

Status Report

Total Records: 2739

Top 3 County Records		Top 3 Log Type Records		Top 3 Coal Records		Top 3 Member Records	
St. Clair	2739	Drillers Log	1929	HERRIN	2422	HERRIN COAL	2422
		Survey Core Study	136	SPRINGFIELD	106	BRERETON LIMESTONE	757
		Other Core Study	59	JAMESTOWN	60	BANKSTON FORK LIMESTONE	727

Data Summary

Cross-tabulation of all selected logs, individual logs will vary.

Tabulation of logged intervals only, individual logs will vary.

Depth and Thickness measurements in feet

Member	Lithology	Avg. Depth	Min. Depth	Max. Depth	Avg. Thk	Min. Thk	Max. Thk
CARTHAGE	LIMESTONE	92.3	73.5	111.0	6.8	5.0	8.5
CHAPEL	COAL	168.5	168.5	168.5	0.3	0.3	0.3
TRIVOLI	SANDSTONE	66.9	66.9	66.9	14.2	14.2	14.2
GIMLET	SANDSTONE	133.5	133.5	133.5	7.2	7.2	7.2
ROCK BRANCH	COAL	97.9	97.9	97.9	0.2	0.2	0.2
PIASA	LIMESTONE	106.4	7.9	287.0	6.9	0.3	74.0
DANVILLE	COAL	126.0	29.2	263.9	1.6	0.3	6.7
BANKSTON FORK	LIMESTONE	118.8	19.6	323.5	7.3	0.5	37.5
ANVIL ROCK	SANDSTONE	122.2	27.7	296.0	5.0	1.0	11.8
LAWSON	SHALE	122.9	16.0	279.0	9.1	0.6	41.5
CONANT	LIMESTONE	124.6	27.0	291.0	1.9	0.1	8.0
JAMESTOWN	COAL	114.6	29.0	260.7	0.5	0.1	5.0
BRERETON	LIMESTONE	103.2	10.0	300.0	5.7	0.1	38.9
ANNA	SHALE	97.2	3.3	311.0	2.6	0.1	12.1
ENERGY	SHALE	153.5	21.8	329.5	35.0	0.4	78.3
HERRIN	COAL	108.8	1.5	362.0	6.2	0.0	14.3
HIGGINSVILLE	LIMESTONE	128.0	60.5	203.1	3.3	0.0	9.3
ST. DAVID	LIMESTONE	207.2	127.3	289.5	3.1	1.0	5.5
TURNER MINE	SHALE	200.4	135.0	295.5	2.0	0.3	3.8
SPRINGFIELD	COAL	88.9	5.9	296.5	2.4	0.5	10.0
HANOVER	LIMESTONE	127.3	127.3	127.3	1.0	1.0	1.0
EXCELLO	SHALE	148.9	123.0	176.0	5.0	2.0	8.8
HOUCHIN CREEK	COAL	173.3	100.0	348.4	3.2	0.2	10.0
SURVANT	COAL	327.2	316.0	347.6	1.0	0.3	1.6
OAK GROVE	LIMESTONE	239.0	239.0	239.0	1.0	1.0	1.0
MECCA QUARRY	SHALE	248.6	153.0	356.8	4.9	1.3	7.0
COLCHESTER	COAL	272.9	159.0	358.1	1.7	0.9	2.2
SEELYVILLE	COAL	244.9	236.5	253.3	4.6	4.0	5.3
DAVIS	COAL	347.0	347.0	347.0	2.8	2.8	2.8

Net Coal | 24.6 |

Coal Logs

This report contains non-confidential coal log descriptions from the Coal Section's stratigraphic database in the county listed. Coal logs are sorted by township/range and section. For each log, North American Datum 1983 (NAD83) Longitude/Latitude coordinates in decimal degrees are provided as well as a legal description which uses the Public Land Survey System (PLSS). The following are two examples of coal log locations:

Example location 1: COUNTY: SALINE TWP/RNG: 7S 5E SECTION: 19 QUARTERS/FOOTAGES: 330'S line, 330'W line of SE NE
LONGITUDE: -88.691911 LATITUDE: 37.900435

This log is from a borehole located in Saline County, Township 7 South, Range 5 East, 330 feet from the south line and 330 feet from the west line of the southeast quarter of the northeast quarter of section 19.

Example location 2: COUNTY: SALINE TWP/RNG: 9S 5E SECTION: 36 QUARTERS/FOOTAGES: 530'N, 530'W, SE/c NE NW
LONGITUDE: -88.60834 LATITUDE: 37.700006

This log is from a borehole located in Saline County, Township 9 South, Range 5 East, 530 feet north and 530 feet west of the southeast corner of the northeast quarter of the northwest quarter of section 36.

Beneath the header is geology information for that data point. The Coal Section stratigraphic database from which this .PDF file is derived is a multi-project database which contains drill hole and outcrop descriptions of Pennsylvanian stratigraphy in Illinois. Consequently, the level of detail and accuracy in the data and their interpretation vary (sometimes widely) with the geologist, project type, or original data source. Multiple descriptions of a particular location may be present. Note that both the coal stratigraphic database and this .PDF listing are only a subset of the total amount of data available from the ISGS Geologic Records Library archives, and reflect only coal-specific data and interpretations of past and present Coal Section geologists. They are not a comprehensive listing of all data that may be available from the ISGS.

MAPID: 16301250000C VERSION: 1 PROJECT: D JOHNSON
COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 1 QUARTERS/FOOTAGES: 330' N line, 300' W line of NE SE
QUADRANGLE: TRENTON LONGITUDE: -89.709167 GEOLOGIST: D. JOHNSON
CONFIDENTIAL: N LATITUDE: 38.559707 DATE COLLECTED: 7 / 0 / 1952
SURFACE ELEVATION (FT.): 486.0 LOGGED (FT.): 368.0 LOG TYPE: Electric Log
SOURCE: DOOLEY, ROY M. WELL TYPE: Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
162.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	323.5
156.5	CARBONDALE	ENERGY	UNCLASSIFIED	32.5	329.5
124.0	CARBONDALE	HERRIN	COAL	6.0	362.0

MAPID: 1630256000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 1 QUARTERS/FOOTAGES: 330' S line, 330' W line
 QUADRANGLE: TRENTON LONGITUDE: -89.722748 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.554502 DATE COLLECTED: 2 / 0 / 1967
 SURFACE ELEVATION (FT.): 496.0 LOGGED (FT.): 342.0 LOG TYPE: Electric Log
 SOURCE: CALVERT EASTERN DRLG. WELL TYPE: Dry Hole
 COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
209.0	MODESTO	PIASA	LIMESTONE	8.0	287.0
201.0	CARBONDALE	ENERGY	UNCLASSIFIED	38.0	295.0
163.0	CARBONDALE	HERRIN	COAL	9.0	333.0

MAPID: 16301373000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 2 QUARTERS/FOOTAGES: 715' N line, 2608' W line
 QUADRANGLE: TRENTON LONGITUDE: -89.733723 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.566056 DATE COLLECTED: 10 / 0 / 1963
 SURFACE ELEVATION (FT.): 496.0 LOGGED (FT.): 296.0 LOG TYPE: Electric Log
 SOURCE: SUN PRODUCTION COMPANY WELL TYPE: Structure Test
 COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
263.0	MODESTO	PIASA	LIMESTONE	3.5	233.0
259.5	MODESTO		UNCLASSIFIED	6.0	236.5
253.5	CARBONDALE		UNCLASSIFIED	13.0	242.5
240.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.0	255.5
230.5	CARBONDALE	ENERGY	UNCLASSIFIED	25.5	265.5
205.0	CARBONDALE	HERRIN	COAL	5.0	291.0

MAPID: 16301373000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 2 QUARTERS/FOOTAGES: 715' N line, 2608' W line
 QUADRANGLE: TRENTON LONGITUDE: -89.733723 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 38.566056 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 496.0 LOGGED (FT.): 300.0 LOG TYPE: Electric Log
 SOURCE: WELL TYPE: Oil and Gas Test
 COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
259.0	MODESTO	PIASA	LIMESTONE	3.0	237.0
256.0	CARBONDALE		GRAY SHALE	23.0	240.0
233.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	263.0
226.0	CARBONDALE	LAWSON	GRAY SHALE	25.0	270.0
201.0	CARBONDALE	HERRIN	COAL	5.0	295.0

MAPID: 16302735000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 2 QUARTERS/FOOTAGES: 330' S line, 990' E line of NW

QUADRANGLE: TRENTON LONGITUDE: -89.736944 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.561784 DATE COLLECTED: 11 / 0 / 1967

SURFACE ELEVATION (FT.): 500.0 LOGGED (FT.): 310.0 LOG TYPE: Electric Log

SOURCE: HARRIS, LLOYD A. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
250.0	MODESTO	PIASA	LIMESTONE	10.0	250.0	
240.0	MODESTO		UNCLASSIFIED	3.0	260.0	
237.0	CARBONDALE		UNCLASSIFIED	9.0	263.0	
228.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	272.0	
220.0	CARBONDALE	ENERGY	UNCLASSIFIED	22.0	280.0	
198.0	CARBONDALE	HERRIN	COAL	8.0	302.0	

MAPID: 16324998000C VERSION: 1

PROJECT: NCRDS99

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 2 QUARTERS/FOOTAGES: 50' S line, 2600' E line

QUADRANGLE: TRENTON LONGITUDE: -89.733029 GEOLOGIST: MCCracken

CONFIDENTIAL: N LATITUDE: 38.553811 DATE COLLECTED: 6 / 17 / 1980

SURFACE ELEVATION (FT.): 490.0 LOGGED (FT.): 0.0 LOG TYPE: Survey Core Study

SOURCE: GULF OIL CORPORATION SU16 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
490.0			NO RECORD	295.0	0.0	
195.0	CARBONDALE		SHALE	2.7	295.0	
192.3	CARBONDALE	ENERGY	CLAYSTONE & SILTSTONE	0.2	297.7	
192.1	CARBONDALE	ENERGY	SHALE	0.1	297.9	
192.0	CARBONDALE	ENERGY	CLAYSTONE & SILTSTONE	0.1	298.0	
191.9	CARBONDALE	ENERGY	SHALE	0.1	298.1	
191.8	CARBONDALE	HERRIN	COAL	-	298.2	NO THICKNESS VALUE REPORTED
-	CARBONDALE		UNDERCLAY	2.1		NO DEPTH REPORTED
-	CARBONDALE		SHALE	0.3		NO DEPTH REPORTED
-	CARBONDALE		CALCAREOUS SHALE	2.3		NO DEPTH REPORTED

MAPID: 16324998000C **VERSION:** 2 **PROJECT:** EIA-DOE
COUNTY: ST. CLAIR **TWP/RNG:** 1N 6W **SECTION:** 2 **QUARTERS/FOOTAGES:** 50' S line, 2600' E line
QUADRANGLE: TRENTON **LONGITUDE:** -89.733029 **GEOLOGIST:** PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 38.553811 **DATE COLLECTED:** 6 / 17 / 1980
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 309.0 **LOG TYPE:** Other Core Study
SOURCE: GULF OIL CORPORATION SU16 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	-	298.2	COAL REPORTED, NO THICKNESS VALUE

MAPID: 16301374000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: ST. CLAIR **TWP/RNG:** 1N 6W **SECTION:** 3 **QUARTERS/FOOTAGES:** 123' N line, 2580' W line
QUADRANGLE: LEBANON **LONGITUDE:** -89.752342 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.567812 **DATE COLLECTED:** 9 / 0 / 1963
SURFACE ELEVATION (FT.): 456.0 **LOGGED (FT.):** 272.0 **LOG TYPE:** Electric Log
SOURCE: SUN PRODUCTION COMPANY **WELL TYPE:** Structure Test
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
247.3	MODESTO	PIASA	LIMESTONE	5.5	208.7	
241.8	MODESTO		UNCLASSIFIED	4.0	214.2	
237.8	CARBONDALE		UNCLASSIFIED	9.8	218.2	
228.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.5	228.0	
218.5	CARBONDALE	ENERGY	UNCLASSIFIED	28.5	237.5	
190.0	CARBONDALE	HERRIN	COAL	6.0	266.0	

MAPID: 16301374000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 3 QUARTERS/FOOTAGES: 123' N line, 2580' W line

QUADRANGLE: LEBANON LONGITUDE: -89.752342 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.567812 DATE COLLECTED:

SURFACE ELEVATION (FT.): 456.0 LOGGED (FT.): 277.0 LOG TYPE: Electric Log

SOURCE: WELL TYPE: Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
244.0	MODESTO	PIASA	LIMESTONE	6.0	212.0	
238.0	MODESTO		GRAY SHALE	6.0	218.0	
232.0	CARBONDALE	DANVILLE	BONE COAL	1.0	224.0	
231.0	CARBONDALE		GRAY SHALE	5.0	225.0	
226.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	4.0	230.0	
222.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	2.0	234.0	
220.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	236.0	
214.0	CARBONDALE	LAWSON	GRAY SHALE	28.0	242.0	
186.0	CARBONDALE	HERRIN	COAL	7.0	270.0	

MAPID: 16325031000C VERSION: 1

PROJECT: NCRDS99

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 5 QUARTERS/FOOTAGES: 1400' N line, 1130' W line

QUADRANGLE: LEBANON LONGITUDE: -89.794492 GEOLOGIST: MCCRACKEN

CONFIDENTIAL: N LATITUDE: 38.564709 DATE COLLECTED: 6 / 25 / 1980

SURFACE ELEVATION (FT.): 450.0 LOGGED (FT.): 242.0 LOG TYPE: Survey Core Study

SOURCE: GULF OIL CORPORATION SU-26 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
450.0	CARBONDALE		CORE LOSS	221.0	0.0	NO RECORD
229.0	CARBONDALE		SHALE	10.0	221.0	
219.0	CARBONDALE	HERRIN	COAL	-	231.0	NO THICKNESS VALUES REPORTED
212.0	CARBONDALE		UNDERCLAY	1.2	238.0	
210.8	CARBONDALE		CLAYSTONE & SILTSTONE	2.8	239.2	

MAPID: 16325031000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 5 QUARTERS/FOOTAGES: 1400' N line, 1130' W line

QUADRANGLE: LEBANON LONGITUDE: -89.794492 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.564709 DATE COLLECTED: 6 / 25 / 1980

SURFACE ELEVATION (FT.): LOGGED (FT.): 251.0 LOG TYPE: Other Core Study

SOURCE: GULF OIL CORPORATION SU26 WELL TYPE: Coal Test

COMMENT: ROCK MECHANICS TESTING PERFORMED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	-	231.0	COAL REPORTED, NO THICKNESS VALUE

MAPID: 16303305000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 6 QUARTERS/FOOTAGES: 0' S line, 0' E line of SE SE NW

QUADRANGLE: LEBANON LONGITUDE: -89.808378 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.561553 DATE COLLECTED: 11 / 15 / 1960

SURFACE ELEVATION (FT.): 449.0 LOGGED (FT.): 173.0 LOG TYPE: Other Core Study

SOURCE: TRUAX-TRAER COAL CO TR-16 WELL TYPE: Coal Test

COMMENT: CORE C-8564; NO DETAILED LOCATION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
282.9	CARBONDALE	HERRIN	COAL	5.2	166.1	

MAPID: 16303305000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 6 QUARTERS/FOOTAGES: 0' S line, 0' E line of SE SE NW

QUADRANGLE: LEBANON LONGITUDE: -89.808378 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.561553 DATE COLLECTED:

SURFACE ELEVATION (FT.): 449.0 LOGGED (FT.): 171.2 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO TR-16 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
339.4	MODESTO	PIASA	LIMESTONE	5.0	109.6	
334.4	MODESTO		UNCLASSIFIED	3.5	114.6	
330.9	CARBONDALE		UNCLASSIFIED	11.5	118.1	
319.4	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	129.6	
312.4	CARBONDALE	ANNA	BLACK SHALE	0.3	136.6	
312.1	CARBONDALE	ENERGY	SHALE	29.1	136.9	
283.0	CARBONDALE	HERRIN	COAL	5.2	166.0	

MAPID: 16300809000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 7 QUARTERS/FOOTAGES: 2690' S line, 1105' E line

QUADRANGLE: LEBANON LONGITUDE: -89.801912 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.547451 DATE COLLECTED: 0 / 0 / 1939

SURFACE ELEVATION (FT.): 439.5 LOGGED (FT.): 2252.0 LOG TYPE:

SOURCE: ALGONA PC WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
239.5	CARBONDALE	HERRIN	COAL	10.0	200.0	
192.5	CARBONDALE	SPRINGFIELD	COAL	3.0	247.0	

MAPID: 16300809000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 7 QUARTERS/FOOTAGES: 2690' S line, 1105' E line

QUADRANGLE: LEBANON LONGITUDE: -89.801912 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.547451 DATE COLLECTED: 6 / 0 / 1939

SURFACE ELEVATION (FT.): 440.0 LOGGED (FT.): 210.0 LOG TYPE: Drillers Log

SOURCE: ALGONA OIL, INC. WELL TYPE: Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
286.0	MODESTO	PIASA	LIMESTONE	6.0	154.0
280.0	MODESTO		UNCLASSIFIED	3.0	160.0
277.0	CARBONDALE		UNCLASSIFIED	9.0	163.0
268.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	172.0
260.0	CARBONDALE	ENERGY	UNCLASSIFIED	20.0	180.0
240.0	CARBONDALE	HERRIN	COAL	10.0	200.0

MAPID: 16302555000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 7 QUARTERS/FOOTAGES: 18' S line, 330' W line

QUADRANGLE: LEBANON LONGITUDE: -89.817142 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.54047 DATE COLLECTED:

SURFACE ELEVATION (FT.): 432.0 LOGGED (FT.): 156.0 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 4395 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
334.0	MODESTO	PIASA	LIMESTONE	4.1	98.0
329.9	CARBONDALE		GRAY SHALE	13.2	102.1
316.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	115.3 UPPER BENCH
314.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.6	118.0 SHALE PARTING
312.4	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	119.6 LOWER BENCH
309.7	CARBONDALE	LAWSON	GRAY SHALE	27.7	122.3
282.0	CARBONDALE	ANNA	BLACK SHALE	0.7	150.0
282.0	CARBONDALE	HERRIN	COAL	6.0	150.0

MAPID: 16302555000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 7 QUARTERS/FOOTAGES: 18' S line, 330' W line

QUADRANGLE: LEBANON LONGITUDE: -89.817142 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.54047 DATE COLLECTED:

SURFACE ELEVATION (FT.): 432.0 LOGGED (FT.): 156.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 4395 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
334.7	MODESTO	PIASA	LIMESTONE	4.1	97.3
330.6	MODESTO		UNCLASSIFIED	3.5	101.4
327.1	CARBONDALE		UNCLASSIFIED	9.7	104.9
317.4	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	114.6
310.4	CARBONDALE	ANNA	BLACK SHALE	0.7	121.6
309.7	CARBONDALE	ENERGY	SHALE	27.7	122.3
282.0	CARBONDALE	HERRIN	COAL	6.0	150.0

MAPID: 16302555000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 7 QUARTERS/FOOTAGES: 18' S line, 330' W line

QUADRANGLE: LEBANON LONGITUDE: -89.817142 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.54047 DATE COLLECTED: 6 / 21 / 1960

SURFACE ELEVATION (FT.): 431.8 LOGGED (FT.): 157.2 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 4395 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
281.5	CARBONDALE	HERRIN	COAL	5.9	150.3

MAPID: 16302565000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 9 QUARTERS/FOOTAGES: 143' S line, 1950' W line

QUADRANGLE: LEBANON LONGITUDE: -89.772593 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.539901 DATE COLLECTED: 8 / 0 / 1963

SURFACE ELEVATION (FT.): 457.0 LOGGED (FT.): 239.0 LOG TYPE: Electric Log

SOURCE: SUN PRODUCTION COMPANY WELL TYPE: Structure Test

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
268.6	MODESTO	PIASA	LIMESTONE	3.0	188.4
265.6	MODESTO		UNCLASSIFIED	3.3	191.4
262.3	CARBONDALE		UNCLASSIFIED	6.8	194.7
255.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	201.5
248.5	CARBONDALE	ENERGY	UNCLASSIFIED	24.5	208.5
224.0	CARBONDALE	HERRIN	COAL	6.0	233.0

MAPID: 16302565000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 9 QUARTERS/FOOTAGES: 143' S line, 1950' W line

QUADRANGLE: LEBANON LONGITUDE: -89.772593

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.539901

DATE COLLECTED:

SURFACE ELEVATION (FT.): 457.0

LOGGED (FT.): 242.0

LOG TYPE: Electric Log

SOURCE:

WELL TYPE: Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
266.0	MODESTO	PIASA	LIMESTONE	4.0	191.0
262.0	CARBONDALE		GRAY SHALE	9.0	195.0
253.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	204.0
250.5	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.5	206.5
249.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	208.0
245.0	CARBONDALE	LAWSON	GRAY SHALE	24.0	212.0
221.0	CARBONDALE	HERRIN	COAL	6.0	236.0

MAPID: 16323721000C VERSION: 1

PROJECT: BLM

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 9 QUARTERS/FOOTAGES: 100' S line, 300' E line of NW SE SE

QUADRANGLE: LEBANON LONGITUDE: -89.764352

GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 38.541469

DATE COLLECTED: 8 / 15 / 1973

SURFACE ELEVATION (FT.): 465.0

LOGGED (FT.): 335.0

LOG TYPE: Drillers Log

SOURCE: D. & S. DRILLING

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
465.0			UNCONSOLIDATED	55.0	0.0
410.0			SHALE	155.0	55.0
255.0			LIMESTONE	18.0	210.0
237.0	CARBONDALE	HERRIN	COAL	4.0	228.0
233.0			ROCK	103.0	232.0

MAPID: 16302288000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 10 QUARTERS/FOOTAGES: 45' N line, 22' E line

QUADRANGLE: TRENTON LONGITUDE: -89.742725 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.553609 DATE COLLECTED: 9 / 0 / 1963

SURFACE ELEVATION (FT.): 485.0 LOGGED (FT.): 293.3 LOG TYPE: Electric Log

SOURCE: SUN PRODUCTION COMPANY WELL TYPE: Structure Test

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
248.8	MODESTO	PIASA	LIMESTONE	8.5	236.2
240.3	MODESTO		UNCLASSIFIED	3.5	244.7
236.8	CARBONDALE		UNCLASSIFIED	7.5	248.2
229.3	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.5	255.7
221.8	CARBONDALE	ENERGY	UNCLASSIFIED	24.8	263.2
197.0	CARBONDALE	HERRIN	COAL	5.3	288.0

MAPID: 16302710000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 10 QUARTERS/FOOTAGES: 57' N line, 670' W line

QUADRANGLE: LEBANON LONGITUDE: -89.758779 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.553762 DATE COLLECTED: 9 / 0 / 1963

SURFACE ELEVATION (FT.): 476.0 LOGGED (FT.): 291.5 LOG TYPE: Electric Log

SOURCE: SUN PRODUCTION COMPANY WELL TYPE: Structure Test

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
248.0	MODESTO	PIASA	LIMESTONE	5.0	228.0
243.0	MODESTO		UNCLASSIFIED	3.5	233.0
239.5	CARBONDALE		UNCLASSIFIED	10.5	236.5
229.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.5	247.0
219.5	CARBONDALE	ENERGY	UNCLASSIFIED	29.5	256.5
190.0	CARBONDALE	HERRIN	COAL	5.5	286.0

MAPID: 16302710000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 10 QUARTERS/FOOTAGES: 57' N line, 670' W line

QUADRANGLE: LEBANON LONGITUDE: -89.758779

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.553762

DATE COLLECTED:

SURFACE ELEVATION (FT.): 476.0

LOGGED (FT.): 296.0

LOG TYPE: Electric Log

SOURCE:

WELL TYPE: Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
243.0	MODESTO	PIASA	GRAY SHALE	7.0	233.0
236.0	MODESTO		BONE COAL	1.0	240.0
235.0	CARBONDALE		GRAY SHALE	5.0	241.0
230.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	246.0
225.0	CARBONDALE	LAWSON	GRAY SHALE	28.0	251.0
186.0	CARBONDALE	HERRIN	COAL	6.0	290.0

MAPID: 16323867000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 10 QUARTERS/FOOTAGES: 990' S line, 1980' E line of SE

QUADRANGLE: TRENTON LONGITUDE: -89.749477

GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.541916

DATE COLLECTED: 9 / 14 / 1972

SURFACE ELEVATION (FT.): 481.0

LOGGED (FT.): 311.5

LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 12871C

WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
177.0	CARBONDALE	HERRIN	COAL	7.1	304.0

MAPID: 16301253000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 14 QUARTERS/FOOTAGES: 660' S line, 660' E line
 QUADRANGLE: TRENTON LONGITUDE: -89.725974 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.526259 DATE COLLECTED: 12 / 0 / 1942
 SURFACE ELEVATION (FT.): 464.0 LOGGED (FT.): 320.5 LOG TYPE: Electric Log
 SOURCE: SMOKEY OIL CO. WELL TYPE: Dry Hole
 COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
193.0	MODESTO	PIASA	LIMESTONE	7.5	271.0
185.5	MODESTO		UNCLASSIFIED	2.5	278.5
183.0	CARBONDALE		UNCLASSIFIED	9.0	281.0
174.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	290.0
168.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	296.0
165.0	CARBONDALE		UNCLASSIFIED	1.0	299.0
164.0	CARBONDALE	BRERETON	LIMESTONE	10.5	300.0
153.5	CARBONDALE	ANNA	BLACK SHALE	3.5	310.5
150.0	CARBONDALE	HERRIN	COAL	6.5	314.0

MAPID: 16301253000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 14 QUARTERS/FOOTAGES: 660' S line, 660' E line
 QUADRANGLE: TRENTON LONGITUDE: -89.725974 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 38.526259 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 464.0 LOGGED (FT.): 321.0 LOG TYPE: Electric Log
 SOURCE: WELL TYPE: Oil and Gas Test
 COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
194.0	MODESTO	PIASA	LIMESTONE	9.0	270.0
185.0	CARBONDALE	LAWSON	SILTSTONE	12.0	279.0
173.0	CARBONDALE	CONANT	LIMESTONE & SHALE	5.0	291.0
168.0	CARBONDALE		SHALE	4.0	296.0
164.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	11.0	300.0
153.0	CARBONDALE	ANNA	BLACK SHALE	5.0	311.0
150.0	CARBONDALE	HERRIN	COAL	7.0	314.0

MAPID: 1632420000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 14 QUARTERS/FOOTAGES: 1320' S line, 2640' W line of SW
 QUADRANGLE: TRENTON LONGITUDE: -89.73302 GEOLOGIST: PRUSSEN
 CONFIDENTIAL: N LATITUDE: 38.528139 DATE COLLECTED: 7 / 10 / 1973
 SURFACE ELEVATION (FT.): 461.4 LOGGED (FT.): 321.2 LOG TYPE: Other Core Study
 SOURCE: PEABODY COAL CO. 12893C WELL TYPE: Coal Test
 COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
153.1	CARBONDALE	HERRIN	COAL	7.1	308.3	

MAPID: 16302553000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 16 QUARTERS/FOOTAGES: 1095' S line, 2625' W line
 QUADRANGLE: LEBANON LONGITUDE: -89.770077 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 38.527959 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 462.0 LOGGED (FT.): 260.6 LOG TYPE: Survey Core Study
 SOURCE: PEABODY COAL CO. 4393 WELL TYPE: Coal Test
 COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
250.0	MODESTO	PIASA	LIMESTONE	7.5	212.0	
242.5	CARBONDALE		GRAY SHALE	9.8	219.5	
232.7	CARBONDALE	BANKSTON FORK	LIMESTONE	5.7	229.3	UPPER BENCH
227.0	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	0.8	235.0	SHALE PARTING
226.2	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	5.8	235.8	LOWER BENCH
220.4	CARBONDALE	LAWSON	GRAY SHALE	9.0	241.6	
211.4	CARBONDALE	JAMESTOWN	BONE COAL	0.2	250.6	
211.2	CARBONDALE		GRAY SHALE	2.3	250.8	
208.9	CARBONDALE	ANNA	CARBONACEOUS SHALE	0.3	253.1	
209.0	CARBONDALE	HERRIN	COAL	7.6	253.0	

MAPID: 16302553000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 16 QUARTERS/FOOTAGES: 1095' S line, 2625' W line

QUADRANGLE: LEBANON LONGITUDE: -89.770077 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.527959 DATE COLLECTED:

SURFACE ELEVATION (FT.): 461.0 LOGGED (FT.): 260.6 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 4393 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
249.4	MODESTO	PIASA	LIMESTONE	7.5	211.6
241.9	MODESTO		UNCLASSIFIED	3.0	219.1
238.9	CARBONDALE		UNCLASSIFIED	6.8	222.1
232.1	CARBONDALE	BANKSTON FORK	LIMESTONE	6.3	228.9
225.8	CARBONDALE	ANVIL ROCK	SANDSTONE	1.2	235.2
224.6	CARBONDALE	CONANT	LIMESTONE	1.0	236.4
223.6	CARBONDALE		SHALE	0.6	237.4
223.0	CARBONDALE	BRERETON	LIMESTONE	3.2	238.0
219.8	CARBONDALE	ENERGY	SHALE	11.8	241.2
208.0	CARBONDALE	HERRIN	COAL	7.6	253.0

MAPID: 16302553000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 16 QUARTERS/FOOTAGES: 1095' S line, 2625' W line

QUADRANGLE: LEBANON LONGITUDE: -89.770077 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.527959 DATE COLLECTED: 0 / 0 / 1960

SURFACE ELEVATION (FT.): 461.5 LOGGED (FT.): 261.3 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 4393 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
208.4	CARBONDALE	HERRIN	COAL	7.6	253.1

MAPID: 16323888000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 18 QUARTERS/FOOTAGES: 330' S line, 2640' E line of SE

QUADRANGLE: LEBANON LONGITUDE: -89.807046 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.52634 DATE COLLECTED: 11 / 3 / 1973

SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 164.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15817C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
318.7	MODESTO	PIASA	LIMESTONE	6.6	106.3	"CUTLER"
279.3	CARBONDALE	HERRIN	COAL	7.5	145.7	

MAPID: 16323764000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: ST. CLAIR **TWP/RNG:** 1N 6W **SECTION:** 19 **QUARTERS/FOOTAGES:** 1' S line, 1320' W line
QUADRANGLE: LEBANON **LONGITUDE:** -89.813455 **GEOLOGIST:** PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 38.510871 **DATE COLLECTED:** 4 / 16 / 1973
SURFACE ELEVATION (FT.): 431.0 **LOGGED (FT.):** 146.7 **LOG TYPE:** Other Core Study
SOURCE: PEABODY COAL CO. 15570C **WELL TYPE:** Coal Test
COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
295.7	CARBONDALE	HERRIN	COAL	7.1	135.3	

MAPID: 16323764000C **VERSION:** 2 **PROJECT:** AVAIL
COUNTY: ST. CLAIR **TWP/RNG:** 1N 6W **SECTION:** 19 **QUARTERS/FOOTAGES:** 1' S line, 1320' W line
QUADRANGLE: LEBANON **LONGITUDE:** -89.813455 **GEOLOGIST:** CHENOWETH
CONFIDENTIAL: N **LATITUDE:** 38.510871 **DATE COLLECTED:** 4 / 16 / 1973
SURFACE ELEVATION (FT.): 431.0 **LOGGED (FT.):** 146.7 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 15570C **WELL TYPE:** Coal Test
COMMENT: PEABODY LOC. E-17

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
431.0	PLEISTOCENE		UNCONSOLIDATED	95.5	0.0	
335.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	95.5	
332.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.8	98.8	ERROR IN LOG MEASUREMENT
318.4	CARBONDALE	BANKSTON FORK	LIMESTONE	11.4	112.6	
307.0	CARBONDALE		DARK SHALE	4.4	124.0	
302.6	CARBONDALE	BRERETON	LIMESTONE	6.5	128.4	
296.1	CARBONDALE	ANNA	BLACK SHALE	0.3	134.9	
295.7	CARBONDALE	HERRIN	COAL	7.1	135.3	
288.6	CARBONDALE		UNDERCLAY	4.3	142.4	

MAPID: 16323826000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: ST. CLAIR **TWP/RNG:** 1N 6W **SECTION:** 19 **QUARTERS/FOOTAGES:** 1' S line, 1' W line of NE
QUADRANGLE: LEBANON **LONGITUDE:** -89.807925 **GEOLOGIST:** PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 38.518133 **DATE COLLECTED:** 4 / 24 / 1973
SURFACE ELEVATION (FT.): 428.0 **LOGGED (FT.):** 174.8 **LOG TYPE:** Other Core Study
SOURCE: PEABODY COAL CO. 12884C **WELL TYPE:** Coal Test
COMMENT: COMPANY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
306.3	MODESTO	PIASA	LIMESTONE	7.3	121.7	
266.3	CARBONDALE	HERRIN	COAL	7.1	161.7	

MAPID: 16323896000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: ST. CLAIR **TWP/RNG:** 1N 6W **SECTION:** 20 **QUARTERS/FOOTAGES:** 1' S line, 1' E line of NW NW
QUADRANGLE: LEBANON **LONGITUDE:** -89.793124 **GEOLOGIST:** PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 38.52165 **DATE COLLECTED:** 5 / 1 / 1973
SURFACE ELEVATION (FT.): 426.1 **LOGGED (FT.):** 199.1 **LOG TYPE:** Other Core Study
SOURCE: PEABODY COAL CO. 12886C **WELL TYPE:** Coal Test
COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
279.3	MODESTO	PIASA	LIMESTONE	7.1	146.8
238.6	CARBONDALE	HERRIN	COAL	7.2	187.5

MAPID: 16323765000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: ST. CLAIR **TWP/RNG:** 1N 6W **SECTION:** 23 **QUARTERS/FOOTAGES:** 1' N line, 660' W line of NW NW
QUADRANGLE: TRENTON **LONGITUDE:** -89.739918 **GEOLOGIST:** PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 38.524549 **DATE COLLECTED:** 4 / 18 / 1973
SURFACE ELEVATION (FT.): 466.0 **LOGGED (FT.):** 300.1 **LOG TYPE:** Other Core Study
SOURCE: PEABODY COAL CO. 15656C **WELL TYPE:** Coal Test
COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
176.0	CARBONDALE	HERRIN	COAL	7.6	290.0

MAPID: 16323766000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: ST. CLAIR **TWP/RNG:** 1N 6W **SECTION:** 24 **QUARTERS/FOOTAGES:** 1' N line, 1320' W line of NW
QUADRANGLE: TRENTON **LONGITUDE:** -89.719006 **GEOLOGIST:** PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 38.524339 **DATE COLLECTED:** 4 / 28 / 1973
SURFACE ELEVATION (FT.): 447.0 **LOGGED (FT.):** 329.6 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 15657 **WELL TYPE:** Coal Test
COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
131.7	CARBONDALE	HERRIN	COAL	7.7	315.3

MAPID: 16323897000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 27 QUARTERS/FOOTAGES: 2640' S line, 2640' E line

QUADRANGLE: LEBANON LONGITUDE: -89.751235 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.502754 DATE COLLECTED: 5 / 10 / 1973

SURFACE ELEVATION (FT.): 434.7 LOGGED (FT.): 248.2 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 15706 WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
241.6	MODESTO	PIASA	LIMESTONE	7.8	193.1
203.0	CARBONDALE	HERRIN	COAL	7.4	231.7

MAPID: 16323897000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 27 QUARTERS/FOOTAGES: 2640' S line, 2640' E line

QUADRANGLE: LEBANON LONGITUDE: -89.751235 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.502754 DATE COLLECTED: 5 / 10 / 1973

SURFACE ELEVATION (FT.): 434.7 LOGGED (FT.): 248.2 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15706 WELL TYPE: Coal Test

COMMENT: PEABODY LOC. I-9

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
434.7	PLEISTOCENE		UNCONSOLIDATED	19.4	0.0
415.3	PLEISTOCENE		SAND & GRAVEL	28.6	19.4
386.7	MODESTO		SANDY SHALE	18.9	48.0
367.8	MODESTO	TRIVOLI	SANDSTONE	14.2	66.9
353.6	MODESTO		GRAY SHALE	52.4	81.1
301.2	MODESTO	GIMLET	SANDSTONE	7.2	133.5
294.0	MODESTO		GRAY SHALE	32.5	140.7
261.5	MODESTO		LIMESTONE	1.3	173.2
260.2	MODESTO		GRAY SHALE	2.7	174.5
257.5	MODESTO		LIMESTONE	1.0	177.2
256.5	MODESTO		SANDY SHALE	14.9	178.2
241.6	MODESTO	PIASA	LIMESTONE	7.8	193.1
233.8			SANDY SHALE	10.2	200.9
223.6	CARBONDALE	BANKSTON FORK	SANDY LIMESTONE	6.6	211.1
217.0	CARBONDALE		SANDY SHALE	2.5	217.7

MAPID: 16301256000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: ST. CLAIR **TWP/RNG:** 1N 6W **SECTION:** 29 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of NW
QUADRANGLE: LEBANON **LONGITUDE:** -89.789546 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.504263 **DATE COLLECTED:** 8 / 0 / 1943
SURFACE ELEVATION (FT.): 438.0 **LOGGED (FT.):** 147.0 **LOG TYPE:** Electric Log
SOURCE: DOUGLAS L A **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
295.0	CARBONDALE	HERRIN	COAL	4.0	143.0	

MAPID: 16300040000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 6W **SECTION:** 31 **QUARTERS/FOOTAGES:** 1150' S line, 200' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.798202 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.484645 **DATE COLLECTED:** 0 / 0 / 1911
SURFACE ELEVATION (FT.): 426.7 **LOGGED (FT.):** 2151.0 **LOG TYPE:**
SOURCE: MCNEAL 2 **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
274.7	CARBONDALE	HERRIN	COAL	6.0	152.0	

MAPID: 16300040000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: ST. CLAIR **TWP/RNG:** 1N 6W **SECTION:** 31 **QUARTERS/FOOTAGES:** 1150' S line, 200' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.798202 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.484645 **DATE COLLECTED:** 0 / 0 / 1911
SURFACE ELEVATION (FT.): 427.0 **LOGGED (FT.):** 158.0 **LOG TYPE:** Drillers Log
SOURCE: CENTRAL REFINING CO **WELL TYPE:** Unsuccessful or Unknown Results
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
275.0	CARBONDALE	HERRIN	COAL	6.0	152.0	

MAPID: 16300040000C VERSION: 3

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 31 QUARTERS/FOOTAGES: 1150' S line, 200' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.798202 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.484645 DATE COLLECTED: 0 / 0 / 1911

SURFACE ELEVATION (FT.): 426.7 LOGGED (FT.): 645.0 LOG TYPE: Survey Core Study

SOURCE: CENTRAL REFINING CO. WELL TYPE: Oil and Gas Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
426.7			SOIL	20.0	0.0	
406.7			SAND	25.0	20.0	
381.7			BLACK SHALE	27.0	45.0	
354.7			SANDSTONE	42.0	72.0	
312.7			LIMESTONE	8.0	114.0	
304.7			BLACK SHALE	15.0	122.0	
289.7	CARBONDALE	BRERETON	LIMESTONE	11.0	137.0	
278.7	CARBONDALE	ANNA	BLACK SHALE	4.0	148.0	
274.7	CARBONDALE	HERRIN	COAL	6.0	152.0	
268.7	CARBONDALE		LIMESTONE	8.0	158.0	
260.7	CARBONDALE		BLACK SHALE	104.0	166.0	
156.7	CARBONDALE		LIMESTONE	5.0	270.0	
151.7	CARBONDALE		BLACK SHALE	10.0	275.0	
141.7	CARBONDALE		BLACK SHALE	80.0	285.0	
61.7	CARBONDALE		LIMESTONE	5.0	365.0	
56.7	CARBONDALE		BLACK SHALE	20.0	370.0	
36.7	MISSISSIPPIAN		LIMESTONE	15.0	390.0	
21.7	MISSISSIPPIAN		BLACK SHALE	15.0	405.0	
6.7	MISSISSIPPIAN		LIMESTONE	40.0	420.0	
-33.3	MISSISSIPPIAN		BLACK SHALE	15.0	460.0	
-48.3	MISSISSIPPIAN		BLACK SHALE	12.0	475.0	
-60.3	MISSISSIPPIAN		LIMESTONE	10.0	487.0	
-70.3	MISSISSIPPIAN		BLACK SHALE	5.0	497.0	
-75.3	MISSISSIPPIAN		LIMESTONE	33.0	502.0	LIGHT
-108.3	MISSISSIPPIAN		BLACK SHALE	20.0	535.0	
-128.3	MISSISSIPPIAN		SANDSTONE	50.0	555.0	LIGHT
-178.3	MISSISSIPPIAN		BLACK SHALE	5.0	605.0	
-183.3	MISSISSIPPIAN		SANDSTONE	10.0	610.0	LIGHT
-193.3	MISSISSIPPIAN		BLACK SHALE	5.0	620.0	
-198.3	MISSISSIPPIAN		LIMESTONE	15.0	625.0	LIGHT
-213.3	MISSISSIPPIAN		BLACK SHALE	5.0	640.0	

MAPID: 16300041000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 31 QUARTERS/FOOTAGES: SE SE NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.798814 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.48977 DATE COLLECTED: 0 / 0 / 1992

SURFACE ELEVATION (FT.): 426.7 LOGGED (FT.): 3107.0 LOG TYPE:

SOURCE: POSTEL MIL0001 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
281.7	CARBONDALE	HERRIN	COAL	6.0	145.0
225.7	CARBONDALE	SPRINGFIELD	COAL	5.0	201.0

MAPID: 16300041000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 31 QUARTERS/FOOTAGES: SE SE NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.798814 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.48977 DATE COLLECTED: 0 / 0 / 1892

SURFACE ELEVATION (FT.): 427.0 LOGGED (FT.): 151.0 LOG TYPE: Drillers Log

SOURCE: POSTEL MILLING WELL TYPE: Unsuccessful or Unknown Results

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
323.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	104.0
315.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	112.0
312.0	CARBONDALE	BRERETON	LIMESTONE	30.0	115.0
282.0	CARBONDALE	HERRIN	COAL	6.0	145.0

MAPID: 16300041000C VERSION: 3

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 31 QUARTERS/FOOTAGES: SE SE NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.798814 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.48977 DATE COLLECTED: 0 / 0 / 1894

SURFACE ELEVATION (FT.): 426.7 LOGGED (FT.): 2766.0 LOG TYPE: Survey Core Study

SOURCE: PH POSTEL MILLING CO. WELL TYPE: Oil and Gas Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
426.7			CLAY	30.0	0.0	
396.7			SAND	5.0	30.0	
391.7			SAND	5.0	35.0	WHITE
386.7			SAND	64.0	40.0	
322.7			LIMESTONE	8.0	104.0	
314.7			SHALE	30.0	112.0	
284.7			LIMESTONE	3.0	142.0	
281.7	CARBONDALE	HERRIN	COAL	6.0	145.0	
275.7	CARBONDALE		SHALE	15.0	151.0	
260.7	CARBONDALE		SHALE	35.0	166.0	
225.7	CARBONDALE	HOUCHIN CREEK	COAL	5.0	201.0	THICKNESS PROBABLY INACCURATE
220.7	CARBONDALE		SHALE	50.0	206.0	WHITE
170.7	CARBONDALE		SHALE	40.0	256.0	
130.7	CARBONDALE		SHALE	45.0	296.0	WHITE
85.7	CARBONDALE		ROCK	45.0	341.0	RED
40.7	CARBONDALE		SHALE	35.0	386.0	
5.7	CARBONDALE		SHALE	113.0	421.0	
-107.3	CARBONDALE		LIMESTONE	5.0	534.0	
-112.3	CARBONDALE		SANDSTONE	45.0	539.0	
-157.3	CARBONDALE		SHALE	25.0	584.0	
-182.3	MISSISSIPPIAN		LIMESTONE	20.0	609.0	
-202.3	MISSISSIPPIAN		ROCK	55.0	629.0	RED ROCK /HARD CALCAREOUS SHALE; RED
-257.3	MISSISSIPPIAN		SHALE	20.0	684.0	WHITE
-277.3	MISSISSIPPIAN		SANDSTONE	20.0	704.0	
-297.3	MISSISSIPPIAN		LIMESTONE	460.0	724.0	
-757.3	MISSISSIPPIAN		SHALE	420.0	1184.0	
-1177.3	MISSISSIPPIAN		LIMESTONE	390.0	1604.0	
-1567.3	MISSISSIPPIAN		CALCAREOUS CLAYSTONE	70.0	1994.0	RED
-1637.3	MISSISSIPPIAN		LIMESTONE	126.0	2064.0	
-1763.3	MISSISSIPPIAN		SHALE	127.0	2190.0	
-1890.3	MISSISSIPPIAN		LIMESTONE	449.0	2317.0	

MAPID: 16300666000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 31 QUARTERS/FOOTAGES: 1215' S line, 315' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.798607 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.484829 DATE COLLECTED: 6 / 0 / 1934

SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 152.0 LOG TYPE: Drillers Log

SOURCE: FOHEY EDGAR L WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
340.0	MODESTO	PIASA	LIMESTONE	5.0	85.0
335.0	MODESTO		UNCLASSIFIED	5.0	90.0
330.0	CARBONDALE		UNCLASSIFIED	10.0	95.0
320.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	105.0
313.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	112.0
310.0	CARBONDALE	BRERETON	LIMESTONE	25.0	115.0
285.0	CARBONDALE	ANNA	BLACK SHALE	3.0	140.0
282.0	CARBONDALE	HERRIN	COAL	9.0	143.0

MAPID: 16300666000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 31 QUARTERS/FOOTAGES: 1215' S line, 315' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.798607 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.484829 DATE COLLECTED:

SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 149.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
320.0	MODESTO	PIASA	LIMESTONE	7.0	105.0
313.0	CARBONDALE	LAWSON	GRAY SHALE	13.0	112.0
300.0	CARBONDALE	BRERETON	LIMESTONE AND SANDSTONE	15.0	125.0
285.0	CARBONDALE	ANNA	BLACK SHALE	3.0	140.0
282.0	CARBONDALE	HERRIN	COAL	6.0	143.0

MAPID: 16300666000C VERSION: 3

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 31 QUARTERS/FOOTAGES: 1215' S line, 315' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.798607 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.484829 DATE COLLECTED: 0 / 0 / 1934

SURFACE ELEVATION (FT.): 425.2 LOGGED (FT.): 620.0 LOG TYPE:

SOURCE: FOHEY E L WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
282.2	CARBONDALE	HERRIN	COAL	6.0	143.0

MAPID: 16300666000C VERSION: 4

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 31 QUARTERS/FOOTAGES: 1215' S line, 315' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.798607 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.484829 DATE COLLECTED: 6 / 19 / 1934

SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 610.0 LOG TYPE: Drillers Log

SOURCE: E. L. FOHEY WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
425.0			SOIL	3.0	0.0	
422.0			CLAY	17.0	3.0	YELLOW
405.0			SAND	10.0	20.0	
395.0			SAND	15.0	30.0	
380.0			SAND & GRAVEL	7.0	45.0	
373.0			SOIL	13.0	52.0	
360.0			SOIL	10.0	65.0	
350.0			SHALE	5.0	75.0	
345.0			SHALE	5.0	80.0	
340.0			SHALE	5.0	85.0	
335.0			SHALE	5.0	90.0	YELLOW
330.0			LIMESTONE	7.0	95.0	
323.0			SHALE	13.0	102.0	
310.0			LIMESTONE	5.0	115.0	
305.0	CARBONDALE	BRERETON	LIMESTONE	10.0	120.0	
295.0	CARBONDALE	ANNA	BLACK SHALE	3.0	130.0	ANNA
292.0	CARBONDALE	HERRIN	COAL	6.0	133.0	THICKNESS NOT PRECISE
286.0	CARBONDALE		SHALE	4.0	139.0	
282.0	CARBONDALE		SHALE	22.0	143.0	
260.0	CARBONDALE		SHALE	25.0	165.0	
235.0	CARBONDALE		COAL	5.0	190.0	
230.0	CARBONDALE		SHALE	105.0	195.0	
125.0	CARBONDALE		BLACK SHALE	5.0	300.0	
120.0	CARBONDALE		SANDY SHALE	65.0	305.0	
55.0	MISSISSIPPIAN		SHALE	30.0	370.0	
25.0	MISSISSIPPIAN		SHALE	5.0	400.0	
20.0	MISSISSIPPIAN		SHALE	10.0	405.0	
10.0	MISSISSIPPIAN		LIMESTONE	15.0	415.0	
-5.0	MISSISSIPPIAN		SHALE	10.0	430.0	
-15.0	MISSISSIPPIAN		BLACK SHALE	10.0	440.0	
-25.0	MISSISSIPPIAN		LIMESTONE	20.0	450.0	
-45.0	MISSISSIPPIAN		SHALE	12.0	470.0	LIGHT
-57.0	MISSISSIPPIAN		SHALE	13.0	482.0	LIGHT
-70.0	MISSISSIPPIAN		SHALE	5.0	495.0	
-75.0	MISSISSIPPIAN		HARD SHALE	10.0	500.0	
-85.0	MISSISSIPPIAN		LIMESTONE	25.0	510.0	
-110.0	MISSISSIPPIAN		SHALE	5.0	535.0	
-115.0	MISSISSIPPIAN		LIMESTONE	5.0	540.0	
-120.0	MISSISSIPPIAN		SHALE	10.0	545.0	

-130.0 MISSISSIPPIAN

SANDSTONE

55.0 555.0 WHITE

MAPID: 16300230000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 6W **SECTION:** 32 **QUARTERS/FOOTAGES:** 1450' S line, 2450' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.787444 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.48547 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 429.4 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: KOLB CC 0001 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
269.4	CARBONDALE	HERRIN	COAL	7.0	160.0	

MAPID: 16300230000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: ST. CLAIR **TWP/RNG:** 1N 6W **SECTION:** 32 **QUARTERS/FOOTAGES:** 1450' S line, 2450' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.787444 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.48547 **DATE COLLECTED:** 0 / 0 / 1900
SURFACE ELEVATION (FT.): 430.0 **LOGGED (FT.):** 168.0 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Mine Shaft
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
269.0	CARBONDALE	HERRIN	COAL	7.0	161.0	

MAPID: 16300231000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 6W **SECTION:** 32 **QUARTERS/FOOTAGES:** 4700' S line, 5000' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.796553 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.494442 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 434.5 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: SCHUBERT CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
269.5	CARBONDALE	HERRIN	COAL	7.0	165.0	

MAPID: 16300231000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: ST. CLAIR **TWP/RNG:** 1N 6W **SECTION:** 32 **QUARTERS/FOOTAGES:** 4700' S line, 5000' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.796553 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.494442 **DATE COLLECTED:** 0 / 0 / 1900
SURFACE ELEVATION (FT.): 435.0 **LOGGED (FT.):** 172.0 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Mine Shaft
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
270.0	CARBONDALE	HERRIN	COAL	7.0	165.0	

MAPID: 16300232000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 6W **SECTION:** 32 **QUARTERS/FOOTAGES:** 4500' S line, 2500' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.787762 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.493892 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 433.4 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: MASCTAH CM0002 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
266.4	CARBONDALE	HERRIN	COAL	7.0	167.0	

MAPID: 16300232000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: ST. CLAIR **TWP/RNG:** 1N 6W **SECTION:** 32 **QUARTERS/FOOTAGES:** 4500' S line, 2500' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.787762 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.493892 **DATE COLLECTED:** 0 / 0 / 1900
SURFACE ELEVATION (FT.): 434.0 **LOGGED (FT.):** 175.0 **LOG TYPE:** Drillers Log
SOURCE: KOLB & MASCOUTAH COAL **WELL TYPE:** Mine Shaft
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
266.0	CARBONDALE	HERRIN	COAL	7.0	168.0	

MAPID: 16303004000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 33 QUARTERS/FOOTAGES: 0' S line, 0' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.77877 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.481471 DATE COLLECTED:

SURFACE ELEVATION (FT.): 414.0 LOGGED (FT.): 148.2 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8902C WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
320.0	MODESTO	PIASA	LIMESTONE	8.5	94.0
311.5	MODESTO		SHALE	13.8	102.5
297.7	CARBONDALE	DANVILLE	COAL	0.5	116.3
297.2	CARBONDALE		CALCAREOUS SHALE	8.1	116.8
289.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	124.9
286.4	CARBONDALE	LAWSON	DARK GRAY SHALE	6.6	127.6
279.8	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	2.3	134.2
277.5	CARBONDALE	JAMESTOWN	CARBONACEOUS LIMESTONE	0.4	136.5
277.0	CARBONDALE		BLACK SHALE	0.9	137.0
276.1	CARBONDALE	BRERETON	LIMESTONE	2.0	137.9
274.1	CARBONDALE	ANNA	BLACK SHALE	1.0	139.9
273.0	CARBONDALE	HERRIN	COAL	7.2	141.0

MAPID: 16303004000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 33 QUARTERS/FOOTAGES: 0' S line, 0' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.77877 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.481471 DATE COLLECTED:

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 148.2 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8902C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
325.6	MODESTO	PIASA	LIMESTONE	8.5	94.4
317.1	MODESTO		UNCLASSIFIED	5.1	102.9
312.0	CARBONDALE		UNCLASSIFIED	11.1	108.0
300.9	CARBONDALE	BANKSTON FORK	LIMESTONE	8.8	119.1
292.1	CARBONDALE	ANVIL ROCK	SANDSTONE	6.6	127.9
285.5	CARBONDALE	CONANT	LIMESTONE	2.6	134.5
282.9	CARBONDALE		SHALE	0.9	137.1
282.0	CARBONDALE	BRERETON	LIMESTONE	1.9	138.0
280.1	CARBONDALE	ANNA	BLACK SHALE	1.1	139.9
279.0	CARBONDALE	HERRIN	COAL	7.2	141.0

MAPID: 16303004000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 33 QUARTERS/FOOTAGES: 0' S line, 0' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.77877 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.481471 DATE COLLECTED: 0 / 0 / 1969

SURFACE ELEVATION (FT.): 414.0 LOGGED (FT.): 153.0 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 8902C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY; C-7273

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
272.9	CARBONDALE	HERRIN	COAL	7.2	141.1	
272.9	CARBONDALE	HERRIN	COAL	7.2	141.1	

MAPID: 16303498000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 33 QUARTERS/FOOTAGES: 660' S line, 660' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.762587 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.482956 DATE COLLECTED: 11 / 2 / 1971

SURFACE ELEVATION (FT.): LOGGED (FT.): 196.5 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 12684C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	5.8	185.7	

MAPID: 16303498000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 33 QUARTERS/FOOTAGES: 660' S line, 660' E line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.762587 GEOLOGIST: CHENOWETH
 CONFIDENTIAL: N LATITUDE: 38.482956 DATE COLLECTED: 11 / 2 / 1971
 SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 196.5 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 12684C WELL TYPE: Coal Test
 COMMENT: PEABODYLOC. O-15

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
420.0	PLEISTOCENE		UNCONSOLIDATED	117.9	0.0	
302.1	MODESTO		SHALE & SANDSTONE	27.5	117.9	
274.6	MODESTO	PIASA	LIMESTONE	8.7	145.4	
265.9	MODESTO		SHALE	7.1	154.1	
258.8	MODESTO		LIMESTONE	1.0	161.2	
257.8			SHALE	2.6	162.2	
255.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	164.8	
251.7	CARBONDALE	BANKSTON FORK	SHALE	0.4	168.3	
251.3	CARBONDALE	BANKSTON FORK	LIMESTONE	0.6	168.7	
250.7	CARBONDALE	BANKSTON FORK	CLAYSTONE & SILTSTONE	1.4	169.3	
249.3	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	170.7	
246.6	CARBONDALE		SHALE	2.2	173.4	
244.4	CARBONDALE		LIMESTONE	1.9	175.6	
242.5	CARBONDALE		SHALE	3.7	177.5	
238.8	CARBONDALE	BRERETON	LIMESTONE	1.6	181.2	
237.2	CARBONDALE	ANNA	BLACK SHALE	2.6	182.8	JAMESTOWN HORIZON
234.6	CARBONDALE	ANNA	LIMESTONE	0.4	185.4	
234.3	CARBONDALE	HERRIN	COAL	8.1	185.7	
226.2	CARBONDALE		UNDERCLAY	2.3	193.8	
223.9	CARBONDALE		CALCAREOUS SHALE	0.4	196.1	

MAPID: 16303542000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 33 QUARTERS/FOOTAGES: 1' N line, 2640' E line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.769783 GEOLOGIST: PRUSSEN
 CONFIDENTIAL: N LATITUDE: 38.49578 DATE COLLECTED: 10 / 19 / 1971
 SURFACE ELEVATION (FT.): LOGGED (FT.): 214.2 LOG TYPE: Other Core Study
 SOURCE: PEABODY COAL CO. 12737C WELL TYPE: Coal Test
 COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	8.0	205.5	

MAPID: 16303542000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 33 QUARTERS/FOOTAGES: 1' N line, 2640' E line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.769783 GEOLOGIST: CHENOWETH
 CONFIDENTIAL: N LATITUDE: 38.49578 DATE COLLECTED: 10 / 19 / 1971
 SURFACE ELEVATION (FT.): 438.0 LOGGED (FT.): 214.2 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 12737C WELL TYPE: Coal Test
 COMMENT: PEABODY LOC. I-1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
438.0	PLEISTOCENE		UNCONSOLIDATED	134.0	0.0	
304.0	MODESTO		GRAY SHALE	33.4	134.0	
270.6	MODESTO	PIASA	LIMESTONE	7.1	167.4	
263.5			GRAY SHALE	10.2	174.5	
253.3	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	6.0	184.7	
247.3	CARBONDALE	BANKSTON FORK	LIMESTONE	4.7	190.7	
242.6	CARBONDALE		SHALE WITH LIMESTONE	1.4	195.4	
241.2	CARBONDALE		BLACK SHALE	3.3	196.8	JAMESTOWN HORIZON
237.9	CARBONDALE	BRERETON	LIMESTONE	2.6	200.1	
235.3	CARBONDALE	ANNA	BLACK SHALE	2.8	202.7	
232.5	CARBONDALE	HERRIN	COAL	8.0	205.5	
224.5	CARBONDALE		UNDERCLAY	0.8	213.5	

MAPID: 16303370000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 34 QUARTERS/FOOTAGES: 1320' N line, 1980' E line
 QUADRANGLE: VENEDY LONGITUDE: -89.748818 GEOLOGIST: PRUSSEN
 CONFIDENTIAL: N LATITUDE: 38.491776 DATE COLLECTED: 4 / 28 / 1971
 SURFACE ELEVATION (FT.): 423.3 LOGGED (FT.): 234.7 LOG TYPE: Other Core Study
 SOURCE: PEABODY COAL CO. 12509C WELL TYPE: Coal Test
 COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
198.6	CARBONDALE	HERRIN	COAL	7.5	224.7	

MAPID: 16303370000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 34 QUARTERS/FOOTAGES: 1320' N line, 1980' E line

QUADRANGLE: VENEDY LONGITUDE: -89.748818

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.491776

DATE COLLECTED:

SURFACE ELEVATION (FT.): 423.0 LOGGED (FT.): 232.5

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12509C

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
235.0	MODESTO	PIASA	LIMESTONE	8.6	188.0
226.4	CARBONDALE		SHALE & SANDSTONE	13.6	196.6
212.8	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	210.2
210.6	CARBONDALE	LAWSON	DARK GRAY SHALE	9.9	212.4
200.7	CARBONDALE	BRERETON	LIMESTONE	2.3	222.3
198.4	CARBONDALE	ANNA	BLACK SHALE	0.3	224.6
198.0	CARBONDALE	HERRIN	COAL	7.5	225.0

MAPID: 16301260000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 35 QUARTERS/FOOTAGES: 2310' N line, 660' E line

QUADRANGLE: VENEDY LONGITUDE: -89.725593

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.488749

DATE COLLECTED: 5 / 0 / 1952

SURFACE ELEVATION (FT.): 440.0 LOGGED (FT.): 333.5

LOG TYPE: Electric Log

SOURCE: JARVIS, S. D., ETAL

WELL TYPE: Unsuccessful or Unknown Results

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
250.5	MODESTO	PIASA	LIMESTONE	7.0	189.5
243.5	MODESTO		UNCLASSIFIED	3.0	196.5
240.5	CARBONDALE	DANVILLE	COAL	1.0	199.5
239.5	CARBONDALE		UNCLASSIFIED	5.0	200.5
234.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	205.5
227.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	212.5
224.5	CARBONDALE		UNCLASSIFIED	2.0	215.5
222.5	CARBONDALE	BRERETON	LIMESTONE	8.5	217.5
214.0	CARBONDALE	ANNA	BLACK SHALE	2.0	226.0
212.0	CARBONDALE	HERRIN	COAL	5.5	228.0

MAPID: 1630126000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 35 QUARTERS/FOOTAGES: 2310' N line, 660' E line

QUADRANGLE: VENEDY LONGITUDE: -89.725593

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.488749

DATE COLLECTED:

SURFACE ELEVATION (FT.): 440.0

LOGGED (FT.): 235.0

LOG TYPE: Electric Log

SOURCE:

WELL TYPE: Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
250.0	MODESTO	PIASA	LIMESTONE	7.0	190.0
243.0	CARBONDALE		SHALE	10.0	197.0
233.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	5.0	207.0
228.0	CARBONDALE	LAWSON	DARK GRAY SHALE	7.0	212.0
221.0	CARBONDALE	CONANT	LIMESTONE & SHALE	2.0	219.0
219.0	CARBONDALE		BLACK SHALE	2.5	221.0
216.5	CARBONDALE	BRERETON	LIMESTONE	3.0	223.5
213.5	CARBONDALE	ANNA	BLACK SHALE	1.5	226.5
212.0	CARBONDALE	HERRIN	COAL	7.0	228.0

MAPID: 16303401000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 36 QUARTERS/FOOTAGES: 1' N line, 1' W line of NW NE

QUADRANGLE: VENEDY LONGITUDE: -89.714044

GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.494982

DATE COLLECTED: 6 / 28 / 1971

SURFACE ELEVATION (FT.):

LOGGED (FT.): 225.9

LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 12718C

WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	COAL	7.9	214.9

MAPID: 16303497000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 36 QUARTERS/FOOTAGES: 0' S line, 660' E line

QUADRANGLE: VENEDY LONGITUDE: -89.70692

GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.480255

DATE COLLECTED: 4 / 24 / 1971

SURFACE ELEVATION (FT.): 425.0

LOGGED (FT.): 241.0

LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 12508C

WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
218.2			COAL	1.6	206.8
193.3	CARBONDALE	HERRIN	COAL	7.3	231.7

MAPID: 16303497000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 6W SECTION: 36 QUARTERS/FOOTAGES: 0' S line, 660' E line

QUADRANGLE: VENEDY LONGITUDE: -89.70692 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.480255 DATE COLLECTED:

SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 239.3 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12508C WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
234.0	MODESTO	PIASA	LIMESTONE	6.1	191.0
227.9	MODESTO		GRAY SHALE	10.0	197.1
217.9	CARBONDALE	DANVILLE	COAL	1.5	207.1
216.4	CARBONDALE		SILTY SHALE	5.5	208.6
210.9	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	214.1
209.6	CARBONDALE	LAWSON	DARK GRAY SHALE	8.8	215.4
200.8	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	4.0	224.2
196.8	CARBONDALE	BRERETON	LIMESTONE	3.5	228.2
193.3	CARBONDALE	ANNA	BLACK SHALE	0.2	231.7
193.0	CARBONDALE	HERRIN	COAL	7.3	232.0

MAPID: 16301102000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 3 QUARTERS/FOOTAGES: NE NE SW

QUADRANGLE: LEBANON LONGITUDE: -89.865637 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.561737 DATE COLLECTED: 3 / 7 / 1950

SURFACE ELEVATION (FT.): 510.0 LOGGED (FT.): 218.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 5L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
510.0	PLEISTOCENE		CLAY	18.0	0.0	
492.0	PLEISTOCENE		SANDY CLAY	5.0	18.0	
487.0	PLEISTOCENE		SAND	50.0	23.0	
437.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	40.0	73.0	BLU
397.0	MODESTO		GRAY SHALE	14.0	113.0	
383.0	MODESTO	PIASA	LIMESTONE	0.3	127.0	
382.7	MODESTO		GRAY SHALE	5.2	127.3	
377.5	CARBONDALE	DANVILLE	COAL	0.5	132.5	
377.0	CARBONDALE		UNDERCLAY	3.0	133.0	
374.0	CARBONDALE		GRAY SHALE	5.0	136.0	
369.0	CARBONDALE		RED SHALE	3.4	141.0	
365.6	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	144.4	
362.2	CARBONDALE		RED SHALE	9.1	147.8	
353.2	CARBONDALE	BRERETON	LIMESTONE	5.2	156.8	
348.0	CARBONDALE	BRERETON	LIMESTONE W/ SHALE	0.7	162.0	
347.3	CARBONDALE	BRERETON	LIMESTONE	1.0	162.7	
346.3	CARBONDALE	ENERGY	GRAY SHALE	45.6	163.7	
300.7	CARBONDALE	HERRIN	COAL	6.8	209.3	
293.9	CARBONDALE		UNDERCLAY	1.9	216.1	

MAPID: 16301102000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 3 QUARTERS/FOOTAGES: NE NE SW

QUADRANGLE: LEBANON LONGITUDE: -89.865637 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.561737 DATE COLLECTED:

SURFACE ELEVATION (FT.): 510.0 LOGGED (FT.): 215.8 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 5L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
365.7	MODESTO	PIASA	LIMESTONE	3.3	144.3	
362.4	MODESTO		UNCLASSIFIED	2.5	147.6	
359.9	CARBONDALE		UNCLASSIFIED	6.6	150.1	
353.3	CARBONDALE	BANKSTON FORK	LIMESTONE	6.7	156.7	
346.6	CARBONDALE	ANVIL ROCK	SANDSTONE	4.3	163.4	
342.3	CARBONDALE	ENERGY	SHALE	41.3	167.7	
301.0	CARBONDALE	HERRIN	COAL	6.8	209.0	

MAPID: 16301103000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 3 QUARTERS/FOOTAGES: NE NW SE

QUADRANGLE: LEBANON LONGITUDE: -89.86096 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.56155 DATE COLLECTED: 3 / 9 / 1950

SURFACE ELEVATION (FT.): 460.0 LOGGED (FT.): 168.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 6L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
460.0	PLEISTOCENE		SANDY CLAY	13.0	0.0	
447.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	20.0	13.0	BLU
427.0	PLEISTOCENE		CLAY	27.3	33.0	BLU
399.7	MODESTO		LIMESTONE	0.4	60.3	
399.3	MODESTO		GRAY SHALE	5.5	60.7	
393.8	MODESTO		LIMESTONE	0.3	66.2	
393.6	MODESTO		GRAY SHALE	14.9	66.4	
378.7	MODESTO		COAL	0.3	81.3	
378.3	MODESTO		UNDERCLAY	2.8	81.7	
375.5	MODESTO		GRAY SHALE	4.0	84.5	
371.5	MODESTO		RED SHALE	2.0	88.5	
369.5	MODESTO		GRAY SHALE	1.5	90.5	
368.0	MODESTO		RED SHALE	2.7	92.0	
365.3	MODESTO	PIASA	LIMESTONE	5.8	94.7	
359.5			RED SHALE	5.0	100.5	
354.5			GRAY SHALE	1.4	105.5	
353.1	CARBONDALE	BANKSTON FORK	LIMESTONE	6.6	106.9	
346.5	CARBONDALE		LIMESTONE/CHERT	3.3	113.5	
343.2	CARBONDALE	ENERGY	SANDY SHALE	4.2	116.8	
339.0	CARBONDALE	ENERGY	GRAY SHALE	39.2	121.0	
299.8	CARBONDALE	HERRIN	COAL	6.8	160.2	
293.0	CARBONDALE		UNDERCLAY	1.0	167.0	

MAPID: 16301103000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 3 QUARTERS/FOOTAGES: NE NW SE

QUADRANGLE: LEBANON LONGITUDE: -89.86096 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.56155 DATE COLLECTED:

SURFACE ELEVATION (FT.): 460.0 LOGGED (FT.): 166.8 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 6L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
364.7	MODESTO	PIASA	LIMESTONE	5.8	95.3
358.9	MODESTO		UNCLASSIFIED	2.0	101.1
356.9	CARBONDALE		UNCLASSIFIED	4.4	103.1
352.5	CARBONDALE	BANKSTON FORK	LIMESTONE	9.1	107.5
343.4	CARBONDALE	ANVIL ROCK	SANDSTONE	4.2	116.6
339.2	CARBONDALE	ENERGY	SHALE	39.2	120.8
300.0	CARBONDALE	HERRIN	COAL	6.8	160.0

MAPID: 16301104000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 3 QUARTERS/FOOTAGES: SE SE NE

QUADRANGLE: LEBANON LONGITUDE: -89.856284 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.563163 DATE COLLECTED: 3 / 10 / 1950

SURFACE ELEVATION (FT.): 477.0 LOGGED (FT.): 173.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 7L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
477.0	PLEISTOCENE		CLAY	23.0	0.0	
454.0	PLEISTOCENE		SAND	5.0	23.0	
449.0	PLEISTOCENE		UNCONSOLIDATED	3.0	28.0	BLU
446.0	PLEISTOCENE		SAND	2.0	31.0	
444.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	9.0	33.0	BLU
435.0	MODESTO		GRAY SHALE	39.0	42.0	
396.0	MODESTO		GRAY SHALE	6.0	81.0	
390.0	MODESTO		LIMESTONE	0.2	87.0	
389.8	MODESTO		GRAY SHALE	13.3	87.2	
376.5	MODESTO		UNDERCLAY	3.0	100.5	
373.5	MODESTO		SHALE	4.0	103.5	MIXED
369.5	MODESTO		LIMESTONE	1.0	107.5	
368.5	MODESTO		SHALE	2.3	108.5	MIXED
366.2	MODESTO	PIASA	LIMESTONE	7.3	110.8	
359.0			SHALE	6.0	118.0	MIXED
353.0	CARBONDALE	BANKSTON FORK	LIMESTONE	0.7	124.0	
352.3	CARBONDALE	BANKSTON FORK	LIMESTONE/CHERT	6.8	124.7	
345.5	CARBONDALE		SANDY SHALE	4.2	131.5	
341.3	CARBONDALE		LIMESTONE/CHERT	1.5	135.7	
339.8	CARBONDALE	ENERGY	SHALE	2.8	137.2	MIXED
337.0	CARBONDALE	ENERGY	GRAY SHALE	20.5	140.0	
316.5	CARBONDALE	ENERGY	LIMESTONE	1.0	160.5	
315.5	CARBONDALE	ENERGY	GRAY SHALE	4.0	161.5	
311.5	CARBONDALE	HERRIN	COAL	6.6	165.5	
304.9	CARBONDALE		UNDERCLAY	0.9	172.1	

MAPID: 16301104000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 3 QUARTERS/FOOTAGES: SE SE NE

QUADRANGLE: LEBANON LONGITUDE: -89.856284 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.563163 DATE COLLECTED:

SURFACE ELEVATION (FT.): 475.0 LOGGED (FT.): 171.6 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 7L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
364.8	MODESTO	PIASA	LIMESTONE	7.3	110.2
357.5	MODESTO		UNCLASSIFIED	1.5	117.5
356.0	CARBONDALE		UNCLASSIFIED	4.5	119.0
351.5	CARBONDALE	BANKSTON FORK	LIMESTONE	7.5	123.5
344.0	CARBONDALE	ANVIL ROCK	SANDSTONE	2.2	131.0
341.8	CARBONDALE		SHALE	2.0	133.2
339.8	CARBONDALE	BRERETON	LIMESTONE	1.5	135.2
338.3	CARBONDALE	ENERGY	SHALE	28.3	136.7
310.0	CARBONDALE	HERRIN	COAL	6.6	165.0

MAPID: 16301105000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 3 QUARTERS/FOOTAGES: NE NW NE

QUADRANGLE: LEBANON LONGITUDE: -89.860967 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.568618 DATE COLLECTED:

SURFACE ELEVATION (FT.): 475.0 LOGGED (FT.): 202.8 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 1L WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
350.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	6.6	125.0
343.4	CARBONDALE		GRAY SHALE	4.6	131.6
338.8	CARBONDALE	BANKSTON FORK	LIMESTONE AND SANDSTONE	7.3	136.2
331.5	CARBONDALE	LAWSON	SILTY SHALE	6.7	143.5
324.8	CARBONDALE	BRERETON	LIMESTONE	3.0	150.2
321.8	CARBONDALE	ENERGY	GRAY SHALE	42.8	153.2
279.0	CARBONDALE	ENERGY	LIMESTONE/UNDERCLAY	0.5	196.0
279.0	CARBONDALE	HERRIN	COAL	6.8	196.0

MAPID: 16301105000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 3 QUARTERS/FOOTAGES: NE NW NE

QUADRANGLE: LEBANON LONGITUDE: -89.860967 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.568618 DATE COLLECTED:

SURFACE ELEVATION (FT.): 490.0 LOGGED (FT.): 202.8 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 1L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
364.1	MODESTO	PIASA	LIMESTONE	5.2	125.9
358.9	MODESTO		UNCLASSIFIED	1.1	131.1
357.8	CARBONDALE		UNCLASSIFIED	3.5	132.2
354.3	CARBONDALE	BANKSTON FORK	LIMESTONE	7.3	135.7
347.0	CARBONDALE	ANVIL ROCK	SANDSTONE	4.0	143.0
343.0	CARBONDALE		SHALE	2.7	147.0
340.3	CARBONDALE	BRERETON	LIMESTONE	3.0	149.7
337.3	CARBONDALE	ENERGY	SHALE	43.3	152.7
294.0	CARBONDALE	HERRIN	COAL	6.8	196.0

MAPID: 16301105000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 3 QUARTERS/FOOTAGES: NE NW NE

QUADRANGLE: LEBANON LONGITUDE: -89.860967 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.568618 DATE COLLECTED: 2 / 22 / 1950

SURFACE ELEVATION (FT.): 490.0 LOGGED (FT.): 206.8 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 1L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
490.0	PLEISTOCENE		CLAY	26.0	0.0	
464.0	PLEISTOCENE		SANDY CLAY	2.0	26.0	
462.0	PLEISTOCENE		CLAY	20.0	28.0	
442.0	PLEISTOCENE		UNCONSOLIDATED	3.0	48.0	BLUE
439.0	MODESTO		BLUE SHALE	32.0	51.0	
407.0	MODESTO		GRAY SHALE	3.7	83.0	
403.3	MODESTO		LIMESTONE	1.1	86.7	
402.2	MODESTO		GRAY SHALE	23.3	87.8	
379.0	MODESTO		LIMESTONE	0.2	111.0	
378.8	MODESTO		GRAY SHALE	2.6	111.2	
376.2	MODESTO		LIMESTONE	0.2	113.8	
376.1	MODESTO		GRAY SHALE	10.6	113.9	
365.5	MODESTO		LIMESTONE	1.4	124.5	
364.1	MODESTO		LIMESTONE	4.0	125.9	
360.1	MODESTO		LIMESTONE	0.5	129.9	
359.6	MODESTO		LIMESTONE	0.7	130.4	
358.9	MODESTO		SHALE	4.6	131.1	
354.3	MODESTO	PIASA	LIMESTONE	3.4	135.7	
350.9	MODESTO	PIASA	LIMESTONE	1.9	139.1	
349.0	MODESTO	PIASA	SANDY LIMESTONE	2.0	141.0	
347.0			SANDY SHALE	6.7	143.0	
340.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	149.7	
337.3	CARBONDALE	ENERGY	GRAY SHALE	42.8	152.7	
294.5	CARBONDALE		LIMESTONE	0.2	195.5	
294.3	CARBONDALE		CLAYSTONE & SILTSTONE	0.3	195.7	
294.0	CARBONDALE	HERRIN	COAL	6.8	196.0	
287.2	CARBONDALE		UNDERCLAY	4.0	202.8	

MAPID: 16301106000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 3 QUARTERS/FOOTAGES: NW NE NW

QUADRANGLE: LEBANON LONGITUDE: -89.868001 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.568748 DATE COLLECTED: 2 / 24 / 1950

SURFACE ELEVATION (FT.): 480.0 LOGGED (FT.): 243.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 2L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
480.0	PLEISTOCENE		CLAY	26.0	0.0	
454.0	PLEISTOCENE		UNCONSOLIDATED	16.0	26.0	BLU
438.0	PLEISTOCENE		BOULDER	1.0	42.0	LIME BLDR
437.0	PLEISTOCENE		UNCONSOLIDATED	3.0	43.0	GR
434.0			SHALE WITH LIMESTONE	2.5	46.0	
431.5			LIMESTONE	1.0	48.5	
430.5			LIMESTONE	3.5	49.5	GRAY
427.0			SANDY SHALE	34.0	53.0	
393.0			LIMESTONE	0.2	87.0	BR
392.8			GRAY SHALE	2.8	87.2	
390.0			LIMESTONE	0.3	90.0	
389.7			GRAY SHALE	0.3	90.3	
389.4			GRAY SHALE	6.4	90.6	
383.0			RED SHALE	3.0	97.0	
380.0			LIMESTONE	6.3	100.0	
373.7			LIMESTONE	5.6	106.3	
368.2			LIMESTONE	3.7	111.8	
364.5			LIMESTONE	2.9	115.5	
361.6	CARBONDALE	ENERGY	SANDY SHALE	8.0	118.4	
353.6	CARBONDALE	ENERGY	GRAY SHALE	6.6	126.4	
347.0	CARBONDALE	ENERGY	GRAY SHALE	41.0	133.0	
306.0	CARBONDALE	HERRIN	COAL	5.8	174.0	
300.2	CARBONDALE		UNDERCLAY	2.8	179.8	
297.5			LIMESTONE	3.5	182.5	
294.0			SANDY SHALE	16.5	186.0	
277.5			LIMESTONE	4.8	202.5	
272.7			RED SHALE	10.8	207.3	
262.0			GRAY SHALE	4.0	218.0	
258.0			RED SHALE	6.0	222.0	
252.0			GRAY SHALE	15.0	228.0	

MAPID: 16301106000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 3 QUARTERS/FOOTAGES: NW NE NW

QUADRANGLE: LEBANON LONGITUDE: -89.868001 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.568748 DATE COLLECTED:

SURFACE ELEVATION (FT.): 480.0 LOGGED (FT.): 179.8 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 2L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
380.1	MODESTO	PIASA	LIMESTONE	6.3	99.9
373.8	MODESTO		UNCLASSIFIED	1.5	106.2
372.3	CARBONDALE		UNCLASSIFIED	4.1	107.7
368.2	CARBONDALE	BANKSTON FORK	LIMESTONE	6.6	111.8
361.6	CARBONDALE	ANVIL ROCK	SANDSTONE	6.0	118.4
355.6	CARBONDALE	ENERGY	SHALE	49.6	124.4
306.0	CARBONDALE	HERRIN	COAL	5.8	174.0

MAPID: 16302763000C VERSION: 1

PROJECT: BLM

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 3 QUARTERS/FOOTAGES: NW NW NE SE

QUADRANGLE: LEBANON LONGITUDE: -89.859207 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 38.561931 DATE COLLECTED: 0 / 0 / 1966

SURFACE ELEVATION (FT.): 471.0 LOGGED (FT.): 545.0 LOG TYPE: Drillers Log

SOURCE: HAUDMIK DRILLING CO. WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
471.0			UNKNOWN	166.0	0.0
305.0	CARBONDALE	HERRIN	COAL	8.0	166.0
297.0			ROCK	36.0	174.0
261.0			SANDSTONE/SHALE	85.0	210.0
176.0			COAL	6.0	295.0
170.0			ROCK	244.0	301.0

MAPID: 16301107000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 4 QUARTERS/FOOTAGES: NE SW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.879587 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.558542 DATE COLLECTED: 3 / 24 / 1950

SURFACE ELEVATION (FT.): 522.0 LOGGED (FT.): 181.8 LOG TYPE: Drillers Log

SOURCE: ISGS 13L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
522.0	PLEISTOCENE		CLAY	44.8	0.0	
477.2	PLEISTOCENE		BOULDER	0.8	44.8	LIME BLDR
476.4	PLEISTOCENE		UNCONSOLIDATED	15.4	45.6	BLU
461.0	PLEISTOCENE		CLAY	12.0	61.0	
449.0	MODESTO		GRAY SHALE	25.2	73.0	
423.8	MODESTO		COAL	0.3	98.2	
423.5	MODESTO		UNDERCLAY	3.5	98.5	
420.0	MODESTO		SHALE	4.0	102.0	MIXED
416.0	MODESTO		SHALY LIMESTONE	1.5	106.0	
414.5	MODESTO		SHALE	2.5	107.5	MIXED
412.0	MODESTO	PIASA	LIMESTONE/CHERT	6.7	110.0	
405.3			RED SHALE	5.8	116.7	
399.5	CARBONDALE	BANKSTON FORK	LIMESTONE	0.5	122.5	
399.0	CARBONDALE	BANKSTON FORK	LIMESTONE/CHERT	5.0	123.0	
394.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	128.0	
390.5	CARBONDALE		SHALE	4.5	131.5	
386.0	CARBONDALE		LIMESTONE	2.0	136.0	
384.0	CARBONDALE	ENERGY	SHALE	5.0	138.0	MIXED
379.0	CARBONDALE	ENERGY	GRAY SHALE	30.7	143.0	
348.3	CARBONDALE	HERRIN	COAL	7.1	173.7	
341.2	CARBONDALE		UNDERCLAY	2.0	180.8	

MAPID: 16301107000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 4 QUARTERS/FOOTAGES: NE SW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.879587 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.558542 DATE COLLECTED:

SURFACE ELEVATION (FT.): 522.0 LOGGED (FT.): 180.1 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 13L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
412.7	MODESTO	PIASA	LIMESTONE	6.7	109.3
406.0	MODESTO		UNCLASSIFIED	1.5	116.0
404.5	CARBONDALE		UNCLASSIFIED	4.3	117.5
400.2	CARBONDALE	BANKSTON FORK	LIMESTONE	9.0	121.8
391.2	CARBONDALE	ANVIL ROCK	SANDSTONE	2.5	130.8
388.7	CARBONDALE		SHALE	2.0	133.3
386.7	CARBONDALE	BRERETON	LIMESTONE	2.0	135.3
384.7	CARBONDALE	ENERGY	SHALE	35.7	137.3
349.0	CARBONDALE	HERRIN	COAL	7.1	173.0

MAPID: 16301108000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 4 QUARTERS/FOOTAGES: SW SW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.88188 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.556771 DATE COLLECTED: 3 / 27 / 1950

SURFACE ELEVATION (FT.): 510.0 LOGGED (FT.): 155.5 LOG TYPE: Drillers Log

SOURCE: ISGS 14L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
510.0	PLEISTOCENE		CLAY	30.0	0.0	
480.0	PLEISTOCENE		SANDY CLAY	5.0	30.0	
475.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	13.2	35.0	BLU
461.8	PLEISTOCENE		BOULDER	0.5	48.2	LIME BLDR
461.3	PLEISTOCENE		CLAY, SAND & SILTSTONE	19.8	48.7	BLU
441.5			BOULDER	0.8	68.5	
440.7			SILT & SAND	51.7	69.3	BLU
389.0			LIMESTONE	0.3	121.0	
388.7			SHALE	0.8	121.3	
387.8			LIMESTONE	3.5	122.2	
384.3			SHALE	2.3	125.7	MIXED
382.0			LIMESTONE	4.6	128.0	
377.4			SHALE	0.3	132.6	
377.2	CARBONDALE	BRERETON	LIMESTONE	1.7	132.8	
375.5	CARBONDALE	ENERGY	GRAY SHALE	8.5	134.5	
367.0	CARBONDALE	ENERGY	GRAY SHALE	2.5	143.0	
364.5	CARBONDALE	HERRIN	COAL	8.4	145.5	
356.1	CARBONDALE		UNDERCLAY	1.6	153.9	

MAPID: 16301108000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 4 QUARTERS/FOOTAGES: SW SW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.88188 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.556771 DATE COLLECTED:

SURFACE ELEVATION (FT.): 510.0 LOGGED (FT.): 153.4 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 14L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
384.8	CARBONDALE	ANVIL ROCK	SANDSTONE	1.3	125.2	
383.5	CARBONDALE		SHALE	1.0	126.5	
382.5	CARBONDALE	BRERETON	LIMESTONE	6.5	127.5	
376.0	CARBONDALE	ENERGY	SHALE	11.0	134.0	
365.0	CARBONDALE	HERRIN	COAL	8.4	145.0	

MAPID: 16301109000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 4 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.891128 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.556966 DATE COLLECTED: 4 / 21 / 1950

SURFACE ELEVATION (FT.): 580.0 LOGGED (FT.): 215.5 LOG TYPE: Drillers Log

SOURCE: ISGS 22L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
580.0	PLEISTOCENE		SANDY CLAY	21.0	0.0	
559.0	PLEISTOCENE		SAND	23.0	21.0	
536.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	8.0	44.0	BLU
528.0	PLEISTOCENE		SANDY CLAY	11.0	52.0	
517.0	PLEISTOCENE		SAND	77.0	63.0	
440.0	PLEISTOCENE		SILT & SAND	31.7	140.0	BLU
408.3			LIMESTONE	3.8	171.7	
404.5			SOFT SHALE	3.5	175.5	
401.0			LIMESTONE	4.5	179.0	
396.5			SHALE WITH LIMESTONE	1.5	183.5	
395.0			LIMESTONE	4.2	185.0	
390.8			SHALE WITH LIMESTONE	1.2	189.2	
389.7			LIMESTONE	0.7	190.3	
389.0			SHALE WITH LIMESTONE	3.0	191.0	
386.0			LIMESTONE	2.6	194.0	
383.4	CARBONDALE	BRERETON	LIMESTONE	2.3	196.6	GRAY
381.2	CARBONDALE	BRERETON	LIMESTONE	3.7	198.8	GRAY
377.5	CARBONDALE	ANNA	BLACK SHALE	3.3	202.5	
374.2	CARBONDALE	HERRIN	COAL	0.6	205.8	COAL BALL
373.7	CARBONDALE	HERRIN	COAL	7.2	206.3	
366.5	CARBONDALE		UNDERCLAY	2.0	213.5	

MAPID: 16301109000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 4 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.891128 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.556966 DATE COLLECTED:

SURFACE ELEVATION (FT.): 580.0 LOGGED (FT.): 213.2 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 22L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
408.4	MODESTO	PIASA	LIMESTONE	3.8	171.6
404.6	MODESTO		UNCLASSIFIED	1.8	175.4
402.8	CARBONDALE		UNCLASSIFIED	6.3	177.2
396.5	CARBONDALE	BANKSTON FORK	LIMESTONE	7.5	183.5
389.0	CARBONDALE	ANVIL ROCK	SANDSTONE	1.5	191.0
387.5	CARBONDALE		SHALE	1.5	192.5
386.0	CARBONDALE	BRERETON	LIMESTONE	4.8	194.0
381.2	CARBONDALE	ENERGY	SHALE	7.2	198.8
374.0	CARBONDALE	HERRIN	COAL	7.2	206.0

MAPID: 16301110000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 4 QUARTERS/FOOTAGES: NE NE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.884269 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.562284 DATE COLLECTED: 3 / 29 / 1950

SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 200.5 LOG TYPE: Drillers Log

SOURCE: ISGS 15L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.0	PLEISTOCENE		CLAY	22.0	0.0	
538.0	PLEISTOCENE		SANDY CLAY	11.0	22.0	
527.0	PLEISTOCENE		BOULDER	0.6	33.0	LIME BLDR
526.4	PLEISTOCENE		CLAY, SAND & SILTSTONE	12.4	33.6	BLU
514.0	PLEISTOCENE		SAND	7.0	46.0	
507.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	10.0	53.0	BLU
497.0	PLEISTOCENE		SAND	10.0	63.0	
487.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	56.0	73.0	BLU
431.0			LIMESTONE	6.5	129.0	
424.5			SHALE	7.3	135.5	MIXED
417.2			LIMESTONE	10.3	142.8	
407.0			GRAY SHALE	4.0	153.0	
403.0			LIMESTONE	2.5	157.0	
400.5			LIMESTONE	2.9	159.5	
397.6			GRAY SHALE	27.1	162.4	
370.5			LIMESTONE	0.4	189.5	
370.1			GRAY SHALE	0.8	189.9	
369.2			LIMESTONE	0.8	190.8	
368.4			SHALE	0.6	191.6	
367.8	CARBONDALE	ANNA	BLACK SHALE	0.8	192.2	
367.0	CARBONDALE	HERRIN	COAL	6.6	193.0	
360.4	CARBONDALE		UNDERCLAY	0.9	199.6	

MAPID: 1630111000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 4 QUARTERS/FOOTAGES: NE NE SW
 QUADRANGLE: O'FALLON LONGITUDE: -89.884269 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.562284 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 199.6 LOG TYPE: Drillers Log
 SOURCE: PERRY COAL CO. 15L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
431.8	MODESTO	PIASA	LIMESTONE	6.5	128.2
425.3	MODESTO		UNCLASSIFIED	2.0	134.7
423.3	CARBONDALE		UNCLASSIFIED	5.2	136.7
418.1	CARBONDALE	BANKSTON FORK	LIMESTONE	10.3	141.9
407.8	CARBONDALE	ANVIL ROCK	SANDSTONE	2.0	152.2
405.8	CARBONDALE		SHALE	2.0	154.2
403.8	CARBONDALE	BRERETON	LIMESTONE	5.4	156.2
398.4	CARBONDALE	ANNA	BLACK SHALE	0.8	161.6
397.6	CARBONDALE	ENERGY	SHALE	30.6	162.4
367.0	CARBONDALE	HERRIN	COAL	6.6	193.0

MAPID: 1630111000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 4 QUARTERS/FOOTAGES: NE NW SW
 QUADRANGLE: O'FALLON LONGITUDE: -89.888911 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.562382 DATE COLLECTED: 4 / 5 / 1950
 SURFACE ELEVATION (FT.): 580.0 LOGGED (FT.): 213.0 LOG TYPE: Drillers Log
 SOURCE: ISGS 17L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
580.0	PLEISTOCENE		CLAY	25.0	0.0
555.0	PLEISTOCENE		SANDY CLAY	3.0	25.0
552.0	PLEISTOCENE		SAND	20.0	28.0 YL
532.0	PLEISTOCENE		SANDY CLAY	6.0	48.0
526.0	PLEISTOCENE		SAND	109.0	54.0 BLU
417.0	PLEISTOCENE		CLAY	28.0	163.0 BLU
389.0	CARBONDALE	ENERGY	GRAY SHALE	13.2	191.0
375.8	CARBONDALE	HERRIN	COAL	7.8	204.2
368.0	CARBONDALE		UNDERCLAY	1.0	212.0 FINE UCLY

MAPID: 16301111000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 4 QUARTERS/FOOTAGES: NE NW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.888911 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.562382 DATE COLLECTED:

SURFACE ELEVATION (FT.): 580.0 LOGGED (FT.): 191.8 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 17L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
437.2	CARBONDALE	ENERGY	SHALE	41.2	142.8	
396.0	CARBONDALE	HERRIN	COAL	7.8	184.0	

MAPID: 16301112000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 4 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: LEBANON LONGITUDE: -89.874978 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.562089 DATE COLLECTED:

SURFACE ELEVATION (FT.): 492.0 LOGGED (FT.): 163.4 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 4L WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
403.0	MODESTO	PIASA	LIMESTONE	6.5	89.0	
396.5	CARBONDALE		SHALE & SANDSTONE	6.8	95.5	
389.7	CARBONDALE	BANKSTON FORK	LIMESTONE	8.3	102.3	
381.5	CARBONDALE	LAWSON	LIMESTONE W/ SHALE	4.2	110.5	
377.3	CARBONDALE	BRERETON	LIMESTONE	0.9	114.7	
376.4	CARBONDALE	ENERGY	GRAY SHALE	41.2	115.6	
335.0	CARBONDALE	HERRIN	COAL	6.4	157.0	

MAPID: 16301112000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 4 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: LEBANON LONGITUDE: -89.874978 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.562089 DATE COLLECTED:

SURFACE ELEVATION (FT.): 490.0 LOGGED (FT.): 163.4 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 4L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
400.8	MODESTO	PIASA	LIMESTONE	6.5	89.2
394.3	MODESTO		UNCLASSIFIED	2.5	95.7
391.8	CARBONDALE		UNCLASSIFIED	4.2	98.2
387.6	CARBONDALE	BANKSTON FORK	LIMESTONE	10.8	102.4
376.8	CARBONDALE	ANVIL ROCK	SANDSTONE	1.7	113.2
375.1	CARBONDALE	CONANT	LIMESTONE	0.9	114.9
374.2	CARBONDALE	ENERGY	SHALE	41.2	115.8
333.0	CARBONDALE	HERRIN	COAL	6.4	157.0

MAPID: 16301112000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 4 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: LEBANON LONGITUDE: -89.874978 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.562089 DATE COLLECTED: 3 / 4 / 1950

SURFACE ELEVATION (FT.): 492.0 LOGGED (FT.): 200.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 4L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
492.0	PLEISTOCENE		CLAY	13.0	0.0	
479.0	PLEISTOCENE		UNCONSOLIDATED	10.0	13.0	BLUE
469.0	PLEISTOCENE		SANDY CLAY	10.0	23.0	
459.0	PLEISTOCENE		CLAY	2.5	33.0	
456.5			LIMESTONE	1.0	35.5	
455.5			LIMESTONE	5.7	36.5	GRAY
449.8			GRAY SHALE	9.8	42.2	
440.0			GRAY SHALE	25.0	52.0	
415.0			LIMESTONE	0.2	77.0	GRAY
414.8			COAL	0.5	77.2	
414.3			UNDERCLAY	3.3	77.7	
411.0			GRAY SHALE	4.0	81.0	
407.0			RED SHALE	4.0	85.0	
403.0			LIMESTONE	6.5	89.0	
396.5			RED SHALE	2.5	95.5	
394.0			SHALE	4.3	98.0	MIXED
389.7	MODESTO	PIASA	LIMESTONE	5.0	102.3	
384.7	MODESTO	PIASA	LIMESTONE	3.3	107.3	
381.5	CARBONDALE		SHALE WITH LIMESTONE	2.5	110.5	
379.0	CARBONDALE		SHALE	1.7	113.0	
377.3	CARBONDALE	BANKSTON FORK	LIMESTONE	0.9	114.7	
376.4	CARBONDALE	ENERGY	SHALE	2.4	115.6	
374.0	CARBONDALE	ENERGY	GRAY SHALE	38.8	118.0	
335.2	CARBONDALE	ENERGY	COAL	6.4	156.8	
328.8	CARBONDALE		UNDERCLAY	3.4	163.2	
325.4	CARBONDALE		LIMESTONE	3.3	166.6	
322.1	CARBONDALE		GRAY SHALE	6.3	169.9	
315.8	CARBONDALE		LIMESTONE	1.3	176.2	
314.5	CARBONDALE		GRAY SHALE	8.8	177.5	
305.7	CARBONDALE		SANDY LIMESTONE	3.8	186.3	GRAY
301.8	CARBONDALE		GRAY SHALE	1.6	190.2	
300.2	CARBONDALE		SHALE	2.0	191.8	
298.2	CARBONDALE		UNDERCLAY	6.3	193.8	

MAPID: 16301113000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 4 QUARTERS/FOOTAGES: SE NE NE

QUADRANGLE: LEBANON LONGITUDE: -89.875017 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.567555 DATE COLLECTED: 3 / 0 / 1950

SURFACE ELEVATION (FT.): 518.0 LOGGED (FT.): 171.5 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 16L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
518.0	PLEISTOCENE		CLAY	23.0	0.0	
495.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	8.0	23.0	BLU
487.0	PLEISTOCENE		SAND & GRAVEL	8.0	31.0	
479.0			SANDY SHALE	14.0	39.0	
465.0			GRAY SHALE	35.0	53.0	
430.0			SHALE	3.0	88.0	MIXED
427.0			RED SHALE	3.5	91.0	
423.5			LIMESTONE	4.3	94.5	
419.2			LIMESTONE	1.3	98.8	
418.0			SHALE	2.5	100.0	MIXED
415.5			RED SHALE	2.3	102.5	
413.2	MODESTO	PIASA	LIMESTONE	10.2	104.8	
403.0	CARBONDALE	ENERGY	GRAY SHALE	47.0	115.0	
356.0	CARBONDALE	HERRIN	COAL	7.0	162.0	
387.2	CARBONDALE	ENERGY	GRAY SHALE	31.3	130.8	
356.0	CARBONDALE	HERRIN	COAL	7.0	162.0	
349.0	CARBONDALE		UNDERCLAY	2.5	169.0	

MAPID: 16301113000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 4 QUARTERS/FOOTAGES: SE NE NE

QUADRANGLE: LEBANON LONGITUDE: -89.875017 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.567555 DATE COLLECTED:

SURFACE ELEVATION (FT.): 518.0 LOGGED (FT.): 169.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 16L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
423.6	MODESTO	PIASA	LIMESTONE	4.3	94.4	
419.3	MODESTO		UNCLASSIFIED	1.3	98.7	
418.0	CARBONDALE		UNCLASSIFIED	4.8	100.0	
413.2	CARBONDALE	BANKSTON FORK	LIMESTONE	10.2	104.8	
403.0			SHALE	8.0	115.0	
395.0			SHALE	7.5	123.0	
387.5			LIMESTONE	0.3	130.5	

MAPID: 16301114000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 5 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.895755 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.556998 DATE COLLECTED: 3 / 5 / 1951

SURFACE ELEVATION (FT.): 641.0 LOGGED (FT.): 254.0 LOG TYPE: Drillers Log

SOURCE: ISGS 55L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
641.0	PLEISTOCENE		CLAY	20.0	0.0	
621.0	PLEISTOCENE		SAND	5.0	20.0	
616.0	PLEISTOCENE		SAND/CLAY	115.0	25.0	
501.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	60.0	140.0	BLUE
441.0			SHALE	17.0	200.0	
424.0			LIMESTONE W/ SHALE	6.0	217.0	
418.0			SHALE	3.3	223.0	
414.7			LIMESTONE	5.2	226.3	
409.6			SHALE WITH LIMESTONE	9.8	231.4	
399.7			LIMESTONE	13.3	241.3	

MAPID: 16301115000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 5 QUARTERS/FOOTAGES: SW SW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.900379 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.557004 DATE COLLECTED: 12 / 7 / 1950

SURFACE ELEVATION (FT.): 643.0 LOGGED (FT.): 273.0 LOG TYPE: Drillers Log

SOURCE: ISGS 47L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
643.0	PLEISTOCENE		CLAY	25.0	0.0	
618.0	PLEISTOCENE		SAND & GRAVEL	6.0	25.0	
612.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	12.0	31.0	BLU
600.0	PLEISTOCENE		SAND	181.5	43.0	
418.5			LIMESTONE	18.5	224.5	
400.0			GRAY SHALE	6.0	243.0	
394.0			LIMESTONE	6.0	249.0	
388.0			SHALE	1.3	255.0	
386.7			LIMESTONE	0.4	256.3	
386.2			SHALE	2.8	256.8	
383.5	CARBONDALE	BRERETON	LIMESTONE	7.0	259.5	
376.5	CARBONDALE	ANNA	BLACK SHALE	4.3	266.5	
372.2	CARBONDALE	HERRIN	COAL	2.3	270.8	

MAPID: 16301115000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 5 QUARTERS/FOOTAGES: SW SW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.900379 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.557004 DATE COLLECTED:

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 0.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 47L WELL TYPE: Coal Test

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
-	MODESTO	PIASA	LIMESTONE	6.5	
-	MODESTO		UNCLASSIFIED	1.5	
-	CARBONDALE		UNCLASSIFIED	4.5	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	7.8	
-	CARBONDALE	ANVIL ROCK	SANDSTONE	1.4	
-	CARBONDALE		SHALE	1.3	
-	CARBONDALE	BRERETON	LIMESTONE	7.0	
-	CARBONDALE	ANNA	BLACK SHALE	4.3	

MAPID: 16301116000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 5 QUARTERS/FOOTAGES: SW NE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.895818 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.560642 DATE COLLECTED: 4 / 9 / 1950

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 284.5 LOG TYPE: Drillers Log

SOURCE: ISGS 18L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
655.0	PLEISTOCENE		CLAY	13.0	0.0	
642.0	PLEISTOCENE		SANDY CLAY	10.0	13.0	
632.0	PLEISTOCENE		SAND	10.0	23.0	
622.0	PLEISTOCENE		SAND/CLAY	12.0	33.0	
610.0	PLEISTOCENE		SILT & SAND	35.0	45.0	BLU
575.0	PLEISTOCENE		CLAY	6.0	80.0	BLU
569.0	PLEISTOCENE		SAND	129.0	86.0	
440.0	PLEISTOCENE		BOULDER	0.4	215.0	LIME BLDR
439.6	PLEISTOCENE		SAND	14.8	215.4	
424.8			LIMESTONE	9.3	230.2	
415.5			SHALE	3.5	239.5	
412.0			LIMESTONE	3.0	243.0	
409.0			SHALE	2.0	246.0	
407.0			LIMESTONE	0.8	248.0	
406.2			SHALE	0.4	248.8	
405.8			LIMESTONE	1.8	249.2	
404.0			LIMESTONE W/ SHALE	6.0	251.0	
398.0			LIMESTONE	13.5	257.0	
384.5	CARBONDALE	HERRIN	COAL	7.3	270.5	
377.2	CARBONDALE		UNDERCLAY	6.7	277.8	

MAPID: 16301116000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 5 QUARTERS/FOOTAGES: SW NE SE
 QUADRANGLE: O'FALLON LONGITUDE: -89.895818 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.560642 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 277.3 LOG TYPE: Drillers Log
 SOURCE: PERRY COAL CO. 18L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
425.3	MODESTO	PIASA	LIMESTONE	9.3	229.7
416.0	MODESTO		UNCLASSIFIED	1.0	239.0
415.0	CARBONDALE		UNCLASSIFIED	2.5	240.0
412.5	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	242.5
404.5	CARBONDALE	ANVIL ROCK	SANDSTONE	3.0	250.5
401.5	CARBONDALE	CONANT	LIMESTONE	0.5	253.5
401.0	CARBONDALE		SHALE	2.5	254.0
398.5	CARBONDALE	BRERETON	LIMESTONE	13.5	256.5
385.0	CARBONDALE	HERRIN	COAL	7.3	270.0

MAPID: 16301117000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 5 QUARTERS/FOOTAGES: NW NW SE
 QUADRANGLE: O'FALLON LONGITUDE: -89.900455 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.56247 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 255.5 LOG TYPE: Drillers Log
 SOURCE: ISGS 54L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
650.0	PLEISTOCENE		CLAY	26.0	0.0
624.0	PLEISTOCENE		SAND	10.0	26.0
614.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	5.0	36.0 BLU
609.0	PLEISTOCENE		SAND	12.0	41.0
597.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	180.0	53.0 BLU
417.0			SHALE WITH LIMESTONE	3.8	233.0
413.2			LIMESTONE	3.6	236.8
409.6			BLACK SHALE	3.6	240.4
406.0			HARD SHALE	2.5	244.0
403.5			LIMESTONE	1.0	246.5
402.5	CARBONDALE	HERRIN	COAL	7.4	247.5
395.1	CARBONDALE		UNDERCLAY	0.6	254.9

MAPID: 16301117000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 5 QUARTERS/FOOTAGES: NW NW SE
 QUADRANGLE: O'FALLON LONGITUDE: -89.900455 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.56247 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 254.4 LOG TYPE: Drillers Log
 SOURCE: PERRY COAL CO. 54L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
417.5	CARBONDALE	ANVIL ROCK	SANDSTONE	1.5	232.5	
416.0	CARBONDALE	CONANT	LIMESTONE	0.8	234.0	
415.2	CARBONDALE		SHALE	1.5	234.8	
413.7	CARBONDALE	BRERETON	LIMESTONE	7.2	236.3	
406.5	CARBONDALE	ANNA	BLACK SHALE	3.5	243.5	
403.0	CARBONDALE	HERRIN	COAL	7.4	247.0	

MAPID: 16301118000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 5 QUARTERS/FOOTAGES: NE SW NW
 QUADRANGLE: O'FALLON LONGITUDE: -89.9074 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.566123 DATE COLLECTED: 2 / 16 / 1948
 SURFACE ELEVATION (FT.): 611.0 LOGGED (FT.): 236.5 LOG TYPE: Drillers Log
 SOURCE: ISGS 2W WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
611.0	PLEISTOCENE		CLAY	22.0	0.0	
589.0	PLEISTOCENE		SAND & GRAVEL	12.0	22.0	
577.0	PLEISTOCENE		SANDY CLAY	10.0	34.0	
567.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	60.0	44.0	BLU
507.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	63.5	104.0	BLU
443.5			LIMESTONE	2.5	167.5	
441.0			RED SHALE	6.0	170.0	
435.0			LIMESTONE	8.0	176.0	
427.0			SHALY LIMESTONE	7.0	184.0	
420.0			BLACK SHALE	5.0	191.0	
415.0	CARBONDALE	BRERETON	LIMESTONE	6.0	196.0	
409.0	CARBONDALE	ANNA	BLACK SHALE	3.0	202.0	
406.0	CARBONDALE	HERRIN	COAL	7.0	205.0	
399.0	CARBONDALE		UNDERCLAY	3.5	212.0	
395.5	CARBONDALE		LIMESTONE	4.5	215.5	
391.0	CARBONDALE		SHALE	7.0	220.0	
384.0	CARBONDALE		LIMESTONE	1.5	227.0	
382.5	CARBONDALE		SHALE	6.0	228.5	
376.5	CARBONDALE		LIMESTONE	2.0	234.5	

MAPID: 16301118000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 5 QUARTERS/FOOTAGES: NE SW NW
 QUADRANGLE: O'FALLON LONGITUDE: -89.9074 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.566123 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 615.0 LOGGED (FT.): 216.0 LOG TYPE: Drillers Log
 SOURCE: PERRY COAL CO. 2W WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
443.5	MODESTO	PIASA	LIMESTONE	2.5	171.5
441.0	MODESTO		UNCLASSIFIED	1.5	174.0
439.5	CARBONDALE		UNCLASSIFIED	4.5	175.5
435.0	CARBONDALE	BANKSTON FORK	LIMESTONE	10.0	180.0
425.0	CARBONDALE	ANVIL ROCK	SANDSTONE	4.0	190.0
421.0	CARBONDALE	CONANT	LIMESTONE	1.0	194.0
420.0	CARBONDALE		SHALE	2.0	195.0
418.0	CARBONDALE	BRERETON	LIMESTONE	9.0	197.0
409.0	CARBONDALE	ANNA	BLACK SHALE	3.0	206.0
406.0	CARBONDALE	HERRIN	COAL	7.0	209.0

MAPID: 16301119000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 5 QUARTERS/FOOTAGES: NE SE NE
 QUADRANGLE: O'FALLON LONGITUDE: -89.893619 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.566102 DATE COLLECTED: 3 / 9 / 1951
 SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 236.0 LOG TYPE: Drillers Log
 SOURCE: ISGS 56L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
630.0	PLEISTOCENE		CLAY	19.0	0.0
611.0	PLEISTOCENE		SAND & GRAVEL	16.0	19.0
595.0	PLEISTOCENE		SANDY CLAY	26.0	35.0
569.0	PLEISTOCENE		SAND	27.0	61.0
542.0	PLEISTOCENE		SANDY CLAY	32.0	88.0
510.0	PLEISTOCENE		SAND	49.0	120.0
461.0	PLEISTOCENE		SILT & SAND	61.0	169.0 BLU
400.0	CARBONDALE	HERRIN	COAL	4.3	230.0
395.7	CARBONDALE		UNDERCLAY	1.3	234.3
394.5	CARBONDALE		LIMESTONE	0.5	235.5

MAPID: 16301119000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 5 QUARTERS/FOOTAGES: NE SE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.893619 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.566102 DATE COLLECTED:

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 234.3 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 56L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
400.0	CARBONDALE	HERRIN	COAL	4.3	230.0	

MAPID: 16301126000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 5 QUARTERS/FOOTAGES: SE SW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.907382 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.564301 DATE COLLECTED: 2 / 20 / 1952

SURFACE ELEVATION (FT.): 580.0 LOGGED (FT.): 201.5 LOG TYPE: Drillers Log

SOURCE: ISGS 62L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
580.0	PLEISTOCENE		CLAY	47.0	0.0	BLU
533.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	10.0	47.0	BLU
523.0	PLEISTOCENE		SAND	79.0	57.0	
444.0	PLEISTOCENE		SILT & SAND	25.5	136.0	
418.5			LIMESTONE	23.5	161.5	
395.0	CARBONDALE	ANNA	BLACK SHALE	5.0	185.0	
390.0	CARBONDALE	HERRIN	COAL	8.0	190.0	
382.0	CARBONDALE		UNDERCLAY	3.5	198.0	

MAPID: 16301126000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 5 QUARTERS/FOOTAGES: SE SW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.907382 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.564301 DATE COLLECTED:

SURFACE ELEVATION (FT.): 580.0 LOGGED (FT.): 198.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 62L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
418.5	CARBONDALE	BRERETON	LIMESTONE	23.5	161.5	
395.0	CARBONDALE	ANNA	BLACK SHALE	5.0	185.0	
390.0	CARBONDALE	HERRIN	COAL	8.0	190.0	

MAPID: 16301127000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 5 QUARTERS/FOOTAGES: NE SE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.902713 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.558829 DATE COLLECTED: 2 / 27 / 1952

SURFACE ELEVATION (FT.): 631.0 LOGGED (FT.): 209.0 LOG TYPE: Drillers Log

SOURCE: ISGS 63L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
631.0	PLEISTOCENE		SANDY CLAY	5.0	0.0	
626.0	PLEISTOCENE		SAND	163.0	5.0	
463.0			LIMESTONE	19.8	168.0	
443.2			SHALE	3.0	187.8	
440.2			LIMESTONE	18.3	190.8	

MAPID: 16301201000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 5 QUARTERS/FOOTAGES: SW NE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.895818 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.560642 DATE COLLECTED:

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 283.6 LOG TYPE: Drillers Log

SOURCE: ISGS 21L WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
425.0	MODESTO	PIASA	LIMESTONE	4.2	230.0	
420.8	CARBONDALE		GRAY SHALE	6.7	234.2	
414.2	CARBONDALE	BANKSTON FORK	LIMESTONE	11.6	240.8	
402.6	CARBONDALE	LAWSON	SHALE	2.3	252.4	
400.3	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	5.2	254.7	
395.1	CARBONDALE		SHALE	0.8	259.9	
394.3	CARBONDALE	BRERETON	LIMESTONE	11.0	260.7	
383.3	CARBONDALE	ANNA	BLACK SHALE	4.3	271.7	
379.0	CARBONDALE	HERRIN	COAL	7.6	276.0	

MAPID: 16301201000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 5 QUARTERS/FOOTAGES: SW NE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.895818 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.560642 DATE COLLECTED:

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 282.6 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 21L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
425.9	MODESTO	PIASA	LIMESTONE	4.1	229.1
421.8	MODESTO		UNCLASSIFIED	2.0	233.2
419.8	CARBONDALE		UNCLASSIFIED	4.7	235.2
415.1	CARBONDALE	BANKSTON FORK	LIMESTONE	11.6	239.9
403.5	CARBONDALE	ANVIL ROCK	SANDSTONE	4.3	251.5
399.2	CARBONDALE	CONANT	LIMESTONE	0.9	255.8
398.3	CARBONDALE		SHALE	3.0	256.7
395.3	CARBONDALE	BRERETON	LIMESTONE	11.0	259.7
384.3	CARBONDALE	ANNA	BLACK SHALE	4.3	270.7
380.0	CARBONDALE	HERRIN	COAL	7.6	275.0

MAPID: 16301201000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 5 QUARTERS/FOOTAGES: SW NE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.895818 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.560642 DATE COLLECTED: 4 / 18 / 1950

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 285.5 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 21L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
655.0	PLEISTOCENE		CLAY	28.0	0.0	
627.0	PLEISTOCENE		SAND	6.0	28.0	
621.0	PLEISTOCENE		CLAY	3.0	34.0	
618.0	PLEISTOCENE		SAND	12.0	37.0	
606.0	PLEISTOCENE		UNCONSOLIDATED	6.0	49.0	BLUE
600.0	PLEISTOCENE		SAND	11.0	55.0	
589.0	PLEISTOCENE		SILT & SAND	2.0	66.0	BLUE
587.0	PLEISTOCENE		SAND	111.7	68.0	
475.3	PLEISTOCENE		SANDY CLAY	1.0	179.7	
474.3	PLEISTOCENE		SAND	42.3	180.7	
432.0	PLEISTOCENE		BOULDER	1.5	223.0	LIME BLDR
430.5	PLEISTOCENE		SAND/CLAY	5.2	224.5	
425.3			LIMESTONE	4.1	229.7	
421.2			GRAY SHALE	6.7	233.8	
414.6			LIMESTONE	2.6	240.4	
412.0			LIMESTONE	1.3	243.0	
410.7			LIMESTONE	7.7	244.3	
403.0			SHALE	2.3	252.0	
400.7			LIMESTONE	5.2	254.3	
395.5			SHALE	0.8	259.5	
394.7			LIMESTONE	5.8	260.3	
389.0			LIMESTONE	5.3	266.0	GRAY
383.7	CARBONDALE	ANNA	BLACK SHALE	4.3	271.3	
379.5	CARBONDALE	HERRIN	COAL	7.6	275.5	
371.9	CARBONDALE		UNDERCLAY	2.3	283.1	FINE

MAPID: 16301120000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 6 QUARTERS/FOOTAGES: NE SW NE

QUADRANGLE: O'FALLON LONGITUDE: -89.916528 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.566049 DATE COLLECTED: 12 / 11 / 1951

SURFACE ELEVATION (FT.): 552.0 LOGGED (FT.): 174.0 LOG TYPE: Drillers Log

SOURCE: ISGS 58L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
552.0	PLEISTOCENE		CLAY	18.0	0.0	
534.0	PLEISTOCENE		UNCONSOLIDATED	12.0	18.0	BLU
522.0	PLEISTOCENE		SAND	13.0	30.0	
509.0	PLEISTOCENE		SILT & SAND	10.0	43.0	BLU
499.0	PLEISTOCENE		SILT & SAND	50.5	53.0	BLU
448.5			LIMESTONE	3.3	103.5	
445.2			SHALE	6.9	106.8	
438.3			LIMESTONE	9.3	113.7	
429.0			SHALE	8.5	123.0	
420.5			LIMESTONE	3.5	131.5	
417.0			SHALE	0.5	135.0	
416.5			LIMESTONE	26.5	135.5	
390.0	CARBONDALE	HERRIN	COAL	7.0	162.0	
383.0	CARBONDALE		UNDERCLAY	5.0	169.0	

MAPID: 16301120000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 6 QUARTERS/FOOTAGES: NE SW NE

QUADRANGLE: O'FALLON LONGITUDE: -89.916528 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.566049 DATE COLLECTED:

SURFACE ELEVATION (FT.): 552.0 LOGGED (FT.): 169.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 58L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
448.5	MODESTO	PIASA	LIMESTONE	3.3	103.5	
445.2	MODESTO		UNCLASSIFIED	2.0	106.8	
443.2	CARBONDALE		UNCLASSIFIED	4.9	108.8	
438.3	CARBONDALE	BANKSTON FORK	LIMESTONE	9.3	113.7	
429.0	CARBONDALE	ANVIL ROCK	SANDSTONE	8.5	123.0	
420.5	CARBONDALE	CONANT	LIMESTONE	3.5	131.5	
417.0	CARBONDALE		SHALE	0.5	135.0	
416.5	CARBONDALE	BRERETON	LIMESTONE	26.5	135.5	
390.0	CARBONDALE	HERRIN	COAL	7.0	162.0	

MAPID: 16301121000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 6 QUARTERS/FOOTAGES: SE SW NE

QUADRANGLE: O'FALLON LONGITUDE: -89.916514

GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.56423

DATE COLLECTED: 2 / 14 / 1952

SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 189.0

LOG TYPE: Drillers Log

SOURCE: ISGS 61L

WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.0	PLEISTOCENE		CLAY	20.0	0.0	
540.0	PLEISTOCENE		UNCONSOLIDATED	13.0	20.0	BLU
527.0	PLEISTOCENE		SAND	14.0	33.0	
513.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	62.0	47.0	BLU
451.0			LIMESTONE	1.3	109.0	
449.7			LIMESTONE	4.8	110.3	
445.0			SHALE	7.3	115.0	MIXED
437.7			LIMESTONE	16.0	122.3	
421.7			SHALE	4.0	138.3	
417.7			LIMESTONE	6.5	142.3	
411.2			SHALE	0.5	148.8	
410.7			LIMESTONE	20.8	149.3	
372.0	CARBONDALE		UNDERCLAY & LIMESTONE	1.0	188.0	

MAPID: 16301121000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 6 QUARTERS/FOOTAGES: SE SW NE

QUADRANGLE: O'FALLON LONGITUDE: -89.916514

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.56423

DATE COLLECTED:

SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 183.0

LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 61L

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
454.8	MODESTO	PIASA	LIMESTONE	4.8	105.2	
450.0	MODESTO		UNCLASSIFIED	2.0	110.0	
448.0	CARBONDALE		UNCLASSIFIED	5.2	112.0	
442.8	CARBONDALE	BANKSTON FORK	LIMESTONE	16.0	117.2	
426.8	CARBONDALE	ANVIL ROCK	SANDSTONE	3.0	133.2	
423.8	CARBONDALE		SHALE	1.0	136.2	
422.8	CARBONDALE	BRERETON	LIMESTONE	27.8	137.2	
395.0	CARBONDALE	ANNA	BLACK SHALE	5.0	165.0	
390.0	CARBONDALE	ENERGY	SHALE	5.0	170.0	
385.0	CARBONDALE	HERRIN	COAL	8.0	175.0	
377.0	CARBONDALE		UNDERCLAY	5.0	183.0	

MAPID: 16301122000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 6 QUARTERS/FOOTAGES: SE SW NE

QUADRANGLE: O'FALLON LONGITUDE: -89.916514 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.56423 DATE COLLECTED:

SURFACE ELEVATION (FT.): 551.0 LOGGED (FT.): 171.5 LOG TYPE: Drillers Log

SOURCE: ISGS 60L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
551.0	PLEISTOCENE		CLAY	18.0	0.0	
533.0	PLEISTOCENE		UNCONSOLIDATED	10.0	18.0	BLU
523.0	PLEISTOCENE		SAND	12.0	28.0	
511.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	64.0	40.0	BLU
447.0			LIMESTONE	3.0	104.0	
444.0			SHALE	7.0	107.0	MIXED
437.0			LIMESTONE	10.0	114.0	
427.0			LIMESTONE	2.0	124.0	
425.0			SHALE	6.5	126.0	
418.5			LIMESTONE	31.5	132.5	
387.0	CARBONDALE	HERRIN	COAL	7.5	164.0	

MAPID: 16301122000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 6 QUARTERS/FOOTAGES: SE SW NE

QUADRANGLE: O'FALLON LONGITUDE: -89.916514 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.56423 DATE COLLECTED:

SURFACE ELEVATION (FT.): 551.0 LOGGED (FT.): 171.5 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 60L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
447.0	MODESTO	PIASA	LIMESTONE	3.0	104.0	
444.0	MODESTO		UNCLASSIFIED	2.0	107.0	
442.0	CARBONDALE		UNCLASSIFIED	5.0	109.0	
437.0	CARBONDALE	BANKSTON FORK	LIMESTONE	12.0	114.0	
425.0	CARBONDALE	ANVIL ROCK	SANDSTONE	4.5	126.0	
420.5	CARBONDALE		SHALE	2.0	130.5	
418.5	CARBONDALE	BRERETON	LIMESTONE	31.5	132.5	
387.0	CARBONDALE	HERRIN	COAL	7.5	164.0	

MAPID: 16301123000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 6 QUARTERS/FOOTAGES: 330' N line, 1650' W line

QUADRANGLE: O'FALLON LONGITUDE: -89.92325 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.569407 DATE COLLECTED:

SURFACE ELEVATION (FT.): 580.0 LOGGED (FT.): 200.5 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 57L WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
426.0	MODESTO	PIASA	LIMESTONE	3.8	154.0
422.2	CARBONDALE		LIMESTONE W/ SHALE	5.0	157.8
417.2	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	11.3	162.8
405.9	CARBONDALE	LAWSON	LIMESTONE W/ SHALE	2.7	174.1
403.2	CARBONDALE	BRERETON	LIMESTONE	10.8	176.8
392.5	CARBONDALE	ANNA	BLACK SHALE	4.8	187.5
387.0	CARBONDALE	HERRIN	COAL	7.5	193.0

MAPID: 16301123000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 6 QUARTERS/FOOTAGES: 330' N line, 1650' W line

QUADRANGLE: O'FALLON LONGITUDE: -89.92325 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.569407 DATE COLLECTED:

SURFACE ELEVATION (FT.): 580.0 LOGGED (FT.): 199.5 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 57L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
426.4	MODESTO	PIASA	LIMESTONE	2.8	153.6
423.6	MODESTO		UNCLASSIFIED	1.0	156.4
422.6	CARBONDALE		UNCLASSIFIED	5.0	157.4
417.6	CARBONDALE	BANKSTON FORK	LIMESTONE	11.3	162.4
406.3	CARBONDALE	ANVIL ROCK	SANDSTONE	1.0	173.7
405.3	CARBONDALE	CONANT	LIMESTONE	0.7	174.7
404.6	CARBONDALE		SHALE	1.0	175.4
403.6	CARBONDALE	BRERETON	LIMESTONE	10.8	176.4
392.8	CARBONDALE	ANNA	BLACK SHALE	4.8	187.2
388.0	CARBONDALE	HERRIN	COAL	7.5	192.0

MAPID: 16301123000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 6 QUARTERS/FOOTAGES: 330' N line, 1650' W line
 QUADRANGLE: O'FALLON LONGITUDE: -89.92325 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.569407 DATE COLLECTED: 12 / 6 / 1951
 SURFACE ELEVATION (FT.): 580.0 LOGGED (FT.): 204.0 LOG TYPE: Drillers Log
 SOURCE: PERRY COAL CO. 57L WELL TYPE:
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
580.0	PLEISTOCENE		CLAY	32.0	0.0	
548.0	PLEISTOCENE		UNCONSOLIDATED	122.3	32.0	BLUE
425.7			LIMESTONE	2.8	154.3	
423.0			LIMESTONE	1.0	157.0	
422.0			LIMESTONE W/ SHALE	5.0	158.0	
417.0			LIMESTONE	11.3	163.0	
405.7			SHALE WITH LIMESTONE	2.7	174.3	
403.0			LIMESTONE	10.8	177.0	
392.2	CARBONDALE	ANNA	BLACK SHALE	4.8	187.8	
387.5	CARBONDALE	HERRIN	COAL	7.5	192.5	
380.0	CARBONDALE		UNDERCLAY	4.0	200.0	

MAPID: 16301124000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 6 QUARTERS/FOOTAGES: SW SE NE
 QUADRANGLE: O'FALLON LONGITUDE: -89.914242 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.56426 DATE COLLECTED: 12 / 24 / 1951
 SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 191.0 LOG TYPE: Drillers Log
 SOURCE: ISGS 59L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.0	PLEISTOCENE		CLAY	19.0	0.0	
541.0	PLEISTOCENE		UNCONSOLIDATED	10.0	19.0	BLU
531.0	PLEISTOCENE		SAND	34.0	29.0	
497.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	48.0	63.0	BLU
449.0			LIMESTONE	3.8	111.0	
445.2			SHALE	7.6	114.8	MIXED
437.7			LIMESTONE	11.7	122.3	
426.0			LIMESTONE W/ SHALE	12.5	134.0	
413.5			LIMESTONE	20.0	146.5	
393.5	CARBONDALE	ANNA	BLACK SHALE	7.8	166.5	
385.7	CARBONDALE	HERRIN	COAL	8.0	174.3	
377.7	CARBONDALE		UNDERCLAY	8.7	182.3	

MAPID: 16301124000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 6 QUARTERS/FOOTAGES: SW SE NE
 QUADRANGLE: O'FALLON LONGITUDE: -89.914242 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.56426 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 182.0 LOG TYPE: Drillers Log
 SOURCE: PERRY COAL CO. 59L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
457.2	MODESTO	PIASA	LIMESTONE	3.8	102.8
453.4	MODESTO		UNCLASSIFIED	2.0	106.6
451.4	CARBONDALE		UNCLASSIFIED	5.6	108.6
445.8	CARBONDALE	BANKSTON FORK	LIMESTONE	13.7	114.2
432.1	CARBONDALE	ANVIL ROCK	SANDSTONE	2.0	127.9
430.1	CARBONDALE	CONANT	LIMESTONE	1.5	129.9
428.6	CARBONDALE		SHALE	2.0	131.4
426.6	CARBONDALE	BRERETON	LIMESTONE	25.0	133.4
401.6	CARBONDALE	ANNA	BLACK SHALE	7.8	158.4
393.8	CARBONDALE	ENERGY	SHALE	7.8	166.2
386.0	CARBONDALE	HERRIN	COAL	8.0	174.0

MAPID: 16301125000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 6 QUARTERS/FOOTAGES: NE NE NE
 QUADRANGLE: O'FALLON LONGITUDE: -89.912003 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.569265 DATE COLLECTED: 5 / 16 / 1950
 SURFACE ELEVATION (FT.): 575.0 LOGGED (FT.): 112.5 LOG TYPE: Drillers Log
 SOURCE: ISGS 38L WELL TYPE:
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
575.0	PLEISTOCENE		CLAY	31.0	0.0
544.0	PLEISTOCENE		SAND	33.5	31.0
510.5	PLEISTOCENE		CLAY, SAND & SILTSTONE	25.5	64.5 BLUE
485.0	PLEISTOCENE		CLAY	17.0	90.0 BLUE
468.0			SHALE WITH LIMESTONE	3.0	107.0
465.0			RED SHALE	2.5	110.0

MAPID: 16301128000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 7 QUARTERS/FOOTAGES: 2310' N line, 990' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.914267 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.549691 DATE COLLECTED:

SURFACE ELEVATION (FT.): 580.0 LOGGED (FT.): 234.3 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 49L WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
410.0	MODESTO	PIASA	LIMESTONE	7.8	170.0
402.2	CARBONDALE		SHALE	5.3	177.8
396.8	CARBONDALE	BANKSTON FORK	LIMESTONE	20.7	183.2
376.2	CARBONDALE	LAWSON	SHALE	17.3	203.8
358.8	CARBONDALE	BRERETON	LIMESTONE	5.8	221.2
353.0	CARBONDALE	HERRIN	COAL	7.3	227.0

MAPID: 16301128000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 7 QUARTERS/FOOTAGES: 2310' N line, 990' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.914267 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.549691 DATE COLLECTED:

SURFACE ELEVATION (FT.): 580.0 LOGGED (FT.): 234.3 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 49L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
409.9	MODESTO	PIASA	LIMESTONE	7.8	170.1
402.1	MODESTO		UNCLASSIFIED	1.5	177.9
400.6	CARBONDALE		UNCLASSIFIED	3.8	179.4
396.8	CARBONDALE	BANKSTON FORK	LIMESTONE	36.0	183.2
360.8	CARBONDALE	ANVIL ROCK	SANDSTONE	1.0	219.2
359.8	CARBONDALE		SHALE	1.0	220.2
358.8	CARBONDALE	BRERETON	LIMESTONE	5.8	221.2
353.0	CARBONDALE	HERRIN	COAL	7.3	227.0

MAPID: 16301129000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 7 QUARTERS/FOOTAGES: 120' N line, 50' W line of SW SW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.928725 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.550064 DATE COLLECTED:

SURFACE ELEVATION (FT.): 570.0 LOGGED (FT.): 198.4 LOG TYPE: Drillers Log

SOURCE: ISGS 2D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
436.0	MODESTO	PIASA	LIMESTONE	7.0	134.0
429.0	MODESTO		UNCLASSIFIED	1.0	141.0
428.0	CARBONDALE		UNCLASSIFIED	2.5	142.0
425.5	CARBONDALE	BANKSTON FORK	LIMESTONE	37.5	144.5
388.0	CARBONDALE	ANVIL ROCK	SANDSTONE	1.0	182.0
387.0	CARBONDALE	CONANT	LIMESTONE	0.5	183.0
386.5	CARBONDALE		SHALE	1.5	183.5
385.0	CARBONDALE	BRERETON	LIMESTONE	7.0	185.0
378.0	CARBONDALE	HERRIN	COAL	6.4	192.0

MAPID: 16302072000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 7 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.927744 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.547646 DATE COLLECTED:

SURFACE ELEVATION (FT.): 614.0 LOGGED (FT.): 259.4 LOG TYPE: Drillers Log

SOURCE: ISGS 19 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
418.0	MODESTO	PIASA	LIMESTONE	5.0	196.0
413.0	MODESTO		UNCLASSIFIED	1.5	201.0
411.5	CARBONDALE		UNCLASSIFIED	4.0	202.5
407.5	CARBONDALE	BANKSTON FORK	LIMESTONE	35.5	206.5
372.0	CARBONDALE	ANVIL ROCK	SANDSTONE	4.0	242.0
368.0	CARBONDALE		SHALE	3.0	246.0
365.0	CARBONDALE	BRERETON	LIMESTONE	4.0	249.0
361.0	CARBONDALE	HERRIN	COAL	6.4	253.0

MAPID: 1630113000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 8 QUARTERS/FOOTAGES: 125' N line, 260' W line of NE NE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.902893 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.548299 DATE COLLECTED:

SURFACE ELEVATION (FT.): 609.0 LOGGED (FT.): 264.0 LOG TYPE: Drillers Log

SOURCE: ISGS 53L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
405.5	MODESTO	PIASA	LIMESTONE	8.1	203.5
397.4	MODESTO		UNCLASSIFIED	2.1	211.6
395.3	CARBONDALE		UNCLASSIFIED	6.1	213.7
389.2	CARBONDALE	BANKSTON FORK	LIMESTONE	14.5	219.8
374.7	CARBONDALE	ANVIL ROCK	SANDSTONE	7.0	234.3
367.7	CARBONDALE	CONANT	LIMESTONE	3.0	241.3
364.7	CARBONDALE		SHALE	6.5	244.3
358.2	CARBONDALE	BRERETON	LIMESTONE	6.2	250.8
352.0	CARBONDALE	HERRIN	COAL	7.0	257.0

MAPID: 16301131000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 8 QUARTERS/FOOTAGES: 110' S line, 330' W line of NW NE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.904971 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.547079 DATE COLLECTED:

SURFACE ELEVATION (FT.): 530.0 LOGGED (FT.): 176.7 LOG TYPE: Drillers Log

SOURCE: ISGS 50L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
411.1	MODESTO	PIASA	LIMESTONE	5.8	118.9
405.3	MODESTO		UNCLASSIFIED	3.0	124.7
402.3	CARBONDALE		UNCLASSIFIED	7.7	127.7
394.6	CARBONDALE	BANKSTON FORK	LIMESTONE	13.0	135.4
381.6	CARBONDALE	ANVIL ROCK	SANDSTONE	5.3	148.4
376.3	CARBONDALE	CONANT	LIMESTONE	2.0	153.7
374.3	CARBONDALE		SHALE	7.0	155.7
367.3	CARBONDALE	BRERETON	LIMESTONE	7.3	162.7
360.0	CARBONDALE	HERRIN	COAL	6.7	170.0

MAPID: 16301133000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 8 QUARTERS/FOOTAGES: 280' N line, 120' E line of SE NW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.906568 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.553462 DATE COLLECTED:

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 264.3 LOG TYPE: Drillers Log

SOURCE: ISGS 1W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
433.8	MODESTO	PIASA	LIMESTONE	6.0	201.2
427.8	MODESTO		UNCLASSIFIED	2.5	207.2
425.3	CARBONDALE		UNCLASSIFIED	7.0	209.7
418.3	CARBONDALE	BANKSTON FORK	LIMESTONE	15.0	216.7
403.3	CARBONDALE	ANVIL ROCK	SANDSTONE	8.0	231.7
395.3	CARBONDALE	CONANT	LIMESTONE	2.5	239.7
392.8	CARBONDALE		SHALE	8.0	242.2
384.8	CARBONDALE	BRERETON	LIMESTONE	7.5	250.2
377.3	CARBONDALE	ANNA	BLACK SHALE	0.3	257.7
377.0	CARBONDALE	HERRIN	COAL	6.3	258.0

MAPID: 16302053000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 8 QUARTERS/FOOTAGES: 1625' S line, 1450' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.897243 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.545704 DATE COLLECTED:

SURFACE ELEVATION (FT.): 555.0 LOGGED (FT.): 211.9 LOG TYPE: Survey Core Study

SOURCE: ISGS 10 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN COMMENT	
397.9	MODESTO	PIASA	LIMESTONE	4.5	157.1	
393.4	CARBONDALE		SHALE & SILTSTONE	20.8	161.6	
372.5	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	0.7	182.5	UPPER BENCH
371.9	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	0.6	183.1	SHALE PARTING
371.3	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	183.7	LOWER BENCH
369.1	CARBONDALE	LAWSON	DARK GRAY SHALE	0.9	185.9	
368.2	CARBONDALE	LAWSON	CALCAREOUS SANDSTONE	3.4	186.8	
364.8	CARBONDALE	LAWSON	BLACK SHALE	1.3	190.2	
363.5	CARBONDALE	LAWSON	LIMESTONE/UNDERCLAY	0.5	191.5	
363.0	CARBONDALE	LAWSON	BLACK SHALE	3.8	192.0	
359.2	CARBONDALE	JAMESTOWN	CARBONACEOUS SHALE	1.2	195.8	
358.0	CARBONDALE		DARK GRAY SHALE	2.5	197.0	
355.5	CARBONDALE	BRERETON	LIMESTONE	5.4	199.5	
350.1	CARBONDALE	ANNA	DARK GRAY SHALE	0.1	204.9	
350.0	CARBONDALE	HERRIN	COAL	6.9	205.0	

MAPID: 16302053000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 8 QUARTERS/FOOTAGES: 1625' S line, 1450' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.897243 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.545704 DATE COLLECTED:

SURFACE ELEVATION (FT.): 555.0 LOGGED (FT.): 211.9 LOG TYPE: Drillers Log

SOURCE: ISGS 10 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
397.8	MODESTO	PIASA	LIMESTONE	4.5	157.2
393.3	MODESTO		UNCLASSIFIED	3.0	161.7
390.3	CARBONDALE		UNCLASSIFIED	8.5	164.7
381.8	CARBONDALE	BANKSTON FORK	LIMESTONE	13.1	173.2
368.7	CARBONDALE	ANVIL ROCK	SANDSTONE	5.2	186.3
363.5	CARBONDALE	CONANT	LIMESTONE	0.5	191.5
363.0	CARBONDALE		SHALE	5.0	192.0
358.0	CARBONDALE	BRERETON	LIMESTONE	7.9	197.0
350.1	CARBONDALE	ANNA	BLACK SHALE	0.1	204.9
350.0	CARBONDALE	HERRIN	COAL	6.9	205.0

MAPID: 16302062000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 8 QUARTERS/FOOTAGES: 300' S line, 180' W line of SW NW NE

QUADRANGLE: O'FALLON LONGITUDE: -89.900874 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.553198 DATE COLLECTED:

SURFACE ELEVATION (FT.): 634.0 LOGGED (FT.): 263.0 LOG TYPE: Drillers Log

SOURCE: ISGS 8 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
383.1	CARBONDALE	BRERETON	LIMESTONE	7.3	250.9
375.8	CARBONDALE	ANNA	BLACK SHALE	1.8	258.2
374.0	CARBONDALE	HERRIN	COAL	3.0	260.0

MAPID: 16302063000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 8 QUARTERS/FOOTAGES: 40' N line, 455' W line of NW NW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.899885 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.548538 DATE COLLECTED:

SURFACE ELEVATION (FT.): 608.0 LOGGED (FT.): 265.5 LOG TYPE: Drillers Log

SOURCE: ISGS 9 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
402.9	MODESTO	PIASA	LIMESTONE	5.5	205.1
397.4	MODESTO		UNCLASSIFIED	3.0	210.6
394.4	CARBONDALE		UNCLASSIFIED	8.5	213.6
385.9	CARBONDALE	BANKSTON FORK	LIMESTONE	14.9	222.1
371.0	CARBONDALE	ANVIL ROCK	SANDSTONE	7.5	237.0
363.5	CARBONDALE	CONANT	LIMESTONE	3.5	244.5
360.0	CARBONDALE	JAMESTOWN	COAL	0.3	248.0
359.7	CARBONDALE		SHALE	4.4	248.3
355.3	CARBONDALE	BRERETON	LIMESTONE	4.8	252.7
350.5	CARBONDALE	ANNA	BLACK SHALE	0.5	257.5
350.0	CARBONDALE	HERRIN	COAL	7.5	258.0

MAPID: 16302064000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 8 QUARTERS/FOOTAGES: 27' S line, 130' E line of SE SW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.897226 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.541292 DATE COLLECTED:

SURFACE ELEVATION (FT.): 499.0 LOGGED (FT.): 145.2 LOG TYPE: Drillers Log

SOURCE: ISGS 11 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
403.7	MODESTO	PIASA	LIMESTONE	4.0	95.3
399.7	MODESTO		UNCLASSIFIED	2.5	99.3
397.2	CARBONDALE		UNCLASSIFIED	7.0	101.8
390.2	CARBONDALE	BANKSTON FORK	LIMESTONE	13.7	108.8
376.5	CARBONDALE	ANVIL ROCK	SANDSTONE	5.0	122.5
371.5	CARBONDALE	CONANT	LIMESTONE	0.3	127.5
371.2	CARBONDALE		SHALE	5.0	127.8
366.2	CARBONDALE	BRERETON	LIMESTONE	5.2	132.8
361.0	CARBONDALE	HERRIN	COAL	7.2	138.0

MAPID: 16301101000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 9 QUARTERS/FOOTAGES: 50' S line, 350' W line of SW SW NE

QUADRANGLE: O'FALLON LONGITUDE: -89.881731 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.548597 DATE COLLECTED:

SURFACE ELEVATION (FT.): 475.0 LOGGED (FT.): 116.0 LOG TYPE: Drillers Log

SOURCE: ISGS 52L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
379.0	CARBONDALE	ANNA	BLACK SHALE	6.0	96.0	
373.0	CARBONDALE	ENERGY	SHALE	6.0	102.0	
367.0	CARBONDALE	HERRIN	COAL	8.0	108.0	

MAPID: 16301134000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 9 QUARTERS/FOOTAGES: 990' S line, 2310' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.881839 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.543795 DATE COLLECTED:

SURFACE ELEVATION (FT.): 472.0 LOGGED (FT.): 115.8 LOG TYPE: Survey Core Study

SOURCE: PERRY COAL CO. 11L WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
405.0	MODESTO	PIASA	LIMESTONE	4.9	67.0	
400.1	CARBONDALE		GRAY SHALE	14.8	71.9	
385.2	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.8	86.8	UPPER BENCH
380.5	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	1.4	91.5	SHALE PARTING
379.1	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	92.9	LOWER BENCH
378.1	CARBONDALE	LAWSON	GRAY SHALE	4.0	93.9	
374.1	CARBONDALE	CONANT	LIMESTONE W/ SHALE	3.2	97.9	
370.9	CARBONDALE	BRERETON	LIMESTONE	2.4	101.1	
368.5	CARBONDALE	ANNA	BLACK SHALE	4.9	103.5	
363.0	CARBONDALE	HERRIN	COAL	6.8	109.0	

MAPID: 16301134000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 9 QUARTERS/FOOTAGES: 990' S line, 2310' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.881839 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.543795 DATE COLLECTED:

SURFACE ELEVATION (FT.): 472.0 LOGGED (FT.): 115.8 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 11L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
407.0	MODESTO	PIASA	LIMESTONE	4.9	65.0
402.1	MODESTO		UNCLASSIFIED	3.0	69.9
399.1	CARBONDALE		UNCLASSIFIED	8.9	72.9
390.2	CARBONDALE	BANKSTON FORK	LIMESTONE	10.3	81.8
379.9	CARBONDALE	ANVIL ROCK	SANDSTONE	1.4	92.1
378.5	CARBONDALE	CONANT	LIMESTONE	1.0	93.5
377.5	CARBONDALE		SHALE	4.0	94.5
373.5	CARBONDALE	BRERETON	LIMESTONE	5.6	98.5
367.9	CARBONDALE	ANNA	BLACK SHALE	4.9	104.1
363.0	CARBONDALE	HERRIN	COAL	6.8	109.0

MAPID: 16301135000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 9 QUARTERS/FOOTAGES: 225' N line, 280' W line of NE NW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.888882 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.547976 DATE COLLECTED:

SURFACE ELEVATION (FT.): 519.0 LOGGED (FT.): 164.6 LOG TYPE: Drillers Log

SOURCE: ISGS 12L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
409.1	MODESTO	PIASA	LIMESTONE	6.0	109.9
403.1	MODESTO		UNCLASSIFIED	2.5	115.9
400.6	CARBONDALE		UNCLASSIFIED	7.3	118.4
393.3	CARBONDALE	BANKSTON FORK	LIMESTONE	12.6	125.7
380.7	CARBONDALE	ANVIL ROCK	SANDSTONE	6.2	138.3
374.5	CARBONDALE	CONANT	LIMESTONE	0.7	144.5
373.8	CARBONDALE		SHALE	2.0	145.2
371.8	CARBONDALE	BRERETON	LIMESTONE	6.3	147.2
365.5	CARBONDALE	ANNA	BLACK SHALE	4.5	153.5
361.0	CARBONDALE	HERRIN	COAL	6.6	158.0

MAPID: 16301136000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 9 QUARTERS/FOOTAGES: 200' S line, 115' E line of SW SE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.876456 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.548909 DATE COLLECTED:

SURFACE ELEVATION (FT.): 470.0 LOGGED (FT.): 127.5 LOG TYPE: Drillers Log

SOURCE: ISGS 10L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
390.9	MODESTO	PIASA	LIMESTONE	3.3	79.1
387.6	MODESTO		UNCLASSIFIED	2.8	82.4
384.8	CARBONDALE		UNCLASSIFIED	6.8	85.2
378.0	CARBONDALE	BANKSTON FORK	LIMESTONE	14.6	92.0
363.4	CARBONDALE	ANVIL ROCK	SANDSTONE	3.6	106.6
359.8	CARBONDALE	CONANT	LIMESTONE	0.8	110.2
359.0	CARBONDALE		SHALE	1.0	111.0
358.0	CARBONDALE	BRERETON	LIMESTONE	6.8	112.0
351.2	CARBONDALE	ANNA	BLACK SHALE	2.2	118.8
349.0	CARBONDALE	HERRIN	COAL	6.5	121.0

MAPID: 16301137000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 9 QUARTERS/FOOTAGES: 180' N line, 265' W line of NE SE NW

QUADRANGLE: O'FALLON LONGITUDE: -89.884363 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.551713 DATE COLLECTED:

SURFACE ELEVATION (FT.): 563.0 LOGGED (FT.): 192.8 LOG TYPE: Drillers Log

SOURCE: ISGS 51L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
432.0	MODESTO	PIASA	LIMESTONE	5.0	131.0
427.0	MODESTO		UNCLASSIFIED	3.0	136.0
424.0	CARBONDALE		UNCLASSIFIED	9.0	139.0
415.0	CARBONDALE	BANKSTON FORK	LIMESTONE	10.0	148.0
405.0	CARBONDALE	ANVIL ROCK	SANDSTONE	4.0	158.0
401.0	CARBONDALE	CONANT	LIMESTONE	0.5	162.0
400.5	CARBONDALE		SHALE	3.5	162.5
397.0	CARBONDALE	BRERETON	LIMESTONE	6.0	166.0
391.0	CARBONDALE	ANNA	BLACK SHALE	7.0	172.0
384.0	CARBONDALE	ENERGY	SHALE	7.0	179.0
377.0	CARBONDALE	HERRIN	COAL	6.8	186.0

MAPID: 16300493000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 7W **SECTION:** 10 **QUARTERS/FOOTAGES:** 500' S line, 1500' E line
QUADRANGLE: LEBANON **LONGITUDE:** -89.860408 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.5421 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 443.3 **LOGGED (FT.):** 630.0 **LOG TYPE:**
SOURCE: SCOTTFIELD **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
345.3	CARBONDALE	HERRIN	COAL	7.0	98.0	

MAPID: 16300493000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: ST. CLAIR **TWP/RNG:** 1N 7W **SECTION:** 10 **QUARTERS/FOOTAGES:** 500' S line, 1500' E line
QUADRANGLE: LEBANON **LONGITUDE:** -89.860408 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.5421 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 443.0 **LOGGED (FT.):** 105.0 **LOG TYPE:** Drillers Log
SOURCE: BUTLER, MILLARD M. **WELL TYPE:** Water Well
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
345.0	CARBONDALE	HERRIN	COAL	7.0	98.0	

MAPID: 16300493000C **VERSION:** 3 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 7W **SECTION:** 10 **QUARTERS/FOOTAGES:** 500' S line, 1500' E line
QUADRANGLE: LEBANON **LONGITUDE:** -89.860408 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.5421 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 436.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: CONSOLIDATED COAL CO. **WELL TYPE:** Coal Test
COMMENT: ABANDONED MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
436.0			MINE OPENING	0.0	0.0	NO INFORMATION, COAL TEST

MAPID: 16301138000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 10 QUARTERS/FOOTAGES: 120' S line, 100' W line of SW NW NW

QUADRANGLE: LEBANON LONGITUDE: -89.873411 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.552315 DATE COLLECTED:

SURFACE ELEVATION (FT.): 475.0 LOGGED (FT.): 140.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 8L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
391.8	MODESTO	PIASA	LIMESTONE	4.3	83.2
387.5	MODESTO		UNCLASSIFIED	2.0	87.5
385.5	CARBONDALE		UNCLASSIFIED	6.5	89.5
379.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.4	96.0
370.6	CARBONDALE	ANVIL ROCK	SANDSTONE	1.0	104.4
369.6	CARBONDALE		SHALE	0.5	105.4
369.1	CARBONDALE	BRERETON	LIMESTONE	4.6	105.9
364.5	CARBONDALE	ENERGY	SHALE	22.5	110.5
342.0	CARBONDALE	HERRIN	COAL	7.0	133.0

MAPID: 16301200000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 10 QUARTERS/FOOTAGES: 2310' N line, 990' W line

QUADRANGLE: LEBANON LONGITUDE: -89.870266 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.549186 DATE COLLECTED:

SURFACE ELEVATION (FT.): 460.0 LOGGED (FT.): 132.9 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 9L WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
376.0	MODESTO	PIASA	LIMESTONE	5.9	84.0
370.1	CARBONDALE		GRAY SHALE	14.2	89.9
355.9	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	8.3	104.1
347.7	CARBONDALE		GRAY SHALE	1.3	112.3
346.3	CARBONDALE	BRERETON	LIMESTONE W/ SHALE	7.5	113.7
338.8	CARBONDALE	ANNA	BLACK SHALE	3.0	121.2
334.0	CARBONDALE	HERRIN	COAL	6.9	126.0

MAPID: 16301200000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 10 QUARTERS/FOOTAGES: 2310' N line, 990' W line

QUADRANGLE: LEBANON LONGITUDE: -89.870266 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.549186 DATE COLLECTED:

SURFACE ELEVATION (FT.): 460.0 LOGGED (FT.): 133.9 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 9L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
383.4	MODESTO	PIASA	LIMESTONE	5.9	76.6
377.5	MODESTO		UNCLASSIFIED	4.3	82.5
373.2	CARBONDALE		UNCLASSIFIED	10.0	86.8
363.2	CARBONDALE	BANKSTON FORK	LIMESTONE	8.3	96.8
354.9	CARBONDALE	ANVIL ROCK	SANDSTONE	1.0	105.1
353.9	CARBONDALE		SHALE	0.3	106.1
353.6	CARBONDALE	BRERETON	LIMESTONE	5.2	106.4
348.4	CARBONDALE	ANNA	BLACK SHALE	7.7	111.6
340.7	CARBONDALE	ENERGY	SHALE	7.7	119.3
333.0	CARBONDALE	HERRIN	COAL	6.9	127.0

MAPID: 16301414000C VERSION: 1

PROJECT: BLM

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 10 QUARTERS/FOOTAGES: SW

QUADRANGLE: LEBANON LONGITUDE: -89.869075 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 38.544518 DATE COLLECTED: 4 / 0 / 1947

SURFACE ELEVATION (FT.): 448.0 LOGGED (FT.): 435.0 LOG TYPE: Drillers Log

SOURCE: ABBOTT & CUNDIFF WELL TYPE: Water Well

COMMENT: TRACT OF LAND IS PART OF LOT 7A

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
448.0			UNCONSOLIDATED	54.0	0.0
394.0			ROCK	37.0	54.0
357.0			COAL WITH SHALE	6.0	91.0
351.0			ROCK	93.0	97.0
258.0			SHALE	22.0	190.0
236.0			LIMESTONE	2.0	212.0
234.0			SHALE	1.0	214.0
233.0			COAL	4.0	215.0
229.0			ROCK	216.0	219.0

MAPID: 16301139000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 15 QUARTERS/FOOTAGES: 2310' N line, 1650' W line
 QUADRANGLE: LEBANON LONGITUDE: -89.867825 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 38.534454 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 440.0 LOGGED (FT.): 82.3 LOG TYPE: Drillers Log
 SOURCE: PERRY COAL CO. 20L WELL TYPE: Coal Test
 COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
368.0	CARBONDALE	BRERETON	LIMESTONE	3.0	72.0
365.0	CARBONDALE	ANNA	BLACK SHALE	1.0	75.0
364.0	CARBONDALE	HERRIN	COAL	6.3	76.0

MAPID: 16301139000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 15 QUARTERS/FOOTAGES: 2310' N line, 1650' W line
 QUADRANGLE: LEBANON LONGITUDE: -89.867825 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.534454 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 440.0 LOGGED (FT.): 82.3 LOG TYPE: Drillers Log
 SOURCE: PERRY COAL CO. 20L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
368.0	CARBONDALE	BRERETON	LIMESTONE	3.0	72.0
365.0	CARBONDALE	ANNA	BLACK SHALE	1.0	75.0
364.0	CARBONDALE	HERRIN	COAL	6.3	76.0

MAPID: 16300225000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 17 QUARTERS/FOOTAGES: 2700' S line, 1500' E line
 QUADRANGLE: O'FALLON LONGITUDE: -89.897309 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.534064 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 470.8 LOGGED (FT.): 0.0 LOG TYPE:
 SOURCE: SOU C M C 0008 WELL TYPE: Underground mine
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
349.8	CARBONDALE	HERRIN	COAL	7.0	121.0

MAPID: 16300225000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 17 QUARTERS/FOOTAGES: 2700' S line, 1500' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.897309 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.534064 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 471.0 LOGGED (FT.): 128.0 LOG TYPE: Drillers Log

SOURCE: SOUTHERN GEM COAL CORP. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
350.0	CARBONDALE	HERRIN	COAL	7.0	121.0

MAPID: 16300038000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 18 QUARTERS/FOOTAGES: 1940' S line, 2390' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.918977 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.532099 DATE COLLECTED: 8 / 0 / 1915

SURFACE ELEVATION (FT.): 490.0 LOGGED (FT.): 115.0 LOG TYPE: Drillers Log

SOURCE: SO. COAL & MINING CO WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
435.0	MODESTO	PIASA	LIMESTONE	4.0	55.0
431.0	MODESTO		UNCLASSIFIED	5.0	59.0
426.0	CARBONDALE		UNCLASSIFIED	13.0	64.0
413.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	77.0
407.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	83.0
404.0	CARBONDALE		UNCLASSIFIED	2.0	86.0
402.0	CARBONDALE	BRERETON	LIMESTONE	21.0	88.0
381.0	CARBONDALE	HERRIN	COAL	6.0	109.0

MAPID: 16300038000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 18 QUARTERS/FOOTAGES: 1940' S line, 2390' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.918977 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.532099 DATE COLLECTED:

SURFACE ELEVATION (FT.): 490.0 LOGGED (FT.): 115.0 LOG TYPE: Drillers Log

SOURCE: POOR DESCRIPTION WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
413.0	MODESTO	PIASA	LIMESTONE	6.0	77.0
407.0	CARBONDALE		SHALE	5.0	83.0
402.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	88.0
394.0	CARBONDALE	BRERETON	LIMESTONE	13.0	96.0
381.0	CARBONDALE	HERRIN	COAL	6.0	109.0

MAPID: 16300038000C **VERSION:** 3 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 7W **SECTION:** 18 **QUARTERS/FOOTAGES:** 1940' S line, 2390' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.918977 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.532099 **DATE COLLECTED:** 0 / 0 / 1915
SURFACE ELEVATION (FT.): 490.1 **LOGGED (FT.):** 746.0 **LOG TYPE:**
SOURCE: SOU C M C **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
381.1	CARBONDALE	HERRIN	COAL	6.0	109.0	

MAPID: 16300226000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 7W **SECTION:** 18 **QUARTERS/FOOTAGES:** 2500' S line, 4100' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.925024 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.533673 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 520.2 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: SOU C M C 0007 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
396.2	CARBONDALE	HERRIN	COAL	6.5	124.0	

MAPID: 16300226000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: ST. CLAIR **TWP/RNG:** 1N 7W **SECTION:** 18 **QUARTERS/FOOTAGES:** 2500' S line, 4100' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.925024 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.533673 **DATE COLLECTED:** 0 / 0 / 1900
SURFACE ELEVATION (FT.): 520.0 **LOGGED (FT.):** 526.5 **LOG TYPE:** Drillers Log
SOURCE: SOUTHERN GEM COAL CORP. **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
396.0	CARBONDALE	HERRIN	COAL	6.5	124.0	

MAPID: 16302238000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 19 QUARTERS/FOOTAGES: 990' N line, 2310' W line

QUADRANGLE: O'FALLON LONGITUDE: -89.920606 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.524018 DATE COLLECTED: 10 / 0 / 1960

SURFACE ELEVATION (FT.): 489.0 LOGGED (FT.): 104.0 LOG TYPE: Electric Log

SOURCE: POWELL GRAHAM WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
432.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	57.0
426.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	5.0	63.0
421.0	CARBONDALE		UNCLASSIFIED	5.0	68.0
416.0	CARBONDALE	BRERETON	LIMESTONE	26.0	73.0
390.0	CARBONDALE	HERRIN	COAL	5.0	99.0

MAPID: 16302238000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 19 QUARTERS/FOOTAGES: 990' N line, 2310' W line

QUADRANGLE: O'FALLON LONGITUDE: -89.920606 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.524018 DATE COLLECTED:

SURFACE ELEVATION (FT.): 489.0 LOGGED (FT.): 104.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
432.0	MODESTO	PIASA	LIMESTONE	6.0	57.0
426.0	CARBONDALE		SHALE	10.0	63.0
416.0	CARBONDALE	BANKSTON FORK	LIMESTONE	20.0	73.0
396.0	CARBONDALE		GRAY SHALE	4.0	93.0
392.0	CARBONDALE	BRERETON	LIMESTONE	2.0	97.0
390.0	CARBONDALE	HERRIN	COAL	5.0	99.0

MAPID: 16323767000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 25 QUARTERS/FOOTAGES: 660' S line, 1980' W line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.829396 GEOLOGIST: CHENOWETH
 CONFIDENTIAL: N LATITUDE: 38.498453 DATE COLLECTED: 6 / 10 / 1973
 SURFACE ELEVATION (FT.): 405.0 LOGGED (FT.): 107.9 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 12892C WELL TYPE: Coal Test
 COMMENT: PEABODY LOC. G-15

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
405.0	PLEISTOCENE		UNCONSOLIDATED	60.9	0.0	
344.1	MODESTO	PIASA	LIMESTONE	8.4	60.9	
335.7			GRAY SHALE	10.2	69.3	
325.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.6	79.5	
322.9	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.2	82.1	
320.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.6	84.3	
318.1	CARBONDALE		DARK SHALE	4.6	86.9	
313.5	CARBONDALE	BRERETON	LIMESTONE	2.3	91.5	
311.2	CARBONDALE	ANNA	BLACK SHALE	0.4	93.8	
310.8	CARBONDALE	HERRIN	COAL	7.1	94.2	
303.7	CARBONDALE		UNDERCLAY	4.1	101.3	
299.6	CARBONDALE		LIMESTONE	2.5	105.4	

MAPID: 16301084000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 28 QUARTERS/FOOTAGES: 2595' S line, 1345' W line
 QUADRANGLE: O'FALLON LONGITUDE: -89.88718 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 38.504428 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 445.0 LOGGED (FT.): 77.3 LOG TYPE: Drillers Log
 SOURCE: PYRAMID COAL CO. 24 WELL TYPE: Coal Test
 COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
400.6	CARBONDALE		GRAY SHALE	9.4	44.4	
391.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	53.8	UPPER BENCH
389.7	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.1	55.3	SHALE PARTING
388.6	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	56.4	LOWER BENCH
386.6	CARBONDALE	LAWSON	GRAY SHALE	1.3	58.4	
385.3	CARBONDALE	LAWSON	DARK GRAY SHALE	6.0	59.7	
379.3	CARBONDALE	LAWSON	GRAY SHALE	0.7	65.7	
378.6	CARBONDALE	CONANT	LIMESTONE W/ SHALE	1.6	66.4	
377.0	CARBONDALE	JAMESTOWN	COAL	0.2	68.0	
376.8	CARBONDALE		GRAY SHALE	0.7	68.2	
376.2	CARBONDALE	BRERETON	LIMESTONE	1.9	68.8	
374.2	CARBONDALE	ANNA	BLACK SHALE	0.3	70.8	
374.0	CARBONDALE	HERRIN	COAL	6.3	71.0	

MAPID: 16301084000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 28 QUARTERS/FOOTAGES: 2595' S line, 1345' W line

QUADRANGLE: O'FALLON LONGITUDE: -89.88718 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.504428 DATE COLLECTED:

SURFACE ELEVATION (FT.): 445.0 LOGGED (FT.): 77.3 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 24 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
400.7	MODESTO		UNCLASSIFIED	2.5	44.3
398.2	CARBONDALE		UNCLASSIFIED	6.9	46.8
391.3	CARBONDALE	BANKSTON FORK	LIMESTONE	4.6	53.7
386.7	CARBONDALE	ANVIL ROCK	SANDSTONE	8.0	58.3
378.7	CARBONDALE	CONANT	LIMESTONE	1.6	66.3
377.1	CARBONDALE	JAMESTOWN	COAL	0.2	67.9
376.9	CARBONDALE		SHALE	0.7	68.1
376.2	CARBONDALE	BRERETON	LIMESTONE	1.9	68.8
374.3	CARBONDALE	ANNA	BLACK SHALE	0.3	70.7
374.0	CARBONDALE	HERRIN	COAL	6.3	71.0

MAPID: 16301096000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 28 QUARTERS/FOOTAGES: 5' S line, 40' W line of SW NE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.887105 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.500941 DATE COLLECTED:

SURFACE ELEVATION (FT.): 445.0 LOGGED (FT.): 76.5 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 36 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
410.9	MODESTO	PIASA	LIMESTONE	4.9	34.1
406.0	MODESTO		UNCLASSIFIED	3.6	39.0
402.4	CARBONDALE		UNCLASSIFIED	10.7	42.6
391.7	CARBONDALE	BANKSTON FORK	LIMESTONE	8.1	53.3
383.6	CARBONDALE	ANVIL ROCK	SANDSTONE	3.1	61.4
380.5	CARBONDALE		SHALE	3.1	64.5
377.4	CARBONDALE	BRERETON	LIMESTONE	1.1	67.6
376.3	CARBONDALE	ANNA	BLACK SHALE	1.3	68.7
375.0	CARBONDALE	HERRIN	COAL	6.5	70.0

MAPID: 16301097000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 28 QUARTERS/FOOTAGES: 175' N line, 30' E line of NE NE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.882755 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.504081 DATE COLLECTED:

SURFACE ELEVATION (FT.): 435.0 LOGGED (FT.): 77.7 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 37 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
389.5	MODESTO	PIASA	LIMESTONE	0.9	45.5
388.6	MODESTO		UNCLASSIFIED	2.0	46.4
386.6	CARBONDALE		UNCLASSIFIED	5.5	48.4
381.1	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	53.9
376.6	CARBONDALE	ANVIL ROCK	SANDSTONE	7.3	58.4
369.3	CARBONDALE	CONANT	LIMESTONE	0.5	65.7
368.8	CARBONDALE		SHALE	1.4	66.2
367.4	CARBONDALE	BRERETON	LIMESTONE	3.4	67.6
364.0	CARBONDALE	HERRIN	COAL	6.7	71.0

MAPID: 16301098000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 28 QUARTERS/FOOTAGES: 125' S line, 40' E line of SE NE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.882778 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.501248 DATE COLLECTED:

SURFACE ELEVATION (FT.): 443.0 LOGGED (FT.): 79.5 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 38 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
388.6	CARBONDALE	BANKSTON FORK	LIMESTONE	5.9	54.4
382.7	CARBONDALE	ANVIL ROCK	SANDSTONE	8.2	60.3
374.5	CARBONDALE	JAMESTOWN	COAL	0.2	68.5
374.3	CARBONDALE		SHALE	2.3	68.7
372.0	CARBONDALE	BRERETON	LIMESTONE	2.0	71.0
370.0	CARBONDALE	HERRIN	COAL	6.5	73.0

MAPID: 16301099000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 28 QUARTERS/FOOTAGES: 600' S line, 600' E line of SE SE SW

QUADRANGLE: FREEBURG LONGITUDE: -89.884737 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.498909 DATE COLLECTED:

SURFACE ELEVATION (FT.): 439.0 LOGGED (FT.): 68.3 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 39 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
410.1	MODESTO	PIASA	LIMESTONE	2.6	28.9
407.5	MODESTO		UNCLASSIFIED	3.0	31.5
404.5	CARBONDALE		UNCLASSIFIED	7.9	34.5
396.6	CARBONDALE	BANKSTON FORK	LIMESTONE	3.1	42.4
393.5	CARBONDALE	ANVIL ROCK	SANDSTONE	8.3	45.5
385.2	CARBONDALE	CONANT	LIMESTONE	0.5	53.8
384.7	CARBONDALE		SHALE	1.3	54.3
383.4	CARBONDALE	BRERETON	LIMESTONE	6.4	55.6
377.0	CARBONDALE	HERRIN	COAL	6.3	62.0

MAPID: 16301100000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 28 QUARTERS/FOOTAGES: 175' S line, 25' E line of SE SE SW

QUADRANGLE: FREEBURG LONGITUDE: -89.88271 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.497723 DATE COLLECTED:

SURFACE ELEVATION (FT.): 446.0 LOGGED (FT.): 68.3 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 40 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
411.4	MODESTO	PIASA	LIMESTONE	2.3	34.6
409.1	MODESTO		UNCLASSIFIED	1.5	36.9
407.6	CARBONDALE		UNCLASSIFIED	4.5	38.4
403.1	CARBONDALE	BANKSTON FORK	LIMESTONE	4.4	42.9
398.7	CARBONDALE	ANVIL ROCK	SANDSTONE	6.9	47.3
391.8	CARBONDALE	CONANT	LIMESTONE	0.6	54.2
391.2	CARBONDALE		SHALE	1.3	54.8
389.9	CARBONDALE	BRERETON	LIMESTONE	5.9	56.1
384.0	CARBONDALE	HERRIN	COAL	6.3	62.0

MAPID: 16301066000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 29 QUARTERS/FOOTAGES: 95' S line, 10' E line of NE NW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.905782 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.510347 DATE COLLECTED:

SURFACE ELEVATION (FT.): 488.0 LOGGED (FT.): 119.2 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
415.3	MODESTO	PIASA	LIMESTONE	3.3	72.7
412.0	MODESTO		UNCLASSIFIED	4.0	76.0
408.0	CARBONDALE		UNCLASSIFIED	11.5	80.0
396.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.6	91.5
392.9	CARBONDALE	ANVIL ROCK	SANDSTONE	7.3	95.1
385.6	CARBONDALE		SHALE	3.0	102.4
382.6	CARBONDALE	BRERETON	LIMESTONE	4.0	105.4
378.6	CARBONDALE	ANNA	BLACK SHALE	1.6	109.4
377.0	CARBONDALE	HERRIN	COAL	8.2	111.0

MAPID: 16301075000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 29 QUARTERS/FOOTAGES: 60' S line, 100' E line of SE SW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.90601 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.50478 DATE COLLECTED:

SURFACE ELEVATION (FT.): 466.0 LOGGED (FT.): 85.4 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 15 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
407.2	CARBONDALE	BANKSTON FORK	LIMESTONE	6.1	58.8
401.1	CARBONDALE	ANVIL ROCK	SANDSTONE	6.4	64.9
394.7	CARBONDALE	CONANT	LIMESTONE	0.4	71.3
394.3	CARBONDALE	JAMESTOWN	COAL	0.2	71.7
394.1	CARBONDALE		SHALE	2.7	71.9
391.4	CARBONDALE	BRERETON	LIMESTONE	4.4	74.6
387.0	CARBONDALE	HERRIN	COAL	6.4	79.0

MAPID: 16301076000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 29 QUARTERS/FOOTAGES: 185' N line, 300' E line of NE NW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.897539 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.504106 DATE COLLECTED:

SURFACE ELEVATION (FT.): 461.0 LOGGED (FT.): 82.1 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 16 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
405.8	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	55.2
400.8	CARBONDALE	ANVIL ROCK	SANDSTONE	7.4	60.2
393.4	CARBONDALE		SHALE	5.1	67.6
388.3	CARBONDALE	BRERETON	LIMESTONE	3.3	72.7
385.0	CARBONDALE	HERRIN	COAL	6.1	76.0

MAPID: 16301077000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 29 QUARTERS/FOOTAGES: 35' S line, 105' E line of SE SE SW

QUADRANGLE: FREEBURG LONGITUDE: -89.901335 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.497406 DATE COLLECTED:

SURFACE ELEVATION (FT.): 446.0 LOGGED (FT.): 58.4 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 17 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
407.7	CARBONDALE	ANVIL ROCK	SANDSTONE	5.7	38.3
402.0	CARBONDALE	CONANT	LIMESTONE	3.1	44.0
398.9	CARBONDALE	JAMESTOWN	COAL	0.1	47.1
398.8	CARBONDALE		SHALE	1.3	47.2
397.5	CARBONDALE	BRERETON	LIMESTONE	3.4	48.5
394.1	CARBONDALE	ANNA	BLACK SHALE	0.1	51.9
394.0	CARBONDALE	HERRIN	COAL	6.4	52.0

MAPID: 16301092000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 29 QUARTERS/FOOTAGES: 860' N line, 60' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.89219 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.509571 DATE COLLECTED:

SURFACE ELEVATION (FT.): 449.0 LOGGED (FT.): 82.6 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 32 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
408.4	MODESTO	PIASA	LIMESTONE	5.3	40.6
403.1	CARBONDALE		GRAY SHALE	14.5	45.9
388.6	CARBONDALE	BANKSTON FORK	LIMESTONE	0.8	60.4
387.8	CARBONDALE	LAWSON	GRAY SHALE	3.8	61.2
384.0	CARBONDALE	LAWSON	DARK GRAY SHALE	4.7	65.0
379.3	CARBONDALE	CONANT	LIMESTONE W/ SHALE	1.8	69.7
377.5	CARBONDALE	JAMESTOWN	DARK GRAY SHALE	0.5	71.5
377.0	CARBONDALE		GRAY SHALE	0.8	72.0
376.2	CARBONDALE	BRERETON	LIMESTONE	2.0	72.8
374.2	CARBONDALE	ANNA	BLACK SHALE	1.3	74.8
373.0	CARBONDALE	HERRIN	COAL	6.6	76.0

MAPID: 16301092000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 29 QUARTERS/FOOTAGES: 860' N line, 60' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.89219 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.509571 DATE COLLECTED:

SURFACE ELEVATION (FT.): 449.0 LOGGED (FT.): 82.6 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 32 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
409.4	MODESTO	PIASA	LIMESTONE	5.3	39.6
404.1	MODESTO		UNCLASSIFIED	3.0	44.9
401.1	CARBONDALE		UNCLASSIFIED	8.0	47.9
393.1	CARBONDALE	BANKSTON FORK	LIMESTONE	5.3	55.9
387.8	CARBONDALE	ANVIL ROCK	SANDSTONE	8.5	61.2
379.3	CARBONDALE	CONANT	LIMESTONE	1.2	69.7
378.1	CARBONDALE		SHALE	1.9	70.9
376.2	CARBONDALE	BRERETON	LIMESTONE	2.1	72.8
374.1	CARBONDALE	ANNA	BLACK SHALE	1.1	74.9
373.0	CARBONDALE	HERRIN	COAL	6.6	76.0

MAPID: 16301093000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 29 QUARTERS/FOOTAGES: 405' N line, 65' W line of SE NW NE

QUADRANGLE: O'FALLON LONGITUDE: -89.89862 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.50898 DATE COLLECTED:

SURFACE ELEVATION (FT.): 463.0 LOGGED (FT.): 94.6 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 33 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
397.4	CARBONDALE	BANKSTON FORK	LIMESTONE	3.8	65.6
393.6	CARBONDALE	ANVIL ROCK	SANDSTONE	9.3	69.4
384.3	CARBONDALE	CONANT	LIMESTONE	1.2	78.7
383.1	CARBONDALE		SHALE	5.8	79.9
377.3	CARBONDALE	BRERETON	LIMESTONE	2.3	85.7
375.0	CARBONDALE	HERRIN	COAL	6.6	88.0

MAPID: 16301094000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 29 QUARTERS/FOOTAGES: 90' N line, 135' W line of NE SE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.893666 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.500707 DATE COLLECTED:

SURFACE ELEVATION (FT.): 445.0 LOGGED (FT.): 63.7 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 34 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
405.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.7	39.8
401.5	CARBONDALE	ANVIL ROCK	SANDSTONE	7.5	43.5
394.0	CARBONDALE	CONANT	LIMESTONE	2.9	51.0
391.1	CARBONDALE	JAMESTOWN	COAL	0.1	53.9
391.0	CARBONDALE		SHALE	1.2	54.0
389.8	CARBONDALE	BRERETON	LIMESTONE	1.8	55.2
388.0	CARBONDALE	HERRIN	COAL	6.7	57.0

MAPID: 16301095000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 29 QUARTERS/FOOTAGES: 50' N line, 15' E line of NE NE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.891959 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.504478 DATE COLLECTED:

SURFACE ELEVATION (FT.): 452.0 LOGGED (FT.): 421.8 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 35 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
452.0			UNCONSOLIDATED	26.0	0.0
426.0			SHALE	28.8	26.0
397.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	54.8
395.0	CARBONDALE	BANKSTON FORK	SHALE	0.8	57.0
394.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	57.8
392.3	CARBONDALE	ANVIL ROCK	SHALE	7.0	59.7
385.2	CARBONDALE	CONANT	LIMESTONE	0.8	66.8
384.5	CARBONDALE		SHALE	1.3	67.5
383.2	CARBONDALE	JAMESTOWN	COAL	0.1	68.8
383.0	CARBONDALE		SHALE	1.3	69.0
381.6	CARBONDALE	BRERETON	LIMESTONE	2.9	70.4
378.8	CARBONDALE	ANNA	BLACK SHALE	1.2	73.2
377.6	CARBONDALE	HERRIN	COAL	6.8	74.4
370.8	CARBONDALE		UNDERCLAY	2.7	81.2

MAPID: 16301063000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 30 QUARTERS/FOOTAGES: 150' S line, 2020' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.917231 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.49793 DATE COLLECTED:

SURFACE ELEVATION (FT.): 474.0 LOGGED (FT.): 58.7 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 3 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
443.3	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	4.3	30.7
439.0	CARBONDALE	LAWSON	GRAY SHALE	9.6	35.0
429.4	CARBONDALE	CONANT	LIMESTONE W/ SHALE	3.6	44.6
425.8	CARBONDALE	JAMESTOWN	BLACK SHALE	1.1	48.2
424.7	CARBONDALE	BRERETON	LIMESTONE	2.6	49.3
422.2	CARBONDALE	ANNA	BLACK SHALE	0.2	51.8
422.0	CARBONDALE	HERRIN	COAL	6.7	52.0

MAPID: 16301063000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 30 QUARTERS/FOOTAGES: 150' S line, 2020' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.917231 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.49793 DATE COLLECTED:

SURFACE ELEVATION (FT.): 474.0 LOGGED (FT.): 59.7 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
442.4	CARBONDALE	BANKSTON FORK	LIMESTONE	4.3	31.6
438.1	CARBONDALE	ANVIL ROCK	SANDSTONE	9.6	35.9
428.5	CARBONDALE	CONANT	LIMESTONE	2.8	45.5
425.7	CARBONDALE		SHALE	1.9	48.3
423.8	CARBONDALE	BRERETON	LIMESTONE	2.6	50.2
421.2	CARBONDALE	ANNA	BLACK SHALE	0.2	52.8
421.0	CARBONDALE	HERRIN	COAL	6.7	53.0

MAPID: 16301065000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 30 QUARTERS/FOOTAGES: 45' N line, 110' W line of SE NW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.92583 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.503022 DATE COLLECTED:

SURFACE ELEVATION (FT.): 470.0 LOGGED (FT.): 74.3 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
433.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.6	36.3
429.1	CARBONDALE	ANVIL ROCK	SANDSTONE	9.9	40.9
419.2	CARBONDALE	CONANT	LIMESTONE	1.3	50.8
417.9	CARBONDALE		SHALE	2.6	52.1
415.3	CARBONDALE	BRERETON	LIMESTONE	1.9	54.7
413.4	CARBONDALE	ANNA	BLACK SHALE	5.7	56.6
407.7	CARBONDALE	ENERGY	SHALE	5.7	62.3
402.0	CARBONDALE	HERRIN	COAL	6.3	68.0

MAPID: 16301067000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 30 QUARTERS/FOOTAGES: 105' N line, 10' W line of NW NE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.914894 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.511684 DATE COLLECTED:

SURFACE ELEVATION (FT.): 488.0 LOGGED (FT.): 99.6 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 7 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
436.6	MODESTO	PIASA	LIMESTONE	6.7	51.4
429.9	MODESTO		UNCLASSIFIED	3.0	58.1
426.9	CARBONDALE		UNCLASSIFIED	9.0	61.1
417.9	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	70.1
414.4	CARBONDALE	ANVIL ROCK	SANDSTONE	8.0	73.6
406.4	CARBONDALE	CONANT	LIMESTONE	3.0	81.6
403.4	CARBONDALE		SHALE	3.2	84.6
400.2	CARBONDALE	BRERETON	LIMESTONE	5.0	87.8
395.2	CARBONDALE	ANNA	BLACK SHALE	0.2	92.8
395.0	CARBONDALE	HERRIN	COAL	6.6	93.0

MAPID: 16301068000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 30 QUARTERS/FOOTAGES: 450' S line, 250' E line of SE SE SW

QUADRANGLE: FREEBURG LONGITUDE: -89.920166 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.498836 DATE COLLECTED:

SURFACE ELEVATION (FT.): 483.0 LOGGED (FT.): 66.3 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 8 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
446.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.8	36.8
442.4	CARBONDALE	ANVIL ROCK	SANDSTONE	6.5	40.6
435.9	CARBONDALE	CONANT	LIMESTONE	1.0	47.1
434.9	CARBONDALE		SHALE	4.2	48.1
430.7	CARBONDALE	BRERETON	LIMESTONE	7.7	52.3
423.0	CARBONDALE	HERRIN	COAL	6.3	60.0

MAPID: 16301074000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 30 QUARTERS/FOOTAGES: 115' S line, 75' W line of NW NE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.914528 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.503207 DATE COLLECTED:

SURFACE ELEVATION (FT.): 454.0 LOGGED (FT.): 54.4 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 14 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
430.1	CARBONDALE	BANKSTON FORK	LIMESTONE	3.8	23.9
426.3	CARBONDALE	ANVIL ROCK	SANDSTONE	8.1	27.7
418.2	CARBONDALE	CONANT	LIMESTONE	2.8	35.8
415.4	CARBONDALE	JAMESTOWN	COAL	0.3	38.6
415.1	CARBONDALE		SHALE	3.5	38.9
411.6	CARBONDALE	BRERETON	LIMESTONE	5.6	42.4
406.0	CARBONDALE	HERRIN	COAL	6.4	48.0

MAPID: 16301062000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 31 QUARTERS/FOOTAGES: 100' S line, 400' E line of SE NW NE

QUADRANGLE: FREEBURG LONGITUDE: -89.916074 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.494113 DATE COLLECTED:

SURFACE ELEVATION (FT.): 468.0 LOGGED (FT.): 55.3 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 2 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
441.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	26.5
438.8	CARBONDALE	ANVIL ROCK	SANDSTONE	9.4	29.2
429.4	CARBONDALE	CONANT	LIMESTONE	1.9	38.6
427.5	CARBONDALE		SHALE	3.3	40.5
424.2	CARBONDALE	BRERETON	LIMESTONE	5.2	43.8
419.0	CARBONDALE	HERRIN	COAL	6.3	49.0

MAPID: 16301069000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 31 QUARTERS/FOOTAGES: 50' S line, 400' E line of SE NW SW

QUADRANGLE: FREEBURG LONGITUDE: -89.925076 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.486769 DATE COLLECTED:

SURFACE ELEVATION (FT.): 504.0 LOGGED (FT.): 101.8 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 9 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
451.2	MODESTO	PIASA	LIMESTONE	4.8	52.8
446.4	MODESTO		UNCLASSIFIED	3.7	57.6
442.7	CARBONDALE		UNCLASSIFIED	10.8	61.3
431.9	CARBONDALE	BANKSTON FORK	LIMESTONE	5.8	72.1
426.1	CARBONDALE	ANVIL ROCK	SANDSTONE	9.6	77.9
416.5	CARBONDALE	CONANT	LIMESTONE	2.3	87.5
414.2	CARBONDALE	JAMESTOWN	COAL	0.2	89.8
414.0	CARBONDALE		SHALE	0.4	90.0
413.6	CARBONDALE	BRERETON	LIMESTONE	4.6	90.4
409.0	CARBONDALE	HERRIN	COAL	6.8	95.0

MAPID: 16301071000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 31 QUARTERS/FOOTAGES: 350' N line, 400' E line of NE NW NW

QUADRANGLE: FREEBURG LONGITUDE: -89.92523 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.496758 DATE COLLECTED:

SURFACE ELEVATION (FT.): 481.0 LOGGED (FT.): 66.4 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 11 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
459.9	MODESTO	PIASA	LIMESTONE	5.2	21.1
454.7	MODESTO		UNCLASSIFIED	2.5	26.3
452.2	CARBONDALE		UNCLASSIFIED	7.0	28.8
445.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.1	35.8
441.1	CARBONDALE	ANVIL ROCK	SANDSTONE	8.3	39.9
432.8	CARBONDALE	CONANT	LIMESTONE	5.9	48.2
426.9	CARBONDALE	JAMESTOWN	COAL	0.1	54.1
426.8	CARBONDALE		SHALE	3.2	54.2
423.6	CARBONDALE	BRERETON	LIMESTONE	2.6	57.4
421.0	CARBONDALE	HERRIN	COAL	6.4	60.0

MAPID: 16301072000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 31 QUARTERS/FOOTAGES: 50' S line, 300' E line of SE NW SE

QUADRANGLE: FREEBURG LONGITUDE: -89.915658 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.486674 DATE COLLECTED:

SURFACE ELEVATION (FT.): 515.0 LOGGED (FT.): 111.1 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 12 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
448.6	MODESTO	PIASA	LIMESTONE	5.1	66.4
443.5	MODESTO		UNCLASSIFIED	2.3	71.5
441.2	CARBONDALE		UNCLASSIFIED	9.4	73.8
431.8	CARBONDALE	BANKSTON FORK	LIMESTONE	3.2	83.2
428.6	CARBONDALE	ANVIL ROCK	SANDSTONE	5.8	86.4
422.8	CARBONDALE	CONANT	LIMESTONE	1.2	92.2
421.6	CARBONDALE		SHALE	3.5	93.4
418.1	CARBONDALE	BRERETON	LIMESTONE	7.9	96.9
410.2	CARBONDALE	ANNA	BLACK SHALE	0.2	104.8
410.0	CARBONDALE	HERRIN	COAL	6.1	105.0

MAPID: 16301073000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 31 QUARTERS/FOOTAGES: 0' S line, 400' E line of SE SE SE

QUADRANGLE: FREEBURG LONGITUDE: -89.911453 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.482868 DATE COLLECTED:

SURFACE ELEVATION (FT.): 605.0 LOGGED (FT.): 223.1 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 13 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
424.4	MODESTO	PIASA	LIMESTONE	6.4	180.6
418.0	MODESTO		UNCLASSIFIED	2.2	187.0
415.8	CARBONDALE		UNCLASSIFIED	6.5	189.2
409.3	CARBONDALE	BANKSTON FORK	LIMESTONE	5.1	195.7
404.2	CARBONDALE	ANVIL ROCK	SANDSTONE	9.7	200.8
394.5	CARBONDALE	CONANT	LIMESTONE	2.2	210.5
392.3	CARBONDALE		SHALE	0.6	212.7
391.7	CARBONDALE	BRERETON	LIMESTONE	3.7	213.3
388.0	CARBONDALE	HERRIN	COAL	6.1	217.0

MAPID: 16301087000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 31 QUARTERS/FOOTAGES: 10' S line, 2240' W line

QUADRANGLE: FREEBURG

LONGITUDE: -89.920266

GEOLOGIST:

CONFIDENTIAL: N

LATITUDE: 38.482938

DATE COLLECTED:

SURFACE ELEVATION (FT.): 558.0

LOGGED (FT.): 157.1

LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 27

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
444.5	MODESTO	PIASA	LIMESTONE	3.6	113.5	
440.9	CARBONDALE		GRAY SHALE	14.9	117.1	
426.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	132.0	UPPER BENCH
424.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.1	133.6	SHALE PARTING
424.3	CARBONDALE	BANKSTON FORK	LIMESTONE	0.5	133.7	LOWER BENCH
423.9	CARBONDALE	LAWSON	GRAY SHALE	1.3	134.1	
422.6	CARBONDALE	LAWSON	SILTY SHALE	4.8	135.4	
417.8	CARBONDALE	LAWSON	GRAY SHALE	0.6	140.2	
417.2	CARBONDALE	LAWSON	SILTY SHALE	0.5	140.8	
416.7	CARBONDALE	LAWSON	GRAY SHALE	2.5	141.3	
414.2	CARBONDALE	CONANT	LIMESTONE W/ SHALE	4.2	143.8	
410.0	CARBONDALE	JAMESTOWN	COAL	0.3	148.0	
409.7	CARBONDALE		BLACK SHALE	0.7	148.3	
409.1	CARBONDALE	BRERETON	LIMESTONE	2.3	148.9	
406.8	CARBONDALE	ANNA	DARK GRAY SHALE	0.8	151.2	
406.0	CARBONDALE	HERRIN	COAL	5.1	152.0	

MAPID: 16301087000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 31 QUARTERS/FOOTAGES: 10' S line, 2240' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.920266 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.482938 DATE COLLECTED:

SURFACE ELEVATION (FT.): 558.0 LOGGED (FT.): 157.1 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 27 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
444.7	MODESTO	PIASA	LIMESTONE	4.3	113.3
440.4	MODESTO		UNCLASSIFIED	1.9	117.6
438.5	CARBONDALE		UNCLASSIFIED	10.5	119.5
428.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	130.0
424.0	CARBONDALE	ANVIL ROCK	SANDSTONE	9.7	134.0
414.3	CARBONDALE	CONANT	LIMESTONE	4.2	143.7
410.1	CARBONDALE	JAMESTOWN	COAL	0.3	147.9
409.8	CARBONDALE		SHALE	0.7	148.2
409.1	CARBONDALE	BRERETON	LIMESTONE	2.8	148.9
406.3	CARBONDALE	ANNA	BLACK SHALE	0.3	151.7
406.0	CARBONDALE	HERRIN	COAL	5.1	152.0

MAPID: 16301091000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 31 QUARTERS/FOOTAGES: 190' S line, 10' W line of NE SE NE

QUADRANGLE: FREEBURG LONGITUDE: -89.912341 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.49247 DATE COLLECTED:

SURFACE ELEVATION (FT.): 485.0 LOGGED (FT.): 82.4 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 31 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
431.1	CARBONDALE	BANKSTON FORK	LIMESTONE	3.7	53.9
427.4	CARBONDALE	ANVIL ROCK	SANDSTONE	11.1	57.6
416.3	CARBONDALE	CONANT	LIMESTONE	4.0	68.7
412.3	CARBONDALE	JAMESTOWN	COAL	0.1	72.7
412.2	CARBONDALE		SHALE	0.5	72.8
411.7	CARBONDALE	BRERETON	LIMESTONE	1.7	73.3
410.0	CARBONDALE	ANNA	BLACK SHALE	1.0	75.0
409.0	CARBONDALE	HERRIN	COAL	6.4	76.0

MAPID: 16301829000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 31 QUARTERS/FOOTAGES: 330' N line, 1498' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.923129 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.49676 DATE COLLECTED: 11 / 0 / 1955

SURFACE ELEVATION (FT.): 497.0 LOGGED (FT.): 85.0 LOG TYPE: Electric Log

SOURCE: JET OIL CO. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
420.0	CARBONDALE	HERRIN	COAL	8.0	77.0

MAPID: 16301061000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 32 QUARTERS/FOOTAGES: 110' S line, 240' E line of NE NW NW

QUADRANGLE: FREEBURG LONGITUDE: -89.906367 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.495812 DATE COLLECTED:

SURFACE ELEVATION (FT.): 455.0 LOGGED (FT.): 72.3 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
427.5	MODESTO	PIASA	LIMESTONE	6.4	27.5
421.1	MODESTO		UNCLASSIFIED	3.0	33.9
418.1	CARBONDALE		UNCLASSIFIED	8.3	36.9
409.8	CARBONDALE	BANKSTON FORK	LIMESTONE	4.7	45.2
405.1	CARBONDALE	ANVIL ROCK	SANDSTONE	11.8	49.9
393.3	CARBONDALE	CONANT	LIMESTONE	1.2	61.7
392.1	CARBONDALE		SHALE	1.3	62.9
390.8	CARBONDALE	BRERETON	LIMESTONE	0.6	64.2
390.2	CARBONDALE	ANNA	BLACK SHALE	1.2	64.8
389.0	CARBONDALE	HERRIN	COAL	6.3	66.0

MAPID: 16301064000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 32 QUARTERS/FOOTAGES: 1915' N line, 2415' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.901614

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.492024

DATE COLLECTED:

SURFACE ELEVATION (FT.): 474.0

LOGGED (FT.): 90.7

LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 4

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
429.0	MODESTO	PIASA	LIMESTONE	4.4	45.0
424.6	CARBONDALE		GRAY SHALE	14.1	49.4
410.5	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.2	63.5
406.3	CARBONDALE	LAWSON	GRAY SHALE	7.8	67.7
398.5	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	3.7	75.5
394.8	CARBONDALE	JAMESTOWN	COAL	0.2	79.2
394.7	CARBONDALE		BLACK SHALE	0.8	79.3
393.8	CARBONDALE	BRERETON	LIMESTONE	3.9	80.2
389.9	CARBONDALE	ANNA	BLACK SHALE	0.3	84.1
390.0	CARBONDALE	HERRIN	COAL	6.7	84.0

MAPID: 16301064000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 32 QUARTERS/FOOTAGES: 1915' N line, 2415' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.901614

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.492024

DATE COLLECTED:

SURFACE ELEVATION (FT.): 474.0

LOGGED (FT.): 90.6

LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 4

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
429.5	MODESTO	PIASA	LIMESTONE	4.5	44.5
425.0	MODESTO		UNCLASSIFIED	4.2	49.0
420.8	CARBONDALE		UNCLASSIFIED	9.9	53.2
410.9	CARBONDALE	BANKSTON FORK	LIMESTONE	4.2	63.1
406.7	CARBONDALE	ANVIL ROCK	SANDSTONE	7.8	67.3
398.9	CARBONDALE	CONANT	LIMESTONE	3.7	75.1
395.2	CARBONDALE	JAMESTOWN	COAL	0.2	78.8
395.0	CARBONDALE		SHALE	0.8	79.0
394.2	CARBONDALE	BRERETON	LIMESTONE	3.9	79.8
390.3	CARBONDALE	ANNA	BLACK SHALE	0.3	83.7
390.0	CARBONDALE	HERRIN	COAL	6.6	84.0

MAPID: 16301078000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 32 QUARTERS/FOOTAGES: 10' S line, 450' E line of SE SW NW

QUADRANGLE: FREEBURG LONGITUDE: -89.907027 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.4901 DATE COLLECTED:

SURFACE ELEVATION (FT.): 498.0 LOGGED (FT.): 111.3 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 18 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
434.3	MODESTO	PIASA	LIMESTONE	6.7	63.7
427.6	MODESTO		UNCLASSIFIED	3.5	70.4
424.1	CARBONDALE		UNCLASSIFIED	9.5	73.9
414.6	CARBONDALE	BANKSTON FORK	LIMESTONE	9.7	83.4
404.9	CARBONDALE	ANVIL ROCK	SANDSTONE	5.8	93.1
399.1	CARBONDALE	CONANT	LIMESTONE	1.1	98.9
398.0	CARBONDALE		SHALE	1.2	100.0
396.8	CARBONDALE	BRERETON	LIMESTONE	0.7	101.2
396.1	CARBONDALE	ANNA	BLACK SHALE	3.1	101.9
393.0	CARBONDALE	HERRIN	COAL	6.3	105.0

MAPID: 16301079000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 32 QUARTERS/FOOTAGES: 160' N line, 80' E line of SE NW NE

QUADRANGLE: FREEBURG LONGITUDE: -89.896593 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.495031 DATE COLLECTED:

SURFACE ELEVATION (FT.): 472.0 LOGGED (FT.): 87.4 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 19 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
421.7	MODESTO	PIASA	LIMESTONE	0.6	50.3
421.1	MODESTO		UNCLASSIFIED	3.0	50.9
418.1	CARBONDALE		UNCLASSIFIED	8.2	53.9
409.9	CARBONDALE	BANKSTON FORK	LIMESTONE	9.8	62.1
400.1	CARBONDALE	ANVIL ROCK	SANDSTONE	2.9	71.9
397.2	CARBONDALE	CONANT	LIMESTONE	2.3	74.8
394.9	CARBONDALE	JAMESTOWN	COAL	0.2	77.1
394.7	CARBONDALE		SHALE	0.6	77.3
394.1	CARBONDALE	BRERETON	LIMESTONE	2.7	77.9
391.4	CARBONDALE	ANNA	BLACK SHALE	0.4	80.6
391.0	CARBONDALE	HERRIN	COAL	6.4	81.0

MAPID: 16301085000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 32 QUARTERS/FOOTAGES: 105' N line, 190' E line of SW SE NE

QUADRANGLE: FREEBURG LONGITUDE: -89.894557 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.491518 DATE COLLECTED:

SURFACE ELEVATION (FT.): 480.0 LOGGED (FT.): 94.1 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 25 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
432.4	MODESTO	PIASA	LIMESTONE	2.3	47.6
430.1	MODESTO		UNCLASSIFIED	6.1	49.9
424.0	CARBONDALE	DANVILLE	COAL	4.4	56.0
419.6	CARBONDALE		UNCLASSIFIED	8.8	60.4
410.8	CARBONDALE	BANKSTON FORK	LIMESTONE	4.4	69.2
406.4	CARBONDALE	ANVIL ROCK	SANDSTONE	6.5	73.6
399.9	CARBONDALE	CONANT	LIMESTONE	1.9	80.1
398.0	CARBONDALE		SHALE	1.6	82.0
396.4	CARBONDALE	BRERETON	LIMESTONE	4.4	83.6
392.0	CARBONDALE	HERRIN	COAL	6.1	88.0

MAPID: 16301086000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 32 QUARTERS/FOOTAGES: 140' S line, 60' W line of SW SW SE

QUADRANGLE: FREEBURG LONGITUDE: -89.900436 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.483127 DATE COLLECTED:

SURFACE ELEVATION (FT.): 593.0 LOGGED (FT.): 225.6 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 26 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
410.7	MODESTO	PIASA	LIMESTONE	7.4	182.3
403.3	MODESTO		UNCLASSIFIED	2.3	189.7
401.0	CARBONDALE		UNCLASSIFIED	8.0	192.0
393.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	200.0
389.0	CARBONDALE	ANVIL ROCK	SANDSTONE	8.1	204.0
380.9	CARBONDALE	CONANT	LIMESTONE	5.6	212.1
375.3	CARBONDALE	JAMESTOWN	COAL	0.1	217.7
375.2	CARBONDALE	BRERETON	LIMESTONE	0.4	217.8
374.8	CARBONDALE	ANNA	BLACK SHALE	0.8	218.2
374.0	CARBONDALE	HERRIN	COAL	6.6	219.0

MAPID: 16301088000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 32 QUARTERS/FOOTAGES: 110' S line, 60' W line of NE NE NW

QUADRANGLE: FREEBURG LONGITUDE: -89.903016 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.495799 DATE COLLECTED:

SURFACE ELEVATION (FT.): 459.0 LOGGED (FT.): 72.8 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 28 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
429.2	MODESTO	PIASA	LIMESTONE	4.3	29.8
424.9	MODESTO		UNCLASSIFIED	3.0	34.1
421.9	CARBONDALE		UNCLASSIFIED	8.9	37.1
413.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.3	46.0
407.7	CARBONDALE	ANVIL ROCK	SANDSTONE	10.4	51.3
397.3	CARBONDALE	CONANT	LIMESTONE	1.4	61.7
395.9	CARBONDALE		SHALE	1.0	63.1
394.9	CARBONDALE	BRERETON	LIMESTONE	1.3	64.1
393.6	CARBONDALE	ANNA	BLACK SHALE	1.6	65.4
392.0	CARBONDALE	HERRIN	COAL	5.8	67.0

MAPID: 16301089000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 32 QUARTERS/FOOTAGES: 160' S line, 250' W line of NW NW NE

QUADRANGLE: FREEBURG LONGITUDE: -89.900055 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.495928 DATE COLLECTED:

SURFACE ELEVATION (FT.): 476.0 LOGGED (FT.): 90.3 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 29 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
429.5	MODESTO	PIASA	LIMESTONE	5.8	46.5
423.7	MODESTO		UNCLASSIFIED	3.5	52.3
420.2	CARBONDALE		UNCLASSIFIED	9.7	55.8
410.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.1	65.5
406.4	CARBONDALE	ANVIL ROCK	SANDSTONE	9.1	69.6
397.3	CARBONDALE	CONANT	LIMESTONE	3.4	78.7
393.9	CARBONDALE	JAMESTOWN	COAL	0.4	82.1
393.5	CARBONDALE	BRERETON	LIMESTONE	1.5	82.5
392.0	CARBONDALE	HERRIN	COAL	6.3	84.0

MAPID: 16301082000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 33 QUARTERS/FOOTAGES: 235' N line, 20' E line of NE NW NW

QUADRANGLE: FREEBURG LONGITUDE: -89.887261 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.496615 DATE COLLECTED:

SURFACE ELEVATION (FT.): 454.0 LOGGED (FT.): 69.1 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 22 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
427.3	MODESTO	PIASA	LIMESTONE	7.3	26.7
420.0	MODESTO		UNCLASSIFIED	2.3	34.0
417.7	CARBONDALE		UNCLASSIFIED	7.6	36.3
410.1	CARBONDALE	BANKSTON FORK	LIMESTONE	5.2	43.9
404.9	CARBONDALE	ANVIL ROCK	SANDSTONE	9.8	49.1
395.1	CARBONDALE	CONANT	LIMESTONE	1.8	58.9
393.3	CARBONDALE	JAMESTOWN	COAL	0.1	60.7
393.2	CARBONDALE		SHALE	0.3	60.8
392.9	CARBONDALE	BRERETON	LIMESTONE	1.9	61.1
391.0	CARBONDALE	HERRIN	COAL	6.1	63.0

MAPID: 16301083000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 33 QUARTERS/FOOTAGES: 230' S line, 45' W line of SW SE NW

QUADRANGLE: FREEBURG LONGITUDE: -89.886828 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.490556 DATE COLLECTED:

SURFACE ELEVATION (FT.): 493.0 LOGGED (FT.): 109.2 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 23 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
425.5	MODESTO	PIASA	LIMESTONE	6.5	67.5
419.0	MODESTO		UNCLASSIFIED	2.8	74.0
416.2	CARBONDALE		UNCLASSIFIED	7.5	76.8
408.7	CARBONDALE	BANKSTON FORK	LIMESTONE	6.1	84.3
402.6	CARBONDALE	ANVIL ROCK	SANDSTONE	6.2	90.4
396.4	CARBONDALE	CONANT	LIMESTONE	3.3	96.6
393.1	CARBONDALE	JAMESTOWN	COAL	0.1	99.9
393.0	CARBONDALE		SHALE	0.1	100.0
392.9	CARBONDALE	BRERETON	LIMESTONE	1.7	100.1
391.2	CARBONDALE	ANNA	BLACK SHALE	1.2	101.8
390.0	CARBONDALE	HERRIN	COAL	6.2	103.0

MAPID: 16301090000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 33 QUARTERS/FOOTAGES: 250' S line, 200' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.890554 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.483307 DATE COLLECTED:

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 265.0 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 30 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
405.0	MODESTO	PIASA	LIMESTONE	5.8	225.0	
399.2	CARBONDALE		GRAY SHALE	11.8	230.8	
387.3	CARBONDALE	BANKSTON FORK	LIMESTONE	0.9	242.7	UPPER BENCH
386.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.2	243.6	SHALE PARTING
385.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	244.8	LOWER BENCH
383.3	CARBONDALE	LAWSON	SHALE	6.7	246.7	
376.7	CARBONDALE	CONANT	LIMESTONE W/ SHALE	2.8	253.3	
373.9	CARBONDALE	JAMESTOWN	COAL	0.2	256.1	
373.7	CARBONDALE		BLACK SHALE	0.2	256.3	
373.6	CARBONDALE	BRERETON	LIMESTONE	0.2	256.4	
373.4	CARBONDALE	ANNA	DARK GRAY SHALE	1.9	256.6	
372.0	CARBONDALE	HERRIN	COAL	7.0	258.0	

MAPID: 16301090000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 33 QUARTERS/FOOTAGES: 250' S line, 200' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.890554 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.483307 DATE COLLECTED:

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 265.0 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 30 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
405.6	MODESTO	PIASA	LIMESTONE	5.8	224.4	
399.8	MODESTO		UNCLASSIFIED	3.0	230.2	
396.8	CARBONDALE		UNCLASSIFIED	8.8	233.2	
388.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	242.0	
384.0	CARBONDALE	ANVIL ROCK	SANDSTONE	6.7	246.0	
377.3	CARBONDALE	CONANT	LIMESTONE	2.8	252.7	
374.5	CARBONDALE	JAMESTOWN	COAL	0.2	255.5	
374.3	CARBONDALE		SHALE	0.2	255.7	
374.1	CARBONDALE	BRERETON	LIMESTONE	0.2	255.9	
373.9	CARBONDALE	ANNA	BLACK SHALE	1.9	256.1	
372.0	CARBONDALE	HERRIN	COAL	7.0	258.0	

MAPID: 16300228000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 7W **SECTION:** 34 **QUARTERS/FOOTAGES:** 3250' S line, 4550' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.870839 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.491398 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 458.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: RENTCHLER 0001 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
365.0	CARBONDALE	HERRIN	COAL	7.3	93.0	

MAPID: 16300228000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: ST. CLAIR **TWP/RNG:** 1N 7W **SECTION:** 34 **QUARTERS/FOOTAGES:** 3250' S line, 4550' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.870839 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.491398 **DATE COLLECTED:** 0 / 0 / 1900
SURFACE ELEVATION (FT.): 458.0 **LOGGED (FT.):** 100.3 **LOG TYPE:** Drillers Log
SOURCE: NASH & RENTCHLER COAL **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
365.0	CARBONDALE	HERRIN	COAL	7.3	93.0	

MAPID: 16303654000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1N 7W **SECTION:** 34 **QUARTERS/FOOTAGES:** 2640' N line, 2640' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.864103 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.489777 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 442.0 **LOGGED (FT.):** 107.8 **LOG TYPE:** Survey Core Study
SOURCE: PEABODY COAL CO. 15567C **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
373.6	MODESTO	PIASA	LIMESTONE	7.5	68.4	
366.1	CARBONDALE		SHALE	8.3	75.9	
357.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.4	84.2	UPPER BENCH
356.4	CARBONDALE	BANKSTON FORK	SILTY SHALE	0.8	85.6	SHALE PARTING
355.6	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.4	86.4	LOWER BENCH
351.2	CARBONDALE	LAWSON	GRAY SHALE	2.6	90.8	
348.6	CARBONDALE	LAWSON	DARK GRAY SHALE	5.7	93.4	
342.9	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	1.1	99.1	
341.8	CARBONDALE	ANNA	DARK GRAY SHALE	0.8	100.2	
341.0	CARBONDALE	HERRIN	COAL	6.8	101.0	

MAPID: 16323898000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 34 QUARTERS/FOOTAGES: 660' S line, 1' E line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.854749 GEOLOGIST: CHENOWETH
 CONFIDENTIAL: N LATITUDE: 38.48408 DATE COLLECTED: 4 / 26 / 1973
 SURFACE ELEVATION (FT.): 440.0 LOGGED (FT.): 101.0 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 12885C WELL TYPE: Coal Test
 COMMENT: PEABODY LOC. Q-15

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
440.0	PLEISTOCENE		UNCONSOLIDATED	45.6	0.0
394.4			GRAY SHALE	32.4	45.6
362.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	78.0
361.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.6	79.0
357.4	CARBONDALE	BANKSTON FORK	LIMESTONE	0.8	82.6
356.6	CARBONDALE		GRAY SHALE	0.7	83.4
355.9	CARBONDALE	BRERETON	LIMESTONE	5.9	84.1
350.0	CARBONDALE		SHALE	0.2	90.0
349.8	CARBONDALE	HERRIN	COAL	5.7	90.2
344.1	CARBONDALE		UNDERCLAY	5.1	95.9

MAPID: 16300229000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 35 QUARTERS/FOOTAGES: 2550' S line, 3675' E line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.849168 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.489201 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 434.2 LOGGED (FT.): 0.0 LOG TYPE:
 SOURCE: LIBERTYCMC WELL TYPE: Underground mine
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
321.2	CARBONDALE	HERRIN	COAL	7.0	113.0

MAPID: 16300842000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 1N 7W SECTION: 36 QUARTERS/FOOTAGES: 500' S line, 1015' W line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.832628 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.483264 DATE COLLECTED: 0 / 0 / 1900
 SURFACE ELEVATION (FT.): 509.0 LOGGED (FT.): 146.0 LOG TYPE: Drillers Log
 SOURCE: WELL TYPE: Unsuccessful or Unknown Results
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
367.0	CARBONDALE	DANVILLE	COAL	4.0	142.0

MAPID: 16300646000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 2 QUARTERS/FOOTAGES: 1360' S line, 5090' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.96522 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.559616 DATE COLLECTED: 0 / 0 / 1889

SURFACE ELEVATION (FT.): 571.8 LOGGED (FT.): 1141.0 LOG TYPE: Drillers Log

SOURCE: BELLEVILLE 1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
571.8			SOIL	26.0	0.0	
545.8			GRAVEL	2.0	26.0	
543.8			CLAY	34.0	28.0	YELLOW
509.8			LIMESTONE	58.0	62.0	
451.8	CARBONDALE	HERRIN	COAL	7.0	120.0	THICKNESS NOT PRECISE
444.8	CARBONDALE		CLAYSTONE	2.0	127.0	
442.8	CARBONDALE		SANDY SLATE	169.0	129.0	
273.8	CARBONDALE		SANDSTONE	14.0	298.0	GRAY
259.8	CARBONDALE		SHALE	3.0	312.0	
256.8	CARBONDALE		SANDSTONE	10.0	315.0	WHITE
246.8	CARBONDALE		BLACK SHALE	8.0	325.0	
238.8	CARBONDALE		SANDSTONE	47.0	333.0	RED
191.8	CARBONDALE		SANDSTONE	10.0	380.0	WHITE
181.8	CARBONDALE		SANDSTONE	12.0	390.0	GRAY
169.8	CARBONDALE		BLACK SHALE	27.0	402.0	
142.8	CARBONDALE		SANDSTONE	14.0	429.0	
128.8	CARBONDALE		SANDSTONE	15.0	443.0	
113.8	CARBONDALE		SANDSTONE	58.0	458.0	GRAY
55.8	CARBONDALE		SANDSTONE	21.0	516.0	DARK
34.8	MISSISSIPPIAN		LIMESTONE	25.0	537.0	LIMESTONE BEGINNING OF CHESTER; D
9.8	MISSISSIPPIAN		SANDSTONE	19.0	562.0	BROWN
-9.2	MISSISSIPPIAN		LIMESTONE	13.0	581.0	
-22.2	MISSISSIPPIAN		SANDSTONE	16.0	594.0	
-38.2	MISSISSIPPIAN		LIMESTONE	21.0	610.0	
-59.2	MISSISSIPPIAN		SHALE	100.0	631.0	
-159.2	MISSISSIPPIAN		LIMESTONE	93.0	731.0	
-252.2	MISSISSIPPIAN		BLACK SHALE	86.0	824.0	
-338.2	MISSISSIPPIAN		SANDSTONE	10.0	910.0	
-348.2	MISSISSIPPIAN		CONGLOMERATE	30.0	920.0	
-378.2	MISSISSIPPIAN		SHALE	56.0	950.0	
-434.2	MISSISSIPPIAN		SANDY SLATE	70.0	1006.0	
-504.2	MISSISSIPPIAN		BLACK SHALE	20.0	1076.0	
-524.2	MISSISSIPPIAN		SANDY SLATE	25.0	1096.0	
-549.2	MISSISSIPPIAN		ROCK	20.0	1121.0	

MAPID: 16300646000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 2 QUARTERS/FOOTAGES: 1360' S line, 5090' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.96522 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.559616 DATE COLLECTED:

SURFACE ELEVATION (FT.): 571.8 LOGGED (FT.): 1141.0 LOG TYPE:

SOURCE: BELLEVILLE WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
451.8	CARBONDALE	HERRIN	COAL	7.0	120.0	

MAPID: 16301140000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 2 QUARTERS/FOOTAGES: SE NE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.948465 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.567915 DATE COLLECTED: 2 / 3 / 1948

SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 187.0 LOG TYPE: Drillers Log

SOURCE: ISGS 1D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.0	PLEISTOCENE		UNCONSOLIDATED	24.0	0.0	
526.0	PLEISTOCENE		UNCONSOLIDATED	4.0	24.0	BLUE
522.0	PLEISTOCENE		CLAY, SAND & GRAVEL	22.0	28.0	BLUE
500.0			BLUE SHALE	17.0	50.0	
483.0			SHALE W/ COAL STREAKS	1.0	67.0	
482.0			UNDERCLAY	3.0	68.0	
479.0			SANDY SHALE	9.0	71.0	
470.0	MODESTO	PIASA	LIMESTONE	7.0	80.0	
463.0			SHALE	8.0	87.0	
455.0			LIMESTONE	6.0	95.0	
449.0			BLUE SHALE	6.0	101.0	
443.0			LIMESTONE	19.0	107.0	
424.0			SHALE	6.0	126.0	
418.0	CARBONDALE	BRERETON	LIMESTONE	4.0	132.0	
414.0	CARBONDALE	HERRIN	COAL	6.5	136.0	#6
407.5	CARBONDALE		UNDERCLAY	2.0	142.5	
405.5	CARBONDALE		LIMESTONE	1.0	144.5	
404.5	CARBONDALE		SANDY SHALE	15.5	145.5	
389.0	CARBONDALE		LIMESTONE	4.0	161.0	
385.0	CARBONDALE		BLUE SHALE	2.0	165.0	
383.0	CARBONDALE		LIMESTONE	1.0	167.0	
382.0	CARBONDALE	EXCELLO	SHALE W/ COAL STREAKS	2.0	168.0	
380.0	CARBONDALE		UNDERCLAY/SHALE	7.0	170.0	
373.0	CARBONDALE		SANDY SHALE	10.0	177.0	

MAPID: 16300023000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 5 QUARTERS/FOOTAGES: 925' S line, 4575' E line

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.017854 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.568786 DATE COLLECTED:

SURFACE ELEVATION (FT.): 530.9 LOGGED (FT.): 100.0 LOG TYPE:

SOURCE: CONSOL STLREIN WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
350.9	CARBONDALE	HERRIN	COAL	6.2	180.0	
315.9	CARBONDALE	SPRINGFIELD	COAL	2.2	215.0	

MAPID: 16327175000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 5 QUARTERS/FOOTAGES: NE NW SW

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.016881 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.562827 DATE COLLECTED: 5 / 27 / 1992

SURFACE ELEVATION (FT.): LOGGED (FT.): 198.0 LOG TYPE: Drillers Log

SOURCE: KOHNEN, CLARENCE WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	27.0	0.0	BROWN
-			CLAY	17.0	27.0	BRN/YEL
-			SANDY CLAY	20.0	44.0	BROWN
-			CLAY	8.0	64.0	GRY/BRN
-			CLAY	4.0	72.0	BLUE/GRY
-			SANDY CLAY	16.0	76.0	GRAY
-			CLAY	17.0	92.0	GRAY
-			SOFT SHALE	4.0	109.0	
-			SOFT SHALE	7.0	113.0	
-			SOFT SHALE	35.0	120.0	
-			CALCAREOUS SHALE	3.0	155.0	
-			LIMESTONE	4.0	158.0	GRAY
-			LIMESTONE	7.0	162.0	LT GRAY
-			SHALE	5.0	169.0	GRN/GRY
-			LIMESTONE	6.0	174.0	LT/GRY
-			CALCAREOUS SHALE	8.0	180.0	
-			LIMESTONE	6.0	188.0	GRAY
-			HARD SHALE	2.0	194.0	
-			LIMESTONE	2.0	196.0	GRAY
-			MINE OPENING	0.0	198.0	

MAPID: 16300269000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 6 **QUARTERS/FOOTAGES:** 3075' S line, 2975' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.030798 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.56466 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 493.6 **LOGGED (FT.):** 500.0 **LOG TYPE:**
SOURCE: CONSOL STL 1 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
389.6	CARBONDALE	HERRIN	COAL	5.8	104.0
359.6	CARBONDALE	SPRINGFIELD	COAL	2.1	134.0

MAPID: 16300266000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 7 **QUARTERS/FOOTAGES:** 1750' S line, 4150' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.034959 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.546514 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 571.4 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: SOU C M C 0003 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
396.4	CARBONDALE	HERRIN	COAL	-	175.0

MAPID: 16300834000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 7 **QUARTERS/FOOTAGES:** 1280' N line, 25' E line of NW
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.028202 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.552663 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 500.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: LENZ CM **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
375.0	CARBONDALE	HERRIN	COAL	7.0	125.0

MAPID: 16300835000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 7 **QUARTERS/FOOTAGES:** 330' N line, 350' W line of NE
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.026893 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.555297 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 560.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: DUTCH HOL **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
410.0	CARBONDALE	HERRIN	COAL	8.0	150.0	

MAPID: 16303226000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 7 **QUARTERS/FOOTAGES:** 660' N line, 660' E line
QUADRANGLE: MONKS MOUND **LONGITUDE:** -90.022801 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.554424 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 575.0 **LOGGED (FT.):** 184.0 **LOG TYPE:** Survey Core Study
SOURCE: **WELL TYPE:** Water Well
COMMENT: 10/23/95: GRU CAN'T FIND LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
440.0	MODESTO	PIASA	NODULAR LIMESTONE	2.5	135.0	
437.5	CARBONDALE		CLAYSTONE & SHALE	4.9	137.5	
432.6	CARBONDALE	BANKSTON FORK	LIMESTONE	7.5	142.4	
425.1	CARBONDALE	LAWSON	BONE COAL	0.5	149.9	
424.5	CARBONDALE	LAWSON	CLAYSTONE	4.6	150.5	
420.0	CARBONDALE	LAWSON	LIMESTONE W/ SHALE	23.0	155.0	
396.9	CARBONDALE	BRERETON	LIMESTONE AND SANDSTONE	6.2	178.1	
393.0	CARBONDALE	HERRIN	COAL	2.0	182.0	

MAPID: 16300206000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 8 **QUARTERS/FOOTAGES:** 3000' S line, 450' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.003396 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.549761 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 580.4 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: N ROYAL CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
382.4	CARBONDALE	HERRIN	COAL	7.0	198.0	

MAPID: 16300270000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 9 **QUARTERS/FOOTAGES:** 1400' S line, 3100' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.994839 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.545237 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 566.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: SUMMIT CM **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
452.0	CARBONDALE	HERRIN	COAL	7.0	114.0	

MAPID: 16300271000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 11 **QUARTERS/FOOTAGES:** 4250' S line, 2000' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.954362 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.552959 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 521.2 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: ELDNAR CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
371.2	CARBONDALE	HERRIN	COAL	6.0	150.0	

MAPID: 16300415000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 11 **QUARTERS/FOOTAGES:** 2800' N line, 5280' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.965873 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.548134 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 553.2 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: SPORLEDER **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
393.2	CARBONDALE	HERRIN	COAL	7.0	160.0	

MAPID: 16300764000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 12 **QUARTERS/FOOTAGES:** 725' S line, 3895' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.94252 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.543176 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 577.9 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: PURITY CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
387.9	CARBONDALE	HERRIN	COAL	7.2	190.0	

MAPID: 16301207000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 13 QUARTERS/FOOTAGES: SE NW

QUADRANGLE: O'FALLON LONGITUDE: -89.940302 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.53572 DATE COLLECTED: 4 / 15 / 1953

SURFACE ELEVATION (FT.): 545.0 LOGGED (FT.): 204.0 LOG TYPE: Drillers Log

SOURCE: ISGS 92L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.0	PLEISTOCENE		SOIL	38.0	0.0	
507.0			SANDY SHALE	26.0	38.0	
481.0			SANDSTONE	7.0	64.0	
474.0			SHALY SANDSTONE	19.0	71.0	
455.0			GRAY SHALE	43.0	90.0	
412.0			GRAY SHALE	5.0	133.0	
407.0			LIMESTONE	2.0	138.0	
405.0			RED SHALE	3.4	140.0	
401.6			LIMESTONE	2.8	143.4	
398.8			SHALE	9.3	146.2	GR
389.5			SHALE WITH LIMESTONE	4.0	155.5	
385.5	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	159.5	
380.0	CARBONDALE	BANKSTON FORK	LIMESTONE	12.0	165.0	
368.0	CARBONDALE		SHALE	1.0	177.0	
367.0	CARBONDALE		LIMESTONE	1.0	178.0	
366.0	CARBONDALE		SHALE	4.0	179.0	
362.0	CARBONDALE		SHALE	1.4	183.0	GRAY
360.6	CARBONDALE		LIMESTONE	1.0	184.4	
359.6	CARBONDALE		CALCAREOUS SHALE	5.6	185.4	
354.0	CARBONDALE	BRERETON	LIMESTONE	5.8	191.0	GRAY
348.2	CARBONDALE	HERRIN	COAL	6.2	196.8	
342.0	CARBONDALE		UNDERCLAY	0.8	203.0	
341.2	CARBONDALE		LIMESTONE	0.2	203.8	

MAPID: 16300209000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 14 QUARTERS/FOOTAGES: 2325' S line, 3900' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.960883 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.532694 DATE COLLECTED:

SURFACE ELEVATION (FT.): 549.6 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: SOU C M C 6 WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
408.6	CARBONDALE	HERRIN	COAL	7.0	141.0	

MAPID: 16300215000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 15 **QUARTERS/FOOTAGES:** 1000' S line, 3900' W line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.969843 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.529014 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 553.8 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: TOWER GRVE **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
403.8	CARBONDALE	HERRIN	COAL	6.5	150.0	

MAPID: 16300272000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 15 **QUARTERS/FOOTAGES:** 1250' S line, 1125' W line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.979609 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.529904 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 515.9 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: SERVICE CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
397.9	CARBONDALE	HERRIN	COAL	6.5	118.0	

MAPID: 16300210000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 16 **QUARTERS/FOOTAGES:** 4800' S line, 1750' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.989887 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.539844 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 536.6 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: FULLRN CMC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
383.6	CARBONDALE	HERRIN	COAL	6.8	153.0	

MAPID: 16300211000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 16 **QUARTERS/FOOTAGES:** 1850' S line, 4300' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.99871 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.531778 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 543.1 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: CONSOL STL **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
399.1	CARBONDALE	HERRIN	COAL	6.0	144.0	

MAPID: 16300212000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 16 **QUARTERS/FOOTAGES:** 1500' S line, 3225' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.994915 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.530778 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 544.1 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: PERRY CC PITT **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
421.1	CARBONDALE	HERRIN	COAL	6.5	123.0	

MAPID: 16300011000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 17 **QUARTERS/FOOTAGES:**
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.011012 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.534184 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 550.0 **LOGGED (FT.):** 1170.0 **LOG TYPE:**
SOURCE: BLVL N G C **WELL TYPE:** Coal Test
COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
407.0	CARBONDALE	HERRIN	COAL	7.0	143.0	

MAPID: 16300274000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 17 **QUARTERS/FOOTAGES:** 1200' S line, 4050' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.015953 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.530273 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 564.8 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: SCHURMN **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
410.8	CARBONDALE	HERRIN	COAL	-	154.0	

MAPID: 16300213000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 18 **QUARTERS/FOOTAGES:** 4400' S line, 3725' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.033383 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.539238 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 575.7 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: DEWEY CMC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
395.7	CARBONDALE	HERRIN	COAL	7.5	180.0	

MAPID: 16300275000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 18 **QUARTERS/FOOTAGES:** 4975' S line, 2350' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.028558 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.540806 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 579.6 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: GUEST CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
387.6	CARBONDALE	HERRIN	COAL	6.5	192.0	

MAPID: 16300353000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 19 **QUARTERS/FOOTAGES:** 400' S line, 3050' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.031005 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.51396 **DATE COLLECTED:** 0 / 0 / 1920
SURFACE ELEVATION (FT.): 549.9 **LOGGED (FT.):** 108.0 **LOG TYPE:**
SOURCE: ALUMINUM 4 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
449.9	CARBONDALE	HERRIN	COAL	6.3	100.0	

MAPID: 16300366000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 19 **QUARTERS/FOOTAGES:** 2510' S line, 225' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.021052 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.519496 **DATE COLLECTED:** 0 / 0 / 1920
SURFACE ELEVATION (FT.): 519.0 **LOGGED (FT.):** 87.0 **LOG TYPE:**
SOURCE: ALUMINUM 1 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
440.0	CARBONDALE	HERRIN	COAL	6.7	79.0	

MAPID: 16300644000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 19 **QUARTERS/FOOTAGES:** SW NW NE
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.028355 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.524391 **DATE COLLECTED:** 0 / 0 / 1923
SURFACE ELEVATION (FT.): 542.5 **LOGGED (FT.):** 158.0 **LOG TYPE:**
SOURCE: MADISON CC0004 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300645000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 19 **QUARTERS/FOOTAGES:** 1320' N line, 0' W line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.035978 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.523456 **DATE COLLECTED:** 0 / 0 / 1923
SURFACE ELEVATION (FT.): 550.0 **LOGGED (FT.):** 301.0 **LOG TYPE:**
SOURCE: MADISON CC0003 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
424.0	CARBONDALE	HERRIN	COAL	6.7	126.0	

MAPID: 16300645000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 19 **QUARTERS/FOOTAGES:** 1320' N line, 0' W line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.035978 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.523456 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 550.0 **LOGGED (FT.):** 132.7 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
454.7	CARBONDALE	LAWSON	GRAY SHALE	5.5	95.3	
449.2	CARBONDALE	CONANT	LIMESTONE	8.0	100.8	
441.2	CARBONDALE		CLAYSTONE & SHALE	0.7	108.8	
440.5	CARBONDALE	BRERETON	LIMESTONE	14.3	109.5	
426.2	CARBONDALE	ANNA	BLACK SHALE	2.2	123.8	
424.0	CARBONDALE	HERRIN	COAL	6.7	126.0	

MAPID: 16300207000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 20 **QUARTERS/FOOTAGES:** 5150' S line, 5150' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.01978 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.52676 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 547.3 **LOGGED (FT.):** 75.0 **LOG TYPE:** Drillers Log
SOURCE: STIEHL BROTHERS MINE **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
478.3	CARBONDALE	HERRIN	COAL	6.0	69.0	SHIPPING MINE 6' COAL AT 75'

MAPID: 16300207000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 20 **QUARTERS/FOOTAGES:** 5150' S line, 5150' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.01978 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.52676 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 547.3 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: STUHLBROS **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
472.3	CARBONDALE	HERRIN	COAL	6.0	75.0	

MAPID: 16300276000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 20 **QUARTERS/FOOTAGES:** 5000' S line, 2450' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.010294 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.526292 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 556.2 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: SOUTHERN COAL AND COKE MINING 5 **WELL TYPE:** Coal Test
COMMENT: GLENDALE C.CO., MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			MINE OPENING	0.0		SHIPPING MINE GLENDALE COAL COMPANY

MAPID: 16300276000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 20 **QUARTERS/FOOTAGES:** 5000' S line, 2450' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.010294 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.526292 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 556.2 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: SOU C M C 0005 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.2	CARBONDALE	HERRIN	COAL	-	141.0	

MAPID: 16300649000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 20 QUARTERS/FOOTAGES: 3865' S line, 1975' E line

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.008631 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.523149 DATE COLLECTED: 8 / 18 / 1932

SURFACE ELEVATION (FT.): 540.2 LOGGED (FT.): 462.0 LOG TYPE: Drillers Log

SOURCE: KANE AND POLLACK WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.2			CLAY	18.0	0.0	YELLOW
522.2			CLAY	12.0	18.0	BLUE
510.2			GRAVEL	6.0	30.0	
504.2			SOFT SHALE	34.0	36.0	
470.2			MINE OPENING	6.0	70.0	
464.2			CLAYSTONE	4.0	76.0	
460.2			LIMESTONE	23.0	80.0	GRAY
437.2	CARBONDALE	HERRIN	COAL	8.0	103.0	THICKNESS NOT PRECISE
429.2	CARBONDALE		CLAYSTONE	5.0	111.0	
424.2	CARBONDALE		LIMESTONE	2.0	116.0	
422.2	CARBONDALE		SHALE	5.0	118.0	WHITE
417.2	CARBONDALE		LIMESTONE	7.0	123.0	GRAY
410.2	CARBONDALE		LIGHT SHALE	5.0	130.0	
405.2	CARBONDALE		SHALE	5.0	135.0	
400.2	CARBONDALE		SHALE	10.0	140.0	WHITE
390.2	CARBONDALE		ROCK	7.0	150.0	RED
383.2	CARBONDALE		SANDY SHALE	13.0	157.0	
370.2	CARBONDALE		SANDY SHALE	5.0	170.0	
365.2	CARBONDALE		SHALE	5.0	175.0	
360.2	CARBONDALE		CLAYSTONE	5.0	180.0	YELLOW
355.2	MISSISSIPPIAN		LIMESTONE	13.0	185.0	GRAY
342.2	MISSISSIPPIAN		SHALE	5.0	198.0	LIGHT
337.2	MISSISSIPPIAN		LIMESTONE	22.0	203.0	GRAY
315.2	MISSISSIPPIAN		SHALE	2.0	225.0	
313.2	MISSISSIPPIAN		LIMESTONE	9.0	227.0	GRAY
304.2	MISSISSIPPIAN		SHALE	4.0	236.0	
300.2	MISSISSIPPIAN		ROCK	4.0	240.0	RED
296.2	MISSISSIPPIAN		SANDSTONE	6.0	244.0	
290.2	MISSISSIPPIAN		LIMESTONE	10.0	250.0	GRAY
280.2	MISSISSIPPIAN		SANDSTONE	32.0	260.0	
248.2	MISSISSIPPIAN		SHALE	12.0	292.0	WHITE
236.2	MISSISSIPPIAN		ROCK	11.0	304.0	RED
225.2	MISSISSIPPIAN		LIMESTONE	12.0	315.0	GRAY
213.2	MISSISSIPPIAN		LIMESTONE	7.0	327.0	
206.2	MISSISSIPPIAN		SANDSTONE	7.0	334.0	
199.2	MISSISSIPPIAN		CALCAREOUS SHALE	71.0	341.0	
128.2	MISSISSIPPIAN		SANDSTONE	12.0	412.0	GRAY
116.2	MISSISSIPPIAN		SANDSTONE	36.0	424.0	WHITE
80.2	MISSISSIPPIAN		LIMESTONE	2.0	460.0	

MAPID: 16300649000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 20 QUARTERS/FOOTAGES: 3865' S line, 1975' E line

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.008631 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.523149 DATE COLLECTED: 0 / 0 / 1932

SURFACE ELEVATION (FT.): 540.2 LOGGED (FT.): 462.0 LOG TYPE:

SOURCE: KANEPOLLCK WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
437.2	CARBONDALE	HERRIN	COAL	8.0	103.0

MAPID: 16300026000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 21 QUARTERS/FOOTAGES: 4075' N line, 2725' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.993691 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.515378 DATE COLLECTED: 7 / 10 / 1926

SURFACE ELEVATION (FT.): 552.4 LOGGED (FT.): 492.0 LOG TYPE: Drillers Log

SOURCE: BELLEVILLE PURE MILK WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
552.4			CLAY	40.0	0.0	RED
512.4			ROCK	5.0	40.0	
507.4			CLAY	7.0	45.0	
500.4			CHERT	13.0	52.0	BLUE
487.4			CLAY	5.0	65.0	
482.4			SHALE	8.0	70.0	
474.4			CHERT	5.0	78.0	BLUE
469.4			BLACK SHALE	7.0	83.0	
462.4			SHALE	17.0	90.0	
445.4			SHALE	5.0	107.0	
440.4			ROCK	5.0	112.0	
435.4	CARBONDALE		SHALE	5.0	117.0	
430.4	CARBONDALE	HERRIN	COAL	6.0	122.0	
424.4	CARBONDALE		SHALE	12.0	128.0	
412.4	CARBONDALE		SHALE	10.0	140.0	
402.4	CARBONDALE		SHALE	6.0	150.0	
396.4	CARBONDALE		SHALE	19.0	156.0	
377.4	CARBONDALE		CALCAREOUS SHALE	23.0	175.0	
354.4	CARBONDALE		ROCK	22.0	198.0	
332.4	CARBONDALE		SHALE	15.0	220.0	
317.4	MISSISSIPPIAN		LIMESTONE	20.0	235.0	
297.4	MISSISSIPPIAN		SANDSTONE	7.0	255.0	
290.4	MISSISSIPPIAN		LIMESTONE	3.0	262.0	BLUE
287.4	MISSISSIPPIAN		SHALE	3.0	265.0	
284.4	MISSISSIPPIAN		LIMESTONE	17.0	268.0	
267.4	MISSISSIPPIAN		SHALE	29.0	285.0	
238.4	MISSISSIPPIAN		LIMESTONE	6.0	314.0	
232.4	MISSISSIPPIAN		SHALE	77.0	320.0	
155.4	MISSISSIPPIAN		SHALE	16.0	397.0	
139.4	MISSISSIPPIAN		SANDSTONE	45.0	413.0	
94.4	MISSISSIPPIAN		LIMESTONE	34.5	458.0	BROWN

MAPID: 16300026000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 21 **QUARTERS/FOOTAGES:** 4075' N line, 2725' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.993691 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.515378 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 552.4 **LOGGED (FT.):** 493.0 **LOG TYPE:**
SOURCE: SEWELLWELL **WELL TYPE:** Water Well
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
430.4	CARBONDALE	HERRIN	COAL	6.0	122.0	

MAPID: 16300027000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 21 **QUARTERS/FOOTAGES:** 510' S line, 2415' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.992685 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.51379 **DATE COLLECTED:** 0 / 0 / 1890
SURFACE ELEVATION (FT.): 489.3 **LOGGED (FT.):** 406.0 **LOG TYPE:** Drillers Log
SOURCE: IMBS MILLING CO. **WELL TYPE:** Water Well
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
489.3			SOIL	8.0	0.0	
481.3			LIMESTONE	4.0	8.0	
477.3			CLAYSTONE	46.0	12.0	
431.3			LIMESTONE	38.0	58.0	
393.3	CARBONDALE	HERRIN	COAL	6.0	96.0	
387.3	CARBONDALE		CLAYSTONE	2.0	102.0	
385.3	CARBONDALE		ROCK	142.0	104.0	
243.3	CARBONDALE		ROCK	40.0	246.0	
203.3	CARBONDALE		SHALE	32.0	286.0	
171.3	CARBONDALE		BLACK SHALE	6.0	318.0	
165.3	CARBONDALE		SANDSTONE	16.0	324.0	
149.3	CARBONDALE		SANDSTONE	66.0	340.0	WHITE

MAPID: 16300027000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 21 **QUARTERS/FOOTAGES:** 510' S line, 2415' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.992685 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.51379 **DATE COLLECTED:** 0 / 0 / 1990
SURFACE ELEVATION (FT.): 489.3 **LOGGED (FT.):** 406.0 **LOG TYPE:**
SOURCE: BAITS BEN **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
393.3	CARBONDALE	HERRIN	COAL	6.0	96.0	

MAPID: 16300652000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 21 QUARTERS/FOOTAGES: 785' S line, 555' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.986112 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.514505 DATE COLLECTED: 10 / 1 / 1932

SURFACE ELEVATION (FT.): 524.8 LOGGED (FT.): 535.0 LOG TYPE: Drillers Log

SOURCE: PEERLESS ENAMEL PROD. CO. WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
524.8			CLAY	38.0	0.0	YELLOW
486.8			LIMESTONE	32.0	38.0	
454.8	CARBONDALE	HERRIN	COAL	6.0	70.0	THICKNESS NOT PRECISE
448.8	CARBONDALE		CLAYSTONE	4.0	76.0	
444.8	CARBONDALE		SHALE	10.0	80.0	WHITE
434.8	CARBONDALE		LIMESTONE	10.0	90.0	
424.8	CARBONDALE		ROCK	4.0	100.0	RED
420.8	CARBONDALE		LIGHT SHALE	11.0	104.0	
409.8	MISSISSIPPIAN		LIMESTONE	15.0	115.0	BROWN
394.8	MISSISSIPPIAN		LIGHT SHALE	25.0	130.0	
369.8	MISSISSIPPIAN		LIMESTONE	25.0	155.0	
344.8	MISSISSIPPIAN		SHALE	20.0	180.0	
324.8	MISSISSIPPIAN		LIMESTONE	10.0	200.0	
314.8	MISSISSIPPIAN		SANDSTONE	50.0	210.0	
264.8	MISSISSIPPIAN		LIMESTONE	7.0	260.0	GRAY
257.8	MISSISSIPPIAN		LIMESTONE	8.0	267.0	
249.8	MISSISSIPPIAN		SANDSTONE	5.0	275.0	
244.8	MISSISSIPPIAN		SHALE	6.0	280.0	
238.8	MISSISSIPPIAN		LIMESTONE	9.0	286.0	GRAY
229.8	MISSISSIPPIAN		ROCK	10.0	295.0	RED
219.8	MISSISSIPPIAN		SANDY SHALE	15.0	305.0	
204.8	MISSISSIPPIAN		LIMESTONE	25.0	320.0	GRAY
179.8			SHALE	13.0	345.0	
166.8			SANDSTONE	74.0	358.0	
92.8	MISSISSIPPIAN		LIMESTONE	103.0	432.0	BROWN

MAPID: 16300652000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 21 QUARTERS/FOOTAGES: 785' S line, 555' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.986112 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.514505 DATE COLLECTED: 0 / 0 / 1932

SURFACE ELEVATION (FT.): 524.8 LOGGED (FT.): 435.0 LOG TYPE:

SOURCE: KANEPOLLCK WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
454.8	CARBONDALE	HERRIN	COAL	6.0	70.0	

MAPID: 16300028000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 22 QUARTERS/FOOTAGES: 3315' S line, 1065' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.970036 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.521421 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 518.5 LOGGED (FT.): 1500.0 LOG TYPE: Drillers Log

SOURCE: NATURAL GAS CO. WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
518.5			SOIL	26.0	0.0	
492.5			SAND	2.0	26.0	
490.5			CLAY	34.0	28.0	
456.5			LIMESTONE	43.0	62.0	
413.5			LIMESTONE	15.0	105.0	
398.5	CARBONDALE	HERRIN	COAL	7.0	120.0	
391.5	CARBONDALE		CLAYSTONE	2.0	127.0	
389.5	CARBONDALE		SANDY SHALE	169.0	129.0	
220.5	CARBONDALE		SANDSTONE	14.0	298.0	
206.5	CARBONDALE		SHALE	3.0	312.0	
203.5	CARBONDALE		SANDSTONE	10.0	315.0	WHITE
193.5	CARBONDALE		SOFT SHALE	8.0	325.0	
185.5	CARBONDALE		SANDSTONE	47.0	333.0	
138.5	CARBONDALE		SANDSTONE	10.0	380.0	WHITE
128.5	CARBONDALE		SANDY SHALE	12.0	390.0	
116.5	CARBONDALE		SHALE	12.0	402.0	WHITE
104.5	CARBONDALE		SHALE	13.0	414.0	
91.5	CARBONDALE		SANDSTONE	14.0	427.0	
77.5	CARBONDALE		SANDSTONE	15.0	441.0	
62.5	CARBONDALE		SANDSTONE	58.0	456.0	GRAY
4.5	MISSISSIPPIAN		LIMESTONE	986.0	514.0	

MAPID: 16300028000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 22 QUARTERS/FOOTAGES: 3315' S line, 1065' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.970036 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.521421 DATE COLLECTED:

SURFACE ELEVATION (FT.): 518.5 LOGGED (FT.): 1500.0 LOG TYPE:

SOURCE: NATURAL GAS CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
398.5	CARBONDALE	HERRIN	COAL	7.0	120.0	

MAPID: 16300214000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 22 **QUARTERS/FOOTAGES:** 2875' N line, 4000' W line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.969903 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.518318 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 536.5 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: BRESCH CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
435.5	CARBONDALE	HERRIN	COAL	6.3	101.0	

MAPID: 16300216000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 22 **QUARTERS/FOOTAGES:** 600' N line, 400' W line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.982194 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.524852 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 493.7 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: WHITE NESB **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
437.7	CARBONDALE	HERRIN	COAL	-	56.0	

MAPID: 16301809000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 22 **QUARTERS/FOOTAGES:** N2 NW
QUADRANGLE: O'FALLON **LONGITUDE:** -89.979275 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.524679 **DATE COLLECTED:** 7 / 28 / 1955
SURFACE ELEVATION (FT.): 530.0 **LOGGED (FT.):** 95.0 **LOG TYPE:** Drillers Log
SOURCE: TONY BONNOLLE, INC **WELL TYPE:** Water Well
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
530.0			CLAY	20.0	0.0	BROWN
510.0			CLAY	5.0	20.0	BLUE
505.0			CLAY	15.0	25.0	BROWN
490.0			CLAY	5.0	40.0	GRAY
485.0			CLAY	5.0	45.0	BLUE
480.0			CLAY	5.0	50.0	YELLOW
475.0			CLAY	5.0	55.0	BLUE
470.0			SHALE	10.0	60.0	
460.0			LIMESTONE	20.0	70.0	
440.0			BLACK SHALE	5.0	90.0	

MAPID: 16300217000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 23 QUARTERS/FOOTAGES: 1300' S line, 4375' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.962374 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.515833 DATE COLLECTED:

SURFACE ELEVATION (FT.): 515.4 LOGGED (FT.): 119.6 LOG TYPE: Drillers Log

SOURCE: ELL-RICH MINING COMPANY WELL TYPE: Coal Test

COMMENT: SLOPE MINE 6 FEET COAL AT ELEVATION 425

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
401.8	CARBONDALE	HERRIN	COAL	6.0	113.6	SLOPE MINE 6' COAL AT ELEVATION 425'

MAPID: 16300217000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 23 QUARTERS/FOOTAGES: 1300' S line, 4375' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.962374 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.515833 DATE COLLECTED:

SURFACE ELEVATION (FT.): 515.4 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: WHITE COUNTY COAL CORP. WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
425.4	CARBONDALE	HERRIN	COAL	6.0	90.0	

MAPID: 16300030000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 24 QUARTERS/FOOTAGES: 2425' S line, 3000' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.939239 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.518899 DATE COLLECTED: 0 / 0 / 1927

SURFACE ELEVATION (FT.): 505.9 LOGGED (FT.): 1030.0 LOG TYPE: Drillers Log

SOURCE: MASON WAGNER ET AL WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
505.9			SOIL	25.0	0.0	
480.9			CLAY	28.0	25.0	
452.9			LIMESTONE	9.0	53.0	
443.9			LIGHT SHALE	17.0	62.0	
426.9			LIMESTONE	27.0	79.0	
399.9	CARBONDALE	HERRIN	COAL	6.0	106.0	
393.9	CARBONDALE		LIMESTONE	6.0	112.0	BLUE
387.9	CARBONDALE		LIGHT SHALE	7.0	118.0	
380.9	CARBONDALE		SHALE	5.0	125.0	WHITE
375.9	CARBONDALE		LIMESTONE	3.0	130.0	WHITE
372.9	CARBONDALE		LIMESTONE	3.0	133.0	BLUISH
369.9	CARBONDALE		LIMESTONE	3.0	136.0	WHITE
366.9	CARBONDALE		BLACK SHALE	11.0	139.0	
355.9	CARBONDALE		SHALE	5.0	150.0	
350.9	CARBONDALE		SHALE	6.0	155.0	
344.9	CARBONDALE		SHALE	32.0	161.0	LIGHT
312.9	CARBONDALE		SHALE	22.0	193.0	
290.9	MISSISSIPPIAN		LIMESTONE	5.0	215.0	BROWN
285.9	MISSISSIPPIAN		SHALE	10.0	220.0	
275.9	MISSISSIPPIAN		LIMESTONE	5.0	230.0	BLUE
270.9	MISSISSIPPIAN		LIGHT SHALE	20.0	235.0	
250.9	MISSISSIPPIAN		ROCK	13.0	255.0	RED
237.9	MISSISSIPPIAN		LIMESTONE	8.0	268.0	BROWN
229.9	MISSISSIPPIAN		SHALE	9.0	276.0	
220.9	MISSISSIPPIAN		LIMESTONE	25.0	285.0	BROWN
195.9	MISSISSIPPIAN		LIMESTONE	38.0	310.0	LIGHT
157.9	MISSISSIPPIAN		ROCK	12.0	348.0	RED
145.9	MISSISSIPPIAN		LIGHT SHALE	32.0	360.0	
113.9	MISSISSIPPIAN		CALCAREOUS SHALE	8.0	392.0	SET OF 10 INCH CASING AT 40'
105.9	MISSISSIPPIAN		SHALE	13.0	400.0	
92.9	MISSISSIPPIAN		LIMESTONE	5.0	413.0	
87.9	MISSISSIPPIAN		LIGHT SHALE	17.0	418.0	
70.9	MISSISSIPPIAN		LIMESTONE	3.0	435.0	
67.9	MISSISSIPPIAN		ROCK	27.0	438.0	RED
40.9	MISSISSIPPIAN		LIGHT SHALE	5.0	465.0	
35.9	MISSISSIPPIAN		SANDY SHALE	15.0	470.0	
20.9	MISSISSIPPIAN		LIMESTONE	5.0	485.0	GRN/WHITE
15.9	MISSISSIPPIAN		SANDSTONE	50.0	490.0	GRAY
-34.1	MISSISSIPPIAN		SANDSTONE	5.0	540.0	DARK

-39.1	MISSISSIPPIAN	SANDSTONE	13.0	545.0	GRAY
-52.1	MISSISSIPPIAN	LIMESTONE	118.0	558.0	BRN/PNK
-170.1	MISSISSIPPIAN	LIMESTONE	124.0	676.0	BROWN
-294.1	MISSISSIPPIAN	LIMESTONE	5.0	800.0	BROWN
-299.1	MISSISSIPPIAN	LIMESTONE	100.0	805.0	BROWN
-399.1	MISSISSIPPIAN	LIMESTONE	90.0	905.0	BROWN
-489.1	MISSISSIPPIAN	LIMESTONE	10.0	995.0	BRN/WHT
-499.1	MISSISSIPPIAN	LIMESTONE	25.0	1005.0	LT BRN

MAPID: 16300030000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 24 **QUARTERS/FOOTAGES:** 2425' S line, 3000' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.939239 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.518899 **DATE COLLECTED:** 0 / 0 / 1997
SURFACE ELEVATION (FT.): 505.9 **LOGGED (FT.):** 1995.0 **LOG TYPE:**
SOURCE: MASONWGNER **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN COMMENT	
399.9	CARBONDALE	HERRIN	COAL	6.0	106.0

MAPID: 16301302000C **VERSION:** 1 **PROJECT:** NCRDS87
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 24 **QUARTERS/FOOTAGES:** 990' S line, 330' W line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.945835 **GEOLOGIST:** WEIBEL
CONFIDENTIAL: N **LATITUDE:** 38.514935 **DATE COLLECTED:** 4 / 23 / 1951
SURFACE ELEVATION (FT.): 490.0 **LOGGED (FT.):** 78.5 **LOG TYPE:** Other Core Study
SOURCE: BELLE VALLEY COAL CORP. **WELL TYPE:** Diamond Drill
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN COMMENT	
490.0			UNCONSOLIDATED	27.5	0.0
462.5	CARBONDALE		LIMESTONE	6.8	27.5
455.7	CARBONDALE		GRAY SHALE	9.8	34.3
446.0	CARBONDALE		LIMESTONE	7.0	44.0
439.0	CARBONDALE		UNCLASSIFIED	13.8	51.0
425.2	CARBONDALE		BLACK SHALE	2.2	64.8
423.0	CARBONDALE	BRERETON	LIMESTONE	3.2	67.0
419.8	CARBONDALE	ANNA	BLACK SHALE	1.3	70.2
418.5	CARBONDALE	HERRIN	COAL	6.8	71.5
411.7	CARBONDALE		UNDERCLAY	0.3	78.3

MAPID: 16301302000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 24 QUARTERS/FOOTAGES: 990' S line, 330' W line

QUADRANGLE: O'FALLON LONGITUDE: -89.945835 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.514935 DATE COLLECTED:

SURFACE ELEVATION (FT.): 490.0 LOGGED (FT.): 78.8 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
463.8	MODESTO	PIASA	LIMESTONE	6.8	26.2	
457.1	CARBONDALE		GRAY SHALE	9.8	32.9	
447.3	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	42.7	
440.3	CARBONDALE	LAWSON	SILTY SHALE	1.0	49.7	
439.3	CARBONDALE	LAWSON	CALCAREOUS SANDSTONE	12.8	50.7	
426.5	CARBONDALE	LAWSON	SHALE	1.9	63.5	
424.6	CARBONDALE	JAMESTOWN	BONE COAL	0.2	65.4	
424.4	CARBONDALE		SHALE	1.9	65.6	
422.5	CARBONDALE	BRERETON	LIMESTONE	3.2	67.5	
419.3	CARBONDALE	ANNA	BLACK SHALE	1.3	70.7	
418.0	CARBONDALE	HERRIN	COAL	6.8	72.0	

MAPID: 16301302000C VERSION: 3

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 24 QUARTERS/FOOTAGES: 990' S line, 330' W line

QUADRANGLE: O'FALLON LONGITUDE: -89.945835 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.514935 DATE COLLECTED: 4 / 23 / 1951

SURFACE ELEVATION (FT.): 490.0 LOGGED (FT.): 78.5 LOG TYPE: Drillers Log

SOURCE: BELLE VALLEY COAL CORP 1 WELL TYPE: Coal Test

COMMENT: GOOD COAL TOP AND CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
490.0			CLAY	27.5	0.0	
462.5			LIMESTONE	6.8	27.5	
455.7			SHALE	9.8	34.3	
446.0			LIMESTONE	7.0	44.0	
439.0			SANDY SHALE	1.0	51.0	
438.0			SANDSTONE	12.8	52.0	
425.2			BLACK SHALE	2.2	64.8	SLATE WITH A 2" SCUM OF COAL IN CENTER
423.0	CARBONDALE	BRERETON	LIMESTONE	3.2	67.0	
419.8	CARBONDALE	ANNA	BLACK SHALE	1.3	70.2	
418.5	CARBONDALE	HERRIN	COAL	6.8	71.5	
411.7	CARBONDALE		CLAYSTONE	0.3	78.3	

MAPID: 16301303000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 24 QUARTERS/FOOTAGES: SE SW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.943543 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.513099 DATE COLLECTED: 4 / 24 / 1951

SURFACE ELEVATION (FT.): 475.0 LOGGED (FT.): 85.0 LOG TYPE: Drillers Log

SOURCE: BELLE VALLEY COAL CORP 2 WELL TYPE: Coal Test

COMMENT: GOOD COAL, TOP, AND CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
475.0			CLAY	33.7	0.0	
441.3			LIMESTONE	6.1	33.7	
435.2			SOFT SHALE	11.3	39.8	
424.0			LIMESTONE	1.5	51.0	
422.5			LIMESTONE	5.8	52.5	
416.7			SANDSTONE	6.7	58.3	
410.0			LIMESTONE	8.3	65.0	
401.7			BLACK SHALE	1.2	73.3	
400.6	CARBONDALE	BRERETON	LIMESTONE	2.4	74.4	DARK
398.2	CARBONDALE	ANNA	BLACK SHALE	1.0	76.8	
397.2	CARBONDALE	HERRIN	COAL	7.2	77.8	

MAPID: 16301080000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 25 QUARTERS/FOOTAGES: 920' S line, 1220' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.932742 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.500346 DATE COLLECTED:

SURFACE ELEVATION (FT.): 493.0 LOGGED (FT.): 86.3 LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 20 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
448.1	CARBONDALE		CLAYSTONE & SHALE	10.0	44.9	
438.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	54.9	UPPER BENCH
435.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.6	57.6	SHALE PARTING
434.8	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.3	58.2	LOWER BENCH
432.5	CARBONDALE	LAWSON	SILTY SHALE	0.5	60.5	
432.0	CARBONDALE	LAWSON	GRAY SHALE	0.8	61.0	
431.2	CARBONDALE	LAWSON	SILTY SHALE	6.1	61.8	
425.2	CARBONDALE	CONANT	LIMESTONE	2.7	67.8	
422.5	CARBONDALE		GRAY SHALE	4.4	70.5	
418.1	CARBONDALE	BRERETON	LIMESTONE	2.8	74.9	
415.3	CARBONDALE	ANNA	BLACK SHALE	1.3	77.7	
414.0	CARBONDALE	HERRIN	COAL	7.3	79.0	

MAPID: 16301305000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 25 **QUARTERS/FOOTAGES:** SE SE
QUADRANGLE: FREEBURG **LONGITUDE:** -89.930717 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.499609 **DATE COLLECTED:** 0 / 0 / 1954
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 79.5 **LOG TYPE:** Drillers Log
SOURCE: RICHARD GRIBLER **WELL TYPE:** Water Well
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	23.0	0.0	BLUE
-			ROCK	5.0	23.0	
-			GRAVEL	3.0	28.0	
-			ROCK	5.0	31.0	
-	CARBONDALE	ANNA	SHALE	5.0	36.0	
-	CARBONDALE	HERRIN	COAL	6.5	41.0	
-	CARBONDALE		SHALE	1.5	47.5	
-	CARBONDALE		LIMESTONE	30.5	49.0	GREY

MAPID: 16300218000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 26 **QUARTERS/FOOTAGES:** 1600' N line, 700' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.949311 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.50779 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 490.1 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: EAST BELLEVILLE MINE **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT , SHIPPING MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
490.1			MINE OPENING	0.0	0.0	SHIPPING MINE EAST BELLEVILLE MINE

MAPID: 16300218000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 26 **QUARTERS/FOOTAGES:** 1600' N line, 700' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.949311 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.50779 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 490.1 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: E BLVL M **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
430.1	CARBONDALE	HERRIN	COAL	-	60.0	

MAPID: 16300765000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 26 QUARTERS/FOOTAGES: 3165' S line, 190' E line
 QUADRANGLE: O'FALLON LONGITUDE: -89.947487 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.506549 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 480.4 LOGGED (FT.): 67.0 LOG TYPE: Drillers Log
 SOURCE: BELLE VALLEY COAL CO WELL TYPE: Coal Test
 COMMENT: 60' TO 7' OF #6

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
420.4			MINE OPENING	7.0	60.0	SLOPE MINE 60' TO 7' OF #6

MAPID: 16300765000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 26 QUARTERS/FOOTAGES: 3165' S line, 190' E line
 QUADRANGLE: O'FALLON LONGITUDE: -89.947487 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.506549 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 480.4 LOGGED (FT.): 0.0 LOG TYPE:
 SOURCE: BEL VAL CC WELL TYPE: Underground mine
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
420.4	CARBONDALE	HERRIN	COAL	7.0	60.0	

MAPID: 16301306000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 26 QUARTERS/FOOTAGES: NE SE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.948039 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.507707 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 480.0 LOGGED (FT.): 65.2 LOG TYPE: Drillers Log

SOURCE: BELLE VALLEY COAL CO 1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
480.0			CLAY	20.5	0.0	
459.5			CLAY	2.8	20.5	GRY/YEL
456.7			HARD SHALE	6.8	23.3	
449.9			ROCK	2.0	30.1	
447.9			LIMESTONE	1.8	32.1	
446.1			ROCK	1.8	33.9	
444.3			ROCK	1.8	35.7	
442.5			ROCK	1.7	37.5	
440.8			ROCK	2.1	39.2	
438.7			ROCK	1.2	41.3	
437.6			ROCK	4.4	42.4	
433.2			ROCK	1.1	46.8	GRAY
432.1			LIMESTONE	5.3	47.9	
426.7			ROCK	4.2	53.3	
422.6			CLOD	0.3	57.4	
422.3	CARBONDALE	HERRIN	COAL	6.7	57.7	
415.7	CARBONDALE		CLAYSTONE	0.8	64.3	

MAPID: 16301307000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 26 QUARTERS/FOOTAGES: NE SE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.948039 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.507707 DATE COLLECTED: 5 / 7 / 1947

SURFACE ELEVATION (FT.): LOGGED (FT.): 58.0 LOG TYPE: Drillers Log

SOURCE: BELLE VALLEY COAL CO 2 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			SOIL	3.0	0.0	
-			CLAY	32.0	3.0	YELLOW
-			LIMESTONE	7.0	35.0	
-			CALCAREOUS SHALE	4.0	42.0	
-			SHALE	8.0	46.0	
-			LIMESTONE	4.0	54.0	BROKE THROUGH IN MINE AT 58'

MAPID: 16302915000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 26 **QUARTERS/FOOTAGES:** SE NW
QUADRANGLE: O'FALLON **LONGITUDE:** -89.958676 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.506848 **DATE COLLECTED:** 2 / 0 / 1958
SURFACE ELEVATION (FT.): 474.5 **LOGGED (FT.):** 43.5 **LOG TYPE:** Drillers Log
SOURCE: ILL DIV OF HIGHWAYS **WELL TYPE:** Engineering Test Holes
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	7.0		VERY STIFF GRAY SILTY CLAY; GRAY
467.5			CLAY	4.5	7.0	STIFF MOTTLED SILTY CLAY
463.0			CLAY	7.5	11.5	BROWN
455.5			CLAY	11.8	19.0	
443.7			COAL	0.9	30.8	
442.8			SHALE	11.8	31.7	

MAPID: 16300219000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 27 **QUARTERS/FOOTAGES:** 2725' N line, 4700' W line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.967365 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.504737 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 506.1 **LOGGED (FT.):** 65.0 **LOG TYPE:** Drillers Log
SOURCE: PATTERSON & HARDING MINE **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT 6' COAL AT 65'

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
447.1	CARBONDALE	HERRIN	COAL	6.0	59.0	LOCAL MINE ELEVATION TOP 441'

MAPID: 16300219000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 27 **QUARTERS/FOOTAGES:** 2725' N line, 4700' W line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.967365 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.504737 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 506.1 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: PAT HARD M **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
441.1	CARBONDALE	HERRIN	COAL	6.0	65.0	

MAPID: 16300031000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 28 QUARTERS/FOOTAGES: W2

QUADRANGLE: O'FALLON LONGITUDE: -89.997366 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.505255 DATE COLLECTED:

SURFACE ELEVATION (FT.): 520.0 LOGGED (FT.): 455.0 LOG TYPE: Drillers Log

SOURCE: BELLEVILLE DEEP WATER CO WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
520.0			SOIL	30.0	0.0
490.0			LIMESTONE	15.0	30.0
475.0			SHALE	5.0	45.0
470.0			LIMESTONE	15.0	50.0
455.0	CARBONDALE	HERRIN	COAL	5.0	65.0
450.0	CARBONDALE		SHALE	30.0	70.0
420.0	MISSISSIPPIAN		LIMESTONE	50.0	100.0
370.0	MISSISSIPPIAN		SANDSTONE	10.0	150.0
360.0	MISSISSIPPIAN		SHALE	40.0	160.0
320.0	MISSISSIPPIAN		LIMESTONE	40.0	200.0
280.0	MISSISSIPPIAN		SHALE	60.0	240.0
220.0	MISSISSIPPIAN		LIMESTONE	10.0	300.0
210.0	MISSISSIPPIAN		SHALE	19.0	310.0
191.0	MISSISSIPPIAN		SANDSTONE	71.0	329.0
120.0	MISSISSIPPIAN		LIMESTONE	27.0	400.0
93.0	MISSISSIPPIAN		SHALE	5.0	427.0
88.0	MISSISSIPPIAN		LIMESTONE	23.0	432.0

MAPID: 16300031000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 28 QUARTERS/FOOTAGES: W2

QUADRANGLE: O'FALLON LONGITUDE: -89.997366 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.505255 DATE COLLECTED:

SURFACE ELEVATION (FT.): 520.0 LOGGED (FT.): 455.0 LOG TYPE:

SOURCE: BLVL DP WC WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
455.0	CARBONDALE	HERRIN	COAL	5.0	65.0

MAPID: 16300034000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 28 **QUARTERS/FOOTAGES:** 300' S line, 1455' W line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.996855 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.49893 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 483.1 **LOGGED (FT.):** 569.0 **LOG TYPE:**
SOURCE: BLVL DP WC **WELL TYPE:** Water Well
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
439.1	CARBONDALE	HERRIN	COAL	6.0	44.0	

MAPID: 16300034000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 28 **QUARTERS/FOOTAGES:** 300' S line, 1455' W line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.996855 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.49893 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 483.0 **LOGGED (FT.):** 50.0 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE		UNDERCLAY	34.0		
449.0	CARBONDALE	BRERETON	LIMESTONE	10.0	34.0	
439.0	CARBONDALE	HERRIN	COAL	6.0	44.0	

MAPID: 16300034000C **VERSION:** 3 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 28 **QUARTERS/FOOTAGES:** 300' S line, 1455' W line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.996855 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.49893 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 483.1 **LOGGED (FT.):** 569.0 **LOG TYPE:** Drillers Log
SOURCE: BELLEVILLE DEEP WATER WELL CO **WELL TYPE:** Plugged and/or Abandoned
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
483.1			CLAY	34.0	0.0	
449.1			LIMESTONE	10.0	34.0	
439.1	CARBONDALE	HERRIN	COAL	6.0	44.0	
433.1	CARBONDALE		SHALE	18.0	50.0	
415.1	CARBONDALE		LIMESTONE	7.0	68.0	
408.1	CARBONDALE		SANDSTONE	59.0	75.0	
349.1	MISSISSIPPIAN		LIMESTONE	25.0	134.0	
324.1	MISSISSIPPIAN		SANDSTONE	34.0	159.0	
290.1	MISSISSIPPIAN		SHALE	195.0	193.0	
95.1	MISSISSIPPIAN		SANDSTONE	23.0	388.0	
72.1	MISSISSIPPIAN		CALCAREOUS SHALE	158.0	411.0	WELL ABANDONED

MAPID: 16300279000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 28 QUARTERS/FOOTAGES: 3100' N line, 250' W line

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.000996 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.503876 DATE COLLECTED:

SURFACE ELEVATION (FT.): 492.6 LOGGED (FT.): 60.0 LOG TYPE: Drillers Log

SOURCE: COLUMBIA COAL COMPANY WELL TYPE: Coal Test

COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
438.6	CARBONDALE	HERRIN	COAL	6.0	54.0	SHIPPING MINE ELEVATION TOP 433'

MAPID: 16300279000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 28 QUARTERS/FOOTAGES: 3100' N line, 250' W line

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.000996 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.503876 DATE COLLECTED:

SURFACE ELEVATION (FT.): 492.6 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: COLUMBIA COAL COMPANY WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
432.6	CARBONDALE	HERRIN	COAL	6.0	60.0	

MAPID: 16300653000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 28 QUARTERS/FOOTAGES: 940' S line, 200' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.984374 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.500758 DATE COLLECTED: 2 / 24 / 1932

SURFACE ELEVATION (FT.): 471.0 LOGGED (FT.): 1037.5 LOG TYPE: Drillers Log

SOURCE: KANE,POLLACK, STOLBERG 1 WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
471.0			SOIL	1.0	0.0	
470.0			CLAY	53.0	1.0	YELLOW
417.0	CARBONDALE	HERRIN	COAL	6.0	54.0	THICKNESS NOT PRECISE
411.0	CARBONDALE		LIMESTONE	8.0	60.0	
403.0	CARBONDALE		SHALE	14.0	68.0	WHITE
389.0	CARBONDALE		LIMESTONE	7.0	82.0	
382.0	CARBONDALE		SHALE	2.0	89.0	
380.0	CARBONDALE		COAL	5.0	91.0	
375.0	CARBONDALE		SHALE	9.0	96.0	
366.0	CARBONDALE		ROCK	4.0	105.0	RED
362.0	CARBONDALE		SHALE	10.0	109.0	
352.0	CARBONDALE		LIMESTONE	10.0	119.0	
342.0	CARBONDALE		SHALE	16.0	129.0	
326.0	MISSISSIPPIAN		LIMESTONE	28.0	145.0	
298.0	MISSISSIPPIAN		SHALE	11.0	173.0	
287.0	MISSISSIPPIAN		LIMESTONE	16.0	184.0	
271.0	MISSISSIPPIAN		SANDSTONE	50.0	200.0	
221.0	MISSISSIPPIAN		LIGHT SHALE	5.0	250.0	
216.0	MISSISSIPPIAN		LIMESTONE	5.0	255.0	
211.0	MISSISSIPPIAN		LIGHT SHALE	25.0	260.0	
186.0	MISSISSIPPIAN		SHALE	5.0	285.0	
181.0	MISSISSIPPIAN		LIMESTONE	5.0	290.0	GRAY
176.0	MISSISSIPPIAN		SANDSTONE	15.0	295.0	BROWN
161.0	MISSISSIPPIAN		ROCK	10.0	310.0	RED
151.0	MISSISSIPPIAN		LIMESTONE	30.0	320.0	BROWN
121.0	MISSISSIPPIAN		SANDSTONE	80.0	350.0	
41.0	MISSISSIPPIAN		LIMESTONE	8.0	430.0	SET 6 1/4" PIPE
33.0	MISSISSIPPIAN		LIMESTONE	7.0	438.0	WHITE
26.0	MISSISSIPPIAN		LIMESTONE	55.0	445.0	GRAY
-29.0	MISSISSIPPIAN		LIMESTONE	170.0	500.0	BROWN
-199.0	MISSISSIPPIAN		LIMESTONE	10.0	670.0	GRAY
-209.0	MISSISSIPPIAN		LIMESTONE	20.0	680.0	BROWN
-229.0	MISSISSIPPIAN		LIMESTONE	42.0	700.0	
-271.0	MISSISSIPPIAN		SANDY SHALE	16.0	742.0	
-287.0	MISSISSIPPIAN		LIMESTONE	59.0	758.0	GRAY
-346.0	MISSISSIPPIAN		SHALE	3.0	817.0	
-349.0	MISSISSIPPIAN		LIMESTONE	5.0	820.0	GRAY
-354.0	MISSISSIPPIAN		LIMESTONE	208.0	825.0	GRAY
-562.0	MISSISSIPPIAN		NO RECORD	4.5	1033.0	DRY HOLE

MAPID: 16300653000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 28 **QUARTERS/FOOTAGES:** 940' S line, 200' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.984374 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.500758 **DATE COLLECTED:** 0 / 0 / 1932
SURFACE ELEVATION (FT.): 471.4 **LOGGED (FT.):** 1138.0 **LOG TYPE:**
SOURCE: KANEPOLLCK **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
417.4	CARBONDALE	HERRIN	COAL	6.0	54.0	
380.4	CARBONDALE	SPRINGFIELD	COAL	5.0	91.0	

MAPID: 16300654000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 28 **QUARTERS/FOOTAGES:** 1290' S line, 3010' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.994295 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.501677 **DATE COLLECTED:** 7 / 22 / 1933
SURFACE ELEVATION (FT.): 509.0 **LOGGED (FT.):** 200.0 **LOG TYPE:** Drillers Log
SOURCE: STOLBERG & HAAS 3 **WELL TYPE:** Plugged and/or Abandoned
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
509.0			SOIL	35.0	0.0	
474.0	CARBONDALE	ANNA	SHALE	2.0	35.0	
472.0	CARBONDALE	HERRIN	COAL	6.0	37.0	THICKNESS NOT PRECISE
466.0	CARBONDALE		CLAYSTONE	5.0	43.0	
461.0	CARBONDALE		CHERT	2.0	48.0	
459.0	CARBONDALE		SHALE	5.0	50.0	
454.0	CARBONDALE		CHERT	5.0	55.0	
449.0	CARBONDALE		SHALE	4.0	60.0	
445.0	CARBONDALE		CHERT	3.0	64.0	
442.0	CARBONDALE		SHALE	24.0	67.0	
418.0	CARBONDALE		SHALE	6.0	91.0	
412.0	CARBONDALE		SHALE	48.0	97.0	
364.0	CARBONDALE		COAL	2.0	145.0	
362.0	CARBONDALE		CLAYSTONE	3.0	147.0	
359.0	CARBONDALE		SHALE	6.0	150.0	
353.0	CARBONDALE		SHALE	9.0	156.0	
344.0	CARBONDALE		SANDSTONE	15.0	165.0	
329.0	CARBONDALE		LIMESTONE	3.0	180.0	
326.0	CARBONDALE		SANDSTONE	17.0	183.0	WHITE

MAPID: 16300654000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 28 **QUARTERS/FOOTAGES:** 1290' S line, 3010' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.994295 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.501677 **DATE COLLECTED:** 0 / 0 / 1933
SURFACE ELEVATION (FT.): 509.0 **LOGGED (FT.):** 200.0 **LOG TYPE:**
SOURCE: STOLB HAAS **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
472.0	CARBONDALE	HERRIN	COAL	6.0	37.0	

MAPID: 16300033000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 29 **QUARTERS/FOOTAGES:** 1980' N line, 0' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.001819 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.506973 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 500.0 **LOGGED (FT.):** 432.0 **LOG TYPE:**
SOURCE: BLVL DP WC **WELL TYPE:**
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
456.0	CARBONDALE	HERRIN	COAL	7.0	44.0	

MAPID: 16300033000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 29 **QUARTERS/FOOTAGES:** 1980' N line, 0' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.001819 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.506973 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 500.0 **LOGGED (FT.):** 51.0 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE		UNDERCLAY	34.0		
466.0	CARBONDALE	BRERETON	LIMESTONE	10.0	34.0	
456.0	CARBONDALE	HERRIN	COAL	7.0	44.0	

MAPID: 16300033000C **VERSION:** 3 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 29 **QUARTERS/FOOTAGES:** 1980' N line, 0' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.001819 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.506973 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 500.0 **LOGGED (FT.):** 432.0 **LOG TYPE:** Drillers Log
SOURCE: BELLEVILLE DEEP WELL WATER CO **WELL TYPE:** Oil and Gas Test
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
500.0			CLAY	34.0	0.0	
466.0			LIMESTONE	10.0	34.0	
456.0	CARBONDALE	HERRIN	COAL	7.0	44.0	
449.0	CARBONDALE		CALCAREOUS SHALE	18.0	51.0	
431.0	CARBONDALE		SANDSTONE	7.0	69.0	
424.0	CARBONDALE		SHALE	59.0	76.0	
365.0	CARBONDALE		LIMESTONE	25.0	135.0	
340.0	CARBONDALE		SANDSTONE	34.0	160.0	
306.0	CARBONDALE		SHALE	195.0	194.0	
111.0	CARBONDALE		SANDSTONE	23.0	389.0	
88.0	CARBONDALE		CALCAREOUS SHALE	20.0	412.0	

MAPID: 16300221000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 29 **QUARTERS/FOOTAGES:** 2675' N line, 1475' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.007037 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.505084 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 499.8 **LOGGED (FT.):** 54.0 **LOG TYPE:** Drillers Log
SOURCE: REEB COAL COMPANY **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT 6'6" COAL AT 54'

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
452.3	CARBONDALE	HERRIN	COAL	6.5	47.5	SHIPPING MINE ELEVATION TOP 446'

MAPID: 16300221000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 29 **QUARTERS/FOOTAGES:** 2675' N line, 1475' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.007037 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.505084 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 499.8 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: REEB COAL COMPANY **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
445.8	CARBONDALE	HERRIN	COAL	6.5	54.0	

MAPID: 16300222000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 29 **QUARTERS/FOOTAGES:** 3650' N line, 1400' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.006821 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.502393 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 530.0 **LOGGED (FT.):** 103.0 **LOG TYPE:** Drillers Log
SOURCE: EAST-BELL COAL CO **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
433.0	CARBONDALE	HERRIN	COAL	6.0	97.0	SHAFT ELEVATION TOP 433'

MAPID: 16300222000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 29 **QUARTERS/FOOTAGES:** 3650' N line, 1400' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.006821 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.502393 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 530.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: WHITE ROSE **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
420.0	CARBONDALE	HERRIN	COAL	6.0	110.0	

MAPID: 16300280000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 29 **QUARTERS/FOOTAGES:** 1000' N line, 1320' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.006409 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.509705 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 508.4 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: SCHRAM MINE **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
508.4			MINE OPENING	0.0	0.0	LOCAL MINE, SCHRAM MINE

MAPID: 16300280000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 29 **QUARTERS/FOOTAGES:** 1000' N line, 1320' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.006409 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.509705 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 508.4 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: PIONEER C C **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
457.4	CARBONDALE	HERRIN	COAL	6.0	51.0	

MAPID: 16300281000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 29 **QUARTERS/FOOTAGES:** 1750' N line, 1925' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.00857 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.507647 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 504.1 **LOGGED (FT.):** 50.0 **LOG TYPE:** Drillers Log
SOURCE: ALUMINUM ORE CO **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
460.1	CARBONDALE	HERRIN	COAL	6.0	44.0	SHIPPING MINE ELEVATION TOP 454'

MAPID: 16300281000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 29 **QUARTERS/FOOTAGES:** 1750' N line, 1925' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.00857 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.507647 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 504.1 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: ALCOA ORE **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
454.1	CARBONDALE	HERRIN	COAL	6.0	50.0	

MAPID: 16300358000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 29 **QUARTERS/FOOTAGES:** SW SW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.019185 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.499066 **DATE COLLECTED:** 0 / 0 / 1920
SURFACE ELEVATION (FT.): 535.4 **LOGGED (FT.):** 92.8 **LOG TYPE:** Drillers Log
SOURCE: ALUMINUM ORE COMPANY 2 **WELL TYPE:** Coal Test
COMMENT: DIAMOND DRILL 5' COAL AT 449'

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
535.4			SOIL	41.0	0.0	
494.4			CLAY	6.0	41.0	
488.4			SANDSTONE	2.5	47.0	GRAY
485.9			SANDY SHALE	5.5	49.5	
480.4			SANDSTONE	0.7	55.0	
479.7			SANDY SHALE	9.3	55.7	
470.4			SANDSTONE	10.0	65.0	
460.4			ROCK	8.3	75.0	BLUE
452.1			SANDSTONE	3.0	83.3	
449.1	CARBONDALE	HERRIN	COAL	5.0	86.3	5' COAL AT 449'
444.1	CARBONDALE		CLAYSTONE	1.4	91.3	

MAPID: 16300358000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 29 **QUARTERS/FOOTAGES:** SW SW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.019185 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.499066 **DATE COLLECTED:** 0 / 0 / 1920
SURFACE ELEVATION (FT.): 535.4 **LOGGED (FT.):** 93.0 **LOG TYPE:**
SOURCE: ALUMINUM 2 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
449.4	CARBONDALE	HERRIN	COAL	5.0	86.0	

MAPID: 16300354000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 30 **QUARTERS/FOOTAGES:** 4025' S line, 4060' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.034569 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.509419 **DATE COLLECTED:** 0 / 0 / 1920
SURFACE ELEVATION (FT.): 547.9 **LOGGED (FT.):** 131.8 **LOG TYPE:** Drillers Log
SOURCE: ALUMINUM ORE COMPANY 14 **WELL TYPE:** Coal Test
COMMENT: DIAMOND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
547.9			SOIL	117.0	0.0	
430.9			SANDSTONE	5.0	117.0	
425.9			SANDY SHALE	5.5	122.0	
420.4			SHALE	1.2	127.5	
419.2			COAL	1.9	128.7	1'11" COAL AT ELEVATION 419.2'
417.3			CLAYSTONE	1.2	130.6	

MAPID: 16300354000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 30 **QUARTERS/FOOTAGES:** 4025' S line, 4060' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.034569 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.509419 **DATE COLLECTED:** 0 / 0 / 1920
SURFACE ELEVATION (FT.): 547.9 **LOGGED (FT.):** 132.0 **LOG TYPE:**
SOURCE: ALUMINUM 14 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		
418.9	CARBONDALE	SPRINGFIELD	COAL	1.8	129.0	

MAPID: 16300355000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 30 QUARTERS/FOOTAGES: 2920' S line, 3560' E line
 QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.032821 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.506351 DATE COLLECTED: 0 / 0 / 1920
 SURFACE ELEVATION (FT.): 542.7 LOGGED (FT.): 96.0 LOG TYPE: Drillers Log
 SOURCE: ALUMINUM ORE COMPANY 14B WELL TYPE: Coal Test
 COMMENT: DIAMOND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
542.7			SOIL	65.0	0.0	
477.7			SANDSTONE	0.8	65.0	
476.9			SANDY SHALE	12.2	65.8	
464.7			SANDSTONE	9.0	78.0	
455.7	CARBONDALE	HERRIN	COAL	6.8	87.0	6"10" COAL AT ELEVATION 455.7'
448.9	CARBONDALE		CLAYSTONE	2.2	93.8	

MAPID: 16300355000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 30 QUARTERS/FOOTAGES: 2920' S line, 3560' E line
 QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.032821 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.506351 DATE COLLECTED: 0 / 0 / 1920
 SURFACE ELEVATION (FT.): 542.7 LOGGED (FT.): 96.0 LOG TYPE:
 SOURCE: ALUMINUM 14B WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
455.7	CARBONDALE	HERRIN	COAL	6.8	87.0	

MAPID: 16300356000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 30 QUARTERS/FOOTAGES: 1900' S line, 3920' E line
 QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.034093 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.503549 DATE COLLECTED: 0 / 0 / 1920
 SURFACE ELEVATION (FT.): 550.2 LOGGED (FT.): 80.6 LOG TYPE: Drillers Log
 SOURCE: ALUMINUM ORE COMPANY 13 WELL TYPE: Coal Test
 COMMENT: DIAMOND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.2			SOIL	60.0	0.0	
490.2			SANDSTONE	0.3	60.0	
489.9			CLAYSTONE	4.4	60.3	
485.4			SANDSTONE	4.7	64.8	
480.8	CARBONDALE	ANNA	BLACK SHALE	2.0	69.4	
478.8	CARBONDALE	HERRIN	COAL	7.0	71.4	7' COAL AT ELEVATION 478.8
471.8	CARBONDALE		CLAYSTONE	2.0	78.4	

MAPID: 16300356000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 30 **QUARTERS/FOOTAGES:** 1900' S line, 3920' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.034093 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.503549 **DATE COLLECTED:** 0 / 0 / 1920
SURFACE ELEVATION (FT.): 550.2 **LOGGED (FT.):** 80.0 **LOG TYPE:**
SOURCE: ALUMINUM 13 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
479.2	CARBONDALE	HERRIN	COAL	7.0	71.0	

MAPID: 16300357000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 30 **QUARTERS/FOOTAGES:** 35' S line, 4330' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.035548 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.498412 **DATE COLLECTED:** 0 / 0 / 1920
SURFACE ELEVATION (FT.): 545.9 **LOGGED (FT.):** 57.5 **LOG TYPE:** Drillers Log
SOURCE: ALUMINUM ORE COMPANY 5 **WELL TYPE:** Coal Test
COMMENT: DIAMOND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.9			SOIL	39.0	0.0	
506.9			SANDY SHALE	6.4	39.0	
500.5			SANDSTONE	2.6	45.4	
497.9	CARBONDALE	ANNA	BLACK SHALE	1.8	48.0	
496.1	CARBONDALE	HERRIN	COAL	6.1	49.8	61" COAL AT ELEVATION 496.1
490.1	CARBONDALE		CLAYSTONE	0.8	55.8	
489.3	CARBONDALE		SANDSTONE	0.9	56.6	

MAPID: 16300357000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 30 **QUARTERS/FOOTAGES:** 35' S line, 4330' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.035548 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.498412 **DATE COLLECTED:** 0 / 0 / 1920
SURFACE ELEVATION (FT.): 545.9 **LOGGED (FT.):** 58.0 **LOG TYPE:**
SOURCE: ALUMINUM 5 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
495.9	CARBONDALE	HERRIN	COAL	6.1	50.0	

MAPID: 16300819000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 30 QUARTERS/FOOTAGES: 2800' S line, 900' E line

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.023476 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.505933 DATE COLLECTED: 0 / 0 / 1920

SURFACE ELEVATION (FT.): 505.3 LOGGED (FT.): 72.5 LOG TYPE: Drillers Log

SOURCE: ALUMINUM ORE CO 3 WELL TYPE: Coal Test

COMMENT: DIAMOND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
505.3			SOIL	30.0	0.0	
475.3			BOULDER	0.5	30.0	
474.8			CLAY	29.5	30.5	
445.3			SANDSTONE	3.3	60.0	GRAY
442.0	CARBONDALE	HERRIN	COAL	5.5	63.3	5'6" COAL AT ELEVATION 442'
436.5	CARBONDALE		CLAYSTONE	3.8	68.8	SANDSTONE GRAY BELOW

MAPID: 16300819000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 30 QUARTERS/FOOTAGES: 2800' S line, 900' E line

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.023476 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.505933 DATE COLLECTED: 0 / 0 / 1920

SURFACE ELEVATION (FT.): 505.3 LOGGED (FT.): 73.0 LOG TYPE:

SOURCE: ALUMINUM 3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
442.3	CARBONDALE	HERRIN	COAL	5.5	63.0	

MAPID: 16301309000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 30 QUARTERS/FOOTAGES: SW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.034068 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.500134 DATE COLLECTED: 0 / 0 / 1955

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 365.0 LOG TYPE: Drillers Log

SOURCE: QUALITY FARM EQUIP INC 19 WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.0			SOIL	4.0	0.0	
536.0			CLAY	13.0	4.0	YELLOW
523.0			CLAY	2.0	17.0	GREY
521.0			CLAY	6.0	19.0	YELLOW
515.0			CLAY	1.0	25.0	GREY
514.0			SHALE	25.0	26.0	
489.0			SHALE	12.0	51.0	
477.0			LIMESTONE	17.0	63.0	
460.0			BLACK SHALE	3.0	80.0	
457.0			ROCK	1.0	83.0	
456.0	CARBONDALE	HERRIN	COAL	6.0	84.0	
450.0	CARBONDALE		SHALE	3.0	90.0	
447.0	CARBONDALE		LIMESTONE	7.0	93.0	
440.0	CARBONDALE		LIMESTONE	30.0	100.0	
410.0	CARBONDALE	SPRINGFIELD	COAL	5.0	130.0	THICKNESS INCORRECT
405.0	CARBONDALE		LIMESTONE	15.0	135.0	
390.0	CARBONDALE		SHALE	5.0	150.0	
385.0	CARBONDALE		SHALE	10.0	155.0	
375.0	MISSISSIPPIAN		LIMESTONE	35.0	165.0	
340.0	MISSISSIPPIAN		SHALE	15.0	200.0	
325.0	MISSISSIPPIAN		LIMESTONE	15.0	215.0	
310.0	MISSISSIPPIAN		SANDSTONE	20.0	230.0	
290.0	MISSISSIPPIAN		SHALE	8.0	250.0	
282.0	MISSISSIPPIAN		LIMESTONE	7.0	258.0	
275.0	MISSISSIPPIAN		SANDSTONE	5.0	265.0	
270.0	MISSISSIPPIAN		SHALE	20.0	270.0	
250.0	MISSISSIPPIAN		LIMESTONE	18.0	290.0	
232.0	MISSISSIPPIAN		SANDY SHALE	2.0	308.0	
230.0	MISSISSIPPIAN		SHALE	5.0	310.0	GRY/RED
225.0	MISSISSIPPIAN		SHALE	30.0	315.0	
195.0	MISSISSIPPIAN		SANDSTONE	20.0	345.0	

MAPID: 16300359000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 3330' S line, 3600' E line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.03309 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.492883 DATE COLLECTED: 0 / 0 / 1920
 SURFACE ELEVATION (FT.): 545.8 LOGGED (FT.): 55.3 LOG TYPE: Drillers Log
 SOURCE: ALUMINUM ORE COMPANY 12 WELL TYPE: Coal Test
 COMMENT: DIAMOND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.8			SOIL	32.0	0.0	
513.8			SANDSTONE	8.0	32.0	
505.8			SANDY SHALE	1.0	40.0	
504.8			SANDY SHALE	3.8	41.0	
501.0	CARBONDALE	ANNA	BLACK SHALE	2.0	44.8	
499.0	CARBONDALE	HERRIN	COAL	6.4	46.8	65" COAL AT ELEVATION 499.0
492.5	CARBONDALE		CLAYSTONE	2.0	53.3	

MAPID: 16300359000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 3330' S line, 3600' E line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.03309 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.492883 DATE COLLECTED: 0 / 0 / 1920
 SURFACE ELEVATION (FT.): 545.8 LOGGED (FT.): 55.0 LOG TYPE:
 SOURCE: ALUMINUM 12 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
498.8	CARBONDALE	HERRIN	COAL	6.4	47.0	

MAPID: 16300360000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 2995' S line, 1335' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.025154 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.491917 DATE COLLECTED: 0 / 0 / 1920

SURFACE ELEVATION (FT.): 541.7 LOGGED (FT.): 75.2 LOG TYPE: Drillers Log

SOURCE: ALUMINUM ORE COMPANY 11 WELL TYPE: Coal Test

COMMENT: DIAMOND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
541.7			SOIL	12.0	0.0	
529.7			CLAY	6.5	12.0	
523.2			CLAY	14.5	18.5	
508.7			SANDSTONE	1.5	33.0	
507.2			SANDY SHALE	1.5	34.5	
505.7			SANDSTONE	3.3	36.0	
502.4			SANDY SHALE	7.2	39.3	
495.2			SANDSTONE	6.0	46.5	
489.2			SANDY SHALE	1.8	52.5	
487.4			SANDSTONE	12.6	54.3	BLACK
474.9	CARBONDALE	HERRIN	COAL	6.3	66.8	64" COAL AT ELEVATION 474.9
468.5	CARBONDALE		CLAYSTONE	2.0	73.2	

MAPID: 16300360000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 2995' S line, 1335' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.025154 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.491917 DATE COLLECTED: 0 / 0 / 1920

SURFACE ELEVATION (FT.): 541.7 LOGGED (FT.): 75.0 LOG TYPE:

SOURCE: ALUMINUM 11 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
474.7	CARBONDALE	HERRIN	COAL	6.3	67.0	

MAPID: 16300361000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 1365' S line, 4200' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.035308 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.487467 DATE COLLECTED: 0 / 0 / 1920

SURFACE ELEVATION (FT.): 545.8 LOGGED (FT.): 73.0 LOG TYPE: Drillers Log

SOURCE: ALUMINUM ORE COMPANY 20 WELL TYPE: Coal Test

COMMENT: DIAMOND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.8			SOIL	30.0	0.0	
515.8			SANDSTONE	5.0	30.0	
510.8			CLAYSTONE	5.0	35.0	YELLOW
505.8			CLAYSTONE	4.0	40.0	
501.8			CLAYSTONE	10.0	44.0	YELLOW
491.8			SANDSTONE	3.0	54.0	
488.8			CLAYSTONE	4.0	57.0	YELLOW
484.8			SANDSTONE	3.3	61.0	
481.5			SHALE	4.4	64.3	
477.1			COAL	2.6	68.7	27" COAL AT ELEVATION 477.1'
474.5			CLAYSTONE	1.8	71.3	

MAPID: 16300361000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 1365' S line, 4200' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.035308 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.487467 DATE COLLECTED: 0 / 0 / 1920

SURFACE ELEVATION (FT.): 545.8 LOGGED (FT.): 73.0 LOG TYPE:

SOURCE: ALUMINUM 20 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		
476.8	CARBONDALE	SPRINGFIELD	COAL	2.6	69.0	

MAPID: 16300362000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES:

QUADRANGLE: MILLSTADT LONGITUDE: -90.028221

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.490956

DATE COLLECTED: 0 / 0 / 1920

SURFACE ELEVATION (FT.): 543.4 LOGGED (FT.): 76.7

LOG TYPE: Drillers Log

SOURCE: ALUMINUM ORE COMPANY 21

WELL TYPE: Coal Test

COMMENT: DIAMOND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
543.4			SOIL	33.0	0.0	
510.4			BLACK SHALE	5.0	33.0	
505.4			SOFT SHALE	29.0	38.0	
476.4			SANDSTONE	4.8	67.0	
471.6			BLACK SHALE	1.8	71.8	
469.9	CARBONDALE	SPRINGFIELD	COAL	2.2	73.5	22" COAL AT ELEVATION 469.9'
467.7	CARBONDALE		CLAYSTONE	1.0	75.7	

MAPID: 16300362000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES:

QUADRANGLE: MILLSTADT LONGITUDE: -90.028221

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.490956

DATE COLLECTED: 0 / 0 / 1920

SURFACE ELEVATION (FT.): 543.4 LOGGED (FT.): 77.0

LOG TYPE:

SOURCE: ALUMINUM 21

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		
469.4	CARBONDALE	SPRINGFIELD	COAL	2.2	74.0	

MAPID: 16300363000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 1600' S line, 870' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.023598 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.488058 DATE COLLECTED: 0 / 0 / 1920

SURFACE ELEVATION (FT.): 538.1 LOGGED (FT.): 55.7 LOG TYPE: Drillers Log

SOURCE: ALUMINUM ORE COMPANY 22 WELL TYPE: Coal Test

COMMENT: DIAMOND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
538.1			SOIL	25.0	0.0	
513.1			SANDSTONE	6.5	25.0	
506.6			CLAYSTONE	12.2	31.5	
494.4			SANDSTONE	2.1	43.7	
492.3	CARBONDALE	ANNA	BLACK SHALE	2.3	45.8	
490.1	CARBONDALE	HERRIN	COAL	6.7	48.0	
483.4	CARBONDALE		CLAYSTONE	1.0	54.7	

MAPID: 16300363000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 1600' S line, 870' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.023598 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.488058 DATE COLLECTED: 0 / 0 / 1920

SURFACE ELEVATION (FT.): 538.1 LOGGED (FT.): 56.0 LOG TYPE:

SOURCE: ALUMINUM 22 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
490.1	CARBONDALE	HERRIN	COAL	6.7	48.0	

MAPID: 16300364000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 430' S line, 1130' E line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.024579 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.484832 DATE COLLECTED: 0 / 0 / 1920
 SURFACE ELEVATION (FT.): 538.2 LOGGED (FT.): 53.5 LOG TYPE: Drillers Log
 SOURCE: ALUMINUM ORE COMPANY 23 WELL TYPE: Coal Test
 COMMENT: DIAMOND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
538.2			SOIL	35.0	0.0	
503.2			LIMESTONE	1.0	35.0	
502.2			CLAYSTONE	7.0	36.0	
495.2			LIMESTONE	2.0	43.0	
493.2			SANDSTONE	0.8	45.0	
492.4	CARBONDALE	ANNA	BLACK SHALE	0.4	45.8	
492.0	CARBONDALE	HERRIN	COAL	5.8	46.2	59.5" COAL AT ELEVATION 492.0
486.2	CARBONDALE		CLAYSTONE	1.5	52.0	

MAPID: 16300364000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 430' S line, 1130' E line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.024579 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.484832 DATE COLLECTED: 0 / 0 / 1920
 SURFACE ELEVATION (FT.): 538.2 LOGGED (FT.): 54.0 LOG TYPE:
 SOURCE: ALUMINUM 23 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
492.2	CARBONDALE	HERRIN	COAL	5.8	46.0	

MAPID: 16300365000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 500' S line, 1670' E line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.02647 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.485036 DATE COLLECTED: 0 / 0 / 1920
 SURFACE ELEVATION (FT.): 539.8 LOGGED (FT.): 80.4 LOG TYPE: Drillers Log
 SOURCE: ALUMINUM ORE COMPANY 34 WELL TYPE: Coal Test
 COMMENT: DIAMOND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
539.8			SOIL	30.5	0.0	
509.3			SOFT SHALE	39.5	30.5	
469.8			LIMESTONE	5.5	70.0	
464.3			BLACK SHALE	1.7	75.5	
462.6			COAL	2.3	77.2	23" COAL AT ELEVATION 462'
460.4			CLAYSTONE	1.0	79.4	

MAPID: 16300365000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 31 **QUARTERS/FOOTAGES:** 500' S line, 1670' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.02647 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.485036 **DATE COLLECTED:** 0 / 0 / 1920
SURFACE ELEVATION (FT.): 539.8 **LOGGED (FT.):** 80.0 **LOG TYPE:**
SOURCE: ALUMINUM 34 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	
462.8	CARBONDALE	SPRINGFIELD	COAL	2.3	77.0

MAPID: 16300655000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 31 **QUARTERS/FOOTAGES:** 600' S line, 1250' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.031513 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.485336 **DATE COLLECTED:** 0 / 0 / 1934
SURFACE ELEVATION (FT.): 543.9 **LOGGED (FT.):** 300.0 **LOG TYPE:**
SOURCE: FOHEY E L **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300656000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 31 **QUARTERS/FOOTAGES:** 1320' S line, 0' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.035922 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.487348 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 546.8 **LOGGED (FT.):** 60.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
546.8			SOIL	22.0	0.0
524.8			LIMESTONE	4.0	22.0
520.8			SHALE	19.0	26.0
501.8			BLACK SHALE	15.0	45.0

MAPID: 16300656000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 31 **QUARTERS/FOOTAGES:** 1320' S line, 0' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.035922 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.487348 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 546.8 **LOGGED (FT.):** 60.0 **LOG TYPE:**
SOURCE: MIDWEST SF045Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300657000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 31 **QUARTERS/FOOTAGES:** 2640' S line, 0' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.035956 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.490992 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 549.8 **LOGGED (FT.):** 37.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
549.8			SOIL	18.0	0.0	
531.8			SHALE	11.0	18.0	
520.8			SHALE	1.5	29.0	
519.3	CARBONDALE	HERRIN	COAL	2.5	30.5	
516.8	CARBONDALE	HERRIN	COAL	3.3	33.0	
513.5	CARBONDALE		CLAYSTONE	0.7	36.3	

MAPID: 16300657000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 31 **QUARTERS/FOOTAGES:** 2640' S line, 0' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.035956 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.490992 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 549.8 **LOGGED (FT.):** 37.0 **LOG TYPE:**
SOURCE: MIDWEST SF047Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
518.8	CARBONDALE	HERRIN	COAL	5.8	31.0	

MAPID: 16300658000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 2640' S line, 1250' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.031565 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.490968 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 547.7 LOGGED (FT.): 55.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
547.7			SOIL	22.0	0.0
525.7			SHALE	11.5	22.0
514.2			LIMESTONE	6.5	33.5
507.7			BLACK SHALE	2.0	40.0
505.7			LIMESTONE	4.0	42.0
501.7	CARBONDALE	ANNA	BLACK SHALE	2.2	46.0
499.5	CARBONDALE	HERRIN	COAL	6.1	48.2
493.4	CARBONDALE		CLAYSTONE	0.8	54.3

MAPID: 16300658000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 2640' S line, 1250' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.031565 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.490968 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 547.7 LOGGED (FT.): 55.0 LOG TYPE:

SOURCE: MIDWEST SF050Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
499.7	CARBONDALE	HERRIN	COAL	6.1	48.0

MAPID: 16300659000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 930' N line, 660' E line of SW

QUADRANGLE: MILLSTADT

LONGITUDE: -90.032129

GEOLOGIST: HINES

CONFIDENTIAL: N

LATITUDE: 38.488417

DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 555.4

LOGGED (FT.): 55.5

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
555.4			SOIL	20.0	0.0
535.4			SHALE	13.5	20.0
521.9			LIMESTONE	1.0	33.5
520.9			SANDY SLATE	4.5	34.5
516.4	CARBONDALE	ANNA	BLACK SHALE	9.3	39.0
507.1	CARBONDALE	HERRIN	COAL	6.5	48.3
500.6	CARBONDALE		CLAYSTONE	0.7	54.8

MAPID: 16300659000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 930' N line, 660' E line of SW

QUADRANGLE: MILLSTADT

LONGITUDE: -90.032129

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N

LATITUDE: 38.488417

DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 555.4

LOGGED (FT.): 56.0

LOG TYPE:

SOURCE: MIDWEST SF051Y

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
507.4	CARBONDALE	HERRIN	COAL	6.5	48.0

MAPID: 1630066000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.025198

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.487292

DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 541.9

LOGGED (FT.): 58.5

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
541.9			SOIL	20.0	0.0
521.9			SHALE	10.0	20.0
511.9			LIMESTONE	1.0	30.0
510.9			BLACK SHALE	11.0	31.0
499.9			BLACK SHALE	1.8	42.0
498.1			BLACK SHALE	2.2	43.8
495.9			SANDSTONE	1.0	46.0
494.9	CARBONDALE	ANNA	BLACK SHALE	4.0	47.0
490.9	CARBONDALE	HERRIN	COAL	6.5	51.0
484.4	CARBONDALE		CLAYSTONE	1.0	57.5

MAPID: 1630066000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.025198

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.487292

DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 541.9

LOGGED (FT.): 59.0

LOG TYPE:

SOURCE: MIDWEST SF 52Y

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
490.9	CARBONDALE	HERRIN	COAL	6.5	51.0

MAPID: 16300661000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 0' S line, 1320' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.025269

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.48365

DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 535.4

LOGGED (FT.): 60.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
535.4			SOIL	25.0	0.0
510.4			SHALE	16.0	25.0
494.4			BLACK SHALE	11.0	41.0
483.4			SHALE	8.0	52.0

MAPID: 16300661000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 31 **QUARTERS/FOOTAGES:** 0' S line, 1320' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.025269 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.48365 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 535.4 **LOGGED (FT.):** 60.0 **LOG TYPE:**
SOURCE: MIDWEST SF053Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300807000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 31 **QUARTERS/FOOTAGES:** N2 NW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.034017 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.490084 **DATE COLLECTED:** 0 / 0 / 1939
SURFACE ELEVATION (FT.): 550.0 **LOGGED (FT.):** 1615.0 **LOG TYPE:**
SOURCE: EMENHEISER **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300817000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 31 **QUARTERS/FOOTAGES:** NE SW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.033038 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.486425 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 550.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: ERIE DRG C **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300880000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 1540' S line, 1270' E line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.034133 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.495249 DATE COLLECTED: 11 / 0 / 1946

SURFACE ELEVATION (FT.): 543.5 LOGGED (FT.): 67.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 626D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
543.5			SOIL	38.9	0.0	
504.6			LIMESTONE	0.4	38.9	
504.2			CLAYSTONE	5.7	39.3	BLUE
498.5			LIMESTONE	3.3	45.0	
495.2			SHALE	1.8	48.3	LIGHT
493.4			LIMESTONE	0.3	50.1	
493.2			SHALE	1.2	50.3	LIGHT
492.0			LIMESTONE	0.8	51.5	
491.2			SHALE	0.8	52.3	LIGHT
490.3	CARBONDALE	BRERETON	LIMESTONE	4.0	53.2	
486.3	CARBONDALE	ANNA	BLACK SHALE	2.5	57.2	
483.8	CARBONDALE		COAL	6.3	59.7	
477.5	CARBONDALE		CLAYSTONE	1.3	66.0	

MAPID: 16300881000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 0' S line, 670' W line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.027406 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.490948 DATE COLLECTED: 11 / 0 / 1946

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 70.8 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 627W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.0			CLAY	17.0	0.0	
523.0			CLAY	8.0	17.0	BLUE
515.0			CLAY	10.7	25.0	
504.3			LIMESTONE	3.8	35.7	
500.6			SHALE	0.8	39.4	LIGHT
499.8			LIMESTONE	2.1	40.2	
497.7			SHALE	0.8	42.3	LIGHT
497.0			LIMESTONE	1.5	43.0	
495.5			SHALE	1.0	44.5	
494.5			LIMESTONE	5.0	45.5	
489.5			SHALE	4.7	50.5	
484.8			LIMESTONE	1.8	55.2	
483.1			SHALE	3.0	56.9	
480.1	CARBONDALE	BRERETON	LIMESTONE	4.4	59.9	
475.7	CARBONDALE		SHALE	0.2	64.3	
475.5	CARBONDALE	HERRIN	COAL	6.3	64.5	

MAPID: 16300892000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 1380' S line, 1980' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.028971 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.487476 DATE COLLECTED: 1 / 0 / 1945

SURFACE ELEVATION (FT.): 551.0 LOGGED (FT.): 44.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 500D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
551.0			SOIL	31.0	0.0	
520.0	CARBONDALE	BRERETON	LIMESTONE	6.0	31.0	
514.0	CARBONDALE	ANNA	BLACK SHALE	0.5	37.0	
513.5	CARBONDALE	HERRIN	COAL	6.3	37.5	
507.2	CARBONDALE		CLAYSTONE	0.7	43.8	

MAPID: 16300892000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 1380' S line, 1980' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.028971

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.487476

DATE COLLECTED:

SURFACE ELEVATION (FT.): 551.0 LOGGED (FT.): 44.3

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
550.5	CARBONDALE		UNDERCLAY	31.0	0.5
519.5	CARBONDALE	BRERETON	LIMESTONE	6.0	31.5
513.5	CARBONDALE	ANNA	BLACK SHALE	0.5	37.5
513.0	CARBONDALE	HERRIN	COAL	6.3	38.0

MAPID: 16300893000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 1210' N line, 950' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.033163

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.48765

DATE COLLECTED: 2 / 0 / 1945

SURFACE ELEVATION (FT.): 551.8 LOGGED (FT.): 40.5

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 504D

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
551.8			SOIL	28.0	0.0
523.8			LIMESTONE	4.0	28.0
519.8			SHALE	5.0	32.0
514.8			COAL	1.5	37.0
513.3			CLAYSTONE	2.0	38.5

MAPID: 16300895000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.025198

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.487292

DATE COLLECTED: 2 / 0 / 1945

SURFACE ELEVATION (FT.): 545.0 LOGGED (FT.): 39.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 517D

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
545.0			SOIL	28.0	0.0
517.0	CARBONDALE	BRERETON	LIMESTONE	5.0	28.0
512.0	CARBONDALE	ANNA	BLACK SHALE	2.0	33.0
510.0	CARBONDALE	HERRIN	COAL	3.0	35.0
507.0	CARBONDALE		CLAYSTONE	1.0	38.0

MAPID: 16300896000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 2100' N line, 1320' W line of SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.025241 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.485136 DATE COLLECTED: 3 / 0 / 1945

SURFACE ELEVATION (FT.): 534.0 LOGGED (FT.): 48.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 529D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
534.0			SOIL	23.0	0.0
511.0			LIMESTONE	4.0	23.0
507.0			SHALE	6.0	27.0
501.0			LIMESTONE	2.0	33.0
499.0			SHALE	1.0	35.0
498.0	CARBONDALE	BRERETON	LIMESTONE	3.5	36.0
494.5	CARBONDALE	ANNA	BLACK SHALE	1.5	39.5
493.0	CARBONDALE	HERRIN	COAL	6.5	41.0
486.5	CARBONDALE		CLAYSTONE	0.5	47.5

MAPID: 16300897000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 1740' N line, 1000' W line of SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.026345 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.486138 DATE COLLECTED: 3 / 0 / 1945

SURFACE ELEVATION (FT.): 537.8 LOGGED (FT.): 50.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 530D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
537.8			SOIL	25.0	0.0
512.8			BLACK SHALE	25.0	25.0

MAPID: 16300898000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 2380' N line, 1320' W line of SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.025257 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.484365 DATE COLLECTED: 3 / 0 / 1945

SURFACE ELEVATION (FT.): 533.6 LOGGED (FT.): 48.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 532D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
533.6			SOIL	25.0	0.0
508.6			SHALE	19.0	25.0
489.6			COAL	1.0	44.0
488.6			CLAYSTONE	1.0	45.0
487.6			LIMESTONE	2.0	46.0

MAPID: 16300899000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 1820' N line, 1820' W line of SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.02347 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.485897 DATE COLLECTED: 4 / 0 / 1945

SURFACE ELEVATION (FT.): 537.0 LOGGED (FT.): 57.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 535D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
537.0			SOIL	40.0	0.0
497.0			LIMESTONE	2.0	40.0
495.0			SHALE	2.0	42.0
493.0	CARBONDALE	BRERETON	LIMESTONE	5.5	44.0
487.5	CARBONDALE	ANNA	BLACK SHALE	0.5	49.5
487.0	CARBONDALE	HERRIN	COAL	6.3	50.0
480.7	CARBONDALE		CLAYSTONE	0.8	56.3

MAPID: 1630090000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 1900' N line, 2150' W line of SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.022316 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.485668 DATE COLLECTED: 4 / 0 / 1945

SURFACE ELEVATION (FT.): 530.0 LOGGED (FT.): 51.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 536D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
530.0			SOIL	27.0	0.0
503.0			LIMESTONE	1.0	27.0
502.0			SHALE	19.0	28.0
483.0	CARBONDALE	HERRIN	COAL	3.0	47.0
480.0	CARBONDALE		CLAYSTONE	1.0	50.0

MAPID: 16300901000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 20' S line, 520' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.02246 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.48369 DATE COLLECTED: 4 / 0 / 1945

SURFACE ELEVATION (FT.): 525.0 LOGGED (FT.): 59.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 543D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
525.0			SOIL	25.0	0.0
500.0			SHALE	20.0	25.0
480.0	CARBONDALE	BRERETON	LIMESTONE	3.5	45.0
476.5	CARBONDALE	ANNA	BLACK SHALE	4.5	48.5
472.0	CARBONDALE	HERRIN	COAL	1.5	53.0
470.5	CARBONDALE	HERRIN	COAL	3.5	54.5
467.0	CARBONDALE		CLAYSTONE	1.0	58.0

MAPID: 16300902000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 200' S line, 610' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.033753 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.484244 DATE COLLECTED: 4 / 0 / 1945

SURFACE ELEVATION (FT.): 531.0 LOGGED (FT.): 60.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 544D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
531.0			SOIL	25.0	0.0
506.0			BLACK SHALE	35.0	25.0

MAPID: 16300904000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 1270' S line, 270' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.021512 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.487135 DATE COLLECTED: 5 / 0 / 1945

SURFACE ELEVATION (FT.): 540.2 LOGGED (FT.): 61.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 548D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
540.2			SOIL	31.0	0.0
509.2			LIMESTONE	3.0	31.0
506.2			SHALE	4.0	34.0
502.2			LIMESTONE	2.0	38.0
500.2			SHALE	3.0	40.0
497.2	CARBONDALE	BRERETON	LIMESTONE	10.0	43.0
487.2	CARBONDALE	ANNA	BLACK SHALE	0.5	53.0
486.7	CARBONDALE	HERRIN	COAL	7.5	53.5
479.2	CARBONDALE		CLAYSTONE	0.5	61.0

MAPID: 16300905000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 1290' S line, 680' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.022949 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.487197 DATE COLLECTED: 5 / 0 / 1945

SURFACE ELEVATION (FT.): 539.0 LOGGED (FT.): 60.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 549D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
539.0			SOIL	33.0	0.0
506.0			LIMESTONE	1.0	33.0
505.0			SHALE	2.0	34.0
503.0			LIMESTONE	6.0	36.0
497.0			BLACK SHALE	5.0	42.0
492.0	CARBONDALE	BRERETON	LIMESTONE	3.0	47.0
489.0	CARBONDALE	ANNA	BLACK SHALE	2.5	50.0
486.5	CARBONDALE	HERRIN	COAL	6.7	52.5
479.8	CARBONDALE		CLAYSTONE	0.8	59.2

MAPID: 16300906000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 1850' N line, 610' W line of SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.027719 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.485845 DATE COLLECTED: 6 / 0 / 1947

SURFACE ELEVATION (FT.): 541.7 LOGGED (FT.): 53.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 38Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
541.7			SOIL	29.5	0.0	
512.2			LIMESTONE	2.0	29.5	
510.2			CLAYSTONE	12.5	31.5	
497.7	CARBONDALE	ANNA	BLACK SHALE	1.5	44.0	
496.2	CARBONDALE	HERRIN	COAL	6.0	45.5	
490.2	CARBONDALE		CLAYSTONE	1.5	51.5	

MAPID: 16300907000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 1830' N line, 400' W line of SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.028458 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.485905 DATE COLLECTED: 6 / 0 / 1947

SURFACE ELEVATION (FT.): 542.7 LOGGED (FT.): 58.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 39Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
542.7			SOIL	40.0	0.0	
502.7			CLAY	11.0	40.0	BLUE
491.7			LIMESTONE	0.5	51.0	
491.2			COAL	3.0	51.5	
488.2			CLAYSTONE	1.5	54.5	
486.7			BLACK SHALE	2.0	56.0	

MAPID: 16300908000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 2400' N line, 0' W line of SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.029893 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.484341 DATE COLLECTED: 6 / 0 / 1947

SURFACE ELEVATION (FT.): 543.0 LOGGED (FT.): 38.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 45Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
543.0			SOIL	28.8	0.0
514.2			LIMESTONE	4.2	28.8
510.0			COAL	3.5	33.0
506.5			CLAYSTONE	1.5	36.5

MAPID: 16300927000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 1185' N line, 590' W line of NW SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.027754 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.487681 DATE COLLECTED: 11 / 0 / 1943

SURFACE ELEVATION (FT.): 544.0 LOGGED (FT.): 58.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 27 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
544.0			SOIL	31.0	0.0
513.0			LIMESTONE	1.0	31.0
512.0			SHALE	2.0	32.0
510.0			LIMESTONE	4.0	34.0
506.0			BLACK SHALE	2.0	38.0
504.0			LIMESTONE	4.0	40.0
500.0			BLACK SHALE	2.0	44.0
498.0	CARBONDALE	BRERETON	LIMESTONE	4.0	46.0
494.0	CARBONDALE	ANNA	BLACK SHALE	1.5	50.0
492.5	CARBONDALE	HERRIN	COAL	6.5	51.5
486.0	CARBONDALE		CLAYSTONE	0.5	58.0

MAPID: 16300928000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 31 QUARTERS/FOOTAGES: 280' N line, 2480' W line of SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.021066

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.490129

DATE COLLECTED:

SURFACE ELEVATION (FT.): 540.8

LOGGED (FT.): 64.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 41

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
540.8			SOIL	29.0	0.0
511.8			LIMESTONE	7.0	29.0
504.8			BLACK SHALE	1.5	36.0
503.3			LIMESTONE	4.5	37.5
498.8			BLACK SHALE	3.0	42.0
495.8			LIMESTONE	4.0	45.0
491.8			BLACK SHALE	4.0	49.0
487.8	CARBONDALE	BRERETON	LIMESTONE	3.0	53.0
484.8	CARBONDALE	ANNA	BLACK SHALE	1.0	56.0
483.8	CARBONDALE	HERRIN	COAL	6.5	57.0
477.3	CARBONDALE		CLAYSTONE	0.5	63.5

MAPID: 16300871000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 32 QUARTERS/FOOTAGES: 2140' N line, 700' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.013832

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.484963

DATE COLLECTED: 11 / 0 / 1943

SURFACE ELEVATION (FT.): 544.0

LOGGED (FT.): 38.3

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT B17

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
544.0			SOIL	30.0	0.0
514.0			LIMESTONE	2.0	30.0
512.0	CARBONDALE	SPRINGFIELD	COAL	6.3	32.0

MAPID: 16300879000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 32 QUARTERS/FOOTAGES: 0' N line, 1175' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.01621 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.498152 DATE COLLECTED: 11 / 0 / 1946

SURFACE ELEVATION (FT.): 536.5 LOGGED (FT.): 75.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 625W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
536.5			SOIL	17.0	0.0	
519.5			SOFT SHALE	2.0	17.0	
517.5			MUDSTONE	8.0	19.0	GREEN
509.5			MUDSTONE	22.4	27.0	BLUE
487.1			LIMESTONE	0.6	49.4	
486.5			MUDSTONE	12.3	50.0	BLUE
474.2			HARD SHALE	3.0	62.3	
471.2			LIMESTONE	3.5	65.3	
467.7			SHALE	0.3	68.8	
467.5	CARBONDALE	HERRIN	COAL	5.8	69.0	
461.7	CARBONDALE		CLAYSTONE	0.3	74.8	

MAPID: 16300879000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 32 QUARTERS/FOOTAGES: 0' N line, 1175' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.01621 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.498152 DATE COLLECTED:

SURFACE ELEVATION (FT.): 537.0 LOGGED (FT.): 74.8 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
474.7	CARBONDALE		GRAY SHALE	3.0	62.3	
471.7	CARBONDALE	BRERETON	LIMESTONE	3.5	65.3	
468.2	CARBONDALE	ANNA	LIMESTONE & SHALE	0.3	68.8	
468.0	CARBONDALE	HERRIN	COAL	5.8	69.0	

MAPID: 16300886000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 32 QUARTERS/FOOTAGES: 2410' N line, 1340' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.016092 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.484227 DATE COLLECTED: 12 / 0 / 1946

SURFACE ELEVATION (FT.): 536.0 LOGGED (FT.): 40.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 655W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
536.0			SOIL	33.2	0.0	
502.8			SMUT	1.0	33.2	
501.8	CARBONDALE	HERRIN	COAL	0.8	34.2	TOP OF COAL ERODED
501.0	CARBONDALE	HERRIN	COAL	2.5	35.0	
498.5	CARBONDALE		CLAYSTONE	2.5	37.5	

MAPID: 16300887000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 32 QUARTERS/FOOTAGES: 5270' S line, 3620' W line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.013015 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.494547 DATE COLLECTED: 12 / 0 / 1946

SURFACE ELEVATION (FT.): 539.0 LOGGED (FT.): 40.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 666W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
539.0			CLAY	28.5	0.0	
510.5			LIMESTONE	1.8	28.5	
508.7			CLAYSTONE	2.4	30.3	
506.2	CARBONDALE	HERRIN	COAL	1.0	32.8	
505.2	CARBONDALE	HERRIN	COAL	3.8	33.8	
501.4	CARBONDALE		CLAYSTONE	2.4	37.6	

MAPID: 16300891000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 32 QUARTERS/FOOTAGES: W2

QUADRANGLE: MILLSTADT LONGITUDE: -90.01588 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.490882 DATE COLLECTED: 11 / 0 / 1946

SURFACE ELEVATION (FT.): 542.3 LOGGED (FT.): 63.4 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 628W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
542.3			CLAY	22.0	0.0	
520.3			SAND	3.5	22.0	
516.8			LIMESTONE	11.7	25.5	
505.1			SHALE	1.5	37.2	
503.6			LIMESTONE	2.8	38.7	
500.8			SHALE	3.3	41.5	
497.5			LIMESTONE	0.8	44.8	
496.8			SHALE	0.8	45.5	
496.0			LIMESTONE	0.8	46.3	
495.3			SHALE	1.0	47.0	
494.3			LIMESTONE	0.9	48.0	
493.4			SHALE	0.8	48.9	
492.5	CARBONDALE	BRERETON	LIMESTONE	0.4	49.8	
492.1	CARBONDALE	ANNA	SHALE	3.6	50.2	
488.5	CARBONDALE	ANNA	SHALE	0.9	53.8	
487.6	CARBONDALE	ANNA	SHALE	2.8	54.7	
484.9	CARBONDALE	HERRIN	COAL	6.0	57.4	

MAPID: 16300283000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 33 QUARTERS/FOOTAGES: 5100' S line, 3250' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.994952 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.497671 DATE COLLECTED:

SURFACE ELEVATION (FT.): 499.2 LOGGED (FT.): 40.0 LOG TYPE: Drillers Log

SOURCE: NEW NATIONAL COAL & MINING CO WELL TYPE: Mine Shaft

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
465.2	CARBONDALE	HERRIN	COAL	6.0	34.0	LOCAL MINE, MINE SHAFT 6' COAL AT 40"

MAPID: 16300283000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 33 **QUARTERS/FOOTAGES:** 5100' S line, 3250' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.994952 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.497671 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 499.2 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: N NAT CMC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
459.2	CARBONDALE	HERRIN	COAL	6.0	40.0	

MAPID: 16300662000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 33 **QUARTERS/FOOTAGES:** 1915' N line, 2440' W line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.993475 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.492832 **DATE COLLECTED:** 0 / 0 / 1932
SURFACE ELEVATION (FT.): 481.5 **LOGGED (FT.):** 200.0 **LOG TYPE:**
SOURCE: KANEPOLLCK **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
447.5	CARBONDALE	HERRIN	COAL	5.0	34.0	

MAPID: 16300662000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 33 **QUARTERS/FOOTAGES:** 1915' N line, 2440' W line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.993475 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.492832 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 482.0 **LOGGED (FT.):** 39.0 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	LAWSON	SHALE	16.0		
466.0	CARBONDALE	LAWSON	SANDSTONE	4.0	16.0	
462.0	CARBONDALE	BRERETON	LIMESTONE	14.0	20.0	
448.0	CARBONDALE	HERRIN	COAL	5.0	34.0	

MAPID: 16300662000C VERSION: 3

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 33 QUARTERS/FOOTAGES: 1915' N line, 2440' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.993475 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.492832 DATE COLLECTED: 8 / 19 / 1932

SURFACE ELEVATION (FT.): 481.5 LOGGED (FT.): 140.0 LOG TYPE: Drillers Log

SOURCE: KANE, POLLACK ET AL 1 WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
481.5			SHALE	16.0	0.0	
465.5			SANDSTONE	4.0	16.0	
461.5			LIMESTONE	14.0	20.0	
447.5	CARBONDALE	HERRIN	COAL	5.0	34.0	MINED OUT
442.5	CARBONDALE		CLAYSTONE	21.0	39.0	
421.5	CARBONDALE		LIMESTONE	7.0	60.0	
414.5	CARBONDALE		SHALE	18.0	67.0	LIGHT
396.5	CARBONDALE		SANDSTONE	4.0	85.0	RED
392.5	CARBONDALE		SHALE	33.0	89.0	WHITE
359.5	CARBONDALE		LIMESTONE	2.0	122.0	
357.5	CARBONDALE		SHALE	6.0	124.0	LIGHT
351.5	MISSISSIPPIAN		LIMESTONE	10.0	130.0	

MAPID: 16300036000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 34 QUARTERS/FOOTAGES: 1600' S line, 2500' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.974828 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.487896 DATE COLLECTED:

SURFACE ELEVATION (FT.): 476.0 LOGGED (FT.): 650.0 LOG TYPE:

SOURCE: BLVL ST CL WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
401.0	CARBONDALE	HERRIN	COAL	4.0	75.0	

MAPID: 16300036000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 34 QUARTERS/FOOTAGES: 1600' S line, 2500' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.974828

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.487896

DATE COLLECTED:

SURFACE ELEVATION (FT.): 476.0

LOGGED (FT.): 79.0

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
436.0	CARBONDALE		SHALE & SANDSTONE	15.0	40.0
421.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	55.0
419.0	CARBONDALE	LAWSON	GRAY SHALE	8.0	57.0
411.0	CARBONDALE	BRERETON	LIMESTONE	10.0	65.0
401.0	CARBONDALE	HERRIN	COAL	4.0	75.0

MAPID: 16300036000C VERSION: 3

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 34 QUARTERS/FOOTAGES: 1600' S line, 2500' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.974828 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.487896 DATE COLLECTED:

SURFACE ELEVATION (FT.): 476.0 LOGGED (FT.): 680.0 LOG TYPE: Drillers Log

SOURCE: BELLEVILLE ST. CLAIR DEV. CO WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
476.0			SANDY CLAY	40.0	0.0	
436.0			SAND	5.0	40.0	
431.0			SHALE	10.0	45.0	
421.0			LIMESTONE	2.0	55.0	WHITE
419.0			SHALE	8.0	57.0	WHITE
411.0			LIMESTONE	10.0	65.0	WHITE
401.0	CARBONDALE	HERRIN	COAL	4.0	75.0	
397.0	CARBONDALE		BLACK SHALE	8.0	79.0	
389.0	CARBONDALE		LIMESTONE	5.0	87.0	WHITE
384.0	CARBONDALE		SHALE	36.0	92.0	WHITE
348.0	MISSISSIPPIAN		LIMESTONE	5.0	128.0	WHITE
343.0	MISSISSIPPIAN		SHALE	4.0	133.0	
339.0	MISSISSIPPIAN		LIMESTONE	23.0	137.0	WHITE
316.0	MISSISSIPPIAN		SHALE	15.0	160.0	
301.0	MISSISSIPPIAN		ROCK	7.0	175.0	RED
294.0	MISSISSIPPIAN		SHALE	4.0	182.0	
290.0	MISSISSIPPIAN		LIMESTONE	14.0	186.0	
276.0	MISSISSIPPIAN		SHALE	15.0	200.0	
261.0	MISSISSIPPIAN		LIMESTONE	9.0	215.0	
252.0	MISSISSIPPIAN		SHALE	17.0	224.0	
235.0	MISSISSIPPIAN		LIMESTONE	4.0	241.0	
231.0	MISSISSIPPIAN		SHALE	12.0	245.0	
219.0	MISSISSIPPIAN		LIMESTONE	5.0	257.0	
214.0	MISSISSIPPIAN		SHALE	8.0	262.0	
206.0	MISSISSIPPIAN		LIMESTONE	4.0	270.0	
202.0	MISSISSIPPIAN		ROCK	8.0	274.0	RED
194.0	MISSISSIPPIAN		LIMESTONE	5.0	282.0	
189.0	MISSISSIPPIAN		SANDSTONE	7.0	287.0	
182.0	MISSISSIPPIAN		SHALE	10.0	294.0	
172.0	MISSISSIPPIAN		SANDY SHALE	86.0	304.0	
86.0	MISSISSIPPIAN		LIMESTONE	46.0	390.0	WHITE
40.0	MISSISSIPPIAN		SHALE	3.0	436.0	WHITE
37.0	MISSISSIPPIAN		LIMESTONE	6.0	439.0	WHITE
31.0	MISSISSIPPIAN		SANDSTONE	8.0	445.0	
23.0	MISSISSIPPIAN		LIMESTONE	42.0	453.0	GRAY
-19.0	MISSISSIPPIAN		LIMESTONE	10.0	495.0	BLUE
-29.0	MISSISSIPPIAN		LIMESTONE	5.0	505.0	GRAY
-34.0	MISSISSIPPIAN		LIMESTONE	20.0	510.0	BL/GRY
-54.0	MISSISSIPPIAN		LIMESTONE	65.0	530.0	GRAY

-119.0	MISSISSIPPIAN	LIMESTONE	9.0	595.0	BROWN
-128.0	MISSISSIPPIAN	LIMESTONE	13.0	604.0	GRAY
-141.0	MISSISSIPPIAN	LIMESTONE	33.0	617.0	GRAY
-174.0	MISSISSIPPIAN	LIMESTONE	12.0	650.0	GRAY
-186.0	MISSISSIPPIAN	SHALE	6.0	662.0	
-192.0	MISSISSIPPIAN	LIMESTONE	8.0	668.0	GRAY
-200.0	MISSISSIPPIAN	LIMESTONE	4.0	676.0	BROWN

MAPID: 16300223000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 34 **QUARTERS/FOOTAGES:** 1600' S line, 5075' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.982837 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.488028 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 498.2 **LOGGED (FT.):** 48.0 **LOG TYPE:** Drillers Log
SOURCE: PERRY COAL CO. **WELL TYPE:** Coal Test
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		UNIT OVERBURDEN COMMENT
455.7	CARBONDALE	HERRIN	COAL	5.5	42.5	5'6" COAL AT 48'

MAPID: 16300223000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 34 **QUARTERS/FOOTAGES:** 1600' S line, 5075' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.982837 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.488028 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 498.2 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: PERRY CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		UNIT OVERBURDEN COMMENT
450.2	CARBONDALE	HERRIN	COAL	5.5	48.0	

MAPID: 16300224000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 34 **QUARTERS/FOOTAGES:** 750' S line, 1000' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.968549 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.485448 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 496.6 **LOGGED (FT.):** 94.0 **LOG TYPE:** Drillers Log
SOURCE: VULCAN COAL AND MINING CO. **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		UNIT OVERBURDEN COMMENT
409.1	CARBONDALE	HERRIN	COAL	6.5	87.5	6'6" COAL AT 94'

MAPID: 16300224000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 34 **QUARTERS/FOOTAGES:** 750' S line, 1000' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.968549 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.485448 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 496.6 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: HIPPARD CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
402.6	CARBONDALE	HERRIN	COAL	6.5	94.0	

MAPID: 16300376000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 34 **QUARTERS/FOOTAGES:** 4900' S line, 2700' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.974411 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.497 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 483.9 **LOGGED (FT.):** 45.0 **LOG TYPE:** Drillers Log
SOURCE: PROG. (SAFETY FIRST) COAL CO **WELL TYPE:** Coal Test
COMMENT: SLOPE MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
444.9	CARBONDALE	HERRIN	COAL	6.0	39.0	⁶ COAL AT 45'

MAPID: 16300376000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 34 **QUARTERS/FOOTAGES:** 4900' S line, 2700' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.974411 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.497 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 483.9 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: PROGRESSIV **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
438.9	CARBONDALE	HERRIN	COAL	6.0	45.0	

MAPID: 16300663000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 8W **SECTION:** 34 **QUARTERS/FOOTAGES:** SW SW
QUADRANGLE: FREEBURG **LONGITUDE:** -89.981302 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.485406 **DATE COLLECTED:** 0 / 0 / 1927
SURFACE ELEVATION (FT.): 500.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 1 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
440.0	CARBONDALE	HERRIN	COAL	-	60.0	

MAPID: 16302929000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 34 QUARTERS/FOOTAGES: NW NW NW

QUADRANGLE: FREEBURG LONGITUDE: -89.982376 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.497243 DATE COLLECTED: 2 / 8 / 1962

SURFACE ELEVATION (FT.): 470.6 LOGGED (FT.): 38.2 LOG TYPE: Drillers Log

SOURCE: ILL. DIV. OF HIGHWAYS 4 WELL TYPE: Engineering Test Holes

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
448.6			SILT	0.0	22.0	
446.2			SAND	0.0	24.4	GRAY
443.6			SAND & GRAVEL	0.0	27.0	GRAY
440.0			SILTSTONE	0.0	30.6	GRAY
438.6			CLAYSTONE	0.0	32.0	GRAY
436.2	CARBONDALE	HERRIN	COAL	0.0	34.4	BLACK
433.6	CARBONDALE	HERRIN	COAL	0.0	37.0	BLACK
432.4	CARBONDALE		HARD SHALE	0.0	38.2	

MAPID: 16327733000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 34 QUARTERS/FOOTAGES: 300' N line, 1' E line of SE

QUADRANGLE: FREEBURG LONGITUDE: -89.964998 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.489786 DATE COLLECTED: 3 / 22 / 1938

SURFACE ELEVATION (FT.): LOGGED (FT.): 47.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 12-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	28.0	0.0	
-			SHALE	4.5	28.0	
-			LIMESTONE	6.5	32.5	
-			SANDY SHALE	2.5	39.0	
-			BLACK SHALE	3.2	41.5	
-			COAL	1.3	44.7	HARD
-			UNDERCLAY	1.1	45.9	

MAPID: 16327734000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 34 QUARTERS/FOOTAGES: 330' N line, 425' E line of SE

QUADRANGLE: FREEBURG LONGITUDE: -89.966487 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.489727 DATE COLLECTED: 3 / 22 / 1938

SURFACE ELEVATION (FT.): LOGGED (FT.): 30.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 13-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		CLAY	16.0	0.0	
-			LIMESTONE	1.5	16.0	
-			SHALE	1.5	17.5	
-			BLACK SHALE	0.8	19.0	
-			COAL	1.6	19.8	HARD
-			UNDERCLAY	4.6	21.4	
-			SHALE	4.0	26.0	

MAPID: 16327735000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 35 QUARTERS/FOOTAGES: 2310' S line, 990' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.96152 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.489681 DATE COLLECTED: 3 / 19 / 1938

SURFACE ELEVATION (FT.): 455.0 LOGGED (FT.): 44.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 6-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
455.0	PLEISTOCENE		CLAY	23.5	0.0	
431.5	CARBONDALE	BRERETON	LIMESTONE	6.5	23.5	
425.0	CARBONDALE	ANNA	BLACK SHALE	7.3	30.0	W/ BOULDERS; BLK
417.7	CARBONDALE	HERRIN	COAL	6.3	37.3	HARD
411.4	CARBONDALE		UNDERCLAY	0.9	43.6	

MAPID: 16327736000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 35 QUARTERS/FOOTAGES: 990' S line, 1320' W line of NW

QUADRANGLE: FREEBURG LONGITUDE: -89.960324 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.493324 DATE COLLECTED: 3 / 18 / 1938

SURFACE ELEVATION (FT.): LOGGED (FT.): 49.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 7-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		CLAY	29.5	0.0	
-	CARBONDALE		LIMESTONE	1.5	29.5	
-	CARBONDALE		UNDERCLAY	1.0	31.0	
-	CARBONDALE		LIMESTONE	2.5	32.0	
-	CARBONDALE		UNDERCLAY	1.0	34.5	
-	CARBONDALE	BRERETON	LIMESTONE	2.5	35.5	
-	CARBONDALE	ANNA	BLACK SHALE	3.8	38.0	
-	CARBONDALE	HERRIN	COAL	6.3	41.8	HARD
-	CARBONDALE		UNDERCLAY	0.9	48.1	

MAPID: 16327737000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 35 QUARTERS/FOOTAGES: 1320' N line, 990' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.961475 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.494247 DATE COLLECTED: 3 / 18 / 1938

SURFACE ELEVATION (FT.): LOGGED (FT.): 47.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 8-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		CLAY	20.0	0.0	
-			SHALE	8.0	20.0	
-	CARBONDALE		LIMESTONE	3.0	28.0	
-	CARBONDALE		UNDERCLAY	1.0	31.0	
-	CARBONDALE	BRERETON	LIMESTONE	4.5	32.0	
-	CARBONDALE	ANNA	BLACK SHALE	3.0	36.5	
-	CARBONDALE	HERRIN	COAL	6.4	39.5	HARD
-	CARBONDALE		UNDERCLAY	1.1	45.9	

MAPID: 16327738000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 35 QUARTERS/FOOTAGES: 175' N line, 62' W line of SW

QUADRANGLE: FREEBURG LONGITUDE: -89.964775 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.490129 DATE COLLECTED: 3 / 21 / 1938

SURFACE ELEVATION (FT.): 562.3 LOGGED (FT.): 50.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 10-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
562.3	PLEISTOCENE		CLAY	31.0	0.0
531.3			LIMESTONE	4.0	31.0
527.3			SHALE	9.0	35.0
518.3			SHALE	2.0	44.0
516.3			LIMESTONE	4.0	46.0

MAPID: 16327739000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 35 QUARTERS/FOOTAGES: 1155' N line, 1' W line of SW

QUADRANGLE: FREEBURG LONGITUDE: -89.965014 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.487425 DATE COLLECTED: 3 / 26 / 1938

SURFACE ELEVATION (FT.): 572.7 LOGGED (FT.): 49.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 14-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
572.7	PLEISTOCENE		CLAY	15.0	0.0
557.7			SHALE	14.0	15.0
543.7			COAL	0.3	29.0 "DEAD"
543.4			SHALE	0.8	29.3
542.7			LIMESTONE	9.0	30.0
533.7			BLUE SHALE	8.0	39.0
525.7			LIMESTONE	2.0	47.0

MAPID: 16327740000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 35 QUARTERS/FOOTAGES: 990' N line, 122' W line of SW

QUADRANGLE: FREEBURG LONGITUDE: -89.964585 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.487879 DATE COLLECTED: 3 / 26 / 1938

SURFACE ELEVATION (FT.): 465.0 LOGGED (FT.): 35.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 15-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
465.0	PLEISTOCENE		CLAY	22.0	0.0	
443.0			SHALE	5.0	22.0	
438.0	CARBONDALE	HERRIN	COAL	1.0	27.0	SOFT
437.0	CARBONDALE	HERRIN	COAL	5.8	28.0	HARD
431.2	CARBONDALE		UNDERCLAY	1.3	33.8	

MAPID: 16327741000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 35 QUARTERS/FOOTAGES: 625' N line, 130' W line of SW

QUADRANGLE: FREEBURG LONGITUDE: -89.964546 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.488887 DATE COLLECTED: 3 / 26 / 1938

SURFACE ELEVATION (FT.): 465.0 LOGGED (FT.): 37.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 16-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
465.0	PLEISTOCENE		CLAY	25.0	0.0	
440.0	CARBONDALE		LIMESTONE	1.3	25.0	
438.7	CARBONDALE		SHALE	1.0	26.3	
437.7	CARBONDALE	ANNA	BLACK SHALE	2.7	27.3	
435.0	CARBONDALE	ANNA	CONGLOMERATE	0.8	30.0	
434.2	CARBONDALE	HERRIN	COAL	5.8	30.8	HARD
428.5	CARBONDALE		UNDERCLAY	1.0	36.5	

MAPID: 16327742000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 35 QUARTERS/FOOTAGES: 287' S line, 200' W line of NW

QUADRANGLE: FREEBURG LONGITUDE: -89.964278 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.491403 DATE COLLECTED: 3 / 27 / 1938

SURFACE ELEVATION (FT.): 569.4 LOGGED (FT.): 42.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 17-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
569.4	PLEISTOCENE		CLAY	22.0	0.0	
547.4			SHALE	20.0	22.0	

MAPID: 16300647000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 36 QUARTERS/FOOTAGES: 500' N line, 0' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.928386 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.496426 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 490.0 LOG TYPE: Drillers Log

SOURCE: B & ST CLAIR DEVELOPMENT CO 1 WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			SHALE	3.0	29.0	
-			LIMESTONE	21.0	32.0	
-	CARBONDALE	HERRIN	COAL	7.0	53.0	THICKNESS NOT PRECISE
-	CARBONDALE		SHALE	4.0	60.0	
-	CARBONDALE		LIMESTONE	5.0	64.0	
-	CARBONDALE		SHALE	7.0	69.0	
-	CARBONDALE		LIMESTONE	4.0	76.0	
-	CARBONDALE		SHALE	5.0	80.0	WHITE
-	CARBONDALE		LIMESTONE	15.0	85.0	GRAY
-	CARBONDALE	HOUCHIN CREEK	COAL	4.0	100.0	THICKNESS NOT PRECISE
-	CARBONDALE		SHALE	12.0	104.0	WHITE
-	CARBONDALE		SHALE	5.0	116.0	
-	CARBONDALE		SHALE	12.0	121.0	
-	CARBONDALE		LIMESTONE	2.0	133.0	GRAY
-	MISSISSIPPIAN		LIMESTONE	13.0	135.0	BLACK
-	MISSISSIPPIAN		SHALE	7.0	148.0	
-	MISSISSIPPIAN		LIMESTONE	11.0	155.0	GRAY
-	MISSISSIPPIAN		LIMESTONE	5.0	166.0	GRAY
-	MISSISSIPPIAN		SHALE	3.0	171.0	
-	MISSISSIPPIAN		LIMESTONE	2.0	174.0	GRAY
-	MISSISSIPPIAN		SHALE	22.0	176.0	
-	MISSISSIPPIAN		SHALE	2.0	198.0	
-	MISSISSIPPIAN		SHALE	8.0	200.0	
-	MISSISSIPPIAN		LIMESTONE	4.0	208.0	GRAY
-	MISSISSIPPIAN		SHALE	3.0	212.0	
-	MISSISSIPPIAN		LIMESTONE	5.0	215.0	DARK
-	MISSISSIPPIAN		SHALE	3.0	220.0	
-	MISSISSIPPIAN		LIMESTONE	22.0	223.0	WHITE
-	MISSISSIPPIAN		SHALE	5.0	245.0	
-	MISSISSIPPIAN		ROCK	15.0	250.0	RED
-	MISSISSIPPIAN		LIMESTONE	5.0	265.0	
-	MISSISSIPPIAN		SANDSTONE	25.0	270.0	
-	MISSISSIPPIAN		SHALE	25.0	295.0	
-	MISSISSIPPIAN		SHALE	8.0	320.0	WHITE
-	MISSISSIPPIAN		ROCK	27.0	328.0	RED
-	MISSISSIPPIAN		LIMESTONE	2.0	355.0	GRAY
-	MISSISSIPPIAN		ROCK	8.0	357.0	RED
-	MISSISSIPPIAN		SHALE	7.0	365.0	
-	MISSISSIPPIAN		LIMESTONE	6.0	372.0	BL/GRY

-	MISSISSIPPIAN	SHALE	11.0	378.0	
-	MISSISSIPPIAN	SANDSTONE	12.0	389.0	
-	MISSISSIPPIAN	SHALE	7.0	401.0	PIPE
-	MISSISSIPPIAN	SHALE	3.0	408.0	
-	MISSISSIPPIAN	CALCAREOUS SHALE	2.0	411.0	
-	MISSISSIPPIAN	SANDSTONE	1.0	413.0	
-	MISSISSIPPIAN	SHALE	2.0	414.0	
-	MISSISSIPPIAN	SANDSTONE	3.0	416.0	
-	MISSISSIPPIAN	SHALE	2.0	419.0	
-	MISSISSIPPIAN	SANDSTONE	6.0	421.0	
-	MISSISSIPPIAN	SHALE	2.0	427.0	
-	MISSISSIPPIAN	SANDSTONE	14.0	429.0	
-	MISSISSIPPIAN	SHALE	8.0	443.0	
-	MISSISSIPPIAN	SANDSTONE	13.0	451.0	WHITE
-	MISSISSIPPIAN	LIMESTONE	3.0	464.0	BROWN
-	MISSISSIPPIAN	LIMESTONE	8.0	467.0	GRAY
-	MISSISSIPPIAN	LIMESTONE	5.0	475.0	WHITE
-	MISSISSIPPIAN	LIMESTONE	5.0	480.0	GRAY
-	MISSISSIPPIAN	LIMESTONE	5.0	485.0	GRAY

MAPID: 16301070000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 8W SECTION: 36 QUARTERS/FOOTAGES: 2600' S line, 920' E line

QUADRANGLE: FREEBURG

LONGITUDE: -89.9315

GEOLOGIST:

CONFIDENTIAL: N

LATITUDE: 38.49018

DATE COLLECTED:

SURFACE ELEVATION (FT.): 504.0

LOGGED (FT.): 90.2

LOG TYPE: Drillers Log

SOURCE: PYRAMID COAL CO. 10

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
463.0	MODESTO	PIASA	LIMESTONE	6.8	41.0	
456.3	CARBONDALE		GRAY SHALE	12.8	47.7	
443.5	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	2.2	60.5	UPPER BENCH
441.3	CARBONDALE	BANKSTON FORK	LIMESTONE	1.2	62.7	LOWER BENCH
440.2	CARBONDALE	LAWSON	GRAY SHALE	0.8	63.8	
439.4	CARBONDALE	LAWSON	SILTY SHALE	5.8	64.6	
433.6	CARBONDALE	CONANT	LIMESTONE W/ SHALE	4.7	70.4	
428.9	CARBONDALE	JAMESTOWN	COAL	0.2	75.1	
428.7	CARBONDALE		DARK GRAY SHALE	3.4	75.3	
425.3	CARBONDALE	BRERETON	LIMESTONE	2.8	78.7	
422.5	CARBONDALE	ANNA	BLACK SHALE	1.5	81.5	
421.0	CARBONDALE	HERRIN	COAL	7.2	83.0	

MAPID: 16300203000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 1 QUARTERS/FOOTAGES: 1250' S line, 3750' E line

QUADRANGLE: FRENCH VILLAGE

LONGITUDE: -90.049013

GEOLOGIST: HINES

CONFIDENTIAL: N

LATITUDE: 38.560506

DATE COLLECTED:

SURFACE ELEVATION (FT.): 590.8

LOGGED (FT.): 153.0

LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO.

WELL TYPE: Mine Shaft

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
444.8	CARBONDALE	HERRIN	COAL	7.0	146.0	7' COAL AT 153'

MAPID: 16300203000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 1 QUARTERS/FOOTAGES: 1250' S line, 3750' E line

QUADRANGLE: FRENCH VILLAGE

LONGITUDE: -90.049013

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N

LATITUDE: 38.560506

DATE COLLECTED: 0 / 0 / 1905

SURFACE ELEVATION (FT.): 590.8

LOGGED (FT.): 0.0

LOG TYPE:

SOURCE: PERRY CC 0SUP

WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
437.8	CARBONDALE	HERRIN	COAL	7.0	153.0	

MAPID: 16303137000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 1 QUARTERS/FOOTAGES: SE NE SW

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.046278 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.561585 DATE COLLECTED: 3 / 1 / 1970

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 176.0 LOG TYPE: Survey Core Study

SOURCE: LAYNE-WESTERN CO. 5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
524.0			SHALE	7.6	76.0	
516.4			SHALE	6.5	83.6	
509.9			LIMESTONE	0.8	90.1	
509.2			SHALE	0.8	90.8	
508.4			SHALE	10.0	91.6	
498.4			SHALE	10.0	101.6	
488.4	CARBONDALE	ANNA	SHALE	0.6	111.6	
487.8	CARBONDALE	HERRIN	COAL	0.2	112.2	
487.7	CARBONDALE		SHALE	5.2	112.3	
482.5	CARBONDALE		SHALE	2.5	117.5	
480.0	CARBONDALE		SILTSTONE	1.5	120.0	GRAY
478.7	CARBONDALE		SILTSTONE	4.4	121.3	
474.2	CARBONDALE		CLAYSTONE & SILTSTONE	1.8	125.8	
472.4	CARBONDALE		CLAYSTONE & SILTSTONE	0.8	127.6	
469.7	CARBONDALE		CLAYSTONE & SILTSTONE	5.0	130.3	
464.7	CARBONDALE		LIMESTONE	5.0	135.3	
460.0	CARBONDALE		LIMESTONE	2.3	140.0	
457.7	CARBONDALE		SHALE	1.0	142.3	
456.7	CARBONDALE		CLAYSTONE & SILTSTONE	1.5	143.3	
454.0	CARBONDALE		CLAYSTONE & SILTSTONE	1.0	146.0	
453.0	CARBONDALE		LIMESTONE	8.5	147.0	GRAY
444.0	CARBONDALE		SHALE	0.2	156.0	
443.8	CARBONDALE		LIMESTONE	9.8	156.2	GRAY
434.0	CARBONDALE		LIMESTONE	7.8	166.0	
426.0	CARBONDALE	HOUCHIN CREEK	COAL	2.0	174.0	

MAPID: 16303138000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 1 QUARTERS/FOOTAGES: 1650' S line, 2310' W line

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.046067 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.561547 DATE COLLECTED: 3 / 20 / 1970

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 175.3 LOG TYPE: Survey Core Study

SOURCE: LAYNE-WESTERN CO. 6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
521.7			SANDSTONE	1.3	78.3	
520.4			SHALE	6.0	79.6	
514.4			SHALE	7.3	85.6	
507.2			LIMESTONE	1.2	92.8	
506.0			SHALE	10.0	94.0	
496.0			SHALE	10.0	104.0	
486.0			SHALE	0.5	114.0	
485.5			LIMESTONE	0.4	114.5	
485.1			SHALE	0.5	114.9	
484.6			COAL	0.1	115.4	BRIGHT
484.4			CLAYSTONE & SILTSTONE	3.0	115.6	
481.4			CLAYSTONE & SILTSTONE	10.0	118.6	
471.4			CLAYSTONE & SILTSTONE	4.0	128.6	
467.4	MODESTO	PIASA	LIMESTONE	5.8	132.6	
461.6	MODESTO		SHALE	0.3	138.4	
461.4	CARBONDALE	DANVILLE	COAL	2.5	138.6	
458.9	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	141.1	
456.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.3	143.5	
452.2	CARBONDALE		SHALE	0.5	147.8	
451.7	CARBONDALE		LIMESTONE	4.7	148.3	
447.0	CARBONDALE		SILTSTONE	5.4	153.0	
441.6	CARBONDALE	BRERETON	LIMESTONE	2.6	158.4	
439.0	CARBONDALE	BRERETON	LIMESTONE	4.3	161.0	
434.7	CARBONDALE	ANNA	SHALE	0.4	165.3	
434.3	CARBONDALE	HERRIN	COAL	5.1	165.7	
429.2	CARBONDALE		CLAYSTONE & SILTSTONE	4.5	170.8	

MAPID: 16303138000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 1 QUARTERS/FOOTAGES: 1650' S line, 2310' W line

QUADRANGLE: FRENCH VILLAGE

LONGITUDE: -90.046067

GEOLOGIST:

CONFIDENTIAL: N

LATITUDE: 38.561547

DATE COLLECTED:

SURFACE ELEVATION (FT.): 600.0

LOGGED (FT.): 184.1

LOG TYPE: Survey Core Study

SOURCE:

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
459.0	MODESTO	PIASA	LIMESTONE	5.8	141.0
453.2	CARBONDALE		CLAYSTONE & SHALE	2.1	146.8
451.1	CARBONDALE		BLACK SHALE	0.7	148.9
450.4	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	6.7	149.6
443.7	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.5	156.3
443.2	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	4.7	156.8
438.6	CARBONDALE	LAWSON	LIMESTONE W/ SHALE	5.4	161.4
433.2	CARBONDALE	BRERETON	LIMESTONE	6.9	166.8
426.2	CARBONDALE	ANNA	DARK GRAY SHALE	0.4	173.8
421.0	CARBONDALE	HERRIN	COAL	5.1	179.0

MAPID: 16303198000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 2 QUARTERS/FOOTAGES: NW NE NW

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.06657 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.57086 DATE COLLECTED: 7 / 1 / 1970

SURFACE ELEVATION (FT.): LOGGED (FT.): 471.0 LOG TYPE: Drillers Log

SOURCE: HANDNIK DRILLING CO WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	28.0	0.0	YELLOW
-			CLAY	32.0	28.0	GRAY
-			SANDY CLAY	20.0	60.0	YELLOW
-			LIMESTONE	14.0	80.0	
-	CARBONDALE	HERRIN	COAL	2.0	94.0	
-	CARBONDALE	HERRIN	COAL	6.0	96.0	
-			LIMESTONE	10.0	102.0	
-	CARBONDALE		SHALE	5.0	112.0	
-	CARBONDALE		SANDSTONE	7.0	117.0	
-	CARBONDALE		SHALE	30.0	124.0	
-	CARBONDALE		HARD SHALE	22.0	154.0	
-	CARBONDALE	HOUCHIN CREEK	COAL	1.0	176.0	
-	CARBONDALE		HARD SHALE	25.0	177.0	
-	MISSISSIPPIAN		LIMESTONE	26.0	202.0	
-	MISSISSIPPIAN		HARD SHALE	34.0	228.0	
-	MISSISSIPPIAN		LIMESTONE	12.0	262.0	
-	MISSISSIPPIAN		SANDSTONE	41.0	274.0	
-	MISSISSIPPIAN		HARD SHALE	5.0	315.0	
-	MISSISSIPPIAN		SHALE	15.0	320.0	
-	MISSISSIPPIAN		SANDSTONE	7.0	335.0	
-	MISSISSIPPIAN		SHALE	6.0	342.0	
-	MISSISSIPPIAN		LIMESTONE	12.0	348.0	
-	MISSISSIPPIAN		SHALE	8.0	360.0	
-	MISSISSIPPIAN		SANDY SHALE	15.0	368.0	
-	MISSISSIPPIAN		SHALE	19.0	383.0	RED/GRY
-	MISSISSIPPIAN		SANDY SHALE	40.0	402.0	
-	MISSISSIPPIAN		SANDSTONE	29.0	442.0	WHITE

MAPID: 16300373000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 3 **QUARTERS/FOOTAGES:** 4500' S line, 4200' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.087126 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.569701 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 485.7 **LOGGED (FT.):** 6.0 **LOG TYPE:** Drillers Log
SOURCE: ROMA COAL COMPANY **WELL TYPE:** Coal Test
COMMENT: DRIFT MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
485.7	CARBONDALE	HERRIN	COAL	6.0	0.0	ELEVATION COAL 492' (6' COAL)

MAPID: 16300374000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 3 **QUARTERS/FOOTAGES:** 4900' S line, 4100' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.086749 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.570804 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 459.7 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: GRANT COAL COMPANY **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
459.7	CARBONDALE	HERRIN	COAL	0.0	0.0	

MAPID: 16300375000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 3 **QUARTERS/FOOTAGES:** 4850' S line, 3650' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.085169 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.570663 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 487.7 **LOGGED (FT.):** 6.0 **LOG TYPE:** Drillers Log
SOURCE: GRANT COAL COMPANY **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
487.7	CARBONDALE	HERRIN	COAL	6.0	0.0	ELEVATION TOP 494' (6' COAL)

MAPID: 16300022000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 9 **QUARTERS/FOOTAGES:** 4850' S line, 2580' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.100274 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.556199 **DATE COLLECTED:** 0 / 0 / 1929
SURFACE ELEVATION (FT.): 423.8 **LOGGED (FT.):** 1150.0 **LOG TYPE:**
SOURCE: KOLB HENRY **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300424000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 9 **QUARTERS/FOOTAGES:** 570' S line, 1175' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.095471 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.544372 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 477.7 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: HARDSCRABBLE **WELL TYPE:** Coal Test
COMMENT: DRIFT MINE ABANDONED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
477.7			MINE OPENING	0.0	0.0	ABANDONED

MAPID: 16300025000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 11 **QUARTERS/FOOTAGES:** 2200' S line, 200' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.055165 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.548572 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 574.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: COLBY MINE **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
414.0	CARBONDALE	HERRIN	COAL	-	160.0	

MAPID: 16300761000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 11 **QUARTERS/FOOTAGES:** 4000' S line, 4750' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.071073 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.553859 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 476.1 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: W. TRAVIS COAL COMPANY **WELL TYPE:** Drift Mine
COMMENT: DRIFT MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
476.1			MINE OPENING	0.0	0.0	S. BANK OF SMALL STREAM

MAPID: 16327627000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 11 QUARTERS/FOOTAGES: SE SE NW SE

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.059629 GEOLOGIST: C TREWOROY

CONFIDENTIAL: N LATITUDE: 38.546698 DATE COLLECTED: 4 / 7 / 1994

SURFACE ELEVATION (FT.): 568.0 LOGGED (FT.): 200.0 LOG TYPE: Survey Core Study

SOURCE: SCI ENGINEERING 1 WELL TYPE: Engineering Test Holes

COMMENT: DRILLED FOR MAGMA OPERATIONS CENTER

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
568.0	PLEISTOCENE		SILTY CLAYSTONE	81.7	0.0	
486.3	CARBONDALE		SILTSTONE	2.1	81.7	TRACE OF LIMESTONE; GREEN
484.2	CARBONDALE		GRAY LIMESTONE	1.0	83.8	TRACE SILTSTN
483.2	CARBONDALE		CALCAREOUS SHALE	12.7	84.8	
470.5	CARBONDALE		CALCAREOUS SHALE	0.5	97.5	
470.0	CARBONDALE	BRERETON	LIMESTONE	4.0	98.0	
466.0	CARBONDALE		SHALE	0.5	102.0	
465.5	CARBONDALE	HERRIN	SHALE/COAL	5.5	102.5	
460.0	CARBONDALE		SHALE	11.0	108.0	TRACE LS
449.0	CARBONDALE		CLAYSTONE & SILTSTONE	5.0	119.0	
444.0	CARBONDALE		SHALE	4.9	124.0	TRACE LS
439.1	CARBONDALE		LIMESTONE	7.6	128.9	LIGHT
431.5	CARBONDALE		SHALE	1.5	136.5	
430.0	CARBONDALE		DARK SHALE	4.5	138.0	TRACE OF COAL
425.5	CARBONDALE		DARK SHALE	1.5	142.5	
424.0	CARBONDALE		LIGHT SHALE	6.5	144.0	
417.5	CARBONDALE		BROWN SHALE	8.0	150.5	
409.5	CARBONDALE		SHALE	4.5	158.5	
405.0	CARBONDALE		SANDSTONE	1.5	163.0	MEDIUM
403.5	CARBONDALE		SANDY SHALE	12.5	164.5	
391.0	CARBONDALE		DARK SHALE	5.0	177.0	
386.0	CARBONDALE	HOUCHIN CREEK	COAL WITH SHALE	1.0	182.0	BLACK
385.0	CARBONDALE		UNDERCLAY	3.0	183.0	
382.0	CARBONDALE		CALCAREOUS SHALE	1.5	186.0	
380.5	CARBONDALE		SHALE & SANDSTONE	10.5	187.5	
370.0	CARBONDALE		CALCAREOUS SHALE	2.0	198.0	

MAPID: 16327628000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 11 QUARTERS/FOOTAGES: SE

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.059066 GEOLOGIST: C TREWORY

CONFIDENTIAL: N LATITUDE: 38.546232 DATE COLLECTED: 4 / 7 / 1994

SURFACE ELEVATION (FT.): 568.0 LOGGED (FT.): 147.0 LOG TYPE: Survey Core Study

SOURCE: SCI ENGINEERING 2 WELL TYPE: Engineering Test Holes

COMMENT: DRILLED FOR MAGMA OPERATIONS CENTER

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
568.0			UNCLASSIFIED	96.0	0.0	
472.0	CARBONDALE		LIMESTONE & SHALE	2.0	96.0	SPARCE FOSSILS; DARK
470.0	CARBONDALE	BRERETON	LIMESTONE	6.0	98.0	DARK
464.0	CARBONDALE		CORE LOSS	1.0	104.0	
463.0	CARBONDALE	HERRIN	COAL	3.0	105.0	
460.0	CARBONDALE	HERRIN	SILTY SHALE	1.0	108.0	
459.0	CARBONDALE	HERRIN	COAL WITH SHALE	1.0	109.0	DARK
458.0	CARBONDALE	HERRIN	COAL	1.0	110.0	
457.0	CARBONDALE		SILTY SHALE	3.0	111.0	GRN/BLUE AT BASE
454.0	CARBONDALE		LIMESTONE	3.5	114.0	SHELL FRAGMENTS NOTED
450.5	CARBONDALE		ARGILACEOUS SHALE	0.7	117.5	SOFT
449.8	CARBONDALE		DARK SHALE	2.3	118.2	
447.5	CARBONDALE		CALCAREOUS SHALE	5.0	120.5	
442.5	CARBONDALE		LIMESTONE	5.5	125.5	LIGHT
437.0	CARBONDALE		LIMESTONE	3.5	131.0	DARK
433.5	CARBONDALE		LIMESTONE	0.5	134.5	LIGHT
433.0	CARBONDALE	TURNER MINE	BLACK SHALE	3.0	135.0	
430.0	CARBONDALE	SPRINGFIELD	COAL	2.0	138.0	
428.0	CARBONDALE		ARGILACEOUS SHALE	7.0	140.0	

MAPID: 16327629000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 11 QUARTERS/FOOTAGES: SE

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.059066 GEOLOGIST: C TREWORY

CONFIDENTIAL: N LATITUDE: 38.546232 DATE COLLECTED: 5 / 7 / 1994

SURFACE ELEVATION (FT.): 568.0 LOGGED (FT.): 188.2 LOG TYPE: Survey Core Study

SOURCE: SCI ENGINEERING 3 WELL TYPE: Engineering Test Holes

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
568.0			UNCLASSIFIED	170.0	0.0	
398.0			GRAY SHALE	10.8	170.0	SLIGHTLY SILTY
387.2			COAL	0.9	180.8	W/ SMALL PYRITE NODULES
386.3			CLAYSTONE & SILTSTONE	6.6	181.7	

MAPID: 16300204000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 12 **QUARTERS/FOOTAGES:** 2125' S line, 175' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.036436 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.547959 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 578.1 **LOGGED (FT.):** 173.0 **LOG TYPE:** Drillers Log
SOURCE: B-B COAL AND MINING COMPANY **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
411.4	CARBONDALE	HERRIN	COAL	6.3	166.7	LOCAL MINE 64" COAL AT 173'

MAPID: 16300204000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 12 **QUARTERS/FOOTAGES:** 2125' S line, 175' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.036436 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.547959 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 578.1 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: BELLHEATCC00BB **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
405.1	CARBONDALE	HERRIN	COAL	6.3	173.0	

MAPID: 16300265000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 12 **QUARTERS/FOOTAGES:** 4100' S line, 1700' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.041766 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.553528 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 585.0 **LOGGED (FT.):** 173.0 **LOG TYPE:** Drillers Log
SOURCE: SOUTHERN COAL AND COKE MINING 1 **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
419.0	CARBONDALE	HERRIN	COAL	7.0	166.0	7' COAL AT 173'

MAPID: 16300265000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 12 **QUARTERS/FOOTAGES:** 4100' S line, 1700' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.041766 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.553528 **DATE COLLECTED:** 0 / 0 / 1988
SURFACE ELEVATION (FT.): 585.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: SOU C M C 0001 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
412.0	CARBONDALE	HERRIN	COAL	7.0	173.0	

MAPID: 16300268000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 12 QUARTERS/FOOTAGES: 1050' S line, 4800' E line

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.052711 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.545346 DATE COLLECTED:

SURFACE ELEVATION (FT.): 566.9 LOGGED (FT.): 160.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Mine Shaft

COMMENT: SHIPPING MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
406.9	CARBONDALE	HERRIN	COAL	0.0	160.0	160' TO COAL

MAPID: 16300268000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 12 QUARTERS/FOOTAGES: 1050' S line, 4800' E line

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.052711 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.545346 DATE COLLECTED:

SURFACE ELEVATION (FT.): 566.9 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
406.9	CARBONDALE	HERRIN	COAL	-	160.0	

MAPID: 16324219000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 12 QUARTERS/FOOTAGES: 75' N line, 285' E line of NW NE

QUADRANGLE: FRENCH VILLAGE

LONGITUDE: -90.04141

GEOLOGIST: HINES

CONFIDENTIAL: N

LATITUDE: 38.556685

DATE COLLECTED: 6 / 29 / 1977

SURFACE ELEVATION (FT.): 580.0

LOGGED (FT.): 167.2

LOG TYPE: Survey Core Study

SOURCE: JOHN MATHES & ASSOC INC 6

WELL TYPE: Engineering Test Holes

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
541.0			SANDSTONE	9.8	39.0
531.2			SANDSTONE	9.8	48.8
521.4			SANDSTONE	0.6	58.6
520.8			SILTSTONE	1.0	59.2
519.8			SANDSTONE	1.3	60.2
518.5			SHALE	11.8	61.5
506.7			SHALE	3.0	73.3
503.7			LIMESTONE	1.3	76.3
502.5			SHALE	0.6	77.5
501.9			SHALE	10.0	78.1
491.9			SHALE	8.8	88.1
483.1			COAL	0.1	96.9
482.9			SHALE	0.6	97.1
482.3			SHALE	2.0	97.7
480.3			CLAYSTONE & SILTSTONE	4.4	99.7
475.9			SANDSTONE	3.1	104.1
472.8			SANDSTONE	1.8	107.2
471.0			SILTSTONE	2.3	109.0
468.7			CLAYSTONE & SILTSTONE	1.8	111.3
466.9			LIMESTONE	2.0	113.1
464.9			CLAYSTONE & SILTSTONE	1.4	115.1
463.6			CLAYSTONE & SILTSTONE	1.7	116.4
461.9			LIMESTONE	7.6	118.1
454.3			SHALE	0.7	125.7
453.6			SHALE	1.3	126.4
452.4			CLAYSTONE & SILTSTONE	4.3	127.6
448.1			LIMESTONE	3.2	131.9
444.9			SILTSTONE	0.7	135.1
444.2			SILTSTONE	2.5	135.8
441.7			SHALE	0.6	138.3
441.1	CARBONDALE	BRERETON	LIMESTONE	6.5	138.9
434.6	CARBONDALE	BRERETON	CALCAREOUS SHALE	10.0	145.4
424.6	CARBONDALE	ANNA	SHALE	1.0	155.4
423.6	CARBONDALE	HERRIN	COAL	0.3	156.4
423.3	CARBONDALE	HERRIN	SHALE	0.9	156.7
422.4	CARBONDALE	HERRIN	COAL	5.4	157.6
417.0	CARBONDALE		CLAYSTONE & SILTSTONE	3.0	163.0
414.0	CARBONDALE		LIMESTONE	1.2	166.0

MAPID: 16324219000C VERSION: 2

PROJECT: NCRDS87

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 12 QUARTERS/FOOTAGES: 75' N line, 285' E line of NW NE

QUADRANGLE: FRENCH VILLAGE

LONGITUDE: -90.04141

GEOLOGIST: WEIBEL

CONFIDENTIAL: N

LATITUDE: 38.556685

DATE COLLECTED: 6 / 29 / 1977

SURFACE ELEVATION (FT.): 580.0

LOGGED (FT.): 170.5

LOG TYPE: Survey Core Study

SOURCE: JOHN MATHES & ASSOC.,INC.

WELL TYPE: Diamond Drill

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
580.0			UNKNOWN	39.0	0.0
541.0			SANDSTONE	20.6	39.0
520.4			SILTSTONE	1.0	59.6
519.4			SANDSTONE	1.4	60.6
518.0			SHALE	13.9	62.0
504.1			LIMESTONE	2.3	75.9
501.8			SHALE	19.7	78.2
482.1	MODESTO	ROCK BRANCH	COAL	0.2	97.9
481.9	MODESTO		UNDERCLAY	7.3	98.1
474.7	MODESTO		SANDSTONE	5.2	105.3
469.4	MODESTO		SILTSTONE	2.4	110.6
467.0	MODESTO		CLAYSTONE	1.9	113.0
465.1	MODESTO		LIMESTONE	2.0	114.9
463.1	MODESTO		CLAYSTONE	3.3	116.9
459.9	MODESTO	PIASA	LIMESTONE	7.7	120.1
452.2	MODESTO		SHALE	1.3	127.8
450.9	MODESTO		SHALE	1.3	129.1
449.6	MODESTO		CLAYSTONE	4.4	130.4
445.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.2	134.8
442.0	CARBONDALE		SILTSTONE	3.8	138.0
438.1	CARBONDALE		SHALE	0.8	141.9
437.4	CARBONDALE	BRERETON	LIMESTONE	16.6	142.6
420.8	CARBONDALE	ANNA	BLACK SHALE	1.0	159.2
419.8	CARBONDALE	HERRIN	COAL	0.3	160.2
419.5	CARBONDALE	HERRIN	BLACK SHALE	0.1	160.5
419.4	CARBONDALE	HERRIN	COAL	5.5	160.6
413.9	CARBONDALE		CLAYSTONE	3.2	166.1
410.7	CARBONDALE		LIMESTONE	1.2	169.3

MAPID: 16300021000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 13 QUARTERS/FOOTAGES: NE NW NE

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.041712 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.541303 DATE COLLECTED:

SURFACE ELEVATION (FT.): 565.0 LOGGED (FT.): 0.0 LOG TYPE: Drillers Log

SOURCE: GARTSIDE COAL COMPANY 3 WELL TYPE: Mine Shaft

COMMENT: ABANDONED MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
565.0			MINE OPENING	0.0	0.0	ABANDONED MINE, SHIPPING MINE

MAPID: 16300037000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 13 QUARTERS/FOOTAGES: 930' S line, 330' W line

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.053437 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.530591 DATE COLLECTED: 6 / 0 / 1923

SURFACE ELEVATION (FT.): 503.0 LOGGED (FT.): 299.7 LOG TYPE: Survey Core Study

SOURCE: MADISON COAL CORP 1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
503.0			CLAY	103.0	0.0	YELLOW
400.0			CLAYSTONE & SANDSTONE	7.0	103.0	GRAY
393.0			SHALE	3.8	110.0	10" CORE GROUND AWAY
389.2			CLAYSTONE & SHALE	0.6	113.8	
388.6			SANDSTONE	1.0	114.4	
387.6			CALCAREOUS SHALE	0.5	115.4	
387.1			SANDSTONE	0.9	115.9	
386.2			SANDY SHALE	3.8	116.8	
382.4			SHALE	7.5	120.6	
374.9			LIMESTONE	0.3	128.1	
372.9			SHALE	1.8	130.1	
371.2			SANDSTONE	0.8	131.8	
370.3			SHALE	5.4	132.7	
364.2			CLAYSTONE	4.8	138.8	
359.4			SHALE	0.2	143.6	
359.2			CLAYSTONE & SHALE	1.0	143.8	
358.2			CLAYSTONE & SHALE	1.0	144.8	
357.2			CLAYSTONE & SHALE	0.6	145.8	
356.7			LIMESTONE	0.5	146.3	
356.2			CALCAREOUS SHALE	1.0	146.8	
355.2			CALCAREOUS SHALE	0.8	147.8	
354.4			CALCAREOUS SHALE	1.0	148.6	
353.4			CALCAREOUS SHALE	1.1	149.6	
352.3			CALCAREOUS SHALE	2.8	150.7	
349.6			CALCAREOUS SHALE	5.0	153.4	
344.6			LIMESTONE	1.8	158.4	GRAY
342.7			SOFT SHALE	1.3	160.3	
341.5			CALCAREOUS SHALE	12.3	161.5	
329.2			CALCAREOUS SHALE	5.5	173.8	
323.7			CALCAREOUS SHALE	5.8	179.3	
317.9			CALCAREOUS SHALE	1.3	185.1	
316.7			CALCAREOUS SHALE	1.8	186.3	
314.8			SHALE	0.3	188.2	
314.5			SHALE	1.5	188.5	GRY/GRN
313.0			LIMESTONE	0.3	190.0	GRAY
312.7			LIMESTONE	1.2	190.3	
311.5			LIMESTONE	0.8	191.5	
310.7			CALCAREOUS SHALE	1.1	192.3	

309.7	CALCAREOUS SHALE	4.5	193.3	
305.2	CALCAREOUS SHALE	3.3	197.8	
301.8	ROCK	0.3	201.2	QUARTZITE
301.6	SHALE	23.3	201.4	
278.2	LIMESTONE	4.7	224.8	GRAY
273.6	SOFT SHALE	0.1	229.4	
273.5	SHALY LIMESTONE	0.5	229.5	
273.0	CALCAREOUS SHALE	1.8	230.0	
271.2	SHALE	16.8	231.8	
254.4	SANDSTONE	11.3	248.6	
243.2	SANDY SHALE	1.9	259.8	
241.2	SHALE	1.3	261.8	
239.9	SHALY LIMESTONE	1.5	263.1	
238.4	SANDSTONE	1.3	264.6	GRAY
237.1	SANDSTONE	1.3	265.9	GRAY
235.8	CALCAREOUS SHALE	2.2	267.2	
233.7	CALCAREOUS SHALE	2.7	269.3	
231.0	SOFT SHALE	0.4	272.0	
230.6	LIMESTONE	0.8	272.4	
229.8	SHALE	2.7	273.2	
227.2	CALCAREOUS SHALE	2.2	275.8	
225.0	SHALE	15.3	278.0	
209.7	SHALE	0.7	293.3	
209.0	CALCAREOUS SHALE	1.6	294.0	
207.4	CALCAREOUS SHALE	1.0	295.6	D
206.4	SHALE	1.2	296.6	
205.2	SHALE	1.7	297.8	
203.6	SHALE	0.2	299.4	
203.4	LIMESTONE	0.4	299.6	
202.9	SHALE	0.4	300.1	

MAPID: 16300037000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** 930' S line, 330' W line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.053437 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.530591 **DATE COLLECTED:** 0 / 0 / 1923
SURFACE ELEVATION (FT.): 502.9 **LOGGED (FT.):** 300.0 **LOG TYPE:**
SOURCE: MADISON CC 1 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16301314000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 13 QUARTERS/FOOTAGES: 1170' N line, 2240' W line

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.046701 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.539085 DATE COLLECTED: 0 / 0 / 1941

SURFACE ELEVATION (FT.): 520.0 LOGGED (FT.): 450.0 LOG TYPE: Drillers Log

SOURCE: EDGAR L FOHEY WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
520.0			SOIL	95.0	0.0	
425.0	CARBONDALE	BRERETON	LIMESTONE	10.0	95.0	
415.0	CARBONDALE	ANNA	SHALE	2.0	105.0	
413.0	CARBONDALE	HERRIN	COAL	4.0	107.0	THICKNESS NOT PRECISE
409.0	CARBONDALE		DARK SHALE	4.0	111.0	
405.0	CARBONDALE		SANDY SHALE	10.0	115.0	
395.0	CARBONDALE		LIMESTONE	10.0	125.0	
385.0	CARBONDALE		SHALE	15.0	135.0	BL/GRY
370.0	CARBONDALE		SHALE	10.0	150.0	
360.0	CARBONDALE		SANDY SHALE	10.0	160.0	
350.0	CARBONDALE		SANDY SHALE	15.0	170.0	
335.0	CARBONDALE		SANDY SHALE	5.0	185.0	
330.0	CARBONDALE		SANDSTONE	27.0	190.0	LIGHT
303.0	CARBONDALE		ROCK	3.0	217.0	RED
300.0	MISSISSIPPIAN		LIMESTONE	55.0	220.0	BLUE
245.0	MISSISSIPPIAN		SANDSTONE	35.0	275.0	WHITE
210.0	MISSISSIPPIAN		SANDSTONE	5.0	310.0	WHITE
205.0	MISSISSIPPIAN		SHALE	3.0	315.0	
202.0	MISSISSIPPIAN		LIMESTONE	2.0	318.0	
200.0	MISSISSIPPIAN		SANDSTONE	10.0	320.0	
190.0	MISSISSIPPIAN		LIMESTONE	5.0	330.0	
185.0	MISSISSIPPIAN		SHALE	15.0	335.0	
170.0	MISSISSIPPIAN		LIMESTONE	15.0	350.0	
155.0	MISSISSIPPIAN		SANDSTONE	5.0	365.0	
150.0	MISSISSIPPIAN		SANDY SHALE	15.0	370.0	
135.0	MISSISSIPPIAN		SHALE	10.0	385.0	
125.0	MISSISSIPPIAN		SANDSTONE	5.0	395.0	
120.0	MISSISSIPPIAN		SHALE	35.0	400.0	
85.0	MISSISSIPPIAN		SANDSTONE	15.0	435.0	

MAPID: 16301314000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 13 QUARTERS/FOOTAGES: 1170' N line, 2240' W line

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.046701

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.539085

DATE COLLECTED:

SURFACE ELEVATION (FT.): 550.0

LOGGED (FT.): 111.0

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE		UNDERCLAY	95.0		
455.0	CARBONDALE	BRERETON	LIMESTONE	10.0	95.0	
445.0	CARBONDALE	ANNA	SHALE	2.0	105.0	
443.0	CARBONDALE	HERRIN	COAL	4.0	107.0	

MAPID: 16300267000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 14 QUARTERS/FOOTAGES: 4050' S line, 1000' E line

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.058088

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.539276

DATE COLLECTED:

SURFACE ELEVATION (FT.): 557.6

LOGGED (FT.): 0.0

LOG TYPE:

SOURCE: MADISON CC000C

WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
435.6	CARBONDALE	HERRIN	COAL	7.0	122.0	

MAPID: 16300426000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 14 QUARTERS/FOOTAGES: 2025' S line, 2950' E line

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.064955

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.533771

DATE COLLECTED: 0 / 0 / 1925

SURFACE ELEVATION (FT.): 504.3

LOGGED (FT.): 690.0

LOG TYPE:

SOURCE: DIEHL BROS

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16326093000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 14 **QUARTERS/FOOTAGES:** NE NW NE
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.060265 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.541695 **DATE COLLECTED:** 12 / 8 / 1982
SURFACE ELEVATION (FT.): 289.0 **LOGGED (FT.):** 292.0 **LOG TYPE:** Drillers Log
SOURCE: DOHRMAN, RAYMOND **WELL TYPE:** Water Well
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
289.0			UNCONSOLIDATED	45.0	0.0	
244.0			SOFT SHALE	26.0	45.0	
218.0			ROCK	4.0	71.0	BLACK
214.0			MINE OPENING	13.0	75.0	
201.0			ROCK	86.0	88.0	
115.0			SHALE	11.0	174.0	
104.0			ROCK	88.0	185.0	
16.0			SANDSTONE	19.0	273.0	

MAPID: 16300029000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 24 **QUARTERS/FOOTAGES:** 1675' S line, 1550' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.041471 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.517928 **DATE COLLECTED:** 0 / 0 / 1923
SURFACE ELEVATION (FT.): 539.9 **LOGGED (FT.):** 1000.0 **LOG TYPE:**
SOURCE: MADISON CC0002 **WELL TYPE:** Coal Test
COMMENT: SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300421000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 24 **QUARTERS/FOOTAGES:** NE SE NE
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.037171 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.523136 **DATE COLLECTED:** 0 / 0 / 1923
SURFACE ELEVATION (FT.): 555.6 **LOGGED (FT.):** 301.0 **LOG TYPE:**
SOURCE: MADISON CC0003 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
429.6	CARBONDALE	HERRIN	COAL	6.7	126.0	

MAPID: 16300422000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 24 **QUARTERS/FOOTAGES:** N2 NW NE NW
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.048791 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.527463 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 540.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: MADISON COAL COMPANY 5 **WELL TYPE:** Coal Test
COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.0			UNCLASSIFIED	0.0	0.0	DRILL HOLE;NO COAL

MAPID: 16300422000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 24 **QUARTERS/FOOTAGES:** N2 NW NE NW
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.048791 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.527463 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 540.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: MADISON CC0005 **WELL TYPE:** Coal Test
COMMENT: EXACT LOCATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300423000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 24 **QUARTERS/FOOTAGES:** 250' N line, 200' E line of NW NE
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.041351 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.527051 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 550.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: MADISON COAL CORPORATION 6 **WELL TYPE:** Coal Test
COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.0			UNCLASSIFIED	0.0	0.0	DRILL HOLE;NOT CERTAIN #6 PRESENT

MAPID: 16300823000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 24 **QUARTERS/FOOTAGES:** 150' N line, 450' E line of SE NE NE
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.037582 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.525437 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 550.0 **LOGGED (FT.):** 154.0 **LOG TYPE:** Drillers Log
SOURCE: MADISON COAL CORPORATION 7 **WELL TYPE:** Coal Test
COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
404.0	CARBONDALE	HERRIN	COAL	8.0	146.0	8' COAL AT 404 A.T. TOP COAL

MAPID: 16300823000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 24 QUARTERS/FOOTAGES: 150' N line, 450' E line of SE NE NE

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.037582 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.525437 DATE COLLECTED:

SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: MADISON CC0007 WELL TYPE: Coal Test

COMMENT: EXACT LOCATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
404.0	CARBONDALE	HERRIN	COAL	8.0	146.0	

MAPID: 16326676000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 24 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.053508 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.51444 DATE COLLECTED: 9 / 21 / 1988

SURFACE ELEVATION (FT.): LOGGED (FT.): 75.0 LOG TYPE: Drillers Log

SOURCE: KOHNEN, CLARENCE WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			SOIL	1.0	0.0	BROWN
-			CLAY	8.0	1.0	YELLOW
-			CLAY	9.0	9.0	RED
-			CLAY	20.0	18.0	YELLOW
-			CLAY	20.0	38.0	GRAY
-	CARBONDALE	HERRIN	COAL	6.0	58.0	
-	CARBONDALE		SHALE	11.0	64.0	

MAPID: 16300012000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 25 QUARTERS/FOOTAGES: 1450' N line, 660' E line of NW

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.047626 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.509418 DATE COLLECTED: 10 / 26 / 1926

SURFACE ELEVATION (FT.): 545.0 LOGGED (FT.): 25.0 LOG TYPE: Drillers Log

SOURCE: FRANKLIN COAL CO 4 WELL TYPE: Coal Test

COMMENT: HOLE NO. 4 NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.0			CLAY	19.0	0.0	
526.0			SOFT SHALE	6.0	19.0	

MAPID: 16300012000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 25 **QUARTERS/FOOTAGES:** 1450' N line, 660' E line of NW
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.047626 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.509418 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 545.0 **LOGGED (FT.):** 25.0 **LOG TYPE:**
SOURCE: FRAN CC 0004 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300117000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 25 **QUARTERS/FOOTAGES:** SE/c SW
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.049795 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.502244 **DATE COLLECTED:** 11 / 27 / 1926
SURFACE ELEVATION (FT.): 545.2 **LOGGED (FT.):** 70.0 **LOG TYPE:** Drillers Log
SOURCE: MS COAL CORP (FRANKLIN COAL COA) **WELL TYPE:** Coal Test
COMMENT: SEE MAP 13-87-23

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
478.7	CARBONDALE	HERRIN	COAL	3.5	66.5	69' THRU COAL

MAPID: 16300117000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 25 **QUARTERS/FOOTAGES:** SE/c SW
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.049795 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.502244 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 545.2 **LOGGED (FT.):** 69.0 **LOG TYPE:**
SOURCE: FRAN CC A **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
479.2	CARBONDALE	HERRIN	COAL	3.5	66.0	

MAPID: 1630035000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 25 QUARTERS/FOOTAGES: 4490' S line, 40' E line
 QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.036181 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.510717 DATE COLLECTED: 0 / 0 / 1920
 SURFACE ELEVATION (FT.): 540.3 LOGGED (FT.): 124.3 LOG TYPE: Drillers Log
 SOURCE: ALUMINUM ORE COMPANY 9 WELL TYPE: Coal Test
 COMMENT: DIAMOND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
540.3			SOIL	101.0	0.0
439.3			SANDSTONE	0.5	101.0
438.8			SANDY SHALE	11.5	101.5
427.3			SANDSTONE	5.2	113.0
422.1			SANDY SHALE	3.0	118.2
419.1			SANDSTONE	0.9	121.2
418.2			BLACK SHALE	1.2	122.1
417.0			CLAYSTONE	1.0	123.3

MAPID: 1630035000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 25 QUARTERS/FOOTAGES: 4490' S line, 40' E line
 QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.036181 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.510717 DATE COLLECTED: 0 / 0 / 1920
 SURFACE ELEVATION (FT.): 540.3 LOGGED (FT.): 124.0 LOG TYPE:
 SOURCE: ALUMINUM 9 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 1630035100C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 25 QUARTERS/FOOTAGES: 1760' S line, 370' E line
 QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.037334 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.503197 DATE COLLECTED: 0 / 0 / 1920
 SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 67.8 LOG TYPE: Drillers Log
 SOURCE: ALUMINUM ORE COMPANY 8 WELL TYPE: Coal Test
 COMMENT: DIAMOND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
560.0			SOIL	53.0	0.0
507.0			SANDSTONE	1.0	53.0
506.0			SANDY SHALE	5.0	54.0
501.0			SANDSTONE	1.8	59.0
499.2			BLACK SHALE	6.0	60.8
493.2			CLAYSTONE	1.0	66.8

MAPID: 16300351000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 25 **QUARTERS/FOOTAGES:** 1760' S line, 370' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.037334 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.503197 **DATE COLLECTED:** 0 / 0 / 1920
SURFACE ELEVATION (FT.): 560.0 **LOGGED (FT.):** 68.0 **LOG TYPE:**
SOURCE: ALUMINUM 8 **WELL TYPE:** Coal Test
COMMENT: SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300425000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 25 **QUARTERS/FOOTAGES:** 0' S line, 924' E line of SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.048403 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.498485 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 545.0 **LOGGED (FT.):** 52.0 **LOG TYPE:** Drillers Log
SOURCE: FRANKLIN COAL CO. **WELL TYPE:** Coal Test
COMMENT: ROD DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
545.0			UNCLASSIFIED	52.0	0.0	NO COAL, NO LOG

MAPID: 16327743000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 25 **QUARTERS/FOOTAGES:** 1' S line, 2640' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.045009 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.498443 **DATE COLLECTED:** 9 / 23 / 1938
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 57.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 15 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	PLEISTOCENE		CLAY	30.0	0.0	
-			SHALE	25.0	30.0	
-			LIMESTONE	2.0	55.0	

MAPID: 16327744000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 25 **QUARTERS/FOOTAGES:** 1' S line, 1980' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.047328 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.498473 **DATE COLLECTED:** 9 / 24 / 1938
SURFACE ELEVATION (FT.): 585.1 **LOGGED (FT.):** 55.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 16 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
585.1	PLEISTOCENE		CLAY	30.0	0.0	
555.1			GRAY SHALE	25.0	30.0	SOFT

MAPID: 16327745000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 25 **QUARTERS/FOOTAGES:** 2640' N line, 1' W line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.054485 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.506263 **DATE COLLECTED:** 9 / 27 / 1938
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 75.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 21 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		CLAY	40.0	0.0	
-			GRAY SHALE	35.0	40.0	

MAPID: 16300013000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 26 **QUARTERS/FOOTAGES:** 670' N line, 250' E line of NW NE
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.060189 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.511821 **DATE COLLECTED:** 10 / 26 / 1925
SURFACE ELEVATION (FT.): 545.0 **LOGGED (FT.):** 73.0 **LOG TYPE:** Drillers Log
SOURCE: FRANKLIN COAL CO 1 **WELL TYPE:** Coal Test
COMMENT: HOLE NO 1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.0			CLAY	46.0	0.0	YELLOW
499.0			CLAY	11.0	46.0	BLUE
488.0	CARBONDALE	BRERETON	LIMESTONE	5.5	57.0	
482.5	CARBONDALE	ANNA	BLACK SHALE	3.0	62.5	
479.5	CARBONDALE	HERRIN	COAL	7.0	65.5	
472.5	CARBONDALE		CLAYSTONE	0.5	72.5	

MAPID: 16300013000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 26 **QUARTERS/FOOTAGES:** 670' N line, 250' E line of NW NE
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.060189 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.511821 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 545.0 **LOGGED (FT.):** 73.0 **LOG TYPE:**
SOURCE: FRAN CC 1 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
479.0	CARBONDALE	HERRIN	COAL	7.0	66.0	

MAPID: 16300014000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 26 **QUARTERS/FOOTAGES:** 2500' N line, 3075' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.065308 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.506879 **DATE COLLECTED:** 10 / 26 / 1926
SURFACE ELEVATION (FT.): 520.1 **LOGGED (FT.):** 45.0 **LOG TYPE:** Drillers Log
SOURCE: FRANKLIN COAL CO 2 **WELL TYPE:** Coal Test
COMMENT: HOLE NO 2, NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
520.1			CLAY	29.0	0.0	
491.1			SOFT SHALE	13.5	29.0	
477.6			CLAYSTONE	2.0	42.5	RED
475.6			LIMESTONE	0.5	44.5	NO COAL

MAPID: 16300014000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 26 **QUARTERS/FOOTAGES:** 2500' N line, 3075' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.065308 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.506879 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 520.1 **LOGGED (FT.):** 45.0 **LOG TYPE:**
SOURCE: FRAN CC 0002 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300015000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 26 **QUARTERS/FOOTAGES:** 3350' N line, 2550' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.063402 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.504492 **DATE COLLECTED:** 10 / 26 / 1926
SURFACE ELEVATION (FT.): 550.8 **LOGGED (FT.):** 60.0 **LOG TYPE:** Drillers Log
SOURCE: FRANKLIN COAL CO 3 **WELL TYPE:** Coal Test
COMMENT: HOLE NO 3, NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.8			CLAY	30.0	0.0	
520.8			SOFT SHALE	23.0	30.0	
497.8			SANDY SHALE	7.0	53.0	NO COAL

MAPID: 16300015000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 26 **QUARTERS/FOOTAGES:** 3350' N line, 2550' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.063402 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.504492 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 550.8 **LOGGED (FT.):** 60.0 **LOG TYPE:**
SOURCE: FRAN CC 3 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300391000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 26 **QUARTERS/FOOTAGES:** SW SE SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.057915 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.499571 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 540.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: JACOB MEYER **WELL TYPE:** Coal Test
COMMENT: LOCAL MINE ABANDONED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.0			MINE OPENING	0.0	0.0	LOCAL MINE ABANDONED

MAPID: 16300517000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 28 **QUARTERS/FOOTAGES:** 610' N line, 675' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.094001 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.512086 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 546.8 **LOGGED (FT.):** 46.5 **LOG TYPE:** Drillers Log
SOURCE: LOUIS PFLINGSTEN **WELL TYPE:** Coal Test
COMMENT: DRILL HOLE , NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
500.3			CORE LOSS	0.0	46.5	NO COAL

MAPID: 16300517000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 28 **QUARTERS/FOOTAGES:** 610' N line, 675' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.094001 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.512086 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 546.8 **LOGGED (FT.):** 47.0 **LOG TYPE:**
SOURCE: PFLINGSTEN **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300427000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 33 **QUARTERS/FOOTAGES:** 1210' N line, 1040' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.095618 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.495717 **DATE COLLECTED:** 0 / 0 / 1931
SURFACE ELEVATION (FT.): 516.6 **LOGGED (FT.):** 1265.0 **LOG TYPE:**
SOURCE: COLLINS TJ 1 **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300428000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 33 **QUARTERS/FOOTAGES:** 1605' N line, 200' W line of NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.100323 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.494677 **DATE COLLECTED:** 0 / 0 / 1930
SURFACE ELEVATION (FT.): 534.7 **LOGGED (FT.):** 1268.0 **LOG TYPE:**
SOURCE: OHIO OIL **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300120000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** SW/c SE SE SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.074472 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.485148 **DATE COLLECTED:** 11 / 27 / 1926
SURFACE ELEVATION (FT.): 576.2 **LOGGED (FT.):** 42.0 **LOG TYPE:** Drillers Log
SOURCE: MS COAL CORP (FRANKLIN COAL COD) **WELL TYPE:** Coal Test
COMMENT: 42' TO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
534.2	CARBONDALE	HERRIN	COAL	0.0	42.0	42' TO COAL

MAPID: 16300120000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** SW/c SE SE SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.074472 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.485148 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 576.2 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: FRAN CC D **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
534.2	CARBONDALE	HERRIN	COAL	-	42.0	

MAPID: 16300154000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** SW/c SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.077927 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.487952 **DATE COLLECTED:** 5 / 29 / 1928
SURFACE ELEVATION (FT.): 575.0 **LOGGED (FT.):** 60.0 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 131 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
575.0			UNCONSOLIDATED	20.0	0.0	
555.0			CLAY	10.0	20.0	
545.0			SANDY CLAY	8.0	30.0	
537.0			LIGHT SHALE	4.0	38.0	
533.0			ROCK	1.0	42.0	RED
532.0			SHALE	4.0	43.0	
528.0			HARD SHALE	11.0	47.0	
517.0			SHALE	2.0	58.0	NO COAL

MAPID: 16300154000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** SW/c SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.077927 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.487952 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 575.0 **LOGGED (FT.):** 60.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0131 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300155000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** SW/c SW SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.080143 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.486152 **DATE COLLECTED:** 6 / 7 / 1928
SURFACE ELEVATION (FT.): 580.0 **LOGGED (FT.):** 50.6 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 132 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT	
580.0			UNCONSOLIDATED	20.0	0.0	
560.0			SHALE	2.5	20.0	
557.5			SANDY SHALE	5.0	22.5	
552.5			ROCK	1.3	27.5	
551.2			SHALE	5.8	28.8	
545.5			ROCK	1.5	34.5	
544.0			SHALE	3.0	36.0	
541.0			LIMESTONE	7.0	39.0	
534.0			SHALE	1.2	46.0	WHITE
532.8			SMUT	0.3	47.2	
532.5			ROCK	2.3	47.5	
530.2	CARBONDALE	HERRIN	COAL	0.8	49.8	

MAPID: 16300155000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** SW/c SW SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.080143 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.486152 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 580.0 **LOGGED (FT.):** 51.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0132 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
530.0	CARBONDALE	HERRIN	COAL	0.8	50.0

MAPID: 16300156000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: SE/c NW SE SE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.076771 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.487019 DATE COLLECTED: 7 / 10 / 1928
 SURFACE ELEVATION (FT.): 575.0 LOGGED (FT.): 51.6 LOG TYPE: Drillers Log
 SOURCE: MISSISSIPPI COAL CORP. 132A WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
575.0			UNCONSOLIDATED	23.0	0.0	
552.0			SANDY SHALE	16.0	23.0	
536.0			ROCK	7.0	39.0	
529.0			SHALE	1.0	46.0	
528.0			SMUT	2.0	47.0	
526.0	CARBONDALE	ANNA	BLACK SHALE	0.5	49.0	
525.5	CARBONDALE	HERRIN	COAL	2.1	49.5	

MAPID: 16300156000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: SE/c NW SE SE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.076771 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.487019 DATE COLLECTED: 0 / 0 / 1928
 SURFACE ELEVATION (FT.): 575.0 LOGGED (FT.): 52.0 LOG TYPE:
 SOURCE: MISSISSIPPI COAL CORP. 132A WELL TYPE: Coal Test
 COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
528.0	CARBONDALE	HERRIN	COAL	4.6	47.0	

MAPID: 16300157000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: SE/c SW SE SE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.076728 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.485183 DATE COLLECTED: 7 / 7 / 1928
 SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 19.1 LOG TYPE: Drillers Log
 SOURCE: MISSISSIPPI COAL CORP. 132B WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.0			UNCONSOLIDATED	14.5	0.0	
535.5			SMUT	0.5	14.5	
535.0	CARBONDALE	HERRIN	COAL	4.1	15.0	

MAPID: 16300157000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** SE/c SW SE SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.076728 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.485183 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 550.0 **LOGGED (FT.):** 19.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 132B **WELL TYPE:** Coal Test
COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
535.0	CARBONDALE	HERRIN	COAL	4.6	15.0

MAPID: 16300158000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** SW SW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.08148 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.492572 **DATE COLLECTED:** 5 / 29 / 1928
SURFACE ELEVATION (FT.): 585.0 **LOGGED (FT.):** 31.0 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 181 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
585.0			UNCONSOLIDATED	10.0	0.0
575.0			CLAY	2.0	10.0
573.0			LIGHT SHALE	12.0	12.0
561.0	CARBONDALE	BRERETON	LIMESTONE	4.5	24.0
556.5	CARBONDALE	ANNA	BLACK SHALE	1.3	28.5
555.2	CARBONDALE	HERRIN	COAL	1.2	29.8

MAPID: 16300158000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** SW SW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.08148 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.492572 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 565.0 **LOGGED (FT.):** 31.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 181 **WELL TYPE:** Coal Test
COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	
535.0	CARBONDALE	SPRINGFIELD	COAL	1.2	30.0

MAPID: 16300388000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** 5250' S line, 2250' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.081454 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.498834 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 572.7 **LOGGED (FT.):** 38.0 **LOG TYPE:** Drillers Log
SOURCE: MORGAN COAL CO. 1 **WELL TYPE:** Coal Test
COMMENT: STRIP MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.7	CARBONDALE	HERRIN	COAL	6.0	32.0	6' COAL AT 38' ELEVATION TOP 535'

MAPID: 16300388000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** 5250' S line, 2250' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.081454 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.498834 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 572.7 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: MORGAN COAL CO. 1 **WELL TYPE:** Strip Mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
534.7	CARBONDALE	HERRIN	COAL	6.0	38.0	

MAPID: 16300518000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:**
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.082594 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.49167 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 300.0 **LOG TYPE:**
SOURCE: MIDWEST SF **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300519000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.074569 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.490669 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 555.0 LOGGED (FT.): 47.0 LOG TYPE:

SOURCE: MIDWEST SF012Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	
510.0	CARBONDALE	SPRINGFIELD	COAL	1.3	45.0

MAPID: 16300520000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.074569 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.490669 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 30.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 13-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
540.0			CLAY	16.0	0.0
524.0			LIMESTONE	1.5	16.0
522.5			SHALE	1.5	17.5
521.0			BLACK SHALE	0.8	19.0
520.2	CARBONDALE	SPRINGFIELD	COAL	1.6	19.8 NO 5?
518.6	CARBONDALE		CLAYSTONE	4.6	21.4
514.0	CARBONDALE		BLACK SHALE	4.0	26.0

MAPID: 16300520000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.074569 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.490669 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 30.0 LOG TYPE:

SOURCE: MIDWEST SF 13Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	
520.0	CARBONDALE	SPRINGFIELD	COAL	1.6	20.0

MAPID: 16300521000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: S2 SE NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.075747 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.492518 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 516.8 LOGGED (FT.): 9.8 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 726 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
516.8			CLAY	5.6	0.0	
511.2			BLACK SHALE	0.3	5.6	
510.9	CARBONDALE	SPRINGFIELD	COAL	1.5	5.9	(#5 SEAM) ELEV TOP 510.87
509.4	CARBONDALE		CLAYSTONE	2.3	7.4	

MAPID: 16300521000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: S2 SE NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.075747 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.492518 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 516.8 LOGGED (FT.): 10.0 LOG TYPE:

SOURCE: MIDWEST SF0726 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		
510.8	CARBONDALE	SPRINGFIELD	COAL	1.5	6.0	

MAPID: 16300522000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: SW/c NW NE SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.076853

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.490693

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 569.2 LOGGED (FT.): 52.7

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 727

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
569.2			CLAY	18.3	0.0	
550.9			CLAY	15.9	18.3	GRAY
534.9			CLAY	2.0	34.3	YELLOW
532.9			CLAY	2.0	36.3	GRAY
530.9			LIMESTONE	2.8	38.3	
528.2			CLAYSTONE	0.8	41.0	
527.4			LIMESTONE	1.6	41.8	
525.8			CLAYSTONE	0.8	43.4	GRAY
525.0			LIMESTONE	1.3	44.2	
523.8			SHALE	1.1	45.4	
522.7			BLACK SHALE	1.1	46.5	
521.6			UNCLASSIFIED	0.6	47.6	
521.0			SMUT	0.3	48.2	
520.8	CARBONDALE	SPRINGFIELD	COAL	1.8	48.4	NO 5 SEAM, ELEV TOP 520.81
518.9	CARBONDALE		CLAYSTONE	2.4	50.3	

MAPID: 16300522000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: SW/c NW NE SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.076853

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.490693

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 569.2 LOGGED (FT.): 53.0

LOG TYPE:

SOURCE: MIDWEST SF0727

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		
521.2	CARBONDALE	SPRINGFIELD	COAL	1.8	48.0	

MAPID: 16300523000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: SE SW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.079186 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.492551 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 569.3 LOGGED (FT.): 44.8 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 746 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
569.3			CLAY	29.3	0.0	
540.0			CLAY	6.7	29.3	GRAY
533.4			LIMESTONE	3.3	35.9	
530.1			SHALE	5.7	39.2	

MAPID: 16300523000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: SE SW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.079186 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.492551 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 569.3 LOGGED (FT.): 45.0 LOG TYPE:

SOURCE: MIDWEST SF0746 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300524000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: SE/c SW SW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.08148 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.492572 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 581.4 LOGGED (FT.): 34.4 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 747 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
581.4			CLAY	28.0	0.0	
553.4	CARBONDALE	HERRIN	COAL	1.0	28.0	ELEV TOP 553.39
552.4	CARBONDALE	HERRIN	SHALE	0.2	29.0	
552.2	CARBONDALE	HERRIN	COAL	0.7	29.2	
551.6	CARBONDALE	HERRIN	SHALE	0.1	29.8	
551.5	CARBONDALE	HERRIN	COAL	1.9	29.9	
549.6	CARBONDALE	HERRIN	SHALE	0.1	31.8	
549.5	CARBONDALE	HERRIN	COAL	1.8	31.9	
547.7	CARBONDALE		CLAYSTONE	0.8	33.7	

MAPID: 16300524000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** SE/c SW SW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.08148 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.492572 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 581.4 **LOGGED (FT.):** 34.0 **LOG TYPE:**
SOURCE: MIDWEST SF0747 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
553.4	CARBONDALE	HERRIN	COAL	5.7	28.0	

MAPID: 16300525000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** NW/c SE NE SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.083636 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.488942 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 585.1 **LOGGED (FT.):** 50.0 **LOG TYPE:**
SOURCE: MIDWEST SF0758 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300526000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** NE/c SE NE SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.083636 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.488942 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 589.3 **LOGGED (FT.):** 39.0 **LOG TYPE:**
SOURCE: MIDWEST SF0772 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300527000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** NE SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.084809 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.489867 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 569.8 **LOGGED (FT.):** 46.0 **LOG TYPE:**
SOURCE: MIDWEST SF0773 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300528000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: 0' N line, 165' W line of SE NE SW

QUADRANGLE: MILLSTADT

LONGITUDE: -90.08423

GEOLOGIST: HINES

CONFIDENTIAL: N

LATITUDE: 38.489861

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 585.2

LOGGED (FT.): 47.9

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 774

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
585.2			CLAY	34.3	0.0	
550.9			SHALE	2.4	34.3	
548.4			LIMESTONE	0.7	36.8	
547.8			CLAYSTONE	2.2	37.4	YELLOW
545.6	CARBONDALE	SPRINGFIELD	COAL	1.5	39.6	ELEV TOP 545.59
544.1	CARBONDALE		CLAYSTONE	6.8	41.1	

MAPID: 16300528000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: 0' N line, 165' W line of SE NE SW

QUADRANGLE: MILLSTADT

LONGITUDE: -90.08423

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N

LATITUDE: 38.489861

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 585.2

LOGGED (FT.): 48.0

LOG TYPE:

SOURCE: MIDWEST SF0774

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		
545.2	CARBONDALE	SPRINGFIELD	COAL	1.5	40.0	

MAPID: 16300529000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: 165' S line, 0' E line of SE NE SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.082483 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.488468 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 584.3 LOGGED (FT.): 45.6 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 775 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
584.3			CLAY	30.1	0.0	
554.2			CLAY	1.8	30.1	GRAY
552.4			BOULDER	0.5	31.9	
551.9			CLAY	3.4	32.4	GRAY
548.5			LIMESTONE	0.4	35.8	
548.0			HARD SHALE	3.5	36.3	
544.5			SOFT SHALE	1.3	39.8	
543.3			ROCK	0.2	41.0	BLACK
543.1	CARBONDALE	SPRINGFIELD	COAL	1.4	41.2	PROBABLY #5 ELEV TOP 543.17
541.7	CARBONDALE		CLAYSTONE	3.0	42.6	

MAPID: 16300529000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: 165' S line, 0' E line of SE NE SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.082483 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.488468 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 584.3 LOGGED (FT.): 46.0 LOG TYPE:
 SOURCE: MIDWEST SF0775 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		
543.3	CARBONDALE	SPRINGFIELD	COAL	1.4	41.0	

MAPID: 16300762000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: SE NE SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.083636 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.488942 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 520.0 LOGGED (FT.): 46.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL WELL TYPE: Coal Test
 COMMENT: STRIP MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
480.0			MINE OPENING	6.0	40.0	40' TO 6' OF NO. 6

MAPID: 16300762000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** SE NE SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.083636 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.488942 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 580.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: MIDWEST SF **WELL TYPE:** Strip Mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300812000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** NE/c SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.077927 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.487952 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 565.1 **LOGGED (FT.):** 49.0 **LOG TYPE:**
SOURCE: MIDWEST SF 725 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16327746000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** 210' S line, 600' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.075446 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.484825 **DATE COLLECTED:** 12 / 27 / 1938
SURFACE ELEVATION (FT.): 584.9 **LOGGED (FT.):** 31.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 9 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
584.9	PLEISTOCENE		CLAY	23.0	0.0
561.9			SHALE	2.0	23.0
559.9	CARBONDALE	HERRIN	COAL	4.5	25.0
555.4	CARBONDALE		UNDERCLAY	1.5	29.5

TOP OF COAL MAY BE
ERODED

MAPID: 16327747000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: 540' S line, 440' E line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.074898 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.485728 DATE COLLECTED: 12 / 27 / 1938
 SURFACE ELEVATION (FT.): 575.9 LOGGED (FT.): 24.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 11 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
575.9	PLEISTOCENE		CLAY	16.0	0.0	
559.9			SHALE	2.0	16.0	
557.9	CARBONDALE	HERRIN	COAL	5.5	18.0	
552.4	CARBONDALE		UNDERCLAY	0.5	23.5	

MAPID: 16327748000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: 630' S line, 230' E line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.074163 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.485964 DATE COLLECTED: 12 / 28 / 1938
 SURFACE ELEVATION (FT.): 571.9 LOGGED (FT.): 21.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 12 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
571.9	PLEISTOCENE		CLAY	15.0	0.0	
556.9	CARBONDALE	HERRIN	COAL	2.0	15.0	TOP OF COAL ERODED
554.9	CARBONDALE	HERRIN	COAL	3.0	17.0	HARD
551.9	CARBONDALE		UNDERCLAY	1.0	20.0	

MAPID: 16327749000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 34 QUARTERS/FOOTAGES: 900' S line, 220' E line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.074141 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.486709 DATE COLLECTED: 12 / 28 / 1938
 SURFACE ELEVATION (FT.): 580.6 LOGGED (FT.): 30.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 13 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
580.6	PLEISTOCENE		CLAY	25.5	0.0	
555.1	CARBONDALE	HERRIN	COAL	2.0	25.5	TOP OF COAL ERODED
553.1	CARBONDALE		UNDERCLAY	2.0	27.5	
551.1	CARBONDALE		SANDSTONE	0.5	29.5	

MAPID: 16327750000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** 985' S line, 40' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.07351 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.486933 **DATE COLLECTED:** 12 / 29 / 1938
SURFACE ELEVATION (FT.): 583.0 **LOGGED (FT.):** 35.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 18 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
583.0	PLEISTOCENE		CLAY	30.0	0.0	
553.0	CARBONDALE	HERRIN	COAL	1.5	30.0	SOFT, TOP OF COAL ERODED
551.5	CARBONDALE	HERRIN	COAL	2.0	31.5	HARD
549.5	CARBONDALE		UNDERCLAY	1.5	33.5	

MAPID: 16327751000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** 860' S line, 80' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.073644 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.48659 **DATE COLLECTED:** 12 / 29 / 1938
SURFACE ELEVATION (FT.): 584.1 **LOGGED (FT.):** 32.5 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 20 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
584.1	PLEISTOCENE		CLAY	27.5	0.0	
556.6	CARBONDALE	HERRIN	COAL	4.0	27.5	HARD, TOP OF COAL ERODED
552.6	CARBONDALE		UNDERCLAY	1.0	31.5	

MAPID: 16327752000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** 840' S line, 1' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.073366 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.486531 **DATE COLLECTED:** 12 / 30 / 1938
SURFACE ELEVATION (FT.): 585.8 **LOGGED (FT.):** 35.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 21 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
585.8	PLEISTOCENE		CLAY	29.0	0.0	
556.8	CARBONDALE	HERRIN	COAL	5.0	29.0	TOP OF COAL ERODED
551.8	CARBONDALE		UNDERCLAY	1.0	34.0	

MAPID: 16327753000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** 590' S line, 30' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.073459 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.48584 **DATE COLLECTED:** 12 / 31 / 1938
SURFACE ELEVATION (FT.): 585.1 **LOGGED (FT.):** 32.5 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 23 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
585.1	PLEISTOCENE		CLAY	26.5	0.0	
558.6	CARBONDALE	HERRIN	COAL	1.0	26.5	TOP OF COAL ERODED
557.6	CARBONDALE	HERRIN	COAL	4.5	27.5	HARD
553.1	CARBONDALE		UNDERCLAY	0.5	32.0	

MAPID: 16327754000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** 440' S line, 140' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.073839 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.485432 **DATE COLLECTED:** 12 / 31 / 1938
SURFACE ELEVATION (FT.): 586.3 **LOGGED (FT.):** 35.5 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 24 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
586.3	PLEISTOCENE		CLAY	23.0	0.0	
563.3			SHALE	3.0	23.0	
560.3	CARBONDALE	ANNA	BLACK SHALE	3.0	26.0	
557.3	CARBONDALE	HERRIN	COAL	6.0	29.0	
551.3	CARBONDALE		UNDERCLAY	0.5	35.0	

MAPID: 16300016000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 2500' S line, 1670' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.060228 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.490858 **DATE COLLECTED:** 10 / 26 / 1926
SURFACE ELEVATION (FT.): 552.0 **LOGGED (FT.):** 50.0 **LOG TYPE:** Drillers Log
SOURCE: FRANKLIN COAL CO 6 **WELL TYPE:** Coal Test
COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
552.0			CLAY	34.0	0.0	
518.0			SOFT SHALE	10.5	34.0	
507.5			COAL	2.0	44.5	
505.5			CLAYSTONE	3.5	46.5	NO COAL

MAPID: 16300016000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 2500' S line, 1670' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.060228 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.490858 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 552.0 **LOGGED (FT.):** 50.0 **LOG TYPE:**
SOURCE: FRAN CC 0006 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300017000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 100' S line, 750' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.070698 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.484435 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 578.0 **LOGGED (FT.):** 57.0 **LOG TYPE:**
SOURCE: FRAN CC 0008 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
529.0	CARBONDALE	HERRIN	COAL	7.7	49.0

MAPID: 16300017000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 100' S line, 750' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.070698 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.484435 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 578.0 **LOGGED (FT.):** 56.7 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
545.3	CARBONDALE		SHALE	5.0	32.7
540.3	CARBONDALE	BRERETON	LIMESTONE	8.0	37.7
532.3	CARBONDALE	ANNA	DARK GRAY SHALE	3.3	45.7
529.0	CARBONDALE	HERRIN	COAL	7.7	49.0

MAPID: 16300017000C **VERSION:** 3 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 100' S line, 750' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.070698 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.484435 **DATE COLLECTED:** 10 / 26 / 1926
SURFACE ELEVATION (FT.): 578.0 **LOGGED (FT.):** 57.0 **LOG TYPE:** Drillers Log
SOURCE: FRANKLIN COAL CO 8 **WELL TYPE:** Coal Test
COMMENT: HOLE NO 8

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
578.0			CLAY	30.3	0.0	
547.7			SAND	2.7	30.3	
545.0			SHALE	5.0	33.0	
540.0			LIMESTONE	8.0	38.0	
532.0			SHALE	1.0	46.0	WHITE
531.0			SHALE	2.3	47.0	
528.7			COAL	7.7	49.3	

MAPID: 16300018000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1385' S line, 5275' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072915 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.488027 **DATE COLLECTED:** 10 / 26 / 1926
SURFACE ELEVATION (FT.): 570.0 **LOGGED (FT.):** 35.0 **LOG TYPE:** Drillers Log
SOURCE: FRANKLIN COAL CO. 9 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.0			CLAY	10.0	0.0	
560.0			LIMESTONE	8.0	10.0	
552.0			SHALE	11.0	18.0	
541.0			BLACK SHALE	1.0	29.0	
540.0	CARBONDALE	HERRIN	COAL	4.3	30.0	
535.7	CARBONDALE		CLAYSTONE	0.7	34.3	

MAPID: 16300018000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1385' S line, 5275' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072915 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.488027 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 570.0 **LOGGED (FT.):** 35.0 **LOG TYPE:**
SOURCE: FRAN CC 0009 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.0	CARBONDALE	HERRIN	COAL	4.3	30.0	

MAPID: 16300039000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1355' S line, 605' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.056518 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.487626 **DATE COLLECTED:** 7 / 5 / 1928
SURFACE ELEVATION (FT.): 565.0 **LOGGED (FT.):** 47.2 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 136A **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
565.0			UNCONSOLIDATED	20.0	0.0
545.0			SHALE	8.0	20.0
537.0			ROCK	3.0	28.0
534.0			SHALE	5.0	31.0
529.0			ROCK	3.0	36.0
526.0			SMUT	1.3	39.0
524.7	CARBONDALE	ANNA	BLACK SHALE	1.0	40.3
523.7	CARBONDALE	HERRIN	COAL	5.8	41.3

MAPID: 16300039000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1355' S line, 605' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.056518 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.487626 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 565.0 **LOGGED (FT.):** 47.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 136A **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
524.0	CARBONDALE	HERRIN	COAL	5.8	41.0

MAPID: 16300097000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1355' S line, 5235' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072777 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.487939 **DATE COLLECTED:** 6 / 0 / 1928
SURFACE ELEVATION (FT.): 560.4 **LOGGED (FT.):** 12.0 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 158 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
560.4			UNCONSOLIDATED	7.0	0.0
553.4			SMUT	1.5	7.0
551.9	CARBONDALE	ANNA	BLACK SHALE	1.0	8.5
550.9	CARBONDALE	HERRIN	COAL	2.5	9.5

MAPID: 16300097000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1355' S line, 5235' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072777 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.487939 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 560.4 **LOGGED (FT.):** 12.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0158 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.4	CARBONDALE	HERRIN	COAL	2.5	10.0	

MAPID: 16300119000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NE/c NW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071031 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.48969 **DATE COLLECTED:** 11 / 27 / 1926
SURFACE ELEVATION (FT.): 565.8 **LOGGED (FT.):** 50.0 **LOG TYPE:** Drillers Log
SOURCE: MS COAL CORP (FRANKLIN COAL CO) **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
521.8	CARBONDALE	HERRIN	COAL	6.0	44.0	50' THRU COAL

MAPID: 16300119000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NE/c NW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071031 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.48969 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 565.8 **LOGGED (FT.):** 50.0 **LOG TYPE:**
SOURCE: FRAN CC 000C **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
521.8	CARBONDALE	HERRIN	COAL	6.0	44.0	

MAPID: 16300123000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1355' S line, 3915' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.06814 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.487851 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 569.2 **LOGGED (FT.):** 45.4 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 159 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
569.2			UNCONSOLIDATED	18.0	0.0
551.2			SHALE	9.0	18.0
542.2			SANDSTONE	2.0	27.0
540.2			SHALE	2.0	29.0
538.2			LIMESTONE	3.0	31.0
535.2			SHALE	3.3	34.0
531.9			SMUT	0.1	37.3
531.9			BLACK SHALE	1.3	37.3
530.6			ROCK	0.6	38.6
530.0	CARBONDALE	HERRIN	COAL	6.3	39.2

MAPID: 16300123000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1355' S line, 3915' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.06814 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.487851 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 569.4 **LOGGED (FT.):** 45.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0159 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
530.4	CARBONDALE	HERRIN	COAL	6.3	39.0

MAPID: 16300139000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1355' S line, 4575' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.070458 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.487895 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 573.6 **LOGGED (FT.):** 36.1 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 158B **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
573.6			UNCONSOLIDATED	26.0	0.0
547.6			ROCK	2.0	26.0
545.6	CARBONDALE	ANNA	BLACK SHALE	2.0	28.0
543.6	CARBONDALE	HERRIN	COAL	6.1	30.0

MAPID: 16300139000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1355' S line, 4575' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.070458 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.487895 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 573.6 **LOGGED (FT.):** 36.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 158B **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
543.6	CARBONDALE	HERRIN	COAL	6.1	30.0	

MAPID: 16300159000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 55' S line, 5235' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072812 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.484352 **DATE COLLECTED:** 5 / 31 / 1928
SURFACE ELEVATION (FT.): 591.8 **LOGGED (FT.):** 42.3 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 133 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
591.8			UNCONSOLIDATED	20.0	0.0	
571.8			SHALE	8.0	20.0	
563.8			LIMESTONE	8.3	28.0	
555.5			SMUT	0.2	36.3	
555.3	CARBONDALE	HERRIN	COAL	5.8	36.5	

MAPID: 16300159000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 55' S line, 5235' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072812 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.484352 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 591.8 **LOGGED (FT.):** 42.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0133 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
555.8	CARBONDALE	HERRIN	COAL	5.9	36.0	

MAPID: 16300160000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 680' S line, 4575' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.070475 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.486032 **DATE COLLECTED:** 7 / 9 / 1928
SURFACE ELEVATION (FT.): 580.0 **LOGGED (FT.):** 37.5 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 133A **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
580.0			UNCONSOLIDATED	16.0	0.0
564.0			SHALE	8.0	16.0
556.0			SHALE	2.5	24.0
553.5	CARBONDALE	BRERETON	LIMESTONE	5.0	26.5
548.5	CARBONDALE	ANNA	SHALE	0.5	31.5
548.0	CARBONDALE	HERRIN	COAL	5.5	32.0

MAPID: 16300160000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 680' S line, 4575' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.070475 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.486032 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 580.0 **LOGGED (FT.):** 38.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 133A **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
548.0	CARBONDALE	HERRIN	COAL	5.5	32.0

MAPID: 16300161000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 55' S line, 3915' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.068174 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.484262 **DATE COLLECTED:** 6 / 12 / 1928
SURFACE ELEVATION (FT.): 579.4 **LOGGED (FT.):** 40.8 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 134 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
579.4			UNCONSOLIDATED	20.0	0.0
559.4			SHALE	6.0	20.0
553.4	CARBONDALE	BRERETON	LIMESTONE	6.3	26.0
547.1	CARBONDALE	ANNA	SHALE	3.2	32.3
544.0	CARBONDALE	HERRIN	COAL	5.3	35.4

MAPID: 16300161000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 55' S line, 3915' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.068174 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.484262 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 579.4 **LOGGED (FT.):** 41.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0134 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
544.4	CARBONDALE	HERRIN	COAL	5.3	35.0

MAPID: 16300162000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 55' S line, 2600' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063558 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.484174 **DATE COLLECTED:** 6 / 12 / 1928
SURFACE ELEVATION (FT.): 581.0 **LOGGED (FT.):** 49.1 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 135 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
581.0			UNCONSOLIDATED	20.0	0.0
561.0			SHALE	2.0	20.0
559.0			LIMESTONE	2.0	22.0
557.0			SHALE	7.0	24.0
550.0			LIMESTONE	2.0	31.0
548.0			SHALE	2.0	33.0
546.0	CARBONDALE	BRERETON	LIMESTONE	3.0	35.0
543.0	CARBONDALE	ANNA	SHALE	2.0	38.0
541.0	CARBONDALE	ANNA	BLACK SHALE	3.0	40.0
538.0	CARBONDALE	HERRIN	COAL	6.1	43.0

MAPID: 16300162000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 55' S line, 2600' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063558 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.484174 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 581.0 **LOGGED (FT.):** 49.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0135 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
538.0	CARBONDALE	HERRIN	COAL	6.1	43.0

MAPID: 16300188000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1995' S line, 5235' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.07276 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.489706 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 560.0 **LOGGED (FT.):** 33.3 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 158C **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.0			UNCONSOLIDATED	24.0	0.0	
536.0	CARBONDALE	ANNA	SHALE	4.0	24.0	
532.0	CARBONDALE	ANNA	BLACK SHALE	1.0	28.0	
531.0	CARBONDALE	HERRIN	COAL	4.3	29.0	

MAPID: 16300188000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1995' S line, 5235' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.07276 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.489706 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 560.0 **LOGGED (FT.):** 33.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 158C **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
531.0	CARBONDALE	HERRIN	COAL	4.3	29.0	

MAPID: 16300189000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1355' S line, 2600' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063523 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.487761 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 565.0 **LOGGED (FT.):** 43.3 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 160 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
565.0			UNCONSOLIDATED	24.0	0.0	
541.0			HARD SHALE	6.9	24.0	
534.1			LIMESTONE	2.6	30.9	
531.5			CLAYSTONE	1.2	33.5	
530.3			ROCK	2.5	34.7	
527.8	CARBONDALE	HERRIN	COAL	6.1	37.2	TWO SMALL DIRTY BANDS

MAPID: 16300189000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1355' S line, 2600' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063523 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.487761 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 565.0 **LOGGED (FT.):** 43.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0160 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
528.0	CARBONDALE	HERRIN	COAL	6.1	37.0	

MAPID: 16300289000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 2655' S line, 2545' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063295 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.491345 **DATE COLLECTED:** 7 / 6 / 1928
SURFACE ELEVATION (FT.): 540.0 **LOGGED (FT.):** 29.0 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 160C **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.0			UNCONSOLIDATED	8.0	0.0	
532.0			SOFT SHALE	17.0	8.0	
515.0			SMUT	2.5	25.0	
512.5	CARBONDALE	HERRIN	COAL	1.5	27.5	WEATHERED COAL

MAPID: 16300289000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 2655' S line, 2545' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063295 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.491345 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 540.0 **LOGGED (FT.):** 29.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 160C **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
515.0	CARBONDALE	HERRIN	COAL	4.0	25.0	

MAPID: 16300290000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1355' S line, 1280' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.058886

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.48767

DATE COLLECTED: 6 / 11 / 1928

SURFACE ELEVATION (FT.): 575.3 LOGGED (FT.): 51.9

LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 161

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
575.3			UNCONSOLIDATED	27.0	0.0
548.3			ROCK	6.0	27.0
542.3			HARD SHALE	5.0	33.0
537.3			SHALE	2.0	38.0
535.3			LIMESTONE	5.8	40.0
529.5	CARBONDALE	HERRIN	COAL	6.1	45.8

MAPID: 16300290000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1355' S line, 1280' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.058886

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.48767

DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): 575.3 LOGGED (FT.): 51.0

LOG TYPE:

SOURCE: MISSISSIPPI COAL CORP. 0161

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
529.3	CARBONDALE	HERRIN	COAL	5.1	46.0

MAPID: 16300291000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1995' S line, 622' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.05656 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.489393 DATE COLLECTED: 6 / 30 / 1928

SURFACE ELEVATION (FT.): 570.0 LOGGED (FT.): 58.7 LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 161B WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.0			UNCONSOLIDATED	20.0	0.0	
550.0			SHALE	18.5	20.0	
531.5			SHALE	1.5	38.5	
530.0			ROCK	5.0	40.0	
525.0			SHALE	2.0	45.0	
523.0			LIMESTONE	3.5	47.0	
519.5			SMUT	0.8	50.5	
518.7	CARBONDALE	ANNA	BLACK SHALE	1.0	51.3	
517.7	CARBONDALE	HERRIN	COAL	6.3	52.3	

MAPID: 16300291000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1995' S line, 622' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.05656 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.489393 DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): 570.0 LOGGED (FT.): 58.0 LOG TYPE:

SOURCE: MISSISSIPPI COAL CORP. 161B WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
519.0	CARBONDALE	HERRIN	COAL	6.3	51.0	

MAPID: 16300293000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 3915' S line, 4650' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.070655 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.494965 **DATE COLLECTED:** 7 / 3 / 1928
SURFACE ELEVATION (FT.): 569.7 **LOGGED (FT.):** 41.3 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 183A **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
569.7			UNCONSOLIDATED	20.0	0.0
549.7			SHALE	5.0	20.0
544.7			LIMESTONE	6.2	25.0
538.5	CARBONDALE	ANNA	SHALE	4.0	31.2
534.5	CARBONDALE	ANNA	BLACK SHALE	1.2	35.2
533.4	CARBONDALE	HERRIN	COAL	5.0	36.3

MAPID: 16300293000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 3915' S line, 4650' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.070655 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.494965 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 569.7 **LOGGED (FT.):** 41.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 183A **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
533.7	CARBONDALE	HERRIN	COAL	5.0	36.0

MAPID: 16300294000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 3295' S line, 4590' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.070459 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.493251 **DATE COLLECTED:** 7 / 2 / 1928
SURFACE ELEVATION (FT.): 570.7 **LOGGED (FT.):** 37.7 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 183B **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
570.7			UNCONSOLIDATED	23.5	0.0
547.2			ROCK	3.5	23.5
543.7			SMUT	3.0	27.0
540.7	CARBONDALE	ANNA	BLACK SHALE	3.0	30.0
537.7	CARBONDALE	HERRIN	COAL	4.7	33.0

MAPID: 16300294000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 3295' S line, 4590' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.070459 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.493251 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 570.7 **LOGGED (FT.):** 38.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 183B **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
537.7	CARBONDALE	HERRIN	COAL	4.7	33.0	

MAPID: 16300295000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 3915' S line, 5235' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072711 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.495004 **DATE COLLECTED:** 7 / 5 / 1928
SURFACE ELEVATION (FT.): 550.8 **LOGGED (FT.):** 61.0 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 183C **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.8			UNCONSOLIDATED	22.0	0.0	
528.8			SHALE	27.0	22.0	
501.8			SOFT SHALE	12.0	49.0	NO COAL

MAPID: 16300295000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 3915' S line, 5235' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072711 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.495004 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 550.8 **LOGGED (FT.):** 61.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 183C **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300296000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 2655' S line, 3915' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.068109 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.491438 DATE COLLECTED: 6 / 8 / 1928

SURFACE ELEVATION (FT.): 568.1 LOGGED (FT.): 49.2 LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 184 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
568.1			UNCONSOLIDATED	22.0	0.0
546.1			SHALE	4.0	22.0
542.1			SANDSTONE	2.5	26.0
539.6			LIMESTONE	14.0	28.5
525.6	CARBONDALE	HERRIN	COAL	6.7	42.5

MAPID: 16300296000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 2655' S line, 3915' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.068109 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.491438 DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): 568.1 LOGGED (FT.): 49.0 LOG TYPE:

SOURCE: MISSISSIPPI COAL CORP. 0184 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
526.1	CARBONDALE	HERRIN	COAL	6.7	42.0

MAPID: 16300297000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 2655' S line, 3275' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.06586 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.491394 DATE COLLECTED: 6 / 30 / 1928

SURFACE ELEVATION (FT.): 559.2 LOGGED (FT.): 54.8 LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 184B WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
559.2			UNCONSOLIDATED	20.0	0.0	
539.2			SHALE	6.0	20.0	
533.2			SHALE	5.0	26.0	
528.2			LIMESTONE	1.0	31.0	
527.2			SHALE	2.0	32.0	
525.2			LIMESTONE	1.5	34.0	
523.7			SHALE	1.0	35.5	
522.7			LIMESTONE	5.0	36.5	
517.7			SHALE	1.0	41.5	
516.7			ROCK	4.5	42.5	BLACK
512.2			SMUT	0.5	47.0	
511.7	CARBONDALE	ANNA	BLACK SHALE	0.5	47.5	
511.2	CARBONDALE	HERRIN	COAL	6.8	48.0	

MAPID: 16300297000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 2655' S line, 3275' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.06586 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.491394 DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): 559.2 LOGGED (FT.): 55.0 LOG TYPE:

SOURCE: MISSISSIPPI COAL CORP. 184B WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
511.2	CARBONDALE	HERRIN	COAL	6.8	48.0	

MAPID: 16300298000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 2655' S line, 1940' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.06117 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.491303 **DATE COLLECTED:** 6 / 8 / 1928
SURFACE ELEVATION (FT.): 549.5 **LOGGED (FT.):** 60.0 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 185 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
549.5			UNCONSOLIDATED	26.0	0.0	
523.5			SHALE	4.0	26.0	
519.5			SOFT SHALE	30.0	30.0	

MAPID: 16300298000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 2655' S line, 1940' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.06117 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.491303 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 549.5 **LOGGED (FT.):** 60.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0185 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300299000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 2655' S line, 1280' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.058854 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.491259 **DATE COLLECTED:** 6 / 15 / 1928
SURFACE ELEVATION (FT.): 558.2 **LOGGED (FT.):** 36.5 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 186 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
558.2			UNCONSOLIDATED	16.0	0.0	
542.2			GRAVEL	3.0	16.0	
539.2			SHALE	5.0	19.0	
534.2			ROCK	3.0	24.0	BLACK
531.2	CARBONDALE	BRERETON	LIMESTONE	3.0	27.0	
528.2	CARBONDALE	HERRIN	COAL	6.5	30.0	

MAPID: 16300299000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 2655' S line, 1280' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.058854 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.491259 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 558.2 **LOGGED (FT.):** 37.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0186 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
528.2	CARBONDALE	HERRIN	COAL	6.5	30.0	

MAPID: 16300301000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 3915' S line, 3915' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.068073 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.494917 **DATE COLLECTED:** 6 / 2 / 1928
SURFACE ELEVATION (FT.): 564.3 **LOGGED (FT.):** 53.8 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 209 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
564.3			UNCONSOLIDATED	19.0	0.0	
545.3			SHALE	5.5	19.0	
539.8			CLAYSTONE	2.0	24.5	RED
537.8			ROCK	6.3	26.5	WHITE
531.5			LIMESTONE	9.8	32.8	
521.8			SHALE	1.0	42.5	
520.8			ROCK	0.5	43.5	
520.3	CARBONDALE	ANNA	BLACK SHALE	2.8	44.0	
517.5	CARBONDALE	HERRIN	COAL	7.0	46.8	3 SMALL DIRT BANDS COAL

MAPID: 16300301000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 3915' S line, 3915' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.068073 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.494917 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 564.3 **LOGGED (FT.):** 54.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0209 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
517.3	CARBONDALE	HERRIN	COAL	7.0	47.0	

MAPID: 16300392000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 3850' S line, 4075' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.068637 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.494748 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 566.3 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: MAYER CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
526.3	CARBONDALE	HERRIN	COAL	6.2	40.0	

MAPID: 16300530000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SW/c SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.068638 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.487802 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 590.9 **LOGGED (FT.):** 44.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 6-D **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
590.9			CLAY	28.0	0.0	
562.9	CARBONDALE	BRERETON	LIMESTONE	9.0	28.0	
553.9	CARBONDALE	ANNA	BLACK SHALE	0.5	37.0	
553.4	CARBONDALE	HERRIN	COAL	5.2	37.5	
548.2	CARBONDALE		CLAYSTONE	1.3	42.7	

MAPID: 16300530000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SW/c SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.068638 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.487802 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 590.9 **LOGGED (FT.):** 44.0 **LOG TYPE:**
SOURCE: MIDWEST SF006D **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
552.9	CARBONDALE	HERRIN	COAL	5.2	38.0	

MAPID: 16300531000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 0' S line, 1320' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.059064 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.483934 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 576.6 **LOGGED (FT.):** 41.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL F-1 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
576.6			CLAY	28.0	0.0
548.6	CARBONDALE	BRERETON	LIMESTONE	5.0	28.0
543.6	CARBONDALE	ANNA	BLACK SHALE	2.0	33.0
541.6	CARBONDALE	HERRIN	COAL	5.5	35.0
536.1	CARBONDALE		CLAYSTONE	0.5	40.5

MAPID: 16300531000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 0' S line, 1320' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.059064 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.483934 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 576.6 **LOGGED (FT.):** 41.0 **LOG TYPE:**
SOURCE: MIDWEST SF00F1 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
541.6	CARBONDALE	HERRIN	COAL	5.5	35.0

MAPID: 16300532000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1000' S line, 1120' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.058334 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.486681 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 577.7 **LOGGED (FT.):** 55.5 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL F-2 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
577.7			CLAY	23.0	0.0
554.7			LIMESTONE	2.0	23.0
552.7			SHALE	6.0	25.0
546.7			LIMESTONE	7.0	31.0
539.7			BLACK SHALE	2.0	38.0
537.7	CARBONDALE	BRERETON	LIMESTONE	2.0	40.0
535.7	CARBONDALE	ANNA	BLACK SHALE	6.5	42.0
529.2	CARBONDALE	HERRIN	COAL	6.5	48.5
522.7	CARBONDALE		CLAYSTONE	0.5	55.0

MAPID: 16300532000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1000' S line, 1120' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.058334 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.486681 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 577.7 **LOGGED (FT.):** 51.0 **LOG TYPE:**
SOURCE: MIDWEST SF00F2 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
533.7	CARBONDALE	HERRIN	COAL	6.5	44.0	

MAPID: 16300533000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1320' N line, 660' W line of SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.06157 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.487701 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 568.8 **LOGGED (FT.):** 50.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL F-3 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
568.8			CLAY	26.0	0.0	
542.8			LIMESTONE	10.0	26.0	
532.8			BLACK SHALE	2.0	36.0	
530.8	CARBONDALE	BRERETON	LIMESTONE	2.0	38.0	
528.8	CARBONDALE	ANNA	BLACK SHALE	3.0	40.0	
525.8	CARBONDALE	HERRIN	COAL	6.5	43.0	
519.3	CARBONDALE		CLAYSTONE	0.5	49.5	

MAPID: 16300533000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1320' N line, 660' W line of SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.06157 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.487701 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 568.8 **LOGGED (FT.):** 50.0 **LOG TYPE:**
SOURCE: MIDWEST SF F3 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
525.8	CARBONDALE	HERRIN	COAL	6.5	43.0	

MAPID: 16300534000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: S2
 QUADRANGLE: MILLSTADT LONGITUDE: -90.063888 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.487709 DATE COLLECTED: 0 / 0 / 1937
 SURFACE ELEVATION (FT.): 567.6 LOGGED (FT.): 45.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL F-4 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
567.6			CLAY	24.0	0.0
543.6			LIMESTONE	9.0	24.0
534.6			BLACK SHALE	2.0	33.0
532.6	CARBONDALE	BRERETON	LIMESTONE	2.0	35.0
530.6	CARBONDALE	ANNA	BLACK SHALE	1.5	37.0
529.1	CARBONDALE	HERRIN	COAL	6.0	38.5
523.1	CARBONDALE		CLAYSTONE	0.5	44.5

MAPID: 16300534000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: S2
 QUADRANGLE: MILLSTADT LONGITUDE: -90.063888 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.487709 DATE COLLECTED: 0 / 0 / 1937
 SURFACE ELEVATION (FT.): 567.6 LOGGED (FT.): 45.0 LOG TYPE:
 SOURCE: MIDWEST SF00F4 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
528.6	CARBONDALE	HERRIN	COAL	6.0	39.0

MAPID: 16300535000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 990' N line, 0' W line of SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063892 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.488656 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 564.8 **LOGGED (FT.):** 48.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL F-5 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
564.8			CLAY	25.0	0.0	
539.8			LIMESTONE	2.0	25.0	
537.8			BLACK SHALE	2.0	27.0	
535.8			LIMESTONE	8.0	29.0	
527.8			BLACK SHALE	3.0	37.0	
524.8	CARBONDALE	BRERETON	LIMESTONE	1.0	40.0	
523.8	CARBONDALE	ANNA	BLACK SHALE	1.0	41.0	
522.8	CARBONDALE	HERRIN	COAL	5.8	42.0	
517.0	CARBONDALE		CLAYSTONE	0.3	47.8	

MAPID: 16300535000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 990' N line, 0' W line of SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063892 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.488656 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 564.8 **LOGGED (FT.):** 48.0 **LOG TYPE:**
SOURCE: MIDWEST SF00F5 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
522.8	CARBONDALE	HERRIN	COAL	5.8	42.0	

MAPID: 16300536000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 660' N line, 0' W line of SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063892 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.489567 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 548.0 **LOGGED (FT.):** 40.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL F-6 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
548.0			CLAY	22.0	0.0	
526.0			CLAY	10.0	22.0	GRAY
516.0			CLAY	2.0	32.0	BLACK
514.0	CARBONDALE	HERRIN	COAL	3.0	34.0	PARTIALLY ERODED
511.0	CARBONDALE		CLAYSTONE	3.0	37.0	

MAPID: 16300536000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 660' N line, 0' W line of SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063892 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.489567 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 548.0 **LOGGED (FT.):** 40.0 **LOG TYPE:**
SOURCE: MIDWEST SF F6 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
514.0	CARBONDALE	HERRIN	COAL	3.0	34.0

MAPID: 16300537000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 250' N line, 660' W line of SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.061579 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.490655 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 564.4 **LOGGED (FT.):** 47.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL F-7 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
564.4			CLAY	23.0	0.0
541.4			LIMESTONE	10.0	23.0
531.4			BLACK SHALE	1.0	33.0
530.4	CARBONDALE	BRERETON	LIMESTONE	4.0	34.0
526.4	CARBONDALE	ANNA	BLACK SHALE	2.5	38.0
523.9	CARBONDALE	HERRIN	COAL	0.5	40.5
523.4	CARBONDALE	HERRIN	PYRITE	1.0	41.0
522.4	CARBONDALE	HERRIN	COAL	4.5	42.0
517.9	CARBONDALE		CLAYSTONE	0.5	46.5

MAPID: 16300537000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 250' N line, 660' W line of SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.061579 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.490655 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 564.4 **LOGGED (FT.):** 47.0 **LOG TYPE:**
SOURCE: MIDWEST SF00F7 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
523.4	CARBONDALE	HERRIN	COAL	6.0	41.0

MAPID: 16300538000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.068638

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.487802

DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 560.3 LOGGED (FT.): 41.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL R-1

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.3			CLAY	22.0	0.0	
538.3			LIMESTONE	3.0	22.0	
535.3			SHALE	3.0	25.0	
532.3			BLACK SHALE	2.0	28.0	
530.3	CARBONDALE	BRERETON	LIMESTONE	1.0	30.0	
529.3	CARBONDALE	ANNA	BLACK SHALE	2.5	31.0	
526.8	CARBONDALE	HERRIN	COAL	6.0	33.5	
520.8	CARBONDALE		CLAYSTONE	1.5	39.5	

MAPID: 16300538000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.068638

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.487802

DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 560.3 LOGGED (FT.): 41.0

LOG TYPE:

SOURCE: MIDWEST SF00R1

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
526.3	CARBONDALE	HERRIN	COAL	6.0	34.0	

MAPID: 16300539000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071031

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.48969

DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 571.0 LOGGED (FT.): 40.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL R-2

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
571.0			CLAY	24.0	0.0	
547.0	CARBONDALE	BRERETON	LIMESTONE	8.5	24.0	
538.5	CARBONDALE	ANNA	BLACK SHALE	0.5	32.5	
538.0	CARBONDALE	HERRIN	COAL	6.0	33.0	
532.0	CARBONDALE		CLAYSTONE	1.0	39.0	

MAPID: 16300539000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071031 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.48969 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 571.0 **LOGGED (FT.):** 40.0 **LOG TYPE:**
SOURCE: MIDWEST SF00R2 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
538.0	CARBONDALE	HERRIN	COAL	6.0	33.0

MAPID: 16300540000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 660' N line, 2640' E line of SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.073167 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.489748 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 569.7 **LOGGED (FT.):** 67.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL R-5 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
569.7			CLAY	24.0	0.0
545.7			SHALE	10.0	24.0
535.7			BLACK SHALE	17.0	34.0
518.7	CARBONDALE	BRERETON	LIMESTONE	7.0	51.0
511.7	CARBONDALE	ANNA	BLACK SHALE	2.0	58.0
509.7	CARBONDALE	ANNA	BLACK SHALE	1.0	60.0
508.7	CARBONDALE	HERRIN	COAL	1.0	61.0
507.7	CARBONDALE		CLAYSTONE	5.0	62.0

MAPID: 16300540000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 660' N line, 2640' E line of SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.073167 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.489748 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 569.7 **LOGGED (FT.):** 67.0 **LOG TYPE:**
SOURCE: MIDWEST SF00R3 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	
508.7	CARBONDALE	SPRINGFIELD	COAL	1.0	61.0

MAPID: 16300541000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: W2

QUADRANGLE: MILLSTADT LONGITUDE: -90.068671 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.491482 DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 567.4 LOGGED (FT.): 50.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL R-4 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
567.4			CLAY	29.0	0.0	
538.4	CARBONDALE	BRERETON	LIMESTONE	13.5	29.0	
524.9	CARBONDALE	ANNA	BLACK SHALE	1.0	42.5	
523.9	CARBONDALE	HERRIN	COAL	5.8	43.5	
518.1	CARBONDALE		CLAYSTONE	0.7	49.3	

MAPID: 16300541000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: W2

QUADRANGLE: MILLSTADT LONGITUDE: -90.068671 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.491482 DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 567.4 LOGGED (FT.): 50.0 LOG TYPE:

SOURCE: MIDWEST SF00R4 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
523.4	CARBONDALE	HERRIN	COAL	5.8	44.0	

MAPID: 16300542000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NE SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.066274 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.489597 DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 563.7 LOGGED (FT.): 54.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL R-5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
563.7			CLAY	26.0	0.0	
537.7			SHALE	8.0	26.0	
529.7			BLACK SHALE	5.0	34.0	
524.7	CARBONDALE	BRERETON	LIMESTONE	4.0	39.0	
520.7	CARBONDALE	ANNA	BLACK SHALE	2.0	43.0	
518.7	CARBONDALE	ANNA	BLACK SHALE	2.0	45.0	
516.7	CARBONDALE	HERRIN	COAL	6.0	47.0	NO. 6 ELEV TOP 516.7
510.7	CARBONDALE		CLAYSTONE	1.0	53.0	

MAPID: 16300542000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NE SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.066274 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.489597 DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 563.7 LOGGED (FT.): 54.0 LOG TYPE:

SOURCE: MIDWEST SF00R5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
516.7	CARBONDALE	HERRIN	COAL	6.0	47.0	

MAPID: 16300543000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 660' S line, 660' E line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.066223 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.493258 DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 560.2 LOGGED (FT.): 49.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL R-6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.2			CLAY	24.0	0.0	
536.2			SHALE	6.0	24.0	
530.2	CARBONDALE	BRERETON	LIMESTONE	10.0	30.0	
520.2	CARBONDALE	ANNA	BLACK SHALE	2.0	40.0	
518.2	CARBONDALE	HERRIN	COAL	6.0	42.0	
512.2	CARBONDALE		CLAYSTONE	1.0	48.0	

MAPID: 16300543000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 660' S line, 660' E line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.066223 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.493258 DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 560.2 LOGGED (FT.): 49.0 LOG TYPE:

SOURCE: MIDWEST SF00R6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
518.2	CARBONDALE	HERRIN	COAL	6.0	42.0	

MAPID: 16300544000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW/c NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.059115 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.494977 DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 561.3 LOGGED (FT.): 60.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL R-7 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
561.3			CLAY	26.0	0.0
535.3			SHALE	8.0	26.0
527.3			LIMESTONE	1.0	34.0
526.3			BLACK SHALE	15.0	35.0
511.3			BLACK SHALE	10.0	50.0

MAPID: 16300544000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW/c NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.059115 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.494977 DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 561.3 LOGGED (FT.): 60.0 LOG TYPE:

SOURCE: MIDWEST SF00R7 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300545000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.068704 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.495165 DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 561.7 LOGGED (FT.): 51.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL R-8 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
561.7			CLAY	24.0	0.0
537.7			SANDSTONE	3.0	24.0
534.7			BLACK SHALE	6.0	27.0
528.7	CARBONDALE	BRERETON	LIMESTONE	8.0	33.0
520.7	CARBONDALE	ANNA	BLACK SHALE	3.0	41.0
517.7	CARBONDALE	HERRIN	COAL	6.2	44.0
511.5	CARBONDALE		CLAYSTONE	0.8	50.2

MAPID: 16300545000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.068704 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.495165 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 561.7 **LOGGED (FT.):** 51.0 **LOG TYPE:**
SOURCE: MIDWEST SF00R8 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
517.7	CARBONDALE	HERRIN	COAL	6.2	44.0

MAPID: 16300546000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 450' S line, 150' W line of NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063376 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.492623 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 536.6 **LOGGED (FT.):** 50.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL R-9 **WELL TYPE:** Coal Test
COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
536.6			CLAY	14.0	0.0
522.6			SANDSTONE	1.0	14.0
521.6			SHALE	5.0	15.0
516.6			BLACK SHALE	15.0	20.0
501.6			BLACK SHALE	10.0	35.0
491.6			BLACK SHALE	5.0	45.0

MAPID: 16300546000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 450' S line, 150' W line of NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063376 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.492623 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 536.6 **LOGGED (FT.):** 50.0 **LOG TYPE:**
SOURCE: MIDWEST SF00R9 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300547000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** N2
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063908 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.495072 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 530.6 **LOGGED (FT.):** 27.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL R-10 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
530.6			CLAY	14.0	0.0	
516.6			SANDSTONE	1.0	14.0	
515.6			SHALE	5.0	15.0	
510.6	CARBONDALE	HERRIN	COAL	6.0	20.0	
504.6	CARBONDALE		CLAYSTONE	1.0	26.0	

MAPID: 16300547000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** N2
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063908 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.495072 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 530.8 **LOGGED (FT.):** 27.0 **LOG TYPE:**
SOURCE: MIDWEST SF0R10 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
510.8	CARBONDALE	HERRIN	COAL	6.0	20.0	

MAPID: 16300548000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 870' S line, 330' W line of NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.062745 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.493769 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 542.3 **LOGGED (FT.):** 60.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL R-11 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
542.3			CLAY	24.0	0.0	
518.3			SHALE	6.0	24.0	
512.3			BLACK SHALE	14.0	30.0	
498.3			BLACK SHALE	16.0	44.0	NO COAL

MAPID: 16300548000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 870' S line, 330' W line of NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.062745 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.493769 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 542.3 **LOGGED (FT.):** 60.0 **LOG TYPE:**
SOURCE: MIDWEST SF0R11 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300549000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 660' S line, 430' E line of NW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.070163 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.489653 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 572.9 **LOGGED (FT.):** 46.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 5-Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
572.9			UNDERCLAY	26.0	0.0
546.9	CARBONDALE	BRERETON	LIMESTONE	8.0	26.0
538.9	CARBONDALE	ANNA	BLACK SHALE	1.5	34.0
537.4	CARBONDALE	ANNA	BLACK SHALE	3.5	35.5
533.9	CARBONDALE	HERRIN	COAL	6.3	39.0
527.6	CARBONDALE		CLAYSTONE	0.8	45.3

MAPID: 16300549000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 660' S line, 430' E line of NW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.070163 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.489653 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 572.9 **LOGGED (FT.):** 46.0 **LOG TYPE:**
SOURCE: MIDWEST SF005Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
533.9	CARBONDALE	HERRIN	COAL	6.3	39.0

MAPID: 1630055000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 330' N line, 1650' E line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.069693 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.490591 DATE COLLECTED: 0 / 0 / 1938
 SURFACE ELEVATION (FT.): 567.8 LOGGED (FT.): 44.5 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 6-Y WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
567.8			CLAY	23.5	0.0	
544.3	CARBONDALE	BRERETON	LIMESTONE	6.5	23.5	
537.8	CARBONDALE	ANNA	BLACK SHALE	7.3	30.0	
530.5	CARBONDALE	HERRIN	COAL	6.3	37.3	
524.2	CARBONDALE		CLAYSTONE	0.9	43.6	

MAPID: 1630055000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 330' N line, 1650' E line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.069693 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.490591 DATE COLLECTED: 0 / 0 / 1938
 SURFACE ELEVATION (FT.): 567.8 LOGGED (FT.): 45.0 LOG TYPE:
 SOURCE: MIDWEST SF006Y WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
530.8	CARBONDALE	HERRIN	COAL	6.3	37.0	

MAPID: 16300551000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 990' S line, 1320' E line of NW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.068545 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.494213 DATE COLLECTED: 0 / 0 / 1938
 SURFACE ELEVATION (FT.): 563.8 LOGGED (FT.): 49.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 7-Y WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
563.8			CLAY	29.5	0.0	
534.3			LIMESTONE	1.5	29.5	
532.8			CLAYSTONE	1.0	31.0	
531.8			LIMESTONE	2.5	32.0	
529.3			CLAYSTONE	1.0	34.5	
528.3	CARBONDALE	BRERETON	LIMESTONE	2.5	35.5	
525.8	CARBONDALE	ANNA	BLACK SHALE	3.8	38.0	
522.0	CARBONDALE	HERRIN	COAL	6.3	41.8	
515.7	CARBONDALE		CLAYSTONE	0.9	48.1	

MAPID: 16300551000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 990' S line, 1320' E line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.068545 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.494213 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 563.8 LOGGED (FT.): 49.0 LOG TYPE:

SOURCE: MIDWEST SF007Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
521.8	CARBONDALE	HERRIN	COAL	6.3	42.0

MAPID: 16300552000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1320' S line, 1650' E line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.069705 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.495146 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 564.3 LOGGED (FT.): 47.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 8-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
564.3			CLAY	20.0	0.0
544.3			SHALE	8.0	20.0
536.3			LIMESTONE	3.0	28.0
533.3			CLAYSTONE	1.0	31.0
532.3	CARBONDALE	BRERETON	LIMESTONE	4.5	32.0
527.8	CARBONDALE	ANNA	BLACK SHALE	3.0	36.5
524.8	CARBONDALE	HERRIN	COAL	6.4	39.5
518.4	CARBONDALE		CLAYSTONE	1.1	45.9

MAPID: 16300552000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1320' S line, 1650' E line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.069705 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.495146 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 564.3 LOGGED (FT.): 47.0 LOG TYPE:

SOURCE: MIDWEST SF008Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
524.3	CARBONDALE	HERRIN	COAL	6.4	40.0

MAPID: 16300553000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 175' N line, 62' W line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.073217 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.49109 DATE COLLECTED: 0 / 0 / 1938
 SURFACE ELEVATION (FT.): 562.3 LOGGED (FT.): 50.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 10-Y WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
562.3			CLAY	31.0	0.0
531.3			LIMESTONE	4.0	31.0
527.3			SHALE	9.0	35.0
518.3			BLACK SHALE	2.0	44.0
516.3			LIMESTONE	4.0	46.0

MAPID: 16300553000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 175' N line, 62' W line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.073217 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.49109 DATE COLLECTED: 0 / 0 / 1938
 SURFACE ELEVATION (FT.): 562.3 LOGGED (FT.): 50.0 LOG TYPE:
 SOURCE: MIDWEST SF010Y WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300554000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 185' N line, 234' W line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.072609 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.491048 DATE COLLECTED: 0 / 0 / 1938
 SURFACE ELEVATION (FT.): 564.5 LOGGED (FT.): 28.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 11-Y WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
564.5			CLAY	21.0	0.0
543.5	CARBONDALE	HERRIN	COAL	0.5	21.0
543.0	CARBONDALE	HERRIN	COAL	5.7	21.5
537.3	CARBONDALE		CLAYSTONE	0.8	27.2

MAPID: 16300554000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 185' N line, 234' W line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.072609 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.491048 DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 564.5 LOGGED (FT.): 28.0 LOG TYPE:

SOURCE: MIDWEST SF 11Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
543.5	CARBONDALE	HERRIN	COAL	6.2	21.0	

MAPID: 16300555000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1155' N line, 0' W line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.073392 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.488386 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 572.7 LOGGED (FT.): 49.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 14-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
572.7			CLAY	15.0	0.0	
557.7			SHALE	14.0	15.0	
543.7			COAL	0.3	29.0	
543.4			SHALE	0.8	29.3	
542.7			LIMESTONE	9.0	30.0	
533.7			BLACK SHALE	8.0	39.0	
525.7			LIMESTONE	2.0	47.0	

MAPID: 16300555000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1155' N line, 0' W line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.073392 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.488386 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 572.7 LOGGED (FT.): 49.0 LOG TYPE:

SOURCE: MIDWEST SF014Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300556000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 970' N line, 122' W line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.072971 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.48889 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 576.0 LOGGED (FT.): 35.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 15-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
576.0			CLAY	22.0	0.0
554.0			SHALE	5.0	22.0
549.0	CARBONDALE	HERRIN	COAL	1.0	27.0
548.0	CARBONDALE	HERRIN	COAL	5.8	28.0
542.2	CARBONDALE		CLAYSTONE	1.3	33.8

MAPID: 16300556000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 970' N line, 122' W line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.072971 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.48889 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 570.0 LOGGED (FT.): 35.0 LOG TYPE:

SOURCE: MIDWEST SF015Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
543.0	CARBONDALE	HERRIN	COAL	6.8	27.0

MAPID: 16300557000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 625' N line, 130' W line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.072957 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.48984 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 575.6 LOGGED (FT.): 37.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 16-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
575.6			CLAY	25.0	0.0
550.6			LIMESTONE	1.3	25.0
549.3			SHALE	1.0	26.3
548.3			BLACK SHALE	2.7	27.3
545.6			ROCK	0.8	30.0
544.8	CARBONDALE	HERRIN	COAL	5.8	30.8
539.1	CARBONDALE		CLAYSTONE	1.0	36.5

MAPID: 16300557000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 625' N line, 130' W line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.072957 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.48984 DATE COLLECTED: 0 / 0 / 1938
 SURFACE ELEVATION (FT.): 575.6 LOGGED (FT.): 38.0 LOG TYPE:
 SOURCE: MIDWEST SF016Y WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
544.6	CARBONDALE	HERRIN	COAL	5.8	31.0	

MAPID: 16300558000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 287' S line, 200' W line of NW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.072749 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.492354 DATE COLLECTED: 0 / 0 / 1938
 SURFACE ELEVATION (FT.): 569.4 LOGGED (FT.): 42.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 17-Y WELL TYPE: Coal Test
 COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
569.4			CLAY	22.0	0.0	
547.4			SHALE	20.0	22.0	NO COAL

MAPID: 16300558000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 287' S line, 200' W line of NW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.072749 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.492354 DATE COLLECTED: 0 / 0 / 1938
 SURFACE ELEVATION (FT.): 569.4 LOGGED (FT.): 42.0 LOG TYPE:
 SOURCE: MIDWEST SF017Y WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300559000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 287' S line, 282' W line of NW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.072461 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.49235 DATE COLLECTED: 0 / 0 / 1938
 SURFACE ELEVATION (FT.): 570.5 LOGGED (FT.): 49.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 18-Y WELL TYPE: Coal Test
 COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
570.5			CLAY	17.0	0.0
553.5			SHALE	32.0	17.0

MAPID: 16300559000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 287' S line, 282' W line of NW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.072461 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.49235 DATE COLLECTED: 0 / 0 / 1938
 SURFACE ELEVATION (FT.): 570.5 LOGGED (FT.): 49.0 LOG TYPE:
 SOURCE: MIDWEST SF018Y WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300560000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 287' S line, 356' W line of NW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.072201 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.492345 DATE COLLECTED: 0 / 0 / 1938
 SURFACE ELEVATION (FT.): 571.3 LOGGED (FT.): 39.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 19-Y WELL TYPE: Coal Test
 COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
571.3			CLAY	15.0	0.0
556.3			SHALE	24.0	15.0

MAPID: 1630056000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 287' S line, 356' W line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072201 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.492345 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 571.3 **LOGGED (FT.):** 39.0 **LOG TYPE:**
SOURCE: MIDWEST SF019Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300561000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 287' S line, 429' W line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071945 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.492338 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 571.4 **LOGGED (FT.):** 42.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 20-Y **WELL TYPE:** Coal Test
COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
571.4			CLAY	15.0	0.0
556.4			SHALE	24.0	15.0
532.4			COAL	0.5	39.0
531.9			CLAYSTONE	2.5	39.5

MAPID: 16300561000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 287' S line, 429' W line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071945 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.492338 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 571.4 **LOGGED (FT.):** 42.0 **LOG TYPE:**
SOURCE: MIDWEST SF020Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300562000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 287' S line, 527' W line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.0716 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.492332 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 572.0 **LOGGED (FT.):** 43.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 21-Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
572.0			CLAY	29.0	0.0	
543.0	CARBONDALE	BRERETON	LIMESTONE	2.0	29.0	
541.0	CARBONDALE	ANNA	BLACK SHALE	4.6	31.0	
536.4	CARBONDALE	HERRIN	COAL	6.6	35.6	NO.6
529.8	CARBONDALE		CLAYSTONE	0.8	42.2	

MAPID: 16300562000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 287' S line, 527' W line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.0716 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.492332 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 572.0 **LOGGED (FT.):** 43.0 **LOG TYPE:**
SOURCE: MIDWEST SF021Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
536.0	CARBONDALE	HERRIN	COAL	6.6	36.0	

MAPID: 16300563000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 634' S line, 543' W line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071559 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.49329 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 570.7 **LOGGED (FT.):** 44.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 22-Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.7			CLAY	27.5	0.0	
543.2			LIMESTONE	5.3	27.5	
537.9			SHALE	0.7	32.8	
537.2	CARBONDALE	ANNA	BLACK SHALE	3.3	33.5	
533.9	CARBONDALE	HERRIN	COAL	6.3	36.8	NO.6
527.6	CARBONDALE		CLAYSTONE	0.9	43.1	

MAPID: 16300563000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 634' S line, 543' W line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071559 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.49329 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 570.7 **LOGGED (FT.):** 44.0 **LOG TYPE:**
SOURCE: MIDWEST SF022Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
533.7	CARBONDALE	HERRIN	COAL	6.3	37.0	

MAPID: 16300564000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 634' S line, 400' W line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072061 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.493299 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 569.2 **LOGGED (FT.):** 40.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 23-Y **WELL TYPE:** Coal Test
COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
569.2			CLAY	22.0	0.0	
547.2			SHALE	18.0	22.0	

MAPID: 16300564000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 634' S line, 400' W line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072061 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.493299 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 569.2 **LOGGED (FT.):** 40.0 **LOG TYPE:**
SOURCE: MIDWEST SF023Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300565000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 634' S line, 468' W line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071822 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.493294 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 570.0 LOGGED (FT.): 42.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 24-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.0			CLAY	22.0	0.0	
548.0			SHALE	12.3	22.0	
535.7	CARBONDALE	ANNA	BLACK SHALE	1.5	34.3	
534.2	CARBONDALE	HERRIN	COAL	1.3	35.8	
532.8	CARBONDALE	HERRIN	COAL	4.2	37.2	NO.6
528.7	CARBONDALE		CLAYSTONE	1.2	41.3	

MAPID: 16300565000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 634' S line, 468' W line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071822 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.493294 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 570.0 LOGGED (FT.): 43.0 LOG TYPE:

SOURCE: MIDWEST SF024Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
534.0	CARBONDALE	HERRIN	COAL	5.5	36.0	

MAPID: 16300566000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 840' S line, 543' W line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071567 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.493859 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 568.0 LOGGED (FT.): 44.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 25-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
568.0			CLAY	22.0	0.0	
546.0			SHALE	4.0	22.0	
542.0	CARBONDALE	BRERETON	LIMESTONE	1.8	26.0	
540.2	CARBONDALE	BRERETON	LIMESTONE	5.3	27.8	
534.8	CARBONDALE	ANNA	BLACK SHALE	3.4	33.2	
531.4	CARBONDALE	HERRIN	COAL	6.5	36.6	
524.9	CARBONDALE		CLAYSTONE	0.9	43.1	

MAPID: 16300566000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 840' S line, 543' W line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071567 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.493859 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 568.0 **LOGGED (FT.):** 44.0 **LOG TYPE:**
SOURCE: MIDWEST SF025Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
531.0	CARBONDALE	HERRIN	COAL	6.5	37.0	

MAPID: 16300567000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 840' S line, 443' W line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071918 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.493865 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 568.3 **LOGGED (FT.):** 42.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 26-Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
568.3			CLAY	16.0	0.0	
552.3			SHALE	10.0	16.0	
542.3	CARBONDALE	BRERETON	LIMESTONE	5.5	26.0	
536.8	CARBONDALE	ANNA	BLACK SHALE	4.0	31.5	
532.8	CARBONDALE	HERRIN	COAL	5.8	35.5	NO.6
527.0	CARBONDALE		CLAYSTONE	0.7	41.3	

MAPID: 16300567000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 840' S line, 443' W line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071918 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.493865 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 568.3 **LOGGED (FT.):** 42.0 **LOG TYPE:**
SOURCE: MIDWEST SF026Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
532.3	CARBONDALE	HERRIN	COAL	5.8	36.0	

MAPID: 16300568000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 840' S line, 343' W line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.07227 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.493872 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 566.7 LOGGED (FT.): 39.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 27-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
566.7			CLAY	20.0	0.0
546.7			SHALE	5.5	20.0
541.2	CARBONDALE	BRERETON	LIMESTONE	4.5	25.5
536.7	CARBONDALE	ANNA	BLACK SHALE	1.9	30.0
534.8	CARBONDALE	HERRIN	COAL	6.5	31.9
528.3	CARBONDALE		CLAYSTONE	0.6	38.4

MAPID: 16300568000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 840' S line, 343' W line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.07227 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.493872 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 566.7 LOGGED (FT.): 39.0 LOG TYPE:

SOURCE: MIDWEST SF027Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
534.7	CARBONDALE	HERRIN	COAL	6.5	32.0

MAPID: 16300569000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 840' S line, 253' W line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.072586 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.493878 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 564.8 LOGGED (FT.): 35.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 28-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
564.8			CLAY	20.0	0.0
544.8			SHALE	9.5	20.0
535.3	CARBONDALE	HERRIN	COAL	1.0	29.5
534.3	CARBONDALE	HERRIN	COAL	3.6	30.5
530.7	CARBONDALE		CLAYSTONE	0.9	34.1

MAPID: 16300569000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 840' S line, 253' W line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.072586 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.493878 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 564.8 LOGGED (FT.): 35.0 LOG TYPE:

SOURCE: MIDWEST SF028Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
534.8	CARBONDALE	HERRIN	COAL	4.6	30.0

MAPID: 16300570000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1040' S line, 343' W line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.072277 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.494424 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 31.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 29-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
550.0			CLAY	18.0	0.0
532.0			SHALE	7.0	18.0
525.0	CARBONDALE	HERRIN	COAL	1.0	25.0
524.0	CARBONDALE	HERRIN	COAL	1.5	26.0
522.5	CARBONDALE	HERRIN	COAL	2.2	27.5
520.3	CARBONDALE		CLAYSTONE	1.3	29.7

MAPID: 16300570000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1040' S line, 343' W line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.072277 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.494424 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 31.0 LOG TYPE:

SOURCE: MIDWEST SF029Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
525.0	CARBONDALE	HERRIN	COAL	4.7	25.0

MAPID: 16300571000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 330' S line, 1320' E line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.068538

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.492391

DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 575.0 LOGGED (FT.): 83.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 46-Y

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
575.0			CLAY	22.0	0.0
553.0			SHALE	10.0	22.0
543.0	CARBONDALE	BRERETON	LIMESTONE	3.7	32.0
539.3	CARBONDALE	ANNA	BLACK SHALE	1.4	35.7
537.9	CARBONDALE	HERRIN	COAL	6.0	37.1
531.9	CARBONDALE		CLAYSTONE	3.9	43.1
528.0	CARBONDALE		BLACK SHALE	13.0	47.0
515.0	CARBONDALE		LIMESTONE	6.0	60.0
509.0	CARBONDALE		LIMESTONE	8.0	66.0
501.0	CARBONDALE		BLACK SHALE	2.0	74.0
499.0	CARBONDALE		BLACK SHALE	3.1	76.0
495.9	CARBONDALE	SPRINGFIELD	COAL	2.9	79.1
493.0	CARBONDALE		CLAYSTONE	1.0	82.0

MAPID: 16300571000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 330' S line, 1320' E line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.068538

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.492391

DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 575.0 LOGGED (FT.): 83.0

LOG TYPE:

SOURCE: MIDWEST SF046Y

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
538.0	CARBONDALE	HERRIN	COAL	6.0	37.0

MAPID: 16300572000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW NW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.062713 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.495967 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 551.6 LOGGED (FT.): 50.3 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 701 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
551.6			CLAY	14.9	0.0	
536.7			SANDY CLAY	16.8	14.9	YELLOW
519.8			CLAY	7.7	31.8	GRAY
512.2			SHALE	8.9	39.4	
503.3			UNDERCLAY	2.0	48.3	

MAPID: 16300572000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW NW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.062713 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.495967 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 520.0 LOGGED (FT.): 50.0 LOG TYPE:

SOURCE: MIDWEST SF0701 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300573000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW NW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.062713 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.495967 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 517.2 LOGGED (FT.): 12.8 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 702 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
517.2			CLAY	3.3	0.0	
513.9	CARBONDALE	ANNA	BLACK SHALE	2.5	3.3	
511.4	CARBONDALE	HERRIN	COAL	4.3	5.8	
507.1	CARBONDALE	HERRIN	PYRITE	0.1	10.1	
507.0	CARBONDALE	HERRIN	COAL	1.7	10.2	
505.4	CARBONDALE		UNDERCLAY	1.0	11.8	

MAPID: 16300573000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SW NW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.062713 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.495967 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 517.2 **LOGGED (FT.):** 13.0 **LOG TYPE:**
SOURCE: MIDWEST SF0702 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
507.2	CARBONDALE	HERRIN	COAL	6.0	10.0	

MAPID: 16300574000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SE/c NW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.061512 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.496865 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 539.3 **LOGGED (FT.):** 23.4 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 704 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
539.3			CLAY	6.7	0.0	
532.6			SANDY CLAY	8.8	6.7	GRAY
523.8	CARBONDALE	ANNA	BLACK SHALE	0.5	15.5	
523.3	CARBONDALE	HERRIN	COAL	6.3	16.0	ELEV TOP 523.25
517.0	CARBONDALE		UNDERCLAY	1.1	22.3	

MAPID: 16300574000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SE/c NW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.061512 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.496865 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 539.3 **LOGGED (FT.):** 23.0 **LOG TYPE:**
SOURCE: MIDWEST SF0704 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
523.3	CARBONDALE	HERRIN	COAL	6.3	16.0	

MAPID: 16300575000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: W2 NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.061512 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.495023 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 536.2 LOGGED (FT.): 24.8 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 705 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
536.2			CLAY	4.0	0.0	
532.2			SANDY CLAY	16.8	4.0	GRAY
515.4	CARBONDALE	HERRIN	COAL	2.5	20.8	ELEV TOP 514.45
512.9	CARBONDALE		UNDERCLAY	1.5	23.3	

MAPID: 16300575000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: W2 NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.061512 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.495023 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 536.2 LOGGED (FT.): 25.0 LOG TYPE:

SOURCE: MIDWEST SF0705 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		
515.2	CARBONDALE	SPRINGFIELD	COAL	2.5	21.0	

MAPID: 16300576000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NE NW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.060307 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.497762 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 521.4 LOGGED (FT.): 19.2 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 706 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
521.4			CLAY	3.5	0.0	
517.9			SANDY CLAY	7.8	3.5	YELLOW
510.1			SANDY CLAY	6.8	11.3	GRAY
503.4			UNDERCLAY	1.2	18.0	

MAPID: 16300576000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NE NW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.060307 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.497762 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 521.4 **LOGGED (FT.):** 19.0 **LOG TYPE:**
SOURCE: MIDWEST SF0706 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300577000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SW/c SE NW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.060314 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.495921 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 556.0 **LOGGED (FT.):** 58.5 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 707 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
556.0			CLAY	24.3	0.0	
531.7			CLAY	13.2	24.3	YELLOW
518.6			SHALE	0.8	37.4	YELLOW
517.7			CLAYSTONE	8.8	38.3	YELLOW
509.0			SHALE	1.1	47.0	YELLOW
507.9			CLAYSTONE	7.3	48.1	GRAY
500.7			CLAYSTONE	3.2	55.3	GRAY

MAPID: 16300577000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SW/c SE NW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.060314 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.495921 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 556.0 **LOGGED (FT.):** 59.0 **LOG TYPE:**
SOURCE: MIDWEST SF0707 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300578000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.061515 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.493184 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 553.8 LOGGED (FT.): 48.8 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 708 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
553.8			CLAY	4.7	0.0	
549.1			CLAY	21.8	4.7	GRAY
527.4			CLAY	13.0	26.4	LT GY
514.4			CLAY	9.4	39.4	GRAY

MAPID: 16300578000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.061515 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.493184 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 553.8 LOGGED (FT.): 49.0 LOG TYPE:

SOURCE: MIDWEST SF0708 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300579000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SE SW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.06032 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.492241 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 557.6 LOGGED (FT.): 38.3 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 709 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
557.6			CLAY	4.4	0.0	
553.2			CLAY	9.6	4.4	GRAY
543.6			SANDY CLAY	4.5	14.0	
539.1			ROCK	0.3	18.5	
538.8			SHALE WITH LIMESTONE	5.3	18.8	
533.4			LIMESTONE	1.9	24.2	
531.5			CLAYSTONE	0.7	26.1	YELLOW
530.8			LIMESTONE	3.8	26.8	
527.0			SHALE	0.3	30.6	
526.8	CARBONDALE	HERRIN	COAL	6.0	30.8	
520.8	CARBONDALE		UNDERCLAY	1.4	36.8	

MAPID: 16300579000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SE SW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.06032 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.492241 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 557.6 LOGGED (FT.): 38.0 LOG TYPE:

SOURCE: MIDWEST SF0709 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
526.6	CARBONDALE	HERRIN	COAL	6.0	31.0	

MAPID: 16300580000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NW/c NE NE SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.055559 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.490306 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 569.7 **LOGGED (FT.):** 45.3 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 710 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
569.7			CLAY	19.8	0.0	
549.9			SANDY CLAY	13.8	19.8	LT GY
536.1			UNCLASSIFIED	1.1	33.6	
535.0			UNDERCLAY	10.7	34.7	

MAPID: 16300580000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NW/c NE NE SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.055559 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.490306 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 569.7 **LOGGED (FT.):** 45.0 **LOG TYPE:**
SOURCE: MIDWEST SF0710 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
535.7	CARBONDALE	HERRIN	COAL	1.1	34.0	

MAPID: 16300581000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NW/c NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.059115 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.494977 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 554.3 **LOGGED (FT.):** 58.3 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 711 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
554.3			CLAY	19.7	0.0	
534.6			CLAY	8.8	19.7	GRAY
525.9			CLAY	3.1	28.4	YELLOW
522.8			CLAY	26.8	31.5	GRAY

MAPID: 16300581000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NW/c NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.059115 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.494977 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 554.3 LOGGED (FT.): 60.0 LOG TYPE:

SOURCE: MIDWEST SF0711 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300582000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NE/c SE SW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.06032 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.492241 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 557.4 LOGGED (FT.): 39.6 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 713 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
557.4			CLAY	23.4	0.0	
534.0			CLAY	3.5	23.4	GRAY
530.5			LIMESTONE	1.1	26.9	
529.4			UNCLASSIFIED	0.9	28.0	DRILLED DROPPED
528.5	CARBONDALE	BRERETON	LIMESTONE	3.5	28.9	
525.0	CARBONDALE	ANNA	SHALE	0.3	32.4	BLACK
524.6	CARBONDALE	HERRIN	COAL	2.1	32.8	ELEV TOP 524.70
522.6	CARBONDALE	HERRIN	PYRITE	0.1	34.8	
522.5	CARBONDALE	HERRIN	COAL	0.3	34.9	
522.2	CARBONDALE	HERRIN	SHALE	0.1	35.2	
522.1	CARBONDALE	HERRIN	COAL	1.6	35.3	
520.5	CARBONDALE	HERRIN	SHALE	0.1	36.9	
520.4	CARBONDALE	HERRIN	COAL	1.0	37.0	
519.4	CARBONDALE		UNDERCLAY	1.6	38.0	

MAPID: 16300582000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NE/c SE SW NE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.06032 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.492241 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 557.5 LOGGED (FT.): 41.0 LOG TYPE:
 SOURCE: MIDWEST SF 713 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
524.5	CARBONDALE	HERRIN	COAL	6.1	33.0	

MAPID: 16300583000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW SW NE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.062709 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.492287 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 538.8 LOGGED (FT.): 33.1 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 714 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
538.8			CLAY	17.2	0.0	
521.6			CALCAREOUS SHALE	2.8	17.2	
518.9	CARBONDALE	BRERETON	LIMESTONE	2.6	19.9	
516.3	CARBONDALE	ANNA	SHALE	0.3	22.5	
516.0	CARBONDALE	ANNA	SLATY SHALE	2.8	22.8	
513.2	CARBONDALE	HERRIN	COAL	1.0	25.6	ELEV TOP 513.21
512.2	CARBONDALE	HERRIN	PYRITE	0.4	26.6	
511.8	CARBONDALE	HERRIN	COAL	0.5	27.0	
511.3	CARBONDALE	HERRIN	SHALE	0.1	27.5	
511.2	CARBONDALE	HERRIN	COAL	0.8	27.6	
510.4	CARBONDALE	HERRIN	PYRITE	0.2	28.4	
510.2	CARBONDALE	HERRIN	COAL	0.6	28.6	
509.6	CARBONDALE	HERRIN	COAL	2.9	29.2	
506.7	CARBONDALE		UNDERCLAY	1.0	32.1	

MAPID: 16300583000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW SW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.062709 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.492287 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 538.8 LOGGED (FT.): 33.0 LOG TYPE:

SOURCE: MIDWEST SF0714 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
512.8	CARBONDALE	HERRIN	COAL	6.5	26.0	

MAPID: 16300584000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW/c NW SW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.062709 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.494128 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 533.8 LOGGED (FT.): 31.8 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 715 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
533.8			CLAY	15.8	0.0	
518.0			SANDY CLAY	3.5	15.8	GRAY
514.5			CLAY	2.0	19.3	
512.5	CARBONDALE	ANNA	SOFT SHALE	0.8	21.3	
511.6	CARBONDALE	ANNA	SLATY SHALE	1.4	22.2	
510.2	CARBONDALE	ANNA	SOFT SHALE	0.6	23.6	
509.6	CARBONDALE	HERRIN	COAL	1.3	24.2	ELEV TOP 509.61
508.4	CARBONDALE	HERRIN	SHALE	0.2	25.4	
508.2	CARBONDALE	HERRIN	COAL	1.7	25.6	
506.5	CARBONDALE	HERRIN	SHALE	0.1	27.3	
506.5	CARBONDALE	HERRIN	COAL	3.5	27.3	
503.0	CARBONDALE		UNDERCLAY	1.0	30.8	

MAPID: 16300584000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW/c NW SW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.062709 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.494128 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 533.8 LOGGED (FT.): 32.0 LOG TYPE:

SOURCE: MIDWEST SF0715 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
509.8	CARBONDALE	HERRIN	COAL	6.7	24.0	

MAPID: 16300585000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW/c SE SW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.06032 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.492241 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 559.3 LOGGED (FT.): 47.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 716 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
559.3			CLAY	22.8	0.0	
536.5			SANDY CLAY	5.1	22.8	BROWN
531.4			SANDY CLAY	7.8	27.9	GRAY
523.6			CLAY	1.3	35.7	DARK GRAY
522.4			SANDY CLAY	2.9	36.9	GRAY
519.5	CARBONDALE	ANNA	SOFT SHALE	1.0	39.8	
518.5	CARBONDALE	HERRIN	COAL	3.2	40.8	ELEV TOP 518.42
515.3	CARBONDALE		UNDERCLAY	0.6	44.0	
514.7	CARBONDALE		LIMESTONE	1.8	44.6	
512.9	CARBONDALE		LIMESTONE	0.6	46.4	

MAPID: 16300585000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW/c SE SW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.06032 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.492241 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 559.3 LOGGED (FT.): 47.0 LOG TYPE:

SOURCE: MIDWEST SF0716 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		
518.3	CARBONDALE	SPRINGFIELD	COAL	3.2	41.0	

MAPID: 16300586000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NW SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.061514 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.489504 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 552.9 LOGGED (FT.): 42.8 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 717 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
552.9			CLAY	21.8	0.0	
531.1			LIMESTONE	2.5	21.8	
528.6			SHALE	0.6	24.3	
528.1			SHALE	1.0	24.8	BLUE
527.1			LIMESTONE	1.5	25.8	
525.6			UNCLASSIFIED	0.5	27.3	GRAY
525.1			LIMESTONE	1.1	27.8	THIN BEDDED 35 MIN DRILL T.
524.0			UNCLASSIFIED	0.5	28.9	GRAY
523.5	CARBONDALE	BRERETON	LIMESTONE	4.0	29.4	
519.5	CARBONDALE	ANNA	SHALE	0.7	33.4	
518.8	CARBONDALE	ANNA	SLATY SHALE	1.3	34.1	
517.5	CARBONDALE	HERRIN	COAL	2.0	35.4	ELEV TOP 517.29
515.5	CARBONDALE	HERRIN	SHALE	0.1	37.4	
515.4	CARBONDALE	HERRIN	COAL	0.3	37.5	
515.2	CARBONDALE	HERRIN	SHALE	0.2	37.7	
515.0	CARBONDALE	HERRIN	COAL	4.1	37.9	
510.9	CARBONDALE		UNDERCLAY	0.7	42.0	

MAPID: 16300586000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NW SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.061514 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.489504 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 552.9 LOGGED (FT.): 43.0 LOG TYPE:

SOURCE: MIDWEST SF0717 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
516.9	CARBONDALE	HERRIN	COAL	6.6	36.0	

MAPID: 16300587000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SE NE SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.055573 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.488467 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 583.9 LOGGED (FT.): 49.9 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 718 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
583.9			CLAY	20.3	0.0	
563.6			CLAY	5.2	20.3	BROWN
558.5			LIMESTONE	0.8	25.4	
557.7			CLAYSTONE	1.1	26.2	BROWN
556.6			LIMESTONE	2.3	27.3	
554.4			SANDY SHALE	2.3	29.5	
552.1			LIMESTONE	4.8	31.8	
547.4			SHALE	1.5	36.5	
545.9	CARBONDALE	BRERETON	LIMESTONE	2.8	38.0	
543.1	CARBONDALE	ANNA	SHALE	2.0	40.8	
541.1	CARBONDALE	HERRIN	COAL	1.8	42.8	ELEV TOP 541.15
539.3	CARBONDALE	HERRIN	SHALE	0.2	44.6	
539.1	CARBONDALE	HERRIN	COAL	0.8	44.8	
538.4	CARBONDALE	HERRIN	SHALE	0.1	45.5	
538.3	CARBONDALE	HERRIN	COAL	1.2	45.6	
537.1	CARBONDALE	HERRIN	SHALE	0.1	46.8	
537.1	CARBONDALE	HERRIN	COAL	2.0	46.8	
535.1	CARBONDALE		CLAYSTONE	1.1	48.8	

MAPID: 16300587000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SE NE SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.055573 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.488467 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 583.9 LOGGED (FT.): 50.0 LOG TYPE:

SOURCE: MIDWEST SF 718 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.9	CARBONDALE	HERRIN	COAL	6.1	43.0	

MAPID: 16300588000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SE SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.056777 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.485731 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 577.9 LOGGED (FT.): 49.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 719 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
577.9			CLAY	21.8	0.0	
556.1			CLAY	10.8	21.8	BROWN
545.3			CLAY	1.3	32.6	GRAY
544.0			LIMESTONE	0.7	33.9	
543.3			SHALE	2.3	34.6	
541.1			LIMESTONE	1.3	36.8	
539.8			UNCLASSIFIED	0.3	38.1	
539.5	CARBONDALE	BRERETON	LIMESTONE	1.9	38.4	
537.6	CARBONDALE	ANNA	SHALE	0.6	40.3	
537.0	CARBONDALE	ANNA	BLACK SHALE	1.6	40.9	
535.4	CARBONDALE	HERRIN	COAL	1.8	42.5	ELEV TOP 535.4
533.6	CARBONDALE	HERRIN	SHALE	0.1	44.3	
533.5	CARBONDALE	HERRIN	COAL	0.9	44.4	
532.6	CARBONDALE	HERRIN	SHALE	0.2	45.3	
532.4	CARBONDALE	HERRIN	COAL	3.0	45.5	
529.4	CARBONDALE		CLAYSTONE	1.0	48.5	

MAPID: 16300588000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SE SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.056777 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.485731 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 577.9 LOGGED (FT.): 50.0 LOG TYPE:

SOURCE: MIDWEST SF0719 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
534.9	CARBONDALE	HERRIN	COAL	6.0	43.0	

MAPID: 16300589000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.059142 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.487616 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 573.0 LOGGED (FT.): 33.1 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 720 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
573.0			CLAY	24.7	0.0	
548.3			LIMESTONE	0.3	24.7	
548.0			UNCLASSIFIED	1.3	25.0	
546.7	CARBONDALE	HERRIN	COAL	1.6	26.3	ELEV TOP 546.67
545.1	CARBONDALE	HERRIN	SHALE	0.2	27.9	
544.9	CARBONDALE	HERRIN	COAL	0.8	28.1	
544.1	CARBONDALE	HERRIN	SHALE	0.1	28.9	
544.0	CARBONDALE	HERRIN	COAL	0.8	29.0	
543.2	CARBONDALE	HERRIN	SHALE	0.1	29.8	
543.1	CARBONDALE	HERRIN	COAL	0.2	29.9	
542.9	CARBONDALE	HERRIN	SHALE	0.2	30.1	
542.7	CARBONDALE	HERRIN	COAL	1.7	30.3	
541.1	CARBONDALE		CLAYSTONE	1.2	31.9	

MAPID: 16300589000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.059142 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.487616 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 573.0 LOGGED (FT.): 33.0 LOG TYPE:

SOURCE: MIDWEST SF0720 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
547.0	CARBONDALE	HERRIN	COAL	5.6	26.0	

MAPID: 16300590000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NE/c SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.059142 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.487616 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 567.3 LOGGED (FT.): 29.8 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 721 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
567.3			CLAY	6.8	0.0	
560.5			CLAY	14.2	6.8	GRAY
546.3			LIMESTONE	3.3	21.0	DECAYED
543.0			CLAYSTONE	1.0	24.3	YELLOW
542.0	CARBONDALE	HERRIN	COAL	1.3	25.3	ELEV TOP 541.96
540.7	CARBONDALE	HERRIN	SHALE	0.3	26.6	GRAY
540.4	CARBONDALE	HERRIN	COAL	1.8	26.9	
538.6	CARBONDALE		CLAYSTONE	0.8	28.7	
537.8	CARBONDALE		LIMESTONE	0.3	29.5	

MAPID: 16300590000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NE/c SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.059142 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.487616 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 567.3 LOGGED (FT.): 30.0 LOG TYPE:

SOURCE: MIDWEST SF0721 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
542.3	CARBONDALE	HERRIN	COAL	3.3	25.0	

MAPID: 16300591000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: N2 SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.059135 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.489458 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 568.3 LOGGED (FT.): 49.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 722 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
568.3			CLAY	8.3	0.0	
560.0			CLAY	8.7	8.3	GRAY
551.4			CLAY	18.0	16.9	LT GY
533.4			LIMESTONE	3.4	34.9	
530.0			LIMESTONE	0.7	38.3	
529.3			LIMESTONE	2.4	39.0	
526.9			UNCLASSIFIED	0.3	41.4	SF STREAK NOTED UNDETERMINED
526.5	CARBONDALE	HERRIN	COAL	4.1	41.8	ELEV TOP 526.54
522.5	CARBONDALE	HERRIN	PYRITE	0.1	45.8	
522.4	CARBONDALE	HERRIN	COAL	2.1	45.9	
520.3	CARBONDALE		UNDERCLAY	1.0	48.0	

MAPID: 16300591000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: N2 SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.059135 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.489458 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 568.3 LOGGED (FT.): 49.0 LOG TYPE:

SOURCE: MIDWEST SF 722 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
526.3	CARBONDALE	HERRIN	COAL	4.1	42.0	

MAPID: 16300592000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NE/c NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071031 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.48969 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 569.9 LOGGED (FT.): 38.7 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 723 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
569.9			CLAY	17.1	0.0	
552.8			CLAY	6.8	17.1	GRAY
546.1	CARBONDALE	BRERETON	LIMESTONE	2.8	23.8	
543.3	CARBONDALE	ANNA	SHALE	1.3	26.6	
542.0	CARBONDALE	ANNA	BLACK SHALE	2.8	27.9	
539.1	CARBONDALE	HERRIN	COAL	4.4	30.8	ELEV TOP 539.19
534.7	CARBONDALE	HERRIN	PYRITE	0.1	35.2	
534.6	CARBONDALE	HERRIN	COAL	2.2	35.3	
532.5	CARBONDALE		UNDERCLAY	1.3	37.4	

MAPID: 16300592000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NE/c NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071031 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.48969 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 569.9 LOGGED (FT.): 39.0 LOG TYPE:

SOURCE: MIDWEST SF0723 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
538.9	CARBONDALE	HERRIN	COAL	6.7	31.0	

MAPID: 16300593000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW/c SE NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.069833 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.488746 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 573.8 LOGGED (FT.): 37.3 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 724 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
573.8			CLAY	13.2	0.0	
560.6			CLAY	12.6	13.2	GRAY
548.0	CARBONDALE	BRERETON	LIMESTONE	2.8	25.8	
545.2	CARBONDALE	ANNA	SLATY SHALE	1.1	28.6	
544.1	CARBONDALE	ANNA	BLACK SHALE	0.9	29.7	
543.2	CARBONDALE	HERRIN	COAL	1.3	30.6	ELEC TOP 543.25
541.9	CARBONDALE	HERRIN	SHALE	0.1	31.9	
541.8	CARBONDALE	HERRIN	COAL	1.0	32.0	
540.8	CARBONDALE	HERRIN	SHALE	0.1	33.0	
540.7	CARBONDALE	HERRIN	COAL	3.1	33.1	
537.6	CARBONDALE		UNDERCLAY	1.1	36.2	

MAPID: 16300593000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW/c SE NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.069833 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.488746 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 573.8 LOGGED (FT.): 37.0 LOG TYPE:

SOURCE: MIDWEST SF0724 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
542.8	CARBONDALE	HERRIN	COAL	5.6	31.0	

MAPID: 16300594000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.059142 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.487616 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 575.2 LOGGED (FT.): 41.9 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 728 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
575.2			CLAY	6.0	0.0	
569.2			CLAY	22.8	6.0	GRAY
546.4			LIMESTONE	0.3	28.8	
546.1			CLAYSTONE	2.3	29.1	
543.9			CLAYSTONE	0.5	31.3	
543.4	CARBONDALE	BRERETON	LIMESTONE	1.2	31.8	
542.2	CARBONDALE	BRERETON	LIMESTONE	0.4	33.0	
541.8	CARBONDALE	ANNA	BLACK SHALE	1.4	33.4	
540.4	CARBONDALE	HERRIN	COAL	3.3	34.8	
537.0	CARBONDALE	HERRIN	SHALE	0.1	38.2	
536.9	CARBONDALE	HERRIN	COAL	2.4	38.3	
534.5	CARBONDALE		CLAYSTONE	1.3	40.7	

MAPID: 16300594000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.059142 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.487616 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 575.2 LOGGED (FT.): 42.0 LOG TYPE:

SOURCE: MIDWEST SF0728 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.2	CARBONDALE	HERRIN	COAL	5.8	35.0	

MAPID: 16300595000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 760' S line, 0' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.054408 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.485941 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 575.0 **LOGGED (FT.):** 51.1 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 729 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
575.0			CLAY	4.5	0.0	
570.5			CLAY	18.5	4.5	GRAY
552.0			GRAVEL	14.0	23.0	YELLOW
538.0			CLAY	2.7	37.0	GRAY
535.3			CLAY	11.4	39.7	GRAY

MAPID: 16300595000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 760' S line, 0' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.054408 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.485941 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 575.0 **LOGGED (FT.):** 51.0 **LOG TYPE:**
SOURCE: MIDWEST SF0729 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300596000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SW NW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072211 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.488792 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 576.0 **LOGGED (FT.):** 39.3 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 730 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
576.0			CLAY	17.0	0.0	
559.0			CLAY	7.0	17.0	GRAY
552.0			LIMESTONE	4.3	24.0	
547.7			SHALE	0.9	28.3	
546.8			LIMESTONE	0.3	29.2	
546.6			SHALE	0.6	29.4	
546.0	CARBONDALE	ANNA	BLACK SHALE	2.0	30.0	
544.0	CARBONDALE	HERRIN	COAL	6.3	32.0	ELEV TOP 544.03
537.7	CARBONDALE		UNDERCLAY	1.1	38.3	

MAPID: 16300596000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SW NW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072211 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.488792 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 576.0 **LOGGED (FT.):** 39.0 **LOG TYPE:**
SOURCE: MIDWEST SF0730 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
544.0	CARBONDALE	HERRIN	COAL	6.3	32.0	

MAPID: 16300597000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NE/c NE SE NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.065102 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.494175 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 553.3 **LOGGED (FT.):** 48.3 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 736 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
553.3			CLAY	6.5	0.0	
546.8			CLAY	20.5	6.5	GRAY
526.3			LIMESTONE	2.7	27.0	
523.6			SHALE	1.2	29.7	
522.5			LIMESTONE	1.0	30.8	
521.5			LIMESTONE	1.8	31.8	
519.6	CARBONDALE	BRERETON	LIMESTONE	4.5	33.7	
515.1	CARBONDALE	ANNA	SHALE	1.0	38.2	
514.1	CARBONDALE	ANNA	BLACK SHALE	1.7	39.2	
512.5	CARBONDALE	HERRIN	COAL	6.5	40.8	ELEV TOP 512.44
506.0	CARBONDALE		UNDERCLAY	1.0	47.3	

MAPID: 16300597000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NE/c NE SE NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.065102 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.494175 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 553.3 **LOGGED (FT.):** 48.0 **LOG TYPE:**
SOURCE: MIDWEST SF0736 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
512.3	CARBONDALE	HERRIN	COAL	6.5	41.0	

MAPID: 16300598000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW SE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.067484 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.49238 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 553.4 LOGGED (FT.): 38.7 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 737 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
553.4			CLAY	6.4	0.0	
547.0			CLAY	12.3	6.4	GRAY
534.6			SHALE	1.1	18.8	
533.6			LIMESTONE	1.1	19.8	
532.5			SHALE	1.3	20.9	GR
531.1			LIMESTONE	3.9	22.3	
527.2			SHALE	0.6	26.2	
526.6	CARBONDALE	BRERETON	LIMESTONE	1.3	26.8	
525.4	CARBONDALE	ANNA	BLACK SHALE	2.9	28.0	
522.5	CARBONDALE	HERRIN	COAL	6.6	30.9	ELEV TOP 522.49
515.9	CARBONDALE		UNDERCLAY	1.2	37.5	

MAPID: 16300598000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW SE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.067484 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.49238 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 553.4 LOGGED (FT.): 39.0 LOG TYPE:

SOURCE: MIDWEST SF0737 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
522.4	CARBONDALE	HERRIN	COAL	6.6	31.0	

MAPID: 16300599000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NW/c SW NE SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.067458 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.488699 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 570.3 LOGGED (FT.): 54.3 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 738 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.3			CLAY	4.8	0.0	
565.5			CLAY	15.3	4.8	GRAY
550.3			SHALE	10.2	20.0	LT GY
540.1			LIMESTONE	0.8	30.2	
539.4			LIMESTONE	0.7	30.9	
538.7			LIMESTONE	1.5	31.6	
537.2			LIMESTONE	1.2	33.1	
536.0			SHALE	1.8	34.3	
534.3			LIMESTONE	3.8	36.0	
530.5			SHALE	2.6	39.8	
527.9	CARBONDALE	BRERETON	LIMESTONE	1.4	42.4	
526.5	CARBONDALE	ANNA	BLACK SHALE	3.1	43.8	LATTER 1 FOOT DRILLED GRITTY
523.4	CARBONDALE	HERRIN	COAL	6.4	46.9	ELEV TOP 523.33
517.0	CARBONDALE		UNDERCLAY	1.0	53.3	

MAPID: 16300599000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NW/c SW NE SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.067458 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.488699 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 570.3 LOGGED (FT.): 54.0 LOG TYPE:

SOURCE: MIDWEST SF0738 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
523.3	CARBONDALE	HERRIN	COAL	6.4	47.0	

MAPID: 16300600000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 0' S line, 1870' E line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.060996 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.483971 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 581.2 LOGGED (FT.): 47.8 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 741 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
581.2			CLAY	24.2	0.0	
557.0			LIMESTONE	0.3	24.2	
556.7			SHALE	2.2	24.5	
554.5			LIMESTONE	0.5	26.7	
554.0			UNCLASSIFIED	0.3	27.2	
553.7			LIMESTONE	0.7	27.5	
553.0			CLAYSTONE	0.3	28.2	
552.7			LIMESTONE	0.8	28.5	
551.9			LIMESTONE	4.3	29.3	
547.6	CARBONDALE	BRERETON	LIMESTONE	6.6	33.6	
541.0	CARBONDALE	ANNA	SHALE	0.8	40.2	
540.3	CARBONDALE	HERRIN	COAL	5.6	40.9	1 INCH PARTING 7 INCHES DOWN ELEV 540.4
534.7	CARBONDALE		CLAYSTONE	1.4	46.5	

MAPID: 16300600000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 0' S line, 1870' E line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.060996 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.483971 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 581.2 LOGGED (FT.): 48.0 LOG TYPE:
 SOURCE: MIDWEST SF0741 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.2	CARBONDALE	HERRIN	COAL	5.6	41.0	

MAPID: 16300601000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 165' N line, 165' E line of NW NE SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.066861

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.490991

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 563.0 LOGGED (FT.): 57.5

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 742

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
563.0			CLAY	24.0	0.0	
539.0			CLAY	8.6	24.0	GRAY
530.4			LIMESTONE	1.3	32.6	
529.2			SHALE	1.6	33.8	
527.6			LIMESTONE	2.0	35.4	
525.6			LIMESTONE	3.2	37.4	
522.4			LIMESTONE	0.4	40.6	
522.0			LIMESTONE	4.1	41.0	
517.9			LIMESTONE	0.8	45.1	
517.2			LIMESTONE W/ SHALE	3.9	45.8	DARK
513.2			SOFT SHALE	0.3	49.8	
513.0	CARBONDALE	HERRIN	COAL	1.6	50.0	ELEV TOP 513.02
511.4	CARBONDALE	HERRIN	PYRITE	0.1	51.6	
511.3	CARBONDALE	HERRIN	COAL	0.3	51.7	
511.0	CARBONDALE	HERRIN	SHALE	0.3	52.0	
510.7	CARBONDALE	HERRIN	COAL	1.4	52.3	
509.2	CARBONDALE	HERRIN	COAL	2.8	53.8	
506.4	CARBONDALE		UNDERCLAY	0.9	56.6	

MAPID: 16300601000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 165' N line, 165' E line of NW NE SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.066861

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.490991

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 563.0 LOGGED (FT.): 58.0

LOG TYPE:

SOURCE: MIDWEST SF0742

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
513.0	CARBONDALE	HERRIN	COAL	6.6	50.0	

MAPID: 16300602000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SE/c SW NE SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.067458 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.488699 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 551.5 LOGGED (FT.): 35.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 743 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
551.5			CLAY	13.6	0.0	
537.9			LIMESTONE	2.2	13.6	
535.7			SHALE	1.3	15.8	
534.5			LIMESTONE	3.8	17.0	
530.7			SHALE	2.7	20.8	
528.0	CARBONDALE	BRERETON	LIMESTONE	4.2	23.5	
523.8	CARBONDALE	ANNA	BLACK SHALE	1.0	27.7	
522.8	CARBONDALE	HERRIN	COAL	1.9	28.7	ELEV TOP 522.87
520.9	CARBONDALE	HERRIN	SHALE	0.2	30.6	
520.7	CARBONDALE	HERRIN	COAL	0.8	30.8	
520.0	CARBONDALE	HERRIN	PYRITE	0.1	31.5	
519.9	CARBONDALE	HERRIN	COAL	1.1	31.6	
518.8	CARBONDALE	HERRIN	COAL	2.0	32.7	
516.8	CARBONDALE		UNDERCLAY	0.8	34.7	

MAPID: 16300602000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SE/c SW NE SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.067458 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.488699 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 551.5 LOGGED (FT.): 36.0 LOG TYPE:

SOURCE: MIDWEST SF0743 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
522.5	CARBONDALE	HERRIN	COAL	6.0	29.0	

MAPID: 16300603000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 165' N line, 165' E line of SE NE SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.064472 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.489106 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 552.9 LOGGED (FT.): 52.2 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 744 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
552.9			CLAY	19.5	0.0	
533.4			CLAY	18.5	19.5	GRAY
514.9			LIMESTONE	0.4	38.0	
514.5			CLAYSTONE	2.2	38.4	GRAY
512.3			UNDERCLAY	7.8	40.6	
504.5			SHALE	3.8	48.4	

MAPID: 16300603000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 165' N line, 165' E line of SE NE SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.064472 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.489106 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 552.9 LOGGED (FT.): 52.0 LOG TYPE:
 SOURCE: MIDWEST SF0744 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300604000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NE SE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.065102 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.494175 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 564.4 LOGGED (FT.): 58.6 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 745 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
564.4			CLAY	31.0	0.0	
533.4			CLAY	1.0	31.0	DARK
532.4			CLAY	4.4	32.0	GRAY
528.0			LIMESTONE	1.3	36.4	
526.7			CLAYSTONE	2.0	37.7	GRAY
524.7			LIMESTONE	4.0	39.7	
520.7			BLACK SHALE	0.2	43.7	
520.6			COAL	0.4	43.8	ELEV TOP 515.63
520.1	CARBONDALE	ANNA	SHALE	1.2	44.3	DARK GRAY
519.0	CARBONDALE	ANNA	SLATY SHALE	3.3	45.4	
515.6	CARBONDALE	HERRIN	COAL	1.8	48.8	
513.8	CARBONDALE	HERRIN	SHALE	0.1	50.6	
513.7	CARBONDALE	HERRIN	COAL	1.0	50.7	
512.7	CARBONDALE	HERRIN	SHALE	2.2	51.7	
510.6	CARBONDALE	HERRIN	COAL	0.8	53.8	
509.7	CARBONDALE	HERRIN	SHALE	0.2	54.7	
509.6	CARBONDALE	HERRIN	COAL	2.1	54.8	
507.5	CARBONDALE	HERRIN	COAL	0.4	56.9	
506.6	CARBONDALE		UNDERCLAY	0.8	57.8	

MAPID: 16300604000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NE SE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.065102 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.494175 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 564.4 LOGGED (FT.): 56.0 LOG TYPE:

SOURCE: MIDWEST SF 745 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
515.4	CARBONDALE	HERRIN	COAL	6.4	49.0	

MAPID: 16300605000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NW SW NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.072284 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.494313 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 569.8 LOGGED (FT.): 43.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 752 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
569.8			CLAY	16.5	0.0	
553.3			CLAY	15.2	16.5	GRAY
538.1			LIMESTONE	0.3	31.7	
537.9			CLAYSTONE	0.9	31.9	GRAY
537.0			LIMESTONE	0.3	32.8	
536.6			CLAYSTONE	1.9	33.2	GRAY
534.7			SMUT	2.6	35.1	
532.1	CARBONDALE		COAL	1.8	37.7	ELEV TOP 532.14
530.3	CARBONDALE		CLAYSTONE	3.5	39.5	

MAPID: 16300605000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NW SW NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.072284 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.494313 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 569.8 LOGGED (FT.): 43.0 LOG TYPE:

SOURCE: MIDWEST SF0752 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
534.8	CARBONDALE	HERRIN	COAL	4.4	35.0	

MAPID: 16300606000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.072211 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.488792 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 578.2 LOGGED (FT.): 35.1 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 754 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
578.2			CLAY	15.5	0.0	
562.7			CLAY	10.3	15.5	GRAY
552.4			LIMESTONE	0.5	25.8	
551.9			UNCLASSIFIED	0.3	26.3	
551.7			LIMESTONE	0.8	26.5	
550.9			CLOD	0.4	27.3	
550.5	CARBONDALE	HERRIN	COAL	1.5	27.7	ELEV TOP 550.51
549.0	CARBONDALE	HERRIN	SHALE	0.1	29.2	
548.9	CARBONDALE	HERRIN	COAL	3.9	29.3	
545.0	CARBONDALE		UNDERCLAY	1.9	33.2	

MAPID: 16300606000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.072211 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.488792 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 578.2 LOGGED (FT.): 35.0 LOG TYPE:

SOURCE: MIDWEST SF0754 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.2	CARBONDALE	HERRIN	COAL	5.5	28.0	

MAPID: 16300607000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.061517 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.485821 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 576.1 LOGGED (FT.): 46.7 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 755 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
576.1			CLAY	2.5	0.0	
573.6			CLAY	22.9	2.5	GRAY
550.7			LIMESTONE	0.7	25.4	
550.0			SHALE	0.9	26.1	
549.1			LIMESTONE	4.0	27.0	
545.1			SHALE	1.3	31.0	
543.8			LIMESTONE	1.3	32.3	
542.6			LIMESTONE	0.8	33.5	STREAKS
541.8	CARBONDALE	BRERETON	LIMESTONE	3.0	34.3	
538.8	CARBONDALE	ANNA	SHALE	0.5	37.3	
538.3	CARBONDALE	ANNA	BLACK SHALE	1.8	37.8	
536.4	CARBONDALE	HERRIN	COAL	2.0	39.7	ELEV TOP 536.46
534.4	CARBONDALE	HERRIN	SHALE	0.2	41.7	
534.3	CARBONDALE	HERRIN	PYRITE	0.1	41.8	
534.2	CARBONDALE	HERRIN	COAL	0.4	41.9	
533.8	CARBONDALE	HERRIN	SHALE	0.1	42.3	
533.7	CARBONDALE	HERRIN	COAL	1.7	42.4	DRILLED
532.0	CARBONDALE	HERRIN	PYRITE	0.1	44.1	
531.9	CARBONDALE	HERRIN	COAL	1.8	44.2	
530.1	CARBONDALE		CLAYSTONE	0.7	46.0	

MAPID: 16300607000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.061517 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.485821 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 576.1 LOGGED (FT.): 47.0 LOG TYPE:

SOURCE: MIDWEST SF0755 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
536.1	CARBONDALE	HERRIN	COAL	6.3	40.0	

MAPID: 16300608000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.056729 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.493092 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 556.1 **LOGGED (FT.):** 44.4 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 776 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
556.1			CLAY	30.8	0.0
525.3			LIMESTONE	0.6	30.8
524.8			SHALE	0.6	31.3
524.2			LIMESTONE	0.8	31.9
523.4			SHALE	11.7	32.7
511.8			LIMESTONE	0.1	44.3

MAPID: 16300608000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.056729 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.493092 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 556.1 **LOGGED (FT.):** 44.0 **LOG TYPE:**
SOURCE: MIDWEST SF0776 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300609000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.056729 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.493092 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 558.5 **LOGGED (FT.):** 33.3 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 777 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
558.5			CLAY	29.3	0.0
529.2	CARBONDALE	HERRIN	COAL	1.5	29.3 #6 TOP ERODED ELEV TOP 529.23
527.7	CARBONDALE		UNDERCLAY	0.6	30.8
527.2	CARBONDALE		SHALE	1.8	31.3
525.4	CARBONDALE		LIMESTONE	0.2	33.1

MAPID: 16300609000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.056729 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.493092 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 558.5 **LOGGED (FT.):** 33.0 **LOG TYPE:**
SOURCE: MIDWEST SF 777 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
529.5	CARBONDALE	HERRIN	COAL	1.5	29.0	

MAPID: 16300610000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NE/c NW SE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.057921 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.494033 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 555.0 **LOGGED (FT.):** 42.5 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 778 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
555.0			CLAY	21.2	0.0	
533.8			SAND	5.0	21.2	BROWN
528.8			CLAY	3.5	26.2	BROWN
525.3			CLAY	6.0	29.7	GRAY
519.3			LIMESTONE	2.3	35.7	
517.1			CLAYSTONE	2.0	37.9	
515.1			LIMESTONE	0.8	39.9	
514.2			CLAYSTONE	1.8	40.8	

MAPID: 16300610000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NE/c NW SE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.057921 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.494033 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 555.0 **LOGGED (FT.):** 43.0 **LOG TYPE:**
SOURCE: MIDWEST SF0778 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300611000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NE/c SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.059142 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.487616 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 574.6 LOGGED (FT.): 34.3 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 779 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
574.6			CLAY	26.8	0.0	
547.8			LIMESTONE	0.6	26.8	
547.3			CLAYSTONE	0.3	27.3	
547.0	CARBONDALE	HERRIN	COAL	0.3	27.6	ELEV TOP 546.96
546.7	CARBONDALE	HERRIN	COAL	1.2	27.9	
545.5	CARBONDALE	HERRIN	SHALE	0.1	29.1	
545.4	CARBONDALE	HERRIN	COAL	1.8	29.2	
543.7	CARBONDALE	HERRIN	SHALE	0.1	30.9	
543.6	CARBONDALE	HERRIN	COAL	2.0	31.0	
541.6	CARBONDALE		CLAYSTONE	1.3	33.0	

MAPID: 16300611000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NE/c SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.059142 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.487616 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 574.6 LOGGED (FT.): 34.0 LOG TYPE:

SOURCE: MIDWEST SF0779 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
546.6	CARBONDALE	HERRIN	COAL	5.4	28.0	

MAPID: 16300612000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.055559 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.490306 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 576.4 LOGGED (FT.): 41.4 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 780 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
576.4			CLAY	32.6	0.0	
543.8	CARBONDALE	ANNA	BLACK SHALE	2.0	32.6	
541.8	CARBONDALE	HERRIN	COAL	1.2	34.6	ELEV TOP 541.84
540.6	CARBONDALE	HERRIN	SHALE	0.1	35.8	
540.6	CARBONDALE	HERRIN	COAL	2.9	35.8	1" PARTINGS AT 36' AND 37' 6"
537.6	CARBONDALE	HERRIN	SHALE	0.2	38.8	
537.5	CARBONDALE	HERRIN	PYRITE	0.1	38.9	
537.4	CARBONDALE	HERRIN	COAL	1.8	39.0	
535.6	CARBONDALE		CLAYSTONE	0.7	40.8	

MAPID: 16300612000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.055559 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.490306 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 576.4 LOGGED (FT.): 41.0 LOG TYPE:

SOURCE: MIDWEST SF0780 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
541.4	CARBONDALE	HERRIN	COAL	6.2	35.0	

MAPID: 16300613000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NE/c SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.059142 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.487616 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 568.4 **LOGGED (FT.):** 31.8 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 786 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
568.4			CLAY	25.5	0.0	
542.9	CARBONDALE	HERRIN	COAL	0.7	25.5	PARTIALLY ERODED
542.2	CARBONDALE	HERRIN	COAL	1.1	26.2	
541.1	CARBONDALE	HERRIN	SHALE	0.2	27.3	
541.0	CARBONDALE	HERRIN	COAL	0.9	27.4	
540.1	CARBONDALE	HERRIN	SHALE	0.1	28.3	
540.0	CARBONDALE	HERRIN	COAL	2.8	28.4	
537.1	CARBONDALE		CLAYSTONE	0.5	31.3	

MAPID: 16300613000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NE/c SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.059142 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.487616 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 568.4 **LOGGED (FT.):** 32.0 **LOG TYPE:**
SOURCE: MIDWEST SF0786 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
542.4	CARBONDALE	HERRIN	COAL	5.8	26.0	

MAPID: 16300614000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SE SW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.06032 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.492241 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 560.6 **LOGGED (FT.):** 51.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 787 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.6			CLAY	24.8	0.0	
535.8			LIMESTONE	1.0	24.8	
534.8			CLAYSTONE	3.1	25.8	BROWN
531.7			CLAYSTONE	22.1	28.9	GRAY

MAPID: 16300614000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SE SW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.06032 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.492241 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 560.6 **LOGGED (FT.):** 51.0 **LOG TYPE:**
SOURCE: MIDWEST SF0787 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300615000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NE SW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.060317 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.494082 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 555.3 **LOGGED (FT.):** 30.5 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 789 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
555.3			CLAY	15.3	0.0	
540.0			SANDY CLAY	10.2	15.3	YELLOW
529.9			CLAY	4.2	25.4	LT GY
525.7			LIMESTONE	0.7	29.6	
525.0			LIMESTONE	0.3	30.3	ABOVE #6 COAL

MAPID: 16300616000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SE SW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.06032 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.492241 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 553.1 **LOGGED (FT.):** 26.5 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 790 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
553.1			CLAY	15.0	0.0	
538.1			CLAY	9.0	15.0	GRAY
529.1			BOULDER	1.5	24.0	
527.6			LIMESTONE	1.0	25.5	ABOVE #6 COAL

MAPID: 16300616000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SE SW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.06032 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.492241 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 553.1 **LOGGED (FT.):** 27.0 **LOG TYPE:**
SOURCE: MIDWEST SF0790 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300617000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1180' S line, 0' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.054396 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.487101 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 577.1 **LOGGED (FT.):** 54.3 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 791 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
577.1			CLAY	21.0	0.0	
556.1			GRAVEL	5.3	21.0	YELLOW
550.8			CLAY	17.8	26.3	YELLOW
533.1			CLAY	1.0	44.0	RED
532.1			CLAY	6.9	45.0	GRAY
525.2			LIMESTONE	2.4	51.9	

MAPID: 16300617000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1180' S line, 0' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.054396 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.487101 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 577.1 **LOGGED (FT.):** 54.0 **LOG TYPE:**
SOURCE: MIDWEST SF0791 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300618000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW/c SE NE NE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.055514 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.495828 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 553.2 LOGGED (FT.): 44.6 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 792 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
553.2			CLAY	13.0	0.0	
540.2			CLAY	14.0	13.0	GRAY
526.2			CLAY	3.3	27.0	YELLOW
522.9			CLAY	6.8	30.3	GRAY
516.1			LIMESTONE	3.4	37.1	
512.7			LIMESTONE	3.7	40.5	BOTTON 2' 10" STREAKY
509.0			LIMESTONE	0.4	44.2	

MAPID: 16300618000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW/c SE NE NE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.055514 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.495828 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 553.2 LOGGED (FT.): 45.0 LOG TYPE:
 SOURCE: MIDWEST SF0792 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300619000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NE NE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.056705 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.496769 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 538.5 LOGGED (FT.): 34.5 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 793 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
538.5			CLAY	5.0	0.0	
533.5			CLAY	9.0	5.0	GRAY
524.5			CLAY	7.1	14.0	YELLOW
517.4			CLAY	1.9	21.1	GRAY
515.5			LIMESTONE	4.3	23.0	HARD STREAKS
511.2			SHALE	6.8	27.3	
504.3			LIMESTONE	0.3	34.2	

MAPID: 16300619000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.056705 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.496769 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 538.5 **LOGGED (FT.):** 35.0 **LOG TYPE:**
SOURCE: MIDWEST SF0793 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300620000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NW NE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.057904 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.497713 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 529.3 **LOGGED (FT.):** 27.9 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 794 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
529.3			CLAY	3.0	0.0	
526.3			CLAY	5.9	3.0	GRAY
520.4			LIMESTONE	1.1	8.9	
519.3			UNCLASSIFIED	0.2	10.0	
519.1			LIMESTONE	0.8	10.2	
518.4			SHALE	5.5	10.9	LT GY
512.9			LIMESTONE	0.3	16.4	
512.6			SHALE	2.8	16.7	LT GY
509.9			LIMESTONE	0.4	19.4	
509.5			SHALE	8.0	19.8	
501.5			LIMESTONE	0.1	27.8	STOPPED IN LS NEAR #5 CO

MAPID: 16300620000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NW NE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.057904 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.497713 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 529.3 **LOGGED (FT.):** 28.0 **LOG TYPE:**
SOURCE: MIDWEST SF0794 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300621000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.061515 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.493184 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 558.3 LOGGED (FT.): 54.8 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 797 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
558.3			CLAY	5.3	0.0	
553.0			CLAY	22.6	5.3	GRAY
530.5			CLAY	7.3	27.8	GRAY
523.2			LIMESTONE	2.2	35.1	
521.0			CLAYSTONE	1.8	37.3	GRAY
519.3			LIMESTONE	0.8	39.0	
518.5			CLAYSTONE	2.4	39.8	GRAY
516.0			LIMESTONE	1.5	42.3	
514.5			CLAYSTONE	0.8	43.8	GRAY
513.8	CARBONDALE	ANNA	BLACK SHALE	2.8	44.5	
511.0	CARBONDALE	HERRIN	COAL	6.3	47.3	ELEV TOP 511.06
504.7	CARBONDALE		UNDERCLAY	1.2	53.6	

MAPID: 16300621000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.061515 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.493184 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 558.3 LOGGED (FT.): 55.0 LOG TYPE:

SOURCE: MIDWEST SF0797 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
511.3	CARBONDALE	HERRIN	COAL	6.3	47.0	

MAPID: 16300622000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SE/c SW SW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.062709 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.492287 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 553.1 **LOGGED (FT.):** 26.1 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 798 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
553.1			CLAY	14.0	0.0	
539.1			CLAY	11.1	14.0	GRAY
528.0			LIMESTONE	1.0	25.1	LS ABOVE #6 CO

MAPID: 16300622000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SE/c SW SW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.062709 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.492287 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 553.1 **LOGGED (FT.):** 26.0 **LOG TYPE:**
SOURCE: MIDWEST SF0798 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300623000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NE SW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.060317 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.494082 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 563.8 **LOGGED (FT.):** 54.5 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 799 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
563.8			CLAY	20.3	0.0	
543.5			CLAY	7.5	20.3	YELLOW
536.0			SANDY CLAY	11.7	27.8	YELLOW
524.4			CLAY	6.0	39.4	GRAY
518.4			LIMESTONE	0.8	45.4	
517.5			CLAYSTONE	8.3	46.3	GRAY

MAPID: 16300623000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NE SW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.060317 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.494082 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 563.8 **LOGGED (FT.):** 55.0 **LOG TYPE:**
SOURCE: MIDWEST SF0799 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300624000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SW NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071078 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.49337 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 570.2 **LOGGED (FT.):** 43.7 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 800 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
570.2			CLAY	27.3	0.0
542.9			LIMESTONE	1.0	27.3
541.9			CLAYSTONE	2.5	28.3 BROWN
539.4			SHALE	1.6	30.8
537.9	CARBONDALE	BRERETON	LIMESTONE	1.8	32.3
536.0	CARBONDALE	ANNA	BLACK SHALE	2.3	34.2
533.8	CARBONDALE	HERRIN	COAL	2.0	36.4 ELEV TOP 533.74
531.8	CARBONDALE	HERRIN	SHALE	0.1	38.4
531.7	CARBONDALE	HERRIN	COAL	1.1	38.5 DRILLED
530.6	CARBONDALE	HERRIN	COAL	0.9	39.6
529.7	CARBONDALE	HERRIN	SHALE	0.1	40.5
529.6	CARBONDALE	HERRIN	COAL	2.8	40.6
526.9	CARBONDALE		CLAYSTONE	0.3	43.3

MAPID: 16300624000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SW NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071078 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.49337 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 570.2 **LOGGED (FT.):** 44.0 **LOG TYPE:**
SOURCE: MIDWEST SF0800 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
534.2	CARBONDALE	HERRIN	COAL	6.8	36.0

MAPID: 16300625000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NW SW NW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.072284 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.494313 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 560.5 LOGGED (FT.): 45.3 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 801 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.5			CLAY	13.3	0.0	
547.2			CLAY	7.7	13.3	GRAY
539.5			CLAY	7.6	21.0	GRAY
531.9			CLAY	2.8	28.6	YELLOW
529.2			CLAY	9.6	31.3	GRAY
519.6			GRAVEL	4.0	40.9	YELLOW
515.6			LIMESTONE	0.4	44.9	

MAPID: 16300625000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NW SW NW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.072284 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.494313 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 560.5 LOGGED (FT.): 45.0 LOG TYPE:
 SOURCE: MIDWEST SF0801 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300626000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SE NW NE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.060314 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.495921 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 550.3 LOGGED (FT.): 53.3 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 802 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.3			CLAY	14.6	0.0	
535.7			CLAY	4.1	14.6	YELLOW
531.6			SANDY CLAY	14.9	18.7	YELLOW
516.7			CLAY	4.3	33.6	GRAY
512.4			LIMESTONE	10.6	37.9	
501.8			SHALE	4.8	48.5	

MAPID: 16300626000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SE NW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.060314 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.495921 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 550.3 **LOGGED (FT.):** 53.0 **LOG TYPE:**
SOURCE: MIDWEST SF0802 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300627000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SW SW NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072258 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.492472 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 571.3 **LOGGED (FT.):** 44.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 803 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
571.3			CLAY	44.0	0.0	AUGERED

MAPID: 16300627000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SW SW NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072258 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.492472 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 571.3 **LOGGED (FT.):** 44.0 **LOG TYPE:**
SOURCE: MIDWEST SF0803 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300628000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES:

QUADRANGLE: MILLSTADT

LONGITUDE: -90.0639

GEOLOGIST: HINES

CONFIDENTIAL: N

LATITUDE: 38.491389

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 563.8

LOGGED (FT.): 34.9

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 804

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
563.8			CLAY	20.4	0.0	
543.4			CLAY	7.8	20.4	GRAY
535.6	CARBONDALE	HERRIN	COAL	2.9	28.2	
532.7	CARBONDALE	HERRIN	COAL	1.3	31.1	
531.4	CARBONDALE	HERRIN	COAL	1.8	32.4	
529.5	CARBONDALE		CLAYSTONE	0.7	34.3	

MAPID: 16300628000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES:

QUADRANGLE: MILLSTADT

LONGITUDE: -90.0639

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N

LATITUDE: 38.491389

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 563.8

LOGGED (FT.): 35.0

LOG TYPE:

SOURCE: MIDWEST SF0804

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
535.8	CARBONDALE	HERRIN	COAL	6.1	28.0	

MAPID: 16300629000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SE NW NE

QUADRANGLE: MILLSTADT

LONGITUDE: -90.060314

GEOLOGIST: HINES

CONFIDENTIAL: N

LATITUDE: 38.495921

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 538.9

LOGGED (FT.): 51.6

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 805

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
538.9			CLAY	4.5	0.0	
534.4			CLAY	12.1	4.5	LT GY
522.3			CLAY	9.2	16.6	GRAY
513.1			LIMESTONE	0.7	25.8	
512.5			CLAYSTONE	25.2	26.4	GRAY

MAPID: 16300629000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SE NW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.060314 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.495921 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 538.9 **LOGGED (FT.):** 52.0 **LOG TYPE:**
SOURCE: MIDWEST SF0805 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300630000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NW SW NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072284 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.494313 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 565.6 **LOGGED (FT.):** 39.8 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 806 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
565.6			CLAY	17.5	0.0	
548.1			GRAVEL	7.4	17.5	YELLOW
540.7			CALCAREOUS SHALE	2.6	24.9	
538.1			SHALE	1.4	27.5	
536.7	CARBONDALE	BRERETON	LIMESTONE	1.2	28.9	
535.5	CARBONDALE	ANNA	SHALE	0.8	30.1	
534.7	CARBONDALE	ANNA	SHALE	2.2	30.9	
532.5	CARBONDALE	HERRIN	COAL	5.7	33.1	ELEV TOP 532.56
526.8	CARBONDALE		CLAYSTONE	1.0	38.8	

MAPID: 16300630000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NW SW NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072284 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.494313 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 565.6 **LOGGED (FT.):** 40.0 **LOG TYPE:**
SOURCE: MIDWEST SF0806 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
532.6	CARBONDALE	HERRIN	COAL	5.7	33.0	

MAPID: 16300631000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.072258

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.492472

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 570.8 LOGGED (FT.): 41.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 807

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.8			CLAY	26.7	0.0	
544.1			GRAVEL	2.0	26.7	BROWN
542.1			LIMESTONE	0.9	28.7	
541.2			CLAYSTONE	2.4	29.6	GRAY
538.8	CARBONDALE	ANNA	SOFT SHALE	2.3	32.0	
536.5	CARBONDALE	HERRIN	COAL	1.9	34.3	ELEV TOP 536.51
534.6	CARBONDALE	HERRIN	SHALE	0.1	36.2	
534.5	CARBONDALE	HERRIN	COAL	2.3	36.3	
532.3	CARBONDALE	HERRIN	SHALE	0.1	38.5	
532.2	CARBONDALE	HERRIN	COAL	2.1	38.6	
530.1	CARBONDALE		CLAYSTONE	0.3	40.7	

MAPID: 16300631000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.072258

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.492472

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 570.8 LOGGED (FT.): 41.0

LOG TYPE:

SOURCE: MIDWEST SF0807

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
536.8	CARBONDALE	HERRIN	COAL	6.4	34.0	

MAPID: 16300632000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SE NE SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.055573 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.488467 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 577.5 LOGGED (FT.): 38.7 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 808 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
577.5			CLAY	4.5	0.0	
573.0			CLAY	21.7	4.5	GRAY
551.3	CARBONDALE	BRERETON	LIMESTONE	1.2	26.2	
550.2	CARBONDALE	ANNA	SHALE	2.7	27.3	
547.5	CARBONDALE	ANNA	SHALE	1.6	30.0	
545.9	CARBONDALE	HERRIN	COAL	4.5	31.6	'5" PARTING AT 33 FT AND 7 INCHES'
541.5	CARBONDALE	HERRIN	PYRITE	0.0	36.0	
541.4	CARBONDALE	HERRIN	COAL	1.6	36.1	
539.8	CARBONDALE		CLAYSTONE	1.0	37.7	

MAPID: 16300632000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SE NE SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.055573 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.488467 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 577.5 LOGGED (FT.): 39.0 LOG TYPE:

SOURCE: MIDWEST SF0808 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.5	CARBONDALE	HERRIN	COAL	6.1	32.0	

MAPID: 16300633000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NE/c NW NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.072237 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.490631 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 556.9 LOGGED (FT.): 22.7 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 809 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
556.9			CLAY	14.2	0.0	
542.7			SHALE	0.7	14.2	
542.1	CARBONDALE	ANNA	BLACK SHALE	1.3	14.8	
540.7	CARBONDALE	HERRIN	COAL	2.0	16.2	ELEV TOP 540.74
538.7	CARBONDALE	HERRIN	SHALE	0.1	18.2	
538.6	CARBONDALE	HERRIN	COAL	1.0	18.3	
537.6	CARBONDALE	HERRIN	SHALE	0.1	19.3	
537.6	CARBONDALE	HERRIN	COAL	0.4	19.3	
537.1	CARBONDALE	HERRIN	PYRITE	0.1	19.8	
537.1	CARBONDALE	HERRIN	COAL	2.3	19.8	
534.8	CARBONDALE		UNDERCLAY	0.6	22.1	

MAPID: 16300633000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: NE/c NW NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.072237 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.490631 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 556.9 LOGGED (FT.): 23.0 LOG TYPE:

SOURCE: MIDWEST SF0809 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.9	CARBONDALE	HERRIN	COAL	5.9	16.0	

MAPID: 16300634000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NW/c NW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071031 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.48969 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 552.6 **LOGGED (FT.):** 17.3 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 810 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
552.6			CLAY	13.3	0.0	
539.3	CARBONDALE	HERRIN	COAL	1.8	13.3	ELEV TOP 539.23
537.5	CARBONDALE	HERRIN	COAL	1.2	15.1	
536.3	CARBONDALE		UNDERCLAY	1.0	16.3	

MAPID: 16300634000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** NW/c NW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071031 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.48969 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 552.6 **LOGGED (FT.):** 17.0 **LOG TYPE:**
SOURCE: MIDWEST SF 810 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
539.6	CARBONDALE	HERRIN	COAL	2.9	13.0	

MAPID: 16300635000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SE/c NE SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.056753 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.489411 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 576.2 **LOGGED (FT.):** 42.3 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 811 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
576.2			CLAY	6.0	0.0	
570.2			CLAY	19.6	6.0	GRAY
550.6			SHALE	4.0	25.6	
546.6			SHALE	6.2	29.6	
540.4			SMUT	1.8	35.8	
538.7	CARBONDALE	HERRIN	COAL	3.7	37.5	WEATHERED HERRIN?
535.0	CARBONDALE		CLAYSTONE	1.2	41.2	

MAPID: 16300635000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SE/c NE SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.056753 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.489411 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 576.2 **LOGGED (FT.):** 42.0 **LOG TYPE:**
SOURCE: MIDWEST SF0811 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.2	CARBONDALE	HERRIN	COAL	5.4	36.0	

MAPID: 16300636000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SW/c SE SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.056777 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.485731 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 576.1 **LOGGED (FT.):** 50.6 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 812 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
576.1			CLAY	6.0	0.0	
570.1			CLAY	23.3	6.0	GRAY
546.8			LIMESTONE	0.6	29.3	
546.2			SHALE	2.0	29.9	
544.2			CLAYSTONE	18.7	31.9	GRAY

MAPID: 16300636000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SW/c SE SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.056777 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.485731 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 576.1 **LOGGED (FT.):** 51.0 **LOG TYPE:**
SOURCE: MIDWEST SF0812 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300637000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW/c NW NW NE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.062714 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.497809 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 549.6 LOGGED (FT.): 50.5 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 844 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
549.6			CLAY	15.6	0.0	
534.0			CLAY	12.0	15.6	GRAY
522.0			SANDY CLAY	17.6	27.6	DARK GRAY
504.4			SHALE	4.6	45.2	
499.8			COAL	0.3	49.8	
499.6			UNDERCLAY	0.3	50.0	
499.3			LIMESTONE	0.3	50.3	

MAPID: 16300637000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW/c NW NW NE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.062714 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.497809 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 549.6 LOGGED (FT.): 51.0 LOG TYPE:
 SOURCE: MIDWEST SF0844 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300638000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 165' S line, 165' W line of NW NW NE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.063336 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.497356 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 544.5 LOGGED (FT.): 43.5 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 846 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
544.5			CLAY	10.0	0.0	
534.5			CLAY	23.3	10.0	GRAY
511.2			BLACK SHALE	2.3	33.3	
508.9			UNCLASSIFIED	0.7	35.6	IN COAL
508.2	CARBONDALE	HERRIN	COAL	5.8	36.3	
502.5	CARBONDALE		UNDERCLAY	1.5	42.0	

MAPID: 16300638000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 165' S line, 165' W line of NW NW NE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.063336 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.497356 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 544.5 LOGGED (FT.): 44.0 LOG TYPE:
 SOURCE: MIDWEST SF0846 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
508.5	CARBONDALE	HERRIN	COAL	5.8	36.0	

MAPID: 16300639000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW SW NW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.072258 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.492472 DATE COLLECTED: 5 / 30 / 1928
 SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 40.8 LOG TYPE: Drillers Log
 SOURCE: MISSISSIPPI COAL CORP. 183 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.0			UNCONSOLIDATED	20.0	0.0	
530.0			CLAY	7.0	20.0	
523.0			SHALE	3.0	27.0	LIGHT
520.0			ROCK	1.0	30.0	
519.0			CLAYSTONE	0.7	31.0	
518.3			ROCK	5.8	31.7	
512.5			SHALE	1.0	37.5	
511.5			SMUT	1.0	38.5	
510.5	CARBONDALE	HERRIN	COAL	1.3	39.5	

MAPID: 16300639000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW SW NW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.072258 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.492472 DATE COLLECTED: 0 / 0 / 1928
 SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 41.0 LOG TYPE:
 SOURCE: MISSISSIPPI COAL CORP. 0183 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		
511.0	CARBONDALE	SPRINGFIELD	COAL	2.3	39.0	

MAPID: 16300748000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.057968 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.484833 DATE COLLECTED: 7 / 7 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 55.0 LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 136B WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	15.0	0.0	
-			SHALE	15.0	15.0	
-			ROCK	9.0	30.0	
-			SHALE	4.0	39.0	
-			SHALE	12.0	43.0	NO COAL

MAPID: 16300748000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.057968 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.484833 DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 55.0 LOG TYPE:

SOURCE: MISSISSIPPI COAL CORP. 136B WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300749000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: SW NE SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.067458 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.488699 DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): 570.0 LOGGED (FT.): 45.3 LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 158A WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.0			UNCONSOLIDATED	26.0	0.0	
544.0			LIMESTONE	11.0	26.0	
533.0	CARBONDALE	ANNA	BLACK SHALE	2.0	37.0	
531.0	CARBONDALE	HERRIN	COAL	6.3	39.0	

MAPID: 16300749000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SW NE SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.067458 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.488699 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 570.0 **LOGGED (FT.):** 45.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 158A **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
531.0	CARBONDALE	HERRIN	COAL	6.3	39.0	

MAPID: 16300750000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SW NW NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072309 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.496155 **DATE COLLECTED:** 6 / 7 / 1928
SURFACE ELEVATION (FT.): 545.0 **LOGGED (FT.):** 40.0 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 208 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.0			UNCONSOLIDATED	30.0	0.0	
515.0			SHALE	3.0	30.0	
512.0			MUDSTONE	7.0	33.0	STOPPED ON ACCOUNT OF MUD; BLUE

MAPID: 16300750000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** SW NW NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072309 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.496155 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 545.0 **LOGGED (FT.):** 40.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0208 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16303326000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 100' N line, 50' E line of NW NW NE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.061686 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.498432 DATE COLLECTED: 11 / 1 / 1971
 SURFACE ELEVATION (FT.): LOGGED (FT.): 102.0 LOG TYPE: Drillers Log
 SOURCE: HANDRESH DRILLING CO. 321 WELL TYPE: Water Well
 COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	40.0	0.0	YELLOW
-			SAND	3.0	40.0	
-	CARBONDALE	ANNA	SHALE	6.0	43.0	
-	CARBONDALE	HERRIN	COAL	5.0	49.0	
-	CARBONDALE		SHALE	23.0	54.0	
-	CARBONDALE		LIMESTONE	9.0	77.0	
-	CARBONDALE		SHALE	3.0	86.0	
-	CARBONDALE	SPRINGFIELD	COAL	1.0	89.0	
-	CARBONDALE		SHALE	12.0	90.0	

MAPID: 16327260000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 2550' S line, 1500' E line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.059629 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.490985 DATE COLLECTED: 6 / 5 / 1928
 SURFACE ELEVATION (FT.): 570.0 LOGGED (FT.): 32.8 LOG TYPE: Drillers Log
 SOURCE: MISSISSIPPI COAL CORP. 136 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.0			UNCONSOLIDATED	20.0	0.0	
550.0			SHALE	5.0	20.0	
545.0			LIMESTONE	5.5	25.0	
539.5			SMUT	0.5	30.5	
539.0			BLACK SHALE	1.8	31.0	

MAPID: 16327260000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 2550' S line, 1500' E line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.059629 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.490985 DATE COLLECTED: 0 / 0 / 1928
 SURFACE ELEVATION (FT.): 570.0 LOGGED (FT.): 39.0 LOG TYPE:
 SOURCE: MISSISSIPPI COAL CORP. 0136 WELL TYPE: Coal Test
 COMMENT: FORMERLY CTY# 429

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
537.0	CARBONDALE	HERRIN	COAL	5.8	33.0	

MAPID: 16327755000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 250' S line, 630' W line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071238 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.492223 DATE COLLECTED: 12 / 31 / 1938

SURFACE ELEVATION (FT.): 570.7 LOGGED (FT.): 42.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.7	PLEISTOCENE		CLAY	25.0	0.0	
545.7	CARBONDALE		LIMESTONE	1.0	25.0	
544.7	CARBONDALE		SHALE	1.0	26.0	
543.7	CARBONDALE	BRERETON	LIMESTONE	3.5	27.0	
540.2	CARBONDALE	ANNA	BLACK SHALE	4.5	30.5	
535.7	CARBONDALE	HERRIN	COAL	6.6	35.0	HARD
529.1	CARBONDALE		UNDERCLAY	0.4	41.6	

MAPID: 16327756000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 100' S line, 590' W line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071371 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.491811 DATE COLLECTED:

SURFACE ELEVATION (FT.): 568.1 LOGGED (FT.): 36.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 2 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
568.1	PLEISTOCENE		CLAY	23.0	0.0	
545.1			SHALE	5.0	23.0	
540.1			BLUE SHALE	2.0	28.0	
538.1	CARBONDALE	HERRIN	COAL	3.0	30.0	SOFT
535.1	CARBONDALE	HERRIN	COAL	3.0	33.0	HARD
532.1	CARBONDALE		UNDERCLAY	0.5	36.0	

MAPID: 16327757000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1665' N line, 900' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.067046 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.486855 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 43.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 2 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		CLAY	27.0	0.0
-			LIMESTONE	1.0	27.0
-			SHALE	1.0	28.0
-			LIMESTONE	3.0	29.0
-			BLUE SHALE	1.0	32.0
-			LIMESTONE	1.0	33.0
-			BLACK SHALE	1.0	34.0
-	CARBONDALE	BRERETON	LIMESTONE	1.0	35.0
-	CARBONDALE	ANNA	BLACK SHALE	0.7	36.0
-	CARBONDALE	HERRIN	COAL	5.7	36.7
-	CARBONDALE		UNDERCLAY	0.7	42.3

MAPID: 16327758000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 130' S line, 650' W line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071161 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.491889 DATE COLLECTED:

SURFACE ELEVATION (FT.): 568.7 LOGGED (FT.): 38.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
568.7	PLEISTOCENE		CLAY	23.0	0.0
545.7	CARBONDALE		SHALE	8.5	23.0
537.2	CARBONDALE	ANNA	BLACK SHALE	1.0	31.5
536.2	CARBONDALE	HERRIN	COAL	1.0	32.5 SOFT
535.2	CARBONDALE	HERRIN	COAL	4.3	33.5 HARD
530.9	CARBONDALE		UNDERCLAY	0.8	37.8

MAPID: 16327759000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1630' N line, 635' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.066116 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.486934 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 31.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		CLAY	21.0	0.0	
-	CARBONDALE	ANNA	BLACK SHALE	3.5	21.0	
-	CARBONDALE	HERRIN	COAL	6.8	24.5	
-	CARBONDALE		UNDERCLAY	0.3	31.3	

MAPID: 16327760000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 510' S line, 480' W line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071774 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.492952 DATE COLLECTED: 12 / 15 / 1938

SURFACE ELEVATION (FT.): 572.3 LOGGED (FT.): 43.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 4 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
572.3	PLEISTOCENE		CLAY	27.5	0.0	
544.8	CARBONDALE	BRERETON	LIMESTONE	4.5	27.5	
540.3	CARBONDALE	ANNA	BLACK SHALE	4.5	32.0	
535.8	CARBONDALE	HERRIN	COAL	6.5	36.5	HARD
529.3	CARBONDALE		UNDERCLAY	0.5	43.0	

MAPID: 16327761000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1300' N line, 875' E line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.066963 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.487863 DATE COLLECTED:
 SURFACE ELEVATION (FT.): LOGGED (FT.): 36.5 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 4 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		CLAY	16.5	0.0
-	CARBONDALE		LIMESTONE	2.5	16.5
-	CARBONDALE		SHALE	1.0	19.0
-	CARBONDALE	BRERETON	LIMESTONE	6.0	20.0
-	CARBONDALE	ANNA	BLACK SHALE	4.0	26.0
-	CARBONDALE	HERRIN	COAL	6.0	30.0
-	CARBONDALE		UNDERCLAY	0.5	36.0

MAPID: 16327762000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 940' S line, 350' W line of NW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.072251 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.494148 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 562.2 LOGGED (FT.): 33.5 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 5 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
562.2	PLEISTOCENE		CLAY	26.5	0.0
535.7	CARBONDALE	HERRIN	COAL	6.2	26.5 SOFT, TOP OF COAL ERODED
529.5	CARBONDALE		UNDERCLAY	0.8	32.7

MAPID: 16327763000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 2255' N line, 265' E line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.064813 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.485184 DATE COLLECTED:
 SURFACE ELEVATION (FT.): LOGGED (FT.): 41.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 5 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		CLAY	27.0	0.0
-	CARBONDALE	BRERETON	LIMESTONE	5.0	27.0
-	CARBONDALE	ANNA	BLACK SHALE	2.5	32.0
-	CARBONDALE	HERRIN	COAL	6.2	34.5
-	CARBONDALE		UNDERCLAY	0.3	40.7

MAPID: 16327764000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1080' S line, 275' W line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.072521 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.494539 DATE COLLECTED: 12 / 16 / 1938

SURFACE ELEVATION (FT.): 546.7 LOGGED (FT.): 25.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
546.7	PLEISTOCENE		CLAY	20.0	0.0	
526.7	CARBONDALE	HERRIN	COAL	2.0	20.0	SOFT, TOP OF COAL ERODED
524.7	CARBONDALE		UNDERCLAY	3.0	22.0	

MAPID: 16327765000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1880' N line, 10' W line of SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.063848 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.486199 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 54.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		CLAY	27.0	0.0	
-	CARBONDALE		LIMESTONE	4.0	27.0	
-	CARBONDALE		SHALE	10.0	31.0	
-	CARBONDALE		BLUE SHALE	3.0	41.0	
-	CARBONDALE	BRERETON	LIMESTONE	2.5	44.0	
-	CARBONDALE	ANNA	BLACK SHALE	0.5	46.5	
-	CARBONDALE	HERRIN	COAL	6.3	47.0	
-	CARBONDALE		UNDERCLAY	0.7	53.3	

MAPID: 16327766000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1290' N line, 160' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064451 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.487839 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 36.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 7 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		CLAY	23.0	0.0
-	CARBONDALE		LIMESTONE	1.5	23.0
-	CARBONDALE		SHALE	1.0	24.5
-	CARBONDALE	BRERETON	LIMESTONE	3.5	25.5
-	CARBONDALE	ANNA	BLACK SHALE	1.5	29.0
-	CARBONDALE	HERRIN	COAL	5.5	30.5
-	CARBONDALE		UNDERCLAY	0.5	36.0

MAPID: 16327767000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 730' N line, 35' W line of SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.063771 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.489372 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 40.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 8 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		CLAY	15.0	0.0
-	CARBONDALE	BRERETON	LIMESTONE	18.0	15.0
-	CARBONDALE	ANNA	BLACK SHALE	1.0	33.0
-	CARBONDALE	HERRIN	COAL	5.8	34.0
-	CARBONDALE		UNDERCLAY	0.7	39.8

MAPID: 16327768000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 570' N line, 240' W line of SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.063051 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.4898 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 42.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 9 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		CLAY	23.0	0.0
-	CARBONDALE		LIMESTONE	1.0	23.0
-	CARBONDALE		SHALE	5.0	24.0
-	CARBONDALE	BRERETON	LIMESTONE	5.5	29.0
-	CARBONDALE	ANNA	BLACK SHALE	1.0	34.5
-	CARBONDALE	HERRIN	COAL	6.3	35.5
-	CARBONDALE		UNDERCLAY	0.7	41.8

MAPID: 16327769000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 290' N line, 535' W line of SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.062017 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.490554 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 32.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 10 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		CLAY	10.0	0.0
-	CARBONDALE	BRERETON	LIMESTONE	12.5	10.0
-	CARBONDALE	ANNA	BLACK SHALE	2.5	22.5
-	CARBONDALE	HERRIN	COAL	6.7	25.0
-	CARBONDALE		UNDERCLAY	0.3	31.7

MAPID: 1632777000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 50' N line, 430' W line of SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.062388 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.491223 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 34.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 11 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		CLAY	12.0	0.0
-	CARBONDALE		LIMESTONE	2.0	12.0
-	CARBONDALE		SHALE	2.0	14.0
-	CARBONDALE		LIMESTONE	2.0	16.0
-	CARBONDALE		SHALE	1.5	18.0
-	CARBONDALE	BRERETON	LIMESTONE	5.0	19.5
-	CARBONDALE	ANNA	BLACK SHALE	3.0	24.5
-	CARBONDALE	HERRIN	COAL	6.5	27.5
-	CARBONDALE		UNDERCLAY	0.5	34.0

MAPID: 16327771000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 195' N line, 8' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.063927 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.490854 DATE COLLECTED: 9 / 19 / 1940

SURFACE ELEVATION (FT.): LOGGED (FT.): 64.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 12 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		CLAY	28.0	0.0
-			SHALE	36.0	28.0 SOFT

MAPID: 16327772000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 295' N line, 24' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.063981 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.490577 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 65.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 13 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		CLAY	25.0	0.0	
-			SHALE	23.0	25.0	
-			LIMESTONE	1.0	48.0	
-			SHALE	6.0	49.0	
-			LIMESTONE	1.5	55.0	
-			SHALE	8.5	56.5	

MAPID: 16327773000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 395' N line, 10' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.06393 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.490301 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 36.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 14 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		CLAY	15.0	0.0	
-	CARBONDALE		LIMESTONE	1.5	15.0	
-	CARBONDALE		SHALE	2.5	16.5	
-	CARBONDALE		LIMESTONE	1.0	19.0	
-	CARBONDALE		SHALE	2.0	20.0	
-	CARBONDALE	BRERETON	LIMESTONE	5.0	22.0	
-	CARBONDALE	ANNA	BLACK SHALE	3.0	27.0	
-	CARBONDALE	HERRIN	COAL	1.5	30.0	SOFT
-	CARBONDALE	HERRIN	COAL	2.5	31.5	HARD
-	CARBONDALE		UNDERCLAY	2.0	34.0	

MAPID: 16327774000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1120' S line, 100' W line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.073025 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.487297 DATE COLLECTED: 12 / 29 / 1938
 SURFACE ELEVATION (FT.): 560.9 LOGGED (FT.): 14.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 17 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.9	PLEISTOCENE		CLAY	8.5	0.0	
552.4	CARBONDALE	HERRIN	COAL	5.0	8.5	TOP OF COAL ERODED
547.4	CARBONDALE		UNDERCLAY	0.5	13.5	

MAPID: 16327775000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 195' N line, 100' E line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.06425 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.490858 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 561.9 LOGGED (FT.): 60.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 22 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
561.9	PLEISTOCENE		CLAY	23.0	0.0	
538.9			SHALE	37.0	23.0	

MAPID: 16327776000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 200' N line, 195' E line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.064584 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.49085 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 563.5 LOGGED (FT.): 55.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 23 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
563.5	PLEISTOCENE		CLAY	27.0	0.0	
536.5			GRAY SHALE	28.0	27.0	

MAPID: 16327777000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 195' N line, 300' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.06495 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.490874 DATE COLLECTED:

SURFACE ELEVATION (FT.): 566.3 LOGGED (FT.): 55.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 24 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
566.3	PLEISTOCENE		CLAY	28.0	0.0
538.3			SHALE	27.0	28.0

MAPID: 16327778000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 200' N line, 400' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.065304 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.490866 DATE COLLECTED:

SURFACE ELEVATION (FT.): 567.9 LOGGED (FT.): 60.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 25 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
567.9	PLEISTOCENE		CLAY	30.0	0.0
537.9	CARBONDALE		SHALE	14.0	30.0
523.9	CARBONDALE		LIMESTONE	3.0	44.0
520.9	CARBONDALE		SHALE	0.5	47.0
520.4	CARBONDALE	BRERETON	LIMESTONE	2.5	47.5
517.9	CARBONDALE	ANNA	BLACK SHALE	3.5	50.0
514.4	CARBONDALE	HERRIN	COAL	6.2	53.5
508.2	CARBONDALE		UNDERCLAY	0.3	59.7

MAPID: 16327779000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 650' S line, 170' W line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.072758 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.485993 DATE COLLECTED:

SURFACE ELEVATION (FT.): 577.4 LOGGED (FT.): 28.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 26 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
577.4	PLEISTOCENE		CLAY	18.0	0.0
559.4	CARBONDALE	BRERETON	LIMESTONE	3.0	18.0
556.4	CARBONDALE		SHALE	1.0	21.0
555.4	CARBONDALE	HERRIN	COAL	5.7	22.0
549.7	CARBONDALE		UNDERCLAY	0.3	27.7

MAPID: 1632778000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 580' N line, 400' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.0653 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.489817 DATE COLLECTED:

SURFACE ELEVATION (FT.): 562.4 LOGGED (FT.): 55.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 27 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
562.4	PLEISTOCENE		CLAY	30.0	0.0
532.4			GRAY SHALE	25.0	30.0

MAPID: 16327781000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 800' S line, 690' W line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.070938 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.486372 DATE COLLECTED:

SURFACE ELEVATION (FT.): 581.5 LOGGED (FT.): 37.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 28 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
581.5	PLEISTOCENE		CLAY	21.0	0.0
560.5			SHALE	3.0	21.0
557.5	CARBONDALE		BLUE SHALE	4.0	24.0
553.5	CARBONDALE	BRERETON	LIMESTONE	2.5	28.0
551.0	CARBONDALE		SHALE	0.5	30.5
550.5	CARBONDALE	HERRIN	COAL	5.7	31.0 HARD
544.8	CARBONDALE		UNDERCLAY	0.3	36.7

MAPID: 16327782000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 740' N line, 620' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.066072 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.489391 DATE COLLECTED:

SURFACE ELEVATION (FT.): 561.7 LOGGED (FT.): 50.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 29 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
561.7	PLEISTOCENE		CLAY	34.0	0.0	
527.7	CARBONDALE		LIMESTONE	3.0	34.0	
524.7	CARBONDALE		SHALE	1.0	37.0	
523.7	CARBONDALE	BRERETON	LIMESTONE	3.0	38.0	
520.7	CARBONDALE	ANNA	BLACK SHALE	3.0	41.0	
517.7	CARBONDALE	HERRIN	COAL	6.2	44.0	HARD
511.5	CARBONDALE		UNDERCLAY	0.3	50.2	

MAPID: 16327783000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1100' S line, 970' W line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.069968 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.487183 DATE COLLECTED:

SURFACE ELEVATION (FT.): 573.1 LOGGED (FT.): 38.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 30 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
573.1	PLEISTOCENE		CLAY	23.0	0.0	
550.1			SHALE	4.0	23.0	
546.1	CARBONDALE	BRERETON	LIMESTONE	2.5	27.0	
543.6	CARBONDALE	ANNA	BLACK SHALE	2.0	29.5	
541.6	CARBONDALE	HERRIN	COAL	6.0	31.5	
535.6	CARBONDALE		UNDERCLAY	0.5	37.5	

MAPID: 16327784000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 905' N line, 630' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.066104 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.488935 DATE COLLECTED:

SURFACE ELEVATION (FT.): 554.9 LOGGED (FT.): 54.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 31 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
554.9	PLEISTOCENE		CLAY	28.0	0.0	
526.9			SHALE	26.0	28.0	

MAPID: 16327785000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 540' S line, 980' W line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.069906 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.485634 DATE COLLECTED:

SURFACE ELEVATION (FT.): 578.4 LOGGED (FT.): 39.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 32 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
578.4	PLEISTOCENE		CLAY	21.0	0.0	
557.4			SHALE	6.0	21.0	
551.4	CARBONDALE	BRERETON	LIMESTONE	5.0	27.0	
546.4	CARBONDALE	ANNA	BLACK SHALE	1.5	32.0	
544.9	CARBONDALE	HERRIN	COAL	5.0	33.5	HARD
539.9	CARBONDALE		UNDERCLAY	1.0	38.5	

MAPID: 16327786000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 910' N line, 820' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.066771 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.488935 DATE COLLECTED:

SURFACE ELEVATION (FT.): 567.7 LOGGED (FT.): 56.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 33 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
567.7	PLEISTOCENE		CLAY	30.0	0.0	
537.7	CARBONDALE		GRAY SHALE	18.0	30.0	
519.7	CARBONDALE	ANNA	BLACK SHALE	2.0	48.0	
517.7	CARBONDALE	HERRIN	COAL	1.0	50.0	SHELLY
516.7	CARBONDALE	HERRIN	COAL	4.0	51.0	HARD
512.7	CARBONDALE		UNDERCLAY	1.0	55.0	

MAPID: 16327787000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 990' N line, 865' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.066931 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.488716 DATE COLLECTED:

SURFACE ELEVATION (FT.): 570.7 LOGGED (FT.): 55.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 34 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.7	PLEISTOCENE		CLAY	30.0	0.0	
540.7			SHALE	25.0	30.0	

MAPID: 16327788000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1060' N line, 990' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.067369 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.488532 DATE COLLECTED:

SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 43.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 35 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.0	PLEISTOCENE		CLAY	33.0	0.0	
527.0	CARBONDALE	BRERETON	LIMESTONE	1.0	33.0	
526.0	CARBONDALE	ANNA	BLACK SHALE	3.5	34.0	
522.5	CARBONDALE	HERRIN	COAL	1.3	37.5	SHELLY
521.2	CARBONDALE	HERRIN	COAL	4.0	38.8	HARD
517.2	CARBONDALE		UNDERCLAY	0.8	42.8	

MAPID: 16327789000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1140' N line, 990' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.067367 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.488311 DATE COLLECTED:

SURFACE ELEVATION (FT.): 557.8 LOGGED (FT.): 40.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 36 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
557.8	PLEISTOCENE		CLAY	20.0	0.0	
537.8	CARBONDALE		LIMESTONE	3.0	20.0	
534.8	CARBONDALE		SHALE	2.0	23.0	
532.8	CARBONDALE	BRERETON	LIMESTONE	6.0	25.0	
526.8	CARBONDALE	ANNA	BLACK SHALE	2.5	31.0	
524.3	CARBONDALE	HERRIN	COAL	6.0	33.5	
518.3	CARBONDALE		UNDERCLAY	0.5	39.5	

MAPID: 1632779000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1180' N line, 620' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.066066 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.488176 DATE COLLECTED:

SURFACE ELEVATION (FT.): 552.7 LOGGED (FT.): 39.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 37 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
552.7	PLEISTOCENE		CLAY	16.0	0.0
536.7	CARBONDALE		LIMESTONE	1.0	16.0
535.7	CARBONDALE		SHALE	1.5	17.0
534.2	CARBONDALE		LIMESTONE	3.0	18.5
531.2	CARBONDALE		SHALE	1.5	21.5
529.7	CARBONDALE	BRERETON	LIMESTONE	6.0	23.0
523.7	CARBONDALE	ANNA	BLACK SHALE	3.0	29.0
520.7	CARBONDALE	HERRIN	COAL	6.5	32.0
514.2	CARBONDALE		UNDERCLAY	0.5	38.5

MAPID: 16327791000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1050' N line, 530' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.065753 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.488528 DATE COLLECTED:

SURFACE ELEVATION (FT.): 552.5 LOGGED (FT.): 37.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 38 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
552.5	PLEISTOCENE		CLAY	23.0	0.0
529.5	CARBONDALE		GRAY SHALE	5.0	23.0
524.5	CARBONDALE	ANNA	BLACK SHALE	2.5	28.0
522.0	CARBONDALE	HERRIN	COAL	6.5	30.5
515.5	CARBONDALE		UNDERCLAY	0.5	37.0

MAPID: 16327792000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1000' N line, 360' E line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.065157 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.488656 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 549.2 LOGGED (FT.): 45.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 39 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
549.2	PLEISTOCENE		CLAY	25.0	0.0
524.2			GRAY SHALE	20.0	25.0

MAPID: 16327793000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1080' N line, 650' E line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.066174 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.488455 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 566.7 LOGGED (FT.): 55.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 40 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
566.7	PLEISTOCENE		CLAY	32.0	0.0
534.7	CARBONDALE		LIMESTONE	1.0	32.0
533.7	CARBONDALE		SHALE	2.0	33.0
531.7	CARBONDALE		LIMESTONE	2.0	35.0
529.7	CARBONDALE		SHALE	3.0	37.0
526.7	CARBONDALE	BRERETON	LIMESTONE	5.5	40.0
521.2	CARBONDALE	ANNA	BLACK SHALE	2.5	45.5
518.7	CARBONDALE	HERRIN	COAL	6.3	48.0
512.4	CARBONDALE		UNDERCLAY	0.7	54.3

MAPID: 16327794000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1080' N line, 320' E line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.065015 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.48843 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 561.0 LOGGED (FT.): 50.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 41 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
561.0	PLEISTOCENE		CLAY	25.0	0.0
536.0			GRAY SHALE	25.0	25.0

MAPID: 16327795000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1190' N line, 375' E line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.065205 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.488131 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 565.0 LOGGED (FT.): 55.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 42 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
565.0	PLEISTOCENE		CLAY	30.0	0.0
535.0			SHALE	25.0	30.0

MAPID: 16327796000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1310' N line, 400' E line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.065294 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.487802 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 567.4 LOGGED (FT.): 53.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 43 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
567.4	PLEISTOCENE		CLAY	25.0	0.0
542.4	CARBONDALE		SHALE	16.0	25.0
526.4	CARBONDALE	BRERETON	LIMESTONE	4.0	41.0
522.4	CARBONDALE	ANNA	BLACK SHALE	1.0	45.0
521.4	CARBONDALE	HERRIN	COAL	6.5	46.0
514.9	CARBONDALE		UNDERCLAY	0.5	52.5

MAPID: 16327797000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1320' N line, 290' E line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.064907 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.487765 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 554.0 LOGGED (FT.): 45.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 44 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
554.0	PLEISTOCENE		CLAY	20.0	0.0
534.0			GRAY SHALE	25.0	20.0

MAPID: 16327798000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1340' N line, 620' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.066066 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.487734 DATE COLLECTED:

SURFACE ELEVATION (FT.): 566.5 LOGGED (FT.): 48.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 45 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
566.5	PLEISTOCENE		CLAY	29.0	0.0	
537.5	CARBONDALE		LIMESTONE	2.0	29.0	
535.5	CARBONDALE		SHALE	5.5	31.0	LOG SAYS "5.0" THICK
530.0	CARBONDALE	BRERETON	LIMESTONE	3.5	36.5	
526.5	CARBONDALE	ANNA	BLACK SHALE	1.0	40.0	
525.5	CARBONDALE	HERRIN	COAL	6.3	41.0	
519.2	CARBONDALE		UNDERCLAY	0.7	47.3	

MAPID: 16327799000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1220' N line, 510' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.065683 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.488057 DATE COLLECTED:

SURFACE ELEVATION (FT.): 550.1 LOGGED (FT.): 36.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 46 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.1	PLEISTOCENE		CLAY	18.0	0.0	
532.1	CARBONDALE		LIMESTONE	1.0	18.0	
531.1	CARBONDALE		LIMESTONE	2.0	19.0	
529.1	CARBONDALE		LIMESTONE	1.0	21.0	
528.1	CARBONDALE		SHALE	1.0	22.0	
527.1	CARBONDALE	BRERETON	LIMESTONE	4.5	23.0	
522.6	CARBONDALE	ANNA	BLACK SHALE	2.5	27.5	
520.1	CARBONDALE	HERRIN	COAL	6.2	30.0	
513.9	CARBONDALE		UNDERCLAY	0.3	36.2	

MAPID: 1632780000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1410' N line, 300' E line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.064941 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.487519 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 556.1 LOGGED (FT.): 46.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 47 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
556.1	PLEISTOCENE		CLAY	20.0	0.0	
536.1			LIMESTONE	1.0	20.0	
535.1			SHALE	22.0	21.0	
513.1			LIMESTONE	1.0	43.0	
512.1			SHALE	2.0	44.0	

MAPID: 16327801000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1525' N line, 340' E line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.065082 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.487204 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 561.0 LOGGED (FT.): 45.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 48 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
561.0	PLEISTOCENE		CLAY	20.0	0.0	
541.0	CARBONDALE		LIMESTONE	1.0	20.0	
540.0	CARBONDALE		GRAY SHALE	17.0	21.0	
523.0	CARBONDALE		BLUE SHALE	1.0	38.0	
522.0	CARBONDALE	HERRIN	COAL	1.0	39.0	SHELLY
521.0	CARBONDALE	HERRIN	COAL	4.2	40.0	HARD
516.8	CARBONDALE		UNDERCLAY	0.8	44.2	

MAPID: 16327802000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1550' N line, 260' E line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.064801 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.487131 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 568.7 LOGGED (FT.): 55.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 49 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
568.7	PLEISTOCENE		CLAY	25.0	0.0	
543.7			SHALE	30.0	25.0	

MAPID: 16327803000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1510' N line, 170' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064485 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.487234 DATE COLLECTED:

SURFACE ELEVATION (FT.): 556.4 LOGGED (FT.): 45.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 50 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
556.4	PLEISTOCENE		CLAY	25.0	0.0	
531.4			SHALE	20.0	25.0	

MAPID: 16327804000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1600' N line, 170' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064483 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.486986 DATE COLLECTED:

SURFACE ELEVATION (FT.): 558.4 LOGGED (FT.): 37.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 51 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
558.4	PLEISTOCENE		CLAY	20.0	0.0	
538.4	CARBONDALE		SHALE	11.0	20.0	
527.4	CARBONDALE	HERRIN	COAL	2.0	31.0	SOFT
525.4	CARBONDALE	HERRIN	COAL	2.0	33.0	SHELLY
523.4	CARBONDALE		UNDERCLAY	2.0	35.0	

MAPID: 16327805000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1710' N line, 150' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064414 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.48668 DATE COLLECTED:

SURFACE ELEVATION (FT.): 564.4 LOGGED (FT.): 40.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 52 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
564.4	PLEISTOCENE		CLAY	20.0	0.0	
544.4	CARBONDALE		SHALE	8.0	20.0	
536.4	CARBONDALE	BRERETON	LIMESTONE	3.0	28.0	
533.4	CARBONDALE	ANNA	BLACK SHALE	3.0	31.0	
530.4	CARBONDALE	HERRIN	COAL	4.0	34.0	
526.4	CARBONDALE		UNDERCLAY	2.0	38.0	

MAPID: 16327806000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1800' N line, 160' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064447 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.486431 DATE COLLECTED:

SURFACE ELEVATION (FT.): 564.4 LOGGED (FT.): 37.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 53 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
564.4	PLEISTOCENE		CLAY	26.0	0.0
538.4	CARBONDALE		LIMESTONE	2.0	26.0
536.4	CARBONDALE		SHALE	2.0	28.0
534.4	CARBONDALE	HERRIN	COAL	6.3	30.0
528.1	CARBONDALE		UNDERCLAY	0.7	36.3

MAPID: 16327807000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1050' N line, 185' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064541 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.488504 DATE COLLECTED:

SURFACE ELEVATION (FT.): 554.2 LOGGED (FT.): 38.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 54 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
554.2	PLEISTOCENE		CLAY	24.0	0.0
530.2	CARBONDALE		LIMESTONE	2.0	24.0
528.2	CARBONDALE		SHALE	1.0	26.0
527.2	CARBONDALE	BRERETON	LIMESTONE	4.0	27.0
523.2	CARBONDALE	ANNA	BLACK SHALE	1.0	31.0
522.2	CARBONDALE	HERRIN	COAL	5.3	32.0
516.9	CARBONDALE		UNDERCLAY	0.8	37.3

MAPID: 16327808000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 640' N line, 20' W line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.073344 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.489808 DATE COLLECTED: 11 / 2 / 1938

SURFACE ELEVATION (FT.): 574.2 LOGGED (FT.): 35.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 54-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
574.2	PLEISTOCENE		CLAY	26.0	0.0	
548.2	CARBONDALE		LIMESTONE	1.5	26.0	
546.7	CARBONDALE		CLAYSTONE & SILTSTONE	1.5	27.5	YELL
545.2	CARBONDALE	HERRIN	COAL	0.8	29.0	DRILL NOTE: "DEAD"
544.4	CARBONDALE	HERRIN	COAL	4.2	29.8	HARD
540.2	CARBONDALE		UNDERCLAY	1.0	34.0	

MAPID: 16327809000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 880' N line, 260' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064805 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.488978 DATE COLLECTED:

SURFACE ELEVATION (FT.): 547.1 LOGGED (FT.): 33.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 55 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
547.1	PLEISTOCENE		CLAY	11.0	0.0	
536.1	CARBONDALE		LIMESTONE	1.0	11.0	
535.1	CARBONDALE		SHALE	2.0	12.0	
533.1	CARBONDALE		LIMESTONE	2.0	14.0	
531.1	CARBONDALE		SHALE	2.0	16.0	
529.1	CARBONDALE	BRERETON	LIMESTONE	6.0	18.0	
523.1	CARBONDALE	ANNA	BLACK SHALE	2.0	24.0	
521.1	CARBONDALE	HERRIN	COAL	6.3	26.0	
514.8	CARBONDALE		UNDERCLAY	0.8	32.3	

MAPID: 1632781000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 960' N line, 40' W line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.073259 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.488922 DATE COLLECTED: 11 / 3 / 1938

SURFACE ELEVATION (FT.): 574.9 LOGGED (FT.): 32.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 55-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
574.9	PLEISTOCENE		CLAY	26.5	0.0	
548.4	CARBONDALE	ANNA	BLACK SHALE	0.7	26.5	
547.7	CARBONDALE	HERRIN	COAL	1.3	27.2	SOFT
546.5	CARBONDALE	HERRIN	COAL	3.3	28.4	HARD
543.2	CARBONDALE		UNDERCLAY	0.3	31.7	

MAPID: 16327811000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 790' N line, 220' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064666 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.489224 DATE COLLECTED:

SURFACE ELEVATION (FT.): 546.3 LOGGED (FT.): 32.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 56 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
546.3	PLEISTOCENE		CLAY	16.0	0.0	
530.3	CARBONDALE		LIMESTONE	2.0	16.0	
528.3	CARBONDALE		SHALE	2.0	18.0	
526.3	CARBONDALE	BRERETON	LIMESTONE	3.5	20.0	
522.8	CARBONDALE	ANNA	BLACK SHALE	2.0	23.5	
520.8	CARBONDALE	HERRIN	COAL	5.8	25.5	
515.0	CARBONDALE		UNDERCLAY	0.7	31.3	

MAPID: 16327812000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 440' N line, 75' W line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.073158 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.490356 DATE COLLECTED: 11 / 13 / 1938

SURFACE ELEVATION (FT.): LOGGED (FT.): 44.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 56-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		CLAY	33.0	0.0	
-			BLUE SHALE	1.0	33.0	
-			SHALE	10.0	34.0	

MAPID: 16327813000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1410' N line, 140' E line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.064379 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.487508 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 556.5 LOGGED (FT.): 31.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 57 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
556.5	PLEISTOCENE		CLAY	20.0	0.0	
536.5	CARBONDALE		LIMESTONE	2.0	20.0	
534.5	CARBONDALE		SHALE	3.0	22.0	
531.5	CARBONDALE	HERRIN	COAL	2.0	25.0	SOFT
529.5	CARBONDALE	HERRIN	COAL	3.0	27.0	HARD
526.5	CARBONDALE		UNDERCLAY	1.0	30.0	

MAPID: 16327814000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 440' N line, 130' W line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.072965 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.490351 DATE COLLECTED: 11 / 4 / 1938
 SURFACE ELEVATION (FT.): LOGGED (FT.): 40.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 57-Y WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		CLAY	29.0	0.0	
-	CARBONDALE	HERRIN	SMUT	1.0	29.0	TOP PF COAL ERODED
-	CARBONDALE		SHALE	6.0	30.0	
-	CARBONDALE		SHALE	4.0	36.0	

MAPID: 16327815000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1510' N line, 70' E line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.064134 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.487228 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 565.4 LOGGED (FT.): 40.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 58 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
565.4	PLEISTOCENE		CLAY	28.0	0.0	
537.4	CARBONDALE	BRERETON	LIMESTONE	5.0	28.0	
532.4	CARBONDALE		SHALE	1.0	33.0	
531.4	CARBONDALE	HERRIN	COAL	5.5	34.0	
525.9	CARBONDALE		UNDERCLAY	0.5	39.5	

MAPID: 16327816000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 440' N line, 190' W line of SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072754 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.490349 **DATE COLLECTED:** 11 / 5 / 1938
SURFACE ELEVATION (FT.): 570.4 **LOGGED (FT.):** 32.5 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 58-Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
570.4	PLEISTOCENE		CLAY	26.5	0.0
543.9	CARBONDALE	HERRIN	COAL	5.3	26.5
538.6	CARBONDALE		UNDERCLAY	0.7	31.8

MAPID: 16327817000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 830' N line, 310' E line of SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.064981 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.48912 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 558.9 **LOGGED (FT.):** 47.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 59 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
558.9	PLEISTOCENE		CLAY	25.0	0.0
533.9	CARBONDALE		SHALE	18.5	25.0
515.4	CARBONDALE		COAL	1.5	43.5
513.9	CARBONDALE		UNDERCLAY	2.0	45.0

MAPID: 16327818000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1' S line, 325' W line of SW NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072297 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.491555 **DATE COLLECTED:** 11 / 5 / 1938
SURFACE ELEVATION (FT.): 557.4 **LOGGED (FT.):** 22.5 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 59-Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
557.4	PLEISTOCENE		CLAY	15.0	0.0
542.4	CARBONDALE	ANNA	BLACK SHALE	1.5	15.0
540.9	CARBONDALE	HERRIN	COAL	5.5	16.5
535.4	CARBONDALE		UNDERCLAY	0.5	22.0

MAPID: 16327819000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 665' N line, 225' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064683 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.489569 DATE COLLECTED:

SURFACE ELEVATION (FT.): 547.1 LOGGED (FT.): 38.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 60 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
547.1	PLEISTOCENE		CLAY	19.0	0.0	
528.1	CARBONDALE		LIMESTONE	2.0	19.0	
526.1	CARBONDALE		SHALE	11.0	21.0	
515.1	CARBONDALE		COAL	2.0	32.0	
513.1	CARBONDALE		UNDERCLAY	4.0	34.0	

MAPID: 16327820000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1065' N line, 50' W line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.073218 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.488632 DATE COLLECTED: 11 / 8 / 1938

SURFACE ELEVATION (FT.): 574.9 LOGGED (FT.): 32.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 60-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
574.9	PLEISTOCENE		CLAY	25.5	0.0	
549.4	CARBONDALE	HERRIN	COAL	1.0	25.5	SOFT
548.4	CARBONDALE	HERRIN	COAL	5.2	26.5	HARD
543.2	CARBONDALE		UNDERCLAY	0.3	31.7	

MAPID: 16327821000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 560' N line, 90' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064211 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.48985 DATE COLLECTED:

SURFACE ELEVATION (FT.): 546.4 LOGGED (FT.): 42.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 61 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
546.4	PLEISTOCENE		CLAY	10.0	0.0	
536.4	CARBONDALE		LIMESTONE	1.0	10.0	
535.4	CARBONDALE		SHALE	9.0	11.0	
526.4	CARBONDALE		SHALE	17.0	20.0	
509.4	CARBONDALE		COAL	1.0	37.0	
508.4	CARBONDALE		UNDERCLAY	4.0	38.0	

MAPID: 16327822000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 800' N line, 60' W line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.073196 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.489364 DATE COLLECTED: 11 / 8 / 1938

SURFACE ELEVATION (FT.): 562.8 LOGGED (FT.): 32.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 61-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
562.8	PLEISTOCENE		CLAY	25.0	0.0
537.8	CARBONDALE	ANNA	BLACK SHALE	0.7	25.0
537.1	CARBONDALE	HERRIN	COAL	6.2	25.7
531.0	CARBONDALE		UNDERCLAY	0.7	31.8

MAPID: 16327823000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 40' S line, 220' E line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064674 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.491515 DATE COLLECTED:

SURFACE ELEVATION (FT.): 567.2 LOGGED (FT.): 65.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 62 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
567.2	PLEISTOCENE		CLAY	28.0	0.0
539.2	CARBONDALE		SHALE	24.0	28.0
515.2	CARBONDALE	BRERETON	LIMESTONE	4.0	52.0
511.2	CARBONDALE	ANNA	BLACK SHALE	2.5	56.0
508.7	CARBONDALE	HERRIN	COAL	6.5	58.5
502.2	CARBONDALE		UNDERCLAY	0.5	65.0

MAPID: 16327824000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 530' N line, 120' W line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.072995 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.490105 DATE COLLECTED: 11 / 9 / 1938

SURFACE ELEVATION (FT.): 574.2 LOGGED (FT.): 36.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 62-Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
574.2	PLEISTOCENE		CLAY	27.7	0.0
546.5	CARBONDALE	ANNA	BLACK SHALE	2.0	27.7
544.5	CARBONDALE	HERRIN	COAL	6.0	29.7 HARD
538.5	CARBONDALE		UNDERCLAY	0.3	35.7

MAPID: 16327825000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 50' S line, 130' E line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064358 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.491536 DATE COLLECTED:

SURFACE ELEVATION (FT.): 564.8 LOGGED (FT.): 60.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 63 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
564.8	PLEISTOCENE		CLAY	28.0	0.0
536.8			SHALE	32.0	28.0

MAPID: 16327826000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 230' S line, 160' E line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064463 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.492035 DATE COLLECTED:

SURFACE ELEVATION (FT.): 562.7 LOGGED (FT.): 63.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 64 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
562.7	PLEISTOCENE		CLAY	25.0	0.0
537.7			SHALE	16.0	25.0
521.7	CARBONDALE		LIMESTONE	4.0	41.0
517.7	CARBONDALE		SHALE	1.0	45.0
516.7	CARBONDALE	BRERETON	LIMESTONE	5.0	46.0
511.7	CARBONDALE	ANNA	BLACK SHALE	5.0	51.0
506.7	CARBONDALE	HERRIN	COAL	7.0	56.0
499.7	CARBONDALE		UNDERCLAY	0.5	63.0

MAPID: 16327827000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 270' S line, 100' E line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.064254 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.492141 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 558.7 **LOGGED (FT.):** 58.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 65 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
558.7	PLEISTOCENE		CLAY	28.0	0.0
530.7			SHALE	10.0	28.0
520.7	CARBONDALE		LIMESTONE	1.0	38.0
519.7	CARBONDALE		SHALE	2.0	39.0
517.7	CARBONDALE	BRERETON	LIMESTONE	4.0	41.0
513.7	CARBONDALE	ANNA	BLACK SHALE	6.0	45.0
507.7	CARBONDALE	HERRIN	COAL	6.3	51.0
501.4	CARBONDALE		UNDERCLAY	0.8	57.3

MAPID: 16327828000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 265' S line, 10' E line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063937 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.492124 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 555.5 **LOGGED (FT.):** 65.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 66 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
555.5	PLEISTOCENE		CLAY	30.0	0.0
525.5			SHALE	35.0	30.0

MAPID: 16327829000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 520' S line, 75' E line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.064168 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.492832 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 536.0 **LOGGED (FT.):** 31.5 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 67 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
536.0	PLEISTOCENE		CLAY	17.0	0.0
519.0	CARBONDALE	BRERETON	LIMESTONE	5.5	17.0
513.5	CARBONDALE	ANNA	BLACK SHALE	2.5	22.5
511.0	CARBONDALE	HERRIN	COAL	6.2	25.0
504.8	CARBONDALE		UNDERCLAY	0.3	31.2

MAPID: 1632783000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 590' S line, 35' E line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064025 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.49302 DATE COLLECTED:

SURFACE ELEVATION (FT.): 534.4 LOGGED (FT.): 33.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 68 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
534.4	PLEISTOCENE		CLAY	16.0	0.0
518.4	CARBONDALE		LIMESTONE	3.0	16.0
515.4	CARBONDALE		SHALE	1.0	19.0
514.4	CARBONDALE	BRERETON	LIMESTONE	3.0	20.0
511.4	CARBONDALE	ANNA	BLACK SHALE	2.5	23.0
508.9	CARBONDALE	HERRIN	COAL	6.8	25.5
502.1	CARBONDALE		UNDERCLAY	0.7	32.3

MAPID: 16327831000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 740' S line, 80' E line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064186 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.493439 DATE COLLECTED:

SURFACE ELEVATION (FT.): 533.2 LOGGED (FT.): 30.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 69 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
533.2	PLEISTOCENE		CLAY	15.0	0.0
518.2	CARBONDALE		LIMESTONE	3.0	15.0
515.2	CARBONDALE		SHALE	1.0	18.0
514.2	CARBONDALE	BRERETON	LIMESTONE	2.0	19.0
512.2	CARBONDALE	ANNA	BLACK SHALE	2.5	21.0
509.7	CARBONDALE	HERRIN	COAL	6.5	23.5
503.2	CARBONDALE		UNDERCLAY	0.5	30.0

MAPID: 16327832000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 530' S line, 35' W line of NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063781 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.49285 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 534.4 **LOGGED (FT.):** 32.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 70 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
534.4	PLEISTOCENE		CLAY	15.0	0.0	
519.4	CARBONDALE		SHALE	11.0	15.0	
508.4	CARBONDALE	HERRIN	COAL	3.0	26.0	SOFT
505.4	CARBONDALE	HERRIN	COAL	2.0	29.0	SHELLY
503.4	CARBONDALE		UNDERCLAY	1.0	31.0	

MAPID: 16327833000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 555' S line, 125' W line of NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063466 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.492913 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 546.4 **LOGGED (FT.):** 45.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 71 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
546.4	PLEISTOCENE		CLAY	22.0	0.0	
524.4			SHALE	23.0	22.0	

MAPID: 16327834000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 570' S line, 220' W line of NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063129 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.492947 **DATE COLLECTED:** 1 / 4 / 1941
SURFACE ELEVATION (FT.): 555.7 **LOGGED (FT.):** 55.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 72 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
555.7	PLEISTOCENE		CLAY	27.0	0.0	
528.7			SHALE	28.0	27.0	

MAPID: 16327835000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 740' S line, 120' W line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.063484 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.493423 DATE COLLECTED: 1 / 6 / 1941

SURFACE ELEVATION (FT.): 545.5 LOGGED (FT.): 45.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 73 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
545.5	PLEISTOCENE		CLAY	20.0	0.0
525.5			SHALE	25.0	20.0

MAPID: 16327836000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 745' S line, 30' W line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.0638 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.493444 DATE COLLECTED: 1 / 7 / 1941

SURFACE ELEVATION (FT.): 534.8 LOGGED (FT.): 33.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 74 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
534.8	PLEISTOCENE		CLAY	19.0	0.0
515.8	CARBONDALE	BRERETON	LIMESTONE	4.0	19.0
511.8	CARBONDALE	ANNA	BLACK SHALE	3.5	23.0
508.3	CARBONDALE	HERRIN	COAL	6.2	26.5
502.1	CARBONDALE		UNDERCLAY	0.3	32.7

MAPID: 16327837000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 910' S line, 40' W line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.063765 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.4939 DATE COLLECTED: 1 / 8 / 1941

SURFACE ELEVATION (FT.): 537.2 LOGGED (FT.): 35.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 75 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
537.2	PLEISTOCENE		CLAY	20.0	0.0
517.2			SHALE	6.0	20.0
511.2			BLACK SHALE	3.0	26.0
508.2			UNDERCLAY	3.0	29.0
505.2			SHALE	3.0	32.0

MAPID: 16327838000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1120' S line, 40' W line of NE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.063766 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.494479 DATE COLLECTED: 1 / 8 / 1941
 SURFACE ELEVATION (FT.): 531.3 LOGGED (FT.): 29.5 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 76 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
531.3	PLEISTOCENE		CLAY	13.0	0.0	
518.3	CARBONDALE		LIMESTONE	1.0	13.0	SHELLY
517.3	CARBONDALE		SHALE	7.0	14.0	
510.3	CARBONDALE	ANNA	BLACK SHALE	2.0	21.0	
508.3	CARBONDALE	HERRIN	COAL	6.2	23.0	
502.1	CARBONDALE		UNDERCLAY	0.3	29.2	

MAPID: 16327839000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1215' S line, 30' W line of NE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.063803 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.494742 DATE COLLECTED: 1 / 9 / 1941
 SURFACE ELEVATION (FT.): 529.6 LOGGED (FT.): 26.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 77 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
529.6	PLEISTOCENE		CLAY	14.0	0.0	
515.6	CARBONDALE	BRERETON	LIMESTONE	2.5	14.0	
513.1	CARBONDALE	ANNA	BLACK SHALE	3.0	16.5	
510.1	CARBONDALE	HERRIN	COAL	6.0	19.5	
504.1	CARBONDALE		UNDERCLAY	0.5	25.5	

MAPID: 16327840000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 1210' S line, 130' W line of NE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.063452 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.494721 DATE COLLECTED: 1 / 10 / 1941
 SURFACE ELEVATION (FT.): 539.1 LOGGED (FT.): 34.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 78 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
539.1	PLEISTOCENE		CLAY	24.0	0.0	
515.1	CARBONDALE	ANNA	BLACK SHALE	3.0	24.0	
512.1	CARBONDALE	HERRIN	COAL	6.3	27.0	
505.8	CARBONDALE		UNDERCLAY	0.7	33.3	

MAPID: 16327841000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1180' S line, 175' W line of NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063293 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.494636 **DATE COLLECTED:** 1 / 11 / 1941
SURFACE ELEVATION (FT.): 553.6 **LOGGED (FT.):** 50.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 79 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
553.6	PLEISTOCENE		CLAY	25.0	0.0
528.6			SHALE	25.0	25.0

MAPID: 16327842000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 510' S line, 320' W line of NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.06278 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.492775 **DATE COLLECTED:** 1 / 11 / 1941
SURFACE ELEVATION (FT.): 557.3 **LOGGED (FT.):** 50.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 80 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
557.3	PLEISTOCENE		CLAY	25.0	0.0
532.3			SHALE	25.0	25.0

MAPID: 16327843000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 590' S line, 410' W line of NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.062462 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.492989 **DATE COLLECTED:** 1 / 14 / 1941
SURFACE ELEVATION (FT.): 559.1 **LOGGED (FT.):** 50.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 81 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
559.1	PLEISTOCENE		CLAY	25.0	0.0
534.1			SHALE	25.0	25.0

MAPID: 16327844000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 600' S line, 530' W line of NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.06204 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.493011 **DATE COLLECTED:** 1 / 15 / 1941
SURFACE ELEVATION (FT.): 560.2 **LOGGED (FT.):** 54.5 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 82 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
560.2	PLEISTOCENE		CLAY	25.0	0.0
535.2	CARBONDALE		SHALE	11.0	25.0
524.2	CARBONDALE		LIMESTONE	4.0	36.0
520.2	CARBONDALE		SHALE	3.0	40.0
517.2	CARBONDALE	BRERETON	LIMESTONE	2.0	43.0
515.2	CARBONDALE	ANNA	BLACK SHALE	2.5	45.0
512.7	CARBONDALE	HERRIN	COAL	6.5	47.5
506.2	CARBONDALE		UNDERCLAY	0.5	54.0

MAPID: 16327845000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 730' S line, 510' W line of NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.062113 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.493369 **DATE COLLECTED:** 1 / 16 / 1941
SURFACE ELEVATION (FT.): 554.9 **LOGGED (FT.):** 50.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 83 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
554.9	PLEISTOCENE		CLAY	25.0	0.0
529.9			SHALE	25.0	25.0

MAPID: 16327846000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 780' S line, 635' W line of NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.061675 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.493498 **DATE COLLECTED:** 1 / 17 / 1941
SURFACE ELEVATION (FT.): 551.3 **LOGGED (FT.):** 45.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 84 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
551.3	PLEISTOCENE		CLAY	22.0	0.0
529.3			SHALE	23.0	22.0

MAPID: 16327847000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 710' S line, 760' W line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.061235 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.493299 DATE COLLECTED: 1 / 18 / 1941

SURFACE ELEVATION (FT.): 554.9 LOGGED (FT.): 45.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 85 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
554.9	PLEISTOCENE		CLAY	25.0	0.0
529.9			SHALE	20.0	25.0

MAPID: 16327848000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 600' S line, 770' W line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.061197 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.492993 DATE COLLECTED: 1 / 20 / 1941

SURFACE ELEVATION (FT.): 560.3 LOGGED (FT.): 50.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 86 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
560.3	PLEISTOCENE		CLAY	25.0	0.0
535.3			SHALE	25.0	25.0

MAPID: 16327849000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 490' S line, 765' W line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.061216 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.492689 DATE COLLECTED: 1 / 20 / 1941

SURFACE ELEVATION (FT.): 561.8 LOGGED (FT.): 49.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 87 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
561.8	PLEISTOCENE		CLAY	25.0	0.0
536.8			SHALE	18.0	25.0
518.8	CARBONDALE	HERRIN	COAL	3.0	43.0
515.8			UNDERCLAY	3.0	46.0

MAPID: 1632785000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 485' S line, 890' W line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.060776 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.492669 DATE COLLECTED: 1 / 21 / 1941

SURFACE ELEVATION (FT.): 561.4 LOGGED (FT.): 50.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 88 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
561.4	PLEISTOCENE		CLAY	25.0	0.0	
536.4			SHALE	25.0	25.0	

MAPID: 16327851000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 410' S line, 765' W line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.061214 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.492468 DATE COLLECTED: 1 / 22 / 1941

SURFACE ELEVATION (FT.): 561.8 LOGGED (FT.): 46.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 89 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
561.8	PLEISTOCENE		CLAY	30.0	0.0	
531.8	CARBONDALE		SHALE	6.0	30.0	
525.8	CARBONDALE	BRERETON	LIMESTONE	1.5	36.0	
524.3	CARBONDALE	ANNA	BLACK SHALE	2.5	37.5	SOFT; BLK
521.8	CARBONDALE	HERRIN	COAL	4.0	40.0	SOFT
517.8	CARBONDALE		UNDERCLAY	2.0	44.0	

MAPID: 16327852000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 300' S line, 760' W line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.061233 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.492167 DATE COLLECTED: 1 / 23 / 1941

SURFACE ELEVATION (FT.): 558.7 LOGGED (FT.): 43.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 90 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
558.7	PLEISTOCENE		CLAY	25.0	0.0
533.7	CARBONDALE		SHALE	7.0	25.0
526.7	CARBONDALE		LIMESTONE	1.0	32.0
525.7	CARBONDALE		BLACK SHALE	1.0	33.0
524.7	CARBONDALE		LIMESTONE	1.5	34.0
523.2	CARBONDALE	ANNA	BLACK SHALE	1.0	35.5
522.2	CARBONDALE	HERRIN	COAL	6.0	36.5
516.2	CARBONDALE		UNDERCLAY	0.5	42.5

MAPID: 16327853000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 305' S line, 550' W line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.061971 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.492194 DATE COLLECTED: 1 / 25 / 1941

SURFACE ELEVATION (FT.): 561.3 LOGGED (FT.): 50.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 91 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
561.3	PLEISTOCENE		CLAY	32.0	0.0
529.3	CARBONDALE		LIMESTONE	2.0	32.0
527.3	CARBONDALE		SHALE	1.0	34.0
526.3	CARBONDALE	BRERETON	LIMESTONE	6.0	35.0
520.3	CARBONDALE	ANNA	BLACK SHALE	2.5	41.0
517.8	CARBONDALE	HERRIN	COAL	6.3	43.5
511.5	CARBONDALE		UNDERCLAY	0.3	49.8

MAPID: 16327854000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 300' S line, 440' W line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.062357 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.492189 DATE COLLECTED: 1 / 27 / 1941

SURFACE ELEVATION (FT.): 556.7 LOGGED (FT.): 51.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 92 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
556.7	PLEISTOCENE		CLAY	30.0	0.0
526.7	CARBONDALE		LIMESTONE	1.0	30.0
525.7	CARBONDALE		SHALE	2.0	31.0
523.7	CARBONDALE	BRERETON	LIMESTONE	6.0	33.0
517.7	CARBONDALE	ANNA	BLACK SHALE	5.0	39.0
512.7	CARBONDALE	HERRIN	COAL	6.8	44.0
505.9	CARBONDALE		UNDERCLAY	0.3	50.8

MAPID: 16327855000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 290' S line, 340' W line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.062708 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.492168 DATE COLLECTED: 1 / 28 / 1941

SURFACE ELEVATION (FT.): 539.8 LOGGED (FT.): 43.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 93 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
539.8	PLEISTOCENE		CLAY	18.0	0.0
521.8			SHALE	25.0	18.0

MAPID: 16327856000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 290' S line, 300' W line of NE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.062849 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.49217 DATE COLLECTED: 1 / 29 / 1941
 SURFACE ELEVATION (FT.): 538.8 LOGGED (FT.): 33.5 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 94 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
538.8	PLEISTOCENE		CLAY	20.0	0.0	
518.8	CARBONDALE		LIMESTONE	1.5	20.0	
517.3	CARBONDALE		SHALE	4.5	21.5	
512.8	CARBONDALE	ANNA	BLACK SHALE	1.0	26.0	SOFT; BLK
511.8	CARBONDALE	HERRIN	COAL	2.0	27.0	SOFT
509.8	CARBONDALE	HERRIN	COAL	4.2	29.0	HARD
505.6	CARBONDALE		UNDERCLAY	0.3	33.2	

MAPID: 16327857000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 50' S line, 205' W line of NE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.063181 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.491514 DATE COLLECTED: 1 / 30 / 1941
 SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 50.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 95 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.0	PLEISTOCENE		CLAY	30.0	0.0	
530.0			SHALE	20.0	30.0	

MAPID: 16327858000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 110' N line, 190' W line of SE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.06323 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.491072 DATE COLLECTED: 1 / 31 / 1941
 SURFACE ELEVATION (FT.): 558.6 LOGGED (FT.): 50.5 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 96 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
558.6	PLEISTOCENE		CLAY	30.0	0.0	
528.6	CARBONDALE		SHALE	13.0	30.0	
515.6	CARBONDALE	ANNA	BLACK SHALE	1.0	43.0	
514.6	CARBONDALE	HERRIN	COAL	6.0	44.0	
508.6	CARBONDALE		UNDERCLAY	0.5	50.0	

MAPID: 16327859000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 35 QUARTERS/FOOTAGES: 250' N line, 115' W line of SE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.063494 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.490693 DATE COLLECTED: 2 / 1 / 1941
 SURFACE ELEVATION (FT.): 554.4 LOGGED (FT.): 43.5 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 97 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
554.4	PLEISTOCENE		CLAY	21.0	0.0	
533.4	CARBONDALE		LIMESTONE	4.0	21.0	
529.4	CARBONDALE		SHALE	2.0	25.0	
527.4	CARBONDALE	BRERETON	LIMESTONE	6.0	27.0	
521.4	CARBONDALE	ANNA	BLACK SHALE	4.0	33.0	
517.4	CARBONDALE	HERRIN	COAL	6.2	37.0	
511.2	CARBONDALE		UNDERCLAY	0.3	43.2	

MAPID: 16300019000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 36 QUARTERS/FOOTAGES: 2550' S line, 4250' E line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.050884 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.490856 DATE COLLECTED: 10 / 26 / 1926
 SURFACE ELEVATION (FT.): 551.4 LOGGED (FT.): 58.5 LOG TYPE: Drillers Log
 SOURCE: FRANKLIN COAL CO 5 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
551.4			CLAY	26.0	0.0	
525.4			LIMESTONE	2.0	26.0	
523.4			SHALE	12.5	28.0	BLUE
510.9			LIMESTONE	7.5	40.5	
503.4			BLACK SHALE	4.0	48.0	
499.4	CARBONDALE	HERRIN	COAL	6.0	52.0	
493.4	CARBONDALE		UNDERCLAY	0.5	58.0	

MAPID: 16300019000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 36 QUARTERS/FOOTAGES: 2550' S line, 4250' E line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.050884 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.490856 DATE COLLECTED: 0 / 0 / 1926
 SURFACE ELEVATION (FT.): 551.4 LOGGED (FT.): 59.0 LOG TYPE:
 SOURCE: FRAN CC 0005 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
499.4	CARBONDALE	HERRIN	COAL	6.0	52.0	

MAPID: 16300020000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 36 **QUARTERS/FOOTAGES:** 100' S line, 5000' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.053456 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.484112 **DATE COLLECTED:** 10 / 26 / 1926
SURFACE ELEVATION (FT.): 559.2 **LOGGED (FT.):** 60.0 **LOG TYPE:** Drillers Log
SOURCE: FRANKLIN COAL CO 7 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
559.2			CLAY	30.0	0.0	YELLOW
529.2			CLAY	30.0	30.0	BLUE

MAPID: 16300020000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 36 **QUARTERS/FOOTAGES:** 100' S line, 5000' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.053456 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.484112 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 559.2 **LOGGED (FT.):** 60.0 **LOG TYPE:**
SOURCE: FRAN CC 0007 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300302000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 36 **QUARTERS/FOOTAGES:** 2655' S line, 75' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.054094 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.491172 **DATE COLLECTED:** 6 / 15 / 1928
SURFACE ELEVATION (FT.): 567.7 **LOGGED (FT.):** 30.0 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 187 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
567.7			UNCONSOLIDATED	26.0	0.0	
541.7	CARBONDALE	HERRIN	COAL	4.0	26.0	

MAPID: 16300302000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 36 **QUARTERS/FOOTAGES:** 2655' S line, 75' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.054094 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.491172 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 567.7 **LOGGED (FT.):** 30.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0187 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
541.7	CARBONDALE	HERRIN	COAL	4.0	26.0	

MAPID: 16300303000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 36 **QUARTERS/FOOTAGES:** 55' S line, 75' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.054165 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.483993 **DATE COLLECTED:** 7 / 3 / 1928
SURFACE ELEVATION (FT.): 566.3 **LOGGED (FT.):** 60.0 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 137 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
566.3			UNCONSOLIDATED	20.0	0.0	
546.3			SANDY SHALE	25.0	20.0	
521.3			SHALE	5.0	45.0	
516.3			SANDY SHALE	8.0	50.0	
508.3			ROCK	2.0	58.0	

MAPID: 16300303000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 36 **QUARTERS/FOOTAGES:** 55' S line, 75' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.054165 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.483993 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 566.3 **LOGGED (FT.):** 60.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0137 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300304000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 36 **QUARTERS/FOOTAGES:** 1355' S line, 75' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.054129 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.487582 **DATE COLLECTED:** 6 / 4 / 1928
SURFACE ELEVATION (FT.): 576.2 **LOGGED (FT.):** 44.0 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 162 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
576.2			UNCONSOLIDATED	20.0	0.0	
556.2			SHALE	19.0	20.0	BROWN
537.2			SMUT	2.5	39.0	
534.7	CARBONDALE	ANNA	BLACK SHALE	0.5	41.5	
534.2	CARBONDALE	HERRIN	COAL	2.0	42.0	

MAPID: 16300304000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 36 **QUARTERS/FOOTAGES:** 1355' S line, 75' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.054129 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.487582 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 576.2 **LOGGED (FT.):** 44.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0162 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
534.2	CARBONDALE	HERRIN	COAL	2.0	42.0	

MAPID: 16300352000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 36 **QUARTERS/FOOTAGES:** 2690' S line, 40' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.036101 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.491129 **DATE COLLECTED:** 0 / 0 / 1920
SURFACE ELEVATION (FT.): 549.9 **LOGGED (FT.):** 37.8 **LOG TYPE:** Drillers Log
SOURCE: ALUMINUM ORE CO 10 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
549.9			CLAY	27.0	0.0	
522.9			SANDSTONE	3.1	27.0	
519.8			SANDSTONE	1.5	30.1	
518.3			SHALE	2.0	31.6	BLACK
516.3			COAL	2.0	33.6	
514.3			UNDERCLAY	2.2	35.6	

MAPID: 16300352000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 36 **QUARTERS/FOOTAGES:** 2690' S line, 40' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.036101 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.491129 **DATE COLLECTED:** 0 / 0 / 1920
SURFACE ELEVATION (FT.): 549.9 **LOGGED (FT.):** 38.0 **LOG TYPE:**
SOURCE: ALUMINUM 0010 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	
515.9	CARBONDALE	SPRINGFIELD	COAL	2.0	34.0

MAPID: 16300640000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 36 **QUARTERS/FOOTAGES:** 0' S line, 990' E line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.048635 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.491145 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 559.4 **LOGGED (FT.):** 58.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 48Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
559.4			CLAY	22.0	0.0
537.4			SHALE	10.0	22.0
527.4			LIMESTONE	2.0	32.0
525.4			LIMESTONE	4.0	34.0
521.4			SHALE	5.0	38.0
516.4	CARBONDALE		LIMESTONE	1.0	43.0
515.4	CARBONDALE		BLACK SHALE	1.5	44.0
513.9	CARBONDALE		BLACK SHALE	6.0	45.5
507.9	CARBONDALE		BLACK SHALE	2.3	51.5
505.6	CARBONDALE	SPRINGFIELD	COAL	3.3	53.8
502.3	CARBONDALE		UNDERCLAY	0.9	57.1

MAPID: 16300640000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 36 **QUARTERS/FOOTAGES:** 0' S line, 990' E line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.048635 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.491145 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 559.4 **LOGGED (FT.):** 58.0 **LOG TYPE:**
SOURCE: MIDWEST SF048Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	
505.4	CARBONDALE	SPRINGFIELD	COAL	3.3	54.0

MAPID: 16300641000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 36 QUARTERS/FOOTAGES: 330' N line, 1320' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.049794

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.490245

DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 568.9 LOGGED (FT.): 60.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 49Y

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
568.9			CLAY	32.0	0.0
536.9			SHALE	16.5	32.0
520.4			LIMESTONE	1.5	48.5
518.9			SHALE	5.0	50.0
513.9			BLACK SHALE	2.1	55.0
511.8	CARBONDALE	SPRINGFIELD	COAL	2.1	57.1
509.7	CARBONDALE		UNDERCLAY	0.8	59.2

MAPID: 16300641000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 36 QUARTERS/FOOTAGES: 330' N line, 1320' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.049794

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.490245

DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 568.9 LOGGED (FT.): 60.0

LOG TYPE:

SOURCE: MIDWEST SF049Y

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	
511.9	CARBONDALE	SPRINGFIELD	COAL	2.1	57.0

MAPID: 16300642000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 36 QUARTERS/FOOTAGES: NE/c NW NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.053216

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.490273

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 570.3 LOGGED (FT.): 29.9

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 795

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.3			CLAY	5.0	0.0	
565.3			CLAY	18.3	5.0	GRAY
547.0			CLAY	2.4	23.3	YELLOW
544.6	CARBONDALE	HERRIN	COAL	1.0	25.7	TOP ERODED
543.6	CARBONDALE	HERRIN	COAL	1.1	26.7	
542.5	CARBONDALE	HERRIN	COAL	1.5	27.8	
541.0	CARBONDALE		UNDERCLAY	0.7	29.3	

MAPID: 16300642000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 36 QUARTERS/FOOTAGES: NE/c NW NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.053216

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.490273

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 570.3 LOGGED (FT.): 30.0

LOG TYPE:

SOURCE: MIDWEST SF 795

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
544.3	CARBONDALE	HERRIN	COAL	3.6	26.0	

MAPID: 16300643000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 36 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.053216 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.490273 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 575.7 LOGGED (FT.): 37.3 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 796 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
575.7			CLAY	9.0	0.0	
566.7			CLAY	9.1	9.0	GRAY
557.6			CLAY	2.0	18.1	GRAY
555.6			CLAY	3.4	20.1	GRAY
552.2			SHALE WITH LIMESTONE	2.8	23.5	
549.4	CARBONDALE	BRERETON	LIMESTONE	0.7	26.3	
548.8	CARBONDALE	ANNA	SHALE	1.7	26.9	
547.1	CARBONDALE	ANNA	SOFT SHALE	1.9	28.6	
545.2	CARBONDALE	HERRIN	COAL	2.0	30.5	ELEV TOP 545.16
543.2	CARBONDALE	HERRIN	SHALE	0.2	32.5	
543.0	CARBONDALE	HERRIN	COAL	2.7	32.7	DRILLED
540.4	CARBONDALE	HERRIN	COAL	1.4	35.3	
538.9	CARBONDALE		UNDERCLAY	0.6	36.8	

MAPID: 16300643000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 36 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.053216 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.490273 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 575.7 LOGGED (FT.): 37.0 LOG TYPE:

SOURCE: MIDWEST SF0796 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
544.7	CARBONDALE	HERRIN	COAL	6.3	31.0	

MAPID: 16300845000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 36 QUARTERS/FOOTAGES: 2970' N line, 5200' E line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.054218 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.490362 DATE COLLECTED:

SURFACE ELEVATION (FT.): 549.0 LOGGED (FT.): 41.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 31 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
549.0			SANDY CLAY	26.0	0.0
523.0			LIMESTONE	1.0	26.0
522.0			SHALE	1.0	27.0
521.0	CARBONDALE	BRERETON	LIMESTONE	6.0	28.0
515.0	CARBONDALE	ANNA	BLACK SHALE	1.0	34.0
514.0	CARBONDALE	HERRIN	COAL	6.2	35.0
507.8	CARBONDALE		UNDERCLAY	0.3	41.2

MAPID: 16300846000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 36 QUARTERS/FOOTAGES: 3840' N line, 4900' E line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.053142 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.487949 DATE COLLECTED: 11 / 0 / 1943

SURFACE ELEVATION (FT.): 546.0 LOGGED (FT.): 51.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 32 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
546.0			CLAY	29.0	0.0
517.0			LIMESTONE	1.5	29.0
515.5	CARBONDALE		BLACK SHALE	1.5	30.5
514.0	CARBONDALE	BRERETON	LIMESTONE	3.5	32.0
510.5	CARBONDALE	ANNA	BLACK SHALE	3.0	35.5
507.5	CARBONDALE	HERRIN	COAL	6.5	38.5
501.0	CARBONDALE		UNDERCLAY	6.0	45.0

MAPID: 16300847000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 36 QUARTERS/FOOTAGES: 200' S line, 1360' W line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.04038 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.491609 DATE COLLECTED: 11 / 0 / 1943

SURFACE ELEVATION (FT.): 554.5 LOGGED (FT.): 52.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 33 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
554.5			CLAY	28.0	0.0
526.5			LIMESTONE	1.0	28.0
525.5			SHALE	1.0	29.0
524.5			LIMESTONE	2.5	30.0
522.0			BLACK SHALE	1.5	32.5
520.5			LIMESTONE	4.0	34.0
516.5			SANDY SLATE	3.0	38.0
513.5	CARBONDALE	BRERETON	LIMESTONE	3.0	41.0
510.5	CARBONDALE	ANNA	BLACK SHALE	1.5	44.0
509.0	CARBONDALE	HERRIN	COAL	6.5	45.5
502.5	CARBONDALE		UNDERCLAY	0.5	52.0

MAPID: 16300848000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 36 QUARTERS/FOOTAGES: 30' S line, 780' W line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.042417 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.491161 DATE COLLECTED: 11 / 0 / 1943

SURFACE ELEVATION (FT.): 556.5 LOGGED (FT.): 41.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 34 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
556.5			SANDY CLAY	28.0	0.0
528.5	CARBONDALE	BRERETON	LIMESTONE	6.0	28.0
522.5	CARBONDALE	ANNA	BLACK SHALE	0.5	34.0
522.0	CARBONDALE	HERRIN	COAL	6.3	34.5
515.7	CARBONDALE		UNDERCLAY	0.7	40.8

MAPID: 16300849000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 36 QUARTERS/FOOTAGES:

QUADRANGLE: MILLSTADT LONGITUDE: -90.045157

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.491109

DATE COLLECTED: 11 / 0 / 1943

SURFACE ELEVATION (FT.): 557.1

LOGGED (FT.): 64.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 35

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
557.1			CLAY	27.0	0.0
530.1			LIMESTONE	6.0	27.0
524.1			BLACK SHALE	13.0	33.0
511.1			LIMESTONE	5.0	46.0
506.1			SANDY SLATE	5.0	51.0
501.1			BLACK SHALE	2.0	56.0
499.1	CARBONDALE	SPRINGFIELD	COAL	1.0	58.0
498.1	CARBONDALE		UNDERCLAY	5.0	59.0

MAPID: 16300850000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 36 QUARTERS/FOOTAGES: 50' S line, 0' W line of NW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.045158

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.494914

DATE COLLECTED:

SURFACE ELEVATION (FT.): 551.0

LOGGED (FT.): 56.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 36

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
551.0			CLAY	32.0	0.0
519.0	CARBONDALE		LIMESTONE	3.0	32.0
516.0	CARBONDALE		BLACK SHALE	3.0	35.0
513.0	CARBONDALE		LIMESTONE	10.0	38.0
503.0	CARBONDALE		BLACK SHALE	3.0	48.0
500.0	CARBONDALE	SPRINGFIELD	COAL	2.5	51.0
497.5	CARBONDALE		UNDERCLAY	2.5	53.5

MAPID: 16300851000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 36 QUARTERS/FOOTAGES: 0' N line, 660' E line of SE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.047476

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.494803

DATE COLLECTED: 11 / 0 / 1943

SURFACE ELEVATION (FT.): 550.5 LOGGED (FT.): 54.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 37

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
550.5			CLAY	33.0	0.0
517.5			LIMESTONE	13.0	33.0
504.5	CARBONDALE	ANNA	BLACK SHALE	0.5	46.0
504.0	CARBONDALE	HERRIN	COAL	6.8	46.5
497.2	CARBONDALE		UNDERCLAY	0.8	53.3

MAPID: 16300852000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 36 QUARTERS/FOOTAGES: 1960' S line, 710' W line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.042662

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.496493

DATE COLLECTED:

SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 54.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 38

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
550.0			CLAY	36.0	0.0
514.0	CARBONDALE	BRERETON	LIMESTONE	8.0	36.0
506.0	CARBONDALE	ANNA	BLACK SHALE	4.0	44.0
502.0	CARBONDALE	HERRIN	COAL	3.5	48.0
498.5	CARBONDALE		UNDERCLAY	2.5	51.5

MAPID: 16300853000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1N 9W SECTION: 36 QUARTERS/FOOTAGES: 2400' S line, 1210' W line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.040907

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.497689

DATE COLLECTED: 12 / 0 / 1942

SURFACE ELEVATION (FT.): 548.5 LOGGED (FT.): 54.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 39

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
548.5			CLAY	39.0	0.0
509.5	CARBONDALE	BRERETON	LIMESTONE	8.0	39.0
501.5	CARBONDALE	ANNA	BLACK SHALE	0.5	47.0
501.0	CARBONDALE	HERRIN	COAL	6.2	47.5
494.8	CARBONDALE		UNDERCLAY	0.3	53.7

MAPID: 16300912000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 36 **QUARTERS/FOOTAGES:** 1310' N line, 1300' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.040562 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.494764 **DATE COLLECTED:** 5 / 0 / 1939
SURFACE ELEVATION (FT.): 548.0 **LOGGED (FT.):** 54.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT 73Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
548.0			CLAY	13.0	0.0	
535.0			CLAY	18.0	13.0	GRAY
517.0			CLAY	6.0	31.0	
511.0			CALCAREOUS SHALE	5.0	37.0	
506.0	CARBONDALE	BRERETON	LIMESTONE	2.5	42.0	
503.5	CARBONDALE	ANNA	BLACK SHALE	2.7	44.5	
500.8	CARBONDALE	HERRIN	COAL	6.3	47.2	
494.5	CARBONDALE		UNDERCLAY	0.5	53.5	

MAPID: 16300912000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1N 9W **SECTION:** 36 **QUARTERS/FOOTAGES:** 1310' N line, 1300' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.040562 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.494764 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 548.0 **LOGGED (FT.):** 53.3 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION, DEPTHS CORRECTED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
548.0	CARBONDALE		UNDERCLAY	37.0	0.0	
511.0	CARBONDALE	BRERETON	LIMESTONE	7.5	37.0	
503.5	CARBONDALE	ANNA	BLACK SHALE	2.7	44.5	
500.8	CARBONDALE	HERRIN	COAL	6.3	47.2	

MAPID: 16300042000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 6W **SECTION:** 3 **QUARTERS/FOOTAGES:** 2500' S line, 2800' W line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.75121 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.474745 **DATE COLLECTED:** 0 / 0 / 1912
SURFACE ELEVATION (FT.): 424.5 **LOGGED (FT.):** 860.0 **LOG TYPE:**
SOURCE: CENTRAL RF **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
215.5	CARBONDALE	HERRIN	COAL	6.0	209.0	

MAPID: 16303499000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: ST. CLAIR **TWP/RNG:** 1S 6W **SECTION:** 3 **QUARTERS/FOOTAGES:** 0' S line, 330' W line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.759877 **GEOLOGIST:** PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 38.467816 **DATE COLLECTED:** 11 / 13 / 1971
SURFACE ELEVATION (FT.): 412.0 **LOGGED (FT.):** 213.5 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 12739-C **WELL TYPE:** Coal Test
COMMENT: LOC:CTR OF S LINE OF SW/4 SW/4 SW/4

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
209.7	CARBONDALE	HERRIN	COAL	7.5	202.3	

MAPID: 16303499000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1S 6W **SECTION:** 3 **QUARTERS/FOOTAGES:** 0' S line, 330' W line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.759877 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.467816 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 412.0 **LOGGED (FT.):** 209.5 **LOG TYPE:** Survey Core Study
SOURCE: PEABODY COAL CO. 12739-C **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
275.0	MODESTO	PIASA	LIMESTONE	3.0	137.0	
272.0	MODESTO		MOTTLED SHALE	8.0	140.0	
264.0	CARBONDALE	DANVILLE	BONE COAL	0.7	148.0	
263.3	CARBONDALE		DARK GRAY SHALE	5.8	148.7	
257.5	CARBONDALE	LAWSON	LIMESTONE W/ SHALE	41.5	154.5	
216.0	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.3	196.0	
215.7	CARBONDALE	JAMESTOWN	BONE COAL	0.2	196.3	
215.5	CARBONDALE	BRERETON	LIMESTONE	2.7	196.5	
212.8	CARBONDALE	ANNA	BLACK SHALE	2.5	199.2	
210.0	CARBONDALE	HERRIN	COAL	7.5	202.0	

MAPID: 16302933000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: ST. CLAIR **TWP/RNG:** 1S 6W **SECTION:** 5 **QUARTERS/FOOTAGES:** 0' N line, 330' W line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.798024 **GEOLOGIST:** PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 38.481476 **DATE COLLECTED:** 4 / 15 / 1969
SURFACE ELEVATION (FT.): 421.0 **LOGGED (FT.):** 165.1 **LOG TYPE:** Other Core Study
SOURCE: PEABODY COAL CO. 8683C **WELL TYPE:** Coal Test
COMMENT: C-7247

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
267.6	CARBONDALE	HERRIN	COAL	7.3	153.4	COAL REMOVED BY CO.

MAPID: 16302933000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 5 QUARTERS/FOOTAGES: 0' N line, 330' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.798024

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.481476

DATE COLLECTED:

SURFACE ELEVATION (FT.): 421.0 LOGGED (FT.): 160.3

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8683C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
302.0	MODESTO	PIASA	LIMESTONE	8.3	119.0	
293.7	CARBONDALE		GRAY SHALE	9.6	127.3	
284.1	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.3	136.9	UPPER BENCH
279.8	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.6	141.2	SHALE PARTING
277.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	143.8	LOWER BENCH
275.0	CARBONDALE	LAWSON	DARK GRAY SHALE	5.9	146.0	
269.1	CARBONDALE	JAMESTOWN	BONE COAL	0.1	151.9	
269.0	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.7	152.0	
268.3	CARBONDALE	ANNA	BLACK SHALE	0.7	152.7	
268.0	CARBONDALE	HERRIN	COAL	7.3	153.0	

MAPID: 16302981000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 6 QUARTERS/FOOTAGES: 330' N line, 0' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.817682

GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.48072

DATE COLLECTED: 4 / 21 / 1969

SURFACE ELEVATION (FT.): 421.0 LOGGED (FT.): 130.7

LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 8685C

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
299.2	CARBONDALE	HERRIN	COAL	6.6	121.8	

MAPID: 16302981000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 6 QUARTERS/FOOTAGES: 330' N line, 0' W line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.817682 GEOLOGIST: CHENOWETH
 CONFIDENTIAL: N LATITUDE: 38.48072 DATE COLLECTED: 4 / 21 / 1969
 SURFACE ELEVATION (FT.): 421.0 LOGGED (FT.): 130.7 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 8685C WELL TYPE: Coal Test
 COMMENT: PEABODY LOC. A-2

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
421.0	PLEISTOCENE		UNCONSOLIDATED	84.3	0.0	
336.7	MODESTO	PIASA	LIMESTONE	7.2	84.3	TOP MAY BE ERODED
329.5			SHALE WITH LIMESTONE	18.7	91.5	
310.8	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	110.2	
308.8	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.9	112.2	
304.9	CARBONDALE		DARK SHALE	4.9	116.1	
300.0	CARBONDALE	ANNA	BLACK SHALE & LIMESTONE	0.8	121.0	
299.2	CARBONDALE	HERRIN	COAL	6.6	121.8	
292.6	CARBONDALE		UNDERCLAY	2.2	128.4	

MAPID: 16323858000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 6 QUARTERS/FOOTAGES: 1320' S line, 0' W line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.817627 GEOLOGIST: PRUSSEN
 CONFIDENTIAL: N LATITUDE: 38.472189 DATE COLLECTED: 2 / 17 / 1973
 SURFACE ELEVATION (FT.): 409.0 LOGGED (FT.): 124.1 LOG TYPE: Other Core Study
 SOURCE: PEABODY COAL CO. 12882C WELL TYPE: Coal Test
 COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
293.1	CARBONDALE	HERRIN	COAL	7.0	115.9	

MAPID: 16323858000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 6 QUARTERS/FOOTAGES: 1320' S line, 0' W line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.817627 GEOLOGIST: CHENOWETH
 CONFIDENTIAL: N LATITUDE: 38.472189 DATE COLLECTED: 2 / 17 / 1973
 SURFACE ELEVATION (FT.): 409.0 LOGGED (FT.): 124.1 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 12882C WELL TYPE: Coal Test
 COMMENT: PEABODY LOC. A-13

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
409.0	PLEISTOCENE		UNCONSOLIDATED	67.1	0.0	
341.9	MODESTO		GRAY SHALE	2.1	67.1	
339.8	MODESTO		LIMESTONE	0.6	69.2	
339.2	MODESTO		GRAY SHALE	11.8	69.8	
327.4	MODESTO	PIASA	LIMESTONE	6.8	81.6	
320.6			GRAY SHALE	11.6	88.4	
309.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.6	100.0	
304.4	CARBONDALE		GRAY SHALE	1.1	104.6	
303.3	CARBONDALE		DARK SHALE	3.1	105.7	
300.2	CARBONDALE		GRAY SHALE	0.1	108.8	
300.1	CARBONDALE	CONANT	LIMESTONE	0.6	108.9	
299.5	CARBONDALE		DARK SHALE	2.3	109.5	
297.2	CARBONDALE	BRERETON	LIMESTONE	3.7	111.8	
293.6	CARBONDALE		DARK SHALE	0.5	115.4	
293.1	CARBONDALE	HERRIN	COAL	7.0	115.9	
286.1	CARBONDALE		UNDERCLAY	1.2	122.9	

MAPID: 16323899000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 6 QUARTERS/FOOTAGES: 0' N line, 1320' W line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.81305 GEOLOGIST: PRUSSEN
 CONFIDENTIAL: N LATITUDE: 38.481593 DATE COLLECTED: 2 / 20 / 1973
 SURFACE ELEVATION (FT.): 421.0 LOGGED (FT.): 154.9 LOG TYPE: Other Core Study
 SOURCE: PEABODY COAL CO. 15527 WELL TYPE: Coal Test
 COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
308.0	MODESTO	PIASA	LIMESTONE	7.8	113.0	CORE DOES NOT MATCH DRILLERS LOG
271.1	CARBONDALE	HERRIN	COAL	6.4	149.9	CORE DOES NOT MATCH DRILLERS LOG

MAPID: 16323899000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 6 QUARTERS/FOOTAGES: 0' N line, 1320' W line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.81305 GEOLOGIST: CHENOWETH
 CONFIDENTIAL: N LATITUDE: 38.481593 DATE COLLECTED: 2 / 20 / 1973
 SURFACE ELEVATION (FT.): 421.0 LOGGED (FT.): 154.9 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 15527 WELL TYPE: Coal Test
 COMMENT: PEABODY LOC. E-1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
421.0	PLEISTOCENE		UNCONSOLIDATED	53.7	0.0	
367.3	MODESTO		LIMESTONE	0.7	53.7	
366.6	MODESTO		LIMESTONE	58.6	54.4	
308.0	MODESTO	PIASA	LIMESTONE	7.8	113.0	
300.2			GRAY SHALE	2.6	120.8	
297.6			DARK SHALE	2.6	123.4	DANVILLE COAL HORIZON
295.0			GRAY SHALE	6.0	126.0	
289.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	132.0	
286.8	CARBONDALE	BANKSTON FORK	SANDSTONE	0.8	134.2	
286.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.4	135.0	
282.6	CARBONDALE		GRAY SHALE	1.1	138.4	
281.5	CARBONDALE		DARK SHALE	3.8	139.5	
277.7	CARBONDALE	CONANT	LIMESTONE	0.7	143.3	
277.1	CARBONDALE	JAMESTOWN	COAL	0.1	143.9	
277.0	CARBONDALE	BRERETON	LIMESTONE	2.6	144.0	
274.4	CARBONDALE	BRERETON	DARK SHALE	0.2	146.6	
274.2	CARBONDALE	BRERETON	LIMESTONE	0.2	146.8	
274.0	CARBONDALE	HERRIN	COAL	6.9	147.0	
267.1	CARBONDALE		UNDERCLAY	1.0	153.9	

MAPID: 16302361000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 7 QUARTERS/FOOTAGES: 1' N line, 1' W line of NE NE
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.803796 GEOLOGIST: PRUSSEN
 CONFIDENTIAL: N LATITUDE: 38.468474 DATE COLLECTED: 7 / 21 / 1955
 SURFACE ELEVATION (FT.): 421.8 LOGGED (FT.): 166.6 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 2042 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
263.6	CARBONDALE	HERRIN	COAL	6.8	158.2	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302361000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 7 QUARTERS/FOOTAGES: 1' N line, 1' W line of NE NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.803796 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.468474 DATE COLLECTED: 7 / 21 / 1955

SURFACE ELEVATION (FT.): 421.8 LOGGED (FT.): 166.6 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2042 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
421.8	PLEISTOCENE		UNCONSOLIDATED	57.3	0.0	
364.5	MODESTO		GRAY SHALE	41.7	57.3	
322.9	MODESTO		LIMESTONE	2.8	98.9	
320.1	MODESTO		GRAY SHALE	1.7	101.7	
318.5	MODESTO		LIMESTONE	1.1	103.3	
317.4	MODESTO		GRAY SHALE	16.2	104.4	
301.2	MODESTO		LIMESTONE	2.3	120.6	
298.9	MODESTO		GRAY SHALE	4.1	122.9	
294.8	MODESTO	PIASA	LIMESTONE	7.9	127.0	
286.9			GRAY SHALE	6.5	134.9	
280.4	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	141.4	ERROR IN LOG MEASUREMENT
277.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.1	144.4	
276.6	CARBONDALE	BANKSTON FORK	LIMESTONE	5.1	145.2	
271.5	CARBONDALE		DARK GRAY SHALE	6.7	150.3	
264.9	CARBONDALE	BRERETON	ROCK	1.9	156.9	ERROR IN LOG MEASUREMENT
264.0	CARBONDALE	ANNA	BLACK SHALE	0.3	157.8	
263.6	CARBONDALE	HERRIN	COAL	6.8	158.2	
256.9	CARBONDALE		UNDERCLAY	1.7	164.9	

MAPID: 16302362000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 7 QUARTERS/FOOTAGES: 100' N line, 230' W line of SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.807544 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.460703 DATE COLLECTED: 7 / 21 / 1955

SURFACE ELEVATION (FT.): 420.4 LOGGED (FT.): 153.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2043 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
275.8	CARBONDALE	HERRIN	COAL	6.8	144.6	

MAPID: 16302362000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 7 QUARTERS/FOOTAGES: 100' N line, 230' W line of SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.807544 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.460703 DATE COLLECTED: 7 / 21 / 1955

SURFACE ELEVATION (FT.): 420.4 LOGGED (FT.): 153.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2043 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
420.4	PLEISTOCENE		UNCONSOLIDATED	97.4	0.0	
323.0	MODESTO		GRAY SHALE	15.9	97.4	
307.1	MODESTO	PIASA	LIMESTONE	7.3	113.3	
299.8			GRAY SHALE	3.3	120.6	
296.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	123.9	
294.5	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.6	125.9	
290.9	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	129.5	
289.6	CARBONDALE		DARK GRAY SHALE	5.6	130.8	
284.0	CARBONDALE	BRERETON	ROCK	7.9	136.4	
276.1	CARBONDALE	ANNA	BLACK SHALE	0.3	144.3	
275.8	CARBONDALE	HERRIN	COAL	6.8	144.6	
269.1	CARBONDALE		UNDERCLAY	1.8	151.3	

MAPID: 16302376000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 7 QUARTERS/FOOTAGES: 200' N line, 127' W line of NE NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.812555 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.467967 DATE COLLECTED: 7 / 22 / 1955

SURFACE ELEVATION (FT.): 407.6 LOGGED (FT.): 136.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2058 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
279.8	CARBONDALE	HERRIN	COAL	6.4	127.8	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302376000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 7 QUARTERS/FOOTAGES: 200' N line, 127' W line of NE NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.812555

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.467967

DATE COLLECTED: 7 / 22 / 1955

SURFACE ELEVATION (FT.): 407.6 LOGGED (FT.): 136.1

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2058

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
407.6	PLEISTOCENE		UNCONSOLIDATED	94.1	0.0	
313.5	MODESTO	PIASA	LIMESTONE	6.7	94.1	
306.8			GRAY SHALE	9.3	100.8	
297.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.8	110.1	
292.8	CARBONDALE		GRAY SHALE	5.8	114.8	
287.0	CARBONDALE	BRERETON	LIMESTONE	6.9	120.6	
280.1	CARBONDALE	ANNA	BLACK SHALE	0.3	127.5	
279.8	CARBONDALE	HERRIN	COAL	6.4	127.8	
273.4	CARBONDALE		UNDERCLAY	1.9	134.2	

MAPID: 16302424000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 7 QUARTERS/FOOTAGES: 195' S line, 45' W line of SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.808151

GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.454001

DATE COLLECTED: 10 / 6 / 1955

SURFACE ELEVATION (FT.): 413.2 LOGGED (FT.): 133.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2190

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
288.8	CARBONDALE	HERRIN	COAL	7.1	124.4	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302424000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 7 QUARTERS/FOOTAGES: 195' S line, 45' W line of SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.808151 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.454001 DATE COLLECTED: 10 / 6 / 1955

SURFACE ELEVATION (FT.): 413.2 LOGGED (FT.): 133.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2190 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
413.2	PLEISTOCENE		UNCONSOLIDATED	21.0	0.0
392.2	PLEISTOCENE		SAND	19.0	21.0
373.2	PLEISTOCENE		CLAY	47.6	40.0
325.6	MODESTO		LIMESTONE	0.9	87.6
324.8	MODESTO		GRAY SHALE	0.4	88.4
324.4	MODESTO	PIASA	LIMESTONE	6.0	88.8
318.4			GRAY SHALE	12.3	94.8
306.1			SHALY LIMESTONE	0.4	107.1
305.7			GRAY SHALE	0.4	107.5
305.3	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	107.9
303.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.1	109.8
302.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.2	111.0
301.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.1	112.2
299.9	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	113.3
298.4	CARBONDALE		GRAY SHALE	0.4	114.8
298.0	CARBONDALE		LIMESTONE	0.3	115.2
297.6	CARBONDALE		DARK SHALE	8.8	115.6
288.8	CARBONDALE	HERRIN	COAL	7.1	124.4
281.7	CARBONDALE		UNDERCLAY	1.5	131.5

MAPID: 16303655000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 7 QUARTERS/FOOTAGES: 1650' S line, 0' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.817543 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.458029 DATE COLLECTED: 2 / 13 / 1973

SURFACE ELEVATION (FT.): 409.0 LOGGED (FT.): 136.4 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 15526C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
281.7	CARBONDALE	HERRIN	COAL	7.1	127.3

MAPID: 16303655000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 7 QUARTERS/FOOTAGES: 1650' S line, 0' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.817543 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.458029 DATE COLLECTED: 2 / 13 / 1973

SURFACE ELEVATION (FT.): 409.0 LOGGED (FT.): 136.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15526C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. A-12

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
409.0	PLEISTOCENE		UNCONSOLIDATED	86.7	0.0	
322.3	MODESTO		LIMESTONE	1.3	86.7	
321.0	MODESTO		GRAY SHALE	5.2	88.0	
315.8	MODESTO	PIASA	LIMESTONE	8.1	93.2	
307.7			CALCAREOUS SHALE	9.3	101.3	
298.4	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	110.6	
296.4	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	1.2	112.6	
295.2	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	3.4	113.8	
291.8	CARBONDALE		GRAY SHALE	3.0	117.2	
288.8	CARBONDALE		DARK SHALE	2.7	120.2	
286.1	CARBONDALE	CONANT	LIMESTONE	0.9	122.9	
285.2	CARBONDALE		BLACK SHALE	2.8	123.8	JAMESTOWN HORIZON
282.4	CARBONDALE	BRERETON	LIMESTONE	0.6	126.6	
281.8	CARBONDALE	ANNA	BLACK SHALE	0.1	127.2	
281.7	CARBONDALE	HERRIN	COAL	7.1	127.3	
274.6	CARBONDALE		UNDERCLAY	2.0	134.4	

MAPID: 16303656000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 7 QUARTERS/FOOTAGES: 0' S line, 1650' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.811723 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.453467 DATE COLLECTED: 2 / 28 / 1973

SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 142.8 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 15529C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
284.6	CARBONDALE	HERRIN	COAL	7.2	125.4	

MAPID: 16303656000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 7 QUARTERS/FOOTAGES: 0' S line, 1650' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.811723

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.453467

DATE COLLECTED:

SURFACE ELEVATION (FT.): 410.0

LOGGED (FT.): 130.4

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 15529C

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
321.3	MODESTO	PIASA	LIMESTONE	7.4	88.7	
313.9	CARBONDALE		GRAY SHALE	12.3	96.1	
301.6	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	1.8	108.4	UPPER BENCH
299.8	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.8	110.2	SHALE PARTING
299.0	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.0	111.0	LOWER BENCH
296.0	CARBONDALE	LAWSON	GRAY SHALE	0.1	114.0	
295.9	CARBONDALE	LAWSON	DARK GRAY SHALE	4.6	114.1	
291.3	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	1.0	118.7	
290.3	CARBONDALE	JAMESTOWN	BONE COAL	0.3	119.7	
290.0	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	3.8	120.0	
286.2	CARBONDALE	ANNA	BLACK SHALE	1.2	123.8	
285.0	CARBONDALE	HERRIN	COAL	5.4	125.0	

MAPID: 16300050000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 8 QUARTERS/FOOTAGES: 880' S line, 1100' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.795249

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.455835

DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 425.4

LOGGED (FT.): 157.0

LOG TYPE:

SOURCE: UNION COLL 23

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
276.4	CARBONDALE	HERRIN	COAL	7.2	149.0	

MAPID: 16300050000C VERSION: 2

PROJECT: NCRDS87

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 8 QUARTERS/FOOTAGES: 880' S line, 1100' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.795249 GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 38.455835 DATE COLLECTED: 1 / 8 / 1923

SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 157.0 LOG TYPE: Other Core Study

SOURCE: UNION COLLIERY CO. WELL TYPE: Diamond Drill

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
425.0			UNKNOWN	111.0	0.0	
314.0	BOND	CARTHAGE	LIMESTONE	8.5	111.0	UNCERTAIN CORRELATION
305.5	MODESTO		SHALE	7.8	119.5	
297.7	MODESTO		BLACK SHALE	0.3	127.3	
297.4	MODESTO		LIMESTONE	2.2	127.6	
295.2	MODESTO		SHALE	1.3	129.8	
294.0	MODESTO		LIMESTONE	1.1	131.0	
292.9	MODESTO		SHALE	2.6	132.1	
290.3	MODESTO		LIMESTONE	1.3	134.7	
289.0			SHALE	6.7	136.0	
282.3	CARBONDALE		LIMESTONE	0.3	142.7	
282.0	CARBONDALE		SHALE	1.0	143.0	
281.0	CARBONDALE	JAMESTOWN	COAL	0.3	144.0	
280.7	CARBONDALE	BRERETON	LIMESTONE	0.3	144.3	
280.5	CARBONDALE	ANNA	SHALE	4.1	144.5	
276.4	CARBONDALE	HERRIN	COAL	7.2	148.6	
269.2	CARBONDALE		UNDERCLAY	1.3	155.8	

MAPID: 16300050000C VERSION: 3

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 8 QUARTERS/FOOTAGES: 880' S line, 1100' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.795249 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.455835 DATE COLLECTED: 8 / 1 / 1923

SURFACE ELEVATION (FT.): 425.4 LOGGED (FT.): 157.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
425.4			SOIL	1.0	0.0	
424.4			CLAY	22.0	1.0	
402.4			SAND	20.0	23.0	RED
382.4			CLAY	27.0	43.0	
355.4			SOFT SHALE	41.0	70.0	
314.4			LIMESTONE	8.5	111.0	
305.9			SHALE	6.5	119.5	
299.4			SHALE	2.0	126.0	R&BLU
297.4			LIMESTONE	6.5	128.0	
290.9			LIMESTONE	1.5	134.5	BLUE
289.4			SHALE	6.7	136.0	BLACK
282.7	CARBONDALE	BRERETON	LIMESTONE	0.3	142.7	
282.4	CARBONDALE	BRERETON	LIMESTONE	1.0	143.0	BLACK
281.4	CARBONDALE		COAL	0.3	144.0	
281.1	CARBONDALE		LIMESTONE	0.3	144.3	
280.9	CARBONDALE	ANNA	SHALE	4.1	144.5	BLACK
276.8	CARBONDALE	HERRIN	COAL	5.5	148.6	
271.3	CARBONDALE	HERRIN	SHALE	0.1	154.1	
271.2	CARBONDALE	HERRIN	COAL	1.6	154.2	
269.6	CARBONDALE		UNDERCLAY	1.3	155.8	

MAPID: 16302425000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 8 QUARTERS/FOOTAGES: 40' N line, 10' W line of SE NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.78494 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.464361 DATE COLLECTED: 10 / 11 / 1955

SURFACE ELEVATION (FT.): 422.3 LOGGED (FT.): 178.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2191 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
251.8	CARBONDALE	HERRIN	COAL	6.6	170.5	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302425000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 8 QUARTERS/FOOTAGES: 40' N line, 10' W line of SE NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.78494 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.464361 DATE COLLECTED: 10 / 11 / 1955

SURFACE ELEVATION (FT.): 422.3 LOGGED (FT.): 178.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2191 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
422.3	PLEISTOCENE		UNCONSOLIDATED	19.8	0.0	
402.5	PLEISTOCENE		SAND	13.5	19.8	
389.1	PLEISTOCENE		UNCONSOLIDATED	78.8	33.2	SAND, GRAVEL & CLAY
310.2	MODESTO		GRAY SHALE	3.1	112.1	
307.2	MODESTO		LIMESTONE	1.7	115.1	
305.5	MODESTO		GRAY SHALE	12.6	116.8	
292.9	MODESTO		LIMESTONE	1.0	129.4	
291.9	MODESTO		GRAY SHALE	0.4	130.4	
291.5	MODESTO		LIMESTONE	0.4	130.8	
291.1	MODESTO		GRAY SHALE	2.8	131.2	
288.3	MODESTO	PIASA	LIMESTONE	2.4	134.0	
285.9			GRAY SHALE	17.2	136.4	
268.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.4	153.6	
267.3	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.6	155.0	
263.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	158.6	
262.2	CARBONDALE		GRAY SHALE	10.4	160.1	
251.8	CARBONDALE	HERRIN	COAL	6.6	170.5	
245.1	CARBONDALE		UNDERCLAY	1.3	177.2	

MAPID: 16302426000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 8 QUARTERS/FOOTAGES: 14' S line, 453' E line of SW SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.796015 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.453453 DATE COLLECTED: 10 / 12 / 1955

SURFACE ELEVATION (FT.): 421.3 LOGGED (FT.): 150.7 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2192 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
279.1	CARBONDALE	HERRIN	COAL	7.1	142.2	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 1630242600C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 8 QUARTERS/FOOTAGES: 14' S line, 453' E line of SW SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.796015 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.453453 DATE COLLECTED: 10 / 12 / 1955

SURFACE ELEVATION (FT.): 421.3 LOGGED (FT.): 150.7 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2192 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
421.3	PLEISTOCENE		UNCONSOLIDATED	102.7	0.0	
318.6	MODESTO	PIASA	LIMESTONE	5.8	102.7	TOP MAY BE ERODED
312.8			GRAY SHALE	17.1	108.5	
295.7			LIMESTONE	1.6	125.6	
294.0			GRAY SHALE	1.4	127.3	
292.6	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	1.0	128.7	
291.6	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.8	129.7	
290.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	130.5	
289.0	CARBONDALE		GRAY SHALE	5.6	132.3	
283.3	CARBONDALE		ROCK	0.5	138.0	
282.8	CARBONDALE		DARK SHALE	0.2	138.5	
282.6	CARBONDALE		ROCK	0.8	138.7	
281.8	CARBONDALE	ANNA	DARK SHALE	0.7	139.5	
281.1	CARBONDALE	ANNA	BLACK SHALE	2.0	140.2	
279.1	CARBONDALE	HERRIN	COAL	7.1	142.2	
272.0	CARBONDALE		UNDERCLAY	1.5	149.3	

MAPID: 16303371000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 8 QUARTERS/FOOTAGES: 1320' N line, 0' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.780242 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.464478 DATE COLLECTED: 7 / 12 / 1971

SURFACE ELEVATION (FT.): 413.0 LOGGED (FT.): 174.3 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 12526C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
248.0	CARBONDALE	HERRIN	COAL	7.5	165.0	

MAPID: 16303371000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 8 QUARTERS/FOOTAGES: 1320' N line, 0' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.780242 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.464478 DATE COLLECTED:

SURFACE ELEVATION (FT.): 413.0 LOGGED (FT.): 172.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12526C WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
281.0	MODESTO	PIASA	LIMESTONE	5.5	132.0
275.5	CARBONDALE		GRAY SHALE	12.4	137.5
263.1	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	149.9
261.6	CARBONDALE	LAWSON	GRAY SHALE	4.2	151.4
257.4	CARBONDALE	CONANT	LIMESTONE	1.1	155.6
256.3	CARBONDALE		DARK GRAY SHALE	2.9	156.7
253.4	CARBONDALE	BRERETON	LIMESTONE	1.0	159.6
252.4	CARBONDALE	ANNA	DARK GRAY SHALE	4.6	160.6
248.0	CARBONDALE	HERRIN	COAL	7.5	165.0

MAPID: 16323868000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 8 QUARTERS/FOOTAGES: 0' S line, 1320' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.794459 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.453396 DATE COLLECTED: 2 / 23 / 1973

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 158.0 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 15528C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
270.4	CARBONDALE	HERRIN	COAL	7.1	149.6

MAPID: 16323868000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 8 QUARTERS/FOOTAGES: 0' S line, 1320' W line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.794459 GEOLOGIST: CHENOWETH
 CONFIDENTIAL: N LATITUDE: 38.453396 DATE COLLECTED: 2 / 23 / 1973
 SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 158.0 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 15528C WELL TYPE: Coal Test
 COMMENT: PEABODY E-17

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
420.0	PLEISTOCENE		UNCONSOLIDATED	112.8	0.0	
307.2	MODESTO	PIASA	LIMESTONE	5.0	112.8	
302.2			GRAY SHALE	10.8	117.8	
291.4			DARK SHALE	2.8	128.6	DANVILLE COAL HORIZON
288.6			GRAY SHALE	1.6	131.4	
287.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	133.0	
285.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.6	134.8	
281.6	CARBONDALE	BANKSTON FORK	LIMESTONE	1.4	138.4	
280.2	CARBONDALE		DARK SHALE	0.3	139.8	
279.9	CARBONDALE	CONANT	LIMESTONE	0.5	140.1	
279.4	CARBONDALE		DARK SHALE	6.9	140.6	
272.5	CARBONDALE	JAMESTOWN	COAL	0.3	147.5	
272.2	CARBONDALE	BRERETON	LIMESTONE	1.1	147.8	
271.2	CARBONDALE		DARK SHALE	0.4	148.8	
270.8	CARBONDALE	ANNA	BLACK SHALE	0.4	149.2	
270.4	CARBONDALE	HERRIN	COAL	7.1	149.6	
263.4	CARBONDALE		UNDERCLAY	1.4	156.6	

MAPID: 16302413000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 10 QUARTERS/FOOTAGES: 1295' S line, 2246' E line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.750283 GEOLOGIST: PRUSSEN
 CONFIDENTIAL: N LATITUDE: 38.45654 DATE COLLECTED: 8 / 28 / 1955
 SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 196.3 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 2118 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
223.7	CARBONDALE	HERRIN	COAL	8.1	186.3	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302413000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 10 QUARTERS/FOOTAGES: 1295' S line, 2246' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.750283

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.45654

DATE COLLECTED:

SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 194.1

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2118

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
264.0	MODESTO	PIASA	LIMESTONE	5.2	146.0
258.8	CARBONDALE		GRAY SHALE	6.4	151.2
252.4	CARBONDALE	BANKSTON FORK	LIMESTONE	6.6	157.6
245.8	CARBONDALE	LAWSON	DARK GRAY SHALE	8.9	164.2
236.9	CARBONDALE	BRERETON	LIMESTONE	2.8	173.1
234.2	CARBONDALE	ANNA	BLACK SHALE	0.4	175.8
224.0	CARBONDALE	HERRIN	COAL	8.1	186.0

MAPID: 16303389000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 11 QUARTERS/FOOTAGES: 1' N line, 1' W line

QUADRANGLE: VENEDY LONGITUDE: -89.742418

GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.467868

DATE COLLECTED: 7 / 6 / 1971

SURFACE ELEVATION (FT.): 419.0 LOGGED (FT.): 217.5

LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 12662C

WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
209.9	CARBONDALE	HERRIN	COAL	7.6	209.1

MAPID: 16303389000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 11 QUARTERS/FOOTAGES: 1' N line, 1' W line

QUADRANGLE: VENEDY LONGITUDE: -89.742418 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.467868 DATE COLLECTED: 7 / 6 / 1971

SURFACE ELEVATION (FT.): 419.0 LOGGED (FT.): 217.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12662C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. A-1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
419.0	PLEISTOCENE		UNCONSOLIDATED	108.1	0.0	
310.9	PLEISTOCENE		CLAY	29.8	108.1	BLUE
281.1	MODESTO		GRAY SHALE	2.0	137.9	
279.1	MODESTO		LIMESTONE	0.4	139.9	
278.7	MODESTO		GRAY SHALE	10.8	140.3	
267.9	MODESTO		LIMESTONE	0.4	151.1	
267.5	MODESTO		GRAY SHALE	8.5	151.5	
259.0	MODESTO		DARK SHALE	1.3	160.0	
257.7	MODESTO		GRAY SHALE	1.4	161.3	
256.3	MODESTO		LIMESTONE	0.8	162.7	
255.5	MODESTO		GRAY SHALE	5.0	163.5	
250.5	MODESTO	PIASA	LIMESTONE	6.6	168.5	
243.9	MODESTO		GRAY SHALE	6.4	175.1	
237.5	MODESTO		LIMESTONE	0.5	181.5	
237.0			GRAY SHALE	7.3	182.0	
229.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.2	189.3	
228.5	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.4	190.5	
227.1	CARBONDALE	BANKSTON FORK	LIMESTONE	1.7	191.9	
225.4	CARBONDALE		GRAY SHALE	5.4	193.6	
220.0	CARBONDALE	BRERETON	LIMESTONE	9.8	199.0	
210.2	CARBONDALE	ANNA	BLACK SHALE	0.3	208.8	
209.9	CARBONDALE	HERRIN	COAL	7.6	209.1	
202.3	CARBONDALE		UNDERCLAY	0.8	216.7	

MAPID: 16303495000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 11 QUARTERS/FOOTAGES: 0' S line, 2640' E line

QUADRANGLE: VENEDY LONGITUDE: -89.732884 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.452683 DATE COLLECTED: 11 / 9 / 1971

SURFACE ELEVATION (FT.): 421.0 LOGGED (FT.): 219.7 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12539C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
211.8	CARBONDALE	HERRIN	COAL	7.8	209.2	

MAPID: 16303495000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 11 QUARTERS/FOOTAGES: 0' S line, 2640' E line

QUADRANGLE: VENEDY LONGITUDE: -89.732884 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.452683 DATE COLLECTED:

SURFACE ELEVATION (FT.): 421.0 LOGGED (FT.): 216.8 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12539C WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
246.0	MODESTO	PIASA	LIMESTONE	6.7	175.0
239.3	MODESTO		CLAYSTONE & SHALE	6.0	181.7
233.3	CARBONDALE	DANVILLE	COAL	0.8	187.7
232.5	CARBONDALE		CLAYSTONE & SHALE	1.0	188.5
231.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.3	189.5
225.2	CARBONDALE	LAWSON	CLAYSTONE & SHALE	7.5	195.8
217.7	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.3	203.3
217.4	CARBONDALE	JAMESTOWN	CARBONACEOUS SHALE	0.9	203.6
216.5	CARBONDALE	BRERETON	LIMESTONE	3.1	204.5
213.5	CARBONDALE	ANNA	BLACK SHALE	2.1	207.5
212.0	CARBONDALE	HERRIN	COAL	7.8	209.0

MAPID: 16303373000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 13 QUARTERS/FOOTAGES: 1320' N line, 0' W line

QUADRANGLE: VENEDY LONGITUDE: -89.723575 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.448834 DATE COLLECTED: 6 / 24 / 1971

SURFACE ELEVATION (FT.): 421.0 LOGGED (FT.): 216.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12578C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY; C-9017

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
216.1	CARBONDALE	HERRIN	COAL	6.5	204.9

MAPID: 16303373000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 13 QUARTERS/FOOTAGES: 1320' N line, 0' W line

QUADRANGLE: VENEDY LONGITUDE: -89.723575

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.448834

DATE COLLECTED:

SURFACE ELEVATION (FT.): 421.0 LOGGED (FT.): 211.5

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12578C

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
256.0	MODESTO	PIASA	LIMESTONE	5.8	165.0
250.2	CARBONDALE		GRAY SHALE	16.9	170.8
233.3	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	8.3	187.7
225.0	CARBONDALE	LAWSON	GRAY SHALE	6.5	196.0
218.5	CARBONDALE	JAMESTOWN	CARBONACEOUS SHALE	0.4	202.5
218.1	CARBONDALE		BLACK SHALE	0.8	202.9
217.3	CARBONDALE	BRERETON	LIMESTONE	0.2	203.7
217.1	CARBONDALE	ANNA	DARK GRAY SHALE	1.5	203.9
216.0	CARBONDALE	HERRIN	COAL	6.5	205.0

MAPID: 16303372000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 14 QUARTERS/FOOTAGES: 0' N line, 330' W line of SE

QUADRANGLE: VENEDY LONGITUDE: -89.731743

GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.445209

DATE COLLECTED: 4 / 22 / 1971

SURFACE ELEVATION (FT.): 421.0 LOGGED (FT.): 208.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12557C

WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY; C-9012

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
223.8	CARBONDALE	HERRIN	COAL	7.6	197.2

MAPID: 16303372000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 14 QUARTERS/FOOTAGES: 0' N line, 330' W line of SE

QUADRANGLE: VENEDY LONGITUDE: -89.731743 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.445209 DATE COLLECTED: 4 / 22 / 1971

SURFACE ELEVATION (FT.): 421.0 LOGGED (FT.): 208.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12557C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. J-9

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
421.0	PLEISTOCENE		UNCONSOLIDATED	37.0	0.0
384.0	PLEISTOCENE		SAND	8.0	37.0
376.0	PLEISTOCENE		CLAY	58.0	45.0
318.0	MODESTO		GRAY SHALE	47.5	103.0
270.5	MODESTO	PIASA	LIMESTONE	9.0	150.5
261.5			GRAY SHALE	7.8	159.5
253.7			LIMESTONE	4.2	167.3
249.5			GRAY SHALE	7.0	171.5
242.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	178.5
241.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.4	179.8
239.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	181.2
238.0	CARBONDALE		GRAY SHALE	3.3	183.0
234.7	CARBONDALE		LIMESTONE	0.7	186.3
234.0	CARBONDALE		GRAY SHALE	1.7	187.0
232.3	CARBONDALE	CONANT	LIMESTONE	0.8	188.7
231.5	CARBONDALE		DARK SHALE	0.2	189.5
231.3	CARBONDALE	JAMESTOWN	COAL	0.2	189.7
231.1	CARBONDALE		LIMESTONE	0.8	189.9
230.3	CARBONDALE		DARK SHALE	2.5	190.7
227.8	CARBONDALE	BRERETON	LIMESTONE	4.0	193.2
223.8	CARBONDALE	HERRIN	COAL	7.6	197.2
216.2	CARBONDALE		UNDERCLAY	1.8	204.8
214.4	CARBONDALE		LIMESTONE	0.4	206.6
214.0	CARBONDALE		GRAY SHALE	1.0	207.0

MAPID: 16303496000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 14 QUARTERS/FOOTAGES: 0' S line, 0' W line of SE

QUADRANGLE: VENEDY LONGITUDE: -89.7328 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.437778 DATE COLLECTED: 6 / 29 / 1971

SURFACE ELEVATION (FT.): 416.0 LOGGED (FT.): 214.7 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 12524C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY; C-9006

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
209.1	CARBONDALE	HERRIN	COAL	7.3	206.9

MAPID: 16303496000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 14 QUARTERS/FOOTAGES: 0' S line, 0' W line of SE

QUADRANGLE: VENEDY LONGITUDE: -89.7328 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.437778 DATE COLLECTED: 6 / 29 / 1971

SURFACE ELEVATION (FT.): 416.0 LOGGED (FT.): 214.7 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12524C WELL TYPE: Coal Test

COMMENT: PEABODY LOC I-17

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
416.0	PLEISTOCENE		UNCONSOLIDATED	105.0	0.0
311.0	MODESTO		GRAY SHALE	54.6	105.0
256.4	MODESTO	PIASA	LIMESTONE	7.9	159.6
248.5			GRAY SHALE	10.6	167.5
237.9			LIMESTONE	0.6	178.1
237.3			DARK SHALE	4.4	178.7
232.9			LIMESTONE	0.8	183.1
232.1			GRAY SHALE	4.4	183.9
227.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.6	188.3
224.1	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.3	191.9
221.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	194.2
220.3	CARBONDALE	BANKSTON FORK	DARK SHALE	8.0	195.7
212.3	CARBONDALE	BRERETON	LIMESTONE	0.7	203.7
211.6	CARBONDALE	ANNA	BLACK SHALE	2.5	204.4
209.1	CARBONDALE	HERRIN	COAL	7.3	206.9
201.8			UNDERCLAY	0.5	214.2

MAPID: 16303622000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 14 QUARTERS/FOOTAGES: 0' S line, 0' W line

QUADRANGLE: VENEDY LONGITUDE: -89.742148 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.437916 DATE COLLECTED: 10 / 11 / 1972

SURFACE ELEVATION (FT.): 399.0 LOGGED (FT.): 199.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12939C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
210.9	CARBONDALE	HERRIN	COAL	7.6	188.1

MAPID: 16303622000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 14 QUARTERS/FOOTAGES: 0' S line, 0' W line

QUADRANGLE: VENEDY LONGITUDE: -89.742148 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.437916 DATE COLLECTED: 10 / 11 / 1972

SURFACE ELEVATION (FT.): 399.0 LOGGED (FT.): 199.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12939C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. A-17

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
399.0	PLEISTOCENE		UNCONSOLIDATED	8.0	0.0	
391.0	PLEISTOCENE		SAND & GRAVEL	50.0	8.0	
341.0	PLEISTOCENE		CLAY	40.0	58.0	
301.0	MODESTO		GRAY SHALE	41.5	98.0	
259.5	MODESTO	PIASA	LIMESTONE	9.5	139.5	
250.0			GRAY SHALE	16.0	149.0	
234.0			LIMESTONE	1.0	165.0	
233.0			GRAY SHALE	3.0	166.0	
230.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.2	169.0	
228.8	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.8	170.2	
228.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.5	171.0	
219.5	CARBONDALE		DARK SHALE	5.7	179.5	
213.8	CARBONDALE	BRERETON	LIMESTONE	1.0	185.2	
212.8	CARBONDALE		DARK SHALE	1.9	186.2	
210.9	CARBONDALE	HERRIN	COAL	7.6	188.1	
203.3	CARBONDALE		UNDERCLAY	1.0	195.7	
202.3	CARBONDALE		GRAY SHALE	2.3	196.7	

MAPID: 16302405000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 15 QUARTERS/FOOTAGES: 33' N line, 490' E line of NW NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.758117 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.452945 DATE COLLECTED: 8 / 20 / 1955

SURFACE ELEVATION (FT.): 400.4 LOGGED (FT.): 182.2 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2103 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
229.1	CARBONDALE	HERRIN	COAL	9.1	171.3	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302405000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 15 QUARTERS/FOOTAGES: 33' N line, 490' E line of NW NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.758117 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.452945 DATE COLLECTED: 8 / 20 / 1955

SURFACE ELEVATION (FT.): 400.4 LOGGED (FT.): 182.2 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2103 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
400.4	PLEISTOCENE		UNCONSOLIDATED	114.8	0.0	
285.6	MODESTO	PIASA	LIMESTONE	6.2	114.8	TOP MAY BE ERODED
279.5	MODESTO		GRAY SHALE	12.3	120.9	
267.2	MODESTO		BLACK SHALE	3.1	133.2	DANVILLE COAL HORIZON
264.1	CARBONDALE		UNDERCLAY	1.8	136.3	
262.3	CARBONDALE	BANKSTON FORK	LIMESTONE	14.8	138.1	
247.5	CARBONDALE		DARK SHALE	3.3	152.9	
244.2	CARBONDALE	BRERETON	ROCK	11.5	156.2	
232.7	CARBONDALE	ANNA	BLACK SHALE	3.6	167.7	
229.1	CARBONDALE	HERRIN	COAL	9.1	171.3	
220.1	CARBONDALE		UNDERCLAY	1.8	180.3	

MAPID: 16302412000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 15 QUARTERS/FOOTAGES: 391' S line, 25' E line of NE NE

QUADRANGLE: VENEDY LONGITUDE: -89.742435 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.450229 DATE COLLECTED: 8 / 26 / 1955

SURFACE ELEVATION (FT.): 423.9 LOGGED (FT.): 212.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2117 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
220.8	CARBONDALE	HERRIN	COAL	7.5	203.1	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302412000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 15 QUARTERS/FOOTAGES: 391' S line, 25' E line of NE NE

QUADRANGLE: VENEDY LONGITUDE: -89.742435 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.450229 DATE COLLECTED: 8 / 26 / 1955

SURFACE ELEVATION (FT.): 423.9 LOGGED (FT.): 212.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2117 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
423.9	PLEISTOCENE		UNCONSOLIDATED	160.2	0.0	
263.7	MODESTO	PIASA	LIMESTONE	6.8	160.2	
257.0			GRAY SHALE	17.8	166.9	
239.2	CARBONDALE	BANKSTON FORK	LIMESTONE	7.9	184.7	
231.3	CARBONDALE		DARK SHALE	8.8	192.6	
222.5	CARBONDALE	BRERETON	ROCK	1.3	201.4	
221.2	CARBONDALE	ANNA	BLACK SHALE	0.4	202.7	
220.8	CARBONDALE	HERRIN	COAL	7.5	203.1	
213.4	CARBONDALE		UNDERCLAY	1.8	210.5	

MAPID: 16302414000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 15 QUARTERS/FOOTAGES: 1491' N line, 2601' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.751924 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.448861 DATE COLLECTED: 8 / 28 / 1955

SURFACE ELEVATION (FT.): 413.4 LOGGED (FT.): 170.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2119 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
252.2	CARBONDALE	HERRIN	COAL	7.7	161.2	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302414000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 15 QUARTERS/FOOTAGES: 1491' N line, 2601' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.751924

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.448861

DATE COLLECTED:

SURFACE ELEVATION (FT.): 413.0 LOGGED (FT.): 168.7

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2119

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
295.0	MODESTO	PIASA	LIMESTONE	5.8	118.0
289.2	MODESTO		GRAY SHALE	10.0	123.8
279.2	CARBONDALE	DANVILLE	BLACK SHALE	4.3	133.8
274.9	CARBONDALE		CLAYSTONE	2.9	138.1
272.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.4	141.0
263.6	CARBONDALE	LAWSON	DARK GRAY SHALE	3.8	149.4
259.7	CARBONDALE	CONANT	LIMESTONE	1.7	153.3
258.1	CARBONDALE		BLACK SHALE	1.2	154.9
256.9	CARBONDALE	BRERETON	LIMESTONE	2.3	156.1
254.6	CARBONDALE	ANNA	BLACK SHALE	2.6	158.4
252.0	CARBONDALE	HERRIN	COAL	7.7	161.0

MAPID: 16302415000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 15 QUARTERS/FOOTAGES: 693' S line, 90' E line of SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.751917

GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.439894

DATE COLLECTED: 8 / 29 / 1955

SURFACE ELEVATION (FT.): 417.7 LOGGED (FT.): 199.1

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2120

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
228.3	CARBONDALE	HERRIN	COAL	7.8	189.4 SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302415000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 15 QUARTERS/FOOTAGES: 693' S line, 90' E line of SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.751917 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.439894 DATE COLLECTED: 8 / 29 / 1955

SURFACE ELEVATION (FT.): 417.7 LOGGED (FT.): 199.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2120 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
417.7	PLEISTOCENE		UNCONSOLIDATED	142.8	0.0	
274.9	MODESTO	PIASA	LIMESTONE	5.2	142.8	
269.8	MODESTO		GRAY SHALE	15.8	147.9	
253.9	MODESTO		BLACK SHALE	3.7	163.8	DANVILLE COAL HORIZON
250.3	CARBONDALE		UNDERCLAY	2.2	167.4	
248.1	CARBONDALE	BANKSTON FORK	LIMESTONE	7.6	169.6	
240.5	CARBONDALE		GRAY SHALE	4.9	177.2	
235.6	CARBONDALE	BRERETON	ROCK	4.8	182.1	
230.9	CARBONDALE	ANNA	BLACK SHALE	2.6	186.8	
228.3	CARBONDALE	HERRIN	COAL	7.8	189.4	
220.5	CARBONDALE		UNDERCLAY	1.1	197.2	

MAPID: 16302403000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 16 QUARTERS/FOOTAGES: 21' S line, 996' W line of SE NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.76237 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.445624 DATE COLLECTED: 8 / 19 / 1955

SURFACE ELEVATION (FT.): 396.3 LOGGED (FT.): 177.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2099 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
228.4	CARBONDALE	HERRIN	COAL	7.7	167.9	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302403000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 16 QUARTERS/FOOTAGES: 21' S line, 996' W line of SE NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.76237 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.445624 DATE COLLECTED: 8 / 19 / 1955

SURFACE ELEVATION (FT.): 396.3 LOGGED (FT.): 177.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2099 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
396.3	PLEISTOCENE		UNCONSOLIDATED	104.3	0.0	
292.0	MODESTO		LIMESTONE	3.1	104.3	
289.0	MODESTO		GRAY SHALE	13.5	107.3	
275.5	MODESTO	PIASA	LIMESTONE	9.8	120.8	
265.6	MODESTO		GRAY SHALE	8.9	130.7	
256.7	MODESTO		BLACK SHALE	4.3	139.6	DANVILLE COAL HORIZON
252.4	CARBONDALE		UNDERCLAY	0.8	143.9	
251.6	CARBONDALE	BANKSTON FORK	LIMESTONE	11.9	144.7	
239.7	CARBONDALE		DARK SHALE	4.8	156.6	
234.9	CARBONDALE	BRERETON	ROCK	6.3	161.4	
228.6	CARBONDALE	ANNA	BLACK SHALE	0.2	167.7	
228.4	CARBONDALE	HERRIN	COAL	7.7	167.9	
220.7	CARBONDALE		UNDERCLAY	1.8	175.6	

MAPID: 16302404000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 16 QUARTERS/FOOTAGES: 47' N line, 33' W line of NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.770623 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.453013 DATE COLLECTED: 8 / 20 / 1955

SURFACE ELEVATION (FT.): 415.9 LOGGED (FT.): 196.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2101 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
229.8	CARBONDALE	HERRIN	COAL	8.4	186.1	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302404000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 16 QUARTERS/FOOTAGES: 47' N line, 33' W line of NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.770623 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.453013 DATE COLLECTED: 8 / 20 / 1955

SURFACE ELEVATION (FT.): 415.9 LOGGED (FT.): 196.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2101 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.9	PLEISTOCENE		UNCONSOLIDATED	97.2	0.0	
318.7	MODESTO		GRAY SHALE	52.3	97.2	
266.4	MODESTO	PIASA	LIMESTONE	7.6	149.5	
258.8	MODESTO		GRAY SHALE	9.3	157.1	
249.6	MODESTO		BLACK SHALE	1.6	166.3	DANVILLE COAL HORIZON
248.0	CARBONDALE		UNDERCLAY	1.3	167.9	
246.6	CARBONDALE	BANKSTON FORK	LIMESTONE	11.4	169.3	
235.2	CARBONDALE		DARK SHALE	4.5	180.7	
230.7	CARBONDALE	BRERETON	ROCK	0.9	185.2	
229.8	CARBONDALE	HERRIN	COAL	8.4	186.1	
221.4	CARBONDALE		UNDERCLAY	1.8	194.5	

MAPID: 16302406000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 16 QUARTERS/FOOTAGES: 2615' N line, 2608' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.770199 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.445918 DATE COLLECTED: 8 / 31 / 1955

SURFACE ELEVATION (FT.): 417.1 LOGGED (FT.): 191.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2104 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
234.8	CARBONDALE	HERRIN	COAL	7.3	182.3	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302406000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 16 QUARTERS/FOOTAGES: 2615' N line, 2608' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.770199

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.445918

DATE COLLECTED:

SURFACE ELEVATION (FT.): 418.0 LOGGED (FT.): 189.3

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2104

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
275.0	MODESTO	PIASA	LIMESTONE	7.9	143.0	
267.1	CARBONDALE		GRAY SHALE	9.2	150.9	
257.9	CARBONDALE	BANKSTON FORK	LIMESTONE	8.2	160.1	
249.7	CARBONDALE	LAWSON	DARK GRAY SHALE	4.3	168.3	
245.4	CARBONDALE	BRERETON	LIMESTONE	9.4	172.6	
236.0	CARBONDALE	ANNA	BLACK SHALE	0.5	182.0	
236.0	CARBONDALE	HERRIN	COAL	7.3	182.0	

MAPID: 16302410000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 16 QUARTERS/FOOTAGES: 18' N line, 30' W line of SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.780239

GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.445734

DATE COLLECTED: 8 / 23 / 1955

SURFACE ELEVATION (FT.): 412.5 LOGGED (FT.): 167.5

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2110

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
254.1	CARBONDALE	HERRIN	COAL	7.2	158.4	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 1630241000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 16 QUARTERS/FOOTAGES: 18' N line, 30' W line of SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.780239 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.445734 DATE COLLECTED: 8 / 23 / 1955

SURFACE ELEVATION (FT.): 412.5 LOGGED (FT.): 167.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2110 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
412.5	PLEISTOCENE		UNCONSOLIDATED	111.4	0.0	
301.1	MODESTO	PIASA	LIMESTONE	9.1	111.4	TOP MAY BE ERODED
292.0			GRAY SHALE	9.8	120.5	
282.2	CARBONDALE		LIMESTONE	1.4	130.3	
280.8	CARBONDALE		GRAY SHALE	5.3	131.7	
275.6	CARBONDALE	BANKSTON FORK	LIMESTONE	4.3	136.9	
271.2	CARBONDALE		DARK SHALE	6.2	141.3	
265.1	CARBONDALE	BRERETON	ROCK	9.7	147.4	ERROR IN LOG MEASUREMENT
254.4	CARBONDALE		BLACK SHALE	0.3	158.1	
254.1	CARBONDALE	HERRIN	COAL	7.2	158.4	
246.9	CARBONDALE		UNDERCLAY	1.9	165.6	

MAPID: 16302411000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 16 QUARTERS/FOOTAGES: 30' N line, 25' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.78032 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.453139 DATE COLLECTED: 8 / 24 / 1955

SURFACE ELEVATION (FT.): 419.1 LOGGED (FT.): 178.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2112 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
249.2	CARBONDALE	HERRIN	COAL	7.1	169.9	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302411000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 16 QUARTERS/FOOTAGES: 30' N line, 25' W line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.78032 GEOLOGIST: CHENOWETH
 CONFIDENTIAL: N LATITUDE: 38.453139 DATE COLLECTED: 8 / 24 / 1955
 SURFACE ELEVATION (FT.): 419.1 LOGGED (FT.): 178.1 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 2112 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
419.1	PLEISTOCENE		UNCONSOLIDATED	110.8	0.0	
308.3	MODESTO		LIMESTONE	3.7	110.8	
304.7	MODESTO		GRAY SHALE	15.8	114.4	
288.8	MODESTO	PIASA	LIMESTONE	9.3	130.3	
279.5			GRAY SHALE	11.2	139.6	
268.3	CARBONDALE	BANKSTON FORK	LIMESTONE	10.4	150.8	
257.9	CARBONDALE		DARK SHALE	4.9	161.2	
253.0	CARBONDALE	BRERETON	ROCK	2.6	166.1	
250.4	CARBONDALE	ANNA	BLACK SHALE	0.3	168.7	ERROR IN LOG MEASUREMENT
249.2	CARBONDALE	HERRIN	COAL	7.1	169.9	
242.1	CARBONDALE		UNDERCLAY	1.8	177.0	

MAPID: 16303390000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 16 QUARTERS/FOOTAGES: 1' S line, 1' W line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.780273 GEOLOGIST: PRUSSEN
 CONFIDENTIAL: N LATITUDE: 38.438352 DATE COLLECTED: 6 / 28 / 1971
 SURFACE ELEVATION (FT.): 414.0 LOGGED (FT.): 158.7 LOG TYPE: Other Core Study
 SOURCE: PEABODY COAL CO. 12661C WELL TYPE: Coal Test
 COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
265.1	CARBONDALE	HERRIN	COAL	7.5	148.9	

MAPID: 16303390000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 16 QUARTERS/FOOTAGES: 1' S line, 1' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.780273 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.438352 DATE COLLECTED: 6 / 28 / 1971

SURFACE ELEVATION (FT.): 414.0 LOGGED (FT.): 158.7 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12661C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. A-17

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
414.0	PLEISTOCENE		UNCONSOLIDATED	105.7	0.0	
308.3	MODESTO	PIASA	LIMESTONE	4.8	105.7	TOP ERODED
303.5			GRAY SHALE	4.5	110.5	
299.0			LIMESTONE	0.5	115.0	
298.5			GRAY SHALE	9.1	115.5	
289.4			DARK SHALE	1.4	124.6	
288.0			BLACK SHALE	2.0	126.0	DANVILLE COAL HORIZON
286.0			CALCAREOUS SHALE	4.3	128.0	
281.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	132.3	
279.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.2	135.0	
277.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.1	136.2	
276.7	CARBONDALE		CALCAREOUS SHALE	1.4	137.3	
275.3	CARBONDALE		LIMESTONE	1.5	138.7	
273.8	CARBONDALE		DARK SHALE	8.2	140.2	
265.6	CARBONDALE		LIMESTONE	0.3	148.4	
265.4	CARBONDALE		DARK SHALE	0.3	148.6	
265.1	CARBONDALE	HERRIN	COAL	7.5	148.9	
257.6	CARBONDALE		UNDERCLAY	2.3	156.4	

MAPID: 16303402000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 16 QUARTERS/FOOTAGES: 1' N line, 1' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.76107 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.453059 DATE COLLECTED: 6 / 21 / 1971

SURFACE ELEVATION (FT.): LOGGED (FT.): 186.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12760C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			COAL	2.2	146.8	
-	CARBONDALE	HERRIN	COAL	9.5	175.2	

MAPID: 16303402000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 16 QUARTERS/FOOTAGES: 1' N line, 1' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.76107 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.453059 DATE COLLECTED: 6 / 21 / 1971

SURFACE ELEVATION (FT.): 415.0 LOGGED (FT.): 186.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12760C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. Q-1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.0	PLEISTOCENE		UNCONSOLIDATED	117.8	0.0	
297.2	MODESTO		SANDSTONE	2.3	117.8	
294.9	MODESTO		GRAY SHALE	7.6	120.1	
287.3	MODESTO	PIASA	LIMESTONE	8.8	127.7	
278.5	MODESTO		GRAY SHALE	6.3	136.5	
272.2	MODESTO		SANDY SHALE	2.1	142.8	
270.1	MODESTO		GRAY SHALE	1.5	144.9	
268.6	MODESTO		DARK SHALE	0.4	146.4	
268.2	CARBONDALE	DANVILLE	COAL	2.2	146.8	
266.0	CARBONDALE		SANDY SHALE	0.4	149.0	
265.6	CARBONDALE		SANDY SHALE	3.2	149.4	
262.4	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	152.6	
260.0	CARBONDALE		SANDY SHALE	4.6	155.0	
255.4	CARBONDALE		DARK SHALE	15.6	159.6	
239.8	CARBONDALE	HERRIN	COAL	9.5	175.2	
230.3	CARBONDALE		GRAY SHALE	1.8	184.7	

MAPID: 16302373000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 17 QUARTERS/FOOTAGES: 684' S line, 30' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.799022 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.440436 DATE COLLECTED: 7 / 25 / 1955

SURFACE ELEVATION (FT.): 429.5 LOGGED (FT.): 140.6 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2055 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
297.1	CARBONDALE	HERRIN	COAL	6.6	132.4	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302373000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 17 QUARTERS/FOOTAGES: 684' S line, 30' W line
 QUADRANGLE: FREEBURG LONGITUDE: -89.799022 GEOLOGIST: CHENOWETH
 CONFIDENTIAL: N LATITUDE: 38.440436 DATE COLLECTED: 7 / 25 / 1955
 SURFACE ELEVATION (FT.): 429.5 LOGGED (FT.): 140.6 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 2055 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
429.5	PLEISTOCENE		UNCONSOLIDATED	92.3	0.0	
337.2	MODESTO	PIASA	LIMESTONE	1.9	92.3	PIASA, TOP ERODED
335.2			GRAY SHALE	19.4	94.3	
315.8	CARBONDALE	BANKSTON FORK	LIMESTONE	3.8	113.7	
312.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.1	117.5	
310.9	CARBONDALE	BANKSTON FORK	LIMESTONE	3.4	118.6	
307.5	CARBONDALE		DARK GRAY SHALE	9.2	122.0	
298.3	CARBONDALE		ROCK	1.3	131.2	ANNA AND/OR BRERETON
297.1	CARBONDALE	HERRIN	COAL	6.6	132.4	
290.5	CARBONDALE		UNDERCLAY	1.6	139.0	

MAPID: 16302379000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 17 QUARTERS/FOOTAGES: 1' N line, 50' W line of NE SW
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.794246 GEOLOGIST: PRUSSEN
 CONFIDENTIAL: N LATITUDE: 38.445943 DATE COLLECTED: 8 / 1 / 1955
 SURFACE ELEVATION (FT.): 420.1 LOGGED (FT.): 143.9 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 2063 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
285.3	CARBONDALE	HERRIN	COAL	7.4	134.8	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302379000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 17 QUARTERS/FOOTAGES: 1' N line, 50' W line of NE SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.794246 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.445943 DATE COLLECTED: 8 / 1 / 1955

SURFACE ELEVATION (FT.): 420.1 LOGGED (FT.): 143.9 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2063 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
420.1	PLEISTOCENE		UNCONSOLIDATED	93.9	0.0	
326.2	MODESTO	PIASA	LIMESTONE	6.4	93.9	
319.8			GRAY SHALE	17.4	100.3	
302.3	CARBONDALE	BANKSTON FORK	LIMESTONE	7.9	117.8	
294.4	CARBONDALE		GRAY SHALE	7.1	125.7	
287.3	CARBONDALE	BRERETON	ROCK	1.3	132.8	
286.0	CARBONDALE	ANNA	BLACK SHALE	0.7	134.1	
285.3	CARBONDALE	HERRIN	COAL	7.4	134.8	
277.9	CARBONDALE		UNDERCLAY	1.8	142.2	

MAPID: 16302952000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 17 QUARTERS/FOOTAGES: 330' N line, 1320' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.794463 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.452485 DATE COLLECTED: 4 / 12 / 1969

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 160.0 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 8682C WELL TYPE: Coal Test

COMMENT: C-7246

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
271.1	CARBONDALE	HERRIN	COAL	6.8	148.9	COAL REMOVED BY CO.

MAPID: 16302952000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 17 QUARTERS/FOOTAGES: 330' N line, 1320' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.794463

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.452485

DATE COLLECTED:

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 155.8

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8682C

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
309.0	MODESTO	PIASA	LIMESTONE	8.7	111.0
300.3	CARBONDALE		GRAY SHALE	13.9	119.7
286.4	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	8.4	133.6
278.0	CARBONDALE	LAWSON	DARK GRAY SHALE	5.5	142.0
272.4	CARBONDALE	JAMESTOWN	BONE COAL	0.2	147.6
272.2	CARBONDALE		BLACK SHALE	0.8	147.8
271.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.5	148.5
271.0	CARBONDALE	HERRIN	COAL	6.8	149.0

MAPID: 16323768000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 17 QUARTERS/FOOTAGES: 1' N line, 330' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.797939

GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.453434

DATE COLLECTED: 3 / 14 / 1973

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 150.2

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15565C

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
284.7	CARBONDALE	HERRIN	COAL	7.3	135.3

MAPID: 16323768000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 17 QUARTERS/FOOTAGES: 1' N line, 330' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.797939 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.453434 DATE COLLECTED: 3 / 14 / 1973

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 150.2 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15565C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. B-1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
420.0	PLEISTOCENE		UNCONSOLIDATED	19.1	0.0	
400.9	PLEISTOCENE		SAND & GRAVEL	51.0	19.1	
349.9	MODESTO		GRAY SHALE	23.6	70.1	
326.3	MODESTO		SANDY SHALE	3.4	93.7	
322.9	MODESTO	PIASA	LIMESTONE	7.9	97.1	
315.0			SANDY SHALE	15.9	105.0	
299.1	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	120.9	
297.5	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.6	122.5	
295.9	CARBONDALE	BANKSTON FORK	LIMESTONE	0.6	124.1	
295.3	CARBONDALE		SANDY SHALE	2.6	124.7	
292.7	CARBONDALE	CONANT	LIMESTONE	1.9	127.3	
290.8	CARBONDALE		DARK SHALE	3.8	129.2	
287.0	CARBONDALE		BLACK SHALE	1.1	133.0	JAMESTOWN HORIZON
285.9	CARBONDALE	BRERETON	LIMESTONE	0.9	134.1	
285.0	CARBONDALE	ANNA	BLACK SHALE	0.3	135.0	
284.7	CARBONDALE	HERRIN	COAL	5.3	135.3	
279.4	CARBONDALE		UNDERCLAY	2.2	140.6	ERROR IN LOG MEASUREMENT
275.2	CARBONDALE		CALCAREOUS SHALE	1.3	144.8	
273.9	CARBONDALE		SHALE	4.1	146.1	

MAPID: 16301492000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 18 QUARTERS/FOOTAGES: 207' N line, 550' W line of SW SE

QUADRANGLE: MASCOUTAH

LONGITUDE: -89.806322

GEOLOGIST: HINES

CONFIDENTIAL: N

LATITUDE: 38.441748

DATE COLLECTED: 0 / 0 / 1941

SURFACE ELEVATION (FT.): 425.0

LOGGED (FT.): 707.0

LOG TYPE: Drillers Log

SOURCE: W O BURGESS

WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
425.0			CLAY	32.0	0.0	YELLOW
393.0			SAND	11.0	32.0	YELLOW
382.0	CARBONDALE	DANVILLE	COAL	2.0	43.0	BLACK
380.0	CARBONDALE		BLACK SHALE	31.0	45.0	
349.0	CARBONDALE		LIMESTONE	13.0	76.0	GRAY
336.0	CARBONDALE		BLACK SHALE	5.0	89.0	
331.0	CARBONDALE		BLACK SHALE	7.0	94.0	
324.0	CARBONDALE	BRERETON	LIMESTONE	10.0	101.0	GRAY
314.0	CARBONDALE	ANNA	BLACK SHALE	3.0	111.0	
311.0	CARBONDALE	HERRIN	COAL	6.0	114.0	DARK
305.0	CARBONDALE		SOFT SHALE	5.0	120.0	
300.0	CARBONDALE		LIMESTONE	5.0	125.0	LIGHT
295.0	CARBONDALE		BLACK SHALE	45.0	130.0	
250.0	CARBONDALE		LIMESTONE	5.0	175.0	GRAY
245.0	CARBONDALE		BLACK SHALE	5.0	180.0	
240.0	CARBONDALE		SANDY SLATE	10.0	185.0	
230.0	MISSISSIPPIAN		LIMESTONE	25.0	195.0	
205.0	MISSISSIPPIAN		BLACK SHALE	10.0	220.0	
195.0	MISSISSIPPIAN		LIMESTONE	1.0	230.0	BROWN
194.0	MISSISSIPPIAN		BLACK SHALE	7.0	231.0	
187.0	MISSISSIPPIAN		BLACK SHALE	4.0	238.0	
183.0	MISSISSIPPIAN		LIMESTONE	3.0	242.0	DARK
180.0	MISSISSIPPIAN		BLACK SHALE	80.0	245.0	
100.0	MISSISSIPPIAN		LIMESTONE	5.0	325.0	GREEN
95.0	MISSISSIPPIAN		BLACK SHALE	3.0	330.0	
92.0	MISSISSIPPIAN		LIMESTONE	30.0	333.0	LIGHT
62.0	MISSISSIPPIAN		BLACK SHALE	7.0	363.0	
55.0	MISSISSIPPIAN		LIMESTONE	1.0	370.0	LIGHT
54.0	MISSISSIPPIAN		SANDSTONE	4.0	371.0	RED
50.0	MISSISSIPPIAN		LIMESTONE	5.0	375.0	
45.0	MISSISSIPPIAN		BLACK SHALE	5.0	380.0	
40.0	MISSISSIPPIAN		LIMESTONE	20.0	385.0	GRAY
20.0	MISSISSIPPIAN		BLACK SHALE	40.0	405.0	
-20.0	MISSISSIPPIAN		LIMESTONE	10.0	445.0	WHITE
-30.0	MISSISSIPPIAN		LIMESTONE	10.0	455.0	BROWN
-40.0	MISSISSIPPIAN		LIMESTONE	8.0	465.0	
-48.0	MISSISSIPPIAN		BLACK SHALE	12.0	473.0	
-60.0	MISSISSIPPIAN		SANDSTONE	19.0	485.0	DARK
-79.0	MISSISSIPPIAN		LIMESTONE	2.0	504.0	DARK

-81.0	MISSISSIPPIAN	SANDSTONE	9.0	506.0	DARK
-90.0	MISSISSIPPIAN	SANDSTONE	10.0	515.0	DARK
-100.0	MISSISSIPPIAN	SANDSTONE	27.0	525.0	LIGHT
-127.0	MISSISSIPPIAN	BLACK SHALE	3.0	552.0	
-130.0	MISSISSIPPIAN	SANDSTONE	17.0	555.0	
-147.0	MISSISSIPPIAN	LIMESTONE	13.0	572.0	DARK
-160.0	MISSISSIPPIAN	BLACK SHALE	5.0	585.0	
-165.0	MISSISSIPPIAN	LIMESTONE	6.0	590.0	LIGHT
-171.0	MISSISSIPPIAN	LIMESTONE	14.0	596.0	WHITE
-185.0	MISSISSIPPIAN	BLACK SHALE	2.0	610.0	
-187.0	MISSISSIPPIAN	ROCK	3.0	612.0	RED
-190.0	MISSISSIPPIAN	LIMESTONE	10.0	615.0	GRAY
-200.0	MISSISSIPPIAN	ROCK	13.0	625.0	RED
-213.0	MISSISSIPPIAN	BLACK SHALE	19.0	638.0	
-232.0	MISSISSIPPIAN	LIMESTONE	4.0	657.0	DARK
-236.0	MISSISSIPPIAN	BLACK SHALE	7.0	661.0	
-243.0	MISSISSIPPIAN	BLACK SHALE	12.0	668.0	
-255.0	MISSISSIPPIAN	RED SHALE	8.0	680.0	
-263.0	MISSISSIPPIAN	LIMESTONE	5.0	688.0	DARK
-268.0	MISSISSIPPIAN	BLACK SHALE	5.0	693.0	
-273.0	MISSISSIPPIAN	SANDSTONE	8.0	698.0	DARK
-281.0	MISSISSIPPIAN	LIMESTONE	1.0	706.0	WHITE

MAPID: 16302374000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: ST. CLAIR **TWP/RNG:** 1S 6W **SECTION:** 18 **QUARTERS/FOOTAGES:** 2624' S line, 810' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.801958 **GEOLOGIST:** PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 38.445815 **DATE COLLECTED:** 7 / 26 / 1955
SURFACE ELEVATION (FT.): 419.9 **LOGGED (FT.):** 139.8 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 2056 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
288.1	CARBONDALE	HERRIN	COAL	6.3	131.8	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302374000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 18 QUARTERS/FOOTAGES: 2624' S line, 810' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.801958

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.445815

DATE COLLECTED:

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 138.3

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2056

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
333.0	MODESTO	PIASA	LIMESTONE	12.8	87.0	
320.2	CARBONDALE		GRAY SHALE	14.5	99.8	
305.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	114.3	UPPER BENCH
303.1	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.3	116.9	SHALE PARTING
301.7	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	118.3	LOWER BENCH
296.7	CARBONDALE	LAWSON	GRAY SHALE	7.6	123.3	
289.2	CARBONDALE	BRERETON	LIMESTONE	0.9	130.8	
288.2	CARBONDALE	ANNA	BLACK SHALE	1.3	131.8	
288.0	CARBONDALE	HERRIN	COAL	6.3	132.0	

MAPID: 16303657000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 18 QUARTERS/FOOTAGES: 0' N line, 660' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.801411

GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.453456

DATE COLLECTED: 5 / 12 / 1973

SURFACE ELEVATION (FT.): 419.0 LOGGED (FT.): 155.6

LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 15564C

WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY; C-9934

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
279.0	CARBONDALE	HERRIN	COAL	7.6	140.0	

MAPID: 16303657000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 18 QUARTERS/FOOTAGES: 0' N line, 660' E line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.801411 GEOLOGIST: CHENOWETH
 CONFIDENTIAL: N LATITUDE: 38.453456 DATE COLLECTED: 5 / 12 / 1973
 SURFACE ELEVATION (FT.): 419.0 LOGGED (FT.): 155.6 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 15564C WELL TYPE: Coal Test
 COMMENT: PEABODY LOC. 0-1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
419.0	PLEISTOCENE		UNCONSOLIDATED	101.0	0.0	
318.0	MODESTO	PIASA	LIMESTONE	7.2	101.0	
310.8			GRAY SHALE	11.8	108.2	
299.0			LIMESTONE	2.9	120.0	
296.1			GRAY SHALE	1.3	122.9	
294.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	124.2	
292.9	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	3.6	126.1	
289.3	CARBONDALE	BANKSTON FORK	LIMESTONE	1.7	129.7	
287.6	CARBONDALE		DARK SHALE	5.3	131.4	
282.3	CARBONDALE	ANNA	BLACK SHALE	3.3	136.7	
279.0	CARBONDALE	HERRIN	COAL	7.6	140.0	
271.4	CARBONDALE		UNDERCLAY	2.4	147.6	
269.0	CARBONDALE		LIMESTONE	5.6	150.0	

MAPID: 16302384000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 19 QUARTERS/FOOTAGES: 570' N line, 20' E line of SE
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.799156 GEOLOGIST: PRUSSEN
 CONFIDENTIAL: N LATITUDE: 38.429581 DATE COLLECTED: 8 / 4 / 1955
 SURFACE ELEVATION (FT.): 423.5 LOGGED (FT.): 143.2 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 2070 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
289.3	CARBONDALE	HERRIN	COAL	7.1	134.2	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302384000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 19 QUARTERS/FOOTAGES: 570' N line, 20' E line of SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.799156 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.429581 DATE COLLECTED: 8 / 4 / 1955

SURFACE ELEVATION (FT.): 423.5 LOGGED (FT.): 143.2 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2070 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
423.5	PLEISTOCENE		UNCONSOLIDATED	90.3	0.0	
333.2	MODESTO	PIASA	LIMESTONE	2.6	90.3	TOP ERODED
330.6			GRAY SHALE	18.3	92.9	
312.3	CARBONDALE	BANKSTON FORK	LIMESTONE	7.8	111.2	
304.5	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.8	119.0	
302.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.4	120.8	
301.3	CARBONDALE		DARK SHALE	8.1	122.2	ERROR IN LOG MEASUREMENT
292.8	CARBONDALE	BRERETON	ROCK	3.5	130.7	
289.3	CARBONDALE	HERRIN	COAL	7.1	134.2	
282.2	CARBONDALE		UNDERCLAY	1.9	141.3	

MAPID: 16302385000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 19 QUARTERS/FOOTAGES: 20' S line, 350' E line of SE SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.809548 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.423791 DATE COLLECTED: 8 / 4 / 1955

SURFACE ELEVATION (FT.): 424.6 LOGGED (FT.): 123.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2071 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
309.4	CARBONDALE	HERRIN	COAL	6.9	115.2	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302385000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 19 QUARTERS/FOOTAGES: 20' S line, 350' E line of SE SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.809548 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.423791 DATE COLLECTED: 8 / 4 / 1955

SURFACE ELEVATION (FT.): 424.6 LOGGED (FT.): 123.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2071 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
424.6	PLEISTOCENE		UNCONSOLIDATED	68.8	0.0	
355.8	MODESTO	PIASA	LIMESTONE	8.4	68.8	TOP MAY BE ERODED
347.4			GRAY SHALE	4.3	77.2	
343.2			LIMESTONE	3.8	81.4	
339.3			GRAY SHALE	8.8	85.3	
330.5	CARBONDALE	BANKSTON FORK	LIMESTONE	7.3	94.1	
323.3	CARBONDALE		DARK SHALE	9.9	101.3	
313.3	CARBONDALE	BRERETON	ROCK	3.5	111.3	
309.8	CARBONDALE	ANNA	BLACK SHALE	0.4	114.8	
309.4	CARBONDALE	HERRIN	COAL	6.9	115.2	
302.5	CARBONDALE		UNDERCLAY	1.8	122.1	

MAPID: 16302397000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 19 QUARTERS/FOOTAGES: 300' N line, 125' W line of SW NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.81678 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.434117 DATE COLLECTED: 8 / 16 / 1955

SURFACE ELEVATION (FT.): 455.6 LOGGED (FT.): 157.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2090 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
306.5	CARBONDALE	HERRIN	COAL	6.8	149.1	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302397000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 19 QUARTERS/FOOTAGES: 300' N line, 125' W line of SW NW
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.81678 GEOLOGIST: CHENOWETH
 CONFIDENTIAL: N LATITUDE: 38.434117 DATE COLLECTED: 8 / 16 / 1955
 SURFACE ELEVATION (FT.): 455.6 LOGGED (FT.): 157.5 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 2090 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
455.6	PLEISTOCENE		UNCONSOLIDATED	104.4	0.0	
351.2	MODESTO	PIASA	LIMESTONE	14.8	104.4	
336.3			GRAY SHALE	9.3	119.3	
327.1	CARBONDALE	BANKSTON FORK	LIMESTONE	5.2	128.5	
321.9	CARBONDALE		DARK SHALE	4.1	133.7	
317.8	CARBONDALE	BRERETON	ROCK	11.3	137.8	
306.5	CARBONDALE	HERRIN	COAL	6.8	149.1	
299.8	CARBONDALE		UNDERCLAY	1.7	155.8	

MAPID: 16302429000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 19 QUARTERS/FOOTAGES: 15' S line, 15' E line of NW
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.808334 GEOLOGIST: PRUSSEN
 CONFIDENTIAL: N LATITUDE: 38.431221 DATE COLLECTED: 10 / 15 / 1955
 SURFACE ELEVATION (FT.): 519.1 LOGGED (FT.): 217.1 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 2195 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
303.4	CARBONDALE	HERRIN	COAL	7.0	215.7	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302429000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 19 QUARTERS/FOOTAGES: 15' S line, 15' E line of NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.808334 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.431221 DATE COLLECTED: 10 / 15 / 1955

SURFACE ELEVATION (FT.): 519.1 LOGGED (FT.): 217.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2195 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
519.1	PLEISTOCENE		UNCONSOLIDATED	9.5	0.0	
509.6	PLEISTOCENE		SAND	8.2	9.5	
501.4	PLEISTOCENE		SANDY CLAY	2.5	17.7	
498.9	PLEISTOCENE		SAND	22.7	20.2	
476.3	PLEISTOCENE		CLAY	28.3	42.8	
447.9	PLEISTOCENE		SAND	1.4	71.2	
446.5	PLEISTOCENE		CLAY	35.5	72.6	
411.0	PLEISTOCENE		CLAY	3.4	108.1	
407.7	PLEISTOCENE		SAND & GRAVEL	52.8	111.4	
354.9	MODESTO	PIASA	LIMESTONE	5.7	164.2	TOP MAY BE ERODED
349.2			GRAY SHALE	25.4	169.9	
323.8	CARBONDALE	BANKSTON FORK	LIMESTONE	0.9	195.3	
322.9	CARBONDALE		DARK SHALE	7.2	196.2	
315.7	CARBONDALE	BRERETON	ROCK	2.3	203.4	
313.4	CARBONDALE		DARK SHALE	0.2	205.7	
313.2	CARBONDALE	ANNA	BLACK SHALE	2.8	205.9	
310.4	CARBONDALE	HERRIN	COAL	7.0	208.7	
303.4	CARBONDALE		UNDERCLAY	1.5	215.7	

MAPID: 16302430000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 19 QUARTERS/FOOTAGES: 725' N line, 12' E line of NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.808248 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.436619 DATE COLLECTED: 10 / 16 / 1955

SURFACE ELEVATION (FT.): 429.7 LOGGED (FT.): 136.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2196 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
301.9	CARBONDALE	HERRIN	COAL	7.3	127.8	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302430000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 19 QUARTERS/FOOTAGES: 725' N line, 12' E line of NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.808248 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.436619 DATE COLLECTED: 10 / 16 / 1955

SURFACE ELEVATION (FT.): 429.7 LOGGED (FT.): 136.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2196 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
429.7	PLEISTOCENE		UNCONSOLIDATED	20.0	0.0	
409.7	PLEISTOCENE		SAND & GRAVEL	12.4	20.0	
397.3	PLEISTOCENE		SANDY CLAY	7.1	32.4	
390.3	PLEISTOCENE		SAND & GRAVEL	4.9	39.4	
385.4	PLEISTOCENE		CLAY	41.5	44.3	
343.9	MODESTO		LIMESTONE	1.0	85.8	
342.9	MODESTO		LIMESTONE	0.6	86.8	
342.3	MODESTO		GRAY SHALE	4.6	87.4	
337.8	MODESTO	PIASA	LIMESTONE	5.7	91.9	
332.1			GRAY SHALE	12.8	97.6	
319.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.6	110.5	
316.7	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.3	113.0	
315.4	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	1.4	114.3	
314.0	CARBONDALE		GRAY SHALE	1.8	115.7	
312.2	CARBONDALE	CONANT	LIMESTONE	1.0	117.5	
311.3	CARBONDALE		DARK SHALE	9.4	118.4	
301.9	CARBONDALE	HERRIN	COAL	7.4	127.8	
294.5	CARBONDALE		UNDERCLAY	1.1	135.2	

MAPID: 16302935000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 19 QUARTERS/FOOTAGES: 1' N line, 1' W line of NW NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.817338 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.438687 DATE COLLECTED: 4 / 16 / 1969

SURFACE ELEVATION (FT.): 412.0 LOGGED (FT.): 125.8 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 8673C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY; C-7239

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
296.0	CARBONDALE	HERRIN	COAL	6.8	116.0	COAL REMOVED BY CO.

MAPID: 16302386000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 20 QUARTERS/FOOTAGES: 983' N line, 395' E line of NW NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.795798 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.435801 DATE COLLECTED: 8 / 5 / 1955

SURFACE ELEVATION (FT.): 448.7 LOGGED (FT.): 154.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2073 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
303.8	CARBONDALE	HERRIN	COAL	7.7	144.9	SEE COAL SECTION 6-26 & 6-26-A

MAPID: 16302386000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 20 QUARTERS/FOOTAGES: 983' N line, 395' E line of NW NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.795798 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.435801 DATE COLLECTED: 8 / 5 / 1955

SURFACE ELEVATION (FT.): 448.7 LOGGED (FT.): 154.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2073 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
448.7	PLEISTOCENE		UNCONSOLIDATED	107.3	0.0	
341.4	MODESTO	PIASA	LIMESTONE	5.3	107.3	TOP MAY BE ERODED
336.1	MODESTO		GRAY SHALE	14.9	112.6	
321.2	CARBONDALE	BANKSTON FORK	LIMESTONE	5.6	127.5	
315.6	CARBONDALE		DARK SHALE	7.3	133.1	
308.4	CARBONDALE	BRERETON	ROCK	3.8	140.3	
304.6	CARBONDALE	ANNA	BLACK SHALE	0.8	144.1	
303.8	CARBONDALE	HERRIN	COAL	7.7	144.9	
296.1	CARBONDALE		UNDERCLAY	1.9	152.6	

MAPID: 16302953000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 20 QUARTERS/FOOTAGES: 660' N line, 660' E line of NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.792021 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.436653 DATE COLLECTED: 4 / 14 / 1969

SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 166.4 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 8672C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY; C-7238

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
268.2	CARBONDALE	HERRIN	COAL	7.8	156.8	COAL REMOVED BY CO.

MAPID: 16302953000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 20 QUARTERS/FOOTAGES: 660' N line, 660' E line of NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.792021 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.436653 DATE COLLECTED: 4 / 14 / 1969

SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 166.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8672C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. G-3

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
425.0	PLEISTOCENE		UNCONSOLIDATED	25.0	0.0
400.0	PLEISTOCENE		SAND & GRAVEL	20.5	25.0
379.5	PLEISTOCENE		UNCONSOLIDATED	14.5	45.5
365.0	PLEISTOCENE		SAND & GRAVEL	11.0	60.0
354.0	PLEISTOCENE		UNCONSOLIDATED	42.0	71.0
312.0	MODESTO	PIASA	LIMESTONE	10.0	113.0
302.0	MODESTO		GRAY SHALE	9.3	123.0
292.7	CARBONDALE	DANVILLE	COAL	1.0	132.3
291.7	CARBONDALE		GRAY SHALE	5.7	133.3
286.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	139.0
283.3	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.6	141.7
282.7	CARBONDALE	BANKSTON FORK	LIMESTONE	8.6	142.3
274.1	CARBONDALE		GRAY SHALE	1.2	150.9
272.9	CARBONDALE		BLACK SHALE	1.9	152.1
271.0	CARBONDALE		GRAY SHALE	2.8	154.0
268.2	CARBONDALE	HERRIN	COAL	7.6	156.8
260.6	CARBONDALE		UNDERCLAY	2.0	164.4

MAPID: 16323769000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 20 QUARTERS/FOOTAGES: 660' N line, 0' W line of SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.789692 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.429273 DATE COLLECTED: 3 / 26 / 1974

SURFACE ELEVATION (FT.): 418.0 LOGGED (FT.): 152.2 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 15869C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
303.9			COAL	2.1	114.1
278.9	CARBONDALE	HERRIN	COAL	7.5	139.1

MAPID: 16323769000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 20 QUARTERS/FOOTAGES: 660' N line, 0' W line of SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.789692 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.429273 DATE COLLECTED: 3 / 26 / 1974

SURFACE ELEVATION (FT.): 418.0 LOGGED (FT.): 153.2 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15869C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. I-11

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
418.0	PLEISTOCENE		UNCONSOLIDATED	97.1	0.0	
320.9	MODESTO	PIASA	LIMESTONE	7.0	97.1	TOP MAY BE ERODED
313.9	MODESTO		GRAY SHALE	8.8	104.1	
305.1	MODESTO		BLACK SHALE	1.2	112.9	
303.9	CARBONDALE	DANVILLE	COAL	2.1	114.1	
301.8	CARBONDALE		GRAY SHALE	5.5	116.2	
296.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.1	121.7	
293.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.2	124.8	
291.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	126.9	
289.0	CARBONDALE		SHALE WITH LIMESTONE	0.5	129.0	
288.5	CARBONDALE		DARK SHALE	5.8	129.5	
282.7	CARBONDALE		BLACK SHALE	0.8	135.3	
282.0	CARBONDALE		DARK SHALE	2.9	136.0	JAMESTOWN HORIZON
279.1	CARBONDALE		LIMESTONE & SHALE	0.2	138.9	
278.9	CARBONDALE	HERRIN	COAL	7.5	139.1	
271.5	CARBONDALE		UNDERCLAY	2.6	146.5	
268.9	CARBONDALE		LIMESTONE & SHALE	3.1	149.1	

MAPID: 16302407000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 21 QUARTERS/FOOTAGES: 37' N line, 36' W line of NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.770521 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.438093 DATE COLLECTED: 8 / 22 / 1955

SURFACE ELEVATION (FT.): 413.1 LOGGED (FT.): 115.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2105 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCLASSIFIED	0.0		SND&GRVL TO 115'-COAL SEC MAP 6-26&6-26A

MAPID: 16302407000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 21 QUARTERS/FOOTAGES: 37' N line, 36' W line of NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.770521 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.438093 DATE COLLECTED: 8 / 22 / 1955

SURFACE ELEVATION (FT.): 413.1 LOGGED (FT.): 115.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2105 WELL TYPE: Coal Test

COMMENT: TOO SHALLOW FOR #6-NOTE S & G THICK

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
413.1			SOIL	1.0	0.0	
412.1			CLAY	18.7	1.0	
393.4			SAND & GRAVEL	95.3	19.7	

MAPID: 16302408000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 21 QUARTERS/FOOTAGES: 26' N line, 50' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.780104 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.438275 DATE COLLECTED: 8 / 22 / 1955

SURFACE ELEVATION (FT.): 414.5 LOGGED (FT.): 165.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2106 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
257.8	CARBONDALE	HERRIN	COAL	7.4	156.7	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302408000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 21 QUARTERS/FOOTAGES: 26' N line, 50' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.780104 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.438275 DATE COLLECTED: 8 / 22 / 1955

SURFACE ELEVATION (FT.): 414.5 LOGGED (FT.): 165.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2106 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
414.5	PLEISTOCENE		UNCONSOLIDATED	113.3	0.0	
301.2	MODESTO	PIASA	LIMESTONE	8.8	113.3	TOP MAY BE ERODED
292.4	MODESTO		GRAY SHALE	9.7	122.1	
282.7	CARBONDALE		BLACK SHALE	4.4	131.8	DANVILLE COAL HORIZON
278.3	CARBONDALE		UNDERCLAY	1.5	136.2	
276.8	CARBONDALE	BANKSTON FORK	LIMESTONE	7.3	137.7	
269.6	CARBONDALE		DARK SHALE	8.7	144.9	
260.9	CARBONDALE	BRERETON	ROCK	3.1	153.6	
257.8	CARBONDALE	HERRIN	COAL	7.4	156.7	
250.4	CARBONDALE		UNDERCLAY	1.7	164.1	

MAPID: 16302409000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: ST. CLAIR **TWP/RNG:** 1S 6W **SECTION:** 21 **QUARTERS/FOOTAGES:** 555' N line, 850' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.764 **GEOLOGIST:** PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 38.436557 **DATE COLLECTED:** 8 / 23 / 1955
SURFACE ELEVATION (FT.): 397.6 **LOGGED (FT.):** 162.3 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 2109 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
243.8	CARBONDALE	HERRIN	COAL	6.8	153.8	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302409000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1S 6W **SECTION:** 21 **QUARTERS/FOOTAGES:** 555' N line, 850' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.764 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.436557 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 398.0 **LOGGED (FT.):** 160.8 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 2109 **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
291.0	MODESTO	PIASA	LIMESTONE	8.5	107.0	
282.5	MODESTO		GRAY SHALE	10.3	115.5	
272.2	CARBONDALE	DANVILLE	BLACK SHALE	4.4	125.8	
267.7	CARBONDALE		CLAYSTONE	2.3	130.3	
265.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.3	132.5	
259.2	CARBONDALE	LAWSON	DARK GRAY SHALE	3.8	138.8	
255.5	CARBONDALE	BRERETON	LIMESTONE	11.1	142.5	
244.4	CARBONDALE	ANNA	BLACK SHALE	0.6	153.6	
244.0	CARBONDALE	HERRIN	COAL	6.8	154.0	

MAPID: 16303543000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: ST. CLAIR **TWP/RNG:** 1S 6W **SECTION:** 22 **QUARTERS/FOOTAGES:** 330' S line, 0' W line of SE
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.751543 **GEOLOGIST:** PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 38.424354 **DATE COLLECTED:** 7 / 1 / 1971
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 202.0 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 12761C **WELL TYPE:** Coal Test
COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	8.4	192.3	

MAPID: 16303543000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 22 QUARTERS/FOOTAGES: 330' S line, 0' W line of SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.751543 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.424354 DATE COLLECTED: 7 / 1 / 1971

SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 202.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12761C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. I-16

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
410.0	PLEISTOCENE		UNCONSOLIDATED	87.8	0.0	
322.2	MODESTO		SANDSTONE	0.8	87.8	
321.4	MODESTO		SANDY SHALE	46.6	88.6	
274.8	MODESTO	PIASA	LIMESTONE	7.4	135.2	
267.4	MODESTO		SANDY SHALE	13.5	142.6	
253.9	MODESTO		DARK SHALE	7.3	156.1	DANVILLE COAL HORIZON
246.6	CARBONDALE		SANDY SHALE	5.4	163.4	
241.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	168.8	
240.2	CARBONDALE		GRAY SHALE	6.4	169.8	
233.8	CARBONDALE		LIMESTONE	3.8	176.2	CONANT OR LOWER BENCH BF
230.0	CARBONDALE		DARK SHALE	3.1	180.0	
226.9	CARBONDALE	BRERETON	LIMESTONE	4.0	183.1	
222.9	CARBONDALE	ANNA	BLACK SHALE	5.3	187.1	
217.7	CARBONDALE	HERRIN	COAL	8.4	192.3	
209.3	CARBONDALE		GRAY SHALE	1.3	200.7	

MAPID: 16303374000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 24 QUARTERS/FOOTAGES: 2640' N line, 1320' W line

QUADRANGLE: VENEDY LONGITUDE: -89.718814 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.43018 DATE COLLECTED: 7 / 2 / 1971

SURFACE ELEVATION (FT.): 396.0 LOGGED (FT.): 171.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12580C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY; C-9019

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
234.3	CARBONDALE	HERRIN	COAL	7.1	161.7	

MAPID: 16303374000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 24 QUARTERS/FOOTAGES: 2640' N line, 1320' W line

QUADRANGLE: VENEDY LONGITUDE: -89.718814 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.43018 DATE COLLECTED:

SURFACE ELEVATION (FT.): 396.0 LOGGED (FT.): 169.1 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12580C WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
279.0	MODESTO	PIASA	LIMESTONE	4.0	117.0	
275.0	CARBONDALE		CALCAREOUS SHALE	22.0	121.0	
253.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	143.0	UPPER BENCH
252.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.0	144.0	SHALE PARTING
249.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	147.0	LOWER BENCH
247.7	CARBONDALE	LAWSON	GRAY SHALE	3.7	148.3	
244.0	CARBONDALE	LAWSON	DARK GRAY SHALE	3.5	152.0	
240.5	CARBONDALE	CONANT	LIMESTONE	2.5	155.5	
238.0	CARBONDALE		BLACK SHALE	0.5	158.0	
237.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	2.4	158.5	
235.1	CARBONDALE	ANNA	BLACK SHALE	1.1	160.9	
234.0	CARBONDALE	HERRIN	COAL	7.1	162.0	

MAPID: 16302286000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 25 QUARTERS/FOOTAGES: 1650' S line, 1650' W line

QUADRANGLE: VENEDY LONGITUDE: -89.717548 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.411978 DATE COLLECTED:

SURFACE ELEVATION (FT.): 395.0 LOGGED (FT.): 163.0 LOG TYPE: Electric Log

SOURCE: WELL TYPE: Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
294.0	MODESTO	PIASA	LIMESTONE	9.0	101.0	
285.0	CARBONDALE		CLAYSTONE & SHALE	13.0	110.0	
272.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	3.0	123.0	
269.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	8.0	126.0	
261.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	3.0	134.0	
258.0	CARBONDALE	LAWSON	SHALE	8.0	137.0	
250.0	CARBONDALE	CONANT	LIMESTONE & SHALE	2.0	145.0	
248.0	CARBONDALE		DARK GRAY SHALE	2.0	147.0	
246.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	6.0	149.0	
240.0	CARBONDALE	ANNA	BLACK SHALE	2.0	155.0	
238.0	CARBONDALE	HERRIN	COAL	6.0	157.0	

MAPID: 1630229000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 26 QUARTERS/FOOTAGES: 330' S line, 2310' E line

QUADRANGLE: VENEDY LONGITUDE: -89.73141 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.408436 DATE COLLECTED:

SURFACE ELEVATION (FT.): 398.0 LOGGED (FT.): 149.0 LOG TYPE: Electric Log

SOURCE: WELL TYPE: Oil and Gas Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
304.0	MODESTO	PIASA	LIMESTONE	6.5	94.0
297.5	MODESTO		SHALE	9.5	100.5
288.0	CARBONDALE	DANVILLE	BLACK SHALE	3.5	110.0
284.5	CARBONDALE		SHALE	6.5	113.5
278.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	4.0	120.0
274.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	2.0	124.0
272.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	4.0	126.0
268.0	CARBONDALE	LAWSON	SHALE	12.0	130.0
256.0	CARBONDALE	HERRIN	COAL	7.0	142.0

MAPID: 16324318000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 27 QUARTERS/FOOTAGES: 660' N line, 660' E line of SE

QUADRANGLE: VENEDY LONGITUDE: -89.744273 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.413672 DATE COLLECTED: 8 / 30 / 1974

SURFACE ELEVATION (FT.): 391.3 LOGGED (FT.): 165.0 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 15941C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
240.1	CARBONDALE	HERRIN	COAL	7.0	151.2

MAPID: 16324318000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 27 QUARTERS/FOOTAGES: 660' N line, 660' E line of SE

QUADRANGLE: VENEDY LONGITUDE: -89.744273 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.413672 DATE COLLECTED: 8 / 30 / 1974

SURFACE ELEVATION (FT.): 391.3 LOGGED (FT.): 165.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15941C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. O-11

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
391.3	PLEISTOCENE		UNCONSOLIDATED	16.0	0.0
375.3	PLEISTOCENE		SAND & GRAVEL	51.0	16.0
324.3	PLEISTOCENE		CLAY	17.0	67.0
307.3	MODESTO		SANDSTONE	5.0	84.0
302.3	MODESTO		GRAY SHALE	15.0	89.0
287.3	MODESTO	PIASA	LIMESTONE	9.0	104.0
278.3			GRAY SHALE	18.0	113.0
260.3	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	131.0
258.8	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.5	132.5
256.3	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	135.0
254.3	CARBONDALE		DARK SHALE	9.3	137.0
245.0	CARBONDALE	BRERETON	LIMESTONE	2.7	146.3
242.3	CARBONDALE	ANNA	DARK SHALE	2.2	149.0
240.1	CARBONDALE	HERRIN	COAL	7.0	151.2
233.1	CARBONDALE		UNDERCLAY	1.3	158.2
231.8	CARBONDALE		GRAY SHALE	2.4	159.5
229.4	CARBONDALE		LIMESTONE	2.6	161.9
226.8	CARBONDALE		GRAY SHALE	0.5	164.5

MAPID: 16303461000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 28 QUARTERS/FOOTAGES: 330' N line, 0' W line of SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.780366 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.415429 DATE COLLECTED: 9 / 9 / 1971

SURFACE ELEVATION (FT.): LOGGED (FT.): 152.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12814C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	COAL	7.0	143.5

MAPID: 16303461000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 28 QUARTERS/FOOTAGES: 330' N line, 0' W line of SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.780366 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.415429 DATE COLLECTED: 9 / 9 / 1971

SURFACE ELEVATION (FT.): 390.0 LOGGED (FT.): 152.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12814C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. A-10

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
390.0	PLEISTOCENE		UNCONSOLIDATED	20.0	0.0	
370.0	PLEISTOCENE		SAND & GRAVEL	12.0	20.0	
358.0	PLEISTOCENE		CLAY	50.0	32.0	
308.0	PLEISTOCENE		SAND & GRAVEL	10.0	82.0	
298.0	PLEISTOCENE		CLAY	39.0	92.0	
259.0	CARBONDALE	BANKSTON FORK	LIMESTONE	0.9	131.0	TOP ERODED
258.1	CARBONDALE		DARK SHALE	8.9	131.9	
249.2	CARBONDALE	BRERETON	LIMESTONE	0.8	140.8	
248.4	CARBONDALE	ANNA	DARK SHALE	1.9	141.6	
246.5	CARBONDALE	HERRIN	COAL	7.0	143.5	
239.5	CARBONDALE		UNDERCLAY	1.5	150.5	

MAPID: 16302382000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 29 QUARTERS/FOOTAGES: 285' S line, 20' W line of NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.798963 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.417133 DATE COLLECTED: 8 / 3 / 1955

SURFACE ELEVATION (FT.): 415.3 LOGGED (FT.): 145.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2067 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
278.5	CARBONDALE	HERRIN	COAL	7.2	136.8	

MAPID: 16302382000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 29 QUARTERS/FOOTAGES: 285' S line, 20' W line of NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.798963 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.417133 DATE COLLECTED: 8 / 3 / 1955

SURFACE ELEVATION (FT.): 415.3 LOGGED (FT.): 145.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2067 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.3	PLEISTOCENE		UNCONSOLIDATED	112.6	0.0	
302.7			GRAY SHALE	4.8	112.6	
298.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.6	117.3	
293.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.7	121.9	
292.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	122.6	
290.9	CARBONDALE		DARK SHALE	8.7	124.4	
282.2	CARBONDALE	BRERETON	ROCK	3.3	133.1	
278.9	CARBONDALE	ANNA	BLACK SHALE	0.3	136.4	
278.5	CARBONDALE	HERRIN	COAL	7.2	136.8	
271.4	CARBONDALE		UNDERCLAY	1.3	143.9	

MAPID: 16302383000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 29 QUARTERS/FOOTAGES: 25' N line, 1612' E line of NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.795341 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.423682 DATE COLLECTED: 8 / 3 / 1955

SURFACE ELEVATION (FT.): 415.2 LOGGED (FT.): 151.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2068 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
273.4	CARBONDALE	HERRIN	COAL	7.4	141.8	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302383000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 29 QUARTERS/FOOTAGES: 25' N line, 1612' E line of NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.795341 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.423682 DATE COLLECTED: 8 / 3 / 1955

SURFACE ELEVATION (FT.): 415.2 LOGGED (FT.): 151.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2068 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.2	PLEISTOCENE		UNCONSOLIDATED	19.9	0.0	
395.3	PLEISTOCENE		SAND & GRAVEL	82.5	19.9	
312.8	MODESTO	PIASA	LIMESTONE	2.6	102.4	
310.2	MODESTO		GRAY SHALE	9.8	105.0	
300.4	CARBONDALE	DANVILLE	COAL	1.8	114.8	
298.5	CARBONDALE		GRAY SHALE	3.5	116.7	
295.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	120.2	
293.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.1	121.8	
292.4	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	122.8	
290.3	CARBONDALE		GRAY SHALE	5.5	124.9	
284.8	CARBONDALE	CONANT	ROCK	1.9	130.4	
282.9	CARBONDALE		BLACK SHALE	0.8	132.3	JAMESTOWN HORIZON
282.1	CARBONDALE	BRERETON	ROCK	8.6	133.1	
273.5	CARBONDALE	ANNA	BLACK SHALE	0.2	141.7	
273.4	CARBONDALE	HERRIN	COAL	7.4	141.8	
265.9	CARBONDALE		UNDERCLAY	1.8	149.3	

MAPID: 16302387000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 29 QUARTERS/FOOTAGES: 420' S line, 90' E line of NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.79001 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.417503 DATE COLLECTED: 8 / 5 / 1955

SURFACE ELEVATION (FT.): 416.0 LOGGED (FT.): 142.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2074 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
281.7	CARBONDALE	HERRIN	COAL	6.2	134.3	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302387000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 29 QUARTERS/FOOTAGES: 420' S line, 90' E line of NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.79001 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.417503 DATE COLLECTED: 8 / 5 / 1955

SURFACE ELEVATION (FT.): 416.0 LOGGED (FT.): 142.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2074 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
416.0	PLEISTOCENE		UNCONSOLIDATED	23.9	0.0	
392.1	PLEISTOCENE		SAND & GRAVEL	32.3	23.9	
359.8	PLEISTOCENE		SANDY CLAY	14.8	56.2	
345.0	PLEISTOCENE		CLAY	20.6	71.0	
324.4	MODESTO	PIASA	LIMESTONE	7.2	91.6	TOP MAY BE ERODED
317.2	MODESTO		GRAY SHALE	12.2	98.8	
305.1	MODESTO		BLACK SHALE	2.4	110.9	DANVILLE COAL HORIZON
302.7	CARBONDALE		GRAY SHALE	1.5	113.3	
301.2	CARBONDALE	BANKSTON FORK	LIMESTONE	7.4	114.8	
293.7	CARBONDALE		GRAY SHALE	2.8	122.3	
290.9	CARBONDALE		ROCK	1.3	125.1	
289.7	CARBONDALE		BLACK SHALE	0.7	126.3	
289.0	CARBONDALE	BRERETON	ROCK	7.2	127.0	
281.8	CARBONDALE	ANNA	BLACK SHALE	0.2	134.2	
281.7	CARBONDALE	HERRIN	COAL	6.2	134.3	
275.5	CARBONDALE		UNDERCLAY	1.8	140.5	

MAPID: 16302389000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 29 QUARTERS/FOOTAGES: 400' S line, 310' W line of SE SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.793271 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.410046 DATE COLLECTED: 8 / 6 / 1955

SURFACE ELEVATION (FT.): 426.0 LOGGED (FT.): 161.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2076 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
272.5	CARBONDALE	HERRIN	COAL	6.4	153.5	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302389000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 29 QUARTERS/FOOTAGES: 400' S line, 310' W line of SE SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.793271 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.410046 DATE COLLECTED: 8 / 6 / 1955

SURFACE ELEVATION (FT.): 426.0 LOGGED (FT.): 161.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2076 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
426.0	PLEISTOCENE		UNCONSOLIDATED	113.6	0.0	
312.4	MODESTO	PIASA	LIMESTONE	5.5	113.6	
306.9			GRAY SHALE	12.9	119.1	
294.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.8	132.0	
287.2	CARBONDALE		DARK SHALE	5.6	138.8	
281.7	CARBONDALE	BRERETON	ROCK	8.8	144.3	
272.8	CARBONDALE	ANNA	BLACK SHALE	0.3	153.2	
272.5	CARBONDALE	HERRIN	COAL	6.4	153.5	
266.1	CARBONDALE		UNDERCLAY	1.8	159.9	

MAPID: 16302421000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 29 QUARTERS/FOOTAGES: 30' N line, 664' W line of NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.787354 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.423653 DATE COLLECTED: 9 / 20 / 1955

SURFACE ELEVATION (FT.): 415.4 LOGGED (FT.): 148.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2159 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
275.9	CARBONDALE	HERRIN	COAL	6.8	139.5	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302421000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 29 QUARTERS/FOOTAGES: 30' N line, 664' W line of NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.787354 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.423653 DATE COLLECTED: 9 / 20 / 1955

SURFACE ELEVATION (FT.): 415.4 LOGGED (FT.): 148.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2159 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.4	PLEISTOCENE		UNCONSOLIDATED	95.7	0.0	
319.7	MODESTO	PIASA	LIMESTONE	7.0	95.7	TOP MAY BE ERODED
312.7	MODESTO		GRAY SHALE	11.2	102.7	
301.6	CARBONDALE		BLACK SHALE	2.8	113.8	DANVILLE COAL HORIZON
298.7	CARBONDALE		GRAY SHALE	1.8	116.7	
297.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.2	118.4	
289.8	CARBONDALE		GRAY SHALE	5.9	125.6	
283.9	CARBONDALE	CONANT	ROCK	2.2	131.5	
281.7	CARBONDALE		BLACK SHALE	0.8	133.7	
281.0	CARBONDALE	BRERETON	ROCK	4.9	134.4	
276.1	CARBONDALE	ANNA	BLACK SHALE	0.2	139.3	
275.9	CARBONDALE	HERRIN	COAL	6.8	139.5	
269.1	CARBONDALE		UNDERCLAY	1.8	146.3	

MAPID: 16302865000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 29 QUARTERS/FOOTAGES: 1' N line, 1' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.780314 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.42372 DATE COLLECTED: 11 / 8 / 1968

SURFACE ELEVATION (FT.): 412.0 LOGGED (FT.): 145.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8515C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
274.4	CARBONDALE	HERRIN	COAL	6.7	137.6	

MAPID: 16302865000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 29 QUARTERS/FOOTAGES: 1' N line, 1' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.780314 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.42372 DATE COLLECTED: 11 / 8 / 1968

SURFACE ELEVATION (FT.): 412.0 LOGGED (FT.): 145.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8515C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. Q-1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
412.0	PLEISTOCENE		UNCONSOLIDATED	95.8	0.0
316.2	MODESTO	PIASA	LIMESTONE	7.5	95.8
308.7	MODESTO		GRAY SHALE	10.5	103.3
298.2	MODESTO		BLACK SHALE	2.5	113.8
295.7	CARBONDALE	DANVILLE	COAL	1.2	116.3
294.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.9	117.5
289.6	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.3	122.4
287.3	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	124.7
285.0	CARBONDALE		GRAY SHALE	0.3	127.0
284.7	CARBONDALE		LIMESTONE	0.2	127.3
284.5	CARBONDALE		DARK SHALE	9.4	127.5
275.1	CARBONDALE	ANNA	BLACK SHALE	0.7	136.9
274.4	CARBONDALE	HERRIN	COAL	6.7	137.6
267.7	CARBONDALE		UNDERCLAY	0.7	144.3

MAPID: 16303007000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 29 QUARTERS/FOOTAGES: 0' S line, 2640' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.789673 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.408945 DATE COLLECTED: 4 / 2 / 1969

SURFACE ELEVATION (FT.): 400.0 LOGGED (FT.): 140.0 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 8905C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY; C-7272

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
270.5	CARBONDALE	HERRIN	COAL	6.2	129.5

MAPID: 16303007000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 29 QUARTERS/FOOTAGES: 0' S line, 2640' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.789673

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.408945

DATE COLLECTED:

SURFACE ELEVATION (FT.): 400.0 LOGGED (FT.): 135.2

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8905C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
306.9	MODESTO	PIASA	LIMESTONE	4.2	93.1	
302.7	CARBONDALE		GRAY SHALE	13.8	97.3	
288.9	CARBONDALE	BANKSTON FORK	LIMESTONE	1.2	111.1	UPPER BENCH
287.7	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.2	112.3	SHALE PARTING
284.5	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.8	115.5	LOWER BENCH
281.7	CARBONDALE	LAWSON	DARK GRAY SHALE	5.6	118.3	
276.1	CARBONDALE	LAWSON	LIMESTONE	0.3	123.9	
275.8	CARBONDALE	LAWSON	DARK GRAY SHALE	2.7	124.2	
273.1	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	1.6	126.9	
271.5	CARBONDALE	BRERETON	CARBONACEOUS LIMESTONE	0.5	128.5	
271.0	CARBONDALE	HERRIN	COAL	6.2	129.0	

MAPID: 16323900000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 29 QUARTERS/FOOTAGES: 1320' N line, 1980' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.792094

GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.420101

DATE COLLECTED: 6 / 10 / 1974

SURFACE ELEVATION (FT.): 412.0 LOGGED (FT.): 148.8

LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 15881C

WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
320.9	MODESTO	PIASA	LIMESTONE	7.2	91.1	
304.1	CARBONDALE	DANVILLE	COAL	2.4	107.9	
280.2	CARBONDALE	HERRIN	COAL	7.0	131.8	

MAPID: 1632390000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 29 QUARTERS/FOOTAGES: 1320' N line, 1980' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.792094 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.420101 DATE COLLECTED: 6 / 10 / 1974

SURFACE ELEVATION (FT.): 414.5 LOGGED (FT.): 148.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15881C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. G-5

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
414.5	PLEISTOCENE		UNCONSOLIDATED	91.1	0.0	
323.4	MODESTO	PIASA	LIMESTONE	7.2	91.1	TOP MAY BE ERODED
316.2	MODESTO		GRAY SHALE	9.6	98.3	
306.6	CARBONDALE	DANVILLE	COAL	2.4	107.9	
304.2	CARBONDALE		GRAY SHALE	4.7	110.3	
299.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	115.0	
297.3	CARBONDALE		GRAY SHALE	4.4	117.2	
292.9	CARBONDALE		LIMESTONE	1.1	121.6	
291.8	CARBONDALE		DARK SHALE	9.1	122.7	
282.7	CARBONDALE	HERRIN	COAL	7.0	131.8	
275.7	CARBONDALE		UNDERCLAY	3.2	138.8	
272.5	CARBONDALE		LIMESTONE	6.8	142.0	

MAPID: 16302388000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 30 QUARTERS/FOOTAGES: 200' S line, 150' W line of SE SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.812065 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.409522 DATE COLLECTED: 8 / 6 / 1955

SURFACE ELEVATION (FT.): 414.3 LOGGED (FT.): 133.9 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2075 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
289.1	CARBONDALE	HERRIN	COAL	6.8	125.2	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302388000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 30 QUARTERS/FOOTAGES: 200' S line, 150' W line of SE SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.812065 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.409522 DATE COLLECTED: 8 / 6 / 1955

SURFACE ELEVATION (FT.): 414.3 LOGGED (FT.): 133.9 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2075 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
414.3	PLEISTOCENE		UNCONSOLIDATED	102.7	0.0	
311.6	CARBONDALE	BANKSTON FORK	LIMESTONE	9.1	102.7	
302.5	CARBONDALE		GRAY SHALE	11.5	111.8	
291.0	CARBONDALE	BRERETON	ROCK	1.7	123.3	
289.4	CARBONDALE	ANNA	BLACK SHALE	0.3	124.9	
289.1	CARBONDALE	HERRIN	COAL	6.8	125.2	
282.3	CARBONDALE		UNDERCLAY	1.9	132.0	

MAPID: 16302390000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 30 QUARTERS/FOOTAGES: 200' N line, 450' W line of SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.815443 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.4158 DATE COLLECTED: 8 / 11 / 1955

SURFACE ELEVATION (FT.): 439.6 LOGGED (FT.): 146.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2077 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
302.8	CARBONDALE	HERRIN	COAL	7.3	136.8	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 1630239000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 30 QUARTERS/FOOTAGES: 200' N line, 450' W line of SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.815443 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.4158 DATE COLLECTED: 8 / 11 / 1955

SURFACE ELEVATION (FT.): 439.6 LOGGED (FT.): 146.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2077 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
439.6	PLEISTOCENE		UNCONSOLIDATED	27.8	0.0	
411.8	PLEISTOCENE		SAND & GRAVEL	54.4	27.8	
357.3	MODESTO	PIASA	LIMESTONE	7.6	82.3	TOP MAY BE ERODED
349.8			GRAY SHALE	24.4	89.8	
325.3	CARBONDALE	BANKSTON FORK	LIMESTONE	7.9	114.3	
317.4	CARBONDALE		GRAY SHALE	4.3	122.2	
313.1	CARBONDALE	BRERETON	ROCK	8.8	126.5	
304.3	CARBONDALE	ANNA	BLACK SHALE	1.6	135.3	
302.7	CARBONDALE	HERRIN	COAL	7.3	136.9	
295.4	CARBONDALE		UNDERCLAY	1.8	144.2	

MAPID: 16302391000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 30 QUARTERS/FOOTAGES: 325' N line, 600' E line of SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.810276 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.415452 DATE COLLECTED: 8 / 11 / 1955

SURFACE ELEVATION (FT.): 412.8 LOGGED (FT.): 128.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2078 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
293.3	CARBONDALE	HERRIN	COAL	6.7	119.5	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302391000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 30 QUARTERS/FOOTAGES: 325' N line, 600' E line of SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.810276 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.415452 DATE COLLECTED: 8 / 11 / 1955

SURFACE ELEVATION (FT.): 412.8 LOGGED (FT.): 128.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2078 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
412.8	PLEISTOCENE		UNCONSOLIDATED	89.6	0.0	
323.2			GRAY SHALE	11.5	89.6	
311.7	CARBONDALE	BANKSTON FORK	LIMESTONE	8.3	101.1	
303.4	CARBONDALE		GRAY SHALE	8.3	109.4	
295.0	CARBONDALE	BRERETON	ROCK	1.5	117.8	
293.5	CARBONDALE	ANNA	BLACK SHALE	0.3	119.3	
293.3	CARBONDALE	HERRIN	COAL	6.7	119.5	
286.6	CARBONDALE		UNDERCLAY	1.9	126.2	

MAPID: 16302955000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 30 QUARTERS/FOOTAGES: 330' N line, 0' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.816945 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.422808 DATE COLLECTED: 4 / 10 / 1969

SURFACE ELEVATION (FT.): 450.0 LOGGED (FT.): 158.9 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 8681C WELL TYPE: Coal Test

COMMENT: C-7245

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
304.0	CARBONDALE	HERRIN	COAL	7.1	146.0	COAL REMOVED BY CO.

MAPID: 16302955000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 30 QUARTERS/FOOTAGES: 330' N line, 0' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.816945

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.422808

DATE COLLECTED:

SURFACE ELEVATION (FT.): 450.0 LOGGED (FT.): 153.1

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8681C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
337.0	MODESTO	PIASA	LIMESTONE	1.7	113.0
335.3	CARBONDALE		GRAY SHALE	13.9	114.7
321.4	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	7.4	128.6
314.0	CARBONDALE	LAWSON	DARK GRAY SHALE	7.9	136.0
306.1	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.9	143.9
305.3	CARBONDALE	JAMESTOWN	BONE COAL	0.2	144.7
305.1	CARBONDALE	BRERETON	CLAYSTONE	1.0	144.9
304.1	CARBONDALE	ANNA	BLACK SHALE	0.4	145.9
304.0	CARBONDALE	HERRIN	COAL	7.1	146.0

MAPID: 16323869000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 30 QUARTERS/FOOTAGES: 1' S line, 1320' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.803638

GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.408951

DATE COLLECTED: 5 / 16 / 1974

SURFACE ELEVATION (FT.): 416.0 LOGGED (FT.): 150.5

LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 15877C

WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
283.6	CARBONDALE	CONANT	LIMESTONE	2.1	132.4
280.7	CARBONDALE	BRERETON	LIMESTONE	2.1	135.3
278.6	CARBONDALE	HERRIN	COAL	6.8	137.4

MAPID: 16323869000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 30 QUARTERS/FOOTAGES: 1' S line, 1320' E line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.803638 GEOLOGIST: CHENOWETH
 CONFIDENTIAL: N LATITUDE: 38.408951 DATE COLLECTED: 5 / 16 / 1974
 SURFACE ELEVATION (FT.): 416.0 LOGGED (FT.): 150.8 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 15877C WELL TYPE: Coal Test
 COMMENT: PEABODY LOC. M-17

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
416.0	PLEISTOCENE		UNCONSOLIDATED	118.0	0.0	
298.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.7	118.0	
293.3	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.7	122.7	
289.6	CARBONDALE	BANKSTON FORK	LIMESTONE	1.1	126.4	
288.5	CARBONDALE		DARK SHALE	4.8	127.5	
283.7	CARBONDALE	CONANT	LIMESTONE	2.1	132.3	
281.5	CARBONDALE	JAMESTOWN	COAL	0.4	134.5	
281.2	CARBONDALE		DARK SHALE	0.4	134.8	
280.8	CARBONDALE	BRERETON	LIMESTONE	2.4	135.2	
278.4	CARBONDALE	HERRIN	COAL	6.6	137.6	
271.8	CARBONDALE		UNDERCLAY	3.9	144.2	
267.9	CARBONDALE		LIMESTONE	2.7	148.1	

MAPID: 16302395000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 31 QUARTERS/FOOTAGES: 38' N line, 16' E line of SE
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.799059 GEOLOGIST: PRUSSEN
 CONFIDENTIAL: N LATITUDE: 38.401412 DATE COLLECTED: 8 / 10 / 1955
 SURFACE ELEVATION (FT.): 419.0 LOGGED (FT.): 150.2 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 2087 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
277.6	CARBONDALE	HERRIN	COAL	6.8	141.4	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302395000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 31 QUARTERS/FOOTAGES: 38' N line, 16' E line of SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.799059 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.401412 DATE COLLECTED: 8 / 10 / 1955

SURFACE ELEVATION (FT.): 419.0 LOGGED (FT.): 150.2 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2087 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
419.0	PLEISTOCENE		UNCONSOLIDATED	29.0	0.0	
390.0	PLEISTOCENE		SAND & GRAVEL	78.9	29.0	
311.1	PLEISTOCENE		CLAY	19.7	107.9	ERROR IN LOG MEASUREMENT
292.4	CARBONDALE		GRAY SHALE	9.1	126.6	
283.3	CARBONDALE	BRERETON	ROCK	4.3	135.7	
279.1	CARBONDALE	ANNA	BLACK SHALE	1.5	139.9	
277.6	CARBONDALE	HERRIN	COAL	6.8	141.4	
270.7	CARBONDALE		UNDERCLAY	1.9	148.3	

MAPID: 16302396000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 31 QUARTERS/FOOTAGES: 68' S line, 8' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.799026 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.394287 DATE COLLECTED: 8 / 15 / 1955

SURFACE ELEVATION (FT.): 413.7 LOGGED (FT.): 145.9 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2089 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
276.0	CARBONDALE	HERRIN	COAL	6.4	137.7	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302396000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 31 QUARTERS/FOOTAGES: 68' S line, 8' E line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.799026 GEOLOGIST: CHENOWETH
 CONFIDENTIAL: N LATITUDE: 38.394287 DATE COLLECTED: 8 / 15 / 1955
 SURFACE ELEVATION (FT.): 413.7 LOGGED (FT.): 145.9 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 2089 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
413.7	PLEISTOCENE		UNCONSOLIDATED	31.2	0.0	
382.5	PLEISTOCENE		CLAY, SAND & GRAVEL	67.7	31.2	
314.9	PLEISTOCENE		CLAY	13.8	98.8	
301.0	CARBONDALE	BANKSTON FORK	LIMESTONE	10.4	112.7	TOP MAY BE ERODED
290.6	CARBONDALE		GRAY SHALE	9.2	123.1	
281.4	CARBONDALE	BRERETON	ROCK	5.1	132.3	
276.4	CARBONDALE	ANNA	BLACK SHALE	0.3	137.3	
276.0	CARBONDALE	HERRIN	COAL	6.4	137.7	
269.6	CARBONDALE		UNDERCLAY	1.8	144.1	

MAPID: 16302427000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 31 QUARTERS/FOOTAGES: 35' N line, 13' W line of SE
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.808023 GEOLOGIST: PRUSSEN
 CONFIDENTIAL: N LATITUDE: 38.401474 DATE COLLECTED: 10 / 13 / 1955
 SURFACE ELEVATION (FT.): 417.0 LOGGED (FT.): 138.4 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 2193 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
313.9			COAL	1.9	103.1	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302427000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 31 QUARTERS/FOOTAGES: 35' N line, 13' W line of SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.808023 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.401474 DATE COLLECTED: 10 / 13 / 1955

SURFACE ELEVATION (FT.): 417.0 LOGGED (FT.): 138.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2193 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
417.0	PLEISTOCENE		UNCONSOLIDATED	21.2	0.0	
395.8	PLEISTOCENE		SAND & GRAVEL	33.4	21.2	
362.4	PLEISTOCENE		CLAY	22.8	54.6	
339.6	PLEISTOCENE		CLAY, SAND & GRAVEL	9.4	77.4	
330.2	MODESTO	PIASA	LIMESTONE	4.4	86.8	TOP ERODED
325.8	MODESTO		GRAY SHALE	11.9	91.2	
313.9	CARBONDALE	DANVILLE	COAL	1.9	103.1	
312.0	CARBONDALE		GRAY SHALE	3.8	105.0	
308.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.1	108.8	
305.1	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.4	111.9	
301.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	115.3	
300.4	CARBONDALE		GRAY SHALE	7.2	116.6	
293.2	CARBONDALE		ROCK	1.5	123.8	
291.7	CARBONDALE		GRAY SHALE	0.2	125.3	
291.6	CARBONDALE		SHALEY ROCK	0.5	125.4	BLACK
291.1	CARBONDALE		ROCK	0.7	125.9	
290.4	CARBONDALE		GRAY SHALE	0.1	126.6	
290.3	CARBONDALE		ROCK	0.4	126.7	
289.9	CARBONDALE		GRAY SHALE	0.4	127.1	
289.5	CARBONDALE	BRERETON	ROCK	1.9	127.5	
287.6	CARBONDALE		GRAY SHALE	0.3	129.4	
287.3	CARBONDALE	HERRIN	COAL	6.6	129.7	
280.8	CARBONDALE		UNDERCLAY	2.1	136.2	

MAPID: 16302428000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 31 QUARTERS/FOOTAGES: 18' S line, 246' W line of SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.80722 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.394224 DATE COLLECTED: 10 / 15 / 1955

SURFACE ELEVATION (FT.): 430.7 LOGGED (FT.): 148.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2194 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
289.9	CARBONDALE	HERRIN	COAL	6.7	140.8	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302428000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 31 QUARTERS/FOOTAGES: 18' S line, 246' W line of SE
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.80722 GEOLOGIST: CHENOWETH
 CONFIDENTIAL: N LATITUDE: 38.394224 DATE COLLECTED: 10 / 15 / 1955
 SURFACE ELEVATION (FT.): 430.7 LOGGED (FT.): 148.5 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 2194 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
430.7	PLEISTOCENE		UNCONSOLIDATED	23.5	0.0	
407.2	PLEISTOCENE		SANDY CLAY	10.4	23.5	
396.9	PLEISTOCENE		SAND & GRAVEL	82.6	33.8	
314.2	PLEISTOCENE		CLAY	13.1	116.5	
301.1	PLEISTOCENE		CLAY, SAND & GRAVEL	11.2	129.6	
289.9	CARBONDALE	HERRIN	COAL	6.7	140.8	TOP ERODED
283.3	CARBONDALE		UNDERCLAY	1.1	147.4	

MAPID: 16302956000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 31 QUARTERS/FOOTAGES: 2640' N line, 2640' E line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.808266 GEOLOGIST: PRUSSEN
 CONFIDENTIAL: N LATITUDE: 38.401672 DATE COLLECTED: 4 / 3 / 1969
 SURFACE ELEVATION (FT.): 412.0 LOGGED (FT.): 141.0 LOG TYPE: Other Core Study
 SOURCE: PEABODY COAL CO. 8666C WELL TYPE: Coal Test
 COMMENT: SURVEY CORE STUDY; C-7233

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
282.7	CARBONDALE	HERRIN	COAL	6.5	129.3	COAL REMOVED BY CO.

MAPID: 16302956000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 31 QUARTERS/FOOTAGES: 2640' N line, 2640' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.808266

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.401672

DATE COLLECTED:

SURFACE ELEVATION (FT.): 412.0 LOGGED (FT.): 135.5

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8666C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
328.0	MODESTO	PIASA	LIMESTONE	7.3	84.0	
320.7	MODESTO		GRAY SHALE	12.3	91.3	
308.4	CARBONDALE	DANVILLE	COAL	0.4	103.6	
308.0	CARBONDALE		GRAY SHALE	4.8	104.0	
303.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	108.8	UPPER BENCH
299.7	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.0	112.3	SHALE PARTING
297.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	114.3	LOWER BENCH
296.2	CARBONDALE	LAWSON	GRAY SHALE	8.6	115.8	
287.6	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	2.8	124.4	
284.8	CARBONDALE	JAMESTOWN	BONE COAL	0.2	127.2	
284.6	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	1.1	127.4	
283.4	CARBONDALE	ANNA	BLACK SHALE	0.2	128.6	
283.0	CARBONDALE	HERRIN	COAL	6.5	129.0	

MAPID: 16302418000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 32 QUARTERS/FOOTAGES: 2518' S line, 2407' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.79056

GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.400951

DATE COLLECTED: 9 / 9 / 1955

SURFACE ELEVATION (FT.): 415.0 LOGGED (FT.): 158.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2135

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
266.1	CARBONDALE	HERRIN	COAL	7.2	148.9	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302418000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 32 QUARTERS/FOOTAGES: 2518' S line, 2407' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.79056 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.400951 DATE COLLECTED:

SURFACE ELEVATION (FT.): 415.0 LOGGED (FT.): 156.2 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2135 WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
311.0	MODESTO	PIASA	LIMESTONE	8.5	104.0	
302.5	MODESTO		DARK GRAY SHALE	11.8	112.5	
290.7	CARBONDALE	DANVILLE	COAL	1.3	124.3	
289.5	CARBONDALE		CLAYSTONE	2.5	125.5	
287.0	CARBONDALE	BANKSTON FORK	LIMESTONE	10.7	128.0	
276.3	CARBONDALE	LAWSON	GRAY SHALE	8.0	138.7	
268.3	CARBONDALE	BRERETON	LIMESTONE	1.6	146.7	
266.7	CARBONDALE	ANNA	BLACK SHALE	0.3	148.3	
266.0	CARBONDALE	HERRIN	COAL	7.2	149.0	

MAPID: 16302419000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 32 QUARTERS/FOOTAGES: 812' S line, 1130' W line of SE SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.79045 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.396241 DATE COLLECTED: 9 / 9 / 1955

SURFACE ELEVATION (FT.): 417.2 LOGGED (FT.): 164.6 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2136 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
261.0	CARBONDALE	HERRIN	COAL	6.6	156.2	SEE COAL SECTION MAP 6-26 & 6-26-A

MAPID: 16302419000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 32 QUARTERS/FOOTAGES: 812' S line, 1130' W line of SE SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.79045 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.396241 DATE COLLECTED: 9 / 9 / 1955

SURFACE ELEVATION (FT.): 417.2 LOGGED (FT.): 164.6 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2136 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
417.2	PLEISTOCENE		UNCONSOLIDATED	22.3	0.0	
394.9	PLEISTOCENE		CLAY, SAND & GRAVEL	87.5	22.3	
307.4	MODESTO	PIASA	LIMESTONE	9.3	109.8	TOP MAY BE ERODED
298.1	MODESTO		GRAY SHALE	12.8	119.1	
285.3	MODESTO		BLACK SHALE	2.8	131.9	DANVILLE COAL HORIZON
282.5	CARBONDALE		CLAYSTONE	1.6	134.7	
280.9	CARBONDALE	BANKSTON FORK	LIMESTONE	5.3	136.3	
275.6	CARBONDALE		GRAY SHALE	5.3	141.6	
270.3	CARBONDALE		ROCK	3.8	146.9	
266.5	CARBONDALE		BLACK SHALE	0.8	150.7	
265.8	CARBONDALE	BRERETON	ROCK	4.6	151.4	
261.2	CARBONDALE	ANNA	BLACK SHALE	0.2	156.0	
261.0	CARBONDALE	HERRIN	COAL	6.6	156.2	
254.4	CARBONDALE		UNDERCLAY	1.8	162.8	

MAPID: 16302979000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 33 QUARTERS/FOOTAGES: 0' S line, 660' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.763439 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.393523 DATE COLLECTED: 5 / 6 / 1969

SURFACE ELEVATION (FT.): 395.0 LOGGED (FT.): 178.6 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 8679C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY; C-7243

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
227.2	CARBONDALE	HERRIN	COAL	7.5	167.8	

MAPID: 16302979000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 33 QUARTERS/FOOTAGES: 0' S line, 660' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.763439

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.393523

DATE COLLECTED:

SURFACE ELEVATION (FT.): 395.0 LOGGED (FT.): 174.5

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8679C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
274.0	MODESTO	PIASA	LIMESTONE	7.3	121.0	
266.7	MODESTO		GRAY SHALE	12.5	128.3	
254.2	CARBONDALE	DANVILLE	COAL	0.5	140.8	
253.7	CARBONDALE		GRAY SHALE	7.0	141.3	
246.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	148.3	
244.0	CARBONDALE	LAWSON	DARK GRAY SHALE	9.4	151.0	
234.6	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	3.2	160.4	
231.4	CARBONDALE		DARK GRAY SHALE	1.8	163.6	
229.6	CARBONDALE	BRERETON	LIMESTONE	1.3	165.4	
228.2	CARBONDALE	ANNA	BLACK SHALE	0.2	166.8	
228.0	CARBONDALE	HERRIN	COAL	7.5	167.0	

MAPID: 16303060000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 33 QUARTERS/FOOTAGES: 1650' N line, 1320' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.765678

GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.404403

DATE COLLECTED: 6 / 18 / 1969

SURFACE ELEVATION (FT.): 390.0 LOGGED (FT.): 175.3

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8909C

WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
224.6	CARBONDALE	HERRIN	COAL	8.6	165.4	REPORTED BY CO.

MAPID: 1630306000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 33 QUARTERS/FOOTAGES: 1650' N line, 1320' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.765678 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.404403 DATE COLLECTED: 6 / 18 / 1969

SURFACE ELEVATION (FT.): 390.0 LOGGED (FT.): 175.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8909C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. M-6

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
390.0	PLEISTOCENE		UNCONSOLIDATED	95.0	0.0	
295.0	MODESTO		GRAY SHALE	16.0	95.0	
279.0	MODESTO	PIASA	LIMESTONE	8.0	111.0	
271.0	MODESTO		GRAY SHALE	5.8	119.0	
265.2	MODESTO		LIMESTONE	0.4	124.8	
264.8	MODESTO		GRAY SHALE	7.9	125.2	
256.9	MODESTO		LIMESTONE	0.3	133.1	
256.6	CARBONDALE	DANVILLE	COAL	0.4	133.4	
256.2	CARBONDALE		GRAY SHALE	8.5	133.8	
247.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	142.3	
245.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.0	144.8	
242.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	147.8	
239.8	CARBONDALE		DARK SHALE	5.3	150.2	
234.5	CARBONDALE	BRERETON	LIMESTONE	4.2	155.5	
230.3	CARBONDALE	ANNA	BLACK SHALE	5.7	159.7	
224.6	CARBONDALE	HERRIN	COAL	8.6	165.4	
216.0	CARBONDALE		SHALE	1.3	174.0	

MAPID: 1632377000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 33 QUARTERS/FOOTAGES: 660' N line, 2310' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.76913 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.407137 DATE COLLECTED: 10 / 3 / 1973

SURFACE ELEVATION (FT.): 390.0 LOGGED (FT.): 170.0 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 15779C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
239.9	CARBONDALE	HERRIN	COAL	7.3	150.1	THICKNESS UNCERTAIN

MAPID: 1632377000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 33 QUARTERS/FOOTAGES: 660' N line, 2310' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.76913 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.407137 DATE COLLECTED: 10 / 3 / 1973

SURFACE ELEVATION (FT.): 390.0 LOGGED (FT.): 170.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15779C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. J-3

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
390.0	PLEISTOCENE		UNCONSOLIDATED	10.0	0.0
380.0	PLEISTOCENE		SAND	69.0	10.0
311.0	PLEISTOCENE		CLAY	24.0	79.0
287.0	MODESTO	PIASA	LIMESTONE	5.8	103.0
281.2			GRAY SHALE	22.0	108.8
259.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.2	130.8
256.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.0	134.0
253.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	137.0
250.7	CARBONDALE		DARK SHALE	7.9	139.3
242.8	CARBONDALE	BRERETON	LIMESTONE	1.1	147.2
241.7	CARBONDALE	ANNA	DARK SHALE	3.5	148.3
238.2	CARBONDALE	HERRIN	COAL	7.3	151.8
230.9	CARBONDALE		UNDERCLAY	2.8	159.1
228.1	CARBONDALE		LIMESTONE	7.3	161.9
220.8	CARBONDALE		GRAY SHALE	0.8	169.2

MAPID: 16323771000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 33 QUARTERS/FOOTAGES: 1320' S line, 1320' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.765729 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.397214 DATE COLLECTED: 10 / 11 / 1973

SURFACE ELEVATION (FT.): 395.0 LOGGED (FT.): 179.0 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 15781C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
234.1	CARBONDALE	HERRIN	COAL	8.5	160.9

MAPID: 16323771000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 33 QUARTERS/FOOTAGES: 1320' S line, 1320' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.765729 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.397214 DATE COLLECTED: 10 / 11 / 1973

SURFACE ELEVATION (FT.): 395.0 LOGGED (FT.): 179.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15781C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. M-13

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
395.0	PLEISTOCENE		UNCONSOLIDATED	13.7	0.0
381.3	PLEISTOCENE		SAND	45.3	13.7
336.0	PLEISTOCENE		CLAY	21.0	59.0
315.0	MODESTO		GRAY SHALE	29.3	80.0
285.7	MODESTO	PIASA	LIMESTONE	7.4	109.3
278.3			GRAY SHALE	22.6	116.7
255.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	139.3
252.7	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.7	142.3
250.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.4	145.0
246.6	CARBONDALE		DARK SHALE	6.6	148.4
240.0	CARBONDALE	BRERETON	LIMESTONE	0.8	155.0
239.2	CARBONDALE	ANNA	DARK SHALE	5.1	155.8
234.1	CARBONDALE	HERRIN	COAL	8.5	160.9
225.6	CARBONDALE		UNDERCLAY	3.0	169.4
222.6	CARBONDALE		GRAY SHALE	6.6	172.4

MAPID: 16303055000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 34 QUARTERS/FOOTAGES: 660' S line, 0' E line

QUADRANGLE: VENEDY LONGITUDE: -89.741821 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.394964 DATE COLLECTED: 7 / 12 / 1969

SURFACE ELEVATION (FT.): 405.0 LOGGED (FT.): 186.3 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 9001C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
228.9	CARBONDALE	HERRIN	COAL	6.9	176.1 COAL REMOVED BY CO.

MAPID: 16303055000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 34 QUARTERS/FOOTAGES: 660' S line, 0' E line

QUADRANGLE: VENEDY LONGITUDE: -89.741821

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.394964

DATE COLLECTED:

SURFACE ELEVATION (FT.): 405.0 LOGGED (FT.): 182.9

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 9001C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
277.0	MODESTO	PIASA	LIMESTONE	6.7	128.0	
270.3	CARBONDALE		GRAY SHALE	21.4	134.7	
248.9	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	156.1	UPPER BENCH
246.6	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.4	158.4	SHALE PARTING
245.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.8	159.8	LOWER BENCH
242.4	CARBONDALE	LAWSON	DARK GRAY SHALE	7.2	162.6	
235.2	CARBONDALE	BRERETON	LIMESTONE	3.4	169.8	
231.8	CARBONDALE	ANNA	BLACK SHALE	2.8	173.2	
229.0	CARBONDALE	HERRIN	COAL	6.9	176.0	

MAPID: 16303062000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 34 QUARTERS/FOOTAGES: 990' N line, 330' E line

QUADRANGLE: VENEDY LONGITUDE: -89.743037

GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.404956

DATE COLLECTED: 6 / 6 / 1969

SURFACE ELEVATION (FT.): 390.0 LOGGED (FT.): 168.1

LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 8914C

WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
231.7	CARBONDALE	HERRIN	COAL	7.3	158.3	

MAPID: 16303062000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 34 QUARTERS/FOOTAGES: 990' N line, 330' E line
 QUADRANGLE: VENEDY LONGITUDE: -89.743037 GEOLOGIST: CHENOWETH
 CONFIDENTIAL: N LATITUDE: 38.404956 DATE COLLECTED: 6 / 6 / 1969
 SURFACE ELEVATION (FT.): 390.0 LOGGED (FT.): 168.1 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 8914C WELL TYPE: Coal Test
 COMMENT: PEABODY LOC. P-4

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
390.0	PLEISTOCENE		SAND & GRAVEL	73.0	0.0
317.0	MODESTO		GRAY SHALE	42.9	73.0
274.1	MODESTO	PIASA	LIMESTONE	5.7	115.9
268.4			GRAY SHALE	23.5	121.6
244.9	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	145.1
242.7	CARBONDALE		DARK SHALE	6.8	147.3
235.9	CARBONDALE	BRERETON	LIMESTONE	2.1	154.1
233.8	CARBONDALE	ANNA	BLACK SHALE	2.1	156.2
231.7	CARBONDALE	HERRIN	COAL	7.3	158.3
224.4	CARBONDALE		UNDERCLAY	2.5	165.6

MAPID: 16323772000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 34 QUARTERS/FOOTAGES: 1320' N line, 1320' W line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.756411 GEOLOGIST: PRUSSEN
 CONFIDENTIAL: N LATITUDE: 38.40499 DATE COLLECTED: 10 / 5 / 1973
 SURFACE ELEVATION (FT.): 389.0 LOGGED (FT.): 168.0 LOG TYPE: Other Core Study
 SOURCE: PEABODY COAL CO. 15780C WELL TYPE: Coal Test
 COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
239.5	CARBONDALE	HERRIN	COAL	9.2	149.5

MAPID: 16323772000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 34 QUARTERS/FOOTAGES: 1320' N line, 1320' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.756411 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.40499 DATE COLLECTED: 10 / 5 / 1973

SURFACE ELEVATION (FT.): 389.0 LOGGED (FT.): 168.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15780C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. E-5

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
389.0	PLEISTOCENE		UNCONSOLIDATED	7.0	0.0
382.0	PLEISTOCENE		SAND & GRAVEL	70.0	7.0
312.0	PLEISTOCENE		CLAY	19.8	77.0
292.2	MODESTO	PIASA	LIMESTONE	7.2	96.8
285.0			GRAY SHALE	21.5	104.0
263.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	125.5
261.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.4	127.6
258.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	131.0
255.5	CARBONDALE		DARK SHALE	7.0	133.5
248.5	CARBONDALE	BRERETON	LIMESTONE	4.8	140.5
243.7	CARBONDALE	ANNA	DARK SHALE	4.2	145.3
239.5	CARBONDALE	HERRIN	COAL	9.2	149.5
230.3	CARBONDALE		UNDERCLAY	2.7	158.7
227.6	CARBONDALE		GRAY SHALE	6.6	161.4

MAPID: 16324183000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 34 QUARTERS/FOOTAGES:

QUADRANGLE: VENEDY LONGITUDE: -89.749799 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.404408 DATE COLLECTED:

SURFACE ELEVATION (FT.): 389.9 LOGGED (FT.): 181.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15786C WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
389.9	PLEISTOCENE		UNCONSOLIDATED	4.5	0.0	
385.4	PLEISTOCENE		SAND & GRAVEL	64.5	4.5	
320.9	PLEISTOCENE		CLAY	27.0	69.0	
293.9			SANDSTONE	4.0	96.0	
289.9			GRAY SHALE	11.8	100.0	
278.1			LIMESTONE	5.2	111.8	
272.9			GRAY SHALE	23.0	117.0	
249.9			LIMESTONE	3.6	140.0	
246.3			GRAY SHALE	1.4	143.6	
244.9	CARBONDALE		LIMESTONE	2.5	145.0	
242.4	CARBONDALE		SHALE	9.1	147.5	
233.3	CARBONDALE		LIMESTONE	3.3	156.6	
230.0	CARBONDALE		DARK SHALE	2.7	159.9	
227.3	CARBONDALE	HERRIN	COAL	8.3	162.6	
219.0	CARBONDALE		UNDERCLAY	0.8	170.9	
218.2	CARBONDALE		CALCAREOUS SHALE	2.9	171.7	
215.3	CARBONDALE		GRAY SHALE	1.9	174.6	
213.4	CARBONDALE		LIMESTONE	4.5	176.5	

MAPID: 16327641000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 34 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.751528

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.39628

DATE COLLECTED:

SURFACE ELEVATION (FT.): 391.5 LOGGED (FT.): 179.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15787C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
391.5	PLEISTOCENE		UNCONSOLIDATED	7.0	0.0
384.5	PLEISTOCENE		SAND & GRAVEL	49.0	7.0
335.5	PLEISTOCENE		CLAY	42.0	56.0
293.5	MODESTO		SANDSTONE	5.0	98.0
288.5	MODESTO		GRAY SHALE	10.2	103.0
278.3	MODESTO	PIASA	LIMESTONE	7.3	113.2
271.0			GRAY SHALE	21.0	120.5
250.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	141.5
244.5	CARBONDALE		DARK SHALE	5.7	147.0
238.8	CARBONDALE	BRERETON	LIMESTONE	6.7	152.7
232.1	CARBONDALE	ANNA	DARK SHALE	1.3	159.4
230.8	CARBONDALE	HERRIN	COAL	7.1	160.7
223.7	CARBONDALE		UNDERCLAY	0.9	167.8
222.8	CARBONDALE		SHALY LIMESTONE	8.1	168.7
214.7	CARBONDALE		GRAY SHALE	2.2	176.8

MAPID: 16327642000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 34 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.75608 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.403782 DATE COLLECTED:

SURFACE ELEVATION (FT.): 395.2 LOGGED (FT.): 189.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15785C WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS GIVEN BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
395.2	PLEISTOCENE		UNCONSOLIDATED	5.0	0.0	
390.2	PLEISTOCENE		SAND & GRAVEL	87.0	5.0	
303.2	PLEISTOCENE		CLAY	23.2	92.0	
280.0	MODESTO	PIASA	LIMESTONE	7.6	115.2	
272.4			GRAY SHALE	22.2	122.8	
250.2	CARBONDALE		LIMESTONE	3.5	145.0	
246.7	CARBONDALE		GRAY SHALE	3.5	148.5	
243.2	CARBONDALE		LIMESTONE	2.7	152.0	
240.5	CARBONDALE		DARK SHALE	7.9	154.7	
232.6	CARBONDALE		LIMESTONE	1.2	162.6	
231.4	CARBONDALE		DARK SHALE	5.5	163.8	
225.9	CARBONDALE	HERRIN	COAL	8.6	169.3	
217.3	CARBONDALE		UNDERCLAY	1.3	177.9	
216.0	CARBONDALE		SANDY SHALE	9.8	179.2	

MAPID: 16303048000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 35 QUARTERS/FOOTAGES: 660' S line, 660' W line of NE NE

QUADRANGLE: VENEDY LONGITUDE: -89.725619 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.405665 DATE COLLECTED: 0 / 0 / 1969

SURFACE ELEVATION (FT.): 390.0 LOGGED (FT.): 126.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
279.2			COAL	2.0	110.8	

MAPID: 16323773000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 1S 6W SECTION: 36 QUARTERS/FOOTAGES: 2640' N line, 1' W line

QUADRANGLE: VENEDY LONGITUDE: -89.723251 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.40017 DATE COLLECTED: 7 / 20 / 1973

SURFACE ELEVATION (FT.): 396.0 LOGGED (FT.): 192.0 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 15598C WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
219.8	CARBONDALE	HERRIN	COAL	7.0	176.2	

MAPID: 16300044000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 1 QUARTERS/FOOTAGES: NE SW SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.832565 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.469814 DATE COLLECTED: 8 / 0 / 1923

SURFACE ELEVATION (FT.): 402.5 LOGGED (FT.): 96.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
402.5			SOIL	2.0	0.0	
400.5			CLAY	16.0	2.0	
384.5			SAND	10.0	18.0	
374.5			CLAY	24.0	28.0	
350.5			LIMESTONE	8.5	52.0	
342.0			DARK SHALE	5.5	60.5	
336.5			SHALE	5.0	66.0	
331.5			SHALY LIMESTONE	4.5	71.0	
327.0			LIMESTONE	1.5	75.5	
325.5			SHALE	4.0	77.0	BLACK
321.5			SHALE	4.0	81.0	
317.5	CARBONDALE	BRERETON	LIMESTONE	3.3	85.0	
314.2	CARBONDALE	ANNA	SHALE	0.2	88.3	BLACK
314.0	CARBONDALE	HERRIN	COAL	6.8	88.5	
307.2	CARBONDALE		UNDERCLAY	0.8	95.3	

MAPID: 16300044000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 1 QUARTERS/FOOTAGES: NE SW SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.832565 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.469814 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 402.5 LOGGED (FT.): 96.0 LOG TYPE:

SOURCE: UNION COLL0033 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
313.5	CARBONDALE	HERRIN	COAL	6.8	89.0	

MAPID: 16302370000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 1 QUARTERS/FOOTAGES: 75' S line, 60' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.817809 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.467277 DATE COLLECTED: 7 / 23 / 1955

SURFACE ELEVATION (FT.): 408.4 LOGGED (FT.): 122.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2052 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
408.4	PLEISTOCENE		CLAY	15.9	0.0	
392.5	PLEISTOCENE		CLAY, SAND & GRAVEL	30.2	15.9	
362.3	PLEISTOCENE		CLAY & GRAVEL	5.1	46.1	
357.2	PLEISTOCENE		SAND	7.3	51.2	
349.8	PLEISTOCENE		CLAY, SAND & GRAVEL	8.6	58.6	
341.3	MODESTO		LIMESTONE	0.5	67.1	
340.8	MODESTO		GRAY SHALE	6.5	67.6	
334.2	MODESTO	PIASA	LIMESTONE	6.5	74.2	
327.8			GRAY SHALE	15.8	80.6	
311.9	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	2.8	96.5	
309.1	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.5	99.3	
308.6	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	1.3	99.8	
307.3	CARBONDALE		GRAY SHALE	0.6	101.1	
306.7	CARBONDALE		DARK SHALE	5.6	101.7	
301.0	CARBONDALE	CONANT	SHALY LIMESTONE	0.6	107.4	
300.4	CARBONDALE		DARK SHALE	0.2	108.0	
300.2	CARBONDALE		LIMESTONE	0.2	108.2	
300.0	CARBONDALE		DARK SHALE	0.2	108.4	
299.8	CARBONDALE	BRERETON	SHALY LIMESTONE	1.2	108.6	
298.7	CARBONDALE	BRERETON	LIMESTONE	3.4	109.7	
295.3	CARBONDALE	ANNA	DARK SHALE	0.6	113.1	
294.7	CARBONDALE	HERRIN	COAL	7.2	113.7	
287.5	CARBONDALE		UNDERCLAY	1.4	120.9	

MAPID: 16302519000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 1 QUARTERS/FOOTAGES: 660' S line, 660' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.833685 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.468847 DATE COLLECTED:

SURFACE ELEVATION (FT.): 408.0 LOGGED (FT.): 95.8 LOG TYPE: Drillers Log

SOURCE: NO COMPANY WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
348.2	CARBONDALE	BANKSTON FORK	LIMESTONE	8.5	59.8	
339.7	CARBONDALE	LAWSON	DARK GRAY SHALE	5.5	68.3	
334.2	CARBONDALE	LAWSON	GRAY SHALE	5.0	73.8	
329.2	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	6.0	78.8	
323.2	CARBONDALE	JAMESTOWN	BLACK SHALE	0.3	84.8	
322.8	CARBONDALE		CALCAREOUS SHALE	0.3	85.2	
322.5	CARBONDALE	BRERETON	LIMESTONE	3.3	85.5	
319.2	CARBONDALE	ANNA	BLACK SHALE	0.2	88.8	
319.0	CARBONDALE	HERRIN	COAL	6.8	89.0	

MAPID: 16324184000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 1 QUARTERS/FOOTAGES: 1' S line, 330' E line of NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.828018 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.474426 DATE COLLECTED: 7 / 20 / 1976

SURFACE ELEVATION (FT.): 405.0 LOGGED (FT.): 112.7 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15900C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
405.0	PLEISTOCENE		UNCONSOLIDATED	53.2	0.0	
351.8	MODESTO		GRAY SHALE	6.5	53.2	
345.3	MODESTO		SANDSTONE	3.1	59.7	
342.2	MODESTO	PIASA	LIMESTONE	8.3	62.8	
333.9			GRAY SHALE	7.9	71.1	
326.0	CARBONDALE		LIMESTONE	2.8	79.0	
323.2	CARBONDALE		GRAY SHALE	1.0	81.8	
322.2	CARBONDALE		LIMESTONE	1.4	82.8	
320.8	CARBONDALE		GRAY SHALE	11.7	84.2	
309.1	CARBONDALE	HERRIN	COAL	7.0	95.9	
302.1	CARBONDALE		UNDERCLAY	2.0	102.9	
300.1	CARBONDALE		BLACK LIMESTONE	7.8	104.9	

MAPID: 16324320000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 1 QUARTERS/FOOTAGES: 660' S line, 2640' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.826879 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.468867 DATE COLLECTED: 8 / 10 / 1976

SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 109.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15897C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. I-15

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
410.0	PLEISTOCENE		UNCONSOLIDATED	55.0	0.0
355.0	MODESTO		GRAY SHALE	11.5	55.0
343.5	MODESTO	PIASA	SHALY LIMESTONE	5.2	66.5
338.3			GRAY SHALE	10.6	71.7
327.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	82.3
325.2	CARBONDALE	BANKSTON FORK	DARK SHALE	1.1	84.8
324.1	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	85.9
322.5	CARBONDALE		GRAY SHALE	5.1	87.5
317.4	CARBONDALE		LIMESTONE	0.4	92.6
317.0	CARBONDALE		GRAY SHALE	0.9	93.0
316.1	CARBONDALE		LIMESTONE	0.5	93.9
315.6	CARBONDALE		DARK SHALE	1.1	94.4
314.5	CARBONDALE	BRERETON	LIMESTONE	2.8	95.5
311.7	CARBONDALE		GRAY SHALE	0.2	98.3
311.5	CARBONDALE	HERRIN	COAL	6.6	98.5
304.9	CARBONDALE		UNDERCLAY	3.5	105.1
301.4	CARBONDALE		SHALE	0.8	108.6

MAPID: 16327643000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 1 QUARTERS/FOOTAGES: 660' N line, 990' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.821155 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.479868 DATE COLLECTED:

SURFACE ELEVATION (FT.): 408.0 LOGGED (FT.): 113.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16602C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
408.0	PLEISTOCENE		UNCONSOLIDATED	71.7	0.0
336.3	CARBONDALE		LIMESTONE	1.5	71.7
334.8	CARBONDALE		SHALE	13.6	73.2
321.2	CARBONDALE		LIMESTONE	1.9	86.8
319.3	CARBONDALE		SHALE	4.4	88.7
314.9	CARBONDALE		LIMESTONE	0.4	93.1
314.5	CARBONDALE		SHALE	2.9	93.5
311.6	CARBONDALE	BRERETON	LIMESTONE	4.2	96.4
307.4	CARBONDALE		SHALE	0.4	100.6
307.0	CARBONDALE	HERRIN	COAL	6.4	101.0
300.6	CARBONDALE		UNDERCLAY	1.8	107.4
298.8	CARBONDALE		GRAY SHALE	1.0	109.2
297.8	CARBONDALE		LIMESTONE	3.6	110.2

MAPID: 16327704000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 1 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.835681

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.47073

DATE COLLECTED: 6 / 1 / 1988

SURFACE ELEVATION (FT.): 407.6 LOGGED (FT.): 129.1

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16858C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
407.6	PLEISTOCENE		CLAY	18.0	0.0	
389.6	PLEISTOCENE		SAND & GRAVEL	12.5	18.0	
377.1	PLEISTOCENE		SANDY CLAY	5.4	30.5	
371.7	PLEISTOCENE		CLAY	27.3	35.9	
344.4			LIMESTONE	9.1	63.2	
335.3			SHALE	2.2	72.3	BRECCIATED; SLICKENSIDES
333.1			SHALE	0.6	74.5	DARK
332.5			MUDSTONE	4.3	75.1	SLICKENSIDES
328.2			MUDSTONE	1.0	79.4	
327.2	CARBONDALE		LIMESTONE	1.3	80.4	
325.9	CARBONDALE		CALCAREOUS CLAYSTONE	0.4	81.7	
325.5	CARBONDALE		SHALE	0.9	82.1	
324.6	CARBONDALE		LIMESTONE	1.6	83.0	
323.0	CARBONDALE		SHALE	2.6	84.6	DARK
320.4	CARBONDALE		CALCAREOUS CLAYSTONE	0.2	87.2	
320.2	CARBONDALE		SHALE	1.1	87.4	DARK GRAY
319.1	CARBONDALE		ARGILLACEOUS LIMESTONE	0.6	88.5	
318.5	CARBONDALE		CALCAREOUS CLAYSTONE	1.5	89.1	
317.0	CARBONDALE		LIMESTONE	0.7	90.6	
316.3	CARBONDALE		CALCAREOUS CLAYSTONE	0.7	91.3	
315.6	CARBONDALE		LIMESTONE	0.6	92.0	
315.0	CARBONDALE		CALCAREOUS CLAYSTONE	0.9	92.6	
314.1	CARBONDALE	BRERETON	LIMESTONE	5.8	93.5	
308.3	CARBONDALE	ANNA	SHALE	0.4	99.3	DARK
307.9	CARBONDALE	HERRIN	COAL	6.6	99.7	
301.3	CARBONDALE		UNDERCLAY	3.1	106.3	
298.2	CARBONDALE		MUDSTONE	4.2	109.4	
294.0	CARBONDALE		CALCAREOUS CLAYSTONE	0.5	113.6	
293.5	CARBONDALE		SHALE	4.7	114.1	OCC. LS
288.8	CARBONDALE		LIMESTONE	1.2	118.8	
287.6	CARBONDALE		SHALE	5.1	120.0	
282.5	CARBONDALE		SANDSTONE	4.0	125.1	

MAPID: 16300045000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 2 QUARTERS/FOOTAGES: 1700' S line, 2575' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.84575 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.471669 DATE COLLECTED: 8 / 0 / 1923

SURFACE ELEVATION (FT.): 413.1 LOGGED (FT.): 94.6 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY COMPANY WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
413.1			SOIL	1.0	0.0	
412.1			SANDY CLAY	14.0	1.0	
398.1			SAND	7.0	15.0	
391.1			CLAY	11.0	22.0	
380.1			SHALE	12.0	33.0	
368.1			SHALE	3.0	45.0	BLUE
365.1			SHALE	9.0	48.0	BLU&R
356.1			LIMESTONE	4.0	57.0	
352.1			SHALE	4.0	61.0	BLUE
348.1			SHALE	7.0	65.0	
341.1			CALCAREOUS SHALE	2.0	72.0	
339.1			LIMESTONE	2.0	74.0	
337.1			SHALE	5.0	76.0	BLUE
332.1			LIMESTONE	1.5	81.0	
330.6			COAL	0.3	82.5	
330.3	CARBONDALE	ANNA	SHALE	4.3	82.8	BLACK
326.1	CARBONDALE		LIMESTONE	0.1	87.0	
326.0	CARBONDALE	HERRIN	COAL	6.7	87.1	
319.3	CARBONDALE		UNDERCLAY	0.8	93.8	

MAPID: 16300045000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 2 QUARTERS/FOOTAGES: 1700' S line, 2575' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.84575 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.471669 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 413.1 LOGGED (FT.): 96.0 LOG TYPE:

SOURCE: UNION COLL0031 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
325.1	CARBONDALE	HERRIN	COAL	6.7	88.0	

MAPID: 16302005000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 2 QUARTERS/FOOTAGES: 526' S line, 257' W line of NE SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.849208

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.472214

DATE COLLECTED: 10 / 11 / 1957

SURFACE ELEVATION (FT.): 414.3 LOGGED (FT.): 96.6

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2813

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
414.3	PLEISTOCENE		UNCONSOLIDATED	31.9	0.0
382.4	MODESTO		GRAY SHALE	4.1	31.9
378.3	MODESTO		SANDSTONE	1.7	36.0
376.6	MODESTO		SANDY SHALE	1.2	37.7
375.4	MODESTO		GRAY SHALE	20.9	38.9
354.5	MODESTO	PIASA	LIMESTONE	1.0	59.8
353.5			GRAY SHALE	11.9	60.8
341.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	72.8
338.6	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.5	75.7
338.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	76.3
335.7	CARBONDALE	BANKSTON FORK	DARK SHALE	8.1	78.6
327.5	CARBONDALE	CONANT	LIMESTONE	0.6	86.8
327.0	CARBONDALE		DARK SHALE	0.4	87.3
326.6	CARBONDALE	BRERETON	LIMESTONE	2.4	87.7
324.2	CARBONDALE		GRAY SHALE	0.1	90.1
324.1	CARBONDALE	HERRIN	COAL	5.7	90.2
318.4	CARBONDALE		UNDERCLAY	0.7	95.9

MAPID: 16302958000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 2 QUARTERS/FOOTAGES: 660' N line, 1' W line of SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.845429 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.472717 DATE COLLECTED: 4 / 9 / 1969

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 102.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8668C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. I-11

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
420.0	PLEISTOCENE		UNCONSOLIDATED	31.0	0.0
389.0	MODESTO		GRAY SHALE	24.7	31.0
364.3	MODESTO	PIASA	LIMESTONE	7.8	55.7
356.5			GRAY SHALE	7.5	63.5
349.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	71.0
341.0	CARBONDALE		GRAY SHALE	6.4	79.0
334.6	CARBONDALE	BRERETON	LIMESTONE	0.8	85.4
333.8	CARBONDALE	ANNA	BLACK SHALE	1.0	86.2
332.8	CARBONDALE	HERRIN	COAL	6.7	87.2
326.1	CARBONDALE		UNDERCLAY	3.6	93.9
322.5	CARBONDALE		SANDSTONE	1.6	97.5
320.9	CARBONDALE		GRAY SHALE	1.0	99.1
319.9	CARBONDALE		LIMESTONE	1.9	100.1

MAPID: 16303658000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 2 QUARTERS/FOOTAGES: 1650' S line, 2310' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.84668 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.471528 DATE COLLECTED:

SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 94.0 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 15523C WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
360.0	MODESTO	PIASA	LIMESTONE	7.9	50.0
352.1	MODESTO		GRAY SHALE	5.8	57.9
346.3	CARBONDALE	DANVILLE	DARK GRAY SHALE	1.9	63.7
344.4	CARBONDALE		GRAY SHALE	3.7	65.6
340.7	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.8	69.3
337.9	CARBONDALE	LAWSON	GRAY SHALE	3.7	72.1
334.2	CARBONDALE	CONANT	LIMESTONE	0.5	75.8
333.7	CARBONDALE		DARK GRAY SHALE	1.2	76.3
332.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	9.1	77.5
323.4	CARBONDALE	ANNA	BLACK SHALE	0.1	86.6
323.0	CARBONDALE	HERRIN	COAL	7.0	87.0

MAPID: 16326730000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 2 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.845233

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.474346

DATE COLLECTED: 5 / 12 / 1988

SURFACE ELEVATION (FT.): 414.1 LOGGED (FT.): 112.7

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16857C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
414.1	PLEISTOCENE		CLAY	22.1	0.0	
392.0	PLEISTOCENE		SANDY CLAY	4.2	22.1	
387.8			SANDY SHALE	9.4	26.3	
378.4			SHALE	1.0	35.7	DARK
377.4			GRAY SHALE	3.0	36.7	
374.4			SHALE	1.5	39.7	
372.9			GRAY SHALE	6.2	41.2	
366.7			LIMESTONE	0.1	47.4	
366.6			LIMESTONE	5.0	47.5	
361.6	CARBONDALE		CLAYSTONE	2.0	52.5	
359.6	CARBONDALE		SHALE	4.5	54.5	OLIVE GRAY
355.1	CARBONDALE		SHALE	1.5	59.0	
353.6	CARBONDALE		SHALE	5.0	60.5	OLIVE GRAY
348.6	CARBONDALE		LIMESTONE	2.0	65.5	
346.6	CARBONDALE		SHALE	1.2	67.5	
345.4	CARBONDALE		LIMESTONE	2.5	68.7	
342.9	CARBONDALE		SHALE	1.1	71.2	
341.8	CARBONDALE		BLACK SHALE	3.5	72.3	
338.3	CARBONDALE		LIMESTONE	0.1	75.8	
338.2	CARBONDALE		BLACK SHALE	3.6	75.9	
334.6	CARBONDALE	BRERETON	LIMESTONE	1.2	79.5	DARK, MASSIVE
333.4	CARBONDALE	ANNA	SHALE	0.4	80.7	
333.0	CARBONDALE	HERRIN	COAL	6.8	81.1	
326.2	CARBONDALE		UNDERCLAY	0.7	87.9	
325.5	CARBONDALE		UNDERCLAY	6.4	88.6	SLICKENSIDES
319.1	CARBONDALE		UNDERCLAY	2.1	95.0	WITH LS NODS.
317.0	CARBONDALE		LIMESTONE	0.3	97.1	
316.7	CARBONDALE		MUDSTONE	7.8	97.4	
308.9	CARBONDALE		SANDSTONE	2.1	105.2	
306.8	CARBONDALE		MUDSTONE	4.0	107.3	
302.8	CARBONDALE		SANDSTONE/SHALE	1.4	111.3	THIN LAMINATIONS OF EACH

MAPID: 16300046000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES: 330' S line, 4290' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.869811 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.467879 DATE COLLECTED: 7 / 9 / 1923

SURFACE ELEVATION (FT.): 468.0 LOGGED (FT.): 144.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY COMPANY WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
468.0			SOIL	4.0	0.0	BROWN
464.0			CLAY	8.0	4.0	YELLOW
456.0	MODESTO		SANDSTONE	26.0	12.0	
430.0	MODESTO		SHALE	40.0	38.0	
390.0	MODESTO		SHALE	3.3	78.0	
386.7	MODESTO		COAL	0.3	81.3	
386.4	MODESTO	PIASA	LIMESTONE	8.9	81.6	
377.5			SHALE	6.7	90.5	
370.8			DARK SHALE	4.8	97.2	
366.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	102.0	
360.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	108.0	
355.5	CARBONDALE		SHALE	10.5	112.5	BLUE
345.0	CARBONDALE	BRERETON	LIMESTONE	5.0	123.0	
340.0	CARBONDALE	ENERGY	SHALE	2.3	128.0	
337.7	CARBONDALE	ENERGY	DARK SHALE	6.2	130.3	
331.5	CARBONDALE	HERRIN	COAL	2.0	136.5	
329.5	CARBONDALE	HERRIN	BONE COAL	0.0	138.5	
329.5	CARBONDALE	HERRIN	COAL	1.3	138.5	
328.2	CARBONDALE	HERRIN	BONE COAL	0.0	139.8	
328.2	CARBONDALE	HERRIN	COAL	1.5	139.8	
326.7	CARBONDALE	HERRIN	BONE COAL	0.1	141.3	
326.7	CARBONDALE	HERRIN	COAL	1.7	141.3	
325.0	CARBONDALE		UNDERCLAY	1.0	143.0	

MAPID: 16300046000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES: 330' S line, 4290' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.869811 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.467879 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 468.0 LOGGED (FT.): 145.0 LOG TYPE:

SOURCE: UNION COLL0014 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
331.0	CARBONDALE	HERRIN	COAL	7.9	137.0	

MAPID: 16300305000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES: 2375' N line, 350' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.856077 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.475713 DATE COLLECTED: 8 / 0 / 1923

SURFACE ELEVATION (FT.): 458.0 LOGGED (FT.): 130.0 LOG TYPE: Drillers Log

SOURCE: UNIO COLLIERY CO ST LOUIS WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
458.0			CLAY	12.5	0.0	
445.5			SANDY SHALE	32.5	12.5	
413.0			SHALE	21.0	45.0	BLUE
391.8			DARK SHALE	3.7	66.2	
388.3			COAL	0.3	69.7	
388.0			UNDERCLAY	0.5	70.0	
387.5			LIMESTONE	1.5	70.5	
386.0			LIMESTONE	10.0	72.0	
376.0			DARK SHALE	4.0	82.0	
372.0			SHALE	21.0	86.0	GY&R
351.0	CARBONDALE	BRERETON	SHALY LIMESTONE	3.0	107.0	
348.0	CARBONDALE	BRERETON	SHALY LIMESTONE	4.0	110.0	
344.0	CARBONDALE	BRERETON	LIMESTONE	1.5	114.0	
342.5	CARBONDALE	BRERETON	LIMESTONE	1.0	115.5	
341.5	CARBONDALE	ANNA	SHALE	5.3	116.5	BLACK
336.2	CARBONDALE	HERRIN	COAL	5.5	121.8	
330.7	CARBONDALE	HERRIN	SHALE	0.1	127.3	BLUE
330.6	CARBONDALE	HERRIN	COAL	1.2	127.4	
329.4	CARBONDALE		UNDERCLAY	1.4	128.6	

MAPID: 16300305000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES: 2375' N line, 350' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.856077 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.475713 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 453.7 LOGGED (FT.): 130.0 LOG TYPE:

SOURCE: UNION COLL0037 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
331.7	CARBONDALE	HERRIN	COAL	6.8	122.0	

MAPID: 16302006000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES: 35' N line, 165' W line of NE SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.867981 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.474583 DATE COLLECTED: 10 / 12 / 1957

SURFACE ELEVATION (FT.): 486.8 LOGGED (FT.): 154.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2814 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
486.8	PLEISTOCENE		UNCONSOLIDATED	19.6	0.0
467.2	MODESTO		SANDSTONE	36.1	19.6
431.1	MODESTO		GRAY SHALE	39.4	55.7
391.7	MODESTO		COAL	0.7	95.1
391.0	MODESTO		LIGHT SHALE	23.1	95.8
368.0	MODESTO	PIASA	LIMESTONE	4.3	118.8
363.6			GRAY SHALE	7.6	123.2
356.0			LIMESTONE	1.2	130.8
354.8			GRAY SHALE	0.6	132.0
354.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	132.6
351.9	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.9	134.9
351.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	135.8
349.5	CARBONDALE		GRAY SHALE	9.3	137.3
340.2	CARBONDALE	HERRIN	COAL	7.2	146.6
333.0	CARBONDALE		UNDERCLAY	0.7	153.8

MAPID: 16303010000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES: 1650' S line, 1320' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.868485 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.471522 DATE COLLECTED:

SURFACE ELEVATION (FT.): 470.0 LOGGED (FT.): 134.4 LOG TYPE: Survey Core Study

SOURCE: NO COMPANY WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
375.0	MODESTO	PIASA	LIMESTONE	10.1	95.0
364.9	CARBONDALE		DARK GRAY SHALE	6.6	105.1
358.3	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	8.0	111.7
350.3	CARBONDALE	LAWSON	GRAY SHALE	4.8	119.7
345.5	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.9	124.5
344.6	CARBONDALE	JAMESTOWN	BONE COAL	0.5	125.4
344.1	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.4	125.9
343.7	CARBONDALE	ANNA	BLACK SHALE	1.7	126.3
342.0	CARBONDALE	HERRIN	COAL	6.4	128.0

MAPID: 16303065000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES: 330' N line, 1' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.854922 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.481346 DATE COLLECTED: 6 / 19 / 1969

SURFACE ELEVATION (FT.): 446.8 LOGGED (FT.): 102.9 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8917C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. Q-2

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
446.8	PLEISTOCENE		UNCONSOLIDATED	44.3	0.0
402.5	MODESTO		SANDSTONE	16.9	44.3
385.6	MODESTO	PIASA	LIMESTONE	7.5	61.2
378.1			GRAY SHALE	10.3	68.7
367.8	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	79.0
364.8	CARBONDALE	BANKSTON FORK	SHALE	1.0	82.0
363.8	CARBONDALE		LIMESTONE	2.6	83.0
361.2	CARBONDALE		DARK SHALE	4.7	85.6
356.5	CARBONDALE		LIMESTONE	0.4	90.3
356.2	CARBONDALE		DARK SHALE	0.3	90.6
355.8	CARBONDALE	BRERETON	LIMESTONE	2.1	91.0
353.7	CARBONDALE	ANNA	BLACK SHALE	1.0	93.1
352.7	CARBONDALE	HERRIN	COAL	6.0	94.1
346.7	CARBONDALE		UNDERCLAY	2.8	100.1

MAPID: 16303632000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES: 2310' N line, 1' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.854852 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.47588 DATE COLLECTED: 1 / 12 / 1973

SURFACE ELEVATION (FT.): 460.0 LOGGED (FT.): 113.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15520C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. Q-8

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
460.0	PLEISTOCENE		UNCONSOLIDATED	31.0	0.0
429.0	MODESTO		GRAY SHALE	5.2	31.0
423.8	MODESTO		DARK SHALE	8.3	36.2
415.5	MODESTO		GRAY SHALE	8.6	44.5
406.9	MODESTO		SANDSTONE	2.3	53.1
404.6	MODESTO		GRAY SHALE	5.4	55.4
399.2	MODESTO		DARK SHALE	1.1	60.8
398.1	MODESTO		GRAY SHALE	3.5	61.9
394.6	MODESTO		LIMESTONE	0.7	65.4
393.9	MODESTO		GRAY SHALE	2.0	66.1
391.9	MODESTO	PIASA	LIMESTONE	10.8	68.1
381.1			SANDSTONE	2.2	78.9
378.9			DARK SHALE	0.9	81.1
378.0			SANDY SHALE	5.9	82.0
372.1	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	87.9
370.6	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.7	89.4
369.9	CARBONDALE	BANKSTON FORK	LIMESTONE	1.4	90.1
368.5	CARBONDALE		GRAY SHALE	4.0	91.5
364.5	CARBONDALE	CONANT	LIMESTONE	1.0	95.5
363.5	CARBONDALE		DARK SHALE	1.4	96.5
362.1	CARBONDALE	BRERETON	LIMESTONE	6.3	97.9
355.8	CARBONDALE		DARK SHALE	0.3	104.2
355.6	CARBONDALE	HERRIN	COAL	6.6	104.4
349.0	CARBONDALE		UNDERCLAY	2.0	111.0

MAPID: 16303633000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES: 660' N line, 990' E line of SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.867445 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.472856 DATE COLLECTED: 11 / 23 / 1972

SURFACE ELEVATION (FT.): 475.0 LOGGED (FT.): 137.2 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15513C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. F-11

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
475.0	PLEISTOCENE		UNCONSOLIDATED	18.0	0.0	
457.0	MODESTO		SANDSTONE	14.0	18.0	
443.0	MODESTO		SANDY SHALE	27.1	32.0	
415.9	MODESTO		GRAY SHALE	20.4	59.1	
395.5	MODESTO		SANDSTONE	4.8	79.5	
390.7	MODESTO		GRAY SHALE	11.1	84.3	
379.6	MODESTO	PIASA	LIMESTONE	5.5	95.4	
374.1			CALCAREOUS SHALE	5.9	100.9	
368.2			GRAY SHALE	7.3	106.8	
360.9	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	114.1	
358.8	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	1.3	116.2	
357.5	CARBONDALE	BANKSTON FORK	LIMESTONE	0.8	117.5	
356.7	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.8	118.3	
355.9	CARBONDALE	BANKSTON FORK	LIMESTONE	2.6	119.1	
353.3	CARBONDALE		GRAY SHALE	4.2	121.7	
349.1	CARBONDALE		DARK SHALE	1.1	125.9	JAMESTOWN HORIZON
348.0	CARBONDALE	BRERETON	LIMESTONE	0.7	127.0	
347.3	CARBONDALE	ANNA	BLACK SHALE	2.7	127.7	
344.6	CARBONDALE	HERRIN	COAL	6.8	130.4	

MAPID: 16323831000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES: 2640' N line, 1650' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.867348 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.475101 DATE COLLECTED: 10 / 10 / 1973

SURFACE ELEVATION (FT.): 485.0 LOGGED (FT.): 154.9 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15517C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. F-9

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
485.0	PLEISTOCENE		UNCONSOLIDATED	20.0	0.0
465.0	MODESTO		SANDSTONE	38.2	20.0
426.8	MODESTO		GRAY SHALE	40.0	58.2
386.8	MODESTO		SANDSTONE	4.4	98.2
382.4	MODESTO		SANDY SHALE	19.6	102.6
362.8	MODESTO	PIASA	LIMESTONE	2.0	122.2
360.8			GRAY SHALE	9.1	124.2
351.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	133.3
349.6	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.0	135.4
348.6	CARBONDALE	BANKSTON FORK	LIMESTONE	1.4	136.4
347.2	CARBONDALE		GRAY SHALE	3.4	137.8
343.8	CARBONDALE		LIMESTONE	0.4	141.2
343.4	CARBONDALE		DARK SHALE	5.5	141.6
337.9	CARBONDALE	HERRIN	COAL	7.2	147.1
330.7	CARBONDALE		UNDERCLAY	0.6	154.3

MAPID: 16327644000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.854693

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.472065

DATE COLLECTED:

SURFACE ELEVATION (FT.): 461.3 LOGGED (FT.): 137.3

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12883C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
461.3	PLEISTOCENE		UNCONSOLIDATED	46.0	0.0
415.3			GRAY SHALE	31.0	46.0
384.3			LIMESTONE	0.5	77.0
383.8			GRAY SHALE	24.9	77.5
358.9			LIMESTONE	2.9	102.4
356.0			GRAY SHALE	9.7	105.3
346.3	CARBONDALE		LIMESTONE	3.5	115.0
342.8	CARBONDALE		GRAY SHALE	1.1	118.5
341.7	CARBONDALE		LIMESTONE	1.8	119.6
339.9	CARBONDALE		GRAY SHALE	1.4	121.4
338.5	CARBONDALE		LIMESTONE	2.0	122.8
336.5	CARBONDALE		DARK SHALE	3.9	124.8
332.6	CARBONDALE		LIMESTONE	0.4	128.7
332.2	CARBONDALE		DARK SHALE	0.8	129.1
331.4	CARBONDALE	HERRIN	COAL	7.2	129.9
324.2	CARBONDALE		UNDERCLAY	0.2	137.1

MAPID: 16327706000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.854826

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.480496

DATE COLLECTED: 6 / 19 / 1968

SURFACE ELEVATION (FT.): 446.8 LOGGED (FT.): 102.9

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8917C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
446.8	PLEISTOCENE		UNCONSOLIDATED	44.3	0.0	
402.5	CARBONDALE		SANDSTONE	16.9	44.3	
385.6	CARBONDALE		LIMESTONE	7.5	61.2	
378.1	CARBONDALE		GRAY SHALE	10.3	68.7	
367.8	CARBONDALE		LIMESTONE	3.0	79.0	
364.8	CARBONDALE		SHALE	1.0	82.0	
363.8	CARBONDALE		LIMESTONE	2.6	83.0	
361.2	CARBONDALE		SHALE	4.7	85.6	DARK
356.5	CARBONDALE		LIMESTONE	0.4	90.3	
356.2	CARBONDALE		SHALE	0.3	90.6	DARK
355.8	CARBONDALE	BRERETON	LIMESTONE	2.1	91.0	DARK
353.7	CARBONDALE	ANNA	BLACK SHALE	1.0	93.1	
352.7	CARBONDALE	HERRIN	COAL	6.0	94.1	
346.7	CARBONDALE		UNDERCLAY	2.8	100.1	

MAPID: 16327707000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.854693

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.472067

DATE COLLECTED:

SURFACE ELEVATION (FT.): 461.3 LOGGED (FT.): 137.3

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12883C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
461.3	PLEISTOCENE		UNCONSOLIDATED	46.0	0.0	
415.3	CARBONDALE		GRAY SHALE	31.0	46.0	
384.3	CARBONDALE		LIMESTONE	0.5	77.0	
383.8	CARBONDALE		GRAY SHALE	24.9	77.5	
358.9	CARBONDALE		LIMESTONE	2.9	102.4	
356.0	CARBONDALE		GRAY SHALE	9.7	105.3	
346.3	CARBONDALE		LIMESTONE	3.5	115.0	
342.8	CARBONDALE		GRAY SHALE	1.1	118.5	
341.7	CARBONDALE		LIMESTONE	1.8	119.6	
339.9	CARBONDALE		GRAY SHALE	1.4	121.4	
338.5	CARBONDALE	BRERETON	LIMESTONE	2.0	122.8	
336.5	CARBONDALE	ENERGY	SHALE	3.9	124.8	DARK, LS BAND
332.6	CARBONDALE	ENERGY	LIMESTONE	0.4	128.7	
332.2	CARBONDALE	ENERGY	SHALE	0.8	129.1	DARK, LS BAND
331.4	CARBONDALE	HERRIN	COAL	7.2	129.9	
324.2	CARBONDALE		UNDERCLAY	0.2	137.1	

MAPID: 16327708000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.861491

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.470429

DATE COLLECTED: 12 / 9 / 1972

SURFACE ELEVATION (FT.): 443.8 LOGGED (FT.): 114.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15515C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
443.8	PLEISTOCENE		CLAY	10.0	0.0	
433.8			SANDSTONE	6.0	10.0	
427.8			SHALE	57.2	16.0	
370.6			LIMESTONE	3.5	73.2	
367.1			GRAY SHALE	17.1	76.7	
350.0	CARBONDALE		LIMESTONE	1.8	93.8	
348.2	CARBONDALE		SHALE	1.2	95.6	
347.0	CARBONDALE		LIMESTONE	1.4	96.8	
345.6	CARBONDALE		SHALE	0.5	98.2	
345.1	CARBONDALE		GRAY SHALE	1.8	98.7	
343.3	CARBONDALE		LIMESTONE	0.4	100.5	
342.9	CARBONDALE		SHALE	1.4	100.9	DARK
341.5	CARBONDALE		SHALE	3.0	102.3	
338.5	CARBONDALE	BRERETON	LIMESTONE	0.4	105.3	
338.1	CARBONDALE	ANNA	BLACK SHALE	0.9	105.7	
337.2	CARBONDALE	HERRIN	COAL	6.8	106.6	
330.4	CARBONDALE		UNDERCLAY	0.6	113.4	

MAPID: 16327709000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH

LONGITUDE: -89.86401

GEOLOGIST: MCBETH

CONFIDENTIAL: N

LATITUDE: 38.469938

DATE COLLECTED: 12 / 13 / 1972

SURFACE ELEVATION (FT.): 461.3

LOGGED (FT.): 137.6

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15516C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
461.3	PLEISTOCENE		CLAY	16.0	0.0	
445.3			SANDSTONE	24.7	16.0	
420.6			GRAY SHALE	36.1	40.7	
384.5			LIMESTONE	0.8	76.8	
383.7			GRAY SHALE	25.2	77.6	
358.5			LIMESTONE	6.6	102.8	
351.9			SHALE	1.9	109.4	
350.0			GRAY SHALE	6.5	111.3	
343.5			LIMESTONE	1.6	117.8	
341.9	CARBONDALE		SHALE	1.2	119.4	
340.7	CARBONDALE		LIMESTONE	1.0	120.6	
339.7	CARBONDALE		GRAY SHALE	1.2	121.6	
338.5	CARBONDALE		LIMESTONE	2.4	122.8	
336.1	CARBONDALE		GRAY SHALE	2.1	125.2	
334.0	CARBONDALE		SHALE	1.1	127.3	DARK
332.9	CARBONDALE		GRAY SHALE	1.4	128.4	
331.5	CARBONDALE		SHALE	0.3	129.8	DARK
331.2	CARBONDALE	ANNA	BLACK SHALE	1.4	130.1	
329.8	CARBONDALE	HERRIN	COAL	5.3	131.5	
324.5	CARBONDALE		UNDERCLAY	0.8	136.8	

MAPID: 16327710000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.867708

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.474073

DATE COLLECTED: 12 / 20 / 1972

SURFACE ELEVATION (FT.): 487.6 LOGGED (FT.): 154.9

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15517C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
487.6	PLEISTOCENE		CLAY	20.0	0.0	
467.6			SANDSTONE	38.2	20.0	
429.4			GRAY SHALE	40.0	58.2	
389.4			SANDSTONE	4.4	98.2	
385.0			SANDY SHALE	19.6	102.6	
365.4			LIMESTONE	2.0	122.2	
363.4			GRAY SHALE	9.1	124.2	
354.3			LIMESTONE	2.1	133.3	1
352.2			GRAY SHALE	1.0	135.4	
351.2	CARBONDALE		LIMESTONE	1.4	136.4	
349.8	CARBONDALE		GRAY SHALE	3.4	137.8	
346.4	CARBONDALE	BRERETON	LIMESTONE	0.4	141.2	
346.0	CARBONDALE	ANNA	SHALE	5.5	141.6	DARK
340.5	CARBONDALE	HERRIN	COAL	7.2	147.1	
333.3	CARBONDALE		UNDERCLAY	0.6	154.3	

MAPID: 16327711000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES: 2400' N line, 88' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.872837 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.47582 DATE COLLECTED: 6 / 20 / 1985

SURFACE ELEVATION (FT.): 497.5 LOGGED (FT.): 180.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16800C WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
497.5	PLEISTOCENE		CLAY	33.0	0.0	WITH SANDY BAND
464.5	PLEISTOCENE		SAND	17.0	33.0	
447.5	PLEISTOCENE		CLAY	6.5	50.0	
441.0	PLEISTOCENE		SAND	4.0	56.5	
437.0	PLEISTOCENE		CLAY	23.5	60.5	
413.5			SHALE	35.0	84.0	
378.5			LIMESTONE	3.3	119.0	
375.2			CLAYSTONE & SILTSTONE	8.3	122.3	
366.9			SANDSTONE	4.4	130.6	
362.5	CARBONDALE		SILTY SHALE	4.5	135.0	W/ LAMS. OF SILTST & LS
358.0	CARBONDALE		LIMESTONE	1.6	139.5	
356.4	CARBONDALE		SHALE	3.9	141.1	DARK GRAY
352.5	CARBONDALE		SHALE	1.1	145.0	CALCAREOUS
351.4	CARBONDALE	BRERETON	LIMESTONE	2.2	146.1	FRACTURED; VERTICAL JOINTED
349.2	CARBONDALE	ANNA	BLACK SHALE	2.5	148.3	
346.7	CARBONDALE	HERRIN	COAL	5.0	150.8	
341.7	CARBONDALE	HERRIN	SHALE	0.1	155.8	PYRITE
341.6	CARBONDALE	HERRIN	COAL	1.4	155.9	
340.2	CARBONDALE		UNDERCLAY	10.0	157.3	W/ LS BAND
330.2	CARBONDALE		UNDERCLAY	3.2	167.3	
327.0	CARBONDALE		LIMESTONE	1.5	170.5	
325.5	CARBONDALE		MUDSTONE	3.0	172.0	SLICKENSIDES
322.5	CARBONDALE		MUDSTONE	5.0	175.0	

MAPID: 16327712000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.868125

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.48012

DATE COLLECTED: 7 / 4 / 1985

SURFACE ELEVATION (FT.): 512.2 LOGGED (FT.): 320.8

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16805C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
512.2	PLEISTOCENE		CLAY	14.7	0.0	
497.5	PLEISTOCENE		SANDY CLAY	8.0	14.7	
489.5	PLEISTOCENE		CLAY	6.1	22.7	WITH SAND BAND
483.4	PLEISTOCENE		GRAVEL	22.4	28.8	
461.0	PLEISTOCENE		CLAY	21.8	51.2	
439.2			SHALE	22.0	73.0	
417.2			CLAYSTONE & SILTSTONE	13.0	95.0	
404.2			LIMESTONE	8.3	108.0	
395.9			CLAYSTONE & SILTSTONE	7.9	116.3	
388.0	CARBONDALE		MUDSTONE	2.4	124.2	
385.6	CARBONDALE		LIMESTONE	4.1	126.6	FIRM
381.5	CARBONDALE		SHALE	0.9	130.7	
380.6	CARBONDALE		LIMESTONE	2.9	131.6	FRACTURED, VERTICAL JOINTS
377.7	CARBONDALE		SHALE	4.1	134.5	
373.6	CARBONDALE		LIMESTONE	0.2	138.6	FRACTURED
373.4	CARBONDALE	ANNA	CARBONACEOUS SHALE	0.5	138.8	
372.9	CARBONDALE	ANNA	SHALE	1.9	139.3	
371.0	CARBONDALE	HERRIN	COAL	1.8	141.2	
369.2	CARBONDALE		MUDSTONE	3.5	143.0	SLICKENSIDES
365.7	CARBONDALE		MUDSTONE	13.9	146.5	WITH LS BANDS
351.8	CARBONDALE		SANDSTONE & MUDSTONE	160.4	160.4	

MAPID: 16327713000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.864071

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.479981

DATE COLLECTED: 7 / 10 / 1985

SURFACE ELEVATION (FT.): 468.3 LOGGED (FT.): 129.9

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16816C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
468.3	PLEISTOCENE		CLAY	30.0	0.0	
438.3			SHALE	21.4	30.0	
416.9			CLAYSTONE & SILTSTONE	12.8	51.4	
404.1			LIMESTONE	6.0	64.2	
398.1			CLAYSTONE & SILTSTONE	14.5	70.2	
383.6			LIMESTONE	4.9	84.7	
378.7			SHALE	0.9	89.6	WITH LS BAND
377.8			SHALE	2.0	90.5	
375.8			SHALE	7.5	92.5	DARK
368.3	CARBONDALE	BRERETON	LIMESTONE	0.7	100.0	
367.6	CARBONDALE	ANNA	SHALE	0.5	100.7	
367.2	CARBONDALE	HERRIN	COAL	7.0	101.1	
360.1	CARBONDALE		UNDERCLAY	4.8	108.2	
355.4	CARBONDALE		LIMESTONE	5.8	112.9	
349.6	CARBONDALE		CLAYSTONE	2.1	118.7	
347.5	CARBONDALE		SHALE	1.0	120.8	
346.5	CARBONDALE		LIMESTONE	1.3	121.8	
345.2	CARBONDALE		SHALE	6.8	123.1	

MAPID: 16390025000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 3 QUARTERS/FOOTAGES: 350' N line, 25' W line of SE NW SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.870749

GEOLOGIST: NORTH

CONFIDENTIAL: N LATITUDE: 38.472669

DATE COLLECTED: 6 / 2 / 1969

SURFACE ELEVATION (FT.): 469.0 LOGGED (FT.): 137.5

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 9812C

WELL TYPE: Coal Test

COMMENT: PERMIT #138 RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
469.0	PLEISTOCENE		UNCONSOLIDATED	34.0	0.0	
435.1	MODESTO		GRAY SHALE	41.1	33.9	
393.9	CARBONDALE	DANVILLE	COAL	1.1	75.1	
392.9	CARBONDALE		GRAY SHALE	18.5	76.1	
374.4	CARBONDALE	BANKSTON FORK	LIMESTONE	10.1	94.6	
364.3	CARBONDALE		SHALE	6.6	104.7	
357.7	CARBONDALE		LIMESTONE	0.3	111.3	
357.4	CARBONDALE		GRAY SHALE	1.5	111.6	
355.9	CARBONDALE		LIMESTONE	0.9	113.1	
355.0	CARBONDALE		GRAY SHALE	0.6	114.0	
354.4	CARBONDALE		LIMESTONE	1.5	114.6	
352.9	CARBONDALE		GRAY SHALE	1.0	116.1	
351.9	CARBONDALE		LIMESTONE	1.7	117.1	
350.2	CARBONDALE		GRAY SHALE	0.3	118.8	
349.9	CARBONDALE		LIMESTONE	0.2	119.1	
349.7	CARBONDALE		GRAY SHALE	4.8	119.3	
344.9	CARBONDALE	BRERETON	LIMESTONE	0.4	124.1	
344.5	CARBONDALE	BRERETON	SHALE	1.0	124.5	FOSSILS
343.6	CARBONDALE	BRERETON	LIMESTONE	0.4	125.4	
343.2	CARBONDALE	ANNA	BLACK SHALE	2.2	125.8	
340.9	CARBONDALE	HERRIN	COAL	6.4	128.1	
334.5	CARBONDALE		UNDERCLAY	3.0	134.5	

MAPID: 16300047000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 4 QUARTERS/FOOTAGES: 730' S line, 1650' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.878899 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.469178 DATE COLLECTED: 7 / 26 / 1923

SURFACE ELEVATION (FT.): 478.0 LOGGED (FT.): 136.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
478.0			SOIL	3.0	0.0	BROWN
475.0			SAND	5.0	3.0	
470.0			SAND & GRAVEL	4.0	8.0	
466.0			GRAVEL	4.5	12.0	
461.5	MODESTO		SANDY SHALE	27.5	16.5	
434.0	MODESTO		SHALE	20.0	44.0	
414.0	MODESTO		SHALE	5.0	64.0	
409.0	MODESTO		DARK SHALE	4.7	69.0	
404.3	MODESTO		COAL	0.3	73.7	
404.0	MODESTO	PIASA	LIMESTONE	7.0	74.0	
397.0	MODESTO	PIASA	LIMESTONE	2.3	81.0	
394.7			SHALE	3.7	83.3	
391.0			SHALE	0.8	87.0	BLACK
390.2			SHALE	6.3	87.8	
384.0	CARBONDALE		LIMESTONE	6.5	94.0	
377.5	CARBONDALE		SHALE	11.8	100.5	
365.7	CARBONDALE		LIMESTONE	5.2	112.3	
360.5	CARBONDALE		SHALE	3.0	117.5	
357.5	CARBONDALE	BRERETON	LIMESTONE	3.1	120.5	
354.4	CARBONDALE	BRERETON	LIMESTONE	2.0	123.6	DARK
352.4	CARBONDALE	BRERETON	LIMESTONE	3.0	125.6	
349.4	CARBONDALE	ANNA	SHALE	0.4	128.6	BLACK
349.0	CARBONDALE	HERRIN	COAL	2.0	129.0	
347.0	CARBONDALE	HERRIN	BONE COAL	0.0	131.0	
347.0	CARBONDALE	HERRIN	COAL	2.4	131.0	
344.6	CARBONDALE	HERRIN	BONE COAL	0.0	133.4	
344.6	CARBONDALE	HERRIN	COAL	0.4	133.4	
344.2	CARBONDALE	HERRIN	BONE COAL	0.0	133.8	
344.2	CARBONDALE	HERRIN	COAL	1.4	133.8	
342.7	CARBONDALE		UNDERCLAY	0.8	135.3	

MAPID: 16300047000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 4 QUARTERS/FOOTAGES: 730' S line, 1650' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.878899 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.469178 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 478.0 LOGGED (FT.): 136.0 LOG TYPE:

SOURCE: UNION COLL0022 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
349.0	CARBONDALE	HERRIN	COAL	6.3	129.0

MAPID: 16302508000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 4 QUARTERS/FOOTAGES: 1' N line, 1' E line of SW SE

QUADRANGLE: FREEBURG LONGITUDE: -89.877721 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.470965 DATE COLLECTED:

SURFACE ELEVATION (FT.): 478.0 LOGGED (FT.): 136.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 22 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
478.0	PLEISTOCENE		SOIL	3.0	0.0
475.0	PLEISTOCENE		SAND	5.0	3.0
470.0	PLEISTOCENE		SAND & GRAVEL	4.0	8.0
466.0	PLEISTOCENE		CLAY	4.5	12.0
461.5	MODESTO		SANDY SHALE	27.5	16.5
434.0	MODESTO		GRAY SHALE	25.0	44.0
409.0	MODESTO		DARK SHALE	4.7	69.0
404.3	MODESTO		COAL	0.3	73.7
404.0	MODESTO		CALCAREOUS SHALE	7.0	74.0
397.0	MODESTO		SHALY LIMESTONE	2.3	81.0
394.7	MODESTO		SHALE	3.7	83.3
391.0	MODESTO		BLACK SHALE	0.8	87.0
390.2	MODESTO		SHALE	6.3	87.8
384.0	MODESTO	PIASA	LIMESTONE	6.5	94.0
377.5			SHALE	11.8	100.5
365.7	CARBONDALE	BANKSTON FORK	LIMESTONE	5.2	112.3
360.5	CARBONDALE	BANKSTON FORK	SHALE	3.0	117.5
357.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.1	120.5
354.4	CARBONDALE		SHALY LIMESTONE	2.0	123.6
352.4	CARBONDALE	BRERETON	LIMESTONE	3.0	125.6
349.4	CARBONDALE	ANNA	BLACK SHALE	0.4	128.6
349.0	CARBONDALE	HERRIN	COAL	6.3	129.0
342.7	CARBONDALE		UNDERCLAY	0.8	135.3

MAPID: 16302959000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 4 QUARTERS/FOOTAGES: 660' N line, 1320' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.877811 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.480672 DATE COLLECTED: 4 / 2 / 1969

SURFACE ELEVATION (FT.): 570.0 LOGGED (FT.): 199.6 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8555C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. M-3

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
570.0	PLEISTOCENE		UNCONSOLIDATED	70.3	0.0
499.7	MODESTO		SANDY SHALE	14.7	70.3
485.0	MODESTO		GRAY SHALE	70.9	85.0
414.1	MODESTO	PIASA	LIMESTONE	7.1	155.9
407.0			GRAY SHALE	9.5	163.0
397.5			LIMESTONE	1.0	172.5
396.5			GRAY SHALE	0.8	173.5
395.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	174.3
393.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.5	176.6
392.9	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	177.1
390.8	CARBONDALE	LAWSON	GRAY SHALE	5.4	179.2
385.4	CARBONDALE	BRERETON	LIMESTONE	2.8	184.6
382.6	CARBONDALE	ANNA	BLACK SHALE	1.6	187.4
381.0	CARBONDALE	HERRIN	COAL	6.6	189.0
374.4	CARBONDALE		UNDERCLAY	4.0	195.6

MAPID: 16303068000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 4 QUARTERS/FOOTAGES: 2640' N line, 0' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.891076 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.475335 DATE COLLECTED:

SURFACE ELEVATION (FT.): 575.0 LOGGED (FT.): 198.4 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8920C WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
417.0	MODESTO	PIASA	LIMESTONE	4.9	158.0
412.1	CARBONDALE		GRAY SHALE	11.1	162.9
401.0	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	9.6	174.0
391.4	CARBONDALE	LAWSON	GRAY SHALE	1.0	183.6
390.4	CARBONDALE	CONANT	LIMESTONE	0.6	184.6
389.8	CARBONDALE		CALCAREOUS SHALE	0.5	185.2
389.3	CARBONDALE	BRERETON	LIMESTONE	2.4	185.7
386.9	CARBONDALE	ANNA	DARK GRAY SHALE	0.2	188.1
383.0	CARBONDALE	HERRIN	COAL	6.4	192.0

MAPID: 16324821000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 4 QUARTERS/FOOTAGES: 2370' S line, 1200' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.886829 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.473961 DATE COLLECTED: 5 / 24 / 1977

SURFACE ELEVATION (FT.): LOGGED (FT.): 505.0 LOG TYPE: Drillers Log

SOURCE: ST CHARLES DRILLING CO WELL TYPE: Oil and Gas Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			CLAY	65.0	0.0
-			SHALE	60.0	65.0
-	CARBONDALE	BRERETON	LIMESTONE	10.0	125.0
-	CARBONDALE	ENERGY	SHALE	25.0	135.0
-	CARBONDALE	HERRIN	COAL	5.0	160.0
-	CARBONDALE		SHALE	50.0	165.0
-	CARBONDALE	HOUCHIN CREEK	COAL	5.0	215.0
-	CARBONDALE		SHALE	25.0	220.0
-	MISSISSIPPIAN		LIMESTONE	45.0	245.0
-	MISSISSIPPIAN		SANDY SHALE	45.0	290.0
-	MISSISSIPPIAN		LIMESTONE	155.0	335.0
-	MISSISSIPPIAN		SANDSTONE	15.0	490.0

MAPID: 16325613000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 4 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.876944

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.473532

DATE COLLECTED: 5 / 18 / 1984

SURFACE ELEVATION (FT.): 522.7

LOGGED (FT.): 194.5

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16785C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
522.7	PLEISTOCENE		CLAY	29.7	0.0	
493.0	PLEISTOCENE		SAND & GRAVEL	0.3	29.7	
492.7	PLEISTOCENE		CLAY	3.7	30.0	
489.0	PLEISTOCENE		SANDY CLAY	6.0	33.7	WITH GRAVEL
483.0	PLEISTOCENE		CLAY	12.4	39.7	
470.6	PLEISTOCENE		SANDY CLAY	4.7	52.1	
465.9			SANDSTONE	17.0	56.8	
448.9			GRAY SHALE	25.8	73.8	
423.1			SHALE	11.5	99.6	DARK
411.6			SANDY SHALE	3.4	111.1	
408.2			COAL	0.6	114.5	
407.6			UNDERCLAY	0.7	115.1	
406.9			SHALE	6.3	115.8	
400.6			SHALE	3.7	122.1	DARK
396.9			SHALE	7.3	125.8	
389.6			LIMESTONE	5.6	133.1	
384.0			SHALE	0.9	138.7	
383.1			SANDY SHALE	6.4	139.6	
376.7			SHALE	4.3	146.0	
372.4			LIMESTONE	3.5	150.3	
368.9			SHALE	5.8	153.8	W/LS BAND
363.1	CARBONDALE	BRERETON	LIMESTONE	8.4	159.6	
354.7	CARBONDALE	HERRIN	COAL	6.5	168.0	
348.2	CARBONDALE		UNDERCLAY	0.4	174.5	
347.8	CARBONDALE		SHALE	7.5	174.9	WITH LS BAND
340.3	CARBONDALE		LIMESTONE	1.8	182.4	
338.5	CARBONDALE		SHALE	10.3	184.2	WITH LS BAND

MAPID: 16325632000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 4 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.869374

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.475036

DATE COLLECTED: 12 / 16 / 1983

SURFACE ELEVATION (FT.): 589.3 LOGGED (FT.): 239.1

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16773C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
589.3	PLEISTOCENE		UNCONSOLIDATED	31.0	0.0	
558.3	PLEISTOCENE		SAND & GRAVEL	18.0	31.0	
540.3			GRAY SHALE	34.9	49.0	
505.4			SANDSTONE	18.7	83.9	
486.7			SHALE	2.3	102.6	
484.4			GRAY SHALE	7.1	104.9	
477.3			SANDY SHALE	76.1	112.0	
401.2			LIMESTONE	5.2	188.1	
396.0			SHALE	8.9	193.3	RED
387.1	CARBONDALE		LIMESTONE	5.3	202.2	
381.8	CARBONDALE		GRAY SHALE	5.7	207.5	
376.1	CARBONDALE		LIMESTONE	2.5	213.2	
373.6	CARBONDALE		SHALE	0.7	215.7	
372.9	CARBONDALE	BRERETON	LIMESTONE	5.4	216.4	
367.5	CARBONDALE	ANNA	SHALE	0.2	221.8	DARK
367.3	CARBONDALE	HERRIN	COAL	4.7	222.0	
362.6	CARBONDALE		GRAY SHALE	5.5	226.7	
357.1	CARBONDALE		LIMESTONE	2.1	232.2	
355.0	CARBONDALE		GRAY SHALE	0.8	234.3	
354.3	CARBONDALE		LIMESTONE	1.7	235.0	
352.6	CARBONDALE		GRAY SHALE	0.8	236.7	
351.8	CARBONDALE		LIMESTONE	0.8	237.5	
351.1	CARBONDALE		GRAY SHALE	0.6	238.2	
350.5	CARBONDALE		LIMESTONE	0.3	238.8	

MAPID: 16327645000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 4 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.8913 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.482432 DATE COLLECTED:

SURFACE ELEVATION (FT.): 633.1 LOGGED (FT.): 268.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15533C WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
633.1	PLEISTOCENE		CLAY, SAND & GRAVEL	156.3	0.0
476.8	MODESTO		SANDY SHALE	47.8	156.3
429.0	MODESTO		COAL	1.0	204.1
428.0	MODESTO		GRAY SHALE	19.2	205.1
408.8	MODESTO	PIASA	LIMESTONE	7.4	224.3
401.4			GRAY SHALE	9.7	231.7
391.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	241.4
387.7	CARBONDALE		GRAY SHALE	3.6	245.4
384.1	CARBONDALE		LIMESTONE	0.3	249.0
383.8	CARBONDALE		GRAY SHALE	1.2	249.3
382.6	CARBONDALE		LIMESTONE	1.6	250.5
380.9	CARBONDALE		DARK SHALE	0.1	252.2
380.8	CARBONDALE	BRERETON	LIMESTONE	7.6	252.3
373.2	CARBONDALE	ANNA	BLACK SHALE	0.6	259.9
372.6	CARBONDALE	HERRIN	COAL	6.4	260.5
366.2	CARBONDALE		UNDERCLAY	1.5	266.9

MAPID: 16390023000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 4 QUARTERS/FOOTAGES: 350' N line, 150' W line of NW NE NE

QUADRANGLE: FREEBURG

LONGITUDE: -89.87717

GEOLOGIST: NORTH

CONFIDENTIAL: N

LATITUDE: 38.482391

DATE COLLECTED: 4 / 2 / 1969

SURFACE ELEVATION (FT.): 567.0

LOGGED (FT.): 199.6

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8555C

WELL TYPE: Coal Test

COMMENT: PERMIT #138 RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
567.0	PLEISTOCENE		UNCONSOLIDATED	70.3	0.0	
496.7	MODESTO		SHALE	14.7	70.3	BROWN WEATHERED
482.0	MODESTO		GRAY SHALE	70.9	85.0	
411.1	MODESTO	PIASA	LIMESTONE	7.1	155.9	
404.0	MODESTO		GRAY SHALE	9.5	163.0	
394.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	172.5	
393.5	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.8	173.5	
392.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	174.3	
390.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.5	176.6	
389.9	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	177.1	
387.8	CARBONDALE		GRAY SHALE	5.4	179.2	
382.4	CARBONDALE	BRERETON	LIMESTONE	2.8	184.6	DARK
379.6	CARBONDALE	ANNA	BLACK SHALE	1.6	187.4	
378.0	CARBONDALE	HERRIN	COAL	6.6	189.0	
371.4	CARBONDALE		UNDERCLAY	4.0	195.6	

MAPID: 16300048000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 5 QUARTERS/FOOTAGES: SE/c NE SE

QUADRANGLE: FREEBURG LONGITUDE: -89.893389 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.47321 DATE COLLECTED: 7 / 21 / 1923

SURFACE ELEVATION (FT.): 497.6 LOGGED (FT.): 148.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
497.6			SOIL	3.0	0.0	DARK
494.6			SAND	7.5	3.0	
487.1			CLAY	13.5	10.5	
473.6			HARD PAN	16.0	24.0	
457.6			SHALE	9.0	40.0	
448.6			SHALE	13.0	49.0	
435.6			SHALE	5.0	62.0	BLACK
430.6			COAL	0.3	67.0	
430.3			UNDERCLAY	0.7	67.3	
429.6			SHALE	8.0	68.0	
421.6			SHALE	8.0	76.0	BLUE
413.6			SHALE	2.5	84.0	BLUE
411.1			LIMESTONE	8.5	86.5	
402.6			SHALY LIMESTONE	1.3	95.0	
401.3			SHALE	6.7	96.3	
394.6			LIMESTONE	6.0	103.0	
388.6			SHALE	6.3	109.0	
382.3	CARBONDALE	BRERETON	LIMESTONE	7.0	115.3	
375.3	CARBONDALE	ANNA	SHALE	0.3	122.3	BLACK
374.9	CARBONDALE	HERRIN	COAL	3.3	122.7	
371.6	CARBONDALE	HERRIN	BONE COAL	0.0	126.0	
371.6	CARBONDALE	HERRIN	COAL	1.5	126.0	
370.1	CARBONDALE	HERRIN	SHALE	0.1	127.5	BLUE
370.0	CARBONDALE	HERRIN	COAL	1.6	127.6	
368.4	CARBONDALE		UNDERCLAY	0.8	129.2	
367.6	CARBONDALE		UNDERCLAY	2.0	130.0	
365.6	CARBONDALE		LIMESTONE	4.0	132.0	
361.6	CARBONDALE		SHALE	4.0	136.0	
357.6	CARBONDALE		LIMESTONE	1.0	140.0	
356.6	CARBONDALE		UNDERCLAY	7.0	141.0	

MAPID: 16300048000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 5 QUARTERS/FOOTAGES: SE/c NE SE

QUADRANGLE: FREEBURG LONGITUDE: -89.893389 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.47321 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 497.6 LOGGED (FT.): 175.0 LOG TYPE:

SOURCE: UNION COLL0020 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
374.6	CARBONDALE	HERRIN	COAL	6.5	123.0	

MAPID: 16300309000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 5 QUARTERS/FOOTAGES: 3700' S line, 3075' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.901927 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.477722 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 537.4 LOGGED (FT.): 180.0 LOG TYPE:

SOURCE: UNION COLL0056 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
366.4	CARBONDALE	HERRIN	COAL	6.9	171.0	

MAPID: 16302160000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 5 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG

LONGITUDE: -89.9005

GEOLOGIST: HINES

CONFIDENTIAL: N

LATITUDE: 38.475129

DATE COLLECTED: 9 / 0 / 1954

SURFACE ELEVATION (FT.):

LOGGED (FT.): 538.0

LOG TYPE: Drillers Log

SOURCE: MCGEE CONSTRUCTION CO

WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	15.0	0.0	
-			SAND & GRAVEL	40.0	15.0	
-			SHALE	30.0	55.0	
-			LIMESTONE	5.0	85.0	DARK
-			SHALE	23.0	90.0	
-			SHALE	9.0	113.0	DARK GRAY
-			SHALE	7.0	122.0	LT GY
-			LIMESTONE	5.0	129.0	BROWN
-			SHALE	5.0	134.0	BROWN
-			LIMESTONE	3.0	139.0	BROWN
-			SHALE	1.0	142.0	
-			LIMESTONE	12.0	143.0	GRAY
-			SHALE	3.0	155.0	YELLOW
-			LIMESTONE	9.0	158.0	GRAY
-			SHALE	4.0	167.0	
-			LIMESTONE	7.0	171.0	
-			DARK SHALE	2.0	178.0	
-	CARBONDALE	BRERETON	LIMESTONE	5.0	180.0	
-	CARBONDALE	ENERGY	DARK SHALE	3.0	185.0	
-	CARBONDALE	ENERGY	SHALE	25.0	188.0	
-	CARBONDALE	ENERGY	DARK SHALE	15.0	213.0	
-	CARBONDALE	HERRIN	COAL	4.0	228.0	
-	CARBONDALE		SHALE	56.0	232.0	
-	CARBONDALE		SHALE	35.0	288.0	
-	CARBONDALE		SANDSTONE	15.0	323.0	
-	MISSISSIPPIAN		LIMESTONE	18.0	338.0	
-	MISSISSIPPIAN		SHALE	30.0	356.0	
-	MISSISSIPPIAN		LIMESTONE	17.0	386.0	
-	MISSISSIPPIAN		LIMESTONE	20.0	403.0	
-	MISSISSIPPIAN		SHALE	14.0	423.0	
-	MISSISSIPPIAN		SANDY SHALE	3.0	437.0	
-	MISSISSIPPIAN		SHALE	7.0	440.0	LIGHT
-	MISSISSIPPIAN		LIMESTONE	6.0	447.0	
-	MISSISSIPPIAN		SHALE	9.0	453.0	LIGHT
-	MISSISSIPPIAN		LIMESTONE	16.0	462.0	
-	MISSISSIPPIAN		SANDSTONE	10.0	478.0	
-	MISSISSIPPIAN		SHALE	10.0	488.0	
-	MISSISSIPPIAN		CALCAREOUS SHALE	20.0	498.0	
-	MISSISSIPPIAN		SANDSTONE	20.0	518.0	

MAPID: 16303066000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 5 QUARTERS/FOOTAGES: 0' N line, 2640' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.900504

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.482741

DATE COLLECTED:

SURFACE ELEVATION (FT.): 690.0 LOGGED (FT.): 219.5

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8918C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
513.0	MODESTO	PIASA	LIMESTONE	7.9	177.0
505.1	CARBONDALE		GRAY SHALE	10.5	184.9
494.7	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.6	195.3
491.1	CARBONDALE	LAWSON	GRAY SHALE	9.0	198.9
482.1	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	2.8	207.9
479.3	CARBONDALE	JAMESTOWN	COAL	0.6	210.7
478.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	2.3	211.3
476.5	CARBONDALE	ANNA	DARK GRAY SHALE	0.3	213.5
477.0	CARBONDALE	HERRIN	COAL	6.5	213.0

MAPID: 16327646000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 5 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.89467 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.496037 DATE COLLECTED:

SURFACE ELEVATION (FT.): 521.6 LOGGED (FT.): 172.6 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15532C WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
521.6	PLEISTOCENE		UNCONSOLIDATED	26.0	0.0
495.6	MODESTO		SANDSTONE	13.2	26.0
482.4	MODESTO		GRAY SHALE	66.0	39.2
416.4	MODESTO		COAL	0.5	105.2
415.9	MODESTO		GRAY SHALE	17.3	105.7
398.6	MODESTO	PIASA	LIMESTONE	5.2	123.0
393.4			GRAY SHALE	12.2	128.2
381.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	140.4
377.9	CARBONDALE		GRAY SHALE	4.7	143.7
373.2	CARBONDALE		LIMESTONE	0.9	148.4
372.3	CARBONDALE		DARK SHALE	2.0	149.3
370.4	CARBONDALE	BRERETON	LIMESTONE	8.5	151.2
361.9	CARBONDALE		DARK SHALE	0.3	159.7
361.7	CARBONDALE	HERRIN	COAL	6.2	159.9
355.4	CARBONDALE		UNDERCLAY	2.4	166.2
353.0	CARBONDALE		LIMESTONE	4.0	168.6

MAPID: 16327647000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 5 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.89517 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.479642 DATE COLLECTED:

SURFACE ELEVATION (FT.): 620.6 LOGGED (FT.): 220.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15534C WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.6	PLEISTOCENE		UNCONSOLIDATED	94.1	0.0
526.5	MODESTO		GRAY SHALE	78.4	94.1
448.1	MODESTO	PIASA	LIMESTONE	8.0	172.5
440.1			GRAY SHALE	9.4	180.5
430.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	189.9
428.4	CARBONDALE		GRAY SHALE	7.2	192.2
421.2	CARBONDALE	CONANT	LIMESTONE	2.3	199.4
418.9	CARBONDALE		DARK SHALE	1.1	201.7
417.8	CARBONDALE	BRERETON	LIMESTONE	2.2	202.8
415.7	CARBONDALE	ANNA	BLACK SHALE	0.6	204.9
415.1	CARBONDALE	HERRIN	COAL	6.5	205.5
408.5	CARBONDALE		UNDERCLAY	2.3	212.1
406.2	CARBONDALE		LIMESTONE	6.1	214.4

MAPID: 16327648000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 5 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.904914 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.470663 DATE COLLECTED:

SURFACE ELEVATION (FT.): 537.7 LOGGED (FT.): 230.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15549C WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS GIVEN BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
537.7	PLEISTOCENE		UNCONSOLIDATED	60.0	0.0
477.7	PLEISTOCENE		SANDSTONE	35.6	60.0
442.1	MODESTO		SANDY SHALE	80.1	95.6
362.0	MODESTO	PIASA	LIMESTONE	7.3	175.7
354.7			GRAY SHALE	12.6	183.0
342.1	CARBONDALE		LIMESTONE	1.3	195.6
340.8	CARBONDALE		GRAY SHALE	8.6	196.9
332.2	CARBONDALE	BRERETON	LIMESTONE	8.3	205.5
323.9	CARBONDALE	HERRIN	COAL	6.6	213.8
317.4	CARBONDALE		CALCAREOUS SHALE	2.4	220.3
315.0	CARBONDALE		LIMESTONE	7.6	222.7

MAPID: 16327649000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 5 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.905068

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.473689

DATE COLLECTED:

SURFACE ELEVATION (FT.): 609.1 LOGGED (FT.): 256.7

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 155550C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
609.1	PLEISTOCENE		UNCONSOLIDATED	98.0	0.0
511.1	MODESTO		SANDSTONE	23.1	98.0
488.0	MODESTO		GRAY SHALE	95.3	121.1
392.7	MODESTO	PIASA	LIMESTONE	5.6	216.4
387.1			GRAY SHALE	6.7	222.0
380.4	CARBONDALE	BANKSTON FORK	LIMESTONE	5.7	228.7
374.7	CARBONDALE		GRAY SHALE	5.5	234.4
369.2	CARBONDALE	CONANT	LIMESTONE	2.3	239.9
366.9	CARBONDALE		DARK SHALE	0.7	242.2
366.2	CARBONDALE	BRERETON	LIMESTONE	5.5	242.9
360.7	CARBONDALE	ANNA	BLACK SHALE	0.3	248.4
360.5	CARBONDALE	HERRIN	COAL	6.5	248.6
354.0	CARBONDALE		DARK SHALE	0.4	255.1
353.6	CARBONDALE		UNDERCLAY	0.8	255.5
352.8	CARBONDALE		GRAY SHALE	0.4	256.3

MAPID: 16327714000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 5 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.900474

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.467297

DATE COLLECTED: 5 / 30 / 1973

SURFACE ELEVATION (FT.): 560.6 LOGGED (FT.): 220.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15530C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.6	PLEISTOCENE		UNCONSOLIDATED	54.3	0.0	
506.3			SANDSTONE	40.9	54.3	
465.4			GRAY SHALE	2.0	95.2	
463.4			SANDSTONE	4.1	97.2	W/SH
459.3			GRAY SHALE	69.3	101.3	
390.0			LIMESTONE	5.5	170.6	
384.5			GRAY SHALE	9.1	176.1	
375.4			LIMESTONE	2.6	185.2	
372.8			GRAY SHALE	8.2	187.8	
364.7	CARBONDALE		LIMESTONE	3.3	195.9	
361.4	CARBONDALE		SHALE	0.6	199.2	DARK
360.8	CARBONDALE		COAL	0.2	199.8	
360.5	CARBONDALE		SHALE	1.9	200.1	DARK
358.6	CARBONDALE	BRERETON	LIMESTONE	1.3	202.0	
357.3	CARBONDALE	HERRIN	COAL	6.8	203.3	
350.6	CARBONDALE		UNDERCLAY	2.8	210.0	
347.8	CARBONDALE		LIMESTONE	3.2	212.8	
344.6	CARBONDALE		SHALE	0.5	216.0	
344.1	CARBONDALE		SHALE	0.6	216.5	DARK
343.5	CARBONDALE		SHALE	2.9	217.1	

MAPID: 16327715000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 5 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG

LONGITUDE: -89.891237

GEOLOGIST: MCBETH

CONFIDENTIAL: N

LATITUDE: 38.473968

DATE COLLECTED: 6 / 6 / 1973

SURFACE ELEVATION (FT.): 566.5

LOGGED (FT.): 206.4

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15531C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
566.5	PLEISTOCENE		UNCONSOLIDATED	75.3	0.0	
491.2			SANDSTONE	3.6	75.3	
487.6			GRAY SHALE	78.7	78.9	
408.9			LIMESTONE	4.3	157.6	
404.6			GRAY SHALE	12.8	161.9	
391.8	CARBONDALE		LIMESTONE	1.7	174.7	
390.1	CARBONDALE		GRAY SHALE	5.2	176.4	
384.9	CARBONDALE		LIMESTONE	1.1	181.6	
383.8	CARBONDALE		SHALE	0.4	182.7	DARK
383.4	CARBONDALE	BRERETON	LIMESTONE	9.9	183.1	
373.5	CARBONDALE	ANNA	SHALE	0.4	193.0	DARK
373.2	CARBONDALE	HERRIN	COAL	6.1	193.3	
367.0	CARBONDALE		UNDERCLAY	3.6	199.5	
363.4	CARBONDALE		LIMESTONE	3.3	203.1	

MAPID: 16327717000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 5 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.89517 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.479642 DATE COLLECTED: 7 / 3 / 1973

SURFACE ELEVATION (FT.): 620.6 LOGGED (FT.): 220.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15534C WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
620.6	PLEISTOCENE		UNCONSOLIDATED	94.1	0.0	
526.5			GRAY SHALE	78.4	94.1	
448.1			LIMESTONE	8.0	172.5	
440.1			GRAY SHALE	9.4	180.5	WITH LS
430.7	CARBONDALE		LIMESTONE	2.3	189.9	
428.4	CARBONDALE		GRAY SHALE	7.2	192.2	
421.2	CARBONDALE		LIMESTONE	2.3	199.4	
418.9	CARBONDALE		SHALE	1.1	201.7	
417.8	CARBONDALE	BRERETON	LIMESTONE	2.2	202.8	
415.7	CARBONDALE	ANNA	BLACK SHALE	0.6	204.9	
415.1	CARBONDALE	HERRIN	COAL	6.6	205.5	
408.5	CARBONDALE		UNDERCLAY	2.3	212.1	
406.2	CARBONDALE		LIMESTONE	6.1	214.4	

MAPID: 16327718000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 5 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.904914 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.470666 DATE COLLECTED: 11 / 1 / 1973

SURFACE ELEVATION (FT.): 537.7 LOGGED (FT.): 230.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15549C WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
537.7	PLEISTOCENE		UNCONSOLIDATED	60.0	0.0	
477.7			SANDSTONE	35.6	60.0	
442.1			SHALE	80.1	95.6	
362.0	CARBONDALE		LIMESTONE	7.3	175.7	
354.7	CARBONDALE		GRAY SHALE	12.6	183.0	
342.1	CARBONDALE		LIMESTONE	1.3	195.6	
340.8	CARBONDALE		GRAY SHALE	8.6	196.9	
332.2	CARBONDALE	BRERETON	LIMESTONE	8.3	205.5	
323.9	CARBONDALE	HERRIN	COAL	6.6	213.8	
317.4	CARBONDALE		SHALE	2.4	220.3	WITH LS
315.0	CARBONDALE		LIMESTONE	7.6	222.7	

MAPID: 16327719000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 5 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.905065

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.473689

DATE COLLECTED: 11 / 9 / 1973

SURFACE ELEVATION (FT.): 609.1 LOGGED (FT.): 256.7

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15550C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
609.1	PLEISTOCENE		UNCONSOLIDATED	98.0	0.0	
511.1			SANDSTONE	23.1	98.0	
488.0			GRAY SHALE	95.3	121.1	
392.7			LIMESTONE	5.6	216.4	
387.1			GRAY SHALE	6.7	222.0	
380.4	CARBONDALE		LIMESTONE	5.7	228.7	
374.7	CARBONDALE		GRAY SHALE	5.5	234.4	
369.2	CARBONDALE		LIMESTONE	2.3	239.9	
366.9	CARBONDALE		SHALE	0.7	242.2	
366.2	CARBONDALE	BRERETON	LIMESTONE	5.5	242.9	
360.7	CARBONDALE	ANNA	BLACK SHALE	0.3	248.4	
360.5	CARBONDALE	HERRIN	COAL	6.5	248.6	
354.0	CARBONDALE		SHALE	0.4	255.1	DARK
353.6	CARBONDALE		UNDERCLAY	0.8	255.5	
352.8	CARBONDALE		GRAY SHALE	0.4	256.3	

MAPID: 16390022000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 5 QUARTERS/FOOTAGES: 100' S line, 25' E line of NE NE SE

QUADRANGLE: FREEBURG

LONGITUDE: -89.891117

GEOLOGIST: NORTH

CONFIDENTIAL: N

LATITUDE: 38.473231

DATE COLLECTED: 6 / 6 / 1973

SURFACE ELEVATION (FT.): 566.3

LOGGED (FT.): 206.4

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15531C

WELL TYPE: Coal Test

COMMENT: PERMIT # 138 RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
566.3	PLEISTOCENE		UNCONSOLIDATED	75.3	0.0	
491.0			SANDSTONE	3.6	75.3	
487.4			GRAY SHALE	78.7	78.9	
408.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.3	157.6	
404.4	CARBONDALE		GRAY SHALE	12.8	161.9	
391.6	CARBONDALE	CONANT	LIMESTONE	1.7	174.7	
389.9	CARBONDALE		GRAY SHALE	5.2	176.4	
384.7	CARBONDALE	BRERETON	LIMESTONE	1.1	181.6	
383.6	CARBONDALE	BRERETON	SHALE	0.4	182.7	DARK
383.2	CARBONDALE	BRERETON	LIMESTONE	9.9	183.1	
373.3	CARBONDALE	ANNA	SHALE	0.4	193.0	DARK
373.0	CARBONDALE	HERRIN	COAL	6.1	193.3	
366.8	CARBONDALE		UNDERCLAY	3.6	199.5	
363.2	CARBONDALE	HIGGINSVILLE	LIMESTONE	3.3	203.1	

MAPID: 16300049000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 6 QUARTERS/FOOTAGES: 520' N line, 2135' W line

QUADRANGLE: FREEBURG

LONGITUDE: -89.920623

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N

LATITUDE: 38.481477

DATE COLLECTED:

SURFACE ELEVATION (FT.): 578.2

LOGGED (FT.): 550.0

LOG TYPE:

SOURCE: BLVL ST CL

WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
353.2	CARBONDALE	HERRIN	COAL	5.0	225.0	

MAPID: 16300382000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 6 QUARTERS/FOOTAGES: 1500' S line, 3200' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.921113 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.471729 DATE COLLECTED:

SURFACE ELEVATION (FT.): 528.0 LOGGED (FT.): 146.5 LOG TYPE: Drillers Log

SOURCE: CROWN COAL COMPANY WELL TYPE: Mine Shaft

COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
388.0	CARBONDALE	HERRIN	COAL	6.5	140.0	ELEVATION TOP 388'

MAPID: 16300382000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 6 QUARTERS/FOOTAGES: 1500' S line, 3200' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.921113 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.471729 DATE COLLECTED:

SURFACE ELEVATION (FT.): 527.8 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: CROWN CC WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
387.8	CARBONDALE	HERRIN	COAL	6.5	140.0	

MAPID: 16300413000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 6 QUARTERS/FOOTAGES: NW SW NE

QUADRANGLE: FREEBURG LONGITUDE: -89.917902 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.478104 DATE COLLECTED:

SURFACE ELEVATION (FT.): 543.4 LOGGED (FT.): 161.6 LOG TYPE: Drillers Log

SOURCE: TURKEY HILL MINE WELL TYPE: Mine Shaft

COMMENT: LOG OF SHAFT ORAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
543.4			CLAY	18.0	0.0	
525.4			SAND	7.0	18.0	
518.4			UNCONSOLIDATED	17.0	25.0	GUMBO
501.4			SAND	11.0	42.0	
490.4			UNCONSOLIDATED	8.0	53.0	GUMBO
482.4			CLAY	3.0	61.0	YELLOW
479.4			SHALE	51.0	64.0	6" COAL AT 100'+
428.4			LIMESTONE	8.0	115.0	
420.4			UNDERCLAY	8.0	123.0	
412.4			LIMESTONE	5.0	131.0	
407.4			UNDERCLAY	6.0	136.0	
401.4			SHALE	4.0	142.0	
397.4			LIMESTONE	8.0	146.0	
389.4			SHALE	0.5	154.0	
388.9			LIMESTONE	1.5	154.5	
387.4	CARBONDALE	HERRIN	COAL	5.6	156.0	TOTAL DEPTH TO COAL - 159'

MAPID: 16300413000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 6 QUARTERS/FOOTAGES: NW SW NE

QUADRANGLE: FREEBURG LONGITUDE: -89.917902 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.478104 DATE COLLECTED:

SURFACE ELEVATION (FT.): 543.4 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: TURKEYHILL HS WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
378.4	CARBONDALE	HERRIN	COAL	6.0	165.0	

MAPID: 16300667000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 6 **QUARTERS/FOOTAGES:** 1755' N line, 2050' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.917175 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.478049 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 529.8 **LOGGED (FT.):** 162.0 **LOG TYPE:**
SOURCE: TURKEYHILL AS **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
373.8	CARBONDALE	HERRIN	COAL	5.6	156.0	

MAPID: 16303634000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 6 **QUARTERS/FOOTAGES:** 1320' S line, 990' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.913345 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.471155 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 575.0 **LOGGED (FT.):** 232.4 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 15522C **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
386.0	MODESTO	PIASA	LIMESTONE	9.6	189.0	
376.4	CARBONDALE		GRAY SHALE	7.5	198.6	
368.9	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	11.1	206.1	
357.8	CARBONDALE	LAWSON	SHALE	5.3	217.2	
352.5	CARBONDALE	BRERETON	LIMESTONE	4.2	222.5	
348.3	CARBONDALE	ANNA	BLACK SHALE	0.1	226.7	
349.0	CARBONDALE	HERRIN	COAL	6.4	226.0	

MAPID: 16300396000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 7 **QUARTERS/FOOTAGES:** 3200' S line, 2800' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.919542 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.461901 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 565.0 **LOGGED (FT.):** 207.0 **LOG TYPE:** Drillers Log
SOURCE: ORCHARD COAL COMPANY **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
365.0	CARBONDALE	HERRIN	COAL	7.0	200.0	ELEVATION TOP 365'

MAPID: 16300396000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 7 QUARTERS/FOOTAGES: 3200' S line, 2800' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.919542 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.461901 DATE COLLECTED:

SURFACE ELEVATION (FT.): 565.0 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: ORCHARD CC WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
365.0	CARBONDALE	HERRIN	COAL	7.0	200.0	

MAPID: 16302960000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 7 QUARTERS/FOOTAGES: 2640' N line, 2640' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.91895 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.46028 DATE COLLECTED:

SURFACE ELEVATION (FT.): 565.0 LOGGED (FT.): 207.7 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8558C WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
400.0	MODESTO	PIASA	LIMESTONE	7.4	165.0	
392.6	CARBONDALE		GRAY SHALE	8.0	172.4	
384.6	CARBONDALE	BANKSTON FORK	LIMESTONE	4.6	180.4	
380.0	CARBONDALE	LAWSON	GRAY SHALE	6.4	185.0	
373.6	CARBONDALE	CONANT	LIMESTONE	3.7	191.4	
370.0	CARBONDALE	JAMESTOWN	BONE COAL	0.6	195.0	
369.4	CARBONDALE		CLAYSTONE	0.6	195.6	
368.8	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	5.4	196.2	
364.0	CARBONDALE	HERRIN	COAL	6.7	201.0	

MAPID: 16300311000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 8 QUARTERS/FOOTAGES: SW/c NW NE

QUADRANGLE: FREEBURG LONGITUDE: -89.897969 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.465687 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 531.0 LOGGED (FT.): 183.5 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO 58 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
531.0			SOIL	1.0	0.0	
530.0			CLAY	36.0	1.0	
494.0			LIMESTONE	0.5	37.0	
493.5			SHALE	2.5	37.5	
491.0			SANDSTONE	15.0	40.0	
476.0			SANDY SHALE	30.0	55.0	
446.0			SHALE	25.0	85.0	BLUE
421.0			SHALE	10.0	110.0	BLACK
411.0			COAL	0.3	120.0	
410.7			SHALE	13.7	120.3	
397.0			SHALE	7.0	134.0	BLUE & RED
390.0			LIMESTONE	7.0	141.0	
383.0			SHALE	9.0	148.0	
374.0			SHALY LIMESTONE	4.0	157.0	
370.0			SHALE	4.0	161.0	
366.0			SANDY SHALE	4.0	165.0	
362.0			LIMESTONE	2.3	169.0	
359.7			SHALE	0.7	171.3	BLACK
359.0	CARBONDALE	BRERETON	LIMESTONE	2.8	172.0	
356.2	CARBONDALE	ANNA	SHALE	1.3	174.8	BLACK
354.8	CARBONDALE	HERRIN	COAL	4.7	176.2	
350.2	CARBONDALE	HERRIN	SHALE	0.1	180.8	#6; BLU
350.1	CARBONDALE	HERRIN	COAL	1.8	180.9	
348.3	CARBONDALE		UNDERCLAY	0.8	182.7	

MAPID: 16300311000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 8 QUARTERS/FOOTAGES: SW/c NW NE

QUADRANGLE: FREEBURG LONGITUDE: -89.897969 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.465687 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 534.0 LOGGED (FT.): 184.0 LOG TYPE:

SOURCE: UNION COLL0058 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
358.0	CARBONDALE	HERRIN	COAL	6.5	176.0	

MAPID: 16303067000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 8 QUARTERS/FOOTAGES: 2310' S line, 2640' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.900068

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.45925

DATE COLLECTED:

SURFACE ELEVATION (FT.): 525.0 LOGGED (FT.): 173.7

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8919C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
396.0	MODESTO	PIASA	LIMESTONE	10.6	129.0
385.4	CARBONDALE		GRAY SHALE	8.9	139.6
376.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.9	148.5
372.6	CARBONDALE	LAWSON	GRAY SHALE	7.0	152.4
365.6	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	3.5	159.4
362.1	CARBONDALE	JAMESTOWN	BONE COAL	0.9	162.9
361.2	CARBONDALE		BLACK SHALE	0.5	163.8
360.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	2.5	164.3
358.0	CARBONDALE	HERRIN	COAL	6.7	167.0

MAPID: 1632765000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 8 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.904719

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.457296

DATE COLLECTED:

SURFACE ELEVATION (FT.): 537.6 LOGGED (FT.): 188.7

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15537C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
537.6	PLEISTOCENE		UNCONSOLIDATED	39.3	0.0	
498.3	MODESTO		SANDSTONE	24.3	39.3	
474.0	MODESTO		GRAY SHALE	66.1	63.6	
407.9	MODESTO		LIMESTONE	2.5	129.7	
405.4	MODESTO		GRAY SHALE	1.3	132.2	
404.1	MODESTO	PIASA	LIMESTONE	5.5	133.5	
398.6			GRAY SHALE	4.0	139.0	
394.6	CARBONDALE		LIMESTONE	3.0	143.0	
391.6	CARBONDALE		SHALE	6.9	146.0	
384.7	CARBONDALE		LIMESTONE	2.1	152.9	
382.6	CARBONDALE		GRAY SHALE	4.6	155.0	
378.0	CARBONDALE	CONANT	LIMESTONE	3.8	159.6	
374.2	CARBONDALE		DARK SHALE	0.3	163.4	
373.9	CARBONDALE	JAMESTOWN	COAL	0.2	163.7	
373.7	CARBONDALE		DARK SHALE	0.2	163.9	
373.6	CARBONDALE	BRERETON	LIMESTONE	5.1	164.0	
368.5	CARBONDALE	ANNA	BLACK SHALE	0.8	169.1	
367.7	CARBONDALE	HERRIN	COAL	6.4	169.9	
361.4	CARBONDALE		DARK SHALE	0.3	176.2	
361.1	CARBONDALE		UNDERCLAY	2.1	176.5	
359.0	CARBONDALE		LIMESTONE	10.1	178.6	

MAPID: 16300051000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 9 QUARTERS/FOOTAGES: 1980' S line, 1650' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.878794 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.458071 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 463.0 LOGGED (FT.): 125.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
463.0			SOIL	7.0	0.0	DARK
456.0			GRAVEL	12.0	7.0	
444.0			SANDY SHALE	10.5	19.0	
433.5			SHALE	13.0	29.5	
420.5			DARK SHALE	0.5	42.5	
420.0			DARK SHALE	5.0	43.0	
415.0			SHALE	9.7	48.0	BLUE
405.3			COAL	0.3	57.7	
405.0			SHALE	10.0	58.0	
395.0			SHALE	5.0	68.0	
390.0			SHALE	8.0	73.0	
382.0			LIMESTONE	12.3	81.0	
369.7			DARK SHALE	6.6	93.3	
363.1			SHALY LIMESTONE	1.1	99.9	
362.0			CALCAREOUS SHALE	4.0	101.0	
358.0			LIMESTONE	1.8	105.0	
356.2			DARK SHALE	10.3	106.8	
346.0			LIMESTONE	0.2	117.0	DARK
345.8	CARBONDALE	HERRIN	COAL	1.3	117.2	
344.5	CARBONDALE	HERRIN	COAL	2.8	118.5	
341.7	CARBONDALE	HERRIN	BONE COAL	0.0	121.3	
341.6	CARBONDALE	HERRIN	COAL	0.4	121.4	
341.3	CARBONDALE	HERRIN	SHALE	0.1	121.7	BLUE
341.2	CARBONDALE	HERRIN	COAL	1.8	121.8	
339.4	CARBONDALE		UNDERCLAY	1.4	123.6	

MAPID: 16300051000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 9 QUARTERS/FOOTAGES: 1980' S line, 1650' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.878794 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.458071 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 458.3 LOGGED (FT.): 125.0 LOG TYPE:

SOURCE: UNION COLL0016 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
341.3	CARBONDALE	HERRIN	COAL	6.5	117.0	

MAPID: 16300052000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 9 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: FREEBURG LONGITUDE: -89.889685 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.459189 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 475.3 LOGGED (FT.): 127.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
475.3			SOIL	3.0	0.0	DARK
472.3			GRAVEL	4.0	3.0	
468.3			SHALE	4.0	7.0	
464.3			SANDY SHALE	39.0	11.0	
425.3			CALCAREOUS SHALE	1.0	50.0	
424.3			CALCAREOUS SHALE	10.2	51.0	2
414.1			COAL	0.3	61.2	
413.8			SHALE	19.5	61.5	BLUE
394.3			LIMESTONE	11.0	81.0	
383.3			SHALY LIMESTONE	6.0	92.0	
377.3			DARK SHALE	5.0	98.0	
372.3			LIMESTONE	4.0	103.0	
368.3			DARK SHALE	3.0	107.0	
365.3	CARBONDALE	BRERETON	SHALY LIMESTONE	4.3	110.0	
361.0	CARBONDALE		COAL	0.3	114.3	
360.7	CARBONDALE		LIMESTONE	0.3	114.6	
360.4	CARBONDALE	ANNA	DARK SHALE	4.8	114.9	
355.5	CARBONDALE	HERRIN	BONE COAL	0.5	119.8	
355.0	CARBONDALE	HERRIN	COAL	1.4	120.3	
353.6	CARBONDALE	HERRIN	BONE COAL	0.0	121.7	
353.6	CARBONDALE	HERRIN	COAL	1.2	121.7	
352.4	CARBONDALE	HERRIN	BONE COAL	0.0	122.9	
352.4	CARBONDALE	HERRIN	COAL	1.5	122.9	
351.0	CARBONDALE	HERRIN	SHALE	0.1	124.3	
350.9	CARBONDALE	HERRIN	COAL	1.5	124.4	
349.4	CARBONDALE		UNDERCLAY	1.1	125.9	

MAPID: 16300052000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 9 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: FREEBURG LONGITUDE: -89.889685 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.459189 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 475.3 LOGGED (FT.): 127.0 LOG TYPE:

SOURCE: UNION COLL0018 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
355.3	CARBONDALE	HERRIN	COAL	6.2	120.0	

MAPID: 16300670000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 9 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: FREEBURG LONGITUDE: -89.889609 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.453637 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 490.0 LOGGED (FT.): 125.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO 57 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
490.0			SOIL	1.0	0.0	
489.0			CLAY	3.0	1.0	
486.0			SANDY SHALE	8.0	4.0	
478.0			SANDSTONE	12.0	12.0	
466.0			SANDY SHALE	6.0	24.0	
460.0			SHALE	15.0	30.0	BLUE
445.0			DARK SHALE	13.7	45.0	
431.3			COAL	0.3	58.7	
431.0			SHALE	20.0	59.0	
411.0			LIMESTONE	2.5	79.0	
408.5			SHALE	2.5	81.5	
406.0			LIMESTONE	8.5	84.0	
397.5			SHALE	8.5	92.5	
389.0	CARBONDALE	BRERETON	SHALY LIMESTONE	7.0	101.0	
382.0	CARBONDALE	ANNA	SHALE	9.8	108.0	BLACK
372.2	CARBONDALE	HERRIN	COAL	5.2	117.8	
367.1	CARBONDALE	HERRIN	SHALE	0.1	122.9	BLUE
367.0	CARBONDALE	HERRIN	COAL	1.5	123.0	
365.5	CARBONDALE		UNDERCLAY	0.5	124.5	

MAPID: 16300670000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 9 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: FREEBURG LONGITUDE: -89.889609 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.453637 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 457.1 LOGGED (FT.): 125.0 LOG TYPE:

SOURCE: UNION COLL0057 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
339.1	CARBONDALE	HERRIN	COAL	6.8	118.0	

MAPID: 16302962000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 9 QUARTERS/FOOTAGES: 2640' N line, 1320' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.877652 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.459836 DATE COLLECTED:

SURFACE ELEVATION (FT.): 460.0 LOGGED (FT.): 118.4 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8554C WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
381.0	MODESTO	PIASA	LIMESTONE	5.9	79.0	
375.1	CARBONDALE		GRAY SHALE	13.9	84.9	
361.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	98.8	
359.3	CARBONDALE	LAWSON	DARK GRAY SHALE	7.8	100.7	
351.6	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.6	108.4	
351.0	CARBONDALE	JAMESTOWN	CARBONACEOUS SHALE	0.3	109.0	
350.7	CARBONDALE	BRERETON	NODULAR LIMESTONE	0.5	109.3	
350.1	CARBONDALE	ANNA	DARK GRAY SHALE	1.6	109.9	
348.0	CARBONDALE	HERRIN	COAL	6.4	112.0	

MAPID: 16327651000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 9 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.880923

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.460839

DATE COLLECTED:

SURFACE ELEVATION (FT.): 481.5 LOGGED (FT.): 151.2

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15852C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
481.5	PLEISTOCENE		UNCONSOLIDATED	61.0	0.0	
420.5	MODESTO		SHALE	37.0	61.0	
383.5	MODESTO		LIMESTONE	2.3	98.0	
381.2	MODESTO		GRAY SHALE	1.7	100.3	
379.5	MODESTO	PIASA	LIMESTONE	9.6	102.0	
369.9			GRAY SHALE	7.4	111.6	
362.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.7	119.0	
358.8	CARBONDALE		GRAY SHALE	8.2	122.7	
350.6	CARBONDALE	CONANT	LIMESTONE	1.1	130.9	
349.5	CARBONDALE		DARK SHALE	1.7	132.0	
347.8	CARBONDALE	BRERETON	LIMESTONE	4.0	133.7	
343.8	CARBONDALE	ANNA	DARK SHALE	0.4	137.7	
343.4	CARBONDALE	HERRIN	COAL	6.5	138.1	
336.9	CARBONDALE		SHALE	6.3	144.6	
330.7	CARBONDALE		LIMESTONE	0.4	150.8	

MAPID: 16327720000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 9 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.887919

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.462444

DATE COLLECTED: 7 / 10 / 1973

SURFACE ELEVATION (FT.): 513.9 LOGGED (FT.): 181.1

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15535C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
513.9	PLEISTOCENE		UNCONSOLIDATED	68.5	0.0	
445.4			GRAY SHALE	55.5	68.5	
389.9			LIMESTONE	1.7	124.0	
388.2			GRAY SHALE	1.7	125.7	
386.5			LIMESTONE	5.6	127.4	
380.9			GRAY SHALE	12.2	133.0	
368.7			LIMESTONE	3.6	145.2	SOFT
365.1			LIMESTONE	2.3	148.8	HARD
362.8			GRAY SHALE	3.5	151.1	
359.3	CARBONDALE		SHALE	1.5	154.6	DARK
357.9	CARBONDALE	BRERETON	LIMESTONE	5.5	156.0	
352.4	CARBONDALE	ANNA	BLACK SHALE	2.1	161.5	
350.3	CARBONDALE	HERRIN	COAL	6.9	163.6	
343.4	CARBONDALE		UNDERCLAY	1.3	170.5	
342.2	CARBONDALE		LIMESTONE	9.4	171.7	

MAPID: 16327721000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 9 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG

LONGITUDE: -89.880919

GEOLOGIST: MCBETH

CONFIDENTIAL: N

LATITUDE: 38.460839

DATE COLLECTED: 11 / 16 / 1973

SURFACE ELEVATION (FT.): 481.5

LOGGED (FT.): 151.2

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15852C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
481.5	PLEISTOCENE		UNCONSOLIDATED	61.0	0.0	
420.5			SHALE	37.0	61.0	
383.5			LIMESTONE	2.3	98.0	
381.2			GRAY SHALE	1.7	100.3	
379.5			LIMESTONE	9.6	102.0	
369.9			GRAY SHALE	7.4	111.6	
362.5	CARBONDALE		LIMESTONE	3.7	119.0	
358.8	CARBONDALE		GRAY SHALE	8.2	122.7	
350.6	CARBONDALE		LIMESTONE	1.1	130.9	
349.5	CARBONDALE		SHALE	1.7	132.0	DARK, HARD
347.8	CARBONDALE	BRERETON	LIMESTONE	4.0	133.7	
343.8	CARBONDALE	ANNA	SHALE	0.4	137.7	DARK
343.4	CARBONDALE	HERRIN	COAL	6.5	138.1	
336.9	CARBONDALE		SHALE	6.3	144.6	
330.7	CARBONDALE		LIMESTONE	0.4	150.8	

MAPID: 16390024000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 9 QUARTERS/FOOTAGES: 25' N line, 250' W line of NW NW NE

QUADRANGLE: FREEBURG

LONGITUDE: -89.881122

GEOLOGIST: NORTH

CONFIDENTIAL: N

LATITUDE: 38.467229

DATE COLLECTED: 11 / 14 / 1973

SURFACE ELEVATION (FT.): 480.0

LOGGED (FT.): 156.2

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15851C

WELL TYPE: Coal Test

COMMENT: PERMIT #138 RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
480.0	PLEISTOCENE		UNCONSOLIDATED	59.6	0.0	
420.4	MODESTO		SHALE	45.5	59.6	
374.9	MODESTO	PIASA	LIMESTONE	7.0	105.1	
367.9	MODESTO		GRAY SHALE	8.6	112.1	
359.3	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	120.7	
357.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.7	123.0	
355.3	CARBONDALE	BANKSTON FORK	LIMESTONE	0.9	124.7	
354.4	CARBONDALE		GRAY SHALE	6.1	125.6	
348.3	CARBONDALE		SHALE	2.0	131.7	DARK
346.3	CARBONDALE	BRERETON	LIMESTONE	4.4	133.7	
341.8	CARBONDALE	ANNA	BLACK SHALE	1.3	138.2	
340.5	CARBONDALE	HERRIN	COAL	6.8	139.5	
333.7	CARBONDALE		SHALE	3.6	146.3	
330.1	CARBONDALE		LIMESTONE	1.0	149.9	
329.1	CARBONDALE		GRAY SHALE	5.4	150.9	

MAPID: 16302340000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 10 QUARTERS/FOOTAGES: 28' S line, 15' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.872892 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.452621 DATE COLLECTED: 4 / 14 / 1966

SURFACE ELEVATION (FT.): 504.4 LOGGED (FT.): 175.6 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 7512 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
504.4	PLEISTOCENE		UNCONSOLIDATED	16.9	0.0
487.5	MODESTO		BROWN SANDSTONE	23.8	16.9
463.8	MODESTO		SANDY SHALE	58.8	40.6
405.0	MODESTO		COAL	0.3	99.4
404.7	MODESTO		SHALE	1.7	99.7
403.0	MODESTO		SHALY LIMESTONE	4.8	101.4
398.3	MODESTO		GRAY SHALE	12.1	106.1
386.2	MODESTO		LIMESTONE	2.4	118.2
383.8	MODESTO		GRAY SHALE	4.0	120.6
379.8	MODESTO		LIMESTONE	0.5	124.6
379.3	MODESTO		GRAY SHALE	2.5	125.1
376.8	MODESTO	PIASA	LIMESTONE	7.7	127.6
369.1			GRAY SHALE	7.7	135.3
361.4	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	143.0
357.4	CARBONDALE		GRAY SHALE	4.7	147.0
352.8	CARBONDALE		LIMESTONE	1.1	151.6
351.7	CARBONDALE		DARK SHALE	4.2	152.7
347.5	CARBONDALE	BRERETON	LIMESTONE	4.1	156.9
343.4	CARBONDALE		DARK SHALE	0.3	161.0
343.2	CARBONDALE	HERRIN	COAL	5.9	161.2
337.3	CARBONDALE		GRAY SHALE	2.2	167.1
335.2	CARBONDALE		GRAY SHALE	4.6	169.2
330.6	CARBONDALE		SHALY LIMESTONE	1.8	173.8

MAPID: 16302369000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 10 QUARTERS/FOOTAGES: 230' S line, 880' E line of NW NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.87156 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.464 DATE COLLECTED: 7 / 22 / 1955

SURFACE ELEVATION (FT.): 460.0 LOGGED (FT.): 136.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2051 WELL TYPE: Coal Test

COMMENT: PEABODY ELEV IS 502.62

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
460.0	PLEISTOCENE		UNCONSOLIDATED	46.3	0.0	
413.7	MODESTO		DARK SHALE	22.5	46.3	
391.2	MODESTO		COAL	0.4	68.8	
390.8	MODESTO		GRAY SHALE	20.7	69.2	
370.1	MODESTO		LIMESTONE	2.3	89.9	
367.8	MODESTO		GRAY SHALE	1.0	92.2	
366.8	MODESTO	PIASA	LIMESTONE	6.0	93.2	
360.8	MODESTO	PIASA	GRAY SHALE	0.2	99.2	
360.7	MODESTO	PIASA	LIMESTONE	4.5	99.3	
356.2			GRAY SHALE	9.5	103.8	
346.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.4	113.3	UPPER BENCH
345.3	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	2.3	114.7	UPPER BENCH
343.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.2	117.0	SHALE PARTING
341.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	118.2	LOWER BENCH
339.9	CARBONDALE	LAWSON	DARK SHALE	5.5	120.1	
334.4	CARBONDALE	CONANT	LIMESTONE	0.2	125.6	
334.2	CARBONDALE		DARK SHALE	0.7	125.8	
333.5	CARBONDALE	JAMESTOWN	BONE COAL	0.1	126.5	
333.4	CARBONDALE		DARK SHALE	0.6	126.6	
332.9	CARBONDALE	ANNA	BLACK SHALE	1.7	127.1	
331.2	CARBONDALE	HERRIN	COAL	6.7	128.8	
324.5	CARBONDALE		UNDERCLAY	0.8	135.5	

MAPID: 1630250000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 10 QUARTERS/FOOTAGES: 1' S line, 1' W line of SE NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.859239 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.459737 DATE COLLECTED:

SURFACE ELEVATION (FT.): 467.5 LOGGED (FT.): 144.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 14 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
467.5	PLEISTOCENE		UNCONSOLIDATED	12.0	0.0
455.5	MODESTO		SANDSTONE	26.0	12.0
429.5	MODESTO		GRAY SHALE	43.3	38.0
386.2	MODESTO		COAL	0.3	81.3
385.9	MODESTO		CALCAREOUS SHALE	8.9	81.6
377.0	MODESTO		GRAY SHALE	6.7	90.5
370.3	MODESTO		DARK SHALE	4.8	97.2
365.5	MODESTO	PIASA	LIMESTONE	10.5	102.0
355.0			BLUE SHALE	10.5	112.5
344.5	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	5.0	123.0
339.5	CARBONDALE		GRAY SHALE	2.3	128.0
337.2	CARBONDALE		DARK SHALE	6.2	130.3
331.0	CARBONDALE	HERRIN	COAL	6.5	136.5
324.5	CARBONDALE		UNDERCLAY	1.0	143.0

MAPID: 16302530000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 10 QUARTERS/FOOTAGES: 1' S line, 1' W line of SE NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.859239 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.459737 DATE COLLECTED:

SURFACE ELEVATION (FT.): 440.8 LOGGED (FT.): 95.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 44 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
440.8	PLEISTOCENE		UNCONSOLIDATED	24.0	0.0
416.8	MODESTO		ROCK	26.0	24.0
390.8	MODESTO		SHALE	5.0	50.0
385.8	MODESTO		DARK SHALE	3.7	55.0
382.1	MODESTO		COAL	0.3	58.7
381.8	MODESTO		SHALE	21.0	59.0
360.8	MODESTO	PIASA	LIMESTONE	14.0	80.0
346.8	MODESTO		CALCAREOUS SHALE	1.0	94.0

MAPID: 16303635000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 10 QUARTERS/FOOTAGES: 1980' S line, 2640' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.8639 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.457997 DATE COLLECTED: 10 / 18 / 1972

SURFACE ELEVATION (FT.): 460.0 LOGGED (FT.): 121.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15509C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. I-11

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
460.0	PLEISTOCENE		UNCONSOLIDATED	25.0	0.0
435.0	MODESTO		GRAY SHALE	52.2	25.0
382.8	MODESTO		GRAY SHALE	2.7	77.2
380.1	MODESTO		GRAY SHALE	2.7	79.9
377.4	MODESTO	PIASA	LIMESTONE	7.2	82.6
370.2			CALCAREOUS SHALE	4.1	89.8
366.1			GRAY SHALE	5.5	93.9
360.6			LIMESTONE	1.5	99.4
359.1	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	1.6	100.9
357.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	102.5
355.6	CARBONDALE	LAWSON	GRAY SHALE	0.6	104.4
355.0	CARBONDALE	LAWSON	DARK SHALE	1.3	105.0
353.7	CARBONDALE	LAWSON	GRAY SHALE	1.5	106.3
352.2	CARBONDALE	LAWSON	DARK SHALE	1.0	107.8
351.2	CARBONDALE	CONANT	LIMESTONE	0.2	108.8
351.0	CARBONDALE		DARK SHALE	2.5	109.0
348.5	CARBONDALE		LIMESTONE	0.4	111.5
348.1	CARBONDALE		CALCAREOUS SHALE	1.1	111.9
347.1	CARBONDALE	BRERETON	LIMESTONE	1.4	112.9
345.7	CARBONDALE	ANNA	SHALE	1.0	114.3
344.7	CARBONDALE	HERRIN	COAL	6.5	115.3

MAPID: 16303636000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 10 QUARTERS/FOOTAGES: 1980' S line, 2310' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.864886

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.457997

DATE COLLECTED:

SURFACE ELEVATION (FT.): 450.0 LOGGED (FT.): 123.4

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 15519C

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
366.0	MODESTO	PIASA	LIMESTONE	6.7	84.0
359.3	CARBONDALE		CALCAREOUS SHALE	11.6	90.7
347.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	102.3
346.1	CARBONDALE	LAWSON	GRAY SHALE	1.1	103.9
345.0	CARBONDALE	LAWSON	DARK GRAY SHALE	4.1	105.0
340.8	CARBONDALE	CONANT	LIMESTONE	2.3	109.2
338.5	CARBONDALE	JAMESTOWN	CARBONACEOUS SHALE	0.3	111.5
338.2	CARBONDALE		BLACK SHALE	0.6	111.8
337.6	CARBONDALE	BRERETON	LIMESTONE	4.0	112.4
333.6	CARBONDALE	ANNA	DARK GRAY SHALE	0.6	116.4
333.0	CARBONDALE	HERRIN	COAL	6.4	117.0

MAPID: 16327652000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 10 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.869598

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.461994

DATE COLLECTED:

SURFACE ELEVATION (FT.): 474.5 LOGGED (FT.): 135.3

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15510C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS FROM COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
474.5	PLEISTOCENE		UNCONSOLIDATED	90.5	0.0	
384.0	MODESTO		LIMESTONE	2.5	90.5	
381.5	MODESTO		GRAY SHALE	0.8	93.0	
380.7	MODESTO	PIASA	LIMESTONE	7.7	93.8	
373.0			GRAY SHALE	10.5	101.5	
362.5	CARBONDALE		LIMESTONE	2.0	112.0	
360.5	CARBONDALE		SHALE WITH LIMESTONE	1.9	114.0	
358.6	CARBONDALE		LIMESTONE	1.9	115.9	
356.7	CARBONDALE		GRAY SHALE	0.3	117.8	
356.4	CARBONDALE		LIMESTONE	0.4	118.1	
356.0	CARBONDALE		DARK SHALE	1.0	118.5	
355.0	CARBONDALE		GRAY SHALE	2.6	119.5	
352.4	CARBONDALE		DARK SHALE	4.4	122.1	
348.0	CARBONDALE		SHALE WITH LIMESTONE	1.5	126.5	
346.6	CARBONDALE		LIMESTONE	0.7	127.9	
345.9	CARBONDALE	ANNA	BLACK SHALE	0.7	128.6	
345.2	CARBONDALE	HERRIN	COAL	6.0	129.3	

MAPID: 16327653000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 10 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.869566 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.463236 DATE COLLECTED:

SURFACE ELEVATION (FT.): 443.3 LOGGED (FT.): 107.2 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15511C WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
443.3	PLEISTOCENE		UNCONSOLIDATED	46.5	0.0	
396.8	MODESTO		GRAY SHALE	15.9	46.5	
380.9	MODESTO		LIMESTONE	2.0	62.4	
378.9	MODESTO		SHALE	1.0	64.4	
377.9	MODESTO	PIASA	LIMESTONE	8.3	65.4	
369.6			CALCAREOUS SHALE	2.4	73.7	
367.2			GRAY SHALE	7.4	76.1	
359.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.2	83.5	
358.6	CARBONDALE	BANKSTON FORK	SHALE WITH LIMESTONE	1.3	84.7	
357.3	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	86.0	
355.0	CARBONDALE		GRAY SHALE	2.6	88.3	
352.4	CARBONDALE		DARK SHALE	3.8	90.9	
348.6	CARBONDALE	CONANT	LIMESTONE	1.2	94.7	
347.4	CARBONDALE		BLACK SHALE	0.5	95.9	
346.9	CARBONDALE	JAMESTOWN	COAL	0.1	96.4	
346.8	CARBONDALE	BRERETON	LIMESTONE	3.7	96.5	
343.1	CARBONDALE	ANNA	BLACK SHALE	0.3	100.2	
342.9	CARBONDALE	HERRIN	COAL	6.8	100.4	

MAPID: 16327654000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 10 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.871286

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.463222

DATE COLLECTED:

SURFACE ELEVATION (FT.): 443.1 LOGGED (FT.): 112.8

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15512C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
443.1	PLEISTOCENE		UNCONSOLIDATED	46.0	0.0	
397.1	MODESTO		GRAY SHALE	18.2	46.0	
378.9	MODESTO		LIMESTONE	1.9	64.2	
377.0	MODESTO		GRAY SHALE	2.0	66.1	
375.0	MODESTO	PIASA	LIMESTONE	7.4	68.1	
367.6			GRAY SHALE	12.0	75.5	
355.6	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	87.5	
353.2	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	0.7	89.9	
352.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	90.6	
350.4	CARBONDALE		GRAY SHALE	3.6	92.7	
346.8	CARBONDALE		DARK SHALE	3.2	96.3	
343.6	CARBONDALE	CONANT	LIMESTONE	0.5	99.5	
343.1	CARBONDALE		CALCAREOUS SHALE	1.4	100.0	
341.7	CARBONDALE	JAMESTOWN	COAL	0.3	101.4	
341.5	CARBONDALE	BRERETON	LIMESTONE	4.5	101.6	
336.9	CARBONDALE	HERRIN	COAL	6.6	106.2	

MAPID: 16300054000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 11 QUARTERS/FOOTAGES: 3700' S line, 2450' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.844548

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.46272

DATE COLLECTED: 8 / 0 / 1923

SURFACE ELEVATION (FT.): 413.9

LOGGED (FT.): 124.0

LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
413.9			SOIL	1.0	0.0	
412.9			CLAY	14.0	1.0	
398.9			SAND	8.0	15.0	
390.9			CLAY	27.0	23.0	
363.9	MODESTO		SHALE	6.5	50.0	BLUE
357.4	MODESTO		COAL	0.3	56.5	
357.1	MODESTO		SHALE	12.2	56.8	
344.9	MODESTO		SHALE	9.0	69.0	R&BLU
335.9	MODESTO		LIMESTONE	1.5	78.0	
334.4	MODESTO		SHALE	3.0	79.5	
331.4	CARBONDALE	BRERETON	LIMESTONE	10.0	82.5	
321.4	CARBONDALE		SHALE	8.5	92.5	
312.9	CARBONDALE	BRERETON	SHALY LIMESTONE	2.0	101.0	
310.9	CARBONDALE	BRERETON	LIMESTONE	1.0	103.0	
309.9	CARBONDALE	BRERETON	SHALY LIMESTONE	4.0	104.0	
305.9	CARBONDALE	BRERETON	LIMESTONE	1.8	108.0	
304.1	CARBONDALE	ANNA	SHALE	6.0	109.8	BLACK
298.1	CARBONDALE	ANNA	COAL	0.2	115.8	
297.9	CARBONDALE	ANNA	SHALE	0.5	116.0	BLACK
297.4	CARBONDALE	HERRIN	COAL	6.8	116.5	
290.6	CARBONDALE		UNDERCLAY	0.7	123.3	

MAPID: 16300054000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 11 QUARTERS/FOOTAGES: 3700' S line, 2450' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.844548

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.46272

DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 413.9

LOGGED (FT.): 124.0

LOG TYPE:

SOURCE: UNION COLL0029

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
296.9	CARBONDALE	HERRIN	COAL	6.8	117.0	

MAPID: 16300055000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 11 QUARTERS/FOOTAGES: 5125' S line, 5125' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.853971 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.466664 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 420.8 LOGGED (FT.): 102.0 LOG TYPE:

SOURCE: UNION COLL0035 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
325.8	CARBONDALE	HERRIN	COAL	6.3	95.0	

MAPID: 16300060000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 11 QUARTERS/FOOTAGES: 75' S line, 5125' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.853863 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.452719 DATE COLLECTED:

SURFACE ELEVATION (FT.): 469.2 LOGGED (FT.): 144.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
469.2			UNCONSOLIDATED	33.0	0.0	
436.2			SHALE	7.0	33.0	BLUE
429.2			SHALE	17.0	40.0	
412.2			DARK SHALE	22.0	57.0	
390.2			SHALY LIMESTONE	4.0	79.0	
386.2			SHALE	18.3	83.0	
367.9			LIMESTONE	12.3	101.3	
355.6			UNDERCLAY	0.2	113.6	
355.4			SHALY LIMESTONE	2.0	113.8	
353.4			DARK SHALE	5.3	115.8	
348.2	CARBONDALE	BRERETON	LIMESTONE	5.0	121.0	
343.2	CARBONDALE	BRERETON	LIMESTONE	1.0	126.0	
342.2	CARBONDALE	ANNA	DARK SHALE	9.1	127.0	
333.1	CARBONDALE	HERRIN	COAL	3.4	136.1	
329.7	CARBONDALE	HERRIN	BONE COAL	0.0	139.5	
329.7	CARBONDALE	HERRIN	COAL	3.3	139.5	
326.4	CARBONDALE		UNDERCLAY	1.2	142.8	

MAPID: 16300060000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 11 QUARTERS/FOOTAGES: 75' S line, 5125' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.853863 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.452719 DATE COLLECTED:

SURFACE ELEVATION (FT.): 469.2 LOGGED (FT.): 144.0 LOG TYPE:

SOURCE: UNION COLL0010 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
333.2	CARBONDALE	HERRIN	COAL	6.8	136.0	

MAPID: 16302496000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 11 QUARTERS/FOOTAGES: 1' S line, 1' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.854565 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.452516 DATE COLLECTED:

SURFACE ELEVATION (FT.): 468.5 LOGGED (FT.): 144.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 10 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
468.5	PLEISTOCENE		UNCONSOLIDATED	32.0	0.0	
436.5	MODESTO		SHALE	25.0	32.0	
411.5	MODESTO		DARK SHALE	22.0	57.0	
389.5	MODESTO		SHALY LIMESTONE	4.0	79.0	
386.5	MODESTO		SHALE	18.3	82.0	ERROR IN LOG MEASUREMENT
367.2	MODESTO	PIASA	LIMESTONE	12.3	101.3	
354.9			UNDERCLAY	0.2	113.6	
354.7			SHALY LIMESTONE	2.0	113.8	
352.7			DARK SHALE	5.3	115.8	
347.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	121.0	
341.5	CARBONDALE		DARK SHALE	9.1	127.0	
332.4	CARBONDALE	HERRIN	COAL	6.8	136.1	
325.7	CARBONDALE		UNDERCLAY	1.2	142.8	

MAPID: 16302515000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 11 QUARTERS/FOOTAGES: 1' N line, 1' W line of SW NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.845317 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.463358 DATE COLLECTED:

SURFACE ELEVATION (FT.): 431.0 LOGGED (FT.): 124.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 29 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
431.0	PLEISTOCENE		CLAY	15.0	0.0
416.0	PLEISTOCENE		SAND	8.0	15.0
408.0	PLEISTOCENE		CLAY	27.0	23.0
381.0	MODESTO		CARBONACEOUS SHALE	6.5	50.0
374.5	MODESTO		COAL	0.3	56.5
374.2	MODESTO		GRAY SHALE	12.2	56.8
362.0	MODESTO		SHALE	9.0	69.0
353.0	MODESTO		LIMESTONE	1.5	78.0
351.5	MODESTO		SHALE	3.0	79.5
348.5	MODESTO	PIASA	LIMESTONE	10.0	82.5
338.5			SHALE	8.5	92.5
330.0			CALCAREOUS SHALE	2.0	101.0
328.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	103.0
327.0	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	4.0	104.0
323.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	108.0
321.2	CARBONDALE		BLACK SHALE	6.0	109.8
315.2	CARBONDALE	JAMESTOWN	COAL	0.2	115.8
315.0	CARBONDALE	ANNA	BLACK SHALE	0.5	116.0
314.5	CARBONDALE	HERRIN	COAL	6.8	116.5
307.7	CARBONDALE		UNDERCLAY	0.7	123.3

MAPID: 16302521000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 11 QUARTERS/FOOTAGES: 1' N line, 1' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.854727 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.466935 DATE COLLECTED:

SURFACE ELEVATION (FT.): 426.5 LOGGED (FT.): 426.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 35 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
426.5	PLEISTOCENE		UNCONSOLIDATED	19.0	0.0
407.5	PLEISTOCENE		SAND	6.0	19.0
401.5	PLEISTOCENE		CLAY	5.0	25.0
396.5	MODESTO		BLUE SHALE	6.3	30.0
390.2	MODESTO		COAL	0.3	36.3
389.8	MODESTO		GRAY SHALE	11.3	36.7
378.5	MODESTO		BLACK SHALE	4.0	48.0
374.5	MODESTO		GRAY SHALE	1.0	52.0
373.5	MODESTO		GRAY SHALE	4.5	53.0
369.0	MODESTO	PIASA	LIMESTONE	6.5	57.5
362.5			SHALE	12.0	64.0
350.5	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	6.5	76.0
344.0	CARBONDALE		GRAY SHALE	2.5	82.5
341.5	CARBONDALE		BLACK SHALE	3.5	85.0
338.0	CARBONDALE		LIMESTONE	1.5	88.5
336.5	CARBONDALE		CALCAREOUS SHALE	2.0	90.0
334.5	CARBONDALE	BRERETON	LIMESTONE	2.5	92.0
332.0	CARBONDALE	HERRIN	COAL	6.3	94.5
325.8	CARBONDALE		UNDERCLAY	21.3	100.7

MAPID: 16302963000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 11 QUARTERS/FOOTAGES: 330' N line, 1' W line of NW SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.845274 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.45883 DATE COLLECTED: 4 / 8 / 1969

SURFACE ELEVATION (FT.): 440.0 LOGGED (FT.): 138.7 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8556C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. I-10

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
440.0	PLEISTOCENE		UNCONSOLIDATED	11.4	0.0	
428.6	MODESTO		SHALE	22.6	11.4	ERROR IN LOG MEASUREMENT
400.0	MODESTO		SHALE	50.9	40.0	
349.1	MODESTO		LIMESTONE	2.3	90.9	
346.8	MODESTO		GRAY SHALE	2.1	93.2	
344.7	MODESTO	PIASA	LIMESTONE	6.1	95.3	
338.6			GRAY SHALE	1.0	101.4	
337.6			LIMESTONE	1.4	102.4	
336.2			GRAY SHALE	11.2	103.8	
325.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	115.0	
323.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.7	116.8	
319.5	CARBONDALE	BANKSTON FORK	LIMESTONE	0.8	120.5	
318.7	CARBONDALE		GRAY SHALE	2.5	121.3	
316.2	CARBONDALE	BRERETON	LIMESTONE	0.4	123.8	
315.8	CARBONDALE		SHALE	4.1	124.2	
311.7	CARBONDALE	HERRIN	COAL	6.9	128.3	
304.8	CARBONDALE		UNDERCLAY	3.5	135.2	

MAPID: 16303391000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 11 QUARTERS/FOOTAGES: 0' S line, 2310' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.843979

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.452503

DATE COLLECTED:

SURFACE ELEVATION (FT.): 421.0 LOGGED (FT.): 113.8

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12593C

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
351.1	MODESTO	PIASA	LIMESTONE	15.0	69.9
336.1	CARBONDALE		GRAY SHALE	7.8	84.9
328.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	92.7
325.3	CARBONDALE	LAWSON	CLAYSTONE	0.6	95.7
324.7	CARBONDALE	LAWSON	MOTTLED SHALE	1.8	96.3
322.9	CARBONDALE	LAWSON	DARK GRAY SHALE	4.7	98.1
318.2	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.8	102.8
317.4	CARBONDALE	JAMESTOWN	BONE COAL	0.5	103.6
316.9	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	2.9	104.1
314.0	CARBONDALE	HERRIN	COAL	6.8	107.0

MAPID: 16326725000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 11 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.839969

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.464036

DATE COLLECTED: 3 / 21 / 1988

SURFACE ELEVATION (FT.): 426.4 LOGGED (FT.): 158.4

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16849C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
426.4	PLEISTOCENE		CLAY	60.1	0.0	
366.3			GRAY SHALE	30.4	60.1	
335.9			LIMESTONE	12.3	90.5	
323.6			GRAY SHALE	3.4	102.8	
320.2			MUDSTONE	2.9	106.2	
317.3			LIMESTONE	0.5	109.1	
316.8			MUDSTONE	0.3	109.6	
316.5			LIMESTONE	1.4	109.9	
315.1			MUDSTONE	0.3	111.3	
314.8	CARBONDALE		CALCAREOUS CLAYSTONE	4.2	111.6	
310.6	CARBONDALE		LIMESTONE	0.6	115.8	
310.0	CARBONDALE		SHALE	2.3	116.4	
307.7	CARBONDALE		MUDSTONE	1.5	118.7	
306.2	CARBONDALE		MUDSTONE	0.3	120.2	DARK GRAY, CALCAREOUS
305.9	CARBONDALE		MUDSTONE	0.9	120.5	
305.0	CARBONDALE		CORE LOSS	1.8	121.4	CORE LOSS
303.2	CARBONDALE	ANNA	SHALE	2.7	123.2	DARK
300.5	CARBONDALE	HERRIN	COAL	5.0	125.9	
295.5	CARBONDALE	HERRIN	SHALE	0.2	130.9	"BLUE BAND"
295.4	CARBONDALE	HERRIN	COAL	1.3	131.0	
294.1	CARBONDALE		MUDSTONE	1.0	132.3	OLIVE GRAY, PLANT FOSSILS
293.1	CARBONDALE		CALCAREOUS CLAYSTONE	1.3	133.3	
291.8	CARBONDALE		MUDSTONE	4.2	134.6	OCC. LS BAND
287.6	CARBONDALE		LIMESTONE	1.0	138.8	
286.6	CARBONDALE		MUDSTONE	1.0	139.8	
285.6	CARBONDALE		ARGILLACEOUS LIMESTONE	0.5	140.8	
285.1	CARBONDALE		LIMESTONE	0.9	141.3	
284.2	CARBONDALE		MUDSTONE	3.5	142.2	
280.7	CARBONDALE		LIMESTONE	0.6	145.7	
280.1	CARBONDALE		MUDSTONE	2.2	146.3	MINOR SILT
277.9	CARBONDALE		MUDSTONE	9.9	148.5	SILTY

MAPID: 16327722000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 11 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.845157

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.458643

DATE COLLECTED: 4 / 8 / 1969

SURFACE ELEVATION (FT.): 434.3 LOGGED (FT.): 138.7

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8556C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
434.3	PLEISTOCENE		UNCONSOLIDATED	17.4	0.0	
416.9			SANDSTONE	22.6	17.4	
394.3			SHALE	50.9	40.0	
343.4			LIMESTONE	2.3	90.9	
341.1			GRAY SHALE	2.1	93.2	
339.0			LIMESTONE	6.1	95.3	
332.9			GRAY SHALE	1.0	101.4	
331.9			LIMESTONE	1.4	102.4	
330.5			GRAY SHALE	11.2	103.8	
319.3			LIMESTONE	1.8	115.0	
317.5			GRAY SHALE	3.7	116.8	
313.8			LIMESTONE	0.8	120.5	
313.0			GRAY SHALE	2.5	121.3	
310.5			LIMESTONE	0.4	123.8	
310.1	CARBONDALE	ENERGY	SHALE	1.2	124.2	FOSSILS
308.9	CARBONDALE	ENERGY	GRAY SHALE	2.9	125.4	
306.0	CARBONDALE	HERRIN	COAL	6.9	128.3	
299.1	CARBONDALE		UNDERCLAY	3.5	135.2	

MAPID: 16327723000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 11 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.845714

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.452518

DATE COLLECTED: 1 / 6 / 1981

SURFACE ELEVATION (FT.): 425.6 LOGGED (FT.): 120.7

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16545C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
425.6	PLEISTOCENE		UNCONSOLIDATED	23.6	0.0	
402.0	PLEISTOCENE		SAND & GRAVEL	10.9	23.6	
391.1	PLEISTOCENE		GRAVEL	16.6	34.5	
374.5			SHALE	16.7	51.1	
357.8			LIMESTONE	3.3	67.8	
354.5			GRAY SHALE	2.5	71.1	
352.0			LIMESTONE	1.8	73.6	
350.2			GRAY SHALE	1.4	75.4	
348.8			LIMESTONE	3.2	76.8	
345.6			LIMESTONE	7.0	80.0	WITH SH STREAKS
338.6			SHALE	1.4	87.0	BROWN
337.2	CARBONDALE		LIMESTONE	1.6	88.4	
335.5	CARBONDALE		GRAY SHALE	0.8	90.1	
334.7	CARBONDALE		LIMESTONE	0.7	90.9	
334.1	CARBONDALE		GRAY SHALE	0.3	91.5	
333.8	CARBONDALE		LIMESTONE	4.8	91.8	
329.1	CARBONDALE		GRAY SHALE	0.4	96.5	
328.7	CARBONDALE		SHALE	1.8	96.9	DARK
326.9	CARBONDALE	ANNA	BLACK SHALE	5.0	98.7	
322.0	CARBONDALE	HERRIN	COAL	6.6	103.6	
315.4	CARBONDALE		GRAY SHALE	1.1	110.2	
314.4	CARBONDALE		LIMESTONE	9.5	111.2	

MAPID: 16300053000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 12 QUARTERS/FOOTAGES: 3235' S line, 200' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.835234

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.461424

DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 404.6 LOGGED (FT.): 101.0

LOG TYPE:

SOURCE: UNION COLL0027

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
311.6	CARBONDALE	HERRIN	COAL	7.1	93.0	

MAPID: 16300056000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 12 QUARTERS/FOOTAGES: 4420' S line, 200' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.818285 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.464675 DATE COLLECTED: 7 / 25 / 1923

SURFACE ELEVATION (FT.): 404.9 LOGGED (FT.): 117.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
404.9			SOIL	11.0	0.0	
393.9			CLAY	7.0	11.0	
386.9			SANDY CLAY	6.0	18.0	
380.9			SAND	4.0	24.0	
376.9			CLAY	21.0	28.0	
355.9			SAND	9.0	49.0	
346.9			SAND	2.0	58.0	
344.9			SOFT SHALE	8.0	60.0	
336.9			SHALE	5.5	68.0	R&BLU
331.4			LIMESTONE	11.0	73.5	
320.4			CLAYSTONE	6.5	84.5	
313.9			SHALY LIMESTONE	5.0	91.0	
308.9			SOFT SHALE	3.0	96.0	
305.9			SHALE	4.0	99.0	BLACK
301.9	CARBONDALE	BRERETON	LIMESTONE	5.6	103.0	BLUE
296.3	CARBONDALE	ANNA	SOFT SHALE	0.3	108.6	
296.1	CARBONDALE	HERRIN	COAL	7.0	108.8	
289.1	CARBONDALE		UNDERCLAY	1.2	115.8	

MAPID: 16300056000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 12 QUARTERS/FOOTAGES: 4420' S line, 200' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.818285 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.464675 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 404.9 LOGGED (FT.): 117.0 LOG TYPE:

SOURCE: UNION COLL0021 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
295.9	CARBONDALE	HERRIN	COAL	7.0	109.0	

MAPID: 16302507000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 12 QUARTERS/FOOTAGES: 0' N line, 0' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.817597 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.46707 DATE COLLECTED:

SURFACE ELEVATION (FT.): 405.0 LOGGED (FT.): 116.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 21 WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
331.3	MODESTO	PIASA	LIMESTONE	11.0	73.7
320.3	CARBONDALE		CLAYSTONE & SHALE	6.5	84.7
313.8	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	5.0	91.2
308.8	CARBONDALE	LAWSON	GRAY SHALE	3.0	96.2
305.8	CARBONDALE	LAWSON	BLACK SHALE	4.0	99.2
301.8	CARBONDALE	BRERETON	LIMESTONE	5.6	103.2
296.2	CARBONDALE	ANNA	BLACK SHALE	0.3	108.8
296.0	CARBONDALE	HERRIN	COAL	7.0	109.0

MAPID: 16302513000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 12 QUARTERS/FOOTAGES: 1' S line, 1' W line of NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.835918 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.45976 DATE COLLECTED:

SURFACE ELEVATION (FT.): 404.5 LOGGED (FT.): 101.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 27 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
404.5	PLEISTOCENE		UNCONSOLIDATED	27.0	0.0
377.5	PLEISTOCENE		SAND	6.0	27.0
371.5	PLEISTOCENE		CLAY	19.0	33.0
352.5	MODESTO		GRAY SHALE	3.0	52.0
349.5	MODESTO		GRAY SHALE	1.5	55.0
348.0	MODESTO		BLUE SHALE	2.0	56.5
346.0	MODESTO	PIASA	LIMESTONE	10.5	58.5
335.5			SHALE	11.0	69.0
324.5	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	6.0	80.0
318.5	CARBONDALE	ANNA	BLACK SHALE	6.8	86.0
311.7	CARBONDALE	HERRIN	COAL	7.1	92.8
304.6	CARBONDALE		UNDERCLAY	1.1	99.9

MAPID: 16302934000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 12 QUARTERS/FOOTAGES: 0' N line, 0' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.817597

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.46707

DATE COLLECTED: 4 / 17 / 1969

SURFACE ELEVATION (FT.): 409.0 LOGGED (FT.): 123.5

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8684C

WELL TYPE: Coal Test

COMMENT: PEABODY LOC. Q-1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
409.0	PLEISTOCENE		UNCONSOLIDATED	75.2	0.0	
333.8	MODESTO	PIASA	LIMESTONE W/ SHALE	12.9	75.2	
320.9			GRAY SHALE	8.1	88.1	
312.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	96.2	
310.9	CARBONDALE	BANKSTON FORK	SANDY SHALE	1.5	98.1	
309.4	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	99.6	
307.8	CARBONDALE		GRAY SHALE	2.0	101.2	
305.8	CARBONDALE		DARK SHALE	4.1	103.2	
301.7	CARBONDALE	CONANT	LIMESTONE W/ SHALE	1.1	107.3	
300.6	CARBONDALE		LIMESTONE	0.2	108.4	
300.4	CARBONDALE	JAMESTOWN	COAL	0.2	108.6	
300.2	CARBONDALE		UNDERCLAY	0.1	108.8	
300.1	CARBONDALE	BRERETON	LIMESTONE	4.8	108.9	
295.3	CARBONDALE	ANNA	BLACK SHALE	0.1	113.7	
295.2	CARBONDALE	HERRIN	COAL	6.9	113.8	ERROR IN LOG MEASUREMENT
288.1	CARBONDALE		UNDERCLAY	2.6	120.9	

MAPID: 16327655000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 12 QUARTERS/FOOTAGES: 990' N line, 1650' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.830163 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.464302 DATE COLLECTED:

SURFACE ELEVATION (FT.): 405.0 LOGGED (FT.): 109.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15899C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
405.0	PLEISTOCENE		UNCONSOLIDATED	53.3	0.0
351.7			GRAY SHALE	16.4	53.3
335.3			LIMESTONE	1.6	69.7
333.7			GRAY SHALE	10.5	71.3
323.2	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	4.5	81.8
318.7	CARBONDALE		GRAY SHALE	4.4	86.3
314.3	CARBONDALE		DARK SHALE	4.2	90.7
310.1	CARBONDALE	JAMESTOWN	SHALE/COAL	1.0	94.9
309.1	CARBONDALE	ANNA	BLACK SHALE	2.2	95.9
306.9	CARBONDALE	HERRIN	COAL	6.8	98.1
300.1	CARBONDALE		UNDERCLAY	3.5	104.9
296.6	CARBONDALE		LIMESTONE	1.0	108.4

MAPID: 16327656000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 12 QUARTERS/FOOTAGES: 1650' S line, 1320' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.831267 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.457043 DATE COLLECTED:

SURFACE ELEVATION (FT.): 405.0 LOGGED (FT.): 102.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16603C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
405.0	PLEISTOCENE		UNCONSOLIDATED	53.8	0.0
351.2	MODESTO		LIMESTONE	1.5	53.8
349.7	MODESTO		GRAY SHALE	2.7	55.3
347.0	MODESTO	PIASA	LIMESTONE	11.3	58.0
335.7			GRAY SHALE	1.8	69.3
333.9			LIMESTONE	0.8	71.1
333.1			GRAY SHALE	4.6	71.9
328.5			LIMESTONE	1.0	76.5
327.5			GRAY SHALE	1.5	77.5
326.0			LIMESTONE	0.5	79.0
325.5	CARBONDALE		GRAY SHALE	2.2	79.5
323.3	CARBONDALE		LIMESTONE	1.5	81.7
321.8	CARBONDALE		GRAY SHALE	1.4	83.2
320.4	CARBONDALE		DARK SHALE	6.7	84.6
313.7	CARBONDALE	HERRIN	COAL	7.3	91.3
306.4	CARBONDALE		UNDERCLAY	4.2	98.6

MAPID: 16327657000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 12 QUARTERS/FOOTAGES: 2310' N line, 1320' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.831294 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.460654 DATE COLLECTED:

SURFACE ELEVATION (FT.): 405.0 LOGGED (FT.): 102.7 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16604C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
405.0	PLEISTOCENE		UNCONSOLIDATED	56.6	0.0
348.4	MODESTO	PIASA	LIMESTONE	9.8	56.6
338.6			SHALE	10.6	66.4
328.0	CARBONDALE		LIMESTONE	1.0	77.0
327.0	CARBONDALE		GRAY SHALE	2.7	78.0
324.3	CARBONDALE		BLACK LIMESTONE	0.4	80.7
323.9	CARBONDALE		LIMESTONE	2.2	81.1
321.7	CARBONDALE		GRAY SHALE	8.2	83.3
313.5	CARBONDALE		BLACK SHALE	0.4	91.5
313.1	CARBONDALE	HERRIN	COAL	7.1	91.9
306.0	CARBONDALE		UNDERCLAY	3.7	99.0

MAPID: 16327705000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 12 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.832531

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.455701

DATE COLLECTED: 6 / 17 / 1988

SURFACE ELEVATION (FT.): 407.7 LOGGED (FT.): 125.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16859C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
407.7	PLEISTOCENE		UNCONSOLIDATED	61.1	0.0	CLAY, DRIFT
346.6			LIMESTONE	2.0	61.1	
344.6			SHALE	1.7	63.1	
342.9			LIMESTONE	0.2	64.8	WHITE, HARD
342.7			LIMESTONE	3.4	65.0	LT. GRAY, HARD
339.3			MUDSTONE	0.4	68.4	
338.9			LIMESTONE	0.4	68.8	
338.5			SHALE	0.1	69.2	
338.4			LIMESTONE	1.9	69.3	
336.5	CARBONDALE		SHALE	0.2	71.2	
336.3	CARBONDALE		LIMESTONE	2.2	71.4	
334.1	CARBONDALE		MUDSTONE	0.4	73.6	
333.7	CARBONDALE		LIMESTONE	0.2	74.0	
333.5	CARBONDALE		SHALE	0.8	74.2	
332.7	CARBONDALE		MUDSTONE	1.8	75.0	
330.9	CARBONDALE		MUDSTONE	3.2	76.8	SLICKENSIDES
327.7	CARBONDALE		CALCAREOUS CLAYSTONE	2.9	80.0	MINOR LS BANDS
324.8	CARBONDALE		CALCAREOUS CLAYSTONE	0.8	82.9	MASSIVE
324.0	CARBONDALE		LIMESTONE	0.5	83.7	
323.5	CARBONDALE		SHALE	0.3	84.2	
323.2	CARBONDALE		LIMESTONE	0.4	84.5	
322.8	CARBONDALE		CALCAREOUS SHALE	2.7	84.9	INTERBEDDED, THIN
320.1	CARBONDALE		ARGILLACEOUS LIMESTONE	0.4	87.6	
319.7	CARBONDALE		CALCAREOUS CLAYSTONE	1.0	88.0	
318.7	CARBONDALE		LIMESTONE	0.6	89.0	
318.1	CARBONDALE		SHALE	0.8	89.6	DARK GRAY
317.3	CARBONDALE	ANNA	BLACK SHALE	7.9	90.4	
309.4	CARBONDALE	ANNA	BLACK SHALE	0.2	98.3	WITH COAL STREAKS
309.2	CARBONDALE	HERRIN	COAL	5.0	98.5	
304.2	CARBONDALE	HERRIN	SHALE	0.1	103.5	
304.1	CARBONDALE	HERRIN	COAL	1.5	103.6	
302.6	CARBONDALE		UNDERCLAY	5.9	105.1	
296.7	CARBONDALE		ARGILLACEOUS LIMESTONE	1.0	111.0	
295.7	CARBONDALE		SHALE	1.0	112.0	WITH THIN LS LAMINAE
294.7	CARBONDALE		LIMESTONE	1.7	113.0	

293.0	CARBONDALE	MUDSTONE	0.5	114.7	
292.5	CARBONDALE	SHALE	1.0	115.2	
291.5	CARBONDALE	MUDSTONE	1.7	116.2	
289.8	CARBONDALE	LIMESTONE	0.8	117.9	MASSIVE
289.0	CARBONDALE	SILTY SHALE	6.3	118.7	

MAPID: 16300057000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 13 **QUARTERS/FOOTAGES:** 125' S line, 125' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.817775 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.438244 **DATE COLLECTED:** 7 / 13 / 1923
SURFACE ELEVATION (FT.): 413.2 **LOGGED (FT.):** 123.0 **LOG TYPE:** Drillers Log
SOURCE: UNION COLLIERY CO **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
413.2			SOIL	3.0	0.0	
410.2			CLAY	14.0	3.0	YELLOW
396.2			CLAY	12.0	17.0	BLUE
384.2			SAND	11.0	29.0	
373.2			SANDY CLAY	25.0	40.0	
348.2			SAND	7.0	65.0	
341.2			LIMESTONE	2.5	72.0	
338.7			SOFT SHALE	3.0	74.5	
335.7			LIMESTONE	6.2	77.5	
329.5			SHALE	11.3	83.7	R&BLU
318.2			LIMESTONE	4.2	95.0	
314.0			LIMESTONE	2.8	99.2	
311.2			LIMESTONE	2.5	102.0	
308.7	CARBONDALE	BRERETON	LIMESTONE	2.0	104.5	
306.7	CARBONDALE	ANNA	SHALE	9.1	106.5	BLACK
297.6	CARBONDALE	HERRIN	COAL	7.1	115.6	
290.5	CARBONDALE		UNDERCLAY	0.3	122.7	

MAPID: 16300057000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 13 **QUARTERS/FOOTAGES:** 125' S line, 125' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.817775 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.438244 **DATE COLLECTED:** 0 / 0 / 1923
SURFACE ELEVATION (FT.): 413.2 **LOGGED (FT.):** 123.0 **LOG TYPE:**
SOURCE: UNION COLL0017 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
297.2	CARBONDALE	HERRIN	COAL	7.1	116.0	

MAPID: 16300058000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 13 QUARTERS/FOOTAGES: 4950' S line, 200' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.818199 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.451569 DATE COLLECTED: 7 / 20 / 1923

SURFACE ELEVATION (FT.): 407.0 LOGGED (FT.): 127.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
407.0			SOIL	5.0	0.0	
402.0			CLAY	16.0	5.0	
386.0			SAND	14.0	21.0	
372.0			CLAY	14.0	35.0	
358.0			SAND	8.0	49.0	
350.0			CLAY	2.0	57.0	BLUE
348.0			SHALE	1.0	59.0	
347.0			SANDY SHALE	3.0	60.0	
344.0			SOFT SHALE	7.0	63.0	
337.0			SHALE	8.0	70.0	BLU&R
329.0			LIMESTONE	1.5	78.0	
327.5			CLAYSTONE	4.5	79.5	
323.0			LIMESTONE	4.5	84.0	
318.5			SHALE	6.0	88.5	GREEN
312.5			CLAYSTONE	3.5	94.5	
309.0			SHALY LIMESTONE	4.0	98.0	
305.0			LIMESTONE	6.0	102.0	
299.0			SHALE	6.0	108.0	BLACK
293.0			LIMESTONE	1.5	114.0	
291.5	CARBONDALE		COAL	0.2	115.5	
291.3	CARBONDALE	BRERETON	LIMESTONE	1.8	115.7	
289.5	CARBONDALE	ANNA	SHALE	1.5	117.5	BLACK
288.0	CARBONDALE	ANNA	SHALE	0.2	119.0	BLACK
287.8	CARBONDALE	HERRIN	COAL	2.3	119.2	
285.5	CARBONDALE	HERRIN	BONE COAL	0.1	121.5	
285.4	CARBONDALE	HERRIN	COAL	2.8	121.6	
282.6	CARBONDALE	HERRIN	SHALE	0.1	124.4	
282.5	CARBONDALE	HERRIN	COAL	1.7	124.5	
280.9	CARBONDALE		UNDERCLAY	0.8	126.1	

MAPID: 16300058000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 13 QUARTERS/FOOTAGES: 4950' S line, 200' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.818199 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.451569 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 407.0 LOGGED (FT.): 127.0 LOG TYPE:

SOURCE: UNION COLL0019 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
288.0	CARBONDALE	HERRIN	COAL	7.0	119.0	

MAPID: 16300059000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 13 QUARTERS/FOOTAGES: 990' S line, 4420' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.832883 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.440766 DATE COLLECTED: 8 / 4 / 1923

SURFACE ELEVATION (FT.): 401.0 LOGGED (FT.): 90.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
401.0			SOIL	3.0	0.0	
398.0			CLAY	7.0	3.0	DARK
391.0			SANDY CLAY	8.0	10.0	
383.0			SAND	10.0	18.0	
373.0			CLAY	16.0	28.0	
357.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	44.0	
353.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.6	48.0	
345.4	CARBONDALE		SOFT SHALE	9.4	55.6	
336.0	CARBONDALE	CONANT	SHALY LIMESTONE	5.0	65.0	
331.0	CARBONDALE		SHALE	6.5	70.0	BLACK
324.5	CARBONDALE	JAMESTOWN	COAL	0.3	76.5	
324.2	CARBONDALE		SHALE	3.0	76.8	BLACK
321.2	CARBONDALE	BRERETON	LIMESTONE	2.9	79.8	BLUE
318.3	CARBONDALE	ANNA	SHALE	0.3	82.7	BLACK
318.0	CARBONDALE	HERRIN	COAL	6.2	83.0	
311.8	CARBONDALE		UNDERCLAY	0.8	89.2	CORE BEGINS AT 44'

MAPID: 16300059000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 13 QUARTERS/FOOTAGES: 990' S line, 4420' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.832883 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.440766 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 401.0 LOGGED (FT.): 90.0 LOG TYPE:

SOURCE: UNION COLL0025 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
318.0	CARBONDALE	HERRIN	COAL	6.2	83.0	

MAPID: 16300669000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 13 QUARTERS/FOOTAGES: 1325' S line, 170' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.835233 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.441712 DATE COLLECTED: 5 / 0 / 1907

SURFACE ELEVATION (FT.): 400.5 LOGGED (FT.): 199.0 LOG TYPE: Drillers Log

SOURCE: N W BORDERS WISE WELL DRILLING WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
400.5			SOIL	18.0	0.0	
382.5			SAND	24.0	18.0	
358.5			WOOD	4.0	42.0	
354.5			SHALE	7.0	46.0	
347.5			ROCK	9.0	53.0	
338.5			SHALE	12.0	62.0	
326.5			ROCK	2.0	74.0	
324.5			SHALE	8.0	76.0	
316.5			BLACK SHALE	3.0	84.0	
313.5			ROCK	3.0	87.0	
310.5	CARBONDALE	HERRIN	COAL	6.8	90.0	#6
303.7	CARBONDALE		UNDERCLAY	0.7	96.8	
303.0	CARBONDALE		SANDY SHALE	45.5	97.5	
257.5	CARBONDALE		SHALE	6.0	143.0	BLUE
251.5	CARBONDALE		SHALE	8.5	149.0	BLACK
243.0	CARBONDALE		UNDERCLAY	3.0	157.5	
240.0	CARBONDALE		SANDY SHALE	10.5	160.5	
229.5	CARBONDALE		LIMESTONE	3.0	171.0	
226.5	CARBONDALE		SANDSTONE	17.0	174.0	
209.5	CARBONDALE		SHALE	8.0	191.0	

MAPID: 16300669000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 13 QUARTERS/FOOTAGES: 1325' S line, 170' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.835233 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.441712 DATE COLLECTED: 0 / 0 / 1907

SURFACE ELEVATION (FT.): 400.5 LOGGED (FT.): 201.0 LOG TYPE:

SOURCE: BORDERS WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
310.5	CARBONDALE	HERRIN	COAL	6.8	90.0

MAPID: 16302004000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 13 QUARTERS/FOOTAGES: 388' S line, 10' W line of SE SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.831166 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.43909 DATE COLLECTED: 10 / 9 / 1957

SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 112.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2812 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
410.0	PLEISTOCENE		UNCONSOLIDATED	30.0	0.0
380.0	PLEISTOCENE		SAND & GRAVEL	39.9	30.0
340.1	MODESTO	PIASA	LIMESTONE	8.4	69.9
331.7			GRAY SHALE	10.9	78.3
320.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	89.2
319.0	CARBONDALE		DARK SHALE	7.6	91.0
311.4	CARBONDALE	BRERETON	LIMESTONE	4.4	98.6
307.0	CARBONDALE	ANNA	BLACK SHALE	2.3	103.0
304.7	CARBONDALE	HERRIN	COAL	6.6	105.3
298.1	CARBONDALE		UNDERCLAY	0.5	111.9

MAPID: 16302398000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 13 QUARTERS/FOOTAGES: 16' N line, 29' E line of SE SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.826705 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.44156 DATE COLLECTED: 8 / 16 / 1955

SURFACE ELEVATION (FT.): 411.3 LOGGED (FT.): 126.6 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2091 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
411.3	PLEISTOCENE		UNCONSOLIDATED	76.4	0.0
334.9	MODESTO		LIMESTONE	2.8	76.4
332.0	MODESTO		GRAY SHALE	1.3	79.3
330.7	MODESTO	PIASA	LIMESTONE	9.6	80.6
321.1			GRAY SHALE	10.4	90.2
310.7	CARBONDALE	BANKSTON FORK	LIMESTONE	10.1	100.6
300.6	CARBONDALE		DARK SHALE	4.2	110.7
296.5	CARBONDALE	ANNA	BLACK SHALE	3.3	114.8
293.2	CARBONDALE	HERRIN	COAL	6.6	118.1
286.6	CARBONDALE		UNDERCLAY	1.9	124.7

MAPID: 16302503000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 13 QUARTERS/FOOTAGES: 1' S line, 1' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.817338 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.4379 DATE COLLECTED:

SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 123.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 17 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
410.0	PLEISTOCENE		UNCONSOLIDATED	29.0	0.0
381.0	PLEISTOCENE		SAND	11.0	29.0
370.0	PLEISTOCENE		SANDY CLAY	25.0	40.0
345.0	PLEISTOCENE		SAND & GRAVEL	7.0	65.0
338.0	MODESTO		LIMESTONE	2.5	72.0
335.5	MODESTO		GRAY SHALE	3.0	74.5
332.5	MODESTO	PIASA	LIMESTONE	6.2	77.5
326.3			SHALE	15.5	83.7
310.8	CARBONDALE	BANKSTON FORK	LIMESTONE	2.8	99.2
308.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	2.5	102.0
305.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	104.5
303.5	CARBONDALE	ANNA	BLACK SHALE	9.1	106.5
294.4	CARBONDALE	HERRIN	COAL	7.1	115.6
287.3	CARBONDALE		UNDERCLAY	0.3	122.7

MAPID: 16302931000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 13 QUARTERS/FOOTAGES: 0' N line, 0' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.817504

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.452471

DATE COLLECTED:

SURFACE ELEVATION (FT.): 405.0 LOGGED (FT.): 126.0

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8670C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
322.0	MODESTO	PIASA	LIMESTONE	9.5	83.0	
312.5	CARBONDALE		GRAY SHALE	10.5	92.5	
302.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.8	103.0	UPPER BENCH
299.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.2	105.8	SHALE PARTING
296.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.2	109.0	LOWER BENCH
292.8	CARBONDALE	LAWSON	GRAY SHALE	5.8	112.2	
287.0	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.2	118.0	
286.8	CARBONDALE	JAMESTOWN	BONE COAL	0.6	118.2	
286.2	CARBONDALE	ANNA	BLACK SHALE	0.8	118.8	
286.0	CARBONDALE	HERRIN	COAL	7.0	119.0	

MAPID: 16324193000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 13 QUARTERS/FOOTAGES: 1650' N line, 990' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.832376 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.447935 DATE COLLECTED: 11 / 2 / 1976

SURFACE ELEVATION (FT.): 400.0 LOGGED (FT.): 116.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16607C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. Q-6

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
400.0	PLEISTOCENE		UNCONSOLIDATED	56.3	0.0
343.7	MODESTO		LIMESTONE	4.5	56.3
339.2	MODESTO		GRAY SHALE	1.3	60.8
337.9	MODESTO	PIASA	LIMESTONE	8.3	62.1
329.6			SHALE	13.0	70.4
316.6			LIMESTONE	0.3	83.4
316.3			SHALE	0.5	83.7
315.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.7	84.2
314.1	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.2	85.9
314.0	CARBONDALE	BANKSTON FORK	LIMESTONE	0.3	86.0
313.7	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.1	86.3
313.6	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	86.4
312.3	CARBONDALE		SHALE	1.3	87.7
311.0	CARBONDALE	CONANT	LIMESTONE	1.5	89.0
309.6	CARBONDALE		SHALE	9.4	90.4
300.2	CARBONDALE	HERRIN	COAL	6.8	99.8
293.4	CARBONDALE		UNDERCLAY	2.1	106.6
291.3	CARBONDALE		LIMESTONE	2.8	108.7
288.5	CARBONDALE		SHALE	1.3	111.5
287.3	CARBONDALE		LIMESTONE	3.8	112.7

MAPID: 16325142000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 13 QUARTERS/FOOTAGES: 1' N line, 1' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.817508 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.452469 DATE COLLECTED:

SURFACE ELEVATION (FT.): 406.8 LOGGED (FT.): 127.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 19 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
406.8	PLEISTOCENE		UNCONSOLIDATED	21.0	0.0	
385.8	PLEISTOCENE		SAND	19.0	21.0	
364.8	PLEISTOCENE		CLAY	7.0	42.0	ERROR IN LOG MEASUREMENT
357.8	PLEISTOCENE		SAND	8.0	49.0	
349.8	PLEISTOCENE		CLAY	2.0	57.0	
347.8	MODESTO		GRAY SHALE	1.0	59.0	
346.8	MODESTO		SANDY SHALE	3.0	60.0	
343.8	MODESTO		SHALE	15.0	63.0	
328.8	MODESTO		LIMESTONE	1.5	78.0	
327.3	MODESTO		SHALE	4.5	79.5	
322.8	MODESTO	PIASA	LIMESTONE	4.0	84.0	
318.8			SHALE	8.0	88.0	
304.8	CARBONDALE	BANKSTON FORK	LIMESTONE	14.0	102.0	
298.8	CARBONDALE		BLACK SHALE	6.0	108.0	
292.8	CARBONDALE	CONANT	LIMESTONE	1.5	114.0	
291.3	CARBONDALE	JAMESTOWN	COAL	0.2	115.5	
291.1	CARBONDALE	BRERETON	LIMESTONE	1.8	115.7	
289.3	CARBONDALE	ANNA	BLACK SHALE	1.7	117.5	
287.6	CARBONDALE	HERRIN	COAL	7.0	119.2	
280.6	CARBONDALE		UNDERCLAY	0.8	126.2	

MAPID: 16325143000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 13 QUARTERS/FOOTAGES: 1' S line, 1' W line of NW SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.835826 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.441672 DATE COLLECTED:

SURFACE ELEVATION (FT.): 401.0 LOGGED (FT.): 90.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 25 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
401.0	PLEISTOCENE		UNCONSOLIDATED	10.0	0.0
391.0	PLEISTOCENE		SANDY CLAY	8.0	10.0
383.0	PLEISTOCENE		SAND	10.0	18.0
373.0	PLEISTOCENE		CLAY	16.0	28.0
357.0	MODESTO		LIMESTONE	1.0	44.0
356.0	MODESTO		GRAY SHALE	1.0	45.0
355.0	MODESTO	PIASA	LIMESTONE	9.6	46.0
345.4			GRAY SHALE	9.4	55.6
336.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	65.0
331.0	CARBONDALE		BLACK SHALE	6.5	70.0
324.5	CARBONDALE	JAMESTOWN	COAL	0.3	76.5
324.2	CARBONDALE		BLACK SHALE	3.0	76.8
321.2	CARBONDALE	BRERETON	LIMESTONE	2.9	79.8
318.3	CARBONDALE	ANNA	BLACK SHALE	0.3	82.7
318.0	CARBONDALE	HERRIN	COAL	6.2	83.0
311.8	CARBONDALE		UNDERCLAY	0.8	89.2

MAPID: 16325144000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 13 QUARTERS/FOOTAGES: 1' N line, 1' E line of NW NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.831281 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.452488 DATE COLLECTED:

SURFACE ELEVATION (FT.): 403.0 LOGGED (FT.): 111.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 53 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
403.0	PLEISTOCENE		UNCONSOLIDATED	17.0	0.0	
386.0	PLEISTOCENE		SAND	13.0	17.0	
373.0	PLEISTOCENE		CLAY	28.0	30.0	
345.0	MODESTO		GRAY SHALE	5.5	58.0	
339.5	MODESTO		LIMESTONE	3.0	63.5	ERROR IN LOG MEASUREMENT
337.5	MODESTO		SHALE	1.0	65.5	
336.5	MODESTO	PIASA	LIMESTONE	8.5	66.5	
328.0			GRAY SHALE	15.0	75.0	
313.0	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	4.5	90.0	
308.5	CARBONDALE		BLACK SHALE	4.5	94.5	
304.0	CARBONDALE	BRERETON	LIMESTONE	1.5	99.0	
302.5	CARBONDALE	ANNA	BLACK SHALE	2.3	100.5	
300.2	CARBONDALE	HERRIN	COAL	7.0	102.8	
293.2	CARBONDALE		UNDERCLAY	1.2	109.8	

MAPID: 16325145000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 13 QUARTERS/FOOTAGES: 1' N line, 1' W line of SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.826627 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.445226 DATE COLLECTED:

SURFACE ELEVATION (FT.): 400.7 LOGGED (FT.): 118.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 54 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
400.7	PLEISTOCENE		UNCONSOLIDATED	21.0	0.0	
379.7	PLEISTOCENE		SAND	7.0	21.0	
372.7	PLEISTOCENE		CLAY	30.0	28.0	
342.7	PLEISTOCENE		SAND & GRAVEL	7.0	58.0	
335.7	MODESTO		GRAY SHALE	4.0	65.0	
331.7	MODESTO	PIASA	LIMESTONE	7.0	69.0	
324.7			GRAY SHALE	12.0	76.0	
312.7	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	10.0	88.0	
302.7	CARBONDALE		BLACK SHALE	8.0	98.0	
294.7	CARBONDALE	HERRIN	COAL	6.2	106.0	
288.5	CARBONDALE		UNDERCLAY	4.8	112.2	
283.7	CARBONDALE		LIMESTONE	1.0	117.0	

MAPID: 16327658000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 13 QUARTERS/FOOTAGES: 1320' S line, 1' W line
QUADRANGLE: MASCOUTAH LONGITUDE: -89.835826 GEOLOGIST: CHENOWETH
CONFIDENTIAL: N LATITUDE: 38.441702 DATE COLLECTED:
SURFACE ELEVATION (FT.): 400.0 LOGGED (FT.): 106.0 LOG TYPE: Drillers Log
SOURCE: PEABODY COAL CO. 15896C WELL TYPE: Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
400.0	PLEISTOCENE		GLACIAL DRIFT	55.9	0.0
344.1	MODESTO	PIASA	LIMESTONE	8.4	55.9
335.7			GRAY SHALE	1.9	64.3
333.8			LIMESTONE	1.0	66.2
332.8			SHALE	8.0	67.2
324.8	CARBONDALE		LIMESTONE	3.3	75.2
321.5	CARBONDALE		GRAY SHALE	4.2	78.5
317.3	CARBONDALE		SHALE/COAL	6.6	82.7
310.7	CARBONDALE	BRERETON	LIMESTONE	2.3	89.3
308.4	CARBONDALE		DARK SHALE	0.2	91.6
308.2	CARBONDALE	HERRIN	COAL	6.6	91.8
301.6	CARBONDALE		UNDERCLAY	3.4	98.4
298.2	CARBONDALE		LIMESTONE	2.0	101.8
296.2	CARBONDALE		GRAY SHALE	2.2	103.8

MAPID: 16327659000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 13 QUARTERS/FOOTAGES: 1320' N line, 660' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.833539 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.448848 DATE COLLECTED:

SURFACE ELEVATION (FT.): 405.0 LOGGED (FT.): 101.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15898C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
405.0	PLEISTOCENE		UNCONSOLIDATED	50.0	0.0
355.0	MODESTO		GRAY SHALE	1.5	50.0
353.5	MODESTO		LIMESTONE	1.5	51.5
352.0	MODESTO		CLAYSTONE	1.5	53.0
350.5	MODESTO	PIASA	LIMESTONE	4.9	54.5
345.6	MODESTO	PIASA	GRAY SHALE	0.3	59.4
345.3	MODESTO	PIASA	LIMESTONE	3.5	59.7
341.8			SHALE WITH LIMESTONE	11.8	63.2
330.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.1	75.0
326.9	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.0	78.1
325.9	CARBONDALE	BANKSTON FORK	LIMESTONE	1.4	79.1
324.5	CARBONDALE		GRAY SHALE	1.8	80.5
322.7	CARBONDALE		DARK SHALE	6.9	82.3
315.8	CARBONDALE	BRERETON	SHALY LIMESTONE	1.6	89.2
314.2	CARBONDALE	HERRIN	COAL	7.0	90.8
307.2	CARBONDALE		UNDERCLAY	1.6	97.8
305.6	CARBONDALE		GRAY SHALE	0.8	99.4
304.8	CARBONDALE		LIMESTONE	1.1	100.2

MAPID: 1632766000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 13 QUARTERS/FOOTAGES: 1' N line, 1980' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.828918 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.452484 DATE COLLECTED:

SURFACE ELEVATION (FT.): 400.0 LOGGED (FT.): 112.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16601C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
400.0	PLEISTOCENE		UNCONSOLIDATED	56.3	0.0
343.7	MODESTO		GRAY SHALE	3.5	56.3
340.2	MODESTO		LIMESTONE	2.1	59.8
338.1	MODESTO		GRAY SHALE	1.4	61.9
336.7	MODESTO	PIASA	LIMESTONE	7.4	63.3
329.3			GRAY SHALE	12.3	70.7
317.0	CARBONDALE		LIMESTONE	2.7	83.0
314.3	CARBONDALE		SHALE	3.7	85.7
310.6	CARBONDALE		LIMESTONE	2.1	89.4
308.5	CARBONDALE		SHALE	5.6	91.5
302.9	CARBONDALE	ANNA	BLACK SHALE	1.2	97.1
301.7	CARBONDALE	HERRIN	COAL	7.3	98.3
294.4	CARBONDALE		SHALE	1.0	105.6
293.4	CARBONDALE		SHALE	2.9	106.6
290.5	CARBONDALE		SHALY LIMESTONE	3.3	109.5

MAPID: 16300307000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 14 QUARTERS/FOOTAGES: SE NW NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.841699 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.449796 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 429.8 LOGGED (FT.): 97.4 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO 29 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
429.8			SOIL	1.0	0.0	
428.8			CLAY	25.0	1.0	
403.8			SAND	9.0	26.0	
394.8			SAND	12.0	35.0	
382.8			SOFT SHALE	3.0	47.0	
379.8			LIMESTONE	2.0	50.0	
377.8			SHALE	1.5	52.0	BLUE
376.3			LIMESTONE	8.5	53.5	
367.8			SHALE	4.0	62.0	BLUE
363.8			LIMESTONE	10.0	66.0	
353.8			SHALY LIMESTONE	2.0	76.0	
351.8			SHALE	3.0	78.0	BLUE
348.8			SHALE	3.7	81.0	BLACK
345.1			COAL	0.3	84.7	
344.8			SHALE	3.5	85.0	BLACK
341.3			LIMESTONE	2.4	88.5	
338.9	CARBONDALE	HERRIN	COAL	6.5	90.9	NO 6 COAL 6'6" AT 90'9" ACCORDNG TO CORE

MAPID: 16300307000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 14 QUARTERS/FOOTAGES: SE NW NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.841699 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.449796 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 429.8 LOGGED (FT.): 98.0 LOG TYPE:

SOURCE: UNION COLL0039 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
338.8	CARBONDALE	HERRIN	COAL	6.5	91.0	

MAPID: 16300312000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 14 QUARTERS/FOOTAGES: 5015' S line, 2060' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.843099 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.451915 DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): 423.9 LOGGED (FT.): 2265.0 LOG TYPE:

SOURCE: MASON WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
306.9	CARBONDALE	HERRIN	COAL	6.0	117.0

MAPID: 16302356000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 14 QUARTERS/FOOTAGES: 700' S line, 350' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.837053 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.439992 DATE COLLECTED: 7 / 12 / 1955

SURFACE ELEVATION (FT.): 401.2 LOGGED (FT.): 80.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2033 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
401.2	PLEISTOCENE		UNCONSOLIDATED	34.3	0.0
366.9	MODESTO	PIASA	LIMESTONE	10.2	34.3
356.7			GRAY SHALE	2.1	44.5
354.6			LIMESTONE	1.8	46.6
352.8			GRAY SHALE	5.3	48.4
347.4	CARBONDALE	BANKSTON FORK	LIMESTONE	3.7	53.8
343.8	CARBONDALE		DARK SHALE	6.5	57.4
337.3	CARBONDALE	ANNA	BLACK SHALE	8.7	63.9
328.6	CARBONDALE	HERRIN	COAL	6.1	72.6
322.5	CARBONDALE		UNDERCLAY	1.9	78.7

MAPID: 16302375000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 14 QUARTERS/FOOTAGES: 12' S line, 1070' W line of SE NE

QUADRANGLE: MASCOUTAH

LONGITUDE: -89.836752

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N

LATITUDE: 38.445311

DATE COLLECTED: 7 / 27 / 1955

SURFACE ELEVATION (FT.): 401.7

LOGGED (FT.): 97.7

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2057

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
401.7	PLEISTOCENE		UNCONSOLIDATED	24.8	0.0
376.9	PLEISTOCENE		SAND	3.1	24.8
373.9	PLEISTOCENE		CLAY	21.6	27.8
352.3	MODESTO		LIMESTONE	2.4	49.4
349.9	MODESTO		GRAY SHALE	1.9	51.8
347.9	MODESTO	PIASA	LIMESTONE	7.8	53.8
340.1			GRAY SHALE	0.8	61.6
339.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.1	62.4
336.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	4.6	65.5
331.6	CARBONDALE	BANKSTON FORK	LIMESTONE	4.6	70.1
327.0	CARBONDALE		DARK SHALE	5.3	74.7
321.7	CARBONDALE	ANNA	BLACK SHALE	9.3	80.0
312.4	CARBONDALE	HERRIN	COAL	6.6	89.3
305.9	CARBONDALE		UNDERCLAY	1.8	95.8

MAPID: 16302377000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 14 QUARTERS/FOOTAGES: 50' N line, 9' W line of NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.845183 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.452367 DATE COLLECTED: 7 / 26 / 1955

SURFACE ELEVATION (FT.): 427.6 LOGGED (FT.): 120.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2059 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
427.6	PLEISTOCENE		UNCONSOLIDATED	58.0	0.0
369.6	MODESTO		GRAY SHALE	15.3	58.0
354.3	MODESTO		GRAY SHALE	2.7	73.3
351.5	MODESTO		GRAY SHALE	4.5	76.1
347.0	MODESTO	PIASA	LIMESTONE	6.1	80.6
340.9	MODESTO	PIASA	SHALY LIMESTONE	0.6	86.7
340.3			GRAY SHALE	9.1	87.3
331.1	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	1.6	96.5
329.5	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.2	98.1
329.3	CARBONDALE	BANKSTON FORK	LIMESTONE	0.6	98.3
328.8	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.6	98.8
328.1	CARBONDALE	BANKSTON FORK	LIMESTONE	1.7	99.5
326.5	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.1	101.1
326.4	CARBONDALE	BANKSTON FORK	LIMESTONE	0.4	101.2
326.0	CARBONDALE		GRAY SHALE	2.2	101.6
323.8	CARBONDALE		DARK SHALE	3.4	103.8
320.4	CARBONDALE	CONANT	LIMESTONE	0.5	107.2
320.0	CARBONDALE		BLACK SHALE	3.7	107.6
316.2	CARBONDALE	BRERETON	LIMESTONE	1.1	111.4
315.1	CARBONDALE		DARK SHALE	0.5	112.5
314.5	CARBONDALE	HERRIN	COAL	6.8	113.1
307.7	CARBONDALE		UNDERCLAY	0.9	119.9

MAPID: 16302525000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 14 QUARTERS/FOOTAGES: NW NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.842872 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.450698 DATE COLLECTED:

SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 98.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 39 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
410.0	PLEISTOCENE		UNCONSOLIDATED	26.0	0.0
384.0	PLEISTOCENE		SAND	9.0	26.0
375.0	PLEISTOCENE		SAND & GRAVEL	12.0	35.0
363.0	MODESTO		GRAY SHALE	3.0	47.0
360.0	MODESTO		LIMESTONE	2.0	50.0
358.0	MODESTO		BLUE SHALE	1.5	52.0
356.5	MODESTO	PIASA	LIMESTONE	8.5	53.5
348.0			BLUE SHALE	4.0	62.0
344.0			CALCAREOUS SHALE	10.0	66.0
334.0	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	2.0	76.0
332.0	MODESTO		BLUE SHALE	3.0	78.0
329.0	MODESTO		BLACK SHALE	3.7	81.0
325.3	CARBONDALE	JAMESTOWN	COAL	0.3	84.7
325.0	MODESTO		BLACK SHALE	3.5	85.0
321.5	CARBONDALE	BRERETON	LIMESTONE	2.4	88.5
319.1	CARBONDALE	HERRIN	COAL	6.5	90.9
312.6	MODESTO		UNDERCLAY	0.6	97.4

MAPID: 16302932000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 14 QUARTERS/FOOTAGES: 2640' N line, 1980' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.842793

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.445216

DATE COLLECTED:

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 106.6

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8674C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
359.0	MODESTO	PIASA	LIMESTONE	11.0	61.0	
348.0	CARBONDALE		SHALE	8.0	72.0	
340.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	80.0	UPPER BENCH
336.0	CARBONDALE	BANKSTON FORK	SHALE	1.0	84.0	SHALE PARTING
335.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	85.0	LOWER BENCH
333.0	CARBONDALE	LAWSON	DARK GRAY SHALE	6.7	87.0	
326.3	CARBONDALE	CONANT	LIMESTONE W/ SHALE	0.7	93.7	
325.6	CARBONDALE	JAMESTOWN	BONE COAL	0.2	94.4	
325.4	CARBONDALE	BRERETON	LIMESTONE	1.3	94.6	
324.1	CARBONDALE	ANNA	BLACK SHALE	1.5	95.9	
320.0	CARBONDALE	HERRIN	COAL	6.6	100.0	

MAPID: 16303623000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 14 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.839316

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.438967

DATE COLLECTED: 12 / 22 / 1972

SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 95.7

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12879C

WELL TYPE: Coal Test

COMMENT: PEABODY LOC. N-16

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
410.0	PLEISTOCENE		UNCONSOLIDATED	56.8	0.0	
353.2	MODESTO	PIASA	LIMESTONE	7.0	56.8	TOP ERODED
346.2			GRAY SHALE	7.8	63.8	
338.4	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	71.6	
336.5	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.8	73.5	
333.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.7	76.3	
332.0	CARBONDALE		DARK SHALE	5.4	78.0	
326.6	CARBONDALE		LIMESTONE	0.2	83.4	
326.4	CARBONDALE		DARK SHALE	4.5	83.6	
322.0	CARBONDALE	HERRIN	COAL	6.7	88.0	
315.3	CARBONDALE		UNDERCLAY	1.0	94.7	

MAPID: 16303624000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 14 QUARTERS/FOOTAGES: 1' N line, 1' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.854561 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.45251 DATE COLLECTED: 12 / 23 / 1972

SURFACE ELEVATION (FT.): 465.0 LOGGED (FT.): 143.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12880C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. A-1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
465.0	PLEISTOCENE		UNCONSOLIDATED	30.0	0.0	
435.0	MODESTO		GRAY SHALE	69.1	30.0	
365.9	MODESTO		LIMESTONE	3.5	99.1	
362.4	MODESTO		GRAY SHALE	1.0	102.6	
361.4	MODESTO	PIASA	LIMESTONE	10.0	103.6	
351.4			SHALE	7.6	113.6	
343.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	121.2	
342.2	CARBONDALE	BANKSTON FORK	SHALE	3.0	122.8	
339.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	125.8	
338.2	CARBONDALE		DARK SHALE	6.3	126.8	
331.9	CARBONDALE		LIMESTONE	0.1	133.1	
331.7	CARBONDALE		DARK SHALE	2.7	133.3	
329.1	CARBONDALE	HERRIN	COAL	6.9	135.9	
322.1	CARBONDALE		UNDERCLAY	0.2	142.9	

MAPID: 16303659000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 14 QUARTERS/FOOTAGES: 1' N line, 660' E line of SE NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.847515 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.448896 DATE COLLECTED: 2 / 1 / 1973

SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 93.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15524C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. G-5

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
425.0	PLEISTOCENE		UNCONSOLIDATED	48.8	0.0	
376.2	MODESTO	PIASA	LIMESTONE	7.9	48.8	TOP MAY BE ERODED
368.3			GRAY SHALE	7.3	56.7	
361.0			DARK SHALE	2.8	64.0	
358.2			GRAY SHALE	6.7	66.8	
351.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.2	73.5	
350.3	CARBONDALE		SANDY SHALE	2.8	74.7	
347.5	CARBONDALE		DARK SHALE	6.4	77.5	
341.1	CARBONDALE		DARK SHALE	0.6	83.9	
340.4	CARBONDALE		DARK SHALE	0.4	84.6	
340.1	CARBONDALE	HERRIN	COAL	7.1	84.9	
333.0	CARBONDALE		UNDERCLAY	1.3	92.0	

MAPID: 1630366000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 14 QUARTERS/FOOTAGES: 1' S line, 330' E line of SW SW SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.843966

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.438073

DATE COLLECTED: 2 / 6 / 1973

SURFACE ELEVATION (FT.): 430.0

LOGGED (FT.): 100.3

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15525C

WELL TYPE: Coal Test

COMMENT: PEABODY LOC. J-17

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
430.0	PLEISTOCENE		UNCONSOLIDATED	38.3	0.0
391.7	MODESTO		GRAY SHALE	17.4	38.3
374.3	MODESTO	PIASA	LIMESTONE	6.0	55.7
368.3			GRAY SHALE	8.9	61.7
359.4			DARK SHALE	4.2	70.6
355.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.7	74.8
353.5	CARBONDALE		GRAY SHALE	4.9	76.5
348.6	CARBONDALE		LIMESTONE	0.6	81.4
348.0	CARBONDALE		DARK SHALE	4.1	82.0
343.9	CARBONDALE		LIMESTONE	0.3	86.1
343.6	CARBONDALE		DARK SHALE	1.4	86.4
342.2	CARBONDALE	CONANT	LIMESTONE	0.2	87.8
342.0	CARBONDALE		DARK SHALE	0.5	88.0
341.5	CARBONDALE	JAMESTOWN	COAL	0.1	88.5
341.4	CARBONDALE		DARK SHALE	4.2	88.6
337.2	CARBONDALE	HERRIN	COAL	6.8	92.8
330.4	CARBONDALE		UNDERCLAY	0.7	99.6

MAPID: 16324199000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 14 QUARTERS/FOOTAGES: 1980' N line, 330' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.837006 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.44703 DATE COLLECTED: 10 / 15 / 1976

SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 119.6 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16605C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. P-7

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
425.0	PLEISTOCENE		UNCONSOLIDATED	41.0	0.0
384.0	MODESTO		GRAY SHALE	25.9	41.0
358.1	MODESTO		LIMESTONE	2.6	66.9
355.5	MODESTO		GRAY SHALE	5.7	69.5
349.8	MODESTO		LIMESTONE	1.0	75.2
348.8	MODESTO		GRAY SHALE	0.8	76.2
348.0	MODESTO	PIASA	SHALY LIMESTONE	6.7	77.0
341.3			GRAY SHALE	6.7	83.7
334.6	CARBONDALE	BANKSTON FORK	LIMESTONE	1.4	90.4
333.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.3	91.8
332.9	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	92.1
331.3	CARBONDALE		GRAY SHALE	1.6	93.7
329.7	CARBONDALE		SHALY LIMESTONE	1.0	95.3
328.7	CARBONDALE		SHALE	1.9	96.3
326.8	CARBONDALE		LIMESTONE	1.3	98.2
325.5	CARBONDALE		DARK SHALE	0.3	99.5
325.2	CARBONDALE		LIMESTONE	0.2	99.8
325.0	CARBONDALE		SHALE	0.3	100.0
324.7	CARBONDALE	CONANT	LIMESTONE	0.2	100.3
324.5	CARBONDALE		DARK SHALE	5.3	100.5
319.2	CARBONDALE		GRAY SHALE	0.9	105.8
318.3	CARBONDALE		BLACK SHALE	0.2	106.7
318.1	CARBONDALE	HERRIN	COAL	7.3	106.9
310.8	CARBONDALE		UNDERCLAY	1.6	114.2
309.2	CARBONDALE		LIMESTONE	3.4	115.8
305.8	CARBONDALE		GRAY SHALE	0.4	119.2

MAPID: 16327661000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 14 QUARTERS/FOOTAGES: 990' N line, 1320' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.840491 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.449767 DATE COLLECTED:

SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 107.6 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16606C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
410.0	PLEISTOCENE		UNCONSOLIDATED	51.7	0.0
358.3	MODESTO		LIMESTONE	2.3	51.7
356.0	MODESTO		GRAY SHALE	1.9	54.0
354.1	MODESTO	PIASA	LIMESTONE	7.9	55.9
346.2			GRAY SHALE	10.7	63.8
335.5			LIMESTONE	1.2	74.5
334.3			GRAY SHALE	4.9	75.7
329.4			LIMESTONE	1.5	80.6
327.9			GRAY SHALE	0.4	82.1
327.5	CARBONDALE		LIMESTONE	0.1	82.5
327.4	CARBONDALE		SHALE	7.8	82.6
319.6	CARBONDALE		LIMESTONE	0.2	90.4
319.4	CARBONDALE		BLACK SHALE & COAL	0.7	90.6
318.7	CARBONDALE	HERRIN	COAL	6.7	91.3
312.0	CARBONDALE		UNDERCLAY	2.5	98.0
309.5	CARBONDALE		SHALE	1.3	100.5
308.2	CARBONDALE		LIMESTONE	1.2	101.8
307.0	CARBONDALE		GRAY SHALE	1.8	103.0
305.2	CARBONDALE		LIMESTONE	2.8	104.8

MAPID: 16327662000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 14 QUARTERS/FOOTAGES: 2640' N line, 1' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.835846 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.445208 DATE COLLECTED:

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 101.9 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16608C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
420.0	PLEISTOCENE		UNCONSOLIDATED	47.6	0.0
372.4	MODESTO		LIMESTONE	2.7	47.6
369.7	MODESTO		GRAY SHALE	2.0	50.3
367.7	MODESTO	PIASA	LIMESTONE	9.6	52.3
358.1			GRAY SHALE	4.9	61.9
353.2			DARK SHALE	2.4	66.8
350.8			GRAY SHALE	1.2	69.2
349.6	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	70.4
348.1	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.6	71.9
347.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	72.5
345.9	CARBONDALE		DARK SHALE	5.5	74.1
340.4	CARBONDALE		LIMESTONE	0.4	79.6
340.0	CARBONDALE		SHALE	5.0	80.0
335.0	CARBONDALE		GRAY SHALE	1.2	85.0
333.9	CARBONDALE	BRERETON	LIMESTONE	2.8	86.1
331.1	CARBONDALE	ANNA	BLACK SHALE	0.2	88.9
331.0	CARBONDALE	HERRIN	COAL	6.6	89.0
324.4	CARBONDALE		UNDERCLAY	3.4	95.6
321.0	CARBONDALE		LIMESTONE	2.1	99.0
318.9	CARBONDALE		GRAY SHALE	0.5	101.1
318.4	CARBONDALE		LIMESTONE	0.3	101.6

MAPID: 16327724000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 14 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.839366

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.44056

DATE COLLECTED: 12 / 22 / 1972

SURFACE ELEVATION (FT.): 421.2 LOGGED (FT.): 95.7

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12879C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
421.2	PLEISTOCENE		UNCONSOLIDATED	56.8	0.0	
364.4	CARBONDALE		LIMESTONE	7.0	56.8	
357.4	CARBONDALE		GRAY SHALE	7.8	63.8	
349.6	CARBONDALE		LIMESTONE	1.9	71.6	
347.7	CARBONDALE		GRAY SHALE	2.8	73.5	
344.9	CARBONDALE		LIMESTONE	1.7	76.3	
343.2	CARBONDALE		SHALE	5.4	78.0	DARK
337.8	CARBONDALE	BRERETON	LIMESTONE	0.2	83.4	
337.6	CARBONDALE	ANNA	SHALE	4.5	83.6	DARK
333.2	CARBONDALE	HERRIN	COAL	6.7	88.0	
326.5	CARBONDALE		UNDERCLAY	1.0	94.7	

MAPID: 16327725000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 14 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.854324

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.45282

DATE COLLECTED: 12 / 28 / 1972

SURFACE ELEVATION (FT.): 467.8 LOGGED (FT.): 143.1

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12880C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
467.8	PLEISTOCENE		UNCONSOLIDATED	30.0	0.0	
437.8			GRAY SHALE	69.1	30.0	
368.7			LIMESTONE	3.5	99.1	
365.2			GRAY SHALE	1.0	102.6	
364.2			LIMESTONE	10.0	103.6	
354.2			SHALE	7.6	113.6	
346.6			LIMESTONE	1.6	121.2	
345.0			SHALE	3.0	122.8	
342.0			LIMESTONE	1.0	125.8	
341.0	CARBONDALE		SHALE	6.3	126.8	DARK
334.7	CARBONDALE		LIMESTONE	0.1	133.1	
334.5	CARBONDALE	ANNA	SHALE	2.7	133.3	DARK
331.9	CARBONDALE	HERRIN	COAL	6.9	135.9	
324.9	CARBONDALE		UNDERCLAY	0.2	142.9	

MAPID: 16327726000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 14 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH

LONGITUDE: -89.840099

GEOLOGIST: MCBETH

CONFIDENTIAL: N

LATITUDE: 38.450127

DATE COLLECTED: 10 / 26 / 1976

SURFACE ELEVATION (FT.): 404.2

LOGGED (FT.): 107.6

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16606C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
404.2	PLEISTOCENE		CLAY	51.7	0.0	
352.5			LIMESTONE	2.3	51.7	
350.2			GRAY SHALE	1.9	54.0	
348.3			LIMESTONE	7.9	55.9	
340.4			GRAY SHALE	10.7	63.8	
329.7			LIMESTONE	1.2	74.5	
328.5			GRAY SHALE	4.3	75.7	WITH LS
324.2			GRAY SHALE	0.6	80.0	
323.6			LIMESTONE	1.5	80.6	
322.1	CARBONDALE		GRAY SHALE	0.4	82.1	
321.7	CARBONDALE		LIMESTONE	0.1	82.5	
321.6	CARBONDALE		GRAY SHALE	0.5	82.6	
321.1	CARBONDALE		SHALE	7.3	83.1	
313.8	CARBONDALE		LIMESTONE	0.2	90.4	
313.6	CARBONDALE	ANNA	BLACK SHALE	0.7	90.6	
312.9	CARBONDALE	HERRIN	COAL	6.7	91.3	
306.2	CARBONDALE		UNDERCLAY	2.5	98.0	
303.7	CARBONDALE		GRAY SHALE	1.3	100.5	
302.4	CARBONDALE		LIMESTONE	1.2	101.8	FRACTURED
301.2	CARBONDALE		GRAY SHALE	1.8	103.0	WITH LS
299.4	CARBONDALE		LIMESTONE	2.8	104.8	WITH SH

MAPID: 16300061000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: 1120' S line, 200' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.855182 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.441181 DATE COLLECTED:

SURFACE ELEVATION (FT.): 426.7 LOGGED (FT.): 149.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
426.7			SOIL	3.0	0.0	DARK
423.7			CLAY	14.0	3.0	YELLOW
409.7			HARD PAN	7.0	17.0	
402.7			SOFT SHALE	21.0	24.0	
381.7			LIMESTONE	9.0	45.0	
372.7			CLAYSTONE	4.0	54.0	BLUE
368.7	CARBONDALE		SHALY LIMESTONE	1.0	58.0	
367.7	CARBONDALE		DARK SHALE	7.0	59.0	
360.7	CARBONDALE		SHALY LIMESTONE	5.0	66.0	
355.7	CARBONDALE		SHALY LIMESTONE	0.3	71.0	
355.4	CARBONDALE		SHALE	10.7	71.3	
344.7	CARBONDALE		LIMESTONE	0.5	82.0	
344.2	CARBONDALE	HERRIN	COAL	3.1	82.5	
341.1	CARBONDALE	HERRIN	BONE COAL	0.0	85.6	
341.1	CARBONDALE	HERRIN	COAL	2.7	85.6	
338.4	CARBONDALE	HERRIN	BONE COAL	0.0	88.3	
338.4	CARBONDALE	HERRIN	COAL	1.6	88.3	
336.8	CARBONDALE		UNDERCLAY	6.1	89.9	
330.7	CARBONDALE		SHALY LIMESTONE	5.7	96.0	
325.0	CARBONDALE		SHALE	8.3	101.7	
316.7	CARBONDALE		SANDY SHALE	28.0	110.0	
288.7	CARBONDALE		UNDERCLAY	1.0	138.0	
287.7	CARBONDALE		SHALY LIMESTONE	2.8	139.0	
284.9	CARBONDALE	EXCELLO	DARK SHALE	3.8	141.8	
281.0	CARBONDALE	HOUCHIN CREEK	COAL	2.9	145.7	
278.1	CARBONDALE		UNDERCLAY	0.4	148.6	

MAPID: 16300061000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: 1120' S line, 200' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.855182 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.441181 DATE COLLECTED:

SURFACE ELEVATION (FT.): 426.7 LOGGED (FT.): 149.0 LOG TYPE:

SOURCE: UNION COLL0008 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
343.7	CARBONDALE	HERRIN	COAL	7.3	83.0
280.7	CARBONDALE	SPRINGFIELD	COAL	2.9	146.0

MAPID: 16300062000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: 4555' S line, 3035' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.865207 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.45071 DATE COLLECTED: 7 / 3 / 1923

SURFACE ELEVATION (FT.): 498.9 LOGGED (FT.): 167.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
498.9			CLAY	7.0	0.0	YELLOW
491.9			CLAY	18.0	7.0	YELLOW
473.9			HARD PAN	2.0	25.0	
471.9			SANDSTONE	12.5	27.0	
459.4			SANDY SHALE	34.5	39.5	
424.9			SANDY SHALE	9.0	74.0	
415.9			DARK SHALE	15.8	83.0	
400.1			COAL	0.3	98.8	
399.9			COAL	0.1	99.0	
399.8			SHALY LIMESTONE	8.9	99.1	
390.9			DARK SHALE	7.0	108.0	
383.9			SHALE	8.0	115.0	BLUE
375.9			LIMESTONE	2.3	123.0	
373.6			SHALE	1.0	125.3	
372.6			LIMESTONE	2.8	126.3	
369.9			LIMESTONE	8.2	129.0	
361.7			SHALE	4.0	137.2	
357.7	CARBONDALE	BRERETON	LIMESTONE	9.8	141.2	
347.9	CARBONDALE	ANNA	DARK SHALE	8.1	151.0	
339.8	CARBONDALE	HERRIN	COAL	1.5	159.1	
338.3	CARBONDALE	HERRIN	BONE COAL	0.0	160.6	
338.3	CARBONDALE	HERRIN	COAL	1.4	160.6	
336.9	CARBONDALE	HERRIN	BONE COAL	0.0	162.0	
336.9	CARBONDALE	HERRIN	COAL	0.7	162.0	
336.2	CARBONDALE	HERRIN	BONE COAL	0.0	162.7	
336.2	CARBONDALE	HERRIN	COAL	3.2	162.7	
333.1	CARBONDALE		UNDERCLAY	1.2	165.8	LOG DOES NOT CHECK WITH CORE BELOW DEPTH

MAPID: 16300062000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: 4555' S line, 3035' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.865207 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.45071 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 498.9 LOGGED (FT.): 167.0 LOG TYPE:

SOURCE: UNION COLL0012 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
339.9	CARBONDALE	HERRIN	COAL	6.8	159.0	

MAPID: 16300063000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: 120' S line, 3035' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.865113 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.438466 DATE COLLECTED: 8 / 0 / 1923

SURFACE ELEVATION (FT.): 445.6 LOGGED (FT.): 78.6 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
445.6			CLAY	6.0	0.0	
439.6			SAND	5.0	6.0	
434.6			SAND	2.0	11.0	
432.6			CLAY	15.0	13.0	
417.6			LIMESTONE	3.0	28.0	
414.6			SHALE	2.0	31.0	
412.6			LIMESTONE	9.2	33.0	
403.4			SHALE	10.7	42.2	
391.8			LIMESTONE	1.3	53.8	
390.5			SHALE	6.8	55.1	
383.8	CARBONDALE	BRERETON	LIMESTONE	3.0	61.8	
380.8	CARBONDALE	ANNA	SHALE	1.0	64.8	LOG INCORRECT FOR THICKNESS AND DEPTH
378.7	CARBONDALE	ANNA	SHALE	2.1	66.9	BLACK
376.6	CARBONDALE	HERRIN	COAL	0.3	69.0	
376.4	CARBONDALE	HERRIN	CALCAREOUS SHALE	0.4	69.2	
375.9	CARBONDALE	HERRIN	COAL	2.1	69.7	
373.8	CARBONDALE	HERRIN	SHALE	0.1	71.8	BLACK
373.7	CARBONDALE	HERRIN	COAL	6.1	71.9	
367.6	CARBONDALE		UNDERCLAY	0.6	78.0	

MAPID: 16300063000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: 120' S line, 3035' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.865113 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.438466 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 445.6 LOGGED (FT.): 77.0 LOG TYPE:

SOURCE: UNION COLL0032 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
378.6	CARBONDALE	HERRIN	COAL	9.0	67.0	

MAPID: 16300064000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: NE SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.856791 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.443503 DATE COLLECTED: 4 / 0 / 1907

SURFACE ELEVATION (FT.): 460.5 LOGGED (FT.): 181.0 LOG TYPE: Drillers Log

SOURCE: N W BORDERS WISE WELL DRIG CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
460.5			SOIL	25.0	0.0	
435.5			SHALE	35.0	25.0	BLUE
400.5			ROCK	4.0	60.0	BLUE
396.5			CLAYSTONE	1.0	64.0	
395.5			COAL	3.0	65.0	
392.5			UNDERCLAY	7.0	68.0	
385.5			LIMESTONE	9.0	75.0	
376.5			UNDERCLAY	2.0	84.0	
374.5			SANDY SHALE	15.0	86.0	
359.5			SHALE	1.0	101.0	BLUE
358.5			SANDSTONE	3.0	102.0	
355.5			SHALE	4.0	105.0	BLACK
351.5			ROCK	0.2	109.0	
351.3	CARBONDALE	ANNA	BLACK SHALE	3.8	109.2	
347.5	CARBONDALE	HERRIN	COAL	7.4	113.0	
340.1	CARBONDALE		UNDERCLAY	1.5	120.4	
338.6	CARBONDALE		SANDSTONE	5.6	121.9	
333.0	CARBONDALE		SANDSTONE	41.5	127.5	
291.5	CARBONDALE		BLACK SHALE	1.0	169.0	
290.5	CARBONDALE		ROCK	1.0	170.0	
289.5	CARBONDALE		BLACK SHALE	3.0	171.0	
286.5	CARBONDALE		COAL	4.0	174.0	
282.5	CARBONDALE		UNDERCLAY	3.0	178.0	

MAPID: 16300064000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 15 **QUARTERS/FOOTAGES:** NE SE
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.856791 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.443503 **DATE COLLECTED:** 0 / 0 / 1907
SURFACE ELEVATION (FT.): 460.5 **LOGGED (FT.):** 181.0 **LOG TYPE:**
SOURCE: BORDERS **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
347.5	CARBONDALE	HERRIN	COAL	7.4	113.0	
286.5	CARBONDALE	SPRINGFIELD	COAL	4.0	174.0	

MAPID: 16300308000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 15 **QUARTERS/FOOTAGES:** 125' S line, 100' W line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.872429 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.438515 **DATE COLLECTED:** 0 / 0 / 1923
SURFACE ELEVATION (FT.): 483.8 **LOGGED (FT.):** 153.0 **LOG TYPE:**
SOURCE: UNION COLL0040 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
336.8	CARBONDALE	HERRIN	COAL	6.2	147.0	

MAPID: 16300754000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 15 **QUARTERS/FOOTAGES:**
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.863684 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.445329 **DATE COLLECTED:** 0 / 0 / 1907
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 181.0 **LOG TYPE:**
SOURCE: BORDERS **WELL TYPE:** Coal Test
COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	7.4	113.0	

MAPID: 16302330000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: 860' S line, 20' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.872734

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.440543

DATE COLLECTED:

SURFACE ELEVATION (FT.): 485.0 LOGGED (FT.): 119.9

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 7475

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
410.0	MODESTO	PIASA	LIMESTONE	1.2	75.0
408.8	CARBONDALE		CLAYSTONE	3.0	76.2
405.8	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	8.8	79.2 UPPER BENCH
397.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	3.7	88.0 SHALE PARTING
393.3	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	1.9	91.7 LOWER BENCH
391.4	CARBONDALE	LAWSON	CLAYSTONE	9.3	93.6
382.2	CARBONDALE	LAWSON	DARK GRAY SHALE	5.3	102.8
376.8	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	2.2	108.2
374.7	CARBONDALE	JAMESTOWN	BONE COAL	0.3	110.3
374.4	CARBONDALE	BRERETON	CARBONACEOUS LIMESTONE	2.4	110.6
372.0	CARBONDALE	HERRIN	COAL	6.9	113.0

MAPID: 16302392000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: 40' S line, 150' E line of SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.864143 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.43824 DATE COLLECTED: 8 / 4 / 1955

SURFACE ELEVATION (FT.): 442.8 LOGGED (FT.): 75.7 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2079 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
442.8	PLEISTOCENE		UNCONSOLIDATED	18.9	0.0	
423.9	MODESTO		GRAY SHALE	9.8	18.9	
414.2	MODESTO		LIMESTONE	1.5	28.6	
412.7	MODESTO		CLAYSTONE & SILTSTONE	0.2	30.1	
412.6	MODESTO		LIMESTONE	0.4	30.2	
412.2	MODESTO		GRAY SHALE	1.6	30.6	
410.6	MODESTO	PIASA	LIMESTONE	6.9	32.2	
403.7	MODESTO	PIASA	CLAYSTONE & SILTSTONE	0.3	39.1	
403.4	MODESTO	PIASA	LIMESTONE	3.4	39.4	
400.1			GRAY SHALE	8.1	42.7	
392.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	50.8	
389.8	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.1	53.0	
388.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	54.1	
386.6	CARBONDALE		GRAY SHALE	2.2	56.2	
384.4	CARBONDALE	CONANT	LIMESTONE	0.2	58.4	
384.2	CARBONDALE		DARK SHALE	3.6	58.6	
380.6	CARBONDALE	BRERETON	LIMESTONE	5.6	62.2	
375.0	CARBONDALE		SHALE	0.1	67.8	
375.0	CARBONDALE	HERRIN	COAL	6.0	67.8	ERROR IN LOG MEASUREMENT
368.8	CARBONDALE		UNDERCLAY	1.6	74.0	

MAPID: 16302473000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: 900' S line, 350' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.871576 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.440649 DATE COLLECTED: 3 / 11 / 1966

SURFACE ELEVATION (FT.): 478.7 LOGGED (FT.): 118.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 7468 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
478.7	PLEISTOCENE		UNCONSOLIDATED	68.7	0.0
410.0	MODESTO		LIMESTONE	2.3	68.7
407.7	MODESTO		GRAY SHALE	2.2	71.0
405.5	MODESTO	PIASA	LIMESTONE	8.1	73.2
397.4			GRAY SHALE	0.6	81.3
396.8			LIMESTONE	1.4	81.9
395.4			GRAY SHALE	1.0	83.3
394.4			GRAY SHALE	6.1	84.3
388.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.4	90.4
384.9	CARBONDALE	BANKSTON FORK	SHALE	3.2	93.8
381.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.1	97.0
378.6	CARBONDALE		SHALE	7.4	100.1
371.2	CARBONDALE	ANNA	BLACK SHALE	1.0	107.5
370.2	CARBONDALE	HERRIN	COAL	6.8	108.5
363.4	CARBONDALE		UNDERCLAY	3.1	115.3

MAPID: 16302483000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: 600' N line, 600' E line of SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.856606 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.44365 DATE COLLECTED: 3 / 29 / 1966

SURFACE ELEVATION (FT.): 482.8 LOGGED (FT.): 137.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 7479 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
482.8	PLEISTOCENE		UNCONSOLIDATED	88.4	0.0	
394.4	MODESTO		LIMESTONE	2.3	88.4	
392.2	MODESTO		GRAY SHALE	2.6	90.6	
389.5	MODESTO	PIASA	LIMESTONE	7.0	93.3	
382.6			GRAY SHALE	13.5	100.2	
369.1	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	113.7	
367.5	CARBONDALE		GRAY SHALE	5.2	115.3	
362.3	CARBONDALE	CONANT	LIMESTONE	0.5	120.5	
361.8	CARBONDALE		GRAY SHALE	1.5	121.0	
360.3	CARBONDALE	JAMESTOWN	COAL	0.3	122.5	
360.0	CARBONDALE		GRAY SHALE	1.4	122.8	
358.6	CARBONDALE	BRERETON	LIMESTONE	2.2	124.2	
356.4	CARBONDALE	ANNA	DARK SHALE	1.1	126.4	
355.3	CARBONDALE	HERRIN	COAL	6.3	127.5	
349.0	CARBONDALE		UNDERCLAY	2.3	133.8	
346.7	CARBONDALE		LIMESTONE	1.0	136.1	

MAPID: 16302494000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: 1' N line, 1' E line of SE SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.854486 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.441688 DATE COLLECTED:

SURFACE ELEVATION (FT.): 426.5 LOGGED (FT.): 149.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
426.5	PLEISTOCENE		UNCONSOLIDATED	58.0	0.0	
368.5	MODESTO	PIASA	SHALY LIMESTONE	1.0	58.0	TOP ERODED
367.5			DARK SHALE	7.0	59.0	
360.5	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	5.3	66.0	
355.2	CARBONDALE		GRAY SHALE	10.7	71.3	
344.5	CARBONDALE		SHALE WITH LIMESTONE	0.5	82.0	
344.0	CARBONDALE	HERRIN	COAL	7.4	82.5	
336.6	CARBONDALE		UNDERCLAY	6.1	89.9	
330.5	CARBONDALE		SHALY LIMESTONE	5.7	96.0	
324.8	CARBONDALE		SHALE	4.3	101.7	ERROR IN LOG MEASUREMENT
316.5	CARBONDALE		SANDY SHALE	3.0	110.0	
313.5	CARBONDALE		GRAY SHALE	25.0	113.0	
288.5	CARBONDALE		CLAYSTONE & SILTSTONE	1.0	138.0	
287.5	CARBONDALE	ST. DAVID	SHALY LIMESTONE	2.8	139.0	
284.7	CARBONDALE	TURNER MINE	DARK SHALE	3.8	141.8	
280.8	CARBONDALE	SPRINGFIELD	COAL	2.9	145.7	
277.9	CARBONDALE		UNDERCLAY	5.0	148.6	

MAPID: 16302498000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: NE NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.866032 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.450735 DATE COLLECTED:

SURFACE ELEVATION (FT.): 498.5 LOGGED (FT.): 167.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
498.5	PLEISTOCENE		GLACIAL DRIFT	27.0	0.0	
471.5	MODESTO		SANDSTONE	12.5	27.0	TRIVOLI?
459.0	MODESTO		SANDY SHALE	42.5	39.5	
416.5	MODESTO		SHALE	15.8	82.0	ERROR IN LOG MEASUREMENT
399.7	MODESTO		COAL	0.3	98.8	
399.4	MODESTO		SHALY LIMESTONE	8.9	99.1	
390.5	MODESTO		DARK SHALE	7.0	108.0	
383.5	MODESTO		BLUE SHALE	8.0	115.0	
375.5	MODESTO		LIMESTONE	2.3	123.0	
373.2	MODESTO		SHALE	1.0	125.3	
372.2	MODESTO	PIASA	LIMESTONE	10.9	126.3	
361.3			SHALE	4.0	137.2	
357.3	CARBONDALE	BANKSTON FORK	LIMESTONE	9.8	141.2	
347.5	CARBONDALE		DARK SHALE	8.1	151.0	
339.4	CARBONDALE	HERRIN	COAL	6.8	159.1	
332.7	CARBONDALE		UNDERCLAY	1.2	165.8	

MAPID: 16302518000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: 1' S line, 1' E line of SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.86362 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.438131 DATE COLLECTED:

SURFACE ELEVATION (FT.): 445.5 LOGGED (FT.): 76.7 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 32 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
445.5	PLEISTOCENE		UNCONSOLIDATED	6.0	0.0	
439.5	PLEISTOCENE		SAND	7.0	6.0	
432.5	PLEISTOCENE		UNCONSOLIDATED	15.0	13.0	
417.5	PLEISTOCENE		BOULDER	3.0	28.0	LOG SAYS "BROKEN LIMESTONE"
414.5	MODESTO		GRAY SHALE	2.0	31.0	
412.5	MODESTO	PIASA	LIMESTONE	9.2	33.0	
403.3			BLUE SHALE	8.8	42.2	
394.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	51.0	
393.2	CARBONDALE		SHALE	6.8	52.3	
386.5	CARBONDALE	CONANT	LIMESTONE	3.0	59.0	
383.5	CARBONDALE		SHALE	1.2	62.0	
382.3	CARBONDALE		BLACK SHALE	1.9	63.2	
380.4	CARBONDALE	JAMESTOWN	COAL	0.3	65.1	
380.2	CARBONDALE	ANNA	BLACK SHALE	2.4	65.3	
377.7	CARBONDALE	HERRIN	COAL	6.3	67.8	
371.4	CARBONDALE		UNDERCLAY	0.6	74.1	

MAPID: 16302526000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: 1' S line, 1' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.872771 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.438171 DATE COLLECTED:

SURFACE ELEVATION (FT.): 482.5 LOGGED (FT.): 111.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 40 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
482.5	PLEISTOCENE		UNCONSOLIDATED	70.0	0.0
412.5	MODESTO		CARBONACEOUS SHALE	7.0	70.0
405.5	MODESTO	PIASA	LIMESTONE	1.0	77.0
404.5			SHALE	7.0	78.0
397.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	85.0
396.2	CARBONDALE		SHALE	5.7	86.3
390.5	CARBONDALE	CONANT	LIMESTONE	1.3	92.0
389.2	CARBONDALE		DARK SHALE	0.8	93.3
388.3	CARBONDALE	JAMESTOWN	COAL	0.2	94.2
388.2	CARBONDALE		DARK SHALE	5.7	94.3
382.5	CARBONDALE	BRERETON	LIMESTONE	3.0	100.0
379.5	CARBONDALE		CLAYSTONE & SILTSTONE	0.8	103.0
378.7	CARBONDALE	HERRIN	COAL	6.1	103.8
372.7	CARBONDALE		UNDERCLAY	1.2	109.8

MAPID: 16303440000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: 1' S line, 1' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.854458 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.438088 DATE COLLECTED: 5 / 28 / 1971

SURFACE ELEVATION (FT.): 432.0 LOGGED (FT.): 89.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12569C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. Q-17

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
432.0	PLEISTOCENE		UNCONSOLIDATED	42.8	0.0
389.2	MODESTO		LIMESTONE	1.2	42.8
388.0	MODESTO		GRAY SHALE	1.0	44.0
387.0	MODESTO	PIASA	LIMESTONE	7.2	45.0
379.8			GRAY SHALE	11.3	52.2
368.5	CARBONDALE	BANKSTON FORK	LIMESTONE	0.8	63.5
367.7	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.1	64.3
367.6	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	64.4
365.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.1	66.8
365.1	CARBONDALE	BANKSTON FORK	LIMESTONE	0.1	66.9
365.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.3	67.0
364.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	67.3
362.6	CARBONDALE		GRAY SHALE	1.0	69.4
361.6	CARBONDALE		DARK SHALE	4.4	70.4
357.2	CARBONDALE	CONANT	LIMESTONE	0.2	74.8
357.0	CARBONDALE		DARK SHALE	0.6	75.0
356.4	CARBONDALE	BRERETON	LIMESTONE	1.4	75.6
355.0	CARBONDALE	ANNA	DARK SHALE	1.9	77.0
353.1	CARBONDALE	HERRIN	COAL	6.8	78.9
346.3	CARBONDALE		UNDERCLAY	2.3	85.7
344.0	CARBONDALE		LIMESTONE	1.0	88.0

MAPID: 16303441000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: 1320' S line, 1' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.854487 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.441729 DATE COLLECTED: 6 / 4 / 1971

SURFACE ELEVATION (FT.): 430.0 LOGGED (FT.): 93.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12571C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. Q-13

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
430.0	PLEISTOCENE		UNCONSOLIDATED	46.5	0.0
383.5	MODESTO		LIMESTONE	2.5	46.5
381.0	MODESTO		GRAY SHALE	0.8	49.0
380.2	MODESTO	PIASA	LIMESTONE	8.2	49.8
372.0			GRAY SHALE	9.5	58.0
362.5	CARBONDALE	BANKSTON FORK	LIMESTONE	0.5	67.5
362.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.4	68.0
361.6	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	68.4
356.1	CARBONDALE		GRAY SHALE	2.2	73.9
353.9	CARBONDALE		DARK SHALE	5.0	76.1
348.9	CARBONDALE		LIMESTONE	0.1	81.1
348.8	CARBONDALE		DARK SHALE	1.4	81.2
347.4	CARBONDALE		LIMESTONE	0.3	82.6
347.1	CARBONDALE		DARK SHALE	0.5	82.9
346.6	CARBONDALE		LIMESTONE	0.2	83.4
346.4	CARBONDALE		DARK SHALE	0.8	83.6
345.6	CARBONDALE	HERRIN	COAL	6.8	84.4
338.8	CARBONDALE		UNDERCLAY	1.8	91.2

MAPID: 16323889000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: 1650' S line, 1320' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.859125 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.442662 DATE COLLECTED: 8 / 28 / 1970

SURFACE ELEVATION (FT.): 460.0 LOGGED (FT.): 125.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 9980C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. M-12

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
460.0	PLEISTOCENE		UNCONSOLIDATED	86.7	0.0	
373.3	MODESTO	PIASA	LIMESTONE	11.1	86.7	TOP ERODED
362.2			GRAY SHALE	12.2	97.8	
350.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	110.0	
347.6	CARBONDALE		GRAY SHALE	4.0	112.4	
343.6	CARBONDALE		LIMESTONE	0.4	116.4	
343.2	CARBONDALE		GRAY SHALE	0.3	116.8	
342.9	CARBONDALE	BRERETON	LIMESTONE	4.3	117.1	
338.6	CARBONDALE	BRERETON	DARK SHALE	0.3	121.4	
338.3	CARBONDALE	BRERETON	LIMESTONE	1.7	121.7	
336.6	CARBONDALE		DARK SHALE	0.3	123.4	
336.3	CARBONDALE	HERRIN	COAL	1.3	123.7	

MAPID: 16323890000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: 1980' S line, 990' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.857975 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.443566 DATE COLLECTED: 9 / 1 / 1970

SURFACE ELEVATION (FT.): 462.0 LOGGED (FT.): 104.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 9981C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. N-11

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
462.0	PLEISTOCENE		UNCONSOLIDATED	65.6	0.0	
396.4	MODESTO		LIMESTONE	2.4	65.6	
394.0	MODESTO		GRAY SHALE	2.0	68.0	
392.0	MODESTO	PIASA	LIMESTONE	7.6	70.0	
384.4			GRAY SHALE	7.4	77.6	
377.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	85.0	
374.7	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.3	87.3	
374.4	CARBONDALE	BANKSTON FORK	LIMESTONE	6.9	87.6	
367.5	CARBONDALE		GRAY SHALE	0.2	94.5	
367.3	CARBONDALE	CONANT	LIMESTONE	0.1	94.7	
367.2	CARBONDALE		DARK SHALE	5.1	94.8	
362.1	CARBONDALE	BRERETON	LIMESTONE	1.3	99.9	
360.8	CARBONDALE		DARK SHALE	1.4	101.2	
359.4	CARBONDALE	HERRIN	COAL	1.4	102.6	HOLE DID NOT PENETRATE FULL SEAM

MAPID: 16323892000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: 1980' S line, 1320' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.859133 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.443573 DATE COLLECTED: 9 / 1 / 1970

SURFACE ELEVATION (FT.): 461.0 LOGGED (FT.): 106.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 9982C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. M-11

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
461.0	PLEISTOCENE		UNCONSOLIDATED	64.5	0.0
396.5	MODESTO	PIASA	LIMESTONE	11.5	64.5
385.0			GRAY SHALE	11.5	76.0
373.5	CARBONDALE	BANKSTON FORK	LIMESTONE	5.7	87.5
367.8	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.2	93.2
367.6	CARBONDALE	BANKSTON FORK	LIMESTONE	0.4	93.4
367.2	CARBONDALE		GRAY SHALE	2.7	93.8
364.5	CARBONDALE		LIMESTONE	0.3	96.5
364.2	CARBONDALE		GRAY SHALE	2.8	96.8
361.4	CARBONDALE	CONANT	LIMESTONE	1.1	99.6
360.3	CARBONDALE		DARK SHALE	0.6	100.7
359.7	CARBONDALE	BRERETON	LIMESTONE	0.9	101.3
358.8	CARBONDALE	ANNA	DARK SHALE	0.5	102.2
358.3	CARBONDALE	HERRIN	COAL	3.3	102.7

MAPID: 16327663000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.863311

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.438226

DATE COLLECTED:

SURFACE ELEVATION (FT.): 438.3 LOGGED (FT.): 79.8

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12624C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
438.3	PLEISTOCENE		UNCONSOLIDATED	29.4	0.0
408.9	MODESTO		LIMESTONE	1.8	29.4
407.1	MODESTO		GRAY SHALE	3.2	31.2
403.9	MODESTO	PIASA	LIMESTONE	6.6	34.4
397.3			GRAY SHALE	10.6	41.0
386.7	CARBONDALE		SANDSTONE	5.6	51.6
381.1	CARBONDALE		DARK SHALE	7.0	57.2
374.1	CARBONDALE	BRERETON	LIMESTONE	4.2	64.2
369.9	CARBONDALE	ANNA	BLACK SHALE	1.5	68.4
368.4	CARBONDALE	HERRIN	COAL	6.7	69.9
361.7	CARBONDALE		UNDERCLAY	0.7	76.6
361.0	CARBONDALE		LIMESTONE	1.9	77.3
359.1	CARBONDALE		SHALE WITH LIMESTONE	0.6	79.2

MAPID: 16327664000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.865161

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.452657

DATE COLLECTED:

SURFACE ELEVATION (FT.): 508.2 LOGGED (FT.): 178.1

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15502C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
508.2	PLEISTOCENE		UNCONSOLIDATED	28.0	0.0	
480.2	MODESTO		SANDSTONE	20.5	28.0	
459.7	MODESTO		GRAY SHALE	85.2	48.5	
374.5	MODESTO		LIMESTONE	2.7	133.7	
371.8	MODESTO		GRAY SHALE	0.4	136.4	
371.4	MODESTO		LIMESTONE	2.3	136.8	
369.1	MODESTO		GRAY SHALE	0.7	139.1	
368.4	MODESTO	PIASA	LIMESTONE	8.2	139.8	
360.2			GRAY SHALE	7.3	148.0	
352.9	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	155.3	
350.8	CARBONDALE	BANKSTON FORK	SHALE WITH LIMESTONE	1.7	157.4	
349.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	159.1	
346.9	CARBONDALE		GRAY SHALE	1.7	161.3	
345.2	CARBONDALE		DARK SHALE	3.8	163.0	
341.5	CARBONDALE		SHALE WITH LIMESTONE	0.9	166.7	
340.6	CARBONDALE		DARK SHALE	0.5	167.6	
340.1	CARBONDALE	BRERETON	LIMESTONE	2.3	168.1	
337.8	CARBONDALE	ANNA	BLACK SHALE	0.8	170.4	
336.9	CARBONDALE	HERRIN	COAL	6.8	171.3	

MAPID: 16327665000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH

LONGITUDE: -89.85832

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N

LATITUDE: 38.438228

DATE COLLECTED:

SURFACE ELEVATION (FT.): 431.5

LOGGED (FT.): 90.6

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15862C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
431.5	PLEISTOCENE		UNCONSOLIDATED	37.2	0.0
394.3	MODESTO	PIASA	LIMESTONE	12.1	37.2
382.2			GRAY SHALE	9.3	49.3
372.9	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	58.6
371.1	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.6	60.4
369.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	62.0
367.3	CARBONDALE		GRAY SHALE	2.2	64.2
365.1	CARBONDALE		DARK SHALE	4.2	66.4
360.9	CARBONDALE		DARK SHALE & LIMESTONE	1.7	70.6
359.3	CARBONDALE	JAMESTOWN	SHALE/COAL	0.5	72.2
358.8	CARBONDALE	BRERETON	LIMESTONE	3.6	72.7
355.2	CARBONDALE		DARK SHALE	0.3	76.3
354.9	CARBONDALE	HERRIN	COAL	7.2	76.6
347.8	CARBONDALE		UNDERCLAY	2.2	83.7
345.6	CARBONDALE		LIMESTONE	4.7	85.9

MAPID: 16327666000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES: 1320' S line, 2640' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.863751 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.441772 DATE COLLECTED:

SURFACE ELEVATION (FT.): 463.8 LOGGED (FT.): 129.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16184C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
463.8	PLEISTOCENE		UNCONSOLIDATED	15.0	0.0
448.8	MODESTO		SANDY SHALE	31.6	15.0
417.2	MODESTO		GRAY SHALE	17.4	46.6
399.8	MODESTO		SHALE WITH LIMESTONE	10.4	64.0
389.4	MODESTO		LIMESTONE	0.5	74.4
388.9	MODESTO		GRAY SHALE	8.5	74.9
380.4	MODESTO		LIMESTONE	2.7	83.4
377.7	MODESTO		GRAY SHALE	1.9	86.1
375.8	MODESTO	PIASA	LIMESTONE	9.0	88.0
366.8			SHALE WITH LIMESTONE	2.4	97.0
364.4			SHALE	5.7	99.4
358.7			LIMESTONE	1.0	105.1
357.7			GRAY SHALE	2.1	106.1
355.7	CARBONDALE		LIMESTONE	1.2	108.1
354.5	CARBONDALE		GRAY SHALE	3.1	109.3
351.4	CARBONDALE		DARK SHALE	3.7	112.4
347.6	CARBONDALE		LIMESTONE	0.5	116.2
347.2	CARBONDALE		SHALE WITH LIMESTONE	1.1	116.6
346.1	CARBONDALE	JAMESTOWN	COAL	1.7	117.7
344.4	CARBONDALE		DARK SHALE	0.7	119.4
343.8	CARBONDALE		SHALE WITH LIMESTONE	2.6	120.0
341.2	CARBONDALE	HERRIN	COAL	6.8	122.6

MAPID: 16327727000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.856325

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.442861

DATE COLLECTED: 1 / 16 / 1959

SURFACE ELEVATION (FT.): 440.5 LOGGED (FT.): 107.8

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 3487B

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
440.5	PLEISTOCENE		UNCONSOLIDATED	30.1	0.0	
410.4	CARBONDALE		GRAY SHALE	29.0	30.1	
381.4	CARBONDALE		LIMESTONE	2.5	59.1	
378.9	CARBONDALE		GRAY SHALE	1.4	61.6	
377.5	CARBONDALE	BANKSTON FORK	LIMESTONE	10.0	63.0	
367.5	CARBONDALE		GRAY SHALE	6.9	73.0	
360.6	CARBONDALE	BRERETON	LIMESTONE	8.1	79.9	
352.6	CARBONDALE		SHALE	8.8	87.9	DARK GRAY
343.8	CARBONDALE	ANNA	BLACK SHALE	2.0	96.7	
341.8	CARBONDALE	HERRIN	COAL	6.7	98.7	
335.1	CARBONDALE		UNDERCLAY	2.5	105.4	

MAPID: 16327728000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.85448

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.445393

DATE COLLECTED: 6 / 9 / 1971

SURFACE ELEVATION (FT.): 439.4 LOGGED (FT.): 110.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12573C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
439.4	PLEISTOCENE		UNCONSOLIDATED	41.0	0.0	
398.4	PLEISTOCENE		CLAY	22.7	41.0	BLUE
375.7	CARBONDALE		LIMESTONE	2.8	63.7	
372.9	CARBONDALE		GRAY SHALE	1.3	66.5	
371.6	CARBONDALE		LIMESTONE	7.4	67.8	
364.2	CARBONDALE		GRAY SHALE	10.5	75.2	
353.7	CARBONDALE		LIMESTONE	4.8	85.7	
348.9	CARBONDALE		GRAY SHALE	0.5	90.5	
348.4	CARBONDALE		LIMESTONE	2.0	91.0	
346.4	CARBONDALE		GRAY SHALE	0.3	93.0	
346.1	CARBONDALE		LIMESTONE	0.1	93.3	
346.0	CARBONDALE		GRAY SHALE	0.5	93.4	
345.5	CARBONDALE	ANNA	SHALE	6.6	93.9	DARK
338.9	CARBONDALE	HERRIN	COAL	7.5	100.5	
331.4	CARBONDALE		UNDERCLAY	2.0	108.0	

MAPID: 16327729000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.861243

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.447815

DATE COLLECTED: 9 / 20 / 1972

SURFACE ELEVATION (FT.): 461.3 LOGGED (FT.): 124.8

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12872C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
461.3	PLEISTOCENE		UNCONSOLIDATED	26.0	0.0	
435.3	CARBONDALE		GRAY SHALE	56.8	26.0	
378.5	CARBONDALE		LIMESTONE	2.6	82.8	
375.9	CARBONDALE		SHALE	3.8	85.4	
372.1	CARBONDALE		LIMESTONE	6.3	89.2	
365.8	CARBONDALE		SHALE	9.7	95.5	
356.1	CARBONDALE		LIMESTONE	0.9	105.2	
355.2	CARBONDALE		GRAY SHALE	3.9	106.1	
351.3	CARBONDALE		LIMESTONE	1.8	110.0	
349.5	CARBONDALE		GRAY SHALE	0.7	111.8	
348.8	CARBONDALE		SHALE	4.1	112.5	DARK
344.7	CARBONDALE	BRERETON	LIMESTONE	1.6	116.6	
343.0	CARBONDALE	HERRIN	COAL	6.5	118.3	

MAPID: 16327730000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.862328

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.443643

DATE COLLECTED: 8 / 7 / 1972

SURFACE ELEVATION (FT.): 472.6 LOGGED (FT.): 131.1

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12983C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
472.6	PLEISTOCENE		UNCONSOLIDATED	42.0	0.0	
430.6			GRAY SHALE	4.1	42.0	
426.5			LIMESTONE	1.0	46.1	
425.5			SHALE	37.6	47.1	WITH LS
387.9			LIMESTONE	2.7	84.7	
385.2			GRAY SHALE	2.3	87.4	
382.9			LIMESTONE	11.5	89.7	
371.4			GRAY SHALE	5.0	101.2	
366.4			LIMESTONE	3.3	106.2	
363.1	CARBONDALE		SHALE	4.3	109.5	WITH LS
358.8	CARBONDALE		GRAY SHALE	1.7	113.8	
357.1	CARBONDALE		SHALE	7.8	115.5	DARK
349.3	CARBONDALE		LIMESTONE	0.5	123.3	
348.8	CARBONDALE	ANNA	SHALE	0.6	123.8	DARK
348.2	CARBONDALE	HERRIN	COAL	6.7	124.4	

MAPID: 16327731000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 15 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.862133

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 38.452363

DATE COLLECTED: 10 / 3 / 1972

SURFACE ELEVATION (FT.): 498.3 LOGGED (FT.): 174.6

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15501C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
498.3	PLEISTOCENE		CLAY	22.0	0.0	
476.3			SANDSTONE	36.2	22.0	
440.1			SANDY SHALE	30.0	58.2	
410.1			GRAY SHALE	41.0	88.2	
369.1			LIMESTONE	2.6	129.2	
366.5			GRAY SHALE	1.3	131.8	
365.2			LIMESTONE	6.6	133.1	
358.6			SHALE	4.2	139.7	WITH LS
354.4			LIMESTONE	1.1	143.9	
353.3	CARBONDALE		GRAY SHALE	6.0	145.0	
347.3	CARBONDALE		LIMESTONE	1.4	151.0	
345.9	CARBONDALE		GRAY SHALE	0.3	152.4	
345.6	CARBONDALE		LIMESTONE	2.2	152.7	
343.4	CARBONDALE		GRAY SHALE	0.7	154.9	
342.7	CARBONDALE		LIMESTONE	2.0	155.6	
340.7	CARBONDALE		GRAY SHALE	1.2	157.6	
339.5	CARBONDALE	ANNA	SHALE	8.9	158.8	DARK
330.6	CARBONDALE	HERRIN	COAL	6.9	167.7	

MAPID: 16300065000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 16 QUARTERS/FOOTAGES: 660' S line, 4290' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.887857 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.440096 DATE COLLECTED: 8 / 1 / 1923

SURFACE ELEVATION (FT.): 484.9 LOGGED (FT.): 113.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
484.9			SOIL	4.0	0.0	DARK
480.9			HARD PAN	5.0	4.0	
475.9			SANDY SHALE	20.0	9.0	
455.9			DARK SHALE	11.0	29.0	
444.9			DARK SHALE	1.7	40.0	
443.2			COAL	0.3	41.7	
442.9			SHALE	4.0	42.0	
438.9			SHALE	20.0	46.0	BLUE
418.9			LIMESTONE	2.0	66.0	
416.9			LIMESTONE	5.0	68.0	
411.9			LIMESTONE	1.0	73.0	
410.9			LIMESTONE	2.0	74.0	
408.9			SHALY LIMESTONE	5.0	76.0	
403.9			SHALE	7.8	81.0	
396.1			LIMESTONE	6.5	88.8	
389.6			SHALY LIMESTONE	2.8	95.3	ARGILLACEOUS; LT GY
386.9	CARBONDALE	ANNA	DARK SHALE	7.3	98.0	
379.6	CARBONDALE	HERRIN	COAL	6.3	105.3	
373.4	CARBONDALE		UNDERCLAY	1.5	111.5	

MAPID: 16300065000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 16 QUARTERS/FOOTAGES: 660' S line, 4290' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.887857 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.440096 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 484.9 LOGGED (FT.): 113.0 LOG TYPE:

SOURCE: UNION COLL0026 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
379.9	CARBONDALE	HERRIN	COAL	6.3	105.0	

MAPID: 16300066000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 16 QUARTERS/FOOTAGES: 2250' S line, 75' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.873112 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.444385 DATE COLLECTED: 8 / 0 / 1923

SURFACE ELEVATION (FT.): 457.1 LOGGED (FT.): 105.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
457.1			CLAY	7.0	0.0	YELLOW
450.1			SAND	6.0	7.0	
444.1			HARD PAN	5.0	13.0	
439.1			SANDSTONE	5.0	18.0	
434.1			LIMESTONE	0.6	23.0	
433.5			CALCAREOUS SHALE	21.2	23.6	
412.3			COAL	0.3	44.8	
412.0			DARK SHALE	4.4	45.1	
407.6			LIMESTONE	5.5	49.5	
402.1			SHALE	5.0	55.0	
397.1			SHALE	2.0	60.0	
395.1			LIMESTONE	7.0	62.0	
388.1			SHALE	12.0	69.0	BLUE
376.1			LIMESTONE	3.8	81.0	
372.3			SHALE	6.9	84.8	
365.4			LIMESTONE	1.6	91.7	
363.8			COAL	0.1	93.3	
363.8	CARBONDALE	BRERETON	LIMESTONE	5.2	93.3	
358.6	CARBONDALE	HERRIN	COAL	6.2	98.5	
352.4	CARBONDALE		UNDERCLAY	0.3	104.7	

MAPID: 16300066000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 16 QUARTERS/FOOTAGES: 2250' S line, 75' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.873112 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.444385 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 457.1 LOGGED (FT.): 105.0 LOG TYPE:

SOURCE: UNION COLL 30 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
358.1	CARBONDALE	HERRIN	COAL	6.2	99.0	

MAPID: 16300068000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 16 QUARTERS/FOOTAGES: 1120' S line, 330' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.88951 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.441377 DATE COLLECTED: 8 / 0 / 1923

SURFACE ELEVATION (FT.): 535.8 LOGGED (FT.): 167.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
535.8			SOIL	2.0	0.0	DARK
533.8			CLAY	21.0	2.0	YELLOW
512.8			HARD PAN	17.0	23.0	
495.8			SANDSTONE	20.0	40.0	
475.8			SHALE	32.0	60.0	
443.8			DARK SHALE	5.2	92.0	
438.6			COAL	0.3	97.2	
438.3			UNDERCLAY	1.3	97.5	
437.0			SHALY LIMESTONE	4.8	98.8	
432.1			SHALE	16.3	103.7	
415.8			LIMESTONE	2.0	120.0	
413.8			LIMESTONE	7.0	122.0	
406.8			SHALE	8.0	129.0	
398.8			CLAYSTONE & SHALE	8.0	137.0	CF NOTES
390.8	CARBONDALE	BRERETON	LIMESTONE	3.0	145.0	
387.8	CARBONDALE	ANNA	SHALE	10.8	148.0	BLACK
377.0	CARBONDALE	HERRIN	COAL	6.3	158.8	COAL 1-11
370.6	CARBONDALE		UNDERCLAY	1.8	165.2	

MAPID: 16300068000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 16 QUARTERS/FOOTAGES: 1120' S line, 330' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.88951 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.441377 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 535.8 LOGGED (FT.): 167.0 LOG TYPE:

SOURCE: UNION COLL0028 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
376.8	CARBONDALE	HERRIN	COAL	6.3	159.0	

MAPID: 16303412000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 16 QUARTERS/FOOTAGES: 1320' N line, 1320' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.877535

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.448948

DATE COLLECTED:

SURFACE ELEVATION (FT.): 500.0 LOGGED (FT.): 147.0

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12077C

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
395.0	MODESTO	PIASA	LIMESTONE	9.0	105.0	
386.0	CARBONDALE		GRAY SHALE	9.5	114.0	
376.5	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	3.5	123.5	UPPER BENCH
373.0	CARBONDALE	BANKSTON FORK	CLAYSTONE & SHALE	3.4	127.0	SHALE PARTING
369.6	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	1.5	130.4	LOWER BENCH
368.1	CARBONDALE	LAWSON	DARK GRAY SHALE	6.5	131.9	
361.6	CARBONDALE	BRERETON	CALCAREOUS SHALE	0.6	138.4	
361.0	CARBONDALE	ANNA	BLACK SHALE	1.7	139.0	
360.0	CARBONDALE	HERRIN	COAL	7.0	140.0	

MAPID: 16300067000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 17 QUARTERS/FOOTAGES: 3430' S line, 2310' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.898799 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.447819 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 530.5 LOGGED (FT.): 160.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO 24 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
530.5			CLAY	15.0	0.0	YELLOW
515.5			SAND	12.0	15.0	
503.5			SANDSTONE	12.3	27.0	BROWN
491.2			SANDY SHALE	31.3	39.3	
459.9			SHALE	16.4	70.6	
443.5			DARK SHALE	5.0	87.0	
438.5			LIMESTONE	4.0	92.0	
434.5			SHALE	15.7	96.0	
418.8			LIMESTONE	13.0	111.7	
405.8			SHALE	7.3	124.7	
398.5			LIMESTONE	4.8	132.0	
393.7			SHALE	6.3	136.8	
387.5			CALCAREOUS SHALE	3.0	143.0	
384.5	CARBONDALE	ANNA	DARK SHALE	5.0	146.0	
379.5	CARBONDALE	ANNA	CALCAREOUS SHALE	1.8	151.0	
377.7	CARBONDALE	HERRIN	COAL	2.0	152.8	
375.7	CARBONDALE	HERRIN	BONE COAL	0.1	154.8	
375.6	CARBONDALE	HERRIN	COAL	2.2	154.9	
373.4	CARBONDALE	HERRIN	BONE COAL	0.0	157.1	
373.4	CARBONDALE	HERRIN	COAL	0.1	157.1	
373.3	CARBONDALE	HERRIN	BONE COAL	0.0	157.2	
373.3	CARBONDALE	HERRIN	COAL	1.7	157.2	
371.7	CARBONDALE		UNDERCLAY	1.2	158.8	

MAPID: 16300067000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 17 QUARTERS/FOOTAGES: 3430' S line, 2310' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.898799 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.447819 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 530.5 LOGGED (FT.): 160.0 LOG TYPE:

SOURCE: UNION COLL0024 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
377.5	CARBONDALE	HERRIN	COAL	6.1	153.0	

MAPID: 16303362000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 17 QUARTERS/FOOTAGES: 990' N line, 1320' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.895333

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.450065

DATE COLLECTED:

SURFACE ELEVATION (FT.): 520.0 LOGGED (FT.): 138.6

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12567C

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
422.0	MODESTO	PIASA	LIMESTONE	8.8	98.0	
413.2	CARBONDALE		GRAY SHALE	10.8	106.8	
402.4	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.6	117.6	
399.8	CARBONDALE	LAWSON	GRAY SHALE	2.9	120.2	
396.9	CARBONDALE	LAWSON	LIMESTONE W/ SHALE	2.6	123.1	
394.3	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	2.1	125.7	
392.3	CARBONDALE	JAMESTOWN	BONE COAL	0.8	127.7	
391.5	CARBONDALE		LIMESTONE W/ SHALE	0.8	128.5	
390.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	1.9	129.3	
388.8	CARBONDALE	ANNA	BLACK SHALE	0.8	131.2	
388.0	CARBONDALE	HERRIN	COAL	6.6	132.0	

MAPID: 16300233000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 18 QUARTERS/FOOTAGES: 4300' S line, 4700' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.926004

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.450389

DATE COLLECTED:

SURFACE ELEVATION (FT.): 537.5 LOGGED (FT.): 0.0

LOG TYPE: Drillers Log

SOURCE: WALNUT VALLEY COAL COMPANY

WELL TYPE: Mine Shaft

COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
537.5			MINE OPENING	0.0	0.0	APP. SAME AS ST. CLAIR MINE UNDERGRND

MAPID: 16300234000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 18 QUARTERS/FOOTAGES: 3950' S line, 4800' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.926339

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.449425

DATE COLLECTED:

SURFACE ELEVATION (FT.): 536.0 LOGGED (FT.): 100.0

LOG TYPE: Drillers Log

SOURCE: NOAH COAL & MINING COMPANY

WELL TYPE: Mine Shaft

COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
442.5	CARBONDALE	HERRIN	COAL	6.5	93.5	ELEVATION TOP 436'

MAPID: 16300234000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 18 **QUARTERS/FOOTAGES:** 3950' S line, 4800' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.926339 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.449425 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 536.3 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: NASH CMC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
436.3	CARBONDALE	HERRIN	COAL	6.5	100.0	

MAPID: 16300235000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 18 **QUARTERS/FOOTAGES:** 1950' S line, 3500' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.921683 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.443879 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 538.0 **LOGGED (FT.):** 144.0 **LOG TYPE:** Drillers Log
SOURCE: MULBERRY HILL COAL COMPANY **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
400.5	CARBONDALE	HERRIN	COAL	6.5	137.5	ELEVATION TOP 395'

MAPID: 16300235000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 18 **QUARTERS/FOOTAGES:** 1950' S line, 3500' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.921683 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.443879 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 538.1 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: MULBERRY HILL COAL COMPANY **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
394.1	CARBONDALE	HERRIN	COAL	6.5	144.0	

MAPID: 16300671000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 18 **QUARTERS/FOOTAGES:** 1650' N line, 330' W line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.92646 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.448541 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 530.0 **LOGGED (FT.):** 2022.0 **LOG TYPE:**
SOURCE: COLGAN A J 1 **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
422.0	CARBONDALE	HERRIN	COAL	5.0	108.0	

MAPID: 16300671000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 18 QUARTERS/FOOTAGES: 1650' N line, 330' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.92646 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.448541 DATE COLLECTED:

SURFACE ELEVATION (FT.): 525.0 LOGGED (FT.): 113.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
455.0	MODESTO	PIASA	LIMESTONE	10.0	70.0
445.0	CARBONDALE		LIMESTONE W/ SHALE	14.0	80.0
431.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	94.0
425.0	CARBONDALE	LAWSON	DARK GRAY SHALE	6.0	100.0
419.0	CARBONDALE	BRERETON	LIMESTONE	2.0	106.0
417.0	CARBONDALE	HERRIN	COAL	5.0	108.0

MAPID: 16300671000C VERSION: 3

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 18 QUARTERS/FOOTAGES: 1650' N line, 330' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.92646 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.448541 DATE COLLECTED: 7 / 14 / 1937

SURFACE ELEVATION (FT.): 525.0 LOGGED (FT.): 315.0 LOG TYPE: Drillers Log

SOURCE: A J COLGAN ET AL WELL TYPE: Junked Hole

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
525.0			CLAY	15.0	0.0	15; R
510.0			SAND	20.0	15.0	WHITE
490.0			CLAY	35.0	35.0	RED
455.0			GRAVEL	10.0	70.0	
445.0			LIMESTONE	10.0	80.0	
435.0			BLACK SHALE	5.0	90.0	
430.0			LIMESTONE	2.0	95.0	
428.0			BLACK SHALE	7.0	97.0	
421.0			LIMESTONE	4.0	104.0	WHITE
417.0			LIMESTONE	2.0	108.0	WHITE
415.0			BLACK SHALE	6.0	110.0	
409.0			LIMESTONE	2.0	116.0	GRAY
407.0	CARBONDALE	HERRIN	COAL	5.0	118.0	
402.0	CARBONDALE		BLACK SHALE	5.0	123.0	
397.0	CARBONDALE		BLACK SHALE	8.0	128.0	
389.0	CARBONDALE		BLACK SHALE	8.0	136.0	
381.0	CARBONDALE		BLACK SHALE	5.0	144.0	
376.0	CARBONDALE		BLACK SHALE	14.0	149.0	
362.0	CARBONDALE		LIMESTONE	3.0	163.0	WHITE
359.0	CARBONDALE		BLACK SHALE	4.0	166.0	
355.0	CARBONDALE	SPRINGFIELD	COAL	3.0	170.0	
352.0	CARBONDALE		BLACK SHALE	7.0	173.0	
345.0	CARBONDALE		BLACK SHALE	4.0	180.0	
341.0	CARBONDALE		ROCK	4.0	184.0	
337.0	CARBONDALE		BLACK SHALE	28.0	188.0	
309.0	CARBONDALE		LIMESTONE	2.0	216.0	GRAY
307.0	CARBONDALE		BLACK SHALE	4.0	218.0	
303.0	CARBONDALE		BLACK SHALE	16.0	222.0	
287.0	MISSISSIPPIAN		LIMESTONE	34.0	238.0	
253.0	MISSISSIPPIAN		LIMESTONE	13.0	272.0	WHITE
240.0	MISSISSIPPIAN		BLACK SHALE	10.0	285.0	
230.0	MISSISSIPPIAN		BLACK SHALE	2.0	295.0	
228.0	MISSISSIPPIAN		ROCK	5.0	297.0	
223.0	MISSISSIPPIAN		BLACK SHALE	5.0	302.0	
218.0	MISSISSIPPIAN		LIMESTONE	8.0	307.0	BROWN

MAPID: 16300236000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 19 **QUARTERS/FOOTAGES:** 1100' N line, 1850' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.915729 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.435422 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 518.9 **LOGGED (FT.):** 143.0 **LOG TYPE:** Drillers Log
SOURCE: REICHERT COAL COMPANY **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
382.4	CARBONDALE	HERRIN	COAL	6.5	136.5	FREEBURG COAL MINING CO. ELEV TOP 376'

MAPID: 16300236000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 19 **QUARTERS/FOOTAGES:** 1100' N line, 1850' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.915729 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.435422 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 518.9 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: FREEBURG CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
375.9	CARBONDALE	HERRIN	COAL	6.5	143.0	

MAPID: 16303513000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 19 **QUARTERS/FOOTAGES:** 2640' N line, 1320' W line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.922858 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.431213 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 492.0 **LOGGED (FT.):** 97.8 **LOG TYPE:** Survey Core Study
SOURCE: PEABODY COAL CO. 12848C **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
432.4	MODESTO	PIASA	LIMESTONE	1.8	59.6	
430.6	CARBONDALE		GRAY SHALE	13.5	61.4	
417.1	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	1.8	74.9	
415.3	CARBONDALE	LAWSON	CALCAREOUS SHALE	0.7	76.7	
414.6	CARBONDALE	LAWSON	CLAYSTONE	1.6	77.4	
413.0	CARBONDALE	LAWSON	SILTY SHALE	2.4	79.0	
410.6	CARBONDALE	LAWSON	SILTSTONE	4.0	81.4	
406.6	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	4.4	85.4	
402.2	CARBONDALE	JAMESTOWN	BONE COAL	0.5	89.8	
401.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.2	90.3	
401.5	CARBONDALE	ANNA	DARK GRAY SHALE	0.5	90.5	
401.0	CARBONDALE	HERRIN	COAL	6.8	91.0	

MAPID: 16300389000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 20 **QUARTERS/FOOTAGES:** 2500' S line, 2500' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.899362 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.430987 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 461.9 **LOGGED (FT.):** 80.0 **LOG TYPE:** Drillers Log
SOURCE: WILDWOOD COAL COMPANY **WELL TYPE:** Coal Test
COMMENT: MINE SLOPE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
388.6	CARBONDALE	HERRIN	COAL	6.8	73.3	ELEVATION TOP 382'

MAPID: 16300389000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 20 **QUARTERS/FOOTAGES:** 2500' S line, 2500' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.899362 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.430987 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 461.9 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: WILDWOODCC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
381.9	CARBONDALE	HERRIN	COAL	6.8	80.0	

MAPID: 16300767000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 20 **QUARTERS/FOOTAGES:** 5' S line, 3190' W line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.897783 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.424069 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 477.1 **LOGGED (FT.):** 267.0 **LOG TYPE:** Drillers Log
SOURCE: NEUWIRTH COAL COMPANY **WELL TYPE:** Coal Test
COMMENT: SLOPE MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	6.5		DEPTH 260.5?- PROBABLY LENGTH OF SLOPE

MAPID: 16303364000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 20 QUARTERS/FOOTAGES: 2640' N line, 1320' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.895221 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.431037 DATE COLLECTED:

SURFACE ELEVATION (FT.): 500.0 LOGGED (FT.): 140.8 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12566C WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
401.8	MODESTO	PIASA	LIMESTONE	6.2	98.2	
395.6	CARBONDALE		GRAY SHALE	13.1	104.4	
382.5	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.4	117.5	UPPER BENCH
380.1	CARBONDALE	BANKSTON FORK	SILTSTONE	0.2	119.9	SHALE PARTING
379.9	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	1.8	120.1	LOWER BENCH
378.1	CARBONDALE	LAWSON	SILTY SHALE	5.8	121.9	
372.4	CARBONDALE	LAWSON	CALCAREOUS SHALE	3.8	127.6	
368.6	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	1.4	131.4	
367.2	CARBONDALE	JAMESTOWN	BONE COAL	0.6	132.8	
366.7	CARBONDALE		CLAYSTONE	0.1	133.3	
366.6	CARBONDALE	ANNA	BLACK SHALE	0.6	133.4	
366.0	CARBONDALE	HERRIN	COAL	6.8	134.0	

MAPID: 16300069000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 21 QUARTERS/FOOTAGES: 530' S line, 5150' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.890392 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.425378 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 429.2 LOGGED (FT.): 143.0 LOG TYPE:

SOURCE: UNION COLL0001 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
362.2	CARBONDALE	HERRIN	COAL	6.1	67.0	

MAPID: 16300069000C VERSION: 2

PROJECT: NCRDS87

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 21 QUARTERS/FOOTAGES: 530' S line, 5150' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.890392 GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 38.425378 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 429.3 LOGGED (FT.): 143.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
429.3			UNCONSOLIDATED	24.0	0.0
405.3			LIMESTONE	17.6	24.0
387.7			SHALE	19.0	41.6
368.7			LIMESTONE	5.4	60.6
363.3			UNDERCLAY	0.5	66.0
362.8			BONE COAL	6.1	66.5
356.7			UNDERCLAY	2.3	72.6
354.5			LIMESTONE	10.2	74.8
344.3			SHALE	45.6	85.0
298.7	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	2.2	130.6
296.5	CARBONDALE		SHALE	10.3	132.8

MAPID: 16300069000C VERSION: 3

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 21 QUARTERS/FOOTAGES: 530' S line, 5150' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.890392 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.425378 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 429.3 LOGGED (FT.): 143.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
429.3			SOIL	5.0	0.0
424.3			GRAVEL	17.0	5.0
407.3			HARD PAN	2.0	22.0
405.3			LIMESTONE	17.6	24.0
387.7			SHALE	16.0	41.6
371.7			DARK SHALE	3.0	57.6
368.7			LIMESTONE	5.4	60.6
363.3			CLAYSTONE	0.5	66.0
362.8	CARBONDALE	HERRIN	COAL	0.8	66.5
362.0	CARBONDALE	HERRIN	BONE COAL	0.1	67.3
362.0	CARBONDALE	HERRIN	COAL	2.0	67.3
360.0	CARBONDALE	HERRIN	BONE COAL	0.0	69.3
359.9	CARBONDALE	HERRIN	COAL	0.9	69.4
359.0	CARBONDALE	HERRIN	BONE COAL	0.0	70.3
359.0	CARBONDALE	HERRIN	COAL	0.4	70.3
358.6	CARBONDALE	HERRIN	BONE COAL	0.1	70.7
358.5	CARBONDALE	HERRIN	COAL	0.8	70.8
357.8	CARBONDALE	HERRIN	BONE COAL	0.0	71.5
357.7	CARBONDALE	HERRIN	COAL	1.0	71.6
356.7	CARBONDALE		UNDERCLAY	2.3	72.6
354.5	CARBONDALE		LIMESTONE	7.2	74.8
347.3	CARBONDALE		LIMESTONE	3.0	82.0
344.3	CARBONDALE		DARK SHALE	2.0	85.0
342.3	CARBONDALE		SHALE	5.0	87.0
337.3	CARBONDALE		SANDY SHALE	4.0	92.0
333.3	CARBONDALE		SHALE	28.8	96.0
304.5	CARBONDALE		DARK SHALE	1.2	124.8
303.3	CARBONDALE		SHALE	0.3	126.0
303.0	CARBONDALE		SHALE	0.8	126.3
302.1	CARBONDALE		SHALE	0.4	127.2
301.7	CARBONDALE		DARK SHALE	2.7	127.6
299.0	CARBONDALE		SHALE	0.3	130.3
298.7	CARBONDALE	HOUCHIN CREEK	COAL	0.3	130.6
298.5	CARBONDALE	HOUCHIN CREEK	SANDY SHALE	0.3	130.8
298.1	CARBONDALE	HOUCHIN CREEK	COAL	0.1	131.2
298.0	CARBONDALE	HOUCHIN CREEK	SHALE	0.8	131.3
297.3	CARBONDALE	HOUCHIN CREEK	COAL	0.8	132.0
296.5	CARBONDALE		SANDY SHALE	0.3	132.8
296.3	CARBONDALE		SHALE	5.0	133.0

291.3 CARBONDALE

SANDY SHALE

5.0 138.0

MAPID: 16301419000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 21 QUARTERS/FOOTAGES: 1980' N line, 1' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.890601 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.432826 DATE COLLECTED: 0 / 0 / 1971

SURFACE ELEVATION (FT.): 485.0 LOGGED (FT.): 127.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12834C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. A-7

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
485.0	PLEISTOCENE		UNCONSOLIDATED	77.5	0.0
407.5	MODESTO		LIMESTONE	2.0	77.5
405.5	MODESTO		GRAY SHALE	2.0	79.5
403.5	MODESTO	PIASA	LIMESTONE	7.0	81.5
396.5			GRAY SHALE	10.1	88.5
386.4	CARBONDALE	BANKSTON FORK	LIMESTONE	3.8	98.6
382.6	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.5	102.4
379.1	CARBONDALE	BANKSTON FORK	LIMESTONE	1.7	105.9
377.4	CARBONDALE		GRAY SHALE	1.2	107.6
376.2	CARBONDALE		DARK SHALE	3.4	108.8
372.8	CARBONDALE	BRERETON	LIMESTONE	6.3	112.2
366.5	CARBONDALE		DARK SHALE	0.2	118.5
366.3	CARBONDALE	HERRIN	COAL	6.5	118.7
359.8	CARBONDALE		UNDERCLAY	1.8	125.2

MAPID: 16303378000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 21 QUARTERS/FOOTAGES: 1320' S line, 1320' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.877172 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.427492 DATE COLLECTED: 6 / 18 / 1971

SURFACE ELEVATION (FT.): 470.0 LOGGED (FT.): 128.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12576C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. M-13

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
470.0	PLEISTOCENE		UNCONSOLIDATED	81.5	0.0	
388.5	MODESTO		LIMESTONE	2.0	81.5	
386.5	MODESTO		GRAY SHALE	2.0	83.5	
384.5	MODESTO	PIASA	LIMESTONE	6.0	85.5	
378.5			GRAY SHALE	11.5	91.5	
367.0	CARBONDALE	BANKSTON FORK	LIMESTONE	0.5	103.0	
366.5	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.9	103.5	
364.6	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	105.4	
362.8	CARBONDALE		GRAY SHALE	1.8	107.2	
361.0	CARBONDALE		LIMESTONE	0.1	109.0	CONANT
360.9	CARBONDALE		DARK SHALE	7.4	109.1	
353.5	CARBONDALE	BRERETON	LIMESTONE	0.4	116.5	
353.1	CARBONDALE		DARK SHALE	1.5	116.9	
351.6	CARBONDALE	HERRIN	COAL	6.5	118.4	
345.1	CARBONDALE		UNDERCLAY	3.1	124.9	

MAPID: 16303379000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 21 QUARTERS/FOOTAGES: 1650' S line, 990' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.876037 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.428399 DATE COLLECTED: 7 / 8 / 1971

SURFACE ELEVATION (FT.): 430.0 LOGGED (FT.): 88.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12581C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. N-12

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
430.0	PLEISTOCENE		UNCONSOLIDATED	45.5	0.0	
384.5	MODESTO	PIASA	LIMESTONE	6.0	45.5	TOP MAY BE ERODED
378.5			GRAY SHALE	12.7	51.5	
365.8	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	64.2	
360.3	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.1	69.7	
360.2	CARBONDALE	BANKSTON FORK	LIMESTONE	0.2	69.8	
360.0	CARBONDALE		GRAY SHALE	1.4	70.0	
358.6	CARBONDALE		DARK SHALE	7.2	71.4	
351.4	CARBONDALE	HERRIN	COAL	6.6	78.6	
344.8	CARBONDALE		UNDERCLAY	2.8	85.2	

MAPID: 1630338000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 21 QUARTERS/FOOTAGES: 1980' S line, 660' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.874897 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.429305 DATE COLLECTED: 7 / 12 / 1971

SURFACE ELEVATION (FT.): 444.3 LOGGED (FT.): 94.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12582C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. O-11

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
444.3	PLEISTOCENE		UNCONSOLIDATED	47.5	0.0	
396.8	MODESTO		LIMESTONE	2.0	47.5	
394.8	MODESTO		GRAY SHALE	2.2	49.5	
392.6	MODESTO	PIASA	LIMESTONE	10.0	51.7	
382.6			GRAY SHALE	11.3	61.7	
371.3	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	73.0	
369.8	CARBONDALE		GRAY SHALE	2.8	74.5	BANKSTON FORK?
367.0	CARBONDALE		LIMESTONE	0.3	77.3	BANKSTON FORK ?
366.7	CARBONDALE		GRAY SHALE	0.9	77.6	
365.8	CARBONDALE		LIMESTONE	0.5	78.5	
365.3	CARBONDALE		DARK SHALE	3.2	79.0	
362.1	CARBONDALE	CONANT	LIMESTONE	0.8	82.2	
361.3	CARBONDALE		DARK SHALE	0.4	83.0	
360.9	CARBONDALE	JAMESTOWN	COAL	0.1	83.4	
360.8	CARBONDALE	BRERETON	LIMESTONE	0.7	83.5	
360.1	CARBONDALE		DARK SHALE	1.1	84.2	
359.0	CARBONDALE	HERRIN	COAL	6.4	85.3	
352.6	CARBONDALE		UNDERCLAY	2.3	91.7	

MAPID: 16303444000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 21 QUARTERS/FOOTAGES: 1980' N line, 0' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.872655

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.432703

DATE COLLECTED:

SURFACE ELEVATION (FT.): 475.0 LOGGED (FT.): 118.3

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12829C

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
401.1	MODESTO	PIASA	LIMESTONE	8.5	73.9	
392.6	CARBONDALE		GRAY SHALE	9.2	82.4	
383.4	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	1.3	91.6	UPPER BENCH
382.1	CARBONDALE	BANKSTON FORK	SILTSTONE	0.2	92.9	SHALE PARTING
381.9	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	1.8	93.1	LOWER BENCH
380.1	CARBONDALE	LAWSON	CALCAREOUS SHALE	1.7	94.9	
378.5	CARBONDALE	LAWSON	MOTTLED SHALE	3.5	96.5	
375.0	CARBONDALE	LAWSON	BLACK SHALE	3.6	100.0	
371.4	CARBONDALE	LAWSON	CALCAREOUS SHALE	1.0	103.6	
370.5	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	1.4	104.5	
369.1	CARBONDALE	JAMESTOWN	BONE COAL	0.7	105.9	
368.4	CARBONDALE		BLACK SHALE	0.5	106.6	
367.9	CARBONDALE	BRERETON	LIMESTONE	5.0	107.1	
363.0	CARBONDALE	HERRIN	COAL	6.3	112.0	

MAPID: 16303535000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 21 QUARTERS/FOOTAGES: 1320' N line, 1' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.872699 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.434525 DATE COLLECTED: 11 / 10 / 1971

SURFACE ELEVATION (FT.): 480.0 LOGGED (FT.): 117.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12828C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
480.0	PLEISTOCENE		UNCONSOLIDATED	71.0	0.0
409.0	MODESTO		LIMESTONE	2.0	71.0
407.0	MODESTO		GRAY SHALE	1.3	73.0
405.7	MODESTO	PIASA	LIMESTONE	11.7	74.3
394.0			GRAY SHALE	10.0	86.0
384.0			LIMESTONE	0.1	96.0
383.9			GRAY SHALE	0.2	96.1
383.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	96.3
381.7	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.5	98.3
381.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	98.8
378.8			GRAY SHALE	0.4	101.2
378.4			LIMESTONE	0.1	101.6
378.3			DARK SHALE	4.8	101.7
373.5	CARBONDALE	JAMESTOWN	COAL	0.1	106.5
373.4			DARK SHALE	2.0	106.6
371.4	CARBONDALE	HERRIN	COAL	6.5	108.6
364.9			UNDERCLAY	1.0	115.1
363.9			LIMESTONE	1.7	116.1

MAPID: 16327667000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 21 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.879209

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.430393

DATE COLLECTED:

SURFACE ELEVATION (FT.): 479.7 LOGGED (FT.): 120.4

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12981C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
479.7	PLEISTOCENE		UNCONSOLIDATED	31.7	0.0	
448.0	MODESTO		GRAY SHALE	40.4	31.7	
407.6	MODESTO	PIASA	LIMESTONE	10.6	72.1	
397.0			SHALE WITH LIMESTONE	2.8	82.7	
394.2			LIMESTONE	0.5	85.5	
393.7			GRAY SHALE	10.0	86.0	
383.7	CARBONDALE		LIMESTONE	0.5	96.0	
383.2	CARBONDALE		SHALE WITH LIMESTONE	2.2	96.5	
381.0	CARBONDALE		LIMESTONE	2.5	98.7	
378.6	CARBONDALE		GRAY SHALE	0.2	101.1	
378.4	CARBONDALE		LIMESTONE	0.4	101.3	
378.0	CARBONDALE		GRAY SHALE	4.3	101.7	
373.7	CARBONDALE		DARK SHALE	4.8	106.0	
369.0	CARBONDALE		SHALE WITH LIMESTONE	1.3	110.7	
367.6	CARBONDALE		DARK SHALE	1.3	112.1	
366.4	CARBONDALE	HERRIN	COAL	7.1	113.3	

MAPID: 16300070000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 22 QUARTERS/FOOTAGES: 120' S line, 5150' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.872105

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.424154

DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 397.7 LOGGED (FT.): 131.0

LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO 2

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
397.7			SOIL	7.0	0.0	BROWN
390.7			CLAY	6.0	7.0	YELLOW
384.7			SHALE	24.0	13.0	
360.7			LIMESTONE	6.0	37.0	GIRTYINA VENTRICOSA ZONE
354.7			SHALE	4.0	43.0	GIRTYINA VENTRICOSA ZONE
350.7			SHALE	2.0	47.0	GIRTYINA VENTRICOSA ZONE
348.7			LIMESTONE	1.0	49.0	GIRTYINA VENTRICOSA ZONE
347.7	CARBONDALE	ANNA	DARK SHALE	3.4	50.0	
344.3	CARBONDALE	ANNA	BONE COAL	0.6	53.4	
343.7	CARBONDALE	ANNA	DARK SHALE	2.8	54.0	
340.9	CARBONDALE	HERRIN	COAL	2.7	56.8	
338.2	CARBONDALE	HERRIN	SHALE	0.0	59.5	
338.2	CARBONDALE	HERRIN	COAL	4.4	59.5	
333.7	CARBONDALE		UNDERCLAY	2.3	64.0	
331.4	CARBONDALE		SHALE	13.8	66.3	
317.7	CARBONDALE		SANDSTONE	5.0	80.0	
312.7	CARBONDALE		SHALE	9.0	85.0	
303.7	CARBONDALE		SANDY SHALE	16.0	94.0	
287.7	CARBONDALE		SHALE	3.0	110.0	BLACK
284.7	CARBONDALE		LIMESTONE	3.0	113.0	
281.7	CARBONDALE		SHALE	7.0	116.0	BLACK
274.7	CARBONDALE	EXCELLO	DARK SHALE	3.8	123.0	
270.9	CARBONDALE	HOUCHIN CREEK	COAL	3.2	126.8	
267.7	CARBONDALE		UNDERCLAY	1.0	130.0	

MAPID: 16300070000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 22 QUARTERS/FOOTAGES: 120' S line, 5150' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.872105

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.424154

DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 397.7 LOGGED (FT.): 131.0

LOG TYPE:

SOURCE: UNION COLL 2

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
344.7	CARBONDALE	HERRIN	COAL	10.5	53.0	
270.7	CARBONDALE	SPRINGFIELD	COAL	3.2	127.0	

MAPID: 16300072000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 22 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.871489 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.431886 DATE COLLECTED: 8 / 0 / 1923

SURFACE ELEVATION (FT.): 465.7 LOGGED (FT.): 106.5 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
465.7			CLAY	40.0	0.0	
425.7			SAND	4.0	40.0	
421.7			CLAY	15.0	44.0	
406.7			LIMESTONE	16.0	59.0	
390.7			SHALE	5.0	75.0	BLACK
385.7			LIMESTONE	3.5	80.0	
382.2			SHALE	6.5	83.5	
375.7			SHALE	5.5	90.0	BLACK
370.2	CARBONDALE	BRERETON	LIMESTONE	3.1	95.5	
367.1	CARBONDALE	ANNA	SHALE	0.4	98.6	
366.7	CARBONDALE	HERRIN	COAL	6.3	99.0	
360.4	CARBONDALE		UNDERCLAY	1.3	105.3	

MAPID: 16300072000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 22 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.871489 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.431886 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 465.7 LOGGED (FT.): 107.0 LOG TYPE:

SOURCE: UNION COLL0034 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
366.7	CARBONDALE	HERRIN	COAL	6.3	99.0	

MAPID: 16300073000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 22 QUARTERS/FOOTAGES: 2640' N line, 2510' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.863042 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.430836 DATE COLLECTED: 8 / 0 / 1923

SURFACE ELEVATION (FT.): 434.8 LOGGED (FT.): 85.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
434.8			CLAY	39.0	0.0	
395.8			LIMESTONE	15.0	39.0	
380.8			SHALE	6.0	54.0	
374.8			LIMESTONE	5.0	60.0	
369.8			CALCAREOUS SHALE	1.0	65.0	
368.8	CARBONDALE	BRERETON	LIMESTONE	3.0	66.0	
365.8	CARBONDALE	ANNA	SHALE	1.0	69.0	
364.8	CARBONDALE	ANNA	DARK SHALE	8.0	70.0	
356.8	CARBONDALE	HERRIN	COAL	6.3	78.0	
350.5	CARBONDALE		UNDERCLAY	0.8	84.3	

MAPID: 16300073000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 22 QUARTERS/FOOTAGES: 2640' N line, 2510' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.863042 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.430836 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 434.8 LOGGED (FT.): 85.0 LOG TYPE:

SOURCE: UNION COLL0036 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
356.8	CARBONDALE	HERRIN	COAL	6.3	78.0	

MAPID: 16300306000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 22 QUARTERS/FOOTAGES: 5150' S line, 100' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.854801

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.437877

DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 427.6

LOGGED (FT.): 90.0

LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO 38

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
427.6			CLAY	23.0	0.0	
404.6			CLAY	9.0	23.0	YELLOW
395.6			HARD PAN	9.0	32.0	
386.6			LIMESTONE	11.0	41.0	
375.6			SHALE	3.0	52.0	BLUE
372.6			LIMESTONE	1.0	55.0	
371.6			SHALE	6.0	56.0	
365.6			LIMESTONE	5.5	62.0	
360.1			LIMESTONE	1.5	67.5	
358.6			SHALE	5.5	69.0	
353.1			LIMESTONE	0.5	74.5	
352.6			SHALE	1.5	75.0	
351.1			COAL	0.2	76.5	
350.9			SHALE	3.1	76.7	BLUE
347.8	CARBONDALE	BRERETON	LIMESTONE	1.5	79.8	
346.3	CARBONDALE	ANNA	SHALE	1.2	81.3	BLACK
345.2	CARBONDALE	HERRIN	COAL	7.1	82.4	
338.0	CARBONDALE		UNDERCLAY	0.4	89.6	

MAPID: 16300306000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 22 QUARTERS/FOOTAGES: 5150' S line, 100' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.854801

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.437877

DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 427.6

LOGGED (FT.): 90.0

LOG TYPE:

SOURCE: UNION COLL 38

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
345.6	CARBONDALE	HERRIN	COAL	7.1	82.0	

MAPID: 16302367000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 22 QUARTERS/FOOTAGES: 965' S line, 15' W line of SE SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.858647 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.426361 DATE COLLECTED: 7 / 28 / 1955

SURFACE ELEVATION (FT.): 402.5 LOGGED (FT.): 79.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2048 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
402.5	PLEISTOCENE		UNCONSOLIDATED	21.9	0.0	
380.6	PLEISTOCENE		SAND & GRAVEL	13.3	21.9	
367.2	MODESTO	PIASA	LIMESTONE	6.4	35.3	
360.8			GRAY SHALE	11.6	41.7	
349.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	53.3	
346.6	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.3	55.9	
345.3	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	57.2	
343.6	CARBONDALE		DARK SHALE	5.3	58.9	
338.2	CARBONDALE	ANNA	BLACK SHALE	6.7	64.3	DISCREPANCY IN THICKNESS&UNDLYING
330.6	CARBONDALE	HERRIN	COAL	6.3	71.9	
325.2	CARBONDALE		UNDERCLAY	1.8	77.3	

MAPID: 16302701000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 22 QUARTERS/FOOTAGES: NW SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.861079 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.429117 DATE COLLECTED: 9 / 0 / 1960

SURFACE ELEVATION (FT.): 422.0 LOGGED (FT.): 0.0 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 4622 WELL TYPE: Coal Test

COMMENT: ANALY. FOR THIS CORE AVAIL ON CORE SHEET

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	6.8		

MAPID: 16302702000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 22 QUARTERS/FOOTAGES: SW SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.86098 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.425517 DATE COLLECTED: 9 / 0 / 1960

SURFACE ELEVATION (FT.): 418.4 LOGGED (FT.): 0.0 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 4623 WELL TYPE: Coal Test

COMMENT: ANALY. FOR THIS CORE AVAIL ON CORE SHEET

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	7.9		

MAPID: 16303382000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 22 QUARTERS/FOOTAGES: 660' N line, 0' W line

QUADRANGLE: MASCOUTAH

LONGITUDE: -89.872737

GEOLOGIST:

CONFIDENTIAL: N

LATITUDE: 38.436347

DATE COLLECTED:

SURFACE ELEVATION (FT.): 410.0

LOGGED (FT.): 108.1

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12583C

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
338.7	MODESTO	PIASA	LIMESTONE	9.5	71.3
329.2	CARBONDALE		GRAY SHALE	7.7	80.8
321.5	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	6.0	88.5
315.5	CARBONDALE	LAWSON	MOTTLED SHALE	0.3	94.5
315.2	CARBONDALE	LAWSON	CALCAREOUS SHALE	0.7	94.8
314.5	CARBONDALE	LAWSON	DARK GRAY SHALE	4.5	95.5
310.0	CARBONDALE	CONANT	CALCAREOUS SHALE	0.5	100.0
309.5	CARBONDALE		CARBONACEOUS SHALE	0.5	100.5
309.0	CARBONDALE	HERRIN	COAL	7.1	101.0

MAPID: 16300071000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 23 QUARTERS/FOOTAGES: 1385' S line, 120' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.853711 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.427472 DATE COLLECTED: 6 / 8 / 1923

SURFACE ELEVATION (FT.): 409.4 LOGGED (FT.): 73.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
409.4			SOIL	6.0	0.0	DARK
403.4			CLAY	16.0	6.0	GRAY
387.4			HARD PAN	5.0	22.0	
382.4			LIMESTONE	9.0	27.0	FUSULINAS
373.4			LIMESTONE	2.3	36.0	
371.1			SHALE	5.7	38.3	
365.4			SHALE	7.0	44.0	
358.4	CARBONDALE	BRERETON	LIMESTONE	2.0	51.0	
356.4	CARBONDALE	ANNA	SHALE	9.6	53.0	BLACK
346.8	CARBONDALE	ANNA	SHALE	1.8	62.6	BLACK
345.0	CARBONDALE	HERRIN	COAL	2.7	64.4	
342.3	CARBONDALE	HERRIN	BONE COAL	0.0	67.1	
342.3	CARBONDALE	HERRIN	COAL	1.9	67.1	
340.4	CARBONDALE	HERRIN	BONE COAL	0.1	69.0	
340.3	CARBONDALE	HERRIN	COAL	0.4	69.1	
339.9	CARBONDALE	HERRIN	SHALE	0.0	69.5	BLUE
339.9	CARBONDALE	HERRIN	COAL	1.8	69.5	
338.1	CARBONDALE		UNDERCLAY	1.7	71.3	

MAPID: 16300071000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 23 QUARTERS/FOOTAGES: 1385' S line, 120' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.853711 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.427472 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 409.4 LOGGED (FT.): 73.0 LOG TYPE:

SOURCE: UNION COLL0004 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
345.4	CARBONDALE	HERRIN	COAL	6.9	64.0	

MAPID: 16300074000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 23 QUARTERS/FOOTAGES: 3830' S line, 4290' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.850834 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.434187 DATE COLLECTED:

SURFACE ELEVATION (FT.): 431.5 LOGGED (FT.): 96.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
431.5			SOIL	9.0	0.0	BROWN
422.5			CLAY	11.0	9.0	YELLOW
411.5			HARD PAN	20.0	20.0	
391.5			SAND	10.0	40.0	
381.5			LIMESTONE	9.7	50.0	
371.8			SHALE	5.6	59.7	
366.2			LIMESTONE	8.4	65.3	
357.8			DARK SHALE	3.3	73.7	
354.5			UNDERCLAY	3.0	77.0	
351.5			SHALE	2.3	80.0	BLACK
349.2			COAL	0.2	82.3	
349.0			SHALY LIMESTONE	5.0	82.5	
344.0	CARBONDALE	HERRIN	COAL	0.5	87.5	
343.5	CARBONDALE	HERRIN	COAL	1.3	88.0	
342.2	CARBONDALE	HERRIN	BONE COAL	0.0	89.3	
342.2	CARBONDALE	HERRIN	COAL	2.0	89.3	
340.2	CARBONDALE	HERRIN	BONE COAL	0.0	91.3	
340.2	CARBONDALE	HERRIN	COAL	3.3	91.3	
336.9	CARBONDALE		UNDERCLAY	1.4	94.6	

MAPID: 16300074000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 23 QUARTERS/FOOTAGES: 3830' S line, 4290' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.850834 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.434187 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 431.5 LOGGED (FT.): 96.0 LOG TYPE:

SOURCE: UNION COLL0005 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
343.5	CARBONDALE	HERRIN	COAL	7.1	88.0	

MAPID: 16300074000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 23 QUARTERS/FOOTAGES: 3830' S line, 4290' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.850834 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.434187 DATE COLLECTED:

SURFACE ELEVATION (FT.): 431.0 LOGGED (FT.): 96.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 5 WELL TYPE: Coal Test

COMMENT: formerly co. number 2491

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
431.0	PLEISTOCENE		UNCONSOLIDATED	40.0	0.0
391.0	PLEISTOCENE		SAND & GRAVEL	10.0	40.0
381.0	MODESTO	PIASA	LIMESTONE	9.7	50.0
371.3			SHALE	5.6	59.7
365.7	CARBONDALE	BANKSTON FORK	LIMESTONE	8.4	65.3
357.3	CARBONDALE		SHALE	3.3	73.7
354.0	CARBONDALE		UNDERCLAY	3.0	77.0
351.0	CARBONDALE		BLACK SHALE	2.3	80.0
348.7	CARBONDALE	JAMESTOWN	COAL	0.2	82.3
348.5	CARBONDALE	BRERETON	SHALY LIMESTONE	5.0	82.5
343.5	CARBONDALE	HERRIN	COAL	7.1	87.5
336.4	CARBONDALE		UNDERCLAY	1.4	94.6

MAPID: 16300075000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 23 QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.843815 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.429887 DATE COLLECTED:

SURFACE ELEVATION (FT.): 402.2 LOGGED (FT.): 66.8 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
402.2			SOIL	2.0	0.0	BROWN
400.2			CLAY	5.0	2.0	GRAY
395.2			HARD PAN	10.7	7.0	
384.5			SAND & GRAVEL	2.3	17.7	
382.2			LIMESTONE	1.4	20.0	
380.8			CLAYSTONE	2.2	21.4	
378.6			LIMESTONE	2.4	23.6	
376.2			LIMESTONE	6.0	26.0	
370.2			SHALE	7.0	32.0	BLUE
363.2			LIMESTONE	5.0	39.0	
358.2			DARK SHALE	8.0	44.0	
350.2			SHALY LIMESTONE	3.9	52.0	
346.3			SHALY LIMESTONE	2.7	55.9	
343.6	CARBONDALE	HERRIN	BONE COAL	0.2	58.6	
343.4	CARBONDALE	HERRIN	COAL	1.0	58.8	
342.4	CARBONDALE	HERRIN	BONE COAL	0.0	59.8	
342.4	CARBONDALE	HERRIN	COAL	0.3	59.8	
342.0	CARBONDALE	HERRIN	BONE COAL	0.0	60.2	
342.0	CARBONDALE	HERRIN	COAL	5.5	60.2	
336.5	CARBONDALE		UNDERCLAY	1.1	65.7	

MAPID: 16300075000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 23 QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.843815 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.429887 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 420.2 LOGGED (FT.): 67.0 LOG TYPE:

SOURCE: UNION COLL 6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
361.2	CARBONDALE	HERRIN	COAL	7.1	59.0	

MAPID: 16302358000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 23 QUARTERS/FOOTAGES: 30' S line, 345' W line of NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.853026 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.430942 DATE COLLECTED: 7 / 13 / 1955

SURFACE ELEVATION (FT.): 417.2 LOGGED (FT.): 81.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2035 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
417.2	PLEISTOCENE		UNCONSOLIDATED	32.2	0.0
385.0	MODESTO		LIMESTONE	2.1	32.2
382.9	MODESTO		GRAY SHALE	1.0	34.3
381.9	MODESTO	PIASA	LIMESTONE	10.3	35.3
371.6			GRAY SHALE	6.8	45.6
364.9	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	52.3
362.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.1	54.8
361.3	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	55.9
359.7	CARBONDALE	LAWSON	DARK GRAY SHALE	6.2	57.5
353.5	CARBONDALE	CONANT	ROCK	1.8	63.7
351.7	CARBONDALE		BLACK SHALE	0.8	65.5
351.0	CARBONDALE	BRERETON	ROCK	6.2	66.2
344.8	CARBONDALE	ANNA	BLACK SHALE	0.3	72.4
344.5	CARBONDALE	HERRIN	COAL	6.8	72.7
337.7	CARBONDALE		UNDERCLAY	1.9	79.5

MAPID: 16302364000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 23 QUARTERS/FOOTAGES: 623' N line, 383' W line of SE NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.848314 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.432731 DATE COLLECTED: 7 / 23 / 1955

SURFACE ELEVATION (FT.): 428.0 LOGGED (FT.): 83.9 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2045 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
428.0	PLEISTOCENE		UNCONSOLIDATED	25.6	0.0
402.4	PLEISTOCENE		SAND & GRAVEL	13.7	25.6
388.7	MODESTO		LIMESTONE	1.8	39.3
387.0	MODESTO		GRAY SHALE	1.3	41.0
385.7	MODESTO	PIASA	LIMESTONE	8.5	42.3
377.2			GRAY SHALE	7.1	50.8
370.2	CARBONDALE	BANKSTON FORK	LIMESTONE	5.8	57.8
364.3	CARBONDALE		DARK GRAY SHALE	7.7	63.7
356.7	CARBONDALE	BRERETON	ROCK	4.3	71.3
352.4	CARBONDALE	HERRIN	COAL	6.6	75.6
345.8	CARBONDALE		UNDERCLAY	1.8	82.2

MAPID: 1630238000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 23 QUARTERS/FOOTAGES: 200' S line, 800' W line of SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.842042 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.424056 DATE COLLECTED: 8 / 2 / 1955

SURFACE ELEVATION (FT.): 396.3 LOGGED (FT.): 73.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2064 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
396.3	PLEISTOCENE		UNCONSOLIDATED	29.7	0.0	
366.6	MODESTO	PIASA	LIMESTONE	8.6	29.7	DISCREPANCY IN THICKNESS&UNDLYING
357.0			GRAY SHALE	6.6	39.3	
350.5	CARBONDALE	BANKSTON FORK	LIMESTONE	8.7	45.8	
341.8	CARBONDALE		DARK GRAY SHALE	7.5	54.5	
334.3	CARBONDALE	BRERETON	ROCK	2.8	62.0	
331.5	CARBONDALE	HERRIN	COAL	6.4	64.8	
325.0	CARBONDALE		UNDERCLAY	1.8	71.3	

MAPID: 16302381000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 23 QUARTERS/FOOTAGES: 45' S line, 330' W line of NE

QUADRANGLE: VENEDY LONGITUDE: -89.84383 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.430923 DATE COLLECTED: 8 / 2 / 1955

SURFACE ELEVATION (FT.): 413.2 LOGGED (FT.): 80.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2065 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
413.2	PLEISTOCENE		UNCONSOLIDATED	34.0	0.0	
379.2	MODESTO		LIMESTONE	2.4	34.0	
376.8	MODESTO		GRAY SHALE	1.7	36.4	
375.1	MODESTO	PIASA	LIMESTONE	5.4	38.1	
369.7			GRAY SHALE	10.1	43.5	
359.6	CARBONDALE	BANKSTON FORK	LIMESTONE	9.1	53.6	
350.5	CARBONDALE		DARK GRAY SHALE	5.3	62.7	
345.3	CARBONDALE		ROCK	0.9	67.9	CONANT
344.4	CARBONDALE		BLACK SHALE	1.3	68.8	JAMESTOWN HORIZON
343.0	CARBONDALE	BRERETON	ROCK	1.6	70.2	
341.4	CARBONDALE	HERRIN	COAL	6.7	71.8	
334.8	CARBONDALE		UNDERCLAY	1.9	78.4	

MAPID: 16302492000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 23 QUARTERS/FOOTAGES: 1' N line, 1' W line of SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.844984 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.430803 DATE COLLECTED:

SURFACE ELEVATION (FT.): 402.0 LOGGED (FT.): 66.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
402.0	PLEISTOCENE		UNCONSOLIDATED	17.7	0.0
384.3	PLEISTOCENE		SAND & GRAVEL	2.3	17.7
382.0	PLEISTOCENE		BOULDER	1.4	20.0
380.6	PLEISTOCENE		CLAY	2.2	21.4
378.4	PLEISTOCENE		BOULDER	2.4	23.6
376.0	MODESTO		LIMESTONE	6.0	26.0
370.0			BLUE SHALE	7.0	32.0
363.0	CARBONDALE	BANKSTON FORK	SANDY LIMESTONE	5.0	39.0
358.0	CARBONDALE		DARK SHALE	8.0	44.0
350.0	CARBONDALE	BRERETON	SHALY LIMESTONE	6.6	52.0
343.4	CARBONDALE	HERRIN	COAL	7.1	58.6
336.3	CARBONDALE		UNDERCLAY	1.1	65.7

MAPID: 16302538000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 23 QUARTERS/FOOTAGES: 1' N line, 1' E line of NW NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.840481 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.438064 DATE COLLECTED:

SURFACE ELEVATION (FT.): 408.9 LOGGED (FT.): 75.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 52 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
408.9	PLEISTOCENE		UNCONSOLIDATED	30.0	0.0
378.9	PLEISTOCENE		SAND & GRAVEL	5.0	30.0
373.9	MODESTO		SHALE	1.0	35.0
372.9	MODESTO		LIMESTONE	1.0	36.0
371.9	MODESTO		SHALE	1.0	37.0
370.9	MODESTO	PIASA	LIMESTONE	5.0	38.0
365.9			SHALE	11.0	43.0
354.9	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	54.0
353.4	CARBONDALE		GRAY SHALE	3.5	55.5
349.9	CARBONDALE		BLACK SHALE	4.2	59.0
345.7	CARBONDALE	JAMESTOWN	COAL	0.3	63.2
345.4	CARBONDALE		FOSSILIFEROUS SHALE	4.0	63.5
341.4	CARBONDALE	HERRIN	COAL	6.6	67.5
334.9	CARBONDALE		UNDERCLAY	0.9	74.0

MAPID: 16303059000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 23 QUARTERS/FOOTAGES: 1980' S line, 2310' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.843831

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.428993

DATE COLLECTED:

SURFACE ELEVATION (FT.): 399.0 LOGGED (FT.): 92.7

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8908C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
347.0	MODESTO	PIASA	LIMESTONE	6.9	52.0	
340.1	CARBONDALE		GRAY SHALE	9.0	58.9	
331.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	67.9	UPPER BENCH
329.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.0	70.0	SHALE PARTING
326.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	73.0	LOWER BENCH
324.5	CARBONDALE	LAWSON	DARK GRAY SHALE	6.2	74.5	
318.3	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.5	80.7	
317.8	CARBONDALE	JAMESTOWN	BONE COAL	0.5	81.2	
317.3	CARBONDALE		CALCAREOUS SHALE	0.3	81.7	
317.0	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	1.1	82.0	
315.9	CARBONDALE	ANNA	BLACK SHALE	1.3	83.1	
313.0	CARBONDALE	HERRIN	COAL	6.7	86.0	

MAPID: 16300076000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 24 QUARTERS/FOOTAGES: SW SW SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.825146 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.424295 DATE COLLECTED: 7 / 1 / 1923

SURFACE ELEVATION (FT.): 448.6 LOGGED (FT.): 129.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
448.6			SOIL	1.0	0.0	
447.6			SANDY CLAY	81.0	1.0	
366.6			SAND	5.0	82.0	
361.6			CLAYSTONE & SHALE	2.0	87.0	
359.6			LIMESTONE W/ SHALE	6.0	89.0	
353.6			SOFT SHALE	5.0	95.0	
348.6			LIMESTONE	1.5	100.0	
347.1			SANDY SHALE	2.5	101.5	
344.6			LIMESTONE	1.0	104.0	
343.6			CLAYSTONE & SHALE	3.0	105.0	
340.6			BLACK SHALE	6.5	108.0	
334.1			LIMESTONE	7.0	114.5	BLUE
327.1	CARBONDALE	HERRIN	COAL	4.8	121.5	
322.3	CARBONDALE	HERRIN	SHALE	0.1	126.3	BLUE
322.2	CARBONDALE	HERRIN	COAL	1.8	126.4	
320.4	CARBONDALE		UNDERCLAY	0.8	128.2	

MAPID: 16300076000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 24 QUARTERS/FOOTAGES: SW SW SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.825146 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.424295 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 448.6 LOGGED (FT.): 129.0 LOG TYPE:

SOURCE: UNION COLL 15 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
326.6	CARBONDALE	HERRIN	COAL	6.7	122.0	

MAPID: 16302357000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 24 QUARTERS/FOOTAGES: 1337' N line, 1336' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.831088

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.434328

DATE COLLECTED:

SURFACE ELEVATION (FT.): 403.0 LOGGED (FT.): 93.4

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2034

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
353.0	MODESTO	PIASA	LIMESTONE	9.4	50.0	
343.6	CARBONDALE		GRAY SHALE	8.6	59.4	
335.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.2	68.0	UPPER BENCH
333.8	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.3	69.2	SHALE PARTING
332.6	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	70.4	LOWER BENCH
331.2	CARBONDALE	LAWSON	DARK GRAY SHALE	9.9	71.8	
321.3	CARBONDALE	CONANT	LIMESTONE	3.0	81.7	
318.3	CARBONDALE		BLACK SHALE	0.7	84.7	
317.7	CARBONDALE	BRERETON	LIMESTONE	2.1	85.3	
315.6	CARBONDALE	ANNA	BLACK SHALE	0.2	87.4	
316.0	CARBONDALE	HERRIN	COAL	6.4	87.0	

MAPID: 16302501000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 24 QUARTERS/FOOTAGES: 1' S line, 1' W line of SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.826296

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.423392

DATE COLLECTED:

SURFACE ELEVATION (FT.): 448.5 LOGGED (FT.): 129.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
448.5	PLEISTOCENE		UNCONSOLIDATED	82.0	0.0	
366.5	PLEISTOCENE		SAND & GRAVEL	5.0	82.0	
361.5			SHALE	13.0	87.0	
348.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	100.0	
347.0	CARBONDALE	BANKSTON FORK	SANDY SHALE	2.5	101.5	
344.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	104.0	
343.5	CARBONDALE		SHALE	3.0	105.0	
340.5	CARBONDALE		BLACK SHALE	6.5	108.0	
334.0	CARBONDALE	BRERETON	LIMESTONE	7.0	114.5	
327.0	CARBONDALE	HERRIN	COAL	6.7	121.5	
320.3	CARBONDALE		UNDERCLAY	0.8	128.2	

MAPID: 16302527000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 24 QUARTERS/FOOTAGES: 1' N line, 1' W line of SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.826431 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.43068 DATE COLLECTED:

SURFACE ELEVATION (FT.): 418.5 LOGGED (FT.): 120.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 41 WELL TYPE: Coal Test

COMMENT: LOCATION GIVEN AS "NEAR CENTER"

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
418.5	PLEISTOCENE		CLAY	34.0	0.0
384.5	PLEISTOCENE		SAND	6.0	34.0
378.5	PLEISTOCENE		CLAY	26.0	40.0
352.5	MODESTO		GRAY SHALE	4.0	66.0
348.5	MODESTO		LIMESTONE	2.0	70.0
346.5	MODESTO		BLUE SHALE	1.0	72.0
345.5	MODESTO	PIASA	LIMESTONE	6.0	73.0
339.5			SHALE	14.0	79.0
325.5	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	8.5	93.0
317.0	CARBONDALE		BLACK SHALE	3.8	101.5
313.2	CARBONDALE		LIMESTONE	0.3	105.3
312.8	CARBONDALE	ANNA	BLACK SHALE	6.3	105.7
306.5	CARBONDALE	HERRIN	COAL	7.3	112.0
299.2	CARBONDALE		UNDERCLAY	0.7	119.3

MAPID: 16323902000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 24 QUARTERS/FOOTAGES: 330' S line, 1' W line of NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.826449 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.431594 DATE COLLECTED: 8 / 23 / 1972

SURFACE ELEVATION (FT.): 412.0 LOGGED (FT.): 126.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12988C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. I-8

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
412.0	PLEISTOCENE		SAND/CLAY	74.9	0.0
337.1	MODESTO		LIMESTONE	1.7	74.9
335.4	MODESTO		CALCAREOUS SHALE	4.0	76.6
331.4	MODESTO	PIASA	LIMESTONE	4.0	80.6
327.4			GRAY SHALE	13.8	84.6
313.6	CARBONDALE	BANKSTON FORK	LIMESTONE	1.1	98.4
312.5	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	2.7	99.5
309.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.2	102.2
308.6	CARBONDALE		GRAY SHALE	1.7	103.4
306.9	CARBONDALE		DARK SHALE	4.8	105.1
302.1	CARBONDALE	CONANT	LIMESTONE	1.2	109.9
301.0	CARBONDALE		DARK SHALE	1.4	111.0
299.6	CARBONDALE		CALCAREOUS SHALE	3.5	112.4
296.1	CARBONDALE	BRERETON	LIMESTONE	2.9	115.9
293.2	CARBONDALE		DARK SHALE	0.4	118.8
292.8	CARBONDALE	HERRIN	COAL	7.2	119.2

MAPID: 16302399000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 25 QUARTERS/FOOTAGES: 35' N line, 50' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.835487 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.423327 DATE COLLECTED:

SURFACE ELEVATION (FT.): 459.0 LOGGED (FT.): 133.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2092 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
371.0	MODESTO	PIASA	LIMESTONE	8.5	88.0
362.5	CARBONDALE		GRAY SHALE	10.8	96.5
351.7	CARBONDALE	BANKSTON FORK	LIMESTONE	5.8	107.3
345.9	CARBONDALE	LAWSON	DARK GRAY SHALE	7.8	113.1
338.2	CARBONDALE	CONANT	LIMESTONE	1.8	120.8
336.3	CARBONDALE		BLACK SHALE	0.6	122.7
335.8	CARBONDALE	BRERETON	LIMESTONE	3.8	123.2
332.0	CARBONDALE	ANNA	BLACK SHALE	0.2	127.0
332.0	CARBONDALE	HERRIN	COAL	6.8	127.0

MAPID: 1630240000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 25 QUARTERS/FOOTAGES: 1000' S line, 40' E line of NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.826427 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.418894 DATE COLLECTED: 8 / 17 / 1955

SURFACE ELEVATION (FT.): 453.3 LOGGED (FT.): 125.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2093 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
453.3	PLEISTOCENE		UNCONSOLIDATED	24.6	0.0	
428.7	PLEISTOCENE		CLAY, SAND & GRAVEL	71.8	24.6	
357.0	PLEISTOCENE		CLAY	7.1	96.3	
349.9	CARBONDALE		LIMESTONE	1.8	103.4	TOP MAY BE ERODED
348.0	CARBONDALE		GRAY SHALE	8.3	105.3	
339.8	CARBONDALE	ANNA	BLACK SHALE	3.2	113.5	
336.6	CARBONDALE	HERRIN	COAL	6.7	116.7	
330.0			UNDERCLAY	1.9	123.3	

MAPID: 16302490000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 25 QUARTERS/FOOTAGES: 1' S line, 1' W line of NW SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.835482 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.412505 DATE COLLECTED:

SURFACE ELEVATION (FT.): 409.0 LOGGED (FT.): 73.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 4 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
409.0	PLEISTOCENE		UNCONSOLIDATED	27.0	0.0	
382.0	CARBONDALE	BANKSTON FORK	LIMESTONE	9.0	27.0	
373.0	CARBONDALE	BANKSTON FORK	SANDY LIMESTONE	2.3	36.0	
370.7	CARBONDALE		SHALE	12.7	38.3	
358.0	CARBONDALE	BRERETON	LIMESTONE	2.0	51.0	
356.0	CARBONDALE	ANNA	BLACK SHALE	11.4	53.0	
344.6	CARBONDALE	HERRIN	COAL	6.9	64.4	
337.7	CARBONDALE		UNDERCLAY	1.7	71.3	

MAPID: 16303537000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 25 QUARTERS/FOOTAGES: 1' N line, 330' W line of NW NW NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.834505 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.423418 DATE COLLECTED: 9 / 2 / 1971

SURFACE ELEVATION (FT.): 460.0 LOGGED (FT.): 140.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12813C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. B-1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
460.0	PLEISTOCENE		UNCONSOLIDATED	83.0	0.0	
377.0	PLEISTOCENE		CLAY	26.5	83.0	
350.5			LIMESTONE	2.5	109.5	
348.0			GRAY SHALE	3.0	112.0	
345.0	CARBONDALE		LIMESTONE	10.0	115.0	
335.0	CARBONDALE		DARK SHALE	0.3	125.0	
334.7	CARBONDALE		CALCAREOUS SHALE	3.4	125.3	CORE DESCRIPT: SH, DRILLER'S LOG=LS
331.3	CARBONDALE		DARK SHALE	0.1	128.7	
331.2	CARBONDALE	HERRIN	COAL	7.1	128.8	
324.1	CARBONDALE		UNDERCLAY	2.5	135.9	
321.6	CARBONDALE		LIMESTONE	1.6	138.4	

MAPID: 16323873000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 25 QUARTERS/FOOTAGES: 1650' S line, 1' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.835497 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.413419 DATE COLLECTED: 5 / 24 / 1974

SURFACE ELEVATION (FT.): 485.0 LOGGED (FT.): 163.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15878C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. A-12

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
485.0	PLEISTOCENE		UNCONSOLIDATED	138.8	0.0	
346.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.1	138.8	
345.1	CARBONDALE		SHALE	2.3	139.9	
342.8	CARBONDALE	CONANT	LIMESTONE	0.2	142.2	
342.6	CARBONDALE		GRAY SHALE	2.5	142.4	
340.1	CARBONDALE	BRERETON	LIMESTONE	5.2	144.9	
334.9	CARBONDALE		DARK SHALE	0.2	150.1	
334.6	CARBONDALE	HERRIN	COAL	6.8	150.4	
327.9	CARBONDALE		UNDERCLAY	4.3	157.1	
323.6	CARBONDALE		UNDERCLAY	1.4	161.4	
322.3	CARBONDALE		LIMESTONE	0.4	162.7	

MAPID: 16323895000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 25 QUARTERS/FOOTAGES: 1' N line, 1320' E line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.821562 GEOLOGIST: CHENOWETH
 CONFIDENTIAL: N LATITUDE: 38.423369 DATE COLLECTED: 2 / 30 / 1972
 SURFACE ELEVATION (FT.): 450.0 LOGGED (FT.): 137.7 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 12990C WELL TYPE: Coal Test
 COMMENT: PEABODY LOC. M-1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
450.0	PLEISTOCENE		SAND & GRAVEL	105.6	0.0
344.4	PLEISTOCENE		BOULDER	0.6	105.6
343.8	PLEISTOCENE		UNCONSOLIDATED	4.7	106.2
339.1			LIMESTONE	1.6	110.9
337.5			GRAY SHALE	1.9	112.5
335.6			LIMESTONE	0.8	114.4
334.8			DARK SHALE	0.4	115.2
334.4	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	115.6
332.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.0	118.0
331.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	119.0
329.2	CARBONDALE	LAWSON	DARK SHALE	8.1	120.8
321.1	CARBONDALE	BRERETON	LIMESTONE	0.6	128.9
320.5	CARBONDALE	ANNA	BLACK SHALE	1.2	129.5
319.3	CARBONDALE	HERRIN	COAL	7.0	130.7

MAPID: 16302008000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 26 QUARTERS/FOOTAGES: 45' S line, 57' E line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.835627 GEOLOGIST: CHENOWETH
 CONFIDENTIAL: N LATITUDE: 38.40899 DATE COLLECTED: 10 / 1 / 1957
 SURFACE ELEVATION (FT.): 422.2 LOGGED (FT.): 78.2 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 2816 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
422.2	PLEISTOCENE		UNCONSOLIDATED	62.1	0.0
360.1	CARBONDALE		GRAY SHALE	2.7	62.1
357.4	CARBONDALE	BRERETON	LIMESTONE	5.6	64.8
351.8	CARBONDALE		GRAY SHALE	0.2	70.4
351.5	CARBONDALE	HERRIN	COAL	6.9	70.7
344.7	CARBONDALE		UNDERCLAY	0.6	77.5

MAPID: 16302371000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 26 QUARTERS/FOOTAGES: 952' N line, 856' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.85098 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.420987 DATE COLLECTED: 7 / 25 / 1955

SURFACE ELEVATION (FT.): 400.2 LOGGED (FT.): 76.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2053 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
400.2	PLEISTOCENE		UNCONSOLIDATED	15.6	0.0
384.6	PLEISTOCENE		CLAY, SAND & GRAVEL	7.6	15.6
377.0	PLEISTOCENE		CLAY	3.2	23.2
373.9	MODESTO		LIMESTONE	2.4	26.3
371.4	MODESTO		GRAY SHALE	4.5	28.8
366.9	MODESTO	PIASA	LIMESTONE	7.2	33.3
359.8			GRAY SHALE	6.3	40.4
353.4	CARBONDALE	BANKSTON FORK	LIMESTONE	8.5	46.8
344.9	CARBONDALE		GRAY SHALE	9.6	55.3
335.4	CARBONDALE	ANNA	BLACK SHALE	2.3	64.8
333.0	CARBONDALE	HERRIN	COAL	7.3	67.2
325.8	CARBONDALE		UNDERCLAY	1.7	74.4

MAPID: 16302453000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 26 QUARTERS/FOOTAGES: 2' S line, 5' W line of SE NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.840124 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.416205 DATE COLLECTED: 8 / 6 / 1958

SURFACE ELEVATION (FT.): 447.1 LOGGED (FT.): 120.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 3258 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
447.1	PLEISTOCENE		UNCONSOLIDATED	26.3	0.0
420.8	PLEISTOCENE		CLAY, SAND & GRAVEL	45.3	26.3
375.5	MODESTO	PIASA	LIMESTONE	10.8	71.6
364.8			GRAY SHALE	7.3	82.3
357.4	CARBONDALE	BANKSTON FORK	LIMESTONE	5.6	89.7
351.8	CARBONDALE		BLACK SHALE	16.8	95.3
335.0	CARBONDALE	HERRIN	COAL	6.4	112.1
328.6	CARBONDALE		UNDERCLAY	1.8	118.5

TOP MAY BE
ERODED

MAPID: 16302529000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 26 QUARTERS/FOOTAGES: 1240' N line, 1200' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.83982 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.420054 DATE COLLECTED:

SURFACE ELEVATION (FT.): 445.0 LOGGED (FT.): 125.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 43 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
445.0	PLEISTOCENE		UNCONSOLIDATED	22.0	0.0	
423.0	PLEISTOCENE		SANDY CLAY	8.0	22.0	
415.0	PLEISTOCENE		CLAY & GRAVEL	22.0	30.0	
393.0	PLEISTOCENE		SAND	12.0	52.0	
381.0	PLEISTOCENE		CLAY	12.0	64.0	
369.0	MODESTO		LIMESTONE	1.0	76.0	
368.0	MODESTO		BLUE SHALE	2.5	77.0	
365.5	MODESTO	PIASA	LIMESTONE	8.0	79.5	
357.5			CALCAREOUS SHALE	3.5	87.5	
354.0			SHALE	11.5	91.0	
342.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	102.5	
341.0	CARBONDALE		CALCAREOUS SHALE	1.0	104.0	
340.0	CARBONDALE		BLACK SHALE	7.5	105.0	
332.5	CARBONDALE	JAMESTOWN	COAL	0.2	112.5	
332.3	CARBONDALE		BLACK SHALE	0.8	112.7	
331.5	CARBONDALE	BRERETON	LIMESTONE	3.5	113.5	
328.0	CARBONDALE	ANNA	BLACK SHALE	0.6	117.0	
327.4	CARBONDALE	HERRIN	COAL	6.8	117.6	
320.7	CARBONDALE		UNDERCLAY	0.7	124.3	

MAPID: 16302531000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 26 QUARTERS/FOOTAGES: 1150' N line, 100' W line of SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.853556 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.413183 DATE COLLECTED:

SURFACE ELEVATION (FT.): 405.0 LOGGED (FT.): 72.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 45 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
405.0	PLEISTOCENE		UNCONSOLIDATED	12.0	0.0	
393.0	PLEISTOCENE		SAND	24.0	12.0	
369.0			LIMESTONE & SHALE	3.0	36.0	
366.0	CARBONDALE		CLAYSTONE	6.5	39.0	
359.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	45.5	
357.0	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	5.0	48.0	
352.0	CARBONDALE	ANNA	BLACK SHALE	10.7	53.0	
341.3	CARBONDALE	HERRIN	COAL	7.5	63.7	
333.7	CARBONDALE		UNDERCLAY	0.7	71.3	ERROR IN LOG MEASUREMENT

MAPID: 16302536000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 26 QUARTERS/FOOTAGES: 1' N line, 1' E line of NW NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.849428 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.423592 DATE COLLECTED:

SURFACE ELEVATION (FT.): 387.5 LOGGED (FT.): 72.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 50 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
387.5	PLEISTOCENE		CLAY	17.0	0.0	
370.5	PLEISTOCENE		SAND/CLAY	9.0	17.0	
361.5	MODESTO		CALCAREOUS SHALE	3.0	26.0	
358.5	MODESTO	PIASA	LIMESTONE	10.0	29.0	
348.5			BLUE SHALE	9.0	39.0	
339.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	48.0	
337.5	CARBONDALE		SHALE	4.3	50.0	
333.2	CARBONDALE	CONANT	LIMESTONE	0.8	54.3	
332.5	CARBONDALE		DARK SHALE	0.8	55.0	
331.7	CARBONDALE	JAMESTOWN	COAL	0.3	55.8	
331.5	CARBONDALE	BRERETON	LIMESTONE	9.0	56.0	
322.5	CARBONDALE	HERRIN	COAL	6.5	65.0	
316.0	CARBONDALE		UNDERCLAY	0.5	71.5	

MAPID: 16302997000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 26 QUARTERS/FOOTAGES: 2640' N line, 1320' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.840177 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.416193 DATE COLLECTED:

SURFACE ELEVATION (FT.): 411.0 LOGGED (FT.): 118.7 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8702C WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
342.0	MODESTO	PIASA	LIMESTONE	13.1	69.0	
328.9	CARBONDALE		GRAY SHALE	7.6	82.1	
321.3	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	89.7	UPPER BENCH
319.5	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.0	91.5	SHALE PARTING
318.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	92.5	LOWER BENCH
316.4	CARBONDALE	LAWSON	GRAY SHALE	2.1	94.6	
314.3	CARBONDALE	LAWSON	DARK GRAY SHALE	3.2	96.7	
311.1	CARBONDALE	CONANT	LIMESTONE	0.7	99.9	
310.4	CARBONDALE	JAMESTOWN	BONE COAL	0.6	100.6	
309.8	CARBONDALE		DARK GRAY SHALE	2.7	101.2	
307.1	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	7.5	103.9	
299.6	CARBONDALE	ANNA	BLACK SHALE	0.6	111.4	
299.0	CARBONDALE	HERRIN	COAL	6.7	112.0	

MAPID: 16323859000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 26 QUARTERS/FOOTAGES: 990' S line, 1320' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.849261 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.411752 DATE COLLECTED: 10 / 9 / 1974

SURFACE ELEVATION (FT.): 463.6 LOGGED (FT.): 144.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15948C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. E-14

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
463.6	PLEISTOCENE		UNCONSOLIDATED	96.5	0.0	
367.1	MODESTO	PIASA	LIMESTONE	0.5	96.5	TOP ERODED
366.6			GRAY SHALE	10.4	97.0	
356.2	CARBONDALE	BANKSTON FORK	LIMESTONE	7.6	107.4	
348.6	CARBONDALE		SHALE	8.0	115.0	
340.6	CARBONDALE	BRERETON	LIMESTONE	0.9	123.0	
339.7	CARBONDALE		SHALE	3.5	123.9	
336.2	CARBONDALE	HERRIN	COAL	7.2	127.4	
329.0	CARBONDALE		UNDERCLAY	1.1	134.6	
327.9			LIMESTONE	11.3	135.7	

MAPID: 16323874000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 26 QUARTERS/FOOTAGES: 1' S line, 1' E line of SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.844648 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.408972 DATE COLLECTED: 5 / 10 / 1974

SURFACE ELEVATION (FT.): 434.3 LOGGED (FT.): 118.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15876C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. I-17

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
434.3	PLEISTOCENE		UNCONSOLIDATED	58.5	0.0
375.8	MODESTO		SANDSTONE	1.4	58.5
374.4	MODESTO	PIASA	LIMESTONE	5.9	59.9
368.5			GRAY SHALE	11.6	65.8
356.9	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	77.4
355.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.4	78.9
353.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	81.3
351.4	CARBONDALE		GRAY SHALE	1.6	82.9
349.8	CARBONDALE		DARK SHALE	5.4	84.5
344.4	CARBONDALE	CONANT	LIMESTONE W/ COAL	2.0	89.9
342.4	CARBONDALE	JAMESTOWN	COAL	0.4	91.9
342.0	CARBONDALE		LIMESTONE	0.1	92.3
341.9	CARBONDALE		DARK SHALE	4.9	92.4
337.0	CARBONDALE	BRERETON	LIMESTONE	3.3	97.3
333.8	CARBONDALE	HERRIN	COAL	7.1	100.5
326.7	CARBONDALE		UNDERCLAY	7.8	107.6

MAPID: 16323875000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 26 QUARTERS/FOOTAGES: 1' S line, 1320' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.840058 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.408919 DATE COLLECTED: 5 / 7 / 1974

SURFACE ELEVATION (FT.): 445.0 LOGGED (FT.): 103.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15875C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. M-17

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
445.0	PLEISTOCENE		UNCONSOLIDATED	86.6	0.0
358.4	CARBONDALE		SANDY LIMESTONE	1.0	86.6
357.4	CARBONDALE		GRAY SHALE	0.6	87.6
356.8	CARBONDALE	BRERETON	LIMESTONE	4.6	88.2
352.2	CARBONDALE		DARK SHALE	0.6	92.8
351.6	CARBONDALE	HERRIN	COAL	6.0	93.4
345.6	CARBONDALE		UNDERCLAY	4.4	99.4

MAPID: 16323911000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 26 QUARTERS/FOOTAGES: 330' S line, 1320' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.849242 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.40993 DATE COLLECTED: 10 / 29 / 1974

SURFACE ELEVATION (FT.): 450.0 LOGGED (FT.): 130.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16152C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. E-16

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
450.0	PLEISTOCENE		UNCONSOLIDATED	49.5	0.0	
400.5	PLEISTOCENE		BOULDER	3.5	49.5	
397.0	PLEISTOCENE		SAND & GRAVEL	21.5	53.0	
375.5	MODESTO	PIASA	LIMESTONE	12.0	74.5	TOP MAY BE ERODED
363.5			GRAY SHALE	13.7	86.5	
349.8	CARBONDALE	BANKSTON FORK	LIMESTONE	0.8	100.2	UPPER BENCH
349.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	4.6	101.0	
344.4	CARBONDALE	BANKSTON FORK	LIMESTONE	0.6	105.6	LOWER BENCH
343.8	CARBONDALE		GRAY SHALE	1.0	106.2	
342.8	CARBONDALE	CONANT	LIMESTONE	2.3	107.2	
340.5	CARBONDALE		DARK SHALE	7.1	109.5	
333.4	CARBONDALE	BRERETON	LIMESTONE	0.5	116.6	
332.9	CARBONDALE	ANNA	DARK SHALE	2.2	117.1	
330.7	CARBONDALE	HERRIN	COAL	7.8	119.3	
322.9	CARBONDALE		UNDERCLAY	2.9	127.1	

MAPID: 16327668000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 26 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.851346 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.409098 DATE COLLECTED:

SURFACE ELEVATION (FT.): 436.0 LOGGED (FT.): 108.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15942C WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
436.0	PLEISTOCENE		UNCONSOLIDATED	83.0	0.0	
353.0	CARBONDALE		DARK SHALE	3.0	83.0	
350.0	CARBONDALE	BRERETON	LIMESTONE	4.9	86.0	
345.1	CARBONDALE		DARK SHALE	1.6	90.9	
343.5	CARBONDALE	HERRIN	COAL	7.2	92.5	
336.3	CARBONDALE		UNDERCLAY	4.0	99.7	
332.3	CARBONDALE		SHALY LIMESTONE	4.3	103.7	

MAPID: 16327669000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 26 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.853351

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.416391

DATE COLLECTED:

SURFACE ELEVATION (FT.): 413.0 LOGGED (FT.): 87.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15949C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
413.0	PLEISTOCENE		UNCONSOLIDATED	31.0	0.0	
382.0	MODESTO	PIASA	LIMESTONE	9.7	31.0	
372.3			GRAY SHALE	8.8	40.7	
363.5	CARBONDALE		LIMESTONE	3.0	49.5	
360.5	CARBONDALE		GRAY SHALE	2.5	52.5	
358.0	CARBONDALE		LIMESTONE	2.5	55.0	
355.5	CARBONDALE		DARK SHALE	6.3	57.5	
349.2	CARBONDALE	BRERETON	LIMESTONE	3.3	63.8	
345.9	CARBONDALE		DARK SHALE	2.1	67.1	
343.8	CARBONDALE	HERRIN	COAL	7.4	69.2	
336.4	CARBONDALE		UNDERCLAY	2.9	76.6	
333.5	CARBONDALE		SHALY LIMESTONE	2.3	79.5	
331.2	CARBONDALE		GRAY SHALE	5.2	81.8	

MAPID: 16327670000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 26 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.853363

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.413233

DATE COLLECTED:

SURFACE ELEVATION (FT.): 402.0 LOGGED (FT.): 76.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16151C

WELL TYPE: Coal Test

COMMENT: STATE PLANE CORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
402.0	PLEISTOCENE		UNCONSOLIDATED	34.7	0.0	
367.3	PLEISTOCENE		BOULDER	0.5	34.7	
366.8	PLEISTOCENE		CLAY	18.8	35.2	
348.0	CARBONDALE		LIMESTONE	1.5	54.0	
346.5	CARBONDALE		DARK SHALE	2.6	55.5	
343.9	CARBONDALE	HERRIN	COAL	7.2	58.1	
336.7	CARBONDALE		UNDERCLAY	1.9	65.3	
334.8	CARBONDALE		SHALY LIMESTONE	4.6	67.2	
330.2	CARBONDALE		GRAY SHALE	4.2	71.8	

MAPID: 16327908000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 26 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.849407

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.416511

DATE COLLECTED:

SURFACE ELEVATION (FT.): 462.1 LOGGED (FT.): 136.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15950C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
462.1			UNCONSOLIDATED	77.0	0.0
385.1			LIMESTONE	2.5	77.0
382.6			GRAY SHALE	2.2	79.5
380.4			LIMESTONE	8.6	81.7
371.8			GRAY SHALE	8.7	90.3
363.1			LIMESTONE	4.5	99.0
358.6			GRAY SHALE	2.0	103.5
356.6			LIMESTONE	2.0	105.5
354.6			DARK SHALE	5.9	107.5
348.7			LIMESTONE	1.9	113.4
346.8			DARK SHALE	2.2	115.3
344.6	CARBONDALE	HERRIN	COAL	7.4	117.5
337.2			UNDERCLAY	1.1	124.9
336.1			GRAY SHALE	4.9	126.0
331.2			SHALY LIMESTONE	5.1	130.9

MAPID: 16300077000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 27 QUARTERS/FOOTAGES: 4950' S line, 2310' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.864335 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.422873 DATE COLLECTED:

SURFACE ELEVATION (FT.): 398.1 LOGGED (FT.): 75.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
398.1			SOIL	7.0	0.0	
391.1			CLAY	8.0	7.0	YELLOW
383.1			HARD PAN	8.0	15.0	
375.1			LIMESTONE	12.0	23.0	
363.1			CLAYSTONE	13.0	35.0	3" LIS BAND
350.1			LIMESTONE	3.0	48.0	GIR VENT ZONE
347.1			LIMESTONE	3.0	51.0	GIR VENT ZONE
344.1			SHALE	3.0	54.0	
341.1	CARBONDALE	BRERETON	LIMESTONE	2.0	57.0	
339.1	CARBONDALE	ANNA	DARK SHALE	2.0	59.0	
337.1	CARBONDALE	ANNA	SOFT SHALE	4.8	61.0	
332.3	CARBONDALE	ANNA	SHALE	0.8	65.8	
331.5	CARBONDALE	HERRIN	BONE COAL	1.3	66.6	BONE COAL BLACK FISSLE SHALE; BK
330.3	CARBONDALE	HERRIN	COAL	6.6	67.8	
323.7	CARBONDALE		UNDERCLAY	0.6	74.4	

MAPID: 16300077000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 27 QUARTERS/FOOTAGES: 4950' S line, 2310' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.864335 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.422873 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 398.1 LOGGED (FT.): 75.0 LOG TYPE:

SOURCE: UNION COLL0003 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
330.1	CARBONDALE	HERRIN	COAL	6.6	68.0	

MAPID: 16302368000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 27 QUARTERS/FOOTAGES: 1051' N line, 793' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.856766 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.420776 DATE COLLECTED: 7 / 28 / 1955

SURFACE ELEVATION (FT.): 407.4 LOGGED (FT.): 86.6 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2050 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
407.4	PLEISTOCENE		UNCONSOLIDATED	42.7	0.0
364.7	MODESTO	PIASA	LIMESTONE	7.6	42.7
357.1			GRAY SHALE	8.7	50.3
348.5	CARBONDALE	BANKSTON FORK	LIMESTONE	10.3	58.9
338.2	CARBONDALE		DARK GRAY SHALE	5.2	69.2
333.1	CARBONDALE		ROCK	0.9	74.3
332.1	CARBONDALE		BLACK SHALE	1.0	75.3
331.1	CARBONDALE	BRERETON	ROCK	1.5	76.3
329.6	CARBONDALE	ANNA	BLACK SHALE	0.4	77.8
329.2	CARBONDALE	HERRIN	COAL	6.6	78.2
322.6	CARBONDALE		UNDERCLAY	1.8	84.8

MAPID: 16302372000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 27 QUARTERS/FOOTAGES: 674' N line, 20' E line of SE NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.854026 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.418148 DATE COLLECTED: 7 / 27 / 1955

SURFACE ELEVATION (FT.): 399.6 LOGGED (FT.): 74.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2054 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
399.6	PLEISTOCENE		CLAY	12.7	0.0
386.9	PLEISTOCENE		SAND & GRAVEL	13.2	12.7
373.8	MODESTO	PIASA	LIMESTONE	4.3	25.8
369.5			GRAY SHALE	13.2	30.1
356.3	CARBONDALE	BANKSTON FORK	LIMESTONE	7.2	43.3
349.2	CARBONDALE		DARK GRAY SHALE	11.2	50.4
338.0	CARBONDALE		ROCK	1.8	61.6
336.2	CARBONDALE		BLACK SHALE	0.7	63.4
335.5	CARBONDALE		ROCK	1.4	64.1
334.1	CARBONDALE	ANNA	ROCK	0.4	65.5
333.7	CARBONDALE	HERRIN	COAL	6.6	65.9
327.1	CARBONDALE		UNDERCLAY	1.9	72.5

MAPID: 16302457000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 27 QUARTERS/FOOTAGES: 1275' S line, 50' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.872084 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.412829 DATE COLLECTED: 8 / 13 / 1958

SURFACE ELEVATION (FT.): 423.8 LOGGED (FT.): 88.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 3267 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
423.8	PLEISTOCENE		UNCONSOLIDATED	39.2	0.0	
384.6	MODESTO	PIASA	LIMESTONE	13.2	39.2	TOP MAY BE ERODED
371.5			GRAY SHALE	5.9	52.3	
365.5	CARBONDALE	BANKSTON FORK	LIMESTONE	8.3	58.3	
357.2	CARBONDALE		DARK GRAY SHALE	2.1	66.6	
355.1	CARBONDALE		BLACK SHALE	6.9	68.7	
348.2	CARBONDALE	BRERETON	ROCK	1.2	75.6	
347.0	CARBONDALE	ANNA	BLACK SHALE	2.8	76.8	
344.2	CARBONDALE	HERRIN	COAL	6.7	79.6	
337.5	CARBONDALE		UNDERCLAY	1.8	86.3	

MAPID: 16302458000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 27 QUARTERS/FOOTAGES: 1315' S line, 1975' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.86533 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.412851 DATE COLLECTED: 8 / 13 / 1958

SURFACE ELEVATION (FT.): 436.7 LOGGED (FT.): 100.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 3268 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
436.7	PLEISTOCENE		UNCONSOLIDATED	40.8	0.0	
395.9	MODESTO		LIMESTONE	2.2	40.8	
393.8	MODESTO		GRAY SHALE	2.1	42.9	
391.7	MODESTO	PIASA	LIMESTONE	9.9	45.0	
381.8			GRAY SHALE	11.8	54.9	
370.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.8	66.7	
361.3	CARBONDALE		BLACK SHALE	2.9	75.4	
358.4	CARBONDALE		ROCK	0.4	78.3	
357.9	CARBONDALE		BLACK SHALE	5.2	78.8	
352.8	CARBONDALE	BRERETON	ROCK	3.5	83.9	
349.3	CARBONDALE	ANNA	BLACK SHALE	4.1	87.4	
345.2	CARBONDALE	HERRIN	COAL	6.8	91.5	
338.4	CARBONDALE		UNDERCLAY	2.1	98.3	

MAPID: 16303516000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 27 QUARTERS/FOOTAGES: 0' N line, 0' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.872457 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.423827 DATE COLLECTED:

SURFACE ELEVATION (FT.): 399.0 LOGGED (FT.): 127.2 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12826C WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
312.0	MODESTO	PIASA	LIMESTONE	8.0	87.0	
304.0	CARBONDALE		GRAY SHALE	10.0	95.0	
294.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.1	105.0	UPPER BENCH
292.9	CARBONDALE	BANKSTON FORK	CLAYSTONE	0.3	106.1	SHALE PARTING
292.6	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	0.3	106.4	LOWER BENCH
292.3	CARBONDALE	LAWSON	DARK GRAY SHALE	5.1	106.7	
287.2	CARBONDALE	CONANT	NODULAR LIMESTONE	1.3	111.8	
285.9	CARBONDALE	JAMESTOWN	BONE COAL	0.7	113.1	
285.2	CARBONDALE		CALCAREOUS SHALE	1.7	113.8	
283.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	6.3	115.5	
277.2	CARBONDALE	ANNA	BLACK SHALE	0.4	121.8	
278.0	CARBONDALE	HERRIN	COAL	6.2	121.0	

MAPID: 16327671000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 27 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.871305 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.412674 DATE COLLECTED:

SURFACE ELEVATION (FT.): 397.9 LOGGED (FT.): 57.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16156C WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
397.9	PLEISTOCENE		UNCONSOLIDATED	25.0	0.0	
372.9	CARBONDALE		LIMESTONE	3.0	25.0	
369.9	CARBONDALE		DARK SHALE	7.5	28.0	
362.4	CARBONDALE		LIMESTONE	0.4	35.5	
362.0	CARBONDALE		DARK SHALE	0.9	35.9	
361.1	CARBONDALE		LIMESTONE	1.0	36.8	
360.1	CARBONDALE		DARK SHALE	2.5	37.8	
357.6	CARBONDALE	HERRIN	COAL	7.4	40.3	
350.2	CARBONDALE		UNDERCLAY	1.2	47.7	
349.0			SHALE WITH LIMESTONE	5.1	48.9	
343.9			GRAY SHALE	3.0	54.0	

MAPID: 16303392000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 28 QUARTERS/FOOTAGES: 330' N line, 330' W line of SE

QUADRANGLE: FREEBURG LONGITUDE: -89.880251 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.415715 DATE COLLECTED: 8 / 3 / 1971

SURFACE ELEVATION (FT.): 432.2 LOGGED (FT.): 81.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12590C WELL TYPE: Coal Test

COMMENT: PEABODY LOC.J-10

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
432.2	PLEISTOCENE		UNCONSOLIDATED	30.5	0.0
401.7	MODESTO		LIMESTONE	2.0	30.5
399.7	MODESTO		GRAY SHALE	3.8	32.5
395.9	MODESTO	PIASA	LIMESTONE	6.7	36.3
389.2			GRAY SHALE	9.8	43.0
379.4	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	52.8
375.9	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.6	56.3
375.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	56.9
371.8	CARBONDALE		DARK SHALE	5.4	60.4
366.4	CARBONDALE	CONANT	LIMESTONE	0.7	65.8
365.7	CARBONDALE		DARK SHALE	1.3	66.5
364.4	CARBONDALE	BRERETON	LIMESTONE	1.2	67.8
363.2	CARBONDALE	ANNA	DARK SHALE	2.4	69.0
360.8	CARBONDALE	HERRIN	COAL	6.8	71.4

MAPID: 16303393000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 28 QUARTERS/FOOTAGES: 990' N line, 330' W line of SE

QUADRANGLE: FREEBURG LONGITUDE: -89.880234 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.413893 DATE COLLECTED: 8 / 6 / 1971

SURFACE ELEVATION (FT.): 438.1 LOGGED (FT.): 85.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12591C WELL TYPE: Coal Test

COMMENT: PEABODY LO. J-12

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
438.1	PLEISTOCENE		UNCONSOLIDATED	34.0	0.0
404.1	MODESTO		LIMESTONE	1.0	34.0
403.1	MODESTO		GRAY SHALE	1.5	35.0
401.6	MODESTO	PIASA	LIMESTONE	10.0	36.5
391.6			GRAY SHALE	10.5	46.5
381.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	57.0
378.9	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.4	59.2
378.5	CARBONDALE		LIMESTONE	0.7	59.6
377.8	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.5	60.3
377.3	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	60.8
375.4	CARBONDALE	LAWSON	DARK SHALE	4.9	62.7
370.5	CARBONDALE	LAWSON	LIMESTONE	0.7	67.6
369.8	CARBONDALE	LAWSON	DARK SHALE	0.1	68.3
369.7	CARBONDALE	LAWSON	LIMESTONE	0.2	68.4
369.5	CARBONDALE	LAWSON	DARK SHALE	0.1	68.6
369.4	CARBONDALE	LAWSON	LIMESTONE	0.1	68.7
369.3	CARBONDALE	JAMESTOWN	COAL	0.2	68.8
369.1	CARBONDALE	BRERETON	LIMESTONE	3.6	69.0
365.5	CARBONDALE		DARK SHALE	4.2	72.6
361.3	CARBONDALE	HERRIN	COAL	4.8	76.8
356.5	CARBONDALE		UNDERCLAY	2.2	81.6
354.3	CARBONDALE		LIMESTONE	1.2	83.8

MAPID: 16303394000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 28 QUARTERS/FOOTAGES: 990' S line, 2310' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.880351

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.41212

DATE COLLECTED:

SURFACE ELEVATION (FT.): 435.0 LOGGED (FT.): 73.7

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12592C

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
404.0	MODESTO	PIASA	LIMESTONE	7.4	31.0	
396.6	CARBONDALE		GRAY SHALE	8.9	38.4	
387.7	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.3	47.3	UPPER BENCH
384.4	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	2.3	50.6	SHALE PARTING
382.1	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.6	52.9	LOWER BENCH
379.5	CARBONDALE	LAWSON	DARK GRAY SHALE	6.7	55.5	
372.9	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.8	62.1	
372.1	CARBONDALE	JAMESTOWN	CARBONACEOUS SHALE	0.6	62.9	
371.5	CARBONDALE	BRERETON	NODULAR LIMESTONE	0.9	63.5	
370.6	CARBONDALE	ANNA	BLACK SHALE	3.4	64.4	
368.0	CARBONDALE	HERRIN	COAL	6.7	67.0	

MAPID: 16303538000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 28 QUARTERS/FOOTAGES: 990' N line, 1' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.872412 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.421091 DATE COLLECTED: 11 / 18 / 1971

SURFACE ELEVATION (FT.): LOGGED (FT.): 139.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12831C WELL TYPE: Coal Test

COMMENT: PEABODY LOC Q-4, ELEV ESTIMA-UNDER WATER

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	88.8	0.0
-	MODESTO		LIMESTONE	2.0	88.8
-	MODESTO		GRAY SHALE	0.6	90.8
-	MODESTO	PIASA	LIMESTONE	9.1	91.4
-			GRAY SHALE	8.5	100.5
-	CARBONDALE	BANKSTON FORK	LIMESTONE	5.8	109.0
-	CARBONDALE		GRAY SHALE	2.0	114.8
-	CARBONDALE		DARK SHALE	5.4	116.8
-	CARBONDALE	CONANT	LIMESTONE	2.2	122.2
-	CARBONDALE		DARK SHALE	0.7	124.4
-	CARBONDALE	JAMESTOWN	COAL	0.2	125.1
-	CARBONDALE		DARK SHALE	0.6	125.3
-	CARBONDALE	BRERETON	LIMESTONE	3.3	125.9
-	CARBONDALE		DARK SHALE	0.6	129.2
-	CARBONDALE	HERRIN	COAL	6.9	129.8
-	CARBONDALE		UNDERCLAY	2.3	136.7

MAPID: 16327672000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 28 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.880461

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.418315

DATE COLLECTED:

SURFACE ELEVATION (FT.): 457.8 LOGGED (FT.): 113.1

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15514C

WELL TYPE: Coal Test

COMMENT: STATE PLANES COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
457.8	PLEISTOCENE		UNCONSOLIDATED	40.0	0.0
417.8	MODESTO		DARK GRAY SHALE	8.5	40.0
409.3	MODESTO		GRAY SHALE	15.3	48.5
394.0	MODESTO		LIMESTONE	1.6	63.8
392.4	MODESTO		GRAY SHALE	3.4	65.4
389.0	MODESTO	PIASA	LIMESTONE	5.5	68.8
383.5			GRAY SHALE	12.2	74.3
371.3	CARBONDALE		LIMESTONE	1.5	86.5
369.8	CARBONDALE		GRAY SHALE	0.4	88.0
369.4	CARBONDALE		SHALE WITH LIMESTONE	3.0	88.4
366.4	CARBONDALE		LIMESTONE	2.0	91.4
364.4	CARBONDALE		DARK SHALE	5.6	93.4
358.8	CARBONDALE		LIMESTONE	0.3	99.0
358.5	CARBONDALE		SHALE WITH LIMESTONE	1.3	99.3
357.2	CARBONDALE	BRERETON	LIMESTONE	2.0	100.6
355.2	CARBONDALE	ANNA	BLACK SHALE	3.5	102.6
351.7	CARBONDALE	HERRIN	COAL	6.9	106.1
344.8	CARBONDALE		UNDERCLAY	0.1	113.0

MAPID: 16327673000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 28 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.881053 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.415467 DATE COLLECTED:

SURFACE ELEVATION (FT.): 423.4 LOGGED (FT.): 72.9 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15854C WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
423.4	PLEISTOCENE		UNCONSOLIDATED	28.0	0.0
395.4	MODESTO	PIASA	LIMESTONE	5.0	28.0
390.4			GRAY SHALE	3.5	33.0
386.9			LIMESTONE	0.2	36.5
386.7			GRAY SHALE	8.6	36.7
378.1	CARBONDALE		LIMESTONE	5.1	45.3
373.0	CARBONDALE		SHALE	2.4	50.4
370.6	CARBONDALE		LIMESTONE	1.7	52.8
368.9	CARBONDALE		DARK SHALE	9.7	54.5
359.2	CARBONDALE	ANNA	BLACK SHALE	2.0	64.2
357.2	CARBONDALE	HERRIN	COAL	6.7	66.2

MAPID: 16327674000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 28 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.879441 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.411168 DATE COLLECTED:

SURFACE ELEVATION (FT.): 408.7 LOGGED (FT.): 56.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15855C WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
408.7	PLEISTOCENE		UNCONSOLIDATED	12.9	0.0
395.8			LIMESTONE	1.0	12.9
394.8			GRAY SHALE	2.5	13.9
392.3			LIMESTONE	2.4	16.4
389.9			GRAY SHALE	14.2	18.8
375.7	CARBONDALE		LIMESTONE	0.6	33.0
375.1	CARBONDALE		GRAY SHALE	1.3	33.6
373.8	CARBONDALE		LIMESTONE	0.8	34.9
373.0	CARBONDALE		GRAY SHALE	1.0	35.7
372.0	CARBONDALE		LIMESTONE	1.5	36.7
370.5	CARBONDALE		DARK SHALE	6.5	38.2
364.0	CARBONDALE		LIMESTONE	0.6	44.7
363.4	CARBONDALE	ANNA	BLACK SHALE	4.1	45.3
359.3	CARBONDALE	HERRIN	COAL	6.9	49.4

MAPID: 16327675000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 28 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.875617

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.409259

DATE COLLECTED:

SURFACE ELEVATION (FT.): 397.3 LOGGED (FT.): 54.2

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15857C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
397.3	PLEISTOCENE		UNCONSOLIDATED	7.9	0.0
389.4	MODESTO	PIASA	LIMESTONE	6.5	7.9
382.9			GRAY SHALE	5.7	14.4
377.2	CARBONDALE		LIMESTONE	1.4	20.1
375.8	CARBONDALE		GRAY SHALE	5.6	21.5
370.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	27.1
368.6	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.6	28.7
368.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.7	29.3
366.3	CARBONDALE		GRAY SHALE	3.0	31.0
363.3	CARBONDALE	CONANT	LIMESTONE	1.5	34.0
361.8	CARBONDALE		DARK SHALE	7.5	35.5
354.3	CARBONDALE	JAMESTOWN	SHALE/COAL	0.2	43.0
354.1	CARBONDALE	BRERETON	LIMESTONE	1.8	43.2
352.3	CARBONDALE	ANNA	BLACK SHALE	3.5	45.0
348.8	CARBONDALE	ANNA	SHALY LIMESTONE	0.6	48.5
348.2	CARBONDALE	HERRIN	COAL	5.1	49.1

MAPID: 16327676000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 28 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.880751

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.41152

DATE COLLECTED:

SURFACE ELEVATION (FT.): 420.4 LOGGED (FT.): 85.5

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15883C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
420.4	PLEISTOCENE		UNCONSOLIDATED	19.0	0.0	
401.4	MODESTO		LIMESTONE	1.9	19.0	
399.5	MODESTO		GRAY SHALE	2.8	20.9	
396.7	MODESTO	PIASA	LIMESTONE	11.0	23.7	
385.7			GRAY SHALE	8.0	34.7	
377.7	CARBONDALE		LIMESTONE	2.8	42.7	
375.0	CARBONDALE		GRAY SHALE	2.4	45.4	
372.6	CARBONDALE		SHALY LIMESTONE	2.3	47.8	
370.3	CARBONDALE		GRAY SHALE	5.7	50.1	
364.6	CARBONDALE		DARK SHALE	3.6	55.8	
361.0	CARBONDALE	BRERETON	LIMESTONE	3.4	59.4	
357.6	CARBONDALE	ANNA	BLACK SHALE	4.0	62.8	
353.6	CARBONDALE	ANNA	SHALY LIMESTONE	0.4	66.8	
353.3	CARBONDALE	HERRIN	COAL	7.1	67.1	
346.2	CARBONDALE		DARK SHALE	0.2	74.2	
346.0	CARBONDALE		UNDERCLAY	10.4	74.4	
335.7	CARBONDALE		LIMESTONE	0.8	84.7	

MAPID: 16327677000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 28 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.876887 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.409208 DATE COLLECTED:

SURFACE ELEVATION (FT.): 417.6 LOGGED (FT.): 85.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15884C WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
417.6	PLEISTOCENE		UNCONSOLIDATED	19.4	0.0
398.2	MODESTO		LIMESTONE	1.5	19.4
396.7	MODESTO		GRAY SHALE	6.5	20.9
390.2	MODESTO	PIASA	LIMESTONE	10.1	27.4
380.1			GRAY SHALE	8.5	37.5
371.6	CARBONDALE		LIMESTONE	0.9	46.0
370.7	CARBONDALE		GRAY SHALE	1.0	46.9
369.7	CARBONDALE		LIMESTONE	0.8	47.9
368.9	CARBONDALE		GRAY SHALE	3.7	48.7
365.2	CARBONDALE		LIMESTONE	1.5	52.4
363.7	CARBONDALE		GRAY SHALE	0.9	53.9
362.8	CARBONDALE		DARK SHALE	4.6	54.8
358.2	CARBONDALE		SHALY LIMESTONE	1.3	59.4
356.9	CARBONDALE		LIMESTONE	2.0	60.7
354.9	CARBONDALE	ANNA	BLACK SHALE	5.8	62.7
349.1	CARBONDALE	HERRIN	COAL	7.4	68.5
341.8	CARBONDALE		DARK SHALE	1.1	75.8
340.7	CARBONDALE		LIMESTONE	0.2	76.9
340.5	CARBONDALE		SANDSTONE	4.2	77.1
336.3	CARBONDALE		GRAY SHALE	4.2	81.3

MAPID: 16327678000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 28 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.887838

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.415119

DATE COLLECTED:

SURFACE ELEVATION (FT.): 477.7 LOGGED (FT.): 127.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15943C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
477.7	PLEISTOCENE		UNCONSOLIDATED	73.0	0.0
404.7	MODESTO		LIMESTONE	1.0	73.0
403.7	MODESTO		GRAY SHALE	1.0	74.0
402.7	MODESTO	PIASA	LIMESTONE	6.2	75.0
396.5			GRAY SHALE	10.0	81.2
386.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	91.2
383.5	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.3	94.2
382.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	95.5
379.7	CARBONDALE		GRAY SHALE	2.0	98.0
377.7	CARBONDALE		DARK SHALE	2.8	100.0
374.9	CARBONDALE		LIMESTONE	0.6	102.8
374.3	CARBONDALE		DARK SHALE	0.6	103.4
373.7	CARBONDALE	BRERETON	LIMESTONE	3.7	104.0
370.0	CARBONDALE	ANNA	DARK SHALE	2.9	107.7
367.1	CARBONDALE	HERRIN	COAL	6.3	110.6
360.8	CARBONDALE		UNDERCLAY	0.5	116.9
360.3	CARBONDALE		GRAY SHALE	4.0	117.4
356.3	CARBONDALE		LIMESTONE	1.9	121.4
354.4	CARBONDALE		GRAY SHALE	3.7	123.3

MAPID: 16327679000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 28 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.884185

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.417196

DATE COLLECTED:

SURFACE ELEVATION (FT.): 445.4 LOGGED (FT.): 104.4

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16059C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
445.4	PLEISTOCENE		UNCONSOLIDATED	46.6	0.0
398.8	MODESTO		LIMESTONE	1.4	46.6
397.4	MODESTO		GRAY SHALE	2.5	48.0
394.9	MODESTO	PIASA	LIMESTONE	6.4	50.5
388.5			GRAY SHALE	5.3	56.9
383.2			DARK SHALE	1.4	62.2
381.8			GRAY SHALE	4.0	63.6
377.8	CARBONDALE		SHALY LIMESTONE	1.8	67.6
376.0	CARBONDALE		GRAY SHALE	2.7	69.4
373.3	CARBONDALE		LIMESTONE	1.6	72.1
371.7	CARBONDALE		GRAY SHALE	2.2	73.7
369.5	CARBONDALE		DARK SHALE	2.5	75.9
367.0	CARBONDALE		LIMESTONE	0.9	78.4
366.1	CARBONDALE		SHALE	0.4	79.3
365.7	CARBONDALE	BRERETON	LIMESTONE	4.1	79.7
361.6	CARBONDALE	ANNA	BLACK SHALE	3.2	83.8
358.4	CARBONDALE	HERRIN	COAL	6.9	87.0
351.5	CARBONDALE		UNDERCLAY	3.4	93.9
348.1	CARBONDALE		LIMESTONE	1.0	97.3
347.1	CARBONDALE		SHALE	1.6	98.3
345.6	CARBONDALE		LIMESTONE	2.7	99.8
342.9	CARBONDALE		SHALE	0.4	102.5
342.5	CARBONDALE		LIMESTONE	0.6	102.9
342.0	CARBONDALE		SHALE	1.0	103.4

MAPID: 1632768000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 28 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.884128

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.418336

DATE COLLECTED:

SURFACE ELEVATION (FT.): 444.4 LOGGED (FT.): 106.2

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16060C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
444.4	PLEISTOCENE		UNCONSOLIDATED	49.0	0.0
395.4	MODESTO		LIMESTONE	1.5	49.0
393.9	MODESTO		GRAY SHALE	3.0	50.5
390.9	MODESTO	PIASA	LIMESTONE	6.9	53.5
384.0			GRAY SHALE	8.6	60.4
375.4	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	69.0
373.6	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.9	70.8
372.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	71.7
369.2	CARBONDALE		GRAY SHALE	2.5	75.2
366.7	CARBONDALE		DARK SHALE	2.7	77.7
364.0	CARBONDALE	CONANT	LIMESTONE	0.9	80.4
363.1	CARBONDALE		DARK SHALE	1.8	81.3
361.3	CARBONDALE	JAMESTOWN	COAL	0.2	83.1
361.1	CARBONDALE		DARK SHALE	1.9	83.3
359.2	CARBONDALE	BRERETON	LIMESTONE	2.6	85.2
356.6	CARBONDALE	ANNA	BLACK SHALE	2.2	87.8
354.4	CARBONDALE	HERRIN	COAL	6.7	90.0
347.7	CARBONDALE		UNDERCLAY	1.7	96.7
346.0	CARBONDALE		SHALY LIMESTONE	2.9	98.4
343.1	CARBONDALE		SHALE WITH LIMESTONE	0.5	101.3
342.6	CARBONDALE		LIMESTONE	0.5	101.8
342.2	CARBONDALE		SHALE WITH LIMESTONE	3.4	102.2
338.8	CARBONDALE		SHALY LIMESTONE	0.6	105.6

MAPID: 16327681000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 28 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.886285

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.41942

DATE COLLECTED:

SURFACE ELEVATION (FT.): 476.8 LOGGED (FT.): 136.4

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16061C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
476.8	PLEISTOCENE		UNCONSOLIDATED	61.7	0.0
415.1	MODESTO		GRAY SHALE	2.0	61.7
413.1	MODESTO		SANDSTONE	1.8	63.7
411.3	MODESTO		GRAY SHALE	18.0	65.5
393.3	MODESTO		LIMESTONE	1.8	83.5
391.5	MODESTO		GRAY SHALE	0.9	85.3
390.6	MODESTO	PIASA	LIMESTONE	6.2	86.2
384.4			SHALE WITH LIMESTONE	2.5	92.4
381.9			LIMESTONE	2.5	94.9
379.4			SHALE	4.4	97.4
375.0	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	2.9	101.8
372.1	CARBONDALE	BANKSTON FORK	SHALE	1.7	104.7
370.4	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	106.4
368.1	CARBONDALE		GRAY SHALE	2.6	108.7
365.5	CARBONDALE		DARK SHALE	3.2	111.3
362.3	CARBONDALE	CONANT	LIMESTONE	3.2	114.5
359.1	CARBONDALE		DARK SHALE	1.2	117.7
357.9	CARBONDALE	BRERETON	LIMESTONE	3.8	118.9
354.1	CARBONDALE	ANNA	BLACK SHALE	0.7	122.7
353.4	CARBONDALE	HERRIN	COAL	6.7	123.4
346.7	CARBONDALE		UNDERCLAY	3.8	130.1
343.0	CARBONDALE		SHALY LIMESTONE	1.5	133.8
341.4	CARBONDALE		LIMESTONE	1.0	135.4

MAPID: 16327682000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 28 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.888511 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.420243 DATE COLLECTED:

SURFACE ELEVATION (FT.): 484.2 LOGGED (FT.): 145.2 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16062C WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
484.2	PLEISTOCENE		UNCONSOLIDATED	63.4	0.0
420.8	MODESTO		GRAY SHALE	2.0	63.4
418.8	MODESTO		COAL	0.5	65.4
418.3	MODESTO		DARK GRAY SHALE	5.5	65.9
412.8	MODESTO		GRAY SHALE	16.4	71.4
396.4	MODESTO		LIMESTONE	1.6	87.8
394.8	MODESTO		GRAY SHALE	7.1	89.4
387.7	MODESTO	PIASA	LIMESTONE	5.7	96.5
382.0			GRAY SHALE	6.0	102.2
376.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	108.2
374.5	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.8	109.7
372.7	CARBONDALE		LIMESTONE	2.1	111.5
370.6	CARBONDALE		GRAY SHALE	2.6	113.6
368.0	CARBONDALE		DARK SHALE	5.6	116.2
362.4	CARBONDALE		DARK SHALE & LIMESTONE	2.6	121.8
359.8	CARBONDALE	BRERETON	LIMESTONE	3.3	124.4
356.5	CARBONDALE		GRAY SHALE	0.4	127.7
356.0	CARBONDALE	HERRIN	COAL	6.4	128.2
349.7	CARBONDALE		UNDERCLAY	3.7	134.5
346.0	CARBONDALE		LIMESTONE	7.0	138.2

MAPID: 16300078000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 29 QUARTERS/FOOTAGES: 2250' S line, 120' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.890932 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.415699 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 458.0 LOGGED (FT.): 95.0 LOG TYPE:

SOURCE: UNION COLL0007 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
370.0	CARBONDALE	HERRIN	COAL	6.3	88.0

MAPID: 16300381000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 29 **QUARTERS/FOOTAGES:** 850' N line, 3750' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.90368 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.421826 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 506.2 **LOGGED (FT.):** 127.0 **LOG TYPE:** Drillers Log
SOURCE: EAST SIDE COAL COMPANY **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
385.7	CARBONDALE	HERRIN	COAL	6.5	120.5	ELEVATION TOP 379'

MAPID: 16300381000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 29 **QUARTERS/FOOTAGES:** 850' N line, 3750' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.90368 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.421826 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 506.2 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: E SIDE CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
379.2	CARBONDALE	HERRIN	COAL	6.5	127.0	

MAPID: 16302936000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 29 **QUARTERS/FOOTAGES:** 2310' S line, 1320' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.895141 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.415906 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 472.0 **LOGGED (FT.):** 118.8 **LOG TYPE:** Survey Core Study
SOURCE: PEABODY COAL CO. 8560C **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
394.0	MODESTO	PIASA	LIMESTONE	8.2	78.0	
385.8	CARBONDALE		GRAY SHALE	11.9	86.2	
373.9	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	98.1	
371.5	CARBONDALE	LAWSON	DARK GRAY SHALE	8.2	100.5	
363.3	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	1.2	108.7	
362.2	CARBONDALE	JAMESTOWN	BONE COAL	0.3	109.8	
361.8	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.3	110.2	
361.5	CARBONDALE	ANNA	BLACK SHALE	1.3	110.5	
360.0	CARBONDALE	HERRIN	COAL	6.8	112.0	

MAPID: 16300237000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 30 **QUARTERS/FOOTAGES:** 3200' S line, 1250' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.913389 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.41855 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 513.5 **LOGGED (FT.):** 122.0 **LOG TYPE:** Drillers Log
SOURCE: COLUMBIA COLLINS COMPANY **WELL TYPE:** Mine Shaft
COMMENT: NEW FREEBURG, MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
399.5	CARBONDALE	HERRIN	COAL	8.0	114.0	ELEVATION TOP 392'

MAPID: 16300237000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 30 **QUARTERS/FOOTAGES:** 3200' S line, 1250' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.913389 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.41855 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 513.5 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: COLUMBIA COLLINS COMPANY **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
391.5	CARBONDALE	HERRIN	COAL	8.0	122.0	

MAPID: 16300238000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 30 **QUARTERS/FOOTAGES:** 1300' S line, 1300' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.913576 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.413307 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 501.6 **LOGGED (FT.):** 77.0 **LOG TYPE:** Drillers Log
SOURCE: RED TOP COAL COMPANY **WELL TYPE:** Mine Shaft
COMMENT: STAR, MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
431.9	CARBONDALE	HERRIN	COAL	7.3	69.7	ELEVATION TOP 425'

MAPID: 16300238000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 30 **QUARTERS/FOOTAGES:** 1300' S line, 1300' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.913576 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.413307 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 501.6 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: STAR COAL CO. **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
424.6	CARBONDALE	HERRIN	COAL	7.3	77.0	

MAPID: 16300383000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 30 **QUARTERS/FOOTAGES:** 2625' S line, 3350' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.92076 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.417061 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 497.5 **LOGGED (FT.):** 63.0 **LOG TYPE:** Drillers Log
SOURCE: HILL COAL COMPANY **WELL TYPE:** Coal Test
COMMENT: MINE SLOPE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
441.5	CARBONDALE	HERRIN	COAL	7.0	56.0	ELEVATION TOP 435'

MAPID: 16300383000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 30 **QUARTERS/FOOTAGES:** 2625' S line, 3350' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.92076 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.417061 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 497.5 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: HILL CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
434.5	CARBONDALE	HERRIN	COAL	7.0	63.0	

MAPID: 16300491000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 31 **QUARTERS/FOOTAGES:** 2370' N line, 2465' W line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.918546 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.403242 **DATE COLLECTED:** 0 / 0 / 1939
SURFACE ELEVATION (FT.): 482.8 **LOGGED (FT.):** 1962.0 **LOG TYPE:**
SOURCE: MOSEBACH P **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
426.8	CARBONDALE	HERRIN	COAL	9.0	56.0	

MAPID: 16300491000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 31 QUARTERS/FOOTAGES: 2370' N line, 2465' W line
 QUADRANGLE: FREEBURG LONGITUDE: -89.918546 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 38.403242 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 483.0 LOGGED (FT.): 65.0 LOG TYPE: Drillers Log
 SOURCE: WELL TYPE: Coal Test
 COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
451.0	CARBONDALE	LAWSON	GRAY SHALE	16.0	32.0	
435.0	CARBONDALE	BRERETON	LIMESTONE	8.0	48.0	
427.0	CARBONDALE	HERRIN	COAL	9.0	56.0	

MAPID: 16300284000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 32 QUARTERS/FOOTAGES: 100' S line, 600' E line
 QUADRANGLE: FREEBURG LONGITUDE: -89.891965 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.395293 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 420.5 LOGGED (FT.): 18.5 LOG TYPE: Drillers Log
 SOURCE: REIHNHEIMER COAL COMPANY WELL TYPE: Coal Test
 COMMENT: SLOPE MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
408.5	CARBONDALE	HERRIN	COAL	6.5	12.0	ELEVATION TO 409', 14' TO 7' OF #6 COAL

MAPID: 16300284000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 32 QUARTERS/FOOTAGES: 100' S line, 600' E line
 QUADRANGLE: FREEBURG LONGITUDE: -89.891965 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.395293 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 420.5 LOGGED (FT.): 0.0 LOG TYPE:
 SOURCE: REIHNH CC WELL TYPE: Underground mine
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
408.5	CARBONDALE	HERRIN	COAL	6.5	12.0	

MAPID: 1630044600C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 32 **QUARTERS/FOOTAGES:** 5115' S line, 1190' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.894661 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.409163 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 475.0 **LOGGED (FT.):** 71.0 **LOG TYPE:** Drillers Log
SOURCE: UNITED ELECTRIC COAL COMPANY 967 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
475.0			UNCLASSIFIED	71.0	0.0	DRILL HOLE; TOTAL DEPTH NO COAL

MAPID: 1630044600C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 32 **QUARTERS/FOOTAGES:** 5115' S line, 1190' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.894661 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.409163 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 475.0 **LOGGED (FT.):** 71.0 **LOG TYPE:**
SOURCE: UN ELEC CC 967 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300447000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 32 **QUARTERS/FOOTAGES:** 1485' S line, 2510' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.898841 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.399185 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 447.5 **LOGGED (FT.):** 71.0 **LOG TYPE:** Drillers Log
SOURCE: UNITED ELECTRIC COAL COMPANY 725 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
447.5			UNCLASSIFIED	71.0	0.0	DRILL HOLE; TOTAL DEPTH NO COAL

MAPID: 16300447000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 32 **QUARTERS/FOOTAGES:** 1485' S line, 2510' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.898841 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.399185 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 477.5 **LOGGED (FT.):** 71.0 **LOG TYPE:**
SOURCE: UN ELEC CC 725 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300451000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 32 **QUARTERS/FOOTAGES:** 2805' S line, 3795' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.903517 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.402873 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 477.2 **LOGGED (FT.):** 70.0 **LOG TYPE:** Drillers Log
SOURCE: UNITED ELECTRIC COAL COMPANY 803 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
477.2			UNCLASSIFIED	70.0	0.0	DRILL HOLE; TOTAL DEPTH NO COAL

MAPID: 16302085000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 32 **QUARTERS/FOOTAGES:** 990' N line, 990' W line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.905547 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.406892 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 459.0 **LOGGED (FT.):** 55.4 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 2417 **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.0	CARBONDALE	BRERETON	LIMESTONE	4.8	44.0	
410.2	CARBONDALE	ANNA	BLACK SHALE	0.3	48.8	
410.0	CARBONDALE	HERRIN	COAL	6.4	49.0	

MAPID: 16327716000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 32 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG

LONGITUDE: -89.894667

GEOLOGIST: MCBETH

CONFIDENTIAL: N

LATITUDE: 38.496037

DATE COLLECTED: 6 / 12 / 1973

SURFACE ELEVATION (FT.): 521.6

LOGGED (FT.): 172.6

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15532C

WELL TYPE: Coal Test

COMMENT: PERMIT 28; RIVER KING #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
521.6	PLEISTOCENE		UNCONSOLIDATED	26.0	0.0	
495.6			SANDSTONE	13.2	26.0	
482.4			GRAY SHALE	66.0	39.2	
416.4			COAL	0.5	105.2	
415.9			GRAY SHALE	17.3	105.7	
398.6			LIMESTONE	5.2	123.0	
393.4			GRAY SHALE	12.2	128.2	
381.2			LIMESTONE	3.3	140.4	
377.9			GRAY SHALE	4.7	143.7	
373.2	CARBONDALE		LIMESTONE	0.9	148.4	
372.3	CARBONDALE		SHALE	2.0	149.3	DARK
370.4	CARBONDALE	BRERETON	LIMESTONE	8.5	151.2	
361.9	CARBONDALE	ANNA	SHALE	0.3	159.7	DARK
361.7	CARBONDALE	HERRIN	COAL	6.2	159.9	
355.4	CARBONDALE		UNDERCLAY	2.4	166.2	
353.0	CARBONDALE		LIMESTONE	4.0	168.6	

MAPID: 16300079000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 33 QUARTERS/FOOTAGES: 3695' S line, 790' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.874893 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.405048 DATE COLLECTED: 6 / 19 / 1923

SURFACE ELEVATION (FT.): 396.1 LOGGED (FT.): 46.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY COMPANY WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
396.1			CLAY	12.0	0.0	
384.1			SAND	10.0	12.0	
374.1			SOFT SHALE	3.0	22.0	
371.1	CARBONDALE	BRERETON	LIMESTONE	4.0	25.0	DARK
367.1	CARBONDALE	BRERETON	LIMESTONE	8.5	29.0	
358.6	CARBONDALE		SOFT SHALE	0.3	37.5	
358.3	CARBONDALE	HERRIN	COAL	1.2	37.8	
357.1	CARBONDALE	HERRIN	COAL	3.2	39.0	
353.9	CARBONDALE	HERRIN	PYRITE	0.0	42.2	
353.9	CARBONDALE	HERRIN	COAL	0.3	42.2	
353.6	CARBONDALE	HERRIN	SHALE	0.1	42.5	
353.5	CARBONDALE	HERRIN	COAL	1.3	42.6	
352.2	CARBONDALE	HERRIN	PYRITE	0.0	43.9	
352.2	CARBONDALE	HERRIN	COAL	0.8	43.9	
351.4	CARBONDALE		UNDERCLAY	1.3	44.7	

MAPID: 16300079000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 33 QUARTERS/FOOTAGES: 3695' S line, 790' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.874893 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.405048 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 396.1 LOGGED (FT.): 46.0 LOG TYPE:

SOURCE: UNION COLL0009 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
358.1	CARBONDALE	HERRIN	COAL	6.7	38.0	

MAPID: 16300448000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 33 **QUARTERS/FOOTAGES:** 1485' S line, 5115' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.889961 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.399096 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 445.6 **LOGGED (FT.):** 60.0 **LOG TYPE:** Drillers Log
SOURCE: UNITED ELECTRIC COAL COMPANY 729 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
445.6			UNCLASSIFIED	60.0	0.0	DRILL HOLE;TOTAL DEPTH NO COAL

MAPID: 16300448000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 33 **QUARTERS/FOOTAGES:** 1485' S line, 5115' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.889961 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.399096 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 445.6 **LOGGED (FT.):** 60.0 **LOG TYPE:**
SOURCE: UN ELEC CC 729 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300449000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 33 **QUARTERS/FOOTAGES:** 1485' S line, 4025' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.886137 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.399059 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 456.4 **LOGGED (FT.):** 20.5 **LOG TYPE:** Drillers Log
SOURCE: UNITED COAL COMPANY 731 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
442.4	CARBONDALE	HERRIN	COAL	6.5	14.0	ELEVATION 442', DRILL HOLE

MAPID: 16300449000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 33 **QUARTERS/FOOTAGES:** 1485' S line, 4025' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.886137 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.399059 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 456.4 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: UN ELEC CC 731 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
442.4	CARBONDALE	HERRIN	COAL	6.5	14.0	

MAPID: 16300457000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 33 **QUARTERS/FOOTAGES:** 130' S line, 5115' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.881119 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.402154 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 467.2 **LOGGED (FT.):** 72.0 **LOG TYPE:** Drillers Log
SOURCE: UNITED ELECTRIC COAL COMPANY 649 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
467.2			UNCLASSIFIED	72.0	0.0	DRILL HOLE;TOTAL DEPTH NO COAL

MAPID: 16300457000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 33 **QUARTERS/FOOTAGES:** 130' S line, 5115' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.881119 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.402154 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 467.2 **LOGGED (FT.):** 72.0 **LOG TYPE:**
SOURCE: UN ELEC CC 649 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300458000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 33 **QUARTERS/FOOTAGES:** 130' S line, 3860' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.885492 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.395312 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 453.3 **LOGGED (FT.):** 71.0 **LOG TYPE:** Drillers Log
SOURCE: UNITED ELECTRIC COAL COMPANY 651 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
453.3			UNCLASSIFIED	71.0	0.0	DRILL HOLE;TOTAL DEPTH NO COAL

MAPID: 16300458000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 33 **QUARTERS/FOOTAGES:** 130' S line, 3860' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.885492 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.395312 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 453.3 **LOGGED (FT.):** 71.0 **LOG TYPE:**
SOURCE: UN ELEC CC 651 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300459000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 33 **QUARTERS/FOOTAGES:** 130' S line, 2510' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.880756 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.395264 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 424.3 **LOGGED (FT.):** 58.0 **LOG TYPE:** Drillers Log
SOURCE: UNITED ELECTRIC COAL COMPANY 653 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
374.3	CARBONDALE	HERRIN	COAL	8.0	50.0	ELEVATION 374', DRILL HOLE

MAPID: 16300459000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 33 **QUARTERS/FOOTAGES:** 130' S line, 2510' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.880756 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.395264 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 424.3 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: UN ELEC CC 653 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
374.3	CARBONDALE	HERRIN	COAL	8.0	50.0	

MAPID: 16302495000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 33 **QUARTERS/FOOTAGES:** 1320' N line, 1320' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.876763 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.405711 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 397.0 **LOGGED (FT.):** 44.1 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 9 **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
374.8	CARBONDALE	LAWSON	DARK GRAY SHALE	3.0	22.2	
371.8	CARBONDALE	LAWSON	CALCAREOUS SHALE	4.0	25.2	
367.8	CARBONDALE	BRERETON	LIMESTONE	8.5	29.2	
359.3	CARBONDALE	ANNA	DARK GRAY SHALE	0.3	37.7	
359.0	CARBONDALE	HERRIN	COAL	6.1	38.0	

MAPID: 16327683000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 33 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.873124

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.4062

DATE COLLECTED:

SURFACE ELEVATION (FT.): 414.5 LOGGED (FT.): 79.6

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15861C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
414.5	PLEISTOCENE		UNCONSOLIDATED	24.6	0.0	
389.9	MODESTO	PIASA	LIMESTONE	4.8	24.6	
385.1			GRAY SHALE	12.2	29.4	
372.9	CARBONDALE		LIMESTONE	3.5	41.6	
369.4	CARBONDALE		GRAY SHALE	2.9	45.1	
366.5	CARBONDALE		LIMESTONE	3.5	48.0	
363.0	CARBONDALE		SHALE	8.1	51.5	
354.9	CARBONDALE		LIMESTONE	0.6	59.6	
354.3	CARBONDALE		DARK SHALE	0.3	60.2	
354.0	CARBONDALE	ANNA	BLACK SHALE	1.1	60.5	
352.9	CARBONDALE	ANNA	LIMESTONE	0.4	61.6	
352.5	CARBONDALE	HERRIN	COAL	6.7	62.0	
345.8	CARBONDALE		UNDERCLAY	1.5	68.7	
344.3	CARBONDALE		LIMESTONE	2.8	70.2	
341.5	CARBONDALE		GRAY SHALE	2.3	73.0	
339.3	CARBONDALE		SHALY LIMESTONE	1.8	75.2	
337.5	CARBONDALE		GRAY SHALE	0.8	77.0	
336.7	CARBONDALE		SHALY LIMESTONE	1.8	77.8	

MAPID: 16300081000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 34 QUARTERS/FOOTAGES: 1380' S line, 120' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.854153 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.398408 DATE COLLECTED: 6 / 28 / 1923

SURFACE ELEVATION (FT.): 425.2 LOGGED (FT.): 140.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
425.2			CLAY	10.0	0.0	
415.2			SAND	7.0	10.0	
408.2			SAND	8.0	17.0	
400.2			CLAY	14.0	25.0	
386.2			CLAY	11.0	39.0	
375.2			SAND	32.0	50.0	
343.2			SOFT SHALE	1.5	82.0	
341.7			LIMESTONE	0.5	83.5	
341.2			LIMESTONE	1.5	84.0	
339.7			SOFT SHALE	5.5	85.5	
334.2			LIMESTONE	1.0	91.0	
333.2			SANDY SHALE	3.0	92.0	
330.2			SOFT SHALE	2.0	95.0	
328.2			SANDY SHALE	14.0	97.0	
314.2			SANDY SHALE	2.0	111.0	
312.2			DARK SHALE	14.3	113.0	
297.9	CARBONDALE	ST. DAVID	LIMESTONE	1.0	127.3	
296.9	CARBONDALE		SHALE	7.3	128.3	BLACK
289.5	CARBONDALE	SPRINGFIELD	COAL	3.0	135.7	
286.5	CARBONDALE		UNDERCLAY	1.3	138.7	

MAPID: 16300081000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 34 QUARTERS/FOOTAGES: 1380' S line, 120' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.854153 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.398408 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 425.2 LOGGED (FT.): 140.0 LOG TYPE:

SOURCE: UNION COLL0011 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		
289.2	CARBONDALE	SPRINGFIELD	COAL	3.0	136.0	

MAPID: 16300461000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 34 **QUARTERS/FOOTAGES:** 130' S line, 5115' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.871635 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.395175 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 394.6 **LOGGED (FT.):** 29.0 **LOG TYPE:** Drillers Log
SOURCE: UNITED ELECTRIC COAL COMPANY 657 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
368.6	CARBONDALE	HERRIN	COAL	3.0	26.0	ELEVATION 369', DRILL HOLE

MAPID: 16300461000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 34 **QUARTERS/FOOTAGES:** 130' S line, 5115' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.871635 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.395175 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 394.6 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: UN ELEC CC 657 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
368.6	CARBONDALE	HERRIN	COAL	3.0	26.0	

MAPID: 16300462000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 34 **QUARTERS/FOOTAGES:** 130' S line, 2705' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.86318 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.39507 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 441.6 **LOGGED (FT.):** 71.0 **LOG TYPE:** Drillers Log
SOURCE: UNITED ELECTRIC COAL COMPANY 661 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
441.6			UNCLASSIFIED	71.0	0.0	DRILL HOLE;TOTAL DEPTH NO COAL

MAPID: 16302378000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 34 QUARTERS/FOOTAGES: 400' N line, 50' W line of NE NW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.867418 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.408145 DATE COLLECTED: 7 / 26 / 1955

SURFACE ELEVATION (FT.): 412.9 LOGGED (FT.): 85.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2062 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
412.9	PLEISTOCENE		UNCONSOLIDATED	4.7	0.0	
408.2	PLEISTOCENE		SAND & GRAVEL	28.9	4.7	
379.3	PLEISTOCENE		CLAY	1.7	33.6	
377.7	MODESTO		LIMESTONE	1.8	35.2	
375.8	MODESTO		GRAY SHALE	3.4	37.1	
372.5	MODESTO		LIMESTONE	0.8	40.4	
371.7	MODESTO		GRAY SHALE	0.8	41.2	
370.9	MODESTO	PIASA	LIMESTONE	6.5	42.0	
364.4			GRAY SHALE	8.7	48.5	
355.7	CARBONDALE	BANKSTON FORK	LIMESTONE	0.5	57.2	
355.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.2	57.7	
354.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.2	58.9	
352.7	CARBONDALE		GRAY SHALE	2.3	60.2	
350.4	CARBONDALE		LIMESTONE	0.3	62.5	
350.1	CARBONDALE		GRAY SHALE	1.4	62.8	
348.8	CARBONDALE	CONANT	LIMESTONE	1.5	64.1	
347.2	CARBONDALE		DARK SHALE	8.5	65.7	
338.7	CARBONDALE	BRERETON	LIMESTONE	0.9	74.2	ERROR IN LOG MEASUREMENT
337.6	CARBONDALE	ANNA	BLACK SHALE	1.9	75.3	
335.9	CARBONDALE	ANNA	LIMESTONE	0.5	77.0	PROBABLY A CONCRETION
335.4	CARBONDALE	HERRIN	COAL	6.8	77.5	
328.7	CARBONDALE		UNDERCLAY	1.1	84.2	

MAPID: 16302402000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 34 QUARTERS/FOOTAGES: 1330' N line, 1345' E line of NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.858538 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.405462 DATE COLLECTED: 8 / 18 / 1955

SURFACE ELEVATION (FT.): 428.6 LOGGED (FT.): 83.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2096 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
428.6	PLEISTOCENE		UNCONSOLIDATED	57.8	0.0
370.8	CARBONDALE		DARK SHALE	4.2	57.8
366.7	CARBONDALE	BRERETON	ROCK	12.8	61.9
353.9	CARBONDALE	ANNA	BLACK SHALE	0.3	74.7
353.7	CARBONDALE	HERRIN	COAL	6.8	74.9
346.9	CARBONDALE		UNDERCLAY	1.8	81.7

MAPID: 16302497000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 34 QUARTERS/FOOTAGES: NE SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.856038 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.40005 DATE COLLECTED: 0 / 0 / 1955

SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 140.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 11 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
425.0	PLEISTOCENE		CLAY	10.0	0.0
415.0	PLEISTOCENE		SAND	15.0	10.0
400.0	PLEISTOCENE		CLAY & GRAVEL	25.0	25.0
375.0	PLEISTOCENE		SAND	32.0	50.0
343.0			SHALE	1.5	82.0
341.5			LIMESTONE	2.0	83.5
339.5			SHALE	5.5	85.5
334.0			LIMESTONE	1.0	91.0
333.0			SANDY SHALE	3.0	92.0
330.0	CARBONDALE		GRAY SHALE	2.0	95.0
328.0	CARBONDALE		SANDY SHALE	16.0	97.0
312.0	CARBONDALE		DARK SHALE	14.3	113.0
297.7	CARBONDALE	HANOVER	LIMESTONE	1.0	127.3
296.7	CARBONDALE	EXCELLO	BLACK SHALE	7.3	128.3
289.3	CARBONDALE	HOUCHIN CREEK	COAL	3.0	135.7
286.3	CARBONDALE		UNDERCLAY	1.3	138.7

MAPID: 16302535000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 34 QUARTERS/FOOTAGES: 50' N line, 200' W line of NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.862325 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.409045 DATE COLLECTED: 0 / 0 / 1955

SURFACE ELEVATION (FT.): 472.8 LOGGED (FT.): 128.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 49 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
472.8	PLEISTOCENE		CLAY	38.0	0.0
434.8	PLEISTOCENE		SAND	12.0	38.0
422.8	PLEISTOCENE		SAND & GRAVEL	10.0	50.0
412.8	PLEISTOCENE		SAND	24.0	60.0
388.8	MODESTO		GRAY SHALE	1.0	84.0
387.8	MODESTO	PIASA	LIMESTONE	2.0	85.0
385.8			GRAY SHALE	13.5	87.0
372.3	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	100.5
366.8	CARBONDALE		BLACK SHALE	8.5	106.0
358.3	CARBONDALE	JAMESTOWN	COAL	0.2	114.5
358.1	CARBONDALE	BRERETON	LIMESTONE	3.0	114.7
355.1	CARBONDALE	ANNA	BLACK SHALE	2.1	117.7
353.0	CARBONDALE	HERRIN	COAL	7.2	119.8
345.9	CARBONDALE		UNDERCLAY	1.1	126.9

MAPID: 16303112000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 34 QUARTERS/FOOTAGES: 330' N line, 0' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.853854 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.40816 DATE COLLECTED:

SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 97.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8928C WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
375.0	MODESTO	PIASA	LIMESTONE	10.0	50.0
365.0	CARBONDALE		GRAY SHALE	8.8	60.0
356.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	68.8 UPPER BENCH
352.9	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.4	72.1 SHALE PARTING
350.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	74.5 LOWER BENCH
348.3	CARBONDALE	LAWSON	GRAY SHALE	6.8	76.7
341.5	CARBONDALE	BRERETON	LIMESTONE	2.5	83.5
339.0	CARBONDALE	ANNA	BLACK SHALE	3.9	86.0
335.0	CARBONDALE	HERRIN	COAL	7.3	90.0

MAPID: 16323834000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 34 QUARTERS/FOOTAGES: 2640' N line, 990' E line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.857247 GEOLOGIST: CHENOWETH
 CONFIDENTIAL: N LATITUDE: 38.401827 DATE COLLECTED: 2 / 28 / 1974
 SURFACE ELEVATION (FT.): 435.0 LOGGED (FT.): 95.1 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 15866C WELL TYPE: Coal Test
 COMMENT: PEABODY LOC. N-9

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
435.0	PLEISTOCENE		UNCONSOLIDATED	73.5	0.0	
361.5	CARBONDALE	BRERETON	LIMESTONE	5.1	73.5	
356.4	CARBONDALE	ANNA	BLACK SHALE	1.8	78.6	
354.6	CARBONDALE	HERRIN	COAL	7.0	80.4	
347.6	CARBONDALE		UNDERCLAY	2.2	87.4	
345.4	CARBONDALE		SHALE WITH LIMESTONE	1.8	89.6	
343.7	CARBONDALE		LIMESTONE	3.8	91.3	

MAPID: 16300082000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 35 QUARTERS/FOOTAGES: 2825' S line, 2725' E line
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.844854 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.40229 DATE COLLECTED: 4 / 0 / 1907
 SURFACE ELEVATION (FT.): 426.9 LOGGED (FT.): 157.0 LOG TYPE: Drillers Log
 SOURCE: WISE WELL DRILL&PROSPECTING CO WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
426.9			CLAY	20.0	0.0	
406.9			SAND	10.0	20.0	YELLOW
396.9			CLAY	10.0	30.0	BLUE
386.9			SAND	18.0	40.0	
368.9			CLAY	3.0	58.0	BLUE
365.9			SHALE	13.5	61.0	BLACK
352.4			ROCK	4.0	74.5	
348.4			SHALE/UNDERCLAY	0.5	78.5	
347.9	CARBONDALE	HERRIN	COAL	7.0	79.0	
340.9	CARBONDALE		UNDERCLAY	1.0	86.0	
339.9	CARBONDALE		LIMESTONE	41.0	87.0	
298.9	CARBONDALE		SHALE	6.0	128.0	LIGHT
292.9	CARBONDALE		SHALE	10.0	134.0	BLACK
282.9	CARBONDALE		UNDERCLAY	1.0	144.0	DARK
281.9	CARBONDALE	HOUCHIN CREEK	COAL	10.0	145.0	THICKNESS PROBABLY INACCURATE
271.9	CARBONDALE		SHALE/UNDERCLAY	2.0	155.0	

MAPID: 16300082000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 35 QUARTERS/FOOTAGES: 2825' S line, 2725' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.844854 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.40229 DATE COLLECTED: 0 / 0 / 1907

SURFACE ELEVATION (FT.): 426.9 LOGGED (FT.): 157.0 LOG TYPE:

SOURCE: BORDERS WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
347.9	CARBONDALE	HERRIN	COAL	7.0	79.0
321.9	CARBONDALE	SPRINGFIELD	COAL	10.0	105.0

MAPID: 16302359000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 35 QUARTERS/FOOTAGES: 450' S line, 150' E line of SW SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.840321 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.395683 DATE COLLECTED: 7 / 18 / 1955

SURFACE ELEVATION (FT.): 442.6 LOGGED (FT.): 127.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2036 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
442.6	PLEISTOCENE		CLAY	16.1	0.0
426.5	PLEISTOCENE		SAND & GRAVEL	65.7	16.1
360.8	MODESTO	PIASA	LIMESTONE	4.5	81.8
356.3			GRAY SHALE	3.3	86.3
353.0			LIMESTONE	1.1	89.6
351.9			GRAY SHALE	4.9	90.7
347.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	95.6
345.1	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.3	97.5
342.8	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	99.8
340.3	CARBONDALE		DARK GRAY SHALE	5.9	102.3
334.4	CARBONDALE		ROCK	3.1	108.2
331.3	CARBONDALE		BLACK SHALE	1.2	111.3
330.2	CARBONDALE	BRERETON	ROCK	6.3	112.4
323.9	CARBONDALE	ANNA	BLACK SHALE	0.2	118.7
323.8	CARBONDALE	HERRIN	COAL	6.8	118.8
316.9	CARBONDALE		UNDERCLAY	1.7	125.7

MAPID: 16302366000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 35 QUARTERS/FOOTAGES: 2030' N line, 1948' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.842151 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.403336 DATE COLLECTED: 7 / 23 / 1955

SURFACE ELEVATION (FT.): 396.5 LOGGED (FT.): 74.2 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2047 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
396.5	PLEISTOCENE		UNCONSOLIDATED	20.3	0.0	
376.2	PLEISTOCENE		SAND & GRAVEL	7.3	20.3	
368.8	MODESTO	PIASA	LIMESTONE	8.7	27.7	ERROR IN LOG MEASUREMENT
362.2			GRAY SHALE	9.5	34.3	
352.7	CARBONDALE	BANKSTON FORK	LIMESTONE	6.9	43.8	
345.7	CARBONDALE		DARK GRAY SHALE	4.3	50.8	
341.4	CARBONDALE	BRERETON	ROCK	6.9	55.1	
334.5	CARBONDALE	ANNA	BLACK SHALE	2.8	62.0	
331.7	CARBONDALE	ANNA	ROCK	0.9	64.8	
330.8	CARBONDALE	HERRIN	COAL	6.7	65.7	
324.2	CARBONDALE		UNDERCLAY	1.8	72.3	

MAPID: 16302533000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 35 QUARTERS/FOOTAGES: 0' N line, 2640' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.84469 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.408969 DATE COLLECTED:

SURFACE ELEVATION (FT.): 427.0 LOGGED (FT.): 99.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 47 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
374.0	MODESTO	PIASA	LIMESTONE	6.0	53.0	
368.0	CARBONDALE		GRAY SHALE	12.0	59.0	
356.0	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	7.7	71.0	
348.3	CARBONDALE	LAWSON	BLACK SHALE	9.6	78.7	
338.7	CARBONDALE	JAMESTOWN	COAL	0.3	88.3	
338.4	CARBONDALE		BLACK SHALE	0.4	88.6	
338.0	CARBONDALE	BRERETON	LIMESTONE	2.0	89.0	
336.0	CARBONDALE	ANNA	BLACK SHALE	1.7	91.0	
334.0	CARBONDALE	HERRIN	COAL	6.8	93.0	

MAPID: 16302872000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 35 **QUARTERS/FOOTAGES:** 113' S line, 203' W line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.852974 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.394897 **DATE COLLECTED:** 0 / 0 / 1968
SURFACE ELEVATION (FT.): 418.0 **LOGGED (FT.):** 155.0 **LOG TYPE:** Drillers Log
SOURCE: CARL WILSON WELL DRILLING **WELL TYPE:** Water Well
COMMENT: NOT SUITABLE FOR RESOURCE CALCULATIONS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
418.0			CLAY	10.0	0.0	
408.0			GLACIAL DRIFT	15.0	10.0	
393.0			SAND & GRAVEL	40.0	25.0	
353.0	CARBONDALE		CALCAREOUS SHALE	5.0	65.0	
348.0	CARBONDALE		SHALE	14.5	70.0	
333.5	CARBONDALE	HERRIN	COAL	-	84.5	THICKNESS REPORTED AS 6FT
327.5	CARBONDALE		LIMESTONE	5.0	90.5	
322.5	CARBONDALE		SHALE	50.0	95.5	
272.5	CARBONDALE		BLACK SHALE	8.0	145.5	
264.5	CARBONDALE		SHALE	2.0	153.5	

MAPID: 16303630000C **VERSION:** 1 **PROJECT:** AVAIL
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 35 **QUARTERS/FOOTAGES:** 2640' S line, 1' W line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.85377 **GEOLOGIST:** CHENOWETH
CONFIDENTIAL: N **LATITUDE:** 38.401882 **DATE COLLECTED:** 1 / 3 / 1973
SURFACE ELEVATION (FT.): 420.0 **LOGGED (FT.):** 66.2 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 12881C **WELL TYPE:** Coal Test
COMMENT: PEABODY LO. A-9

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
420.0	PLEISTOCENE		SAND & GRAVEL	60.0	0.0	
360.0	CARBONDALE	BRERETON	LIMESTONE	2.0	60.0	
358.0	CARBONDALE	ANNA	BLACK SHALE	2.0	62.0	
356.0	CARBONDALE	HERRIN	COAL	2.2	64.0	

MAPID: 16323835000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 35 QUARTERS/FOOTAGES: 1320' S line, 1' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.835211 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.398028 DATE COLLECTED: 2 / 11 / 1974

SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 104.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15863C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. Q-13

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
425.0	PLEISTOCENE		UNCONSOLIDATED	64.6	0.0
360.4			GRAY SHALE	7.4	64.6
353.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.4	72.0
351.6	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	1.0	73.4
350.6	CARBONDALE		CALCAREOUS SHALE	1.8	74.4
348.8	CARBONDALE		LIMESTONE	1.9	76.2
346.9	CARBONDALE		SHALE	0.3	78.1
346.6	CARBONDALE		LIMESTONE	0.2	78.4
346.4	CARBONDALE		DARK SHALE	6.6	78.6
339.8	CARBONDALE		DARK SHALE	2.2	85.2
337.6	CARBONDALE	BRERETON	LIMESTONE	0.4	87.4
337.2	CARBONDALE		DARK SHALE	0.5	87.8
336.8	CARBONDALE		DARK SHALE	0.9	88.2
335.9	CARBONDALE	HERRIN	COAL	6.2	89.1
329.7	CARBONDALE		UNDERCLAY	2.7	95.3

MAPID: 16327684000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 35 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.83525 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.403356 DATE COLLECTED:

SURFACE ELEVATION (FT.): 416.1 LOGGED (FT.): 97.6 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15859C WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
416.1	PLEISTOCENE		UNCONSOLIDATED	61.1	0.0	
355.0	CARBONDALE		SHALY LIMESTONE	2.3	61.1	
352.7	CARBONDALE		GRAY SHALE	1.9	63.4	
350.8	CARBONDALE		LIMESTONE	1.6	65.3	
349.1	CARBONDALE		GRAY SHALE	1.6	67.0	
347.5	CARBONDALE		DARK SHALE	8.4	68.6	
339.1	CARBONDALE	JAMESTOWN	COAL	0.3	77.0	
338.8	CARBONDALE	BRERETON	SHALY LIMESTONE	3.4	77.3	
335.5	CARBONDALE	HERRIN	COAL	6.5	80.6	
329.0	CARBONDALE		UNDERCLAY	1.4	87.1	
327.6	CARBONDALE		GRAY SHALE	4.6	88.5	
323.0	CARBONDALE		SHALY LIMESTONE	4.5	93.1	

MAPID: 16300083000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 36 QUARTERS/FOOTAGES: 5150' S line, 5175' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.83526 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.408599 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 419.2 LOGGED (FT.): 74.0 LOG TYPE: Drillers Log

SOURCE: UNION COLLIERY CO 18 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
419.2			CLAY	23.0	0.0	
396.2			CLAY	10.0	23.0	BLUE
386.2			SAND	12.0	33.0	
374.2			CLAY	14.0	45.0	
360.2			SOFT SHALE	2.0	59.0	
358.2	CARBONDALE	ANNA	SHALE	5.9	61.0	BLACK
352.3	CARBONDALE	HERRIN	COAL	4.7	66.9	
347.6	CARBONDALE	HERRIN	SHALE	0.1	71.6	BLUE
347.5	CARBONDALE	HERRIN	COAL	1.8	71.7	
345.8	CARBONDALE		UNDERCLAY	0.6	73.4	

MAPID: 16300083000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 36 QUARTERS/FOOTAGES: 5150' S line, 5175' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.83526 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.408599 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 419.2 LOGGED (FT.): 74.0 LOG TYPE:

SOURCE: UNION COLL0013 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
352.2	CARBONDALE	HERRIN	COAL	6.5	67.0

MAPID: 16302393000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 36 QUARTERS/FOOTAGES: 200' S line, 330' W line of SE NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.820516 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.402139 DATE COLLECTED: 8 / 8 / 1955

SURFACE ELEVATION (FT.): 407.3 LOGGED (FT.): 87.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2083 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
407.3	PLEISTOCENE		UNCONSOLIDATED	26.9	0.0
380.4	PLEISTOCENE		SAND & GRAVEL	28.7	26.9
351.7	PLEISTOCENE		CLAY	5.7	55.6
346.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	61.3
344.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.3	63.3
341.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	65.6
339.3	CARBONDALE		GRAY SHALE	8.1	68.0
331.2	CARBONDALE	CONANT	ROCK	1.3	76.1
329.9	CARBONDALE		BLACK SHALE	0.6	77.4
329.3	CARBONDALE	BRERETON	ROCK	1.7	78.0
327.6	CARBONDALE	ANNA	BLACK SHALE	0.3	79.7
327.4	CARBONDALE	HERRIN	COAL	6.3	79.9
321.1	CARBONDALE		UNDERCLAY	1.7	86.2

MAPID: 16302422000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 36 QUARTERS/FOOTAGES: 2605' N line, 25' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.835193

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.401669

DATE COLLECTED:

SURFACE ELEVATION (FT.): 416.0 LOGGED (FT.): 83.1

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2183

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
358.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.3	57.8
353.8	CARBONDALE	LAWSON	DARK GRAY SHALE	5.7	62.2
348.2	CARBONDALE	CONANT	LIMESTONE	1.8	67.8
346.4	CARBONDALE		BLACK SHALE	0.7	69.6
345.7	CARBONDALE	BRERETON	LIMESTONE	6.4	70.3
339.3	CARBONDALE	ANNA	BLACK SHALE	0.3	76.7
339.0	CARBONDALE	HERRIN	COAL	6.1	77.0

MAPID: 16302499000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 36 QUARTERS/FOOTAGES: 1' N line, 1' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.835419

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.408861

DATE COLLECTED:

SURFACE ELEVATION (FT.): 419.5 LOGGED (FT.): 74.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 13

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
419.5	PLEISTOCENE		CLAY	33.0	0.0
386.5	PLEISTOCENE		SAND	12.0	33.0
374.5	PLEISTOCENE		CLAY & GRAVEL	14.0	45.0
360.5	CARBONDALE		SHALE	2.0	59.0
358.5	CARBONDALE	ANNA	BLACK SHALE	5.9	61.0
352.6	CARBONDALE	HERRIN	COAL	6.5	66.9
346.1	CARBONDALE		UNDERCLAY	0.6	73.4

MAPID: 16324322000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 36 QUARTERS/FOOTAGES: 1' S line, 990' E line of SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.829626 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.39435 DATE COLLECTED: 3 / 9 / 1977

SURFACE ELEVATION (FT.): 415.0 LOGGED (FT.): 99.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16316C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. F-17

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.0	PLEISTOCENE		CLAY	26.0	0.0	
389.0	PLEISTOCENE		SAND	17.8	26.0	
371.2	PLEISTOCENE		BOULDER	1.7	43.8	
369.5	PLEISTOCENE		SAND	21.0	45.5	
348.5	PLEISTOCENE		CLAY	5.5	66.5	
343.0	CARBONDALE		LIMESTONE	0.9	72.0	TOPMAY BE ERODED
342.1	CARBONDALE		GRAY SHALE	1.7	72.9	
340.4	CARBONDALE	CONANT	LIMESTONE	2.4	74.6	
338.0	CARBONDALE		DARK SHALE	6.0	77.0	
332.0	CARBONDALE	BRERETON	LIMESTONE	2.3	83.0	
329.7	CARBONDALE		DARK SHALE	1.7	85.3	
328.0	CARBONDALE	HERRIN	COAL	5.7	87.0	
322.3	CARBONDALE		UNDERCLAY	0.5	92.7	
321.8	CARBONDALE		GRAY SHALE	5.8	93.2	

MAPID: 16327685000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 36 QUARTERS/FOOTAGES: 2640' N line, 1320' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.821766 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.401597 DATE COLLECTED:

SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 90.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16182C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
410.0	PLEISTOCENE		UNCONSOLIDATED	16.0	0.0	
394.0	PLEISTOCENE		SAND	22.0	16.0	
372.0	PLEISTOCENE		CLAY	21.0	38.0	
351.0			LIMESTONE	4.5	59.0	
346.5			GRAY SHALE	3.5	63.5	
343.0	CARBONDALE		LIMESTONE	2.0	67.0	
341.0	CARBONDALE		DARK SHALE	7.7	69.0	
333.3	CARBONDALE		LIMESTONE	0.5	76.7	
332.8	CARBONDALE		SHALE	1.3	77.2	
331.5	CARBONDALE	HERRIN	COAL	6.8	78.5	
324.7	CARBONDALE		UNDERCLAY	1.4	85.3	
323.3	CARBONDALE		LIMESTONE	3.3	86.7	

MAPID: 16327686000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 1S 7W SECTION: 36 QUARTERS/FOOTAGES: 1320' S line, 1320' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.821785 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.397942 DATE COLLECTED:

SURFACE ELEVATION (FT.): 415.0 LOGGED (FT.): 109.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16183C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
415.0	PLEISTOCENE		UNCONSOLIDATED	24.0	0.0
391.0	PLEISTOCENE		SAND	32.0	24.0
359.0	PLEISTOCENE		CLAY	16.5	56.0
342.5			LIMESTONE	0.5	72.5
342.0			GRAY SHALE	1.0	73.0
341.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	74.0
337.5	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.0	77.5
336.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.7	78.5
334.8	CARBONDALE		SHALE	8.1	80.2
326.7	CARBONDALE	BRERETON	LIMESTONE	2.2	88.3
324.5	CARBONDALE	ANNA	DARK SHALE	2.4	90.5
322.1	CARBONDALE	HERRIN	COAL	6.3	92.9
315.8	CARBONDALE		UNDERCLAY	1.7	99.2
314.1	CARBONDALE		LIMESTONE	7.3	100.9
306.8	CARBONDALE		GRAY SHALE	0.8	108.2

MAPID: 16327687000C **VERSION:** 1 **PROJECT:** AVAIL
COUNTY: ST. CLAIR **TWP/RNG:** 1S 7W **SECTION:** 36 **QUARTERS/FOOTAGES:** 2640' N line, 1320' E line
QUADRANGLE: MASCOUTAH **LONGITUDE:** -89.821766 **GEOLOGIST:** CHENOWETH
CONFIDENTIAL: N **LATITUDE:** 38.401597 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 415.0 **LOGGED (FT.):** 91.0 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 16315C **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.0	PLEISTOCENE		UNCONSOLIDATED	26.0	0.0	
389.0	PLEISTOCENE		SAND	18.0	26.0	
371.0	PLEISTOCENE		CLAY	18.8	44.0	
352.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	62.8	
350.6	CARBONDALE		SHALE	6.0	64.4	
344.6	CARBONDALE	CONANT	LIMESTONE	0.9	70.4	
343.7	CARBONDALE		SHALE	2.2	71.3	
341.5	CARBONDALE	BRERETON	LIMESTONE	3.2	73.5	
338.3	CARBONDALE		SHALE	0.2	76.7	
338.1	CARBONDALE	HERRIN	COAL	6.1	76.9	
332.0	CARBONDALE		UNDERCLAY	1.6	83.0	
330.4	CARBONDALE		LIMESTONE	6.4	84.6	

MAPID: 16300239000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 1 **QUARTERS/FOOTAGES:** 1750' S line, 2550' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.936999 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.47259 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 504.1 **LOGGED (FT.):** 94.0 **LOG TYPE:** Drillers Log
SOURCE: MISSOURI-ILL COAL COMPANY **WELL TYPE:** Coal Test
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
416.6	CARBONDALE	HERRIN	COAL	6.5	87.5	ELEVATION TOP 411'

MAPID: 16300239000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 1 **QUARTERS/FOOTAGES:** 1750' S line, 2550' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.936999 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.47259 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 504.1 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: MO ILL CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
410.1	CARBONDALE	HERRIN	COAL	6.5	94.0	

MAPID: 16300672000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 1 **QUARTERS/FOOTAGES:** NE NE NW
QUADRANGLE: FREEBURG **LONGITUDE:** -89.938353 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.482156 **DATE COLLECTED:** 0 / 0 / 1933
SURFACE ELEVATION (FT.): 545.0 **LOGGED (FT.):** 433.0 **LOG TYPE:**
SOURCE: BAITTS BEN **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
403.0	CARBONDALE	HERRIN	COAL	4.0	142.0	

MAPID: 16302559000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 1 **QUARTERS/FOOTAGES:** 20' S line, 370' W line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.944854 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.467899 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 500.0 **LOGGED (FT.):** 90.8 **LOG TYPE:** Survey Core Study
SOURCE: PEABODY COAL CO. 7706 **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
438.7	CARBONDALE	BANKSTON FORK	LIMESTONE	14.0	61.3	
424.7	CARBONDALE	LAWSON	DARK GRAY SHALE	4.7	75.3	
420.0	CARBONDALE	BRERETON	LIMESTONE	3.6	80.0	
416.4	CARBONDALE	ANNA	DARK GRAY SHALE	0.5	83.6	
416.0	CARBONDALE	HERRIN	COAL	6.8	84.0	

MAPID: 16300241000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 2 **QUARTERS/FOOTAGES:** 5050' S line, 1175' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.95043 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.481864 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 491.5 **LOGGED (FT.):** 90.0 **LOG TYPE:** Drillers Log
SOURCE: GROOM COAL COMPANY **WELL TYPE:** Coal Test
COMMENT: MINE SHAFT, RICHLAND

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
408.5			COAL	7.0	83.0	ELEVATION TOP 409'

MAPID: 16300241000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 2 **QUARTERS/FOOTAGES:** 5050' S line, 1175' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.95043 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.481864 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 491.5 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: GROOM CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
408.5	CARBONDALE	HERRIN	COAL	7.0	83.0	

MAPID: 16300673000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 2 **QUARTERS/FOOTAGES:** 5190' S line, 1160' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.95038 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.482251 **DATE COLLECTED:** 0 / 0 / 1912
SURFACE ELEVATION (FT.): 491.7 **LOGGED (FT.):** 367.0 **LOG TYPE:**
SOURCE: GROOM CC **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
391.7	CARBONDALE	HERRIN	COAL	-	100.0	

MAPID: 16300674000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 2 **QUARTERS/FOOTAGES:** 330' N line, 375' W line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.963735 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.482403 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 491.4 **LOGGED (FT.):** 49.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 2-Y **WELL TYPE:** Coal Test
COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
491.4			CLAY	22.0	0.0	
469.4			SHALE	7.0	22.0	
462.4			LIMESTONE	6.0	29.0	
456.4			BLACK SHALE	3.0	35.0	
453.4	CARBONDALE	BRERETON	LIMESTONE	1.8	38.0	
451.6	CARBONDALE	ANNA	BLACK SHALE	1.9	39.8	
449.7	CARBONDALE	HERRIN	COAL	6.3	41.7	
443.4	CARBONDALE		UNDERCLAY	1.0	48.0	

MAPID: 16300674000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 2 **QUARTERS/FOOTAGES:** 330' N line, 375' W line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.963735 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.482403 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 491.4 **LOGGED (FT.):** 49.0 **LOG TYPE:**
SOURCE: MIDWEST SF002Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
449.4	CARBONDALE	HERRIN	COAL	6.3	42.0	

MAPID: 16302557000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 2 **QUARTERS/FOOTAGES:** 2640' N line, 1180' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.950382 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.475973 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 480.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Survey Core Study
SOURCE: PEABODY COAL CO. 7736 **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0		
-	CARBONDALE	LAWSON	GRAY SHALE	5.8		
-	CARBONDALE	CONANT	LIMESTONE	0.3		
-	CARBONDALE		GRAY SHALE	1.4		
-	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	10.2		
-	CARBONDALE	ANNA	BLACK SHALE	3.6		
-	CARBONDALE	HERRIN	COAL	8.8		

MAPID: 16327860000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 2 **QUARTERS/FOOTAGES:** 1' N line, 0' W line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.965054 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.483317 **DATE COLLECTED:** 3 / 18 / 1938
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 36.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 3-Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		CLAY	18.5	0.0	
-	CARBONDALE		LIMESTONE	2.0	18.5	
-	CARBONDALE		BLUE SHALE	3.5	20.5	
-	CARBONDALE	ANNA	BLACK SHALE	6.2	24.0	
-	CARBONDALE	HERRIN	COAL	5.0	30.2	HARD
-	CARBONDALE		UNDERCLAY	0.8	35.2	

MAPID: 16300865000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 4 QUARTERS/FOOTAGES: NW NE NW

QUADRANGLE: FREEBURG LONGITUDE: -89.996373 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.482612 DATE COLLECTED:

SURFACE ELEVATION (FT.): 515.0 LOGGED (FT.): 80.7 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT R-4 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
515.0			CLAY	43.0	0.0	
472.0			LIMESTONE	26.0	43.0	
446.0	CARBONDALE	ANNA	BLACK SHALE	5.0	69.0	
441.0	CARBONDALE	HERRIN	COAL	6.7	74.0	

MAPID: 16300866000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 4 QUARTERS/FOOTAGES: 0' N line, 2640' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.992913 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.483588 DATE COLLECTED: 9 / 0 / 1943

SURFACE ELEVATION (FT.): 510.0 LOGGED (FT.): 81.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT R-5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
510.0			CLAY	44.0	0.0	
466.0			LIMESTONE	17.0	44.0	
449.0			BLACK SHALE	3.0	61.0	
446.0			PYRITE	4.0	64.0	
442.0	CARBONDALE	ANNA	BLACK SHALE	1.0	68.0	
441.0	CARBONDALE	HERRIN	COAL	6.0	69.0	
435.0	CARBONDALE		UNDERCLAY	6.0	75.0	

MAPID: 16300867000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 4 QUARTERS/FOOTAGES: N2 N2

QUADRANGLE: FREEBURG LONGITUDE: -89.992436 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.481668 DATE COLLECTED: 10 / 0 / 1943

SURFACE ELEVATION (FT.): 503.0 LOGGED (FT.): 72.3 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT R-6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
503.0			CLAY	45.0	0.0
458.0			LIMESTONE	11.0	45.0
447.0			SHALE	2.0	56.0
445.0			BLACK SHALE	4.0	58.0
441.0			LIMESTONE	4.0	62.0
437.0	CARBONDALE	HERRIN	COAL	6.3	66.0
430.7	CARBONDALE		UNDERCLAY	0.0	72.3

MAPID: 16300868000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 4 QUARTERS/FOOTAGES: E2 E2

QUADRANGLE: FREEBURG LONGITUDE: -89.985822 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.475957 DATE COLLECTED: 10 / 0 / 1943

SURFACE ELEVATION (FT.): 478.0 LOGGED (FT.): 51.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT R-7 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
478.0			CLAY	32.0	0.0
446.0			SHALE	12.0	32.0
434.0			SANDSTONE	3.0	44.0
431.0	CARBONDALE	HERRIN	COAL	4.5	47.0
426.5	CARBONDALE		UNDERCLAY	0.0	51.5

MAPID: 16300869000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 4 QUARTERS/FOOTAGES: NW SE NE

QUADRANGLE: FREEBURG LONGITUDE: -89.987032 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.47882 DATE COLLECTED: 10 / 0 / 1943

SURFACE ELEVATION (FT.): 504.0 LOGGED (FT.): 81.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT R-8 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
504.0			CLAY	38.0	0.0	
466.0			SHALE	35.0	38.0	
431.0			CLAYSTONE	8.0	73.0	
423.0			UNCLASSIFIED	0.0	81.0	NO COAL

MAPID: 16300870000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 4 QUARTERS/FOOTAGES: 100' N line, 200' E line of SW NE

QUADRANGLE: FREEBURG LONGITUDE: -89.988905 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.479491 DATE COLLECTED: 10 / 0 / 1943

SURFACE ELEVATION (FT.): 502.0 LOGGED (FT.): 81.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT R-13 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
502.0			CLAY	28.0	0.0	
474.0			SHALE	41.0	28.0	
433.0	CARBONDALE	SPRINGFIELD	COAL	2.0	69.0	
431.0	CARBONDALE		SHALE	10.0	71.0	

MAPID: 16300922000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 4 QUARTERS/FOOTAGES: 1' N line, 1' W line of SW NE

QUADRANGLE: FREEBURG LONGITUDE: -89.99284 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.47974 DATE COLLECTED: 10 / 0 / 1943

SURFACE ELEVATION (FT.): 522.4 LOGGED (FT.): 65.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 11 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
522.4			CLAY	40.0	0.0	
482.4			LIMESTONE	7.0	40.0	
475.4			SANDY SLATE	3.0	47.0	
472.4			SHALE	4.0	50.0	BLUE
468.4	CARBONDALE	BRERETON	LIMESTONE	3.5	54.0	
464.9	CARBONDALE	ANNA	BLACK SHALE	1.0	57.5	
463.9	CARBONDALE	HERRIN	COAL	6.3	58.5	#6 COAL, ELEVATION TOP 461.37
457.6	CARBONDALE		UNDERCLAY	0.8	64.8	

MAPID: 16300922000C VERSION: 2

PROJECT: NCRDS87

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 4 QUARTERS/FOOTAGES: 1' N line, 1' W line of SW NE

QUADRANGLE: FREEBURG LONGITUDE: -89.99284 GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 38.47974 DATE COLLECTED: 8 / 0 / 1943

SURFACE ELEVATION (FT.): 522.4 LOGGED (FT.): 65.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
522.4			UNCONSOLIDATED	40.0	0.0	
482.4	CARBONDALE		LIMESTONE	7.0	40.0	
475.4	CARBONDALE		SHALE	7.0	47.0	
468.4	CARBONDALE	BRERETON	LIMESTONE	3.5	54.0	
464.9	CARBONDALE	ANNA	BLACK SHALE	1.0	57.5	
463.9	CARBONDALE	HERRIN	COAL	6.3	58.5	
457.6	CARBONDALE		UNDERCLAY	0.8	64.8	

MAPID: 16300923000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 4 QUARTERS/FOOTAGES: W2

QUADRANGLE: FREEBURG LONGITUDE: -89.996824 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.475857 DATE COLLECTED: 10 / 0 / 1943

SURFACE ELEVATION (FT.): 505.0 LOGGED (FT.): 61.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 22 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
505.0			CLAY	24.0	0.0
481.0			LIMESTONE	6.0	24.0
475.0			BLACK SHALE	5.0	30.0
470.0			LIMESTONE	6.0	35.0
464.0			BLACK SHALE	8.0	41.0
456.0			LIMESTONE	6.0	49.0
450.0	CARBONDALE	HERRIN	COAL	6.0	55.0
444.0	CARBONDALE		UNDERCLAY	0.5	61.0

MAPID: 16300925000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 4 QUARTERS/FOOTAGES: NW NW NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.000166 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.482593 DATE COLLECTED: 11 / 0 / 1904

SURFACE ELEVATION (FT.): 515.0 LOGGED (FT.): 46.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 24 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
515.0			CLAY	21.0	0.0
494.0			LIMESTONE	8.0	21.0
486.0			BLACK SHALE	3.0	29.0
483.0	CARBONDALE	BRERETON	LIMESTONE	1.0	32.0
482.0	CARBONDALE	ANNA	BLACK SHALE	6.0	33.0
476.0	CARBONDALE	HERRIN	COAL	6.7	39.0
469.3	CARBONDALE		UNDERCLAY	0.3	45.7

MAPID: 16300926000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 4 QUARTERS/FOOTAGES: 800' N line, 0' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.001267

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.481346

DATE COLLECTED: 11 / 0 / 1943

SURFACE ELEVATION (FT.): 510.0

LOGGED (FT.): 54.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 25

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
510.0			CLAY	28.0	0.0
482.0			LIMESTONE	4.0	28.0
478.0			BLACK SHALE	8.0	32.0
470.0	CARBONDALE	BRERETON	LIMESTONE	6.0	40.0
464.0	CARBONDALE	ANNA	BLACK SHALE	1.0	46.0
463.0	CARBONDALE	HERRIN	COAL	6.2	47.0
456.8	CARBONDALE		UNDERCLAY	0.8	53.2

MAPID: 16300854000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 5 QUARTERS/FOOTAGES: 1630' N line, 2500' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.010843

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.47909

DATE COLLECTED: 12 / 0 / 1938

SURFACE ELEVATION (FT.): 537.5

LOGGED (FT.): 49.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 1M

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
537.5			CLAY	24.0	0.0
513.5			LIMESTONE	8.0	24.0
505.5			BLACK SHALE	2.0	32.0
503.5			BLACK SHALE	6.0	34.0
497.5	CARBONDALE	ANNA	BLACK SHALE	2.0	40.0
495.5	CARBONDALE	HERRIN	COAL	6.5	42.0
489.0	CARBONDALE		UNDERCLAY	0.5	48.5

MAPID: 16300855000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 5 QUARTERS/FOOTAGES: 2210' N line, 1920' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.012886

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.477496

DATE COLLECTED: 12 / 0 / 1938

SURFACE ELEVATION (FT.): 534.2

LOGGED (FT.): 39.5

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 4M

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
534.2			CLAY	31.0	0.0	
503.2			LIMESTONE	0.5	31.0	
502.7	CARBONDALE	ANNA	BLACK SHALE	2.5	31.5	
500.2	CARBONDALE	HERRIN	COAL	2.0	34.0	
498.2	CARBONDALE	HERRIN	COAL	2.5	36.0	
495.7	CARBONDALE		UNDERCLAY	1.0	38.5	

MAPID: 16300856000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 5 QUARTERS/FOOTAGES: 1570' N line, 1480' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.014423

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.47927

DATE COLLECTED:

SURFACE ELEVATION (FT.): 538.4

LOGGED (FT.): 44.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 12M

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
538.4			CLAY	44.0	0.0	NO COAL

MAPID: 16300857000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 5 QUARTERS/FOOTAGES: 1550' N line, 3960' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.005713 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.479292 DATE COLLECTED: 8 / 0 / 1936

SURFACE ELEVATION (FT.): 510.0 LOGGED (FT.): 49.9 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 4C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
510.0			CLAY	18.0	0.0
492.0			SHALE	8.0	18.0
484.0			LIMESTONE	7.0	26.0
477.0			BLACK SHALE	1.2	33.0
475.8			BLACK SHALE	2.8	34.2
473.0			BLACK SHALE	4.0	37.0
469.0	CARBONDALE	ANNA	BLACK SHALE	1.3	41.0
467.7	CARBONDALE	HERRIN	COAL	6.7	42.3
461.1	CARBONDALE		UNDERCLAY	1.0	48.9

MAPID: 16300858000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 5 QUARTERS/FOOTAGES: 2970' N line, 2410' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.011171 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.475392 DATE COLLECTED: 8 / 0 / 1936

SURFACE ELEVATION (FT.): 520.0 LOGGED (FT.): 29.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 5C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
520.0			CLAY	11.0	0.0
509.0			SHALE	6.5	11.0
502.5	CARBONDALE	BRERETON	LIMESTONE	3.0	17.5
499.5	CARBONDALE	ANNA	BLACK SHALE	1.8	20.5
497.7	CARBONDALE	HERRIN	COAL	6.8	22.3
491.0	CARBONDALE		UNDERCLAY	0.5	29.0

MAPID: 16300859000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 5 QUARTERS/FOOTAGES: 1650' N line, 1760' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.013441 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.479046 DATE COLLECTED: 8 / 0 / 1956

SURFACE ELEVATION (FT.): 535.0 LOGGED (FT.): 45.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 8C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
535.0			CLAY	23.0	0.0
512.0			LIMESTONE	2.5	23.0
509.5			BLACK SHALE	3.5	25.5
506.0			BLACK SHALE	6.0	29.0
500.0	CARBONDALE	BRERETON	LIMESTONE	3.0	35.0
497.0	CARBONDALE	ANNA	BLACK SHALE	0.5	38.0
496.5	CARBONDALE	HERRIN	COAL	6.0	38.5
490.5	CARBONDALE		UNDERCLAY	0.5	44.5

MAPID: 16300860000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 5 QUARTERS/FOOTAGES: 40' N line, 3310' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.00798 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.48347 DATE COLLECTED: 8 / 0 / 1946

SURFACE ELEVATION (FT.): 530.0 LOGGED (FT.): 56.7 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 14C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
530.0			CLAY	10.0	0.0
520.0			SHALE	18.0	10.0
502.0			LIMESTONE	10.0	28.0
492.0			SHALE	1.0	38.0
491.0			BLACK SHALE	2.0	39.0
489.0	CARBONDALE	BRERETON	LIMESTONE	7.5	41.0
481.5	CARBONDALE	ANNA	BLACK SHALE	0.5	48.5
481.0	CARBONDALE	ANNA	BLACK SHALE	1.0	49.0
480.0	CARBONDALE	HERRIN	COAL	6.7	50.0

MAPID: 16300861000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 5 QUARTERS/FOOTAGES: 30' N line, 3900' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.005908 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.483491 DATE COLLECTED: 8 / 0 / 1956

SURFACE ELEVATION (FT.): 525.0 LOGGED (FT.): 59.3 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 15C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
525.0			CLAY	12.0	0.0
513.0			SHALE	17.0	12.0
496.0			SHALE	3.0	29.0
493.0			LIMESTONE	6.0	32.0
487.0			BLACK SHALE	4.0	38.0
483.0			BLACK SHALE	1.0	42.0
482.0			LIMESTONE	8.5	43.0
473.5			BLACK SHALE	0.5	51.5
473.0			BLACK SHALE	1.0	52.0
472.0			COAL	0.6	53.0
471.4			UNDERCLAY	5.7	53.6

MAPID: 16300862000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 5 QUARTERS/FOOTAGES: 20' N line, 2640' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.010541 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.483534 DATE COLLECTED: 8 / 0 / 1936

SURFACE ELEVATION (FT.): 541.0 LOGGED (FT.): 53.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 19C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
541.0			CLAY	24.0	0.0
517.0			SHALE	2.0	24.0
515.0			LIMESTONE	6.0	26.0
509.0			BLACK SHALE	1.5	32.0
507.5			BLACK SHALE	4.5	33.5
503.0	CARBONDALE	BRERETON	LIMESTONE	7.5	38.0
495.5	CARBONDALE	ANNA	BLACK SHALE	0.5	45.5
495.0	CARBONDALE	HERRIN	COAL	6.5	46.0
488.5	CARBONDALE		UNDERCLAY	0.5	52.5

MAPID: 16300862000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 5 QUARTERS/FOOTAGES: 20' N line, 2640' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.010541

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.483534

DATE COLLECTED:

SURFACE ELEVATION (FT.): 541.0

LOGGED (FT.): 52.5

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
517.0	CARBONDALE		CLAYSTONE	2.0	24.0
515.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	26.0
509.0	CARBONDALE	LAWSON	GRAY SHALE	1.5	32.0
507.5	CARBONDALE	LAWSON	BLACK SHALE	4.5	33.5
503.0	CARBONDALE	BRERETON	LIMESTONE	7.5	38.0
495.5	CARBONDALE	ANNA	BLACK SHALE	0.5	45.5
495.0	CARBONDALE	HERRIN	COAL	6.5	46.0

MAPID: 16300863000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 5 QUARTERS/FOOTAGES: NE NE NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.002414

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.482592

DATE COLLECTED: 9 / 0 / 1943

SURFACE ELEVATION (FT.): 521.0

LOGGED (FT.): 69.5

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT R2

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
521.0			CLAY	32.0	0.0
489.0			LIMESTONE	28.0	32.0
461.0	CARBONDALE	ANNA	BLACK SHALE	3.0	60.0
458.0	CARBONDALE	HERRIN	COAL	6.5	63.0

MAPID: 16300864000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 5 **QUARTERS/FOOTAGES:** NE NE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.002414 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.482592 **DATE COLLECTED:** 9 / 0 / 1943
SURFACE ELEVATION (FT.): 505.0 **LOGGED (FT.):** 57.8 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT R3 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
505.0			CLAY	21.0	0.0	
484.0			LIMESTONE	21.0	21.0	
463.0			BLACK SHALE	7.0	42.0	
456.0	CARBONDALE	BRERETON	LIMESTONE	2.0	49.0	
454.0	CARBONDALE	ANNA	BLACK SHALE	1.0	51.0	
453.0	CARBONDALE	HERRIN	COAL	5.8	52.0	

MAPID: 16300882000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 5 **QUARTERS/FOOTAGES:** 350' N line, 50' W line of SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.010275 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.474811 **DATE COLLECTED:** 12 / 0 / 1945
SURFACE ELEVATION (FT.): 517.0 **LOGGED (FT.):** 33.5 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT 299W **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
517.0			CLAY	28.1	0.0	
488.9	CARBONDALE	HERRIN	COAL	3.9	28.1	TOP OF COAL ERODED
485.0	CARBONDALE		UNDERCLAY	1.5	32.0	

MAPID: 16300883000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 5 **QUARTERS/FOOTAGES:** 650' N line, 550' W line of SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.00852 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.47399 **DATE COLLECTED:** 12 / 0 / 1945
SURFACE ELEVATION (FT.): 514.0 **LOGGED (FT.):** 28.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT 303W **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
514.0			CLAY	22.4	0.0	
491.6	CARBONDALE	HERRIN	COAL	0.9	22.4	
490.7	CARBONDALE	HERRIN	COAL	3.6	23.3	
487.1	CARBONDALE		UNDERCLAY	1.1	26.9	

MAPID: 16300884000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 5 QUARTERS/FOOTAGES: 350' N line, 890' W line of SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.007325 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.474824 DATE COLLECTED: 12 / 0 / 1945

SURFACE ELEVATION (FT.): 515.5 LOGGED (FT.): 21.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 310W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
515.5			CLAY	17.8	0.0
497.7			SMUT	0.5	17.8
497.2	CARBONDALE	SPRINGFIELD	COAL	0.7	18.3
496.5	CARBONDALE	SPRINGFIELD	COAL	0.6	19.0
495.9	CARBONDALE		UNDERCLAY	1.4	19.6

MAPID: 16300885000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 5 QUARTERS/FOOTAGES: 200' S line, 1030' W line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.00683 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.476344 DATE COLLECTED:

SURFACE ELEVATION (FT.): 514.0 LOGGED (FT.): 38.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 326W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
514.0			CLAY	23.0	0.0
491.0			LIMESTONE	0.6	23.0
490.4			CLAYSTONE	1.3	23.6
489.1	CARBONDALE	BRERETON	LIMESTONE	2.5	24.9
486.6	CARBONDALE	ANNA	BLACK SHALE	0.8	27.4
485.7	CARBONDALE	ANNA	BLACK SHALE	2.1	28.3
483.7	CARBONDALE	HERRIN	COAL	6.3	30.3
477.4	CARBONDALE		UNDERCLAY	1.4	36.6

MAPID: 16300888000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 5 QUARTERS/FOOTAGES: 460' N line, 1638' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.013858 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.482332 DATE COLLECTED: 1 / 0 / 1946

SURFACE ELEVATION (FT.): 544.5 LOGGED (FT.): 44.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 673W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
544.5			CLAY	33.8	0.0	
510.7			LIMESTONE	0.7	33.8	
510.0			MUDSTONE	1.4	34.5	BLUE
508.6			LIMESTONE	0.5	35.9	
508.1			MUDSTONE	1.3	36.4	BLUE
506.8			LIMESTONE	0.8	37.7	
506.0	CARBONDALE	HERRIN	COAL	4.3	38.5	
501.7	CARBONDALE		UNDERCLAY	0.2	42.8	
501.5	CARBONDALE		LIMESTONE	0.3	43.0	
501.2	CARBONDALE		UNDERCLAY	0.5	43.3	
500.7	CARBONDALE		LIMESTONE	0.3	43.8	

MAPID: 16300889000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 5 QUARTERS/FOOTAGES: 808' N line, 1132' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.015639 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.481377 DATE COLLECTED: 1 / 0 / 1947

SURFACE ELEVATION (FT.): 536.0 LOGGED (FT.): 37.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 677W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
536.0			CLAY	32.3	0.0	
503.7			CLAY	0.6	32.3	
503.1			UNDERCLAY	3.6	32.9	
499.5			LIMESTONE	0.5	36.5	

MAPID: 1630089000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 5 **QUARTERS/FOOTAGES:** 1218' N line, 1511' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.014311 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.48024 **DATE COLLECTED:** 1 / 0 / 1947
SURFACE ELEVATION (FT.): 537.4 **LOGGED (FT.):** 39.5 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT 678W **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
537.4			CLAY	28.7	0.0
508.7			CLAY	1.8	28.7
507.0	CARBONDALE	ANNA	BLACK SHALE	1.0	30.4
506.0	CARBONDALE	HERRIN	COAL	6.3	31.4
499.6	CARBONDALE		UNDERCLAY	1.8	37.8

MAPID: 16300675000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 6 **QUARTERS/FOOTAGES:** S2 N2
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.027758 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.477733 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 540.0 **LOGGED (FT.):** 59.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 31Y **WELL TYPE:** Coal Test
COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
540.0			CLAY	22.0	0.0
518.0			SHALE	6.0	22.0
512.0			BLACK SHALE	8.0	28.0
504.0			SHALE	23.0	36.0

MAPID: 16300675000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 6 **QUARTERS/FOOTAGES:** S2 N2
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.027758 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.477733 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 540.0 **LOGGED (FT.):** 59.0 **LOG TYPE:**
SOURCE: MIDWEST SF031Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300676000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 6 QUARTERS/FOOTAGES:

QUADRANGLE: MILLSTADT LONGITUDE: -90.027761

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.475757

DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 60.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 32Y

WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.0			CLAY	23.0	0.0	
517.0			BLACK SHALE	37.0	23.0	NO COAL

MAPID: 16300676000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 6 QUARTERS/FOOTAGES:

QUADRANGLE: MILLSTADT LONGITUDE: -90.027761

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.475757

DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 60.0

LOG TYPE:

SOURCE: MIDWEST SF032Y

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300677000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 6 QUARTERS/FOOTAGES: N2 S2

QUADRANGLE: MILLSTADT LONGITUDE: -90.027764

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.473783

DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 50.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 33Y

WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.0			CLAY	26.0	0.0	
514.0			LIMESTONE	1.0	26.0	
513.0			BLACK SHALE	13.0	27.0	
500.0			SHALE	10.0	40.0	

MAPID: 16300677000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 6 **QUARTERS/FOOTAGES:** N2 S2
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.027764 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.473783 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 540.0 **LOGGED (FT.):** 50.0 **LOG TYPE:**
SOURCE: MIDWEST SF033Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300678000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 6 **QUARTERS/FOOTAGES:** S2
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.027767 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.471806 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 540.0 **LOGGED (FT.):** 50.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 34Y **WELL TYPE:** Coal Test
COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
540.0			CLAY	25.5	0.0	
514.5			SHALE	3.0	25.5	
511.5			SHALE	21.5	28.5	NO COAL

MAPID: 16300678000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 6 **QUARTERS/FOOTAGES:** S2
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.027767 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.471806 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 540.0 **LOGGED (FT.):** 50.0 **LOG TYPE:**
SOURCE: MIDWEST SF034Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300679000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 6 QUARTERS/FOOTAGES: 0' N line, 2640' E line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.028877 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.483667 DATE COLLECTED: 0 / 0 / 1938
 SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 50.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 35Y WELL TYPE: Coal Test
 COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.0			CLAY	22.0	0.0	
518.0			SHALE	16.0	22.0	
502.0			SHALE	3.0	38.0	
499.0			SHALE	9.0	41.0	NO COAL

MAPID: 16300679000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 6 QUARTERS/FOOTAGES: 0' N line, 2640' E line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.028877 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.483667 DATE COLLECTED: 0 / 0 / 1938
 SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 50.0 LOG TYPE:
 SOURCE: MIDWEST SF035Y WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300680000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 6 QUARTERS/FOOTAGES: 660' S line, 1320' E line of NW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.033534 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.477596 DATE COLLECTED: 0 / 0 / 1938
 SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 64.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 36Y WELL TYPE: Coal Test
 COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
550.0			CLAY	18.0	0.0
532.0			SHALE	17.0	18.0
515.0			SHALE	3.0	35.0
512.0			SHALE	10.0	38.0
502.0			LIMESTONE	1.0	48.0
501.0			BLACK SHALE	1.0	49.0
500.0			LIMESTONE	2.0	50.0
498.0			BLACK SHALE	1.0	52.0
497.0			LIMESTONE	1.0	53.0
496.0			BLACK SHALE	3.2	54.0
492.8			BLACK SHALE	1.9	57.2
490.9	CARBONDALE	SPRINGFIELD	COAL	2.9	59.1
488.0	CARBONDALE		UNDERCLAY	2.0	62.0

MAPID: 16300680000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 6 QUARTERS/FOOTAGES: 660' S line, 1320' E line of NW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.033534 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.477596 DATE COLLECTED: 0 / 0 / 1938
 SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 64.0 LOG TYPE:
 SOURCE: MIDWEST SF036Y WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	
491.0	CARBONDALE	SPRINGFIELD	COAL	2.9	59.0

MAPID: 16300681000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 6 QUARTERS/FOOTAGES: W2

QUADRANGLE: MILLSTADT LONGITUDE: -90.031824

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.475768

DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 72.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 37Y

WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
550.0			CLAY	20.0	0.0
530.0			SHALE	16.0	20.0
514.0			LIMESTONE	1.5	36.0
512.5			SHALE	17.5	37.5
495.0			BLACK SHALE	9.0	55.0
486.0			LIMESTONE	2.5	64.0
483.5			BLACK SHALE	2.7	66.5
480.8	CARBONDALE	SPRINGFIELD	COAL	1.8	69.2
479.1	CARBONDALE		UNDERCLAY	1.1	70.9

MAPID: 16300681000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 6 QUARTERS/FOOTAGES: W2

QUADRANGLE: MILLSTADT LONGITUDE: -90.031824

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.475768

DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 72.0

LOG TYPE:

SOURCE: MIDWEST SF037Y

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	
481.0	CARBONDALE	SPRINGFIELD	COAL	1.8	69.0

MAPID: 16300682000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 6 QUARTERS/FOOTAGES: 2640' N line, 0' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.035889

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.476415

DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 55.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 38Y

WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
550.0			CLAY	19.0	0.0
531.0			BLACK SHALE	33.8	19.0
497.2	CARBONDALE	SPRINGFIELD	COAL	1.0	52.8
496.2	CARBONDALE		UNDERCLAY	1.2	53.8

MAPID: 16300682000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 6 **QUARTERS/FOOTAGES:** 2640' N line, 0' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.035889 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.476415 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 550.0 **LOGGED (FT.):** 55.0 **LOG TYPE:**
SOURCE: MIDWEST SF038Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	
497.0	CARBONDALE	SPRINGFIELD	COAL	1.0	53.0

MAPID: 16300683000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 6 **QUARTERS/FOOTAGES:** 660' S line, 2640' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.028928 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.469675 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 550.0 **LOGGED (FT.):** 52.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 39Y **WELL TYPE:** Coal Test
COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
550.0			CLAY	18.0	0.0
532.0			BLACK SHALE	9.0	18.0
523.0			SHALE	8.0	27.0
515.0			BLACK SHALE	2.0	35.0
513.0			LIMESTONE	8.0	37.0
505.0			BLACK SHALE	1.3	45.0
503.7			BLACK SHALE	2.4	46.3
501.2	CARBONDALE	SPRINGFIELD	COAL	2.3	48.8
498.9	CARBONDALE		UNDERCLAY	0.9	51.1

MAPID: 16300683000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 6 **QUARTERS/FOOTAGES:** 660' S line, 2640' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.028928 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.469675 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 550.0 **LOGGED (FT.):** 52.0 **LOG TYPE:**
SOURCE: MIDWEST SF039Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	
501.0	CARBONDALE	SPRINGFIELD	COAL	2.3	49.0

MAPID: 16300684000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 6 QUARTERS/FOOTAGES: 1320' N line, 1120' E line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.032851 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.472128 DATE COLLECTED: 0 / 0 / 1938
 SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 50.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 40Y WELL TYPE: Coal Test
 COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
540.0			CLAY	14.0	0.0
526.0			SHALE	2.0	14.0
524.0			BLACK SHALE	24.0	16.0
500.0			BLACK SHALE	5.0	40.0
495.0			BLACK SHALE	2.3	45.0
492.7	CARBONDALE	SPRINGFIELD	COAL	0.5	47.3
492.2	CARBONDALE		UNDERCLAY	2.3	47.8

MAPID: 16300684000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 6 QUARTERS/FOOTAGES: 1320' N line, 1120' E line of SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.032851 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.472128 DATE COLLECTED: 0 / 0 / 1938
 SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 50.0 LOG TYPE:
 SOURCE: MIDWEST SF040Y WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	
493.0	CARBONDALE	SPRINGFIELD	COAL	0.5	47.0

MAPID: 16300093000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 7 QUARTERS/FOOTAGES: SW SE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.026578 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.455876 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 500.0 LOGGED (FT.): 50.0 LOG TYPE:
 SOURCE: SMITH 0019 WELL TYPE: Coal Test
 COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300094000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 7 **QUARTERS/FOOTAGES:** NE SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.031226 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.459499 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 500.0 **LOGGED (FT.):** 50.0 **LOG TYPE:**
SOURCE: SMITH 0020 **WELL TYPE:** Coal Test
COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300095000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 7 **QUARTERS/FOOTAGES:** NE SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.031226 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.459499 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 500.0 **LOGGED (FT.):** 25.0 **LOG TYPE:**
SOURCE: SMITH 0021 **WELL TYPE:** Coal Test
COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300872000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 11 **QUARTERS/FOOTAGES:** 0' S line, 1250' E line of NW
QUADRANGLE: FREEBURG **LONGITUDE:** -89.959866 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.460776 **DATE COLLECTED:** 11 / 0 / 1943
SURFACE ELEVATION (FT.): 480.0 **LOGGED (FT.):** 81.3 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT R18 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
480.0			CLAY	50.0	0.0
430.0			LIMESTONE	11.0	50.0
419.0			SHALE	1.5	61.0
417.5			BLACK SHALE	0.5	62.5
417.0			LIMESTONE	1.0	63.0
416.0			BLACK SHALE	11.8	64.0
404.2	CARBONDALE	HERRIN	COAL	3.5	75.8
400.7	CARBONDALE		UNDERCLAY	2.0	79.3

MAPID: 16300873000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 11 **QUARTERS/FOOTAGES:** 150' N line, 0' E line of SW
QUADRANGLE: FREEBURG **LONGITUDE:** -89.955473 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.460305 **DATE COLLECTED:** 11 / 0 / 1943
SURFACE ELEVATION (FT.): 482.0 **LOGGED (FT.):** 80.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT R19 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
482.0			CLAY	26.0	0.0	
456.0			SHALE	54.0	26.0	NO COAL

MAPID: 16300874000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 11 **QUARTERS/FOOTAGES:** 35' N line, 35' E line of NW SE
QUADRANGLE: FREEBURG **LONGITUDE:** -89.950882 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.460565 **DATE COLLECTED:** 11 / 0 / 1943
SURFACE ELEVATION (FT.): 483.0 **LOGGED (FT.):** 75.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT R20 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
483.0			CLAY	28.0	0.0	
455.0			SHALE	47.0	28.0	NO COAL

MAPID: 16300875000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 11 **QUARTERS/FOOTAGES:** SE
QUADRANGLE: FREEBURG **LONGITUDE:** -89.950713 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.457024 **DATE COLLECTED:** 11 / 0 / 1943
SURFACE ELEVATION (FT.): 470.0 **LOGGED (FT.):** 45.2 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT R21 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
470.0			CLAY	26.0	0.0	
444.0			SANDSTONE	3.0	26.0	
441.0			LIMESTONE	3.0	29.0	
438.0			SHALE	3.0	32.0	
435.0	CARBONDALE	ANNA	BLACK SHALE	1.0	35.0	
434.0	CARBONDALE	HERRIN	COAL	3.5	36.0	
430.5	CARBONDALE	HERRIN	COAL	5.7	39.5	

MAPID: 16300876000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 11 QUARTERS/FOOTAGES: SW

QUADRANGLE: FREEBURG LONGITUDE: -89.960155 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.457133 DATE COLLECTED: 12 / 0 / 1943

SURFACE ELEVATION (FT.): 481.0 LOGGED (FT.): 75.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT R22 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
481.0			CLAY	24.0	0.0	
457.0			SHALE	51.0	24.0	NO COAL

MAPID: 16300877000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 11 QUARTERS/FOOTAGES: 5270' S line, 3960' E line of SE

QUADRANGLE: FREEBURG LONGITUDE: -89.96006 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.468033 DATE COLLECTED: 12 / 0 / 1943

SURFACE ELEVATION (FT.): 456.0 LOGGED (FT.): 71.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT R23 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
456.0			CLAY	25.0	0.0	
431.0			SHALE	46.0	25.0	NO COAL

MAPID: 16300878000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 11 QUARTERS/FOOTAGES: 2000' N line, 0' W line of SE

QUADRANGLE: FREEBURG LONGITUDE: -89.955409 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.455197 DATE COLLECTED: 12 / 0 / 1943

SURFACE ELEVATION (FT.): 480.0 LOGGED (FT.): 71.2 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT R24 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
480.0			CLAY	26.0	0.0	
454.0			SHALE	30.0	26.0	
424.0			LIMESTONE	4.0	56.0	
420.0			SHALE	4.0	60.0	
416.0	CARBONDALE	HERRIN	COAL	7.2	64.0	
408.8	CARBONDALE		UNDERCLAY	0.0	71.2	

MAPID: 16302020000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 11 **QUARTERS/FOOTAGES:** 330' S line, 990' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.949428 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.454287 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 470.0 **LOGGED (FT.):** 45.2 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 1895 **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
443.4	CARBONDALE	BANKSTON FORK	LIMESTONE	6.3	26.6	
437.2	CARBONDALE		BLACK SHALE	1.3	32.8	
435.8	CARBONDALE	BRERETON	LIMESTONE	1.4	34.2	
434.4	CARBONDALE	ANNA	BLACK SHALE	0.4	35.6	
434.0	CARBONDALE	HERRIN	COAL	9.2	36.0	

MAPID: 16300384000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 12 **QUARTERS/FOOTAGES:** 4450' S line, 1300' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.932513 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.46545 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 503.5 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: HEINDRICKSTOWN MINE **WELL TYPE:** Coal Test
COMMENT: MINE SHAFT, MP FLS #13-87-41C

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
503.5			MINE OPENING	0.0	0.0	MINE SHAFT; SHIPPING MINE

MAPID: 16300384000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 12 **QUARTERS/FOOTAGES:** 4450' S line, 1300' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.932513 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.46545 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 503.5 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: HEINDTN M **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
498.5	CARBONDALE	HERRIN	COAL	6.5	5.0	

MAPID: 16300385000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 12 **QUARTERS/FOOTAGES:** 1900' S line, 675' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.93016 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.45838 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 520.7 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: DUDLEY MINE **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT, MP FLS # 13-87-41C

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
520.7			MINE OPENING	0.0	0.0	MINE SHAFT;SHIPPING MINE

MAPID: 16300386000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 12 **QUARTERS/FOOTAGES:** 4425' S line, 4150' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.942525 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.465512 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 498.3 **LOGGED (FT.):** 75.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWAY COAL COMPANY **WELL TYPE:** Coal Test
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
429.3	CARBONDALE	HERRIN	COAL	6.0	69.0	ELEVATION TOP 429'

MAPID: 16300386000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 12 **QUARTERS/FOOTAGES:** 4425' S line, 4150' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.942525 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.465512 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 498.3 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: MIDWAY CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
429.3	CARBONDALE	HERRIN	COAL	6.0	69.0	

MAPID: 16300414000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 12 **QUARTERS/FOOTAGES:** 100' S line, 1800' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.933999 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.45346 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 507.8 **LOGGED (FT.):** 124.0 **LOG TYPE:** Drillers Log
SOURCE: SUGAR CREEK COAL CO. **WELL TYPE:** Coal Test
COMMENT: MINE SLOPE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
393.8	CARBONDALE	HERRIN	COAL	10.0	114.0	ELEVATION TO 394'

MAPID: 16300414000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 12 **QUARTERS/FOOTAGES:** 100' S line, 1800' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.933999 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.45346 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 507.8 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: SUGAR CREEK COAL CO. **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
393.8	CARBONDALE	HERRIN	COAL	10.0	114.0	

MAPID: 16300810000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 12 **QUARTERS/FOOTAGES:** SE
QUADRANGLE: FREEBURG **LONGITUDE:** -89.932313 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.456799 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: **WELL TYPE:** Oil and Gas Test
COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	5.0	108.0	
-	CARBONDALE	SPRINGFIELD	COAL	3.0	160.0	

MAPID: 16302022000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 12 **QUARTERS/FOOTAGES:** 330' S line, 2310' W line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.937838 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.454147 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 450.0 **LOGGED (FT.):** 66.8 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 1910 **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
414.4	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	35.6	UPPER BENCH
407.9	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.8	42.1	SHALE PARTING
405.2	CARBONDALE	BANKSTON FORK	LIMESTONE	7.5	44.8	LOWER BENCH
397.7	CARBONDALE	LAWSON	BLACK SHALE	0.6	52.3	
397.1	CARBONDALE	CONANT	LIMESTONE	1.9	52.9	
395.2	CARBONDALE		BLACK SHALE	3.1	54.8	
392.1	CARBONDALE	BRERETON	LIMESTONE	0.9	57.9	
391.2	CARBONDALE	ANNA	BLACK SHALE	0.2	58.8	
391.0	CARBONDALE	HERRIN	COAL	7.8	59.0	

MAPID: 16302024000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 13 QUARTERS/FOOTAGES: 330' N line, 2310' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.935772 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.452297 DATE COLLECTED:

SURFACE ELEVATION (FT.): 506.0 LOGGED (FT.): 104.9 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 1912 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
455.0	MODESTO	PIASA	LIMESTONE	8.3	51.0	
446.7	CARBONDALE		GRAY SHALE	10.2	59.3	
436.6	CARBONDALE	BANKSTON FORK	LIMESTONE	8.6	69.4	
428.0	CARBONDALE	LAWSON	GRAY SHALE	2.2	78.0	
425.8	CARBONDALE	BRERETON	LIMESTONE	13.3	80.2	
412.5	CARBONDALE	ANNA	BLACK SHALE	1.5	93.5	
411.0	CARBONDALE	HERRIN	COAL	9.9	95.0	

MAPID: 16300913000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 14 QUARTERS/FOOTAGES: SW NE

QUADRANGLE: FREEBURG LONGITUDE: -89.953008 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.448042 DATE COLLECTED:

SURFACE ELEVATION (FT.): 482.0 LOGGED (FT.): 94.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
482.0			CLAY	64.0	0.0	
418.0			LIMESTONE	1.0	64.0	
417.0			BLACK SHALE	23.5	65.0	
393.5	CARBONDALE	SPRINGFIELD	COAL	1.5	88.5	SEAM #5 COAL
392.0	CARBONDALE		UNDERCLAY	4.5	90.0	

MAPID: 16300914000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 14 QUARTERS/FOOTAGES: NE SW NE

QUADRANGLE: FREEBURG LONGITUDE: -89.951834 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.448928 DATE COLLECTED:

SURFACE ELEVATION (FT.): 475.0 LOGGED (FT.): 42.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 2 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
475.0			CLAY	31.0	0.0	
444.0	CARBONDALE	BRERETON	LIMESTONE	2.5	31.0	
441.5	CARBONDALE	ANNA	BLACK SHALE	2.0	33.5	
439.5	CARBONDALE	HERRIN	COAL	2.0	35.5	
437.5	CARBONDALE	HERRIN	COAL	3.5	37.5	
434.0	CARBONDALE		UNDERCLAY	1.0	41.0	

MAPID: 16300915000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 14 QUARTERS/FOOTAGES: NE SE NE

QUADRANGLE: FREEBURG LONGITUDE: -89.947126 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.448891 DATE COLLECTED:

SURFACE ELEVATION (FT.): 480.0 LOGGED (FT.): 50.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
480.0			CLAY	25.0	0.0	
455.0			BLACK SHALE	25.0	25.0	NO COAL

MAPID: 16300916000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 14 QUARTERS/FOOTAGES: 0' N line, 0' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.945936 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.453343 DATE COLLECTED:

SURFACE ELEVATION (FT.): 484.0 LOGGED (FT.): 63.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 4 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
484.0			CLAY	31.0	0.0	
453.0			LIMESTONE	2.0	31.0	
451.0			SANDY SLATE	9.0	33.0	
442.0	CARBONDALE	BRERETON	LIMESTONE	6.0	42.0	
436.0	CARBONDALE	ANNA	BLACK SHALE	6.0	48.0	
430.0	CARBONDALE	HERRIN	COAL	8.3	54.0	SEAM #6
421.7	CARBONDALE		UNDERCLAY	0.7	62.3	

MAPID: 16300916000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 14 QUARTERS/FOOTAGES: 0' N line, 0' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.945936

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.453343

DATE COLLECTED:

SURFACE ELEVATION (FT.): 484.0

LOGGED (FT.): 62.3

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
453.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	31.0	
451.0	CARBONDALE	LAWSON	SILTY SHALE	9.0	33.0	
442.0	CARBONDALE	BRERETON	LIMESTONE	6.0	42.0	
436.0	CARBONDALE	ANNA	BLACK SHALE	6.0	48.0	
430.0	CARBONDALE	HERRIN	COAL	8.3	54.0	

MAPID: 16300917000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 14 QUARTERS/FOOTAGES: 330' N line, 660' W line of SW NE

QUADRANGLE: FREEBURG LONGITUDE: -89.953049

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.448923

DATE COLLECTED: 10 / 0 / 1943

SURFACE ELEVATION (FT.): 482.0

LOGGED (FT.): 53.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 5

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
482.0			CLAY	42.0	0.0	
440.0			LIMESTONE	5.0	42.0	
435.0			BLACK SHALE	1.0	47.0	
434.0	CARBONDALE	SPRINGFIELD	COAL	1.5	48.0	SEAM #5 COAL
432.5	CARBONDALE		UNDERCLAY	3.5	49.5	

MAPID: 16300918000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 14 QUARTERS/FOOTAGES:

QUADRANGLE: FREEBURG LONGITUDE: -89.955353

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.446269

DATE COLLECTED: 10 / 0 / 1943

SURFACE ELEVATION (FT.): 465.0

LOGGED (FT.): 55.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 6

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
465.0			CLAY	26.0	0.0	
439.0			LIMESTONE	1.0	26.0	
438.0			SHALE	28.0	27.0	

MAPID: 16300919000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 14 QUARTERS/FOOTAGES: NW NE SW

QUADRANGLE: FREEBURG LONGITUDE: -89.958868 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.445394 DATE COLLECTED: 10 / 0 / 1943

SURFACE ELEVATION (FT.): 467.0 LOGGED (FT.): 55.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 7 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
467.0			CLAY	25.0	0.0
442.0			BLACK SHALE	30.0	25.0

MAPID: 16300920000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 14 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: FREEBURG LONGITUDE: -89.963562 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.445425 DATE COLLECTED: 10 / 0 / 1943

SURFACE ELEVATION (FT.): 440.0 LOGGED (FT.): 50.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 8 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
440.0			CLAY	25.0	0.0
415.0			BLACK SHALE	23.0	25.0
392.0			SANDSTONE	2.0	48.0

MAPID: 16300921000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 14 QUARTERS/FOOTAGES: NW NE NE

QUADRANGLE: FREEBURG LONGITUDE: -89.94948 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.452484 DATE COLLECTED: 10 / 0 / 1912

SURFACE ELEVATION (FT.): 480.0 LOGGED (FT.): 68.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 9 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
480.0			CLAY	40.0	0.0
440.0			BLACK SHALE	5.0	40.0
435.0	CARBONDALE	BRERETON	LIMESTONE	4.0	45.0
431.0	CARBONDALE	ANNA	BLACK SHALE	12.0	49.0
419.0	CARBONDALE	HERRIN	COAL	7.0	61.0
412.0	CARBONDALE		UNDERCLAY	0.5	68.0

MAPID: 16326298000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 14 **QUARTERS/FOOTAGES:** SW SE SE
QUADRANGLE: FREEBURG **LONGITUDE:** -89.949478 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.439972 **DATE COLLECTED:** 7 / 28 / 1983
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 312.0 **LOG TYPE:** Drillers Log
SOURCE: RAYMOND DOHRMAN **WELL TYPE:** Water Well
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			UNCONSOLIDATED	42.0	0.0
-			SHALE	69.0	42.0
-	CARBONDALE	SPRINGFIELD	COAL	3.0	111.0
-	CARBONDALE		SHALE	69.0	114.0
-	CARBONDALE		ROCK	48.0	183.0
-	CARBONDALE		SHALE	74.0	231.0
-	CARBONDALE		SANDSTONE	7.0	305.0

MAPID: 16300085000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 18 **QUARTERS/FOOTAGES:** SW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.034128 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.441427 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 529.5 **LOGGED (FT.):** 40.7 **LOG TYPE:** Drillers Log
SOURCE: HARVEY SMITH 17 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
529.5			CLAY	26.3	0.0
503.2			SHALE	3.8	26.3
499.5			LIMESTONE	6.3	30.0
493.2	CARBONDALE	HERRIN	COAL	3.3	36.3
489.8	CARBONDALE		UNDERCLAY	1.0	39.7

MAPID: 16300085000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 18 **QUARTERS/FOOTAGES:** SW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.034128 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.441427 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 529.5 **LOGGED (FT.):** 41.0 **LOG TYPE:**
SOURCE: SMITH 17 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
493.5	CARBONDALE	HERRIN	COAL	3.3	36.0

MAPID: 16300096000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 18 **QUARTERS/FOOTAGES:** SE NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.031194 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.448624 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 500.0 **LOGGED (FT.):** 50.0 **LOG TYPE:**
SOURCE: SMITH 0018 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300685000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 18 **QUARTERS/FOOTAGES:** 2785' S line, 3615' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.032294 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.447305 **DATE COLLECTED:** 2 / 18 / 1933
SURFACE ELEVATION (FT.): 529.7 **LOGGED (FT.):** 60.0 **LOG TYPE:** Drillers Log
SOURCE: ANCONA NATURAL GAS 1 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
484.7			CLAY	0.0	45.0
474.7			LIMESTONE	0.0	55.0
469.7			COAL	0.0	60.0

MAPID: 16300685000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 18 **QUARTERS/FOOTAGES:** 2785' S line, 3615' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.032294 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.447305 **DATE COLLECTED:** 0 / 0 / 1933
SURFACE ELEVATION (FT.): 529.7 **LOGGED (FT.):** 60.0 **LOG TYPE:**
SOURCE: ANC NAT GC **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
474.7	CARBONDALE	HERRIN	COAL	5.0	55.0

MAPID: 16300686000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 18 QUARTERS/FOOTAGES: 3510' S line, 4385' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.035005 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.449324 DATE COLLECTED: 1 / 20 / 1933

SURFACE ELEVATION (FT.): 533.9 LOGGED (FT.): 187.5 LOG TYPE: Drillers Log

SOURCE: ANCONA NATURAL GAS WELL TYPE: Oil and Gas Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
533.9			SOIL	1.0	0.0	
532.9			CLAY	42.0	1.0	YELLOW
490.9			CLAY	1.0	43.0	
489.9			SOFT SHALE	7.0	44.0	
482.9			SHALE	2.0	51.0	BLUE
480.9	CARBONDALE	BRERETON	LIMESTONE	7.0	53.0	
473.9	CARBONDALE	ANNA	SHALE	5.0	60.0	BLACK
468.9	CARBONDALE	HERRIN	COAL	7.0	65.0	THICKNESS NOT PRECISE
461.9	CARBONDALE		SHALE	13.0	72.0	WATER AT 83
448.9	CARBONDALE		SHALE	1.0	85.0	BLUE
447.9	CARBONDALE		SHALE	7.0	86.0	
440.9	CARBONDALE		LIMESTONE	8.5	93.0	
432.4	CARBONDALE		SHALE	7.5	101.5	BLUE
424.9	CARBONDALE		SHALE	1.0	109.0	RED
423.9	CARBONDALE		SHALE	8.0	110.0	BLUE
415.9	CARBONDALE		SOFT SHALE	13.0	118.0	
402.9	CARBONDALE		ROCK	3.0	131.0	
399.9	CARBONDALE		SANDSTONE	6.0	134.0	
393.9	MISSISSIPPIAN		SHALY LIMESTONE	35.0	140.0	
358.9	MISSISSIPPIAN		UNKNOWN	12.5	175.0	

MAPID: 16300686000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 18 QUARTERS/FOOTAGES: 3510' S line, 4385' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.035005 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.449324 DATE COLLECTED: 0 / 0 / 1933

SURFACE ELEVATION (FT.): 533.9 LOGGED (FT.): 188.0 LOG TYPE:

SOURCE: ANC NAT GC WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
468.9	CARBONDALE	HERRIN	COAL	-	65.0	

MAPID: 16300687000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 18 **QUARTERS/FOOTAGES:** 4010' S line, 3160' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.030708 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.450677 **DATE COLLECTED:** 4 / 24 / 1933
SURFACE ELEVATION (FT.): 524.6 **LOGGED (FT.):** 168.0 **LOG TYPE:** Drillers Log
SOURCE: ANCONA NATURAL GAS 2 **WELL TYPE:** Oil and Gas Test
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
524.6			SOIL	22.0	0.0	
502.6			LIMESTONE	1.0	22.0	
501.6			SHALE	4.0	23.0	
497.6			COAL	3.0	27.0	
494.6			SHALE	9.0	30.0	BROWN
485.6			LIMESTONE	8.0	39.0	
477.6			SHALE	16.0	47.0	
461.6			LIMESTONE	7.0	63.0	SET 6 1/4
454.6	CARBONDALE	ANNA	BLACK SHALE	3.0	70.0	
451.6	CARBONDALE	HERRIN	COAL	5.0	73.0	
446.6	CARBONDALE		SHALE	22.0	78.0	
424.6	CARBONDALE		CLAYSTONE	10.0	100.0	YELLOW
414.6	CARBONDALE		LIMESTONE	8.0	110.0	
406.6	CARBONDALE		SHALE	7.0	118.0	
399.6	CARBONDALE		ROCK	11.0	125.0	
388.6	CARBONDALE		SHALE	5.0	136.0	SET 4 7/8
383.6	CARBONDALE		LIMESTONE	1.0	141.0	
382.6	CARBONDALE		SANDSTONE	26.0	142.0	

MAPID: 16300687000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 18 **QUARTERS/FOOTAGES:** 4010' S line, 3160' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.030708 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.450677 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 524.6 **LOGGED (FT.):** 168.0 **LOG TYPE:**
SOURCE: ANC NAT GC **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
451.6	CARBONDALE	HERRIN	COAL	5.0	73.0	

MAPID: 16300688000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 18 QUARTERS/FOOTAGES: NE SW NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.03467 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.449522 DATE COLLECTED: 0 / 0 / 1932

SURFACE ELEVATION (FT.): 535.0 LOGGED (FT.): 171.6 LOG TYPE: Drillers Log

SOURCE: JOSEPH MEYES WELL TYPE: Oil and Gas Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
535.0			SOIL	1.0	0.0	
534.0			CLAY	42.0	1.0	YELLOW
492.0			CLAY	1.0	43.0	
491.0			CLAY	7.0	44.0	BLUE
484.0			CLAY	2.0	51.0	BLUE
482.0	CARBONDALE	BRERETON	LIMESTONE	7.0	53.0	8" TO 55'
475.0	CARBONDALE	ANNA	SLATY SHALE	5.0	60.0	
470.0	CARBONDALE	HERRIN	COAL	7.0	65.0	
463.0	CARBONDALE		RED SHALE	13.0	72.0	
450.0	CARBONDALE		SHALE	1.0	85.0	BLUE
449.0	CARBONDALE		SHALE	7.0	86.0	
442.0	CARBONDALE		LIMESTONE	8.5	93.0	
433.5	CARBONDALE		RED SHALE	7.5	101.5	
426.0	CARBONDALE		RED SHALE	1.0	109.0	
425.0	CARBONDALE		SHALE	8.0	110.0	BLUE
417.0	CARBONDALE		SOFT SHALE	5.0	118.0	
412.0	CARBONDALE		UNKNOWN	3.0	123.0	
409.0	CARBONDALE		SANDY SHALE	5.0	126.0	
404.0	CARBONDALE		ROCK	3.0	131.0	6" CAS
401.0	CARBONDALE		SANDSTONE	6.0	134.0	
395.0	MISSISSIPPIAN		SHALY LIMESTONE	25.0	140.0	
370.0	MISSISSIPPIAN		UNKNOWN	6.6	165.0	

MAPID: 16300688000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 18 QUARTERS/FOOTAGES: NE SW NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.03467 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.449522 DATE COLLECTED: 0 / 0 / 1932

SURFACE ELEVATION (FT.): 520.0 LOGGED (FT.): 182.0 LOG TYPE:

SOURCE: MEYES J WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
455.0	CARBONDALE	HERRIN	COAL	7.0	65.0	

MAPID: 16324846000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 18 **QUARTERS/FOOTAGES:** 1400' S line, 1400' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.024507 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.443436 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 330.0 **LOG TYPE:** Drillers Log
SOURCE: RAY DOHRMAN **WELL TYPE:** Oil and Gas Test
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	22.0	0.0	
-			SHALE	18.0	22.0	
-			ROCK	5.0	40.0	
-	CARBONDALE	HERRIN	COAL	5.0	45.0	
-	CARBONDALE		SHALE	220.0	50.0	
-	CARBONDALE		SANDSTONE	60.0	270.0	

MAPID: 16324847000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 18 **QUARTERS/FOOTAGES:** 950' N line, 990' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.032489 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.451406 **DATE COLLECTED:** 9 / 21 / 1978
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 330.0 **LOG TYPE:** Drillers Log
SOURCE: DON DOHRMAN **WELL TYPE:** Oil and Gas Test
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	34.0	0.0	
-			SHALE	7.0	34.0	
-			ROCK	5.0	41.0	
-	CARBONDALE	HERRIN	COAL	3.0	46.0	
-	CARBONDALE		SHALE	221.0	49.0	
-	CARBONDALE		SANDSTONE	60.0	270.0	

MAPID: 16300399000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 19 **QUARTERS/FOOTAGES:** 1450' S line, 2100' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.027293 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.428968 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 520.6 **LOGGED (FT.):** 6.5 **LOG TYPE:** Drillers Log
SOURCE: GROSSMAN COAL COMPANY **WELL TYPE:** Coal Test
COMMENT: STRIP MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
520.6	CARBONDALE	HERRIN	COAL	6.5	0.0	ELEVATION 521', LOCAL MINE

MAPID: 16303366000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 24 QUARTERS/FOOTAGES: 1980' N line, 1320' E line

QUADRANGLE: FREEBURG LONGITUDE: -89.932125

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.433197

DATE COLLECTED:

SURFACE ELEVATION (FT.): 519.0 LOGGED (FT.): 109.3

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12505C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
452.0	MODESTO	PIASA	LIMESTONE	6.0	67.0	
446.0	CARBONDALE		GRAY SHALE	11.3	73.0	
434.7	CARBONDALE	BANKSTON FORK	LIMESTONE	0.9	84.3	
433.8	CARBONDALE	LAWSON	GRAY SHALE	6.2	85.2	
427.6	CARBONDALE	CONANT	LIMESTONE AND SANDSTONE	3.7	91.4	
423.9	CARBONDALE	JAMESTOWN	CARBONACEOUS SHALE	0.5	95.1	
423.4	CARBONDALE		CALCAREOUS SHALE	2.0	95.6	
421.4	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	6.0	97.6	
415.4	CARBONDALE	ANNA	DARK GRAY SHALE	0.3	103.6	
416.0	CARBONDALE	HERRIN	COAL	6.3	103.0	

MAPID: 16326992000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1S 8W SECTION: 25 QUARTERS/FOOTAGES: NW NE SE

QUADRANGLE: FREEBURG LONGITUDE: -89.930837

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.416353

DATE COLLECTED: 9 / 5 / 1990

SURFACE ELEVATION (FT.): LOGGED (FT.): 84.0

LOG TYPE: Drillers Log

SOURCE: CLARENCE KOHNEN

WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			SOIL	1.0	0.0	
-			CLAY	5.0	1.0	
-			SANDY CLAY	10.0	6.0	YELLOW
-			CLAY	54.0	16.0	GRAY
-	CARBONDALE	HERRIN	COAL	6.0	70.0	
-	CARBONDALE		SOFT SHALE	8.0	76.0	

MAPID: 16300086000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 28 **QUARTERS/FOOTAGES:** 430' S line, 1780' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.989317 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.411355 **DATE COLLECTED:** 0 / 0 / 1908
SURFACE ELEVATION (FT.): 471.0 **LOGGED (FT.):** 124.0 **LOG TYPE:**
SOURCE: BAETJI **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300087000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 32 **QUARTERS/FOOTAGES:** SE SE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.002364 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.404019 **DATE COLLECTED:** 0 / 0 / 1908
SURFACE ELEVATION (FT.): 490.0 **LOGGED (FT.):** 230.0 **LOG TYPE:**
SOURCE: BAETJI **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300088000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 33 **QUARTERS/FOOTAGES:** NW SW SE
QUADRANGLE: FREEBURG **LONGITUDE:** -89.990924 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.398563 **DATE COLLECTED:** 0 / 0 / 1908
SURFACE ELEVATION (FT.): 453.2 **LOGGED (FT.):** 156.0 **LOG TYPE:**
SOURCE: BAETJI **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300089000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 33 **QUARTERS/FOOTAGES:** 4270' S line, 980' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.986485 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.407626 **DATE COLLECTED:** 0 / 0 / 1908
SURFACE ELEVATION (FT.): 453.4 **LOGGED (FT.):** 153.0 **LOG TYPE:**
SOURCE: BAETJI **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300090000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 33 **QUARTERS/FOOTAGES:** NE SE NW
QUADRANGLE: FREEBURG **LONGITUDE:** -89.993254 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.405728 **DATE COLLECTED:** 0 / 0 / 1908
SURFACE ELEVATION (FT.): 476.0 **LOGGED (FT.):** 130.0 **LOG TYPE:**
SOURCE: BAETJI **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300091000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 33 **QUARTERS/FOOTAGES:** 4045' S line, 3190' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.994235 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.407082 **DATE COLLECTED:** 0 / 0 / 1908
SURFACE ELEVATION (FT.): 478.5 **LOGGED (FT.):** 133.0 **LOG TYPE:**
SOURCE: BAETJI **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300092000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 8W **SECTION:** 33 **QUARTERS/FOOTAGES:** 4050' S line, 3065' E line
QUADRANGLE: FREEBURG **LONGITUDE:** -89.993796 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.407093 **DATE COLLECTED:** 0 / 0 / 1908
SURFACE ELEVATION (FT.): 477.0 **LOGGED (FT.):** 1368.0 **LOG TYPE:**
SOURCE: SMITH PDC **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300689000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 1 QUARTERS/FOOTAGES: NW SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.042727

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.474511

DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 41.5

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 41Y

WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.0			SOIL	20.0	0.0	
520.0			SHALE	5.5	20.0	
514.5			LIMESTONE	7.0	25.5	
507.5			BLACK SHALE	1.8	32.5	
505.7			BLACK SHALE	2.8	34.3	
502.9	CARBONDALE	SPRINGFIELD	COAL	2.2	37.1	
500.7	CARBONDALE		UNDERCLAY	2.3	39.3	

MAPID: 16300689000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 1 QUARTERS/FOOTAGES: NW SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.042727

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.474511

DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 42.0

LOG TYPE:

SOURCE: MIDWEST SF 41Y

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		
503.0	CARBONDALE	SPRINGFIELD	COAL	2.2	37.0	

MAPID: 16300690000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 1 QUARTERS/FOOTAGES: W2 E2

QUADRANGLE: MILLSTADT LONGITUDE: -90.042706 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.476358 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 545.0 LOGGED (FT.): 52.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 42Y WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.0			SOIL	20.0	0.0	
525.0			SHALE	17.0	20.0	
508.0			BLACK SHALE	2.5	37.0	
505.5			BLACK SHALE	7.5	39.5	
498.0			BLACK SHALE	1.7	47.0	
496.3	CARBONDALE	SPRINGFIELD	COAL	1.5	48.7	
494.8	CARBONDALE		UNDERCLAY	1.8	50.2	

MAPID: 16300690000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 1 QUARTERS/FOOTAGES: W2 E2

QUADRANGLE: MILLSTADT LONGITUDE: -90.042706 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.476358 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 545.0 LOGGED (FT.): 52.0 LOG TYPE:

SOURCE: MIDWEST SF 42Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		
496.0	CARBONDALE	SPRINGFIELD	COAL	1.5	49.0	

MAPID: 16300691000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 1 QUARTERS/FOOTAGES: 2640' N line, 1320' W line of SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.040452 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.469061 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 56.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 43Y WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.0			SOIL	26.0	0.0	
524.0			SHALE	30.0	26.0	NO COAL

MAPID: 16300691000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 1 **QUARTERS/FOOTAGES:** 2640' N line, 1320' W line of SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.040452 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.469061 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 550.0 **LOGGED (FT.):** 60.0 **LOG TYPE:**
SOURCE: MIDWEST SF 43Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300692000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 1 **QUARTERS/FOOTAGES:** 200' N line, 660' W line of SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.05177 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.475846 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 565.0 **LOGGED (FT.):** 49.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 44Y **WELL TYPE:** Coal Test
COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
565.0			SOIL	20.0	0.0
545.0			SHALE	7.5	20.0
537.5			LIMESTONE	2.5	27.5
535.0			LIMESTONE	6.0	30.0
529.0			LIMESTONE	2.0	36.0
527.0			BLACK SHALE	2.3	38.0
524.7			BLACK SHALE	3.8	40.3
521.0	CARBONDALE	SPRINGFIELD	COAL	2.7	44.0
518.3	CARBONDALE		UNDERCLAY	2.3	46.7

MAPID: 16300692000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 1 **QUARTERS/FOOTAGES:** 200' N line, 660' W line of SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.05177 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.475846 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 565.0 **LOGGED (FT.):** 49.0 **LOG TYPE:**
SOURCE: MIDWEST SF044Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	
521.0	CARBONDALE	SPRINGFIELD	COAL	2.7	44.0

MAPID: 16300122000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071984 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.477493 DATE COLLECTED: 11 / 27 / 1926

SURFACE ELEVATION (FT.): 583.7 LOGGED (FT.): 36.0 LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
553.7	CARBONDALE	HERRIN	COAL	6.0	30.0	36' THRU CO

MAPID: 16300122000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071984 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.477493 DATE COLLECTED: 0 / 0 / 1926

SURFACE ELEVATION (FT.): 583.7 LOGGED (FT.): 36.0 LOG TYPE:

SOURCE: FRAN CC 000F WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
553.7	CARBONDALE	HERRIN	COAL	6.0	30.0	

MAPID: 16300313000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071842 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.469843 DATE COLLECTED: 6 / 15 / 1928

SURFACE ELEVATION (FT.): 592.0 LOGGED (FT.): 51.3 LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 33 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
592.0			UNCONSOLIDATED	15.0	0.0	
577.0			SANDY CLAY	20.0	15.0	
557.0			SHALE	1.8	35.0	LIGHT
555.2			LIMESTONE	2.9	36.8	
552.3			SHALE	4.3	39.7	BLUE
548.0	CARBONDALE	ANNA	BLACK SHALE	2.8	44.0	
545.2	CARBONDALE	HERRIN	COAL	4.6	46.8	

MAPID: 16300313000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071842 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.469843 DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): 592.0 LOGGED (FT.): 52.0 LOG TYPE:

SOURCE: MISSISSIPPI COAL CORP. 0033 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.0	CARBONDALE	HERRIN	COAL	4.6	47.0	

MAPID: 16300314000C VERSION: 1

PROJECT: NCRDS87

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: 1320' S line, 0' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.073072 GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 38.472526 DATE COLLECTED: 6 / 13 / 1928

SURFACE ELEVATION (FT.): 586.3 LOGGED (FT.): 46.4 LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
586.3			UNCONSOLIDATED	23.0	0.0	
563.3	CARBONDALE		UNCLASSIFIED	2.0	23.0	
561.3	CARBONDALE		SHALE	6.0	25.0	
555.3	CARBONDALE		LIMESTONE	2.0	31.0	
553.3	CARBONDALE		SHALE	1.5	33.0	
551.8	CARBONDALE	BRERETON	LIMESTONE	2.2	34.5	
549.6	CARBONDALE	ANNA	BLACK SHALE	3.4	36.7	
546.2	CARBONDALE	HERRIN	COAL	6.3	40.1	

MAPID: 16300314000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: 1320' S line, 0' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.073072 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.472526 DATE COLLECTED:

SURFACE ELEVATION (FT.): 586.0 LOGGED (FT.): 46.3 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
563.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	22.9	
561.1	CARBONDALE	LAWSON	GRAY SHALE	6.0	24.9	
555.1	CARBONDALE	CONANT	LIMESTONE	2.0	30.9	
553.1	CARBONDALE		GRAY SHALE	1.5	32.9	
551.6	CARBONDALE	BRERETON	LIMESTONE	2.2	34.4	
549.4	CARBONDALE	ANNA	BLACK SHALE	3.4	36.6	
546.0	CARBONDALE	HERRIN	COAL	6.3	40.0	

MAPID: 16300314000C VERSION: 3

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: 1320' S line, 0' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.073072 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.472526 DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): 586.3 LOGGED (FT.): 46.0 LOG TYPE:

SOURCE: MISSISSIPPI COAL CORP. 0058 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
546.3	CARBONDALE	HERRIN	COAL	6.3	40.0	

MAPID: 16300314000C **VERSION:** 4 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** 1320' S line, 0' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.073072 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.472526 **DATE COLLECTED:** 6 / 13 / 1928
SURFACE ELEVATION (FT.): 586.3 **LOGGED (FT.):** 46.4 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 58 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
586.3			UNCONSOLIDATED	23.0	0.0	
563.3			ROCK	2.0	23.0	
561.3			SHALE	6.0	25.0	LIGHT
555.3			LIMESTONE	2.0	31.0	
553.3			SHALE	1.5	33.0	BLUE
551.8	CARBONDALE	BRERETON	LIMESTONE	2.2	34.5	
549.6	CARBONDALE	ANNA	BLACK SHALE	3.4	36.7	
546.2	CARBONDALE	HERRIN	COAL	6.3	40.1	

MAPID: 16300315000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** SW NW SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.062439 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.473644 **DATE COLLECTED:** 6 / 5 / 1928
SURFACE ELEVATION (FT.): 575.0 **LOGGED (FT.):** 60.0 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 60 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
575.0			UNCONSOLIDATED	20.0	0.0	
555.0			SANDY CLAY	24.0	20.0	
531.0			SHALE	16.0	44.0	NO COAL

MAPID: 16300315000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** SW NW SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.062439 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.473644 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 575.0 **LOGGED (FT.):** 60.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0060 **WELL TYPE:** Coal Test
COMMENT: SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300316000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES:

QUADRANGLE: MILLSTADT LONGITUDE: -90.063614

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.476477

DATE COLLECTED: 7 / 9 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 57.0

LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 60C

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	20.0	0.0	
-			SHALE	30.0	20.0	
-			MUDSTONE	7.0	50.0	NO COAL; BLU

MAPID: 16300316000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES:

QUADRANGLE: MILLSTADT LONGITUDE: -90.063614

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.476477

DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 57.0

LOG TYPE:

SOURCE: MISSISSIPPI COAL CORP. 060C

WELL TYPE: Coal Test

COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300317000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071984

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.477493

DATE COLLECTED: 6 / 1 / 1928

SURFACE ELEVATION (FT.): 587.3 LOGGED (FT.): 48.4

LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 83

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
587.3			UNCONSOLIDATED	26.0	0.0	
561.3			SAND	1.0	26.0	
560.3			SHALE	5.0	27.0	LIGHT
555.3			LIMESTONE	5.0	32.0	
550.3			SHALE	2.0	37.0	BLUE
548.3			ROCK	1.0	39.0	
547.3			BLACK SHALE	2.2	40.0	
545.1			COAL	6.3	42.2	3 SMALL DIRT BANDS

MAPID: 16300317000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** SW SW NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071984 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.477493 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 587.3 **LOGGED (FT.):** 48.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0083 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.3	CARBONDALE	HERRIN	COAL	6.3	42.0	

MAPID: 16300318000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:**
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063614 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.476477 **DATE COLLECTED:** 7 / 12 / 1928
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 50.0 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 83A **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	15.0	0.0	
-			SHALE	9.0	15.0	
-			ROCK	6.0	24.0	
-			SHALE	19.0	30.0	
-			COAL	1.0	49.0	

MAPID: 16300318000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:**
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063614 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.476477 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 69.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 083A **WELL TYPE:** Coal Test
COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		
-	CARBONDALE	SPRINGFIELD	COAL	2.0	67.0	

MAPID: 16300319000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW SE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.0672 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.477453 DATE COLLECTED: 6 / 12 / 1928

SURFACE ELEVATION (FT.): 582.5 LOGGED (FT.): 47.0 LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 84 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
582.5			UNCONSOLIDATED	15.0	0.0	
567.5			SHALE	7.0	15.0	LIGHT
560.5			CLAYSTONE	12.0	22.0	
548.5			SOFT SHALE	11.0	34.0	
537.5			COAL	2.0	45.0	

MAPID: 16300319000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW SE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.0672 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.477453 DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): 582.5 LOGGED (FT.): 47.0 LOG TYPE:

SOURCE: MISSISSIPPI COAL CORP. 0084 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
537.5	CARBONDALE	HERRIN	COAL	2.0	45.0	

MAPID: 16300320000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES:

QUADRANGLE: MILLSTADT LONGITUDE: -90.063614 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.476477 DATE COLLECTED: 7 / 11 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 47.6 LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 84C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	18.0	0.0	
-			SHALE	21.0	18.0	
-			ROCK	2.5	39.0	
-	CARBONDALE	ANNA	SHALE	0.5	41.5	BLUE
-	CARBONDALE	HERRIN	COAL	5.6	42.0	

MAPID: 16300320000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:**
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063614 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.476477 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 48.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 084C **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	5.0	42.0	

MAPID: 16300321000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** SW SW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.062416 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.47741 **DATE COLLECTED:** 6 / 11 / 1928
SURFACE ELEVATION (FT.): 584.0 **LOGGED (FT.):** 40.2 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 85 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
584.0			UNCONSOLIDATED	22.0	0.0	
562.0			SANDY CLAY	6.0	22.0	
556.0			BOULDER	7.0	28.0	
549.0	CARBONDALE	HERRIN	COAL	5.2	35.0	

MAPID: 16300321000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** SW SW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.062416 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.47741 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 584.0 **LOGGED (FT.):** 40.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0085 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
549.0	CARBONDALE	HERRIN	COAL	5.2	35.0	

MAPID: 16300322000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES:

QUADRANGLE: MILLSTADT LONGITUDE: -90.063614

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.476477

DATE COLLECTED: 7 / 12 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 59.0

LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 85A

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	22.0	0.0	
-			SAND	3.5	22.0	
-			SAND	1.5	25.5	
-			LIMESTONE	10.0	27.0	
-			SHALE	9.0	37.0	BLUE
-			LIMESTONE	8.5	46.0	
-			SHALE	2.5	54.5	BLUE
-			SMUT	0.5	57.0	
-	CARBONDALE	HERRIN	COAL	1.5	57.5	

MAPID: 16300322000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES:

QUADRANGLE: MILLSTADT LONGITUDE: -90.063614

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.476477

DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 50.0

LOG TYPE:

SOURCE: MISSISSIPPI COAL CORP. 085A

WELL TYPE: Coal Test

COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	1.0	49.0	

MAPID: 16300323000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NW SE NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.057594

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.479236

DATE COLLECTED: 7 / 12 / 1928

SURFACE ELEVATION (FT.): 575.0 LOGGED (FT.): 39.3

LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 85C

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
575.0			UNCONSOLIDATED	27.0	0.0	
548.0			SAND	9.0	27.0	
539.0			SMUT	1.5	36.0	
537.5	CARBONDALE	HERRIN	COAL	1.8	37.5	MAY BE PARTIALLY ERODED HERRIN

MAPID: 16300323000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** NW SE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.057594 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.479236 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 575.0 **LOGGED (FT.):** 39.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 085C **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
539.0	CARBONDALE	HERRIN	COAL	3.3	36.0	

MAPID: 16300324000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** SW NW NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072057 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.481319 **DATE COLLECTED:** 6 / 13 / 1928
SURFACE ELEVATION (FT.): 591.8 **LOGGED (FT.):** 48.7 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 108 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
591.8			UNCONSOLIDATED	18.0	0.0	
573.8			SAND	8.0	18.0	
565.8			SHALE	1.7	26.0	
564.1			ROCK	3.0	27.7	
561.1			SHALE	5.5	30.7	
555.6			LIMESTONE	6.3	36.2	
549.3	CARBONDALE	HERRIN	COAL	6.2	42.5	

MAPID: 16300324000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** SW NW NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.072057 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.481319 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 591.8 **LOGGED (FT.):** 49.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0108 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
548.8	CARBONDALE	HERRIN	COAL	6.2	43.0	

MAPID: 16300325000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW NE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.067223 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.481249 DATE COLLECTED: 6 / 14 / 1928

SURFACE ELEVATION (FT.): 588.5 LOGGED (FT.): 52.0 LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 109 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
588.5			UNCONSOLIDATED	23.0	0.0	
565.5			SAND	3.0	23.0	
562.5			SHALE	11.0	26.0	
551.5			LIMESTONE	6.5	37.0	
545.0			SMUT	1.5	43.5	
543.5	CARBONDALE	HERRIN	COAL	0.7	45.0	
542.8	CARBONDALE	HERRIN	COAL	6.3	45.7	

MAPID: 16300325000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW NE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.067223 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.481249 DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): 588.5 LOGGED (FT.): 52.0 LOG TYPE:

SOURCE: MISSISSIPPI COAL CORP. 0109 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
542.5	CARBONDALE	HERRIN	COAL	6.3	46.0	

MAPID: 16300326000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW NW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.06239 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.481176 DATE COLLECTED: 6 / 5 / 1928

SURFACE ELEVATION (FT.): 584.2 LOGGED (FT.): 42.0 LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 110 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
584.2			UNCONSOLIDATED	22.0	0.0	
562.2			SANDSTONE/SHALE	3.0	22.0	
559.2	CARBONDALE	BRERETON	LIMESTONE	10.0	25.0	
549.2	CARBONDALE	ANNA	BLACK SHALE	1.5	35.0	
547.7	CARBONDALE	HERRIN	COAL	5.5	36.5	

MAPID: 16300326000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** SW NW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.06239 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.481176 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 584.2 **LOGGED (FT.):** 42.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0110 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
547.2	CARBONDALE	HERRIN	COAL	5.5	37.0	

MAPID: 16300327000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:**
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063614 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.476477 **DATE COLLECTED:** 7 / 7 / 1928
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 36.3 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 110A **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	20.0	0.0	
-			SANDSTONE/SHALE	8.0	20.0	
-	CARBONDALE	ANNA	DARK SHALE	2.0	28.0	
-	CARBONDALE	HERRIN	COAL	6.3	30.0	

MAPID: 16300327000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:**
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063614 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.476477 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 36.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 110A **WELL TYPE:** Coal Test
COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	6.3	30.0	

MAPID: 16300328000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES:

QUADRANGLE: MILLSTADT LONGITUDE: -90.063614

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.476477

DATE COLLECTED: 7 / 6 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 28.7

LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 110B

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	20.0	0.0	
-			SANDSTONE/SHALE	3.0	20.0	
-	CARBONDALE	HERRIN	COAL	5.7	23.0	

MAPID: 16300328000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES:

QUADRANGLE: MILLSTADT LONGITUDE: -90.063614

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.476477

DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 29.0

LOG TYPE:

SOURCE: MISSISSIPPI COAL CORP. 110B

WELL TYPE: Coal Test

COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	5.7	23.0	

MAPID: 16300329000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW NE NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.057556

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.481106

DATE COLLECTED: 6 / 12 / 1928

SURFACE ELEVATION (FT.): 569.3 LOGGED (FT.): 51.5

LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 111

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
569.3			UNCONSOLIDATED	18.0	0.0	
551.3			SANDSTONE/SHALE	11.0	18.0	
540.3			SHALE	2.0	29.0	BLUE
538.3			SHALE	9.7	31.0	LIGHT
528.6			LIMESTONE	7.5	40.7	
521.1			SMUT	1.4	48.2	
519.7			COAL	1.9	49.6	

MAPID: 16300329000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** SW NE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.057556 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.481106 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 569.3 **LOGGED (FT.):** 52.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0111 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
521.3	CARBONDALE	HERRIN	COAL	3.3	48.0	

MAPID: 16300330000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:**
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063614 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.476477 **DATE COLLECTED:** 7 / 6 / 1928
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 59.9 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 111C **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	22.0	0.0	
-			SANDSTONE/SHALE	6.0	22.0	
-			SANDSTONE	3.0	28.0	
-			SANDSTONE	1.5	31.0	
-			LIMESTONE	4.0	32.5	
-			SHALE	10.0	36.5	BLUE
-			LIMESTONE	10.0	46.5	
-			SHALE	1.0	56.5	BLUE
-			SMUT	1.0	57.5	
-			COAL	1.4	58.5	

MAPID: 16300330000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:**
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063614 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.476477 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 60.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 111C **WELL TYPE:** Coal Test
COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	1.4	59.0	

MAPID: 16300380000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** 3625' S line, 5000' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071553 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.478898 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 595.8 **LOGGED (FT.):** 51.0 **LOG TYPE:** Drillers Log
SOURCE: LILL COAL COMPANY **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.8	CARBONDALE	HERRIN	COAL	6.0	45.0	ELEVATION TOP 545' LOCAL MINE

MAPID: 16300380000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** 3625' S line, 5000' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071553 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.478898 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 595.8 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: LILL CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
544.8	CARBONDALE	HERRIN	COAL	6.0	51.0	

MAPID: 16300693000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** 0' S line, 1780' E line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.069865 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.476523 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 583.2 **LOGGED (FT.):** 60.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL D1 **WELL TYPE:** Coal Test
COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
583.2			SOIL	25.0	0.0	
558.2			SHALE	12.0	25.0	
546.2			LIMESTONE	3.0	37.0	
543.2			BLACK SHALE	20.0	40.0	NO COAL

MAPID: 16300693000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** 0' S line, 1780' E line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.069865 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.476523 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 583.2 **LOGGED (FT.):** 60.0 **LOG TYPE:**
SOURCE: MIDWEST SF001D **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300694000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** 660' S line, 2640' E line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.07288 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.478367 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 585.1 **LOGGED (FT.):** 49.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 2D **WELL TYPE:** Coal Test
COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN COMMENT
585.1			SOIL	18.0	0.0
567.1			SHALE	7.0	18.0
560.1			LIMESTONE	3.0	25.0
557.1			BLACK SHALE	2.0	28.0
555.1			LIMESTONE	3.0	30.0
552.1			BLACK SHALE	1.0	33.0
551.1	CARBONDALE	BRERETON	LIMESTONE	7.0	34.0
544.1	CARBONDALE	ANNA	BLACK SHALE	1.0	41.0
543.1	CARBONDALE	HERRIN	COAL	6.0	42.0
537.1	CARBONDALE		UNDERCLAY	1.0	48.0

MAPID: 16300694000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** 660' S line, 2640' E line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.07288 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.478367 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 585.1 **LOGGED (FT.):** 49.0 **LOG TYPE:**
SOURCE: MIDWEST SF002D **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN COMMENT
543.1	CARBONDALE	HERRIN	COAL	6.0	42.0

MAPID: 16300695000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.070804 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.478438 DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 586.0 LOGGED (FT.): 51.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL D3 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
586.0			SOIL	24.0	0.0	
562.0			LIMESTONE	2.5	24.0	
559.5			BLACK SHALE	9.5	26.5	
550.0			LIMESTONE	2.0	36.0	
548.0			BLACK SHALE	5.5	38.0	
542.5	CARBONDALE	ANNA	BLACK SHALE	1.0	43.5	
541.5	CARBONDALE	ANNA	COAL	5.0	44.5	
536.5	CARBONDALE		UNDERCLAY	1.5	49.5	

MAPID: 16300695000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.070804 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.478438 DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 586.0 LOGGED (FT.): 51.0 LOG TYPE:

SOURCE: MIDWEST SF 3D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
541.0	CARBONDALE	HERRIN	COAL	5.0	45.0	

MAPID: 16300696000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: 460' S line, 1650' E line of NW

QUADRANGLE: MILLSTADT

LONGITUDE: -90.069405

GEOLOGIST: HINES

CONFIDENTIAL: N

LATITUDE: 38.477787

DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 586.0

LOGGED (FT.): 55.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 4D

WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
586.0			SOIL	21.0	0.0
565.0			LIMESTONE	1.0	21.0
564.0			SHALE	15.0	22.0
549.0	CARBONDALE	BRERETON	LIMESTONE	5.0	37.0
544.0	CARBONDALE	ANNA	BLACK SHALE	3.0	42.0
541.0	CARBONDALE	ANNA	BLACK SHALE	3.0	45.0
538.0	CARBONDALE	HERRIN	COAL	6.2	48.0
531.8	CARBONDALE		UNDERCLAY	0.8	54.2

MAPID: 16300696000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: 460' S line, 1650' E line of NW

QUADRANGLE: MILLSTADT

LONGITUDE: -90.069405

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N

LATITUDE: 38.477787

DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 586.0

LOGGED (FT.): 55.0

LOG TYPE:

SOURCE: MIDWEST SF004D

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
538.0	CARBONDALE	HERRIN	COAL	6.2	48.0

MAPID: 16300697000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: 1320' S line, 1680' E line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.069501

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.480164

DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 586.9 LOGGED (FT.): 51.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL D5

WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
586.9			SOIL	23.0	0.0
563.9			SHALE	10.0	23.0
553.9			LIMESTONE	2.0	33.0
551.9			BLACK SHALE	2.0	35.0
549.9	CARBONDALE	BRERETON	LIMESTONE	5.0	37.0
544.9	CARBONDALE	ANNA	BLACK SHALE	2.5	42.0
542.4	CARBONDALE	HERRIN	COAL	6.0	44.5
536.4	CARBONDALE		UNDERCLAY	0.5	50.5

MAPID: 16300697000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: 1320' S line, 1680' E line of NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.069501

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.480164

DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 586.9 LOGGED (FT.): 51.0

LOG TYPE:

SOURCE: MIDWEST SF005D

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
541.9	CARBONDALE	HERRIN	COAL	6.0	45.0

MAPID: 16300698000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: 660' N line, 0' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.073288

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.482387

DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 590.4 LOGGED (FT.): 46.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 7D

WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
590.4			SOIL	20.0	0.0	
570.4			SHALE	11.0	20.0	
559.4			LIMESTONE	1.0	31.0	
558.4			BLACK SHALE	3.0	32.0	
555.4	CARBONDALE	BRERETON	LIMESTONE	3.0	35.0	
552.4	CARBONDALE	ANNA	BLACK SHALE	1.5	38.0	
550.9	CARBONDALE	HERRIN	COAL	5.8	39.5	
545.1	CARBONDALE		UNDERCLAY	0.8	45.3	

MAPID: 16300698000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: 660' N line, 0' W line

QUADRANGLE: MILLSTADT LONGITUDE: -90.073288

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.482387

DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 590.4 LOGGED (FT.): 46.0

LOG TYPE:

SOURCE: MIDWEST SF 7D

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.4	CARBONDALE	HERRIN	COAL	5.8	40.0	

MAPID: 16300699000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: W2 W2

QUADRANGLE: MILLSTADT LONGITUDE: -90.070775 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.47653 DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 583.0 LOGGED (FT.): 49.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL D8 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
583.0			SOIL	22.0	0.0
561.0			SHALE	10.0	22.0
551.0			LIMESTONE	4.0	32.0
547.0			BLACK SHALE	2.0	36.0
545.0	CARBONDALE	BRERETON	LIMESTONE	2.0	38.0
543.0	CARBONDALE	ANNA	BLACK SHALE	2.5	40.0
540.5	CARBONDALE	HERRIN	COAL	6.0	42.5
534.5	CARBONDALE		UNDERCLAY	0.5	48.5

MAPID: 16300699000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: W2 W2

QUADRANGLE: MILLSTADT LONGITUDE: -90.070775 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.47653 DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 583.0 LOGGED (FT.): 49.0 LOG TYPE:

SOURCE: MIDWEST SF 8D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
540.0	CARBONDALE	HERRIN	COAL	6.0	43.0

MAPID: 16300700000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: 100' N line, 1320' E line of SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.068251 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.476233 DATE COLLECTED: 0 / 0 / 1937

SURFACE ELEVATION (FT.): 579.5 LOGGED (FT.): 48.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 9D WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
579.5			SOIL	25.0	0.0
554.5			SHALE	10.0	25.0
544.5	CARBONDALE	ANNA	BLACK SHALE	6.0	35.0
538.5	CARBONDALE	HERRIN	COAL	2.0	41.0
536.5	CARBONDALE	HERRIN	COAL	4.0	43.0
532.5	CARBONDALE		UNDERCLAY	1.0	47.0

MAPID: 16300700000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** 100' N line, 1320' E line of SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.068251 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.476233 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 579.5 **LOGGED (FT.):** 48.0 **LOG TYPE:**
SOURCE: MIDWEST SF009D **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
538.5	CARBONDALE	HERRIN	COAL	6.0	41.0	

MAPID: 16300701000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** S2
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063626 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.472703 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 576.0 **LOGGED (FT.):** 49.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 10D **WELL TYPE:** Coal Test
COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
576.0			SOIL	20.0	0.0	
556.0			SHALE	10.0	20.0	
546.0			BLACK SHALE	19.0	30.0	NO COAL

MAPID: 16300701000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** S2
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063626 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.472703 **DATE COLLECTED:** 0 / 0 / 1937
SURFACE ELEVATION (FT.): 576.0 **LOGGED (FT.):** 49.0 **LOG TYPE:**
SOURCE: MIDWEST SF010D **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300702000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: N2 N2 NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.06845 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.483167 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 585.9 LOGGED (FT.): 55.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 1Y WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
585.9			SOIL	10.0	0.0	
575.9			SHALE	15.0	10.0	
560.9			LIMESTONE	6.0	25.0	
554.9			BLACK SHALE	4.0	31.0	
550.9			LIMESTONE	1.0	35.0	
549.9			BLACK SHALE	3.0	36.0	
546.9			LIMESTONE	2.3	39.0	
544.6			SANDSTONE	2.8	41.3	
541.9	CARBONDALE	ANNA	BLACK SHALE	4.2	44.0	
537.7	CARBONDALE	HERRIN	COAL	6.6	48.2	
531.1	CARBONDALE		UNDERCLAY	0.8	54.8	

MAPID: 16300702000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: N2 N2 NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.06845 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.483167 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 585.9 LOGGED (FT.): 56.0 LOG TYPE:

SOURCE: MIDWEST SF001Y WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
537.9	CARBONDALE	HERRIN	COAL	6.6	48.0	

MAPID: 16300703000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** 0' N line, 450' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071746 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.484181 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 582.0 **LOGGED (FT.):** 36.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 3Y **WELL TYPE:** Coal Test
COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
582.0			SOIL	18.5	0.0	
563.5	CARBONDALE	BRERETON	LIMESTONE	2.0	18.5	
561.5	CARBONDALE	ANNA	BLACK SHALE	3.5	20.5	
558.0	CARBONDALE	ANNA	BLACK SHALE	6.2	24.0	
551.8	CARBONDALE	HERRIN	COAL	5.0	30.2	
546.8	CARBONDALE		UNDERCLAY	0.8	35.2	

MAPID: 16300703000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** 0' N line, 450' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071746 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.484181 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 582.0 **LOGGED (FT.):** 36.0 **LOG TYPE:**
SOURCE: MIDWEST SF003Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
552.0	CARBONDALE	HERRIN	COAL	5.0	30.0	

MAPID: 16300704000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** 330' S line, 430' E line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.065121 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.4774 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 572.6 **LOGGED (FT.):** 48.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 4Y **WELL TYPE:** Coal Test
COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
572.6			SOIL	25.0	0.0	
547.6			LIMESTONE	4.0	25.0	
543.6	CARBONDALE	BRERETON	LIMESTONE	4.0	29.0	
539.6	CARBONDALE	ANNA	BLACK SHALE	2.0	33.0	
537.6	CARBONDALE	ANNA	BLACK SHALE	6.0	35.0	AND BOULDERS
531.6	CARBONDALE	HERRIN	COAL	6.0	41.0	
525.6	CARBONDALE		UNDERCLAY	1.0	47.0	

MAPID: 16300704000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** 330' S line, 430' E line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.065121 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.4774 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 572.6 **LOGGED (FT.):** 48.0 **LOG TYPE:**
SOURCE: MIDWEST SF004Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
531.6	CARBONDALE	HERRIN	COAL	6.0	41.0	

MAPID: 16300705000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** N2 N2
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063595 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.482139 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 588.6 **LOGGED (FT.):** 55.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 30Y **WELL TYPE:** Coal Test
COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
588.6			SOIL	22.0	0.0	
566.6			SHALE	4.0	22.0	
562.6			LIMESTONE	6.0	26.0	
556.6			BLACK SHALE	7.0	32.0	
549.6	CARBONDALE	BRERETON	LIMESTONE	6.0	39.0	
543.6	CARBONDALE	ANNA	BLACK SHALE	3.3	45.0	
540.3	CARBONDALE	HERRIN	COAL	5.8	48.3	
534.4	CARBONDALE		UNDERCLAY	0.8	54.2	

MAPID: 16300705000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** N2 N2
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.063595 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.482139 **DATE COLLECTED:** 0 / 0 / 1938
SURFACE ELEVATION (FT.): 588.6 **LOGGED (FT.):** 55.0 **LOG TYPE:**
SOURCE: MIDWEST SF030Y **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.6	CARBONDALE	HERRIN	COAL	5.8	48.0	

MAPID: 16300706000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071984 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.477493 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 585.2 LOGGED (FT.): 50.8 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 756 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
585.2			CLAY	6.6	0.0	
578.6			CLAY	16.0	6.6	GRAY
562.6			CLAY	0.4	22.6	YELLOW
562.2			LIMESTONE	0.8	23.0	
561.4			CLAYSTONE	0.8	23.8	YELLOW
560.6			LIMESTONE	0.3	24.6	
560.4			SHALE	6.6	24.8	WITH LIMESTONE STREAKS
553.8	CARBONDALE	BRERETON	LIMESTONE W/ SHALE	8.2	31.4	
545.6	CARBONDALE	ANNA	SHALE	1.0	39.6	
544.6	CARBONDALE	ANNA	BLACK SHALE	3.2	40.6	
541.4	CARBONDALE	HERRIN	COAL	2.8	43.8	
538.6	CARBONDALE	HERRIN	SHALE	0.2	46.6	.5" SULPHUR AT TOP
538.4	CARBONDALE	HERRIN	COAL	1.3	46.8	
537.1	CARBONDALE	HERRIN	COAL	1.5	48.1	.5" SULPHUR AT TOP
535.6	CARBONDALE		UNDERCLAY	1.2	49.6	

MAPID: 16300706000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071984 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.477493 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 585.2 LOGGED (FT.): 51.0 LOG TYPE:

SOURCE: MIDWEST SF0756 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
541.2	CARBONDALE	HERRIN	COAL	5.8	44.0	

MAPID: 16300707000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: N2

QUADRANGLE: MILLSTADT LONGITUDE: -90.063601 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.480251 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 582.4 LOGGED (FT.): 43.3 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 813 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
582.4			CLAY	7.5	0.0	
574.9			CLAY	18.0	7.5	GRAY
556.9			LIMESTONE	0.5	25.5	
556.4			SHALE	1.0	26.0	
555.4			LIMESTONE	3.5	27.0	
551.9			SHALE	1.6	30.5	
550.3	CARBONDALE	BRERETON	LIMESTONE	2.2	32.1	
548.1	CARBONDALE	ANNA	SHALE	0.3	34.3	
547.8	CARBONDALE	ANNA	BLACK SHALE	2.2	34.6	
545.6	CARBONDALE	HERRIN	COAL	0.7	36.8	ELEV TOP 545.69
545.0	CARBONDALE	HERRIN	PYRITE	0.1	37.4	
544.9	CARBONDALE	HERRIN	COAL	3.0	37.5	
541.9	CARBONDALE	HERRIN	PYRITE	0.1	40.5	
541.8	CARBONDALE	HERRIN	COAL	1.8	40.6	
540.0	CARBONDALE		UNDERCLAY	0.8	42.4	

MAPID: 16300707000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: N2

QUADRANGLE: MILLSTADT LONGITUDE: -90.063601 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.480251 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 582.4 LOGGED (FT.): 43.0 LOG TYPE:

SOURCE: MIDWEST SF 813 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.4	CARBONDALE	HERRIN	COAL	5.7	37.0	

MAPID: 16300708000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.068424 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.480316 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 588.7 LOGGED (FT.): 59.7 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 814 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
588.7			CLAY	17.5	0.0	
571.2			CLAY	8.5	17.5	GRAY
562.7			SAND & GRAVEL	2.3	26.0	
560.4			CLAY	2.2	28.3	
558.3			LIMESTONE	7.6	30.4	
550.7			UNCLASSIFIED	1.3	38.0	
549.4	CARBONDALE	BRERETON	LIMESTONE	9.3	39.3	
540.1	CARBONDALE	ANNA	SHALE	0.7	48.6	
539.4	CARBONDALE	ANNA	BLACK SHALE	3.7	49.3	
535.8	CARBONDALE	HERRIN	COAL	6.2	52.9	
529.6	CARBONDALE		UNDERCLAY	0.6	59.1	

MAPID: 16300708000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.068424 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.480316 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 588.7 LOGGED (FT.): 60.0 LOG TYPE:

SOURCE: MIDWEST SF0814 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
535.7	CARBONDALE	HERRIN	COAL	6.2	53.0	

MAPID: 16300709000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: W2

QUADRANGLE: MILLSTADT LONGITUDE: -90.068387 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.476511 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 582.0 LOGGED (FT.): 52.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 815 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
582.0			CLAY	5.5	0.0	
576.5			CLAY	14.2	5.5	GRAY
562.3			CLAY	7.7	19.7	WITH SAND; YL
554.7			BOULDER	0.8	27.3	
553.9			CLAY	4.3	28.1	GRAY
549.7			SOFT SHALE	11.7	32.3	
538.0			LIMESTONE	0.3	44.0	
537.7			SOFT SHALE	2.5	44.3	
535.2	CARBONDALE	SPRINGFIELD	COAL	2.4	46.8	ELEVATION TOP 535.21; SMUT
532.8	CARBONDALE		UNDERCLAY	3.3	49.2	

MAPID: 16300709000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: W2

QUADRANGLE: MILLSTADT LONGITUDE: -90.068387 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.476511 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 582.0 LOGGED (FT.): 53.0 LOG TYPE:

SOURCE: MIDWEST SF0815 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
535.0	CARBONDALE	HERRIN	COAL	2.4	47.0	

MAPID: 16300710000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.066019 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.482177 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 587.5 LOGGED (FT.): 57.3 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 816 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
587.5			CLAY	30.8	0.0	
556.7			LIMESTONE	0.8	30.8	
556.0			SHALE	1.0	31.5	
555.0			LIMESTONE	1.8	32.5	
553.2			SHALE	1.5	34.3	
551.7			LIMESTONE	1.4	35.8	
550.3			SHALE	1.0	37.2	
549.3			LIMESTONE	10.6	38.2	
538.7	CARBONDALE	ANNA	SHALE	0.6	48.8	
538.2	CARBONDALE	ANNA	SOFT SHALE	0.8	49.3	
537.4	CARBONDALE	HERRIN	COAL	4.7	50.1	ELEV TOP 537.4
532.7	CARBONDALE		UNDERCLAY	2.6	54.8	

MAPID: 16300710000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.066019 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.482177 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 587.5 LOGGED (FT.): 57.0 LOG TYPE:

SOURCE: MIDWEST SF 816 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
537.5	CARBONDALE	HERRIN	COAL	4.7	50.0	

MAPID: 16300711000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SE NE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064807 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.481211 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 584.6 LOGGED (FT.): 44.6 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 817 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
584.6			CLAY	26.7	0.0	
557.9			BOULDER	0.6	26.7	
557.3			CLAY	1.2	27.3	GRAY
556.2	CARBONDALE	BRERETON	LIMESTONE	6.6	28.4	
549.6	CARBONDALE	ANNA	SHALE	1.7	35.0	
547.9	CARBONDALE	ANNA	BLACK SHALE	1.2	36.7	
546.8	CARBONDALE	HERRIN	COAL	1.8	37.8	ELEV TOP 546.73
545.0	CARBONDALE	HERRIN	SHALE	0.2	39.6	
544.8	CARBONDALE	HERRIN	COAL	2.1	39.8	
542.8	CARBONDALE	HERRIN	PYRITE	0.1	41.8	
542.7	CARBONDALE	HERRIN	COAL	1.7	41.9	
541.0	CARBONDALE		UNDERCLAY	1.0	43.6	

MAPID: 16300711000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SE NE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064807 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.481211 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 584.6 LOGGED (FT.): 45.0 LOG TYPE:

SOURCE: MIDWEST SF0817 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
546.6	CARBONDALE	HERRIN	COAL	5.6	38.0	

MAPID: 16300712000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071948 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.47558 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 584.7 LOGGED (FT.): 47.8 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 818 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
584.7			CLAY	23.3	0.0	
561.4			LIMESTONE	0.7	23.3	
560.7			SHALE	3.7	24.0	WITH HARD STREAKS
557.0			LIMESTONE	1.5	27.7	
555.5			SHALE	4.8	29.2	WITH HARD STREAKS
550.7			LIMESTONE	1.0	34.0	
549.7			SHALE	1.3	35.0	
548.4			SHALE	1.2	36.3	DARK GRAY
547.3			LIMESTONE	3.3	37.4	
544.0			SHALE	0.2	40.7	
543.9	CARBONDALE	HERRIN	COAL	6.0	40.8	ELEV TOP 543.86'
537.9	CARBONDALE		UNDERCLAY	0.9	46.8	

MAPID: 16300712000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071948 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.47558 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 584.7 LOGGED (FT.): 48.0 LOG TYPE:

SOURCE: MIDWEST SF0818 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
543.7	CARBONDALE	HERRIN	COAL	6.0	41.0	

MAPID: 16300713000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NE NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.06957 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.475567 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 581.6 LOGGED (FT.): 47.2 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 819 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
581.6			CLAY	26.7	0.0	
554.9			CLAY	3.0	26.7	GRAY
551.9	CARBONDALE	BRERETON	LIMESTONE	7.4	29.7	
544.5	CARBONDALE	ANNA	SHALE	2.5	37.1	
542.0	CARBONDALE	ANNA	BLACK SHALE	1.0	39.6	
541.0	CARBONDALE	HERRIN	COAL	3.8	40.6	ELEV TOP 541.03'
537.3	CARBONDALE	HERRIN	PYRITE	0.1	44.3	
537.2	CARBONDALE	HERRIN	COAL	0.2	44.4	
537.0	CARBONDALE	HERRIN	PYRITE	0.1	44.6	
536.9	CARBONDALE	HERRIN	COAL	1.7	44.7	
535.3	CARBONDALE		UNDERCLAY	0.8	46.3	

MAPID: 16300713000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NE NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.06957 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.475567 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 581.6 LOGGED (FT.): 47.0 LOG TYPE:

SOURCE: MIDWEST SF0819 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.6	CARBONDALE	HERRIN	COAL	5.8	41.0	

MAPID: 16300714000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NE NE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064807 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.483102 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 582.4 LOGGED (FT.): 52.3 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 820 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
582.4			CLAY	6.5	0.0	
575.9			CLAY	14.2	6.5	GRAY
561.7			CLAY	4.0	20.7	LT GY
557.7			LIMESTONE	5.3	24.7	
552.4			UNCLASSIFIED	0.7	30.0	GRAY
551.7			LIMESTONE	3.0	30.7	
548.7			SHALE	4.0	33.7	
544.7	CARBONDALE	BRERETON	LIMESTONE	4.3	37.7	
540.5	CARBONDALE	ANNA	SHALE	1.2	41.9	
539.3	CARBONDALE	ANNA	BLACK SHALE	2.3	43.1	
537.0	CARBONDALE	HERRIN	COAL	5.6	45.4	ELEV TOP 536.95'
531.4	CARBONDALE		UNDERCLAY	1.3	51.0	

MAPID: 16300714000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NE NE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064807 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.483102 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 582.4 LOGGED (FT.): 52.0 LOG TYPE:

SOURCE: MIDWEST SF0820 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
537.4	CARBONDALE	HERRIN	COAL	5.6	45.0	

MAPID: 16300715000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SE SE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064808

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.477432

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 579.3 LOGGED (FT.): 53.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 821

WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
579.3			CLAY	4.5	0.0	
574.8			GRAVEL	17.7	4.5	
557.1			LIMESTONE	5.7	22.2	GRAY
551.5			LIMESTONE	2.2	27.8	AND GRAY CLAY
549.3			CLAYSTONE	2.4	30.0	WITH LIME STREAKS; GY
546.9			CLAYSTONE	1.1	32.4	GRAY
545.8			LIMESTONE	8.5	33.5	
537.3			SHALE	2.4	42.0	
534.9			BLACK SHALE	1.3	44.4	
533.6			ROCK	0.7	45.7	COAL BALLS
533.0	CARBONDALE	HERRIN	COAL	3.7	46.3	
529.3	CARBONDALE		UNDERCLAY	3.0	50.0	

MAPID: 16300715000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SE SE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064808

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.477432

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 579.3 LOGGED (FT.): 53.0

LOG TYPE:

SOURCE: MIDWEST SF0821

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
533.3	CARBONDALE	HERRIN	COAL	3.7	46.0	

MAPID: 16300716000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NE SE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064806 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.479323 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 583.8 LOGGED (FT.): 45.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 822 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
583.8			CLAY	6.5	0.0	
577.3			SANDY CLAY	14.9	6.5	GRAY
562.4			SAND	3.9	21.4	WITH CLY; YL
558.5			CLAY	11.8	25.3	YL/GY
546.7			CLAY	4.0	37.1	GRAY
542.7			CLAY	1.6	41.1	WITH SOME COAL; DK GY
541.1			CLAY	0.8	42.7	UCLY; GY
540.4			LIMESTONE	1.6	43.4	

MAPID: 16300716000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NE SE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064806 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.479323 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 583.8 LOGGED (FT.): 45.0 LOG TYPE:

SOURCE: MIDWEST SF0822 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300717000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NE SE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064806 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.479323 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 584.5 LOGGED (FT.): 50.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 823 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
584.5			CLAY	8.4	0.0	
576.1			SANDY CLAY	17.3	8.4	GRAY
558.7			CLAY	4.4	25.8	GRAY
554.3			LIMESTONE	1.5	30.2	
552.8			LIMESTONE	1.5	31.7	
551.3			CLAYSTONE	2.2	33.2	GRAY
549.2			LIMESTONE	1.4	35.3	
547.7			CLAYSTONE	4.7	36.8	WITH LIMESTONE STREAKS; GY
543.1			LIMESTONE	0.7	41.4	
542.4			CLAYSTONE	0.8	42.1	GRAY
541.6			BLACK SHALE	0.3	42.9	
541.2	CARBONDALE	HERRIN	COAL	5.3	43.3	ELEV TOP 541.06
536.0	CARBONDALE		UNDERCLAY	1.3	48.5	

MAPID: 16300717000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NE SE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064806 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.479323 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 584.5 LOGGED (FT.): 50.0 LOG TYPE:

SOURCE: MIDWEST SF 823 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
541.5	CARBONDALE	HERRIN	COAL	5.3	43.0	

MAPID: 16300718000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: E2 W2

QUADRANGLE: MILLSTADT LONGITUDE: -90.066002 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.476495 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 582.0 LOGGED (FT.): 52.4 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 824 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
582.0			CLAY	4.4	0.0	
577.6			SANDY CLAY	17.7	4.4	LT GY
559.9			SAND	4.3	22.1	YELLOW
555.7			CLAY	23.8	26.3	GRAY
531.8			LIMESTONE	2.3	50.2	

MAPID: 16300718000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: E2 W2

QUADRANGLE: MILLSTADT LONGITUDE: -90.066002 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.476495 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 582.0 LOGGED (FT.): 52.0 LOG TYPE:

SOURCE: MIDWEST SF0824 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300719000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NE/c SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.068353 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.472707 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 583.5 LOGGED (FT.): 44.4 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 825 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
583.5			CLAY	6.4	0.0	
577.1			CLAY	20.3	6.4	YELLOW
556.8			CLAY	7.3	26.7	WITH LIME STREAKS; YL/GY
549.6			LIMESTONE	3.3	33.9	
546.3			CLOD	0.5	37.2	
545.8	CARBONDALE	HERRIN	COAL	1.5	37.7	ELEV TOP 545.84
544.3	CARBONDALE	HERRIN	SHALE	0.2	39.2	
544.2	CARBONDALE	HERRIN	COAL	2.1	39.3	
542.1	CARBONDALE	HERRIN	SHALE	0.1	41.4	
542.0	CARBONDALE	HERRIN	COAL	1.5	41.5	
540.5	CARBONDALE		UNDERCLAY	1.4	43.0	

MAPID: 16300719000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NE/c SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.068353 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.472707 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 583.5 LOGGED (FT.): 44.0 LOG TYPE:

SOURCE: MIDWEST SF0825 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.5	CARBONDALE	HERRIN	COAL	5.3	38.0	

MAPID: 16300720000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW NE SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.067177 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.473657 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 556.4 LOGGED (FT.): 22.3 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 826 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
556.4			CLAY	17.6	0.0	
538.8	CARBONDALE	SPRINGFIELD	COAL	1.8	17.6	
537.0	CARBONDALE		CLAYSTONE	2.8	19.4	

MAPID: 1630072000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** SW NE SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.067177 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.473657 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 556.4 **LOGGED (FT.):** 22.0 **LOG TYPE:**
SOURCE: MIDWEST SF 826 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
538.4	CARBONDALE	HERRIN	COAL	1.8	18.0	

MAPID: 16300721000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** SE NW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.069544 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.473662 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 561.2 **LOGGED (FT.):** 26.3 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 827 **WELL TYPE:** Coal Test
COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
561.2			CLAY	9.7	0.0	
551.5			LIMESTONE	1.8	9.7	
549.7			SHALE	6.0	11.5	
543.7			LIMESTONE	0.8	17.5	
542.9			CLAYSTONE	1.9	18.3	
540.9	CARBONDALE	HERRIN	COAL	0.6	20.3	
540.4	CARBONDALE	HERRIN	COAL	2.8	20.8	ELEV TOP 540.42
537.6	CARBONDALE	HERRIN	PYRITE	0.1	23.6	
537.5	CARBONDALE	HERRIN	COAL	1.3	23.7	
536.2	CARBONDALE		UNDERCLAY	1.3	25.0	THIS HOLE DRILLED NEAR BOTTOM OF HOLLOW

MAPID: 16300721000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** SE NW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.069544 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.473662 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 561.2 **LOGGED (FT.):** 26.0 **LOG TYPE:**
SOURCE: MIDWEST SF0827 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
541.2	CARBONDALE	HERRIN	COAL	4.0	20.0	

MAPID: 16300722000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: N2 SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.068368

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.474609

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 563.1 LOGGED (FT.): 29.6

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 828

WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
563.1			CLAY	9.3	0.0	
553.8			LIMESTONE	0.8	9.3	
553.0			CLAYSTONE	1.8	10.1	GRAY
551.3			LIMESTONE	1.8	11.8	
549.4			SHALE	2.7	13.7	
546.8			LIMESTONE	0.8	16.3	
545.9			SHALE	3.3	17.2	
542.7			LIMESTONE	1.6	20.4	
541.1			SOFT SHALE	0.2	22.0	
540.9	CARBONDALE	HERRIN	COAL	6.4	22.2	ELEV TOP 540.95
534.5	CARBONDALE		UNDERCLAY	1.0	28.6	

MAPID: 16300722000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: N2 SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.068368

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.474609

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 563.1 LOGGED (FT.): 30.0

LOG TYPE:

SOURCE: MIDWEST SF0828

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
541.1	CARBONDALE	HERRIN	COAL	6.4	22.0	

MAPID: 16300723000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW NE SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.067177 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.473657 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 579.3 LOGGED (FT.): 49.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 829 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
579.3			CLAY	16.0	0.0	
563.3			CLAY	11.4	16.0	GRAY
551.9			LIMESTONE	0.8	27.4	
551.0			CLAYSTONE	11.5	28.3	YELLOW
539.5			CLAYSTONE	2.0	39.8	BROWN
537.5			CLAYSTONE	3.2	41.8	GRAY
534.4			LIMESTONE	4.6	44.9	

MAPID: 16300723000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW NE SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.067177 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.473657 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 579.3 LOGGED (FT.): 50.0 LOG TYPE:

SOURCE: MIDWEST SF0829 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300724000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SE SE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064808 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.477432 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 583.3 LOGGED (FT.): 53.4 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 830 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
583.3			CLAY	8.6	0.0	
574.7			CLAY	16.5	8.6	GRAY
558.2			SAND	3.2	25.1	YELLOW
555.0			CLAY	3.8	28.3	LT GY
551.2			LIMESTONE	0.5	32.1	
550.7			LIMESTONE	0.4	32.6	
550.3			CLAYSTONE	20.4	33.0	GRAY

MAPID: 16300724000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** SE SE NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.064808 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.477432 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 583.3 **LOGGED (FT.):** 53.0 **LOG TYPE:**
SOURCE: MIDWEST SF0830 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300725000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** NE SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.065994 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.474599 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 578.1 **LOGGED (FT.):** 39.8 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 831 **WELL TYPE:** Coal Test
COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
578.1			CLAY	36.2	0.0	
541.9	CARBONDALE	SPRINGFIELD	COAL	2.0	36.2	ELEV TOP 541.91
539.9	CARBONDALE		UNDERCLAY	1.7	38.2	

MAPID: 16300725000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** NE SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.065994 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.474599 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 578.1 **LOGGED (FT.):** 40.0 **LOG TYPE:**
SOURCE: MIDWEST SF0831 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
542.1	CARBONDALE	HERRIN	COAL	2.0	36.0	

MAPID: 16300726000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NE SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.065994 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.474599 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 573.5 LOGGED (FT.): 37.4 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 832 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
573.5			CLAY	22.7	0.0	
550.8			LIMESTONE	0.8	22.7	
550.1			SHALE	1.8	23.4	
548.3	CARBONDALE	BRERETON	LIMESTONE	0.9	25.2	
547.4	CARBONDALE	ANNA	SHALE	4.3	26.1	
543.2	CARBONDALE	ANNA	BLACK SHALE	0.8	30.3	
542.3	CARBONDALE	HERRIN	COAL	1.8	31.2	ELEV TOP 542.35
540.5	CARBONDALE	HERRIN	SHALE	0.1	33.0	
540.4	CARBONDALE	HERRIN	COAL	3.7	33.1	
536.7	CARBONDALE		UNDERCLAY	0.7	36.8	

MAPID: 16300726000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NE SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.065994 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.474599 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 573.5 LOGGED (FT.): 37.0 LOG TYPE:

SOURCE: MIDWEST SF 832 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
542.5	CARBONDALE	HERRIN	COAL	5.6	31.0	

MAPID: 16300727000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NW/c NE NE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064807 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.483102 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 577.4 LOGGED (FT.): 56.1 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 833 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
577.4			CLAY	24.6	0.0	
552.8			LIMESTONE	3.2	24.6	UPPER 5" SOFT
549.6			CLAYSTONE	1.8	27.8	GRAY
547.9			LIMESTONE	4.3	29.5	CLAY STREAKS; GY
543.6	CARBONDALE		LIMESTONE	1.8	33.8	
541.8	CARBONDALE		SHALE	1.2	35.6	
540.6	CARBONDALE	BRERETON	LIMESTONE	8.7	36.8	
532.0	CARBONDALE	ANNA	SHALE	0.8	45.4	
531.2	CARBONDALE	ANNA	BLACK SHALE	2.4	46.2	
528.8	CARBONDALE	HERRIN	COAL	2.9	48.6	ELEV TOP 531.79
525.9	CARBONDALE	HERRIN	RASH	0.2	51.5	
525.7	CARBONDALE	HERRIN	COAL	0.6	51.7	
525.1	CARBONDALE	HERRIN	COAL	2.9	52.3	
522.2	CARBONDALE		UNDERCLAY	0.3	55.2	
521.9	CARBONDALE		LIMESTONE	0.6	55.5	

MAPID: 16300727000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NW/c NE NE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064807 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.483102 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 577.4 LOGGED (FT.): 53.0 LOG TYPE:

SOURCE: MIDWEST SF 833 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
531.4	CARBONDALE	HERRIN	COAL	6.6	46.0	

MAPID: 16300728000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: W2 SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.070713

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.472712

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 578.3 LOGGED (FT.): 49.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 834

WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
578.3			CLAY	13.5	0.0	
564.8			CLAY	7.8	13.5	GRAY
557.0			LIMESTONE	0.5	21.3	PROBABLY BOULDERS
556.5			CLAYSTONE	8.5	21.8	YELLOW
548.0			CLAYSTONE	7.8	30.3	GRAY
540.2			CLAYSTONE	10.8	38.1	GRAY
529.5			LIMESTONE	0.2	48.8	

MAPID: 16300728000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: W2 SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.070713

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.472712

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 578.3 LOGGED (FT.): 50.0

LOG TYPE:

SOURCE: MIDWEST SF0834

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300729000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NW NE SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.067189

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.475554

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 582.2 LOGGED (FT.): 51.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 835

WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
582.2			CLAY	34.8	0.0	
547.4			LIMESTONE	1.2	34.8	
546.3			CLAYSTONE	15.1	35.9	GRAY

MAPID: 16300729000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** NW NE SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.067189 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.475554 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 582.2 **LOGGED (FT.):** 51.0 **LOG TYPE:**
SOURCE: MIDWEST SF0835 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300730000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** SW NW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071911 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.47367 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 578.1 **LOGGED (FT.):** 51.8 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 836 **WELL TYPE:** Coal Test
COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
578.1			CLAY	16.3	0.0	
561.8			CLAY	9.5	16.3	GRAY
552.3			CLAY	9.6	25.8	YELLOW
542.8			CLAY	11.7	35.3	GRAY
531.1			SHALE	1.6	47.0	
529.5			LIMESTONE	0.8	48.6	
528.7			SHALE	2.4	49.4	

MAPID: 16300730000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** SW NW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071911 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.47367 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 578.1 **LOGGED (FT.):** 52.0 **LOG TYPE:**
SOURCE: MIDWEST SF0836 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300731000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: 165' S line, 165' W line of SW NW SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.072508 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.473167 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 579.9 LOGGED (FT.): 45.5 LOG TYPE: Drillers Log
 SOURCE: MIDWEST SMOKELESS FUEL 837 WELL TYPE: Coal Test
 COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
579.9			CLAY	23.4	0.0	
556.5			CLAY	17.6	23.4	GRAY
538.9	CARBONDALE	SPRINGFIELD	COAL	2.5	41.0	ELEV TOP 539.88
536.4	CARBONDALE		UNDERCLAY	2.0	43.5	

MAPID: 16300731000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: 165' S line, 165' W line of SW NW SW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.072508 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.473167 DATE COLLECTED: 0 / 0 / 1936
 SURFACE ELEVATION (FT.): 579.9 LOGGED (FT.): 46.0 LOG TYPE:
 SOURCE: MIDWEST SF0837 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
539.9	CARBONDALE	HERRIN	COAL	2.5	40.0	

MAPID: 16300732000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071984 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.477493 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 582.7 LOGGED (FT.): 44.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 838 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
582.7			CLAY	17.5	0.0	
565.2			CLAY	8.3	17.5	GRAY
556.9			LIMESTONE	1.1	25.8	
555.9			SHALE	3.3	26.8	
552.6	CARBONDALE	BRERETON	LIMESTONE	2.6	30.1	
550.0	CARBONDALE	ANNA	SHALE	4.9	32.7	
545.1	CARBONDALE	ANNA	BLACK SHALE	0.5	37.6	
544.6	CARBONDALE	HERRIN	COAL	1.6	38.1	ELEV TOP 544.6
543.0	CARBONDALE	HERRIN	SHALE	0.1	39.7	
542.9	CARBONDALE	HERRIN	COAL	3.9	39.8	
539.0	CARBONDALE		UNDERCLAY	0.8	43.7	

MAPID: 16300732000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071984 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.477493 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 582.7 LOGGED (FT.): 45.0 LOG TYPE:

SOURCE: MIDWEST SF0838 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
544.7	CARBONDALE	HERRIN	COAL	5.6	38.0	

MAPID: 16300733000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SW NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071911 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.47367 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 582.5 LOGGED (FT.): 49.3 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 839 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
582.5			CLAY	49.3	0.0	

MAPID: 16300733000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** SW NW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.071911 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.47367 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 582.5 **LOGGED (FT.):** 49.0 **LOG TYPE:**
SOURCE: MIDWEST SF0839 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300734000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** NW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.070742 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.47462 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 579.3 **LOGGED (FT.):** 43.5 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST SMOKELESS FUEL 840 **WELL TYPE:** Coal Test
COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
579.3			CLAY	36.5	0.0	
542.8			SMUT	1.0	36.5	
541.8	CARBONDALE	HERRIN	COAL	0.9	37.5	TOP OF COAL ERODED
540.9	CARBONDALE	HERRIN	SHALE	0.1	38.4	
540.8	CARBONDALE	HERRIN	COAL	2.6	38.5	
538.2	CARBONDALE		UNDERCLAY	2.4	41.1	

MAPID: 16300734000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 2 **QUARTERS/FOOTAGES:** NW SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.070742 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.47462 **DATE COLLECTED:** 0 / 0 / 1936
SURFACE ELEVATION (FT.): 579.3 **LOGGED (FT.):** 44.0 **LOG TYPE:**
SOURCE: MIDWEST SF 840 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
542.3	CARBONDALE	HERRIN	COAL	4.6	37.0	

MAPID: 16300735000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: S2 NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.068405

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.478413

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 579.3 LOGGED (FT.): 47.9

LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 841

WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
579.3			CLAY	23.9	0.0	
555.4			LIMESTONE	2.3	23.9	AND CLAY; GY
553.0			LIMESTONE	6.8	26.3	
546.2			UNCLASSIFIED	1.7	33.1	
544.5	CARBONDALE	BRERETON	LIMESTONE	5.1	34.8	
539.5	CARBONDALE	ANNA	BLACK SHALE	0.8	39.8	
538.6	CARBONDALE	HERRIN	COAL	2.9	40.7	ELEV TOP 540.66
535.7	CARBONDALE	HERRIN	COAL	0.3	43.6	
535.5	CARBONDALE	HERRIN	COAL	2.9	43.8	
532.5	CARBONDALE		UNDERCLAY	1.2	46.8	

MAPID: 16300735000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: S2 NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.068405

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.478413

DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 579.3 LOGGED (FT.): 46.0

LOG TYPE:

SOURCE: MIDWEST SF 841

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.3	CARBONDALE	HERRIN	COAL	6.1	39.0	

MAPID: 16300736000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NE NE SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064807 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.47554 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 577.2 LOGGED (FT.): 37.3 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 842 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
577.2			CLAY	7.5	0.0	
569.7			CLAY	20.7	7.5	GRAY
549.0			SHALE	5.9	28.2	
543.1	CARBONDALE	SPRINGFIELD	COAL	1.0	34.1	
542.1	CARBONDALE		UNDERCLAY	2.2	35.1	

MAPID: 16300736000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NE NE SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.064807 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.47554 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 577.2 LOGGED (FT.): 37.0 LOG TYPE:

SOURCE: MIDWEST SF0842 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
543.2	CARBONDALE	HERRIN	COAL	1.0	34.0	

MAPID: 16300737000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SE NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.069544 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.473662 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 569.7 LOGGED (FT.): 33.8 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 843 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
569.7			CLAY	12.3	0.0	
557.4			LIMESTONE	0.6	12.3	
556.9			SHALE	2.5	12.8	
554.4			LIMESTONE	0.7	15.3	
553.7			SHALE	1.4	16.0	
552.3			LIMESTONE	1.5	17.4	
550.8			SHALE	3.3	18.9	
547.4			LIMESTONE	5.4	22.3	4" SHALE PT AT 25'8"
542.0			SHALE	0.4	27.7	
541.6	CARBONDALE	HERRIN	COAL	5.3	28.1	ELEV TOP 541.57
536.4	CARBONDALE		UNDERCLAY	0.4	33.3	

MAPID: 16300737000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: SE NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.069544 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.473662 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 569.7 LOGGED (FT.): 34.0 LOG TYPE:

SOURCE: MIDWEST SF0843 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
541.7	CARBONDALE	HERRIN	COAL	5.3	28.0	

MAPID: 16300738000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071948 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.47558 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 585.4 LOGGED (FT.): 48.8 LOG TYPE: Drillers Log

SOURCE: MIDWEST SMOKELESS FUEL 845 WELL TYPE: Coal Test

COMMENT: HAND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
585.4			CLAY	18.3	0.0	
567.1			CLAY	3.8	18.3	YELLOW
563.4			BOULDER	1.5	22.0	
561.9			CLAY	0.8	23.5	YELLOW
561.1			LIMESTONE	0.6	24.3	
560.6			CLAYSTONE	6.3	24.8	YL/GY
554.2	CARBONDALE	BRERETON	LIMESTONE	7.3	31.2	
546.9	CARBONDALE	ANNA	SHALE	0.6	38.5	
546.3	CARBONDALE	ANNA	BLACK SHALE	2.7	39.1	
543.6	CARBONDALE	HERRIN	COAL	5.8	41.8	ELEV TOP 543.61
537.8	CARBONDALE		UNDERCLAY	1.3	47.6	

MAPID: 16300738000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 2 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: MILLSTADT LONGITUDE: -90.071948 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.47558 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 585.4 LOGGED (FT.): 49.0 LOG TYPE:

SOURCE: MIDWEST SF 845 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
543.4	CARBONDALE	HERRIN	COAL	5.8	42.0	

MAPID: 16300121000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES: 3600' S line, 2600' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.082346 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.478976 DATE COLLECTED: 11 / 27 / 1926

SURFACE ELEVATION (FT.): 604.0 LOGGED (FT.): 50.0 LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.0	CARBONDALE	HERRIN	COAL	6.0	44.0	50' THRU COAL

MAPID: 16300121000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 3 **QUARTERS/FOOTAGES:** 3600' S line, 2600' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.082346 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.478976 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 604.0 **LOGGED (FT.):** 50.0 **LOG TYPE:**
SOURCE: FRAN CC 000E **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
558.0	CARBONDALE	HERRIN	COAL	6.0	46.0	

MAPID: 16300331000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 3 **QUARTERS/FOOTAGES:** SW SW SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.081068 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.469974 **DATE COLLECTED:** 5 / 0 / 1928
SURFACE ELEVATION (FT.): 590.1 **LOGGED (FT.):** 27.0 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 31 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
590.1			UNCONSOLIDATED	15.0	0.0	
575.1			SANDY CLAY	8.0	15.0	
567.1			SMUT	2.0	23.0	
565.1			COAL	2.0	25.0	

MAPID: 16300331000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 3 **QUARTERS/FOOTAGES:** SW SW SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.081068 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.469974 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 590.1 **LOGGED (FT.):** 27.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0031 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
567.1	CARBONDALE	HERRIN	COAL	4.0	23.0	

MAPID: 16300332000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 3 **QUARTERS/FOOTAGES:** SW NE SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.085687 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.473882 **DATE COLLECTED:** 6 / 15 / 1928
SURFACE ELEVATION (FT.): 600.6 **LOGGED (FT.):** 52.0 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 55 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
600.6			UNCONSOLIDATED	20.0	0.0	
580.6			SANDSTONE/SHALE	21.5	20.0	
559.1			ROCK	1.0	41.5	
558.1			CLAYSTONE	1.0	42.5	
557.1			ROCK	1.5	43.5	
555.6			SHALE	4.0	45.0	
551.6			SHALE	1.0	49.0	BLUE
550.6			COAL	2.0	50.0	

MAPID: 16300332000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 3 **QUARTERS/FOOTAGES:** SW NE SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.085687 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.473882 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 600.6 **LOGGED (FT.):** 52.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0055 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.6	CARBONDALE	HERRIN	COAL	2.0	50.0	

MAPID: 16300333000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 3 **QUARTERS/FOOTAGES:** 1320' S line, 2640' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.082348 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.472682 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 600.7 **LOGGED (FT.):** 41.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0056 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
565.7	CARBONDALE	HERRIN	COAL	5.9	35.0	

MAPID: 16300333000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES: 1320' S line, 2640' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.082348

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.472682

DATE COLLECTED:

SURFACE ELEVATION (FT.): 601.0

LOGGED (FT.): 40.9

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
581.0	CARBONDALE	LAWSON	SILTY SHALE	7.5	20.0	
573.5	CARBONDALE	BRERETON	LIMESTONE	7.5	27.5	
566.0	CARBONDALE	HERRIN	COAL	5.9	35.0	

MAPID: 16300333000C VERSION: 3

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES: 1320' S line, 2640' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.082348

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.472682

DATE COLLECTED: 6 / 5 / 1928

SURFACE ELEVATION (FT.): 600.7

LOGGED (FT.): 40.9

LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 56

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
600.7			UNCONSOLIDATED	20.0	0.0	
580.7			SANDSTONE/SHALE	7.5	20.0	
573.2			LIMESTONE	7.5	27.5	
565.7	CARBONDALE	HERRIN	COAL	5.9	35.0	

MAPID: 16300334000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES: SW NE SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.07653 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.47373 DATE COLLECTED: 6 / 15 / 1928

SURFACE ELEVATION (FT.): 595.0 LOGGED (FT.): 60.0 LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 57 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
595.0			UNCONSOLIDATED	25.0	0.0	
570.0			SANDSTONE/SHALE	10.0	25.0	
560.0			SHALE	8.3	35.0	BLUE
551.7			ROCK	0.8	43.3	
551.0			SHALE	2.0	44.0	BLUE
549.0			SHALE	6.0	46.0	
543.0			SANDSTONE	2.0	52.0	
541.0			SHALE	4.0	54.0	
537.0			SANDSTONE	2.0	58.0	

MAPID: 16300334000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES: SW NE SE

QUADRANGLE: MILLSTADT LONGITUDE: -90.07653 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.47373 DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): 595.0 LOGGED (FT.): 60.0 LOG TYPE:

SOURCE: MISSISSIPPI COAL CORP. 0057 WELL TYPE: Coal Test

COMMENT: SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300335000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES: SE/c SW SW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.081148

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.477635

DATE COLLECTED: 5 / 28 / 1928

SURFACE ELEVATION (FT.): 608.4 LOGGED (FT.): 41.2

LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 81

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
608.4			UNCONSOLIDATED	18.0	0.0	
590.4			SANDSTONE/SHALE	3.5	18.0	
586.9			SHALE	4.0	21.5	
582.9			ROCK	1.3	25.5	
581.6			CLAYSTONE	1.0	26.8	
580.6			ROCK	2.0	27.8	
578.6			SHALE	3.0	29.8	BLUE
575.6	CARBONDALE	ANNA	BLACK SHALE	2.8	32.8	
572.8	CARBONDALE	HERRIN	COAL	5.6	35.6	

MAPID: 16300335000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES: SE/c SW SW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.081148

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.477635

DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): 608.4 LOGGED (FT.): 43.0

LOG TYPE:

SOURCE: MISSISSIPPI COAL CORP. 0081

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.4	CARBONDALE	HERRIN	COAL	5.6	38.0	

MAPID: 16300336000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES:

QUADRANGLE: MILLSTADT LONGITUDE: -90.082275

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.476696

DATE COLLECTED: 7 / 12 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 42.5

LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 81A

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	21.0	0.0	
-			SANDSTONE/SHALE	9.0	21.0	
-			SHALE	1.0	30.0	
-			ROCK	3.0	31.0	
-			SHALE	1.5	34.0	
-			SMUT	0.5	35.5	
-	CARBONDALE	ANNA	BLACK SHALE	1.0	36.0	
-	CARBONDALE	HERRIN	COAL	5.5	37.0	

MAPID: 16300336000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES:

QUADRANGLE: MILLSTADT LONGITUDE: -90.082275

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.476696

DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 43.0

LOG TYPE:

SOURCE: MISSISSIPPI COAL CORP. 081A

WELL TYPE: Coal Test

COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	5.5	37.0	

MAPID: 16300337000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES: SW SE NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.076596 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.477561 DATE COLLECTED: 6 / 14 / 1928

SURFACE ELEVATION (FT.): 597.9 LOGGED (FT.): 49.3 LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 82 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
597.9			UNCONSOLIDATED	23.0	0.0	
574.9			SANDSTONE/SHALE	10.5	23.0	
564.4			ROCK	0.6	33.5	
563.8			SHALE	1.3	34.1	BLUE
562.6			LIMESTONE	3.3	35.3	
559.2			SHALE	2.2	38.7	BLUE
557.1			SMUT	1.3	40.8	
555.8	CARBONDALE	ANNA	BLACK SHALE	0.9	42.1	
554.9	CARBONDALE	HERRIN	COAL	6.3	43.0	

MAPID: 16300337000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES: SW SE NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.076596 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.477561 DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): 597.9 LOGGED (FT.): 49.0 LOG TYPE:

SOURCE: MISSISSIPPI COAL CORP. 0082 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
554.9	CARBONDALE	HERRIN	COAL	6.3	43.0	

MAPID: 16300338000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES: SW NW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.081186

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.481467

DATE COLLECTED: 6 / 7 / 1928

SURFACE ELEVATION (FT.): 599.3 LOGGED (FT.): 46.0

LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 106

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
599.3			UNCONSOLIDATED	20.0	0.0	
579.3			SAND	2.0	20.0	
577.3			SANDY CLAY	6.0	22.0	
571.3			ROCK	1.0	28.0	
570.3			SANDY CLAY	3.0	29.0	
567.3			SHALE	8.0	32.0	LIGHT
559.3			ROCK	6.0	40.0	NO COAL; BR

MAPID: 16300338000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES: SW NW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.081186

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.481467

DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): 599.3 LOGGED (FT.): 46.0

LOG TYPE:

SOURCE: MISSISSIPPI COAL CORP. 0106

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300339000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES: SW NE NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.076658

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.481393

DATE COLLECTED: 6 / 14 / 1928

SURFACE ELEVATION (FT.): 604.0 LOGGED (FT.): 39.0

LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 107

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
604.0			UNCONSOLIDATED	21.0	0.0	
583.0			GRAVEL	2.0	21.0	
581.0			SHALE	6.0	23.0	
575.0			SANDSTONE/SHALE	3.0	29.0	
572.0			SMUT	4.5	32.0	
567.5	CARBONDALE	HERRIN	COAL	2.5	36.5	PROBABLY WEATHERED HERRIN

MAPID: 16300339000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 3 **QUARTERS/FOOTAGES:** SW NE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.076658 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.481393 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 604.0 **LOGGED (FT.):** 39.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 0107 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
572.0	CARBONDALE	HERRIN	COAL	7.0	32.0	

MAPID: 16300340000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 3 **QUARTERS/FOOTAGES:** NE NE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.074436 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.48327 **DATE COLLECTED:** 7 / 11 / 1928
SURFACE ELEVATION (FT.): 600.6 **LOGGED (FT.):** 40.1 **LOG TYPE:** Drillers Log
SOURCE: MISSISSIPPI COAL CORP. 107A **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
600.6			UNCONSOLIDATED	18.0	0.0	
582.6			SANDSTONE/SHALE	4.5	18.0	
578.1			CLAYSTONE	3.5	22.5	
574.6			LIMESTONE	2.0	26.0	
572.6			SHALE	2.0	28.0	BLUE
570.6			ROCK	1.0	30.0	
569.6			SMUT	2.5	31.0	
567.1	CARBONDALE	ANNA	BLACK SHALE	0.7	33.5	
566.4	CARBONDALE	HERRIN	COAL	5.9	34.2	

MAPID: 16300340000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 3 **QUARTERS/FOOTAGES:** NE NE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.074436 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.48327 **DATE COLLECTED:** 0 / 0 / 1928
SURFACE ELEVATION (FT.): 600.6 **LOGGED (FT.):** 40.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. 107A **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
566.6	CARBONDALE	HERRIN	COAL	5.9	34.0	

MAPID: 16300341000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES: SW/c SE NE NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.074396 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.481355 DATE COLLECTED: 7 / 12 / 1928

SURFACE ELEVATION (FT.): 595.0 LOGGED (FT.): 49.3 LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CORP. 107B WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
595.0			UNCONSOLIDATED	20.0	0.0
575.0			SANDSTONE/SHALE	7.0	20.0
568.0			ROCK	1.0	27.0
567.0			SHALE	1.5	28.0
565.5			ROCK	4.0	29.5
561.5			SHALE	1.0	33.5
560.5			ROCK	2.0	34.5
558.5			SHALE	1.0	36.5
557.5			ROCK	1.3	37.5
556.2			SMUT	1.0	38.8
555.2	CARBONDALE	ANNA	BLACK SHALE	2.8	39.8
552.4	CARBONDALE	HERRIN	COAL	6.8	42.6

MAPID: 16300341000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES: SW/c SE NE NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.074396 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.481355 DATE COLLECTED: 0 / 0 / 1928

SURFACE ELEVATION (FT.): 595.0 LOGGED (FT.): 50.0 LOG TYPE:

SOURCE: MISSISSIPPI COAL CORP. 107B WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
552.0	CARBONDALE	HERRIN	COAL	6.8	43.0

MAPID: 16327861000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 3 **QUARTERS/FOOTAGES:** 20' N line, 700' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.075785 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.484194 **DATE COLLECTED:** 12 / 28 / 1938
SURFACE ELEVATION (FT.): 574.3 **LOGGED (FT.):** 22.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 14 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
574.3	PLEISTOCENE		CLAY	13.0	0.0	
561.3	CARBONDALE	ANNA	BLACK SHALE	2.0	13.0	
559.3	CARBONDALE	HERRIN	COAL	6.5	15.0	
552.8	CARBONDALE		UNDERCLAY	0.5	21.5	

MAPID: 16327862000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 3 **QUARTERS/FOOTAGES:** 600' N line, 780' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.076032 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.482597 **DATE COLLECTED:** 12 / 30 / 1938
SURFACE ELEVATION (FT.): 593.1 **LOGGED (FT.):** 38.5 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 19 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
593.1	PLEISTOCENE		CLAY	23.0	0.0	
570.1	CARBONDALE	BRERETON	LIMESTONE	4.0	23.0	
566.1	CARBONDALE	ANNA	BLACK SHALE	2.0	27.0	CARB; BLK
564.1	CARBONDALE	ANNA	LIMESTONE	2.5	29.0	
561.6	CARBONDALE	ANNA	BLACK SHALE	0.5	31.5	
561.1	CARBONDALE	HERRIN	COAL	6.0	32.0	
555.1	CARBONDALE		UNDERCLAY	0.5	38.0	

MAPID: 16327863000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 3 **QUARTERS/FOOTAGES:** 350' N line, 840' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.076259 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.483292 **DATE COLLECTED:** 12 / 31 / 1938
SURFACE ELEVATION (FT.): 582.0 **LOGGED (FT.):** 26.5 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 22 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
582.0	PLEISTOCENE		CLAY	20.0	0.0	
562.0	CARBONDALE	HERRIN	COAL	6.0	20.0	
556.0	CARBONDALE		UNDERCLAY	0.5	26.0	

MAPID: 16327864000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES: 930' N line, 910' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.076471 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.481695 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 597.3 LOGGED (FT.): 38.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 25 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
597.3	PLEISTOCENE		CLAY	24.0	0.0
573.3	CARBONDALE		LIMESTONE	1.0	24.0
572.3	CARBONDALE		SHALE	1.0	25.0
571.3	CARBONDALE		LIMESTONE	1.0	26.0
570.3	CARBONDALE		SHALE	1.0	27.0
569.3	CARBONDALE	BRERETON	LIMESTONE	2.0	28.0
567.3	CARBONDALE	ANNA	BLACK SHALE	1.5	30.0
565.8	CARBONDALE	HERRIN	COAL	6.5	31.5
559.3	CARBONDALE		UNDERCLAY	0.5	38.0

MAPID: 16327865000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES: 740' N line, 1040' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.076939 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.482225 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 577.8 LOGGED (FT.): 27.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 27 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
577.8	PLEISTOCENE		CLAY	13.0	0.0
564.8	CARBONDALE	BRERETON	LIMESTONE	2.0	13.0
562.8	CARBONDALE	ANNA	BLACK SHALE	2.5	15.0
560.3	CARBONDALE	HERRIN	COAL	6.0	17.5
554.3	CARBONDALE		UNDERCLAY	0.5	23.5

MAPID: 1632786600C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES: 1290' N line, 980' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.076695 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.480705 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 599.1 LOGGED (FT.): 42.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 29 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
599.1	PLEISTOCENE		CLAY	27.0	0.0
572.1	CARBONDALE		LIMESTONE	2.0	27.0
570.1	CARBONDALE		SHALE	1.0	29.0
569.1	CARBONDALE	BRERETON	LIMESTONE	3.0	30.0
566.1	CARBONDALE	ANNA	BLACK SHALE	3.0	33.0
563.1	CARBONDALE	HERRIN	COAL	6.0	36.0
557.1	CARBONDALE		UNDERCLAY	0.5	42.0

MAPID: 16327867000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES: 950' N line, 260' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.074184 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.481601 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 594.0 LOGGED (FT.): 47.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 31 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
594.0	PLEISTOCENE		CLAY	24.0	0.0
570.0	CARBONDALE		LIMESTONE	5.0	24.0
565.0	CARBONDALE		SHALE	1.0	29.0
564.0	CARBONDALE	BRERETON	LIMESTONE	5.0	30.0
559.0	CARBONDALE	ANNA	BLACK SHALE	2.0	35.0
557.0	CARBONDALE	ANNA	CONGLOMERATE	2.0	37.0
555.0	CARBONDALE	ANNA	BLACK SHALE	1.5	39.0
553.5	CARBONDALE	HERRIN	COAL	6.0	40.5
547.5	CARBONDALE		UNDERCLAY	0.5	46.5

MAPID: 16327868000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 3 QUARTERS/FOOTAGES: 290' N line, 350' E line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.074539 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.48343 DATE COLLECTED: 0 / 0 / 1938
 SURFACE ELEVATION (FT.): LOGGED (FT.): 43.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 33 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		CLAY	25.0	0.0	
-	CARBONDALE		LIMESTONE	5.0	25.0	
-	CARBONDALE		SHALE	2.0	30.0	
-	CARBONDALE	BRERETON	LIMESTONE	3.0	32.0	
-	CARBONDALE	ANNA	BLACK SHALE	1.5	35.0	
-	CARBONDALE	HERRIN	COAL	6.0	36.5	
-	CARBONDALE		UNDERCLAY	0.5	42.5	

MAPID: 16300832000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 5 QUARTERS/FOOTAGES: SW SW NW
 QUADRANGLE: COLUMBIA LONGITUDE: -90.12715 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.478077 DATE COLLECTED: 0 / 0 / 1933
 SURFACE ELEVATION (FT.): 602.0 LOGGED (FT.): 715.0 LOG TYPE:
 SOURCE: HAVERSTICK WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300821000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 8 QUARTERS/FOOTAGES: 165' N line, 165' W line of NW SW SW
 QUADRANGLE: COLUMBIA LONGITUDE: -90.127869 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.458322 DATE COLLECTED: 0 / 0 / 1929
 SURFACE ELEVATION (FT.): 665.0 LOGGED (FT.): 600.0 LOG TYPE:
 SOURCE: TIMBERLAKE WELL TYPE: Oil and Gas Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300098000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 9 **QUARTERS/FOOTAGES:** 1750' S line, 500' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.093276 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.459868 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 620.4 **LOGGED (FT.):** 530.0 **LOG TYPE:**
SOURCE: MILLSTA EL **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.4	CARBONDALE	HERRIN	COAL	6.0	50.0	

MAPID: 16300739000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 9 **QUARTERS/FOOTAGES:** 1320' S line, 680' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.093919 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.458681 **DATE COLLECTED:** 0 / 0 / 1939
SURFACE ELEVATION (FT.): 620.0 **LOGGED (FT.):** 615.0 **LOG TYPE:**
SOURCE: SEWELLWELL **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
565.0	CARBONDALE	HERRIN	COAL	-	55.0	

MAPID: 16300740000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 9 **QUARTERS/FOOTAGES:** 1730' S line, 360' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.092787 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.459813 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 620.0 **LOGGED (FT.):** 56.0 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.0	CARBONDALE	HERRIN	COAL	6.0	50.0	

MAPID: 16300099000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 10 **QUARTERS/FOOTAGES:** 2100' S line, 2625' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.082109 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.460577 **DATE COLLECTED:** 0 / 0 / 1916
SURFACE ELEVATION (FT.): 600.4 **LOGGED (FT.):** 120.0 **LOG TYPE:**
SOURCE: ROOS 2 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
581.4	CARBONDALE	HERRIN	COAL	6.0	19.0	

MAPID: 16300100000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 10 **QUARTERS/FOOTAGES:** 1000' S line, 2600' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.081982 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.457538 **DATE COLLECTED:** 0 / 0 / 1916
SURFACE ELEVATION (FT.): 594.9 **LOGGED (FT.):** 272.0 **LOG TYPE:**
SOURCE: ROOS 0001 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
571.9	CARBONDALE	HERRIN	COAL	6.0	23.0
531.9	CARBONDALE	SPRINGFIELD	COAL	3.0	63.0

MAPID: 16300100000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 10 **QUARTERS/FOOTAGES:** 1000' S line, 2600' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.081982 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.457538 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 595.0 **LOGGED (FT.):** 29.8 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
573.0	CARBONDALE	BRERETON	LIMESTONE	2.0	22.0
571.0	CARBONDALE	HERRIN	COAL	5.8	24.0

MAPID: 16300101000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 10 **QUARTERS/FOOTAGES:** 60' S line, 660' W line of NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.08918 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.46223 **DATE COLLECTED:** 0 / 0 / 1916
SURFACE ELEVATION (FT.): 612.5 **LOGGED (FT.):** 324.0 **LOG TYPE:**
SOURCE: MILLSTA MC **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
584.5	CARBONDALE	HERRIN	COAL	6.0	28.0

MAPID: 16323730000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 10 QUARTERS/FOOTAGES: 25' S line, 105' E line of NW SE NW
 QUADRANGLE: MILLSTADT LONGITUDE: -90.084891 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.463818 DATE COLLECTED: 9 / 25 / 1973
 SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 304.0 LOG TYPE: Drillers Log
 SOURCE: D&S DRILLING WELL TYPE: Water Well
 COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
600.0			UNCONSOLIDATED	35.0	0.0	
565.0			LIMESTONE	6.0	35.0	
559.0	CARBONDALE	HERRIN	COAL	5.0	41.0	
554.0	CARBONDALE		SHALE	44.0	46.0	
510.0	CARBONDALE		SANDSTONE	31.0	90.0	
479.0	CARBONDALE		SHALE	56.0	121.0	
423.0	MISSISSIPPIAN		LIMESTONE	9.0	177.0	
414.0	MISSISSIPPIAN		SHALE	28.0	186.0	
386.0	MISSISSIPPIAN		LIMESTONE	17.0	214.0	
369.0	MISSISSIPPIAN		SHALE	10.0	231.0	
359.0	MISSISSIPPIAN		LIMESTONE	12.0	241.0	
347.0	MISSISSIPPIAN		SHALE	5.0	253.0	
342.0	MISSISSIPPIAN		SANDSTONE	46.0	258.0	

MAPID: 16300768000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 11 QUARTERS/FOOTAGES: 4075' S line, 4400' E line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.069752 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.465801 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 537.9 LOGGED (FT.): 0.0 LOG TYPE: Drillers Log
 SOURCE: WELL TYPE: Slope Mine
 COMMENT: SLOPE MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
537.9			MINE OPENING	0.0	0.0	LOCAL MINE

MAPID: 16300769000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 11 QUARTERS/FOOTAGES: 5150' S line, 3600' E line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.066931 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.468791 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 583.3 LOGGED (FT.): 0.0 LOG TYPE: Drillers Log
 SOURCE: WELL TYPE: Mine Shaft
 COMMENT: LOCAL MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
583.3			MINE OPENING	0.0	0.0	MINE SHAFT

MAPID: 16300102000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 12 **QUARTERS/FOOTAGES:** 150' S line, 1250' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.040291 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.455189 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 543.3 **LOGGED (FT.):** 40.0 **LOG TYPE:**
SOURCE: SMITH 0011 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300822000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 12 **QUARTERS/FOOTAGES:** SE NE SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.046265 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.45918 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 520.0 **LOGGED (FT.):** 350.0 **LOG TYPE:**
SOURCE: PACKARD **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16324312000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 12 **QUARTERS/FOOTAGES:** 103' S line, 106' E line of NW SE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.040878 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.458604 **DATE COLLECTED:** 5 / 19 / 1977
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 27.0 **LOG TYPE:** Drillers Log
SOURCE: CLARENCE KOHNEN **WELL TYPE:** Water Well
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			SOIL	1.0	0.0
-			CLAY	9.0	1.0 YELLOW
-	CARBONDALE	HERRIN	COAL	4.0	10.0
-	CARBONDALE		SANDSTONE	1.0	14.0 GRAY
-	CARBONDALE		SHALE	12.0	15.0

MAPID: 16324868000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 12 **QUARTERS/FOOTAGES:** 1000' S line, 1100' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.039761 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.45754 **DATE COLLECTED:** 4 / 12 / 1978
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 58.0 **LOG TYPE:** Drillers Log
SOURCE: CLARENCE KOHNEN **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			SOIL	1.0	0.0	
-			CLAY	11.0	1.0	YELLOW
-			SANDY CLAY	10.0	12.0	RED
-			SAND	12.0	22.0	YELLOW
-			SANDY CLAY	8.0	34.0	GRAY
-	CARBONDALE	ANNA	SHALE	8.0	42.0	YELLOW
-	CARBONDALE	HERRIN	COAL	3.0	50.0	
-	CARBONDALE		SHALE	5.0	53.0	

MAPID: 16300084000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** 2500' S line, 600' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.038187 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.447167 **DATE COLLECTED:** 2 / 16 / 1931
SURFACE ELEVATION (FT.): 540.0 **LOGGED (FT.):** 53.0 **LOG TYPE:** Drillers Log
SOURCE: HARVEY SMITH 16 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.0			CLAY	30.3	0.0	
509.7			SHALE	8.5	30.3	
501.2			LIMESTONE	6.8	38.8	
494.3			BLACK SHALE	1.3	45.7	
493.0	CARBONDALE	HERRIN	COAL	5.2	47.0	
487.8	CARBONDALE		UNDERCLAY	0.8	52.2	

MAPID: 16300084000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** 2500' S line, 600' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.038187 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.447167 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 540.0 **LOGGED (FT.):** 53.0 **LOG TYPE:**
SOURCE: SMITH 0016 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
493.0	CARBONDALE	HERRIN	COAL	5.2	47.0	

MAPID: 16300103000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** NE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.038248 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.452976 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 520.0 **LOGGED (FT.):** 50.0 **LOG TYPE:**
SOURCE: SMITH 0001 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300104000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** NE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.038248 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.452976 **DATE COLLECTED:** 2 / 16 / 1931
SURFACE ELEVATION (FT.): 540.0 **LOGGED (FT.):** 54.0 **LOG TYPE:** Drillers Log
SOURCE: HARVEY SMITH **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
540.0			CLAY	27.0	0.0
513.0			SANDY SHALE	1.5	27.0
511.5			SHALE	11.5	28.5
500.0			LIMESTONE	9.0	40.0
491.0			BLACK SHALE	2.0	49.0
489.0			COAL	2.0	51.0
487.0			UNDERCLAY	1.0	53.0

MAPID: 16300104000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** NE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.038248 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.452976 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 540.0 **LOGGED (FT.):** 54.0 **LOG TYPE:**
SOURCE: SMITH 0002 **WELL TYPE:** Coal Test
COMMENT: SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
489.0	CARBONDALE	HERRIN	COAL	2.0	51.0

MAPID: 16300105000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** NE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.038248 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.452976 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 540.0 **LOGGED (FT.):** 52.0 **LOG TYPE:**
SOURCE: SMITH 0003 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300106000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** SE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.038323 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.449345 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 515.0 **LOGGED (FT.):** 50.0 **LOG TYPE:**
SOURCE: SMITH 0004 **WELL TYPE:** Coal Test
COMMENT: SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
476.0	CARBONDALE	HERRIN	COAL	1.0	39.0

MAPID: 16300107000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** SE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.038323 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.449345 **DATE COLLECTED:** 2 / 16 / 1931
SURFACE ELEVATION (FT.): 515.0 **LOGGED (FT.):** 28.0 **LOG TYPE:** Drillers Log
SOURCE: HARVEY SMITH **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
515.0			CLAY	16.0	0.0
499.0			LIMESTONE	7.5	16.0
491.5			BLACK SHALE	1.3	23.5
490.2			COAL	1.7	24.8
488.5			UNDERCLAY	1.5	26.5

MAPID: 16300107000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** SE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.038323 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.449345 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 515.0 **LOGGED (FT.):** 28.0 **LOG TYPE:**
SOURCE: SMITH 0005 **WELL TYPE:** Coal Test
COMMENT: SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
490.0	CARBONDALE	HERRIN	COAL	1.7	25.0	

MAPID: 16300108000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** SE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.038323 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.449345 **DATE COLLECTED:** 2 / 16 / 1931
SURFACE ELEVATION (FT.): 515.0 **LOGGED (FT.):** 31.2 **LOG TYPE:** Drillers Log
SOURCE: HARVEY SMITH **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
515.0			CLAY	16.0	0.0	
499.0			BOULDER	4.0	16.0	
495.0			SHALE	7.0	20.0	
488.0			COAL	3.2	27.0	
484.8			UNDERCLAY	1.0	30.2	

MAPID: 16300108000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** SE NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.038323 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.449345 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 515.0 **LOGGED (FT.):** 31.0 **LOG TYPE:**
SOURCE: SMITH 0006 **WELL TYPE:** Coal Test
COMMENT: SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
488.0	CARBONDALE	HERRIN	COAL	3.2	27.0	

MAPID: 16300109000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 13 QUARTERS/FOOTAGES: NE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.047446 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.452919 DATE COLLECTED: 2 / 16 / 1931

SURFACE ELEVATION (FT.): 515.0 LOGGED (FT.): 50.0 LOG TYPE: Drillers Log

SOURCE: HARVEY SMITH WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
515.0			CLAY	32.0	0.0	
483.0			SHALE	18.0	32.0	

MAPID: 16300109000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 13 QUARTERS/FOOTAGES: NE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.047446 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.452919 DATE COLLECTED: 0 / 0 / 1926

SURFACE ELEVATION (FT.): 515.0 LOGGED (FT.): 50.0 LOG TYPE:

SOURCE: SMITH 0007 WELL TYPE: Coal Test

COMMENT: SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300110000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 13 QUARTERS/FOOTAGES: NE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.047446 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.452919 DATE COLLECTED: 2 / 16 / 1931

SURFACE ELEVATION (FT.): 520.0 LOGGED (FT.): 50.0 LOG TYPE: Drillers Log

SOURCE: HARVEY SMITH WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
520.0			CLAY	30.0	0.0	
490.0			SHALE	20.0	30.0	

MAPID: 1630011000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** NE NW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.047446 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.452919 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 520.0 **LOGGED (FT.):** 50.0 **LOG TYPE:**
SOURCE: SMITH 0008 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300111000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** NW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.042847 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.452946 **DATE COLLECTED:** 2 / 16 / 1931
SURFACE ELEVATION (FT.): 540.0 **LOGGED (FT.):** 43.5 **LOG TYPE:** Drillers Log
SOURCE: HARVEY SMITH **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.0			CLAY	26.0	0.0	
514.0			BOULDER	5.0	26.0	
509.0	CARBONDALE	BRERETON	LIMESTONE	3.0	31.0	
506.0	CARBONDALE	ANNA	SHALE	2.0	34.0	BLACK
504.0	CARBONDALE		SMUT	2.0	36.0	
502.0	CARBONDALE	HERRIN	COAL	4.4	38.0	
497.6	CARBONDALE		UNDERCLAY	1.1	42.4	

MAPID: 16300111000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** NW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.042847 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.452946 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 540.0 **LOGGED (FT.):** 44.0 **LOG TYPE:**
SOURCE: SMITH 0009 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
504.0	CARBONDALE	HERRIN	COAL	6.4	36.0	

MAPID: 16300112000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** 4125' S line, 1500' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.041244 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.451664 **DATE COLLECTED:** 2 / 16 / 1931
SURFACE ELEVATION (FT.): 528.4 **LOGGED (FT.):** 50.0 **LOG TYPE:** Drillers Log
SOURCE: HARVEY SMITH 10 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
528.4			CLAY	27.0	0.0
501.4			BOULDER	5.0	27.0
496.4			SHALE	18.0	32.0

MAPID: 16300112000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** 4125' S line, 1500' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.041244 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.451664 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 528.4 **LOGGED (FT.):** 50.0 **LOG TYPE:**
SOURCE: SMITH 0010 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300113000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** 3200' S line, 3700' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.049022 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.449134 **DATE COLLECTED:** 2 / 16 / 1931
SURFACE ELEVATION (FT.): 574.1 **LOGGED (FT.):** 32.0 **LOG TYPE:** Drillers Log
SOURCE: HARVEY SMITH 12 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
574.1			CLAY	19.0	0.0
555.1			LIMESTONE	6.5	19.0
548.6			BLACK SHALE	2.5	25.5
546.1			COAL	2.8	28.0
543.3			UNDERCLAY	1.3	30.8

MAPID: 16300113000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** 3200' S line, 3700' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.049022 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.449134 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 574.1 **LOGGED (FT.):** 32.0 **LOG TYPE:**
SOURCE: SMITH 0012 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
546.1	CARBONDALE	HERRIN	COAL	2.8	28.0

MAPID: 16300114000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** 1980' N line, 660' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.052042 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.449222 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 564.0 **LOGGED (FT.):** 50.0 **LOG TYPE:**
SOURCE: SMITH 0013 **WELL TYPE:** Coal Test
COMMENT: SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
521.0	CARBONDALE	HERRIN	COAL	6.3	43.0

MAPID: 16300114000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** 1980' N line, 660' W line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.052042 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.449222 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 564.0 **LOGGED (FT.):** 49.3 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
544.4	CARBONDALE	BANKSTON FORK	LIMESTONE	0.8	19.6
543.7	CARBONDALE	LAWSON	SILTY SHALE	11.0	20.3
532.7	CARBONDALE	CONANT	LIMESTONE	2.0	31.3
530.7	CARBONDALE	JAMESTOWN	COAL	1.5	33.3
529.2	CARBONDALE	BRERETON	LIMESTONE	4.2	34.8
525.0	CARBONDALE	ANNA	BLACK SHALE	2.0	39.0
523.0	CARBONDALE	ENERGY	GRAY SHALE	2.0	41.0
521.0	CARBONDALE	HERRIN	COAL	6.3	43.0

MAPID: 16300114000C VERSION: 3

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 13 QUARTERS/FOOTAGES: 1980' N line, 660' W line
 QUADRANGLE: MILLSTADT LONGITUDE: -90.052042 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.449222 DATE COLLECTED: 2 / 16 / 1931
 SURFACE ELEVATION (FT.): 564.0 LOGGED (FT.): 50.0 LOG TYPE: Drillers Log
 SOURCE: HARVEY SMITH 13 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
564.0			CLAY	19.3	0.0
544.7			LIMESTONE	0.8	19.3
544.0			SANDY SHALE	11.0	20.0
533.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	31.0
531.0	CARBONDALE	JAMESTOWN	COAL	1.5	33.0
529.5	CARBONDALE	BRERETON	LIMESTONE	4.2	34.5
525.3	CARBONDALE	ANNA	BLACK SHALE	2.0	38.7
523.3	CARBONDALE	ANNA	SHALE	2.0	40.7
521.3	CARBONDALE	HERRIN	COAL	6.3	42.7
515.0	CARBONDALE		UNDERCLAY	1.0	49.0

MAPID: 16300115000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 13 QUARTERS/FOOTAGES: SW SE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.043018 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.442089 DATE COLLECTED: 2 / 16 / 1931
 SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 50.3 LOG TYPE: Drillers Log
 SOURCE: HARVEY SMITH 15 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
540.0			CLAY	18.3	0.0
521.7			BOULDER	3.0	18.3
518.7			LIMESTONE	7.0	21.3
511.7			SHALE	22.0	28.3

MAPID: 16300115000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 13 QUARTERS/FOOTAGES: SW SE
 QUADRANGLE: MILLSTADT LONGITUDE: -90.043018 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.442089 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 50.0 LOG TYPE:
 SOURCE: SMITH 0015 WELL TYPE: Coal Test
 COMMENT: SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16300393000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 13 QUARTERS/FOOTAGES: 3450' S line, 4950' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.053395 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.449837 DATE COLLECTED:

SURFACE ELEVATION (FT.): 527.5 LOGGED (FT.): 0.0 LOG TYPE: Drillers Log

SOURCE: C R LISTER & SON WELL TYPE: Coal Test

COMMENT: OUTCROP COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
527.5			MINE OPENING	0.0 0.0	LOCAL MINE

MAPID: 16300743000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 13 QUARTERS/FOOTAGES: 2745' S line, 1420' E line

QUADRANGLE: MILLSTADT LONGITUDE: -90.04105 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.447852 DATE COLLECTED: 3 / 15 / 1932

SURFACE ELEVATION (FT.): 539.9 LOGGED (FT.): 1400.0 LOG TYPE: Drillers Log

SOURCE: ANCONA NATURAL GAS 1 WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
539.9			CLAY	16.0	0.0	YELLOW
523.9			LIMESTONE	10.0	16.0	
513.9	CARBONDALE	HERRIN	COAL	6.0	26.0	
507.9	CARBONDALE		SILTY, SANDY SHALE	23.0	32.0	
484.9	CARBONDALE		SANDSTONE	3.0	55.0	RED
481.9	CARBONDALE		SANDSTONE	12.0	58.0	GRAY
469.9	CARBONDALE		SANDY SHALE	15.0	70.0	
454.9	MISSISSIPPIAN		LIMESTONE	15.0	85.0	GRAY
439.9	MISSISSIPPIAN		SANDSTONE	5.0	100.0	
434.9	MISSISSIPPIAN		SANDSTONE	23.0	105.0	WHITE
411.9	MISSISSIPPIAN		LIMESTONE	4.0	128.0	OILSHOW; BR
407.9	MISSISSIPPIAN		SHALE	3.0	132.0	BLUE
404.9	MISSISSIPPIAN		LIMESTONE	2.0	135.0	
402.9	MISSISSIPPIAN		SHALE	13.0	137.0	BLUE
389.9	MISSISSIPPIAN		LIMESTONE	2.0	150.0	BROWN
387.9	MISSISSIPPIAN		SANDSTONE	26.0	152.0	RED
361.9	MISSISSIPPIAN		SHALE	37.0	178.0	BLUE
324.9	MISSISSIPPIAN		SANDY SHALE	8.0	215.0	
316.9	MISSISSIPPIAN		CLAYSTONE	12.0	223.0	BLUE
304.9	MISSISSIPPIAN		SANDY SHALE	10.0	235.0	
294.9	MISSISSIPPIAN		SANDSTONE	2.0	245.0	RED
292.9	MISSISSIPPIAN		SILTY, SANDY SHALE	8.0	247.0	
284.9	MISSISSIPPIAN		SANDSTONE	79.0	255.0	GRAY
205.9	MISSISSIPPIAN		LIMESTONE	26.0	334.0	GRAY
179.9	MISSISSIPPIAN		LIMESTONE	90.0	360.0	BROWN
89.9	MISSISSIPPIAN		LIMESTONE	5.0	450.0	GRAY
84.9	MISSISSIPPIAN		LIMESTONE	91.0	455.0	BROWN
-6.1	MISSISSIPPIAN		SHALE	7.0	546.0	BROWN
-13.1	MISSISSIPPIAN		LIMESTONE	7.0	553.0	GRAY
-20.1	MISSISSIPPIAN		LIMESTONE	35.0	560.0	BROWN
-55.1	MISSISSIPPIAN		LIMESTONE	10.0	595.0	GRAY
-65.1	MISSISSIPPIAN		LIMESTONE	60.0	605.0	BROWN
-125.1	MISSISSIPPIAN		LIMESTONE	35.0	665.0	BROWN
-160.1	MISSISSIPPIAN		LIMESTONE	30.0	700.0	BLUE
-190.1	MISSISSIPPIAN		LIMESTONE	30.0	730.0	BLUE/GY
-220.1	MISSISSIPPIAN		LIMESTONE	14.0	760.0	WITH GLASS; BLU
-234.1	MISSISSIPPIAN		LIMESTONE	6.0	774.0	SHARP; GY
-240.1	MISSISSIPPIAN		SHALE	45.0	780.0	SHARP; BLU
-285.1	MISSISSIPPIAN		LIMESTONE	15.0	825.0	SHARP; GY

-300.1	MISSISSIPPIAN	LIMESTONE	35.0	840.0	BLUE
-335.1	MISSISSIPPIAN	LIMESTONE	75.0	875.0	WHITE
-410.1	MISSISSIPPIAN	LIMESTONE	70.0	950.0	BLUE
-480.1	MISSISSIPPIAN	LIMESTONE	8.0	1020.0	GRAY
-488.1	MISSISSIPPIAN	LIMESTONE	7.0	1028.0	BLUE
-495.1	MISSISSIPPIAN	LIMESTONE	19.0	1035.0	BLUE
-514.1	MISSISSIPPIAN	SANDSTONE	36.0	1054.0	RED
-550.1	MISSISSIPPIAN	SOFT SHALE	3.0	1090.0	
-553.1	MISSISSIPPIAN	LIMESTONE	5.0	1093.0	GRAY
-558.1	MISSISSIPPIAN	SHALE	12.0	1098.0	
-570.1	MISSISSIPPIAN	LIMESTONE	160.0	1110.0	
-730.1	MISSISSIPPIAN	SHALE	85.0	1270.0	BLUE
-815.1	MISSISSIPPIAN	SILTY, SANDY SHALE	45.0	1355.0	

MAPID: 16300743000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** 2745' S line, 1420' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.04105 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.447852 **DATE COLLECTED:** 0 / 0 / 1932
SURFACE ELEVATION (FT.): 539.9 **LOGGED (FT.):** 1491.0 **LOG TYPE:**
SOURCE: ANC N G C **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN COMMENT	
513.9	CARBONDALE	HERRIN	COAL	6.0	26.0

MAPID: 16300773000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** 4825' S line, 100' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.036283 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.453578 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 540.5 **LOGGED (FT.):** 51.0 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: DRY HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN COMMENT	
491.5	CARBONDALE	SPRINGFIELD	COAL	2.0	49.0

MAPID: 16300116000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 14 **QUARTERS/FOOTAGES:** 2750' S line, 150' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.054889 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.447908 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 556.3 **LOGGED (FT.):** 50.0 **LOG TYPE:**
SOURCE: SMITH 0014 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300286000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 14 **QUARTERS/FOOTAGES:** 3200' S line, 3325' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.066031 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.449155 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 545.8 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: DIAMOND JOE MINE **WELL TYPE:** Slope Mine
COMMENT: SLOPE MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
545.8			MINE OPENING	0.0	0.0	LOCAL MINE "DIAMOND JOE" MINE

MAPID: 16300387000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 14 **QUARTERS/FOOTAGES:** 2900' S line, 3800' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.067703 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.448326 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 550.4 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: GUTHERZ **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
544.4	CARBONDALE	HERRIN	COAL	5.3	6.0	

MAPID: 16323731000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 14 QUARTERS/FOOTAGES: 127' N line, 122' E line of NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.054774 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.454317 DATE COLLECTED: 11 / 14 / 1973

SURFACE ELEVATION (FT.): LOGGED (FT.): 353.0 LOG TYPE: Drillers Log

SOURCE: D & S DRILLING WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	28.0	0.0	
-			LIMESTONE	7.0	28.0	
-	CARBONDALE	HERRIN	COAL	5.0	35.0	
-	CARBONDALE		LIMESTONE	4.0	40.0	
-	CARBONDALE		SHALE	55.0	44.0	
-	CARBONDALE		LIMESTONE	12.0	99.0	
-	CARBONDALE	HOUCHIN CREEK	COAL	4.0	111.0	
-	CARBONDALE		LIMESTONE	2.0	115.0	
-	CARBONDALE		SHALE	6.0	117.0	
-	CARBONDALE		LIMESTONE	9.0	123.0	
-	CARBONDALE		SHALE	98.0	132.0	
-	MISSISSIPPIAN		LIMESTONE	22.0	230.0	
-	MISSISSIPPIAN		SANDY SHALE	28.0	252.0	
-	MISSISSIPPIAN		SANDSTONE	73.0	280.0	

MAPID: 16300774000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 15 QUARTERS/FOOTAGES: SE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.084542 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.449391 DATE COLLECTED:

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 30.0 LOG TYPE: Drillers Log

SOURCE: F C MORGAN 3 WELL TYPE: Coal Test

COMMENT: STRIP MINE, LOCAL MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
576.0	CARBONDALE	HERRIN	COAL	6.0	24.0	EST 25' TO COAL, 6' OF #6 CO, ELEV 575'

MAPID: 16300774000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 15 QUARTERS/FOOTAGES: SE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.084542 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.449391 DATE COLLECTED:

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: MORGAN FC 0003 WELL TYPE: Strip Mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
575.0	CARBONDALE	HERRIN	COAL	6.0	25.0	

MAPID: 16323762000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 15 QUARTERS/FOOTAGES: NW NE

QUADRANGLE: MILLSTADT LONGITUDE: -90.079859 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.452916 DATE COLLECTED: 8 / 3 / 1974

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 310.0 LOG TYPE: Drillers Log

SOURCE: D&S DRILLING 10 WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
630.0			CLAY	16.0	0.0	
614.0			SHALE	6.0	16.0	
608.0			LIMESTONE	12.0	22.0	
596.0	CARBONDALE	HERRIN	COAL	7.0	34.0	
589.0	CARBONDALE		SHALE	8.0	41.0	
581.0	CARBONDALE		LIMESTONE	3.0	49.0	
578.0	CARBONDALE		SHALE	19.0	52.0	
559.0	CARBONDALE		LIMESTONE	14.0	71.0	
545.0	CARBONDALE		SANDSTONE	28.0	85.0	
517.0	MISSISSIPPIAN		LIMESTONE	24.0	113.0	
493.0	MISSISSIPPIAN		SHALE	11.0	137.0	RED
482.0	MISSISSIPPIAN		LIMESTONE	8.0	148.0	
474.0	MISSISSIPPIAN		SANDY SHALE	43.0	156.0	
431.0	MISSISSIPPIAN		LIMESTONE	4.0	199.0	
427.0	MISSISSIPPIAN		SHALE	8.0	203.0	RED
419.0	MISSISSIPPIAN		SANDSTONE	9.0	211.0	
410.0	MISSISSIPPIAN		SHALE	7.0	220.0	RED
403.0	MISSISSIPPIAN		SHALE	11.0	227.0	
392.0	MISSISSIPPIAN		SANDSTONE	72.0	238.0	

MAPID: 16326685000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 23 **QUARTERS/FOOTAGES:** SW SW NE
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.062574 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.434006 **DATE COLLECTED:** 9 / 7 / 1988
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 365.0 **LOG TYPE:** Drillers Log
SOURCE: DALE RAYMOND DOHRMAN **WELL TYPE:** Water Well
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	42.0	0.0	
-			SHALE	30.0	42.0	
-	CARBONDALE	SPRINGFIELD	COAL	2.0	72.0	BLACK
-	CARBONDALE		SHALE	36.0	74.0	
-	CARBONDALE		SANDSTONE	7.0	110.0	GAS & OIL
-	CARBONDALE		ROCK	28.0	117.0	
-	CARBONDALE		SHALE	198.0	145.0	
-	CARBONDALE		SANDSTONE	19.0	343.0	
-	CARBONDALE		ROCK	3.0	362.0	

MAPID: 16300287000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 24 **QUARTERS/FOOTAGES:** 2275' S line, 550' E line
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.038186 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.432065 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 527.5 **LOGGED (FT.):** 6.5 **LOG TYPE:** Drillers Log
SOURCE: F C MORGAN COAL COMPANY 2 **WELL TYPE:** Coal Test
COMMENT: STRIP MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
527.5	CARBONDALE	HERRIN	COAL	6.5	0.0	ELEVATION 528

MAPID: 16300828000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 1S 9W **SECTION:** 25 **QUARTERS/FOOTAGES:** S2 S2 SW
QUADRANGLE: MILLSTADT **LONGITUDE:** -90.05019 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.411973 **DATE COLLECTED:** 0 / 0 / 1926
SURFACE ELEVATION (FT.): 525.0 **LOGGED (FT.):** 52.0 **LOG TYPE:**
SOURCE: MISSISSIPPI COAL CORP. B **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16302820000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 1S 9W SECTION: 35 QUARTERS/FOOTAGES: SE SE NW

QUADRANGLE: MILLSTADT LONGITUDE: -90.065287 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.404742 DATE COLLECTED: 0 / 0 / 1968

SURFACE ELEVATION (FT.): LOGGED (FT.): 124.0 LOG TYPE: Drillers Log

SOURCE: HANDRICK DRILLING CO WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	19.0	0.0	YELLOW
-			LIMESTONE	7.0	19.0	
-			SHALE	3.0	26.0	
-	CARBONDALE	SPRINGFIELD	COAL	3.0	29.0	
-	CARBONDALE		SHALE	26.0	32.0	
-	CARBONDALE		LIMESTONE	9.0	58.0	
-	CARBONDALE		LIMESTONE	11.0	67.0	
-	MISSISSIPPIAN		LIMESTONE	41.0	78.0	
-	MISSISSIPPIAN		SHALE	5.0	119.0	

MAPID: 16301349000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 3 QUARTERS/FOOTAGES: 330' N line, 990' E line of SE NW

QUADRANGLE: ST. JACOB LONGITUDE: -89.756514 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.650764 DATE COLLECTED: 7 / 0 / 1953

SURFACE ELEVATION (FT.): 495.0 LOGGED (FT.): 283.0 LOG TYPE: Electric Log

SOURCE: LUTTRELL HOMER T R WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
302.0	MODESTO	PIASA	LIMESTONE	6.0	193.0	
296.0	MODESTO		UNCLASSIFIED	5.5	199.0	
290.5	CARBONDALE	DANVILLE	COAL	1.0	204.5	
289.5	CARBONDALE		UNCLASSIFIED	9.5	205.5	
280.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	11.0	215.0	
269.0	CARBONDALE	ENERGY	UNCLASSIFIED	52.0	226.0	
217.0	CARBONDALE	HERRIN	COAL	5.0	278.0	

MAPID: 16301877000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 3 QUARTERS/FOOTAGES: 330' S line, 330' E line of NE SE

QUADRANGLE: HIGHLAND LONGITUDE: -89.744747 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.645235 DATE COLLECTED: 5 / 0 / 1957

SURFACE ELEVATION (FT.): 527.0 LOGGED (FT.): 320.0 LOG TYPE: Electric Log

SOURCE: R. K. PETROLEUM CORP. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
287.0	MODESTO	PIASA	LIMESTONE	8.5	240.0
278.5	MODESTO		UNCLASSIFIED	3.5	248.5
275.0	CARBONDALE		UNCLASSIFIED	6.5	252.0
268.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.0	258.5
258.5	CARBONDALE	ENERGY	UNCLASSIFIED	47.5	268.5
211.0	CARBONDALE	HERRIN	COAL	4.0	316.0

MAPID: 16301989000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 3 QUARTERS/FOOTAGES: 330' S line, 330' E line of NE SW

QUADRANGLE: ST. JACOB LONGITUDE: -89.754083 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.645372 DATE COLLECTED: 9 / 0 / 1957

SURFACE ELEVATION (FT.): 497.0 LOGGED (FT.): 277.0 LOG TYPE: Electric Log

SOURCE: WEDER HERBERT WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
299.0	MODESTO	PIASA	LIMESTONE	6.0	198.0
293.0	MODESTO		UNCLASSIFIED	2.0	204.0
291.0	CARBONDALE		UNCLASSIFIED	6.0	206.0
285.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	11.5	212.0
273.5	CARBONDALE	ENERGY	UNCLASSIFIED	49.5	223.5
224.0	CARBONDALE	HERRIN	COAL	4.0	273.0

MAPID: 16301991000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 4 QUARTERS/FOOTAGES: 330' N line, 330' W line of SE

QUADRANGLE: ST. JACOB LONGITUDE: -89.770449 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.647315 DATE COLLECTED: 11 / 0 / 1957

SURFACE ELEVATION (FT.): 488.0 LOGGED (FT.): 273.0 LOG TYPE: Electric Log

SOURCE: KOCH, EDWARD C. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
294.0	MODESTO	PIASA	LIMESTONE	7.0	194.0
287.0	MODESTO		UNCLASSIFIED	2.5	201.0
284.5	CARBONDALE		UNCLASSIFIED	6.5	203.5
278.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	13.0	210.0
265.0	CARBONDALE	ENERGY	UNCLASSIFIED	47.0	223.0
218.0	CARBONDALE	HERRIN	COAL	3.0	270.0

MAPID: 16301961000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 7 QUARTERS/FOOTAGES: 330' S line, 330' E line of SW

QUADRANGLE: ST. JACOB LONGITUDE: -89.809846 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.62762 DATE COLLECTED: 7 / 0 / 1957

SURFACE ELEVATION (FT.): 461.0 LOGGED (FT.): 233.3 LOG TYPE: Electric Log

SOURCE: NIAGARA OIL CORP WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
280.0	MODESTO	PIASA	LIMESTONE	5.5	181.0
274.5	MODESTO		UNCLASSIFIED	3.0	186.5
271.5	CARBONDALE	DANVILLE	COAL	1.0	189.5
270.5	CARBONDALE		UNCLASSIFIED	5.5	190.5
265.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	196.0
256.0	CARBONDALE	ENERGY	UNCLASSIFIED	25.0	205.0
231.0	CARBONDALE	HERRIN	COAL	3.3	230.0

MAPID: 16327363000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 8 QUARTERS/FOOTAGES:

QUADRANGLE: ST. JACOB LONGITUDE: -89.789553

GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.633893

DATE COLLECTED: 6 / 22 / 1967

SURFACE ELEVATION (FT.): 451.2 LOGGED (FT.): 226.0

LOG TYPE: Drillers Log

SOURCE: PEABODY 8042B

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
451.2	PLEISTOCENE		SANDY CLAY	78.5	0.0	GRAY
372.7			GRAY SHALE	5.6	78.5	
367.1			SANDSTONE	33.2	84.1	
333.9			LIMESTONE	2.3	117.3	
331.6			SANDSTONE	40.1	119.6	
291.5			LIMESTONE	15.0	159.7	
276.5	CARBONDALE	ENERGY	GRAY SHALE	10.1	174.7	
266.4	CARBONDALE	ENERGY	GRAY SHALE	34.0	184.8	
232.4	CARBONDALE	ENERGY	GRAY SHALE	2.1	218.8	
230.3	CARBONDALE	ENERGY	GRAY SHALE	1.2	220.9	
229.1	CARBONDALE	ENERGY	GRAY SHALE	0.4	222.1	
228.7	CARBONDALE	HERRIN	COAL	1.3	222.5	
227.4	CARBONDALE	HERRIN	GRAY SHALE	0.1	223.8	
227.3	CARBONDALE	HERRIN	COAL	1.1	223.9	
226.2	CARBONDALE		UNDERCLAY	1.0	225.0	

MAPID: 16301350000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 10 QUARTERS/FOOTAGES: 330' N line, 330' W line of SE

QUADRANGLE: ST. JACOB LONGITUDE: -89.751211

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.632568

DATE COLLECTED: 2 / 0 / 1950

SURFACE ELEVATION (FT.): 463.0 LOGGED (FT.): 236.0

LOG TYPE: Electric Log

SOURCE: OBERING ERNEST A

WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
289.0	MODESTO	PIASA	LIMESTONE	6.0	174.0	
283.0	MODESTO		UNCLASSIFIED	2.0	180.0	
281.0	CARBONDALE		UNCLASSIFIED	6.0	182.0	
275.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	13.0	188.0	
262.0	CARBONDALE	ENERGY	UNCLASSIFIED	31.0	201.0	
231.0	CARBONDALE	HERRIN	COAL	4.0	232.0	

MAPID: 16301563000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 10 QUARTERS/FOOTAGES: 330' N line, 30' W line of NE

QUADRANGLE: ST. JACOB LONGITUDE: -89.752677 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.639939 DATE COLLECTED: 2 / 0 / 1945

SURFACE ELEVATION (FT.): 511.0 LOGGED (FT.): 275.5 LOG TYPE: Electric Log

SOURCE: LUTTRELL HOMER WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
303.5	MODESTO	PIASA	LIMESTONE	6.0	207.5
297.5	MODESTO		UNCLASSIFIED	3.5	213.5
294.0	CARBONDALE		UNCLASSIFIED	7.5	217.0
286.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.5	224.5
277.0	CARBONDALE	ENERGY	UNCLASSIFIED	38.0	234.0
239.0	CARBONDALE	HERRIN	COAL	3.5	272.0

MAPID: 16301564000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 11 QUARTERS/FOOTAGES: 330' N line, 330' W line of NE SW

QUADRANGLE: HIGHLAND LONGITUDE: -89.73728 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.632424 DATE COLLECTED: 12 / 0 / 1945

SURFACE ELEVATION (FT.): 493.0 LOGGED (FT.): 271.8 LOG TYPE: Electric Log

SOURCE: WALKER A J WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
288.0	MODESTO	PIASA	LIMESTONE	7.0	205.0
281.0	MODESTO		UNCLASSIFIED	2.5	212.0
278.5	CARBONDALE		UNCLASSIFIED	7.5	214.5
271.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	222.0
262.0	CARBONDALE	ENERGY	UNCLASSIFIED	37.0	231.0
225.0	CARBONDALE	HERRIN	COAL	3.8	268.0

MAPID: 16324223000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 12 QUARTERS/FOOTAGES:

QUADRANGLE: HIGHLAND LONGITUDE: -89.715714

GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.633206

DATE COLLECTED: 5 / 15 / 1967

SURFACE ELEVATION (FT.): 496.2

LOGGED (FT.): 354.3

LOG TYPE: Drillers Log

SOURCE: PEABODY 8033B

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
496.2			CLAY	22.0	0.0	
474.2			GRAY SHALE	34.4	22.0	
439.8			LIMESTONE	1.5	56.4	
438.3			GRAY SHALE	37.1	57.9	
401.2			GRAY SHALE	30.0	95.0	
371.2			SANDSTONE	80.6	125.0	GRAY
290.6			GRAY SHALE	2.0	205.6	
288.6			SANDSTONE	2.1	207.6	GRAY
286.5			SANDSTONE	2.5	209.7	
284.0			SANDSTONE	4.8	212.2	GRAY
279.2			LIMESTONE	3.6	217.0	
275.6			SHALE	3.4	220.6	
272.2			SANDSTONE	5.3	224.0	GRAY
266.9			SANDY SHALE	14.1	229.3	
252.8	MODESTO	PIASA	LIMESTONE	2.4	243.4	
250.5	MODESTO		GRAY SHALE	5.9	245.7	
244.6	CARBONDALE	DANVILLE	COAL	1.2	251.6	
243.4	CARBONDALE		UNDERCLAY	1.7	252.8	
241.7	CARBONDALE		GRAY SHALE	5.1	254.5	
236.6	CARBONDALE	BANKSTON FORK	LIMESTONE	3.1	259.6	
233.6	CARBONDALE	ENERGY	GRAY SHALE	14.4	262.6	
219.2	CARBONDALE	ENERGY	SANDSTONE	4.0	277.0	GRAY
215.2	CARBONDALE	ENERGY	SANDY SHALE	26.2	281.0	
189.0	CARBONDALE	ENERGY	SHALE/COAL	0.7	307.2	
188.3	CARBONDALE	HERRIN	COAL	2.9	307.9	
185.4	CARBONDALE		UNDERCLAY	2.7	310.8	
182.7	CARBONDALE		LIMESTONE	5.3	313.5	
177.4	CARBONDALE		SANDY SHALE	18.8	318.8	
158.6	CARBONDALE		GRAY SHALE	7.5	337.6	
151.1	CARBONDALE		LIMESTONE	1.5	345.1	
149.6	CARBONDALE		GRAY SHALE	1.8	346.6	
147.8	CARBONDALE	HOUCHIN CREEK	COAL	1.9	348.4	
145.9	CARBONDALE		UNDERCLAY	4.0	350.3	

MAPID: 16327361000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 12 QUARTERS/FOOTAGES:

QUADRANGLE: HIGHLAND LONGITUDE: -89.715714

GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.633206

DATE COLLECTED: 5 / 19 / 1967

SURFACE ELEVATION (FT.): 473.6

LOGGED (FT.): 376.5

LOG TYPE: Drillers Log

SOURCE: PEABODY 8034B

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
473.6	PLEISTOCENE		CLAY	32.5	0.0	
441.1			GRAY SHALE	40.5	32.5	
400.6			SANDY SHALE	19.0	73.0	
381.6			SANDSTONE	59.7	92.0	GRAY
321.9			LIMESTONE	2.6	151.7	
319.3			GRAY SHALE	7.5	154.3	
311.8			SANDSTONE	19.2	161.8	GRAY
292.6			LIMESTONE	4.1	181.0	
288.5			GRAY SHALE	4.4	185.1	
284.1			SANDSTONE	3.8	189.5	GRAY
280.3			SANDY SHALE	6.6	193.3	
273.7			LIMESTONE	4.9	199.9	
268.9			GRAY SHALE	10.6	204.7	
258.3			LIMESTONE	2.0	215.3	
256.3	CARBONDALE	ENERGY	GRAY SHALE	22.7	217.3	
233.6	CARBONDALE	ENERGY	GRAY SHALE	22.5	240.0	
211.1	CARBONDALE	HERRIN	COAL WITH SHALE	2.8	262.5	#6
208.3	CARBONDALE		GRAY SHALE	2.8	265.3	
205.5	CARBONDALE		LIMESTONE	6.7	268.1	
198.8	CARBONDALE		GRAY SHALE	4.5	274.8	
194.3	CARBONDALE		SANDY SHALE	10.7	279.3	
183.6	CARBONDALE		GRAY SHALE	10.1	290.0	
173.5	CARBONDALE		LIMESTONE	1.9	300.1	
171.6	CARBONDALE		GRAY SHALE	2.1	302.0	
169.5	CARBONDALE	HOUCHIN CREEK	COAL	1.6	304.1	#5
167.9	CARBONDALE		UNDERCLAY	5.1	305.7	
162.8	CARBONDALE		GRAY SHALE	28.2	310.8	
134.6	CARBONDALE		GRAY SHALE	8.6	339.0	
126.0	CARBONDALE	SURVANT	COAL	1.6	347.6	
124.4	CARBONDALE		SANDY SHALE	27.3	349.2	

MAPID: 16327362000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 13 QUARTERS/FOOTAGES:

QUADRANGLE: TRENTON LONGITUDE: -89.71542 GEOLOGIST: UITEMP
CONFIDENTIAL: N LATITUDE: 38.61874 DATE COLLECTED: 6 / 21 / 1967
SURFACE ELEVATION (FT.): 480.9 LOGGED (FT.): 264.1 LOG TYPE: Drillers Log
SOURCE: PEABODY 8041B WELL TYPE:
COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
480.9	PLEISTOCENE		CLAY	30.5	0.0	0
450.4			BROWN SHALE	6.0	30.5	
444.4			GRAY SHALE	11.4	36.5	
433.0			SANDSTONE	8.9	47.9	GRAY
424.1			SANDY SHALE	22.2	56.8	
401.9			SANDSTONE	104.0	79.0	GRAY
297.9			LIMESTONE	2.0	183.0	
295.9			SANDSTONE	6.1	185.0	GRAY
289.8			GRAY SHALE	2.4	191.1	
287.4			LIMESTONE	1.6	193.5	
285.8	CARBONDALE	ENERGY	GRAY SHALE	58.8	195.1	
227.0	CARBONDALE	HERRIN	COAL	2.5	253.9	
224.5	CARBONDALE		GRAY SHALE	7.7	256.4	

MAPID: 16301793000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 14 QUARTERS/FOOTAGES: 330' S line, 330' E line

QUADRANGLE: TRENTON LONGITUDE: -89.725518 GEOLOGIST: D. JOHNSON
CONFIDENTIAL: N LATITUDE: 38.612476 DATE COLLECTED: 11 / 0 / 1956
SURFACE ELEVATION (FT.): 483.0 LOGGED (FT.): 274.0 LOG TYPE: Electric Log
SOURCE: FULK, PERRY WELL TYPE: Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
271.5	MODESTO	PIASA	LIMESTONE	5.0	211.5	
266.5	MODESTO		UNCLASSIFIED	4.5	216.5	
262.0	CARBONDALE		UNCLASSIFIED	7.0	221.0	
255.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	228.0	
246.0	CARBONDALE	ENERGY	UNCLASSIFIED	32.0	237.0	
214.0	CARBONDALE	HERRIN	COAL	5.0	269.0	

MAPID: 16301793000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 14 QUARTERS/FOOTAGES: 330' S line, 330' E line

QUADRANGLE: TRENTON LONGITUDE: -89.725518 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.612476 DATE COLLECTED:

SURFACE ELEVATION (FT.): 483.0 LOGGED (FT.): 216.0 LOG TYPE: Electric Log

SOURCE: WELL TYPE: Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
341.0	MODESTO	PIASA	LIMESTONE	7.0	142.0
334.0	CARBONDALE		SHALE	6.0	149.0
328.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	155.0
323.0	CARBONDALE	ENERGY	GRAY SHALE	40.0	160.0
283.0	CARBONDALE	ENERGY	CALCAREOUS SHALE	6.0	200.0
277.0	CARBONDALE	ENERGY	DARK GRAY SHALE	4.0	206.0
273.0	CARBONDALE	HERRIN	COAL	6.0	210.0

MAPID: 16303306000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 15 QUARTERS/FOOTAGES: 1133' S line, 2189' W line

QUADRANGLE: LEBANON LONGITUDE: -89.753542 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.614864 DATE COLLECTED:

SURFACE ELEVATION (FT.): 469.0 LOGGED (FT.): 248.5 LOG TYPE: Survey Core Study

SOURCE: TRUAX-TRAER COAL CO TR-4 WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
282.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	7.5	187.0
274.5	CARBONDALE		SHALE	8.5	194.5
266.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	203.0
261.0	CARBONDALE	ENERGY	GRAY SHALE	10.5	208.0
250.5	CARBONDALE	ENERGY	SILTY SHALE	3.0	218.5
247.5	CARBONDALE	ENERGY	GRAY SHALE	21.7	221.5
225.8	CARBONDALE	ENERGY	BLACK SHALE	0.6	243.2
225.2	CARBONDALE	ENERGY	GRAY SHALE	2.5	243.8
223.0	CARBONDALE	HERRIN	COAL	2.5	246.0

MAPID: 16303306000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 15 QUARTERS/FOOTAGES: 1133' S line, 2189' W line

QUADRANGLE: LEBANON LONGITUDE: -89.753542 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.614864 DATE COLLECTED:

SURFACE ELEVATION (FT.): 469.0 LOGGED (FT.): 248.5 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO TR-4 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
279.3	MODESTO	PIASA	LIMESTONE	4.5	189.7
274.8	MODESTO		UNCLASSIFIED	2.5	194.2
272.3	CARBONDALE		UNCLASSIFIED	6.0	196.7
266.3	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	202.7
261.3	CARBONDALE	ENERGY	SHALE	38.3	207.7
223.0	CARBONDALE	HERRIN	COAL	2.5	246.0

MAPID: 16303306000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 15 QUARTERS/FOOTAGES: 1133' S line, 2189' W line

QUADRANGLE: LEBANON LONGITUDE: -89.753542 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.614864 DATE COLLECTED: 7 / 0 / 1960

SURFACE ELEVATION (FT.): 469.0 LOGGED (FT.): 252.0 LOG TYPE: Other Core Study

SOURCE: TRUAX-TRAER COAL CO TR-4 WELL TYPE: Coal Test

COMMENT: CORE C-8553

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
222.7	CARBONDALE	HERRIN	COAL	2.5	246.3

MAPID: 16300359200M VERSION: 1

PROJECT: BLM

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 16 QUARTERS/FOOTAGES: SE SW SW

QUADRANGLE: LEBANON LONGITUDE: -89.776273 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 38.612924 DATE COLLECTED: 0 / 0 / 1941

SURFACE ELEVATION (FT.): 459.0 LOGGED (FT.): 0.0 LOG TYPE: Measured section

SOURCE: MINE INDEX-MOWE & CHAPPLE WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	COAL	-	

MAPID: 16327365000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 18 QUARTERS/FOOTAGES:

QUADRANGLE: LEBANON LONGITUDE: -89.808561

GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.619479

DATE COLLECTED: 7 / 29 / 1967

SURFACE ELEVATION (FT.): 468.6 LOGGED (FT.): 243.1

LOG TYPE: Drillers Log

SOURCE: PEABODY 8103B

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
468.6	PLEISTOCENE		CLAY & GRAVEL	101.5	0.0
367.1			SANDSTONE	65.2	101.5
301.9			LIMESTONE	16.4	166.7
285.5	CARBONDALE	ENERGY	GRAY SHALE	39.0	183.1
246.5	CARBONDALE	ENERGY	GRAY SHALE	1.6	222.1
244.9	CARBONDALE	HERRIN	COAL	3.4	223.7
241.5	CARBONDALE		GRAY SHALE	4.4	227.1
237.2	CARBONDALE		LIMESTONE	5.9	231.4
231.3	CARBONDALE		GRAY SHALE	5.8	237.3

MAPID: 16300005000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 19 QUARTERS/FOOTAGES: 750' S line, 905' W line

QUADRANGLE: LEBANON LONGITUDE: -89.815359

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.600045

DATE COLLECTED: 11 / 0 / 1908

SURFACE ELEVATION (FT.): 465.0 LOGGED (FT.): 204.0

LOG TYPE: Drillers Log

SOURCE: LEBANON OIL & GAS

WELL TYPE: Unsuccessful or Unknown Results

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
318.0	MODESTO	PIASA	LIMESTONE	5.0	147.0
313.0	MODESTO		UNCLASSIFIED	2.0	152.0
311.0	CARBONDALE		UNCLASSIFIED	5.0	154.0
306.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.0	159.0
296.0	CARBONDALE	ENERGY	UNCLASSIFIED	30.0	169.0
266.0	CARBONDALE	HERRIN	COAL	5.0	199.0

MAPID: 16300005000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 19 QUARTERS/FOOTAGES: 750' S line, 905' W line

QUADRANGLE: LEBANON LONGITUDE: -89.815359 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.600045 DATE COLLECTED:

SURFACE ELEVATION (FT.): 465.0 LOGGED (FT.): 204.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
318.0	MODESTO	PIASA	LIMESTONE	5.0	147.0
313.0	CARBONDALE		SHALE	7.0	152.0
306.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	159.0
301.0	CARBONDALE	LAWSON	SHALE	2.0	164.0
299.0	CARBONDALE	BRERETON	LIMESTONE	3.0	166.0
296.0	CARBONDALE	ENERGY	GRAY SHALE	30.0	169.0
266.0	CARBONDALE	HERRIN	COAL	5.0	199.0

MAPID: 16300005000C VERSION: 3

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 19 QUARTERS/FOOTAGES: 750' S line, 905' W line

QUADRANGLE: LEBANON LONGITUDE: -89.815359 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.600045 DATE COLLECTED: 0 / 0 / 1908

SURFACE ELEVATION (FT.): 464.8 LOGGED (FT.): 881.0 LOG TYPE:

SOURCE: LEBANON OG 1 WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
265.8	CARBONDALE	HERRIN	COAL	5.0	199.0
-	CARBONDALE	SPRINGFIELD	UNCLASSIFIED	0.0	

MAPID: 16300490000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 20 QUARTERS/FOOTAGES: 2035' S line, 280' E line

QUADRANGLE: LEBANON LONGITUDE: -89.780711 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.603121 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 473.0 LOGGED (FT.): 235.0 LOG TYPE: Drillers Log

SOURCE: NEIL, W. E., ETAL WELL TYPE: Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
306.0	MODESTO	PIASA	LIMESTONE	6.0	167.0
300.0	MODESTO		UNCLASSIFIED	1.5	173.0
298.5	CARBONDALE		UNCLASSIFIED	4.5	174.5
294.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	179.0
286.0	CARBONDALE	ENERGY	UNCLASSIFIED	43.0	187.0
243.0	CARBONDALE	HERRIN	COAL	5.0	230.0

MAPID: 16300490000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 20 QUARTERS/FOOTAGES: 2035' S line, 280' E line

QUADRANGLE: LEBANON LONGITUDE: -89.780711

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.603121

DATE COLLECTED:

SURFACE ELEVATION (FT.): 473.0

LOGGED (FT.): 235.0

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
306.0	MODESTO	PIASA	LIMESTONE	6.0	167.0
300.0	CARBONDALE		SHALE	6.0	173.0
294.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	179.0
286.0	CARBONDALE	LAWSON	GRAY SHALE	35.0	187.0
251.0	CARBONDALE	BRERETON	LIMESTONE	8.0	222.0
243.0	CARBONDALE	HERRIN	COAL	5.0	230.0

MAPID: 16300490000C VERSION: 3

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 20 QUARTERS/FOOTAGES: 2035' S line, 280' E line

QUADRANGLE: LEBANON LONGITUDE: -89.780711

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.603121

DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 473.3

LOGGED (FT.): 1023.0

LOG TYPE:

SOURCE: NEIL W E

WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
243.3	CARBONDALE	HERRIN	COAL	5.0	230.0

MAPID: 16300490000C VERSION: 4

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 20 QUARTERS/FOOTAGES: 2035' S line, 280' E line

QUADRANGLE: LEBANON LONGITUDE: -89.780711 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.603121 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 473.3 LOGGED (FT.): 701.0 LOG TYPE: Drillers Log

SOURCE: W E NEIL ET AL 1 WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
473.3			UNCONSOLIDATED	56.0	0.0	
417.3			LIMESTONE	44.0	56.0	
373.3			SANDSTONE	15.0	100.0	
358.3			SHALE	4.0	115.0	BLUE
354.3			SANDSTONE	2.0	119.0	
352.3			SHALE	44.0	121.0	BLUE
308.3			ROCK	2.0	165.0	RED
306.3			LIMESTONE	6.0	167.0	
300.3			SHALE	6.0	173.0	
294.3			LIMESTONE	8.0	179.0	
286.3			SHALE	30.0	187.0	LIGHT
256.3			SHALE	5.0	217.0	BLUE
251.3			LIMESTONE	8.0	222.0	
243.3	CARBONDALE	HERRIN	COAL	5.0	230.0	
238.3	CARBONDALE		SHALE	15.0	235.0	
223.3	CARBONDALE		LIMESTONE	5.0	250.0	
218.3	CARBONDALE		SHALE	25.0	255.0	LIGHT
193.3	CARBONDALE		LIMESTONE	4.0	280.0	
189.3	CARBONDALE		SANDY SHALE	16.0	284.0	
173.3	CARBONDALE		SHALE	20.0	300.0	
153.3	CARBONDALE		SHALE WITH LIMESTONE	4.0	320.0	
149.3	CARBONDALE		SANDY SHALE	31.0	324.0	
118.3	CARBONDALE		SHALE	10.0	355.0	LITTLE COAL; BK
108.3	CARBONDALE		SANDY SHALE	20.0	365.0	
88.3	CARBONDALE		ROCK	8.0	385.0	RED
80.3	CARBONDALE		SANDY SHALE	7.0	393.0	
73.3	CARBONDALE		SANDSTONE	17.0	400.0	
56.3	CARBONDALE		SHALE	18.0	417.0	
38.3	CARBONDALE		ROCK	15.0	435.0	RED
23.3	CARBONDALE		SHALE	5.0	450.0	
18.3	MISSISSIPPIAN		LIMESTONE	10.0	455.0	
8.3	MISSISSIPPIAN		SANDSTONE	5.0	465.0	
3.3	MISSISSIPPIAN		LIMESTONE	20.0	470.0	
-16.7	MISSISSIPPIAN		SOFT SHALE	20.0	490.0	
-36.7	MISSISSIPPIAN		ROCK	8.0	510.0	RED
-44.7	MISSISSIPPIAN		SHALE	2.0	518.0	BLUE
-46.7	MISSISSIPPIAN		LIMESTONE	5.0	520.0	
-51.7	MISSISSIPPIAN		LIMESTONE	7.0	525.0	
-58.7	MISSISSIPPIAN		SANDY SHALE	5.0	532.0	

-63.7	MISSISSIPPIAN	LIMESTONE	8.0	537.0	
-71.7	MISSISSIPPIAN	CALCAREOUS SHALE	5.0	545.0	
-76.7	MISSISSIPPIAN	SHALE	10.0	550.0	WHITE
-86.7	MISSISSIPPIAN	LIMESTONE	9.0	560.0	
-95.7	MISSISSIPPIAN	SHALE	1.0	569.0	
-96.7	MISSISSIPPIAN	LIMESTONE	20.0	570.0	
-116.7	MISSISSIPPIAN	LIMESTONE	20.0	590.0	
-136.7	MISSISSIPPIAN	LIMESTONE	3.0	610.0	
-139.7	MISSISSIPPIAN	SHALE	18.0	613.0	
-157.7	MISSISSIPPIAN	SANDSTONE	11.0	631.0	
-168.7	MISSISSIPPIAN	SOFT SHALE	11.0	642.0	
-179.7	MISSISSIPPIAN	SANDSTONE	17.0	653.0	
-196.7	MISSISSIPPIAN	SANDSTONE	15.0	670.0	
-211.7	MISSISSIPPIAN	SHALE	11.0	685.0	BLUE
-222.7	MISSISSIPPIAN	LIMESTONE	5.0	696.0	BROWN

MAPID: 16327364000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 20 QUARTERS/FOOTAGES:

QUADRANGLE: LEBANON

LONGITUDE: -89.789007

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 38.604845

DATE COLLECTED: 8 / 3 / 1967

SURFACE ELEVATION (FT.): 439.0

LOGGED (FT.): 194.3

LOG TYPE: Drillers Log

SOURCE: PEABODY 8104B

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
439.0	PLEISTOCENE		CLAY, SAND & GRAVEL	50.5	0.0	
388.6			SANDSTONE	21.2	50.4	
367.4			GRAY SHALE	8.5	71.6	
358.9			LIMESTONE	1.8	80.1	GRAY
357.1			GRAY SHALE	28.4	81.9	
328.7			GRAY SHALE	9.6	110.3	
319.2			LIMESTONE	2.1	119.8	
317.1			GRAY SHALE	1.2	121.9	
315.9			LIMESTONE	6.6	123.1	
309.3			GRAY SHALE	6.3	129.7	
303.1			LIMESTONE	3.8	135.9	
299.3			SANDSTONE	9.1	139.7	
290.2	CARBONDALE		LIMESTONE	7.2	148.8	
283.0	CARBONDALE	ENERGY	GRAY SHALE	28.7	156.0	
254.3	CARBONDALE	ENERGY	GRAY SHALE	1.0	184.7	
253.3	CARBONDALE	ENERGY	GRAY SHALE	1.6	185.7	
251.7	CARBONDALE	HERRIN	COAL	4.5	187.3	
247.2	CARBONDALE		UNDERCLAY	2.5	191.8	

MAPID: 16300004000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 22 QUARTERS/FOOTAGES: 300' S line, 1250' E line

QUADRANGLE: TRENTON LONGITUDE: -89.747269 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.597959 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 500.0 LOGGED (FT.): 275.7 LOG TYPE: Drillers Log

SOURCE: WINKLER JULIUS WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
272.8	MODESTO		UNCLASSIFIED	4.5	227.2
268.3	CARBONDALE		UNCLASSIFIED	12.0	231.7
256.3	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	243.7
248.3	CARBONDALE	ENERGY	UNCLASSIFIED	19.3	251.7
229.0	CARBONDALE	HERRIN	COAL	4.7	271.0

MAPID: 16300004000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 22 QUARTERS/FOOTAGES: 300' S line, 1250' E line

QUADRANGLE: TRENTON LONGITUDE: -89.747269 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.597959 DATE COLLECTED:

SURFACE ELEVATION (FT.): 480.0 LOGGED (FT.): 275.7 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
274.0	MODESTO	PIASA	LIMESTONE	5.0	206.0
269.0	CARBONDALE		SHALE & SANDSTONE	33.0	211.0
236.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	244.0
228.0	CARBONDALE	ENERGY	GRAY SHALE	19.3	252.0
209.0	CARBONDALE	HERRIN	COAL	4.7	271.0

MAPID: 16300004000C VERSION: 3

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 22 QUARTERS/FOOTAGES: 300' S line, 1250' E line

QUADRANGLE: TRENTON LONGITUDE: -89.747269 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.597959 DATE COLLECTED:

SURFACE ELEVATION (FT.): 479.8 LOGGED (FT.): 276.0 LOG TYPE:

SOURCE: WINKLER M WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
208.8	CARBONDALE	HERRIN	COAL	4.7	271.0

MAPID: 16300004000C VERSION: 4

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 22 QUARTERS/FOOTAGES: 300' S line, 1250' E line

QUADRANGLE: TRENTON LONGITUDE: -89.747269 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.597959 DATE COLLECTED:

SURFACE ELEVATION (FT.): 490.0 LOGGED (FT.): 276.0 LOG TYPE: Drillers Log

SOURCE: JULIUS WINKLER COMPANY WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
490.0			UNCONSOLIDATED	35.0	0.0	
455.0			SAND	3.5	35.0	
451.5			CLAY	8.0	38.5	BLUE
443.5			BLACK SHALE	3.0	46.5	
440.5			SANDSTONE	12.0	49.5	NO 1
428.5			LIMESTONE	5.5	61.5	
423.0			SANDSTONE	12.0	67.0	NO 2
411.0			SHALE	81.0	79.0	
330.0			LIMESTONE	4.0	160.0	
326.0			SHALE	18.0	164.0	
308.0			SHALE	24.0	182.0	BLU/BLK
284.0			LIMESTONE	5.0	206.0	
279.0			UNDERCLAY	25.0	211.0	BLACK
254.0			SANDSTONE	8.0	236.0	
246.0			LIMESTONE	8.0	244.0	GRAY
238.0	CARBONDALE	ENERGY	SHALE	19.3	252.0	
218.7	CARBONDALE	HERRIN	COAL	4.7	271.3	

MAPID: 16301351000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 22 QUARTERS/FOOTAGES: SW NW

QUADRANGLE: LEBANON LONGITUDE: -89.758916 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.606321 DATE COLLECTED: 9 / 0 / 1951

SURFACE ELEVATION (FT.): 495.0 LOGGED (FT.): 281.0 LOG TYPE: Electric Log

SOURCE: QUICK BOYD W WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
274.5	MODESTO	PIASA	LIMESTONE	4.5	220.5	
270.0	MODESTO		UNCLASSIFIED	4.5	225.0	
265.5	CARBONDALE	DANVILLE	COAL	0.5	229.5	
265.0	CARBONDALE		UNCLASSIFIED	7.5	230.0	
257.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.5	237.5	
253.0	CARBONDALE	ENERGY	UNCLASSIFIED	35.0	242.0	
218.0	CARBONDALE	HERRIN	COAL	4.0	277.0	

MAPID: 16301566000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 23 QUARTERS/FOOTAGES: 330' S line, 330' W line of NW NW
 QUADRANGLE: TRENTON LONGITUDE: -89.741593 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.608918 DATE COLLECTED: 10 / 0 / 1944
 SURFACE ELEVATION (FT.): 484.0 LOGGED (FT.): 245.0 LOG TYPE: Electric Log
 SOURCE: SINCLAIR WYOMING OIL WELL TYPE: Dry Hole
 COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
295.0	MODESTO	PIASA	LIMESTONE	5.0	189.0	
290.0	MODESTO		UNCLASSIFIED	1.5	194.0	
288.5	CARBONDALE	DANVILLE	COAL	0.5	195.5	
288.0	CARBONDALE		UNCLASSIFIED	6.0	196.0	
282.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	202.0	
273.0	CARBONDALE	ENERGY	UNCLASSIFIED	29.0	211.0	
244.0	CARBONDALE	HERRIN	COAL	5.0	240.0	

MAPID: 16325007000C VERSION: 1

PROJECT: NCRDS99

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 23 QUARTERS/FOOTAGES: 2350' S line, 1700' E line
 QUADRANGLE: TRENTON LONGITUDE: -89.73044 GEOLOGIST: MCCracken
 CONFIDENTIAL: N LATITUDE: 38.603496 DATE COLLECTED: 6 / 12 / 1980
 SURFACE ELEVATION (FT.): 490.0 LOGGED (FT.): 0.0 LOG TYPE: Survey Core Study
 SOURCE: GULF OIL CORPORATION SU-19 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
490.0			NO RECORD	293.0	0.0	
197.0	CARBONDALE		SHALE	14.2	293.0	
182.8	CARBONDALE		BLACK SHALE	1.5	307.2	
181.3	CARBONDALE		SHALE	1.7	308.7	
179.6	CARBONDALE	HERRIN	COAL	-	310.4	NOTHINGNESS VALUES REPORTED
-	CARBONDALE		UNDERCLAY	3.1		NO DEPTH REPORTED
-	CARBONDALE		CALCAREOUS SHALE	2.9		NO DEPTH RECORDED

MAPID: 16325007000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 23 QUARTERS/FOOTAGES: 2350' S line, 1700' E line
 QUADRANGLE: TRENTON LONGITUDE: -89.73044 GEOLOGIST: PRUSSEN
 CONFIDENTIAL: N LATITUDE: 38.603496 DATE COLLECTED: 6 / 12 / 1980
 SURFACE ELEVATION (FT.): LOGGED (FT.): 322.0 LOG TYPE: Other Core Study
 SOURCE: GULF OIL CORPORATION SU19 WELL TYPE: Coal Test
 COMMENT: ROCK MECHANICS TESTING PERFORMED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	-	310.4	COAL REPORTED, NO THICKNESS VALUE

MAPID: 16302777000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 24 QUARTERS/FOOTAGES: 330' N line, 2310' E line

QUADRANGLE: TRENTON LONGITUDE: -89.714527 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.610611 DATE COLLECTED: 4 / 0 / 1968

SURFACE ELEVATION (FT.): 508.0 LOGGED (FT.): 314.0 LOG TYPE: Electric Log

SOURCE: MACK, JOHN W. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
258.5	MODESTO	PIASA	LIMESTONE	3.5	249.5	
255.0	MODESTO		UNCLASSIFIED	6.0	253.0	
249.0	CARBONDALE	DANVILLE	COAL	1.5	259.0	
247.5	CARBONDALE		UNCLASSIFIED	6.5	260.5	
241.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	11.0	267.0	
230.0	CARBONDALE	ENERGY	UNCLASSIFIED	32.0	278.0	
198.0	CARBONDALE	HERRIN	COAL	4.0	310.0	

MAPID: 16325008000C VERSION: 1

PROJECT: NCRDS99

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 24 QUARTERS/FOOTAGES: 2450' S line, 20' E line

QUADRANGLE: TRENTON LONGITUDE: -89.706365 GEOLOGIST: MCCRACKEN

CONFIDENTIAL: N LATITUDE: 38.603685 DATE COLLECTED: 6 / 7 / 1980

SURFACE ELEVATION (FT.): 511.0 LOGGED (FT.): 0.0 LOG TYPE: Survey Core Study

SOURCE: GULF OIL CORPORATION SU-12 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
511.0			NO RECORD	312.0	0.0	
199.0	CARBONDALE		SHALE	12.8	312.0	
186.2	CARBONDALE	ENERGY	SHALE	0.1	324.8	
186.1	CARBONDALE	ENERGY	SHALE	0.8	324.9	
185.4	CARBONDALE	ENERGY	COAL	0.5	325.6	
184.9	CARBONDALE	ENERGY	CLAYSTONE & SILTSTONE	1.3	326.1	COAL BANDS
183.6	CARBONDALE	ENERGY	BLACK SHALE	0.6	327.4	
183.0	CARBONDALE	ENERGY	CLAYSTONE & SILTSTONE	0.6	328.0	
182.5	CARBONDALE	ENERGY	BLACK SHALE	0.1	328.5	
182.4	CARBONDALE	HERRIN	COAL	-	328.6	NO THICKNESS VALUES REPORTED
-	CARBONDALE		UNDERCLAY	1.8		NO DEPTH REPORTED
-	CARBONDALE		CLAYSTONE & SILTSTONE	1.7		NO DEPTH REPORTED
-	CARBONDALE		SILTSTONE	1.3		NO DEPTH REPORTED

MAPID: 16325008000C **VERSION:** 2 **PROJECT:** EIA-DOE
COUNTY: ST. CLAIR **TWP/RNG:** 2N 6W **SECTION:** 24 **QUARTERS/FOOTAGES:** 2450' S line, 20' E line
QUADRANGLE: TRENTON **LONGITUDE:** -89.706365 **GEOLOGIST:** PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 38.603685 **DATE COLLECTED:** 6 / 17 / 1980
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 347.0 **LOG TYPE:** Other Core Study
SOURCE: GULF OIL CORPORATION SU12 **WELL TYPE:** Coal Test
COMMENT: ROCK MECHANICS TESTING PERFORMED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	-	328.6	COAL REPORTED, NO THICKNESS VALUE

MAPID: 16300190000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 6W **SECTION:** 25 **QUARTERS/FOOTAGES:** 3775' S line, 100' E line
QUADRANGLE: TRENTON **LONGITUDE:** -89.706492 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.592761 **DATE COLLECTED:** 0 / 0 / 1905
SURFACE ELEVATION (FT.): 517.5 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: BREESE TRE00BT **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
182.5	CARBONDALE	HERRIN	COAL	4.5	335.0	

MAPID: 16300190000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: ST. CLAIR **TWP/RNG:** 2N 6W **SECTION:** 25 **QUARTERS/FOOTAGES:** 3775' S line, 100' E line
QUADRANGLE: TRENTON **LONGITUDE:** -89.706492 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.592761 **DATE COLLECTED:** 0 / 0 / 1900
SURFACE ELEVATION (FT.): 518.0 **LOGGED (FT.):** 339.5 **LOG TYPE:** Drillers Log
SOURCE: BREESE-TRENTON MINING CO. **WELL TYPE:** Mine Shaft
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
183.0	CARBONDALE	HERRIN	COAL	4.5	335.0	

MAPID: 16300190000C **VERSION:** 3 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 6W **SECTION:** 25 **QUARTERS/FOOTAGES:** 3775' S line, 100' E line
QUADRANGLE: TRENTON **LONGITUDE:** -89.706492 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.592761 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 517.5 **LOGGED (FT.):** 335.0 **LOG TYPE:** Drillers Log
SOURCE: BREESE-TRENTON MINING CO. **WELL TYPE:** Mine Shaft
COMMENT: SHIPPING MINE - ABANDONED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
187.0	CARBONDALE	HERRIN	COAL	4.5	330.5	ELEV TOP 183'

MAPID: 16301567000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 26 QUARTERS/FOOTAGES: 330' S line, 330' E line of SW

QUADRANGLE: TRENTON LONGITUDE: -89.734807 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.583458 DATE COLLECTED: 12 / 0 / 1942

SURFACE ELEVATION (FT.): 504.0 LOGGED (FT.): 319.5 LOG TYPE: Electric Log

SOURCE: NOLAN VINCENT J WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
244.0	MODESTO	PIASA	LIMESTONE	3.5	260.0
240.5	MODESTO		UNCLASSIFIED	2.5	263.5
238.0	CARBONDALE		UNCLASSIFIED	6.0	266.0
232.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.0	272.0
222.0	CARBONDALE	ENERGY	UNCLASSIFIED	31.0	282.0
191.0	CARBONDALE	HERRIN	COAL	6.5	313.0

MAPID: 16300003000C VERSION: 1

PROJECT: BLM

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 27 QUARTERS/FOOTAGES: 3850' S line, 2150' W line

QUADRANGLE: LEBANON LONGITUDE: -89.753691 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 38.593377 DATE COLLECTED:

SURFACE ELEVATION (FT.): 459.0 LOGGED (FT.): 283.3 LOG TYPE: Drillers Log

SOURCE: LOG BK-G. S. IL., V. 1, P 223, 301 WELL TYPE: Coal Test

COMMENT: SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
459.0			UNCONSOLIDATED	35.0	0.0
424.0			ROCK	133.5	35.0
290.5	MODESTO	CHAPEL	COAL	0.3	168.5
290.2			ROCK	17.0	168.8
273.2			COAL	0.3	185.8
272.9			ROCK	68.2	186.1
204.7			SHALE	25.0	254.3
179.7	CARBONDALE	HERRIN	COAL	4.0	279.3

MAPID: 16300003000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 27 QUARTERS/FOOTAGES: 3850' S line, 2150' W line

QUADRANGLE: LEBANON LONGITUDE: -89.753691 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.593377 DATE COLLECTED:

SURFACE ELEVATION (FT.): 459.0 LOGGED (FT.): 283.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
250.0	MODESTO	PIASA	LIMESTONE	4.5	209.0
245.5	CARBONDALE		GRAY SHALE	35.0	213.5
210.5	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	248.5
202.5	CARBONDALE	ENERGY	DARK GRAY SHALE	25.0	256.5
180.0	CARBONDALE	HERRIN	COAL	4.0	279.0

MAPID: 16300003000C VERSION: 3

PROJECT: NCRDS87

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 27 QUARTERS/FOOTAGES: 3850' S line, 2150' W line

QUADRANGLE: LEBANON LONGITUDE: -89.753691 GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 38.593377 DATE COLLECTED:

SURFACE ELEVATION (FT.): 459.3 LOGGED (FT.): 283.3 LOG TYPE: Drillers Log

SOURCE: SUMMERFIELD SHAFT WELL TYPE: Mine Shaft

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
459.3			UNCONSOLIDATED	35.0	0.0
424.3	BOND		COAL	3.0	35.0
421.3	BOND		UNDERCLAY	0.5	38.0
420.8	BOND		UNCLASSIFIED	35.0	38.5
385.8	BOND	CARTHAGE	LIMESTONE	5.0	73.5
380.8	MODESTO		UNCLASSIFIED	90.0	78.5
290.8	MODESTO	CHAPEL	COAL	0.3	168.5
290.5	MODESTO		CONGLOMERATE	4.0	168.8
286.5	MODESTO		UNDERCLAY	1.0	172.8
285.5			SHALE	12.0	173.8
273.5			COAL	0.2	185.8
273.3			UNDERCLAY	0.7	186.0
272.5			GRAY SHALE	20.0	186.8
252.5			LIMESTONE	4.5	206.8
248.0			SHALE	35.0	211.3
213.0			LIMESTONE	8.0	246.3
205.0			SHALE	25.0	254.3
180.0	CARBONDALE	HERRIN	COAL	4.0	279.3

UNCERTAIN
CORRELATION

MAPID: 16300003000C VERSION: 4

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 27 QUARTERS/FOOTAGES: 3850' S line, 2150' W line

QUADRANGLE: LEBANON LONGITUDE: -89.753691 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.593377 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 459.0 LOGGED (FT.): 273.0 LOG TYPE: Drillers Log

SOURCE: NO COMPANY WELL TYPE: Mine Shaft

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
223.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	236.0
215.0	CARBONDALE	ENERGY	UNCLASSIFIED	25.0	244.0
190.0	CARBONDALE	HERRIN	COAL	4.0	269.0

MAPID: 16300003000C VERSION: 5

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 27 QUARTERS/FOOTAGES: 3850' S line, 2150' W line

QUADRANGLE: LEBANON LONGITUDE: -89.753691 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.593377 DATE COLLECTED: 0 / 0 / 1966

SURFACE ELEVATION (FT.): 459.3 LOGGED (FT.): 283.0 LOG TYPE:

SOURCE: GRINDROD M WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
180.3	CARBONDALE	HERRIN	COAL	4.0	279.0

MAPID: 16300003000C VERSION: 6

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 27 QUARTERS/FOOTAGES: 3850' S line, 2150' W line

QUADRANGLE: LEBANON LONGITUDE: -89.753691 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.593377 DATE COLLECTED:

SURFACE ELEVATION (FT.): 459.3 LOGGED (FT.): 283.3 LOG TYPE: Drillers Log

SOURCE: SHAFT AT SUMMERFIELD WELL TYPE: Mine Shaft

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
459.3			CLAY	35.0	0.0	
424.3			SHALE	3.0	35.0	COAL NO 10
421.3			UNDERCLAY	0.5	38.0	
420.8			SHALE & SANDSTONE	35.0	38.5	
385.8			LIMESTONE	5.0	73.5	SHOAL CREEK
380.8			SANDSTONE/SHALE	90.0	78.5	
290.8			COAL	0.3	168.5	NO 8
290.5			CONGLOMERATE	4.0	168.8	
286.5			UNDERCLAY	1.0	172.8	
285.5			SHALE	12.0	173.8	
273.5			COAL	0.3	185.8	
273.2			UNDERCLAY	0.7	186.1	
272.5			SHALE	20.0	186.8	
252.5			LIMESTONE	4.5	206.8	
248.0			SHALE	35.0	211.3	
213.0			LIMESTONE	8.0	246.3	
205.0	CARBONDALE	ENERGY	SHALE	25.0	254.3	BK GY
180.0	CARBONDALE	HERRIN	COAL	4.0	279.3	

MAPID: 16300359300M VERSION: 1

PROJECT: BLM

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 27 QUARTERS/FOOTAGES: NW SE NW

QUADRANGLE: LEBANON LONGITUDE: -89.755514 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 38.592693 DATE COLLECTED: 0 / 0 / 1890

SURFACE ELEVATION (FT.): 471.0 LOGGED (FT.): 0.0 LOG TYPE: Measured section

SOURCE: MINE INDEX-BESSEMER C. C. WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	-	-	

MAPID: 16301875000C VERSION: 1

PROJECT: BLM

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 28 QUARTERS/FOOTAGES: NE

QUADRANGLE: LEBANON LONGITUDE: -89.765871 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 38.593705 DATE COLLECTED: 0 / 0 / 1899

SURFACE ELEVATION (FT.): 480.0 LOGGED (FT.): 256.8 LOG TYPE: Drillers Log

SOURCE: DONK BROS. COAL & COKE CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
480.0			UNCONSOLIDATED	110.0	0.0	
370.0			ROCK	105.5	110.0	
264.5			BLACK SHALE	4.5	215.5	
260.0			SHALE	24.0	220.0	
236.0	CARBONDALE	HERRIN	COAL	4.8	244.0	
231.2			ROCK	8.0	248.8	

MAPID: 16301875000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 28 QUARTERS/FOOTAGES: NE

QUADRANGLE: LEBANON LONGITUDE: -89.765871 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.593705 DATE COLLECTED:

SURFACE ELEVATION (FT.): 477.0 LOGGED (FT.): 248.8 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
291.0	MODESTO	PIASA	LIMESTONE	5.5	186.0	
285.5	CARBONDALE	LAWSON	SHALE & SANDSTONE	18.5	191.5	
267.0	CARBONDALE	BRERETON	LIMESTONE	5.5	210.0	
261.5	CARBONDALE	ANNA	BLACK SHALE	4.5	215.5	
257.0	CARBONDALE	ENERGY	SHALE	24.0	220.0	
233.0	CARBONDALE	HERRIN	COAL	4.8	244.0	

MAPID: 16301875000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 28 QUARTERS/FOOTAGES: NE

QUADRANGLE: LEBANON LONGITUDE: -89.765871 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.593705 DATE COLLECTED: 0 / 0 / 1899

SURFACE ELEVATION (FT.): LOGGED (FT.): 0.0 LOG TYPE: Drillers Log

SOURCE: KONK BROS COAL&COKE WELL TYPE: Mineral Test

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	5.5	
-	MODESTO		UNCLASSIFIED	4.5	
-	CARBONDALE		UNCLASSIFIED	11.0	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.5	
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	4.5	
-	CARBONDALE	ENERGY	UNCLASSIFIED	24.0	
-	CARBONDALE	HERRIN	COAL	4.8	

MAPID: 16325012000C VERSION: 1

PROJECT: NCRDS99

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 28 QUARTERS/FOOTAGES: 2200' S line, 2300' W line

QUADRANGLE: LEBANON LONGITUDE: -89.771619 GEOLOGIST: MCCRACKEN

CONFIDENTIAL: N LATITUDE: 38.589002 DATE COLLECTED: 6 / 12 / 1980

SURFACE ELEVATION (FT.): 465.0 LOGGED (FT.): 0.0 LOG TYPE: Survey Core Study

SOURCE: GULF OIL CORPORATION SU-27 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN COMMENT	
465.0			NO RECORD	237.0	0.0	
228.0	CARBONDALE		SHALE	7.4	237.0	
220.6	CARBONDALE		BLACK SHALE	0.2	244.4	
220.4	CARBONDALE		SHALE	0.2	244.6	
220.2	CARBONDALE		BLACK SHALE	0.4	244.8	
219.8	CARBONDALE		SHALE	0.4	245.2	
219.5	CARBONDALE		BLACK SHALE	0.3	245.5	
219.2	CARBONDALE		CLAYSTONE & SILTSTONE	0.1	245.8	
219.1	CARBONDALE		SHALE	0.1	245.9	
219.0	CARBONDALE	ENERGY	COAL	0.0	246.0	
219.0	CARBONDALE	ENERGY	SHALE	0.4	246.0	COAL SEAMS
218.6	CARBONDALE	HERRIN	COAL	-	246.4	NO THICKNESS VALUE REPORTED
-	CARBONDALE		UNDERCLAY	5.0		NO DEPTH RECORDED

MAPID: 16325012000C **VERSION:** 2 **PROJECT:** EIA-DOE
COUNTY: ST. CLAIR **TWP/RNG:** 2N 6W **SECTION:** 28 **QUARTERS/FOOTAGES:** 2200' S line, 2300' W line
QUADRANGLE: LEBANON **LONGITUDE:** -89.771619 **GEOLOGIST:** PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 38.589002 **DATE COLLECTED:** 6 / 12 / 1980
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 268.0 **LOG TYPE:** Other Core Study
SOURCE: GULF OIL CORPORATION SU27 **WELL TYPE:** Coal Test
COMMENT: ROCK MECHANICS TESTING PERFORMED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	-	246.4	COAL REPORTED, NO THICKNESS VALUE

MAPID: 16300020000M **VERSION:** 1 **PROJECT:** BLM
COUNTY: ST. CLAIR **TWP/RNG:** 2N 6W **SECTION:** 30 **QUARTERS/FOOTAGES:** SW NE NE
QUADRANGLE: LEBANON **LONGITUDE:** -89.802071 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 38.595058 **DATE COLLECTED:** 0 / 0 / 1924
SURFACE ELEVATION (FT.): 441.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section
SOURCE: MINE INDEX-COLUMBIA COLLIERY CO.
COMMENT: NO MINE NOTES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	-		

MAPID: 16300191000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: ST. CLAIR **TWP/RNG:** 2N 6W **SECTION:** 30 **QUARTERS/FOOTAGES:** 4125' S line, 1000' E line
QUADRANGLE: LEBANON **LONGITUDE:** -89.801798 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.594625 **DATE COLLECTED:** 0 / 0 / 1900
SURFACE ELEVATION (FT.): 446.0 **LOGGED (FT.):** 199.0 **LOG TYPE:** Drillers Log
SOURCE: LEBANON CITY COAL **WELL TYPE:** Mine Shaft
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
253.0	CARBONDALE	HERRIN	COAL	6.0	193.0	

MAPID: 16300191000C **VERSION:** 2 **PROJECT:** BLM
COUNTY: ST. CLAIR **TWP/RNG:** 2N 6W **SECTION:** 30 **QUARTERS/FOOTAGES:** 4125' S line, 1000' E line
QUADRANGLE: LEBANON **LONGITUDE:** -89.801798 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 38.594625 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 446.0 **LOGGED (FT.):** 192.5 **LOG TYPE:** Measured section
SOURCE: LEBANON CITY C. C. **WELL TYPE:** Underground mine
COMMENT: MINE INDEX #200

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
446.0			UNKNOWN	186.5	0.0	
259.5	CARBONDALE	HERRIN	COAL	6.0	186.5	

MAPID: 16300191000C **VERSION:** 3 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 6W **SECTION:** 30 **QUARTERS/FOOTAGES:** 4125' S line, 1000' E line
QUADRANGLE: LEBANON **LONGITUDE:** -89.801798 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.594625 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 445.5 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: LEBANON CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
252.5	CARBONDALE	HERRIN	COAL	6.0	193.0	

MAPID: 16300191000C **VERSION:** 4 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 6W **SECTION:** 30 **QUARTERS/FOOTAGES:** 4125' S line, 1000' E line
QUADRANGLE: LEBANON **LONGITUDE:** -89.801798 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.594625 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 445.5 **LOGGED (FT.):** 192.4 **LOG TYPE:** Drillers Log
SOURCE: LEBANON CITY COAL CO **WELL TYPE:** Mine Shaft
COMMENT: SHIPPIN MINE - ABANDONED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
259.1	CARBONDALE	HERRIN	COAL	6.0	186.4	ELEV TOP 253

MAPID: 16300192000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 30 QUARTERS/FOOTAGES: 4100' S line, 3850' E line

QUADRANGLE: LEBANON LONGITUDE: -89.811824 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.594673 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 443.0 LOGGED (FT.): 212.3 LOG TYPE: Drillers Log

SOURCE: PREMIER COAL&MINING WELL TYPE: Mine Shaft

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
235.0	CARBONDALE	HERRIN	COAL	4.3	208.0	

MAPID: 16300192000C VERSION: 2

PROJECT: BLM

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 30 QUARTERS/FOOTAGES: 4100' S line, 3850' E line

QUADRANGLE: LEBANON LONGITUDE: -89.811824 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 38.594673 DATE COLLECTED:

SURFACE ELEVATION (FT.): 443.0 LOGGED (FT.): 208.0 LOG TYPE: Measured section

SOURCE: PREMIER COAL & MNG. CO. WELL TYPE: Underground mine

COMMENT: COMPANY NAME QUESTIONABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
443.0			UNKNOWN	203.7	0.0	
239.3	CARBONDALE	HERRIN	COAL	4.3	203.7	

MAPID: 16300192000C VERSION: 3

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 30 QUARTERS/FOOTAGES: 4100' S line, 3850' E line

QUADRANGLE: LEBANON LONGITUDE: -89.811824 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.594673 DATE COLLECTED:

SURFACE ELEVATION (FT.): 443.2 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: PREMIERCMC WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
235.2	CARBONDALE	HERRIN	COAL	4.3	208.0	

MAPID: 16300192000C **VERSION:** 4 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 6W **SECTION:** 30 **QUARTERS/FOOTAGES:** 4100' S line, 3850' E line
QUADRANGLE: LEBANON **LONGITUDE:** -89.811824 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.594673 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 443.2 **LOGGED (FT.):** 208.0 **LOG TYPE:** Drillers Log
SOURCE: PREMIER COAL AND MINING CO **WELL TYPE:** Mine Shaft
COMMENT: SHIPPING MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
239.5	CARBONDALE	HERRIN	COAL	4.3	203.7	ELEV TOP 235'

MAPID: 16300359400M **VERSION:** 1 **PROJECT:** BLM
COUNTY: ST. CLAIR **TWP/RNG:** 2N 6W **SECTION:** 30 **QUARTERS/FOOTAGES:** NW SE NW
QUADRANGLE: LEBANON **LONGITUDE:** -89.812192 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 38.593375 **DATE COLLECTED:** 0 / 0 / 1887
SURFACE ELEVATION (FT.): 440.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section
SOURCE: MINE INDEX-LEBANON C. C. **WELL TYPE:** Underground mine
COMMENT: NO MINE NOTES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	-	-	

MAPID: 16301354000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: ST. CLAIR **TWP/RNG:** 2N 6W **SECTION:** 31 **QUARTERS/FOOTAGES:** 2310' N line, 990' W line
QUADRANGLE: LEBANON **LONGITUDE:** -89.814987 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.577015 **DATE COLLECTED:** 4 / 0 / 1953
SURFACE ELEVATION (FT.): 426.0 **LOGGED (FT.):** 161.0 **LOG TYPE:** Electric Log
SOURCE: TETER T C **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
333.0	MODESTO	PIASA	LIMESTONE	6.0	93.0	
327.0	MODESTO		UNCLASSIFIED	4.0	99.0	
323.0	CARBONDALE		UNCLASSIFIED	10.0	103.0	
313.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	12.5	113.0	
300.5	CARBONDALE	ENERGY	UNCLASSIFIED	30.5	125.5	
270.0	CARBONDALE	HERRIN	COAL	5.0	156.0	

MAPID: 16301354000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 31 QUARTERS/FOOTAGES: 2310' N line, 990' W line

QUADRANGLE: LEBANON

LONGITUDE: -89.814987

GEOLOGIST:

CONFIDENTIAL: N

LATITUDE: 38.577015

DATE COLLECTED:

SURFACE ELEVATION (FT.): 426.0

LOGGED (FT.): 165.0

LOG TYPE: Electric Log

SOURCE:

WELL TYPE: Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
329.0	MODESTO	PIASA	LIMESTONE	5.0	97.0
324.0	CARBONDALE		SHALE	8.0	102.0
316.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	110.0
312.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	2.0	114.0
310.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	116.0
306.0	CARBONDALE	LAWSON	SHALE	4.0	120.0
302.0	CARBONDALE	BRERETON	LIMESTONE	6.0	124.0
296.0	CARBONDALE	ENERGY	GRAY SHALE	30.0	130.0
266.0	CARBONDALE	HERRIN	COAL	5.0	160.0

MAPID: 16325018000C VERSION: 1

PROJECT: NCRDS99

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 32 QUARTERS/FOOTAGES: 2510' N line, 630' W line

QUADRANGLE: LEBANON

LONGITUDE: -89.796305

GEOLOGIST: MCCRACKEN

CONFIDENTIAL: N

LATITUDE: 38.576244

DATE COLLECTED: 6 / 26 / 1980

SURFACE ELEVATION (FT.): 445.0

LOGGED (FT.): 234.0

LOG TYPE: Survey Core Study

SOURCE: GULF OIL CORPORATION SI-30

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
445.0			NO RECORD	200.0	0.0
245.0	CARBONDALE		SHALE	22.0	200.0
223.0	CARBONDALE		BLACK SHALE	1.0	222.0
222.0	CARBONDALE	HERRIN	COAL	-	223.0 NO THICKNESS VALUE REPORTED
216.6	CARBONDALE		UNDERCLAY	0.2	228.4
216.5	CARBONDALE		CLAYSTONE & SILTSTONE	5.5	228.5

MAPID: 16325018000C **VERSION:** 2 **PROJECT:** EIA-DOE
COUNTY: ST. CLAIR **TWP/RNG:** 2N 6W **SECTION:** 32 **QUARTERS/FOOTAGES:** 2510' N line, 630' W line
QUADRANGLE: LEBANON **LONGITUDE:** -89.796305 **GEOLOGIST:** PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 38.576244 **DATE COLLECTED:** 6 / 26 / 1980
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 241.0 **LOG TYPE:** Other Core Study
SOURCE: GULF OIL CORPORATION SI30 **WELL TYPE:** Coal Test
COMMENT: ROCK MECHANICS TESTING PERFORMED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	-	223.0	COAL REPORTED, NO THICKNESS VALUE

MAPID: 16302287000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: ST. CLAIR **TWP/RNG:** 2N 6W **SECTION:** 33 **QUARTERS/FOOTAGES:** 9' S line, 145' W line
QUADRANGLE: LEBANON **LONGITUDE:** -89.779429 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.568531 **DATE COLLECTED:** 8 / 0 / 1963
SURFACE ELEVATION (FT.): 451.0 **LOGGED (FT.):** 234.0 **LOG TYPE:** Electric Log
SOURCE: SUN PRODUCTION COMPANY **WELL TYPE:** Structure Test
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
281.0	MODESTO	PIASA	LIMESTONE	3.0	170.0	
278.0	MODESTO		UNCLASSIFIED	5.0	173.0	
273.0	CARBONDALE		UNCLASSIFIED	8.0	178.0	
265.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	14.5	186.0	
250.5	CARBONDALE	ENERGY	UNCLASSIFIED	28.5	200.5	
222.0	CARBONDALE	HERRIN	COAL	5.0	229.0	

MAPID: 16302287000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 2N 6W **SECTION:** 33 **QUARTERS/FOOTAGES:** 9' S line, 145' W line
QUADRANGLE: LEBANON **LONGITUDE:** -89.779429 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.568531 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 451.0 **LOGGED (FT.):** 234.0 **LOG TYPE:** Electric Log
SOURCE: **WELL TYPE:** Oil and Gas Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
281.0	MODESTO	PIASA	LIMESTONE	4.0	170.0	
277.0	CARBONDALE		SHALE	21.0	174.0	
256.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	195.0	
251.0	CARBONDALE	ENERGY	GRAY SHALE	29.0	200.0	
222.0	CARBONDALE	HERRIN	COAL	5.0	229.0	

MAPID: 16325013000C **VERSION:** 1 **PROJECT:** NCRDS99
COUNTY: ST. CLAIR **TWP/RNG:** 2N 6W **SECTION:** 34 **QUARTERS/FOOTAGES:** 2800' S line, 2600' W line
QUADRANGLE: LEBANON **LONGITUDE:** -89.75217 **GEOLOGIST:** MCCRACKEN
CONFIDENTIAL: N **LATITUDE:** 38.575879 **DATE COLLECTED:** 6 / 13 / 1980
SURFACE ELEVATION (FT.): 483.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Survey Core Study
SOURCE: GULF OIL CORPORATION SU-24 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
483.0			NO RECORD	254.0	0.0	
229.0	CARBONDALE		SHALE	19.2	254.0	
209.8	CARBONDALE	HERRIN	COAL	-	273.2	NO THICKNESS VALUE REPORTED
-	CARBONDALE		UNDERCLAY	1.7		NO DEPTH REPORTED

MAPID: 16325013000C **VERSION:** 2 **PROJECT:** EIA-DOE
COUNTY: ST. CLAIR **TWP/RNG:** 2N 6W **SECTION:** 34 **QUARTERS/FOOTAGES:** 2800' S line, 2600' W line
QUADRANGLE: LEBANON **LONGITUDE:** -89.75217 **GEOLOGIST:** PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 38.575879 **DATE COLLECTED:** 6 / 13 / 1980
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 282.0 **LOG TYPE:** Other Core Study
SOURCE: GULF OIL CORPORATION SU24 **WELL TYPE:** Coal Test
COMMENT: ROCK MECHANICS TESTING PERFORMED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	-	273.2	COAL REPORTED, NO THICKNESS VALUE

MAPID: 16302703000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 2N 6W **SECTION:** 35 **QUARTERS/FOOTAGES:** 660' N line, 2310' E line
QUADRANGLE: TRENTON **LONGITUDE:** -89.732498 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.580719 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 495.0 **LOGGED (FT.):** 307.9 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 8035 **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
277.0	MODESTO	PIASA	LIMESTONE	1.1	218.0	
275.9	CARBONDALE		GRAY SHALE	35.3	219.1	
240.6	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	254.4	
236.1	CARBONDALE	LAWSON	GRAY SHALE	1.8	258.9	
234.3	CARBONDALE	JAMESTOWN	COAL	0.3	260.7	
234.0	CARBONDALE		GRAY SHALE	1.2	261.0	
232.8	CARBONDALE	BRERETON	LIMESTONE	3.2	262.2	
229.6	CARBONDALE	ENERGY	GRAY SHALE	35.6	265.4	
193.0	CARBONDALE	HERRIN	COAL	5.9	302.0	

MAPID: 16302703000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 35 QUARTERS/FOOTAGES: 660' N line, 2310' E line

QUADRANGLE: TRENTON LONGITUDE: -89.732498 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.580719 DATE COLLECTED:

SURFACE ELEVATION (FT.): 495.0 LOGGED (FT.): 306.9 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8035 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
237.5	MODESTO	PIASA	LIMESTONE	4.5	257.5
233.0	MODESTO		UNCLASSIFIED	1.9	262.0
231.1	CARBONDALE	DANVILLE	COAL	0.3	263.9
230.8	CARBONDALE		UNCLASSIFIED	1.2	264.2
229.6	CARBONDALE	ENERGY	SHALE	35.6	265.4
194.0	CARBONDALE	HERRIN	COAL	5.9	301.0

MAPID: 16302703000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 35 QUARTERS/FOOTAGES: 660' N line, 2310' E line

QUADRANGLE: TRENTON LONGITUDE: -89.732498 GEOLOGIST: PRUSSEN

CONFIDENTIAL: N LATITUDE: 38.580719 DATE COLLECTED: 6 / 20 / 1967

SURFACE ELEVATION (FT.): 495.2 LOGGED (FT.): 309.7 LOG TYPE: Other Core Study

SOURCE: PEABODY COAL CO. 8035 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
193.7	CARBONDALE	HERRIN	COAL	5.9	301.5

MAPID: 16327366000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 6W SECTION: 35 QUARTERS/FOOTAGES:

QUADRANGLE: TRENTON

LONGITUDE: -89.733627

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 38.575289

DATE COLLECTED: 1 / 10 / 1974

SURFACE ELEVATION (FT.): 491.3

LOGGED (FT.): 320.4

LOG TYPE: Drillers Log

SOURCE: PEABODY 12622C

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
491.3	PLEISTOCENE		UNCONSOLIDATED	72.8	0.0
418.5			GRAY SHALE	88.1	72.8
330.4			SHALY SANDSTONE	53.0	160.9
277.4			LIMESTONE	2.3	213.9
275.1			GRAY SHALE	54.1	216.2
221.0	CARBONDALE		LIMESTONE	8.2	270.3
212.8	CARBONDALE	ENERGY	GRAY SHALE	32.3	278.5
180.5	CARBONDALE	HERRIN	COAL	6.2	310.8
174.3	CARBONDALE		UNDERCLAY	3.4	317.0

MAPID: 16302141000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 1 QUARTERS/FOOTAGES: 27' N line, 18' E line of NE NE

QUADRANGLE: ST. JACOB

LONGITUDE: -89.81902

GEOLOGIST:

CONFIDENTIAL: N

LATITUDE: 38.655753

DATE COLLECTED:

SURFACE ELEVATION (FT.): 515.0

LOGGED (FT.): 277.5

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 5

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
323.0	MODESTO	PIASA	LIMESTONE	2.0	192.0
321.0	CARBONDALE		GRAY SHALE	7.2	194.0
313.8	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	201.2
310.5	CARBONDALE	LAWSON	GRAY SHALE	8.1	204.5
302.4	CARBONDALE	BRERETON	LIMESTONE	2.7	212.6
299.7	CARBONDALE	ENERGY	SILTY SHALE	48.0	215.3
251.7	CARBONDALE	ENERGY	GRAY SHALE	6.8	263.3
244.9	CARBONDALE	ENERGY	MOTTLED SHALE	1.8	270.1
243.0	CARBONDALE	ENERGY	BLACK SHALE	1.5	272.0
241.5	CARBONDALE	ENERGY	CARBONACEOUS SHALE	1.3	273.5
241.0	CARBONDALE	HERRIN	COAL	3.5	274.0

MAPID: 16302141000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 1 QUARTERS/FOOTAGES: 27' N line, 18' E line of NE NE

QUADRANGLE: ST. JACOB LONGITUDE: -89.81902 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.655753 DATE COLLECTED:

SURFACE ELEVATION (FT.): 515.0 LOGGED (FT.): 277.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
311.9	MODESTO	PIASA	LIMESTONE	3.3	203.1
308.6	MODESTO		UNCLASSIFIED	2.0	206.4
306.6	CARBONDALE		UNCLASSIFIED	6.1	208.4
300.5	CARBONDALE	ENERGY	SHALE	59.5	214.5
241.0	CARBONDALE	HERRIN	COAL	3.5	274.0

MAPID: 16302141000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 1 QUARTERS/FOOTAGES: 27' N line, 18' E line of NE NE

QUADRANGLE: ST. JACOB LONGITUDE: -89.81902 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.655753 DATE COLLECTED: 11 / 20 / 1958

SURFACE ELEVATION (FT.): 515.4 LOGGED (FT.): 278.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 5 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
515.4	PLEISTOCENE		UNCONSOLIDATED	12.3	0.0
503.1	PLEISTOCENE		SAND	87.2	12.3 BROWN
415.9	PLEISTOCENE		UNCONSOLIDATED	59.9	99.5
356.0			SANDSTONE	26.2	159.4
329.8			SANDY SHALE	3.3	185.6
326.6			GRAY SHALE	2.7	188.8
323.9			LIMESTONE	2.0	191.5
321.9			GRAY SHALE	7.2	193.5
314.6	MODESTO	PIASA	LIMESTONE	3.3	200.8
311.4			GRAY SHALE	8.3	204.0
303.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	212.3
300.4	CARBONDALE	ENERGY	GRAY SHALE	7.2	215.0
293.2	CARBONDALE	ENERGY	SANDY SHALE	52.3	222.2
240.9	CARBONDALE	HERRIN	COAL	0.3	274.5
240.6	CARBONDALE	HERRIN	RASH	0.2	274.8
240.4	CARBONDALE	HERRIN	COAL	1.8	275.0
238.6	CARBONDALE	HERRIN	ROCK	0.1	276.8 BLUE
238.5	CARBONDALE	HERRIN	COAL	1.1	276.9
237.4	CARBONDALE		UNDERCLAY	1.1	278.0

MAPID: 16302149000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 1 QUARTERS/FOOTAGES: 43' N line, 82' E line of NE NE SW
 QUADRANGLE: ST. JACOB LONGITUDE: -89.828338 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.648623 DATE COLLECTED: 1 / 6 / 1959
 SURFACE ELEVATION (FT.): 492.0 LOGGED (FT.): 250.1 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 22 WELL TYPE:
 COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
492.0	PLEISTOCENE		SOIL	1.0	0.0	
491.0	PLEISTOCENE		CLAY	21.0	1.0	YL
470.0	PLEISTOCENE		GLACIAL DRIFT	15.0	22.0	
455.0	PLEISTOCENE		SANDY CLAY	92.0	37.0	
363.0			SANDSTONE	10.0	129.0	
353.0			LIMESTONE	4.5	139.0	
348.5			SHALE	29.5	143.5	
319.0			LIMESTONE	3.5	173.0	
315.5	CARBONDALE	ENERGY	SHALE	8.5	176.5	
307.0	CARBONDALE	ENERGY	SANDSTONE	10.0	185.0	
297.0	CARBONDALE	ENERGY	SHALE	30.0	195.0	
267.0	CARBONDALE	ENERGY	SHALE	20.0	225.0	
247.0	CARBONDALE	HERRIN	COAL	3.9	245.0	
243.1	CARBONDALE		UNDERCLAY	1.2	248.9	\

MAPID: 16302149000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 1 QUARTERS/FOOTAGES: 43' N line, 82' E line of NE NE SW
 QUADRANGLE: ST. JACOB LONGITUDE: -89.828338 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.648623 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 492.0 LOGGED (FT.): 248.9 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 22 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
319.1	MODESTO	PIASA	LIMESTONE	3.5	172.9	
315.6	MODESTO		UNCLASSIFIED	2.3	176.4	
313.3	CARBONDALE		UNCLASSIFIED	6.3	178.7	
307.0	CARBONDALE	ENERGY	SHALE	60.0	185.0	
247.0	CARBONDALE	HERRIN	COAL	3.9	245.0	

MAPID: 16324224000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 1 QUARTERS/FOOTAGES:

QUADRANGLE: ST. JACOB

LONGITUDE: -89.828047

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 38.648737

DATE COLLECTED: 8 / 24 / 1967

SURFACE ELEVATION (FT.): 465.6

LOGGED (FT.): 371.7

LOG TYPE: Drillers Log

SOURCE: PEABODY 8106B

WELL TYPE:

COMMENT: STRIP LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
465.6	PLEISTOCENE		SAND & GRAVEL	126.5	0.0
339.1			SHALY LIMESTONE	5.1	126.5
334.0			LIMESTONE	2.5	131.6
331.5			GRAY SHALE	14.0	134.1
317.5			LIMESTONE	1.8	148.1
315.7			GRAY SHALE	2.0	149.9
313.7	MODESTO	PIASA	LIMESTONE	4.5	151.9
309.2			GRAY SHALE	9.0	156.4
300.2	CARBONDALE	BANKSTON FORK	LIMESTONE	8.8	165.4
291.4	CARBONDALE	ENERGY	GRAY SHALE	47.1	174.2
244.3	CARBONDALE	ENERGY	LAMINATED SHALE	4.0	221.3
240.3	CARBONDALE	ENERGY	GRAY SHALE	1.8	225.3
238.5	CARBONDALE	HERRIN	BONE COAL	0.3	227.1
238.2	CARBONDALE	HERRIN	COAL	2.2	227.4
236.0	CARBONDALE	HERRIN	SHALE	0.1	229.6
235.8	CARBONDALE	HERRIN	COAL	1.3	229.8
234.5	CARBONDALE		GRAY SHALE	19.3	231.1
215.2	CARBONDALE		LIMESTONE	2.9	250.4
212.3	CARBONDALE		GRAY SHALE	62.7	253.3
149.6	CARBONDALE	SURVANT	COAL	1.1	316.0
148.5	CARBONDALE		GRAY SHALE	39.7	317.1
108.8	CARBONDALE	MECCA QUARRY	BLACK SHALE	1.3	356.8
107.5	CARBONDALE	COLCHESTER	COAL	2.2	358.1
105.4	CARBONDALE		GRAY SHALE	11.5	360.2

MAPID: 16302142000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 2 QUARTERS/FOOTAGES: 29' N line, 313' W line of NW SE

QUADRANGLE: ST. JACOB LONGITUDE: -89.845179

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.649022

DATE COLLECTED:

SURFACE ELEVATION (FT.): 472.0

LOGGED (FT.): 223.2

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
325.0	MODESTO	PIASA	LIMESTONE	3.7	147.0
321.3	CARBONDALE		GRAY SHALE	5.8	150.7
315.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.9	156.5
308.7	CARBONDALE	ENERGY	SILTY SHALE	45.2	163.3
263.5	CARBONDALE	ENERGY	GRAY SHALE	9.4	208.5
254.2	CARBONDALE	ENERGY	DARK GRAY SHALE	0.4	217.8
253.7	CARBONDALE	ENERGY	COAL	0.1	218.3
253.6	CARBONDALE	ENERGY	DARK GRAY SHALE	0.6	218.4
253.0	CARBONDALE	HERRIN	COAL	4.2	219.0

MAPID: 16302142000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 2 QUARTERS/FOOTAGES: 29' N line, 313' W line of NW SE

QUADRANGLE: ST. JACOB LONGITUDE: -89.845179

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.649022

DATE COLLECTED:

SURFACE ELEVATION (FT.): 472.0

LOGGED (FT.): 223.1

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
328.2	MODESTO	PIASA	LIMESTONE	6.9	143.8
321.3	MODESTO		UNCLASSIFIED	1.5	150.7
319.8	CARBONDALE		UNCLASSIFIED	4.3	152.2
315.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.9	156.5
308.6	CARBONDALE	ANVIL ROCK	SANDSTONE	4.6	163.4
304.0	CARBONDALE	ENERGY	SHALE	51.0	168.0
253.0	CARBONDALE	HERRIN	COAL	4.1	219.0

MAPID: 16302142000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 2 QUARTERS/FOOTAGES: 29' N line, 313' W line of NW SE

QUADRANGLE: ST. JACOB LONGITUDE: -89.845179 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.649022 DATE COLLECTED: 12 / 20 / 1958

SURFACE ELEVATION (FT.): 471.7 LOGGED (FT.): 224.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
471.7	PLEISTOCENE		CLAY	21.5	0.0	
450.2	PLEISTOCENE		UNCONSOLIDATED	43.7	21.5	
406.6			SANDSTONE	18.4	65.1	GRAY
388.1			SANDY SHALE	60.2	83.6	
327.9			GRAY SHALE	3.3	143.8	
324.6	MODESTO	PIASA	LIMESTONE	3.7	147.1	
321.0			GRAY SHALE	5.8	150.7	
315.2	CARBONDALE	BANKSTON FORK	LIMESTONE	6.9	156.5	
308.3	CARBONDALE	ENERGY	GRAY SHALE	4.6	163.4	
303.7	CARBONDALE	ENERGY	SANDY SHALE	40.5	168.0	
263.2	CARBONDALE	ENERGY	GRAY SHALE	9.4	208.5	
253.8	CARBONDALE	ENERGY	GRAY SHALE	0.4	217.9	
253.4	CARBONDALE	HERRIN	COAL	0.1	218.3	
253.3	CARBONDALE	HERRIN	GRAY SHALE	0.6	218.4	
252.7	CARBONDALE	HERRIN	COAL	2.9	219.0	
249.9	CARBONDALE	HERRIN	ROCK	0.1	221.8	BLUE
249.8	CARBONDALE	HERRIN	COAL	1.2	221.9	
248.6	CARBONDALE		UNDERCLAY	1.1	223.1	

MAPID: 16327367000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 2 QUARTERS/FOOTAGES:

QUADRANGLE: ST. JACOB LONGITUDE: -89.846278

GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.649129

DATE COLLECTED: 9 / 11 / 1972

SURFACE ELEVATION (FT.): 475.9 LOGGED (FT.): 225.0

LOG TYPE: Drillers Log

SOURCE: PEABODY 12928C

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
475.9	PLEISTOCENE		UNCONSOLIDATED	38.0	0.0	
437.9	PLEISTOCENE		CLAY	34.5	38.0	BLUE
403.4			SANDSTONE	8.5	72.5	
394.9			GRAY SHALE	60.4	81.0	
334.5	MODESTO	PIASA	LIMESTONE	4.1	141.4	
330.4			GRAY SHALE	9.5	145.5	
320.9	CARBONDALE	BANKSTON FORK	LIMESTONE	5.7	155.0	
315.2	CARBONDALE	ENERGY	SHALE WITH LIMESTONE	53.4	160.7	
261.8	CARBONDALE	ENERGY	DARK SHALE	2.2	214.1	
259.6	CARBONDALE	HERRIN	COAL	5.3	216.3	
254.3	CARBONDALE		UNDERCLAY	0.9	221.6	
253.4	CARBONDALE		SHALY LIMESTONE	2.5	222.5	

MAPID: 16301141000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 3 QUARTERS/FOOTAGES: 70' N line, 0' W line of NW SW SW

QUADRANGLE: ST. JACOB LONGITUDE: -89.873858 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.646484 DATE COLLECTED: 3 / 0 / 1953

SURFACE ELEVATION (FT.): 520.0 LOGGED (FT.): 238.7 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 84L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
520.0	PLEISTOCENE		SANDY CLAY	31.0	0.0	
489.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	20.0	31.0	BLUE
469.0	PLEISTOCENE		MUD	15.0	51.0	BLUE
454.0			SHALE	6.5	66.0	YELLOW
447.5			LIMESTONE	1.0	72.5	
446.5			SANDSTONE/LIMESTONE	10.0	73.5	
436.5			SHALY SANDSTONE	10.0	83.5	GRAY
426.5			GRAY SHALE	10.0	93.5	
416.5			GRAY SHALE	10.5	103.5	
406.0			GRAY SHALE	10.0	114.0	
396.0			GRAY SHALE	10.0	124.0	
386.0			GRAY SHALE	9.0	134.0	
377.0			SHALE/UNDERCLAY	10.0	143.0	
367.0			CLAYSTONE & LIMESTONE	10.0	153.0	
357.0			CLAYSTONE & SILTSTONE	11.0	163.0	
346.0	CARBONDALE	ENERGY	SHALE WITH LIMESTONE	10.0	174.0	
336.0	CARBONDALE	ENERGY	SANDY SHALE	10.0	184.0	
326.0	CARBONDALE	ENERGY	SHALE	10.0	194.0	
316.0	CARBONDALE	ENERGY	GRAY SHALE	10.0	204.0	
306.0	CARBONDALE	ENERGY	GRAY SHALE	10.0	214.0	
296.0	CARBONDALE	ENERGY	SHALE/COAL	10.0	224.0	
286.0	CARBONDALE	HERRIN	COAL/CLAYSTONE	4.7	234.0	

MAPID: 16301141000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 3 QUARTERS/FOOTAGES: 70' N line, 0' W line of NW SW SW

QUADRANGLE: ST. JACOB LONGITUDE: -89.873858 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.646484 DATE COLLECTED:

SURFACE ELEVATION (FT.): 515.0 LOGGED (FT.): 237.7 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 84L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
356.5	MODESTO	PIASA	LIMESTONE	3.8	158.5
352.7	MODESTO		UNCLASSIFIED	3.0	162.3
349.7	CARBONDALE		UNCLASSIFIED	8.0	165.3
341.7	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	173.3
333.7	CARBONDALE	ENERGY	SHALE	50.7	181.3
283.0	CARBONDALE	HERRIN	COAL	5.7	232.0

MAPID: 16302138000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 3 QUARTERS/FOOTAGES: 430' N line, 1625' E line of SE

QUADRANGLE: ST. JACOB LONGITUDE: -89.861145 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.648457 DATE COLLECTED:

SURFACE ELEVATION (FT.): 443.0 LOGGED (FT.): 180.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 1 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
345.0	MODESTO	PIASA	LIMESTONE	3.0	98.0
342.0	CARBONDALE		GRAY SHALE	9.2	101.0
332.7	CARBONDALE	BANKSTON FORK	LIMESTONE	6.2	110.3
326.6	CARBONDALE	ENERGY	SHALE & SANDSTONE	48.8	116.4
277.8	CARBONDALE	ENERGY	GRAY SHALE	5.8	165.2
272.0	CARBONDALE	ENERGY	BONE COAL	0.1	171.0
271.9	CARBONDALE	ENERGY	GRAY SHALE	2.8	171.1
269.1	CARBONDALE	ENERGY	CARBONACEOUS SHALE	1.0	173.9
268.0	CARBONDALE	HERRIN	COAL	5.5	175.0

MAPID: 16302138000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 3 QUARTERS/FOOTAGES: 430' N line, 1625' E line of SE

QUADRANGLE: ST. JACOB LONGITUDE: -89.861145 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.648457 DATE COLLECTED:

SURFACE ELEVATION (FT.): 443.0 LOGGED (FT.): 179.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
345.7	MODESTO	PIASA	LIMESTONE	3.0	97.3	
342.7	MODESTO		UNCLASSIFIED	2.5	100.3	
340.2	CARBONDALE		UNCLASSIFIED	6.7	102.8	
333.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.1	109.5	
327.4	CARBONDALE	ANVIL ROCK	SANDSTONE	2.7	115.6	
324.7	CARBONDALE	ENERGY	SHALE	55.7	118.3	
269.0	CARBONDALE	HERRIN	COAL	5.5	174.0	

MAPID: 16302138000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 3 QUARTERS/FOOTAGES: 430' N line, 1625' E line of SE

QUADRANGLE: ST. JACOB LONGITUDE: -89.861145 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.648457 DATE COLLECTED: 11 / 10 / 1958

SURFACE ELEVATION (FT.): 443.5 LOGGED (FT.): 181.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 1 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
443.5	PLEISTOCENE		CLAY	8.7	0.0	
434.8	PLEISTOCENE		SAND	23.9	8.7	GRAY
410.9			SANDY SHALE	60.6	32.6	
350.3			GRAY SHALE	5.0	93.2	
345.4	MODESTO	PIASA	LIMESTONE	3.0	98.1	
342.3			GRAY SHALE	9.2	101.2	
333.1	CARBONDALE	BANKSTON FORK	LIMESTONE	6.2	110.4	
326.9	CARBONDALE	ENERGY	GRAY SHALE	2.7	116.6	
324.3	CARBONDALE	ENERGY	SANDY SHALE	46.1	119.2	
278.1	CARBONDALE	ENERGY	GRAY SHALE	9.6	165.4	
268.5	CARBONDALE	HERRIN	COAL	0.1	175.0	
268.5	CARBONDALE	HERRIN	RASH	0.1	175.0	
268.4	CARBONDALE	HERRIN	COAL	0.0	175.1	
268.3	CARBONDALE	HERRIN	RASH	0.1	175.2	
268.2	CARBONDALE	HERRIN	COAL	3.8	175.3	
264.4	CARBONDALE	HERRIN	ROCK	0.1	179.1	BLUE
264.4	CARBONDALE	HERRIN	COAL	1.3	179.1	
263.1	CARBONDALE		UNDERCLAY	1.0	180.4	

MAPID: 16302300000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 3 QUARTERS/FOOTAGES: 50' N line, 25' E line

QUADRANGLE: ST. JACOB LONGITUDE: -89.855594 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.656326 DATE COLLECTED: 7 / 19 / 1963

SURFACE ELEVATION (FT.): 456.1 LOGGED (FT.): 209.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F7 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
456.1	PLEISTOCENE		SOIL	0.5	0.0	
455.6	PLEISTOCENE		CLAY	14.0	0.5	YELLOW
441.6	PLEISTOCENE		SILTY CLAY	27.0	14.5	YELLOW
414.6			SANDSTONE	5.5	41.5	
409.1			SILTY SHALE	13.0	47.0	
396.1			SHALE	54.0	60.0	
342.1			LIMESTONE	1.5	114.0	
340.6			SHALE	0.5	115.5	
340.1			SHALE	9.0	116.0	
331.1			LIMESTONE	3.3	125.0	
327.8	CARBONDALE	ENERGY	SILTY SHALE	5.7	128.3	
322.1	CARBONDALE	ENERGY	SANDSTONE	3.0	134.0	
319.1	CARBONDALE	ENERGY	SHALE WITH LIMESTONE	5.0	137.0	
314.1	CARBONDALE	ENERGY	SILTY SHALE	20.0	142.0	
294.1	CARBONDALE	ENERGY	GRAY SHALE	6.5	162.0	
287.6	CARBONDALE	ENERGY	GRAY SHALE	3.2	168.5	
284.4	CARBONDALE	ENERGY	SILTY SHALE	4.0	171.7	
280.3	CARBONDALE	ENERGY	GRAY SHALE	9.8	175.8	
270.6	CARBONDALE	ENERGY	GRAY SHALE	10.3	185.5	
260.3	CARBONDALE	ENERGY	GRAY SHALE	3.8	195.8	
256.5	CARBONDALE	HERRIN	COAL	5.1	199.6	
251.3	CARBONDALE		UNDERCLAY	0.3	204.8	
251.1	CARBONDALE		BLACK SHALE	1.7	205.0	
249.4	CARBONDALE		SHALE & CONGLOMERATE	1.5	206.7	
247.9	CARBONDALE		LIMESTONE	1.3	208.2	

MAPID: 16302300000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 3 QUARTERS/FOOTAGES: 50' N line, 25' E line
 QUADRANGLE: ST. JACOB LONGITUDE: -89.855594 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.656326 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 456.0 LOGGED (FT.): 205.1 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. F-7 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
330.6	MODESTO	PIASA	LIMESTONE	3.3	125.4
327.3	MODESTO		UNCLASSIFIED	3.0	128.7
324.3	CARBONDALE		UNCLASSIFIED	5.7	131.7
318.6	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	137.4
313.6	CARBONDALE	ENERGY	SHALE	57.6	142.4
256.0	CARBONDALE	HERRIN	COAL	5.1	200.0

MAPID: 16300837000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 4 QUARTERS/FOOTAGES: 2640' S line, 1780' E line
 QUADRANGLE: COLLINSVILLE LONGITUDE: -89.880103 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.650434 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 490.0 LOGGED (FT.): 0.0 LOG TYPE:
 SOURCE: BRENNAN 5 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
298.0	CARBONDALE	HERRIN	COAL	6.9	192.0

MAPID: 16300837000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 4 QUARTERS/FOOTAGES: 2640' S line, 1780' E line
 QUADRANGLE: COLLINSVILLE LONGITUDE: -89.880103 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.650434 DATE COLLECTED: 0 / 0 / 1900
 SURFACE ELEVATION (FT.): 490.0 LOGGED (FT.): 198.9 LOG TYPE: Drillers Log
 SOURCE: BRENNAN WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
298.0	CARBONDALE	HERRIN	COAL	6.9	192.0

MAPID: 16300837000C VERSION: 3

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 4 QUARTERS/FOOTAGES: 2640' S line, 1780' E line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.880103

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.650434

DATE COLLECTED:

SURFACE ELEVATION (FT.): 490.0 LOGGED (FT.): 192.1

LOG TYPE: Drillers Log

SOURCE: BRENNAN 5

WELL TYPE: Coal Test

COMMENT: DIAMOND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
304.8	CARBONDALE	HERRIN	COAL	6.9	185.2	ELEV TOP 298'

MAPID: 16302139000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 4 QUARTERS/FOOTAGES: 257' N line, 66' E line

QUADRANGLE: ST. JACOB LONGITUDE: -89.874041

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.655867

DATE COLLECTED:

SURFACE ELEVATION (FT.): 474.0 LOGGED (FT.): 207.3

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
344.0	MODESTO	PIASA	LIMESTONE	4.1	130.0	
339.9	CARBONDALE		GRAY SHALE	6.3	134.1	
333.6	CARBONDALE	BANKSTON FORK	LIMESTONE	5.1	140.4	
328.5	CARBONDALE	ENERGY	SILTY SHALE	44.8	145.5	
283.7	CARBONDALE	ENERGY	GRAY SHALE	11.4	190.3	
272.0	CARBONDALE	HERRIN	COAL	5.3	202.0	

MAPID: 16302139000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 4 QUARTERS/FOOTAGES: 257' N line, 66' E line

QUADRANGLE: ST. JACOB LONGITUDE: -89.874041

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.655867

DATE COLLECTED:

SURFACE ELEVATION (FT.): 474.0 LOGGED (FT.): 206.3

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
344.8	MODESTO	PIASA	LIMESTONE	4.1	129.2	
340.7	MODESTO		UNCLASSIFIED	2.0	133.3	
338.7	CARBONDALE		UNCLASSIFIED	4.3	135.3	
334.4	CARBONDALE	BANKSTON FORK	LIMESTONE	5.1	139.6	
329.3	CARBONDALE	ENERGY	SHALE	56.3	144.7	
273.0	CARBONDALE	HERRIN	COAL	5.3	201.0	

MAPID: 16302139000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 4 QUARTERS/FOOTAGES: 257' N line, 66' E line

QUADRANGLE: ST. JACOB LONGITUDE: -89.874041 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.655867 DATE COLLECTED: 11 / 12 / 1959

SURFACE ELEVATION (FT.): 474.0 LOGGED (FT.): 207.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
474.0	PLEISTOCENE		CLAY	18.1	0.0	
455.9			SANDSTONE	5.4	18.1	BROWN
450.5			SANDSTONE	27.2	23.5	GRAY
423.3			SANDY SHALE	74.8	50.7	
348.6			GRAY SHALE	4.3	125.4	
344.2	MODESTO	PIASA	LIMESTONE	4.1	129.8	
340.2			GRAY SHALE	6.3	133.8	
333.8	CARBONDALE	BANKSTON FORK	LIMESTONE	5.1	140.2	
328.8	CARBONDALE	ENERGY	SANDY SHALE	44.8	145.2	
283.9	CARBONDALE	ENERGY	GRAY SHALE	11.4	190.1	
272.5	CARBONDALE	HERRIN	COAL	3.7	201.5	
268.8	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	205.2	
268.8	CARBONDALE	HERRIN	COAL	0.2	205.2	
268.6	CARBONDALE	HERRIN	ROCK	0.2	205.4	BLUE
268.4	CARBONDALE	HERRIN	COAL	1.3	205.6	
267.2	CARBONDALE		UNDERCLAY	1.1	206.8	

MAPID: 16302140000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 4 QUARTERS/FOOTAGES: 35' N line, 284' W line of NW NW NW
 QUADRANGLE: COLLINSVILLE LONGITUDE: -89.89083 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.656856 DATE COLLECTED: 11 / 20 / 1958
 SURFACE ELEVATION (FT.): 537.9 LOGGED (FT.): 232.0 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 3 WELL TYPE:
 COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
537.9	PLEISTOCENE		SOIL	0.5	0.0	
537.4	PLEISTOCENE		CLAY	22.0	0.5	YELLOW
515.4	PLEISTOCENE		GLACIAL DRIFT	43.5	22.5	
471.9			SHALE	9.0	66.0	
462.9	MODESTO	PIASA	LIMESTONE	2.5	75.0	
460.4			SHALE	83.0	77.5	
377.4	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	160.5	
373.4	CARBONDALE	ENERGY	SHALE	54.5	164.5	
318.9	CARBONDALE	ENERGY	SHALE	6.6	219.0	
312.3	CARBONDALE	HERRIN	COAL	6.3	225.6	
306.1	CARBONDALE		UNDERCLAY	0.2	231.8	

MAPID: 16302140000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 4 QUARTERS/FOOTAGES: 35' N line, 284' W line of NW NW NW
 QUADRANGLE: COLLINSVILLE LONGITUDE: -89.89083 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.656856 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 538.0 LOGGED (FT.): 232.3 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 3 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
377.1	MODESTO	PIASA	LIMESTONE	4.0	160.9	
373.1	MODESTO		UNCLASSIFIED	1.5	164.9	
371.6	CARBONDALE		UNCLASSIFIED	4.5	166.4	
367.1	CARBONDALE	ENERGY	SHALE	55.1	170.9	
312.0	CARBONDALE	HERRIN	COAL	6.3	226.0	

MAPID: 16324244000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 4 QUARTERS/FOOTAGES: 330' N line, 2640' E line of NE

QUADRANGLE: COLLINSVILLE

LONGITUDE: -89.883103

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 38.655868

DATE COLLECTED: 5 / 13 / 1977

SURFACE ELEVATION (FT.):

LOGGED (FT.): 235.6

LOG TYPE: Drillers Log

SOURCE: PEABODY 16448C

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	42.2	0.0	
-			SHALE	21.1	42.2	
-			SHALE/SANDSTONE/LIMESTONE	8.5	63.3	
-			SANDSTONE	11.8	71.8	GRAY
-			LIMESTONE	1.6	83.6	
-			SANDSTONE	4.2	85.2	GRAY
-			GRAY SHALE	60.9	89.4	
-			SANDY SHALE	14.1	150.3	
-			LIMESTONE	4.1	164.4	
-	CARBONDALE	ENERGY	GRAY SHALE	8.6	168.5	
-	CARBONDALE	ENERGY	SANDSTONE/SHALE	27.9	177.1	GRAY
-	CARBONDALE	ENERGY	SHALE WITH LIMESTONE	30.6	205.0	
-	CARBONDALE	HERRIN	COAL	0.0	235.6	CORE LOST, THICKNESS OF COAL UNKNOWN

MAPID: 16302302000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 5 QUARTERS/FOOTAGES: 61' N line, 43' E line of NE SW SW

QUADRANGLE: COLLINSVILLE

LONGITUDE: -89.905974

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 38.647017

DATE COLLECTED: 9 / 16 / 1969

SURFACE ELEVATION (FT.): 542.9

LOGGED (FT.): 209.5

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL COMPANY F21

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
542.9	PLEISTOCENE		SOIL	0.5	0.0	
542.4	PLEISTOCENE		CLAY	32.0	0.5	YELLOW
510.4	PLEISTOCENE		SAND & GRAVEL	15.0	32.5	
495.4	PLEISTOCENE		UNCONSOLIDATED	20.5	47.5	
474.9			SANDSTONE	5.0	68.0	
469.9			SILTY SHALE	18.0	73.0	
451.9			SHALE	65.0	91.0	
386.9			SHALE	2.5	156.0	
384.4			LIMESTONE	5.5	158.5	
378.9			SILTY SHALE	12.0	164.0	
366.9			LIMESTONE	12.0	176.0	
354.9			LIMESTONE	2.5	188.0	
352.4			LIMESTONE	1.6	190.5	
350.8	CARBONDALE	ENERGY	SILTY SHALE	3.6	192.1	
347.2	CARBONDALE	ENERGY	BLACK SHALE	4.1	195.7	
343.1	CARBONDALE	ENERGY	LIMESTONE	0.3	199.8	
342.8	CARBONDALE	ENERGY	BLACK SHALE	0.2	200.1	
342.5	CARBONDALE	HERRIN	COAL	6.8	200.4	
335.7	CARBONDALE		UNDERCLAY	1.4	207.2	
334.3	CARBONDALE		LIMESTONE	0.9	208.6	

MAPID: 16302302000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 5 QUARTERS/FOOTAGES: 61' N line, 43' E line of NE SW SW

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.905974 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.647017 DATE COLLECTED:

SURFACE ELEVATION (FT.): 543.0 LOGGED (FT.): 206.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F-21 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
391.9	CARBONDALE		UNCLASSIFIED	2.5	151.1
389.4	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	153.6
383.9	CARBONDALE	ANVIL ROCK	SANDSTONE	6.0	159.1
377.9	CARBONDALE		SHALE	6.0	165.1
371.9	CARBONDALE	BRERETON	LIMESTONE	19.7	171.1
352.2	CARBONDALE	ANNA	BLACK SHALE	4.6	190.8
347.6	CARBONDALE	ENERGY	SHALE	4.6	195.4
343.0	CARBONDALE	HERRIN	COAL	6.8	200.0

MAPID: 16302305000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 5 QUARTERS/FOOTAGES: 143' N line, 313' W line of SE SE

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.895495 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.646655 DATE COLLECTED:

SURFACE ELEVATION (FT.): 465.0 LOGGED (FT.): 140.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F-24 WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
400.0	MODESTO	PIASA	LIMESTONE	1.0	65.0
399.0	CARBONDALE		SANDSTONE	4.5	66.0
394.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.7	70.5
390.8	CARBONDALE	ENERGY	SHALE	6.5	74.2
384.3	CARBONDALE	ENERGY	SANDSTONE	16.3	80.7
368.0	CARBONDALE	ENERGY	SILTY SHALE	35.7	97.0
332.0	CARBONDALE	HERRIN	COAL	7.0	133.0

MAPID: 16302305000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 5 QUARTERS/FOOTAGES: 143' N line, 313' W line of SE SE

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.895495 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.646655 DATE COLLECTED:

SURFACE ELEVATION (FT.): 465.0 LOGGED (FT.): 139.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F-24 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
395.2	MODESTO	PIASA	LIMESTONE	3.7	69.8
391.5	MODESTO		UNCLASSIFIED	2.0	73.5
389.5	CARBONDALE		UNCLASSIFIED	4.5	75.5
385.0	CARBONDALE	ENERGY	SHALE	52.0	80.0
333.0	CARBONDALE	HERRIN	COAL	7.0	132.0

MAPID: 16302305000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 5 QUARTERS/FOOTAGES: 143' N line, 313' W line of SE SE

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.895495 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.646655 DATE COLLECTED: 9 / 24 / 1963

SURFACE ELEVATION (FT.): 465.4 LOGGED (FT.): 141.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F24 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
465.4	PLEISTOCENE		SOIL	0.5	0.0
464.9	PLEISTOCENE		CLAY	5.5	0.5 RED
459.4	PLEISTOCENE		CLAY	6.0	6.0 BLUE
453.4			SHALE	44.0	12.0
409.4			SHALE	9.0	56.0
400.4			LIMESTONE	1.0	65.0
399.4			SANDSTONE	4.5	66.0
394.9			LIMESTONE	3.7	70.5
391.2	CARBONDALE	ENERGY	SHALE	6.5	74.2
384.7	CARBONDALE	ENERGY	SANDSTONE	16.3	80.7
368.4	CARBONDALE	ENERGY	SILTY SHALE	19.0	97.0
349.4	CARBONDALE	ENERGY	SILTY SHALE	13.3	116.0
336.1	CARBONDALE	ENERGY	SILTY SHALE	3.4	129.3
332.7	CARBONDALE	HERRIN	COAL	7.0	132.7
325.7	CARBONDALE		UNDERCLAY	1.0	139.7
324.7	CARBONDALE		CORE LOSS	0.9	140.7

MAPID: 16302306000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 5 QUARTERS/FOOTAGES: 10' S line, 6' E line of SE SE SE

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.892048

GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.643387

DATE COLLECTED: 9 / 28 / 1963

SURFACE ELEVATION (FT.): 546.9 LOGGED (FT.): 225.1

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F25

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
546.9	PLEISTOCENE		SOIL	0.5	0.0	
546.4	PLEISTOCENE		CLAY	33.5	0.5	YELLOW
512.9	PLEISTOCENE		SAND & GRAVEL	8.0	34.0	
504.9	PLEISTOCENE		GLACIAL DRIFT	40.0	42.0	
464.9			SHALE	32.0	82.0	
432.9			SANDSTONE	7.0	114.0	
425.9			SILTY SHALE	8.0	121.0	
417.9			SANDSTONE	6.5	129.0	
411.4			SILTY SHALE	6.0	135.5	
405.4			LIMESTONE	4.5	141.5	
400.9			SHALE	4.0	146.0	
396.9			LIMESTONE	5.0	150.0	
391.9			SHALE	7.0	155.0	
384.9			LIMESTONE	1.5	162.0	
383.4			LIMESTONE	12.5	163.5	
370.9	CARBONDALE	ENERGY	GRAY SHALE	18.9	176.0	
352.0	CARBONDALE	ENERGY	GRAY SHALE	11.8	194.9	
340.1	CARBONDALE	ENERGY	GRAY SHALE	10.0	206.8	
330.2	CARBONDALE	HERRIN	COAL	6.9	216.7	
323.3	CARBONDALE		UNDERCLAY	1.5	223.6	

MAPID: 16302306000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 5 QUARTERS/FOOTAGES: 10' S line, 6' E line of SE SE SE

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.892048

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.643387

DATE COLLECTED:

SURFACE ELEVATION (FT.): 547.0 LOGGED (FT.): 223.9

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F-25

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
396.7	MODESTO	PIASA	LIMESTONE	5.0	150.3	
391.7	MODESTO		UNCLASSIFIED	2.0	155.3	
389.7	CARBONDALE		UNCLASSIFIED	5.0	157.3	
384.7	CARBONDALE	BANKSTON FORK	LIMESTONE	14.0	162.3	
370.7	CARBONDALE	ENERGY	SHALE	40.7	176.3	
330.0	CARBONDALE	HERRIN	COAL	6.9	217.0	

MAPID: 16302298000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 6 QUARTERS/FOOTAGES: 130' N line, 55' E line of SE SE

QUADRANGLE: COLLINSVILLE

LONGITUDE: -89.910634

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 38.646887

DATE COLLECTED: 7 / 12 / 1963

SURFACE ELEVATION (FT.): 547.6

LOGGED (FT.): 222.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F6

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
547.6	PLEISTOCENE		SOIL	0.5	0.0	
547.1	PLEISTOCENE		CLAY	39.0	0.5	YELLOW
508.1	PLEISTOCENE		GRAVEL	7.0	39.5	
501.1	PLEISTOCENE		GLACIAL DRIFT	20.0	46.5	
481.1			SANDSTONE	4.5	66.5	
476.6			SHALE	3.5	71.0	
473.1			LIMESTONE	1.5	74.5	
471.6			LIMESTONE	0.5	76.0	
471.1			SHALE	4.0	76.5	
467.1			LIMESTONE	5.5	80.5	
461.6			SHALE	60.0	86.0	
401.6			SANDY LIMESTONE	3.3	146.0	
398.3			SHALE	13.7	149.3	
384.6			LIMESTONE	2.7	163.0	
381.9			SHALE	2.3	165.7	
379.6			LIMESTONE	3.5	168.0	
376.1			LIMESTONE	1.5	171.5	
374.6			SILTY SHALE	8.0	173.0	
366.6			SANDSTONE	2.0	181.0	
364.6			LIMESTONE	3.5	183.0	
361.1			CALCAREOUS SHALE	9.5	186.5	
351.6			LIMESTONE	9.0	196.0	
342.6			SHALE	3.0	205.0	
339.6			NO RECORD	14.0	208.0	PUSHED OUT & DESTROYED HUNG UP IN BARREL

MAPID: 16302299000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 6 QUARTERS/FOOTAGES: 130' N line, 55' E line of NE SE SE

QUADRANGLE: COLLINSVILLE

LONGITUDE: -89.910634

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 38.646887

DATE COLLECTED: 7 / 12 / 1963

SURFACE ELEVATION (FT.): 547.0

LOGGED (FT.): 218.8

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F6

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
547.0	PLEISTOCENE		SOIL	0.5	0.0	
546.5	PLEISTOCENE		CLAY	39.0	0.5	
507.5	PLEISTOCENE		GRAVEL	7.0	39.5	
500.5	PLEISTOCENE		GLACIAL DRIFT	17.0	46.5	
483.5	PLEISTOCENE		GLACIAL DRIFT	3.0	63.5	
480.5			SANDSTONE	4.5	66.5	
476.0			SHALE WITH LIMESTONE	11.0	71.0	
465.0			SHALE	24.0	82.0	
441.0			SHALE	38.5	106.0	
402.5			SHALE WITH LIMESTONE	11.5	144.5	
391.0			SHALE	7.0	156.0	
384.0			LIMESTONE	2.7	163.0	
381.3			SHALE	2.3	165.7	
379.0			LIMESTONE	5.0	168.0	
374.0			SILTY SHALE	8.0	173.0	
366.0			SANDSTONE	2.0	181.0	
364.0			LIMESTONE	3.5	183.0	
360.5			LIMESTONE	12.0	186.5	
348.5			LIMESTONE	7.1	198.5	
341.4	CARBONDALE	ANNA	BLACK SHALE	5.4	205.6	
336.0	CARBONDALE	HERRIN	COAL	6.4	211.0	
329.6	CARBONDALE		UNDERCLAY	1.3	217.4	10" LOST

MAPID: 16302299000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 6 QUARTERS/FOOTAGES: 130' N line, 55' E line of NE SE SE

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.910634 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.646887 DATE COLLECTED:

SURFACE ELEVATION (FT.): 548.0 LOGGED (FT.): 217.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F-6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
390.4	MODESTO	PIASA	LIMESTONE	2.7	157.6
387.7	MODESTO		UNCLASSIFIED	1.0	160.3
386.7	CARBONDALE		UNCLASSIFIED	1.3	161.3
385.4	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	162.6
380.4	CARBONDALE	ANVIL ROCK	SANDSTONE	5.0	167.6
375.4	CARBONDALE		SHALE	5.0	172.6
370.4	CARBONDALE	BRERETON	LIMESTONE	22.6	177.6
347.8	CARBONDALE	ANNA	BLACK SHALE	5.4	200.2
342.4	CARBONDALE	ENERGY	SHALE	5.4	205.6
337.0	CARBONDALE	HERRIN	COAL	6.4	211.0

MAPID: 16302303000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 6 QUARTERS/FOOTAGES: 175' S line, 175' E line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.911104 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.644089 DATE COLLECTED:

SURFACE ELEVATION (FT.): 546.0 LOGGED (FT.): 221.0 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. F-22 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
378.0	MODESTO	PIASA	LIMESTONE	5.0	168.0
373.0	CARBONDALE	LAWSON	GRAY SHALE	8.0	173.0
365.0	CARBONDALE	BRERETON	LIMESTONE	22.0	181.0
343.0	CARBONDALE	ENERGY	SILTY SHALE	0.3	203.0
342.7	CARBONDALE	ENERGY	SILTY SHALE	2.4	203.3
340.3	CARBONDALE	ENERGY	DARK GRAY SHALE	7.3	205.7
333.0	CARBONDALE	ENERGY	BLACK SHALE	1.3	213.0
333.0	CARBONDALE	HERRIN	COAL	8.0	213.0

MAPID: 16302303000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 6 QUARTERS/FOOTAGES: 175' S line, 175' E line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.911104 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.644089 DATE COLLECTED:

SURFACE ELEVATION (FT.): 546.0 LOGGED (FT.): 220.9 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F-22 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
377.9	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	168.1
372.9	CARBONDALE	ANVIL ROCK	SANDSTONE	4.0	173.1
368.9	CARBONDALE		SHALE	4.0	177.1
364.9	CARBONDALE	BRERETON	LIMESTONE	21.9	181.1
343.0	CARBONDALE	ENERGY	SHALE	10.0	203.0
333.0	CARBONDALE	HERRIN	COAL	7.9	213.0

MAPID: 16302303000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 6 QUARTERS/FOOTAGES: 175' S line, 175' E line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.911104 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.644089 DATE COLLECTED: 9 / 19 / 1963

SURFACE ELEVATION (FT.): 545.7 LOGGED (FT.): 222.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F22 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
545.7	PLEISTOCENE		SOIL	0.5	0.0
545.2	PLEISTOCENE		CLAY	42.0	0.5 YELLOW
503.2	PLEISTOCENE		GLACIAL DRIFT	51.0	42.5
452.2			SANDSTONE	6.5	93.5
445.7			SANDSTONE	4.5	100.0
441.2			SILTY SHALE	14.0	104.5
427.2			SHALE	49.5	118.5
377.7			LIMESTONE	5.0	168.0
372.7			SHALE	6.0	173.0
366.7			SHALE	2.0	179.0
364.7			LIMESTONE	5.5	181.0
359.2			LIMESTONE	16.4	186.5
342.8			DARK SHALE	8.7	202.9
334.0	CARBONDALE	ANNA	BLACK SHALE	1.3	211.7
332.8	CARBONDALE	HERRIN	COAL	8.0	212.9
324.8	CARBONDALE		UNDERCLAY	1.0	220.9
323.8	CARBONDALE		LIMESTONE	0.3	221.9 GRAY

MAPID: 16300417000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 8 QUARTERS/FOOTAGES: 4275' S line, 4950' E line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.909501 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.640768 DATE COLLECTED: 5 / 0 / 1905

SURFACE ELEVATION (FT.): 534.0 LOGGED (FT.): 155.1 LOG TYPE: Drillers Log

SOURCE: NO COMPANY WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
444.0	MODESTO	PIASA	LIMESTONE	4.0	90.0
440.0	MODESTO		UNCLASSIFIED	2.0	94.0
438.0	CARBONDALE		UNCLASSIFIED	5.0	96.0
433.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	101.0
427.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	107.0
424.0	CARBONDALE	BRERETON	LIMESTONE	35.0	110.0
389.0	CARBONDALE	ANNA	BLACK SHALE	3.0	145.0
386.0	CARBONDALE	HERRIN	COAL	7.1	148.0

MAPID: 16300417000C VERSION: 2

PROJECT: NCRDS87

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 8 QUARTERS/FOOTAGES: 4275' S line, 4950' E line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.909501 GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 38.640768 DATE COLLECTED: 4 / 15 / 1905

SURFACE ELEVATION (FT.): 533.6 LOGGED (FT.): 155.5 LOG TYPE: Drillers Log

SOURCE: LUMAGH: MINE NO.2 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
533.6			UNCONSOLIDATED	29.0	0.0
504.6	CARBONDALE		UNCLASSIFIED	81.0	29.0
423.6	CARBONDALE	BRERETON	LIMESTONE	35.0	110.0
388.6	CARBONDALE	ANNA	BLACK SHALE	3.0	145.0
385.6	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	6.9	148.0
378.7	CARBONDALE		UNDERCLAY	0.6	154.9

MAPID: 16300417000C VERSION: 3

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 8 QUARTERS/FOOTAGES: 4275' S line, 4950' E line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.909501 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.640768 DATE COLLECTED: 0 / 0 / 1905

SURFACE ELEVATION (FT.): 533.6 LOGGED (FT.): 156.0 LOG TYPE:

SOURCE: LUMAGHI CC0003 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
385.6	CARBONDALE	HERRIN	COAL	6.9	148.0	

MAPID: 16300417000C VERSION: 4

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 8 QUARTERS/FOOTAGES: 4275' S line, 4950' E line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.909501 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.640768 DATE COLLECTED: 5 / 15 / 1905

SURFACE ELEVATION (FT.): 533.6 LOGGED (FT.): 155.5 LOG TYPE: Drillers Log

SOURCE: LUMAGHI MINE NO 2 3 WELL TYPE: Coal Test

COMMENT: ELEV TOP #6 385.6

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
533.6			SOIL	4.0	0.0	
529.6			CLAY	17.0	4.0	YELLOW
512.6			SAND & GRAVEL	8.0	21.0	
504.6			CLAY	14.0	29.0	BLUE
490.6			BLACK SHALE	43.0	43.0	
447.6			UNDERCLAY	4.0	86.0	GRAY
443.6			UNDERCLAY	20.0	90.0	
423.6			LIMESTONE	35.0	110.0	GRAY
388.6	CARBONDALE	ANNA	BLACK SHALE	3.0	145.0	
385.6	CARBONDALE	HERRIN	COAL	5.5	148.0	
380.1	CARBONDALE	HERRIN	SHALE	0.2	153.5	BLUE
379.9	CARBONDALE	HERRIN	COAL	1.3	153.7	
378.7	CARBONDALE		UNDERCLAY	0.6	154.9	

MAPID: 16301212000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 8 QUARTERS/FOOTAGES: SW SE

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.899137 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.630658 DATE COLLECTED: 5 / 8 / 1953

SURFACE ELEVATION (FT.): 555.0 LOGGED (FT.): 195.5 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 99L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
555.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	55.0	0.0	BLUE
500.0	PLEISTOCENE		CLAY	28.0	55.0	
472.0	PLEISTOCENE		UNCONSOLIDATED	25.0	83.0	BLUE
447.0			GRAY SHALE	39.0	108.0	
408.0			LIMESTONE	1.0	147.0	
407.0			GRAY SHALE	7.5	148.0	
399.5			LIMESTONE	5.5	155.5	
394.0			RED SHALE	3.8	161.0	
390.2			LIMESTONE	4.8	164.8	
385.5			GRAY SHALE	9.0	169.5	
376.5			LIMESTONE	17.0	178.5	
359.5			UNCLASSIFIED	0.0	195.5	DRILL ROD BROKE, ABANDONED HOLE

MAPID: 16301213000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 8 QUARTERS/FOOTAGES: SW SE

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.899137 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.630658 DATE COLLECTED: 5 / 14 / 1953

SURFACE ELEVATION (FT.): 565.0 LOGGED (FT.): 223.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 100L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
565.0	PLEISTOCENE		UNCONSOLIDATED	143.5	0.0	
421.5			GRAY SHALE	4.5	143.5	
417.0			LIMESTONE	0.3	148.0	
416.7			GRAY SHALE	7.9	148.3	
408.7			LIMESTONE	2.0	156.3	
406.7			SHALE	2.8	158.3	MIXED
404.0			LIMESTONE	7.0	161.0	
397.0			SHALE	8.5	168.0	
388.5			SHALY LIMESTONE	5.0	176.5	
383.5			LIMESTONE	20.9	181.5	
362.6	CARBONDALE	ENERGY	SHALE	12.8	202.4	
349.8	CARBONDALE	HERRIN	COAL	7.3	215.2	
342.6	CARBONDALE		UNDERCLAY	0.6	222.4	

MAPID: 16301213000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 8 QUARTERS/FOOTAGES: SW SE

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.899137 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.630658 DATE COLLECTED:

SURFACE ELEVATION (FT.): 565.0 LOGGED (FT.): 222.3 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 100L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
409.0	MODESTO	PIASA	LIMESTONE	2.0	156.0
407.0	MODESTO		UNCLASSIFIED	1.0	158.0
406.0	CARBONDALE		UNCLASSIFIED	1.7	159.0
404.3	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	160.7
397.3	CARBONDALE	ANVIL ROCK	SANDSTONE	4.3	167.7
393.0	CARBONDALE		SHALE	4.3	172.0
388.7	CARBONDALE	BRERETON	LIMESTONE	25.9	176.3
362.8	CARBONDALE	ENERGY	SHALE	12.8	202.2
350.0	CARBONDALE	HERRIN	COAL	7.3	215.0

MAPID: 16302301000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 8 QUARTERS/FOOTAGES: 119' N line, 276' W line of NW NW NE

QUADRANGLE: COLLINSVILLE

LONGITUDE: -89.900295

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 38.643138

DATE COLLECTED: 9 / 6 / 1963

SURFACE ELEVATION (FT.): 535.0

LOGGED (FT.): 206.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F18

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
535.0	PLEISTOCENE		SOIL	0.5	0.0	
534.5	PLEISTOCENE		CLAY	10.0	0.5	YELLOW
524.5	PLEISTOCENE		SILTY CLAY	20.0	10.5	YELLOW
504.5	PLEISTOCENE		GLACIAL DRIFT	26.0	30.5	
478.5			SHALE	22.5	56.5	
456.0			SANDSTONE	3.5	79.0	
452.5			SHALE	13.5	82.5	
439.0			SHALE	22.5	96.0	
416.5			SANDSTONE	1.5	118.5	
415.0			SHALE/SANDSTONE/LIMES TONE	17.0	120.0	
398.0			LIMESTONE	3.5	137.0	
394.5	CARBONDALE		SHALE	7.5	140.5	
387.0	CARBONDALE		SHALE WITH LIMESTONE	8.0	148.0	
379.0	CARBONDALE	ENERGY	SHALE	20.0	156.0	
359.0	CARBONDALE	ENERGY	SILTY SHALE	16.1	176.0	
342.9	CARBONDALE	ENERGY	GRAY SHALE	4.0	192.1	
338.9	CARBONDALE	ENERGY	BLACK SHALE	0.3	196.1	
338.7	CARBONDALE	HERRIN	COAL	6.3	196.3	
332.4	CARBONDALE		UNDERCLAY	2.4	202.6	
330.0	CARBONDALE		SHALY LIMESTONE	1.3	205.0	

MAPID: 16302301000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 8 QUARTERS/FOOTAGES: 119' N line, 276' W line of NW NW NE

QUADRANGLE: COLLINSVILLE

LONGITUDE: -89.900295

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N

LATITUDE: 38.643138

DATE COLLECTED:

SURFACE ELEVATION (FT.): 535.0

LOGGED (FT.): 202.3

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F-18

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
398.3	MODESTO	PIASA	LIMESTONE	3.5	136.7
394.8	MODESTO		UNCLASSIFIED	2.0	140.2
392.8	CARBONDALE		UNCLASSIFIED	5.5	142.2
387.3	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	147.7
379.3	CARBONDALE	ENERGY	SHALE	40.3	155.7
339.0	CARBONDALE	HERRIN	COAL	6.3	196.0

MAPID: 16302304000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 8 QUARTERS/FOOTAGES: 97' N line, 186' W line of NW SW NW

QUADRANGLE: COLLINSVILLE

LONGITUDE: -89.909871

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 38.63967

DATE COLLECTED: 9 / 21 / 1963

SURFACE ELEVATION (FT.): 479.4

LOGGED (FT.): 159.5

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F23

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
479.4	PLEISTOCENE		SOIL	0.5	0.0	
478.9	PLEISTOCENE		CLAY	12.0	0.5	GRAY
466.9	PLEISTOCENE		SAND & GRAVEL	8.0	12.5	
458.9	PLEISTOCENE		CLAY	16.0	20.5	GRAY
442.9			SHALE	14.0	36.5	
428.9			SANDSTONE	12.0	50.5	
416.9			SHALE	32.0	62.5	
384.9			LIMESTONE	3.0	94.5	
381.9			SHALE	1.0	97.5	
380.9	MODESTO	PIASA	SHALY LIMESTONE	4.5	98.5	
376.4	MODESTO	PIASA	LIMESTONE	5.0	103.0	
371.4			SANDSTONE	0.4	108.0	BROWN
371.0			LIMESTONE	3.5	108.4	WHITE
367.5			SHALE	6.5	111.9	RED
361.0			UNKNOWN	15.4	118.4	
345.6	CARBONDALE	BRERETON	LIMESTONE/SHALE/SANDS TONE	10.7	133.8	
334.9	CARBONDALE	ANNA	BLACK SHALE	1.3	144.5	
333.6	CARBONDALE	ANNA	BLACK SHALE	4.5	145.8	
329.1	CARBONDALE	HERRIN	COAL	7.7	150.3	
321.4	CARBONDALE		UNDERCLAY	1.5	158.0	

MAPID: 16302304000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 8 QUARTERS/FOOTAGES: 97' N line, 186' W line of NW SW NW

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.909871 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.63967 DATE COLLECTED:

SURFACE ELEVATION (FT.): 479.0 LOGGED (FT.): 157.7 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F-23 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
388.0	MODESTO	PIASA	LIMESTONE	3.0	91.0
385.0	MODESTO		UNCLASSIFIED	1.0	94.0
384.0	CARBONDALE		UNCLASSIFIED	4.5	95.0
379.5	CARBONDALE	BANKSTON FORK	LIMESTONE	8.5	99.5
371.0	CARBONDALE	ANVIL ROCK	SANDSTONE	1.8	108.0
369.2	CARBONDALE		SHALE	3.5	109.8
365.7	CARBONDALE	BRERETON	LIMESTONE	25.1	113.3
340.6	CARBONDALE	ANNA	BLACK SHALE	5.8	138.4
334.8	CARBONDALE	ENERGY	SHALE	5.8	144.2
329.0	CARBONDALE	HERRIN	COAL	7.7	150.0

MAPID: 16302307000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 8 QUARTERS/FOOTAGES: 106' S line, 28' E line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.892392 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.629033 DATE COLLECTED: 10 / 1 / 1963

SURFACE ELEVATION (FT.): 521.5 LOGGED (FT.): 191.2 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F26 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
521.5	PLEISTOCENE		SOIL	0.5	0.0
521.0	PLEISTOCENE		CLAY	26.5	0.5 YELLOW
494.5	PLEISTOCENE		GLACIAL DRIFT	52.0	27.0
442.5			SHALE	28.0	79.0
414.5			SANDSTONE	3.0	107.0
411.5			LIMESTONE	4.5	110.0
407.0			SHALE	1.5	114.5
405.5			SILTY SHALE	6.0	116.0
399.5	CARBONDALE	ENERGY	SANDSTONE	12.0	122.0
387.5	CARBONDALE	ENERGY	SILTY SHALE	16.0	134.0
371.5	CARBONDALE	ENERGY	SILTY SHALE	16.9	150.0
354.6	CARBONDALE	ENERGY	SHALE & SANDSTONE	12.4	166.9
342.2	CARBONDALE	ENERGY	SHALE & SANDSTONE	2.7	179.3
339.5	CARBONDALE	HERRIN	COAL	7.5	182.0
332.0	CARBONDALE		UNDERCLAY	1.7	189.5

MAPID: 16302307000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 8 QUARTERS/FOOTAGES: 106' S line, 28' E line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.892392 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.629033 DATE COLLECTED:

SURFACE ELEVATION (FT.): 521.0 LOGGED (FT.): 189.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F-26 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
405.0	MODESTO	PIASA	LIMESTONE	4.5	116.0
400.5	MODESTO		UNCLASSIFIED	1.5	120.5
399.0	CARBONDALE		UNCLASSIFIED	6.0	122.0
393.0	CARBONDALE	BANKSTON FORK	LIMESTONE	9.0	128.0
384.0	CARBONDALE	ANVIL ROCK	SANDSTONE	3.0	137.0
381.0	CARBONDALE	ENERGY	SHALE	42.0	140.0
339.0	CARBONDALE	HERRIN	COAL	7.5	182.0

MAPID: 16302308000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 8 QUARTERS/FOOTAGES: 255' S line, 15' W line of SW SW SW

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.910546 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.629685 DATE COLLECTED:

SURFACE ELEVATION (FT.): 528.0 LOGGED (FT.): 199.9 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F-27 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
395.2	MODESTO	PIASA	LIMESTONE	3.0	132.8
392.2	MODESTO		UNCLASSIFIED	1.0	135.8
391.2	CARBONDALE		UNCLASSIFIED	2.0	136.8
389.2	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	138.8
384.2	CARBONDALE	ANVIL ROCK	SANDSTONE	4.8	143.8
379.4	CARBONDALE		SHALE	4.8	148.6
374.6	CARBONDALE	BRERETON	LIMESTONE	29.6	153.4
345.0	CARBONDALE	ANNA	BLACK SHALE	5.0	183.0
340.0	CARBONDALE	ENERGY	SHALE	5.0	188.0
335.0	CARBONDALE	HERRIN	COAL	6.9	193.0

MAPID: 16302309000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 8 QUARTERS/FOOTAGES: 2177' S line, 2565' W line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.901533

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.634871

DATE COLLECTED:

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 221.2

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. F-28

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
373.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	8.6	167.0
364.4	CARBONDALE		CLAYSTONE	11.3	175.6
353.2	CARBONDALE	BANKSTON FORK	LIMESTONE	15.2	186.8
338.0	CARBONDALE	BRERETON	LIMESTONE	7.0	202.0
331.0	CARBONDALE	ENERGY	GRAY SHALE	1.5	209.0
329.5	CARBONDALE	ENERGY	MOTTLED SHALE	0.8	210.5
328.7	CARBONDALE	ENERGY	DARK GRAY SHALE	3.0	211.3
326.0	CARBONDALE	HERRIN	COAL	7.2	214.0

MAPID: 16302309000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 8 QUARTERS/FOOTAGES: 2177' S line, 2565' W line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.901533

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.634871

DATE COLLECTED:

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 221.2

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F-28

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
384.0	MODESTO	PIASA	LIMESTONE	3.7	156.0
380.3	MODESTO		UNCLASSIFIED	1.0	159.7
379.3	CARBONDALE		UNCLASSIFIED	1.0	160.7
378.3	CARBONDALE	BANKSTON FORK	LIMESTONE	8.3	161.7
370.0	CARBONDALE	ANVIL ROCK	SANDSTONE	4.8	170.0
365.2	CARBONDALE		SHALE	5.4	174.8
359.8	CARBONDALE	BRERETON	LIMESTONE	22.2	180.2
337.6	CARBONDALE	ANNA	BLACK SHALE	5.8	202.4
331.8	CARBONDALE	ENERGY	SHALE	5.8	208.2
326.0	CARBONDALE	HERRIN	COAL	7.2	214.0

MAPID: 16302309000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 8 QUARTERS/FOOTAGES: 2177' S line, 2565' W line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.901533 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.634871 DATE COLLECTED: 10 / 11 / 1963

SURFACE ELEVATION (FT.): 540.1 LOGGED (FT.): 223.9 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. F28 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.1	PLEISTOCENE		SOIL	0.5	0.0	
539.6	PLEISTOCENE		CLAY	35.5	0.5	YELLOW
504.1			SHALE	18.0	36.0	
486.1			SANDSTONE	4.5	54.0	
481.6			SHALE	19.5	58.5	
462.1			LIMESTONE	2.0	78.0	
460.1			LIMESTONE	2.0	80.0	
458.1			SHALE/SANDSTONE/LIMESTONE	49.0	82.0	
409.1			SILTY SHALE	14.0	131.0	
395.1			SANDSTONE	10.0	145.0	
385.1			SILTY SHALE	6.5	155.0	
378.6			LIMESTONE	3.7	161.5	
374.9			SILTY SHALE	2.0	165.2	
372.9			LIMESTONE	3.8	167.2	
369.1			LIMESTONE	1.0	171.0	
368.1			LIMESTONE	3.5	172.0	
364.6			SHALE	2.0	175.5	
362.6			DARK SHALE	7.5	177.5	
355.1			DARK SHALE	2.0	185.0	
353.1			LIMESTONE	16.0	187.0	
337.1	CARBONDALE	ENERGY	SHALE WITH LIMESTONE	5.5	203.0	
331.6	CARBONDALE	ENERGY	GRAY SHALE	1.8	208.5	
329.8	CARBONDALE	ENERGY	GRAY SHALE	4.1	210.3	
325.7	CARBONDALE	HERRIN	COAL	7.2	214.4	
318.5	CARBONDALE		UNDERCLAY	2.3	221.6	

MAPID: 16300838000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 9 QUARTERS/FOOTAGES: 200' S line, 2245' E line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.881816 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.629054 DATE COLLECTED:

SURFACE ELEVATION (FT.): 490.0 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: BRENNAN 6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
334.0	CARBONDALE	HERRIN	COAL	6.6	156.0	

MAPID: 16301142000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 9 QUARTERS/FOOTAGES: 20' S line, 20' E line of SE SE SE

QUADRANGLE: ST. JACOB LONGITUDE: -89.873985 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.628381 DATE COLLECTED: 3 / 0 / 1953

SURFACE ELEVATION (FT.): 500.0 LOGGED (FT.): 162.3 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 83L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
500.0	PLEISTOCENE		CLAY	15.0	0.0	
485.0	PLEISTOCENE		UNCONSOLIDATED	68.0	15.0	BLUE
417.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	5.0	83.0	BLUE
412.0	CARBONDALE	ENERGY	GREEN SHALE	5.0	88.0	
407.0	CARBONDALE	ENERGY	SHALE	11.0	93.0	
396.0	CARBONDALE	ENERGY	SHALE	10.0	104.0	
386.0	CARBONDALE	ENERGY	GRAY SHALE	10.0	114.0	
376.0	CARBONDALE	ENERGY	GRAY SHALE	10.0	124.0	
366.0	CARBONDALE	ENERGY	GRAY SHALE	9.0	134.0	
357.0	CARBONDALE	ENERGY	SLATY SHALE	10.0	143.0	
347.0	CARBONDALE	HERRIN	COAL/CLAYSTONE	6.0	153.0	
341.0	CARBONDALE		UNDERCLAY & LIMESTONE	4.0	159.0	

MAPID: 16301142000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 9 QUARTERS/FOOTAGES: 20' S line, 20' E line of SE SE SE

QUADRANGLE: ST. JACOB LONGITUDE: -89.873985 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.628381 DATE COLLECTED:

SURFACE ELEVATION (FT.): 487.0 LOGGED (FT.): 158.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 83L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
399.6	MODESTO		UNCLASSIFIED	1.5	87.4
398.1	CARBONDALE		UNCLASSIFIED	3.5	88.9
394.6	CARBONDALE	BANKSTON FORK	LIMESTONE	11.0	92.4
383.6	CARBONDALE	ANNA	BLACK SHALE	1.3	103.4
382.3	CARBONDALE	ENERGY	SHALE	48.3	104.7
334.0	CARBONDALE	HERRIN	COAL	5.3	153.0

MAPID: 16302065000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 9 QUARTERS/FOOTAGES: 20' S line, 332' W line of SW SW SE

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.881936 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.628562 DATE COLLECTED: 4 / 29 / 1958

SURFACE ELEVATION (FT.): 490.4 LOGGED (FT.): 156.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
490.4	PLEISTOCENE		CLAY	12.0	0.0 YELLOW
478.4	PLEISTOCENE		GLACIAL DRIFT	74.0	12.0
404.4			LIMESTONE	2.5	86.0
401.9			LIMESTONE	9.5	88.5
392.4	CARBONDALE	ENERGY	GRAY SHALE	45.3	98.0
347.1	CARBONDALE	HERRIN	COAL	6.2	143.3
341.0	CARBONDALE		UNDERCLAY	7.0	149.4

MAPID: 16302065000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 9 QUARTERS/FOOTAGES: 20' S line, 332' W line of SW SW SE

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.881936 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.628562 DATE COLLECTED:

SURFACE ELEVATION (FT.): 490.0 LOGGED (FT.): 149.7 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
404.3	CARBONDALE	BANKSTON FORK	LIMESTONE	12.0	85.7	
392.3	CARBONDALE	ENERGY	SHALE	45.3	97.7	
347.0	CARBONDALE	HERRIN	COAL	6.7	143.0	

MAPID: 16302066000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 9 QUARTERS/FOOTAGES: 150' S line, 100' E line of SE SE SE

QUADRANGLE: ST. JACOB LONGITUDE: -89.874268 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.628747 DATE COLLECTED: 5 / 0 / 1958

SURFACE ELEVATION (FT.): 484.2 LOGGED (FT.): 161.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 13 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
484.2	PLEISTOCENE		CLAY	18.0	0.0	YELLOW
466.2	PLEISTOCENE		GLACIAL DRIFT	86.0	18.0	
380.2			LIMESTONE	1.0	104.0	
379.2			GRAY SHALE	7.7	105.0	
371.5			LIMESTONE	0.2	112.7	
371.4			GRAY SHALE	3.8	112.8	
367.5			LIMESTONE	0.3	116.7	
367.2			GRAY SHALE	4.3	117.0	
362.9	CARBONDALE	BRERETON	LIMESTONE	0.1	121.3	
362.8	CARBONDALE	ENERGY	GRAY SHALE	29.4	121.4	
333.4	CARBONDALE	ENERGY	BLACK SHALE	2.3	150.8	
331.0	CARBONDALE	HERRIN	COAL	5.3	153.2	
325.8	CARBONDALE		UNDERCLAY	2.1	158.4	

MAPID: 16302066000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 9 QUARTERS/FOOTAGES: 150' S line, 100' E line of SE SE SE

QUADRANGLE: ST. JACOB LONGITUDE: -89.874268 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.628747 DATE COLLECTED:

SURFACE ELEVATION (FT.): 484.0 LOGGED (FT.): 158.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 13 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
382.6	MODESTO	PIASA	LIMESTONE	1.0	101.4
381.6	MODESTO		UNCLASSIFIED	2.0	102.4
379.6	CARBONDALE		UNCLASSIFIED	5.7	104.4
373.9	CARBONDALE	BANKSTON FORK	LIMESTONE	8.8	110.1
365.1	CARBONDALE	ANNA	BLACK SHALE	2.3	118.9
362.8	CARBONDALE	ENERGY	SHALE	31.8	121.2
331.0	CARBONDALE	HERRIN	COAL	5.3	153.0

MAPID: 16302144000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 9 QUARTERS/FOOTAGES: 22' N line, 58' E line of NE NE

QUADRANGLE: ST. JACOB LONGITUDE: -89.874082 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.642977 DATE COLLECTED:

SURFACE ELEVATION (FT.): 508.0 LOGGED (FT.): 209.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 20 WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
377.0	MODESTO	PIASA	LIMESTONE	4.0	131.0
373.0	CARBONDALE		SHALE	7.0	135.0
366.0	CARBONDALE	BANKSTON FORK	LIMESTONE	10.0	142.0
356.0	CARBONDALE	BRERETON	LIMESTONE	10.0	152.0
346.0	CARBONDALE	ENERGY	GRAY SHALE	41.3	162.0
305.0	CARBONDALE	HERRIN	COAL	6.1	203.0

MAPID: 16302144000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 9 QUARTERS/FOOTAGES: 22' N line, 58' E line of NE NE

QUADRANGLE: ST. JACOB LONGITUDE: -89.874082 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.642977 DATE COLLECTED:

SURFACE ELEVATION (FT.): 508.0 LOGGED (FT.): 208.6 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 20 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
377.8	MODESTO	PIASA	LIMESTONE	4.0	130.2
373.8	MODESTO		UNCLASSIFIED	2.0	134.2
371.8	CARBONDALE		UNCLASSIFIED	5.0	136.2
366.8	CARBONDALE	BANKSTON FORK	LIMESTONE	12.0	141.2
354.8	CARBONDALE	ENERGY	SHALE	49.8	153.2
305.0	CARBONDALE	HERRIN	COAL	5.6	203.0

MAPID: 16302144000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 9 QUARTERS/FOOTAGES: 22' N line, 58' E line of NE NE

QUADRANGLE: ST. JACOB LONGITUDE: -89.874082 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.642977 DATE COLLECTED: 1 / 5 / 1959

SURFACE ELEVATION (FT.): 508.5 LOGGED (FT.): 209.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 20 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
508.5	PLEISTOCENE		SOIL	2.0	0.0
506.5	PLEISTOCENE		CLAY	38.0	2.0 YELLOW
468.5	PLEISTOCENE		GLACIAL DRIFT	16.0	40.0
452.5			LIMESTONE	1.0	56.0
451.5			SHALE	3.0	57.0
448.5			SANDSTONE	34.0	60.0
414.5			SHALE	39.0	94.0
375.5	MODESTO	PIASA	LIMESTONE	4.0	133.0
371.5			SHALE	7.0	137.0
364.5	CARBONDALE	BANKSTON FORK	LIMESTONE	20.0	144.0
344.5	CARBONDALE	ENERGY	SHALE	25.0	164.0
319.5	CARBONDALE	ENERGY	SHALE	16.3	189.0
303.2	CARBONDALE	HERRIN	BONE COAL	0.5	205.3
302.7	CARBONDALE	HERRIN	COAL	5.6	205.8
297.1	CARBONDALE		UNDERCLAY	0.4	211.4

MAPID: 16301219000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 11 QUARTERS/FOOTAGES: 0' N line, 2640' E line

QUADRANGLE: LANCASTER LONGITUDE: -89.846479

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.641975

DATE COLLECTED:

SURFACE ELEVATION (FT.): 500.0 LOGGED (FT.): 237.8

LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 106L

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
346.0	MODESTO	PIASA	LIMESTONE	3.5	154.0	
342.5	CARBONDALE		MOTTLED SHALE	6.8	157.5	
335.7	CARBONDALE	BANKSTON FORK	LIMESTONE	7.3	164.3	UPPER BENCH
328.5	CARBONDALE	BANKSTON FORK	LIMESTONE AND SANDSTONE	2.5	171.5	SHALE PARTING
326.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	174.0	LOWER BENCH
325.0	CARBONDALE	ENERGY	SHALE & SANDSTONE	5.5	175.0	
319.5	CARBONDALE	ENERGY	GRAY SHALE	2.0	180.5	
317.5	CARBONDALE	ENERGY	DARK GRAY SHALE	3.0	182.5	
314.5	CARBONDALE	ENERGY	GRAY SHALE	46.8	185.5	
267.7	CARBONDALE	ENERGY	BLACK SHALE	1.4	232.3	
267.0	CARBONDALE	HERRIN	COAL	4.8	233.0	

MAPID: 16301219000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 11 QUARTERS/FOOTAGES: 0' N line, 2640' E line

QUADRANGLE: LANCASTER LONGITUDE: -89.846479

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.641975

DATE COLLECTED:

SURFACE ELEVATION (FT.): 500.0 LOGGED (FT.): 237.8

LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 106L

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
348.1	MODESTO	PIASA	LIMESTONE	3.5	151.9	
344.6	MODESTO		UNCLASSIFIED	2.0	155.4	
342.6	CARBONDALE		UNCLASSIFIED	4.7	157.4	
337.9	CARBONDALE	BANKSTON FORK	LIMESTONE	10.8	162.1	
327.1	CARBONDALE	ANVIL ROCK	SANDSTONE	5.5	172.9	
321.6	CARBONDALE	ANNA	BLACK SHALE	1.4	178.4	
320.2	CARBONDALE	ENERGY	SHALE	53.2	179.8	
267.0	CARBONDALE	HERRIN	COAL	4.8	233.0	

MAPID: 16301219000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 11 QUARTERS/FOOTAGES: 0' N line, 2640' E line

QUADRANGLE: LANCASTER LONGITUDE: -89.846479 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.641975 DATE COLLECTED: 6 / 10 / 1953

SURFACE ELEVATION (FT.): 500.0 LOGGED (FT.): 333.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 106L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
500.0	PLEISTOCENE		UNCONSOLIDATED	26.0	0.0	
474.0	PLEISTOCENE		SANDY CLAY	12.0	26.0	
462.0	PLEISTOCENE		SILT & SAND	31.0	38.0	BLUE
431.0			LIMESTONE	1.0	69.0	
430.0			SANDY SHALE	6.0	70.0	
424.0			LIMESTONE	6.0	76.0	
418.0			GRAY SHALE	61.3	82.0	
356.7			LIMESTONE	0.3	143.3	
356.4			GRAY SHALE	6.4	143.6	
350.0			SHALY LIMESTONE	3.5	150.0	
346.5			LIMESTONE	3.5	153.5	
343.0			SHALE	6.8	157.0	MIXED
336.2			LIMESTONE	7.3	163.8	
329.0			SANDY LIMESTONE	2.5	171.0	BLUE
326.5			LIMESTONE	1.0	173.5	GRAY
325.5			SHALY SANDSTONE	5.5	174.5	
320.0	CARBONDALE	ENERGY	GRAY SHALE	2.0	180.0	
318.0	CARBONDALE	ENERGY	SHALE	3.0	182.0	
315.0	CARBONDALE	ENERGY	GRAY SHALE	43.8	185.0	
271.2	CARBONDALE	ENERGY	BLACK SHALE	1.4	228.8	
269.8	CARBONDALE	HERRIN	COAL	4.8	230.2	
265.0	CARBONDALE		UNDERCLAY	5.0	235.0	
260.0	CARBONDALE		LIMESTONE	1.0	240.0	
259.0	CARBONDALE		UNDERCLAY	11.5	241.0	
247.5	CARBONDALE	ST. DAVID	LIMESTONE	2.5	252.5	
245.0	CARBONDALE	TURNER MINE	BLACK SHALE	2.2	255.0	
242.8	CARBONDALE		UNDERCLAY	2.8	257.2	
240.0	CARBONDALE		SHALE	17.0	260.0	WHITE
223.0	CARBONDALE		GRAY SHALE	17.0	277.0	
206.0	CARBONDALE		LIMESTONE	1.0	294.0	
205.0	CARBONDALE		GRAY SHALE	23.0	295.0	
182.0	CARBONDALE	SURVANT	COAL	0.3	318.0	
181.7	CARBONDALE		UNDERCLAY	1.7	318.3	GRAY
180.0	CARBONDALE		SANDSTONE	5.0	320.0	
175.0	CARBONDALE		SANDY SHALE	5.0	325.0	

MAPID: 16302143000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 11 QUARTERS/FOOTAGES: 5' S line, 30' E line of SW SE NW
 QUADRANGLE: ST. JACOB LONGITUDE: -89.848725 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.634735 DATE COLLECTED: 1 / 1 / 1959
 SURFACE ELEVATION (FT.): 480.7 LOGGED (FT.): 218.2 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 17 WELL TYPE:
 COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
480.7	PLEISTOCENE		CLAY	26.5	0.0	
454.2	PLEISTOCENE		UNCONSOLIDATED	28.3	26.5	
425.9			LIMESTONE	6.2	54.8	
419.7			GRAY SHALE	4.7	61.0	
415.0			SANDY SHALE	136.7	65.7	
278.3	CARBONDALE	ENERGY	GRAY SHALE	9.6	202.4	
268.7	CARBONDALE		RASH	0.3	212.0	
268.4	CARBONDALE	HERRIN	COAL	3.2	212.3	
265.1	CARBONDALE	HERRIN	ROCK	0.1	215.6	BLUE
265.1	CARBONDALE	HERRIN	COAL	1.5	215.6	
263.6	CARBONDALE		UNDERCLAY	1.1	217.1	

MAPID: 16302143000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 11 QUARTERS/FOOTAGES: 5' S line, 30' E line of SW SE NW
 QUADRANGLE: ST. JACOB LONGITUDE: -89.848725 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.634735 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 481.0 LOGGED (FT.): 217.7 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 17 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
268.0	CARBONDALE	HERRIN	COAL	4.7	213.0	

MAPID: 16302147000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 12 QUARTERS/FOOTAGES: 376' N line, 160' W line of SW
 QUADRANGLE: ST. JACOB LONGITUDE: -89.836694 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 38.633327 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 460.0 LOGGED (FT.): 218.5 LOG TYPE: Survey Core Study
 SOURCE: PEABODY COAL CO. 19 WELL TYPE: Coal Test
 COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
323.0	MODESTO	PIASA	LIMESTONE	3.5	137.0
319.5	CARBONDALE	ENERGY	GRAY SHALE	8.1	140.5
311.4	CARBONDALE	ENERGY	SILTY SHALE	39.1	148.6
272.4	CARBONDALE	ENERGY	GRAY SHALE	21.9	187.6
250.5	CARBONDALE	ENERGY	CARBONACEOUS SHALE	5.0	209.5
246.0	CARBONDALE	HERRIN	COAL	4.5	214.0

MAPID: 16302147000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 12 QUARTERS/FOOTAGES: 376' N line, 160' W line of SW
 QUADRANGLE: ST. JACOB LONGITUDE: -89.836694 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.633327 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 460.0 LOGGED (FT.): 218.5 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 19 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
323.6	MODESTO	PIASA	LIMESTONE	3.5	136.4
320.1	MODESTO		UNCLASSIFIED	2.0	139.9
318.1	CARBONDALE		UNCLASSIFIED	6.1	141.9
312.0	CARBONDALE	ENERGY	SHALE	66.0	148.0
246.0	CARBONDALE	HERRIN	COAL	4.5	214.0

MAPID: 16302147000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 12 QUARTERS/FOOTAGES: 376' N line, 160' W line of SW

QUADRANGLE: ST. JACOB LONGITUDE: -89.836694 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.633327 DATE COLLECTED: 1 / 3 / 1959

SURFACE ELEVATION (FT.): 460.0 LOGGED (FT.): 218.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 19 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
460.0	PLEISTOCENE		CLAY	23.3	0.0	
436.7	PLEISTOCENE		SAND	36.9	23.3	BROWN
399.8			GRAY SHALE	5.0	60.2	
394.8			LIMESTONE	4.3	65.2	
390.5			GRAY SHALE	4.0	69.5	
386.5			SANDY SHALE	57.2	73.5	
329.3			GRAY SHALE	5.8	130.7	
323.5			LIMESTONE	3.5	136.5	
320.0	CARBONDALE	ENERGY	GRAY SHALE	8.1	140.0	
311.9	CARBONDALE	ENERGY	SANDY SHALE	39.1	148.1	
272.9	CARBONDALE	ENERGY	GRAY SHALE	26.9	187.1	
246.0	CARBONDALE	HERRIN	COAL	2.9	214.0	
243.1	CARBONDALE	HERRIN	ROCK	0.1	216.9	BLUE
243.0	CARBONDALE	HERRIN	COAL	1.5	217.0	
241.4	CARBONDALE		UNDERCLAY	1.1	218.6	

MAPID: 16325020000C VERSION: 1

PROJECT: NCRDS99

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 14 QUARTERS/FOOTAGES: 1840' S line, 2290' W line

QUADRANGLE: LEBANON LONGITUDE: -89.847411 GEOLOGIST: MCCRACKEN

CONFIDENTIAL: N LATITUDE: 38.617962 DATE COLLECTED: 7 / 1 / 1980

SURFACE ELEVATION (FT.): 445.0 LOGGED (FT.): 172.6 LOG TYPE: Survey Core Study

SOURCE: GULF OIL CORPORATION SI-38 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
445.0			NO RECORD	145.0	0.0	
300.0	CARBONDALE		SHALE	19.4	145.0	
280.6	CARBONDALE		BLACK SHALE	0.1	164.4	
280.5	CARBONDALE		SHALE	0.6	164.5	
280.0	CARBONDALE		BLACK SHALE	0.2	165.0	
279.8	CARBONDALE		SHALE	0.8	165.2	
279.0	CARBONDALE		BLACK SHALE	0.6	166.0	
278.4	CARBONDALE	HERRIN	COAL	-	166.6	NO THICKNESS VALUE REPORTED
274.4	CARBONDALE		UNDERCLAY	0.3	170.6	
274.1	CARBONDALE		CLAYSTONE & SILTSTONE	1.7	170.9	

MAPID: 16325020000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 14 QUARTERS/FOOTAGES: 1840' S line, 2290' W line
 QUADRANGLE: LEBANON LONGITUDE: -89.847411 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.617962 DATE COLLECTED: 7 / 1 / 1980
 SURFACE ELEVATION (FT.): LOGGED (FT.): 182.0 LOG TYPE: Drillers Log
 SOURCE: GULF SI38 WELL TYPE:
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	ENERGY	SHALE	21.0	145.0	
-	CARBONDALE	ENERGY	BLACK SHALE	0.6	166.0	
-	CARBONDALE	HERRIN	COAL	4.0	166.6	
-	CARBONDALE		CLAYSTONE & SILTSTONE	0.3	170.6	GRAY
-	CARBONDALE		CLAYSTONE & SILTSTONE	1.7	170.9	GRAY

MAPID: 16301143000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 15 QUARTERS/FOOTAGES: 0' S line, 0' W line
 QUADRANGLE: LEBANON LONGITUDE: -89.873962 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 38.613851 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 515.0 LOGGED (FT.): 179.6 LOG TYPE: Drillers Log
 SOURCE: PERRY COAL CO. 80L WELL TYPE: Coal Test
 COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
418.0	MODESTO	PIASA	LIMESTONE	2.5	97.0	
415.5	CARBONDALE		MOTTLED SHALE	4.8	99.5	
410.7	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	104.3	
405.2	CARBONDALE	ENERGY	GRAY SHALE	63.5	109.8	
341.7	CARBONDALE	ENERGY	BLACK SHALE	1.3	173.3	
341.0	CARBONDALE	HERRIN	COAL	5.6	174.0	

MAPID: 16301143000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 15 QUARTERS/FOOTAGES: 0' S line, 0' W line
 QUADRANGLE: LEBANON LONGITUDE: -89.873962 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.613851 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 515.0 LOGGED (FT.): 189.6 LOG TYPE: Drillers Log
 SOURCE: PERRY COAL CO. 80L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
409.9	MODESTO	PIASA	LIMESTONE	2.5	105.1	
407.4	MODESTO		UNCLASSIFIED	1.5	107.6	
405.9	CARBONDALE		UNCLASSIFIED	3.3	109.1	
402.6	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	112.4	
397.1	CARBONDALE	ANNA	BLACK SHALE	1.3	117.9	
395.8	CARBONDALE	ENERGY	SHALE	64.8	119.2	
331.0	CARBONDALE	HERRIN	COAL	5.6	184.0	

MAPID: 16301143000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 15 QUARTERS/FOOTAGES: 0' S line, 0' W line
 QUADRANGLE: LEBANON LONGITUDE: -89.873962 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.613851 DATE COLLECTED: 2 / 25 / 1953
 SURFACE ELEVATION (FT.): 515.0 LOGGED (FT.): 183.0 LOG TYPE: Drillers Log
 SOURCE: PERRY COAL CO. 80L WELL TYPE:
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
515.0	PLEISTOCENE		UNCONSOLIDATED	25.0	0.0	
490.0	PLEISTOCENE		SANDY CLAY	3.0	25.0	
487.0	PLEISTOCENE		SAND & GRAVEL	3.5	28.0	
483.5	PLEISTOCENE		CLAY, SAND & SILTSTONE	1.5	31.5	BLUE
482.0			SHALE	10.0	33.0	YELLOW
472.0			GRAY SHALE	53.7	43.0	
418.3			LIMESTONE	2.5	96.7	
415.8			SHALE	4.8	99.2	YELLOW
411.0	MODESTO	PIASA	LIMESTONE	5.5	104.0	
405.5	CARBONDALE	ENERGY	SHALE	63.5	109.5	
342.0	CARBONDALE	ENERGY	BLACK SHALE	1.3	173.0	
340.7	CARBONDALE	HERRIN	COAL	5.6	174.3	
335.1	CARBONDALE		UNDERCLAY	2.1	179.9	
333.0	CARBONDALE		LIMESTONE/UNDERCLAY	1.0	182.0	

MAPID: 16302145000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 15 QUARTERS/FOOTAGES: 100' S line, 292' E line of SE NE NE

QUADRANGLE: LEBANON

LONGITUDE: -89.856536

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 38.624306

DATE COLLECTED: 1 / 6 / 1959

SURFACE ELEVATION (FT.): 452.9

LOGGED (FT.): 170.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 21

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
452.9	PLEISTOCENE		CLAY	20.9	0.0	
432.0	PLEISTOCENE		SAND	5.4	20.9	BROWN
426.6	PLEISTOCENE		UNCONSOLIDATED	65.9	26.3	
360.7			LIMESTONE	2.1	92.2	
358.7	CARBONDALE	ENERGY	GRAY SHALE	4.4	94.2	
354.3	CARBONDALE	ENERGY	GRAY SHALE	55.0	98.6	
299.3	CARBONDALE	ENERGY	GRAY SHALE	11.0	153.6	
288.3	CARBONDALE	HERRIN	COAL	1.3	164.6	
287.0	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	165.9	
287.0	CARBONDALE	HERRIN	COAL	2.3	165.9	
284.6	CARBONDALE	HERRIN	ROCK	0.1	168.3	BLUE
284.6	CARBONDALE	HERRIN	COAL	1.3	168.3	
283.3	CARBONDALE		UNDERCLAY	2.3	169.6	
281.0	CARBONDALE		LIMESTONE	1.3	171.9	
279.7	CARBONDALE		GRAY SHALE	1.4	173.2	

MAPID: 16302145000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 15 QUARTERS/FOOTAGES: 100' S line, 292' E line of SE NE NE

QUADRANGLE: LEBANON

LONGITUDE: -89.856536

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N

LATITUDE: 38.624306

DATE COLLECTED:

SURFACE ELEVATION (FT.): 453.0

LOGGED (FT.): 170.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 21

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
360.5	MODESTO	PIASA	LIMESTONE	2.1	92.5	
358.4	MODESTO		UNCLASSIFIED	1.2	94.6	
357.2	CARBONDALE		UNCLASSIFIED	3.2	95.8	
354.0	CARBONDALE	ENERGY	SHALE	66.0	99.0	
288.0	CARBONDALE	HERRIN	COAL	5.0	165.0	

MAPID: 16300418000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: 1320' S line, 5200' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.910634 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.617981 DATE COLLECTED: 0 / 0 / 1905

SURFACE ELEVATION (FT.): 527.0 LOGGED (FT.): 162.0 LOG TYPE:

SOURCE: LUMAGHI CC0005 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
372.0	CARBONDALE	HERRIN	COAL	7.2	155.0	

MAPID: 16300418000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: 1320' S line, 5200' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.910634 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.617981 DATE COLLECTED: 6 / 0 / 1905

SURFACE ELEVATION (FT.): 527.0 LOGGED (FT.): 162.2 LOG TYPE: Drillers Log

SOURCE: NO COMPANY WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
432.0	MODESTO	PIASA	LIMESTONE	10.0	95.0	
422.0	MODESTO		UNCLASSIFIED	1.5	105.0	
420.5	CARBONDALE		UNCLASSIFIED	4.5	106.5	
416.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.0	111.0	
406.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	5.0	121.0	
401.0	CARBONDALE	BRERETON	LIMESTONE	29.0	126.0	
372.0	CARBONDALE	HERRIN	COAL	7.2	155.0	

MAPID: 16300418000C VERSION: 3

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: 1320' S line, 5200' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.910634 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.617981 DATE COLLECTED: 6 / 13 / 1905

SURFACE ELEVATION (FT.): 527.0 LOGGED (FT.): 162.3 LOG TYPE: Drillers Log

SOURCE: LUMAGHI MINE NO 2 5 WELL TYPE: Coal Test

COMMENT: ELEV TOP #6 372.0

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
527.0			UNCONSOLIDATED	8.0	0.0	
519.0			GRAVEL	2.0	8.0	
517.0			SAND	3.0	10.0	YELLOW
514.0			CLAY	10.0	13.0	BLUE
504.0			CLAY	12.0	23.0	BLUE
492.0			BLACK SHALE	60.0	35.0	
432.0			LIMESTONE	10.0	95.0	GRAY
422.0			UNDERCLAY	6.0	105.0	BLUE
416.0			UNDERCLAY	15.0	111.0	
401.0			LIMESTONE	8.0	126.0	GRAY
393.0			LIMESTONE	21.0	134.0	BLUE
372.0	CARBONDALE	HERRIN	COAL	7.2	155.0	
364.8	CARBONDALE		LIMESTONE	0.1	162.2	BLUE

MAPID: 16300419000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: 1740' S line, 1425' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.897345 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.619074 DATE COLLECTED: 0 / 0 / 1905

SURFACE ELEVATION (FT.): 490.1 LOGGED (FT.): 200.0 LOG TYPE:

SOURCE: LUMAGHI CC0004 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
372.1	CARBONDALE	HERRIN	COAL	8.0	118.0	

MAPID: 16300419000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: 1740' S line, 1425' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.897345 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.619074 DATE COLLECTED: 6 / 0 / 1905

SURFACE ELEVATION (FT.): 490.0 LOGGED (FT.): 126.0 LOG TYPE: Drillers Log

SOURCE: NO COMPANY WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
429.0	MODESTO	PIASA	LIMESTONE	5.0	61.0
424.0	MODESTO		UNCLASSIFIED	2.5	66.0
421.5	CARBONDALE		UNCLASSIFIED	7.5	68.5
414.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.0	76.0
404.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	86.0
401.0	CARBONDALE		UNCLASSIFIED	3.0	89.0
398.0	CARBONDALE	BRERETON	LIMESTONE	22.0	92.0
376.0	CARBONDALE	ANNA	BLACK SHALE	4.0	114.0
372.0	CARBONDALE	HERRIN	COAL	8.0	118.0

MAPID: 16300419000C VERSION: 3

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: 1740' S line, 1425' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.897345 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.619074 DATE COLLECTED: 6 / 2 / 1905

SURFACE ELEVATION (FT.): 490.1 LOGGED (FT.): 200.0 LOG TYPE: Drillers Log

SOURCE: LUMAGHI MINE NO 2 4 WELL TYPE: Coal Test

COMMENT: ELEV TOP #6 372

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
490.1			UNCONSOLIDATED	3.0	0.0	
487.1			CLAY	12.0	3.0	YELLOW
475.1			GRAVEL	3.0	15.0	
472.1			CLAY	10.0	18.0	YELLOW
462.1			CLAY	8.0	28.0	BLUE
454.1			BLACK SHALE	25.0	36.0	
429.1			UNDERCLAY	15.0	61.0	
414.1			LIMESTONE	10.0	76.0	GRAY
404.1			UNDERCLAY	6.0	86.0	
398.1			LIMESTONE	22.0	92.0	GRAY
376.1	CARBONDALE	ANNA	BLACK SHALE	4.0	114.0	
372.1	CARBONDALE	HERRIN	COAL	1.5	118.0	
370.6	CARBONDALE	HERRIN	COAL	2.5	119.5	
368.1	CARBONDALE	HERRIN	COAL	4.0	122.0	
364.1	CARBONDALE		LIMESTONE	2.0	126.0	GRAY
362.1	CARBONDALE		UNDERCLAY	3.0	128.0	
359.1	CARBONDALE		UNDERCLAY	10.0	131.0	
349.1	CARBONDALE		LIMESTONE	20.0	141.0	GRAY
329.1	CARBONDALE		BLACK SHALE	20.0	161.0	
309.1	CARBONDALE		UNDERCLAY	10.0	181.0	RED
299.1	CARBONDALE		BLACK SHALE	9.0	191.0	

MAPID: 16301210000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.900341 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.620657 DATE COLLECTED: 4 / 27 / 1953

SURFACE ELEVATION (FT.): 520.0 LOGGED (FT.): 174.0 LOG TYPE: Drillers Log

SOURCE: ISGS 95L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
520.0	PLEISTOCENE		UNCONSOLIDATED	31.0	0.0	
489.0	PLEISTOCENE		UNCONSOLIDATED	59.0	31.0	BLUE
430.0			GRAY SHALE	13.0	90.0	
417.0			SHALE	8.0	103.0	
409.0			CALCAREOUS SHALE	1.5	111.0	
407.5			SHALE	4.0	112.5	MIXED
403.5			LIMESTONE	6.5	116.5	
397.0			SHALE	6.0	123.0	MIXED
391.0			LIMESTONE	30.8	129.0	
360.2	CARBONDALE	ANNA	BLACK SHALE	4.9	159.8	BLACK
355.2	CARBONDALE	HERRIN	COAL	6.5	164.8	
348.7	CARBONDALE		UNDERCLAY	2.8	171.3	

MAPID: 16301210000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.900341 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.620657 DATE COLLECTED:

SURFACE ELEVATION (FT.): 520.0 LOGGED (FT.): 171.5 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 95L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
408.8	MODESTO	PIASA	LIMESTONE	1.5	111.2	
407.3	MODESTO		UNCLASSIFIED	1.3	112.7	
406.0	CARBONDALE		UNCLASSIFIED	2.8	114.0	
403.2	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	116.8	
396.7	CARBONDALE	ANVIL ROCK	SANDSTONE	3.0	123.3	
393.7	CARBONDALE		SHALE	3.0	126.3	
390.7	CARBONDALE	BRERETON	LIMESTONE	30.8	129.3	
359.9	CARBONDALE	ANNA	BLACK SHALE	4.9	160.1	
355.0	CARBONDALE	HERRIN	COAL	6.5	165.0	

MAPID: 16301211000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: NW SE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.895774 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.616984 DATE COLLECTED: 4 / 30 / 1953

SURFACE ELEVATION (FT.): 505.0 LOGGED (FT.): 140.0 LOG TYPE: Drillers Log

SOURCE: ISGS 96L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
505.0	PLEISTOCENE		UNCONSOLIDATED	35.0	0.0	
470.0	PLEISTOCENE		UNCONSOLIDATED	11.0	35.0	BLUE
459.0			GRAY SHALE	7.0	46.0	
452.0			SHALE	9.0	53.0	
443.0			LIMESTONE	1.0	62.0	
442.0			LIMESTONE	1.0	63.0	
441.0			SHALE	1.5	64.0	MIXED
439.5	MODESTO	PIASA	LIMESTONE	4.5	65.5	
435.0			SHALE	13.0	70.0	MIXED
422.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	83.0	
415.0	CARBONDALE	ENERGY	SHALE	13.0	90.0	
402.0	CARBONDALE	ENERGY	GRAY SHALE	24.0	103.0	
378.0	CARBONDALE	ENERGY	BLACK SHALE	1.0	127.0	
377.0	CARBONDALE	HERRIN	COAL	6.4	128.0	
370.6	CARBONDALE		UNDERCLAY	5.6	134.4	

MAPID: 16301211000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: NW SE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.895774 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.616984 DATE COLLECTED:

SURFACE ELEVATION (FT.): 505.0 LOGGED (FT.): 134.5 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 96L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
440.5	MODESTO	PIASA	LIMESTONE	4.5	64.5	
436.0	MODESTO		UNCLASSIFIED	4.0	69.0	
432.0	CARBONDALE		UNCLASSIFIED	9.0	73.0	
423.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	82.0	
416.0	CARBONDALE	ANNA	BLACK SHALE	1.0	89.0	
415.0	CARBONDALE	ENERGY	SHALE	38.0	90.0	
377.0	CARBONDALE	HERRIN	COAL	6.5	128.0	

MAPID: 16301214000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: 10' N line, 180' E line of NE NE NW

QUADRANGLE: COLLINSVILLE

LONGITUDE: -89.902084

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 38.628842

DATE COLLECTED: 5 / 19 / 1953

SURFACE ELEVATION (FT.): 542.0

LOGGED (FT.): 213.0

LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 101L

WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
542.0	PLEISTOCENE		UNCONSOLIDATED	138.5	0.0	
403.5			GRAY SHALE	6.5	138.5	
397.0			LIMESTONE	6.0	145.0	
391.0			SHALY LIMESTONE	1.0	151.0	
390.0			GRAY SHALE	3.7	152.0	
386.3	CARBONDALE	BANKSTON FORK	LIMESTONE	5.8	155.7	
380.5	CARBONDALE	ANVIL ROCK	SANDSTONE	4.4	161.5	GRAY
376.1	CARBONDALE		SHALE	4.3	165.9	
371.8	CARBONDALE	BRERETON	LIMESTONE	30.3	170.2	
341.5	CARBONDALE	ANNA	BLACK SHALE	2.5	200.5	
339.0	CARBONDALE	HERRIN	COAL	7.2	203.0	

MAPID: 16301214000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: 10' N line, 180' E line of NE NE NW

QUADRANGLE: COLLINSVILLE

LONGITUDE: -89.902084

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N

LATITUDE: 38.628842

DATE COLLECTED:

SURFACE ELEVATION (FT.): 542.0

LOGGED (FT.): 210.2

LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 101L

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
397.0	MODESTO	PIASA	LIMESTONE	6.0	145.0	
391.0	MODESTO		UNCLASSIFIED	1.5	151.0	
389.5	CARBONDALE		UNCLASSIFIED	3.2	152.5	
386.3			LIMESTONE	5.8	155.7	
380.6			SHALE	8.8	161.4	
371.8			LIMESTONE	28.2	170.2	
343.7			SHALE	2.2	198.3	
341.5	CARBONDALE	ANNA	BLACK SHALE	2.5	200.5	
339.0	CARBONDALE	HERRIN	COAL	7.2	203.0	
331.8	CARBONDALE		UNDERCLAY & LIMESTONE	2.8	210.2	

MAPID: 16301221000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: NE NE NE

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.893445 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.627847 DATE COLLECTED: 5 / 5 / 1953

SURFACE ELEVATION (FT.): 555.0 LOGGED (FT.): 201.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 97L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
555.0	PLEISTOCENE		UNCONSOLIDATED	16.0	0.0	
539.0	PLEISTOCENE		SANDY CLAY	7.0	16.0	
532.0	PLEISTOCENE		SAND & GRAVEL	30.0	23.0	
502.0	PLEISTOCENE		UNCONSOLIDATED	10.0	53.0	BLUE
492.0	PLEISTOCENE		CLAY	20.0	63.0	YELLOW
472.0	PLEISTOCENE		CLAY	15.0	83.0	BLUE
457.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	29.5	98.0	BLUE
427.5			LIMESTONE	3.7	127.5	
423.8			SHALE	1.8	131.2	
422.0	CARBONDALE	ENERGY	CALCAREOUS SHALE	5.0	133.0	
417.0	CARBONDALE	ENERGY	SHALE	25.0	138.0	
392.0	CARBONDALE	ENERGY	GRAY SHALE	29.0	163.0	
363.0	CARBONDALE	HERRIN	COAL	6.2	192.0	
356.8	CARBONDALE		UNDERCLAY	2.8	198.2	

MAPID: 16301221000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: NE NE NE

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.893445 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.627847 DATE COLLECTED:

SURFACE ELEVATION (FT.): 555.0 LOGGED (FT.): 198.2 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 97L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
426.8	MODESTO	PIASA	LIMESTONE	3.7	128.2	
423.1	MODESTO		UNCLASSIFIED	0.1	131.9	
423.0	CARBONDALE		UNCLASSIFIED	1.0	132.0	
422.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	133.0	
417.0	CARBONDALE	ENERGY	SHALE	54.0	138.0	
363.0	CARBONDALE	HERRIN	COAL	6.2	192.0	

MAPID: 16301222000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: NW NE NE

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.895733 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.627878 DATE COLLECTED: 5 / 7 / 1953

SURFACE ELEVATION (FT.): 565.0 LOGGED (FT.): 212.5 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 98L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
565.0	PLEISTOCENE		UNCONSOLIDATED	23.0	0.0	
542.0	PLEISTOCENE		SANDY CLAY	10.0	23.0	RED
532.0	PLEISTOCENE		SAND & GRAVEL	30.0	33.0	
502.0	PLEISTOCENE		UNCONSOLIDATED	10.0	63.0	BLUE
492.0	PLEISTOCENE		SANDY CLAY	20.0	73.0	
472.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	10.0	93.0	BLUE
462.0	PLEISTOCENE		MUD	25.0	103.0	BLUE
437.0			SHALE	6.5	128.0	MIXED
430.5			LIMESTONE	1.5	134.5	
429.0			SHALY LIMESTONE	2.0	136.0	
427.0			SHALE	6.0	138.0	MIXED
421.0			LIMESTONE	3.5	144.0	
417.5			SHALE	4.5	147.5	YELLOW
413.0			LIMESTONE	3.0	152.0	
410.0			SHALY LIMESTONE	3.0	155.0	
407.0	CARBONDALE	ENERGY	SANDY SHALE	25.0	158.0	
382.0	CARBONDALE	ENERGY	GRAY SHALE	20.0	183.0	
362.0	CARBONDALE	HERRIN	COAL	6.8	203.0	
355.2	CARBONDALE		UNDERCLAY	2.8	209.8	

MAPID: 16301222000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: NW NE NE

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.895733 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.627878 DATE COLLECTED:

SURFACE ELEVATION (FT.): 565.0 LOGGED (FT.): 209.8 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 98L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
421.0	MODESTO	PIASA	LIMESTONE	3.5	144.0	
417.5	MODESTO		UNCLASSIFIED	1.5	147.5	
416.0	CARBONDALE		UNCLASSIFIED	3.0	149.0	
413.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	152.0	
407.0	CARBONDALE	ENERGY	SHALE	45.0	158.0	
362.0	CARBONDALE	HERRIN	COAL	6.8	203.0	

MAPID: 16302059000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: 26' N line, 2321' E line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.900464

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.628776

DATE COLLECTED:

SURFACE ELEVATION (FT.): 546.0 LOGGED (FT.): 215.7

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 5

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
391.1	MODESTO	PIASA	NODULAR LIMESTONE	1.7	154.9
389.4	CARBONDALE		CLAYSTONE & SHALE	4.6	156.6
384.8	CARBONDALE	BANKSTON FORK	LIMESTONE	6.3	161.2
378.5	CARBONDALE	LAWSON	MOTTLED SHALE	5.0	167.5
373.5	CARBONDALE	LAWSON	CLAYSTONE	1.4	172.5
372.1	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	26.2	173.9
345.9	CARBONDALE	ANNA	BLACK SHALE	7.9	200.1
338.0	CARBONDALE	HERRIN	COAL	7.7	208.0

MAPID: 16302059000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: 26' N line, 2321' E line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.900464

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.628776

DATE COLLECTED:

SURFACE ELEVATION (FT.): 546.0 LOGGED (FT.): 215.7

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 5

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
391.6	MODESTO	PIASA	LIMESTONE	1.7	154.4
389.9	MODESTO		UNCLASSIFIED	1.2	156.1
388.7	CARBONDALE		UNCLASSIFIED	3.4	157.3
385.3	CARBONDALE	BANKSTON FORK	LIMESTONE	6.3	160.7
379.0	CARBONDALE	ANVIL ROCK	SANDSTONE	3.0	167.0
376.0	CARBONDALE		SHALE	3.4	170.0
372.6	CARBONDALE	BRERETON	LIMESTONE	28.3	173.4
344.3	CARBONDALE	ANNA	BLACK SHALE	6.3	201.7
338.0	CARBONDALE	HERRIN	COAL	7.7	208.0

MAPID: 16302067000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: 26' N line, 91' E line of NE NE NE
 QUADRANGLE: COLLINSVILLE LONGITUDE: -89.892619 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.62867 DATE COLLECTED: 5 / 6 / 1958
 SURFACE ELEVATION (FT.): 558.7 LOGGED (FT.): 201.0 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 14 WELL TYPE:
 COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
558.7	PLEISTOCENE		CLAY	26.0	0.0	YELLOW
532.7	PLEISTOCENE		SAND & GRAVEL	1.0	26.0	
531.7	PLEISTOCENE		CLAY	30.0	27.0	YELLOW
501.7	PLEISTOCENE		GLACIAL DRIFT	70.0	57.0	
431.7			LIMESTONE	4.0	127.0	
427.7			SHALE	1.5	131.0	
426.2			LIMESTONE	3.5	132.5	
422.7	CARBONDALE	ENERGY	SHALE	54.0	136.0	
368.7	CARBONDALE	ENERGY	SILTY SHALE	2.0	190.0	
366.7	CARBONDALE		CLOD	0.2	192.0	
366.5	CARBONDALE	HERRIN	COAL	7.3	192.2	
359.2	CARBONDALE		UNDERCLAY	1.2	199.5	

MAPID: 16302067000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 17 QUARTERS/FOOTAGES: 26' N line, 91' E line of NE NE NE
 QUADRANGLE: COLLINSVILLE LONGITUDE: -89.892619 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.62867 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 559.0 LOGGED (FT.): 200.3 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 14 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
430.5	MODESTO	PIASA	LIMESTONE	4.0	128.5	
426.5	CARBONDALE		UNCLASSIFIED	0.8	132.5	
425.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	133.3	
422.2	CARBONDALE	ENERGY	SHALE	56.2	136.8	
366.0	CARBONDALE	HERRIN	COAL	7.3	193.0	

MAPID: 16300420000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 18 QUARTERS/FOOTAGES: 2540' N line, 115' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.911044 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.621972 DATE COLLECTED: 0 / 0 / 1931

SURFACE ELEVATION (FT.): 546.4 LOGGED (FT.): 850.0 LOG TYPE:

SOURCE: JOHNSON OC WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
354.4	CARBONDALE	HERRIN	COAL	6.0	192.0	

MAPID: 16300420000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 18 QUARTERS/FOOTAGES: 2540' N line, 115' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.911044 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.621972 DATE COLLECTED: 11 / 0 / 1931

SURFACE ELEVATION (FT.): 546.0 LOGGED (FT.): 198.0 LOG TYPE: Drillers Log

SOURCE: JOHNSON OIL RFG CO WELL TYPE: Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
408.0	MODESTO	PIASA	LIMESTONE	7.0	138.0	
401.0	MODESTO		UNCLASSIFIED	1.5	145.0	
399.5	CARBONDALE		UNCLASSIFIED	3.5	146.5	
396.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.0	150.0	
386.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	5.0	160.0	
381.0	CARBONDALE	BRERETON	LIMESTONE	27.0	165.0	
354.0	CARBONDALE	HERRIN	COAL	6.0	192.0	

MAPID: 16301205000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 18 QUARTERS/FOOTAGES: NW SW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.918606 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.617144 DATE COLLECTED: 4 / 7 / 1953

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 182.0 LOG TYPE: Drillers Log

SOURCE: ISGS 90L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.0	PLEISTOCENE		SOIL	53.0	0.0	BLUE
487.0			SHALE	3.0	53.0	YELLOW
484.0			GRAY SHALE	47.0	56.0	
437.0			LIMESTONE	0.4	103.0	
436.6			SHALE	6.1	103.4	
430.5			LIMESTONE	3.5	109.5	
427.0			SHALE	3.8	113.0	MIXED
423.2			LIMESTONE	3.7	116.8	
419.5			SHALE	1.4	120.5	
418.1			LIMESTONE	0.8	121.9	
417.2			SHALE	6.3	122.8	MIXED
411.0			LIMESTONE	9.5	129.0	
401.5			SHALE	2.5	138.5	
399.0			SHALY LIMESTONE	12.5	141.0	
386.5			GRAY SHALE	2.5	153.5	
384.0			LIMESTONE	14.7	156.0	GRAY
369.3	CARBONDALE	HERRIN	COAL	6.8	170.7	
362.5	CARBONDALE		UNDERCLAY	2.5	177.5	
360.0	CARBONDALE		LIMESTONE	2.0	180.0	

MAPID: 16301205000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 18 QUARTERS/FOOTAGES: NW SW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.918606 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.617144 DATE COLLECTED:

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 177.8 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 90L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
422.8	MODESTO	PIASA	LIMESTONE	5.9	117.2	
416.9	MODESTO		UNCLASSIFIED	2.0	123.1	
414.9	CARBONDALE		UNCLASSIFIED	4.2	125.1	
410.7	CARBONDALE	BANKSTON FORK	LIMESTONE	9.5	129.3	
401.2	CARBONDALE	ANVIL ROCK	SANDSTONE	2.5	138.8	
398.7	CARBONDALE	BRERETON	LIMESTONE	29.7	141.3	
369.0	CARBONDALE	HERRIN	COAL	6.8	171.0	

MAPID: 16302076000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 18 QUARTERS/FOOTAGES: 18' N line, 949' E line of SE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.913998

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.617975

DATE COLLECTED:

SURFACE ELEVATION (FT.): 536.0

LOGGED (FT.): 165.2

LOG TYPE: Survey Core Study

SOURCE: ISGS 21

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
433.0	MODESTO	PIASA	LIMESTONE	5.5	103.0	
427.5	CARBONDALE		SHALE	7.0	108.5	
420.5	CARBONDALE	BANKSTON FORK	LIMESTONE	11.0	115.5	UPPER BENCH
409.5	CARBONDALE	BANKSTON FORK	SHALE	2.0	126.5	SHALE PARTING
407.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	128.5	LOWER BENCH
405.5	CARBONDALE	LAWSON	SHALE	3.6	130.5	
401.9	CARBONDALE	CONANT	LIMESTONE	3.9	134.1	
398.0	CARBONDALE		SHALE	4.0	138.0	
394.0	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	15.4	142.0	
378.0	CARBONDALE	HERRIN	COAL	7.2	158.0	

MAPID: 16302076000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 18 QUARTERS/FOOTAGES: 18' N line, 949' E line of SE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.913998

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.617975

DATE COLLECTED:

SURFACE ELEVATION (FT.): 536.0

LOGGED (FT.): 165.2

LOG TYPE: Drillers Log

SOURCE: ISGS 21

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
432.8	MODESTO	PIASA	LIMESTONE	5.5	103.2	
427.3	MODESTO		UNCLASSIFIED	2.0	108.7	
425.3	CARBONDALE		UNCLASSIFIED	5.0	110.7	
420.3	CARBONDALE	BANKSTON FORK	LIMESTONE	11.0	115.7	
409.3	CARBONDALE	ANVIL ROCK	SANDSTONE	2.0	126.7	
407.3	CARBONDALE	BRERETON	LIMESTONE	29.3	128.7	
378.0	CARBONDALE	HERRIN	COAL	7.2	158.0	

MAPID: 16302076000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 18 QUARTERS/FOOTAGES: 18' N line, 949' E line of SE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.913998 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.617975 DATE COLLECTED: 7 / 16 / 1958

SURFACE ELEVATION (FT.): 536.4 LOGGED (FT.): 166.0 LOG TYPE: Drillers Log

SOURCE: ISGS 21 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
536.4	PLEISTOCENE		CLAY	22.0	0.0	YELLOW
514.4	PLEISTOCENE		GLACIAL DRIFT	10.5	22.0	
503.9	PLEISTOCENE		SAND & GRAVEL	6.0	32.5	
497.9	PLEISTOCENE		GLACIAL DRIFT	59.5	38.5	
438.4			LIMESTONE	1.0	98.0	
437.4			SHALE	4.0	99.0	
433.4			LIMESTONE	4.5	103.0	
428.9			LIMESTONE	1.0	107.5	
427.9			SHALE	7.0	108.5	
420.9			LIMESTONE	11.0	115.5	
409.9			SHALE	2.0	126.5	
407.9			LIMESTONE	2.0	128.5	
405.9			SHALE	3.5	130.5	
402.4			LIMESTONE	3.8	134.0	
398.6			SHALE	4.0	137.8	
394.6			LIMESTONE	1.3	141.8	
393.4			LIMESTONE	14.7	143.0	
378.7			CLOD	0.2	157.7	
378.6	CARBONDALE	HERRIN	COAL	7.2	157.8	
371.4	CARBONDALE		UNDERCLAY	1.0	165.0	

MAPID: 16302078000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 18 QUARTERS/FOOTAGES: 16' S line, 85' W line of SW NW NE

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.91944 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.625423 DATE COLLECTED: 7 / 16 / 1958

SURFACE ELEVATION (FT.): 542.4 LOGGED (FT.): 178.0 LOG TYPE: Drillers Log

SOURCE: ISGS 23 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
542.4	PLEISTOCENE		CLAY	28.0	0.0	YELLOW
514.4	PLEISTOCENE		GLACIAL DRIFT	66.0	28.0	
448.4	PLEISTOCENE		GLACIAL DRIFT	9.5	94.0	
438.9			LIMESTONE	0.5	103.5	
438.4			SHALE	6.5	104.0	
431.9			LIMESTONE	8.5	110.5	
423.4			LIMESTONE	3.5	119.0	
419.9			SHALE	6.5	122.5	
413.4			LIMESTONE	5.0	129.0	
408.4			SHALE WITH LIMESTONE	2.2	134.0	
406.2			GRAY SHALE	3.5	136.2	
402.7			LIMESTONE	6.8	139.7	
395.9			SHALE WITH LIMESTONE	5.0	146.5	
390.9			LIMESTONE	1.5	151.5	
389.4	CARBONDALE	ENERGY	SHALE	16.3	153.0	
373.1	CARBONDALE	ENERGY	CLOD	0.2	169.3	
372.9	CARBONDALE	HERRIN	COAL	6.8	169.5	
366.1	CARBONDALE		UNDERCLAY	1.5	176.3	

MAPID: 16302078000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 18 QUARTERS/FOOTAGES: 16' S line, 85' W line of SW NW NE

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.91944 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.625423 DATE COLLECTED:

SURFACE ELEVATION (FT.): 542.0 LOGGED (FT.): 175.8 LOG TYPE: Drillers Log

SOURCE: ISGS 23 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
423.5	MODESTO	PIASA	LIMESTONE	3.5	118.5	
420.0	MODESTO		UNCLASSIFIED	2.0	122.0	
418.0	CARBONDALE		UNCLASSIFIED	4.5	124.0	
413.5	CARBONDALE	BANKSTON FORK	LIMESTONE	7.2	128.5	
406.3	CARBONDALE	ANVIL ROCK	SANDSTONE	3.5	135.7	
402.8	CARBONDALE	BRERETON	LIMESTONE	29.8	139.2	
373.0	CARBONDALE	HERRIN	COAL	6.8	169.0	

MAPID: 16301203000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 19 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.911899 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.606172 DATE COLLECTED: 4 / 2 / 1953

SURFACE ELEVATION (FT.): 500.0 LOGGED (FT.): 133.0 LOG TYPE: Drillers Log

SOURCE: ISGS 88L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
500.0			UNCONSOLIDATED	11.0	0.0	
489.0			SHALE	3.0	11.0	YELLOW
486.0			GRAY SHALE	38.0	14.0	
448.0			SHALE WITH LIMESTONE	3.0	52.0	
445.0			SHALE	8.0	55.0	
437.0			SHALE	5.0	63.0	
432.0			LIMESTONE	6.1	68.0	
425.9			RED SHALE	4.4	74.1	
421.5			SHALY LIMESTONE	1.5	78.5	
420.0			SANDY LIMESTONE	4.0	80.0	
416.0			SANDY SHALE	7.5	84.0	
408.5			LIMESTONE	0.7	91.5	
407.8			SHALE	7.8	92.2	
400.0			SHALY LIMESTONE	2.0	100.0	
398.0			LIMESTONE	10.0	102.0	GRAY
388.0	CARBONDALE	ANNA	BLACK SHALE	5.3	112.0	
382.7	CARBONDALE		UNDERCLAY	1.4	117.3	
381.2	CARBONDALE	HERRIN	COAL	6.3	118.8	
374.9	CARBONDALE		UNDERCLAY	3.9	125.1	
371.0	CARBONDALE		LIMESTONE/UNDERCLAY	3.0	129.0	
368.0	CARBONDALE		UNDERCLAY	1.0	132.0	

MAPID: 16301203000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 19 QUARTERS/FOOTAGES: NE NE SE
 QUADRANGLE: O'FALLON LONGITUDE: -89.911899 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.606172 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 500.0 LOGGED (FT.): 125.3 LOG TYPE: Drillers Log
 SOURCE: PERRY COAL CO. 88L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
438.6	MODESTO	PIASA	LIMESTONE	6.1	61.4
432.5	MODESTO		UNCLASSIFIED	1.5	67.5
431.0	CARBONDALE		UNCLASSIFIED	2.9	69.0
428.1	CARBONDALE	BANKSTON FORK	LIMESTONE	9.5	71.9
418.6	CARBONDALE	ANVIL ROCK	SANDSTONE	3.5	81.4
415.1	CARBONDALE	BRERETON	LIMESTONE	20.5	84.9
394.6	CARBONDALE	ANNA	BLACK SHALE	6.8	105.4
387.8	CARBONDALE	ENERGY	SHALE	6.8	112.2
381.0	CARBONDALE	HERRIN	COAL	6.3	119.0

MAPID: 16301204000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 19 QUARTERS/FOOTAGES: SE SE SE
 QUADRANGLE: O'FALLON LONGITUDE: -89.911959 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.600722 DATE COLLECTED: 4 / 3 / 1953
 SURFACE ELEVATION (FT.): 545.0 LOGGED (FT.): 173.0 LOG TYPE: Drillers Log
 SOURCE: ISGS 89L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
545.0	PLEISTOCENE		UNCONSOLIDATED	42.7	0.0
502.3			LIMESTONE	0.6	42.7
501.7			GRAY SHALE	49.8	43.3
452.0			SHALE	5.7	93.0
446.3			LIMESTONE	1.2	98.7
445.2			UNCLASSIFIED	3.7	99.8
441.5			LIMESTONE	5.3	103.5
436.2			RED SHALE	7.2	108.8
429.0			CALCAREOUS SHALE	2.0	116.0
427.0			SANDSTONE/LIMESTONE	8.0	118.0
419.0			SHALE	2.0	126.0
417.0			SHALE	10.0	128.0
407.0			LIMESTONE	13.2	138.0
393.8	CARBONDALE	ANNA	BLACK SHALE	7.9	151.2
385.9	CARBONDALE	HERRIN	COAL	7.4	159.1
378.5			UNDERCLAY	4.0	166.5
374.5			LIMESTONE/UNDERCLAY	0.2	170.5

MAPID: 16301204000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 19 QUARTERS/FOOTAGES: SE SE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.911959 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.600722 DATE COLLECTED:

SURFACE ELEVATION (FT.): 545.0 LOGGED (FT.): 166.4 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 89L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
449.5	MODESTO	PIASA	LIMESTONE	5.3	95.5
444.2	MODESTO		UNCLASSIFIED	2.0	100.8
442.2	CARBONDALE		UNCLASSIFIED	5.2	102.8
437.0	CARBONDALE	BANKSTON FORK	LIMESTONE	10.0	108.0
427.0	CARBONDALE	ANVIL ROCK	SANDSTONE	2.0	118.0
425.0	CARBONDALE	BRERETON	LIMESTONE	23.2	120.0
401.8	CARBONDALE	ANNA	BLACK SHALE	7.9	143.2
393.9	CARBONDALE	ENERGY	SHALE	7.9	151.1
386.0	CARBONDALE	HERRIN	COAL	7.4	159.0

MAPID: 16302077000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 19 QUARTERS/FOOTAGES: 214' N line, 508' E line of SE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.912598 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.602862 DATE COLLECTED:

SURFACE ELEVATION (FT.): 573.0 LOGGED (FT.): 165.5 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 22 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
479.0	MODESTO	PIASA	LIMESTONE W/ SHALE	15.0	94.0
464.0	CARBONDALE		MOTTLED SHALE	7.0	109.0
457.0	CARBONDALE	BANKSTON FORK	LIMESTONE	9.0	116.0
448.0	CARBONDALE	LAWSON	SILTSTONE	12.0	125.0
436.0	CARBONDALE	CONANT	NODULAR LIMESTONE	2.2	137.0
433.8	CARBONDALE		SILTSTONE	0.8	139.2
433.1	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	15.1	139.9
418.0	CARBONDALE	ANNA	BLACK SHALE	3.2	155.0
414.0	CARBONDALE	HERRIN	COAL	6.5	159.0

MAPID: 16302077000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 19 QUARTERS/FOOTAGES: 214' N line, 508' E line of SE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.912598 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.602862 DATE COLLECTED:

SURFACE ELEVATION (FT.): 573.0 LOGGED (FT.): 230.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 22 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
404.0	MODESTO	PIASA	LIMESTONE	5.0	169.0
399.0	MODESTO		UNCLASSIFIED	2.0	174.0
397.0	CARBONDALE		UNCLASSIFIED	5.0	176.0
392.0	CARBONDALE	BANKSTON FORK	LIMESTONE	10.0	181.0
382.0	CARBONDALE	ANVIL ROCK	SANDSTONE	3.0	191.0
379.0	CARBONDALE	BRERETON	LIMESTONE	26.8	194.0
352.2	CARBONDALE	ANNA	BLACK SHALE	3.2	220.8
349.0	CARBONDALE	HERRIN	COAL	6.5	224.0

MAPID: 16302077000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 19 QUARTERS/FOOTAGES: 214' N line, 508' E line of SE SE

QUADRANGLE: O'FALLON

LONGITUDE: -89.912598

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 38.602862

DATE COLLECTED: 7 / 16 / 1958

SURFACE ELEVATION (FT.): 573.2

LOGGED (FT.): 166.5

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 22

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
573.2	PLEISTOCENE		CLAY	26.0	0.0	YELLOW
547.2	PLEISTOCENE		GRAVEL	6.0	26.0	
541.2	PLEISTOCENE		CLAY	8.0	32.0	YELLOW
533.2	PLEISTOCENE		GLACIAL DRIFT	54.0	40.0	
479.2			SHALE WITH LIMESTONE	15.0	94.0	
464.2			SHALE	7.0	109.0	RED
457.2			LIMESTONE	9.0	116.0	
448.2			SHALE	0.5	125.0	
447.7			LIMESTONE	0.5	125.5	
447.2			SHALE	3.0	126.0	
444.2			LIMESTONE	0.5	129.0	
443.7			SHALE WITH LIMESTONE	8.8	129.5	
434.9			LIMESTONE	1.5	138.3	
433.4			SHALE	1.0	139.8	
432.4			LIMESTONE	0.2	140.8	
432.3			SHALE	0.3	140.9	
432.0			LIMESTONE	0.3	141.2	
431.7			SHALY LIMESTONE	1.5	141.5	
430.2			LIMESTONE	0.4	143.0	
429.8			SHALE WITH LIMESTONE	5.6	143.4	
424.2	CARBONDALE	BRERETON	LIMESTONE	6.5	149.0	
417.7	CARBONDALE	ANNA	BLACK SHALE	3.5	155.5	
414.2	CARBONDALE	HERRIN	COAL	6.5	159.0	
407.7	CARBONDALE		UNDERCLAY	1.0	165.5	

MAPID: 16303227000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 19 QUARTERS/FOOTAGES: NW SE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.914197 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.602553 DATE COLLECTED: 1 / 21 / 1971

SURFACE ELEVATION (FT.): 547.1 LOGGED (FT.): 186.5 LOG TYPE: Survey Core Study

SOURCE: LAYNE-WESTERN CO. 1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
465.1			CLAYSTONE & SILTSTONE	7.0	82.0	GRAY
456.1			LIMESTONE	4.5	91.0	LT GY
451.6			CLAYSTONE & SILTSTONE	6.3	95.5	GRAY
445.3			SILTSTONE	2.3	101.8	LT GY
443.0			SILTSTONE	10.0	104.1	
433.0			SILTSTONE	2.0	114.1	
431.0			SHALE	10.0	116.1	
421.0			LIMESTONE	3.2	126.1	
417.8			LIMESTONE	6.8	129.3	DARK GRAY
411.0			LIMESTONE	9.2	136.1	GRAY
401.8	CARBONDALE	HERRIN	COAL	0.1	145.3	COAL NO 6
401.8	CARBONDALE	HERRIN	COAL	0.7	145.3	
401.1	CARBONDALE	HERRIN	COAL	0.2	146.0	
401.0	CARBONDALE	HERRIN	COAL	0.1	146.1	
400.8	CARBONDALE	HERRIN	COAL	0.5	146.3	
400.3	CARBONDALE	HERRIN	COAL	0.5	146.8	
399.8	CARBONDALE	HERRIN	COAL	0.7	147.3	
399.2	CARBONDALE	HERRIN	COAL	0.8	147.9	
398.3	CARBONDALE	HERRIN	COAL	2.3	148.8	5'CORED 4'6" RECOVERED
396.0	CARBONDALE		CLAYSTONE & SILTSTONE	1.4	151.1	
394.6	CARBONDALE		CLAYSTONE & SILTSTONE	1.8	152.5	
392.9	CARBONDALE		CLAYSTONE & SILTSTONE	2.4	154.2	
390.5	CARBONDALE		LIMESTONE	0.6	156.6	
389.9	CARBONDALE		CLAYSTONE & SILTSTONE	2.6	157.2	
387.3	CARBONDALE		SHALE	0.1	159.8	BLACK
387.2	CARBONDALE		CLAYSTONE & SILTSTONE	0.4	159.9	
386.7	CARBONDALE		CLAYSTONE & SILTSTONE	1.5	160.4	
385.2	CARBONDALE		CLAYSTONE & SILTSTONE	6.0	161.9	
379.2	CARBONDALE		CLAYSTONE & SILTSTONE	4.9	167.9	
374.3	CARBONDALE		LIMESTONE	0.5	172.8	
373.8	CARBONDALE		SHALY LIMESTONE	3.3	173.3	
370.6	CARBONDALE		SHALE	1.0	176.5	CARBONACEOUS ZONE; BK
369.6	CARBONDALE		SHALE	0.3	177.5	DARK GRAY
369.2	CARBONDALE		CLAYSTONE & SILTSTONE	2.0	177.9	GRAY
367.2	CARBONDALE		SHALE	6.7	179.9	

MAPID: 16303227000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 19 QUARTERS/FOOTAGES: NW SE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.914197 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.602553 DATE COLLECTED: 1 / 0 / 1971

SURFACE ELEVATION (FT.): 547.0 LOGGED (FT.): 161.1 LOG TYPE: Drillers Log

SOURCE: LAYNE WESTERN CO., INC. WELL TYPE: Misc. Borings 100 Ft. & Deeper

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
445.3	MODESTO	PIASA	LIMESTONE	4.5	101.7
440.8	MODESTO		UNCLASSIFIED	2.3	106.2
438.5	CARBONDALE		UNCLASSIFIED	6.3	108.5
432.2	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.0	114.8
422.2	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	124.8
420.2	CARBONDALE	BRERETON	LIMESTONE	29.2	126.8
391.0	CARBONDALE	HERRIN	COAL	5.1	156.0

MAPID: 16300839000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 20 QUARTERS/FOOTAGES: 3430' S line, 4750' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.909081 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.609238 DATE COLLECTED: 2 / 3 / 1954

SURFACE ELEVATION (FT.): 500.0 LOGGED (FT.): 134.2 LOG TYPE: Drillers Log

SOURCE: BRENNAN 7 WELL TYPE: Coal Test

COMMENT: ELEV TOP 366

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
372.7	CARBONDALE	HERRIN	COAL	6.9	127.3 ELEV TOP 366'

MAPID: 16300839000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 20 QUARTERS/FOOTAGES: 3430' S line, 4750' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.909081 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.609238 DATE COLLECTED:

SURFACE ELEVATION (FT.): 500.0 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: BRENNAN 7 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
366.0	CARBONDALE	HERRIN	COAL	7.0	134.0

MAPID: 16301206000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 20 QUARTERS/FOOTAGES: SW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.899312 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.601393 DATE COLLECTED: 4 / 11 / 1953

SURFACE ELEVATION (FT.): 545.0 LOGGED (FT.): 194.0 LOG TYPE: Drillers Log

SOURCE: ISGS 91L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.0	PLEISTOCENE		UNCONSOLIDATED	31.0	0.0	
514.0	PLEISTOCENE		SAND	4.0	31.0	
510.0			GRAY SHALE	3.0	35.0	
507.0			LIMESTONE	5.0	38.0	GRAY
502.0			GRAY SHALE	68.5	43.0	
433.5			LIMESTONE	1.0	111.5	
432.5			SHALE	6.8	112.5	
425.7			LIMESTONE	2.5	119.3	
423.2			SHALE	1.8	121.8	
421.5	MODESTO	PIASA	LIMESTONE	8.0	123.5	
413.5			SHALE	10.5	131.5	
403.0			CALCAREOUS SHALE	3.8	142.0	
399.2	CARBONDALE	BANKSTON FORK	LIMESTONE	9.8	145.8	
389.5	CARBONDALE		CLOD	6.0	155.5	
383.5	CARBONDALE	ENERGY	BLACK SHALE	5.0	161.5	
378.5	CARBONDALE	ENERGY	SLATY SHALE	3.5	166.5	
375.0	CARBONDALE	ENERGY	GRAY SHALE	7.5	170.0	
367.5	CARBONDALE	ENERGY	BLACK SHALE	1.3	177.5	
366.2	CARBONDALE	HERRIN	SHALY COAL	1.3	178.8	
364.9	CARBONDALE	HERRIN	SHALY COAL	4.7	180.1	
360.2	CARBONDALE		UNDERCLAY	1.3	184.8	

MAPID: 16301206000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 20 QUARTERS/FOOTAGES: SW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.899312 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.601393 DATE COLLECTED:

SURFACE ELEVATION (FT.): 545.0 LOGGED (FT.): 185.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 91L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
426.9	MODESTO	PIASA	LIMESTONE	2.5	118.1
424.4	MODESTO		UNCLASSIFIED	0.9	120.6
423.5	CARBONDALE		UNCLASSIFIED	0.8	121.5
422.7	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	122.3
414.7	CARBONDALE	ANVIL ROCK	SANDSTONE	5.3	130.3
409.4	CARBONDALE		SHALE	5.3	135.6
404.1	CARBONDALE	BRERETON	LIMESTONE	13.5	140.9
390.6	CARBONDALE	ANNA	BLACK SHALE	1.3	154.4
389.3	CARBONDALE	ENERGY	SHALE	23.3	155.7
366.0	CARBONDALE	HERRIN	COAL	6.0	179.0

MAPID: 16301215000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 20 QUARTERS/FOOTAGES: SE NE NW

QUADRANGLE: O'FALLON LONGITUDE: -89.90268 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.611546 DATE COLLECTED: 5 / 22 / 1953

SURFACE ELEVATION (FT.): 485.0 LOGGED (FT.): 122.5 LOG TYPE: Drillers Log

SOURCE: ISGS 102L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
485.0	PLEISTOCENE		UNCONSOLIDATED	18.0	0.0
467.0			GRAY SHALE	25.0	18.0
442.0			LIMESTONE W/ COAL	0.5	43.0
441.5			UNDERCLAY	8.5	43.5
433.0			LIMESTONE	3.0	52.0
430.0			SHALE	2.5	55.0 MIXED
427.5			LIMESTONE	7.5	57.5
420.0			SHALE	8.5	65.0 MIXED
411.5			SHALY LIMESTONE	4.0	73.5
407.5			LIMESTONE	10.0	77.5
397.5	CARBONDALE	ENERGY	SHALE	5.5	87.5
392.0	CARBONDALE	ENERGY	BROWN SHALE	6.0	93.0
386.0	CARBONDALE	ENERGY	SHALE	14.0	99.0
372.0	CARBONDALE	HERRIN	COAL	6.3	113.0
365.7	CARBONDALE		UNDERCLAY	1.7	119.3
364.0	CARBONDALE		LIMESTONE/UNDERCLAY	1.5	121.0

MAPID: 16301215000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 20 QUARTERS/FOOTAGES: SE NE NW
 QUADRANGLE: O'FALLON LONGITUDE: -89.90268 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.611546 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 485.0 LOGGED (FT.): 119.3 LOG TYPE: Drillers Log
 SOURCE: PERRY COAL CO. 102L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
433.1	MODESTO	PIASA	LIMESTONE	3.0	51.9	
430.1	MODESTO		UNCLASSIFIED	1.0	54.9	
429.1	CARBONDALE		UNCLASSIFIED	1.5	55.9	
427.6	CARBONDALE	BANKSTON FORK	LIMESTONE	7.5	57.4	
420.1	CARBONDALE	ANVIL ROCK	SANDSTONE	4.3	64.9	
415.8	CARBONDALE		SHALE	4.3	69.2	
411.5	CARBONDALE	BRERETON	LIMESTONE	14.0	73.5	
397.5	CARBONDALE	ENERGY	SHALE	25.5	87.5	
372.0	CARBONDALE	HERRIN	COAL	6.3	113.0	

MAPID: 16301216000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 20 QUARTERS/FOOTAGES: 400' N line, 1200' W line
 QUADRANGLE: O'FALLON LONGITUDE: -89.906468 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.613212 DATE COLLECTED: 5 / 25 / 1953
 SURFACE ELEVATION (FT.): 515.0 LOGGED (FT.): 156.5 LOG TYPE: Drillers Log
 SOURCE: ISGS 103L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
515.0	PLEISTOCENE		UNCONSOLIDATED	15.0	0.0	
500.0	PLEISTOCENE		SANDY CLAY	48.0	15.0	
452.0			GRAY SHALE	21.0	63.0	
431.0			LIMESTONE W/ COAL	0.5	84.0	
430.5			UNDERCLAY	7.0	84.5	
423.5			LIMESTONE	1.5	91.5	
422.0			SHALE	3.0	93.0	MIXED
419.0			LIMESTONE	7.0	96.0	
412.0			SHALE	8.0	103.0	MIXED
404.0			LIMESTONE	13.0	111.0	
391.0			LIMESTONE	12.3	124.0	
378.7			BLACK SHALE	6.7	136.3	
372.0	CARBONDALE	ENERGY	BROWN SHALE	5.8	143.0	
366.2	CARBONDALE	HERRIN	COAL	6.3	148.8	
359.9	CARBONDALE		UNDERCLAY	1.4	155.1	

MAPID: 16301216000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 20 QUARTERS/FOOTAGES: 400' N line, 1200' W line

QUADRANGLE: O'FALLON LONGITUDE: -89.906468 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.613212 DATE COLLECTED:

SURFACE ELEVATION (FT.): 515.0 LOGGED (FT.): 155.3 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 103L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
423.2	MODESTO	PIASA	LIMESTONE	1.5	91.8	
421.7	MODESTO		UNCLASSIFIED	1.0	93.3	
420.7	CARBONDALE		UNCLASSIFIED	2.0	94.3	
418.7	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	96.3	
411.7	CARBONDALE	ANVIL ROCK	SANDSTONE	4.0	103.3	
407.7	CARBONDALE		SHALE	4.0	107.3	
403.7	CARBONDALE	BRERETON	LIMESTONE	25.3	111.3	
378.4	CARBONDALE	ENERGY	SHALE	12.4	136.6	
366.0	CARBONDALE	HERRIN	COAL	6.3	149.0	

MAPID: 16301431000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 20 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.909623 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.606147 DATE COLLECTED: 5 / 0 / 1909

SURFACE ELEVATION (FT.): LOGGED (FT.): 748.0 LOG TYPE: Drillers Log

SOURCE: C P BRANT WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			SOIL	19.0	0.0	
-			SHALE	26.0	19.0	
-			LIMESTONE	15.0	45.0	
-			SHALE	65.0	60.0	
-			LIMESTONE	15.0	125.0	
-	CARBONDALE	HERRIN	COAL	8.0	140.0	THICKNESS NOT PRECISE
-	CARBONDALE		SHALE	12.0	148.0	BLACK
-	CARBONDALE		SHALE	152.0	160.0	
-	MISSISSIPPIAN		LIMESTONE	13.0	312.0	
-	MISSISSIPPIAN		SHALE	10.0	325.0	
-	MISSISSIPPIAN		CALCAREOUS SHALE	85.0	335.0	
-	MISSISSIPPIAN		SHALE	106.0	420.0	
-	MISSISSIPPIAN		SANDSTONE	36.0	526.0	
-	MISSISSIPPIAN		SHALE	2.0	562.0	RED
-	MISSISSIPPIAN		SANDSTONE	100.0	564.0	
-	MISSISSIPPIAN		SHALE	11.0	664.0	
-	MISSISSIPPIAN		SANDSTONE	73.0	675.0	

MAPID: 16302079000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 20 QUARTERS/FOOTAGES: 542' N line, 30' W line of SW NW

QUADRANGLE: O'FALLON

LONGITUDE: -89.910632

GEOLOGIST:

CONFIDENTIAL: N

LATITUDE: 38.609208

DATE COLLECTED:

SURFACE ELEVATION (FT.): 503.0

LOGGED (FT.): 124.7

LOG TYPE: Survey Core Study

SOURCE: ISGS 24

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
424.0	MODESTO	PIASA	LIMESTONE	12.0	79.0
412.0	CARBONDALE		SHALE	7.0	91.0
405.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	98.0
400.0	CARBONDALE	CONANT	NODULAR LIMESTONE	4.5	103.0
395.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	5.4	107.5
390.1	CARBONDALE	ANNA	BLACK SHALE	4.5	112.9
385.0	CARBONDALE	HERRIN	COAL	6.7	118.0

MAPID: 16302079000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 20 QUARTERS/FOOTAGES: 542' N line, 30' W line of SW NW

QUADRANGLE: O'FALLON

LONGITUDE: -89.910632

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N

LATITUDE: 38.609208

DATE COLLECTED:

SURFACE ELEVATION (FT.): 503.0

LOGGED (FT.): 125.1

LOG TYPE: Drillers Log

SOURCE: ISGS 24

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
436.7	MODESTO	PIASA	LIMESTONE	7.0	66.3
429.7	MODESTO		UNCLASSIFIED	1.5	73.3
428.2	CARBONDALE		UNCLASSIFIED	4.5	74.8
423.7	CARBONDALE	BANKSTON FORK	LIMESTONE	12.0	79.3
411.7	CARBONDALE	ANVIL ROCK	SANDSTONE	3.5	91.3
408.2	CARBONDALE		SHALE	3.5	94.8
404.7	CARBONDALE	BRERETON	LIMESTONE	15.2	98.3
389.5	CARBONDALE	ANNA	BLACK SHALE	4.5	113.5
385.0	CARBONDALE	HERRIN	COAL	7.1	118.0

MAPID: 16302079000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 20 QUARTERS/FOOTAGES: 542' N line, 30' W line of SW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.910632 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.609208 DATE COLLECTED: 7 / 16 / 1958

SURFACE ELEVATION (FT.): 502.8 LOGGED (FT.): 126.0 LOG TYPE: Drillers Log

SOURCE: ISGS 24 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
502.8	PLEISTOCENE		CLAY	10.0	0.0	YELLOW
492.8	PLEISTOCENE		GLACIAL DRIFT	43.0	10.0	
449.8			LIMESTONE	0.5	53.0	
449.3			GRAY SHALE	12.5	53.5	
436.8			LIMESTONE	7.0	66.0	
429.8			SHALE	6.0	73.0	
423.8			LIMESTONE	2.0	79.0	
421.8			LIMESTONE	10.0	81.0	
411.8			SHALE	7.0	91.0	
404.8			LIMESTONE	5.0	98.0	
399.8	CARBONDALE	BRERETON	LIMESTONE	10.2	103.0	
389.6	CARBONDALE	ANNA	BLACK SHALE	4.5	113.2	
385.1	CARBONDALE	HERRIN	COAL	7.1	117.7	
378.0	CARBONDALE		UNDERCLAY	1.3	124.8	

MAPID: 16302148000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 20 QUARTERS/FOOTAGES: 400' N line, 42' E line of NE NE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.892502 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.613141 DATE COLLECTED: 1 / 14 / 1959

SURFACE ELEVATION (FT.): 484.1 LOGGED (FT.): 95.8 LOG TYPE: Drillers Log

SOURCE: ISGS 25 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
484.1	PLEISTOCENE		SOIL	1.5	0.0	
482.6	PLEISTOCENE		CLAY	11.5	1.5	YELLOW
471.1	PLEISTOCENE		GRAVEL	3.0	13.0	
468.1	PLEISTOCENE		GLACIAL DRIFT	2.0	16.0	
466.1	MODESTO	PIASA	LIMESTONE	3.7	18.0	
462.4			SHALE	6.3	21.7	
456.1	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	28.0	
451.1	CARBONDALE	ENERGY	SHALE	47.0	33.0	
404.1	CARBONDALE	ENERGY	GRAY SHALE	6.8	80.0	
397.3	CARBONDALE	ENERGY	BLACK SHALE	1.3	86.8	
396.1	CARBONDALE	HERRIN	COAL	6.6	88.0	
389.5	CARBONDALE		UNDERCLAY	1.2	94.6	

MAPID: 16302148000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 20 QUARTERS/FOOTAGES: 400' N line, 42' E line of NE NE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.892502 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.613141 DATE COLLECTED:

SURFACE ELEVATION (FT.): 484.0 LOGGED (FT.): 94.6 LOG TYPE: Drillers Log

SOURCE: ISGS 25 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
467.3	MODESTO	PIASA	LIMESTONE	3.7	16.7
463.6	MODESTO		UNCLASSIFIED	2.0	20.4
461.6	CARBONDALE		UNCLASSIFIED	4.3	22.4
457.3	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	26.7
452.3	CARBONDALE	ANNA	BLACK SHALE	1.3	31.7
451.0	CARBONDALE	ENERGY	SHALE	55.0	33.0
396.0	CARBONDALE	HERRIN	COAL	6.6	88.0

MAPID: 16301144000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 21 QUARTERS/FOOTAGES: 1' S line, 1' W line

QUADRANGLE: O'FALLON LONGITUDE: -89.892409 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.599401 DATE COLLECTED:

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 178.3 LOG TYPE: Drillers Log

SOURCE: ISGS 86L WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
439.0	MODESTO	PIASA	LIMESTONE	3.5	101.0
435.5	CARBONDALE		SHALE & SANDSTONE	7.5	104.5
428.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	112.0
420.0	CARBONDALE	ENERGY	GRAY SHALE	10.0	120.0
410.0	CARBONDALE	ENERGY	SILTY SHALE	13.0	130.0
397.0	CARBONDALE	ENERGY	GRAY SHALE	29.8	143.0
367.0	CARBONDALE	HERRIN	COAL	5.3	173.0

MAPID: 16301144000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 21 QUARTERS/FOOTAGES: 1' S line, 1' W line

QUADRANGLE: O'FALLON LONGITUDE: -89.892409 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.599401 DATE COLLECTED:

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 178.3 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 86L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
438.8	MODESTO	PIASA	LIMESTONE	4.0	101.2
434.8	MODESTO		UNCLASSIFIED	2.0	105.2
432.8	CARBONDALE		UNCLASSIFIED	5.0	107.2
427.8	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	112.2
419.8	CARBONDALE	ENERGY	SHALE	52.8	120.2
367.0	CARBONDALE	HERRIN	COAL	5.3	173.0

MAPID: 16301144000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 21 QUARTERS/FOOTAGES: 1' S line, 1' W line

QUADRANGLE: O'FALLON LONGITUDE: -89.892409 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.599401 DATE COLLECTED: 0 / 0 / 1953

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 183.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 86L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
540.0	PLEISTOCENE		CLAY	21.0	0.0
519.0	PLEISTOCENE		SANDY CLAY	12.0	21.0
507.0	PLEISTOCENE		UNCONSOLIDATED	30.0	33.0 BLUE
477.0			GRAY SHALE	27.0	63.0
450.0			SHALE	7.0	90.0
443.0			LIMESTONE	1.0	97.0
442.0			SHALY LIMESTONE	1.0	98.0
441.0			RED SHALE	2.0	99.0
439.0			LIMESTONE	3.5	101.0
435.5			SHALY LIMESTONE	0.5	104.5
435.0			RED SHALE	5.0	105.0
430.0			SHALE	2.0	110.0
428.0	MODESTO	PIASA	LIMESTONE	8.0	112.0
420.0	CARBONDALE	ENERGY	SHALE	10.0	120.0
410.0	CARBONDALE	ENERGY	SANDY SHALE	13.0	130.0
397.0	CARBONDALE	ENERGY	GRAY SHALE	29.8	143.0
367.2	CARBONDALE	HERRIN	COAL	5.3	172.8
362.0	CARBONDALE		UNDERCLAY	3.0	178.0
359.0	CARBONDALE		LIMESTONE	2.0	181.0

MAPID: 16301202000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 21 QUARTERS/FOOTAGES: NW NW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.891204 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.613292 DATE COLLECTED:

SURFACE ELEVATION (FT.): 500.0 LOGGED (FT.): 123.0 LOG TYPE: Drillers Log

SOURCE: ISGS 87L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
500.0	PLEISTOCENE		SANDY CLAY	23.0	0.0	
477.0	PLEISTOCENE		SAND & GRAVEL	14.0	23.0	
463.0	PLEISTOCENE		UNCONSOLIDATED	3.0	37.0	BLUE
460.0			SHALE	2.0	40.0	MIXED
458.0			LIMESTONE	2.5	42.0	
455.5			SHALE	0.8	44.5	
454.7			LIMESTONE	1.0	45.3	
453.7	CARBONDALE	ENERGY	SHALE	36.7	46.3	
417.0	CARBONDALE	ENERGY	GRAY SHALE	19.0	83.0	
398.0	CARBONDALE	ENERGY	BLACK SHALE	1.0	102.0	
397.0	CARBONDALE	HERRIN	COAL	6.0	103.0	
391.0	CARBONDALE		UNDERCLAY	2.3	109.0	
388.7	CARBONDALE		UNDERCLAY & LIMESTONE	1.0	111.3	
387.7	CARBONDALE		UNDERCLAY	10.8	112.3	

MAPID: 16301202000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 21 QUARTERS/FOOTAGES: NW NW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.891204 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.613292 DATE COLLECTED:

SURFACE ELEVATION (FT.): 500.0 LOGGED (FT.): 109.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 87L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
461.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.3	39.0	
454.7	CARBONDALE	ANNA	BLACK SHALE	1.0	45.3	
453.7	CARBONDALE	ENERGY	SHALE	56.7	46.3	
397.0	CARBONDALE	HERRIN	COAL	6.0	103.0	

MAPID: 16301145000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 22 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: LEBANON LONGITUDE: -89.872893

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.599935

DATE COLLECTED:

SURFACE ELEVATION (FT.): 457.0 LOGGED (FT.): 115.0

LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 79L

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
423.0	MODESTO	PIASA	LIMESTONE	3.7	34.0	
419.3	CARBONDALE		SHALE	5.0	37.7	
414.3	CARBONDALE	BANKSTON FORK	LIMESTONE	6.8	42.7	
407.5	CARBONDALE	ENERGY	GRAY SHALE	61.0	49.5	
347.0	CARBONDALE	HERRIN	COAL	5.0	110.0	

MAPID: 16301145000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 22 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: LEBANON LONGITUDE: -89.872893

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.599935

DATE COLLECTED:

SURFACE ELEVATION (FT.): 457.0 LOGGED (FT.): 112.0

LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 79L

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
426.5	MODESTO	PIASA	LIMESTONE	3.7	30.5	
422.8	MODESTO		UNCLASSIFIED	1.5	34.2	
421.3	CARBONDALE		UNCLASSIFIED	3.5	35.7	
417.8	CARBONDALE	BANKSTON FORK	LIMESTONE	6.8	39.2	
411.0	CARBONDALE	ENERGY	SHALE	61.0	46.0	
350.0	CARBONDALE	HERRIN	COAL	5.0	107.0	

MAPID: 16301145000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 22 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: LEBANON LONGITUDE: -89.872893 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.599935 DATE COLLECTED: 2 / 24 / 1953

SURFACE ELEVATION (FT.): 457.0 LOGGED (FT.): 135.5 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 79L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
457.0	PLEISTOCENE		SOIL	9.0	0.0	BLUE
448.0			SHALE	6.0	9.0	YELLOW
442.0			GRAY SHALE	10.0	15.0	
432.0			UNDERCLAY/SHALE	8.5	25.0	
423.5			LIMESTONE	3.7	33.5	
419.8			SHALE	5.0	37.2	RED
414.8	MODESTO	PIASA	LIMESTONE	6.8	42.2	
408.0	CARBONDALE	ENERGY	GRAY SHALE	61.0	49.0	
347.0	CARBONDALE	HERRIN	COAL	5.0	110.0	
342.0	CARBONDALE		UNDERCLAY	3.0	115.0	
339.0	CARBONDALE		UNDERCLAY & LIMESTONE	17.5	118.0	

MAPID: 16303076000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 22 QUARTERS/FOOTAGES: 313' N line, 5' E line of NE SE

QUADRANGLE: LEBANON LONGITUDE: -89.855493 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.604989 DATE COLLECTED: 10 / 17 / 1969

SURFACE ELEVATION (FT.): 455.0 LOGGED (FT.): 274.0 LOG TYPE: Drillers Log

SOURCE: CALVERT FUNDS INC CF6-21 WELL TYPE: Structure Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
384.0	MODESTO	PIASA	LIMESTONE	9.0	71.0	
371.0	MODESTO	PIASA	LIMESTONE	12.0	84.0	
309.0	CARBONDALE	HERRIN	COAL	6.0	146.0	
283.0	CARBONDALE	SPRINGFIELD	COAL	2.0	172.0	
187.0	CARBONDALE		LIMESTONE	1.0	268.0	
183.0	CARBONDALE	COLCHESTER	COAL	2.0	272.0	

MAPID: 16303077000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 22 **QUARTERS/FOOTAGES:** 25' N line, 5' W line of SE
QUADRANGLE: LEBANON **LONGITUDE:** -89.864724 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.606079 **DATE COLLECTED:** 10 / 22 / 1969
SURFACE ELEVATION (FT.): 473.0 **LOGGED (FT.):** 280.0 **LOG TYPE:** Drillers Log
SOURCE: CALVERT FUNDS INC CF8-21 **WELL TYPE:** Structure Test
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
400.0	MODESTO	PIASA	LIMESTONE	8.0	73.0
387.0	MODESTO	PIASA	LIMESTONE	7.0	86.0
322.0	CARBONDALE	HERRIN	COAL	6.0	151.0
296.0	CARBONDALE	SPRINGFIELD	COAL	2.0	177.0
199.0	CARBONDALE		LIMESTONE	1.0	274.0
195.0	CARBONDALE	COLCHESTER	COAL	2.0	278.0

MAPID: 16303078000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 22 **QUARTERS/FOOTAGES:** 15' S line, 920' E line of NE
QUADRANGLE: LEBANON **LONGITUDE:** -89.85871 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.605998 **DATE COLLECTED:** 10 / 23 / 1969
SURFACE ELEVATION (FT.): 466.0 **LOGGED (FT.):** 279.0 **LOG TYPE:** Drillers Log
SOURCE: CALVERT FUNDING INC CF11-21 **WELL TYPE:** Structure Test
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
388.0	MODESTO	PIASA	LIMESTONE	10.0	78.0
374.0	MODESTO	PIASA	LIMESTONE	10.0	92.0
310.0	CARBONDALE	HERRIN	COAL	6.0	156.0
284.0	CARBONDALE	SPRINGFIELD	COAL	2.0	182.0
188.0	CARBONDALE		LIMESTONE	1.0	278.0

MAPID: 16300006000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 23 **QUARTERS/FOOTAGES:** 1350' S line, 2700' E line
QUADRANGLE: LEBANON **LONGITUDE:** -89.846603 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.602205 **DATE COLLECTED:** 0 / 0 / 1912
SURFACE ELEVATION (FT.): 434.9 **LOGGED (FT.):** 905.0 **LOG TYPE:**
SOURCE: OFALLON OC **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
256.9	CARBONDALE	HERRIN	COAL	6.0	178.0

MAPID: 16300006000C VERSION: 2

PROJECT: BLM

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 23 QUARTERS/FOOTAGES: 1350' S line, 2700' E line

QUADRANGLE: LEBANON LONGITUDE: -89.846603 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 38.602205 DATE COLLECTED: 0 / 0 / 1930

SURFACE ELEVATION (FT.): 430.0 LOGGED (FT.): 905.0 LOG TYPE: Drillers Log

SOURCE: O'FALLON OIL & DEV. CO./INTERNATL. C.M.C WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
430.0			UNKNOWN	184.0	0.0
252.0	CARBONDALE	HERRIN	COAL	-	178.0
246.0			ROCK	721.0	184.0

MAPID: 16301218000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 23 QUARTERS/FOOTAGES: 0' N line, 40' W line of NW NW NE

QUADRANGLE: LEBANON

LONGITUDE: -89.846183

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 38.612852

DATE COLLECTED: 6 / 5 / 1953

SURFACE ELEVATION (FT.): 445.0

LOGGED (FT.): 243.0

LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 105L

WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
445.0	PLEISTOCENE		UNCONSOLIDATED	22.0	0.0	
423.0	PLEISTOCENE		SAND	22.0	22.0	
401.0	PLEISTOCENE		SILT & SAND	12.0	44.0	BLUE
389.0			GRAY SHALE	29.0	56.0	
360.0			LIMESTONE	1.0	85.0	
359.0			SHALE	2.7	86.0	
356.3			LIMESTONE	3.7	88.7	
352.7			SHALE	4.2	92.3	MIXED
348.5			LIMESTONE	10.0	96.5	
338.5	CARBONDALE	ENERGY	SHALY SANDSTONE	3.5	106.5	
335.0	CARBONDALE	ENERGY	RED SHALE	3.0	110.0	
332.0	CARBONDALE	ENERGY	GRAY SHALE	47.8	113.0	
284.2	CARBONDALE	HERRIN	COAL	5.7	160.8	
278.5	CARBONDALE		UNDERCLAY	13.5	166.5	
265.0	CARBONDALE		LIMESTONE	2.0	180.0	
263.0	CARBONDALE		SHALE	4.6	182.0	
258.4	CARBONDALE	ST. DAVID	LIMESTONE	2.7	186.6	
255.7	CARBONDALE	TURNER MINE	BLACK SHALE	0.3	189.3	
255.5	CARBONDALE		UNDERCLAY	3.5	189.5	
252.0	CARBONDALE		SANDY SHALE	2.5	193.0	
249.5	CARBONDALE		SANDSTONE	9.5	195.5	
240.0	CARBONDALE		SHALE	3.0	205.0	
237.0	CARBONDALE		SANDY SHALE	5.0	208.0	
232.0	CARBONDALE		SHALE	3.0	213.0	

MAPID: 16301218000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 23 QUARTERS/FOOTAGES: 0' N line, 40' W line of NW NW NE

QUADRANGLE: LEBANON LONGITUDE: -89.846183 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.612852 DATE COLLECTED:

SURFACE ELEVATION (FT.): 445.0 LOGGED (FT.): 166.7 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 105L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
355.5	MODESTO	PIASA	LIMESTONE	3.7	89.5	
351.8	MODESTO		UNCLASSIFIED	1.5	93.2	
350.3	CARBONDALE		UNCLASSIFIED	2.7	94.7	
347.6	CARBONDALE	BANKSTON FORK	LIMESTONE	10.0	97.4	
337.6	CARBONDALE	ANVIL ROCK	SANDSTONE	3.5	107.4	
334.1	CARBONDALE	ENERGY	SHALE	50.1	110.9	
284.0	CARBONDALE	HERRIN	COAL	5.7	161.0	

MAPID: 16302146000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 23 QUARTERS/FOOTAGES: 56' S line, 78' W line of SW SW NW

QUADRANGLE: LEBANON LONGITUDE: -89.855199 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.606 DATE COLLECTED: 9 / 13 / 1959

SURFACE ELEVATION (FT.): 458.5 LOGGED (FT.): 154.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 24 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
458.5	PLEISTOCENE		SOIL	1.5	0.0	
457.0	PLEISTOCENE		CLAY	20.5	1.5	YELLOW
436.5	PLEISTOCENE		GLACIAL DRIFT	58.0	22.0	
378.5	MODESTO	PIASA	LIMESTONE	2.5	80.0	
376.0			SHALE	4.0	82.5	
372.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	86.5	
368.5	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	90.0	
361.5	CARBONDALE	ENERGY	SHALE	25.0	97.0	
336.5	CARBONDALE	ENERGY	SANDSTONE	10.0	122.0	
326.5	CARBONDALE	ENERGY	SHALE	12.0	132.0	
314.5	CARBONDALE	ENERGY	SHALE	4.7	144.0	
309.8	CARBONDALE	HERRIN	COAL	4.3	148.7	
305.5	CARBONDALE		UNDERCLAY	1.0	153.0	

MAPID: 16302146000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 23 QUARTERS/FOOTAGES: 56' S line, 78' W line of SW SW NW

QUADRANGLE: LEBANON LONGITUDE: -89.855199 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.606 DATE COLLECTED:

SURFACE ELEVATION (FT.): 458.0 LOGGED (FT.): 152.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 24 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
378.8	MODESTO	PIASA	LIMESTONE	2.5	79.2
376.3	MODESTO		UNCLASSIFIED	1.3	81.7
375.0	CARBONDALE		UNCLASSIFIED	2.8	83.0
372.2	CARBONDALE	BANKSTON FORK	LIMESTONE	10.5	85.8
361.7	CARBONDALE	ENERGY	SHALE	51.7	96.3
310.0	CARBONDALE	HERRIN	COAL	4.3	148.0

MAPID: 16303014000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 23 QUARTERS/FOOTAGES: SE SW NW

QUADRANGLE: LEBANON LONGITUDE: -89.852032 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.606684 DATE COLLECTED:

SURFACE ELEVATION (FT.): 450.0 LOGGED (FT.): 147.9 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8661C WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
379.0	MODESTO	PIASA	LIMESTONE	4.5	71.0
374.5	CARBONDALE		GRAY SHALE	6.5	75.5
368.0	CARBONDALE	BANKSTON FORK	LIMESTONE	12.3	82.0
355.7	CARBONDALE	ENERGY	GRAY SHALE	17.2	94.3
338.5	CARBONDALE	ENERGY	GRAY SHALE	30.7	111.5
307.8	CARBONDALE	ENERGY	DARK GRAY SHALE	1.1	142.2
307.0	CARBONDALE	HERRIN	COAL	4.9	143.0

MAPID: 16303014000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 23 QUARTERS/FOOTAGES: SE SW NW
 QUADRANGLE: LEBANON LONGITUDE: -89.852032 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.606684 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 450.0 LOGGED (FT.): 147.9 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 8661C WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
381.1	MODESTO	PIASA	LIMESTONE	4.5	68.9
376.6	MODESTO		UNCLASSIFIED	2.0	73.4
374.6	CARBONDALE		UNCLASSIFIED	4.5	75.4
370.1	CARBONDALE	BANKSTON FORK	LIMESTONE	12.3	79.9
357.8	CARBONDALE	ANNA	BLACK SHALE	1.8	92.2
356.0	CARBONDALE	ENERGY	SHALE	49.0	94.0
307.0	CARBONDALE	HERRIN	COAL	4.9	143.0

MAPID: 16303014000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 23 QUARTERS/FOOTAGES: SE SW NW
 QUADRANGLE: LEBANON LONGITUDE: -89.852032 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.606684 DATE COLLECTED: 2 / 26 / 1969
 SURFACE ELEVATION (FT.): 450.0 LOGGED (FT.): 155.0 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 8661C WELL TYPE:
 COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
450.0			GRAY SHALE	41.5	0.0
408.5			GRAY SHALE	20.5	41.5
388.0			GRAY SHALE	8.5	62.0
379.5			LIMESTONE	4.5	70.5
375.0			GRAY SHALE	6.5	75.0
368.5	CARBONDALE	BRERETON	LIMESTONE	12.3	81.5
356.2	CARBONDALE	ENERGY	GRAY SHALE	17.2	93.8
339.0	CARBONDALE	ENERGY	GRAY SHALE	30.0	111.0
309.0	CARBONDALE	ENERGY	BLACK SHALE	1.8	141.0
307.2	CARBONDALE	HERRIN	COAL	4.9	142.8
302.3	CARBONDALE		UNDERCLAY	1.5	147.7
300.8	CARBONDALE		LIMESTONE	3.5	149.2
297.3	CARBONDALE		LIMESTONE	2.3	152.7

MAPID: 16303079000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 23 QUARTERS/FOOTAGES: 330' N line, 30' W line of SE

QUADRANGLE: LEBANON LONGITUDE: -89.846197 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.604749 DATE COLLECTED: 10 / 13 / 1969

SURFACE ELEVATION (FT.): 450.0 LOGGED (FT.): 269.0 LOG TYPE: Drillers Log

SOURCE: CALVERT FUNDS INC CF3-21 WELL TYPE: Structure Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
380.0	MODESTO	PIASA	LIMESTONE	10.0	70.0	
367.0	MODESTO	PIASA	LIMESTONE	14.0	83.0	
307.0	CARBONDALE	HERRIN	COAL	5.0	143.0	
280.0	CARBONDALE	SPRINGFIELD	COAL	2.0	170.0	
187.0	CARBONDALE		LIMESTONE	1.0	263.0	
183.0	CARBONDALE	COLCHESTER	COAL	2.0	267.0	

MAPID: 16303080000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 23 QUARTERS/FOOTAGES: 25' S line, 1105' E line of NW

QUADRANGLE: LEBANON LONGITUDE: -89.850192 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.605811 DATE COLLECTED: 10 / 25 / 1969

SURFACE ELEVATION (FT.): 453.0 LOGGED (FT.): 272.0 LOG TYPE: Drillers Log

SOURCE: CALVERT FUNDS INC CF9-21 WELL TYPE: Structure Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
384.0	MODESTO	PIASA	LIMESTONE	8.0	69.0	
371.0	MODESTO	PIASA	LIMESTONE	12.0	82.0	
310.0	CARBONDALE	HERRIN	COAL	5.0	143.0	
284.0	CARBONDALE	SPRINGFIELD	COAL	3.0	169.0	
187.0	CARBONDALE		LIMESTONE	1.0	266.0	
183.0	CARBONDALE	COLCHESTER	COAL	2.0	270.0	

MAPID: 16303307000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 23 QUARTERS/FOOTAGES: SW NW NW

QUADRANGLE: LEBANON LONGITUDE: -89.854309 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.61034 DATE COLLECTED:

SURFACE ELEVATION (FT.): 455.0 LOGGED (FT.): 170.0 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO TR1 WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
455.0	PLEISTOCENE		CLAY	26.0	0.0	
429.0			UNKNOWN	4.0	26.0	LOG SAID SH; MAY BE TILL OR BLD
425.0			SAND & GRAVEL	12.0	30.0	
413.0			GREEN SHALE	28.0	42.0	
385.0			GRAY SHALE	14.0	70.0	
371.0			LIMESTONE	1.0	84.0	GRAY
370.0			SHALE	1.0	85.0	RED
369.0			GRAY SHALE	3.0	86.0	
366.0			LIMESTONE	2.5	89.0	GRAY
363.5			CALCAREOUS SHALE	2.0	91.5	
361.5			GRAY SHALE	3.5	93.5	
358.0			SHALY LIMESTONE	7.0	97.0	
351.0	CARBONDALE	ENERGY	GRAY SHALE	5.0	104.0	
346.0	CARBONDALE	ENERGY	GREEN SHALE	9.0	109.0	
337.0	CARBONDALE	ENERGY	GRAY SHALE	20.0	118.0	
317.0	CARBONDALE	ENERGY	SHALE	13.0	138.0	
304.0	CARBONDALE	ENERGY	GRAY SHALE	10.5	151.0	
293.5	CARBONDALE	HERRIN	COAL	5.0	161.5	
288.5	CARBONDALE		UNDERCLAY	1.8	166.5	
286.7	CARBONDALE		UNDERCLAY	1.8	168.3	

MAPID: 16303307000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 23 QUARTERS/FOOTAGES: SW NW NW

QUADRANGLE: LEBANON LONGITUDE: -89.854309 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.61034 DATE COLLECTED:

SURFACE ELEVATION (FT.): 455.0 LOGGED (FT.): 167.0 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO TR-1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
365.5	MODESTO	PIASA	LIMESTONE	2.5	89.5	
363.0	MODESTO		UNCLASSIFIED	2.0	92.0	
361.0	CARBONDALE		UNCLASSIFIED	3.5	94.0	
357.5	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	97.5	
350.5	CARBONDALE	ENERGY	SHALE	57.5	104.5	
293.0	CARBONDALE	HERRIN	COAL	5.0	162.0	

MAPID: 16303081000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 24 **QUARTERS/FOOTAGES:** 5' N line, 645' E line of SW
QUADRANGLE: LEBANON **LONGITUDE:** -89.830121 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.605362 **DATE COLLECTED:** 10 / 31 / 1969
SURFACE ELEVATION (FT.): 432.0 **LOGGED (FT.):** 289.0 **LOG TYPE:** Drillers Log
SOURCE: CALVERT FUNDS INC CF12-21 **WELL TYPE:** Structure Test
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
342.0	MODESTO	PIASA	LIMESTONE	11.0	90.0	
325.0	MODESTO	PIASA	LIMESTONE	19.0	107.0	
270.0	CARBONDALE	HERRIN	COAL	5.0	162.0	
241.0	CARBONDALE	SPRINGFIELD	COAL	2.0	191.0	
149.0	CARBONDALE		LIMESTONE	1.0	283.0	
145.0	CARBONDALE	COLCHESTER	COAL	2.0	287.0	

MAPID: 16325021000C **VERSION:** 1 **PROJECT:** NCRDS99
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 24 **QUARTERS/FOOTAGES:** 2480' S line, 2450' W line
QUADRANGLE: LEBANON **LONGITUDE:** -89.828511 **GEOLOGIST:** MCCRACKEN
CONFIDENTIAL: N **LATITUDE:** 38.605027 **DATE COLLECTED:** 6 / 27 / 1980
SURFACE ELEVATION (FT.): 455.0 **LOGGED (FT.):** 209.1 **LOG TYPE:** Survey Core Study
SOURCE: GULF OIL CORPORATION SI-33 **WELL TYPE:** Coal Test
COMMENT: ELEV. UNCERTAIN HIGH RELIEF

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
455.0			NO RECORD	203.1	0.0	
251.9			UNDERCLAY	0.4	203.1	
251.5			SHALE	2.9	203.5	
248.6			LIMESTONE & SHALE	2.7	206.4	

MAPID: 16325021000C **VERSION:** 2 **PROJECT:** AVAIL
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 24 **QUARTERS/FOOTAGES:** 2480' S line, 2450' W line
QUADRANGLE: LEBANON **LONGITUDE:** -89.828511 **GEOLOGIST:** UITEMP
CONFIDENTIAL: N **LATITUDE:** 38.605027 **DATE COLLECTED:** 6 / 27 / 1980
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 214.0 **LOG TYPE:** Drillers Log
SOURCE: GULF SI33 **WELL TYPE:**
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAYSTONE & SILTSTONE	0.4	203.1	GRAY
-			GRAY SHALE	2.9	203.5	
-			SHALY LIMESTONE	2.7	206.4	WHITE

MAPID: 16300030401M **VERSION:** 1 **PROJECT:** BLM
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 26 **QUARTERS/FOOTAGES:** SW SW NE
QUADRANGLE: LEBANON **LONGITUDE:** -89.845171 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 38.592072 **DATE COLLECTED:** 0 / 0 / 1913
SURFACE ELEVATION (FT.): 453.0 **LOGGED (FT.):** 190.0 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-INTERNATIONAL C. & M. C. **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
453.0			UNKNOWN	183.0	0.0	
270.0	CARBONDALE	HERRIN	COAL	7.0	183.0	

MAPID: 16300030402M **VERSION:** 1 **PROJECT:** BLM
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 26 **QUARTERS/FOOTAGES:**
QUADRANGLE: LEBANON **LONGITUDE:** -89.846338 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 38.591118 **DATE COLLECTED:** 12 / 17 / 1907
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 190.0 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-INTERNATIONAL C. & M. C. **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNKNOWN	185.1	0.0	
-	CARBONDALE	HERRIN	COAL	4.9	185.1	

MAPID: 16300193000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 26 **QUARTERS/FOOTAGES:** 3650' S line, 2400' E line
QUADRANGLE: LEBANON **LONGITUDE:** -89.845504 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.593951 **DATE COLLECTED:** 0 / 0 / 1900
SURFACE ELEVATION (FT.): 453.0 **LOGGED (FT.):** 190.0 **LOG TYPE:** Drillers Log
SOURCE: INTERNAT'L. COAL & MNG. **WELL TYPE:** Mine Shaft
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
270.0	CARBONDALE	HERRIN	COAL	7.0	183.0	

MAPID: 16300193000C **VERSION:** 2 **PROJECT:** BLM
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 26 **QUARTERS/FOOTAGES:** 3650' S line, 2400' E line
QUADRANGLE: LEBANON **LONGITUDE:** -89.845504 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 38.593951 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 453.0 **LOGGED (FT.):** 183.0 **LOG TYPE:** Measured section
SOURCE: INTERNATIONAL COAL & MNG. CO. **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
453.0			UNKNOWN	176.0	0.0	
277.0	CARBONDALE	HERRIN	COAL	7.0	176.0	

MAPID: 16300193000C **VERSION:** 3 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 26 **QUARTERS/FOOTAGES:** 3650' S line, 2400' E line
QUADRANGLE: LEBANON **LONGITUDE:** -89.845504 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.593951 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 453.1 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: INTRNTLCMC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
270.1	CARBONDALE	HERRIN	COAL	7.0	183.0	

MAPID: 16300193000C **VERSION:** 4 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 26 **QUARTERS/FOOTAGES:** 3650' S line, 2400' E line
QUADRANGLE: LEBANON **LONGITUDE:** -89.845504 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.593951 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 453.1 **LOGGED (FT.):** 183.0 **LOG TYPE:** Drillers Log
SOURCE: INTERN'L COAL AND MINING CO **WELL TYPE:** Mine Shaft
COMMENT: SHIPPING MINE MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
277.1	CARBONDALE	HERRIN	COAL	7.0	176.0	ELEV TOP 270

MAPID: 16303082000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 26 QUARTERS/FOOTAGES: 153' S line, 39' W line of NW SE

QUADRANGLE: LEBANON LONGITUDE: -89.846224 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.587955 DATE COLLECTED: 10 / 15 / 1969

SURFACE ELEVATION (FT.): 467.0 LOGGED (FT.): 317.0 LOG TYPE: Drillers Log

SOURCE: CALVERT FUNDS INC CF5-21 WELL TYPE: Structure Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
350.0	MODESTO	PIASA	LIMESTONE	12.0	117.0
333.0	MODESTO	PIASA	LIMESTONE	14.0	134.0
279.0	CARBONDALE	HERRIN	COAL	5.0	188.0
249.0	CARBONDALE	SPRINGFIELD	COAL	3.0	218.0
156.0	CARBONDALE		LIMESTONE	1.0	311.0
152.0	CARBONDALE	COLCHESTER	COAL	2.0	315.0

MAPID: 16303083000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 26 QUARTERS/FOOTAGES: 430' N line, 40' W line of NE

QUADRANGLE: LEBANON LONGITUDE: -89.846153 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.597284 DATE COLLECTED: 10 / 20 / 1969

SURFACE ELEVATION (FT.): 468.0 LOGGED (FT.): 301.0 LOG TYPE: Drillers Log

SOURCE: CALVERT FUNDS INC CF7-21 WELL TYPE: Structure Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
369.0	MODESTO	PIASA	LIMESTONE	11.0	99.0
353.0	MODESTO	PIASA	LIMESTONE	15.0	115.0
295.0	CARBONDALE	HERRIN	COAL	6.0	173.0
268.0	CARBONDALE	SPRINGFIELD	COAL	3.0	200.0
173.0	CARBONDALE		LIMESTONE	1.0	295.0
169.0	CARBONDALE	COLCHESTER	COAL	2.0	299.0

MAPID: 16325022000C VERSION: 1

PROJECT: NCRDS99

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 26 QUARTERS/FOOTAGES: 550' S line, 2570' E line
 QUADRANGLE: LEBANON LONGITUDE: -89.846099 GEOLOGIST: MCCRACKEN
 CONFIDENTIAL: N LATITUDE: 38.585402 DATE COLLECTED: 6 / 30 / 1980
 SURFACE ELEVATION (FT.): 450.0 LOGGED (FT.): 170.3 LOG TYPE: Survey Core Study
 SOURCE: GULF OIL CORPORATION SI-35 WELL TYPE: Coal Test
 COMMENT: ELEV. UNCERTAIN-HIGH RELIEF

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
450.0			NO RECORD	141.0	0.0	
309.0	CARBONDALE		SHALE	21.4	141.0	
287.6	CARBONDALE		BLACK SHALE	0.3	162.4	
287.4	CARBONDALE	HERRIN	COAL	-	162.6	NO THICKNESS VALUE REPORTED
281.7	CARBONDALE		UNDERCLAY	0.8	168.3	
281.9	CARBONDALE		LIMESTONE & SHALE	2.3	168.1	

MAPID: 16325022000C VERSION: 2

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 26 QUARTERS/FOOTAGES: 550' S line, 2570' E line
 QUADRANGLE: LEBANON LONGITUDE: -89.846099 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.585402 DATE COLLECTED: 6 / 30 / 1980
 SURFACE ELEVATION (FT.): LOGGED (FT.): 180.0 LOG TYPE: Drillers Log
 SOURCE: GULF SI35 WELL TYPE:
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	ENERGY	SHALE	21.4	141.0	
-	CARBONDALE	ENERGY	BLACK SHALE	0.3	162.4	
-	CARBONDALE	HERRIN	COAL	5.7	162.6	#6
-	CARBONDALE		CLAYSTONE & SILTSTONE	0.8	168.3	GRAY
-	CARBONDALE		SHALY LIMESTONE	2.3	169.1	WHITE

MAPID: 16300423900M VERSION: 1

PROJECT: BLM

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 27 QUARTERS/FOOTAGES: NW NE NE
 QUADRANGLE: LEBANON LONGITUDE: -89.858997 GEOLOGIST: TREWORGY,J
 CONFIDENTIAL: N LATITUDE: 38.597789 DATE COLLECTED: 0 / 0 / 1886
 SURFACE ELEVATION (FT.): 449.0 LOGGED (FT.): 0.0 LOG TYPE: Measured section
 SOURCE: W.P.A. MAP - WATKINS & MORRIS WELL TYPE: Underground mine
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
449.0			UNKNOWN	0.0	0.0	

MAPID: 16325023000C **VERSION:** 1 **PROJECT:** NCRDS99
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 27 **QUARTERS/FOOTAGES:** 100' N line, 140' W line
QUADRANGLE: LEBANON **LONGITUDE:** -89.873566 **GEOLOGIST:** MCCRACKEN
CONFIDENTIAL: N **LATITUDE:** 38.598748 **DATE COLLECTED:** 6 / 29 / 1980
SURFACE ELEVATION (FT.): 500.0 **LOGGED (FT.):** 159.2 **LOG TYPE:** Survey Core Study
SOURCE: GULF OIL CORPORATION SI-37 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
500.0			NO RECORD	135.0	0.0	
365.0	CARBONDALE		SHALE	17.8	135.0	
347.2	CARBONDALE		BLACK SHALE	0.8	152.8	
346.4	CARBONDALE		SHALE	0.4	153.6	
346.0	CARBONDALE	HERRIN	COAL	-	154.0	NO THICKNESS VALUE REPORTED
346.0	CARBONDALE		UNDERCLAY	5.2	154.0	

MAPID: 16325023000C **VERSION:** 2 **PROJECT:** AVAIL
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 27 **QUARTERS/FOOTAGES:** 100' N line, 140' W line
QUADRANGLE: LEBANON **LONGITUDE:** -89.873566 **GEOLOGIST:** UITEMP
CONFIDENTIAL: N **LATITUDE:** 38.598748 **DATE COLLECTED:** 6 / 29 / 1980
SURFACE ELEVATION (FT.): 511.4 **LOGGED (FT.):** 175.0 **LOG TYPE:** Drillers Log
SOURCE: GULF OIL CORPORATION SI37 **WELL TYPE:**
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
376.4	CARBONDALE	ENERGY	SHALE	17.8	135.0	
358.6	CARBONDALE	ENERGY	BLACK SHALE	0.4	152.8	
358.2	CARBONDALE	ENERGY	GRAY SHALE	0.4	153.2	
357.8	CARBONDALE	HERRIN	COAL	5.5	153.6	
352.4	CARBONDALE		CLAYSTONE & SILTSTONE	5.2	159.0	

MAPID: 16300255000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 28 **QUARTERS/FOOTAGES:** 2400' S line, 2150' W line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.884859 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.590978 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 535.7 **LOGGED (FT.):** 180.0 **LOG TYPE:** Drillers Log
SOURCE: SILVER CREEK MINING CO **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
355.7	CARBONDALE	HERRIN	COAL	0.0	180.0	ELEV TOP 356'

MAPID: 16300255000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 28 QUARTERS/FOOTAGES: 2400' S line, 2150' W line

QUADRANGLE: O'FALLON LONGITUDE: -89.884859 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.590978 DATE COLLECTED:

SURFACE ELEVATION (FT.): 535.7 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: SILVERCKMC WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
355.7	CARBONDALE	HERRIN	COAL	-	180.0

MAPID: 16302069000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 28 QUARTERS/FOOTAGES: 26' S line, 388' W line of NE NW

QUADRANGLE: O'FALLON LONGITUDE: -89.886467 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.595628 DATE COLLECTED:

SURFACE ELEVATION (FT.): 531.0 LOGGED (FT.): 163.2 LOG TYPE: Survey Core Study

SOURCE: ISGS 16 WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
447.0	MODESTO	PIASA	LIMESTONE	3.5	84.0
443.5	CARBONDALE		SHALE	4.5	87.5
439.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.9	92.0
434.1	CARBONDALE	ENERGY	LIMESTONE W/ SHALE	5.0	96.9
429.1	CARBONDALE	ENERGY	CALCAREOUS SHALE	6.8	101.9
422.2	CARBONDALE	ENERGY	GRAY SHALE	44.2	108.8
374.0	CARBONDALE	HERRIN	COAL	6.2	157.0

MAPID: 16302069000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 28 QUARTERS/FOOTAGES: 26' S line, 388' W line of NE NW

QUADRANGLE: O'FALLON LONGITUDE: -89.886467 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.595628 DATE COLLECTED:

SURFACE ELEVATION (FT.): 531.0 LOGGED (FT.): 163.2 LOG TYPE: Drillers Log

SOURCE: ISGS 16 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
446.8	MODESTO	PIASA	LIMESTONE	3.5	84.2
443.3	MODESTO		UNCLASSIFIED	1.5	87.7
441.8	CARBONDALE		UNCLASSIFIED	3.0	89.2
438.8	CARBONDALE	BANKSTON FORK	LIMESTONE	8.8	92.2
430.0	CARBONDALE	ENERGY	SHALE	56.0	101.0
374.0	CARBONDALE	HERRIN	COAL	6.2	157.0

MAPID: 16302069000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 28 QUARTERS/FOOTAGES: 26' S line, 388' W line of NE NW

QUADRANGLE: O'FALLON LONGITUDE: -89.886467 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.595628 DATE COLLECTED: 5 / 13 / 1958

SURFACE ELEVATION (FT.): 531.3 LOGGED (FT.): 164.0 LOG TYPE: Drillers Log

SOURCE: ISGS 16 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
531.3	PLEISTOCENE		CLAY	22.0	0.0	YELLOW
509.3	PLEISTOCENE		GLACIAL DRIFT	20.0	22.0	
489.3			SILTY SHALE	27.0	42.0	
462.3			LIMESTONE	0.7	69.0	
461.6			SHALE	3.3	69.7	
458.3			LIMESTONE	0.5	73.0	
457.8			SHALE	10.5	73.5	
447.3			LIMESTONE	3.5	84.0	
443.8			SHALE	4.5	87.5	
439.3			LIMESTONE	4.0	92.0	
435.3			CALCAREOUS SHALE	7.3	96.0	
428.0			GRAY SHALE	2.2	103.3	
425.9			CALCAREOUS SHALE	0.5	105.4	
425.4			GRAY SHALE	2.5	105.9	
422.9	CARBONDALE		LIMESTONE	0.6	108.4	
422.3	CARBONDALE	ENERGY	GRAY SHALE	47.8	109.0	
374.5	CARBONDALE	HERRIN	COAL	6.2	156.8	#6
368.3	CARBONDALE		UNDERCLAY	1.0	163.0	

MAPID: 16300007000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 29 QUARTERS/FOOTAGES: 2575' S line, 1080' W line

QUADRANGLE: O'FALLON LONGITUDE: -89.907142 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.591879 DATE COLLECTED: 10 / 0 / 1917

SURFACE ELEVATION (FT.): 547.3 LOGGED (FT.): 207.5 LOG TYPE: Drillers Log

SOURCE: VAN COURT'S COAL SHAFT WELL TYPE: Mine Shaft

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
547.3			UNCONSOLIDATED	1.5	0.0	
545.8			CLAY	29.0	1.5	YELLOW
516.8			SANDSTONE	16.0	30.5	YELLOW
500.8			BLACK SHALE	29.0	46.5	
471.8			BLACK SHALE	35.0	75.5	
436.8			UNDERCLAY	4.0	110.5	
432.8			ROCK	1.5	114.5	
431.3			SHALE	4.0	116.0	RED
427.3			LIMESTONE	5.0	120.0	GRAY
422.3			ROCK	1.5	125.0	GRANITE; GY
420.8			SHALE	6.5	126.5	
414.3			SANDSTONE	8.0	133.0	
406.3			BLACK SHALE	4.5	141.0	
401.8			LIMESTONE	6.5	145.5	BLACK
395.3			LIMESTONE	1.5	152.0	GRAY
393.8	CARBONDALE	ENERGY	BLACK SHALE	46.5	153.5	
347.3	CARBONDALE	HERRIN	COAL	7.5	200.0	

MAPID: 16300007000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 29 QUARTERS/FOOTAGES: 2575' S line, 1080' W line

QUADRANGLE: O'FALLON LONGITUDE: -89.907142 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.591879 DATE COLLECTED:

SURFACE ELEVATION (FT.): 547.3 LOGGED (FT.): 207.0 LOG TYPE:

SOURCE: VAN COURTS WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
347.3	CARBONDALE	HERRIN	COAL	7.5	200.0	

MAPID: 16300256000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 29 **QUARTERS/FOOTAGES:** 2600' S line, 2450' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.901042 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.591837 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 554.1 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: O'FALLON COAL COMPANY 1 **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
554.1			MINE OPENING	0.0	0.0	MINE SHAFT;SHIPPING MINE

MAPID: 16300367000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 29 **QUARTERS/FOOTAGES:** 2450' S line, 150' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.892952 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.591277 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 547.7 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: BOND MINE **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
547.7			MINE OPENING	0.0	0.0	MINE SHAFT;SHIPPING MINE

MAPID: 16301146000C **VERSION:** 1 **PROJECT:** AVAIL
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 29 **QUARTERS/FOOTAGES:** SE SW SW
QUADRANGLE: O'FALLON **LONGITUDE:** -89.907532 **GEOLOGIST:** UITEMP
CONFIDENTIAL: N **LATITUDE:** 38.585713 **DATE COLLECTED:** 5 / 17 / 1950
SURFACE ELEVATION (FT.): 553.0 **LOGGED (FT.):** 115.8 **LOG TYPE:** Drillers Log
SOURCE: ISGS 39L **WELL TYPE:**
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
553.0	PLEISTOCENE		CLAY	21.0	0.0	
532.0	PLEISTOCENE		UNCONSOLIDATED	5.0	21.0	BLUE
527.0	PLEISTOCENE		SANDY CLAY	14.0	26.0	
513.0	PLEISTOCENE		CLAY	8.0	40.0	BLUE
505.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	62.3	48.0	BLUE
442.7			LIMESTONE	5.6	110.3	

MAPID: 16301147000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 29 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.909854 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.585755 DATE COLLECTED: 5 / 4 / 1950

SURFACE ELEVATION (FT.): 555.0 LOGGED (FT.): 143.0 LOG TYPE: Drillers Log

SOURCE: ISGS 29L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
555.0	PLEISTOCENE		CLAY	13.0	0.0	
542.0	PLEISTOCENE		UNCONSOLIDATED	17.0	13.0	BLU
525.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	13.0	30.0	BLU
512.0	PLEISTOCENE		SANDY CLAY	7.0	43.0	
505.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	66.0	50.0	BLU
439.0			LIMESTONE W/ SHALE	1.0	116.0	
438.0			LIMESTONE	8.0	117.0	
430.0			BLACK SHALE	5.5	125.0	
424.5			UNDERCLAY	1.8	130.5	
422.7	CARBONDALE	HERRIN	COAL	7.0	132.3	
415.7	CARBONDALE		UNDERCLAY	3.7	139.3	

MAPID: 16301147000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 29 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.909854 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.585755 DATE COLLECTED:

SURFACE ELEVATION (FT.): 555.0 LOGGED (FT.): 139.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 29L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
445.6	CARBONDALE	BRERETON	LIMESTONE	8.0	109.4	
437.6	CARBONDALE	ANNA	BLACK SHALE	7.3	117.4	
430.3	CARBONDALE	ENERGY	SHALE	7.3	124.7	
423.0	CARBONDALE	HERRIN	COAL	7.0	132.0	

MAPID: 16301149000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 29 QUARTERS/FOOTAGES: NE SW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.907511 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.587582 DATE COLLECTED:

SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 164.0 LOG TYPE: Drillers Log

SOURCE: ISGS 4W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.0	PLEISTOCENE		CLAY	18.0	0.0	
532.0	PLEISTOCENE		UNCONSOLIDATED	14.0	18.0	BLU
518.0	PLEISTOCENE		SAND & GRAVEL	15.0	32.0	
503.0	PLEISTOCENE		CLAY	7.0	47.0	BLU
496.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	33.0	54.0	BLU
463.0			LIGHT SHALE	4.0	87.0	
459.0	MODESTO	PIASA	LIMESTONE	6.0	91.0	
453.0			LIGHT SHALE	10.0	97.0	
443.0			LIMESTONE W/ SHALE	4.5	107.0	LIGHT
438.5			LIMESTONE	3.5	111.5	
435.0			LIGHT SHALE	9.5	115.0	
425.5			LIMESTONE	9.0	124.5	
416.5			BLACK SHALE	5.5	133.5	
411.0	CARBONDALE	ENERGY	GRAY SHALE	13.8	139.0	
397.2	CARBONDALE	HERRIN	COAL	8.0	152.8	
389.2	CARBONDALE		UNDERCLAY	3.3	160.8	

MAPID: 16301149000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 29 QUARTERS/FOOTAGES: NE SW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.907511 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.587582 DATE COLLECTED:

SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 161.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 4W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
458.8	MODESTO	PIASA	LIMESTONE	6.0	91.2	
452.8	MODESTO		UNCLASSIFIED	2.5	97.2	
450.3	CARBONDALE		UNCLASSIFIED	7.5	99.7	
442.8	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	107.2	
434.8	CARBONDALE	ANVIL ROCK	SANDSTONE	5.0	115.2	
429.8	CARBONDALE		SHALE	4.5	120.2	
425.3	CARBONDALE	BRERETON	LIMESTONE	9.0	124.7	
416.3	CARBONDALE	ENERGY	SHALE	19.3	133.7	
397.0	CARBONDALE	HERRIN	COAL	8.0	153.0	

MAPID: 16301208000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 29 QUARTERS/FOOTAGES: NW NE NW

QUADRANGLE: O'FALLON LONGITUDE: -89.905091 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.598744 DATE COLLECTED: 4 / 21 / 1953

SURFACE ELEVATION (FT.): 545.0 LOGGED (FT.): 180.0 LOG TYPE: Drillers Log

SOURCE: ISGS 93L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.0	PLEISTOCENE		CLAY	33.0	0.0	
512.0	PLEISTOCENE		UNCONSOLIDATED	6.0	33.0	BLUE
506.0			GRAY SHALE	14.0	39.0	
492.0			LIMESTONE	0.5	53.0	
491.5			GRAY SHALE	45.0	53.5	
446.5			LIMESTONE	0.7	98.5	
445.8			SHALE	7.3	99.2	
438.5			LIMESTONE	1.5	106.5	
437.0			SHALE	3.5	108.0	
433.5	MODESTO	PIASA	LIMESTONE	5.5	111.5	
428.0			SHALE	4.5	117.0	MIXED
423.5	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	121.5	
416.5	CARBONDALE		SHALE	7.5	128.5	
409.0	CARBONDALE	BRERETON	LIMESTONE	10.0	136.0	
399.0	CARBONDALE	ENERGY	GRAY SHALE	10.5	146.0	
388.5	CARBONDALE	ENERGY	GRAY SHALE	13.5	156.5	
375.0	CARBONDALE	HERRIN	COAL	6.6	170.0	
368.4	CARBONDALE		UNDERCLAY	3.4	176.6	
365.0	CARBONDALE		LIMESTONE	3.4	180.0	

MAPID: 16301208000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 29 QUARTERS/FOOTAGES: NW NE NW

QUADRANGLE: O'FALLON LONGITUDE: -89.905091 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.598744 DATE COLLECTED:

SURFACE ELEVATION (FT.): 545.0 LOGGED (FT.): 175.6 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 93L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
434.6	MODESTO	PIASA	LIMESTONE	5.5	110.4
429.1	MODESTO		UNCLASSIFIED	1.5	115.9
427.6	CARBONDALE		UNCLASSIFIED	3.0	117.4
424.6	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	120.4
417.6	CARBONDALE	ANVIL ROCK	SANDSTONE	3.8	127.4
413.8	CARBONDALE		SHALE	3.8	131.2
410.0	CARBONDALE	BRERETON	LIMESTONE	10.0	135.0
400.0	CARBONDALE	ENERGY	SHALE	24.0	145.0
376.0	CARBONDALE	HERRIN	COAL	6.6	169.0

MAPID: 16301209000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR

TWP/RNG: 2N 7W

SECTION: 29

QUARTERS/FOOTAGES: NE NW NW

QUADRANGLE: O'FALLON

LONGITUDE: -89.907399

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 38.598797

DATE COLLECTED: 4 / 23 / 1953

SURFACE ELEVATION (FT.):

LOGGED (FT.): 172.0

LOG TYPE: Drillers Log

SOURCE: ISGS

94L

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		CLAY	33.0	0.0	
-			GRAY SHALE	67.5	33.0	
-			LIMESTONE	0.5	100.5	
-			SHALE	2.5	101.0	
-	MODESTO	PIASA	LIMESTONE	8.0	103.5	
-			SHALE	4.5	111.5	MIXED
-			CALCAREOUS SHALE	2.0	116.0	
-	CARBONDALE	BANKSTON FORK	SANDY LIMESTONE	12.0	118.0	BLUE
-	CARBONDALE		CALCAREOUS SHALE	5.5	130.0	
-	CARBONDALE	BRERETON	LIMESTONE	8.5	135.5	
-	CARBONDALE	BRERETON	LIMESTONE	8.5	144.0	
-	CARBONDALE	ENERGY	SLATY SHALE	2.0	152.5	
-	CARBONDALE	ENERGY	GRAY SHALE	3.0	154.5	
-	CARBONDALE	ENERGY	SLATY SHALE	3.0	157.5	
-	CARBONDALE	ENERGY	GRAY SHALE	4.0	160.5	
-	CARBONDALE	ENERGY	GRAY SHALE	5.2	164.5	
-	CARBONDALE	ENERGY	BLACK SHALE	0.3	169.7	
-	CARBONDALE	HERRIN	COAL	7.0	169.9	
-	CARBONDALE		UNDERCLAY	3.6	176.9	

MAPID: 16301209000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 29 QUARTERS/FOOTAGES: NE NW NW
 QUADRANGLE: O'FALLON LONGITUDE: -89.907399 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.598797 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 543.0 LOGGED (FT.): 168.0 LOG TYPE: Drillers Log
 SOURCE: PERRY COAL CO. 94L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
439.9	MODESTO	PIASA	LIMESTONE	8.0	103.1
431.9	MODESTO		UNCLASSIFIED	2.0	111.1
429.9	CARBONDALE		UNCLASSIFIED	4.5	113.1
425.4	CARBONDALE	BANKSTON FORK	LIMESTONE	12.0	117.6
413.4	CARBONDALE	ANVIL ROCK	SANDSTONE	3.5	129.6
409.9	CARBONDALE		SHALE	2.0	133.1
407.9	CARBONDALE	BRERETON	LIMESTONE	8.5	135.1
399.4	CARBONDALE	ENERGY	SHALE	17.4	143.6
382.0	CARBONDALE	HERRIN	COAL	7.0	161.0

MAPID: 16302058000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 29 QUARTERS/FOOTAGES: 150' S line, 1320' W line
 QUADRANGLE: O'FALLON LONGITUDE: -89.906382 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 38.585171 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 148.5 LOG TYPE: Survey Core Study
 SOURCE: ISGS 4 WELL TYPE: Coal Test
 COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
439.5	CARBONDALE	BANKSTON FORK	LIMESTONE	9.8	110.5
429.7	CARBONDALE	ENERGY	MOTTLED SHALE	0.1	120.3
429.6	CARBONDALE	ENERGY	BLACK SHALE	0.5	120.4
429.1	CARBONDALE	ENERGY	MOTTLED SHALE	1.2	120.9
427.9	CARBONDALE	ENERGY	DARK GRAY SHALE	2.6	122.1
425.3	CARBONDALE	ENERGY	GRAY SHALE	15.3	124.7
410.0	CARBONDALE	HERRIN	COAL	8.5	140.0

MAPID: 16302058000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 29 QUARTERS/FOOTAGES: 150' S line, 1320' W line

QUADRANGLE: O'FALLON LONGITUDE: -89.906382 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.585171 DATE COLLECTED:

SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 148.5 LOG TYPE: Drillers Log

SOURCE: ISGS 4 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
438.5	CARBONDALE	BRERETON	LIMESTONE	8.0	111.5	
430.5	CARBONDALE	ENERGY	SHALE	20.5	119.5	
410.0	CARBONDALE	HERRIN	COAL	8.5	140.0	

MAPID: 16302058000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 29 QUARTERS/FOOTAGES: 150' S line, 1320' W line

QUADRANGLE: O'FALLON LONGITUDE: -89.906382 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.585171 DATE COLLECTED: 2 / 21 / 1958

SURFACE ELEVATION (FT.): 549.8 LOGGED (FT.): 148.5 LOG TYPE: Drillers Log

SOURCE: ISGS 4 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
549.8	PLEISTOCENE		SOIL	2.0	0.0	
547.8	PLEISTOCENE		CLAY	12.0	2.0	YELLOW
535.8	PLEISTOCENE		CLAY	3.0	14.0	
532.8	PLEISTOCENE		CLAY	27.5	17.0	
505.3	PLEISTOCENE		CLAY	66.5	44.5	
438.8			LIMESTONE	8.0	111.0	
430.8			BLACK SHALE	0.5	119.0	
430.3	CARBONDALE	ENERGY	GRAY SHALE	8.8	119.5	
421.5	CARBONDALE	ENERGY	GRAY SHALE	11.2	128.3	
410.3	CARBONDALE	HERRIN	COAL	8.5	139.5	
401.8	CARBONDALE		UNDERCLAY	0.5	148.0	

MAPID: 16301150000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 30 QUARTERS/FOOTAGES: SE SE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.91214 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.585791 DATE COLLECTED: 2 / 15 / 1948

SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 186.0 LOG TYPE: Drillers Log

SOURCE: ISGS 3D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.0	PLEISTOCENE		UNCONSOLIDATED	20.0	0.0	
540.0	PLEISTOCENE		UNCLASSIFIED	25.0	20.0	
515.0	PLEISTOCENE		SHALE & SANDSTONE	30.0	45.0	
485.0			SANDY SHALE	52.0	75.0	
433.0	CARBONDALE	BRERETON	LIMESTONE	3.0	127.0	
430.0	CARBONDALE	ANNA	BLACK SHALE	1.5	130.0	
428.5	CARBONDALE	ANNA	LIMESTONE	0.5	131.5	
428.0	CARBONDALE	ANNA	BLACK SHALE	3.0	132.0	
425.0	CARBONDALE	ENERGY	SHALE	5.0	135.0	
420.0	CARBONDALE	HERRIN	COAL	7.5	140.0	#6
412.5	CARBONDALE		UNDERCLAY/SHALE	6.5	147.5	
406.0	CARBONDALE		LIMESTONE	1.0	154.0	
405.0	CARBONDALE		UNCLASSIFIED	7.0	155.0	
398.0	CARBONDALE		LIMESTONE	7.0	162.0	
391.0	CARBONDALE		UNCLASSIFIED	2.0	169.0	
389.0	CARBONDALE		SHALE/COAL	1.5	171.0	
387.5	CARBONDALE		SANDY SHALE	12.5	172.5	
375.0	CARBONDALE		LIMESTONE	1.0	185.0	

MAPID: 16301151000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 30 QUARTERS/FOOTAGES: SE SE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.91214 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.585791 DATE COLLECTED: 2 / 16 / 1948

SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 186.0 LOG TYPE: Drillers Log

SOURCE: ISGS 4D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
560.0	PLEISTOCENE		UNCONSOLIDATED	20.0	0.0
540.0	PLEISTOCENE		SAND	25.0	20.0
515.0	PLEISTOCENE		SHALE & SANDSTONE	30.0	45.0
485.0			SANDY SHALE	52.0	75.0
433.0	CARBONDALE	BRERETON	LIMESTONE	3.0	127.0
430.0	CARBONDALE	ANNA	BLACK SHALE	1.5	130.0
428.5	CARBONDALE	ANNA	LIMESTONE	0.5	131.5
428.0	CARBONDALE	ANNA	BLACK SHALE	3.0	132.0
425.0	CARBONDALE	ENERGY	SHALE	5.0	135.0
420.0	CARBONDALE	HERRIN	COAL	7.5	140.0
412.5	CARBONDALE		UNDERCLAY/SHALE	6.5	147.5
406.0	CARBONDALE		LIMESTONE	1.0	154.0
405.0	CARBONDALE		SANDY SHALE	7.0	155.0
398.0	CARBONDALE		LIMESTONE	7.0	162.0
391.0	CARBONDALE		SANDY SHALE	2.0	169.0
389.0	CARBONDALE		SHALE/COAL	1.5	171.0
387.5	CARBONDALE		SANDY SHALE	12.5	172.5
375.0	CARBONDALE		LIMESTONE	1.0	185.0

MAPID: 16301151000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 30 QUARTERS/FOOTAGES: SE SE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.91214 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.585791 DATE COLLECTED:

SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 147.5 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 4D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
430.0	CARBONDALE	ENERGY	SHALE	10.0	130.0
420.0	CARBONDALE	HERRIN	COAL	7.5	140.0

MAPID: 16301152000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 30 QUARTERS/FOOTAGES: SE SE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.921135 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.585902 DATE COLLECTED: 3 / 9 / 1953

SURFACE ELEVATION (FT.): 553.0 LOGGED (FT.): 168.0 LOG TYPE: Drillers Log

SOURCE: ISGS 8D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
553.0	PLEISTOCENE		UNCONSOLIDATED	18.0	0.0	
535.0	PLEISTOCENE		UNCONSOLIDATED	10.0	18.0	BLU
525.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	12.0	28.0	BLU
513.0	PLEISTOCENE		SAND & GRAVEL	25.0	40.0	
488.0			SHALE	24.0	65.0	
464.0			LIMESTONE	10.0	89.0	
454.0			SHALE	8.0	99.0	
446.0			LIMESTONE	11.0	107.0	
435.0			SHALE	9.0	118.0	
426.0			LIMESTONE	4.0	127.0	
422.0			SHALE	2.0	131.0	
420.0			LIMESTONE	2.5	133.0	
417.5			SHALE	5.5	135.5	BLU
412.0			LIMESTONE	1.0	141.0	
411.0			SHALE	4.0	142.0	BLU
407.0			LIMESTONE	2.0	146.0	
405.0			SHALE	1.5	148.0	BLU
403.5			LIMESTONE	1.5	149.5	
402.0			SHALE	5.0	151.0	BLU
397.0	CARBONDALE	BRERETON	LIMESTONE	3.0	156.0	
394.0	CARBONDALE	ANNA	BLACK SHALE	1.0	159.0	
393.0	CARBONDALE	HERRIN	COAL	6.8	160.0	
386.2	CARBONDALE		UNDERCLAY	1.2	166.8	

MAPID: 16301152000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 30 QUARTERS/FOOTAGES: SE SE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.921135 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.585902 DATE COLLECTED:

SURFACE ELEVATION (FT.): 555.0 LOGGED (FT.): 168.8 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 8D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
464.0	MODESTO	PIASA	LIMESTONE	10.0	91.0
454.0	MODESTO		UNCLASSIFIED	2.0	101.0
452.0	CARBONDALE		UNCLASSIFIED	6.0	103.0
446.0	CARBONDALE	BANKSTON FORK	LIMESTONE	11.0	109.0
435.0	CARBONDALE	ANVIL ROCK	SANDSTONE	5.0	120.0
430.0	CARBONDALE		SHALE	4.0	125.0
426.0	CARBONDALE	BRERETON	LIMESTONE	32.0	129.0
394.0	CARBONDALE	ANNA	BLACK SHALE	1.0	161.0
393.0	CARBONDALE	HERRIN	COAL	6.8	162.0

MAPID: 16301217000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 30 QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.918825 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.591465 DATE COLLECTED: 5 / 28 / 1953

SURFACE ELEVATION (FT.): 545.0 LOGGED (FT.): 171.0 LOG TYPE: Drillers Log

SOURCE: ISGS 104L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.0	PLEISTOCENE		SOIL	2.0	0.0	
543.0	PLEISTOCENE		CLAY	19.0	2.0	
524.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	13.0	21.0	BLU
511.0	PLEISTOCENE		SAND & GRAVEL	9.0	34.0	
502.0	PLEISTOCENE		SAND & GRAVEL	15.0	43.0	BLU
487.0	PLEISTOCENE		MUD	15.0	58.0	BLU
472.0	PLEISTOCENE		SANDY CLAY	5.0	73.0	
467.0			GRAY SHALE	5.5	78.0	
461.5			LIMESTONE	0.4	83.5	
461.1			UNDERCLAY	7.1	83.9	
454.0			LIMESTONE	2.5	91.0	
451.5			SHALE	2.5	93.5	MIXED
449.0	MODESTO	PIASA	LIMESTONE	6.0	96.0	
443.0			SHALE	5.0	102.0	MIXED
438.0			SHALY LIMESTONE	3.0	107.0	
435.0			SANDY LIMESTONE	12.0	110.0	
423.0			SHALE	8.0	122.0	
415.0			LIMESTONE	10.0	130.0	
405.0			LIMESTONE	16.8	140.0	
388.2	CARBONDALE	ANNA	BLACK SHALE	2.3	156.8	
386.0	CARBONDALE	HERRIN	COAL	7.4	159.0	
378.6	CARBONDALE		UNDERCLAY	4.6	166.4	

MAPID: 16301217000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 30 QUARTERS/FOOTAGES: NW NW SE
 QUADRANGLE: O'FALLON LONGITUDE: -89.918825 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.591465 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 545.0 LOGGED (FT.): 166.4 LOG TYPE: Drillers Log
 SOURCE: PERRY COAL CO. 104L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
449.1	MODESTO	PIASA	LIMESTONE	6.0	95.9	
443.1	MODESTO		UNCLASSIFIED	2.0	101.9	
441.1	CARBONDALE		UNCLASSIFIED	6.0	103.9	
435.1	CARBONDALE	BANKSTON FORK	LIMESTONE	12.0	109.9	
423.1	CARBONDALE	ANVIL ROCK	SANDSTONE	4.5	121.9	
418.6	CARBONDALE		SHALE	3.5	126.4	
415.1	CARBONDALE	BRERETON	LIMESTONE	26.8	129.9	
388.3	CARBONDALE	ANNA	BLACK SHALE	2.3	156.7	
386.0	CARBONDALE	HERRIN	COAL	7.4	159.0	

MAPID: 16302075000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 30 QUARTERS/FOOTAGES: 100' N line, 600' W line of SE
 QUADRANGLE: O'FALLON LONGITUDE: -89.91783 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.592112 DATE COLLECTED: 7 / 16 / 1958
 SURFACE ELEVATION (FT.): 548.2 LOGGED (FT.): 168.0 LOG TYPE: Drillers Log
 SOURCE: ISGS 20 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
548.2	PLEISTOCENE		CLAY	22.0	0.0	YL
526.2	PLEISTOCENE		CLAY	12.0	22.0	GRAY
514.2	PLEISTOCENE		SAND & GRAVEL	4.0	34.0	
510.2	PLEISTOCENE		GLACIAL DRIFT	52.0	38.0	
458.2			LIMESTONE	2.0	90.0	
456.2			GRAY SHALE	4.0	92.0	
452.2			LIMESTONE	5.5	96.0	
446.7			SHALE	9.5	101.5	
437.2			LIMESTONE	4.0	111.0	
433.2			SHALE	15.0	115.0	
418.2			LIMESTONE & CLAY	13.0	130.0	
405.2	CARBONDALE	BRERETON	LIMESTONE	14.0	143.0	
391.2	CARBONDALE	ANNA	BLACK SHALE	2.3	157.0	
388.9	CARBONDALE	HERRIN	COAL	7.7	159.3	
381.2	CARBONDALE		UNDERCLAY	1.0	167.0	

MAPID: 16302075000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 30 QUARTERS/FOOTAGES: 100' N line, 600' W line of SE

QUADRANGLE: O'FALLON LONGITUDE: -89.91783 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.592112 DATE COLLECTED:

SURFACE ELEVATION (FT.): 548.0 LOGGED (FT.): 166.7 LOG TYPE: Drillers Log

SOURCE: ISGS 20 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
452.3	MODESTO	PIASA	LIMESTONE	5.5	95.7
446.8	MODESTO		UNCLASSIFIED	2.5	101.2
444.3	CARBONDALE		UNCLASSIFIED	7.0	103.7
437.3	CARBONDALE	BANKSTON FORK	LIMESTONE	10.0	110.7
427.3	CARBONDALE	ANVIL ROCK	SANDSTONE	5.0	120.7
422.3	CARBONDALE		SHALE	4.0	125.7
418.3	CARBONDALE	BRERETON	LIMESTONE	26.8	129.7
391.5	CARBONDALE	ANNA	BLACK SHALE	2.5	156.5
389.0	CARBONDALE	HERRIN	COAL	7.7	159.0

MAPID: 16302083000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 30 QUARTERS/FOOTAGES: 223' S line, 746' E line of SE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.922635 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.585607 DATE COLLECTED: 8 / 14 / 1958

SURFACE ELEVATION (FT.): 557.2 LOGGED (FT.): 165.0 LOG TYPE: Drillers Log

SOURCE: ISGS 25 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
557.2	PLEISTOCENE		SOIL	2.0	0.0	
555.2	PLEISTOCENE		CLAY	45.0	2.0	YL
510.2	PLEISTOCENE		SAND & GRAVEL	12.0	47.0	
498.2			SHALE	3.0	59.0	
495.2			SHALE	19.0	62.0	
476.2			LIMESTONE	1.5	81.0	
474.7			SHALE	4.5	82.5	
470.2			LIMESTONE	7.0	87.0	
463.2			SHALE	6.0	94.0	
457.2			LIMESTONE	11.0	100.0	
446.2			SHALE	5.0	111.0	
441.2			LIMESTONE	8.5	116.0	
432.7			SHALE	3.0	124.5	
429.7			LIMESTONE	1.5	127.5	
428.2			CALCAREOUS SHALE	2.5	129.0	
425.7			LIMESTONE	6.0	131.5	
419.7			SHALE	2.5	137.5	
417.2			LIMESTONE	3.0	140.0	
414.2			SHALE	3.0	143.0	
411.2	CARBONDALE	BRERETON	LIMESTONE	8.9	146.0	
402.3	CARBONDALE		CLOD	0.2	154.9	
402.1	CARBONDALE	HERRIN	COAL	7.3	155.1	
394.8	CARBONDALE		UNDERCLAY	2.3	162.4	

MAPID: 16302083000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 30 QUARTERS/FOOTAGES: 223' S line, 746' E line of SE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.922635 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.585607 DATE COLLECTED:

SURFACE ELEVATION (FT.): 557.0 LOGGED (FT.): 162.3 LOG TYPE: Drillers Log

SOURCE: ISGS 25 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
470.1	MODESTO	PIASA	LIMESTONE	7.0	86.9
463.1	MODESTO		UNCLASSIFIED	1.5	93.9
461.6	CARBONDALE		UNCLASSIFIED	4.5	95.4
457.1	CARBONDALE	BANKSTON FORK	LIMESTONE	11.0	99.9
446.1	CARBONDALE	ANVIL ROCK	SANDSTONE	3.0	110.9
443.1	CARBONDALE		SHALE	2.0	113.9
441.1	CARBONDALE	BRERETON	LIMESTONE	38.9	115.9
402.2	CARBONDALE	ANNA	BLACK SHALE	0.2	154.8
402.0	CARBONDALE	HERRIN	COAL	7.3	155.0

MAPID: 16302117000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 30 QUARTERS/FOOTAGES: 340' N line, 235' W line of NE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.914534 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.598891 DATE COLLECTED:

SURFACE ELEVATION (FT.): 557.0 LOGGED (FT.): 157.6 LOG TYPE: Survey Core Study

SOURCE: ISGS 27 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
457.5	MODESTO	PIASA	LIMESTONE	8.0	99.5
449.5	CARBONDALE		SHALE	15.0	107.5
434.5	CARBONDALE	BANKSTON FORK	LIMESTONE	0.5	122.5
434.0	CARBONDALE	LAWSON	LIMESTONE W/ SHALE	5.9	123.0
428.1	CARBONDALE	LAWSON	SILTSTONE	1.8	128.9
426.2	CARBONDALE	LAWSON	CALCAREOUS SHALE	6.9	130.8
419.3	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	3.6	137.7
415.7	CARBONDALE	ANNA	BLACK SHALE	3.0	141.3
412.7	CARBONDALE	ENERGY	DARK GRAY SHALE	2.6	144.3
410.2	CARBONDALE	ENERGY	GRAY SHALE	1.8	146.8
408.4	CARBONDALE	ENERGY	CARBONACEOUS SHALE	0.9	148.6
407.5	CARBONDALE	ENERGY	CALCAREOUS SHALE	0.5	149.5
407.0	CARBONDALE	HERRIN	COAL	7.6	150.0

MAPID: 16302117000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 30 QUARTERS/FOOTAGES: 340' N line, 235' W line of NE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.914534 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.598891 DATE COLLECTED:

SURFACE ELEVATION (FT.): 557.0 LOGGED (FT.): 157.6 LOG TYPE: Drillers Log

SOURCE: ISGS 27 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
458.7	CARBONDALE	BANKSTON FORK	LIMESTONE	13.0	98.3
445.7	CARBONDALE	ANVIL ROCK	SANDSTONE	5.0	111.3
440.7	CARBONDALE		SHALE	5.0	116.3
435.7	CARBONDALE	BRERETON	LIMESTONE	19.4	121.3
416.3	CARBONDALE	ANNA	BLACK SHALE	0.9	140.7
415.4	CARBONDALE	ENERGY	SHALE	8.4	141.6
407.0	CARBONDALE	HERRIN	COAL	7.6	150.0

MAPID: 16302117000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 30 QUARTERS/FOOTAGES: 340' N line, 235' W line of NE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.914534 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.598891 DATE COLLECTED: 8 / 12 / 1958

SURFACE ELEVATION (FT.): 557.0 LOGGED (FT.): 160.0 LOG TYPE: Drillers Log

SOURCE: ISGS 27 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
557.0	PLEISTOCENE		SOIL	2.5	0.0
554.5	PLEISTOCENE		CLAY	26.5	2.5 YELLOW
528.0	PLEISTOCENE		GLACIAL DRIFT	37.0	29.0
491.0			LIMESTONE	0.5	66.0
490.5			SHALE	32.0	66.5
458.5	MODESTO	PIASA	LIMESTONE	8.0	98.5
450.5			SHALE	15.0	106.5
435.5			LIMESTONE	0.5	121.5
435.0			SHALE WITH LIMESTONE	6.0	122.0
429.0			GRAY SHALE	8.8	128.0
420.2	CARBONDALE	BRERETON	LIMESTONE	0.3	136.8
419.8	CARBONDALE	BRERETON	LIMESTONE	3.8	137.2
416.1	CARBONDALE	ANNA	BLACK SHALE	8.8	140.9
407.3	CARBONDALE		CLOD	0.5	149.7
406.8	CARBONDALE	HERRIN	COAL	7.6	150.2
399.2	CARBONDALE		UNDERCLAY	1.1	157.8
398.2	CARBONDALE		LIMESTONE	1.5	158.8

MAPID: 16300008000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 31 **QUARTERS/FOOTAGES:** 2700' S line, 100' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.911302 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.577586 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 584.1 **LOGGED (FT.):** 600.0 **LOG TYPE:**
SOURCE: OFALLON OD0002 **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
417.1	CARBONDALE	HERRIN	COAL	3.0	167.0	

MAPID: 16301153000C **VERSION:** 1 **PROJECT:** AVAIL
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 31 **QUARTERS/FOOTAGES:** SE SE SE
QUADRANGLE: O'FALLON **LONGITUDE:** -89.912017 **GEOLOGIST:** UITEMP
CONFIDENTIAL: N **LATITUDE:** 38.571062 **DATE COLLECTED:** 4 / 28 / 1950
SURFACE ELEVATION (FT.): 570.0 **LOGGED (FT.):** 178.0 **LOG TYPE:** Drillers Log
SOURCE: ISGS 26L **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.0	PLEISTOCENE		CLAY	36.0	0.0	
534.0	PLEISTOCENE		SAND	27.0	36.0	
507.0	PLEISTOCENE		CLAY	5.0	63.0	BLU
502.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	13.0	68.0	BLU
489.0	PLEISTOCENE		CLAY	25.5	81.0	BLU
463.5			SHALE	3.0	106.5	
460.5	MODESTO	PIASA	LIMESTONE	6.7	109.5	
453.8			RED SHALE	4.8	116.2	
449.0			LIMESTONE	10.0	121.0	
439.0			SANDY SHALE	8.0	131.0	
431.0			LIMESTONE W/ SHALE	16.0	139.0	
415.0			SHALE WITH LIMESTONE	8.2	155.0	
406.8	CARBONDALE	BRERETON	LIMESTONE	5.3	163.2	
401.6	CARBONDALE	ANNA	BLACK SHALE	2.8	168.4	
398.7	CARBONDALE	HERRIN	COAL	7.8	171.3	
390.9	CARBONDALE		UNDERCLAY	0.9	179.1	

MAPID: 16301153000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: SE SE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.912017 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.571062 DATE COLLECTED:

SURFACE ELEVATION (FT.): 570.0 LOGGED (FT.): 176.8 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 26L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
462.7	MODESTO	PIASA	LIMESTONE	6.7	107.3
456.0	MODESTO		UNCLASSIFIED	1.5	114.0
454.5	CARBONDALE		UNCLASSIFIED	3.3	115.5
451.2	CARBONDALE	BANKSTON FORK	LIMESTONE	10.0	118.8
441.2	CARBONDALE	ANVIL ROCK	SANDSTONE	8.0	128.8
433.2	CARBONDALE	BRERETON	LIMESTONE	29.4	136.8
403.8	CARBONDALE	ANNA	BLACK SHALE	2.8	166.2
401.0	CARBONDALE	HERRIN	COAL	7.8	169.0

MAPID: 16301154000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: SE NE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.912052 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.574742 DATE COLLECTED: 2 / 12 / 1953

SURFACE ELEVATION (FT.): 579.0 LOGGED (FT.): 195.8 LOG TYPE: Drillers Log

SOURCE: ISGS 72L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
579.0	PLEISTOCENE		UNCONSOLIDATED	31.0	0.0
548.0	PLEISTOCENE		SANDY CLAY	2.0	31.0
546.0	PLEISTOCENE		SAND & GRAVEL	6.0	33.0
540.0	PLEISTOCENE		CLAY, SAND & GRAVEL	4.0	39.0 BLUE
536.0	PLEISTOCENE		SILT & SAND	10.0	43.0 BLUE
526.0	PLEISTOCENE		SAND/CLAY	102.3	53.0 BLUE
423.7			LIMESTONE	3.3	155.3 GRAY
420.4			LIMESTONE	1.5	158.6
418.9	CARBONDALE	BRERETON	LIMESTONE	1.4	160.1 GRAY
417.5	CARBONDALE	BRERETON	LIMESTONE	5.9	161.5
411.6	CARBONDALE	ANNA	BLACK SHALE	2.6	167.4
409.0	CARBONDALE	HERRIN	COAL	7.5	170.0
401.5	CARBONDALE		UNDERCLAY	4.8	177.5
396.7	CARBONDALE		LIMESTONE/UNDERCLAY	1.8	182.3
395.0	CARBONDALE		UNDERCLAY	6.0	184.0

MAPID: 16301155000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: SE NE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.912052 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.574742 DATE COLLECTED: 2 / 13 / 1953

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 195.5 LOG TYPE: Drillers Log

SOURCE: ISGS 73L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
600.0	PLEISTOCENE		UNCONSOLIDATED	25.0	0.0	
575.0	PLEISTOCENE		SAND/CLAY	8.0	25.0	
567.0	PLEISTOCENE		SANDY CLAY	10.0	33.0	
557.0	PLEISTOCENE		SAND	40.0	43.0	
517.0	PLEISTOCENE		SILT & SAND	104.0	83.0	BLUE
413.0	CARBONDALE	HERRIN	COAL	3.3	187.0	
409.7	CARBONDALE	HERRIN	COAL	2.5	190.3	
407.2	CARBONDALE		UNDERCLAY	2.7	192.8	

MAPID: 16301156000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: SW NE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.914317 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.574776 DATE COLLECTED: 2 / 10 / 1953

SURFACE ELEVATION (FT.): 567.0 LOGGED (FT.): 180.5 LOG TYPE: Drillers Log

SOURCE: ISGS 71L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
567.0	PLEISTOCENE		UNCONSOLIDATED	15.0	0.0	
552.0	PLEISTOCENE		UNCONSOLIDATED	18.0	15.0	BLUE
534.0	PLEISTOCENE		SAND	5.0	33.0	
529.0	PLEISTOCENE		SILT & SAND	104.5	38.0	BLUE
424.5			SHALY LIMESTONE	5.3	142.5	
419.2			LIMESTONE	0.8	147.8	
418.4			LIMESTONE	1.3	148.6	GRAY
417.1			LIMESTONE	1.3	149.9	
415.8			LIMESTONE	0.6	151.2	BLACK
415.3			LIMESTONE	5.9	151.7	
409.3	CARBONDALE	ANNA	BLACK SHALE	3.2	157.7	
406.2	CARBONDALE	HERRIN	COAL	7.2	160.8	
399.0	CARBONDALE		UNDERCLAY	2.5	168.0	
396.5	CARBONDALE		LIMESTONE/UNDERCLAY	2.5	170.5	
394.0	CARBONDALE		UNDERCLAY	7.5	173.0	

MAPID: 16301157000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: NW NE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.914335 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.576614 DATE COLLECTED: 2 / 16 / 1953

SURFACE ELEVATION (FT.): 559.0 LOGGED (FT.): 163.0 LOG TYPE: Drillers Log

SOURCE: ISGS 74L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
559.0	PLEISTOCENE		UNCONSOLIDATED	21.0	0.0	
538.0	PLEISTOCENE		UNCONSOLIDATED	12.0	21.0	BLUE
526.0	PLEISTOCENE		SILT & SAND	22.0	33.0	BLUE
504.0	PLEISTOCENE		SAND	3.0	55.0	FINE
501.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	90.3	58.0	BLUE
410.7			LIMESTONE	2.0	148.3	
408.7			SILTSTONE	4.5	150.3	BLACK
404.2	CARBONDALE	HERRIN	COAL	7.1	154.8	
397.1	CARBONDALE		UNDERCLAY	1.1	161.9	

MAPID: 16301158000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: SW NE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.914317 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.574776 DATE COLLECTED: 2 / 17 / 1953

SURFACE ELEVATION (FT.): 562.0 LOGGED (FT.): 163.0 LOG TYPE: Drillers Log

SOURCE: ISGS 75L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
562.0	PLEISTOCENE		UNCONSOLIDATED	13.0	0.0	
549.0	PLEISTOCENE		UNCONSOLIDATED	20.0	13.0	BLUE
529.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	10.0	33.0	BLUE
519.0	PLEISTOCENE		SAND	20.0	43.0	
499.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	79.7	63.0	BLUE
419.3			LIMESTONE	2.7	142.7	GRAY
416.7			SILTSTONE	4.2	145.3	BLACK
412.5	CARBONDALE	HERRIN	COAL	6.8	149.5	
405.7	CARBONDALE		UNDERCLAY	6.7	156.3	

MAPID: 16301159000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: SE

QUADRANGLE: O'FALLON LONGITUDE: -89.915444 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.573872 DATE COLLECTED: 2 / 7 / 1953

SURFACE ELEVATION (FT.): 561.0 LOGGED (FT.): 176.5 LOG TYPE: Drillers Log

SOURCE: ISGS 70L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
561.0	PLEISTOCENE		UNCONSOLIDATED	13.0	0.0	
548.0	PLEISTOCENE		UNCONSOLIDATED	20.0	13.0	BLU
528.0	PLEISTOCENE		SAND	12.0	33.0	
516.0	PLEISTOCENE		SILT & SAND	43.5	45.0	BLU
472.5			SHALY LIMESTONE	1.0	88.5	
471.5			LIMESTONE	4.8	89.5	
466.7			MUDSTONE	8.3	94.3	SDY MUDST;BLU
458.5			LIMESTONE	5.0	102.5	
453.5			LIMESTONE	5.5	107.5	
448.0			GRAY SHALE	8.8	113.0	
439.1	CARBONDALE	BRERETON	LIMESTONE	30.3	121.9	
408.8	CARBONDALE	ANNA	BLACK SHALE	2.8	152.2	
406.0	CARBONDALE	HERRIN	COAL	8.0	155.0	
396.7	CARBONDALE		UNDERCLAY & LIMESTONE	5.8	164.3	
391.0	CARBONDALE		UNDERCLAY	6.5	170.0	

MAPID: 16301159000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: SE

QUADRANGLE: O'FALLON LONGITUDE: -89.915444 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.573872 DATE COLLECTED:

SURFACE ELEVATION (FT.): 561.0 LOGGED (FT.): 163.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 70L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
472.5	MODESTO	PIASA	LIMESTONE	5.8	88.5
466.7	MODESTO		UNCLASSIFIED	2.0	94.3
464.7	CARBONDALE		UNCLASSIFIED	6.3	96.3
458.4	CARBONDALE	BANKSTON FORK	LIMESTONE	10.5	102.6
447.9	CARBONDALE	ANVIL ROCK	SANDSTONE	4.8	113.1
443.1	CARBONDALE		SHALE	4.0	117.9
439.2			LIMESTONE	24.3	121.8
415.0			LIMESTONE	6.0	146.0
409.0	CARBONDALE	ANNA	BLACK SHALE	2.8	152.0
406.2	CARBONDALE	HERRIN	COAL	8.0	154.8
398.2	CARBONDALE		UNDERCLAY	1.5	162.8

MAPID: 16301160000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: SW NW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.918851 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.574842 DATE COLLECTED: 1 / 27 / 1953

SURFACE ELEVATION (FT.): 552.0 LOGGED (FT.): 170.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 68L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
552.0	PLEISTOCENE		UNCONSOLIDATED	23.0	0.0	
529.0	PLEISTOCENE		UNCONSOLIDATED	2.0	23.0	BLU
527.0	PLEISTOCENE		SAND	19.0	25.0	
508.0	PLEISTOCENE		SAND	40.0	44.0	
468.0	PLEISTOCENE		BOULDER	1.0	84.0	LIME BLDR
467.0	PLEISTOCENE		SAND	11.0	85.0	
456.0			LIMESTONE	3.5	96.0	
452.5			GRAY SHALE	8.5	99.5	
444.0			SHALE	5.5	108.0	
438.5			LIMESTONE	3.3	113.5	
435.2			SHALE	2.3	116.8	
433.0			LIMESTONE	2.5	119.0	
430.5			LIMESTONE	6.5	121.5	GRAY
424.0			LIMESTONE	9.5	128.0	GRAY
414.5			LIMESTONE	7.0	137.5	
407.5			LIMESTONE	4.3	144.5	
403.2			CLOD	0.3	148.8	
402.9	CARBONDALE	HERRIN	COAL	7.2	149.1	
395.7	CARBONDALE		UNDERCLAY	2.8	156.3	
393.0	CARBONDALE		UNDERCLAY & LIMESTONE	4.0	159.0	SMALL AMOUNT OF LIME
389.0	CARBONDALE		UNDERCLAY	7.0	163.0	

MAPID: 1630116000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: SW NW SE
 QUADRANGLE: O'FALLON LONGITUDE: -89.918851 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.574842 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 552.0 LOGGED (FT.): 156.2 LOG TYPE: Drillers Log
 SOURCE: PERRY COAL CO. 68L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
456.3	MODESTO	PIASA	LIMESTONE	3.5	95.7
452.8	MODESTO		UNCLASSIFIED	2.3	99.2
450.5	CARBONDALE		UNCLASSIFIED	6.3	101.5
444.2	CARBONDALE	BANKSTON FORK	LIMESTONE	8.8	107.8
435.4	CARBONDALE	ANVIL ROCK	SANDSTONE	2.3	116.6
433.1	CARBONDALE	BRERETON	LIMESTONE	29.8	118.9
403.3	CARBONDALE	ANNA	BLACK SHALE	0.3	148.7
403.0	CARBONDALE	HERRIN	COAL	7.2	149.0

MAPID: 16301161000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: NE NE SW
 QUADRANGLE: O'FALLON LONGITUDE: -89.92112 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.576711 DATE COLLECTED: 2 / 17 / 1953
 SURFACE ELEVATION (FT.): 555.0 LOGGED (FT.): 163.0 LOG TYPE: Drillers Log
 SOURCE: ISGS 76L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
555.0	PLEISTOCENE		UNCONSOLIDATED	28.0	0.0
527.0	PLEISTOCENE		SAND & GRAVEL	15.0	28.0
512.0	PLEISTOCENE		CLAY, SAND & GRAVEL	10.0	43.0
502.0	PLEISTOCENE		SAND/CLAY	20.0	53.0 BLUE
482.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	56.8	73.0 BLUE
425.2			LIMESTONE	0.3	129.8
424.9			LIMESTONE	0.4	130.1
424.5			LIMESTONE	0.9	130.5
423.6			SHALY LIMESTONE	6.8	131.4
416.8			LIMESTONE	5.0	138.2
411.8	CARBONDALE	HERRIN	COAL	7.0	143.2
404.8	CARBONDALE		CLAYSTONE & SILTSTONE	4.0	150.2 FINE
400.8	CARBONDALE		CLAYSTONE & LIMESTONE	4.0	154.2
396.8	CARBONDALE		CLAYSTONE & SILTSTONE	4.0	158.2 FINE

MAPID: 16301162000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: SE SW NE

QUADRANGLE: O'FALLON LONGITUDE: -89.916607 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.578484 DATE COLLECTED: 1 / 22 / 1953

SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 167.5 LOG TYPE: Drillers Log

SOURCE: ISGS 66L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.0	PLEISTOCENE		UNCONSOLIDATED	14.0	0.0	
536.0	PLEISTOCENE		UNCONSOLIDATED	4.0	14.0	BLUE
532.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	12.0	18.0	BLUE
520.0	PLEISTOCENE		SAND	7.0	30.0	
513.0	PLEISTOCENE		SILT & SAND	97.0	37.0	BLUE
416.0	CARBONDALE	BRERETON	LIMESTONE	2.0	134.0	
414.0	CARBONDALE	ANNA	BLACK SHALE	3.9	136.0	
410.1	CARBONDALE	HERRIN	COAL	6.8	139.9	#6
403.2	CARBONDALE		UNDERCLAY	1.3	146.8	
402.0	CARBONDALE		LIMESTONE/UNDERCLAY	5.0	148.0	
397.0	CARBONDALE		UNDERCLAY	14.5	153.0	

MAPID: 16301163000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.918858 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.576678 DATE COLLECTED: 3 / 0 / 1953

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 148.9 LOG TYPE: Drillers Log

SOURCE: ISGS WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.0			UNCONSOLIDATED	23.0	0.0	
517.0			SILT & SAND	98.0	23.0	BLUE
419.0			LIMESTONE & CLAY	8.0	121.0	BLUE
411.0			CALCAREOUS SHALE	3.0	129.0	
408.0			LIMESTONE	7.0	132.0	
401.0			COAL	4.0	139.0	
397.0			COAL/CLAYSTONE	10.0	143.0	1'3" COAL
387.0			LIMESTONE	10.0	153.0	

MAPID: 16301164000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: SE SE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.912087 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.57842 DATE COLLECTED: 1 / 23 / 1953

SURFACE ELEVATION (FT.): 570.0 LOGGED (FT.): 173.0 LOG TYPE: Drillers Log

SOURCE: ISGS 67L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.0	PLEISTOCENE		UNCONSOLIDATED	23.0	0.0	
547.0	PLEISTOCENE		SAND	5.0	23.0	
542.0	PLEISTOCENE		CLAY	4.0	28.0	
538.0	PLEISTOCENE		SAND	2.0	32.0	
536.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	7.0	34.0	BLUE
529.0	PLEISTOCENE		SAND	92.0	41.0	
437.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	17.0	133.0	BLUE
420.0	PLEISTOCENE		SILT & SAND	2.0	150.0	
418.0	CARBONDALE	ANNA	SHALE/COAL	6.0	152.0	
412.0	CARBONDALE	HERRIN	COAL	6.0	158.0	
406.0	CARBONDALE		UNDERCLAY	5.8	164.0	
400.2	CARBONDALE		LIMESTONE	1.0	169.8	
399.2	CARBONDALE		UNDERCLAY & LIMESTONE	2.3	170.8	

MAPID: 16301165000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: SW SE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.914349 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.57845 DATE COLLECTED: 2 / 21 / 1953

SURFACE ELEVATION (FT.): 563.0 LOGGED (FT.): 153.0 LOG TYPE: Drillers Log

SOURCE: ISGS 78L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
563.0	PLEISTOCENE		UNCONSOLIDATED	30.0	0.0	
533.0	PLEISTOCENE		SILTY CLAY	8.0	30.0	
525.0	PLEISTOCENE		SAND & GRAVEL	2.0	38.0	
523.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	85.5	40.0	BLUE
437.5			LIMESTONE	0.4	125.5	
437.1			SHALE	1.0	125.9	
436.1			LIMESTONE	0.4	126.9	
435.7			SHALE	0.7	127.3	
435.0			LIMESTONE	0.5	128.0	
434.5			SHALE	0.8	128.5	
433.7			LIMESTONE	0.4	129.3	
433.2			SHALE	0.4	129.8	
432.8			LIMESTONE	1.5	130.2	
431.3			SHALE	0.8	131.7	
430.6	CARBONDALE	BRERETON	LIMESTONE	7.3	132.4	GRAY
423.3	CARBONDALE		SILTSTONE	3.3	139.7	BLACK
420.0	CARBONDALE	HERRIN	COAL	7.0	143.0	
413.0	CARBONDALE		UNDERCLAY	0.9	150.0	
412.1	CARBONDALE		LIMESTONE/UNDERCLAY	2.1	150.9	

MAPID: 16301166000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: NW SE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.914363 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.580289 DATE COLLECTED: 2 / 19 / 1953

SURFACE ELEVATION (FT.): 565.0 LOGGED (FT.): 163.0 LOG TYPE: Drillers Log

SOURCE: ISGS 77L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
565.0	PLEISTOCENE		UNCONSOLIDATED	20.0	0.0	
545.0	PLEISTOCENE		UNCONSOLIDATED	8.0	20.0	BLU
537.0	PLEISTOCENE		SANDY CLAY	10.0	28.0	
527.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	57.0	38.0	BLU
470.0			SHALE	18.0	95.0	MIXED
452.0			LIMESTONE	1.0	113.0	
451.0			SHALE	7.0	114.0	YL
444.0			LIMESTONE	1.5	121.0	GRAY
442.5			GRAY SHALE	0.5	122.5	
442.0			LIMESTONE	1.0	123.0	GRAY
441.0			GRAY SHALE	1.5	124.0	
439.5			LIMESTONE	1.5	125.5	GRAY
438.0			GRAY SHALE	1.0	127.0	
437.0			LIMESTONE	0.5	128.0	
436.5			SHALE	0.9	128.5	
435.6			LIMESTONE	0.3	129.4	
435.3			SHALY LIMESTONE	2.1	129.7	
433.2			LIMESTONE	1.3	131.8	GRAY
432.0			SHALE	1.8	133.0	
430.2	CARBONDALE	BRERETON	LIMESTONE	8.2	134.8	
422.0	CARBONDALE		SILTSTONE	2.5	143.0	BLACK
419.5	CARBONDALE	HERRIN	COAL	7.3	145.5	
412.2	CARBONDALE		UNDERCLAY	2.5	152.8	
409.7	CARBONDALE		LIMESTONE & CLAY	2.2	155.3	
407.5	CARBONDALE		LIMESTONE	2.3	157.5	
405.2	CARBONDALE		CLAYSTONE & SILTSTONE	3.3	159.8	FINE

MAPID: 16301166000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: NW SE NE
 QUADRANGLE: O'FALLON LONGITUDE: -89.914363 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.580289 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 565.0 LOGGED (FT.): 152.3 LOG TYPE: Drillers Log
 SOURCE: PERRY COAL CO. 77L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
451.5	CARBONDALE	ANVIL ROCK	SANDSTONE	5.0	113.5	
446.5	CARBONDALE		SHALE	2.0	118.5	
444.5	CARBONDALE	BRERETON	LIMESTONE	22.0	120.5	
422.5	CARBONDALE	ANNA	BLACK SHALE	2.5	142.5	
420.0	CARBONDALE	HERRIN	COAL	7.3	145.0	

MAPID: 16301167000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: SE NE NE
 QUADRANGLE: O'FALLON LONGITUDE: -89.912126 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.582097 DATE COLLECTED: 3 / 3 / 1953
 SURFACE ELEVATION (FT.): 563.0 LOGGED (FT.): 145.0 LOG TYPE: Drillers Log
 SOURCE: ISGS 81L WELL TYPE:
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
563.0	PLEISTOCENE		UNCONSOLIDATED	25.0	0.0	
538.0	PLEISTOCENE		SANDY CLAY	10.0	25.0	
528.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	3.0	35.0	BLUE
525.0	PLEISTOCENE		SAND	5.0	38.0	
520.0	PLEISTOCENE		SILT & SAND	5.0	43.0	BLUE
515.0	PLEISTOCENE		SAND	30.0	48.0	
485.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	65.0	78.0	BLUE
420.0	CARBONDALE		UNDERCLAY	2.0	143.0	

MAPID: 16301168000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: SE NE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.912126 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.582097 DATE COLLECTED: 2 / 27 / 1953

SURFACE ELEVATION (FT.): 563.0 LOGGED (FT.): 146.0 LOG TYPE: Drillers Log

SOURCE: ISGS 81L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
563.0	PLEISTOCENE		UNCONSOLIDATED	28.0	0.0	
535.0	PLEISTOCENE		SANDY CLAY	5.0	28.0	
530.0	PLEISTOCENE		UNCONSOLIDATED	12.0	33.0	BLUE
518.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	74.3	45.0	BLUE
443.7	CARBONDALE		LIMESTONE	9.7	119.3	
434.0	CARBONDALE	BRERETON	LIMESTONE	4.7	129.0	
429.3	CARBONDALE		SILTSTONE	2.2	133.7	BLACK
427.2	CARBONDALE	HERRIN	COAL	7.2	135.8	
420.0	CARBONDALE		UNDERCLAY	3.0	143.0	

MAPID: 16301169000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: NE NE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.912144 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.583936 DATE COLLECTED: 5 / 5 / 1950

SURFACE ELEVATION (FT.): 558.0 LOGGED (FT.): 152.5 LOG TYPE: Drillers Log

SOURCE: ISGS 30L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
558.0	PLEISTOCENE		CLAY	23.0	0.0	
535.0	PLEISTOCENE		SAND & GRAVEL	6.0	23.0	
529.0	PLEISTOCENE		CLAY, SAND & GRAVEL	3.0	29.0	BLUE
526.0	PLEISTOCENE		SAND	64.5	32.0	
461.5	MODESTO	PIASA	LIMESTONE W/ SHALE	6.5	96.5	
455.0			SANDY SHALE	12.0	103.0	
443.0			LIMESTONE	1.5	115.0	
441.5			LIMESTONE	6.5	116.5	
435.0			SHALE WITH LIMESTONE	2.0	123.0	
433.0			LIMESTONE	2.0	125.0	
431.0			LIMESTONE	3.5	127.0	
427.5			SHALE	1.0	130.5	
426.5	CARBONDALE	BRERETON	LIMESTONE	9.5	131.5	
417.0	CARBONDALE	ANNA	BLACK SHALE	2.7	141.0	
414.3	CARBONDALE	HERRIN	COAL	7.3	143.7	
407.1	CARBONDALE		UNDERCLAY	1.6	150.9	

MAPID: 16301570000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: 990' N line, 330' E line of NW

QUADRANGLE: O'FALLON LONGITUDE: -89.92117 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.582241 DATE COLLECTED: 10 / 0 / 1942

SURFACE ELEVATION (FT.): 558.0 LOGGED (FT.): 153.0 LOG TYPE: Electric Log

SOURCE: PRITCHARD PAUL S WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
413.0	CARBONDALE	ANNA	BLACK SHALE	2.0	145.0
411.0	CARBONDALE	HERRIN	COAL	6.0	147.0

MAPID: 16302060000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: 15' S line, 20' E line of SE SE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.910943 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.570169 DATE COLLECTED: 4 / 2 / 1958

SURFACE ELEVATION (FT.): 577.6 LOGGED (FT.): 183.0 LOG TYPE: Drillers Log

SOURCE: ISGS 6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
577.6	PLEISTOCENE		CLAY	12.0	0.0 YL
565.6	PLEISTOCENE		GLACIAL DRIFT	96.0	12.0
469.6			LIMESTONE	8.5	108.0
461.1			SHALE	7.0	116.5
454.1			LIMESTONE	2.0	123.5
452.1			SHALE	1.5	125.5
450.6	MODESTO	PIASA	LIMESTONE	5.5	127.0
445.1			SHALE	12.5	132.5
432.6	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	145.0
429.6	CARBONDALE		CALCAREOUS SHALE	13.5	148.0
416.1	CARBONDALE		SILTY SHALE	4.0	161.5
412.1	CARBONDALE	BRERETON	LIMESTONE	5.3	165.5
406.8	CARBONDALE	ANNA	BLACK SHALE	0.7	170.8
406.1	CARBONDALE	ANNA	BLACK SHALE	4.1	171.5
402.0	CARBONDALE	HERRIN	COAL	6.7	175.6
395.3	CARBONDALE		UNDERCLAY	1.0	182.3

MAPID: 16302060000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: 15' S line, 20' E line of SE SE SE

QUADRANGLE: O'FALLON LONGITUDE: -89.910943 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.570169 DATE COLLECTED:

SURFACE ELEVATION (FT.): 578.0 LOGGED (FT.): 182.7 LOG TYPE: Drillers Log

SOURCE: ISGS 6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
469.6	MODESTO	PIASA	LIMESTONE	8.5	108.4
461.1	MODESTO		UNCLASSIFIED	2.0	116.9
459.1	CARBONDALE		UNCLASSIFIED	5.0	118.9
454.1	CARBONDALE	BANKSTON FORK	LIMESTONE	9.0	123.9
445.1	CARBONDALE	ANVIL ROCK	SANDSTONE	8.5	132.9
436.6	CARBONDALE	BRERETON	LIMESTONE	29.8	141.4
406.8	CARBONDALE	ANNA	BLACK SHALE	4.8	171.2
402.0	CARBONDALE	HERRIN	COAL	6.7	176.0

MAPID: 16302115000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: 353' N line, 422' W line of NW NE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.914033 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.583907 DATE COLLECTED: 0 / 0 / 1958

SURFACE ELEVATION (FT.): 561.0 LOGGED (FT.): 159.8 LOG TYPE: Drillers Log

SOURCE: ISGS 29 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
561.0	PLEISTOCENE		SOIL	1.5	0.0	
559.5	PLEISTOCENE		CLAY	27.5	1.5	YL
532.0	PLEISTOCENE		SAND & GRAVEL	6.0	29.0	
526.0	PLEISTOCENE		UNKNOWN	54.0	35.0	
472.0			LIMESTONE	3.5	89.0	
468.5			MUDSTONE	0.5	92.5	
468.0			LIMESTONE	20.0	93.0	
448.0			SHALE	6.0	113.0	
442.0			LIMESTONE	5.5	119.0	
436.5			LIMESTONE	2.1	124.5	
434.4			GRAY SHALE	1.6	126.6	
432.8			LIMESTONE	3.0	128.2	
429.8			GRAY SHALE	2.6	131.2	
427.2			LIMESTONE	0.7	133.8	
426.6			GRAY SHALE	5.1	134.4	
421.5			CALCAREOUS SHALE	4.3	139.5	
417.2	CARBONDALE	BRERETON	LIMESTONE	4.6	143.8	
412.6	CARBONDALE	ANNA	BLACK SHALE	4.5	148.4	
408.1	CARBONDALE	HERRIN	COAL	7.1	152.9	
401.0	CARBONDALE		UNDERCLAY	1.5	160.0	

MAPID: 16302115000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: 353' N line, 422' W line of NW NE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.914033 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.583907 DATE COLLECTED:

SURFACE ELEVATION (FT.): 561.0 LOGGED (FT.): 160.1 LOG TYPE: Drillers Log

SOURCE: ISGS 29 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
472.0	MODESTO	PIASA	LIMESTONE	3.5	89.0
468.5	MODESTO		UNCLASSIFIED	2.3	92.5
466.2	CARBONDALE		UNCLASSIFIED	6.3	94.8
459.9	CARBONDALE	BANKSTON FORK	LIMESTONE	12.0	101.1
447.9	CARBONDALE	ANVIL ROCK	SANDSTONE	6.0	113.1
441.9	CARBONDALE	BRERETON	LIMESTONE	29.4	119.1
412.5	CARBONDALE	ANNA	BLACK SHALE	4.5	148.5
408.0	CARBONDALE	HERRIN	COAL	7.1	153.0

MAPID: 16302116000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: 340' N line, 295' W line of NE

QUADRANGLE: O'FALLON LONGITUDE: -89.918978 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.584005 DATE COLLECTED:

SURFACE ELEVATION (FT.): 566.0 LOGGED (FT.): 170.5 LOG TYPE: Drillers Log

SOURCE: ISGS 28 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
460.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	12.5	106.0
447.5	CARBONDALE		GRAY SHALE	11.3	118.5
436.2	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	17.1	129.8
419.2	CARBONDALE	LAWSON	GRAY SHALE	3.9	146.8
415.2	CARBONDALE	CONANT	LIMESTONE	0.8	150.8
414.5	CARBONDALE		GRAY SHALE	1.8	151.5
412.7	CARBONDALE	BRERETON	LIMESTONE	5.0	153.3
407.7	CARBONDALE	ANNA	BLACK SHALE	4.5	158.3
403.0	CARBONDALE	HERRIN	COAL	7.5	163.0

MAPID: 16302116000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: 340' N line, 295' W line of NE

QUADRANGLE: O'FALLON LONGITUDE: -89.918978 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.584005 DATE COLLECTED:

SURFACE ELEVATION (FT.): 566.0 LOGGED (FT.): 170.5 LOG TYPE: Drillers Log

SOURCE: ISGS 28 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
469.8	MODESTO	PIASA	LIMESTONE	5.5	96.2
464.3	MODESTO		UNCLASSIFIED	1.5	101.7
462.8	CARBONDALE		UNCLASSIFIED	3.0	103.2
459.8	CARBONDALE	BANKSTON FORK	LIMESTONE	12.5	106.2
447.3	CARBONDALE	ANVIL ROCK	SANDSTONE	5.5	118.7
441.8	CARBONDALE		SHALE	5.1	124.2
436.7	CARBONDALE	BRERETON	LIMESTONE	29.2	129.3
407.5	CARBONDALE	ANNA	BLACK SHALE	4.5	158.5
403.0	CARBONDALE	HERRIN	COAL	7.5	163.0

MAPID: 16302116000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: 340' N line, 295' W line of NE

QUADRANGLE: O'FALLON

LONGITUDE: -89.918978

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 38.584005

DATE COLLECTED: 8 / 17 / 1958

SURFACE ELEVATION (FT.): 565.8

LOGGED (FT.): 172.0

LOG TYPE: Drillers Log

SOURCE: ISGS 28

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
565.8	PLEISTOCENE		SOIL	3.0	0.0	
562.8	PLEISTOCENE		CLAY	26.0	3.0	YELLOW
536.8	PLEISTOCENE		SAND	15.0	29.0	BROWN
521.8	PLEISTOCENE		GLACIAL DRIFT	31.0	44.0	
490.8			SHALE	21.0	75.0	
469.8			LIMESTONE	4.0	96.0	
465.8			LIMESTONE	1.5	100.0	
464.3			SHALE	4.5	101.5	
459.8			LIMESTONE	12.5	106.0	
447.3			SHALE	5.5	118.5	
441.8			GRAY SHALE	5.8	124.0	
436.0			LIMESTONE	0.8	129.8	
435.2			GRAY SHALE	0.7	130.6	
434.5			LIMESTONE	2.2	131.3	
432.4			BLACK SHALE	0.4	133.4	
432.0			GRAY SHALE	0.3	133.8	
431.6			LIMESTONE	3.0	134.2	
428.6			SHALE WITH LIMESTONE	3.3	137.2	
425.4			LIMESTONE	1.8	140.4	
423.5			GRAY SHALE	1.8	142.3	
421.8			GRAY SHALE	0.5	144.0	
421.3			LIMESTONE	0.7	144.5	
420.6			GRAY SHALE	0.9	145.2	
419.7			LIMESTONE	0.8	146.1	
419.0			GRAY SHALE	3.9	146.8	
415.0			LIMESTONE	0.8	150.8	
414.3			GRAY SHALE	1.8	151.5	
412.5	CARBONDALE	BRERETON	LIMESTONE	2.8	153.3	
409.8	CARBONDALE	BRERETON	LIMESTONE	2.3	156.0	
407.5	CARBONDALE	ANNA	BLACK SHALE	4.5	158.3	
403.0	CARBONDALE	HERRIN	COAL	7.5	162.8	#6
395.5	CARBONDALE		UNDERCLAY	1.3	170.3	

MAPID: 16302118000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: 250' N line, 65' E line of NE NE NE
 QUADRANGLE: O'FALLON LONGITUDE: -89.911252 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.584154 DATE COLLECTED: 8 / 8 / 1958
 SURFACE ELEVATION (FT.): 559.7 LOGGED (FT.): 148.0 LOG TYPE: Drillers Log
 SOURCE: ISGS 26 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
559.7	PLEISTOCENE		SOIL	2.0	0.0	
557.7	PLEISTOCENE		CLAY	38.0	2.0	YL
519.7	PLEISTOCENE		GLACIAL DRIFT	81.0	40.0	
438.7			LIMESTONE	14.6	121.0	
424.1	CARBONDALE	ANNA	BLACK SHALE	3.7	135.6	
420.4	CARBONDALE	HERRIN	COAL	6.0	139.3	
414.4	CARBONDALE		UNDERCLAY	2.8	145.3	

MAPID: 16302118000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: 250' N line, 65' E line of NE NE NE
 QUADRANGLE: O'FALLON LONGITUDE: -89.911252 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.584154 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 146.0 LOG TYPE: Drillers Log
 SOURCE: ISGS 26 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
423.7	CARBONDALE	ANNA	BLACK SHALE	3.7	136.3	
420.0	CARBONDALE	HERRIN	COAL	6.0	140.0	

MAPID: 16302347000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 31 QUARTERS/FOOTAGES: 330' N line, 1650' E line of SE
 QUADRANGLE: O'FALLON LONGITUDE: -89.916744 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.576655 DATE COLLECTED: 6 / 0 / 1966
 SURFACE ELEVATION (FT.): 562.0 LOGGED (FT.): 154.0 LOG TYPE: Electric Log
 SOURCE: HOUSER, DANIEL M. WELL TYPE: Dry Hole
 COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
414.0	CARBONDALE	HERRIN	COAL	6.0	148.0	

MAPID: 16300804000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 32 **QUARTERS/FOOTAGES:** 15' S line, 100' W line of SE
QUADRANGLE: O'FALLON **LONGITUDE:** -89.901356 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.570034 **DATE COLLECTED:** 0 / 0 / 1939
SURFACE ELEVATION (FT.): 616.9 **LOGGED (FT.):** 1734.0 **LOG TYPE:**
SOURCE: MC LLAIN **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
410.9	CARBONDALE	HERRIN	COAL	-	206.0	

MAPID: 16301148000C **VERSION:** 1 **PROJECT:** AVAIL
COUNTY: ST. CLAIR **TWP/RNG:** 2N 7W **SECTION:** 32 **QUARTERS/FOOTAGES:** NW NW NW
QUADRANGLE: O'FALLON **LONGITUDE:** -89.909857 **GEOLOGIST:** UITEMP
CONFIDENTIAL: N **LATITUDE:** 38.583899 **DATE COLLECTED:** 5 / 8 / 1950
SURFACE ELEVATION (FT.): 555.0 **LOGGED (FT.):** 123.0 **LOG TYPE:** Drillers Log
SOURCE: ISGS 32L **WELL TYPE:**
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
555.0	PLEISTOCENE		SANDY CLAY	33.0	0.0	
522.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	10.0	33.0	BLUE
512.0	PLEISTOCENE		UNCONSOLIDATED	50.0	43.0	BLUE
462.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	13.0	93.0	BLUE
449.0	PLEISTOCENE		SAND	5.0	106.0	
444.0	PLEISTOCENE		SILT & SAND	10.3	111.0	BLUE
433.7			LIMESTONE	1.0	121.3	
432.7			LIMESTONE	0.8	122.3	

MAPID: 1630117000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.909734 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.571029 DATE COLLECTED: 4 / 26 / 1950

SURFACE ELEVATION (FT.): 590.0 LOGGED (FT.): 233.0 LOG TYPE: Drillers Log

SOURCE: ISGS 25L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
590.0	PLEISTOCENE		SANDY CLAY	36.0	0.0	
554.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	44.0	36.0	BLUE
510.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	33.0	80.0	BLUE
477.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	80.5	113.0	BLUE
396.5	PLEISTOCENE		UNDERCLAY & LIMESTONE	4.5	193.5	
392.0			SANDY SHALE	7.0	198.0	
385.0			LIMESTONE	1.0	205.0	
384.0			SANDY SHALE	7.3	206.0	
376.7			LIMESTONE	5.0	213.3	
371.7	CARBONDALE	ST. DAVID	LIMESTONE	4.3	218.3	
367.5	CARBONDALE	TURNER MINE	SHALE	2.1	222.5	
365.4	CARBONDALE	TURNER MINE	PYRITE	0.6	224.6	
364.8	CARBONDALE	TURNER MINE	BLACK SHALE	1.2	225.2	
363.7	CARBONDALE	SPRINGFIELD	COAL	2.7	226.3	#5
361.0	CARBONDALE		UNDERCLAY	3.5	229.0	FINE

MAPID: 16301171000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: SE SW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.907441 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.570996 DATE COLLECTED: 5 / 20 / 1950

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 203.0 LOG TYPE: Drillers Log

SOURCE: ISGS 42L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
600.0	PLEISTOCENE		SANDY CLAY	30.0	0.0	
570.0	PLEISTOCENE		CLAY	60.0	30.0	BLUE
510.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	110.0	90.0	BLUE
400.0	CARBONDALE		UNDERCLAY & LIMESTONE	3.0	200.0	

MAPID: 16301172000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: SE SW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.907441 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.570996 DATE COLLECTED: 5 / 19 / 1950

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 199.0 LOG TYPE: Drillers Log

SOURCE: ISGS 41L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
600.0	PLEISTOCENE		SANDY CLAY	39.0	0.0	
561.0	PLEISTOCENE		MUD	9.0	39.0	BLUE
552.0	PLEISTOCENE		SILT & SAND	157.0	48.0	BLUE

MAPID: 16301173000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: SW SE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.905148 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.570965 DATE COLLECTED: 5 / 25 / 1950

SURFACE ELEVATION (FT.): 605.0 LOGGED (FT.): 199.5 LOG TYPE: Drillers Log

SOURCE: ISGS 46L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
605.0	PLEISTOCENE		SANDY CLAY	34.0	0.0	
571.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	29.0	34.0	BLUE
542.0	PLEISTOCENE		SANDY CLAY	40.0	63.0	
502.0	PLEISTOCENE		SILT & SAND	93.5	103.0	BLUE
408.5			LIMESTONE	3.0	196.5	

MAPID: 16301174000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: SW SE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.905148 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.570965 DATE COLLECTED: 5 / 24 / 1950

SURFACE ELEVATION (FT.): 602.0 LOGGED (FT.): 210.0 LOG TYPE: Drillers Log

SOURCE: ISGS 45L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
602.0	PLEISTOCENE		SANDY CLAY	59.0	0.0	
543.0	PLEISTOCENE		SILT & SAND	35.0	59.0	BLUE
508.0	PLEISTOCENE		SAND	112.5	94.0	
395.5			SHALE/UNDERCLAY	3.5	206.5	

MAPID: 16301175000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: SW SE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.905148 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.570965 DATE COLLECTED: 5 / 23 / 1950

SURFACE ELEVATION (FT.): 601.0 LOGGED (FT.): 208.0 LOG TYPE: Drillers Log

SOURCE: ISGS 44L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
601.0	PLEISTOCENE		SANDY CLAY	38.0	0.0	
563.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	3.0	38.0	BLUE
560.0	PLEISTOCENE		SAND	2.0	41.0	
558.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	10.0	43.0	BLUE
548.0	PLEISTOCENE		SANDY CLAY	22.0	53.0	
526.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	28.0	75.0	BLUE
498.0	PLEISTOCENE		SILT & SAND	102.5	103.0	BLUE
395.5			SHALE	2.5	205.5	

MAPID: 16301176000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: SE SW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.907441 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.570996 DATE COLLECTED: 5 / 22 / 1950

SURFACE ELEVATION (FT.): 602.0 LOGGED (FT.): 199.0 LOG TYPE: Drillers Log

SOURCE: ISGS 43L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
602.0	PLEISTOCENE		SANDY CLAY	30.0	0.0	
572.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	169.0	30.0	BLUE
403.0	CARBONDALE		UNDERCLAY & LIMESTONE	4.0	199.0	

MAPID: 16301177000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.909734 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.571029 DATE COLLECTED: 5 / 18 / 1950

SURFACE ELEVATION (FT.): 585.0 LOGGED (FT.): 163.0 LOG TYPE: Drillers Log

SOURCE: ISGS 40L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
585.0	PLEISTOCENE		SANDY CLAY	37.0	0.0	
548.0	PLEISTOCENE		MUD	12.0	37.0	BLUE
536.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	107.0	49.0	BLUE
429.0			LIMESTONE	2.0	156.0	
427.0			GRAY SHALE	5.0	158.0	

MAPID: 16301178000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: NE SE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.902859 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.572765 DATE COLLECTED: 4 / 25 / 1950

SURFACE ELEVATION (FT.): 570.0 LOGGED (FT.): 165.0 LOG TYPE: Drillers Log

SOURCE: ISGS 24L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.0	PLEISTOCENE		CLAY	31.0	0.0	
539.0	PLEISTOCENE		SAND	6.0	31.0	
533.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	4.0	37.0	BLU
529.0	PLEISTOCENE		SAND	19.0	41.0	
510.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	49.3	60.0	BLU
460.7			LIMESTONE	2.3	109.3	
458.5			LIMESTONE	3.5	111.5	
455.0			LIMESTONE	4.0	115.0	
451.0			SANDY SHALE	8.8	119.0	
442.2	CARBONDALE	BRERETON	LIMESTONE	8.0	127.8	
434.2	CARBONDALE	ENERGY	GRAY SHALE	9.3	135.8	

MAPID: 16301179000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: NW SE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.905159 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.572801 DATE COLLECTED:

SURFACE ELEVATION (FT.): 591.0 LOGGED (FT.): 234.0 LOG TYPE: Drillers Log

SOURCE: ISGS 9D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
591.0	PLEISTOCENE		UNCONSOLIDATED	25.0	0.0	RED
566.0	PLEISTOCENE		SAND	15.0	25.0	
551.0	PLEISTOCENE		SAND & GRAVEL	50.0	40.0	
501.0	PLEISTOCENE		SILT & SAND	113.0	90.0	
388.0			FOSSILIFEROUS LIMESTONE	2.0	203.0	
386.0			SANDY SHALE	6.0	205.0	
380.0			LIMESTONE	7.0	211.0	
373.0			BLACK SHALE	4.0	218.0	
369.0			CALCAREOUS SHALE	2.0	222.0	
367.0	CARBONDALE	HERRIN	COAL	7.0	224.0	
360.0	CARBONDALE		UNDERCLAY	3.0	231.0	

MAPID: 16301180000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR

TWP/RNG: 2N 7W

SECTION: 32

QUARTERS/FOOTAGES: NE SW SW

QUADRANGLE: O'FALLON

LONGITUDE: -89.907455

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 38.572834

DATE COLLECTED: 4 / 24 / 1950

SURFACE ELEVATION (FT.): 590.0

LOGGED (FT.): 233.0

LOG TYPE: Drillers Log

SOURCE: ISGS 23L

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
590.0	PLEISTOCENE		SANDY CLAY	35.0	0.0	
555.0	PLEISTOCENE		SILT & SAND	8.0	35.0	BLUE
547.0	PLEISTOCENE		SAND	10.0	43.0	
537.0	PLEISTOCENE		SILT & SAND	5.0	53.0	BLUE
532.0	PLEISTOCENE		SAND	8.0	58.0	
524.0	PLEISTOCENE		SILT & SAND	130.0	66.0	BLUE
394.0	CARBONDALE	HERRIN	COAL	0.3	196.0	#6
393.7	CARBONDALE		UNDERCLAY	3.9	196.3	FINE
389.7	CARBONDALE		LIMESTONE	1.3	200.3	
388.5	CARBONDALE		GRAY SHALE	1.3	201.5	
387.2	CARBONDALE		LIMESTONE	5.8	202.8	
381.5	CARBONDALE		LIMESTONE	3.3	208.5	
378.2	CARBONDALE		LIMESTONE W/ SHALE	4.0	211.8	
374.2	CARBONDALE		SHALE	0.9	215.8	
373.3	CARBONDALE	ST. DAVID	LIMESTONE	1.6	216.7	
371.7	CARBONDALE	TURNER MINE	BLACK SHALE	0.3	218.3	
371.5	CARBONDALE		PYRITE	0.4	218.5	
371.1	CARBONDALE	SPRINGFIELD	COAL	1.5	218.9	#5
369.6	CARBONDALE		UNDERCLAY	7.8	220.4	

MAPID: 16301181000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: NE SW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.907508 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.580183 DATE COLLECTED: 5 / 1 / 1950

SURFACE ELEVATION (FT.): 548.0 LOGGED (FT.): 119.8 LOG TYPE: Drillers Log

SOURCE: ISGS 27L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
548.0	PLEISTOCENE		CLAY	22.0	0.0	
526.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	61.0	22.0	BLU
465.0			LIMESTONE	8.5	83.0	
456.5			BLACK SHALE	2.5	91.5	
454.0			SHALE	5.0	94.0	
449.0			UNDERCLAY	4.0	99.0	
445.0			GRAY SHALE	9.0	103.0	
436.0	CARBONDALE	HERRIN	COAL	7.4	112.0	
428.6	CARBONDALE		UNDERCLAY	0.4	119.4	
428.2	CARBONDALE		UNCLASSIFIED	0.0	119.8	

MAPID: 16301181000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: NE SW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.907508 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.580183 DATE COLLECTED:

SURFACE ELEVATION (FT.): 545.0 LOGGED (FT.): 116.4 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 27L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
465.0	CARBONDALE	BRERETON	LIMESTONE	8.5	80.0	
456.5	CARBONDALE	ENERGY	SHALE	20.5	88.5	
436.0	CARBONDALE	HERRIN	COAL	7.4	109.0	

MAPID: 16301182000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: NE SW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.907508 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.580183 DATE COLLECTED: 5 / 13 / 1950

SURFACE ELEVATION (FT.): 558.0 LOGGED (FT.): 123.0 LOG TYPE: Drillers Log

SOURCE: ISGS 36L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
558.0	PLEISTOCENE		CLAY	24.0	0.0	
534.0	PLEISTOCENE		SAND	6.0	24.0	
528.0	PLEISTOCENE		SILT & SAND	16.0	30.0	BLUE
512.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	73.0	46.0	BLUE
439.0			SHALE	1.8	119.0	
437.2			LIMESTONE	2.3	120.8	GRAY

MAPID: 16301183000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: NE SW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.907508 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.580183 DATE COLLECTED: 5 / 12 / 1950

SURFACE ELEVATION (FT.): 558.0 LOGGED (FT.): 148.0 LOG TYPE: Drillers Log

SOURCE: ISGS 35L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
558.0	PLEISTOCENE		CLAY	34.0	0.0	
524.0	PLEISTOCENE		SAND	19.2	34.0	
504.8	PLEISTOCENE		BOULDER	0.5	53.2	LIME BLDR
504.3	PLEISTOCENE		SAND	49.3	53.7	
455.0	PLEISTOCENE		SILT & SAND	45.0	103.0	BLUE

MAPID: 16301184000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: NW SW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.909822 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.580222 DATE COLLECTED: 5 / 2 / 1950

SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 183.0 LOG TYPE: Drillers Log

SOURCE: ISGS 28L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.0	PLEISTOCENE		CLAY	34.0	0.0	
526.0	PLEISTOCENE		UNCONSOLIDATED	13.0	34.0	BLUE
513.0	PLEISTOCENE		SAND	8.0	47.0	
505.0	PLEISTOCENE		SAND/CLAY	28.0	55.0	
477.0	PLEISTOCENE		SILT & SAND	60.0	83.0	BLUE
417.0	CARBONDALE	HERRIN	COAL	2.5	143.0	
414.5	CARBONDALE		LIMESTONE W/ SHALE	12.0	145.5	
402.5	CARBONDALE		LIMESTONE	0.5	157.5	
402.0	CARBONDALE		SANDY SHALE	6.0	158.0	
396.0	CARBONDALE		SANDY LIMESTONE	10.3	164.0	
385.7	CARBONDALE		SLATY SHALE	2.3	174.3	
383.3	CARBONDALE	SPRINGFIELD	COAL	1.9	176.7	#5
381.4	CARBONDALE	SPRINGFIELD	PYRITE	0.6	178.6	
380.8	CARBONDALE	SPRINGFIELD	COAL	0.7	179.2	
380.2	CARBONDALE		UNDERCLAY	3.2	179.8	

MAPID: 16301185000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: NW SW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.909822 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.580222 DATE COLLECTED: 5 / 11 / 1950

SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 145.5 LOG TYPE: Drillers Log

SOURCE: ISGS 34L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.0	PLEISTOCENE		CLAY	32.5	0.0	
527.5	PLEISTOCENE		SAND	2.5	32.5	
525.0	PLEISTOCENE		SILT & SAND	5.0	35.0	BLUE
520.0	PLEISTOCENE		SAND	20.0	40.0	
500.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	76.5	60.0	BLUE
423.5	CARBONDALE	ANNA	BLACK SHALE	1.5	136.5	
422.0	CARBONDALE	HERRIN	COAL	6.6	138.0	
415.4	CARBONDALE		UNDERCLAY	0.9	144.6	

MAPID: 16301186000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.909805 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.578384 DATE COLLECTED: 3 / 9 / 1953

SURFACE ELEVATION (FT.): 585.0 LOGGED (FT.): 176.0 LOG TYPE: Drillers Log

SOURCE: ISGS 5D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
585.0	PLEISTOCENE		UNCONSOLIDATED	40.0	0.0	SD
545.0	PLEISTOCENE		SAND & GRAVEL	45.0	40.0	
500.0	PLEISTOCENE		SILT & SAND	71.0	85.0	BLUE
429.0	CARBONDALE	BRERETON	LIMESTONE	4.0	156.0	
425.0	CARBONDALE		UNCLASSIFIED	5.0	160.0	
420.0	CARBONDALE	HERRIN	COAL	2.0	165.0	
418.0	CARBONDALE	HERRIN	COAL	6.0	167.0	
412.0	CARBONDALE		UNDERCLAY	2.0	173.0	

MAPID: 16301187000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: SW NE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.895928 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.581822 DATE COLLECTED: 5 / 8 / 1950

SURFACE ELEVATION (FT.): 512.0 LOGGED (FT.): 30.5 LOG TYPE: Drillers Log

SOURCE: ISGS 31L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
512.0			SANDY CLAY	28.0	0.0	
484.0			RED SHALE	2.5	28.0	
481.5			UNCLASSIFIED	0.0	30.5	

MAPID: 16301188000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: NW NW NE

QUADRANGLE: O'FALLON LONGITUDE: -89.900567 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.583736 DATE COLLECTED: 3 / 9 / 1953

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 167.0 LOG TYPE: Drillers Log

SOURCE: ISGS 6D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.0	PLEISTOCENE		UNCONSOLIDATED	28.0	0.0	
512.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	47.0	28.0	BLU
465.0			LIMESTONE	10.5	75.0	
454.5			SHALE	9.5	85.5	
445.0			LIMESTONE	6.0	95.0	
439.0	CARBONDALE	ENERGY	SHALE	10.0	101.0	BLU
429.0	CARBONDALE	ENERGY	GRAY SHALE	19.0	111.0	
410.0	CARBONDALE	HERRIN	COAL	7.0	130.0	
403.0	CARBONDALE		UNDERCLAY	3.0	137.0	
400.0	CARBONDALE		LIMESTONE	1.0	140.0	
399.0	CARBONDALE		LIMESTONE	4.0	141.0	
395.0	CARBONDALE		SHALE	11.0	145.0	
384.0	CARBONDALE	ST. DAVID	SANDY LIMESTONE	4.5	156.0	
379.5	CARBONDALE	TURNER MINE	UNCLASSIFIED	2.5	160.5	
377.0	CARBONDALE	SPRINGFIELD	COAL	2.5	163.0	#5
374.5	CARBONDALE		UNDERCLAY	1.5	165.5	

MAPID: 16301188000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: NW NW NE

QUADRANGLE: O'FALLON LONGITUDE: -89.900567 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.583736 DATE COLLECTED:

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 137.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 6D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
465.0	CARBONDALE	BANKSTON FORK	LIMESTONE	10.5	75.0	
454.5	CARBONDALE	ANVIL ROCK	SANDSTONE	5.5	85.5	
449.0	CARBONDALE		SHALE	4.0	91.0	
445.0	CARBONDALE	BRERETON	LIMESTONE	6.0	95.0	
439.0	CARBONDALE	ENERGY	SHALE	29.0	101.0	
410.0	CARBONDALE	HERRIN	COAL	7.0	130.0	

MAPID: 16301189000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES:

QUADRANGLE: O'FALLON LONGITUDE: -89.901717 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.577335 DATE COLLECTED: 5 / 15 / 1950

SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 88.0 LOG TYPE: Drillers Log

SOURCE: ISGS 37L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.0	PLEISTOCENE		SANDY CLAY	47.0	0.0	
503.0	PLEISTOCENE		UNCONSOLIDATED	30.5	47.0	BLUE
472.5			LIMESTONE	0.5	77.5	
472.0			SHALE	3.0	78.0	
469.0			LIMESTONE	1.0	81.0	
468.0			RED SHALE	6.0	82.0	

MAPID: 16301190000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: NW NW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.909857 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.583899 DATE COLLECTED: 5 / 9 / 1950

SURFACE ELEVATION (FT.): 555.0 LOGGED (FT.): 138.0 LOG TYPE: Drillers Log

SOURCE: ISGS 33L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
555.0	PLEISTOCENE		SANDY CLAY	29.0	0.0	
526.0	PLEISTOCENE		UNCONSOLIDATED	4.0	29.0	BLUE
522.0	PLEISTOCENE		SAND	20.0	33.0	
502.0	PLEISTOCENE		SILT & SAND	78.0	53.0	BLUE
424.0	PLEISTOCENE		SILT & SAND	1.7	131.0	BLUE
422.3	CARBONDALE	HERRIN	COAL	1.3	132.7	
421.0	CARBONDALE	HERRIN	COAL	2.7	134.0	
418.3	CARBONDALE		UNDERCLAY	1.3	136.7	

MAPID: 16301489000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: 1320' N line, 330' W line of NW

QUADRANGLE: O'FALLON

LONGITUDE: -89.909828

GEOLOGIST: HINES

CONFIDENTIAL: N

LATITUDE: 38.581175

DATE COLLECTED: 8 / 0 / 1943

SURFACE ELEVATION (FT.): 554.0

LOGGED (FT.): 270.0

LOG TYPE: Drillers Log

SOURCE: WM P MULLER AT AL 1

WELL TYPE: Junked Hole

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
544.0			UNCONSOLIDATED	80.0	10.0	
474.0			LIMESTONE	75.0	80.0	
399.0			LIMESTONE	34.0	155.0	
365.0			SHALE	61.0	189.0	
304.0			SHALE	10.0	250.0	TRACE OF COAL
294.0			SHALE	10.0	260.0	

MAPID: 16301571000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES:

QUADRANGLE: O'FALLON

LONGITUDE: -89.901717

GEOLOGIST: HINES

CONFIDENTIAL: N

LATITUDE: 38.577335

DATE COLLECTED: 10 / 0 / 1941

SURFACE ELEVATION (FT.):

LOGGED (FT.): 2074.0

LOG TYPE: Drillers Log

SOURCE: G A MORRIS 1A

WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCLASSIFIED	170.0	0.0	NO SAMPLES
-	CARBONDALE	HERRIN	COAL	7.0	170.0	
-	CARBONDALE		SANDSTONE/SHALE	103.0	177.0	INTERBEDDED; GN&R
-	MISSISSIPPIAN		SHALY LIMESTONE	125.0	280.0	GOLCONDA; GN&R
-	MISSISSIPPIAN		SANDY SHALE	53.0	405.0	CYPRESS
-	MISSISSIPPIAN		SHALY LIMESTONE	45.0	503.0	PAINT CREEK; R
-	MISSISSIPPIAN		SANDSTONE	98.0	503.0	BENOIST AND AUX VASES
-	MISSISSIPPIAN		LIMESTONE	69.0	601.0	FREDONIA COLITIC, INTERBEDDED DOLOMITE
-			UNCLASSIFIED	100.0	670.0	LOG INCORRECT FOR THICKNESS AND DEPTH
-	MISSISSIPPIAN		LIMESTONE	67.0	770.0	ST LOUIS, INTERBEDDED DOLOMITES
-	MISSISSIPPIAN		LIMESTONE	243.0	837.0	SALEM
-	MISSISSIPPIAN		SANDSTONE	330.0	1080.0	BURLINGTON, KEOKUK AND WARSAW
-	MISSISSIPPIAN		SHALE	56.0	1410.0	KINDERHOOK; GN
-	MISSISSIPPIAN		LIMESTONE	27.0	1466.0	CHOUTEAU
-	MISSISSIPPIAN		SHALE	18.0	1493.0	CHATTANOOGA; BK
-	MISSISSIPPIAN		LIMESTONE	117.0	1511.0	DEVONIAN
-	MISSISSIPPIAN		LIMESTONE	154.0	1628.0	SILURIAN; R
-	MISSISSIPPIAN		LIMESTONE	19.0	1782.0	
-	MISSISSIPPIAN		DOLOMITE	29.0	1801.0	SLIGHT OIL SHOW
-	MISSISSIPPIAN		CALCAREOUS SHALE	127.0	1830.0	MAQUOKETA
-	MISSISSIPPIAN		LIMESTONE	90.0	1957.0	KIMMSWICK, WITH SCATTERED OIL STAIN; CRY
-	MISSISSIPPIAN		SHALE	7.0	2047.0	DECORAH
-	MISSISSIPPIAN		LIMESTONE	20.0	2054.0	PLATTIN

MAPID: 16302054000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: 69' S line, 5' W line of NW

QUADRANGLE: O'FALLON

LONGITUDE: -89.910933

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 38.577673

DATE COLLECTED: 2 / 3 / 1958

SURFACE ELEVATION (FT.): 583.6

LOGGED (FT.): 210.0

LOG TYPE: Drillers Log

SOURCE: ISGS 1

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
583.6	PLEISTOCENE		UNCONSOLIDATED	2.0	0.0	
581.6	PLEISTOCENE		CLAY, SAND & GRAVEL	28.0	2.0	YELLOW
553.6	PLEISTOCENE		SAND	2.5	30.0	BROWN
551.1	PLEISTOCENE		CLAY, SAND & GRAVEL	39.5	32.5	
511.6			SILTY SHALE	10.0	72.0	
501.6			GRAY SHALE	14.0	82.0	
487.6			GRAY SHALE	55.3	96.0	
432.3			CLAYSTONE & SILTSTONE	15.7	151.3	SDY CLYST
416.6			CLAYSTONE & SILTSTONE	9.5	167.0	SDY CLYST:GY
407.1			GRAY SHALE	0.5	176.5	
406.6			GRAY SHALE	0.5	177.0	
406.1			CONGLOMERATE	0.3	177.5	
405.8			GRAY SHALE	0.8	177.8	
405.0			SHALE WITH LIMESTONE	0.9	178.6	
404.1			GRAY SHALE	0.8	179.5	
403.3			SHALE WITH LIMESTONE	0.5	180.3	
402.8			SHALE WITH LIMESTONE	6.7	180.8	
396.2			LIMESTONE	0.3	187.4	
395.8			SHALE WITH LIMESTONE	0.2	187.8	
395.7			LIMESTONE	7.5	187.9	
388.2			SHALY LIMESTONE	1.3	195.4	
386.8			LIMESTONE	0.8	196.8	
386.0			LIMESTONE	0.9	197.6	
385.1	CARBONDALE	HERRIN	COAL	0.1	198.5	
385.0	CARBONDALE	HERRIN	UNCLASSIFIED	1.3	198.6	
383.8	CARBONDALE	HERRIN	SHALE	2.4	199.8	
381.3	CARBONDALE	HERRIN	UNCLASSIFIED	1.5	202.3	
379.8	CARBONDALE	HERRIN	COAL	0.5	203.8	
379.3	CARBONDALE		UNDERCLAY	0.2	204.3	

MAPID: 16302056000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: 300' S line, 500' W line of NW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.909161 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.574606 DATE COLLECTED: 2 / 7 / 1958

SURFACE ELEVATION (FT.): 598.6 LOGGED (FT.): 229.0 LOG TYPE: Drillers Log

SOURCE: ISGS 2 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
598.6	PLEISTOCENE		CLAY	12.0	0.0	YELLOW
586.6	PLEISTOCENE		GLACIAL DRIFT	14.0	12.0	
572.6	PLEISTOCENE		SAND	2.0	26.0	
570.6	PLEISTOCENE		GLACIAL DRIFT	14.0	28.0	
556.6	PLEISTOCENE		GLACIAL DRIFT	2.5	42.0	
554.1	PLEISTOCENE		GLACIAL DRIFT	59.5	44.5	
494.6			SANDSTONE	12.0	104.0	
482.6			GRAY SHALE	22.0	116.0	
460.6			SOFT SHALE	12.0	138.0	
448.6			SOFT SHALE	14.0	150.0	
434.6			SHALE	9.0	164.0	
425.6			CLAYSTONE & SILTSTONE	1.4	173.0	BLUE
424.2			CLAYSTONE & SILTSTONE	0.9	174.4	GREEN
423.3			CLAYSTONE & SILTSTONE	3.0	175.3	CLYST W/ LIME NOD
420.3			UNCLASSIFIED	6.7	178.3	
413.6			CLAYSTONE & SILTSTONE	2.8	185.0	
410.8			UNCLASSIFIED	7.9	187.8	
402.9			LIMESTONE	1.3	195.7	
401.6			GRAY SHALE	0.5	197.0	
401.1			LIMESTONE	1.0	197.5	
400.1			UNCLASSIFIED	8.0	198.5	
392.1			SHALE	0.3	206.5	
391.8			GRAY SHALE	3.3	206.8	
388.4			LIMESTONE	5.8	210.2	
382.6			LIMESTONE	1.5	216.0	
381.1			CALCAREOUS SHALE	4.5	217.5	
376.6	CARBONDALE	ANNA	BLACK SHALE	0.5	222.0	
376.1	CARBONDALE	ANNA	BLACK SHALE	3.3	222.5	
372.8	CARBONDALE	HERRIN	COAL	2.8	225.8	#5
370.1	CARBONDALE		UNDERCLAY	1.0	228.5	

MAPID: 16302057000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: 200' S line, 150' W line of SE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.905765 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.570607 DATE COLLECTED: 2 / 14 / 1958

SURFACE ELEVATION (FT.): 601.2 LOGGED (FT.): 232.0 LOG TYPE: Drillers Log

SOURCE: ISGS 3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
601.2	PLEISTOCENE		CLAY & GRAVEL	20.0	0.0	YELLOW
581.2	PLEISTOCENE		CLAY, SAND & GRAVEL	44.5	20.0	
536.7	PLEISTOCENE		GLACIAL DRIFT	41.5	64.5	
495.2	PLEISTOCENE		CLAY	18.0	106.0	
477.2	PLEISTOCENE		GLACIAL DRIFT	57.0	124.0	
420.2	PLEISTOCENE		BOULDERS & CLAY	15.5	181.0	
404.7			LIMESTONE	0.5	196.5	
404.2			SHALE WITH LIMESTONE	5.0	197.0	
399.2			GRAY SHALE	0.3	202.0	
398.9			LIMESTONE	0.6	202.3	
398.3			GRAY SHALE	2.0	202.9	
396.3			UNCLASSIFIED	3.1	204.9	
393.2			LIMESTONE	0.7	208.0	
392.5			GRAY SHALE	6.8	208.7	
385.7			LIMESTONE	7.0	215.5	
378.7			CALCAREOUS SHALE	0.3	222.5	
378.4			LIMESTONE	0.8	222.8	
377.6			CALCAREOUS SHALE	0.8	223.6	
376.9	CARBONDALE	ANNA	BLACK SHALE	0.4	224.3	
376.4	CARBONDALE	ANNA	BLACK SHALE	3.8	224.8	
372.6	CARBONDALE	HERRIN	COAL	2.4	228.6	
370.2	CARBONDALE		UNDERCLAY	1.0	231.0	

MAPID: 16302061000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: 10' S line, 800' W line

QUADRANGLE: O'FALLON LONGITUDE: -89.908055 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.570116 DATE COLLECTED: 4 / 8 / 1958

SURFACE ELEVATION (FT.): 599.8 LOGGED (FT.): 195.0 LOG TYPE: Drillers Log

SOURCE: ISGS 7 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
599.8	PLEISTOCENE		CLAY	5.0	0.0	YELLOW
594.8	PLEISTOCENE		CLAY	20.0	5.0	YELLOW
574.8	PLEISTOCENE		CLAY	17.0	25.0	WHITE
557.8	PLEISTOCENE		GLACIAL DRIFT	32.0	42.0	
525.8			UNKNOWN	2.0	74.0	LOG SAID SH; MAY BE TILL OR BLDR
523.8			GLACIAL DRIFT	60.0	76.0	
463.8			GLACIAL DRIFT	25.5	136.0	
438.3			GRAY SHALE	5.5	161.5	
432.8			GRAY SHALE	10.0	167.0	
422.8			CLAYSTONE & SILTSTONE	11.5	177.0	
411.3	CARBONDALE	BRERETON	LIMESTONE	1.0	188.5	
410.3	CARBONDALE	HERRIN	COAL	3.5	189.5	
406.8	CARBONDALE		UNDERCLAY	1.8	193.0	

MAPID: 16302068000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: 7' S line, 94' E line of NE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.892789 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.580869 DATE COLLECTED:

SURFACE ELEVATION (FT.): 508.0 LOGGED (FT.): 109.2 LOG TYPE: Survey Core Study

SOURCE: ISGS 15 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
474.0	MODESTO	PIASA	LIMESTONE	5.5	34.0	
468.5	CARBONDALE		GRAY SHALE	6.5	39.5	
462.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	46.0	
454.0	CARBONDALE	LAWSON	SHALE	12.0	54.0	
442.0	CARBONDALE	BRERETON	LIMESTONE	3.7	66.0	
438.3	CARBONDALE	ENERGY	GRAY SHALE	32.7	69.7	
406.0	CARBONDALE	HERRIN	COAL	7.2	102.0	

MAPID: 16302068000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: 7' S line, 94' E line of NE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.892789 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.580869 DATE COLLECTED:

SURFACE ELEVATION (FT.): 508.0 LOGGED (FT.): 109.2 LOG TYPE: Drillers Log

SOURCE: ISGS 15 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
474.4	MODESTO	PIASA	LIMESTONE	5.5	33.6	
468.9	MODESTO		UNCLASSIFIED	2.0	39.1	
466.9	CARBONDALE		UNCLASSIFIED	4.5	41.1	
462.4	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	45.6	
454.4	CARBONDALE	ANVIL ROCK	SANDSTONE	6.0	53.6	
448.4	CARBONDALE		SHALE	6.0	59.6	
442.4	CARBONDALE	BRERETON	LIMESTONE	3.7	65.6	
438.7	CARBONDALE	ENERGY	SHALE	32.7	69.3	
406.0	CARBONDALE	HERRIN	COAL	7.2	102.0	

MAPID: 16302068000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 32 QUARTERS/FOOTAGES: 7' S line, 94' E line of NE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.892789 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.580869 DATE COLLECTED: 5 / 8 / 1958

SURFACE ELEVATION (FT.): 507.9 LOGGED (FT.): 111.0 LOG TYPE: Drillers Log

SOURCE: ISGS 15 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
507.9	PLEISTOCENE		CLAY	29.0	0.0	YELLOW
478.9	PLEISTOCENE		GLACIAL DRIFT	5.0	29.0	
473.9			LIMESTONE	5.5	34.0	
468.4			SHALE	6.5	39.5	
461.9			LIMESTONE	8.0	46.0	
453.9			SHALE	12.0	54.0	
441.9	CARBONDALE	BRERETON	LIMESTONE	3.7	66.0	
438.2	CARBONDALE	ENERGY	GRAY SHALE	32.7	69.7	
405.6	CARBONDALE	HERRIN	COAL	7.2	102.3	#6
398.4	CARBONDALE		UNDERCLAY	1.0	109.5	

MAPID: 16301191000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 33 QUARTERS/FOOTAGES: SE SW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.889037 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.570755 DATE COLLECTED: 2 / 20 / 1948

SURFACE ELEVATION (FT.): 541.0 LOGGED (FT.): 146.0 LOG TYPE: Drillers Log

SOURCE: ISGS 7D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
541.0	PLEISTOCENE		UNCONSOLIDATED	18.0	0.0	
523.0	PLEISTOCENE		UNCONSOLIDATED	10.0	18.0	BLU
513.0	PLEISTOCENE		SAND	63.0	28.0	
450.0			LIMESTONE	2.0	91.0	
448.0			SHALE	8.0	93.0	
440.0			LIMESTONE	5.0	101.0	
435.0	CARBONDALE	ENERGY	SHALE	24.0	106.0	
411.0	CARBONDALE	ENERGY	SOFT SHALE	7.0	130.0	
404.0	CARBONDALE	HERRIN	COAL	7.3	137.0	
396.7	CARBONDALE		UNDERCLAY	1.8	144.3	

MAPID: 16301191000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 33 QUARTERS/FOOTAGES: SE SW SW

QUADRANGLE: O'FALLON LONGITUDE: -89.889037 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.570755 DATE COLLECTED:

SURFACE ELEVATION (FT.): 543.0 LOGGED (FT.): 146.3 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 7D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
448.0	CARBONDALE	ANVIL ROCK	SANDSTONE	4.0	95.0	
444.0	CARBONDALE		SHALE	4.0	99.0	
440.0	CARBONDALE	BRERETON	LIMESTONE	5.0	103.0	
435.0	CARBONDALE	ENERGY	SHALE	31.0	108.0	
404.0	CARBONDALE	HERRIN	COAL	7.3	139.0	

MAPID: 16301192000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 33 QUARTERS/FOOTAGES: NE SE SE

QUADRANGLE: LEBANON LONGITUDE: -89.875074 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.572444 DATE COLLECTED: 3 / 1 / 1950

SURFACE ELEVATION (FT.): 490.0 LOGGED (FT.): 223.0 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 3L WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
490.0	PLEISTOCENE		CLAY	7.0	0.0	
483.0	PLEISTOCENE		SANDY CLAY	1.0	7.0	
482.0	PLEISTOCENE		CLAY	23.0	8.0	
459.0	PLEISTOCENE		BOULDER	1.0	31.0	LIME BLDR
458.0	PLEISTOCENE		CLAY	2.0	32.0	
456.0			GRAY SHALE	34.8	34.0	
421.2			LIMESTONE	0.3	68.8	
420.9			GRAY SHALE	8.4	69.1	
412.5			RED SHALE	1.3	77.5	
411.2			LIMESTONE	5.0	78.8	
406.2			RED SHALE	5.8	83.8	
400.4			LIMESTONE	6.4	89.6	
394.0			SANDY SHALE	9.5	96.0	
384.5			GRAY SHALE	1.2	105.5	
383.3			LIMESTONE	0.3	106.7	
383.1			SHALE	7.1	106.9	
376.0			GRAY SHALE	12.6	114.0	
363.4			LIMESTONE	0.4	126.6	
363.0			GRAY SHALE	15.5	127.0	
347.5			LIMESTONE	2.3	142.5	BR
345.2			SHALE	6.9	144.8	
338.2			LIMESTONE	0.2	151.8	BLACK
338.1			SHALE	0.5	151.9	
337.6			LIMESTONE	0.1	152.4	BLACK
337.5			SHALE	0.8	152.5	
336.7	CARBONDALE	HERRIN	COAL	6.4	153.3	
330.3	CARBONDALE		UNDERCLAY	3.1	159.7	
327.2	CARBONDALE		LIMESTONE	1.8	162.8	
325.5	CARBONDALE		LIMESTONE	2.0	164.5	
323.5	CARBONDALE		SANDY SHALE	7.0	166.5	
316.5	CARBONDALE		LIMESTONE	1.0	173.5	
315.5	CARBONDALE		SHALE	5.7	174.5	
309.8	CARBONDALE		LIMESTONE	4.8	180.2	
305.0	CARBONDALE		SHALE	0.8	185.0	
304.2	CARBONDALE	TURNER MINE	BLACK SHALE	0.8	185.8	
303.4	CARBONDALE		UNDERCLAY	3.1	186.6	
300.3	CARBONDALE		SANDY SHALE	9.0	189.7	
291.3	CARBONDALE		RED SHALE	15.0	198.7	
276.3	CARBONDALE		GRAY SHALE	10.0	213.7	

MAPID: 16301192000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 33 QUARTERS/FOOTAGES: NE SE SE

QUADRANGLE: LEBANON LONGITUDE: -89.875074 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.572444 DATE COLLECTED:

SURFACE ELEVATION (FT.): 490.0 LOGGED (FT.): 158.4 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 3L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
412.9	MODESTO	PIASA	LIMESTONE	5.0	77.1
407.9	MODESTO		UNCLASSIFIED	1.5	82.1
406.4	CARBONDALE		UNCLASSIFIED	4.2	83.6
402.2	CARBONDALE	BANKSTON FORK	LIMESTONE	6.4	87.8
395.8	CARBONDALE	ANNA	BLACK SHALE	1.5	94.2
394.3	CARBONDALE	ENERGY	SHALE	56.3	95.7
338.0	CARBONDALE	HERRIN	COAL	6.4	152.0

MAPID: 16301193000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 33 QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.882075 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.576137 DATE COLLECTED:

SURFACE ELEVATION (FT.): 535.0 LOGGED (FT.): 174.0 LOG TYPE: Drillers Log

SOURCE: ISGS 3W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
535.0	PLEISTOCENE		CLAY	34.0	0.0
501.0	PLEISTOCENE		SANDY CLAY	12.0	34.0
489.0			BLACK SHALE	36.2	46.0
452.8			LIMESTONE	0.3	82.2
452.5			BLACK SHALE	2.5	82.5
450.0			LIMESTONE	0.3	85.0
449.7			SHALE/COAL	0.5	85.3
449.2			UNDERCLAY	2.2	85.8
447.0			LIMESTONE	1.0	88.0
446.0			SHALE	4.0	89.0
442.0			LIMESTONE	1.0	93.0
441.0			RED SHALE	3.0	94.0
438.0			LIMESTONE	5.0	97.0
433.0			RED SHALE	3.0	102.0
430.0			LIMESTONE	7.0	105.0
423.0			SHALE WITH LIMESTONE	27.0	112.0
396.0			LIMESTONE	1.0	139.0
395.0	CARBONDALE	ENERGY	GRAY SHALE	27.5	140.0
367.5	CARBONDALE	HERRIN	COAL	6.3	167.5
361.2	CARBONDALE		UNDERCLAY	0.2	173.8

MAPID: 16301193000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 33 QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.882075 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.576137 DATE COLLECTED:

SURFACE ELEVATION (FT.): 535.0 LOGGED (FT.): 173.3 LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO. 3W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
438.5	MODESTO	PIASA	LIMESTONE	5.0	96.5
433.5	MODESTO		UNCLASSIFIED	1.0	101.5
432.5	CARBONDALE		UNCLASSIFIED	2.0	102.5
430.5	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	104.5
423.5	CARBONDALE	ENERGY	SHALE	55.5	111.5
368.0	CARBONDALE	HERRIN	COAL	6.3	167.0

MAPID: 16301194000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 33 QUARTERS/FOOTAGES: SW NW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.891302 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.581741 DATE COLLECTED: 4 / 12 / 1950

SURFACE ELEVATION (FT.): 500.0 LOGGED (FT.): 123.0 LOG TYPE: Drillers Log

SOURCE: ISGS 19L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
500.0	PLEISTOCENE		CLAY	8.0	0.0	
492.0	PLEISTOCENE		SAND	3.0	8.0	
489.0	PLEISTOCENE		SANDY CLAY	6.0	11.0	
483.0			SHALE	8.0	17.0	YL
475.0			GRAY SHALE	5.0	25.0	
470.0			CLAYSTONE & SILTSTONE	3.0	30.0	
467.0			SHALE	3.0	33.0	
464.0			RED SHALE	2.0	36.0	
462.0			SHALE WITH LIMESTONE	3.7	38.0	
458.3			LIMESTONE	5.4	41.7	
452.9			RED SHALE	4.2	47.1	
448.7			LIMESTONE	5.3	51.3	
443.4			SANDY SHALE	15.8	56.6	
427.7			LIMESTONE	3.0	72.3	
424.7	CARBONDALE	ENERGY	GRAY SHALE	7.7	75.3	
417.0	CARBONDALE	ENERGY	GRAY SHALE	5.0	83.0	
412.0	CARBONDALE	ENERGY	GRAY SHALE	24.6	88.0	
387.4	CARBONDALE	ENERGY	BLACK SHALE	0.6	112.6	
386.8	CARBONDALE	HERRIN	COAL	6.8	113.2	
380.0	CARBONDALE		UNDERCLAY	3.0	120.0	

MAPID: 16301194000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 33 QUARTERS/FOOTAGES: SW NW NW
 QUADRANGLE: O'FALLON LONGITUDE: -89.891302 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.581741 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 500.0 LOGGED (FT.): 119.8 LOG TYPE: Drillers Log
 SOURCE: PERRY COAL CO. 19L WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
459.1	MODESTO	PIASA	LIMESTONE	5.4	40.9
453.7	MODESTO		UNCLASSIFIED	1.5	46.3
452.2	CARBONDALE		UNCLASSIFIED	2.7	47.8
449.5	CARBONDALE	BANKSTON FORK	LIMESTONE	5.3	50.5
444.2	CARBONDALE	ANNA	BLACK SHALE	0.6	55.8
443.6	CARBONDALE	ENERGY	SHALE	56.6	56.4
387.0	CARBONDALE	HERRIN	COAL	6.8	113.0

MAPID: 16302070000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 33 QUARTERS/FOOTAGES: 25' N line, 49' W line of SW NE
 QUADRANGLE: O'FALLON LONGITUDE: -89.88308 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 38.580617 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 525.0 LOGGED (FT.): 0.0 LOG TYPE: Survey Core Study
 SOURCE: ISGS 17 WELL TYPE: Coal Test
 COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	5.5	
-	CARBONDALE		GRAY SHALE	4.5	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	11.0	
-	CARBONDALE	ENERGY	CALCAREOUS SHALE	20.0	
-	CARBONDALE	ENERGY	GRAY SHALE	33.7	
-	CARBONDALE	ENERGY	CARBONACEOUS SHALE	0.3	
-	CARBONDALE	HERRIN	COAL	6.3	

MAPID: 16302070000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 33 QUARTERS/FOOTAGES: 25' N line, 49' W line of SW NE

QUADRANGLE: O'FALLON LONGITUDE: -89.88308 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.580617 DATE COLLECTED:

SURFACE ELEVATION (FT.): 525.0 LOGGED (FT.): 173.3 LOG TYPE: Drillers Log

SOURCE: ISGS 17 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
433.0	MODESTO	PIASA	LIMESTONE	5.5	92.0	
427.5	MODESTO		UNCLASSIFIED	1.5	97.5	
426.0	CARBONDALE		UNCLASSIFIED	3.0	99.0	
423.0	CARBONDALE	BANKSTON FORK	LIMESTONE	11.0	102.0	
412.0	CARBONDALE	ENERGY	SHALE	54.0	113.0	
358.0	CARBONDALE	HERRIN	COAL	6.3	167.0	

MAPID: 16302070000C VERSION: 3

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 33 QUARTERS/FOOTAGES: 25' N line, 49' W line of SW NE

QUADRANGLE: O'FALLON LONGITUDE: -89.88308 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.580617 DATE COLLECTED: 5 / 0 / 1958

SURFACE ELEVATION (FT.): 525.3 LOGGED (FT.): 175.0 LOG TYPE: Drillers Log

SOURCE: ISGS 17 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
525.3	PLEISTOCENE		CLAY	26.0	0.0	YELLOW
499.3	PLEISTOCENE		SAND & GRAVEL	9.5	26.0	
489.8	PLEISTOCENE		CLAY	17.5	35.5	YELLOW
472.3	PLEISTOCENE		GLACIAL DRIFT	39.0	53.0	
433.3			LIMESTONE	5.5	92.0	
427.8			SHALE	4.0	97.5	
423.8			SHALY LIMESTONE	0.5	101.5	
423.3			LIMESTONE	11.0	102.0	
412.3			SHALY LIMESTONE	20.0	113.0	
392.3	CARBONDALE	ENERGY	GRAY SHALE	34.0	133.0	
358.3	CARBONDALE	HERRIN	COAL	6.3	167.0	#6
352.0	CARBONDALE		UNDERCLAY	2.2	173.3	

MAPID: 16302071000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 33 QUARTERS/FOOTAGES: 61' S line, 28' E line of SE NE NE
 QUADRANGLE: LEBANON LONGITUDE: -89.874151 GEOLOGIST: UITEMP
 CONFIDENTIAL: N LATITUDE: 38.580704 DATE COLLECTED: 5 / 20 / 1958
 SURFACE ELEVATION (FT.): 510.3 LOGGED (FT.): 179.0 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 18 WELL TYPE:
 COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
510.3	PLEISTOCENE		CLAY	48.0	0.0	YL
462.3	PLEISTOCENE		GLACIAL DRIFT	49.0	48.0	
413.3			LIMESTONE	3.5	97.0	
409.8			SHALE	4.0	100.5	
405.8			LIMESTONE	10.5	104.5	
395.3	CARBONDALE	ENERGY	SHALE	31.0	115.0	
364.3	CARBONDALE	ENERGY	GRAY SHALE	25.3	146.0	
339.0	CARBONDALE	ENERGY	BLACK SHALE	0.3	171.3	
338.6	CARBONDALE	HERRIN	COAL	5.3	171.7	
333.3	CARBONDALE		UNDERCLAY	2.0	177.0	

MAPID: 16302071000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: ST. CLAIR TWP/RNG: 2N 7W SECTION: 33 QUARTERS/FOOTAGES: 61' S line, 28' E line of SE NE NE
 QUADRANGLE: LEBANON LONGITUDE: -89.874151 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 38.580704 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 510.0 LOGGED (FT.): 177.3 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. 18 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
413.1	MODESTO	PIASA	LIMESTONE	3.5	96.9	
409.6	MODESTO		UNCLASSIFIED	1.3	100.4	
408.3	CARBONDALE		UNCLASSIFIED	2.8	101.7	
405.5	CARBONDALE	BANKSTON FORK	LIMESTONE	10.5	104.5	
395.0	CARBONDALE	ANNA	BLACK SHALE	0.3	115.0	
394.7	CARBONDALE	ENERGY	SHALE	56.7	115.3	
338.0	CARBONDALE	HERRIN	COAL	5.3	172.0	

MAPID: 16301438000C VERSION: 1

PROJECT: NCRDS87

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 2 QUARTERS/FOOTAGES: 2475' N line, 2475' W line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.957741 GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 38.651211 DATE COLLECTED:

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 276.0 LOG TYPE: Drillers Log

SOURCE: LUMAGHI COAL CO. POWER HOLE WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
600.0			UNCONSOLIDATED	46.0	0.0
554.0			SHALE	21.0	46.0
533.0			LIMESTONE	3.0	67.0
530.0			SHALE	28.0	70.0
502.0			SANDSTONE	2.0	98.0
500.0			SHALE	17.0	100.0
483.0			LIMESTONE	4.0	117.0
479.0			SHALE	95.0	121.0
384.0	MODESTO	PIASA	LIMESTONE	5.0	216.0
379.0			SHALE	9.0	221.0
370.0			LIMESTONE	20.0	230.0
350.0			SHALE	2.0	250.0
348.0			LIMESTONE	8.0	252.0
340.0			SHALE	2.0	260.0
338.0	CARBONDALE	BRERETON	LIMESTONE	6.0	262.0
332.0	CARBONDALE	ANNA	BLACK SHALE	4.0	268.0
328.0	CARBONDALE	HERRIN	COAL	4.0	272.0

MAPID: 16301438000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 2 QUARTERS/FOOTAGES: 2475' N line, 2475' W line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.957741

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.651211

DATE COLLECTED:

SURFACE ELEVATION (FT.): 585.0

LOGGED (FT.): 63.5

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
372.0	CARBONDALE		GRAY SHALE	9.0	213.0
363.0	CARBONDALE	BANKSTON FORK	LIMESTONE	20.0	222.0
343.0	CARBONDALE	LAWSON	GRAY SHALE	2.0	242.0
341.0	CARBONDALE	CONANT	LIMESTONE	8.0	244.0
333.0	CARBONDALE	JAMESTOWN	LIMESTONE	5.0	252.0
328.0	CARBONDALE		GRAY SHALE	2.0	257.0
326.0	CARBONDALE	BRERETON	LIMESTONE	6.0	259.0
320.0	CARBONDALE	ANNA	BLACK SHALE	4.0	265.0
315.2	CARBONDALE	ENERGY	UNCLASSIFIED	2.2	269.8
313.0	CARBONDALE	HERRIN	COAL	7.5	272.0

MAPID: 16301438000C VERSION: 3

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 2 QUARTERS/FOOTAGES: 2475' N line, 2475' W line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.957741 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.651211 DATE COLLECTED: 6 / 24 / 1936

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 276.0 LOG TYPE: Drillers Log

SOURCE: LUMAGHI COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
600.0			SOIL	6.0	0.0	
594.0			CLAY	40.0	6.0	YELLOW
554.0			BLACK SHALE	21.0	46.0	
533.0			LIMESTONE	3.0	67.0	GRAY
530.0			SOFT SHALE	28.0	70.0	
502.0			SANDSTONE	2.0	98.0	
500.0			SANDY SHALE	17.0	100.0	
483.0			LIMESTONE	4.0	117.0	
479.0			SHALE	84.0	121.0	BLUE
395.0	MODESTO		SHALE	11.0	205.0	
384.0	MODESTO	PIASA	LIMESTONE	5.0	216.0	
379.0	CARBONDALE		SHALE	9.0	221.0	
370.0	CARBONDALE	BANKSTON FORK	LIMESTONE	20.0	230.0	GRAY
350.0	CARBONDALE		SHALE	2.0	250.0	BLUE
348.0	CARBONDALE		LIMESTONE	8.0	252.0	GRAY
340.0	CARBONDALE		BLACK SHALE	2.0	260.0	
338.0	CARBONDALE	BRERETON	LIMESTONE	6.0	262.0	BRERETON; DK
332.0	CARBONDALE	ANNA	BLACK SHALE	4.0	268.0	
328.0	CARBONDALE	HERRIN	COAL	4.0	272.0	

MAPID: 16301439000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 2 QUARTERS/FOOTAGES: 870' S line, 740' W line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.963769 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.645864 DATE COLLECTED: 11 / 3 / 1944

SURFACE ELEVATION (FT.): 581.9 LOGGED (FT.): 257.6 LOG TYPE: Drillers Log

SOURCE: LUMAGHI COAL CO. MINE 17 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
581.9			SOIL	4.0	0.0	
577.9			CLAY	79.0	4.0	
498.9	MODESTO		SANDSTONE	2.0	83.0	
496.9	MODESTO		SHALE	20.0	85.0	
476.9	MODESTO		LIMESTONE	4.0	105.0	
472.9	MODESTO		SHALE	76.0	109.0	
396.9	MODESTO		SANDSTONE	4.0	185.0	BROWN
392.9	MODESTO		SHALE	9.0	189.0	
383.9	MODESTO		SHALE	2.0	198.0	RED
381.9	MODESTO	PIASA	LIMESTONE	8.0	200.0	
373.9	CARBONDALE		SHALE	6.0	208.0	
367.9	CARBONDALE		LIMESTONE	8.0	214.0	
359.9	CARBONDALE		SHALE	1.0	222.0	
358.9	CARBONDALE		LIMESTONE	8.0	223.0	
350.9	CARBONDALE		SHALE	10.0	231.0	
340.9	CARBONDALE	BRERETON	LIMESTONE	9.0	241.0	BRERETON; DK
331.9	CARBONDALE	HERRIN	COAL	7.6	250.0	

MAPID: 16300368000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 7 QUARTERS/FOOTAGES: 450' S line, 2500' E line

QUADRANGLE: MONKS MOUND LONGITUDE: -90.031681 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.62988 DATE COLLECTED:

SURFACE ELEVATION (FT.): 484.0 LOGGED (FT.): 0.0 LOG TYPE: Drillers Log

SOURCE: AL BUHL MINE WELL TYPE: Slope Mine

COMMENT: SLOPE MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
484.0			MINE OPENING	0.0	0.0	LOCAL MINE

MAPID: 16300411000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 8 QUARTERS/FOOTAGES: SE SW SW

QUADRANGLE: MONKS MOUND LONGITUDE: -90.019403 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.629712 DATE COLLECTED:

SURFACE ELEVATION (FT.): 461.0 LOGGED (FT.): 17.8 LOG TYPE: Drillers Log

SOURCE: A B & H COAL COMPANY WELL TYPE: Coal Test

COMMENT: SLOPE MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
449.0	CARBONDALE	HERRIN	COAL	5.8	12.0	LOCAL MINE 5'9" COAL ELEV TOP 449

MAPID: 16300411000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 8 QUARTERS/FOOTAGES: SE SW SW

QUADRANGLE: MONKS MOUND LONGITUDE: -90.019403 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.629712 DATE COLLECTED:

SURFACE ELEVATION (FT.): 461.0 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: A B H CC WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
449.0	CARBONDALE	HERRIN	COAL	5.8	12.0	

MAPID: 16301053000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 9 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.988939 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.629905 DATE COLLECTED: 4 / 1 / 1920

SURFACE ELEVATION (FT.): 531.0 LOGGED (FT.): 130.0 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATED COAL CO. WELL TYPE:

COMMENT: TOTAL DEPTH IS ACTUALLY 143

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
531.0	PLEISTOCENE		UNCONSOLIDATED	124.0	0.0	
407.0	CARBONDALE	HERRIN	COAL	6.0	124.0	

MAPID: 16301057000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 9 QUARTERS/FOOTAGES: 400' N line, 590' W line of NW SW

QUADRANGLE: MONKS MOUND LONGITUDE: -90.002406

GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.635102

DATE COLLECTED: 8 / 0 / 1950

SURFACE ELEVATION (FT.): 565.0 LOGGED (FT.): 195.2

LOG TYPE: Drillers Log

SOURCE: CONSOLIDATED COAL CO. 7

WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
565.0	PLEISTOCENE		CLAY	15.0	0.0
550.0	PLEISTOCENE		UNCONSOLIDATED	45.0	15.0
505.0	PLEISTOCENE		SAND & GRAVEL	15.0	60.0
490.0			SHALE	81.0	75.0
409.0	MODESTO	PIASA	LIMESTONE	5.0	156.0
404.0			SHALE	11.1	161.0
392.9	CARBONDALE	LAWSON	SILTSTONE	4.6	172.1
388.3	CARBONDALE	CONANT	LIMESTONE W/ SHALE	4.0	176.7
384.3	CARBONDALE		DARK GRAY SHALE	0.9	180.7
383.4	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	4.4	181.6
379.0	CARBONDALE	ANNA	CALCAREOUS SHALE	0.7	186.0
378.0	CARBONDALE	HERRIN	COAL	5.5	187.0
372.4	CARBONDALE		SHALE	3.4	192.6

MAPID: 16301057000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 9 QUARTERS/FOOTAGES: 400' N line, 590' W line of NW SW

QUADRANGLE: MONKS MOUND LONGITUDE: -90.002406

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.635102

DATE COLLECTED:

SURFACE ELEVATION (FT.): 565.0 LOGGED (FT.): 192.5

LOG TYPE: Survey Core Study

SOURCE: CONSOLIDATED COAL CO. 7

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
409.0	MODESTO	PIASA	LIMESTONE	5.0	156.0
404.0	CARBONDALE		CLAYSTONE & SHALE	8.9	161.0
395.1	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.2	169.9

MAPID: 16300194000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 10 **QUARTERS/FOOTAGES:** 3000' S line, 3225' E line
QUADRANGLE: COLLINSVILLE **LONGITUDE:** -89.977803 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.637262 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 590.0 **LOGGED (FT.):** 228.0 **LOG TYPE:** Drillers Log
SOURCE: CONSOLIDATED COAL CO. 17 **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT ELEV TOP 362'/7'6" COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
369.5	CARBONDALE	HERRIN	COAL	7.5	220.5	ELEVATION TOP 362'/SHIPPING MINE

MAPID: 16300194000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 10 **QUARTERS/FOOTAGES:** 3000' S line, 3225' E line
QUADRANGLE: COLLINSVILLE **LONGITUDE:** -89.977803 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.637262 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 590.1 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: CONSOL CC 17 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
362.1	CARBONDALE	HERRIN	COAL	7.5	228.0	

MAPID: 16301054000C **VERSION:** 1 **PROJECT:** AVAIL
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 10 **QUARTERS/FOOTAGES:** 660' N line, 1' W line of SW SW
QUADRANGLE: COLLINSVILLE **LONGITUDE:** -89.985398 **GEOLOGIST:** UITEMP
CONFIDENTIAL: N **LATITUDE:** 38.630848 **DATE COLLECTED:** 5 / 14 / 1920
SURFACE ELEVATION (FT.): 546.0 **LOGGED (FT.):** 142.8 **LOG TYPE:** Drillers Log
SOURCE: CONSOLIDATED COAL CO. **WELL TYPE:**
COMMENT: TOTAL DEPTH ACTUALLY 185'0"

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
546.0	PLEISTOCENE		UNCONSOLIDATED	138.4	0.0	
407.6	CARBONDALE	HERRIN	COAL	4.4	138.4	

MAPID: 16301247000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 10 QUARTERS/FOOTAGES: NE SW NW

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.981976 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.639065 DATE COLLECTED:

SURFACE ELEVATION (FT.): 576.4 LOGGED (FT.): 225.5 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATED COAL CO. 3 WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
427.9			SHALE	0.1	148.5	
427.8			GRAY SHALE	2.4	148.6	
425.4			GRAY SHALE	0.5	151.0	
424.8			GRAY SHALE	3.1	151.6	
421.7			NO RECORD	8.2	154.7	
413.6			SANDSTONE	0.8	162.8	GREEN
412.8			SILTSTONE	3.6	163.6	GREEN
409.2			NO RECORD	5.6	167.2	
403.6			SANDSTONE	0.0	172.8	GRAY
403.6			CLAYSTONE & SILTSTONE	0.0	172.8	
403.6			GRAY SHALE	1.3	172.8	
402.3			LIMESTONE	0.8	174.1	BROWN
401.5			LIMESTONE	0.1	174.9	GRAY
401.4			NO RECORD	6.7	175.0	
394.6			LIMESTONE	0.1	181.8	GRAY
394.6			GRAY SHALE	1.0	181.8	
393.6			LIMESTONE	0.1	182.8	GRAY
393.6			SHALE	2.8	182.8	OLIVE
390.8			SILTSTONE	0.3	185.6	GRAY
390.6			SANDSTONE	3.2	185.8	GRAY
387.4			NO RECORD	3.8	189.0	
383.6			SANDSTONE	1.2	192.8	
382.5			SILTSTONE	0.9	193.9	GREEN
381.6			SILTSTONE	0.8	194.8	GREEN
380.8			SILTSTONE	0.5	195.6	
380.2			SILTSTONE	0.4	196.2	GREEN
379.8			LIMESTONE	2.7	196.6	GRAY
377.1			SILTSTONE	1.0	199.3	GREEN
376.1			GRAY SHALE	1.9	200.3	
374.2			NO RECORD	1.5	202.2	
372.7			SILTSTONE	2.8	203.7	GRAY
369.9			LIMESTONE	0.8	206.5	GRAY
369.1			SILTSTONE	3.4	207.3	GREEN
365.7	CARBONDALE	BRERETON	LIMESTONE	1.3	210.7	GRAY
364.5	CARBONDALE	BRERETON	LIMESTONE	1.1	211.9	GRAY
363.4	CARBONDALE	BRERETON	LIMESTONE	0.4	213.0	GRAY
363.0	CARBONDALE		GREEN SHALE	0.2	213.4	
362.8	CARBONDALE	HERRIN	COAL	0.0	213.6	MINE VOID - REPT'D TO BE 59"
362.7	CARBONDALE		NO RECORD	1.5	213.7	

361.2	CARBONDALE	MINE OPENING	5.8	215.2	
355.5	CARBONDALE	UNDERCLAY	2.9	220.9	GRAY

MAPID: 16301247000C	VERSION: 2	PROJECT: ROOF STUDY			
COUNTY: ST. CLAIR	TWP/RNG: 2N 8W	SECTION: 10	QUARTERS/FOOTAGES: NE SW NW		
QUADRANGLE: COLLINSVILLE	LONGITUDE: -89.981976		GEOLOGIST:		
CONFIDENTIAL: N	LATITUDE: 38.639065		DATE COLLECTED:		
SURFACE ELEVATION (FT.): 574.0	LOGGED (FT.): 219.8		LOG TYPE: Survey Core Study		
SOURCE: CONSOLIDATED COAL CO. 3			WELL TYPE: Coal Test		
COMMENT: FAIR DESCRIPTION					

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
380.3	CARBONDALE		SANDSTONE/SILTSTONE	5.0	193.7	
375.3	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.7	198.7	
372.6	CARBONDALE	LAWSON	SILTSTONE	1.0	201.4	
371.6	CARBONDALE	LAWSON	CALCAREOUS SHALE	1.9	202.4	
369.7	CARBONDALE	LAWSON	SILTSTONE	2.8	204.3	
366.8	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.8	207.2	
366.1	CARBONDALE		CALCAREOUS SHALE	3.4	207.9	
362.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	2.4	211.3	
360.2	CARBONDALE	ANNA	CALCAREOUS SHALE	0.3	213.8	
360.0	CARBONDALE	HERRIN	COAL	5.8	214.0	

MAPID: 16329470000C VERSION: 1

PROJECT:

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 11 QUARTERS/FOOTAGES: 330' N, 445' E, SW/c SW NW NE

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.955443

GEOLOGIST: NORTH

CONFIDENTIAL: N LATITUDE: 38.640572

DATE COLLECTED: 5 / 26 / 1999

SURFACE ELEVATION (FT.): 597.0 LOGGED (FT.): 1172.0

LOG TYPE: Drillers Log

SOURCE: VAN FOSSAN OIL CORPORATION 1A

WELL TYPE: Coal Test

COMMENT: DRILLERS LOG AVAIL FOR ALL 1172'

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
597.0			UNCONSOLIDATED	77.0	0.0	
520.0			GRAY SHALE	22.0	77.0	
498.0			SANDY SHALE	23.6	99.0	
474.4			LIMESTONE	4.1	122.6	
470.3			DARK SHALE	85.3	126.7	
385.0	SHELBURN		LIMESTONE	0.2	212.0	
384.8	SHELBURN		GRAY SHALE	4.4	212.2	
380.4	SHELBURN	PIASA	LIMESTONE	3.4	216.6	
377.0	SHELBURN		GRAY SHALE	9.0	220.0	
368.0	SHELBURN		SHALY SANDSTONE	4.0	229.0	
364.0	SHELBURN	BANKSTON FORK	SANDY LIMESTONE	9.0	233.0	
355.0	SHELBURN		SANDSTONE	3.0	242.0	
352.0	SHELBURN	CONANT	LIMESTONE	3.0	245.0	
349.0	SHELBURN		SANDSTONE/SHALE	11.0	248.0	
338.0	SHELBURN		GRAY SHALE	2.0	259.0	
336.0	SHELBURN		DARK SHALE	4.0	261.0	
332.0	SHELBURN	BRERETON	SHALY LIMESTONE	3.0	265.0	
329.0	CARBONDALE	ANNA	BLACK SHALE	5.0	268.0	
324.0	CARBONDALE	HERRIN	COAL	8.0	273.0	
316.0	CARBONDALE		GRAY SHALE	7.5	281.0	
308.5	CARBONDALE		GREEN SHALE	1.0	288.5	
307.5	CARBONDALE	ST. DAVID	LIMESTONE	5.5	289.5	
301.5	CARBONDALE	TURNER MINE	BLACK SHALE	1.5	295.5	
300.5	CARBONDALE	SPRINGFIELD	COAL	4.0	296.5	
296.5	CARBONDALE		GRAY SHALE	6.5	300.5	
290.0	CARBONDALE		GREEN SHALE	19.0	307.0	NO COAL BELOW HERE
271.0			UNCLASSIFIED	846.0	326.0	

MAPID: 16303015000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 12 QUARTERS/FOOTAGES: 1980' N line, 1980' E line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.935771 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.637751 DATE COLLECTED: 6 / 26 / 1969

SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 205.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8662C WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
560.0	PLEISTOCENE		SAND/CLAY	49.5	0.0
510.5			SANDSTONE	8.5	49.5
502.0			GRAY SHALE	14.5	58.0
487.5			GRAY SHALE	58.0	72.5
429.5			GRAY SHALE	3.8	130.5
425.7			LIMESTONE	3.9	134.3
421.8			GRAY SHALE	2.8	138.2
419.0			LIMESTONE	5.0	141.0
414.0			GRAY SHALE	5.5	146.0
408.5			SANDSTONE	9.3	151.5
399.2			GRAY SHALE	0.7	160.8
398.5			SANDSTONE	1.7	161.5
396.8			GRAY SHALE	8.3	163.2
388.5			SANDSTONE	2.0	171.5
386.5			SANDY SHALE	12.0	173.5
374.5	CARBONDALE	BRERETON	LIMESTONE	7.1	185.5
367.4	CARBONDALE	HERRIN	COAL	6.3	192.6
361.1			UNDERCLAY	2.8	198.9
358.3			LIMESTONE	3.0	201.7
355.3			LIMESTONE	0.3	204.7

MAPID: 16303015000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 12 QUARTERS/FOOTAGES: 1980' N line, 1980' E line

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.935771

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.637751

DATE COLLECTED:

SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 199.3

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8662C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
424.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.9	135.8	UPPER BENCH
420.3	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.8	139.7	SHALE PARTING
417.5	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	142.5	LOWER BENCH
412.5	CARBONDALE	LAWSON	GRAY SHALE	5.5	147.5	
407.0	CARBONDALE	LAWSON	CALCAREOUS SANDSTONE	9.3	153.0	
397.7	CARBONDALE	LAWSON	SILTSTONE	2.5	162.3	
395.2	CARBONDALE	LAWSON	CALCAREOUS SANDSTONE	8.3	164.8	
387.0	CARBONDALE	LAWSON	CALCAREOUS SHALE	12.3	173.0	
374.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	7.8	185.3	
367.0	CARBONDALE	HERRIN	COAL	6.3	193.0	

MAPID: 16330802000C VERSION: 1

PROJECT:

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 12 QUARTERS/FOOTAGES: 1323' S, 1346' W, NE/c NW

QUADRANGLE: COLLINSVILLE

LONGITUDE: -89.942912

GEOLOGIST: NORTH

CONFIDENTIAL: N

LATITUDE: 38.639555

DATE COLLECTED:

SURFACE ELEVATION (FT.): 576.4

LOGGED (FT.): 246.0

LOG TYPE: Drillers Log

SOURCE: SCI ENGINEERING 3

WELL TYPE: Coal Test

COMMENT: CASEYVILLE WATER TOWER

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
576.4			UNCONSOLIDATED	65.0	0.0
511.4			GRAY SHALE	8.5	65.0
502.9			CLAYSTONE & SILTSTONE	3.5	73.5
499.4			SANDY SHALE	6.0	77.0
493.4			GRAY SHALE	14.0	83.0
479.4			LIMESTONE	4.0	97.0
475.4			SANDSTONE	2.0	101.0
473.4			SHALE	81.5	103.0
391.9	SHELBURN	BANKSTON FORK	LIMESTONE	5.0	184.5
386.9	SHELBURN		BLACK SHALE	0.5	189.5
386.4	SHELBURN		SHALE	11.0	190.0
375.4	SHELBURN		CALCAREOUS SHALE	16.1	201.0
359.3	SHELBURN	CONANT	LIMESTONE	7.2	217.1
352.1	SHELBURN		BLACK SHALE	2.9	224.3
349.2	SHELBURN	BRERETON	LIMESTONE	8.3	227.2
340.9	CARBONDALE	HERRIN	COAL	5.5	235.5
335.4	CARBONDALE		UNDERCLAY	2.0	241.0
333.4	CARBONDALE	ST. DAVID	LIMESTONE	3.0	243.0

MAPID: 16330803000C VERSION: 1

PROJECT:

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 12 QUARTERS/FOOTAGES: 1400' S, 1283' W, NE/c NW

QUADRANGLE: COLLINSVILLE LONGITUDE: -89.942692 GEOLOGIST: NORTH

CONFIDENTIAL: N LATITUDE: 38.639345 DATE COLLECTED: 9 / 30 / 1999

SURFACE ELEVATION (FT.): 576.4 LOGGED (FT.): 276.4 LOG TYPE: Drillers Log

SOURCE: SCI ENGINEERING 1 WELL TYPE: Coal Test

COMMENT: CASEYVILLE WATER TOWER

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
576.4			CLAY	68.0	0.0	
508.4			SHALE	2.0	68.0	GRAY-GREEN
506.4			DARK SHALE	5.0	70.0	
501.4			GRAY SHALE	1.0	75.0	TRACE COAL
500.4			GRAY SHALE	2.5	76.0	
497.9			SANDY SHALE	3.5	78.5	
494.4			SANDY SHALE	4.0	82.0	SOME BROWN LS
490.4			GRAY SHALE	12.2	86.0	SOME BROWN LS
478.2			LIMESTONE	3.7	98.2	BROWN
474.5			DARK SHALE	9.1	101.9	
465.4			DARK SHALE	2.0	111.0	
463.4			DARK SHALE	59.0	113.0	SOME SANDY
404.4			GRAY SHALE	2.0	172.0	
402.4			SHALE	11.3	174.0	GREEN-GRAY
391.1	SHELburn	BANKSTON FORK	LIMESTONE	1.7	185.3	GRAY
389.4	SHELburn		SHALE	23.5	187.0	
365.9	SHELburn		SILTSTONE	6.8	210.5	CORE STARTS HERE
359.1	SHELburn		CLAYSTONE & SILTSTONE	1.6	217.3	
357.5	SHELburn	CONANT	LIMESTONE	7.4	218.9	
350.1	SHELburn		GRAY SHALE	1.1	226.3	
349.0	SHELburn		BLACK SHALE	2.6	227.4	
346.4	SHELburn	BRERETON	LIMESTONE	5.6	230.0	
340.8	CARBONDALE	HERRIN	COAL	4.2	235.6	
336.6	CARBONDALE	HERRIN	GRAY SHALE	0.1	239.8	BLUE BAND
336.5	CARBONDALE	HERRIN	COAL	1.0	239.9	
335.5	CARBONDALE		UNDERCLAY	2.1	240.9	
333.4	CARBONDALE	ST. DAVID	LIMESTONE	3.0	243.0	

MAPID: 16301059000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 15 QUARTERS/FOOTAGES: NW SW SW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.984726 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.623187 DATE COLLECTED: 0 / 0 / 1950

SURFACE ELEVATION (FT.): 571.0 LOGGED (FT.): 274.0 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATED COAL CO. 9 WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
571.0	PLEISTOCENE		CLAY	25.0	0.0	
546.0			SOFT SHALE	8.0	25.0	
538.0			SHALE & CONGLOMERATE	37.0	33.0	
501.0			SHALE	84.0	70.0	
417.0	MODESTO	PIASA	LIMESTONE	10.5	154.0	
406.5			SHALE	6.5	164.5	
400.0			SANDSTONE	13.0	171.0	
387.0	CARBONDALE	BRERETON	SHALY LIMESTONE	9.0	184.0	
378.0	CARBONDALE	BRERETON	LIMESTONE	3.5	193.0	
374.5	CARBONDALE	HERRIN	COAL	5.5	196.5	UPPER BENCH
369.0	CARBONDALE		UNDERCLAY/SHALE	20.0	202.0	SHALE PARTING
349.0	CARBONDALE		SHALE	4.0	222.0	LOWER BENCH
345.0	CARBONDALE		SANDY SHALE	15.0	226.0	
330.0	CARBONDALE		SHALE	33.0	241.0	

MAPID: 16301059000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 15 QUARTERS/FOOTAGES: NW SW SW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.984726 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.623187 DATE COLLECTED:

SURFACE ELEVATION (FT.): 571.0 LOGGED (FT.): 201.8 LOG TYPE: Survey Core Study

SOURCE: CONSOLIDATED COAL CO. 9 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
446.8	CARBONDALE		GRAY SHALE	18.0	124.2	
428.8	CARBONDALE		CLAYSTONE & SHALE	12.1	142.2	
416.7	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	0.7	154.3	
416.1	CARBONDALE	BANKSTON FORK	CLAYSTONE & SHALE	0.8	154.9	
415.3	CARBONDALE	BANKSTON FORK	LIMESTONE	7.5	155.7	
407.8	CARBONDALE	LAWSON	CLAYSTONE & SHALE	7.0	163.2	
400.8	CARBONDALE	LAWSON	CALCAREOUS SHALE	1.1	170.2	

MAPID: 16301052000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 16 QUARTERS/FOOTAGES: NW NW

QUADRANGLE: MONKS MOUND LONGITUDE: -90.001917 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.627106 DATE COLLECTED: 4 / 5 / 1920

SURFACE ELEVATION (FT.): 575.0 LOGGED (FT.): 145.7 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATED COAL CO. WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
575.0	PLEISTOCENE		UNCONSOLIDATED	81.0	0.0
494.0			SHALE	12.0	81.0
482.0	MODESTO	PIASA	LIMESTONE	5.8	93.0
476.2			SHALE	4.5	98.8
471.7	CARBONDALE	BANKSTON FORK	LIMESTONE	5.7	103.3
466.0	CARBONDALE		SHALE	20.0	109.0
446.0	CARBONDALE	BRERETON	LIMESTONE	9.0	129.0
437.0	CARBONDALE		CALCAREOUS SHALE	1.5	138.0
435.5	CARBONDALE	HERRIN	COAL	6.0	139.5
429.5	CARBONDALE		UNDERCLAY	0.2	145.5

MAPID: 16301058000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 16 QUARTERS/FOOTAGES: 70' S line, 300' W line of SW SE

QUADRANGLE: O'FALLON LONGITUDE: -89.993525 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.614655 DATE COLLECTED: 0 / 0 / 1950

SURFACE ELEVATION (FT.): 530.0 LOGGED (FT.): 169.8 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATED COAL CO. 8 WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
530.0	PLEISTOCENE		CLAY	13.0	0.0
517.0	PLEISTOCENE		SAND	65.0	13.0
452.0			SHALE	40.5	78.0
411.5	MODESTO	PIASA	LIMESTONE	4.0	118.5
407.5			SHALE	18.5	122.5
389.0	CARBONDALE	LAWSON	GRAY SHALE	5.0	141.0
384.0	CARBONDALE	LAWSON	SILTSTONE	3.8	146.0
380.2	CARBONDALE	LAWSON	CARBONACEOUS SHALE	1.0	149.8
379.2	CARBONDALE		CALCAREOUS SHALE	3.6	150.8
375.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	3.6	154.3
372.1	CARBONDALE	ANNA	BLACK SHALE	3.1	157.9
369.0	CARBONDALE	HERRIN	COAL	6.7	161.0

MAPID: 16301058000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 16 QUARTERS/FOOTAGES: 70' S line, 300' W line of SW SE
 QUADRANGLE: O'FALLON LONGITUDE: -89.993525 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 38.614655 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 530.0 LOGGED (FT.): 167.7 LOG TYPE: Survey Core Study
 SOURCE: CONSOLIDATED COAL CO. 8 WELL TYPE: Coal Test
 COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
445.0	CARBONDALE		GRAY SHALE	18.0	85.0	
427.0	CARBONDALE		CLAYSTONE & SHALE	15.5	103.0	
411.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.8	118.5	
407.7	CARBONDALE	LAWSON	CALCAREOUS SHALE	0.5	122.3	
407.2	CARBONDALE	LAWSON	CLAYSTONE & SHALE	18.2	122.8	

MAPID: 16300257000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 17 QUARTERS/FOOTAGES: 3500' S line, 1100' E line
 QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.00806 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.623827 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 482.0 LOGGED (FT.): 95.0 LOG TYPE: Drillers Log
 SOURCE: NEW ST CLAIR COAL COMPANY WELL TYPE: Mine Shaft
 COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
393.0	CARBONDALE	HERRIN	COAL	6.0	89.0	ELEV TOP 387' SHIPPING MINE

MAPID: 16300257000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 17 QUARTERS/FOOTAGES: 3500' S line, 1100' E line
 QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.00806 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 38.623827 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 482.0 LOGGED (FT.): 0.0 LOG TYPE:
 SOURCE: NEW ST CLAIR COAL COMPANY WELL TYPE: Underground mine
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
387.0	CARBONDALE	HERRIN	COAL	6.0	95.0	

MAPID: 16300195000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 18 QUARTERS/FOOTAGES: 900' N line, 3200' E line

QUADRANGLE: MONKS MOUND LONGITUDE: -90.034032 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.626118 DATE COLLECTED:

SURFACE ELEVATION (FT.): 480.8 LOGGED (FT.): 7.5 LOG TYPE: Drillers Log

SOURCE: DRIFT COAL COMPANY WELL TYPE: Mine Shaft

COMMENT: MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
479.3	CARBONDALE	HERRIN	COAL	6.0	1.5	WOODLAND COAL CO , ELEV 479.3'

MAPID: 16300195000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 18 QUARTERS/FOOTAGES: 900' N line, 3200' E line

QUADRANGLE: MONKS MOUND LONGITUDE: -90.034032 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.626118 DATE COLLECTED:

SURFACE ELEVATION (FT.): 480.8 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: WOODLANDCC WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
478.8	CARBONDALE	HERRIN	COAL	6.0	2.0	

MAPID: 16302310000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 20 QUARTERS/FOOTAGES: 2640' N line, 2640' E line

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.013119 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.606875 DATE COLLECTED: 7 / 29 / 1957

SURFACE ELEVATION (FT.): 592.6 LOGGED (FT.): 201.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 29G WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
592.6	PLEISTOCENE		CLAY	10.0	0.0
582.6	PLEISTOCENE		UNCONSOLIDATED	34.9	10.0
547.7			SANDY SHALE	17.3	44.9
530.4			LIMESTONE	2.6	62.2
527.8			SHALE	1.3	64.8
526.5			LIMESTONE	6.4	66.1
520.0			SANDY SHALE	32.4	72.6
487.6			GRAY SHALE	46.1	105.0
441.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.1	151.1
437.4	CARBONDALE		GRAY SHALE	10.7	155.2
426.7	CARBONDALE		LIMESTONE	2.2	165.9
424.5	CARBONDALE	LAWSON	GRAY SHALE	7.9	168.1
416.6	CARBONDALE	BRERETON	LIMESTONE	12.4	176.0
404.2	CARBONDALE	BRERETON	SHALY LIMESTONE	0.0	188.4
404.2	CARBONDALE	HERRIN	COAL	6.0	188.4
398.1	CARBONDALE		UNDERCLAY	6.7	194.5
391.4	CARBONDALE		LIMESTONE	0.0	201.2

MAPID: 16302310000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 20 QUARTERS/FOOTAGES: 2640' N line, 2640' E line

QUADRANGLE: FRENCH VILLAGE LONGITUDE: -90.013119 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.606875 DATE COLLECTED:

SURFACE ELEVATION (FT.): 593.0 LOGGED (FT.): 195.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 29G WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
442.0	MODESTO	PIASA	LIMESTONE	4.1	151.0
437.9	CARBONDALE		GRAY SHALE	10.7	155.1
427.2	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.2	165.8

MAPID: 16302311000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 20 QUARTERS/FOOTAGES:

QUADRANGLE: FRENCH VILLAGE

LONGITUDE: -90.012962

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 38.607078

DATE COLLECTED: 7 / 23 / 1957

SURFACE ELEVATION (FT.): 573.8

LOGGED (FT.): 164.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 27G

WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
573.8	PLEISTOCENE		CLAY	24.0	0.0
549.8	PLEISTOCENE		GLACIAL DRIFT	32.8	24.0
517.0			GRAY SHALE	53.5	56.8
463.5			LIMESTONE	5.0	110.3
458.6			SANDY SHALE	9.6	115.2
448.9			LIMESTONE	1.7	124.9
447.2			CLAYSTONE & SILTSTONE	10.5	126.6
436.7			SHALE WITH LIMESTONE	3.4	137.1
433.4	CARBONDALE	BRERETON	LIMESTONE	7.6	140.4
425.7	CARBONDALE	ANNA	DARK SHALE	0.3	148.1
425.4	CARBONDALE	HERRIN	COAL	2.1	148.4
423.3	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	150.5
423.3	CARBONDALE	HERRIN	COAL	0.7	150.5
422.6	CARBONDALE	HERRIN	UNCLASSIFIED	0.1	151.2
422.5	CARBONDALE	HERRIN	COAL	0.8	151.3
421.7	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	152.1
421.7	CARBONDALE	HERRIN	COAL	0.2	152.1
421.5	CARBONDALE	HERRIN	CLAYSTONE & SILTSTONE	0.0	152.3
421.4	CARBONDALE	HERRIN	COAL	0.0	152.4
421.4	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	152.4
421.4	CARBONDALE	HERRIN	COAL	1.5	152.4
419.9	CARBONDALE		UNDERCLAY	13.9	153.9

MAPID: 16300196000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 21 QUARTERS/FOOTAGES: 1900' S line, 2350' E line

QUADRANGLE: O'FALLON

LONGITUDE: -89.993418

GEOLOGIST: HINES

CONFIDENTIAL: N

LATITUDE: 38.605208

DATE COLLECTED:

SURFACE ELEVATION (FT.): 577.1

LOGGED (FT.): 173.0

LOG TYPE: Drillers Log

SOURCE: CLUBY-MILLER COAL COMPANY

WELL TYPE: Mine Shaft

COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
410.1	CARBONDALE	HERRIN	COAL	6.0	167.0 H E MILLER COAL CO., ELEV TOP 404'

MAPID: 16300196000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 21 QUARTERS/FOOTAGES: 1900' S line, 2350' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.993418 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.605208 DATE COLLECTED:

SURFACE ELEVATION (FT.): 577.1 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: MILLER H E R WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
404.1	CARBONDALE	HERRIN	COAL	6.0	173.0

MAPID: 16302312000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 21 QUARTERS/FOOTAGES: 1520' N line, 2640' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.994487 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.610236 DATE COLLECTED: 7 / 20 / 1957

SURFACE ELEVATION (FT.): 581.6 LOGGED (FT.): 218.6 LOG TYPE: Drillers Log

SOURCE: ISGS 25G WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
581.6	PLEISTOCENE		CLAY	52.8	0.0
528.8	PLEISTOCENE		UNCONSOLIDATED	64.7	52.8
464.1			GRAY SHALE	41.9	117.5
422.2			LIMESTONE	1.6	159.4
420.6			GRAY SHALE	6.4	161.0
414.2			LIMESTONE	4.9	167.4
409.3			LIMESTONE	0.3	172.3
409.0	CARBONDALE	LAWSON	SHALE	18.9	172.6
390.1	CARBONDALE	CONANT	LIMESTONE	3.5	191.5
386.6	CARBONDALE		LIMESTONE/UNDERCLAY	1.2	195.0
385.4	CARBONDALE	BRERETON	LIMESTONE	11.2	196.2
373.6	CARBONDALE	HERRIN	COAL	5.7	208.0
368.3	CARBONDALE		UNDERCLAY	4.3	213.3
364.0	CARBONDALE		LIMESTONE	1.0	217.6

MAPID: 16302312000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 21 QUARTERS/FOOTAGES: 1520' N line, 2640' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.994487 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.610236 DATE COLLECTED:

SURFACE ELEVATION (FT.): 582.0 LOGGED (FT.): 213.7 LOG TYPE: Drillers Log

SOURCE: ISGS 25G WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
423.0	MODESTO	PIASA	LIMESTONE	1.6	159.0
421.4	CARBONDALE		GRAY SHALE	6.4	160.6
415.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	167.0

MAPID: 16301055000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 22 QUARTERS/FOOTAGES: 2520' N line, 16' E line of NE

QUADRANGLE: O'FALLON LONGITUDE: -89.966391 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.607531 DATE COLLECTED: 8 / 2 / 1950

SURFACE ELEVATION (FT.): 586.0 LOGGED (FT.): 231.0 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATED COAL CO. 5 WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
586.0	PLEISTOCENE		UNCONSOLIDATED	83.0	0.0
503.0			SANDY SHALE	29.0	83.0
474.0			GRAY SHALE	28.0	112.0
446.0			SHALE/COAL	2.0	140.0
444.0			UNDERCLAY	6.0	142.0
438.0			LIMESTONE/UNDERCLAY	22.0	148.0
416.0			LIMESTONE	16.0	170.0
400.0	CARBONDALE	LAWSON	SANDSTONE	8.6	186.0
391.4	CARBONDALE	LAWSON	SHALE & SILTSTONE	15.0	194.6
376.4	CARBONDALE	LAWSON	DARK GRAY SHALE	4.7	209.6
371.8	CARBONDALE	CONANT	LIMESTONE	1.1	214.2
370.7	CARBONDALE		DARK GRAY SHALE	0.8	215.3
369.9	CARBONDALE	BRERETON	LIMESTONE	2.8	216.1
367.0	CARBONDALE	ANNA	BLACK SHALE	2.0	219.0
365.0	CARBONDALE	HERRIN	COAL	7.0	221.0
358.0	CARBONDALE		UNDERCLAY/SHALE	3.0	228.0

MAPID: 16301055000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 22 QUARTERS/FOOTAGES: 2520' N line, 16' E line of NE

QUADRANGLE: O'FALLON LONGITUDE: -89.966391

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.607531

DATE COLLECTED:

SURFACE ELEVATION (FT.): 586.0 LOGGED (FT.): 218.0

LOG TYPE: Survey Core Study

SOURCE: CONSOLIDATED COAL CO. 5

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
503.1	CARBONDALE		SHALE & SILTSTONE	58.0	82.9
445.1	CARBONDALE		CLAYSTONE & SHALE	16.5	140.9
428.6	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.3	157.4
424.4	CARBONDALE	LAWSON	CLAYSTONE & SHALE	7.9	161.6
416.4	CARBONDALE	LAWSON	SILTSTONE	6.4	169.6

MAPID: 16301056000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 22 QUARTERS/FOOTAGES: 10' S line, 265' W line of NW NW

QUADRANGLE: O'FALLON LONGITUDE: -89.984275

GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.611069

DATE COLLECTED: 8 / 3 / 1950

SURFACE ELEVATION (FT.): 581.0 LOGGED (FT.): 267.3

LOG TYPE: Drillers Log

SOURCE: CONSOLIDATED COAL CO. 6

WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
581.0	PLEISTOCENE		CLAY	15.0	0.0
566.0	PLEISTOCENE		UNCONSOLIDATED	25.0	15.0
541.0	PLEISTOCENE		SAND & GRAVEL	15.0	40.0
526.0			SHALE	67.0	55.0
459.0			SHALE	35.0	122.0
424.0	MODESTO	PIASA	LIMESTONE	8.5	157.0
415.5			SHALE	9.5	165.5
406.0			SANDY SHALE	16.0	175.0
390.0	CARBONDALE	BRERETON	LIMESTONE	10.5	191.0
379.5	CARBONDALE	ANNA	BLACK SHALE	2.3	201.5
377.2	CARBONDALE	HERRIN	COAL	7.0	203.8 #7
370.2	CARBONDALE		UNDERCLAY/SHALE	17.2	210.8
353.0	CARBONDALE		LIMESTONE	1.0	228.0
352.0	CARBONDALE		SHALE	36.0	229.0

MAPID: 16300197000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 24 **QUARTERS/FOOTAGES:** 1000' S line, 4750' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.94557 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.602746 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 551.2 **LOGGED (FT.):** 200.0 **LOG TYPE:** Drillers Log
SOURCE: PERRY COAL CO. **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
358.2	CARBONDALE	HERRIN	COAL	7.0	193.0	ELEVATION TO 351'

MAPID: 16300197000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 24 **QUARTERS/FOOTAGES:** 1000' S line, 4750' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.94557 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.602746 **DATE COLLECTED:** 0 / 0 / 1990
SURFACE ELEVATION (FT.): 551.2 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: PERRY CC T **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
351.2	CARBONDALE	HERRIN	COAL	7.0	200.0	

MAPID: 16300198000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 25 **QUARTERS/FOOTAGES:** 3600' S line, 4000' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.942987 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.595207 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 557.2 **LOGGED (FT.):** 194.0 **LOG TYPE:** Drillers Log
SOURCE: PERRY COAL CO. **WELL TYPE:** Coal Test
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
369.2	CARBONDALE	HERRIN	COAL	6.0	188.0	ELEVATION TOP 363'

MAPID: 16300198000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 25 **QUARTERS/FOOTAGES:** 3600' S line, 4000' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.942987 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.595207 **DATE COLLECTED:** 0 / 0 / 1951
SURFACE ELEVATION (FT.): 557.2 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: PERRY CC C **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
363.2	CARBONDALE	HERRIN	COAL	6.0	194.0	

MAPID: 16300516000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 25 **QUARTERS/FOOTAGES:** 1670' N line, 1175' W line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.943442 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.595366 **DATE COLLECTED:** 0 / 0 / 1918
SURFACE ELEVATION (FT.): 555.0 **LOGGED (FT.):** 594.0 **LOG TYPE:**
SOURCE: WISE C S CM **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
368.0	CARBONDALE	HERRIN	COAL	7.0	187.0	

MAPID: 16300199000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 26 **QUARTERS/FOOTAGES:** 175' S line, 2675' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.957076 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.585901 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 569.9 **LOGGED (FT.):** 205.0 **LOG TYPE:** Drillers Log
SOURCE: PERRY COAL CO. **WELL TYPE:** Coal Test
COMMENT: PEABODY COAL COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
371.9	CARBONDALE	HERRIN	COAL	7.0	198.0	ELEVATION TOP 365'

MAPID: 16300199000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 26 **QUARTERS/FOOTAGES:** 175' S line, 2675' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.957076 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.585901 **DATE COLLECTED:** 0 / 0 / 1903
SURFACE ELEVATION (FT.): 569.9 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: PERRY CC 00SE **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
364.9	CARBONDALE	HERRIN	COAL	7.0	205.0	

MAPID: 16300258000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 26 **QUARTERS/FOOTAGES:** NE NW NW
QUADRANGLE: O'FALLON **LONGITUDE:** -89.962825 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.599114 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 560.0 **LOGGED (FT.):** 200.0 **LOG TYPE:** Drillers Log
SOURCE: JOSEPH TAYLOR COAL COMPANY **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
360.0	CARBONDALE	HERRIN	COAL	0.0	200.0	NOT AT THIS LOCATION. SHOULD BE 200'

MAPID: 16300258000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 26 **QUARTERS/FOOTAGES:** NE NW NW
QUADRANGLE: O'FALLON **LONGITUDE:** -89.962825 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.599114 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 560.9 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: PERRY CC 00VH **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
387.9	CARBONDALE	HERRIN	COAL	7.0	173.0	

MAPID: 16300259000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 26 **QUARTERS/FOOTAGES:** 4675' S line, 3050' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.958278 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.598337 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 567.0 **LOGGED (FT.):** 203.0 **LOG TYPE:** Drillers Log
SOURCE: JOSEPH TAYLOR COAL COMPANY **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
372.0	CARBONDALE	HERRIN	COAL	8.0	195.0	ELEVATION TOP 358.0'

MAPID: 16300259000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 26 **QUARTERS/FOOTAGES:** 4675' S line, 3050' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.958278 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.598337 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 561.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: JOTAYLORCC RP **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
358.0	CARBONDALE	HERRIN	COAL	8.0	203.0	

MAPID: 16301220000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 26 QUARTERS/FOOTAGES: SE SE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.958145 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.586342 DATE COLLECTED: 6 / 3 / 1953

SURFACE ELEVATION (FT.): 565.0 LOGGED (FT.): 171.0 LOG TYPE: Drillers Log

SOURCE: ISGS WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
565.0	PLEISTOCENE		UNKNOWN	5.0	0.0	LOG SAID SH; MAY BE TILL OR BLDR
560.0	PLEISTOCENE		UNCONSOLIDATED	15.0	5.0	
545.0	PLEISTOCENE		UNCONSOLIDATED	11.0	20.0	BLUE
534.0	PLEISTOCENE		SANDY CLAY	13.0	31.0	
521.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	8.0	44.0	BLUE
513.0			SHALE	3.0	52.0	YELLOW
510.0			GRAY SHALE	25.0	55.0	
485.0			SHALE	41.0	80.0	
444.0			LIMESTONE	0.2	121.0	
443.8			GRAY SHALE	1.3	121.2	
442.5			LIMESTONE	0.3	122.5	
442.2			GRAY SHALE	0.6	122.8	
441.7			LIMESTONE	0.2	123.3	
441.5			BLACK SHALE	0.2	123.5	
441.3			UNDERCLAY	7.5	123.7	
433.8			LIMESTONE	1.7	131.2	
432.2			SHALY LIMESTONE	1.3	132.8	
430.9			RED SHALE	2.8	134.1	
428.2			LIMESTONE	8.3	136.8	
419.9			SHALE	5.9	145.1	
414.0			LIMESTONE	1.5	151.0	
412.5			LIMESTONE	4.5	152.5	
408.0			LIMESTONE W/ SHALE	3.0	157.0	
405.0			SHALE	9.0	160.0	
396.0			LIMESTONE	2.0	169.0	

MAPID: 16300260000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 27 QUARTERS/FOOTAGES: 100' S line, 3970' E line

QUADRANGLE: O'FALLON LONGITUDE: -89.980256 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.585857 DATE COLLECTED:

SURFACE ELEVATION (FT.): 588.1 LOGGED (FT.): 212.0 LOG TYPE: Drillers Log

SOURCE: PRAIRE COAL COMPANY WELL TYPE: Mine Shaft

COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
383.1	CARBONDALE	HERRIN	COAL	7.0	205.0	ELEVATION TOP 376'

MAPID: 16300260000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 27 **QUARTERS/FOOTAGES:** 100' S line, 3970' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.980256 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.585857 **DATE COLLECTED:** 0 / 0 / 1996
SURFACE ELEVATION (FT.): 588.1 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: PRAIRIE CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
376.1	CARBONDALE	HERRIN	COAL	7.0	212.0	

MAPID: 16302313000C **VERSION:** 1 **PROJECT:** AVAIL
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 29 **QUARTERS/FOOTAGES:** 2000' S line, 200' W line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.021413 **GEOLOGIST:** UITEMP
CONFIDENTIAL: N **LATITUDE:** 38.591154 **DATE COLLECTED:** 8 / 19 / 1957
SURFACE ELEVATION (FT.): 574.8 **LOGGED (FT.):** 146.3 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 35G **WELL TYPE:**
COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
574.8	PLEISTOCENE		CLAY	31.5	0.0	
543.3	PLEISTOCENE		UNCONSOLIDATED	96.6	31.5	
446.7	PLEISTOCENE		BOULDER	2.0	128.1	LIME BLDR
444.7	PLEISTOCENE		UNCONSOLIDATED	0.9	130.1	
443.8	PLEISTOCENE		BOULDER	1.3	131.0	LIME BLDR
442.5	PLEISTOCENE		UNCONSOLIDATED	6.4	132.3	
436.1	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	3.4	138.7	
432.7	CARBONDALE		GRAY SHALE	0.7	142.1	
432.0	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	10.8	142.8	
421.2	CARBONDALE	ANNA	BLACK SHALE	0.4	153.6	
420.8	CARBONDALE	HERRIN	COAL	6.3	154.0	
414.5	CARBONDALE		UNDERCLAY	4.3	160.3	

MAPID: 16302313000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 29 **QUARTERS/FOOTAGES:** 2000' S line, 200' W line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.021413 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.591154 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 575.0 **LOGGED (FT.):** 160.3 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 35G **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

MAPID: 16300755000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 31 **QUARTERS/FOOTAGES:** 600' N line, 4250' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.029127 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.579193 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 502.7 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: PERRY COAL CO. **WELL TYPE:** Mine Shaft
COMMENT: AIR SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
502.7			MINE OPENING	0.0	0.0	SHIPPING MINE

MAPID: 16300200000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 32 **QUARTERS/FOOTAGES:** 2625' S line, 2275' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.011353 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.578535 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 515.1 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: ST LOUIS AND O'FALLON COAL CO **WELL TYPE:** Coal Test
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
515.1			MINE OPENING	0.0	0.0	SHIPPING MINE ABANDONED

MAPID: 16300200000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 32 **QUARTERS/FOOTAGES:** 2625' S line, 2275' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.011353 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.578535 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 515.1 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: ST L OFALL 1 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
388.1	CARBONDALE	HERRIN	COAL	6.0	127.0	

MAPID: 16300201000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 33 **QUARTERS/FOOTAGES:** 2500' S line, 2425' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.993353 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.577967 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 577.4 **LOGGED (FT.):** 193.0 **LOG TYPE:** Drillers Log
SOURCE: ST LOUIS & O'FALLON COAL CO 2 **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
390.6	CARBONDALE	HERRIN	COAL	6.2	186.8	ELEVATION TOP 384'

MAPID: 16300201000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 33 **QUARTERS/FOOTAGES:** 2500' S line, 2425' E line
QUADRANGLE: O'FALLON **LONGITUDE:** -89.993353 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.577967 **DATE COLLECTED:** 0 / 0 / 1904
SURFACE ELEVATION (FT.): 577.4 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: ST L OFALL0002 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
384.4	CARBONDALE	HERRIN	COAL	6.2	193.0	

MAPID: 16301198000C **VERSION:** 1 **PROJECT:** AVAIL
COUNTY: ST. CLAIR **TWP/RNG:** 2N 8W **SECTION:** 35 **QUARTERS/FOOTAGES:** NW NW NE
QUADRANGLE: O'FALLON **LONGITUDE:** -89.955815 **GEOLOGIST:** UITEMP
CONFIDENTIAL: N **LATITUDE:** 38.584493 **DATE COLLECTED:** 2 / 0 / 1948
SURFACE ELEVATION (FT.): 561.0 **LOGGED (FT.):** 136.0 **LOG TYPE:** Drillers Log
SOURCE: ISGS 10D **WELL TYPE:**
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
561.0			UNCLASSIFIED	18.0	0.0	
543.0			CLAY	10.0	18.0	
533.0			UNCONSOLIDATED	12.0	28.0	BLUE
521.0			SAND & GRAVEL	15.0	40.0	
506.0			SANDY SHALE	50.0	55.0	
456.0			SANDY SHALE	30.0	105.0	
426.0			LIMESTONE	1.0	135.0	

MAPID: 16301199000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 35 QUARTERS/FOOTAGES: NW NW NE

QUADRANGLE: O'FALLON LONGITUDE: -89.955815 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.584493 DATE COLLECTED: 2 / 0 / 1948

SURFACE ELEVATION (FT.): 559.0 LOGGED (FT.): 134.0 LOG TYPE: Drillers Log

SOURCE: ISGS 11D WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
559.0			UNCLASSIFIED	28.0	0.0	
531.0			CLAY	20.0	28.0	
511.0			SAND/CLAY	16.0	48.0	
495.0			SANDY SHALE	62.0	64.0	
433.0			FOSSILIFEROUS LIMESTONE	4.0	126.0	
429.0			SHALE	3.0	130.0	
426.0			LIMESTONE	1.0	133.0	

MAPID: 16301195000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 36 QUARTERS/FOOTAGES: SW SE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.941866 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.57153 DATE COLLECTED: 3 / 0 / 1953

SURFACE ELEVATION (FT.): 535.0 LOGGED (FT.): 143.3 LOG TYPE: Drillers Log

SOURCE: ISGS WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
535.0			NO RECORD	0.0	0.0	DATA NOT ENTERED - SEE ORIGINAL LOG
429.4	CARBONDALE	LAWSON	MOTTLED SHALE	9.0	105.6	
420.4	CARBONDALE	LAWSON	DARK GRAY SHALE	1.8	114.6	
418.7	CARBONDALE	LAWSON	SILTSTONE	10.9	116.3	
407.8	CARBONDALE	CONANT	CALCAREOUS SHALE	4.6	127.2	
403.2	CARBONDALE	JAMESTOWN	BONE COAL	0.6	131.8	
402.6	CARBONDALE		DARK GRAY SHALE	4.1	132.4	
398.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	3.5	136.5	
395.0	CARBONDALE	HERRIN	COAL	4.0	140.0	

MAPID: 16301195000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 36 QUARTERS/FOOTAGES: SW SE SW

QUADRANGLE: O'FALLON LONGITUDE: -89.941866 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.57153 DATE COLLECTED:

SURFACE ELEVATION (FT.): 535.0 LOGGED (FT.): 144.0 LOG TYPE: Survey Core Study

SOURCE: PERRY COAL CO. 85L WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
449.8	MODESTO	PIASA	LIMESTONE/UNDERCLAY	5.4	85.2	
444.4	CARBONDALE		CLAYSTONE & SHALE	5.8	90.6	
438.5	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.0	96.5	
435.5	CARBONDALE	LAWSON	LIMESTONE W/ SHALE	6.1	99.5	

MAPID: 16301196000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 36 QUARTERS/FOOTAGES: NE SE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.930192 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.580507 DATE COLLECTED:

SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 164.0 LOG TYPE: Drillers Log

SOURCE: ISGS 65L WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.0	PLEISTOCENE		UNCONSOLIDATED	23.0	0.0	
527.0	PLEISTOCENE		CLAY, SAND & GRAVEL	2.0	23.0	
525.0	PLEISTOCENE		SAND	14.0	25.0	
511.0	PLEISTOCENE		UNCONSOLIDATED	9.0	39.0	BLUE
502.0	PLEISTOCENE		SAND/CLAY	15.0	48.0	
487.0			SILT & SAND	52.0	63.0	BLUE
435.0			SHALY LIMESTONE	7.0	115.0	
428.0			LIMESTONE	3.0	122.0	
425.0			LIMESTONE	9.5	125.0	GRAY
415.5			LIMESTONE	1.0	134.5	
414.5			SHALY LIMESTONE	8.1	135.5	GRAY
406.4			CLOD	0.3	143.6	
406.2	CARBONDALE	HERRIN	COAL	7.0	143.8	
399.2	CARBONDALE		UNDERCLAY	6.7	150.8	
392.5	CARBONDALE		LIMESTONE	0.8	157.5	
391.7	CARBONDALE		UNDERCLAY	5.3	158.3	
386.5	CARBONDALE		LIMESTONE	0.5	163.5	

MAPID: 16301197000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2N 8W SECTION: 36 QUARTERS/FOOTAGES: NE NE NE

QUADRANGLE: O'FALLON LONGITUDE: -89.930179 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 38.584174 DATE COLLECTED: 3 / 0 / 1953

SURFACE ELEVATION (FT.): 551.0 LOGGED (FT.): 166.5 LOG TYPE: Drillers Log

SOURCE: ISGS WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
551.0	PLEISTOCENE		UNCONSOLIDATED	16.0	0.0	
535.0	PLEISTOCENE		UNCONSOLIDATED	8.0	16.0	BLUE
527.0	PLEISTOCENE		SANDY CLAY	7.0	24.0	
520.0	PLEISTOCENE		CLAY, SAND & SILTSTONE	20.0	31.0	BLUE
500.0	PLEISTOCENE		SILT & SAND	60.0	51.0	BLUE
440.0			LIMESTONE	1.0	111.0	
439.0			CALCAREOUS SHALE	4.5	112.0	
434.5			LIMESTONE	10.0	116.5	
424.5			LIMESTONE	10.0	126.5	
414.5			LIMESTONE	3.5	136.5	
411.0			CLOD	0.3	140.0	
410.7	CARBONDALE	HERRIN	COAL	8.3	140.3	
402.5	CARBONDALE		UNDERCLAY	8.2	148.5	
394.3	CARBONDALE		SHALY LIMESTONE	9.8	156.7	

MAPID: 16300010000C VERSION: 1

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 2N 9W SECTION: 2 QUARTERS/FOOTAGES: NW NW NE

QUADRANGLE: MONKS MOUND LONGITUDE: -90.064586 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.657976 DATE COLLECTED:

SURFACE ELEVATION (FT.): 437.0 LOGGED (FT.): 2100.0 LOG TYPE:

SOURCE: MONKS MD WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300261000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 24 **QUARTERS/FOOTAGES:** 875' S line, 2425' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.045236 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.602891 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 502.1 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: FRENCH VILLAGE COAL CORP **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
502.1			MINE OPENING	0.0	0.0	NEW PROSPECT COAL COMPANY (1935)

MAPID: 16300261000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 24 **QUARTERS/FOOTAGES:** 875' S line, 2425' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.045236 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.602891 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 502.1 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: NEWPROSPCT **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
452.1	CARBONDALE	HERRIN	COAL	-	50.0	

MAPID: 16300369000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 24 **QUARTERS/FOOTAGES:** 4700' S line, 1400' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.041921 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.61342 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 474.2 **LOGGED (FT.):** 6.0 **LOG TYPE:** Drillers Log
SOURCE: GUNDLACH MINE **WELL TYPE:** Slope Mine
COMMENT: SLOPE MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
474.2	CARBONDALE	HERRIN	COAL	6.0	0.0	6' COAL AT ELEVATION 480'

MAPID: 16300412000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 24 **QUARTERS/FOOTAGES:** 800' S line, 1925' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.043472 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.602668 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 500.6 **LOGGED (FT.):** 48.0 **LOG TYPE:** Drillers Log
SOURCE: WHITE ASH COAL COMPANY **WELL TYPE:** Mine Shaft
COMMENT: MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
459.6	CARBONDALE	HERRIN	COAL	7.0	41.0	ELEVATION TOP 453'

MAPID: 16300412000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 24 **QUARTERS/FOOTAGES:** 800' S line, 1925' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.043472 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.602668 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 500.6 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: WHITEASHCC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
452.6	CARBONDALE	HERRIN	COAL	7.0	48.0	

MAPID: 16300262000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 26 **QUARTERS/FOOTAGES:** 500' S line, 575' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.056856 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.587354 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 499.5 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: GRANDVIEW COAL COMPANY **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
499.5			MINE OPENING	0.0	0.0	LOCAL MINE

MAPID: 16300262000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 26 **QUARTERS/FOOTAGES:** 500' S line, 575' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.056856 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.587354 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 499.5 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: GRANVIEW **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
487.5	CARBONDALE	HERRIN	COAL	-	12.0	

MAPID: 16300377000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** 2000' S line, 500' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.074884 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.577393 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 484.0 **LOGGED (FT.):** 7.0 **LOG TYPE:** Drillers Log
SOURCE: F ZISKA COAL COMPANY **WELL TYPE:** Coal Test
COMMENT: MINE DRIFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
484.0	CARBONDALE	HERRIN	COAL	7.0	0.0	ELEVATION AT 484'

MAPID: 16300202000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 850' S line, 850' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.057463 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.574132 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 586.5 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: SUBURGAN C & M COMPANY **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
586.5			MINE OPENING	0.0	0.0	LOCAL MINE

MAPID: 16300202000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 850' S line, 850' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.057463 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.574132 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 586.5 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: SUBURB CMC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
418.5	CARBONDALE	HERRIN	COAL	7.0	168.0	

MAPID: 16300263000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 4875' S line, 850' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.057785 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.585243 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 525.8 **LOGGED (FT.):** 81.0 **LOG TYPE:** Drillers Log
SOURCE: EDGEMONT COAL COMPANY **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
444.8	CARBONDALE	HERRIN	COAL	0.0	81.0	ELEVATION TOP 445'

MAPID: 16300263000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 4875' S line, 850' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.057785 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.585243 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 525.8 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: EDGEMT CC 0001 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
444.8	CARBONDALE	HERRIN	COAL	-	81.0	

MAPID: 16300371000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 3900' S line, 4250' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.069667 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.582532 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 466.0 **LOGGED (FT.):** 5.6 **LOG TYPE:** Drillers Log
SOURCE: EDMONT COAL COMPANY **WELL TYPE:** Coal Test
COMMENT: DRIFT MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
466.0	CARBONDALE	HERRIN	COAL	5.6	0.0	ELEVATION 460.35'

MAPID: 16300756000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 390' S line, 1630' W line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.067247 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.572845 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 580.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: UNION MINE 2 **WELL TYPE:** Coal Test
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
580.0			MINE OPENING	0.0	0.0	SOUTH SIDE ABANDONED RAILROAD GRADE

MAPID: 16300757000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1300' S line, 450' W line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.071477 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.57535 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 580.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: UNION MINE 1 **WELL TYPE:** Coal Test
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
580.0			MINE OPENING	0.0	0.0	NORTH SIDE ABANDONED RAILROAD

MAPID: 16300758000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 560' S line, 60' W line of NW
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.073017 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.580613 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 470.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: STRAUBINGER MINE **WELL TYPE:** Coal Test
COMMENT: DRIFT MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
470.0			MINE OPENING	0.0	0.0	LOCATION FROM MINE MAP OF SENIOR MINES

MAPID: 16300759000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 780' S line, 260' W line of NW
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.072333 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.581213 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 470.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: ZISKA MINE (1928) **WELL TYPE:** Coal Test
COMMENT: LOCAL MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
470.0			MINE OPENING	0.0	0.0	FARTHER NORTH THAN ZISKA MINE

MAPID: 16327552000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 3400' S line, 5250' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.073141 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.581145 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 453.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: COAL SECTION **WELL TYPE:** Mine Shaft
COMMENT: SLOPE MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
453.0			MINE OPENING	0.0	0.0	LOCAL MINE

MAPID: 16300264000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 36 **QUARTERS/FOOTAGES:** 325' S line, 125' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.036455 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.572442 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 506.9 **LOGGED (FT.):** 85.0 **LOG TYPE:** Drillers Log
SOURCE: PERRY COAL CO. **WELL TYPE:** Mine Shaft
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
421.9	CARBONDALE	HERRIN	COAL	0.0	85.0	ELEVATION TOP 422'

MAPID: 16300264000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 2N 9W **SECTION:** 36 **QUARTERS/FOOTAGES:** 325' S line, 125' E line
QUADRANGLE: FRENCH VILLAGE **LONGITUDE:** -90.036455 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.572442 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 506.9 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: PERRY CC V **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
421.9	CARBONDALE	HERRIN	COAL	-	85.0	

MAPID: 16303054000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 1 QUARTERS/FOOTAGES: 0' S line, 0' E line

QUADRANGLE: VENEDY LONGITUDE: -89.704115

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.37972

DATE COLLECTED:

SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 199.3

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 9008C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
286.0	MODESTO	PIASA	LIMESTONE	8.0	139.0	
278.0	CARBONDALE		GRAY SHALE	21.9	147.0	
256.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	168.9	UPPER BENCH
253.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.8	171.6	SHALE PARTING
251.6	CARBONDALE	BANKSTON FORK	LIMESTONE	1.4	173.4	LOWER BENCH
250.2	CARBONDALE	LAWSON	DARK GRAY SHALE	7.5	174.8	
242.7	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	2.1	182.3	
240.6	CARBONDALE		CALCAREOUS SHALE	2.5	184.4	
238.1	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	5.6	186.9	
232.4	CARBONDALE	ANNA	CALCAREOUS SHALE	0.2	192.6	
233.0	CARBONDALE	HERRIN	COAL	7.3	192.0	

MAPID: 16302977000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 2 QUARTERS/FOOTAGES: 1' N line, 660' E line

QUADRANGLE: VENEDY LONGITUDE: -89.724813

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.392917

DATE COLLECTED:

SURFACE ELEVATION (FT.): 405.0 LOGGED (FT.): 192.3

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8677C

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
269.0	MODESTO	PIASA	LIMESTONE	7.2	136.0	
261.8	MODESTO		LIMESTONE W/ SHALE	14.6	143.2	
247.2	CARBONDALE	DANVILLE	COAL	1.6	157.8	
245.6	CARBONDALE		GRAY SHALE	5.4	159.4	
240.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.1	164.8	UPPER BENCH
239.1	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.4	165.9	SHALE PARTING
235.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.7	169.3	LOWER BENCH
234.0	CARBONDALE	LAWSON	DARK GRAY SHALE	8.1	171.0	
225.9	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	1.4	179.1	
224.5	CARBONDALE	BRERETON	LIMESTONE	3.0	180.5	
221.5	CARBONDALE	ANNA	BLACK SHALE	1.4	183.5	
220.0	CARBONDALE	HERRIN	COAL	7.3	185.0	

MAPID: 1630298000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 3 QUARTERS/FOOTAGES: 2640' N line, 2640' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.75018 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.385976 DATE COLLECTED:

SURFACE ELEVATION (FT.): 395.0 LOGGED (FT.): 184.2 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8680C WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
268.0	MODESTO	PIASA	LIMESTONE	7.7	127.0
260.3	MODESTO		SHALE	15.5	134.7
244.8	CARBONDALE	DANVILLE	COAL	0.7	150.2
244.1	CARBONDALE		GRAY SHALE	7.3	150.9
236.8	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	158.2
234.8	CARBONDALE	LAWSON	DARK GRAY SHALE	7.7	160.2
227.1	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	1.0	167.9
226.1	CARBONDALE		LIMESTONE W/ SHALE	3.7	168.9
222.4	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	3.5	172.6
218.0	CARBONDALE	HERRIN	COAL	7.2	177.0

MAPID: 16303002000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 3 QUARTERS/FOOTAGES: 1' S line, 990' E line

QUADRANGLE: VENEDY LONGITUDE: -89.744341 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.380915 DATE COLLECTED: 5 / 12 / 1969

SURFACE ELEVATION (FT.): 393.0 LOGGED (FT.): 177.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8707C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. N-17

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
393.0	PLEISTOCENE		UNCONSOLIDATED	78.9	0.0
314.1	MODESTO		LIMESTONE	2.5	78.9
311.6	MODESTO		GRAY SHALE	21.0	81.4
290.6	MODESTO		SANDSTONE	2.8	102.4
287.8	MODESTO		GRAY SHALE	11.9	105.2
275.9	MODESTO	PIASA	LIMESTONE	6.9	117.1
269.0			GRAY SHALE	14.2	124.0
254.8			DARK SHALE	4.8	138.2
250.0			GRAY SHALE	7.4	143.0
242.6	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	150.4
241.1	CARBONDALE		GRAY SHALE	8.0	151.9
233.1	CARBONDALE	BRERETON	LIMESTONE	4.7	159.9
228.4	CARBONDALE	ANNA	DARK SHALE	3.1	164.6
225.3	CARBONDALE	HERRIN	COAL	7.1	167.7
218.2	CARBONDALE		UNDERCLAY	1.5	174.8
216.7	CARBONDALE		LIMESTONE	0.7	176.3

MAPID: 16323827000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 3 QUARTERS/FOOTAGES: 2640' N line, 660' E line

QUADRANGLE: VENEDY LONGITUDE: -89.743231 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.385839 DATE COLLECTED: 11 / 30 / 1973

SURFACE ELEVATION (FT.): 395.0 LOGGED (FT.): 194.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15751C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. O-9

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
395.0	PLEISTOCENE		UNCONSOLIDATED	10.0	0.0
385.0	PLEISTOCENE		SAND & GRAVEL	57.0	10.0
328.0	MODESTO		GRAY SHALE	60.0	67.0
268.0	MODESTO	PIASA	LIMESTONE	7.0	127.0
261.0			GRAY SHALE	21.0	134.0
240.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.8	155.0
236.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.7	158.8
233.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	161.5
231.0	CARBONDALE		DARK SHALE	5.6	164.0
225.4	CARBONDALE	CONANT	LIMESTONE	0.4	169.6
225.0	CARBONDALE		DARK SHALE	2.6	170.0
222.4	CARBONDALE	BRERETON	LIMESTONE	2.6	172.6
219.8	CARBONDALE	ANNA	DARK SHALE	1.5	175.2
218.3	CARBONDALE	HERRIN	COAL	7.3	176.7
211.0	CARBONDALE		UNDERCLAY	1.8	184.0
209.2	CARBONDALE		LIMESTONE W/ SHALE	8.2	185.8

MAPID: 16323829000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 3 QUARTERS/FOOTAGES: 1320' S line, 1320' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.754933 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.384939 DATE COLLECTED: 10 / 15 / 1973

SURFACE ELEVATION (FT.): 390.0 LOGGED (FT.): 184.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO 15782C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. E-13

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
390.0	PLEISTOCENE		UNCONSOLIDATED	9.0	0.0	
381.0	PLEISTOCENE		SAND & GRAVEL	60.5	9.0	
320.5	PLEISTOCENE		CLAY	50.0	69.5	
270.5	MODESTO	PIASA	LIMESTONE	7.5	119.5	TOP MAY BE ERODED
263.0			GRAY SHALE	21.5	127.0	
241.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	148.5	
238.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.8	151.8	
236.4	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	153.6	
234.0	CARBONDALE		DARK SHALE	10.0	156.0	
224.0	CARBONDALE	HERRIN	COAL	7.1	166.0	
216.9	CARBONDALE		UNDERCLAY	1.0	173.1	
215.9	CARBONDALE		GRAY SHALE	6.7	174.1	
209.2	CARBONDALE		LIMESTONE	2.1	180.8	
207.1	CARBONDALE		SHALE	1.1	182.9	

MAPID: 16327688000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 3 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.759373

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.387792

DATE COLLECTED:

SURFACE ELEVATION (FT.): 401.6 LOGGED (FT.): 198.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15762C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
401.6	PLEISTOCENE		SAND/CLAY	10.0	0.0
391.6	PLEISTOCENE		SAND	46.0	10.0
345.6	PLEISTOCENE		CLAY	22.0	56.0
323.6	MODESTO		GRAY SHALE	37.2	78.0
286.4	MODESTO		SANDSTONE	4.3	115.2
282.1	MODESTO		GRAY SHALE	12.5	119.5
269.6	MODESTO	PIASA	LIMESTONE	7.0	132.0
262.6			GRAY SHALE	17.4	139.0
245.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.4	156.4
240.8	CARBONDALE		GRAY SHALE	3.4	160.8
237.4	CARBONDALE	CONANT	LIMESTONE	2.0	164.2
235.4	CARBONDALE		DARK SHALE	6.5	166.2
228.9	CARBONDALE	BRERETON	LIMESTONE	2.9	172.7
226.0	CARBONDALE	ANNA	DARK SHALE	3.5	175.6
222.5	CARBONDALE	HERRIN	COAL	7.1	179.1
215.4	CARBONDALE		UNDERCLAY	1.2	186.2
214.2	CARBONDALE		LIMESTONE	4.2	187.4
210.0	CARBONDALE		GRAY SHALE	6.4	191.6

MAPID: 16303003000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 4 QUARTERS/FOOTAGES: 2640' N line, 2640' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.768838

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.386352

DATE COLLECTED:

SURFACE ELEVATION (FT.): 399.0 LOGGED (FT.): 191.7

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8901C

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
271.0	MODESTO	PIASA	LIMESTONE W/ SHALE	14.3	128.0	
256.7	MODESTO		DARK GRAY SHALE	8.2	142.3	
248.5	CARBONDALE	DANVILLE	COAL	0.9	150.5	
247.6	CARBONDALE		DARK GRAY SHALE	0.9	151.4	
246.7	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	16.0	152.3	
230.8	CARBONDALE	LAWSON	DARK GRAY SHALE	7.4	168.2	
223.4	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.3	175.6	
223.1	CARBONDALE		LIMESTONE W/ SHALE	0.5	175.9	
222.6	CARBONDALE	BRERETON	LIMESTONE	2.0	176.4	
220.6	CARBONDALE	ANNA	BLACK SHALE	4.8	178.4	
216.0	CARBONDALE	HERRIN	COAL	8.7	183.0	

MAPID: 16302420000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 5 QUARTERS/FOOTAGES: 89' S line, 750' W line of NE SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.790735

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.385261

DATE COLLECTED: 9 / 20 / 1955

SURFACE ELEVATION (FT.): 406.6 LOGGED (FT.): 144.6

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2158

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
406.6	PLEISTOCENE		UNCONSOLIDATED	34.6	0.0	
372.0	PLEISTOCENE		SAND & GRAVEL	63.5	34.6	
308.5	MODESTO	PIASA	LIMESTONE	2.1	98.1	TOP ERODED
306.4			GRAY SHALE	9.4	100.2	
297.0			BLACK SHALE	2.8	109.6	
294.2			GRAY SHALE	4.3	112.4	
289.9	CARBONDALE	BANKSTON FORK	LIMESTONE	8.8	116.7	
281.2	CARBONDALE		DARK SHALE	7.3	125.4	
273.9	CARBONDALE	BRERETON	ROCK	3.7	132.7	
270.3	CARBONDALE	HERRIN	COAL	6.3	136.3	
263.9	CARBONDALE		UNDERCLAY	1.9	142.7	

MAPID: 16302975000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 5 QUARTERS/FOOTAGES: 990' N line, 990' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.794653

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.391305

DATE COLLECTED:

SURFACE ELEVATION (FT.): 392.0 LOGGED (FT.): 130.5

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8675C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
316.0	MODESTO	PIASA	LIMESTONE	5.7	76.0	
310.3	MODESTO		SHALE	14.2	81.7	
296.1	CARBONDALE	DANVILLE	COAL	1.6	95.9	
294.5	CARBONDALE		GRAY SHALE	4.7	97.5	
289.8	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	102.2	UPPER BENCH
286.5	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	3.0	105.5	SHALE PARTING
283.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	108.5	LOWER BENCH
281.6	CARBONDALE	LAWSON	DARK GRAY SHALE	7.9	110.4	
273.7	CARBONDALE	BRERETON	CARBONACEOUS LIMESTONE	2.5	118.3	
271.2	CARBONDALE	ANNA	BLACK SHALE	0.8	120.8	
269.0	CARBONDALE	HERRIN	COAL	7.5	123.0	

MAPID: 16302994000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 5 QUARTERS/FOOTAGES: 330' S line, 1320' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.783708 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.382305 DATE COLLECTED: 5 / 20 / 1969

SURFACE ELEVATION (FT.): 395.0 LOGGED (FT.): 181.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8699C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. M-16

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
395.0	PLEISTOCENE		UNCONSOLIDATED	75.0	0.0
320.0	MODESTO		GRAY SHALE	34.6	75.0
285.4	MODESTO	PIASA	LIMESTONE	5.3	109.6
280.1	MODESTO		GRAY SHALE	9.1	114.9
271.0	MODESTO		LIMESTONE	2.5	124.0
268.5	MODESTO		DARK SHALE	6.5	126.5
262.0	CARBONDALE	DANVILLE	COAL	1.6	133.0
260.4	CARBONDALE		GRAY SHALE	11.0	134.6
249.4	CARBONDALE	BANKSTON FORK	LIMESTONE	2.8	145.6
246.6	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.1	148.4
243.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	151.5
240.8	CARBONDALE		DARK SHALE	10.5	154.2
230.4	CARBONDALE	BRERETON	LIMESTONE	1.5	164.6
228.9	CARBONDALE	ANNA	BLACK SHALE	4.4	166.1
224.5	CARBONDALE	HERRIN	COAL	8.4	170.5
216.1	CARBONDALE		UNDERCLAY	3.0	178.9

MAPID: 16327689000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 6 QUARTERS/FOOTAGES: 1' N line, 2310' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.809062 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.394186 DATE COLLECTED:

SURFACE ELEVATION (FT.): 424.0 LOGGED (FT.): 159.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16186C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
424.0	PLEISTOCENE		CLAY	67.5	0.0
356.5	PLEISTOCENE		BOULDER	3.5	67.5
353.0	PLEISTOCENE		SAND	46.0	71.0
307.0	PLEISTOCENE		GRAVEL	2.5	117.0
304.5	PLEISTOCENE		CLAY	14.5	119.5
290.0	CARBONDALE		LIMESTONE	1.2	134.0
288.8	CARBONDALE		DARK SHALE	7.3	135.2
281.5	CARBONDALE	BRERETON	LIMESTONE	1.6	142.5
279.9	CARBONDALE	ANNA	DARK SHALE	2.0	144.1
277.9	CARBONDALE	HERRIN	COAL	6.3	146.1
271.6	CARBONDALE		UNDERCLAY	3.1	152.4
268.5	CARBONDALE		LIMESTONE	3.5	155.5

MAPID: 16327690000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 6 QUARTERS/FOOTAGES: 0' N line, 1320' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.812538 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.394223 DATE COLLECTED:

SURFACE ELEVATION (FT.): 424.0 LOGGED (FT.): 143.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16187C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
424.0	PLEISTOCENE		CLAY	51.0	0.0
373.0	PLEISTOCENE		SAND	30.0	51.0
343.0	PLEISTOCENE		GRAVEL	28.0	81.0
315.0	PLEISTOCENE		CLAY	10.0	109.0
305.0	CARBONDALE	CONANT	LIMESTONE	2.5	119.0
302.5	CARBONDALE		DARK SHALE	2.1	121.5
300.4	CARBONDALE	BRERETON	BLACK LIMESTONE	5.7	123.6
294.7	CARBONDALE	ANNA	DARK SHALE	0.5	129.3
294.2	CARBONDALE	HERRIN	COAL	6.4	129.8
287.8	CARBONDALE		UNDERCLAY	3.5	136.2
284.3	CARBONDALE		SHALE WITH LIMESTONE	3.3	139.7

MAPID: 16302417000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 7 QUARTERS/FOOTAGES: 18' N line, 624' W line of NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.805152 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.381303 DATE COLLECTED: 8 / 30 / 1955

SURFACE ELEVATION (FT.): 411.1 LOGGED (FT.): 146.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2122 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
411.1	PLEISTOCENE		UNCONSOLIDATED	106.7	0.0	
304.4	CARBONDALE	DANVILLE	COAL	3.4	106.7	TOP ERODED
301.0	CARBONDALE		UNDERCLAY	2.8	110.1	
298.2	CARBONDALE		GRAY SHALE	3.3	112.9	
294.9	CARBONDALE	BANKSTON FORK	LIMESTONE	6.6	116.2	
288.3	CARBONDALE		DARK SHALE	8.3	122.8	ERROR IN LOG MEASUREMENT
281.0	CARBONDALE	BRERETON	ROCK	3.3	130.1	
277.8	CARBONDALE	ANNA	BLACK SHALE	2.8	133.3	
274.9	CARBONDALE	HERRIN	COAL	8.6	136.2	
266.3	CARBONDALE		UNDERCLAY	1.7	144.8	

MAPID: 16302635000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 7 QUARTERS/FOOTAGES: 193' S line, 21' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.797621 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.366806 DATE COLLECTED: 11 / 12 / 1963

SURFACE ELEVATION (FT.): LOGGED (FT.): 96.0 LOG TYPE: Drillers Log

SOURCE: SUN OIL COMPANY 15-63 WELL TYPE: Structure Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	6.0	90.0	CO 90-96' INFORMATION FROM PLUGGING AFF

MAPID: 16302989000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 7 QUARTERS/FOOTAGES: 1' S line, 1' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.797535 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.366277 DATE COLLECTED: 4 / 30 / 1969

SURFACE ELEVATION (FT.): 392.0 LOGGED (FT.): 111.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8693C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. Q-17

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
392.0	PLEISTOCENE		UNCONSOLIDATED	82.7	0.0
309.3	MODESTO	PIASA	LIMESTONE	1.8	82.7
307.5			DARK SHALE	6.9	84.5
300.6	CARBONDALE	BANKSTON FORK	LIMESTONE	0.8	91.4
299.9	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.4	92.1
298.5	CARBONDALE	BANKSTON FORK	LIMESTONE	0.6	93.5
297.9	CARBONDALE		DARK SHALE	1.7	94.1
296.2	CARBONDALE		FOSSILIFEROUS SHALE	1.8	95.8
294.4	CARBONDALE	BRERETON	LIMESTONE	2.6	97.6
291.9	CARBONDALE		SOFT SHALE	0.1	100.1
291.8	CARBONDALE	HERRIN	COAL	6.9	100.2
284.9	CARBONDALE		UNDERCLAY	2.6	107.1
282.3	CARBONDALE		LIMESTONE	1.4	109.7

MAPID: 16303008000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 7 QUARTERS/FOOTAGES: 1980' N line, 1320' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.811803 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.375891 DATE COLLECTED: 6 / 7 / 1969

SURFACE ELEVATION (FT.): 411.0 LOGGED (FT.): 136.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8906C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. E-7

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
411.0	PLEISTOCENE		UNCONSOLIDATED	105.8	0.0
305.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.1	105.8
304.1	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	3.8	106.9
300.3	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	110.7
298.7	CARBONDALE		DARK SHALE	6.6	112.3
292.1	CARBONDALE	BRERETON	LIMESTONE	3.8	118.9
288.3	CARBONDALE		CALCAREOUS SHALE	0.2	122.7
288.1	CARBONDALE	ANNA	BLACK SHALE	2.4	122.9
285.7	CARBONDALE	HERRIN	COAL	7.0	125.3
278.7	CARBONDALE		UNDERCLAY	1.9	132.3
276.8	CARBONDALE		LIMESTONE	1.8	134.2

MAPID: 16303009000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 7 QUARTERS/FOOTAGES: 1980' N line, 1320' W line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.811803

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.375891

DATE COLLECTED:

SURFACE ELEVATION (FT.): 411.0 LOGGED (FT.): 132.0

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8911C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
305.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.1	105.5	UPPER BENCH
304.4	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	3.8	106.6	SHALE PARTING
300.6	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	110.4	LOWER BENCH
299.0	CARBONDALE	LAWSON	DARK GRAY SHALE	6.6	112.0	
292.4	CARBONDALE	BRERETON	LIMESTONE	3.9	118.6	
288.6	CARBONDALE	ANNA	BLACK SHALE	2.6	122.4	
286.0	CARBONDALE	HERRIN	COAL	7.0	125.0	

MAPID: 16323904000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 7 QUARTERS/FOOTAGES: 660' N line, 2310' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.806109

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.379531

DATE COLLECTED: 6 / 4 / 1974

SURFACE ELEVATION (FT.): 412.0 LOGGED (FT.): 153.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15916C

WELL TYPE: Coal Test

COMMENT: PEABODY LOC. J-3

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
412.0	PLEISTOCENE		UNCONSOLIDATED	69.0	0.0	
343.0	PLEISTOCENE		SAND & GRAVEL	37.0	69.0	
306.0	PLEISTOCENE		CLAY	10.0	106.0	
296.0	CARBONDALE		DARK SHALE	9.2	116.0	
286.8	CARBONDALE	BRERETON	LIMESTONE	6.4	125.2	
280.4	CARBONDALE	ANNA	DARK SHALE	0.8	131.6	
279.6	CARBONDALE	HERRIN	COAL	6.4	132.4	
273.2	CARBONDALE		UNDERCLAY	0.3	138.8	
272.9	CARBONDALE		SHALE/UNDERCLAY	2.5	139.1	
270.4	CARBONDALE		GRAY SHALE	1.9	141.6	
268.5	CARBONDALE		LIMESTONE	8.0	143.5	
260.5	CARBONDALE		GRAY SHALE	1.5	151.5	

MAPID: 16302416000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 8 QUARTERS/FOOTAGES: 400' N line, 150' E line of NW NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.784293

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.380285

DATE COLLECTED: 8 / 29 / 1955

SURFACE ELEVATION (FT.): 399.3 LOGGED (FT.): 187.5

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2121

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
399.3	PLEISTOCENE		UNCONSOLIDATED	16.4	0.0	
382.9	PLEISTOCENE		SAND	62.3	16.4	
320.6	PLEISTOCENE		CLAY & GRAVEL	3.5	78.7	
317.1	MODESTO		DARK SHALE	14.2	82.2	
302.9	MODESTO		COAL	0.4	96.4	
302.5	MODESTO		GRAY SHALE	14.4	96.8	
288.1	MODESTO		LIMESTONE	0.8	111.2	
287.3	MODESTO		GRAY SHALE	4.9	112.0	
282.5	MODESTO	PIASA	LIMESTONE	1.6	116.8	
280.9	MODESTO	PIASA	LIMESTONE	2.2	118.4	
278.7			GRAY SHALE	31.7	120.6	
247.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	152.3	
244.9	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.6	154.4	
241.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.1	158.0	
238.2	CARBONDALE		GRAY SHALE	8.5	161.1	
229.7	CARBONDALE	BRERETON	SHALEY ROCK	0.9	169.6	BLACK
228.8	CARBONDALE	BRERETON	ROCK	0.9	170.5	
227.9	CARBONDALE		DARK SHALE	0.3	171.4	
227.6	CARBONDALE	ANNA	BLACK SHALE	3.4	171.7	
224.2	CARBONDALE	ANNA	CONCRETION	0.4	175.1	
223.8	CARBONDALE	ANNA	BLACK SHALE	2.3	175.5	
221.5	CARBONDALE	HERRIN	COAL	8.8	177.8	
212.6	CARBONDALE		UNDERCLAY	0.9	186.7	

MAPID: 16302993000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 8 QUARTERS/FOOTAGES: 2640' N line, 2640' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.788074

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.374092

DATE COLLECTED:

SURFACE ELEVATION (FT.): 390.0 LOGGED (FT.): 148.1

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8698C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
305.0	MODESTO	PIASA	LIMESTONE	8.8	85.0	
296.2	CARBONDALE		GRAY SHALE	26.2	93.8	
270.1	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	119.9	UPPER BENCH
268.5	CARBONDALE	BANKSTON FORK	GRAY SHALE	5.1	121.5	SHALE PARTING
263.4	CARBONDALE	BANKSTON FORK	LIMESTONE	1.1	126.6	LOWER BENCH
262.3	CARBONDALE	LAWSON	DARK GRAY SHALE	3.9	127.7	
258.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	8.2	131.5	
250.3	CARBONDALE	ANNA	BLACK SHALE	0.9	139.7	
249.0	CARBONDALE	HERRIN	COAL	7.1	141.0	

MAPID: 16323876000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 8 QUARTERS/FOOTAGES: 1980' N line, 1' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.778879

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.375942

DATE COLLECTED: 3 / 1 / 1973

SURFACE ELEVATION (FT.): 401.0 LOGGED (FT.): 203.4

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15651

WELL TYPE: Coal Test

COMMENT: PEABODY LOC. Q-7

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
401.0	PLEISTOCENE		UNCONSOLIDATED	74.7	0.0	
326.3	MODESTO		GRAY SHALE	15.9	74.7	
310.4	MODESTO		DARK SHALE	13.8	90.6	
296.6	MODESTO		GRAY SHALE	22.6	104.4	
274.0	MODESTO	PIASA	LIMESTONE	4.7	127.0	
269.3	MODESTO		GRAY SHALE	18.0	131.7	
251.3	MODESTO		DARK SHALE	5.2	149.7	DANVILLE COAL HORIZON
246.1	CARBONDALE		GRAY SHALE	7.9	154.9	
238.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	162.8	
236.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	4.0	165.0	
232.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	169.0	
230.4	CARBONDALE		DARK SHALE	6.6	170.6	
223.8	CARBONDALE	BRERETON	LIMESTONE	2.7	177.2	
221.1	CARBONDALE	ANNA	BLACK SHALE	4.5	179.9	
216.6	CARBONDALE	HERRIN	COAL W/ PYRITE	9.0	184.4	
207.6	CARBONDALE		SANDY CLAYSTONE	10.0	193.4	

MAPID: 16302634000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 9 QUARTERS/FOOTAGES: 30' S line, 2046' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.771393

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.366211

DATE COLLECTED:

SURFACE ELEVATION (FT.): 413.0

LOGGED (FT.): 188.0

LOG TYPE: Electric Log

SOURCE:

WELL TYPE: Oil and Gas Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
285.0	MODESTO	PIASA	LIMESTONE	8.0	128.0
277.0	MODESTO		DARK GRAY SHALE	14.0	136.0
263.0	CARBONDALE	DANVILLE	COAL	2.0	150.0
261.0	CARBONDALE		GRAY SHALE	4.0	152.0
257.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	156.0
253.5	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.5	159.5
251.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	162.0
249.0	CARBONDALE	LAWSON	DARK GRAY SHALE	9.0	164.0
240.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	5.0	173.0
235.0	CARBONDALE	ANNA	BLACK SHALE	1.0	178.0
232.0	CARBONDALE	HERRIN	COAL	7.0	181.0

MAPID: 16302990000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 10 QUARTERS/FOOTAGES: 2640' N line, 2310' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.751404

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.373879

DATE COLLECTED:

SURFACE ELEVATION (FT.): 411.0

LOGGED (FT.): 181.0

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8694C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
287.4	MODESTO	PIASA	LIMESTONE	8.4	123.6
279.1	CARBONDALE		GRAY SHALE	22.8	131.9
256.3	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.6	154.7 UPPER BENCH
252.7	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.9	158.3 SHALE PARTING
251.9	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	159.1 LOWER BENCH
249.6	CARBONDALE	LAWSON	DARK GRAY SHALE	8.2	161.4
241.4	CARBONDALE	LAWSON	CALCAREOUS SHALE	1.0	169.6
240.4	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	2.4	170.6
238.0	CARBONDALE	ANNA	BLACK SHALE	1.0	173.0
237.0	CARBONDALE	HERRIN	COAL	7.0	174.0

MAPID: 16303206000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 10 QUARTERS/FOOTAGES: 1' S line, 1' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.740621 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.36573 DATE COLLECTED: 10 / 13 / 1969

SURFACE ELEVATION (FT.): 401.0 LOGGED (FT.): 175.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 9083C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. Q-17

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
401.0	PLEISTOCENE		UNCONSOLIDATED	76.0	0.0
325.0	MODESTO		GRAY SHALE	39.6	76.0
285.4	MODESTO	PIASA	LIMESTONE	7.5	115.6
277.9			GRAY SHALE	23.9	123.1
254.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.2	147.0
252.8	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.3	148.2
249.5	CARBONDALE		LIMESTONE	1.6	151.5
247.9	CARBONDALE		DARK SHALE	8.4	153.1
239.5	CARBONDALE	BRERETON	LIMESTONE	2.6	161.5
236.9	CARBONDALE	ANNA	BLACK SHALE	2.1	164.1
234.9	CARBONDALE	HERRIN	COAL	6.5	166.1
228.4	CARBONDALE		UNDERCLAY	2.5	172.6

MAPID: 16323905000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 10 QUARTERS/FOOTAGES: 990' S line, 1980' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.747605 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.368553 DATE COLLECTED: 5 / 24 / 1974

SURFACE ELEVATION (FT.): 405.0 LOGGED (FT.): 193.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15915C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. K-14

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
405.0	PLEISTOCENE		UNCONSOLIDATED	17.0	0.0
388.0	PLEISTOCENE		SAND & GRAVEL	68.5	17.0
319.5	PLEISTOCENE		CLAY	41.0	85.5
278.5			LIMESTONE	7.0	126.5
271.5			GRAY SHALE	19.0	133.5
252.5			LIMESTONE	0.5	152.5
252.0			GRAY SHALE	3.5	153.0
248.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	156.5
245.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.5	160.0
243.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	161.5
241.7	CARBONDALE		DARK SHALE	10.7	163.3
231.0	CARBONDALE	BRERETON	LIMESTONE	0.5	174.0
230.5	CARBONDALE	ANNA	DARK SHALE	1.3	174.5
229.2	CARBONDALE	HERRIN	COAL	7.0	175.8
222.2	CARBONDALE		UNDERCLAY	2.1	182.8

MAPID: 16327691000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 10 QUARTERS/FOOTAGES:

QUADRANGLE: MASCOUTAH LONGITUDE: -89.759399

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.377494

DATE COLLECTED:

SURFACE ELEVATION (FT.): 408.1 LOGGED (FT.): 193.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15791C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
408.1	PLEISTOCENE		SAND/CLAY	39.0	0.0
369.1	PLEISTOCENE		SAND & GRAVEL	41.0	39.0
328.1	PLEISTOCENE		CLAY	8.5	80.0
319.6	MODESTO		GRAY SHALE	35.0	88.5
284.6	MODESTO	PIASA	LIMESTONE	10.0	123.5
274.6			GRAY SHALE	21.0	133.5
253.6	CARBONDALE		LIMESTONE	4.0	154.5
249.6	CARBONDALE		GRAY SHALE	1.8	158.5
247.8	CARBONDALE		LIMESTONE	1.5	160.3
246.3	CARBONDALE		DARK SHALE	12.3	161.8
234.0	CARBONDALE	HERRIN	COAL	7.0	174.1
227.0	CARBONDALE		UNDERCLAY	2.5	181.1
224.5	CARBONDALE		LIMESTONE	9.4	183.6

MAPID: 16327692000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 10 QUARTERS/FOOTAGES:

QUADRANGLE: ST. LIBORY LONGITUDE: -89.74546 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.371749 DATE COLLECTED:

SURFACE ELEVATION (FT.): 403.7 LOGGED (FT.): 188.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15771C WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
403.7	PLEISTOCENE		SAND/CLAY	19.5	0.0
384.2	PLEISTOCENE		SAND	49.0	19.5
335.2	PLEISTOCENE		CLAY	42.0	68.5
293.2	MODESTO		GRAY SHALE	10.7	110.5
282.5	MODESTO	PIASA	LIMESTONE	7.2	121.2
275.3			GRAY SHALE	17.6	128.4
257.7	CARBONDALE		LIMESTONE	2.0	146.0
255.7	CARBONDALE		GRAY SHALE	3.2	148.0
252.5	CARBONDALE		LIMESTONE	3.3	151.2
249.2	CARBONDALE		GRAY SHALE	1.0	154.5
248.2	CARBONDALE		LIMESTONE	1.6	155.5
246.6	CARBONDALE		DARK SHALE	9.9	157.1
236.7	CARBONDALE	BRERETON	LIMESTONE	3.3	167.0
233.4	CARBONDALE	ANNA	DARK SHALE	1.1	170.3
232.3	CARBONDALE	HERRIN	COAL	6.7	171.4
225.6	CARBONDALE		UNDERCLAY	1.0	178.1
224.6	CARBONDALE		LIMESTONE	8.9	179.1

MAPID: 16302978000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 11 QUARTERS/FOOTAGES: 2310' N line, 2310' W line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.732657 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.374255 DATE COLLECTED:

SURFACE ELEVATION (FT.): 412.0 LOGGED (FT.): 185.5 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8678C WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
286.0	MODESTO	PIASA	LIMESTONE	8.9	126.0	
277.1	MODESTO		SHALE	16.8	134.9	
260.3	CARBONDALE	DANVILLE	COAL	0.6	151.7	
259.7	CARBONDALE		GRAY SHALE	5.8	152.3	
254.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	158.0	UPPER BENCH
252.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.0	160.0	SHALE PARTING
249.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	163.0	LOWER BENCH
246.5	CARBONDALE	LAWSON	DARK GRAY SHALE	8.7	165.5	
237.8	CARBONDALE	CONANT	CARBONACEOUS LIMESTONE	0.8	174.2	
237.0	CARBONDALE	JAMESTOWN	CARBONACEOUS SHALE	0.1	175.0	
236.9	CARBONDALE		BLACK SHALE	0.2	175.1	
236.8	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.5	175.2	
236.3	CARBONDALE	ANNA	BLACK SHALE	1.4	175.7	
234.9	CARBONDALE	ENERGY	GRAY SHALE	1.0	177.1	
234.0	CARBONDALE	HERRIN	COAL	7.5	178.0	

MAPID: 16303322000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 12 QUARTERS/FOOTAGES: 2310' S line, 2310' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.712211 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.371639 DATE COLLECTED:

SURFACE ELEVATION (FT.): 422.0 LOGGED (FT.): 177.0 LOG TYPE: Electric Log

SOURCE: WELL TYPE: Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
304.0	MODESTO	PIASA	LIMESTONE	9.0	118.0	
295.0	CARBONDALE		GRAY SHALE	15.0	127.0	
280.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	14.0	142.0	
266.0	CARBONDALE	LAWSON	DARK GRAY SHALE	9.0	156.0	
257.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	3.0	165.0	
254.0	CARBONDALE	ANNA	BLACK SHALE	2.0	168.0	
252.0	CARBONDALE	HERRIN	COAL	7.0	170.0	

MAPID: 16327693000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 12 QUARTERS/FOOTAGES:

QUADRANGLE: ST. LIBORY LONGITUDE: -89.709852 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.368369 DATE COLLECTED:

SURFACE ELEVATION (FT.): 421.7 LOGGED (FT.): 194.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15752C WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
421.7	PLEISTOCENE		CLAY	19.0	0.0
402.7	PLEISTOCENE		SAND	20.0	19.0
382.7	PLEISTOCENE		CLAY	15.0	39.0
367.7	PLEISTOCENE		SAND	19.0	54.0
348.7	MODESTO		GRAY SHALE	50.7	73.0
298.0	MODESTO	PIASA	LIMESTONE	5.7	123.7
292.3			GRAY SHALE	9.4	129.4
282.9	CARBONDALE		LIMESTONE	2.2	138.8
280.7	CARBONDALE		GRAY SHALE	14.0	141.0
266.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	155.0
265.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.2	156.3
264.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	157.5
261.9	CARBONDALE		DARK SHALE	9.5	159.8
252.4	CARBONDALE	BRERETON	LIMESTONE	4.7	169.3
247.7	CARBONDALE	ANNA	DARK SHALE	2.7	174.0
245.0	CARBONDALE	HERRIN	COAL	7.0	176.7
238.0	CARBONDALE		UNDERCLAY	0.6	183.7
237.4	CARBONDALE		SHALY LIMESTONE	5.0	184.3
232.4	CARBONDALE		LIMESTONE	4.7	189.3

MAPID: 16303056000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 13 QUARTERS/FOOTAGES: 330' N line, 0' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.704089 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.364282 DATE COLLECTED:

SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 173.4 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8930C WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
297.0	MODESTO	PIASA	LIMESTONE	7.8	113.0	
289.2	CARBONDALE		GRAY SHALE	22.7	120.8	
266.5	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.8	143.5	UPPER BENCH
263.7	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.2	146.3	SHALE PARTING
262.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	147.5	LOWER BENCH
260.7	CARBONDALE	LAWSON	DARK GRAY SHALE	10.2	149.3	
250.5	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	2.6	159.5	
248.0	CARBONDALE	JAMESTOWN	CARBONACEOUS SHALE	0.6	162.0	
247.4	CARBONDALE		LIMESTONE W/ SHALE	0.9	162.6	
246.5	CARBONDALE	BRERETON	LIMESTONE	2.4	163.5	
244.1	CARBONDALE	ANNA	BLACK SHALE	1.4	165.9	
244.0	CARBONDALE	HERRIN	COAL	7.4	166.0	

MAPID: 16300128000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 14 QUARTERS/FOOTAGES: 1' N line, 1' E line of NW NW

QUADRANGLE: ST. LIBORY LONGITUDE: -89.73615 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.365629 DATE COLLECTED: 6 / 0 / 1908

SURFACE ELEVATION (FT.): 425.7 LOGGED (FT.): 192.5 LOG TYPE: Drillers Log

SOURCE: ST LIBORY COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
425.7			CLAY	19.0	0.0	
406.7			SAND	5.0	19.0	YELLOW
401.7			GRAVEL	8.0	24.0	
393.7			CLAY	42.0	32.0	YELLOW
351.7			GRAVEL	1.0	74.0	DARK
350.7			SAND	10.0	75.0	
340.7			SAND	4.0	85.0	
336.7			CLAY	26.0	89.0	BLUE
310.7			CONGLOMERATE	5.0	115.0	SLATY
305.7			BLACK SHALE	9.0	120.0	
296.7			CHERT	10.0	129.0	
286.7			BLACK SHALE	7.0	139.0	
279.7			LIMESTONE	4.0	146.0	
275.7			BLACK SHALE	2.0	150.0	
273.7			BLACK SHALE	3.0	152.0	
270.7			BLACK SHALE	15.0	155.0	
255.7			LIMESTONE	2.0	170.0	
253.7			BLACK SHALE	5.0	172.0	
248.7			CONGLOMERATE	3.5	177.0	
245.2			ROCK	4.0	180.5	BLACK
241.2	CARBONDALE	ANNA	BLACK SHALE	0.5	184.5	
240.7	CARBONDALE	HERRIN	COAL	6.5	185.0	
234.2	CARBONDALE		UNDERCLAY	1.0	191.5	

MAPID: 16300128000C VERSION: 2

PROJECT: NCRDS87

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 14 QUARTERS/FOOTAGES: 1' N line, 1' E line of NW NW

QUADRANGLE: ST. LIBORY LONGITUDE: -89.73615 GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 38.365629 DATE COLLECTED:

SURFACE ELEVATION (FT.): 425.7 LOGGED (FT.): 192.5 LOG TYPE: Drillers Log

SOURCE: ST. LIBRARY COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
425.7			UNCONSOLIDATED	89.0	0.0
336.7			UNCLASSIFIED	57.0	89.0
279.7			LIMESTONE	4.0	146.0
275.7			SHALE	20.0	150.0
255.7			LIMESTONE	2.0	170.0
253.7			SHALE	5.0	172.0
248.7			CONGLOMERATE	3.5	177.0
245.2	CARBONDALE	ANNA	BLACK SHALE	4.0	180.5
241.2	CARBONDALE		SHALE	0.5	184.5
240.7	CARBONDALE	HERRIN	COAL	6.5	185.0
234.2			UNDERCLAY	1.0	191.5

MAPID: 16300129000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 14 QUARTERS/FOOTAGES: NE NE NW

QUADRANGLE: ST. LIBORY LONGITUDE: -89.732791 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.364631 DATE COLLECTED:

SURFACE ELEVATION (FT.): 428.6 LOGGED (FT.): 213.0 LOG TYPE: Drillers Log

SOURCE: ST LIBORY COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
428.6			SOIL	2.0	0.0	
426.6			HARD PAN	18.0	2.0	YELLOW
408.6			SAND	9.0	20.0	YELLOW
399.6			CLAY	5.0	29.0	BLUE
394.6			CLAY	10.0	34.0	GRAY
384.6			CLAY	6.0	44.0	YELLOW
378.6			SAND	3.0	50.0	
375.6			CLAY	10.0	53.0	BLUE
365.6			CLAY	10.0	63.0	YELLOW
355.6			SANDY CLAY	5.0	73.0	YELLOW
350.6			SAND	19.0	78.0	
331.6			SHALE	26.0	97.0	BLUE
305.6			UNDERCLAY	17.0	123.0	
288.6			CHERT	10.0	140.0	
278.6			UNDERCLAY	4.0	150.0	
274.6			BLACK SHALE	16.0	154.0	
258.6			COAL	1.0	170.0	
257.6			ROCK	2.0	171.0	
255.6			UNDERCLAY	3.0	173.0	
252.6			ROCK	5.0	176.0	
247.6			BLACK SHALE	6.0	181.0	
241.6			CHERT	8.0	187.0	BLACK
233.6	CARBONDALE	ANNA	BLACK SHALE	1.0	195.0	TO COAL
232.6	CARBONDALE	HERRIN	COAL	7.0	196.0	#6 F.W.D. AND KAY
225.6	CARBONDALE		UNDERCLAY	2.0	203.0	
223.6	CARBONDALE		ROCK	8.0	205.0	

MAPID: 1630300000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 14 QUARTERS/FOOTAGES: 0' S line, 0' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.722431

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.350427

DATE COLLECTED:

SURFACE ELEVATION (FT.): 423.0 LOGGED (FT.): 197.3

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8705C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
284.0	MODESTO	PIASA	LIMESTONE	7.8	139.0	
276.2	MODESTO		GRAY SHALE	10.3	146.8	
265.9	CARBONDALE	DANVILLE	DARK GRAY SHALE	6.7	157.1	
259.2	CARBONDALE		GRAY SHALE	6.8	163.8	
252.4	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	170.6	UPPER BENCH
250.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.1	173.0	SHALE PARTING
246.9	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	176.1	LOWER BENCH
244.4	CARBONDALE	LAWSON	DARK GRAY SHALE	6.6	178.6	
237.8	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.2	185.2	
237.6	CARBONDALE		CALCAREOUS SHALE	0.6	185.4	
237.0	CARBONDALE	BRERETON	LIMESTONE	0.4	186.0	
236.6	CARBONDALE	ANNA	BLACK SHALE	2.4	186.4	
233.0	CARBONDALE	HERRIN	COAL	7.3	190.0	

MAPID: 16303115000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 15 QUARTERS/FOOTAGES: 2310' S line, 2310' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.751286

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.357135

DATE COLLECTED:

SURFACE ELEVATION (FT.): 389.0 LOGGED (FT.): 164.1

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 9082C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
279.0	MODESTO	PIASA	LIMESTONE	4.4	110.0	
274.6	CARBONDALE		GRAY SHALE	26.6	114.4	
248.1	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	140.9	
246.2	CARBONDALE	LAWSON	DARK GRAY SHALE	12.1	142.8	
234.1	CARBONDALE	CONANT	CARBONACEOUS LIMESTONE	0.4	154.9	
233.7	CARBONDALE	BRERETON	LIMESTONE	1.8	155.3	
231.9	CARBONDALE	ANNA	DARK GRAY SHALE	0.6	157.1	
231.0	CARBONDALE	HERRIN	COAL	6.1	158.0	

MAPID: 16300130000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 16 QUARTERS/FOOTAGES: NE NW NE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.765438 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.365104 DATE COLLECTED: 5 / 0 / 1908

SURFACE ELEVATION (FT.): 412.4 LOGGED (FT.): 198.0 LOG TYPE: Drillers Log

SOURCE: UNKNOWN WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
412.4			CLAY	25.0	0.0	YELLOW
387.4			SANDY CLAY	8.5	25.0	
378.9			SAND	11.0	33.5	RED
367.9			SAND	30.5	44.5	
337.4			GRAVEL	4.0	75.0	
333.4			SAND	2.0	79.0	
331.4			BLACK SHALE	8.5	81.0	
322.9			LIMESTONE	2.5	89.5	
320.4			BLACK SHALE	32.0	92.0	
288.4			LIMESTONE	2.0	124.0	
286.4			BLACK SHALE	8.0	126.0	
278.4			LIMESTONE	8.5	134.0	
269.9			SHALE	12.0	142.5	
257.9			BLACK SHALE	3.0	154.5	
254.9			BLACK SHALE	3.0	157.5	
251.9			SHALE	7.0	160.5	
244.9			LIMESTONE	3.0	167.5	
241.9			BLACK SHALE	7.0	170.5	
234.9			SHALE	5.0	177.5	
229.9			ROCK	4.0	182.5	BLACK
225.9	CARBONDALE	HERRIN	COAL	7.5	186.5	
218.4	CARBONDALE		UNDERCLAY	4.0	194.0	

MAPID: 16303114000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 16 QUARTERS/FOOTAGES: 990' S line, 2640' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.768604 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.353664 DATE COLLECTED:

SURFACE ELEVATION (FT.): 387.0 LOGGED (FT.): 153.5 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 9081C WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
290.0	MODESTO	PIASA	LIMESTONE	6.5	97.0	
283.5	CARBONDALE		GRAY SHALE	21.9	103.5	
261.6	CARBONDALE	BANKSTON FORK	LIMESTONE	3.1	125.4	UPPER BENCH
258.5	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.4	128.5	SHALE PARTING
255.1	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	131.9	LOWER BENCH
253.5	CARBONDALE	LAWSON	DARK GRAY SHALE	8.0	133.5	
245.5	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	1.8	141.5	
243.8	CARBONDALE	JAMESTOWN	CARBONACEOUS SHALE	0.6	143.2	
243.2	CARBONDALE	BRERETON	LIMESTONE	0.7	143.8	
242.5	CARBONDALE	ENERGY	CALCAREOUS SHALE	1.9	144.5	
240.7	CARBONDALE	ENERGY	LIMESTONE/UNDERCLAY	0.4	146.3	
240.0	CARBONDALE	HERRIN	COAL	6.5	147.0	

MAPID: 16303116000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 16 QUARTERS/FOOTAGES: 1' N line, 990' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.775096 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.366169 DATE COLLECTED: 10 / 3 / 1969

SURFACE ELEVATION (FT.): 415.0 LOGGED (FT.): 190.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 9080C WELL TYPE: Coal Test

COMMENT: PEABODY LOC. D-1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.0	PLEISTOCENE		UNCONSOLIDATED	83.0	0.0	
332.0	MODESTO		GRAY SHALE	44.6	83.0	
287.4	MODESTO	PIASA	LIMESTONE	8.6	127.6	
278.8			GRAY SHALE	23.3	136.2	
255.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	159.5	
253.9	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.3	161.1	
250.6	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	164.4	
248.7	CARBONDALE		DARK SHALE	7.6	166.3	
241.1	CARBONDALE	BRERETON	LIMESTONE	4.6	173.9	
236.6	CARBONDALE	ANNA	BLACK SHALE	2.1	178.4	
234.5	CARBONDALE	HERRIN	COAL	7.2	180.5	
227.4	CARBONDALE		UNDERCLAY	2.5	187.6	

MAPID: 16302633000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 2S 6W **SECTION:** 17 **QUARTERS/FOOTAGES:** SW NE SW
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.791427 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.356052 **DATE COLLECTED:** 12 / 10 / 1963
SURFACE ELEVATION (FT.): 390.0 **LOGGED (FT.):** 153.0 **LOG TYPE:** Drillers Log
SOURCE: SUN OIL COMPANY 17-63 **WELL TYPE:** Structure Test
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
245.0	CARBONDALE	HERRIN	COAL	8.0	145.0	CO - 145'-153' INFO FROM PLUGGING AFFIV

MAPID: 16302991000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 2S 6W **SECTION:** 17 **QUARTERS/FOOTAGES:** 2640' N line, 1650' E line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.784254 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.358944 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 380.0 **LOGGED (FT.):** 138.8 **LOG TYPE:** Survey Core Study
SOURCE: PEABODY COAL CO. 8695C **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
296.0	MODESTO	PIASA	LIMESTONE	6.7	84.0	
289.3	CARBONDALE		GRAY SHALE	22.6	90.7	
266.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.9	113.3	UPPER BENCH
263.8	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.7	116.2	SHALE PARTING
261.1	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	118.9	LOWER BENCH
259.2	CARBONDALE	LAWSON	DARK GRAY SHALE	9.4	120.8	
249.8	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.5	130.2	
249.3	CARBONDALE	JAMESTOWN	CARBONACEOUS SHALE	0.2	130.7	
249.2	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.5	130.8	
248.6	CARBONDALE	ANNA	BLACK SHALE	1.7	131.4	
248.0	CARBONDALE	HERRIN	COAL	6.8	132.0	

MAPID: 16302632000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 2S 6W **SECTION:** 18 **QUARTERS/FOOTAGES:** 260' N line, 40' E line of SW
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.80686 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.358332 **DATE COLLECTED:** 12 / 3 / 1963
SURFACE ELEVATION (FT.): 386.0 **LOGGED (FT.):** 188.0 **LOG TYPE:** Drillers Log
SOURCE: SUN OIL COMPANY 18-63 **WELL TYPE:** Structure Test
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
280.0	CARBONDALE	HERRIN	COAL	5.0	106.0	
201.0	CARBONDALE	SPRINGFIELD	COAL	3.0	185.0	CO-1-6-111-185-188' INFO PLUGGING AFFIV

MAPID: 16302992000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 18 QUARTERS/FOOTAGES: 2640' N line, 2640' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.806649

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.359091

DATE COLLECTED:

SURFACE ELEVATION (FT.): 387.0 LOGGED (FT.): 112.0

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8697C

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
331.0	MODESTO	PIASA	LIMESTONE	8.2	56.0
322.8	MODESTO		DARK GRAY SHALE	13.5	64.2
309.3	CARBONDALE	DANVILLE	COAL	2.4	77.7
306.9	CARBONDALE		GRAY SHALE	9.7	80.1
297.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.7	89.8
295.5	CARBONDALE	LAWSON	DARK GRAY SHALE	3.7	91.5
291.8	CARBONDALE	CONANT	LIMESTONE	0.6	95.2
291.2	CARBONDALE	JAMESTOWN	BONE COAL	0.2	95.8
291.0	CARBONDALE		LIMESTONE W/ SHALE	6.7	96.0
284.3	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	2.5	102.7
281.8	CARBONDALE	ANNA	GRAY SHALE	0.2	105.2
281.0	CARBONDALE	HERRIN	COAL	6.0	106.0

MAPID: 16302996000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 20 QUARTERS/FOOTAGES: 330' N line, 1650' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.784136

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.350372

DATE COLLECTED:

SURFACE ELEVATION (FT.): 382.0 LOGGED (FT.): 177.4

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8701C

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN COMMENT	
267.0	MODESTO	PIASA	LIMESTONE	8.6	115.0	
258.4	MODESTO		SHALE	15.7	123.6	
242.7	CARBONDALE	DANVILLE	COAL	0.8	139.3	
241.9	CARBONDALE		GRAY SHALE	5.2	140.1	
236.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.4	145.3	UPPER BENCH
233.3	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	3.1	148.7	SHALE PARTING
230.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	151.8	LOWER BENCH
228.2	CARBONDALE	LAWSON	DARK GRAY SHALE	7.0	153.8	
221.2	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.7	160.8	
220.5	CARBONDALE		DARK GRAY SHALE	0.4	161.5	
220.1	CARBONDALE	BRERETON	LIMESTONE	4.9	161.9	
215.2	CARBONDALE	ANNA	BLACK SHALE	2.6	166.8	
212.0	CARBONDALE	HERRIN	COAL	7.4	170.0	

MAPID: 16300132000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 21 QUARTERS/FOOTAGES: NW NE SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.772327 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.342684 DATE COLLECTED: 8 / 0 / 1907

SURFACE ELEVATION (FT.): 428.5 LOGGED (FT.): 179.5 LOG TYPE: Drillers Log

SOURCE: M W BORDERS ET AL 2 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
428.5			UNKNOWN	173.0	0.0	
255.5	CARBONDALE	HERRIN	COAL	6.5	173.0	

MAPID: 16303063000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 21 QUARTERS/FOOTAGES: 2640' N line, 2640' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.768503 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.34364 DATE COLLECTED:

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 191.7 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8915C WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
286.0	MODESTO	PIASA	LIMESTONE	9.0	134.0	
277.0	CARBONDALE		GRAY SHALE	22.0	143.0	
255.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	165.0	UPPER BENCH
252.6	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.2	167.4	SHALE PARTING
249.4	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	170.6	LOWER BENCH
247.5	CARBONDALE	LAWSON	DARK GRAY SHALE	7.1	172.5	
240.4	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.3	179.6	
240.1	CARBONDALE		CALCAREOUS SHALE	0.2	179.9	
239.9	CARBONDALE	BRERETON	LIMESTONE	1.2	180.1	
238.7	CARBONDALE	ANNA	BLACK SHALE	3.3	181.3	
235.0	CARBONDALE	HERRIN	COAL	6.7	185.0	

MAPID: 16300133000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 22 QUARTERS/FOOTAGES: NE SW SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.755775 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.338785 DATE COLLECTED: 8 / 0 / 1907

SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 174.5 LOG TYPE: Drillers Log

SOURCE: M W BORDERS ET AL WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
410.0			SOIL	34.0	0.0	
376.0			SANDY CLAY	12.0	34.0	
364.0			UNDERCLAY	10.0	46.0	RED
354.0			SANDSTONE	12.0	56.0	
342.0			SHALE	28.0	68.0	
314.0			SANDSTONE	4.0	96.0	
310.0			SHALE	3.0	100.0	
307.0			LIMESTONE	2.0	103.0	
305.0			SHALE	1.0	105.0	
304.0			LIMESTONE	13.0	106.0	
291.0			SANDY SHALE	11.0	119.0	
280.0			SHALE	3.0	130.0	BLACK
277.0	CARBONDALE	DANVILLE	COAL	1.0	133.0	
276.0	CARBONDALE		UNDERCLAY	0.5	134.0	
275.5	CARBONDALE		SHALE	4.0	134.5	
271.5	CARBONDALE		LIMESTONE	7.0	138.5	
264.5	CARBONDALE		SHALE	4.0	145.5	BLACK
260.5	CARBONDALE		LIMESTONE	1.0	149.5	
259.5	CARBONDALE		SHALE	2.0	150.5	LIGHT
257.5	CARBONDALE		LIMESTONE	2.0	152.5	
255.5	CARBONDALE		DARK SHALE	3.0	154.5	
252.5	CARBONDALE		LIMESTONE	3.5	157.5	
249.0	CARBONDALE		CLAYSTONE	1.0	161.0	
248.0	CARBONDALE	HERRIN	COAL	6.5	162.0	
241.5	CARBONDALE		UNDERCLAY	1.0	168.5	
240.5	CARBONDALE		SHALE	5.0	169.5	

MAPID: 16303001000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 22 QUARTERS/FOOTAGES: 0' N line, 0' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.740795

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.35084

DATE COLLECTED:

SURFACE ELEVATION (FT.): 391.0 LOGGED (FT.): 139.9

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8706C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
310.0	MODESTO	PIASA	LIMESTONE	9.3	81.0
300.7	MODESTO		GRAY SHALE	12.1	90.3
288.6	CARBONDALE	DANVILLE	DARK GRAY SHALE	5.0	102.4
283.6	CARBONDALE		GRAY SHALE	5.4	107.4
278.2	CARBONDALE	BANKSTON FORK	LIMESTONE	6.4	112.8
271.8	CARBONDALE	LAWSON	DARK GRAY SHALE	7.5	119.2
264.3	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	1.3	126.7
263.0	CARBONDALE		CALCAREOUS SHALE	0.5	128.0
262.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	1.3	128.5
261.1	CARBONDALE	ENERGY	GRAY SHALE	3.5	129.9
258.0	CARBONDALE	HERRIN	COAL	6.9	133.0

MAPID: 16327694000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 22 QUARTERS/FOOTAGES:

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.75049

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.33603

DATE COLLECTED:

SURFACE ELEVATION (FT.): 406.3 LOGGED (FT.): 152.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15768C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
322.8	MODESTO	PIASA	LIMESTONE	9.0	83.5
313.8			GRAY SHALE	20.2	92.5
293.6	CARBONDALE		LIMESTONE	3.3	112.7
290.3	CARBONDALE		GRAY SHALE	3.0	116.0
287.3	CARBONDALE		LIMESTONE	2.5	119.0
284.8	CARBONDALE		DARK SHALE	12.2	121.5
272.6	CARBONDALE	HERRIN	COAL	6.7	133.7
265.9	CARBONDALE		UNDERCLAY	1.1	140.4
264.8	CARBONDALE		SHALE WITH LIMESTONE	6.9	141.5
257.9	CARBONDALE		LIMESTONE	3.6	148.4

MAPID: 16300442000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 23 QUARTERS/FOOTAGES: 860' S line, 2680' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.731853 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.338029 DATE COLLECTED:

SURFACE ELEVATION (FT.): 860.0 LOGGED (FT.): 0.0 LOG TYPE: Drillers Log

SOURCE: ST LIBORY COAL CO. WELL TYPE: Coal Test

COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
860.0			UNKNOWN	0.0	0.0	SMALL DEPRESSION IN GROUND

MAPID: 16302274000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 23 QUARTERS/FOOTAGES: SE SE SE

QUADRANGLE: ST. LIBORY LONGITUDE: -89.723614 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.336411 DATE COLLECTED: 0 / 0 / 1930

SURFACE ELEVATION (FT.): 430.0 LOGGED (FT.): 200.0 LOG TYPE: Drillers Log

SOURCE: THE OHIO OIL COMPANY 5 WELL TYPE: Structure Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
300.0			LIMESTONE	5.0	130.0	DARK
295.0			MUDSTONE	5.0	135.0	LT GY
290.0			LIMESTONE	2.0	140.0	LT GY
288.0			LIMESTONE	5.0	142.0	GRAY
283.0			LIMESTONE	5.0	147.0	GRAY
278.0			CALCAREOUS SHALE	5.0	152.0	
273.0			LIMESTONE	3.0	157.0	
270.0			SHALE	3.0	160.0	
267.0			CALCAREOUS SHALE	6.0	163.0	
261.0			LIMESTONE	7.0	169.0	WHITE
254.0			CALCAREOUS SHALE	9.0	176.0	
245.0	CARBONDALE	ANNA	SHALE	7.0	185.0	TOP OF NO. 6 COAL; BL
238.0	CARBONDALE	HERRIN	COAL	7.0	192.0	ELEVATION TOP OF #6 COAL 238'
231.0	CARBONDALE		UNDERCLAY	1.0	199.0	

MAPID: 16302275000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 23 QUARTERS/FOOTAGES: SE SW

QUADRANGLE: ST. LIBORY LONGITUDE: -89.733993 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.337575 DATE COLLECTED: 0 / 0 / 1930

SURFACE ELEVATION (FT.): 424.0 LOGGED (FT.): 172.0 LOG TYPE: Drillers Log

SOURCE: THE OHIO OIL COMPANY 6 WELL TYPE: Structure Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
305.0			LIMESTONE	9.0	119.0	WHITE
296.0			CALCAREOUS SHALE	8.0	128.0	
288.0			CALCAREOUS SHALE	6.0	136.0	
282.0			LIMESTONE	3.0	142.0	GRAY
279.0			CALCAREOUS SHALE	4.0	145.0	
275.0			LIMESTONE	4.0	149.0	GRAY
271.0			CALCAREOUS SHALE	4.0	153.0	
267.0	CARBONDALE	BRERETON	ARGILLACEOUS LIMESTONE	5.0	157.0	AT 108' GRAY ARG LS; GY
262.0	CARBONDALE	ANNA	SHALE	3.0	162.0	ARENACEOUS PYRITIFEROUS SHALE; BK
259.0	CARBONDALE	HERRIN	COAL	6.0	165.0	ELEVATION TOP #6 COAL 259'
253.0	CARBONDALE		UNDERCLAY	1.0	171.0	

MAPID: 16302984000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 23 QUARTERS/FOOTAGES: 2640' N line, 2310' W line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.732767 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.34337 DATE COLLECTED:

SURFACE ELEVATION (FT.): 417.0 LOGGED (FT.): 150.6 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8688C WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
324.0	MODESTO	PIASA	LIMESTONE	6.9	93.0	
317.1	MODESTO		LIMESTONE W/ SHALE	16.1	99.9	
301.0	CARBONDALE	DANVILLE	COAL	0.5	116.0	
300.5	CARBONDALE		GRAY SHALE	6.8	116.5	
293.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	123.3	UPPER BENCH
290.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.9	126.8	SHALE PARTING
287.3	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	129.7	LOWER BENCH
285.2	CARBONDALE	LAWSON	DARK GRAY SHALE	9.7	131.8	
275.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.8	141.5	
274.7	CARBONDALE	ANNA	BLACK SHALE	0.6	142.3	
274.0	CARBONDALE	HERRIN	COAL	7.6	143.0	

MAPID: 16303190000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 23 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: ST. LIBORY LONGITUDE: -89.739704 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.344255 DATE COLLECTED: 9 / 3 / 1970

SURFACE ELEVATION (FT.): 421.0 LOGGED (FT.): 400.0 LOG TYPE: Drillers Log

SOURCE: THOMAS L LANG 1 WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
421.0			SANDY CLAY	85.0	0.0	
336.0			SHALE WITH LIMESTONE	8.0	85.0	
328.0			LIMESTONE	15.0	93.0	CUTLER LIME; BR
313.0			SHALE	10.0	108.0	
303.0	CARBONDALE	DANVILLE	COAL	2.0	118.0	
301.0	CARBONDALE	DANVILLE	COAL WITH SHALE	2.0	120.0	
299.0	CARBONDALE	DANVILLE	COAL	2.0	122.0	
297.0	CARBONDALE		SHALE	8.0	124.0	
289.0	CARBONDALE		LIMESTONE	4.0	132.0	
285.0	CARBONDALE		SHALE	2.0	136.0	
283.0	CARBONDALE		LIMESTONE	4.0	138.0	
279.0	CARBONDALE	HERRIN	COAL	6.0	142.0	THICKNESS NOT PRECISE
273.0	CARBONDALE		SHALE	2.0	148.0	
271.0	CARBONDALE		LIMESTONE	2.0	150.0	
269.0	CARBONDALE		SHALE	10.0	152.0	
259.0	CARBONDALE		SHALE WITH LIMESTONE	2.0	162.0	
257.0	MISSISSIPPIAN		LIMESTONE	12.0	164.0	
245.0	MISSISSIPPIAN		SHALE WITH LIMESTONE	6.0	176.0	
239.0	MISSISSIPPIAN		LIMESTONE	18.0	182.0	
221.0	MISSISSIPPIAN		SHALE WITH LIMESTONE	26.0	200.0	
195.0			SHALE	2.0	226.0	
193.0	MISSISSIPPIAN		SHALE	60.0	228.0	
133.0	MISSISSIPPIAN		SHALE WITH LIMESTONE	6.0	288.0	
127.0	MISSISSIPPIAN		SHALE	2.0	294.0	
125.0	MISSISSIPPIAN		LIMESTONE	2.0	296.0	
123.0	MISSISSIPPIAN		LIMESTONE	4.0	298.0	
119.0	MISSISSIPPIAN		LIMESTONE	2.0	302.0	
117.0	MISSISSIPPIAN		SHALE	30.0	304.0	
87.0	MISSISSIPPIAN		SANDY SHALE	4.0	334.0	
83.0	MISSISSIPPIAN		SHALE	4.0	338.0	
79.0	MISSISSIPPIAN		SANDSTONE	12.0	342.0	
67.0	MISSISSIPPIAN		SANDY SHALE	8.0	354.0	
59.0	MISSISSIPPIAN		SHALE	18.0	362.0	
41.0	MISSISSIPPIAN		SHALE WITH LIMESTONE	20.0	380.0	

MAPID: 16303117000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 24 QUARTERS/FOOTAGES: 660' N line, 0' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.703839

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.347994

DATE COLLECTED:

SURFACE ELEVATION (FT.): 430.0 LOGGED (FT.): 217.0

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 9073C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
279.0	MODESTO	PIASA	LIMESTONE	5.4	151.0	
273.6	CARBONDALE		GRAY SHALE	30.6	156.4	
243.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	187.0	UPPER BENCH
241.8	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.5	188.2	SHALE PARTING
238.3	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	191.7	LOWER BENCH
236.8	CARBONDALE	LAWSON	DARK GRAY SHALE	8.5	193.2	
228.3	CARBONDALE	CONANT	LIMESTONE W/ SHALE	2.3	201.7	
226.0	CARBONDALE		CALCAREOUS SHALE	1.1	204.0	
225.0	CARBONDALE	BRERETON	LIMESTONE	2.7	205.0	
222.3	CARBONDALE	ANNA	BLACK SHALE	1.7	207.7	
220.0	CARBONDALE	HERRIN	COAL	7.0	210.0	

MAPID: 16327695000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 24 QUARTERS/FOOTAGES: 2640' N line, 0' W line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.722447 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.343139 DATE COLLECTED:

SURFACE ELEVATION (FT.): 429.6 LOGGED (FT.): 200.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16551C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
429.6	PLEISTOCENE		UNCONSOLIDATED	16.0	0.0	
413.6	MODESTO		SANDSTONE	6.0	16.0	
407.6	MODESTO		SILTSTONE	58.0	22.0	
349.6	MODESTO		GRAY SHALE	16.0	80.0	
333.6	MODESTO		LIMESTONE	1.0	96.0	
332.6	MODESTO		SHALE	3.0	97.0	
329.6	MODESTO		SHALE WITH LIMESTONE	23.0	100.0	
306.6	MODESTO		SILTSTONE	6.0	123.0	
300.6	MODESTO		DARK SHALE	1.0	129.0	
299.6	MODESTO		SHALE & SANDSTONE	3.0	130.0	
296.6	MODESTO		UNCLASSIFIED	4.4	133.0	LOG SAYS "DRIFT"
292.2	MODESTO	PIASA	LIMESTONE	10.8	137.4	
281.4	MODESTO		SHALE WITH LIMESTONE	8.2	148.2	
273.2	MODESTO		DARK SHALE	0.6	156.4	
272.6	MODESTO		BLACK SHALE	1.4	157.0	
271.2	CARBONDALE		GRAY SHALE	5.4	158.4	
265.8	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	6.2	163.8	
259.6	CARBONDALE		GRAY SHALE	2.0	170.0	
257.6	CARBONDALE		DARK SHALE	5.9	172.0	
251.7	CARBONDALE	CONANT	LIMESTONE	1.0	177.9	
250.7	CARBONDALE		CALCAREOUS SHALE	1.5	178.9	
249.2	CARBONDALE		SHALY LIMESTONE	1.7	180.4	
247.5	CARBONDALE		DARK SHALE	1.6	182.1	
245.9	CARBONDALE	BRERETON	LIMESTONE	3.9	183.7	
242.0	CARBONDALE	HERRIN	COAL	6.5	187.6	
235.5	CARBONDALE		UNCLASSIFIED	2.9	194.1	
232.6	CARBONDALE		UNDERCLAY	1.2	197.0	
231.4	CARBONDALE		LIMESTONE	2.3	198.2	

MAPID: 16303118000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 25 QUARTERS/FOOTAGES: 0' N line, 0' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.703802 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.334803 DATE COLLECTED:

SURFACE ELEVATION (FT.): 431.0 LOGGED (FT.): 210.3 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 9009C WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
273.0	MODESTO	PIASA	LIMESTONE	3.8	158.0	
269.2	CARBONDALE		GRAY SHALE	18.1	161.8	
251.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	179.9	UPPER BENCH
249.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.5	182.0	SHALE PARTING
245.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	185.5	LOWER BENCH
243.5	CARBONDALE	LAWSON	DARK GRAY SHALE	8.7	187.5	
234.8	CARBONDALE	CONANT	LIMESTONE W/ SHALE	2.3	196.2	
232.5	CARBONDALE		DARK GRAY SHALE	0.3	198.5	
232.2	CARBONDALE	BRERETON	LIMESTONE	3.6	198.8	
228.6	CARBONDALE	ANNA	DARK GRAY SHALE	0.9	202.4	
228.0	CARBONDALE	HERRIN	COAL	7.3	203.0	

MAPID: 16300135000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 26 QUARTERS/FOOTAGES: 100' S line, 3350' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.734058 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.321049 DATE COLLECTED: 10 / 0 / 1907

SURFACE ELEVATION (FT.): 414.6 LOGGED (FT.): 131.5 LOG TYPE: Drillers Log

SOURCE: M W BORDERS & OTHERS WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
414.6			CLAY	20.0	0.0	YELLOW
394.6			SHALE	47.0	20.0	
347.6			ROCK	10.0	67.0	
337.6			ROCK	1.0	77.0	
336.6			LIMESTONE	7.0	78.0	
329.6			CLAYSTONE	17.0	85.0	
312.6			LIMESTONE	5.0	102.0	
307.6			SHALE	5.0	107.0	
302.6			ROCK	2.5	112.0	
300.1	CARBONDALE	ANNA	SHALE	8.0	114.5	
292.1	CARBONDALE	HERRIN	COAL	7.5	122.5	
284.6	CARBONDALE		UNDERCLAY	1.5	130.0	

MAPID: 16303006000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 26 QUARTERS/FOOTAGES: 0' S line, 0' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.722314 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.320611 DATE COLLECTED:

SURFACE ELEVATION (FT.): 437.0 LOGGED (FT.): 164.7 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8904C WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
321.0	MODESTO	PIASA	LIMESTONE	6.8	116.0	
314.2	CARBONDALE		SILTY SHALE	13.5	122.8	
300.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	136.3	UPPER BENCH
298.8	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.1	138.2	SHALE PARTING
295.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	141.3	LOWER BENCH
293.9	CARBONDALE	LAWSON	DARK GRAY SHALE	7.0	143.1	
286.9	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	1.0	150.1	
285.9	CARBONDALE		LIMESTONE W/ SHALE	1.0	151.1	
284.9	CARBONDALE	BRERETON	LIMESTONE	4.0	152.1	
280.9	CARBONDALE	ANNA	BLACK SHALE	1.9	156.1	
279.0	CARBONDALE	HERRIN	COAL	6.7	158.0	

MAPID: 16327696000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 26 QUARTERS/FOOTAGES: 2640' N line, 1' W line
QUADRANGLE: ST. LIBORY LONGITUDE: -89.740991 GEOLOGIST: CHENOWETH
CONFIDENTIAL: N LATITUDE: 38.328563 DATE COLLECTED:
SURFACE ELEVATION (FT.): 406.8 LOGGED (FT.): 126.4 LOG TYPE: Drillers Log
SOURCE: PEABODY COAL CO. 16553C WELL TYPE: Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
406.8	PLEISTOCENE		UNCONSOLIDATED	65.0	0.0
341.8	PLEISTOCENE		GRAVEL	2.6	65.0
339.2	MODESTO	PIASA	LIMESTONE	6.4	67.6
332.8	MODESTO		DARK SHALE	4.0	74.0
328.8	MODESTO		GRAY SHALE	6.0	78.0
322.8	MODESTO		DARK SHALE	3.4	84.0
319.4	CARBONDALE		GRAY SHALE	5.8	87.4
313.6	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	93.2
311.8	CARBONDALE		GRAY SHALE	3.0	95.0
308.8	CARBONDALE		DARK SHALE	4.2	98.0
304.6	CARBONDALE	CONANT	LIMESTONE	0.6	102.2
304.0	CARBONDALE		CALCAREOUS SHALE	1.6	102.8
302.4	CARBONDALE		DARK SHALE	2.0	104.4
300.4	CARBONDALE	BRERETON	LIMESTONE	4.8	106.4
295.6	CARBONDALE		GRAY SHALE	0.4	111.2
295.2	CARBONDALE	HERRIN	COAL	6.8	111.6
288.4	CARBONDALE		UNDERCLAY	0.7	118.4
287.7	CARBONDALE		SHALE WITH LIMESTONE	1.9	119.1
285.9	CARBONDALE		UNCLASSIFIED	0.3	120.9
285.5	CARBONDALE		SHALE WITH LIMESTONE	1.1	121.3
284.4	CARBONDALE		SHALE WITH LIMESTONE	1.1	122.4
283.4	CARBONDALE		SHALY LIMESTONE	0.5	123.4
282.9	CARBONDALE		GRAY SHALE	2.5	123.9

MAPID: 16300136000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 27 QUARTERS/FOOTAGES: 250' N line, 2200' E line

QUADRANGLE: ST. LIBORY

LONGITUDE: -89.748647

GEOLOGIST: HINES

CONFIDENTIAL: N

LATITUDE: 38.335253

DATE COLLECTED: 4 / 0 / 1907

SURFACE ELEVATION (FT.): 415.2

LOGGED (FT.): 140.3

LOG TYPE: Drillers Log

SOURCE: M W BORDERS & OTHERS

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.2			SOIL	5.0	0.0	
410.2			CLAY	43.0	5.0	BLUE
367.2			CLAY	32.0	48.0	YELLOW
335.2			CLAY	6.0	80.0	
329.2			LIMESTONE	5.0	86.0	
324.2			CLAYSTONE	12.0	91.0	BLUE
312.2			SHALE	2.0	103.0	
310.2			CLAYSTONE	8.0	105.0	LS
302.2			LIMESTONE	1.5	113.0	
300.7			UNDERCLAY	1.0	114.5	
299.7			LIMESTONE	3.5	115.5	
296.2			SHALE	6.0	119.0	
290.2			SHALE	2.0	125.0	
288.2			ROCK	4.0	127.0	
284.2	CARBONDALE	HERRIN	COAL	8.3	131.0	
275.9	CARBONDALE		UNDERCLAY	1.0	139.3	

MAPID: 16300137000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 27 QUARTERS/FOOTAGES: SE NE NW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.751191

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.33316

DATE COLLECTED: 2 / 1 / 1908

SURFACE ELEVATION (FT.): 420.9

LOGGED (FT.): 160.0

LOG TYPE: Drillers Log

SOURCE: DAVID THOMAS

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
420.9			SOIL	5.0	0.0	
415.9			CLAY	13.0	5.0	YELLOW
402.9			CLAY	10.0	18.0	BLUE
392.9			SANDY CLAY	15.0	28.0	
377.9			GRAVEL	1.5	43.0	
376.4			CLAY	3.0	44.5	BLUE
373.4			SANDY CLAY	6.5	47.5	
366.9			SANDY CLAY	24.0	54.0	RED
342.9			SAND & GRAVEL	9.0	78.0	
333.9			SHALE	7.0	87.0	
326.9			CLAYSTONE	8.0	94.0	YELLOW
318.9			ROCK	4.5	102.0	
314.4			CLAYSTONE	3.0	106.5	BLUE
311.4			CLAYSTONE	2.0	109.5	RED
309.4			LIMESTONE	1.5	111.5	
307.9			ROCK	9.0	113.0	
298.9			BLACK SHALE	0.5	122.0	
298.4	CARBONDALE	DANVILLE	COAL	1.0	122.5	
297.4	CARBONDALE		UNDERCLAY	0.5	123.5	
296.9	CARBONDALE		SHALE	10.0	124.0	
286.9	CARBONDALE		LIMESTONE	2.0	134.0	
284.9	CARBONDALE		CLAYSTONE	5.0	136.0	BLUE
279.9	CARBONDALE		LIMESTONE	11.0	141.0	
268.9	CARBONDALE	HERRIN	COAL	7.0	152.0	
261.9	CARBONDALE		UNDERCLAY	1.0	159.0	

MAPID: 16301048000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 27 QUARTERS/FOOTAGES: 50' N line, 930' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.755919

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.335894

DATE COLLECTED: 7 / 1 / 1918

SURFACE ELEVATION (FT.): 411.8 LOGGED (FT.): 114.0

LOG TYPE: Drillers Log

SOURCE: ALUMINUM ORE CO 21

WELL TYPE: Coal Test

COMMENT: DIAMOND DRILL , SEE MAP #21-58

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
411.8			SOIL	27.0	0.0	
384.8			SAND	22.0	27.0	
362.8			SAND	6.0	49.0	
356.8			BLACK SHALE	2.0	55.0	
354.8			BLACK SHALE	15.2	57.0	
339.6			SHALE	3.5	72.2	
336.1			SANDSTONE	2.1	75.7	GRAY
334.0			SHALE	2.8	77.8	BLUE
331.3			BLACK SHALE	0.5	80.5	
330.8			CLAYSTONE	6.1	81.0	
324.7			LIMESTONE	0.7	87.1	
324.0			LIMESTONE	0.8	87.8	
323.3			LIMESTONE	9.3	88.5	
314.0			LIMESTONE	7.3	97.8	
306.6			BLACK SHALE	5.0	105.2	
301.6			BLACK SHALE	2.2	110.2	
299.5			COAL	1.3	112.3	
298.2			UNDERCLAY	0.4	113.6	

MAPID: 16302983000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 27 QUARTERS/FOOTAGES: 0' N line, 0' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.759179

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.336072

DATE COLLECTED:

SURFACE ELEVATION (FT.): 414.0 LOGGED (FT.): 168.8

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8687C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
303.0	MODESTO	PIASA	LIMESTONE	8.8	111.0	
294.2	MODESTO		DARK GRAY SHALE	16.1	119.8	
278.1	CARBONDALE	DANVILLE	BONE COAL	0.5	135.9	
277.6	CARBONDALE		GRAY SHALE	6.9	136.4	
270.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.4	143.3	UPPER BENCH
269.3	CARBONDALE	BANKSTON FORK	GRAY SHALE	4.1	144.7	SHALE PARTING
265.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	148.8	LOWER BENCH
263.1	CARBONDALE	LAWSON	DARK GRAY SHALE	8.2	150.9	
254.9	CARBONDALE	CONANT	LIMESTONE	0.3	159.1	
254.6	CARBONDALE	JAMESTOWN	BLACK SHALE	0.3	159.4	
254.3	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.4	159.7	
253.9	CARBONDALE	ANNA	BLACK SHALE	0.3	160.1	
253.6	CARBONDALE	ENERGY	GRAY SHALE	1.4	160.4	
252.0	CARBONDALE	HERRIN	COAL	6.8	162.0	

MAPID: 16327697000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 27 QUARTERS/FOOTAGES:

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.750425

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.328394

DATE COLLECTED:

SURFACE ELEVATION (FT.): 403.5 LOGGED (FT.): 124.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15759C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
403.5	PLEISTOCENE		UNCONSOLIDATED	60.7	0.0	
342.8	MODESTO	PIASA	LIMESTONE	10.0	60.7	
332.8			GRAY SHALE	16.9	70.7	
315.9	CARBONDALE		LIMESTONE	2.6	87.6	
313.3	CARBONDALE		GRAY SHALE	2.8	90.2	
310.5	CARBONDALE		LIMESTONE	2.5	93.0	
308.0	CARBONDALE		DARK SHALE	7.2	95.5	
300.8	CARBONDALE	BRERETON	LIMESTONE	3.8	102.7	
297.0	CARBONDALE	ANNA	DARK SHALE	0.8	106.5	
296.2	CARBONDALE	HERRIN	COAL	6.1	107.3	
290.1	CARBONDALE		UNDERCLAY	0.6	113.4	
289.5	CARBONDALE		LIMESTONE	2.0	114.0	
287.5	CARBONDALE		SHALY LIMESTONE	8.0	116.0	

MAPID: 16327698000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 27 QUARTERS/FOOTAGES:

QUADRANGLE: ST. LIBORY LONGITUDE: -89.740899

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.335775

DATE COLLECTED:

SURFACE ELEVATION (FT.): 420.7 LOGGED (FT.): 157.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 15765C

WELL TYPE: Coal Test

COMMENT: STATE PLANE COORDS PROVIDED BY COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
420.7	PLEISTOCENE		UNCONSOLIDATED	20.0	0.0
400.7	PLEISTOCENE		CLAY	18.0	20.0
382.7	PLEISTOCENE		SAND	33.0	38.0
349.7	PLEISTOCENE		CLAY	13.0	71.0
336.7	MODESTO		GRAY SHALE	6.8	84.0
329.9	MODESTO	PIASA	LIMESTONE	8.7	90.8
321.2			GRAY SHALE	19.0	99.5
302.2	CARBONDALE		LIMESTONE	2.0	118.5
300.2	CARBONDALE		GRAY SHALE	3.5	120.5
296.7	CARBONDALE		LIMESTONE	2.0	124.0
294.7	CARBONDALE		DARK SHALE & LIMESTONE	12.8	126.0
281.9	CARBONDALE	HERRIN	COAL	6.9	138.8
275.0	CARBONDALE		UNDERCLAY	1.3	145.7
273.7	CARBONDALE		LIMESTONE	2.6	147.0
271.1	CARBONDALE		SHALY LIMESTONE	7.4	149.6

MAPID: 16327699000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 27 QUARTERS/FOOTAGES: 2640' N line, 1' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.7591 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.328781 DATE COLLECTED:

SURFACE ELEVATION (FT.): 421.3 LOGGED (FT.): 173.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16552C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
421.3	PLEISTOCENE		UNCONSOLIDATED	109.2	0.0	
312.1	MODESTO	PIASA	LIMESTONE	8.8	109.2	
303.3	MODESTO		SHALE WITH LIMESTONE	12.0	118.0	
291.3	MODESTO		SHALY LIMESTONE	1.0	130.0	
290.3	CARBONDALE	DANVILLE	COAL	1.0	131.0	
289.3	CARBONDALE		SHALE WITH LIMESTONE	3.4	132.0	
285.9	CARBONDALE		LIMESTONE	0.8	135.4	
285.1	CARBONDALE		GRAY SHALE	2.6	136.2	
282.5	CARBONDALE		LIMESTONE	1.6	138.8	
280.9	CARBONDALE		GRAY SHALE	3.2	140.4	
277.7	CARBONDALE		DARK SHALE	2.7	143.6	
275.0	CARBONDALE		CALCAREOUS SHALE	3.7	146.3	
271.3	CARBONDALE		LIMESTONE	0.8	150.0	
270.5	CARBONDALE		CALCAREOUS SHALE	1.0	150.8	
269.5	CARBONDALE	BRERETON	LIMESTONE	5.7	151.8	
263.9	CARBONDALE		GRAY SHALE	0.4	157.4	
263.5	CARBONDALE	HERRIN	COAL	6.1	157.8	
257.5	CARBONDALE		UNDERCLAY	0.7	163.8	
256.8	CARBONDALE		UNCLASSIFIED	0.7	164.5	
256.1	CARBONDALE		UNDERCLAY	0.6	165.2	
255.5	CARBONDALE		LIMESTONE	6.7	165.8	
248.8	CARBONDALE		GRAY SHALE	0.1	172.5	
248.7	CARBONDALE		LIMESTONE	0.9	172.6	

MAPID: 16300131000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 28 QUARTERS/FOOTAGES: NW NE NE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.762737 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.335166 DATE COLLECTED:

SURFACE ELEVATION (FT.): 396.3 LOGGED (FT.): 140.0 LOG TYPE: Drillers Log

SOURCE: GEO ECKERT WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
396.3			SOIL	5.0	0.0	BLACK
391.3			CLAY	43.0	5.0	BLUE
348.3			CLAY	32.0	48.0	YELLOW
316.3			GRAVEL	0.5	80.0	
315.8			CLAY	5.5	80.5	RED
310.3			LIMESTONE	5.0	86.0	
305.3			CLAYSTONE	12.0	91.0	BLUE
293.3			ROCK	2.0	103.0	
291.3			CLAYSTONE	8.0	105.0	
283.3			LIMESTONE	1.5	113.0	
281.8			UNDERCLAY	1.0	114.5	
280.8			LIMESTONE	3.5	115.5	
277.3			BLACK SHALE	6.0	119.0	
271.3			ROCK	2.0	125.0	
269.3			ROCK	4.0	127.0	
265.3	CARBONDALE	HERRIN	COAL	8.0	131.0	#6 (KAY)
257.3	CARBONDALE		UNDERCLAY	1.0	139.0	

MAPID: 16300138000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 28 QUARTERS/FOOTAGES: SE SE SE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.760222 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.321995 DATE COLLECTED: 10 / 0 / 1907

SURFACE ELEVATION (FT.): 418.4 LOGGED (FT.): 166.5 LOG TYPE: Drillers Log

SOURCE: M W BORDERS & OTHERS WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
418.4			CLAY	27.5	0.0	
390.9			CLAY	10.5	27.5	RED
380.4			CLAY	21.5	38.0	YELLOW
358.9			CLAY	20.0	59.5	BLUE
338.9			SHALE	20.0	79.5	
318.9			SHALE	9.0	99.5	
309.9			SHALE	12.0	108.5	
297.9			ROCK	2.0	120.5	
295.9			SHALE	8.5	122.5	
287.4			SHALE	4.0	131.0	
283.4			LIMESTONE	2.0	135.0	
281.4			SHALE	6.5	137.0	
274.9			LIMESTONE	2.5	143.5	
272.4			SHALE	8.0	146.0	
264.4			LIMESTONE	0.5	154.0	
263.9			SHALE	0.5	154.5	
263.4	CARBONDALE	BRERETON	LIMESTONE	2.0	155.0	
261.4	CARBONDALE	ANNA	SHALE	1.5	157.0	
259.9	CARBONDALE	HERRIN	COAL	7.0	158.5	
252.9	CARBONDALE		UNDERCLAY	1.0	165.5	

MAPID: 16300435000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 28 QUARTERS/FOOTAGES: SW SE SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.772095 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.322139 DATE COLLECTED: 7 / 0 / 1907

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 174.0 LOG TYPE: Drillers Log

SOURCE: M W BORDERS & OTHERS WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
420.0			UNKNOWN	167.5	0.0	
252.5	CARBONDALE	HERRIN	COAL	6.5	167.5	

MAPID: 16302999000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 28 QUARTERS/FOOTAGES: 2310' S line, 2640' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.768345

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.327534

DATE COLLECTED:

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 171.8

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8704C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
303.0	MODESTO	PIASA	LIMESTONE	8.0	117.0	
295.0	CARBONDALE		SHALE	18.4	125.0	
276.6	CARBONDALE	BANKSTON FORK	LIMESTONE	3.4	143.4	UPPER BENCH
273.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.0	146.8	SHALE PARTING
270.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	149.8	LOWER BENCH
267.8	CARBONDALE	LAWSON	GRAY SHALE	10.0	152.2	
257.8	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.9	162.2	
256.9	CARBONDALE	JAMESTOWN	BLACK SHALE	0.1	163.1	
256.8	CARBONDALE	BRERETON	LIMESTONE	1.1	163.2	
255.7	CARBONDALE	ANNA	DARK GRAY SHALE	0.5	164.3	
256.0	CARBONDALE	HERRIN	COAL	7.8	164.0	

MAPID: 16302988000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 29 QUARTERS/FOOTAGES: 660' S line, 0' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.778042

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.323099

DATE COLLECTED:

SURFACE ELEVATION (FT.): 400.0 LOGGED (FT.): 173.8

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8692C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
285.0	MODESTO	PIASA	LIMESTONE	8.9	115.0	
276.1	CARBONDALE		GRAY SHALE	18.4	123.9	
257.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.8	142.3	UPPER BENCH
254.9	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.6	145.1	SHALE PARTING
251.3	CARBONDALE	BANKSTON FORK	LIMESTONE	1.7	148.7	LOWER BENCH
249.6	CARBONDALE	LAWSON	DARK GRAY SHALE	6.4	150.4	
243.3	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	2.3	156.7	
241.0	CARBONDALE		DARK GRAY SHALE	3.2	159.0	
237.8	CARBONDALE	BRERETON	LIMESTONE	4.7	162.2	
233.0	CARBONDALE	HERRIN	COAL	6.8	167.0	

MAPID: 16301047000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 30 QUARTERS/FOOTAGES: 1170' N line, 2050' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.806038 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.333481 DATE COLLECTED: 7 / 1 / 1918

SURFACE ELEVATION (FT.): 399.6 LOGGED (FT.): 131.0 LOG TYPE: Drillers Log

SOURCE: ALUMINUM ORE CO 20 WELL TYPE: Coal Test

COMMENT: DIAMOND DRILL, SEE MAP #21-58

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
399.6			SOIL	23.0	0.0	
376.6			SAND	47.0	23.0	
329.6			BLACK SHALE	12.7	70.0	
316.9			COAL	0.2	82.7	
316.8			UNDERCLAY	3.4	82.8	
313.3			LIMESTONE	1.9	86.3	
311.4			BLACK SHALE	2.5	88.2	
308.9			SANDSTONE	2.7	90.7	GRAY
306.3			BLACK SHALE	0.7	93.3	
305.6			LIMESTONE	4.9	94.0	
300.7			LIMESTONE	1.1	98.9	
299.6			LIMESTONE	5.7	100.0	
293.9			LIMESTONE	9.5	105.7	
284.4			UNDERCLAY	0.2	115.2	
284.3			SHALE	4.5	115.3	
279.8			BLACK SHALE	5.2	119.8	
274.6			BLACK SHALE	3.3	125.0	
271.3			COAL	1.9	128.3	
269.4			UNDERCLAY	0.8	130.2	

MAPID: 16302867000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 30 QUARTERS/FOOTAGES: 1320' N line, 1980' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.80577 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.333062 DATE COLLECTED:

SURFACE ELEVATION (FT.): 395.0 LOGGED (FT.): 146.9 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8546C WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
312.0	MODESTO	PIASA	LIMESTONE	10.0	83.0	
302.0	CARBONDALE		GRAY SHALE	22.7	93.0	
279.3	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	115.7	UPPER BENCH
276.9	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.8	118.1	SHALE PARTING
274.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	120.9	LOWER BENCH
271.7	CARBONDALE	LAWSON	DARK GRAY SHALE	8.1	123.3	
263.6	CARBONDALE	BRERETON	LIMESTONE	5.6	131.4	
258.0	CARBONDALE	ANNA	BLACK SHALE	2.6	137.0	
256.0	CARBONDALE	HERRIN	COAL	7.9	139.0	

MAPID: 16301046000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 31 QUARTERS/FOOTAGES: 2250' N line, 2250' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.806189 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.315469 DATE COLLECTED: 7 / 1 / 1918

SURFACE ELEVATION (FT.): 474.5 LOGGED (FT.): 180.0 LOG TYPE: Drillers Log

SOURCE: ALUMINUM ORE CO 19 WELL TYPE: Coal Test

COMMENT: DIAMOND DRILL, SEE MAP #21-58

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
474.5			SOIL	15.0	0.0	
459.5			SAND	5.0	15.0	
454.5			SANDSTONE	31.0	20.0	BROWN
423.5			BLACK SHALE	49.7	51.0	
373.8			COAL	0.2	100.7	
373.7			BLACK SHALE	7.2	100.8	
366.5			SANDSTONE	3.4	108.0	GRAY
363.1			LIMESTONE	7.3	111.4	
355.8			LIMESTONE	1.8	118.7	
354.0			LIMESTONE	3.5	120.5	
350.5			LIMESTONE	9.5	124.0	
341.0			LIMESTONE	1.8	133.5	
339.2			BLACK SHALE	9.8	135.3	
329.4			LIMESTONE	8.4	145.1	
321.0			LIMESTONE	0.2	153.5	
320.8			LIMESTONE	4.9	153.7	
315.9			BLACK SHALE	6.9	158.6	
309.0	CARBONDALE	BRERETON	LIMESTONE	2.7	165.5	
306.3	CARBONDALE	ANNA	BLACK SHALE	4.2	168.2	
302.2	CARBONDALE	HERRIN	COAL	7.0	172.3	
295.2	CARBONDALE		UNDERCLAY	0.7	179.3	

MAPID: 16303399000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 31 QUARTERS/FOOTAGES: 0' S line, 0' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.798448

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.306801

DATE COLLECTED:

SURFACE ELEVATION (FT.): 424.0 LOGGED (FT.): 115.0

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12670C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
363.0	MODESTO	PIASA	LIMESTONE	8.3	61.0	
354.7	CARBONDALE		SHALE	15.6	69.3	
339.1	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	5.7	84.9	UPPER BENCH
333.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.6	90.6	SHALE PARTING
329.8	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	94.2	LOWER BENCH
326.3	CARBONDALE	LAWSON	DARK GRAY SHALE	4.0	97.7	
322.3	CARBONDALE	CONANT	CALCAREOUS SHALE	1.6	101.7	
320.7	CARBONDALE	BRERETON	LIMESTONE	1.0	103.3	
319.7	CARBONDALE	ANNA	BLACK SHALE	3.7	104.3	
316.0	CARBONDALE	HERRIN	COAL	7.0	108.0	

MAPID: 16300140000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 32 QUARTERS/FOOTAGES: 90' N line, 150' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.778539 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.321036 DATE COLLECTED: 8 / 0 / 1907

SURFACE ELEVATION (FT.): 414.9 LOGGED (FT.): 175.0 LOG TYPE: Drillers Log

SOURCE: M W BORDERS & OTHERS WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
414.9			SOIL	20.0	0.0	
394.9			SAND	3.0	20.0	
391.9			SOIL	5.0	23.0	
386.9			SAND	2.0	28.0	
384.9			HARD PAN	25.0	30.0	
359.9			SAND	10.0	55.0	
349.9			CLAY	10.0	65.0	
339.9			SHALE	13.0	75.0	
326.9			SHALE	5.0	88.0	BLACK
321.9			SHALE	19.5	93.0	LIGHT
302.4			LIMESTONE	7.5	112.5	
294.9			SHALE	10.0	120.0	BLUE
284.9			DARK SHALE	3.0	130.0	
281.9			SHALE	2.0	133.0	
279.9			COAL	0.5	135.0	
279.4			SHALE	3.0	135.5	BLACK
276.4			LIMESTONE	1.5	138.5	
274.9			SHALE	6.0	140.0	BLACK
268.9			SANDSTONE	2.0	146.0	
266.9			SHALE	10.5	148.0	
256.4			ROCK	3.5	158.5	
252.9	CARBONDALE	ANNA	SHALE	2.0	162.0	
250.9	CARBONDALE	HERRIN	COAL	7.5	164.0	
243.4	CARBONDALE		CLAYSTONE	1.0	171.5	BLACK
242.4	CARBONDALE		SHALE	2.5	172.5	

MAPID: 16303539000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 32 QUARTERS/FOOTAGES: 2640' N line, 2310' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.785941

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.314118

DATE COLLECTED:

SURFACE ELEVATION (FT.): 400.0 LOGGED (FT.): 173.4

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12731C

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
287.0	MODESTO	PIASA	LIMESTONE	10.3	113.0	
276.7	CARBONDALE		GRAY SHALE	14.7	123.3	
262.0	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	8.4	138.0	
253.6	CARBONDALE	LAWSON	DARK GRAY SHALE	13.8	146.4	
239.8	CARBONDALE	BRERETON	LIMESTONE	1.6	160.2	
238.2	CARBONDALE	ANNA	BLACK SHALE	3.6	161.8	
235.0	CARBONDALE	HERRIN	COAL	8.4	165.0	

MAPID: 16302276000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 34 QUARTERS/FOOTAGES: SE SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.752133

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.307922

DATE COLLECTED: 0 / 0 / 1930

SURFACE ELEVATION (FT.): 426.0 LOGGED (FT.): 145.0

LOG TYPE: Drillers Log

SOURCE: THE OHIO OIL COMPANY 4

WELL TYPE: Coal Test

COMMENT: STRUCTURE TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
426.0			UNKNOWN	88.0	0.0	
338.0			LIMESTONE	10.0	88.0	WHITE
328.0			ARGILLACEOUS LIMESTONE	10.0	98.0	
318.0	CARBONDALE	BRERETON	LIMESTONE	5.0	108.0	GRAY
313.0	CARBONDALE	ENERGY	CALCAREOUS SHALE	4.0	113.0	
309.0	CARBONDALE	ENERGY	CALCAREOUS SHALE	4.0	117.0	
305.0	CARBONDALE	ENERGY	CALCAREOUS SHALE	15.0	121.0	
290.0	CARBONDALE	HERRIN	COAL	8.0	136.0	
282.0	CARBONDALE		CALCAREOUS SHALE	1.0	144.0	BOTTOM OF COAL

MAPID: 16302277000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 35 QUARTERS/FOOTAGES: SE SW

QUADRANGLE: ST. LIBORY LONGITUDE: -89.73393 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.307645 DATE COLLECTED: 0 / 0 / 1930

SURFACE ELEVATION (FT.): 423.0 LOGGED (FT.): 145.0 LOG TYPE: Drillers Log

SOURCE: THE OHIO OIL COMPANY 3 WELL TYPE: Structure Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
423.0			SAND	90.0	0.0	
333.0			LIMESTONE	10.0	90.0	GRAY
323.0			SHALE	8.0	100.0	BLUE
315.0			LIMESTONE	10.0	108.0	WHITE
305.0	CARBONDALE	ENERGY	SHALE	13.4	118.0	CALCAREOUS SHALE 131.5'; BLU/BK
291.6	CARBONDALE	HERRIN	COAL	11.6	131.4	TOP OF COAL, SAMPLE AT 135.5 RATHER SLTY
280.0	CARBONDALE		CALCAREOUS SHALE	2.0	143.0	CALC MUD
278.0	CARBONDALE		UNDERCLAY	0.0	145.0	HOLE BOTTOMED IN FIRECLAY

MAPID: 16303540000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 35 QUARTERS/FOOTAGES: 2640' N line, 1320' W line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.736423 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.313518 DATE COLLECTED:

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 134.6 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12732C WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
338.0	MODESTO	PIASA	LIMESTONE	7.7	82.0	
330.3	CARBONDALE		GRAY SHALE	12.9	89.7	
317.4	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	7.2	102.6	
310.2	CARBONDALE	LAWSON	DARK GRAY SHALE	7.3	109.8	
302.9	CARBONDALE	CONANT	LIMESTONE	1.0	117.1	
301.9	CARBONDALE		LIMESTONE W/ SHALE	3.9	118.1	
298.0	CARBONDALE	BRERETON	LIMESTONE	5.5	122.0	
292.0	CARBONDALE	HERRIN	COAL	6.6	128.0	

MAPID: 16302278000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 36 QUARTERS/FOOTAGES: 0' S line, 1040' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.707356 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.305562 DATE COLLECTED: 0 / 0 / 1930

SURFACE ELEVATION (FT.): 431.0 LOGGED (FT.): 154.0 LOG TYPE: Drillers Log

SOURCE: THE OHIO OIL COMPANY 1 WELL TYPE: Structure Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
431.0			SOIL	20.0	0.0	
411.0			SAND	20.0	20.0	
391.0			SAND	10.0	40.0	
381.0			GRAVEL	2.5	50.0	
378.5			SHALE/COAL	2.5	52.5	
376.0			CLAYSTONE	10.0	55.0	
366.0			CLAYSTONE	13.0	65.0	
353.0			SANDSTONE	7.0	78.0	
346.0			SHALE	6.0	85.0	
340.0			LIMESTONE	13.0	91.0	WHITE
327.0			MUDSTONE	10.0	104.0	WHITE
317.0			CALCAREOUS SHALE	7.0	114.0	AS SHOWN ON DRILLER'S LOG
309.0			LIMESTONE	4.0	122.0	AS SHOWN ON DRILLER'S LOG; WT
305.0	CARBONDALE	BRERETON	LIMESTONE	9.0	126.0	ALTERNATING THIN
296.0	CARBONDALE	ENERGY	CALCAREOUS SHALE	6.0	135.0	
290.0	CARBONDALE	ENERGY	CALCAREOUS SHALE	2.0	141.0	
288.0	CARBONDALE	HERRIN	COAL	7.0	143.0	
281.0	CARBONDALE	HERRIN	COAL	3.0	150.0	
278.0	CARBONDALE		UNDERCLAY	1.0	153.0	

MAPID: 16303488000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 36 QUARTERS/FOOTAGES: 2640' N line, 0' W line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.722189 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.313317 DATE COLLECTED:

SURFACE ELEVATION (FT.): 438.0 LOGGED (FT.): 161.6 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12674C WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
326.0	MODESTO	PIASA	LIMESTONE	8.2	112.0	
317.8	CARBONDALE		GRAY SHALE	11.2	120.2	
306.6	CARBONDALE	BANKSTON FORK	LIMESTONE	3.6	131.4	UPPER BENCH
303.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.8	135.0	SHALE PARTING
299.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	138.8	LOWER BENCH
297.0	CARBONDALE	LAWSON	DARK GRAY SHALE	6.8	141.0	
290.2	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	1.0	147.8	
289.2	CARBONDALE	JAMESTOWN	DARK GRAY SHALE	0.7	148.8	
288.6	CARBONDALE		CALCAREOUS SHALE	0.7	149.4	
287.9	CARBONDALE	BRERETON	LIMESTONE	4.3	150.1	
283.6	CARBONDALE	ANNA	BLACK SHALE	0.9	154.4	
283.0	CARBONDALE	HERRIN	COAL	6.6	155.0	

MAPID: 16327700000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 6W SECTION: 36 QUARTERS/FOOTAGES: 1980' S line, 2310' W line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.714057 GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.311061 DATE COLLECTED:

SURFACE ELEVATION (FT.): 430.0 LOGGED (FT.): 176.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16572C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
430.0	PLEISTOCENE		UNCONSOLIDATED	45.0	0.0
385.0	MODESTO		SILTSTONE	7.0	45.0
378.0	MODESTO		SANDSTONE	1.8	52.0
376.2	MODESTO		GRAY SHALE	32.6	53.8
343.6	MODESTO		SHALE WITH LIMESTONE	23.0	86.4
320.6	MODESTO		SANDSTONE	1.6	109.4
319.0	MODESTO		SILTSTONE	4.0	111.0
315.0	MODESTO		GRAY SHALE	6.2	115.0
308.8	MODESTO		LIMESTONE	0.4	121.2
308.4	MODESTO		GRAY SHALE	2.8	121.6
305.6	MODESTO	PIASA	LIMESTONE	11.2	124.4
294.4			DARK SHALE	0.4	135.6
294.0			GRAY SHALE	8.5	136.0
285.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	144.5
281.5	CARBONDALE		GRAY SHALE	1.2	148.5
280.3	CARBONDALE		LIMESTONE	2.8	149.7
277.5	CARBONDALE		DARK SHALE	1.9	152.5
275.6	CARBONDALE		UNCLASSIFIED	1.0	154.4
274.6	CARBONDALE		DARK SHALE	7.9	155.4
266.7	CARBONDALE	BRERETON	LIMESTONE	2.3	163.3
264.4	CARBONDALE	ANNA	DARK SHALE	0.4	165.6
264.1	CARBONDALE	HERRIN	COAL	6.7	165.9
257.4	CARBONDALE		UNCLASSIFIED	1.7	172.6
255.7	CARBONDALE		GRAY SHALE	2.1	174.3

MAPID: 16300124000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 1 QUARTERS/FOOTAGES: NW SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.823657 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.385281 DATE COLLECTED: 5 / 0 / 1907

SURFACE ELEVATION (FT.): 399.4 LOGGED (FT.): 171.3 LOG TYPE: Drillers Log

SOURCE: WISE WELL DRILLING & PROSPECT WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
399.4			UNCONSOLIDATED	30.0	0.0	
369.4			SAND	24.0	30.0	
345.4			UNDERCLAY	8.0	54.0	
337.4			SHALE	6.5	62.0	LIGHT
330.9			ROCK	0.5	68.5	
330.4			SHALE	4.0	69.0	BROWN
326.4			ROCK	3.0	73.0	
323.4			SHALE	4.0	76.0	BLACK
319.4			ROCK	2.0	80.0	
317.4			SHALE	1.0	82.0	BLACK
316.4			ROCK	4.5	83.0	
311.9			CLAYSTONE	0.5	87.5	
311.4	CARBONDALE	HERRIN	COAL	6.5	88.0	
304.9	CARBONDALE		UNDERCLAY	2.0	94.5	
302.9	CARBONDALE		LIMESTONE	13.5	96.5	
289.4	CARBONDALE		SHALE	4.0	110.0	
285.4	CARBONDALE		LIMESTONE	18.0	114.0	
267.4	CARBONDALE		BLACK SHALE	9.0	132.0	
258.4	CARBONDALE		SHALE	2.0	141.0	BROWN
256.4	CARBONDALE		SHALE	12.0	143.0	BLUE
244.4	CARBONDALE		BLACK SHALE	1.0	155.0	
243.4	CARBONDALE		BLACK SHALE	3.0	156.0	
240.4	CARBONDALE		BLACK SHALE	5.8	159.0	
234.6	CARBONDALE	HOUCHIN CREEK	COAL	4.0	164.8	CORRELATION AND THICKNESS UNCERTAIN
230.6	CARBONDALE		UNDERCLAY	1.0	168.8	
229.6	CARBONDALE		SHALE	1.5	169.8	LIGHT

MAPID: 16300124000C VERSION: 2

PROJECT: NCRDS87

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 1 QUARTERS/FOOTAGES: NW SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.823657 GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 38.385281 DATE COLLECTED: 5 / 0 / 1907

SURFACE ELEVATION (FT.): 399.4 LOGGED (FT.): 171.3 LOG TYPE: Drillers Log

SOURCE: N.W.BORDERS,WISE WELL DRILLING&PROS.CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
399.4			UNCONSOLIDATED	54.0	0.0	
345.4			UNDERCLAY	8.0	54.0	
337.4			SHALE	6.5	62.0	
330.9			UNCLASSIFIED	0.5	68.5	
330.4			SHALE	4.0	69.0	
326.4			UNCLASSIFIED	3.0	73.0	
323.4			BLACK SHALE	4.0	76.0	
319.4			UNCLASSIFIED	2.0	80.0	
317.4			BLACK SHALE	1.0	82.0	
316.4	CARBONDALE		UNCLASSIFIED	4.5	83.0	
311.9	CARBONDALE		UNDERCLAY	0.5	87.5	
311.4	CARBONDALE	HERRIN	COAL	6.5	88.0	
304.9	CARBONDALE		UNDERCLAY	2.0	94.5	
302.9	CARBONDALE		LIMESTONE	13.5	96.5	
289.4	CARBONDALE		SHALE	4.0	110.0	
285.4	CARBONDALE		LIMESTONE	18.0	114.0	
267.4	CARBONDALE		BLACK SHALE	9.0	132.0	
258.4	CARBONDALE		SHALE	15.0	141.0	
243.4	CARBONDALE	EXCELLO	BLACK SHALE	8.8	156.0	UNCERTAIN CORRELATION
234.6	CARBONDALE	HOUCHIN CREEK	COAL	4.0	164.8	UNCERTAIN CORRELATION
230.6	CARBONDALE		UNDERCLAY	1.0	168.8	
229.6	CARBONDALE		SHALE	1.5	169.8	

MAPID: 16302995000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 1 QUARTERS/FOOTAGES: 0' N line, 660' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.819488

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.394282

DATE COLLECTED:

SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 102.6

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8700C

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
356.0	MODESTO	PIASA	LIMESTONE	4.7	54.0	
351.3	CARBONDALE		GRAY SHALE	22.5	58.7	
328.8	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	81.2	UPPER BENCH
326.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.3	83.6	SHALE PARTING
323.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	86.9	LOWER BENCH
320.8	CARBONDALE	LAWSON	DARK GRAY SHALE	6.7	89.2	
314.1	CARBONDALE	BRERETON	CARBONACEOUS LIMESTONE	1.4	95.9	
312.7	CARBONDALE	ANNA	BLACK SHALE	2.1	97.3	
314.0	CARBONDALE	HERRIN	COAL	6.6	96.0	

MAPID: 16300470000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 3 QUARTERS/FOOTAGES: SW NW NE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.861624

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.391971

DATE COLLECTED:

SURFACE ELEVATION (FT.): 430.0 LOGGED (FT.): 71.0

LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 581

WELL TYPE: Coal Test

COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
430.0			UNCLASSIFIED	71.0	0.0	DRILL HOLE;TOTAL DEPTH NO COAL

MAPID: 16300475000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 3 QUARTERS/FOOTAGES: 330' N line, 0' E line

QUADRANGLE: MASCOUTAH LONGITUDE: -89.853663

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.39368

DATE COLLECTED:

SURFACE ELEVATION (FT.): 414.3 LOGGED (FT.): 71.0

LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 501

WELL TYPE: Coal Test

COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
414.3			UNCLASSIFIED	71.0	0.0	DRILL HOLE;TOTAL DEPTH NO COAL

MAPID: 16300479000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 3 QUARTERS/FOOTAGES: SE SW SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.868322 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.381241 DATE COLLECTED:

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 70.0 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 417 WELL TYPE: Coal Test

COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
420.0			UNCLASSIFIED	70.0	0.0	DRILL HOLE;TOTAL DEPTH NO COAL

MAPID: 16300480000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 3 QUARTERS/FOOTAGES: SW NE SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.866081 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.384804 DATE COLLECTED:

SURFACE ELEVATION (FT.): 417.9 LOGGED (FT.): 42.0 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 419 WELL TYPE: Coal Test

COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
417.9			UNCLASSIFIED	42.0	0.0	DRILL HOLE;COAL TEST 42' TO COAL 6"
375.9	CARBONDALE	HERRIN	COAL	0.5	42.0	COAL TEST 42' TO COAL - 6"

MAPID: 16300482000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 3 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: MASCOUTAH LONGITUDE: -89.87062 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.381294 DATE COLLECTED:

SURFACE ELEVATION (FT.): 405.2 LOGGED (FT.): 75.0 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 337 WELL TYPE: Coal Test

COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
405.2			UNCLASSIFIED	75.0	0.0	DRILL HOLE;TOTAL DEPTH NO COAL

MAPID: 16300486000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 3 QUARTERS/FOOTAGES: 660' N line, 330' W line of NW NW
 QUADRANGLE: MASCOUTAH LONGITUDE: -89.870761 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.392983 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 400.0 LOGGED (FT.): 41.3 LOG TYPE: Drillers Log
 SOURCE: UNITED ELECTRIC COAL COMPANY 617 WELL TYPE: Coal Test
 COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
400.0			UNCLASSIFIED	36.0	0.0	DRILL HOLE
364.0	CARBONDALE	HERRIN	COAL	5.3	36.0	DRILL HOLE 36' TO COAL - 5'3"

MAPID: 16300465000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 4 QUARTERS/FOOTAGES: SW NW NW
 QUADRANGLE: FREEBURG LONGITUDE: -89.88877 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.392215 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 470.0 LOGGED (FT.): 75.2 LOG TYPE: Drillers Log
 SOURCE: UNITED ELECTRIC COAL COMPANY 569 WELL TYPE: Coal Test
 COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
470.0			UNCLASSIFIED	68.0	0.0	
402.0	CARBONDALE	HERRIN	COAL	7.2	68.0	COAL TEST, 68' TO COAL - 7'2"

MAPID: 16300466000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 4 QUARTERS/FOOTAGES: SW NE NW
 QUADRANGLE: FREEBURG LONGITUDE: -89.884272 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.392188 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 432.5 LOGGED (FT.): 50.8 LOG TYPE: Drillers Log
 SOURCE: UNITED ELECTRIC COAL COMPANY 571 WELL TYPE: Coal Test
 COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
432.5			UNCLASSIFIED	44.0	0.0	DRILL HOLE
388.5	CARBONDALE	HERRIN	COAL	6.8	44.0	COAL TEST, 44' TO COAL - 6'10"

MAPID: 16300467000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 4 QUARTERS/FOOTAGES: SW NW NE

QUADRANGLE: FREEBURG LONGITUDE: -89.879779 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.392164 DATE COLLECTED:

SURFACE ELEVATION (FT.): 416.0 LOGGED (FT.): 35.4 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 573 WELL TYPE: Coal Test

COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
416.0			UNCLASSIFIED	29.0	0.0	
387.0	CARBONDALE	HERRIN	COAL	6.4	29.0	COAL TEST, 29' TO COAL - 65"

MAPID: 16300468000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 4 QUARTERS/FOOTAGES: SW NE NE

QUADRANGLE: FREEBURG LONGITUDE: -89.875281 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.39214 DATE COLLECTED:

SURFACE ELEVATION (FT.): 423.0 LOGGED (FT.): 38.0 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 575 WELL TYPE: Coal Test

COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
423.0			UNCLASSIFIED	32.0	0.0	
391.0	CARBONDALE	HERRIN	COAL	6.0	32.0	COAL TEST, 32' TO COAL - 6'

MAPID: 16300469000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 4 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: FREEBURG LONGITUDE: -89.888859 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.386673 DATE COLLECTED:

SURFACE ELEVATION (FT.): 400.0 LOGGED (FT.): 36.0 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 577 WELL TYPE: Coal Test

COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
400.0			UNCLASSIFIED	36.0	0.0	COAL TEST, TOTAL DEPTH, NO COAL

MAPID: 16300471000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 4 QUARTERS/FOOTAGES: SW SE NW

QUADRANGLE: FREEBURG LONGITUDE: -89.884305 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.388522 DATE COLLECTED:

SURFACE ELEVATION (FT.): 456.4 LOGGED (FT.): 70.0 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 491 WELL TYPE: Coal Test

COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
456.4			UNCLASSIFIED	70.0	0.0	DRILL HOLE;TOTAL DEPTH NO COAL

MAPID: 16300472000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 4 QUARTERS/FOOTAGES: SW SW NE

QUADRANGLE: FREEBURG LONGITUDE: -89.87978 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.38852 DATE COLLECTED:

SURFACE ELEVATION (FT.): 433.2 LOGGED (FT.): 39.8 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 493 WELL TYPE: Coal Test

COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
433.2			UNCLASSIFIED	34.0	0.0	
399.2	CARBONDALE	HERRIN	COAL	5.8	34.0	COAL TEST, 34' TO COAL 5'10"

MAPID: 16300473000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 4 QUARTERS/FOOTAGES: NE SE SW

QUADRANGLE: FREEBURG LONGITUDE: -89.882066 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.383038 DATE COLLECTED:

SURFACE ELEVATION (FT.): 424.0 LOGGED (FT.): 36.0 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 495 WELL TYPE: Coal Test

COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
424.0			UNCLASSIFIED	29.0	0.0	
395.0	CARBONDALE	HERRIN	COAL	7.0	29.0	COAL TEST, 29' TO COAL - 7'

MAPID: 16300477000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 4 QUARTERS/FOOTAGES: SW NW SE

QUADRANGLE: FREEBURG LONGITUDE: -89.879782 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.384879 DATE COLLECTED:

SURFACE ELEVATION (FT.): 400.0 LOGGED (FT.): 70.0 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 413 WELL TYPE: Coal Test

COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
400.0			UNCLASSIFIED	70.0	0.0	DRILL HOLE;TOTAL DEPTH NO COAL

MAPID: 16300478000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 4 QUARTERS/FOOTAGES: SE SW SW

QUADRANGLE: FREEBURG LONGITUDE: -89.886654 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.381159 DATE COLLECTED:

SURFACE ELEVATION (FT.): 422.2 LOGGED (FT.): 56.8 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 415 WELL TYPE: Coal Test

COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
422.2			UNCLASSIFIED	47.0	0.0	COAL TEST DRILL HOLE
375.2	CARBONDALE	HERRIN	COAL	9.8	47.0	COAL TEST TO COAL; LOG SAYS 99" CO

MAPID: 16300481000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 4 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: FREEBURG LONGITUDE: -89.875204 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.381285 DATE COLLECTED:

SURFACE ELEVATION (FT.): 415.3 LOGGED (FT.): 70.0 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 335 WELL TYPE: Coal Test

COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.3			UNCLASSIFIED	70.0	0.0	DRILL HOLE;TOTAL DEPTH NO COAL

MAPID: 16300483000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 4 QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: FREEBURG LONGITUDE: -89.879781 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.386701 DATE COLLECTED:

SURFACE ELEVATION (FT.): 426.1 LOGGED (FT.): 39.0 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 454 WELL TYPE: Coal Test

COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
395.7			UNCLASSIFIED	8.6	30.4	COAL TEST, 39' TO COAL 8'7"

MAPID: 16300484000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 4 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: MASCOUTAH LONGITUDE: -89.872973 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.386717 DATE COLLECTED:

SURFACE ELEVATION (FT.): 400.0 LOGGED (FT.): 35.3 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 455 WELL TYPE: Coal Test

COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
400.0			UNCLASSIFIED	29.0	0.0	
371.0	CARBONDALE	HERRIN	COAL	6.3	29.0	COAL TEST 29' TO COAL 6'3"

MAPID: 16300485000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 4 QUARTERS/FOOTAGES: SW SE NE

QUADRANGLE: FREEBURG LONGITUDE: -89.875255 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.388521 DATE COLLECTED:

SURFACE ELEVATION (FT.): 422.2 LOGGED (FT.): 56.0 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 456 WELL TYPE: Coal Test

COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
422.2			UNCLASSIFIED	56.0	0.0	
366.2	CARBONDALE	HERRIN	COAL	0.5	56.0	COAL TEST 56' TO COAL 6"

MAPID: 16302033000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 4 QUARTERS/FOOTAGES: 660' N line, 990' W line

QUADRANGLE: FREEBURG LONGITUDE: -89.886407 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.393139 DATE COLLECTED:

SURFACE ELEVATION (FT.): 462.0 LOGGED (FT.): 86.2 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 2146 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
419.0	MODESTO	PIASA	LIMESTONE	8.2	43.0	
410.8	CARBONDALE		GRAY SHALE	6.1	51.2	
404.7	CARBONDALE	BANKSTON FORK	LIMESTONE	7.3	57.3	
397.5	CARBONDALE	LAWSON	DARK GRAY SHALE	6.5	64.5	
391.0	CARBONDALE	BRERETON	LIMESTONE	7.8	71.0	
383.2	CARBONDALE	ANNA	BLACK SHALE	0.2	78.8	
383.0	CARBONDALE	HERRIN	COAL	7.2	79.0	

MAPID: 16327285000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 4 QUARTERS/FOOTAGES: 100' N line, 2570' E line of SE NE

QUADRANGLE: FREEBURG LONGITUDE: -89.880909 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.390982 DATE COLLECTED:

SURFACE ELEVATION (FT.): 413.2 LOGGED (FT.): 39.8 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 497 WELL TYPE: Coal Test

COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
413.2			UNCLASSIFIED	34.0	0.0	COAL TEST 34' TO COAL 5'9"
379.2	CARBONDALE	HERRIN	COAL	5.8	34.0	COAL 5'9"

MAPID: 16300288000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 5 QUARTERS/FOOTAGES: SE SW NE

QUADRANGLE: FREEBURG LONGITUDE: -89.895884 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.388568 DATE COLLECTED:

SURFACE ELEVATION (FT.): 429.0 LOGGED (FT.): 0.0 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 13 WELL TYPE: Strip Mine

COMMENT: STRIP MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
429.0			MINE OPENING	0.0	0.0	MINE TRACK 4' ABOVE COAL

MAPID: 16300416000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 5 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: FREEBURG LONGITUDE: -89.893606 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.381144 DATE COLLECTED:

SURFACE ELEVATION (FT.): 428.2 LOGGED (FT.): 22.0 LOG TYPE: Drillers Log

SOURCE: ACE HIGH COAL COMPANY WELL TYPE: Coal Test

COMMENT: LOCAL MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
406.2			MINE OPENING	0.0	22.0	22' TO COAL SURF OF GROUND WEST SIDE ENT

MAPID: 16300464000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 5 QUARTERS/FOOTAGES: SW NE NE

QUADRANGLE: FREEBURG LONGITUDE: -89.89347 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.392254 DATE COLLECTED:

SURFACE ELEVATION (FT.): 464.7 LOGGED (FT.): 55.0 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 567 WELL TYPE: Coal Test

COMMENT: DRILL HOLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
464.7			UNCLASSIFIED	48.0	0.0	
416.7	CARBONDALE	HERRIN	COAL	7.0	48.0	DRILL HOLE;48' TO COAL 7'

MAPID: 16327138000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 7 QUARTERS/FOOTAGES: NW NE NW

QUADRANGLE: FREEBURG LONGITUDE: -89.921162 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.379219 DATE COLLECTED: 11 / 1 / 1991

SURFACE ELEVATION (FT.): LOGGED (FT.): 68.0 LOG TYPE: Drillers Log

SOURCE: CLARENCE KOHNEN WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			SOIL	1.0	0.0	
-			CLAY	7.0	1.0	YELLOW
-			SANDY CLAY	17.0	8.0	YELLOW
-			SANDSTONE	1.0	25.0	YELLOW
-			SANDSTONE	3.0	26.0	BROWN
-			SOFT SHALE	29.0	29.0	
-			SHALE WITH LIMESTONE	4.0	58.0	
-			RED SHALE	3.0	62.0	
-	CARBONDALE	SPRINGFIELD	COAL	3.0	65.0	

MAPID: 16300125000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 8 QUARTERS/FOOTAGES: SE NW

QUADRANGLE: NEW ATHENS WEST LONGITUDE: -89.901735

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.37473

DATE COLLECTED:

SURFACE ELEVATION (FT.): 451.5

LOGGED (FT.): 156.2

LOG TYPE: Drillers Log

SOURCE: B. & S. I. R. R.

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
451.5			SOIL	3.0	0.0	
448.5			CLAY	14.0	3.0	YELLOW
434.5			SAND	1.0	17.0	
433.5			CLAY	20.0	18.0	BLUE
413.5			CLOD	1.0	38.0	
412.5			SHALE	11.0	39.0	YELLOW
401.5			SANDSTONE	1.0	50.0	R/YL
400.5			SHALE	12.0	51.0	
388.5			ROCK	1.0	63.0	NOT DEFINED
387.5			SHALE	7.0	64.0	
380.5			BLACK SHALE	9.5	71.0	
371.0	CARBONDALE	SPRINGFIELD	COAL	1.5	80.5	
369.5	CARBONDALE		UNDERCLAY	34.0	82.0	
335.5	CARBONDALE		ROCK	1.5	116.0	
334.0	CARBONDALE		BLACK SHALE	3.5	117.5	
330.5	CARBONDALE	HOUCHIN CREEK	COAL	0.2	121.0	A TRACE #4
330.3	CARBONDALE		UNDERCLAY	9.0	121.2	
321.3	CARBONDALE		SHALE	4.0	130.2	BROWN
317.3	CARBONDALE		SHALE	9.0	134.2	BLACK & BLUE
308.3	CARBONDALE		BLACK SHALE	1.0	143.2	
307.3	CARBONDALE		SANDSTONE	9.0	144.2	
298.3	CARBONDALE		SHALE	1.0	153.2	BROWN
297.3	CARBONDALE		SANDSTONE	1.0	154.2	
296.3	CARBONDALE		COAL	1.0	155.2	

MAPID: 16302035000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 10 QUARTERS/FOOTAGES: 2310' N line, 2310' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.863521

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.373849

DATE COLLECTED:

SURFACE ELEVATION (FT.): 400.0

LOGGED (FT.): 59.5

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 203P

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
351.5	CARBONDALE	BRERETON	LIMESTONE	4.5	48.5	
347.0	CARBONDALE	HERRIN	COAL	6.5	53.0	

MAPID: 16302036000C VERSION: 1

PROJECT: AVAIL

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 10 QUARTERS/FOOTAGES: 300' N line, 1100' E line of SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.866231

GEOLOGIST: CHENOWETH

CONFIDENTIAL: N LATITUDE: 38.372131

DATE COLLECTED: 7 / 27 / 1954

SURFACE ELEVATION (FT.): 418.0 LOGGED (FT.): 66.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 217P

WELL TYPE: Coal Test

COMMENT: LOG SAYS "APX. 1100' W & 300' S C"

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
418.0	PLEISTOCENE		CLAY	13.0	0.0	
405.0	PLEISTOCENE		SAND	14.0	13.0	
391.0	PLEISTOCENE		SAND & GRAVEL	33.0	27.0	
358.0	CARBONDALE	BRERETON	LIMESTONE	1.0	60.0	TOP ERODED
357.0	CARBONDALE	HERRIN	COAL	3.3	61.0	
353.7	CARBONDALE		UNDERCLAY	1.7	64.3	

MAPID: 16302346000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 11 QUARTERS/FOOTAGES: 330' S line, 990' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.838057

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.366433

DATE COLLECTED:

SURFACE ELEVATION (FT.): 392.0 LOGGED (FT.): 168.5

LOG TYPE: Electric Log

SOURCE:

WELL TYPE: Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
112.0	BASE OF PENN.		UNCLASSIFIED	-	280.0	
112.0	MISSISSIPPIAN		UNCLASSIFIED	-	280.0	

MAPID: 16303058000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 13 QUARTERS/FOOTAGES: 2640' N line, 0' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.834428

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.358225

DATE COLLECTED:

SURFACE ELEVATION (FT.): 421.0 LOGGED (FT.): 129.1

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 8907C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
359.0	MODESTO	PIASA	LIMESTONE	8.8	62.0	
350.2	CARBONDALE		GRAY SHALE	22.2	70.8	
328.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.8	93.0	UPPER BENCH
325.2	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	3.7	95.8	SHALE PARTING
321.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.6	99.5	LOWER BENCH
318.9	CARBONDALE	LAWSON	DARK GRAY SHALE	6.2	102.1	
312.7	CARBONDALE	CONANT	LIMESTONE	0.2	108.3	
312.5	CARBONDALE		CALCAREOUS SHALE	0.5	108.5	
312.0	CARBONDALE	BRERETON	LIMESTONE	5.3	109.0	
306.7	CARBONDALE	ANNA	BLACK SHALE	5.9	114.3	
301.0	CARBONDALE	HERRIN	COAL	9.1	120.0	

MAPID: 16302551000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 23 QUARTERS/FOOTAGES: 629' S line, 756' E line of NE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.836978

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.345015

DATE COLLECTED: 7 / 23 / 1966

SURFACE ELEVATION (FT.): 383.0 LOGGED (FT.): 68.0

LOG TYPE: Drillers Log

SOURCE: VICKERY DRILLING COMPANY INC 1

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
318.0	CARBONDALE	SPRINGFIELD	COAL	3.0	65.0	COAL FROM 65' - 68'

MAPID: 16302552000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 24 QUARTERS/FOOTAGES: 330' S line, 500' E line of NW SE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.822295

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.340601

DATE COLLECTED: 11 / 28 / 1966

SURFACE ELEVATION (FT.): 413.0 LOGGED (FT.): 517.0

LOG TYPE: Drillers Log

SOURCE: CHARLES C WHITE 1

WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
413.0			SOIL	41.0	0.0	
372.0			SAND	38.0	41.0	
334.0	CARBONDALE		LIMESTONE	4.0	79.0	
330.0	CARBONDALE	HERRIN	COAL	5.0	83.0	
325.0	CARBONDALE		SHALE	27.0	88.0	
298.0	CARBONDALE		LIMESTONE	6.0	115.0	
292.0	CARBONDALE	SPRINGFIELD	COAL	3.0	121.0	
289.0	CARBONDALE		SHALE	50.0	124.0	
239.0	CARBONDALE		SHALY LIMESTONE	6.0	174.0	MIXED
233.0	CARBONDALE		SHALE	16.0	180.0	RED
217.0	CARBONDALE		LIMESTONE	2.0	196.0	
215.0	CARBONDALE		SHALE	57.0	198.0	BLU/GY
158.0	CARBONDALE		SHALE	22.0	255.0	
136.0	CARBONDALE		SANDSTONE	29.0	277.0	
107.0			SHALE	40.0	306.0	
67.0	MISSISSIPPIAN		LIMESTONE	12.0	346.0	
55.0	MISSISSIPPIAN		SHALE	25.0	358.0	
30.0	MISSISSIPPIAN		LIMESTONE	7.0	383.0	
23.0	MISSISSIPPIAN		SHALE	16.0	390.0	
7.0	MISSISSIPPIAN		SHALE	17.0	406.0	RED
-10.0	MISSISSIPPIAN		LIMESTONE	8.0	423.0	
-18.0	MISSISSIPPIAN		SHALE	40.0	431.0	
-58.0	MISSISSIPPIAN		LIMESTONE	15.0	471.0	
-73.0	MISSISSIPPIAN		SHALE	31.0	486.0	

MAPID: 16302638000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 24 QUARTERS/FOOTAGES: 1122' S line, 10' E line of NE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.816015

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.346554

DATE COLLECTED: 10 / 10 / 1963

SURFACE ELEVATION (FT.): 383.0 LOGGED (FT.): 93.0

LOG TYPE: Drillers Log

SOURCE: SUN OIL COMPANY 11-63

WELL TYPE: Structure Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
294.0	CARBONDALE	SPRINGFIELD	COAL	4.0	89.0	COAL AT 89-260' TOTAL DEPTH 495

MAPID: 16303455000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 2S 7W **SECTION:** 24 **QUARTERS/FOOTAGES:** 230' S line, 330' E line of SW NE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.821714 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.34404 **DATE COLLECTED:** 5 / 25 / 1972
SURFACE ELEVATION (FT.): 381.0 **LOGGED (FT.):** 85.0 **LOG TYPE:** Drillers Log
SOURCE: N A BALDRIDGE 1 **WELL TYPE:** Plugged and/or Abandoned
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
304.0	CARBONDALE	HERRIN	COAL	8.0	77.0	COAL AT 77' - 85'

MAPID: 16303438000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 2S 7W **SECTION:** 25 **QUARTERS/FOOTAGES:** 660' S line, 330' E line of NW
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.826298 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.330549 **DATE COLLECTED:** 3 / 0 / 1972
SURFACE ELEVATION (FT.): 394.0 **LOGGED (FT.):** 82.0 **LOG TYPE:** Drillers Log
SOURCE: N A BALDRIDGE 1 **WELL TYPE:** Plugged and/or Abandoned
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
319.0	CARBONDALE	HERRIN	COAL	7.0	75.0	COAL FROM 75-82'

MAPID: 16303454000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 2S 7W **SECTION:** 25 **QUARTERS/FOOTAGES:** 990' N line, 330' E line of NE SW
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.826298 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.325994 **DATE COLLECTED:** 5 / 4 / 1972
SURFACE ELEVATION (FT.): 405.0 **LOGGED (FT.):** 64.0 **LOG TYPE:** Drillers Log
SOURCE: N A BALDRIDGE 1 **WELL TYPE:** Plugged and/or Abandoned
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
348.0	CARBONDALE	HERRIN	COAL	7.0	57.0	COAL FROM 57' - 64' TOTAL DEPTH 525

MAPID: 16303469000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 2S 7W **SECTION:** 25 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of NE NW
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.8286 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.335042 **DATE COLLECTED:** 12 / 31 / 1972
SURFACE ELEVATION (FT.): 397.0 **LOGGED (FT.):** 104.0 **LOG TYPE:** Drillers Log
SOURCE: N A BALDRIDGE 2 **WELL TYPE:** Plugged and/or Abandoned
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
300.0	CARBONDALE	HERRIN	COAL	7.0	97.0	COAL FROM 97-104'

MAPID: 16323732000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 2S 7W **SECTION:** 25 **QUARTERS/FOOTAGES:** 214' N line, 45' E line of SE SE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.816069 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.324512 **DATE COLLECTED:** 8 / 21 / 1973
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 125.0 **LOG TYPE:** Drillers Log
SOURCE: ROY STERNWAY 34 **WELL TYPE:** Water Well
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	56.0	0.0	
-			SHALE	52.0	56.0	
-			LIMESTONE	12.0	108.0	
-			COAL	5.0	120.0	

MAPID: 16301806000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2S 7W **SECTION:** 26 **QUARTERS/FOOTAGES:** W2 W2
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.850623 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.32868 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 420.0 **LOGGED (FT.):** 6.0 **LOG TYPE:** Drillers Log
SOURCE: ENG MISS COAL CORP **WELL TYPE:** Mine Shaft
COMMENT: MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
420.0	CARBONDALE	HERRIN	COAL	6.0	0.0	MINE 60' DEEP

MAPID: 16302037000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 2S 7W **SECTION:** 26 **QUARTERS/FOOTAGES:** 1650' N line, 330' E line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.83553 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.33137 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 75.4 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 1003 **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
373.0	MODESTO	PIASA	LIMESTONE	9.4	27.0	
363.6	CARBONDALE		GRAY SHALE	13.3	36.4	
350.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.6	49.8	UPPER BENCH
347.7	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.7	52.3	SHALE PARTING
346.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	54.0	LOWER BENCH
342.5	CARBONDALE	LAWSON	DARK GRAY SHALE	6.9	57.5	
335.6	CARBONDALE	BRERETON	LIMESTONE	4.3	64.4	
331.0	CARBONDALE	HERRIN	COAL	6.4	69.0	

MAPID: 16302153000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 2S 7W **SECTION:** 34 **QUARTERS/FOOTAGES:** SW NE SE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.856337 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.311955 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 423.5 **LOGGED (FT.):** 55.0 **LOG TYPE:** Drillers Log
SOURCE: DARMSTATTER MINE **WELL TYPE:** Coal Test
COMMENT: SHIPPING MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
368.5	CARBONDALE	HERRIN	COAL	0.0	55.0	55' TO #6 COAL, MINE ABANDONED

MAPID: 16327005000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 2S 7W **SECTION:** 34 **QUARTERS/FOOTAGES:** NE SE SE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.854033 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.310209 **DATE COLLECTED:** 6 / 2 / 1989
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 33.0 **LOG TYPE:** Drillers Log
SOURCE: GARY E NOLL **WELL TYPE:** Water Well
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	33.0	0.0	

MAPID: 16327006000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 2S 7W **SECTION:** 34 **QUARTERS/FOOTAGES:** NE SE SE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.854033 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.310209 **DATE COLLECTED:** 6 / 2 / 1989
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 30.0 **LOG TYPE:** Drillers Log
SOURCE: GARY E NOLL **WELL TYPE:** Water Well
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	30.0	0.0	

MAPID: 16327055000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 2S 7W **SECTION:** 34 **QUARTERS/FOOTAGES:** SW SE SE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.856323 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.308498 **DATE COLLECTED:** 6 / 2 / 1989
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 31.0 **LOG TYPE:** Drillers Log
SOURCE: GARY E NOLL **WELL TYPE:** Water Well
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	31.0	0.0	

MAPID: 16300379000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 35 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.851734 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.313647 DATE COLLECTED:

SURFACE ELEVATION (FT.): 427.3 LOGGED (FT.): 65.0 LOG TYPE: Drillers Log

SOURCE: PEP COAL COMPANY 2 WELL TYPE: Mine Shaft

COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
368.8	CARBONDALE	HERRIN	COAL	6.5	58.5	65' TO 66" COAL, RAIL AT SHAFT

MAPID: 16324080000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 2S 7W SECTION: 36 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.833177 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.315301 DATE COLLECTED: 4 / 30 / 1976

SURFACE ELEVATION (FT.): LOGGED (FT.): 246.0 LOG TYPE: Drillers Log

SOURCE: HEPP DRILLING COMPANY WELL TYPE: Water Well

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	12.0	0.0	
-			SANDSTONE	18.0	12.0	BROWN
-			SHALE	5.0	30.0	
-			SANDSTONE	4.0	35.0	GRAY
-			SHALE	52.0	39.0	DARK GRAY
-			CALCAREOUS SHALE	6.0	91.0	
-			LIMESTONE	2.0	97.0	
-			LIMESTONE	12.0	99.0	CUTLER
-			SHALE	11.0	111.0	
-			LIMESTONE	25.0	122.0	SHEETS; DK
-	CARBONDALE	HERRIN	COAL	7.0	147.0	
-	CARBONDALE		CALCAREOUS SHALE	18.0	154.0	
-	CARBONDALE		SANDSTONE	19.0	172.0	GRAY
-	CARBONDALE		BLACK SHALE	9.0	191.0	
-	CARBONDALE		CALCAREOUS SHALE	46.0	200.0	

MAPID: 16301449000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 2S 8W SECTION: 31 QUARTERS/FOOTAGES: SE

QUADRANGLE: PADERBORN LONGITUDE: -90.022412 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.312337 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 44.0 LOG TYPE: Drillers Log

SOURCE: L C MCCABE FIELD NOTEBOOK #622 WELL TYPE: Coal Test

COMMENT: DRILL HOLE 1918

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			COAL	6.3	37.8	44' TO TOP COAL 3' ROCK HARD LIME ABV

MAPID: 16303367000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 1 QUARTERS/FOOTAGES: 2640' N line, 2640' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.712891 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.2983 DATE COLLECTED:

SURFACE ELEVATION (FT.): 430.0 LOGGED (FT.): 143.6 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12530C WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
333.7	MODESTO	PIASA	LIMESTONE	9.0	96.3	
324.7	CARBONDALE		GRAY SHALE	9.2	105.3	
315.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	114.5	UPPER BENCH
312.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.6	117.8	SHALE PARTING
308.6	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	121.4	LOWER BENCH
306.3	CARBONDALE	LAWSON	DARK GRAY SHALE	6.1	123.7	
300.2	CARBONDALE	LAWSON	GRAY SHALE	4.4	129.8	
295.8	CARBONDALE	LAWSON	LIMESTONE/UNDERCLAY	0.2	134.2	
295.6	CARBONDALE	LAWSON	CALCAREOUS SHALE	0.8	134.4	
294.9	CARBONDALE	ANNA	BLACK SHALE	1.9	135.1	
293.0	CARBONDALE	HERRIN	COAL	6.6	137.0	

MAPID: 16301044000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 2 QUARTERS/FOOTAGES: 1600' N line, 700' W line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.738149 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.301397 DATE COLLECTED: 3 / 0 / 1918

SURFACE ELEVATION (FT.): 409.7 LOGGED (FT.): 128.0 LOG TYPE: Drillers Log

SOURCE: ALUMINUM ORE CO 16 WELL TYPE: Coal Test

COMMENT: DIAMOND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
409.7			SOIL	10.0	0.0	
399.7			CLAY	62.0	10.0	
337.7			GRAVEL	3.0	72.0	
334.7			LIMESTONE	9.0	75.0	
325.7			LIMESTONE	1.0	84.0	
324.7			BLACK SHALE	1.0	85.0	
323.7			LIMESTONE	6.3	86.0	
317.4			LIMESTONE	4.5	92.3	
312.9			LIMESTONE	5.0	96.8	COAL STREAKS
307.9			LIMESTONE	3.4	101.8	BLUE
304.5			BLACK SHALE	7.5	105.2	
297.0	CARBONDALE	BRERETON	LIMESTONE	3.3	112.7	
293.7	CARBONDALE	ANNA	BLACK SHALE	3.5	116.0	
290.2	CARBONDALE	HERRIN	COAL	7.8	119.5	
282.4	CARBONDALE		UNDERCLAY	0.8	127.3	

MAPID: 16302658000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 2 QUARTERS/FOOTAGES: 20' S line, 1320' W line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.736005 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.293779 DATE COLLECTED: 10 / 14 / 1952

SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 131.0 LOG TYPE: Drillers Log

SOURCE: SUN OIL COMPANY ST-8-52 WELL TYPE: Structure Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
338.0	MODESTO	PIASA	LIMESTONE	8.0	87.0	
300.0	CARBONDALE	HERRIN	COAL	6.0	125.0	

MAPID: 16303528000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 2 QUARTERS/FOOTAGES: 2640' N line, 0' W line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.740613

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.298554

DATE COLLECTED:

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 126.5

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12669C

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
350.0	MODESTO	PIASA	LIMESTONE	8.3	70.0	
341.7	CARBONDALE		GRAY SHALE	12.4	78.3	
329.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	90.8	UPPER BENCH
326.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	4.2	93.8	SHALE PARTING
322.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	97.9	LOWER BENCH
319.9	CARBONDALE	LAWSON	DARK GRAY SHALE	8.4	100.1	
311.5	CARBONDALE	CONANT	LIMESTONE	6.2	108.5	
305.3	CARBONDALE		DARK GRAY SHALE	2.3	114.7	
303.0	CARBONDALE	BRERETON	LIMESTONE	0.5	117.0	
302.6	CARBONDALE	ANNA	BLACK SHALE	0.9	117.4	
301.0	CARBONDALE	HERRIN	COAL	7.5	119.0	

MAPID: 16303609000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 3 QUARTERS/FOOTAGES: 2640' N line, 2640' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.749859

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.298725

DATE COLLECTED:

SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 122.9

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 12683C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
334.2	CARBONDALE		GRAY SHALE	12.9	75.8	
321.3	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	88.7	UPPER BENCH
318.9	CARBONDALE	BANKSTON FORK	DARK GRAY SHALE	4.5	91.1	SHALE PARTING
314.4	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	4.4	95.6	LOWER BENCH
310.0	CARBONDALE	LAWSON	SHALE	10.5	100.0	
299.5	CARBONDALE		BLACK SHALE	3.3	110.5	
296.2	CARBONDALE	BRERETON	LIMESTONE	0.8	113.8	
295.4	CARBONDALE	ANNA	SHALE	0.4	114.6	
295.0	CARBONDALE	HERRIN	COAL	7.9	115.0	

MAPID: 16390020000C VERSION: 1

PROJECT: LUMP97

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 3 QUARTERS/FOOTAGES: NE NE SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.750869 GEOLOGIST: D NORTH

CONFIDENTIAL: N LATITUDE: 38.299995 DATE COLLECTED: 5 / 27 / 1976

SURFACE ELEVATION (FT.): 417.0 LOGGED (FT.): 122.9 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16296C WELL TYPE: Coal Test

COMMENT: PERMIT #61 ST/LIBORY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
417.0	PLEISTOCENE		UNCONSOLIDATED	62.0	0.0	
355.0	MODESTO	PIASA	LIMESTONE	7.6	62.0	
347.4	MODESTO		GRAY SHALE	1.4	69.6	
346.0	MODESTO		DARK SHALE	4.0	71.0	
342.0	CARBONDALE	DANVILLE	COAL	0.9	75.0	
341.1	CARBONDALE		GRAY SHALE	6.1	75.9	
335.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	82.0	
331.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	4.7	86.0	
326.3	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	90.7	
323.8	CARBONDALE		DARK SHALE	7.7	93.2	
316.1	CARBONDALE	BRERETON	LIMESTONE	5.1	100.9	
311.0	CARBONDALE	ANNA	DARK SHALE	1.9	106.0	
309.2	CARBONDALE	ANNA	BLACK SHALE	2.0	107.8	
307.2	CARBONDALE	HERRIN	COAL	5.5	109.8	
301.7	CARBONDALE		UNDERCLAY	1.0	115.3	
300.7	CARBONDALE	HIGGINSVILLE	LIMESTONE	1.6	116.3	
299.1	CARBONDALE		UNKNOWN	5.0	117.9	LOST CORE

MAPID: 1630349000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 4 QUARTERS/FOOTAGES: 2640' N line, 1980' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.770634 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.299037 DATE COLLECTED:

SURFACE ELEVATION (FT.): 405.0 LOGGED (FT.): 101.6 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12675C WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
357.2	MODESTO	PIASA	LIMESTONE	9.3	47.8	
347.9	CARBONDALE		GRAY SHALE	8.6	57.1	
339.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	65.7	UPPER BENCH
336.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.5	69.0	SHALE PARTING
332.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.6	72.5	LOWER BENCH
329.9	CARBONDALE	LAWSON	DARK GRAY SHALE	6.8	75.1	
323.1	CARBONDALE	LAWSON	LIMESTONE	0.5	81.9	
322.6	CARBONDALE	LAWSON	CALCAREOUS SHALE	1.1	82.4	
321.5	CARBONDALE	LAWSON	LIMESTONE	0.5	83.5	
321.0	CARBONDALE	LAWSON	DARK GRAY SHALE	1.3	84.0	
319.7	CARBONDALE		CALCAREOUS SHALE	2.7	85.3	
317.0	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	5.6	88.0	
311.5	CARBONDALE	ANNA	DARK GRAY SHALE	0.5	93.5	
311.0	CARBONDALE	HERRIN	COAL	7.6	94.0	

MAPID: 16303491000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 5 QUARTERS/FOOTAGES: 0' N line, 0' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.777655 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.306411 DATE COLLECTED:

SURFACE ELEVATION (FT.): 400.0 LOGGED (FT.): 132.7 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12673C WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
324.0	MODESTO	PIASA	LIMESTONE	11.5	76.0	
312.5	CARBONDALE		GRAY SHALE	10.5	87.5	
302.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.9	98.0	UPPER BENCH
299.1	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.9	100.9	SHALE PARTING
295.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.6	104.8	LOWER BENCH
292.6	CARBONDALE	LAWSON	DARK GRAY SHALE	6.2	107.4	
286.4	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	2.2	113.6	
284.2	CARBONDALE		DARK GRAY SHALE	0.8	115.8	
283.4	CARBONDALE	BRERETON	LIMESTONE	5.0	116.6	
278.4	CARBONDALE	ANNA	BLACK SHALE	3.8	121.6	
275.0	CARBONDALE	HERRIN	COAL	7.7	125.0	

MAPID: 16303530000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 6 **QUARTERS/FOOTAGES:** 2640' N line, 1320' E line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.800894 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.299528 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 435.0 **LOGGED (FT.):** 112.5 **LOG TYPE:** Survey Core Study
SOURCE: PEABODY COAL CO. 12729C **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
381.0	MODESTO	PIASA	LIMESTONE	11.2	54.0	
369.8	CARBONDALE		GRAY SHALE	16.3	65.2	
353.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	81.5	UPPER BENCH
351.2	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	4.0	83.8	LOWER BENCH
347.2	CARBONDALE	LAWSON	DARK GRAY SHALE	10.1	87.8	
337.1	CARBONDALE		BLACK SHALE	0.6	97.9	
336.5	CARBONDALE	BRERETON	LIMESTONE	5.4	98.5	
331.1	CARBONDALE	ANNA	BLACK SHALE	1.0	103.9	
330.0	CARBONDALE	HERRIN	COAL	7.5	105.0	

MAPID: 16300242000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 7 **QUARTERS/FOOTAGES:** 1350' S line, 875' W line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.812683 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.282698 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 452.3 **LOGGED (FT.):** 87.0 **LOG TYPE:** Drillers Log
SOURCE: BESSEMER WASHED COAL COMPANY **WELL TYPE:** Mine Shaft
COMMENT: LENSBURG COAL COMPANY 1926+

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
365.3	CARBONDALE	HERRIN	COAL	0.0	87.0	87' TO COAL

MAPID: 16300452000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 7 **QUARTERS/FOOTAGES:** 1320' S line, 440' W line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.814206 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.282613 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 475.4 **LOGGED (FT.):** 70.0 **LOG TYPE:** Drillers Log
SOURCE: UNITED ELECTRIC COAL COMPANY 807 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
475.4			UNCLASSIFIED	70.0	0.0	DRILL HOLE;TOTAL DEPTH NO COAL

MAPID: 16300452000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 7 **QUARTERS/FOOTAGES:** 1320' S line, 440' W line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.814206 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.282613 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 475.4 **LOGGED (FT.):** 70.0 **LOG TYPE:**
SOURCE: UN ELEC CC 807 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16327265000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 7 **QUARTERS/FOOTAGES:** 1980' S line, 2310' W line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.807647 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.284445 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 440.7 **LOGGED (FT.):** 65.7 **LOG TYPE:** Drillers Log
SOURCE: H E WILLSON 59 **WELL TYPE:** Coal Test
COMMENT: COAL DEVELOPEMENT COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
440.7			UNCLASSIFIED	58.4	0.0	SKELETON ROD
382.3	CARBONDALE	HERRIN	COAL	7.3	58.4	73" COAL #6

MAPID: 16303403000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 8 **QUARTERS/FOOTAGES:** 1320' N line, 0' E line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.777512 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.290153 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 459.0 **LOGGED (FT.):** 161.7 **LOG TYPE:** Survey Core Study
SOURCE: PEABODY COAL CO. 12715C **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
352.0	MODESTO	PIASA	LIMESTONE	9.5	107.0	
342.5	CARBONDALE	LAWSON	GRAY SHALE	23.7	116.5	
318.8	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.2	140.2	
318.6	CARBONDALE		CALCAREOUS SHALE	0.6	140.4	
318.0	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.9	141.0	
317.2	CARBONDALE	ANNA	BLACK SHALE	2.7	141.8	
304.0	CARBONDALE	HERRIN	COAL	6.7	155.0	

MAPID: 16302696000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 9 QUARTERS/FOOTAGES: 1305' S line, 1306' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.763567 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.282436 DATE COLLECTED:

SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 82.3 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 7208 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
393.0	MODESTO	PIASA	LIMESTONE	9.2	32.0	
383.8	CARBONDALE		SHALE	8.3	41.2	
375.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	49.5	UPPER BENCH
373.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	4.8	51.8	SHALE PARTING
368.4	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	56.6	LOWER BENCH
366.1	CARBONDALE	LAWSON	DARK GRAY SHALE	5.8	58.9	
360.3	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	2.9	64.7	
357.4	CARBONDALE		CALCAREOUS SHALE	3.3	67.6	
354.1	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	5.6	70.9	
349.0	CARBONDALE	HERRIN	COAL	6.3	76.0	

MAPID: 16302657000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 10 QUARTERS/FOOTAGES: 40' S line, 10' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.740587 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.279245 DATE COLLECTED: 9 / 22 / 1952

SURFACE ELEVATION (FT.): 423.0 LOGGED (FT.): 127.0 LOG TYPE: Drillers Log

SOURCE: SUN OIL COMPANY 1 WELL TYPE: Structure Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.0	MODESTO	PIASA	LIMESTONE	74.0	8.0	
303.0	CARBONDALE	HERRIN	COAL	7.0	120.0	#6 COAL, TOTAL DEPTH 130

MAPID: 16302707000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 10 QUARTERS/FOOTAGES: 1310' S line, 34' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.758873 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.282405 DATE COLLECTED:

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 69.8 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 7205 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
384.3	CARBONDALE		GRAY SHALE	4.0	35.7	
380.3	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	39.7	UPPER BENCH
379.0	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.1	41.0	SHALE PARTING
374.9	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	45.1	LOWER BENCH
372.8	CARBONDALE		DARK GRAY SHALE	3.9	47.2	
368.9	CARBONDALE	BRERETON	LIMESTONE	9.8	51.1	
359.1	CARBONDALE	ANNA	DARK GRAY SHALE	2.1	60.9	
357.0	CARBONDALE	HERRIN	COAL	6.8	63.0	

MAPID: 16390021000C VERSION: 1

PROJECT: LUMP97

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 10 QUARTERS/FOOTAGES: NE NE NE

QUADRANGLE: ST. LIBORY LONGITUDE: -89.741764 GEOLOGIST: D NORTH

CONFIDENTIAL: N LATITUDE: 38.292801 DATE COLLECTED: 2 / 1 / 1984

SURFACE ELEVATION (FT.): 427.6 LOGGED (FT.): 142.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16783C WELL TYPE: Coal Test

COMMENT: PERMIT #61 ST. LIBORY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
427.6	PLEISTOCENE		UNCONSOLIDATED	40.0	0.0	
387.6	MODESTO		GRAY SHALE	42.1	40.0	
345.5	MODESTO	PIASA	LIMESTONE	6.1	82.1	
339.4	MODESTO		BLACK SHALE	3.6	88.2	
335.8	CARBONDALE		GRAY SHALE	7.1	91.8	
328.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	98.9	
326.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.2	101.6	
324.8	CARBONDALE	BANKSTON FORK	LIMESTONE	0.4	102.8	
324.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.1	103.2	
322.3	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	105.3	
319.6	CARBONDALE		DARK SHALE	4.8	108.0	
314.8	CARBONDALE	CONANT	LIMESTONE	3.1	112.8	
311.7	CARBONDALE		DARK SHALE	3.3	115.9	
308.4	CARBONDALE	BRERETON	LIMESTONE	6.6	119.2	
301.8	CARBONDALE	HERRIN	COAL	6.8	125.8	
295.0	CARBONDALE		GRAY SHALE	4.5	132.6	
290.5	CARBONDALE	HIGGINSVILLE	LIMESTONE	4.0	137.1	
286.5	CARBONDALE		GRAY SHALE	1.0	141.1	

MAPID: 16303406000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 11 QUARTERS/FOOTAGES: 2310' N line, 0' W line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.740597 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.287345 DATE COLLECTED:

SURFACE ELEVATION (FT.): 429.0 LOGGED (FT.): 140.4 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12727C WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
348.0	MODESTO	PIASA	LIMESTONE	8.0	81.0	
340.0	CARBONDALE		GRAY SHALE	18.8	89.0	
321.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	107.8	UPPER BENCH
318.2	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	6.8	110.8	LOWER BENCH
311.4	CARBONDALE	LAWSON	DARK GRAY SHALE	8.6	117.6	
302.8	CARBONDALE	CONANT	LIMESTONE	0.6	126.2	
302.2	CARBONDALE	JAMESTOWN	CARBONACEOUS SHALE	0.3	126.8	
301.9	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.7	127.1	
301.2	CARBONDALE	ANNA	BLACK SHALE	4.0	127.8	
297.0	CARBONDALE	HERRIN	COAL	8.4	132.0	

MAPID: 16303368000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 12 QUARTERS/FOOTAGES: 2640' N line, 2640' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.712865 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.285976 DATE COLLECTED:

SURFACE ELEVATION (FT.): 447.0 LOGGED (FT.): 180.6 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12528C WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
315.0	MODESTO	PIASA	LIMESTONE	9.5	132.0	
305.5	CARBONDALE		SHALE	11.8	141.5	
293.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	153.3	UPPER BENCH
291.3	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.8	155.7	SHALE PARTING
287.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	159.5	LOWER BENCH
285.0	CARBONDALE	LAWSON	DARK GRAY SHALE	10.9	162.0	
274.1	CARBONDALE	BRERETON	LIMESTONE W/ SHALE	0.7	172.9	
273.5	CARBONDALE	ANNA	BLACK SHALE	0.7	173.5	
273.0	CARBONDALE	HERRIN	COAL	6.6	174.0	

MAPID: 16390017000C VERSION: 1

PROJECT: LUMP97

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 12 QUARTERS/FOOTAGES: SE NW SE

QUADRANGLE: ST. LIBORY LONGITUDE: -89.709363 GEOLOGIST: D NORTH

CONFIDENTIAL: N LATITUDE: 38.282771 DATE COLLECTED: 2 / 26 / 1976

SURFACE ELEVATION (FT.): 445.6 LOGGED (FT.): 175.7 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16116C WELL TYPE: Coal Test

COMMENT: PERMIT # 61 ST. LIBORY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
445.6	PLEISTOCENE		UNCONSOLIDATED	75.0	0.0	
370.6	MODESTO		SHALE	28.5	75.0	
342.1	MODESTO		SANDSTONE	4.1	103.5	
338.0	MODESTO		SHALE	4.9	107.6	
333.1	MODESTO		SANDSTONE	3.0	112.5	
330.1	MODESTO		GRAY SHALE	3.0	115.5	
327.1	MODESTO	PIASA	LIMESTONE	10.2	118.5	
316.9	MODESTO		DARK SHALE	5.5	128.7	
311.4	CARBONDALE		SANDSTONE	2.8	134.2	
308.6	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	137.0	
305.1	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.8	140.5	
301.3	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	144.3	
298.9	CARBONDALE		DARK SHALE	9.8	146.7	
289.1	CARBONDALE	BRERETON	LIMESTONE	3.6	156.5	
285.5	CARBONDALE	ANNA	DARK SHALE	1.3	160.1	
284.2	CARBONDALE	ANNA	BLACK SHALE	0.2	161.4	
284.0	CARBONDALE	HERRIN	COAL	5.0	161.6	
279.1	CARBONDALE	HERRIN	SHALE	0.1	166.5	BLUE
279.0	CARBONDALE	HERRIN	COAL	1.8	166.6	
277.3	CARBONDALE		UNDERCLAY	0.9	168.3	
276.4	CARBONDALE	HIGGINSVILLE	LIMESTONE	3.7	169.2	
272.7	CARBONDALE		GRAY SHALE	2.8	172.9	

MAPID: 16390018000C VERSION: 1

PROJECT: LUMP97

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 12 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: ST. LIBORY LONGITUDE: -89.707083 GEOLOGIST: D NORTH

CONFIDENTIAL: N LATITUDE: 38.278888 DATE COLLECTED: 3 / 9 / 1976

SURFACE ELEVATION (FT.): 432.7 LOGGED (FT.): 163.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16139C WELL TYPE: Coal Test

COMMENT: PERMIT #61 ST. LIBORY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
432.7	PLEISTOCENE		UNCONSOLIDATED	77.1	0.0
355.6	MODESTO		CONGLOMERATE	0.3	77.1
355.3	MODESTO		BONE COAL	0.4	77.4
354.9	MODESTO		MUDSTONE	10.5	77.8
344.4	MODESTO		SANDSTONE	3.7	88.3
340.7	MODESTO		MUDSTONE	11.9	92.0
328.8	MODESTO	PIASA	LIMESTONE	8.4	103.9
320.4	MODESTO		MUDSTONE	7.2	112.3
313.2	CARBONDALE	DANVILLE	COAL	0.7	119.5
312.5	CARBONDALE		MUDSTONE	5.6	120.2
306.9	CARBONDALE	BANKSTON FORK	LIMESTONE	2.9	125.8
304.0	CARBONDALE	BANKSTON FORK	SHALE	3.8	128.7
300.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	132.5
297.9	CARBONDALE		MUDSTONE	9.0	134.8
288.9	CARBONDALE	BRERETON	LIMESTONE	2.3	143.8
286.6	CARBONDALE	ANNA	MUDSTONE	0.5	146.1
286.1	CARBONDALE	ANNA	LIMESTONE	0.2	146.6
285.9	CARBONDALE	ANNA	BLACK SHALE	2.2	146.8
283.7	CARBONDALE	HERRIN	COAL	6.3	149.0
277.4	CARBONDALE		MUDSTONE	0.3	155.3
277.1	CARBONDALE		UNDERCLAY	2.6	155.6
274.5	CARBONDALE	HIGGINSVILLE	LIMESTONE	5.1	158.2

MAPID: 16301041000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 13 QUARTERS/FOOTAGES: 2400' N line, 500' E line
 QUADRANGLE: ST. LIBORY LONGITUDE: -89.705415 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.27123 DATE COLLECTED: 3 / 0 / 1918
 SURFACE ELEVATION (FT.): 419.0 LOGGED (FT.): 91.6 LOG TYPE: Drillers Log
 SOURCE: ALUMINUM ORE COMPANY WELL TYPE: Coal Test
 COMMENT: DIAMOND DRILL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
419.0			UNCONSOLIDATED	55.2	0.0	
363.8			SHALE	4.1	55.2	
359.7			SANDSTONE	2.8	59.3	BLUE
357.0			CLAYSTONE	7.0	62.0	BLUE
350.0			SHALE W/ COAL STREAKS	1.0	69.0	
349.0			LIMESTONE	2.5	70.0	
346.5			LIMESTONE	7.5	72.5	
339.0			LIMESTONE	5.3	80.0	
333.7			LIMESTONE	1.7	85.3	
332.0	CARBONDALE	SPRINGFIELD	COAL	2.2	87.0	
329.8	CARBONDALE		UNDERCLAY	2.4	89.2	

MAPID: 16302661000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 13 QUARTERS/FOOTAGES: 50' S line, 100' E line of SW SW
 QUADRANGLE: ST. LIBORY LONGITUDE: -89.717789 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.263761 DATE COLLECTED: 9 / 23 / 1952
 SURFACE ELEVATION (FT.): 418.0 LOGGED (FT.): 105.0 LOG TYPE: Drillers Log
 SOURCE: SUN OIL COMPANY 1 WELL TYPE: Structure Test
 COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
368.0	MODESTO	PIASA	LIMESTONE	17.0	50.0	
318.0	CARBONDALE	HERRIN	COAL	5.0	100.0	#6 COAL, TOTAL DEPTH 110

MAPID: 16302662000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 13 QUARTERS/FOOTAGES: 10' N line, 150' E line of SE NW
 QUADRANGLE: ST. LIBORY LONGITUDE: -89.713353 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.27457 DATE COLLECTED: 9 / 24 / 1952
 SURFACE ELEVATION (FT.): 449.0 LOGGED (FT.): 159.0 LOG TYPE: Drillers Log
 SOURCE: SUN OIL COMPANY 1 WELL TYPE: Structure Test
 COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
337.0	MODESTO	PIASA	LIMESTONE	9.0	112.0	
296.0	CARBONDALE	HERRIN	COAL	6.0	153.0	#6 COAL, TOTAL DEPTH 160

MAPID: 16303369000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 13 QUARTERS/FOOTAGES: 660' N line, 0' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.703649 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.275929 DATE COLLECTED:

SURFACE ELEVATION (FT.): 422.0 LOGGED (FT.): 138.0 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12531C WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
333.5	MODESTO	PIASA	LIMESTONE	10.5	88.5	
323.0	CARBONDALE		SHALE	7.2	99.0	
315.8	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	106.2	UPPER BENCH
312.3	CARBONDALE	BANKSTON FORK	SHALE	3.7	109.7	SHALE PARTING
308.6	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	113.4	LOWER BENCH
306.2	CARBONDALE	LAWSON	SHALE	5.5	115.8	
300.7	CARBONDALE	LAWSON	LIMESTONE	1.6	121.3	
299.1	CARBONDALE	LAWSON	CARBONACEOUS SHALE	0.6	122.9	
298.5	CARBONDALE	CONANT	CARBONACEOUS LIMESTONE	0.6	123.5	
297.9	CARBONDALE	JAMESTOWN	CARBONACEOUS SHALE	1.7	124.1	
296.2	CARBONDALE	BRERETON	LIMESTONE	6.0	125.8	
290.3	CARBONDALE	ANNA	DARK GRAY SHALE	0.3	131.7	
290.0	CARBONDALE	HERRIN	COAL	6.0	132.0	

MAPID: 16390001000C VERSION: 1

PROJECT: NCRDS92

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 13 QUARTERS/FOOTAGES: 1250' S line, 100' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.704029 GEOLOGIST: C TREWORYG

CONFIDENTIAL: N LATITUDE: 38.266492 DATE COLLECTED:

SURFACE ELEVATION (FT.): 415.0 LOGGED (FT.): 105.1 LOG TYPE: Multiple log types

SOURCE: PEABODY COAL CO. 9722C WELL TYPE: Coal Test

COMMENT: PEABODY MARISSA MINE PERMIT #48

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.0			UNCONSOLIDATED	40.1	0.0	GLACIAL DRIFT
374.9	MODESTO		SANDSTONE	5.1	40.1	
369.8	MODESTO		SANDY SHALE	13.2	45.2	
356.6	MODESTO	PIASA	LIMESTONE	9.8	58.4	
346.8	MODESTO		SHALE	3.8	68.2	SH W/ COAL STREAKS
343.0	MODESTO		SHALE	3.8	72.0	
339.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	75.8	
335.9	CARBONDALE	BANKSTON FORK	SHALE	4.4	79.1	
331.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.8	83.5	
328.7	CARBONDALE	LAWSON	SHALE	7.1	86.3	
321.6	CARBONDALE	BRERETON	LIMESTONE	2.6	93.4	
319.0	CARBONDALE	ANNA	SHALE	1.3	96.0	
317.7	CARBONDALE	HERRIN	COAL	6.2	97.3	
311.5	CARBONDALE		UNDERCLAY	1.6	103.5	
309.9	CARBONDALE	HIGGINSVILLE	LIMESTONE	0.0	105.1	

MAPID: 16390002000C VERSION: 1

PROJECT: NCRDS92

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 13 QUARTERS/FOOTAGES: 1250' S line, 2960' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.714041 GEOLOGIST: C TREWORGY

CONFIDENTIAL: N LATITUDE: 38.266916 DATE COLLECTED:

SURFACE ELEVATION (FT.): 415.0 LOGGED (FT.): 131.1 LOG TYPE: Multiple log types

SOURCE: PEABODY COAL CO. 12733C WELL TYPE: Coal Test

COMMENT: PEABODY MARISSA MINE PERMIT #48

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.0			UNCONSOLIDATED	62.3	0.0	GLACIAL DRIFT
352.7	MODESTO		GRAY SHALE	4.2	62.3	
348.5	MODESTO		SANDSTONE	3.7	66.5	
344.8	MODESTO		GRAY SHALE	8.2	70.2	
336.6	MODESTO	PIASA	LIMESTONE	7.6	78.4	
329.0	MODESTO		GRAY SHALE	13.6	86.0	
315.4	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	99.6	
313.1	CARBONDALE		GRAY SHALE	5.2	101.9	
307.9	CARBONDALE	BANKSTON FORK	LIMESTONE	0.0	107.1	
307.9	CARBONDALE	LAWSON	SHALE	6.7	107.1	
301.2	CARBONDALE	CONANT	LIMESTONE	0.5	113.8	
300.7	CARBONDALE		SHALE	5.0	114.3	
295.7	CARBONDALE	BRERETON	LIMESTONE	5.0	119.3	
290.7	CARBONDALE	HERRIN	COAL	6.3	124.3	
284.4	CARBONDALE		UNDERCLAY	0.5	130.6	

MAPID: 16390016000C VERSION: 1

PROJECT: LUMP97

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 13 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: ST. LIBORY LONGITUDE: -89.704815 GEOLOGIST: D NORTH

CONFIDENTIAL: N LATITUDE: 38.269525 DATE COLLECTED: 12 / 4 / 1968

SURFACE ELEVATION (FT.): 434.2 LOGGED (FT.): 138.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 8599B WELL TYPE: Coal Test

COMMENT: PERMIT # 61 ST. LIBORY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
434.2	PLEISTOCENE		UNCONSOLIDATED	70.0	0.0
364.2	MODESTO		LIMESTONE	2.5	70.0
361.7	MODESTO		MICACEOUS SHALE	7.0	72.5
354.7	MODESTO		LIMESTONE	0.7	79.5
354.0	MODESTO		GRAY SHALE	6.0	80.2
348.0	MODESTO	PIASA	LIMESTONE	7.3	86.2
340.7	MODESTO		GRAY SHALE	6.3	93.5
334.4	CARBONDALE	DANVILLE	COAL	0.7	99.8
333.7	CARBONDALE		GRAY SHALE	4.1	100.5
329.6	CARBONDALE	BANKSTON FORK	LIMESTONE	3.2	104.6
326.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.2	107.8
323.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	111.0
320.7	CARBONDALE		MICACEOUS SHALE	4.8	113.5
315.9	CARBONDALE	CONANT	LIMESTONE	0.5	118.3
315.4	CARBONDALE	CONANT	DARK SHALE	0.5	118.8
314.9	CARBONDALE	CONANT	LIMESTONE	0.7	119.3
314.2	CARBONDALE	CONANT	DARK SHALE	1.0	120.0
313.2	CARBONDALE	CONANT	LIMESTONE	0.5	121.0
312.7	CARBONDALE		DARK SHALE	2.1	121.5
310.6	CARBONDALE	BRERETON	LIMESTONE	7.7	123.6
302.9	CARBONDALE	HERRIN	COAL	6.2	131.3
296.7	CARBONDALE		UNDERCLAY	0.5	137.5

MAPID: 16302663000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 14 QUARTERS/FOOTAGES: 25' S line, 25' E line of SW NE

QUADRANGLE: ST. LIBORY LONGITUDE: -89.726714 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.271482 DATE COLLECTED: 9 / 21 / 1952

SURFACE ELEVATION (FT.): 441.0 LOGGED (FT.): 142.0 LOG TYPE: Drillers Log

SOURCE: SUN OIL COMPANY 1 WELL TYPE: Structure Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
346.0	MODESTO	PIASA	LIMESTONE	7.0	95.0
305.0	CARBONDALE	HERRIN	COAL	6.0	136.0 #6 COAL, TOTAL DEPTH 150

MAPID: 16303504000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 14 QUARTERS/FOOTAGES: 0' S line, 0' W line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.740432

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.264285

DATE COLLECTED:

SURFACE ELEVATION (FT.): 447.0 LOGGED (FT.): 127.7

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12679C

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
369.0	MODESTO	PIASA	LIMESTONE	6.3	78.0	
362.7	MODESTO		GRAY SHALE	6.1	84.3	
356.6	CARBONDALE	DANVILLE	COAL	1.5	90.4	
355.1	CARBONDALE		GRAY SHALE	5.1	91.9	
350.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.2	97.0	UPPER BENCH
345.8	CARBONDALE	BANKSTON FORK	GRAY SHALE	5.0	101.2	SHALE PARTING
340.8	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	106.2	LOWER BENCH
338.1	CARBONDALE	LAWSON	DARK GRAY SHALE	9.8	108.9	
328.3	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.9	118.7	
327.4	CARBONDALE	JAMESTOWN	GRAY SHALE	0.4	119.6	
327.0	CARBONDALE	ANNA	BLACK SHALE	1.6	120.0	
326.0	CARBONDALE	HERRIN	COAL	6.7	121.0	

MAPID: 16390019000C VERSION: 1

PROJECT: LUMP97

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 14 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: ST. LIBORY LONGITUDE: -89.723163 GEOLOGIST: D NORTH

CONFIDENTIAL: N LATITUDE: 38.270399 DATE COLLECTED: 8 / 8 / 1975

SURFACE ELEVATION (FT.): 439.2 LOGGED (FT.): 142.9 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16269C WELL TYPE: Coal Test

COMMENT: PERMIT #61 ST. LIBORY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
439.2	PLEISTOCENE		UNCONSOLIDATED	74.8	0.0
364.4	MODESTO		SANDSTONE	0.7	74.8
363.7	MODESTO		SILTSTONE	2.5	75.5
361.2	MODESTO		GRAY SHALE	14.4	78.0
346.8	MODESTO	PIASA	LIMESTONE	10.5	92.4
336.3	MODESTO		GRAY SHALE	1.1	102.9
335.2	MODESTO		DARK SHALE	3.4	104.0
331.8	CARBONDALE		GRAY SHALE	4.6	107.4
327.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	112.0
325.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.4	114.0
321.8	CARBONDALE	BANKSTON FORK	LIMESTONE	3.2	117.4
318.6	CARBONDALE		DARK SHALE	9.1	120.6
309.5	CARBONDALE	ANNA	BLACK SHALE	2.9	129.7
306.6	CARBONDALE	HERRIN	COAL	6.1	132.6
300.6	CARBONDALE		UNDERCLAY	0.5	138.6
300.1	CARBONDALE	HIGGINSVILLE	LIMESTONE	3.8	139.1

MAPID: 16302666000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 15 QUARTERS/FOOTAGES: 150' S line, 10' W line of NW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.759014

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.271784

DATE COLLECTED: 1 / 31 / 1956

SURFACE ELEVATION (FT.): 435.0 LOGGED (FT.): 115.0

LOG TYPE: Drillers Log

SOURCE: SUN OIL COMPANY 6

WELL TYPE: Structure Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
435.0			CLAY	23.0	0.0	
412.0			SHALE	16.0	23.0	
396.0			DARK SHALE	1.0	39.0	
395.0			SANDY SHALE	1.0	40.0	
394.0			SHALE	5.0	41.0	
389.0			DARK SHALE	2.0	46.0	
387.0			SHALE	15.0	48.0	
372.0			SHALE WITH LIMESTONE	6.0	63.0	
366.0			LIMESTONE	2.0	69.0	BROWN
364.0			SHALE	6.0	71.0	
358.0			LIMESTONE	4.0	77.0	BROWN
354.0			SHALE	5.0	81.0	
349.0			LIMESTONE	1.0	86.0	BLACK
348.0			LIMESTONE	1.0	87.0	BROWN
347.0			DARK SHALE	1.0	88.0	
346.0			SHALE	7.0	89.0	
339.0			LIMESTONE	0.0	96.0	BLACK
339.0	CARBONDALE	ANNA	BLACK SHALE	4.0	96.0	
335.0	CARBONDALE	ANNA	BLACK SHALE	4.0	100.0	
331.0	CARBONDALE	HERRIN	COAL	10.0	104.0	
321.0	CARBONDALE		SHALE	1.0	114.0	

MAPID: 16302667000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 15 QUARTERS/FOOTAGES: 10' S line, 300' W line of SE SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.753352

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.264083

DATE COLLECTED: 2 / 1 / 1956

SURFACE ELEVATION (FT.): 458.0 LOGGED (FT.): 100.0

LOG TYPE: Drillers Log

SOURCE: SUN OIL COMPANY 7

WELL TYPE: Structure Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
458.0			CLAY	25.0	0.0	
433.0			SHALE	9.0	25.0	
424.0			DARK SHALE	1.0	34.0	
423.0			SHALE	8.0	35.0	
415.0			DARK SHALE	1.0	43.0	
414.0			SHALE	15.0	44.0	
399.0			LIMESTONE	0.0	59.0	BROWN
399.0			SHALE	6.0	59.0	
393.0			SHALE WITH LIMESTONE	7.0	65.0	
386.0			LIMESTONE	2.0	72.0	BROWN
384.0			SHALE	7.0	74.0	
377.0			LIMESTONE	0.0	81.0	BLACK
377.0	CARBONDALE	ANNA	BLACK SHALE	7.0	81.0	
370.0	CARBONDALE	ANNA	BLACK SHALE	3.0	88.0	
367.0	CARBONDALE	HERRIN	COAL	7.0	91.0	
360.0	CARBONDALE		SHALE	2.0	98.0	

MAPID: 16301395000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 16 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.776228 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.264986 DATE COLLECTED: 9 / 26 / 1947

SURFACE ELEVATION (FT.): 426.3 LOGGED (FT.): 77.5 LOG TYPE: Drillers Log

SOURCE: MID CONTINENT WELL TYPE: Coal Test

COMMENT: HOLE #3

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
426.3			CLAY	27.0	0.0	
399.3			LIMESTONE	5.0	27.0	
394.3			SHALE	15.0	32.0	
379.3			LIMESTONE	2.0	47.0	
377.3			BLACK SHALE	3.0	49.0	
374.3			LIMESTONE	3.0	52.0	
371.3			SHALE	6.0	55.0	BLUE
365.3			LIMESTONE	1.0	61.0	
364.3			SHALE	1.0	62.0	BLUE
363.3			LIMESTONE	0.0	63.0	
363.3			SHALE	3.3	63.0	BLUE
360.0			LIMESTONE	4.8	66.3	
355.1	CARBONDALE	HERRIN	COAL	6.3	71.2	

MAPID: 16301396000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 16 QUARTERS/FOOTAGES: SW SE SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.771651 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.264958 DATE COLLECTED: 8 / 0 / 1948

SURFACE ELEVATION (FT.): 426.6 LOGGED (FT.): 82.7 LOG TYPE: Drillers Log

SOURCE: MID CONTINENT WELL TYPE: Coal Test

COMMENT: HOLE #4

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
426.6			CLAY	42.0	0.0	
384.6			SHALE	8.5	42.0	
376.1			LIMESTONE	7.5	50.5	
368.6			SHALE	7.0	58.0	BLUE
361.6			LIMESTONE	1.5	65.0	
360.1			SHALE	0.5	66.5	BLUE
359.6	CARBONDALE	BRERETON	LIMESTONE	7.5	67.0	
352.1	CARBONDALE	ANNA	SHALE	1.3	74.5	BLUE
350.8	CARBONDALE	HERRIN	COAL	6.8	75.8	

MAPID: 16301397000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 16 QUARTERS/FOOTAGES: 0' S line, 2640' E line
 QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.768303 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.264008 DATE COLLECTED: 8 / 0 / 1948
 SURFACE ELEVATION (FT.): 422.7 LOGGED (FT.): 73.3 LOG TYPE: Drillers Log
 SOURCE: MID CONTINENT WELL TYPE: Coal Test
 COMMENT: HOLE #5

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
422.7			CLAY	20.0	0.0	
402.7			LIMESTONE	10.5	20.0	
392.2			SHALE	9.0	30.5	
383.2			LIMESTONE	2.0	39.5	
381.2			SHALE	5.5	41.5	
375.7			LIMESTONE	2.5	47.0	
373.2			SHALE	7.5	49.5	
365.7			SHALE	1.0	57.0	BLUE
364.7			LIMESTONE	3.5	58.0	
361.2			BLACK SHALE	1.0	61.5	
360.2	CARBONDALE	BRERETON	LIMESTONE	2.5	62.5	
357.7	CARBONDALE	ANNA	BLACK SHALE	0.5	65.0	
357.2	CARBONDALE	HERRIN	COAL	7.8	65.5	

MAPID: 16301397000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 16 QUARTERS/FOOTAGES: 0' S line, 2640' E line
 QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.768303 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 38.264008 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 423.0 LOGGED (FT.): 80.8 LOG TYPE: Drillers Log
 SOURCE: WELL TYPE: Coal Test
 COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
403.0	MODESTO	PIASA	LIMESTONE	10.5	20.0	
392.5	CARBONDALE		SHALE	9.0	30.5	
383.5	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	10.0	39.5	
373.5	CARBONDALE	LAWSON	GRAY SHALE	8.5	49.5	
365.0	CARBONDALE	CONANT	LIMESTONE	3.5	58.0	
361.5	CARBONDALE	JAMESTOWN	BLACK SHALE	1.0	61.5	
360.5	CARBONDALE	BRERETON	LIMESTONE	2.5	62.5	
358.0	CARBONDALE	ANNA	BLACK SHALE	0.5	65.0	
350.0	CARBONDALE	HERRIN	COAL	7.8	73.0	

MAPID: 16301398000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 16 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.776288

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.270579

DATE COLLECTED: 8 / 0 / 1948

SURFACE ELEVATION (FT.): 435.8

LOGGED (FT.): 87.2

LOG TYPE: Drillers Log

SOURCE: MID CONTINENT

WELL TYPE: Coal Test

COMMENT: HOLE #6

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
435.8			CLAY	31.0	0.0
404.8			LIMESTONE	8.5	31.0
396.3			SOFT SHALE	4.5	39.5
391.8			COAL	0.3	44.0
391.5			SOFT SHALE	9.8	44.3
381.8			LIMESTONE	3.0	54.0
378.8			BLACK SHALE	7.0	57.0
371.8			LIMESTONE	4.0	64.0
367.8			SHALE	7.0	68.0 BLUE
360.8	CARBONDALE	BRERETON	LIMESTONE	1.5	75.0
359.3	CARBONDALE	ANNA	BLACK SHALE	2.5	76.5
356.8	CARBONDALE	HERRIN	COAL	8.2	79.0

MAPID: 16301399000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 16 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.776228 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.264986 DATE COLLECTED: 8 / 0 / 1948

SURFACE ELEVATION (FT.): 430.5 LOGGED (FT.): 80.5 LOG TYPE: Drillers Log

SOURCE: MID CONTINENT WELL TYPE: Coal Test

COMMENT: HOLE #9

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
430.5			CLAY	17.0	0.0	
413.5			LIMESTONE	0.5	17.0	
413.0			CLAYSTONE	18.5	17.5	
394.5			SHALE	5.0	36.0	
389.5			BLACK SHALE	8.0	41.0	
381.5			LIMESTONE	2.0	49.0	
379.5			BLACK SHALE	4.0	51.0	
375.5			SHALE	1.0	55.0	BLUE
374.5			LIMESTONE	1.5	56.0	
373.0			SHALE	7.0	57.5	BLUE
366.0			LIMESTONE	1.0	64.5	
365.0			SHALE	3.5	65.5	BLUE
361.5	CARBONDALE	BRERETON	LIMESTONE	3.0	69.0	
358.5	CARBONDALE	ANNA	BLACK SHALE	1.5	72.0	
357.0	CARBONDALE	HERRIN	COAL	7.0	73.5	

MAPID: 16301400000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 16 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.776228

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.264986

DATE COLLECTED: 8 / 0 / 1948

SURFACE ELEVATION (FT.): 430.6

LOGGED (FT.): 84.5

LOG TYPE: Drillers Log

SOURCE: MID CONTINENT

WELL TYPE: Coal Test

COMMENT: HOLE #10

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
430.6			CLAY	25.0	0.0	
405.6			LIMESTONE	9.5	25.0	
396.1			SHALE	7.5	34.5	
388.6			SHALE	3.5	42.0	
385.1			LIMESTONE	0.5	45.5	
384.6			BLACK SHALE	6.0	46.0	
378.6			LIMESTONE	1.0	52.0	
377.6			SHALE	8.0	53.0	BLUE
369.6			LIMESTONE	1.0	61.0	
368.6			SHALE	3.5	62.0	BLUE
365.1	CARBONDALE	BRERETON	LIMESTONE	6.0	65.5	
359.1	CARBONDALE	ANNA	BLACK SHALE	7.0	71.5	
353.1	CARBONDALE	HERRIN	COAL	7.0	77.5	

MAPID: 16301401000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 16 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.776228 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.264986 DATE COLLECTED: 8 / 0 / 1948

SURFACE ELEVATION (FT.): 428.8 LOGGED (FT.): 77.0 LOG TYPE: Drillers Log

SOURCE: MID CONTINENT WELL TYPE: Coal Test

COMMENT: HOLE #11

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
428.8			CLAY	25.0	0.0	
403.8			LIMESTONE	9.0	25.0	
394.8			SHALE	12.0	34.0	
382.8			LIMESTONE	2.0	46.0	
380.8			SHALE	5.5	48.0	
375.3			LIMESTONE	2.5	53.5	
372.8			SHALE	8.0	56.0	BLUE
364.8			LIMESTONE	1.0	64.0	
363.8			SHALE	1.0	65.0	BLUE
362.8			LIMESTONE	1.0	66.0	
361.8			SHALE	2.0	67.0	BLUE
359.8			BLACK SHALE	0.8	69.0	
359.0			LIMESTONE	0.3	69.8	
358.8	CARBONDALE	HERRIN	COAL	7.0	70.0	

MAPID: 16301402000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 16 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.776228 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.264986 DATE COLLECTED: 8 / 0 / 1948

SURFACE ELEVATION (FT.): 430.6 LOGGED (FT.): 79.5 LOG TYPE: Drillers Log

SOURCE: MID CONTINENT WELL TYPE: Coal Test

COMMENT: HOLE #12

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
430.6			CLAY	28.0	0.0	
402.6			LIMESTONE	8.5	28.0	
394.1			SHALE	12.5	36.5	
381.6			LIMESTONE	2.0	49.0	
379.6			SHALE	5.5	51.0	
374.1			LIMESTONE	2.5	56.5	
371.6			SHALE	7.5	59.0	BLUE
364.1			LIMESTONE	2.0	66.5	
362.1			SHALE	1.5	68.5	BLUE
360.6	CARBONDALE	BRERETON	LIMESTONE	0.5	70.0	
360.1	CARBONDALE	ANNA	BLACK SHALE	2.3	70.5	
357.8	CARBONDALE	HERRIN	COAL	6.8	72.8	

MAPID: 16301403000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 16 QUARTERS/FOOTAGES: SE SW SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.773941 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.264972 DATE COLLECTED: 8 / 0 / 1948

SURFACE ELEVATION (FT.): 433.4 LOGGED (FT.): 84.3 LOG TYPE: Drillers Log

SOURCE: MID CONTINENT WELL TYPE: Coal Test

COMMENT: HOLE #13

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
433.4			CLAY	31.5	0.0	
401.9			LIMESTONE	10.5	31.5	
391.4			SHALE	12.0	42.0	
379.4			LIMESTONE	2.0	54.0	
377.4			SHALE	5.0	56.0	
372.4			LIMESTONE	2.0	61.0	
370.4			SHALE	9.0	63.0	BLUE
361.4			LIMESTONE	1.5	72.0	
359.9			SHALE	0.8	73.5	BLUE
359.1	CARBONDALE	BRERETON	LIMESTONE	0.5	74.3	
358.6	CARBONDALE	ANNA	BLACK SHALE	2.3	74.8	
356.4	CARBONDALE	HERRIN	COAL	7.3	77.0	

MAPID: 16301404000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 16 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.776288 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.270579 DATE COLLECTED: 8 / 0 / 1948

SURFACE ELEVATION (FT.): 435.2 LOGGED (FT.): 85.3 LOG TYPE: Drillers Log

SOURCE: MID CONTINENT WELL TYPE: Coal Test

COMMENT: HOLE #14

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
435.2			CLAY	28.5	0.0	
406.7			LIMESTONE	0.5	28.5	
406.2			CLAYSTONE	3.0	29.0	
403.2			LIMESTONE	10.0	32.0	
393.2			SHALE	10.5	42.0	
382.7			LIMESTONE	2.0	52.5	
380.7			SHALE	5.0	54.5	
375.7			LIMESTONE	2.0	59.5	
373.7			SHALE	4.0	61.5	BLUE
369.7			LIMESTONE	4.5	65.5	
365.2			SHALE	2.0	70.0	BLUE
363.2	CARBONDALE	BRERETON	LIMESTONE	6.0	72.0	
357.2	CARBONDALE	HERRIN	COAL	7.3	78.0	

MAPID: 16301405000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 16 QUARTERS/FOOTAGES: NE SW SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.773955 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.266836 DATE COLLECTED: 8 / 0 / 1948

SURFACE ELEVATION (FT.): 439.0 LOGGED (FT.): 99.2 LOG TYPE: Drillers Log

SOURCE: MID CONTINENT WELL TYPE: Coal Test

COMMENT: HOLE #15

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
439.0			CLAY	24.5	0.0	
414.5			LIMESTONE	2.0	24.5	
412.5			SHALE	14.5	26.5	
398.0			LIMESTONE	9.0	41.0	
389.0			SHALE	11.5	50.0	
377.5			LIMESTONE	3.0	61.5	
374.5			SHALE	2.5	64.5	BLUE
372.0			LIMESTONE	3.5	67.0	
368.5			BLACK SHALE	4.5	70.5	
364.0			LIMESTONE	3.0	75.0	
361.0			BLACK SHALE	7.0	78.0	
354.0	CARBONDALE	BRERETON	LIMESTONE	1.0	85.0	
353.0	CARBONDALE	ANNA	BLACK SHALE	6.0	86.0	
347.0	CARBONDALE	HERRIN	COAL	7.2	92.0	

MAPID: 16301406000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 16 QUARTERS/FOOTAGES:

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.768247 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.271446 DATE COLLECTED: 8 / 0 / 1948

SURFACE ELEVATION (FT.): 436.5 LOGGED (FT.): 127.5 LOG TYPE: Drillers Log

SOURCE: MID CONTINENT WELL TYPE: Coal Test

COMMENT: HOLE #16

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
436.5			CLAY	34.0	0.0	
402.5			SHALE	14.0	34.0	
388.5			LIMESTONE	8.5	48.0	
380.0			SHALE	11.0	56.5	
369.0			LIMESTONE	3.0	67.5	
366.0			BLACK SHALE	4.0	70.5	
362.0			LIMESTONE	3.0	74.5	
359.0			SHALE	10.0	77.5	BLUE
349.0			LIMESTONE	31.0	87.5	
318.0	CARBONDALE	ANNA	BLACK SHALE	2.5	118.5	
315.5	CARBONDALE	HERRIN	COAL	6.5	121.0	

MAPID: 16327264000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 16 **QUARTERS/FOOTAGES:** SE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.763642 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.267696 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 430.0 **LOGGED (FT.):** 82.0 **LOG TYPE:** Drillers Log
SOURCE: H E WILLSON **WELL TYPE:** Coal Test
COMMENT: COAL DEVELOPEMENT COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
354.7	CARBONDALE	HERRIN	COAL	6.8	75.3	ROD DRILL HOLE

MAPID: 16327264000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 16 **QUARTERS/FOOTAGES:** SE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.763642 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.267696 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 477.2 **LOGGED (FT.):** 70.0 **LOG TYPE:**
SOURCE: UN ELEC CC 803 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300342000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 17 **QUARTERS/FOOTAGES:** SW SW SW
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.794864 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.265106 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 414.5 **LOGGED (FT.):** 53.8 **LOG TYPE:** Drillers Log
SOURCE: H E WILSON #43 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
414.5			UNCONSOLIDATED	31.7	0.0	
382.8			SHALE	5.0	31.7	LIGHT
377.8			CLAYSTONE	4.0	36.7	
373.8	CARBONDALE	BRERETON	LIMESTONE	2.8	40.7	
371.1	CARBONDALE	ANNA	SHALE	1.1	43.4	BLACK
370.0	CARBONDALE	ANNA	BLACK SHALE	2.8	44.5	
367.2	CARBONDALE	HERRIN	COAL	6.4	47.3	

MAPID: 1630045000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 17 **QUARTERS/FOOTAGES:** SE SE SW
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.787867 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.26506 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 475.0 **LOGGED (FT.):** 65.5 **LOG TYPE:** Drillers Log
SOURCE: UNITED ELECTRIC COAL COMPANY 891 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
417.0	CARBONDALE	HERRIN	COAL	7.5	58.0	ELEVATION 417, DRILL HOLE

MAPID: 1630045000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 17 **QUARTERS/FOOTAGES:** SE SE SW
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.787867 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.26506 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 475.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: UN ELEC CC0891 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
417.0	CARBONDALE	HERRIN	COAL	7.5	58.0	

MAPID: 16300454000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 18 **QUARTERS/FOOTAGES:** SW NW SW
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.814629 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.268648 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 394.9 **LOGGED (FT.):** 50.0 **LOG TYPE:** Drillers Log
SOURCE: UNITED ELECTRIC COAL COMPANY 735 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
394.9			UNCLASSIFIED	50.0	0.0	DRILL HOLE;TOTAL DEPTH NO COAL

MAPID: 16300454000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 18 **QUARTERS/FOOTAGES:** SW NW SW
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.814629 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.268648 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 394.9 **LOGGED (FT.):** 50.0 **LOG TYPE:**
SOURCE: UN ELEC CC 735 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300455000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 18 **QUARTERS/FOOTAGES:** SE NW SW
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.812156 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.268671 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 469.6 **LOGGED (FT.):** 71.0 **LOG TYPE:** Drillers Log
SOURCE: UNITED ELECTRIC COAL COMPANY 643 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
469.6			UNCLASSIFIED	71.0	0.0	TOTAL DEPTH, NO COAL

MAPID: 16300455000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 18 **QUARTERS/FOOTAGES:** SE NW SW
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.812156 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.268671 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 469.6 **LOGGED (FT.):** 71.0 **LOG TYPE:**
SOURCE: UN ELEC CC 643 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300456000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 18 **QUARTERS/FOOTAGES:** SW NW SE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.804729 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.268738 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 438.7 **LOGGED (FT.):** 31.0 **LOG TYPE:** Drillers Log
SOURCE: UNITED ELECTRIC COAL COMPANY 647 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
413.7	CARBONDALE	HERRIN	COAL	6.0	25.0	ELEVATION 414'

MAPID: 16300456000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 18 **QUARTERS/FOOTAGES:** SW NW SE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.804729 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.268738 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 438.7 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: UN ELEC CC 647 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
413.7	CARBONDALE	HERRIN	COAL	6.0	25.0	

MAPID: 16302354000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 18 QUARTERS/FOOTAGES: 2565' N line, 1365' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.811057 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.271891 DATE COLLECTED:

SURFACE ELEVATION (FT.): 419.0 LOGGED (FT.): 50.6 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 4376 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
389.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	30.0
387.0	CARBONDALE	LAWSON	GRAY SHALE	9.9	32.0
377.1	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	1.7	41.9
375.4	CARBONDALE	ANNA	BLACK SHALE	0.4	43.6
375.0	CARBONDALE	HERRIN	COAL	6.6	44.0

MAPID: 16300996000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 19 QUARTERS/FOOTAGES: 20' S line, 2640' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.804661 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.250117 DATE COLLECTED: 9 / 1 / 1943

SURFACE ELEVATION (FT.): 415.0 LOGGED (FT.): 55.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 59-D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
415.0			SOIL	24.0	0.0
391.0			LIMESTONE	1.0	24.0
390.0			SHALE	4.0	25.0
386.0			LIMESTONE	3.0	29.0
383.0			BLACK SHALE	6.0	32.0
377.0			LIMESTONE	2.0	38.0
375.0			BLACK SHALE	2.0	40.0
373.0	CARBONDALE	BRERETON	LIMESTONE	1.0	42.0
372.0	CARBONDALE	ANNA	BLACK SHALE	4.5	43.0
367.5	CARBONDALE	HERRIN	COAL	6.7	47.5
360.8	CARBONDALE		UNDERCLAY	0.8	54.2

MAPID: 16300997000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 19 QUARTERS/FOOTAGES: S2
 QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.805691 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.253562 DATE COLLECTED: 9 / 2 / 1943
 SURFACE ELEVATION (FT.): 413.0 LOGGED (FT.): 35.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 60-D WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
413.0			SOIL	22.0	0.0
391.0			SAND	5.0	22.0
386.0	CARBONDALE	ANNA	BLACK SHALE	2.0	27.0
384.0	CARBONDALE	HERRIN	COAL	5.0	29.0
379.0	CARBONDALE		UNDERCLAY	1.0	34.0

MAPID: 16300999000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 19 QUARTERS/FOOTAGES: 1320' S line, 3960' E line
 QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.809438 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.253713 DATE COLLECTED: 9 / 7 / 1943
 SURFACE ELEVATION (FT.): 409.0 LOGGED (FT.): 38.5 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 63-D WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
409.0			SOIL	23.0	0.0
386.0			SAND	6.0	23.0
380.0			BLACK SHALE	3.5	29.0
376.5			COAL	3.5	32.5
373.0			UNDERCLAY	2.5	36.0

MAPID: 16301002000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 19 QUARTERS/FOOTAGES: 1320' N line, 1320' E line
 QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.800486 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.260489 DATE COLLECTED: 9 / 10 / 1943
 SURFACE ELEVATION (FT.): LOGGED (FT.): 80.0 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG & MIDWAY 66-D WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		CLAY	38.0	0.0
-	PLEISTOCENE		SAND & GRAVEL	5.0	38.0
-			BLUE SHALE	27.0	43.0
-			SANDY SHALE	10.0	70.0

MAPID: 16301003000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 19 **QUARTERS/FOOTAGES:** 1' N line, 1320' E line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.800641 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.264127 **DATE COLLECTED:** 9 / 11 / 1943
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 85.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT 67-D **WELL TYPE:** Coal Test
COMMENT: MIDWEST RADIANT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		CLAY	64.0	0.0
-			LIMESTONE	3.5	64.0
-			BLACK SHALE	1.5	67.5
-			UNDERCLAY	5.0	69.0
-			SANDY SHALE	11.0	74.0

MAPID: 16301004000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 19 **QUARTERS/FOOTAGES:** 1220' N line, 250' E line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.796751 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.260811 **DATE COLLECTED:** 9 / 14 / 1943
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 72.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT 68-D **WELL TYPE:** Coal Test
COMMENT: MIDWEST RADIANT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		CLAY	66.0	0.0
-			SANDSTONE	6.0	66.0

MAPID: 16302038000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 19 **QUARTERS/FOOTAGES:** 2310' N line, 330' W line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.814696 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.25758 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 414.0 **LOGGED (FT.):** 44.5 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 525 **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
391.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.1	23.0
389.9	CARBONDALE	LAWSON	BLACK SHALE	6.0	24.1
383.9	CARBONDALE	BRERETON	LIMESTONE	7.9	30.1
376.0	CARBONDALE	HERRIN	COAL	6.5	38.0

MAPID: 16300152000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 20 QUARTERS/FOOTAGES: SE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.781792 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.253537 DATE COLLECTED:

SURFACE ELEVATION (FT.): 421.0 LOGGED (FT.): 51.0 LOG TYPE: Drillers Log

SOURCE: H WILSON 52 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
421.0			UNCONSOLIDATED	15.0	0.0	
406.0			SHALE	5.0	15.0	
401.0			CLAYSTONE	4.0	20.0	YELLOW
397.0			SANDY SHALE	2.0	24.0	
395.0			SANDSTONE	5.0	26.0	
390.0			DARK SHALE	9.5	31.0	
380.5			LIMESTONE	1.3	40.5	
379.2			SHALE	2.2	41.8	
377.0			LIMESTONE	0.8	44.0	
376.2	CARBONDALE	HERRIN	COAL	6.3	44.8	

MAPID: 16300460000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 20 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.794526 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.256228 DATE COLLECTED:

SURFACE ELEVATION (FT.): 405.3 LOGGED (FT.): 37.8 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 655 WELL TYPE: Coal Test

COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
375.3	CARBONDALE	HERRIN	COAL	7.8	30.0	ELEVATION 375', DRILL HOLE

MAPID: 16300460000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 20 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.794526 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.256228 DATE COLLECTED:

SURFACE ELEVATION (FT.): 405.3 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: UN ELEC CC 655 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
375.3	CARBONDALE	HERRIN	COAL	7.8	30.0	

MAPID: 1630095000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 20 QUARTERS/FOOTAGES: 2640' S line, 0' E line
 QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.777259 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.2573 DATE COLLECTED: 10 / 0 / 1944
 SURFACE ELEVATION (FT.): 395.0 LOGGED (FT.): 55.5 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 47 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
395.0			SOIL	37.0	0.0
358.0			LIMESTONE	3.0	37.0
355.0			BLACK SHALE	2.0	40.0
353.0	CARBONDALE	BRERETON	LIMESTONE	6.0	42.0
347.0	CARBONDALE	ANNA	BLACK SHALE	0.5	48.0
346.5	CARBONDALE	HERRIN	COAL	6.6	48.5
339.9	CARBONDALE		UNDERCLAY	0.4	55.1

MAPID: 16300951000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 20 QUARTERS/FOOTAGES: E2
 QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.781869 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.257057 DATE COLLECTED: 10 / 0 / 1944
 SURFACE ELEVATION (FT.): 417.0 LOGGED (FT.): 60.5 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
417.0			SOIL	25.0	0.0
392.0			SHALE	27.0	25.0
365.0	CARBONDALE	ANNA	BLACK SHALE	1.5	52.0
363.5	CARBONDALE	HERRIN	COAL	6.5	53.5
357.0	CARBONDALE		UNDERCLAY	0.5	60.0

MAPID: 16300952000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 20 QUARTERS/FOOTAGES: SE
 QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.781792 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.253537 DATE COLLECTED: 10 / 0 / 1944
 SURFACE ELEVATION (FT.): 399.0 LOGGED (FT.): 72.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 49 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
399.0			SOIL	35.0	0.0
364.0			BLACK SHALE	20.0	35.0
344.0			SANDY SLATE	17.0	55.0

MAPID: 16300953000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 20 QUARTERS/FOOTAGES: 0' S line, 1320' E line
 QUADRANGLE: BALDWIN LONGITUDE: -89.781768 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.25002 DATE COLLECTED: 10 / 0 / 1944
 SURFACE ELEVATION (FT.): 403.0 LOGGED (FT.): 50.5 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 50 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
403.0			SOIL	20.0	0.0
383.0			SAND	10.0	20.0
373.0			BLACK SHALE	8.0	30.0
365.0	CARBONDALE	BRERETON	LIMESTONE	3.0	38.0
362.0	CARBONDALE	ANNA	BLACK SHALE	2.5	41.0
359.5	CARBONDALE	HERRIN	COAL	6.3	43.5
353.2	CARBONDALE		UNDERCLAY	0.7	49.8

MAPID: 16300954000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 20 QUARTERS/FOOTAGES: 660' S line, 1320' E line
 QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.781796 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.251842 DATE COLLECTED: 10 / 0 / 1944
 SURFACE ELEVATION (FT.): 401.0 LOGGED (FT.): 57.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 51 WELL TYPE: Coal Test
 COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
401.0			SOIL	25.0	0.0
376.0			SAND	5.0	25.0
371.0			BLACK SHALE	15.0	30.0
356.0			SANDY SLATE	12.0	45.0

MAPID: 16300955000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 20 **QUARTERS/FOOTAGES:** 1320' S line, 660' E line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.779514 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.253662 **DATE COLLECTED:** 10 / 0 / 1944
SURFACE ELEVATION (FT.): 390.0 **LOGGED (FT.):** 83.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT 52 **WELL TYPE:** Coal Test
COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
390.0			SOIL	53.0	0.0
337.0			LIMESTONE	4.0	53.0
333.0			BLACK SHALE	2.0	57.0
331.0			UNDERCLAY	2.0	59.0
329.0			SANDY SLATE	22.0	61.0

MAPID: 16300956000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 20 **QUARTERS/FOOTAGES:** 1980' S line, 660' E line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.779542 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.255484 **DATE COLLECTED:** 10 / 0 / 1944
SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 60.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT 53 **WELL TYPE:** Coal Test
COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
400.0			SOIL	25.0	0.0
375.0			BLACK SHALE	27.0	25.0
348.0			SANDSTONE	4.0	52.0
344.0			SANDY SLATE	4.0	56.0

MAPID: 16300957000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 20 **QUARTERS/FOOTAGES:** 1980' S line, 0' E line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.777231 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.255478 **DATE COLLECTED:** 10 / 0 / 1944
SURFACE ELEVATION (FT.): 410.0 **LOGGED (FT.):** 52.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT 54 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
410.0			SOIL	20.0	0.0
390.0			SAND	5.0	20.0
385.0			BLACK SHALE	16.0	25.0
369.0	CARBONDALE	ANNA	BLACK SHALE	3.5	41.0
365.5	CARBONDALE	HERRIN	COAL	6.8	44.5
358.7	CARBONDALE		UNDERCLAY	0.8	51.3

MAPID: 16300958000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 20 QUARTERS/FOOTAGES: 2640' S line, 660' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.77957 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.257306 DATE COLLECTED: 10 / 0 / 1944

SURFACE ELEVATION (FT.): 405.0 LOGGED (FT.): 61.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 55 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
405.0			SOIL	45.0	0.0	
360.0			LIMESTONE	1.0	45.0	
359.0			BLACK SHALE	1.0	46.0	
358.0	CARBONDALE	BRERETON	LIMESTONE	4.0	47.0	
354.0	CARBONDALE	ANNA	BLACK SHALE	2.5	51.0	
351.5	CARBONDALE	HERRIN	COAL	6.8	53.5	
344.7	CARBONDALE		UNDERCLAY	0.8	60.3	

MAPID: 16301001000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 20 QUARTERS/FOOTAGES: NW NW NW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.794818 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.263295 DATE COLLECTED: 9 / 9 / 1943

SURFACE ELEVATION (FT.): 416.0 LOGGED (FT.): 55.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 65-D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
416.0			SOIL	41.0	0.0	
375.0	CARBONDALE	BRERETON	LIMESTONE	4.0	41.0	
371.0	CARBONDALE	ANNA	BLACK SHALE	3.5	45.0	
367.5	CARBONDALE	HERRIN	COAL	6.0	48.5	
361.5	CARBONDALE		UNDERCLAY	0.5	54.5	

MAPID: 16301005000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 20 QUARTERS/FOOTAGES: 1320' N line, 1320' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.791242 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.26051 DATE COLLECTED:

SURFACE ELEVATION (FT.): 417.0 LOGGED (FT.): 78.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 69-D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
417.0			SOIL	50.0	0.0
367.0			BLACK SHALE	9.5	50.0
357.5			LIMESTONE	3.0	59.5
354.5			BLACK SHALE	1.0	62.5
353.5			LIMESTONE	1.5	63.5
352.0			BLACK SHALE	1.0	65.0
351.0			LIMESTONE	5.5	66.0
345.5	CARBONDALE	HERRIN	COAL	6.3	71.5
339.2	CARBONDALE		UNDERCLAY	0.7	77.8

MAPID: 16301006000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 20 QUARTERS/FOOTAGES: 2600' N line, 150' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.795188 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.257005 DATE COLLECTED: 9 / 0 / 1943

SURFACE ELEVATION (FT.): 412.0 LOGGED (FT.): 72.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 70-D WELL TYPE: Coal Test

COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
412.0			SOIL	25.0	0.0
387.0			BLACK SHALE	45.0	25.0
342.0			SANDSTONE	2.0	70.0

MAPID: 16301007000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 20 QUARTERS/FOOTAGES: 100' S line, 0' E line of NW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.786496 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.257352 DATE COLLECTED: 9 / 20 / 1943

SURFACE ELEVATION (FT.): 417.0 LOGGED (FT.): 74.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 72-D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
417.0			SOIL	54.0	0.0
363.0			BLACK SHALE	5.0	54.0
358.0			LIMESTONE	1.0	59.0
357.0			BLACK SHALE	1.0	60.0
356.0	CARBONDALE	BRERETON	LIMESTONE	4.0	61.0
352.0	CARBONDALE	ANNA	BLACK SHALE	2.0	65.0
350.0	CARBONDALE	HERRIN	COAL	7.0	67.0
343.0	CARBONDALE		UNDERCLAY	0.5	74.0

MAPID: 16301008000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 20 QUARTERS/FOOTAGES: 1340' N line, 2640' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.78655 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.260425 DATE COLLECTED: 9 / 20 / 1943

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 86.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 71-D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
420.0			SOIL	51.0	0.0
369.0			LIMESTONE	1.0	51.0
368.0			BLACK SHALE	6.0	52.0
362.0			LIMESTONE	3.0	58.0
359.0			BLACK SHALE	8.0	61.0
351.0			LIMESTONE	6.5	69.0
344.5	CARBONDALE	ANNA	BLACK SHALE	2.5	75.5
342.0	CARBONDALE	HERRIN	COAL	7.3	78.0
334.7	CARBONDALE		UNDERCLAY	0.8	85.3

MAPID: 16301008000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 20 QUARTERS/FOOTAGES: 1340' N line, 2640' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.78655 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.260425 DATE COLLECTED:

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 85.3 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
369.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	51.0	
368.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	6.0	52.0	
362.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	58.0	
359.0	CARBONDALE	LAWSON	GRAY SHALE	8.0	61.0	
351.0	CARBONDALE	BRERETON	LIMESTONE	6.5	69.0	
344.5	CARBONDALE	ANNA	BLACK SHALE	2.5	75.5	
342.0	CARBONDALE	HERRIN	COAL	7.3	78.0	

MAPID: 16301408000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 20 QUARTERS/FOOTAGES: NE NE NE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.778514 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.263189 DATE COLLECTED: 8 / 0 / 1948

SURFACE ELEVATION (FT.): 435.3 LOGGED (FT.): 82.8 LOG TYPE: Drillers Log

SOURCE: MID CONTINENT WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
435.3			CLAY	53.0	0.0	
382.3			SHALE	3.0	53.0	
379.3			LIMESTONE	1.5	56.0	
377.8			SHALE	5.5	57.5	BLUE
372.3			LIMESTONE	1.0	63.0	
371.3			SHALE	1.0	64.0	BLUE
370.3			LIMESTONE	1.5	65.0	
368.8			SHALE	2.5	66.5	BLUE
366.3	CARBONDALE	BRERETON	LIMESTONE	6.5	69.0	
359.8	CARBONDALE	HERRIN	COAL	7.3	75.5	

MAPID: 16327273000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 20 QUARTERS/FOOTAGES: 150' S line, 2550' W line
 QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.786503 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.250442 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 415.0 LOGGED (FT.): 45.0 LOG TYPE: Drillers Log
 SOURCE: H E WILLSON 48 WELL TYPE: Coal Test
 COMMENT: ROD DRILL - SKELETON

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.0			UNCLASSIFIED	43.0	0.0	ROD DRILL - SKELETON
372.0	CARBONDALE	SPRINGFIELD	COAL	2.0	43.0	43'TO2' COAL PROBABLY MINED OUT

MAPID: 16327274000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 20 QUARTERS/FOOTAGES: SW SE SE
 QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.780588 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.250898 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 422.5 LOGGED (FT.): 42.3 LOG TYPE: Drillers Log
 SOURCE: H E WILSON WELL TYPE: Coal Test
 COMMENT: ROD DRILL HOLE - SKELETON

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
386.6	CARBONDALE	HERRIN	COAL	6.4	35.9	

MAPID: 16327275000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 20 QUARTERS/FOOTAGES: SW SW SW
 QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.794308 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.250925 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 417.0 LOGGED (FT.): 75.0 LOG TYPE: Drillers Log
 SOURCE: H E WILLSON WELL TYPE: Coal Test
 COMMENT: ROD DRILL - SKELETON

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
417.0			UNCLASSIFIED	75.0	0.0	ROD DRILL- SKELETON 75' DEEP, NO COAL

MAPID: 16327275000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 20 **QUARTERS/FOOTAGES:** SW SW SW
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.794308 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.250925 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 441.6 **LOGGED (FT.):** 71.0 **LOG TYPE:**
SOURCE: UN ELEC CC0661 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0	

MAPID: 16327870000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 20 **QUARTERS/FOOTAGES:** 2640' N line, 1970' W line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.788808 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.25685 **DATE COLLECTED:** 9 / 23 / 1943
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 83.5 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 73-D **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		CLAY	61.0	0.0
-	CARBONDALE		SANDY SHALE	8.5	61.0
-	CARBONDALE	BRERETON	LIMESTONE	1.5	69.5
-	CARBONDALE	ANNA	BLACK SHALE	4.5	71.0
-	CARBONDALE	HERRIN	COAL	7.3	75.5
-	CARBONDALE		UNDERCLAY	0.7	82.8

MAPID: 16327871000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 20 **QUARTERS/FOOTAGES:** 2615' N line, 1200' W line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.791508 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.256937 **DATE COLLECTED:** 9 / 27 / 1943
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 80.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 75-D **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		CLAY	63.0	0.0
-	CARBONDALE	BRERETON	LIMESTONE	9.0	63.0
-	CARBONDALE	ANNA	BLACK SHALE	1.0	72.0
-	CARBONDALE	HERRIN	COAL	6.5	73.0
-	CARBONDALE		UNDERCLAY	0.5	79.5

MAPID: 16300141000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 21 QUARTERS/FOOTAGES: 2050' S line, 2400' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.768829 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.255686 DATE COLLECTED: 12 / 0 / 1911

SURFACE ELEVATION (FT.): 426.1 LOGGED (FT.): 300.0 LOG TYPE: Drillers Log

SOURCE: FREEHOLD OIL & GAS CO WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
426.1			CLAY	20.0	0.0	
406.1			CLAY	15.0	20.0	BLACK
391.1			LIMESTONE	5.0	35.0	
386.1			BLACK SHALE	10.0	40.0	
376.1			LIMESTONE	5.0	50.0	
371.1			CLAYSTONE	3.0	55.0	
368.1	CARBONDALE	HERRIN	COAL	5.0	58.0	
363.1	CARBONDALE		CLAYSTONE	2.0	63.0	
361.1	CARBONDALE		LIMESTONE	9.0	65.0	
352.1	CARBONDALE		SHALE	26.0	74.0	BLUE
326.1	CARBONDALE		SHALE	70.0	100.0	BLACK
256.1	CARBONDALE		LIMESTONE	5.0	170.0	
251.1	CARBONDALE		BLACK SHALE	2.0	175.0	
249.1	CARBONDALE		COAL	2.0	177.0	
247.1	CARBONDALE		BLACK SHALE	31.0	179.0	
216.1	MISSISSIPPIAN		LIMESTONE	15.0	210.0	
201.1	MISSISSIPPIAN		BLACK SHALE	2.0	225.0	
199.1	MISSISSIPPIAN		LIMESTONE	45.0	227.0	
154.1	MISSISSIPPIAN		CLAYSTONE	7.0	272.0	BLUE
147.1	MISSISSIPPIAN		LIMESTONE	2.0	279.0	
145.1	MISSISSIPPIAN		CLAYSTONE	19.0	281.0	BAD CAVE; BLU

MAPID: 16300153000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 21 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.776116

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.25791

DATE COLLECTED: 0 / 0 / 1929

SURFACE ELEVATION (FT.): 416.0 LOGGED (FT.): 53.9

LOG TYPE: Drillers Log

SOURCE: H E WILLSON 50

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
416.0			UNCONSOLIDATED	22.3	0.0	
393.7			ROCK	1.7	22.3	
392.0			CLAY	2.4	24.0	YELLOW
389.6			SHALE	3.8	26.4	
385.8			LIMESTONE	3.5	30.2	
382.3			CLAYSTONE	1.5	33.7	YELLOW
380.8			BLACK SHALE	5.4	35.2	
375.4	CARBONDALE	BRERETON	LIMESTONE	4.4	40.6	
371.0	CARBONDALE	ANNA	DARK SHALE	0.8	45.0	
370.2	CARBONDALE	ANNA	SHALE	1.7	45.8	BLACK
368.6	CARBONDALE	HERRIN	COAL	6.5	47.4	

MAPID: 16300243000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 21 QUARTERS/FOOTAGES: 2200' S line, 2300' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.769188

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.256099

DATE COLLECTED:

SURFACE ELEVATION (FT.): 427.3 LOGGED (FT.): 55.0

LOG TYPE: Drillers Log

SOURCE: BORDERS 2

WELL TYPE: Coal Test

COMMENT: ABANDONED MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
378.3	CARBONDALE	HERRIN	COAL	6.0	49.0	ABANDONED MINE

MAPID: 16300343000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 21 QUARTERS/FOOTAGES: 2640' N line, 1320' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.772628 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.256745 DATE COLLECTED:

SURFACE ELEVATION (FT.): 419.0 LOGGED (FT.): 52.0 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 55 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
419.0			UNCONSOLIDATED	14.0	0.0	
405.0			SHALE	6.0	14.0	LIGHT
399.0			SANDSTONE	7.5	20.0	
391.5			LIMESTONE	1.8	27.5	
389.7			DARK SHALE	8.3	29.3	
381.3			LIMESTONE	2.4	37.7	
378.9			DARK SHALE	1.0	40.1	
377.9	CARBONDALE	BRERETON	LIMESTONE	4.3	41.1	
373.6	CARBONDALE	HERRIN	COAL	6.6	45.4	

MAPID: 16300343000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 21 QUARTERS/FOOTAGES: 2640' N line, 1320' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.772628 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.256745 DATE COLLECTED:

SURFACE ELEVATION (FT.): 419.0 LOGGED (FT.): 51.6 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
391.9	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	27.1	
390.1	CARBONDALE	LAWSON	DARK GRAY SHALE	8.3	28.9	
381.7	CARBONDALE	CONANT	LIMESTONE	2.4	37.3	
379.3	CARBONDALE	JAMESTOWN	DARK GRAY SHALE	1.0	39.7	
378.3	CARBONDALE	BRERETON	LIMESTONE	4.3	40.7	
374.0	CARBONDALE	HERRIN	COAL	6.6	45.0	

MAPID: 16300390000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 21 QUARTERS/FOOTAGES: SE SE SE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.759705 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.250908 DATE COLLECTED:

SURFACE ELEVATION (FT.): 448.6 LOGGED (FT.): 90.0 LOG TYPE: Drillers Log

SOURCE: WEST SIDE COAL COMPANY WELL TYPE: Coal Test

COMMENT: SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
365.1	CARBONDALE	HERRIN	COAL	6.5	83.5	AIR SHAFT AT 250'LINE

MAPID: 16300948000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 21 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.775995 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.250893 DATE COLLECTED: 9 / 0 / 1944

SURFACE ELEVATION (FT.): 395.0 LOGGED (FT.): 95.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 45 WELL TYPE: Coal Test

COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
395.0			SOIL	20.0	0.0	
375.0			SAND	10.0	20.0	
365.0			BLACK SHALE	25.0	30.0	
340.0			LIMESTONE	9.0	55.0	
331.0			BLACK SHALE	11.0	64.0	
320.0			SANDY SLATE	20.0	75.0	

MAPID: 16300949000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 21 QUARTERS/FOOTAGES: 1320' S line, 0' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.777203 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.253656 DATE COLLECTED: 10 / 0 / 1944

SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 80.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 46 WELL TYPE: Coal Test

COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
410.0			SOIL	18.0	0.0	
392.0			SAND	10.0	18.0	
382.0			BLACK SHALE	31.0	28.0	
351.0			LIMESTONE	5.0	59.0	
346.0			SANDY SLATE	16.0	64.0	

MAPID: 16301409000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 21 QUARTERS/FOOTAGES: NW NW NW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.776203 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.263175 DATE COLLECTED: 8 / 0 / 1948

SURFACE ELEVATION (FT.): 435.0 LOGGED (FT.): 80.0 LOG TYPE: Drillers Log

SOURCE: MID CONTINENT WELL TYPE: Coal Test

COMMENT: HOLE #8

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
435.0			CLAY	32.0	0.0	
403.0			LIMESTONE	3.0	32.0	
400.0			SHALE	12.5	35.0	
387.5			LIMESTONE	1.0	47.5	
386.5			SHALE	5.0	48.5	
381.5			LIMESTONE	2.5	53.5	
379.0			SHALE	8.0	56.0	BLUE
371.0			LIMESTONE	1.5	64.0	
369.5			SHALE	1.5	65.5	BLUE
368.0			LIMESTONE	1.0	67.0	
367.0			SHALE	1.5	68.0	BLUE
365.5	CARBONDALE	BRERETON	LIMESTONE	3.5	69.5	
362.0	CARBONDALE	HERRIN	COAL	7.0	73.0	

MAPID: 16327276000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 21 QUARTERS/FOOTAGES: SW SE SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.771342 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.250898 DATE COLLECTED:

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 0.0 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 4 WELL TYPE: Coal Test

COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
420.0			UNCLASSIFIED	0.0	0.0	ROD DRILL, NO COAL, LOCATED BEYOUN OUTCP

MAPID: 16303505000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 22 QUARTERS/FOOTAGES: 1320' N line, 2310' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.748542 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.260496 DATE COLLECTED:

SURFACE ELEVATION (FT.): 465.0 LOGGED (FT.): 94.5 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 12726C WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
413.0	MODESTO	PIASA	LIMESTONE	3.7	52.0
409.3	CARBONDALE		GRAY SHALE	13.0	55.7
396.3	CARBONDALE	LAWSON	LIMESTONE W/ SHALE	14.0	68.7
382.3	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	4.5	82.7
377.0	CARBONDALE	HERRIN	COAL	6.5	88.0

MAPID: 16302668000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 23 QUARTERS/FOOTAGES: 1270' N line, 25' W line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.740364 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.260776 DATE COLLECTED:

SURFACE ELEVATION (FT.): 446.0 LOGGED (FT.): 127.0 LOG TYPE: Electric Log

SOURCE: WELL TYPE: Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
371.0	MODESTO	PIASA	LIMESTONE	8.0	75.0
363.0	CARBONDALE	LAWSON	SILTY SHALE	29.0	83.0
334.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	3.0	112.0
331.0	CARBONDALE	ANNA	SHALE	5.0	115.0
326.0	CARBONDALE	HERRIN	COAL	7.0	120.0

MAPID: 16302669000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 23 QUARTERS/FOOTAGES: 200' N line, 25' W line of SE SW

QUADRANGLE: ST. LIBORY LONGITUDE: -89.735777 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.252224 DATE COLLECTED: 2 / 3 / 1956

SURFACE ELEVATION (FT.): 450.0 LOGGED (FT.): 75.0 LOG TYPE: Drillers Log

SOURCE: SUN OIL COMPANY 1 WELL TYPE: Structure Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
450.0			CLAY	20.0	0.0	
430.0			SHALE	22.0	20.0	
408.0			SANDSTONE	3.0	42.0	
405.0			SHALE	1.0	45.0	
404.0			DARK SHALE	2.0	46.0	
402.0			SHALE	10.0	48.0	
392.0			LIMESTONE	11.0	58.0	BROWN
381.0			DARK SHALE	2.0	69.0	
379.0			SHALE	4.0	71.0	

MAPID: 16301042000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 24 QUARTERS/FOOTAGES: SE NE NW

QUADRANGLE: ST. LIBORY LONGITUDE: -89.713988 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.260712 DATE COLLECTED: 3 / 0 / 1918

SURFACE ELEVATION (FT.): 416.3 LOGGED (FT.): 86.0 LOG TYPE: Drillers Log

SOURCE: ALUMINUM ORE CO 10 WELL TYPE: Misc. Borings Less Than 100 Ft.

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
416.3			SOIL	40.0	0.0	
376.3			SAND	5.0	40.0	
371.3			CLAY	6.0	45.0	BLUE
365.3			BLACK SHALE	1.3	51.0	
364.0			SANDSTONE	3.8	52.3	BROWN
360.3			LIMESTONE	9.7	56.0	
350.6			LIMESTONE	10.0	65.7	WHITE
340.6	CARBONDALE	SPRINGFIELD	COAL	1.7	75.7	
339.0	CARBONDALE		UNDERCLAY	5.3	77.3	
333.6	CARBONDALE		LIMESTONE	3.2	82.7	WHITE
330.5	CARBONDALE		SANDSTONE	0.2	85.8	

MAPID: 16302757000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 24 QUARTERS/FOOTAGES: 1300' S line, 1485' E line

QUADRANGLE: ST. LIBORY LONGITUDE: -89.70883 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.252293 DATE COLLECTED:

SURFACE ELEVATION (FT.): 456.0 LOGGED (FT.): 142.0 LOG TYPE: Electric Log

SOURCE: WELL TYPE: Oil and Gas Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
360.0	MODESTO	PIASA	LIMESTONE	12.0	96.0
348.0	CARBONDALE	DANVILLE	BLACK SHALE	2.0	108.0
346.0	CARBONDALE		GRAY SHALE	8.5	110.0
337.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	118.5
334.5	CARBONDALE	LAWSON	DARK GRAY SHALE	7.5	121.5
327.0	CARBONDALE	CONANT	LIMESTONE	3.0	129.0
324.0	CARBONDALE		DARK GRAY SHALE	2.5	132.0
321.5	CARBONDALE	BRERETON	LIMESTONE & SHALE	1.5	134.5
320.0	CARBONDALE	HERRIN	COAL	6.0	136.0

MAPID: 16390003000C VERSION: 1

PROJECT: NCRDS92

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 24 QUARTERS/FOOTAGES:

QUADRANGLE: ST. LIBORY LONGITUDE: -89.703701

GEOLOGIST: C TREWORY

CONFIDENTIAL: N LATITUDE: 38.262169

DATE COLLECTED: 6 / 5 / 1991

SURFACE ELEVATION (FT.): 417.4 LOGGED (FT.): 121.4

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16889C

WELL TYPE: Coal Test

COMMENT: FROM PERMIT 48, REVISION 4

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
417.4			CLAY	31.5	0.0	
385.9			SAND	4.5	31.5	
381.4	MODESTO		DARK SHALE	5.0	36.0	
376.4	MODESTO		LIMESTONE	1.1	41.0	
375.3	MODESTO		GRAY SHALE	9.1	42.1	
366.2	MODESTO	PIASA	LIMESTONE	9.3	51.2	
356.9	MODESTO		DARK SHALE	2.2	60.5	
354.7	CARBONDALE	DANVILLE	COAL	1.2	62.7	
353.5	CARBONDALE		GRAY SHALE	2.3	63.9	
351.2	CARBONDALE		SHALE	5.1	66.2	
346.1	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	71.3	BANKSTON FORK LS UPPER
342.8	CARBONDALE	BANKSTON FORK	SHALE	2.9	74.6	
339.9	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	77.5	BANKSTON FORK LS LOWER
337.8	CARBONDALE	LAWSON	DARK SHALE	2.5	79.6	
335.3	CARBONDALE		LIMESTONE	0.5	82.1	
334.8	CARBONDALE	LAWSON	DARK SHALE	0.3	82.6	
334.5	CARBONDALE	LAWSON	FOSSILIFEROUS SHALE	1.1	82.9	
333.4	CARBONDALE	CONANT	LIMESTONE	0.8	84.0	
332.6	CARBONDALE		DARK SHALE	5.5	84.8	
327.1	CARBONDALE	BRERETON	LIMESTONE	3.5	90.3	
323.6	CARBONDALE	ANNA	BLACK SHALE	0.5	93.8	
323.1	CARBONDALE	HERRIN	COAL	6.2	94.3	
316.9	CARBONDALE		UNDERCLAY	1.5	100.5	
315.4	CARBONDALE		LIMESTONE	0.6	102.0	
314.8	CARBONDALE	HIGGINSVILLE	LIMESTONE	1.0	102.6	
313.8	CARBONDALE		CALCAREOUS SHALE	1.3	103.6	
312.5	CARBONDALE		LIMESTONE	0.4	104.9	
312.1	CARBONDALE		GRAY SHALE	0.3	105.3	
311.8	CARBONDALE		LIMESTONE	0.8	105.6	
311.0	CARBONDALE		CALCAREOUS SHALE	1.7	106.4	
309.3	CARBONDALE		LIMESTONE	5.6	108.1	
303.7	CARBONDALE		GRAY SHALE	1.4	113.7	
302.3	CARBONDALE		CALCAREOUS SHALE	1.0	115.1	
301.3	CARBONDALE		SANDY SHALE	5.3	116.1	

MAPID: 16390026000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 24 QUARTERS/FOOTAGES:

QUADRANGLE: OAKDALE LONGITUDE: -89.602381

GEOLOGIST: NORTH

CONFIDENTIAL: N LATITUDE: 38.342922

DATE COLLECTED: 8 / 20 / 1976

SURFACE ELEVATION (FT.): 456.6 LOGGED (FT.): 146.9

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16427C

WELL TYPE: Coal Test

COMMENT: PERMIT 48; MARISSA

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
456.6	PLEISTOCENE		CLAY	21.5	0.0	
435.1			GRAY SHALE	25.4	21.5	
409.7			CALCAREOUS SHALE	15.9	46.9	
393.8			SANDSTONE	1.5	62.8	GRAY
392.3			CALCAREOUS SHALE	30.6	64.3	
361.7	CARBONDALE	BANKSTON FORK	LIMESTONE	7.1	94.9	
354.6	CARBONDALE		CALCAREOUS SHALE	7.2	102.0	
347.4	CARBONDALE	BRERETON	LIMESTONE	2.5	109.2	
344.9	CARBONDALE		CALCAREOUS SHALE	7.6	111.7	
337.3	CARBONDALE		DARK SHALE	11.0	119.3	
326.3	CARBONDALE	HERRIN	COAL	5.1	130.3	
321.2	CARBONDALE	HERRIN	GRAY SHALE	0.1	135.4	
321.1	CARBONDALE	HERRIN	COAL	1.4	135.5	
319.7	CARBONDALE		UNDERCLAY	3.2	136.9	
316.5	CARBONDALE		LIMESTONE	3.9	140.1	
312.6	CARBONDALE		LIMESTONE & SHALE	2.9	144.0	

MAPID: 16390035000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 24 QUARTERS/FOOTAGES:

QUADRANGLE: ST. LIBORY LONGITUDE: -89.712818

GEOLOGIST: NORTH

CONFIDENTIAL: N LATITUDE: 38.256093

DATE COLLECTED: 1 / 18 / 1984

SURFACE ELEVATION (FT.): 412.7 LOGGED (FT.): 114.8

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16782C

WELL TYPE: Coal Test

COMMENT: PERMIT 48; MARISSA

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
412.7	PLEISTOCENE		CLAY	29.2	0.0	
383.5	PLEISTOCENE		CLAY	11.7	29.2	GRAY
371.8	MODESTO		SANDSTONE	2.3	40.9	GRAY
369.5	MODESTO		GRAY SHALE	15.0	43.2	
354.5	MODESTO	PIASA	LIMESTONE	9.3	58.2	GRAY
345.2	CARBONDALE		CARBONACEOUS SHALE	2.6	67.5	
342.6	CARBONDALE		GRAY SHALE	3.9	70.1	
338.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	74.0	
335.7	CARBONDALE	BANKSTON FORK	GRAY SHALE	4.0	77.0	
331.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	81.0	
328.2	CARBONDALE		GRAY SHALE	5.5	84.5	
322.7	CARBONDALE	LAWSON	CLAYSTONE	1.0	90.0	DARK GRAY
321.7	CARBONDALE		CALCAREOUS SHALE	1.6	91.0	WITH LIMESTONE BAND
320.1	CARBONDALE	BRERETON	LIMESTONE	3.1	92.6	DARK GRAY
317.0	CARBONDALE	ANNA	BLACK SHALE	1.7	95.7	
315.3	CARBONDALE	HERRIN	COAL	6.3	97.4	
309.0	CARBONDALE		UNDERCLAY	1.8	103.7	
307.2	CARBONDALE	HIGGINSVILLE	LIMESTONE	2.5	105.5	
304.7	CARBONDALE	HIGGINSVILLE	SHALE WITH LIMESTONE	5.0	108.0	
299.7	CARBONDALE	HIGGINSVILLE	LIMESTONE & SHALE	1.8	113.0	

MAPID: 16300142000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 25 QUARTERS/FOOTAGES: NW NW

QUADRANGLE: TILDEN LONGITUDE: -89.719632 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.247044 DATE COLLECTED: 0 / 0 / 1915

SURFACE ELEVATION (FT.): 441.4 LOGGED (FT.): 350.0 LOG TYPE: Drillers Log

SOURCE: BARNES & NELSON WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
441.4			SOIL	47.0	0.0	
394.4			LIMESTONE	4.0	47.0	
390.4			MUDSTONE	6.0	51.0	BLACK
384.4			BLACK SHALE	7.0	57.0	
377.4			LIMESTONE	10.0	64.0	
367.4			MUDSTONE	9.0	74.0	BLACK
358.4			LIMESTONE	3.0	83.0	
355.4			BLACK SHALE	9.0	86.0	
346.4			MUDSTONE	8.0	95.0	BLACK
338.4			LIMESTONE	3.0	103.0	
335.4	CARBONDALE	HERRIN	COAL	6.0	106.0	
329.4	CARBONDALE		BLACK SHALE	3.0	112.0	
326.4	CARBONDALE		LIMESTONE	3.0	115.0	
323.4	CARBONDALE		BLACK SHALE	30.0	118.0	
293.4	CARBONDALE		CLAYSTONE	8.0	148.0	BLACK
285.4	CARBONDALE		BLACK SHALE	30.0	156.0	
255.4	CARBONDALE		SANDSTONE	10.0	186.0	BROWN
245.4	CARBONDALE		BLACK SHALE	40.0	196.0	
205.4	MISSISSIPPIAN		LIMESTONE	5.0	236.0	
200.4	MISSISSIPPIAN		BLACK SHALE	26.0	241.0	
174.4	MISSISSIPPIAN		CLAYSTONE	10.0	267.0	YELLOW
164.4	MISSISSIPPIAN		BLACK SHALE	23.0	277.0	LS
141.4	MISSISSIPPIAN		LIMESTONE	2.0	300.0	
139.4	MISSISSIPPIAN		SANDSTONE	48.0	302.0	WHITE

MAPID: 16302210000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 25 QUARTERS/FOOTAGES: 330' S line, 330' E line

QUADRANGLE: TILDEN LONGITUDE: -89.704552

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.234994

DATE COLLECTED:

SURFACE ELEVATION (FT.): 498.0

LOGGED (FT.): 162.0

LOG TYPE: Electric Log

SOURCE:

WELL TYPE: Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
382.0	MODESTO	PIASA	LIMESTONE	10.0	116.0	
372.0	MODESTO		DARK GRAY SHALE	4.5	126.0	
367.5	CARBONDALE	DANVILLE	BONE COAL	0.5	130.5	
367.0	CARBONDALE		GRAY SHALE	3.0	131.0	
364.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	3.0	134.0	
361.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.0	137.0	
358.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	3.0	140.0	
355.0	CARBONDALE	LAWSON	DARK GRAY SHALE	9.0	143.0	
346.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	1.5	152.0	
344.5	CARBONDALE	ANNA	SHALE	2.5	153.5	
342.0	CARBONDALE	HERRIN	COAL	6.0	156.0	

MAPID: 16302213000C VERSION: 1

PROJECT: IDMM-GWQX

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 25 QUARTERS/FOOTAGES: 330' S line, 330' E line of NW SE

QUADRANGLE: TILDEN LONGITUDE: -89.709204

GEOLOGIST: C TREWORYG

CONFIDENTIAL: N LATITUDE: 38.238665

DATE COLLECTED: 8 / 0 / 1960

SURFACE ELEVATION (FT.): 478.0

LOGGED (FT.): 294.0

LOG TYPE: Electric Log

SOURCE: ILLINOIS POWER CO.

WELL TYPE: Producer-Oil

COMMENT: ELEV. IS SURF,NOT LOG DATUM: DEPTHS OFF

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
323.0	CARBONDALE	HERRIN	UNCLASSIFIED	-	155.0	
298.0	CARBONDALE	SPRINGFIELD	UNCLASSIFIED	0.0	180.0	THIN OR ABSENT
249.0	CARBONDALE	HOUCHIN CREEK	UNCLASSIFIED	-	229.0	
184.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	294.0	

MAPID: 16324142000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 25 QUARTERS/FOOTAGES:

QUADRANGLE: TILDEN LONGITUDE: -89.712681

GEOLOGIST: NORTH

CONFIDENTIAL: N LATITUDE: 38.241445

DATE COLLECTED: 4 / 9 / 1976

SURFACE ELEVATION (FT.): 448.5 LOGGED (FT.): 113.4

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16411C

WELL TYPE: Coal Test

COMMENT: PERMIT 48; MARISSA

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
448.5	PLEISTOCENE		CLAY	32.2	0.0	
416.3	MODESTO		GRAY SHALE	15.2	32.2	
401.1	MODESTO		SANDSTONE	3.0	47.4	GRAY
398.1	MODESTO		GRAY SHALE	9.3	50.4	
388.8	MODESTO	PIASA	LIMESTONE	10.0	59.7	
378.8	MODESTO		GRAY SHALE	2.3	69.7	
376.5	MODESTO		DARK GRAY SHALE	3.9	72.0	
372.6	CARBONDALE	DANVILLE	COAL	1.2	75.9	
371.4	CARBONDALE		UNDERCLAY/SHALE	8.8	77.1	
362.6	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	85.9	
360.4	CARBONDALE	BANKSTON FORK	DARK SHALE	5.6	88.1	
354.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	93.7	DARK GRAY
353.3	CARBONDALE		BLACK SHALE & LIMESTONE	6.2	95.2	
347.1	CARBONDALE	BRERETON	ARGILLACEOUS LIMESTONE	3.0	101.4	LIGHT GRAY
344.1	CARBONDALE	HERRIN	COAL	4.7	104.4	
339.4	CARBONDALE	HERRIN	GRAY SHALE	0.1	109.1	
339.3	CARBONDALE	HERRIN	COAL	1.1	109.2	
338.2	CARBONDALE		UNDERCLAY	1.5	110.3	LIGHT GRAY
336.7	CARBONDALE	HIGGINSVILLE	LIMESTONE	1.6	111.8	LIGHT GRAY

MAPID: 16324187000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 25 QUARTERS/FOOTAGES:

QUADRANGLE: TILDEN LONGITUDE: -89.712681

GEOLOGIST: NORTH

CONFIDENTIAL: N LATITUDE: 38.241445

DATE COLLECTED: 3 / 18 / 1976

SURFACE ELEVATION (FT.): 449.7 LOGGED (FT.): 132.3

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 16408C

WELL TYPE: Coal Test

COMMENT: PERMIT 48; MARISSA

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
449.7	PLEISTOCENE		CLAY	43.2	0.0	
406.5	MODESTO		GRAY SHALE	20.5	43.2	
386.0	MODESTO		SANDSTONE	3.0	63.7	GRAY
383.0	MODESTO		GRAY SHALE	11.2	66.7	
371.8	MODESTO	PIASA	LIMESTONE	8.3	77.9	
363.5			GRAY SHALE	10.4	86.2	
353.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	96.6	
350.9	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	4.9	98.8	
346.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	103.7	
343.5	CARBONDALE		GRAY SHALE	4.3	106.2	
339.2	CARBONDALE		SILTY SHALE	3.6	110.5	
335.6	CARBONDALE		SILTY SHALE	0.3	114.1	
335.3	CARBONDALE	CONANT	ARGILLACEOUS LIMESTONE	1.1	114.4	DARK
334.2	CARBONDALE		SILTY SHALE	1.3	115.5	
332.9	CARBONDALE		SHALE	0.3	116.8	CALC
332.6	CARBONDALE	BRERETON	LIMESTONE	1.4	117.1	GRAY
331.2	CARBONDALE		CALCAREOUS SHALE	0.3	118.5	
330.9	CARBONDALE	ENERGY	CARBONACEOUS SHALE	1.0	118.8	
329.9	CARBONDALE	HERRIN	COAL	5.1	119.8	
324.8	CARBONDALE	HERRIN	GRAY SHALE	0.1	124.9	
324.7	CARBONDALE	HERRIN	COAL	1.2	125.0	
323.5	CARBONDALE		UNDERCLAY & LIMESTONE	1.1	126.2	
322.4	CARBONDALE	HIGGINSVILLE	ARGILLACEOUS LIMESTONE	5.0	127.3	LIGHT GRAY

MAPID: 16300143000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 26 QUARTERS/FOOTAGES: 1650' N line, 990' E line

QUADRANGLE: TILDEN LONGITUDE: -89.725362 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.244385 DATE COLLECTED:

SURFACE ELEVATION (FT.): 431.6 LOGGED (FT.): 388.0 LOG TYPE: Drillers Log

SOURCE: FREEHOLD OIL CO WELL TYPE: Producer-Gas

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
431.6			UNCONSOLIDATED	29.0	0.0	
402.6			LIMESTONE	6.0	29.0	
396.6			BLACK SHALE	13.0	35.0	
383.6			LIMESTONE	12.0	48.0	
371.6			BLACK SHALE	5.0	60.0	
366.6			LIMESTONE	2.0	65.0	
364.6			BLACK SHALE	5.0	67.0	
359.6			LIMESTONE	3.0	72.0	
356.6			BLACK SHALE	8.0	75.0	
348.6			LIMESTONE	7.0	83.0	
341.6	CARBONDALE	HERRIN	COAL	6.0	90.0	
335.6	CARBONDALE		LIMESTONE	15.0	96.0	
320.6	CARBONDALE		BLACK SHALE	50.0	111.0	
270.6	CARBONDALE		BLACK SHALE	10.0	161.0	
260.6	CARBONDALE		SHALE	10.0	171.0	BROWN
250.6	CARBONDALE		BLACK SHALE	11.0	181.0	
239.6	CARBONDALE		BLACK SHALE	9.0	192.0	
230.6	MISSISSIPPIAN		LIMESTONE	5.0	201.0	
225.6	MISSISSIPPIAN		BLACK SHALE	15.0	206.0	
210.6	MISSISSIPPIAN		LIMESTONE	3.0	221.0	
207.6	MISSISSIPPIAN		SHALE	10.0	224.0	BROWN
197.6	MISSISSIPPIAN		CLAYSTONE	20.0	234.0	WHITE
177.6	MISSISSIPPIAN		BLACK SHALE	15.0	254.0	
162.6	MISSISSIPPIAN		CLAYSTONE	10.0	269.0	WHITE
152.6	MISSISSIPPIAN		SANDSTONE	20.0	279.0	BROWN
132.6	MISSISSIPPIAN		SANDSTONE	23.0	299.0	WHITE
109.6	MISSISSIPPIAN		LIMESTONE	4.0	322.0	
105.6	MISSISSIPPIAN		BLACK SHALE	10.0	326.0	
95.6	MISSISSIPPIAN		LIMESTONE	5.0	336.0	
90.6	MISSISSIPPIAN		BLACK SHALE	12.0	341.0	
78.6	MISSISSIPPIAN		LIMESTONE	15.0	353.0	
63.6	MISSISSIPPIAN		CLAYSTONE	20.0	368.0	BLUE

MAPID: 16300143000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 26 QUARTERS/FOOTAGES: 1650' N line, 990' E line

QUADRANGLE: TILDEN

LONGITUDE: -89.725362

GEOLOGIST:

CONFIDENTIAL: N

LATITUDE: 38.244385

DATE COLLECTED:

SURFACE ELEVATION (FT.): 432.0

LOGGED (FT.): 96.0

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
384.0	MODESTO	PIASA	LIMESTONE	12.0	48.0
372.0	CARBONDALE		BLACK SHALE	5.0	60.0
367.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	65.0
365.0	CARBONDALE	BANKSTON FORK	BLACK SHALE	5.0	67.0
360.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	72.0
357.0	CARBONDALE	LAWSON	BLACK SHALE	8.0	75.0
349.0	CARBONDALE	BRERETON	LIMESTONE	7.0	83.0
342.0	CARBONDALE	HERRIN	COAL	6.0	90.0

MAPID: 16300144000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 26 QUARTERS/FOOTAGES: 4000' S line, 2150' E line

QUADRANGLE: TILDEN LONGITUDE: -89.729432 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.245277 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 455.9 LOGGED (FT.): 469.0 LOG TYPE: Drillers Log

SOURCE: FREEHOLD OIL & GAS WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
455.9			UNCONSOLIDATED	35.0	0.0	
420.9			LIMESTONE	8.0	35.0	
412.9			BLACK SHALE	18.0	43.0	
394.9			LIMESTONE	3.0	61.0	
391.9			BLACK SHALE	7.0	64.0	
384.9			LIMESTONE	5.0	71.0	
379.9			BLACK SHALE	10.0	76.0	
369.9			LIMESTONE	8.0	86.0	
361.9			BLACK SHALE	15.0	94.0	
346.9			LIMESTONE	4.0	109.0	
342.9	CARBONDALE	HERRIN	COAL	6.0	113.0	
336.9	CARBONDALE		LIMESTONE	10.0	119.0	
326.9	CARBONDALE		BLACK SHALE	50.0	129.0	
276.9	CARBONDALE		BLACK SHALE	10.0	179.0	
266.9	MISSISSIPPIAN		LIMESTONE	8.0	189.0	
258.9	MISSISSIPPIAN		CLAYSTONE	10.0	197.0	CAVE; WT
248.9	MISSISSIPPIAN		SHALE	9.0	207.0	BROWN
239.9	MISSISSIPPIAN		BLACK SHALE	20.0	216.0	
219.9	MISSISSIPPIAN		LIMESTONE	10.0	236.0	
209.9	MISSISSIPPIAN		BLACK SHALE	30.0	246.0	
179.9	MISSISSIPPIAN		BLACK SHALE	20.0	276.0	
159.9	MISSISSIPPIAN		LIMESTONE	10.0	296.0	
149.9	MISSISSIPPIAN		LIMESTONE	5.0	306.0	
144.9	MISSISSIPPIAN		SHALE	4.0	311.0	BROWN
140.9	MISSISSIPPIAN		SANDSTONE	10.0	315.0	BROWN
130.9	MISSISSIPPIAN		LIMESTONE	4.0	325.0	
126.9	MISSISSIPPIAN		BLACK SHALE	20.0	329.0	
106.9	MISSISSIPPIAN		BLACK SHALE	60.0	349.0	
46.9	MISSISSIPPIAN		LIMESTONE	10.0	409.0	
36.9	MISSISSIPPIAN		BLACK SHALE	20.0	419.0	
16.9	MISSISSIPPIAN		BLACK SHALE	30.0	439.0	

MAPID: 16300247000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 26 **QUARTERS/FOOTAGES:** 100' S line, 4500' E line
QUADRANGLE: TILDEN **LONGITUDE:** -89.737543 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.234599 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 490.6 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: OK COAL COMPANY **WELL TYPE:** Mine Shaft
COMMENT: MARISSA COAL COMPANY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
490.6			MINE OPENING	0.0	0.0	ACTIVE MINE

MAPID: 16301820000C **VERSION:** 1 **PROJECT:** IDMM-GWQX
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 26 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of NW SE
QUADRANGLE: TILDEN **LONGITUDE:** -89.727637 **GEOLOGIST:** C TREWORYG
CONFIDENTIAL: N **LATITUDE:** 38.23881 **DATE COLLECTED:** 10 / 0 / 1955
SURFACE ELEVATION (FT.): 471.0 **LOGGED (FT.):** 257.0 **LOG TYPE:** Electric Log
SOURCE: BAYER, KENNETH M. **WELL TYPE:** Producer-Oil
COMMENT: ELEV. IS SURF,NOT LOG DATUM: DEPTHS OFF

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
359.0	CARBONDALE	DANVILLE	UNCLASSIFIED	-	112.0	
331.0	CARBONDALE	HERRIN	UNCLASSIFIED	-	140.0	
311.0	CARBONDALE	SPRINGFIELD	UNCLASSIFIED	0.0	160.0	THIN OR ABSENT
282.0	CARBONDALE	HOUCHIN CREEK	UNCLASSIFIED	-	189.0	
214.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	257.0	

MAPID: 16300145000C VERSION: 1

PROJECT: NCRDS87

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 27 QUARTERS/FOOTAGES: 2600' S line, 2375' E line

QUADRANGLE: TILDEN LONGITUDE: -89.74876 GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 38.241505 DATE COLLECTED:

SURFACE ELEVATION (FT.): 473.3 LOGGED (FT.): 279.0 LOG TYPE: Other Core Study

SOURCE: WELL TYPE: Diamond Drill

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
473.3			UNCONSOLIDATED	23.0	0.0	
450.3			GRAY SHALE	45.0	23.0	
405.3			LIMESTONE	11.0	68.0	
394.3			DARK SHALE	9.0	79.0	
385.3			LIMESTONE	4.0	88.0	
381.3			SHALE	3.0	92.0	
378.3			LIMESTONE	2.0	95.0	
376.3			BLACK SHALE	6.0	97.0	
370.3			LIMESTONE	12.3	103.0	
358.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	6.9	115.3	
351.0	CARBONDALE		SHALE	11.8	122.3	
339.3	CARBONDALE		SANDSTONE	6.0	134.0	
333.3	CARBONDALE		SHALE	33.0	140.0	
300.3	CARBONDALE		LIMESTONE	1.0	173.0	
299.3	CARBONDALE		BLACK SHALE	6.0	174.0	
293.3	CARBONDALE		SHALE	42.0	180.0	
251.3	CARBONDALE		DARK SHALE	17.0	222.0	
234.3	CARBONDALE	OAK GROVE	LIMESTONE	1.0	239.0	UNCERTAIN CORRELATION
233.3	CARBONDALE	MECCA QUARRY	BLACK SHALE	4.2	240.0	UNCERTAIN CORRELATION
229.1	CARBONDALE	COLCHESTER	COAL	2.2	244.2	UNCERTAIN CORRELATION
227.0			SHALE	4.0	246.3	
223.0			COAL	0.2	250.3	
222.8			SHALE	2.8	250.5	
220.0			COAL	2.9	253.3	
217.0			SHALE	1.6	256.3	
215.5			COAL	0.8	257.8	
214.7			SHALE	17.4	258.6	
197.3			SANDSTONE	3.0	276.0	

MAPID: 16300145000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 27 QUARTERS/FOOTAGES: 2600' S line, 2375' E line

QUADRANGLE: TILDEN

LONGITUDE: -89.74876

GEOLOGIST:

CONFIDENTIAL: N

LATITUDE: 38.241505

DATE COLLECTED:

SURFACE ELEVATION (FT.): 476.0

LOGGED (FT.): 121.9

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
408.0	MODESTO	PIASA	LIMESTONE	11.0	68.0
397.0	CARBONDALE		DARK GRAY SHALE	9.0	79.0
388.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	88.0
384.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	3.0	92.0
381.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	95.0
379.0	CARBONDALE	LAWSON	BLACK SHALE	6.0	97.0
373.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	12.3	103.0
361.0	CARBONDALE	HERRIN	COAL	6.9	115.0

MAPID: 16300145000C VERSION: 3

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 27 QUARTERS/FOOTAGES: 2600' S line, 2375' E line

QUADRANGLE: TILDEN LONGITUDE: -89.74876 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.241505 DATE COLLECTED: 0 / 0 / 1915

SURFACE ELEVATION (FT.): 476.3 LOGGED (FT.): 279.0 LOG TYPE: Drillers Log

SOURCE: ROTRAMEL WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
476.3			CLAY	23.0	0.0	
453.3			SOFT SHALE	7.0	23.0	
446.3			DARK SHALE	12.0	30.0	
434.3			SHALE	14.0	42.0	
420.3			DARK SHALE	6.0	56.0	
414.3			SANDSTONE/SHALE	6.0	62.0	GRAY
408.3			LIMESTONE	11.0	68.0	
397.3			SOFT SHALE	9.0	79.0	
388.3			LIMESTONE	4.0	88.0	
384.3			LIMESTONE	3.0	92.0	
381.3			LIMESTONE	2.0	95.0	
379.3			SHALE	6.0	97.0	BLACK
373.3			LIMESTONE	12.3	103.0	
361.0	CARBONDALE	HERRIN	COAL	4.8	115.3	
356.1	CARBONDALE	HERRIN	SHALE	0.1	120.2	
356.0	CARBONDALE	HERRIN	COAL	2.0	120.3	
354.0	CARBONDALE		SHALE WITH LIMESTONE	8.8	122.3	
345.3	CARBONDALE		SHALE	3.0	131.0	
342.3	CARBONDALE		SANDSTONE	6.0	134.0	
336.3	CARBONDALE		SANDY SHALE	33.0	140.0	
303.3	CARBONDALE		LIMESTONE	1.0	173.0	
302.3	CARBONDALE		SHALE	2.0	174.0	BLACK
300.3	CARBONDALE	EXCELLO	SHALE	4.0	176.0	BLACK
296.3	CARBONDALE		SHALE	21.0	180.0	DARK BROWN
275.3	CARBONDALE		SOFT SHALE	2.0	201.0	
273.3	CARBONDALE		SANDSTONE	10.0	203.0	
263.3	CARBONDALE		SANDSTONE	9.0	213.0	
254.3	CARBONDALE		DARK SHALE	17.0	222.0	
237.3	CARBONDALE		LIMESTONE	1.0	239.0	
236.3	CARBONDALE	MECCA QUARRY	SHALE	3.0	240.0	BLACK
233.3	CARBONDALE	MECCA QUARRY	SHALE	1.2	243.0	BLACK
232.1	CARBONDALE	COLCHESTER	BONE COAL	2.2	244.2	
230.0	SPOON		SHALE	4.0	246.3	
226.0	SPOON		BONE COAL	0.2	250.3	
225.8	SPOON		SHALE	2.8	250.5	
223.0	SPOON	SEELYVILLE	BONE COAL	2.9	253.3	
220.0	SPOON	SEELYVILLE	SHALE	1.6	256.3	
218.5	SPOON	SEELYVILLE	BONE COAL	0.8	257.8	
217.7	SPOON		SHALE	12.4	258.6	

205.3	SPOON	SHALE	5.0	271.0
200.3	SPOON	SANDSTONE	3.0	276.0

MAPID: 16300146000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 27 **QUARTERS/FOOTAGES:** 1410' N line, 1300' W line
QUADRANGLE: BALDWIN **LONGITUDE:** -89.753993 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.245377 **DATE COLLECTED:** 0 / 0 / 1915
SURFACE ELEVATION (FT.): 463.2 **LOGGED (FT.):** 454.0 **LOG TYPE:** Drillers Log
SOURCE: CONSOLIDATED COAL CO. **WELL TYPE:** Plugged and/or Abandoned
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
463.2			SOIL	44.0	0.0	
419.2			BLACK SHALE	6.0	44.0	
413.2	CARBONDALE	DANVILLE	COAL	2.0	50.0	
411.2	CARBONDALE		ROCK	36.0	52.0	
375.2	CARBONDALE	HERRIN	COAL	6.0	88.0	
369.2	CARBONDALE		UNDERCLAY	10.0	94.0	
359.2	CARBONDALE		LIMESTONE	6.0	104.0	BLUE
353.2	CARBONDALE		BLACK SHALE	17.0	110.0	
336.2	CARBONDALE		BLACK SHALE	24.0	127.0	
312.2	CARBONDALE		BLACK SHALE	8.0	151.0	
304.2	CARBONDALE		UNDERCLAY	4.0	159.0	
300.2	CARBONDALE		ROCK	58.0	163.0	
242.2	CARBONDALE	MECCA QUARRY	BLACK SHALE	7.0	221.0	
235.2	CARBONDALE	COLCHESTER	COAL	1.5	228.0	
233.7	SPOON		CLAYSTONE	7.0	229.5	GRAY
226.7	SPOON	SEELYVILLE	COAL	4.0	236.5	
222.7	SPOON		UNDERCLAY	8.0	240.5	
214.7	SPOON		SANDSTONE	14.0	248.5	WHITE
200.7	SPOON		UNDERCLAY	20.0	262.5	
180.7	SPOON		SANDSTONE	10.0	282.5	
170.7	SPOON		UNDERCLAY	12.0	292.5	
158.7	SPOON		LIMESTONE	29.0	304.5	
129.7	SPOON		BLACK SHALE	71.0	333.5	
58.7	SPOON		LIMESTONE	50.0	404.5	

MAPID: 16300244000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 27 QUARTERS/FOOTAGES: SE SE NW

QUADRANGLE: BALDWIN LONGITUDE: -89.750641 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.242693 DATE COLLECTED:

SURFACE ELEVATION (FT.): 476.4 LOGGED (FT.): 0.0 LOG TYPE: Drillers Log

SOURCE: GILL COAL COMPANY WELL TYPE: Coal Test

COMMENT: SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
476.4			MINE OPENING	0.0	0.0	IDLE

MAPID: 16300438000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 27 QUARTERS/FOOTAGES: 2635' S line, 2975' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.750861 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.241594 DATE COLLECTED: 0 / 0 / 1934

SURFACE ELEVATION (FT.): 476.3 LOGGED (FT.): 367.0 LOG TYPE: Drillers Log

SOURCE: GILL COAL CORP 1 WELL TYPE: Producer-Oil

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
476.3	CARBONDALE		UNKNOWN	110.0	0.0	Herrin in missing interval?
366.3	CARBONDALE		COAL	7.0	110.0	
359.3	CARBONDALE		LIMESTONE	1.0	117.0	
358.3	CARBONDALE		UNDERCLAY	8.0	118.0	
350.3	CARBONDALE		LIMESTONE	1.0	126.0	
349.3	CARBONDALE		SHALE	7.0	127.0	
342.3	CARBONDALE		SANDSTONE	4.0	134.0	
338.3	CARBONDALE		SHALE	122.0	138.0	
216.3	CARBONDALE		LIMESTONE	1.0	260.0	
215.3	CARBONDALE	MECCA QUARRY	BLACK SHALE	6.0	261.0	
209.3	CARBONDALE	COLCHESTER	COAL	1.0	267.0	
208.3			SHALE	64.0	268.0	
144.3			SANDSTONE	35.0	332.0	

MAPID: 16327277000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 27 QUARTERS/FOOTAGES: 1830' S line, 2760' E line

QUADRANGLE: TILDEN LONGITUDE: -89.75009 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.239376 DATE COLLECTED:

SURFACE ELEVATION (FT.): 498.4 LOGGED (FT.): 0.0 LOG TYPE: Drillers Log

SOURCE: MARISSA MINE WELL TYPE: Coal Test

COMMENT: OLD DUTCH MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
498.4			MINE OPENING	0.0	0.0	ABANDONED

MAPID: 16300163000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 28 QUARTERS/FOOTAGES: NW

QUADRANGLE: BALDWIN LONGITUDE: -89.772515 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.246141 DATE COLLECTED:

SURFACE ELEVATION (FT.): 432.0 LOGGED (FT.): 57.4 LOG TYPE: Drillers Log

SOURCE: G E WILLSON 57 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
432.0			UNCONSOLIDATED	15.7	0.0	
416.3			ROCK	4.8	15.7	
411.5			SHALE	8.5	20.5	BLUE
403.0			BLACK SHALE	0.2	29.0	
402.8	CARBONDALE	DANVILLE	COAL	0.3	29.2	
402.5	CARBONDALE		SHALE	2.0	29.5	
400.5	CARBONDALE		SANDY SHALE	4.5	31.5	
396.0	CARBONDALE		ROCK	2.5	36.0	
393.5	CARBONDALE		DARK SHALE	7.0	38.5	
386.5	CARBONDALE		ROCK	1.0	45.5	
385.5	CARBONDALE		BLACK SHALE	1.0	46.5	
384.5	CARBONDALE		ROCK	2.2	47.5	
382.3	CARBONDALE	ANNA	BLACK SHALE	1.0	49.7	
381.3	CARBONDALE	HERRIN	COAL	6.8	50.7	

MAPID: 16300164000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 28 QUARTERS/FOOTAGES: SE NW

QUADRANGLE: BALDWIN LONGITUDE: -89.7702 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.244192 DATE COLLECTED:

SURFACE ELEVATION (FT.): 435.0 LOGGED (FT.): 68.3 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 61 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
435.0			UNCONSOLIDATED	15.0	0.0	
420.0			SANDY SHALE	2.0	15.0	
418.0			CLAYSTONE	8.0	17.0	YELLOW
410.0			DARK SHALE	5.3	25.0	
404.7			COAL	0.5	30.3	
404.2			COAL/CLAYSTONE	3.0	30.8	
401.2			ROCK	2.7	33.8	
398.6			SHALE	3.8	36.4	
394.7			ROCK	1.8	40.3	
393.0			DARK SHALE	8.4	42.0	
384.6			ROCK	0.8	50.4	
383.7			DARK SHALE	1.5	51.3	
382.2			ROCK	1.9	52.8	
380.3			DARK SHALE	1.0	54.7	
379.3			ROCK	6.3	55.7	
373.0	CARBONDALE	HERRIN	COAL	6.3	62.0	

MAPID: 16300248000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 28 QUARTERS/FOOTAGES: 100' N line, 300' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.759561 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.249763 DATE COLLECTED:

SURFACE ELEVATION (FT.): 452.0 LOGGED (FT.): 90.0 LOG TYPE: Drillers Log

SOURCE: EGYPTIAN COAL COMPANY WELL TYPE: Coal Test

COMMENT: MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
362.0	CARBONDALE	HERRIN	COAL	0.0	90.0	

MAPID: 16302040000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 28 QUARTERS/FOOTAGES: 2310' S line, 2310' W line

QUADRANGLE: BALDWIN LONGITUDE: -89.769131

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.240832

DATE COLLECTED:

SURFACE ELEVATION (FT.): 442.0 LOGGED (FT.): 69.9

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 379

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
394.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	47.8
392.4	CARBONDALE	LAWSON	DARK GRAY SHALE	9.8	49.6
382.7	CARBONDALE	BRERETON	LIMESTONE	1.5	59.3
381.2	CARBONDALE	ANNA	BLACK SHALE	2.2	60.8
379.0	CARBONDALE	HERRIN	COAL	6.9	63.0

MAPID: 16327278000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 28 QUARTERS/FOOTAGES: 750' S line, 300' W line

QUADRANGLE: BALDWIN LONGITUDE: -89.776196

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.236633

DATE COLLECTED:

SURFACE ELEVATION (FT.): 444.2 LOGGED (FT.): 66.0

LOG TYPE: Drillers Log

SOURCE: LITTLE MUDDY COAL COMPANY

WELL TYPE: Coal Test

COMMENT: OLD ABANDONED MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
384.7	CARBONDALE	HERRIN	COAL	6.5	59.5

MAPID: 16300165000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES:

QUADRANGLE: BALDWIN

LONGITUDE: -89.786527

GEOLOGIST: HINES

CONFIDENTIAL: N

LATITUDE: 38.242298

DATE COLLECTED:

SURFACE ELEVATION (FT.): 425.0

LOGGED (FT.): 43.3

LOG TYPE: Drillers Log

SOURCE: H E WILSON 53

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
425.0			UNCONSOLIDATED	18.0	0.0	
407.0			SHALE	3.0	18.0	YELLOW
404.0			SHALE	4.0	21.0	
400.0			DARK SHALE	3.0	25.0	
397.0			LIMESTONE	1.0	28.0	
396.0			BLACK SHALE	1.3	29.0	
394.7			LIMESTONE	1.0	30.3	
393.7			DARK SHALE	1.2	31.3	
392.5			LIMESTONE	4.5	32.5	
388.0	CARBONDALE	HERRIN	COAL	6.3	37.0	

MAPID: 16300345000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES: SE

QUADRANGLE: BALDWIN

LONGITUDE: -89.781856

GEOLOGIST: HINES

CONFIDENTIAL: N

LATITUDE: 38.238433

DATE COLLECTED:

SURFACE ELEVATION (FT.): 457.0

LOGGED (FT.): 80.8

LOG TYPE: Drillers Log

SOURCE: H E WILSON A

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
457.0			UNCONSOLIDATED	23.4	0.0	
433.6			SHALE	4.0	23.4	
429.6			SHALE	2.8	27.4	LT GY
426.7			SHALE	5.7	30.3	
421.1			LIMESTONE	6.0	35.9	
415.1			SHALE	1.3	41.9	
413.8			SHALE	4.2	43.2	BLUE
409.7			COAL	0.4	47.3	
409.2			SHALE	4.2	47.8	LG GY
405.1			SHALE	3.6	51.9	LIGHT
401.5			LIMESTONE	2.6	55.5	
398.9			SHALE	1.0	58.1	LT GY
397.9			LIMESTONE	2.8	59.1	
395.1			DARK SHALE	9.2	61.9	
385.9	CARBONDALE	ANNA	BLACK SHALE	3.2	71.1	
382.7	CARBONDALE	HERRIN	COAL	6.6	74.3	

MAPID: 1630096000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES: 0' S line, 2640' W line

QUADRANGLE: BALDWIN LONGITUDE: -89.786356 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.234565 DATE COLLECTED: 6 / 26 / 1943

SURFACE ELEVATION (FT.): 439.0 LOGGED (FT.): 59.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 24D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
439.0			SOIL	25.0	0.0
414.0			LIMESTONE	1.0	25.0
413.0			BLACK SHALE	4.0	26.0
409.0			LIMESTONE	4.0	30.0
405.0			BLACK SHALE	5.0	34.0
400.0	CARBONDALE	BRERETON	LIMESTONE	2.0	39.0
398.0	CARBONDALE	ANNA	BLACK SHALE	10.5	41.0
387.5	CARBONDALE	HERRIN	COAL	6.7	51.5
380.8	CARBONDALE		UNDERCLAY	0.8	58.2

MAPID: 16300961000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES: SW

QUADRANGLE: BALDWIN LONGITUDE: -89.791104 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.23843 DATE COLLECTED: 6 / 29 / 1943

SURFACE ELEVATION (FT.): 430.0 LOGGED (FT.): 47.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 25D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
430.0			SOIL	22.0	0.0
408.0			LIMESTONE	3.0	22.0
405.0			SANDSTONE	5.0	25.0
400.0	CARBONDALE	ANNA	BLACK SHALE	10.5	30.0
389.5	CARBONDALE	HERRIN	COAL	6.5	40.5
383.0	CARBONDALE		UNDERCLAY	0.5	47.0

MAPID: 16300962000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES: 0' S line, 1320' W line

QUADRANGLE: BALDWIN LONGITUDE: -89.790976 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.234559 DATE COLLECTED: 6 / 30 / 1943

SURFACE ELEVATION (FT.): 440.0 LOGGED (FT.): 49.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 26D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
440.0			SOIL	30.0	0.0
410.0	CARBONDALE	BRERETON	LIMESTONE	3.0	30.0
407.0	CARBONDALE	ANNA	BLACK SHALE	10.0	33.0
397.0	CARBONDALE	HERRIN	COAL	6.0	43.0
391.0	CARBONDALE		UNDERCLAY	0.5	49.0

MAPID: 16300963000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES:

QUADRANGLE: BALDWIN LONGITUDE: -89.786527 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.242298 DATE COLLECTED: 7 / 1 / 1943

SURFACE ELEVATION (FT.): 435.0 LOGGED (FT.): 47.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 27D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
435.0			SOIL	20.0	0.0
415.0			SANDSTONE	5.0	20.0
410.0			BLACK SHALE	5.0	25.0
405.0			LIMESTONE	3.5	30.0
401.5			BLACK SHALE	5.0	33.5
396.5	CARBONDALE	BRERETON	LIMESTONE	2.0	38.5
394.5	CARBONDALE	ANNA	BLACK SHALE	0.5	40.5
394.0	CARBONDALE	HERRIN	COAL	5.5	41.0
388.5	CARBONDALE		UNDERCLAY	1.0	46.5

MAPID: 16300964000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES: 1320' N line, 0' W line

QUADRANGLE: BALDWIN LONGITUDE: -89.795988 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.246401 DATE COLLECTED: 7 / 3 / 1943

SURFACE ELEVATION (FT.): 491.0 LOGGED (FT.): 59.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 28D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
491.0			SOIL	25.0	0.0
466.0			SANDSTONE	5.0	25.0
461.0			LIMESTONE	1.0	30.0
460.0			SHALE	5.0	31.0
455.0			LIMESTONE	3.0	36.0
452.0			BLACK SHALE	6.0	39.0
446.0	CARBONDALE	BRERETON	LIMESTONE	2.5	45.0
443.5	CARBONDALE	ANNA	BLACK SHALE	4.5	47.5
439.0	CARBONDALE	HERRIN	COAL	6.5	52.0

MAPID: 16300965000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES: NW NW NW

QUADRANGLE: BALDWIN LONGITUDE: -89.794893 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.249077 DATE COLLECTED: 7 / 7 / 1943

SURFACE ELEVATION (FT.): 417.0 LOGGED (FT.): 62.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 29D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
417.0			SOIL	25.0	0.0
392.0			BLACK SHALE	12.0	25.0
380.0			LIMESTONE	2.0	37.0
378.0			BLACK SHALE	7.0	39.0
371.0			LIMESTONE	2.0	46.0
369.0			BLACK SHALE	2.5	48.0
366.5	CARBONDALE	BRERETON	LIMESTONE	3.0	50.5
363.5	CARBONDALE	ANNA	BLACK SHALE	2.0	53.5
361.5	CARBONDALE	HERRIN	COAL	6.2	55.5
355.3	CARBONDALE		UNDERCLAY	0.3	61.7

MAPID: 16300966000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES: 0' N line, 1320' W line

QUADRANGLE: BALDWIN LONGITUDE: -89.791487 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.250038 DATE COLLECTED: 7 / 8 / 1943

SURFACE ELEVATION (FT.): 419.0 LOGGED (FT.): 65.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 30D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
419.0			SOIL	25.0	0.0
394.0			BLACK SHALE	20.0	25.0
374.0			SANDSTONE	6.0	45.0
368.0	CARBONDALE	BRERETON	LIMESTONE	2.0	51.0
366.0	CARBONDALE	ANNA	BLACK SHALE	5.0	53.0
361.0	CARBONDALE	HERRIN	COAL	7.0	58.0
354.0	CARBONDALE		UNDERCLAY	0.5	65.0

MAPID: 16300971000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES: NW

QUADRANGLE: BALDWIN LONGITUDE: -89.791278 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.246168 DATE COLLECTED: 6 / 23 / 1943

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 54.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 22D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
420.0			SOIL	20.0	0.0
400.0			SAND	4.0	20.0
396.0			BLACK SHALE	3.0	24.0 LS
393.0			LIMESTONE	2.0	27.0
391.0			BLACK SHALE	7.0	29.0
384.0			LIMESTONE	3.0	36.0
381.0			BLACK SHALE	4.0	39.0
377.0	CARBONDALE	BRERETON	LIMESTONE	3.5	43.0
373.5	CARBONDALE	ANNA	BLACK SHALE	0.5	46.5
373.0	CARBONDALE	HERRIN	COAL	6.2	47.0
366.8	CARBONDALE		UNDERCLAY	0.8	53.2

MAPID: 16301028000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES: NW

QUADRANGLE: BALDWIN LONGITUDE: -89.791278 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.246168 DATE COLLECTED: 6 / 18 / 1943

SURFACE ELEVATION (FT.): LOGGED (FT.): 63.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 20D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			SOIL	20.0	0.0
-			SAND	3.0	20.0
-			SANDSTONE	16.0	23.0
-			LIMESTONE	2.0	39.0
-			BLACK SHALE	6.0	41.0
-			LIMESTONE	2.0	47.0
-			BLACK SHALE	4.0	49.0
-	CARBONDALE	BRERETON	LIMESTONE	2.0	53.0
-	CARBONDALE	ANNA	BLACK SHALE	1.0	55.0
-	CARBONDALE	HERRIN	COAL	6.2	56.0
-	CARBONDALE		UNDERCLAY	0.8	62.2

MAPID: 16301029000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES: W2

QUADRANGLE: BALDWIN LONGITUDE: -89.791189 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.2423 DATE COLLECTED: 6 / 21 / 1943

SURFACE ELEVATION (FT.): LOGGED (FT.): 43.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 21D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			SOIL	20.0	0.0
-			SAND	3.0	20.0
-			BLACK SHALE	4.0	23.0
-			LIMESTONE	2.0	27.0
-			BLACK SHALE	4.0	29.0
-	CARBONDALE	BRERETON	LIMESTONE	3.0	33.0
-	CARBONDALE	ANNA	BLACK SHALE	1.0	36.0
-	CARBONDALE	HERRIN	COAL	6.0	37.0
-	CARBONDALE		UNDERCLAY	0.5	43.0

MAPID: 16301030000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES: S2

QUADRANGLE: BALDWIN LONGITUDE: -89.78648 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.238433 DATE COLLECTED: 6 / 0 / 1925

SURFACE ELEVATION (FT.): 370.0 LOGGED (FT.): 57.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 233D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
370.0			SOIL	32.0	0.0
338.0			LIMESTONE	2.0	32.0
336.0			BLACK SHALE	5.0	34.0
331.0	CARBONDALE	BRERETON	LIMESTONE	4.0	39.0
327.0	CARBONDALE	ANNA	BLACK SHALE	8.0	43.0
319.0	CARBONDALE	HERRIN	COAL	5.5	51.0
313.5	CARBONDALE		UNDERCLAY	0.5	56.5

MAPID: 16301410000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES: 990' S line, 330' E line of SW NW

QUADRANGLE: BALDWIN

LONGITUDE: -89.792408

GEOLOGIST: HINES

CONFIDENTIAL: N

LATITUDE: 38.245033

DATE COLLECTED: 10 / 0 / 1950

SURFACE ELEVATION (FT.): 419.0

LOGGED (FT.): 340.0

LOG TYPE: Drillers Log

SOURCE: C W YOUNG 4

WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
419.0			SOIL	6.0	0.0	
413.0			SANDY CLAY	4.0	6.0	YELLOW
409.0			SHALE	9.0	10.0	
400.0			SHALE & CONGLOMERATE	5.0	19.0	
395.0			LIMESTONE	1.0	24.0	BLUE
394.0			SHALE	8.0	25.0	DARK BLUE
386.0			BLACK SHALE	1.0	33.0	
385.0			SHALE	5.0	34.0	BLACK
380.0	CARBONDALE	ANNA	BLACK SHALE	2.0	39.0	
378.0	CARBONDALE	HERRIN	COAL	7.0	41.0	
371.0	CARBONDALE		SHALE	4.0	48.0	BLUE
367.0	CARBONDALE		LIMESTONE	3.0	52.0	BROWN
364.0	CARBONDALE		LIMESTONE	4.0	55.0	GRAY
360.0	CARBONDALE		SHALE	7.0	59.0	GY BLU
353.0	CARBONDALE		CALCAREOUS SHALE	2.0	66.0	
351.0	CARBONDALE		SANDSTONE	8.0	68.0	GRAY
343.0	CARBONDALE		SHALE	27.0	76.0	BLU GY
316.0	CARBONDALE	HOUCHIN CREEK	COAL	3.0	103.0	
313.0	CARBONDALE		SHALE	8.0	106.0	BLACK
305.0	CARBONDALE		SHALE	6.0	114.0	
299.0	CARBONDALE		SANDSTONE	3.0	120.0	GRAY
296.0	CARBONDALE		SHALE	22.0	123.0	
274.0	CARBONDALE		SHALE	8.0	145.0	DARK BLUE
266.0	CARBONDALE	MECCA QUARRY	SHALE	6.0	153.0	BLACK
260.0	CARBONDALE	COLCHESTER	COAL	1.0	159.0	
259.0			SHALE	25.0	160.0	LT GY
234.0			SHALE	9.0	185.0	R BRN
225.0			SANDSTONE	8.0	194.0	GRAY
217.0			SHALE	3.0	202.0	
214.0			SANDSTONE	23.0	205.0	LT GY
191.0	MISSISSIPPIAN		LIMESTONE	7.0	228.0	BROWN
184.0	MISSISSIPPIAN		SHALE	1.0	235.0	
183.0	MISSISSIPPIAN		LIMESTONE	9.0	236.0	
174.0	MISSISSIPPIAN		SANDSTONE	2.0	245.0	
172.0	MISSISSIPPIAN		SHALE	1.0	247.0	GR
171.0	MISSISSIPPIAN		SHALE	7.0	248.0	BLUE
164.0	MISSISSIPPIAN		SHALE	2.0	255.0	GREEN GRAY
162.0	MISSISSIPPIAN		LIMESTONE	9.0	257.0	GRAY
153.0	MISSISSIPPIAN		SHALE	8.0	266.0	BLUE

145.0	MISSISSIPPIAN	LIMESTONE	4.0	274.0	GRAY
141.0	MISSISSIPPIAN	SANDSTONE	2.0	278.0	DARK GRAY
139.0	MISSISSIPPIAN	SHALE	14.0	280.0	BLUE
125.0	MISSISSIPPIAN	SANDSTONE	1.0	294.0	
124.0	MISSISSIPPIAN	SHALE	5.0	295.0	BLU-BK
119.0	MISSISSIPPIAN	LIMESTONE	2.0	300.0	DARK GRAY
117.0	MISSISSIPPIAN	SHALE	5.0	302.0	
112.0	MISSISSIPPIAN	SHALE	7.0	307.0	BLUE
105.0	MISSISSIPPIAN	CALCAREOUS SHALE	26.0	314.0	

MAPID: 16301507000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES: 990' N line, 330' W line of NE SW

QUADRANGLE: BALDWIN LONGITUDE: -89.789974 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.239564 DATE COLLECTED: 0 / 0 / 1942

SURFACE ELEVATION (FT.): 437.0 LOGGED (FT.): 330.0 LOG TYPE: Drillers Log

SOURCE: C W YOUNG 2 WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
437.0			SOIL	4.0	0.0	
433.0			CLAY	27.0	4.0	
406.0	CARBONDALE		SHALE	16.0	31.0	BLACK
390.0	CARBONDALE	HERRIN	COAL	6.0	47.0	
384.0	CARBONDALE		SHALE	5.0	53.0	
379.0	CARBONDALE		LIMESTONE	5.0	58.0	
374.0	CARBONDALE		SHALE	7.0	63.0	BLUE
367.0	CARBONDALE		SANDY SHALE	20.0	70.0	
347.0	CARBONDALE		SHALE	15.0	90.0	
332.0	CARBONDALE		LIMESTONE	3.0	105.0	
329.0	CARBONDALE		BLACK SHALE	6.0	108.0	
323.0	CARBONDALE		SHALE	12.0	114.0	BLUE
311.0	CARBONDALE		SHALE	14.0	126.0	
297.0	CARBONDALE		DARK SHALE	19.0	140.0	
278.0	CARBONDALE		LIMESTONE	2.0	159.0	
276.0	CARBONDALE		BLACK SHALE	5.0	161.0	
271.0	CARBONDALE		SHALE	5.0	166.0	
266.0	CARBONDALE		BLACK SHALE	4.0	171.0	
262.0	CARBONDALE		SANDSTONE	1.0	175.0	
261.0	CARBONDALE		SANDSTONE	10.0	176.0	
251.0	CARBONDALE		SHALE	15.0	186.0	
236.0	CARBONDALE		SANDSTONE	4.0	201.0	
232.0	MISSISSIPPIAN		LIMESTONE	28.0	205.0	
204.0	MISSISSIPPIAN		SHALE	13.0	233.0	
191.0	MISSISSIPPIAN		LIMESTONE	9.0	246.0	
182.0	MISSISSIPPIAN		SHALE	3.0	255.0	
179.0	MISSISSIPPIAN		LIMESTONE	10.0	258.0	
169.0	MISSISSIPPIAN		SHALE	29.0	268.0	
140.0	MISSISSIPPIAN		LIMESTONE	33.0	297.0	

MAPID: 16301508000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES: 329' S line, 330' W line of SE SW

QUADRANGLE: BALDWIN LONGITUDE: -89.789881 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.23547 DATE COLLECTED: 1 / 0 / 1943

SURFACE ELEVATION (FT.): 450.0 LOGGED (FT.): 300.0 LOG TYPE: Drillers Log

SOURCE: C W YOUNG 3 WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
450.0			SOIL	2.0	0.0	
448.0			CLAY	35.0	2.0	
413.0	CARBONDALE	BRERETON	LIMESTONE	2.0	37.0	
411.0	CARBONDALE	ANNA	SHALE	8.0	39.0	BLACK
403.0	CARBONDALE		BLACK SHALE	6.0	47.0	
397.0	CARBONDALE	HERRIN	COAL	4.0	53.0	
393.0	CARBONDALE		LIMESTONE	10.0	57.0	
383.0	CARBONDALE		LIMESTONE	6.0	67.0	
377.0	CARBONDALE		SANDY SHALE	25.0	73.0	
352.0	CARBONDALE		DARK SHALE	10.0	98.0	
342.0	CARBONDALE		SANDSTONE	10.0	108.0	
332.0	CARBONDALE		BLACK SHALE	7.0	118.0	
325.0	CARBONDALE		SHALE	12.0	125.0	
313.0			LIMESTONE	8.0	137.0	
305.0			SHALE	20.0	145.0	
285.0			SHALE	4.0	165.0	BLUE
281.0			LIMESTONE	3.0	169.0	
278.0			SHALE	20.0	172.0	
258.0			SANDSTONE	13.0	192.0	OIL SHOW
245.0			ROCK	11.0	205.0	
234.0			SANDSTONE	6.0	216.0	OIL SHOW
228.0	MISSISSIPPIAN		LIMESTONE	19.0	222.0	
209.0	MISSISSIPPIAN		SHALE	13.0	241.0	
196.0	MISSISSIPPIAN		LIMESTONE	5.0	254.0	
191.0	MISSISSIPPIAN		SHALE	3.0	259.0	
188.0	MISSISSIPPIAN		LIMESTONE	10.0	262.0	
178.0	MISSISSIPPIAN		SHALE	28.0	272.0	

MAPID: 16301510000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES: SW SW

QUADRANGLE: BALDWIN LONGITUDE: -89.79336 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.236491 DATE COLLECTED: 11 / 0 / 1943

SURFACE ELEVATION (FT.): 430.0 LOGGED (FT.): 245.0 LOG TYPE: Drillers Log

SOURCE: C W YOUNG 2 WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
430.0			SOIL	4.0	0.0	BLACK
426.0			CLAY	19.0	4.0	
407.0			SHALE	8.0	23.0	
399.0	CARBONDALE	BRERETON	LIMESTONE	4.0	31.0	
395.0	CARBONDALE	ANNA	BLACK SHALE	2.0	35.0	
393.0	CARBONDALE	HERRIN	COAL	6.0	37.0	
387.0	CARBONDALE		SHALE	17.0	43.0	BLACK
370.0	CARBONDALE		SANDY SHALE	30.0	60.0	
340.0	CARBONDALE		SHALE	20.0	90.0	
320.0	CARBONDALE		SHALE	15.0	110.0	BLUE
305.0	CARBONDALE		SHALE	15.0	125.0	GREEN
290.0	CARBONDALE		SHALE	18.0	140.0	
272.0	CARBONDALE		LIMESTONE	4.0	158.0	
268.0	CARBONDALE		SHALE	3.0	162.0	BLACK
265.0	CARBONDALE		SHALE	20.0	165.0	
245.0	CARBONDALE		SHALE	15.0	185.0	
230.0	MISSISSIPPIAN		LIMESTONE	5.0	200.0	
225.0	MISSISSIPPIAN		LIMESTONE	25.0	205.0	
200.0	MISSISSIPPIAN		SHALE	15.0	230.0	

MAPID: 16301511000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES: 660' S line, 660' W line of SW SW

QUADRANGLE: BALDWIN LONGITUDE: -89.793346 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.236378 DATE COLLECTED: 7 / 0 / 1944

SURFACE ELEVATION (FT.): 435.0 LOGGED (FT.): 250.0 LOG TYPE: Drillers Log

SOURCE: C W YOUNG 4 WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
435.0			SOIL	4.0	0.0	
431.0			CLAY	11.0	4.0	
420.0			SAND	9.0	15.0	
411.0			SHALE	6.0	24.0	BLACK
405.0	CARBONDALE	BRERETON	LIMESTONE	3.0	30.0	
402.0	CARBONDALE	ANNA	BLACK SHALE	2.0	33.0	
400.0	CARBONDALE	HERRIN	COAL	6.0	35.0	
394.0	CARBONDALE		SHALE	20.0	41.0	BLUE
374.0	CARBONDALE		SANDY SHALE	39.0	61.0	
335.0	CARBONDALE		SHALE	19.0	100.0	
316.0	CARBONDALE		SANDSTONE	5.0	119.0	
311.0	CARBONDALE		SHALE	26.0	124.0	
285.0	CARBONDALE		LIMESTONE	6.0	150.0	
279.0	CARBONDALE		SHALE	24.0	156.0	
255.0	CARBONDALE		SANDSTONE	23.0	180.0	
232.0	MISSISSIPPIAN		LIMESTONE	25.0	203.0	
207.0	MISSISSIPPIAN		SHALE	15.0	228.0	
192.0	MISSISSIPPIAN		LIMESTONE	7.0	243.0	

MAPID: 16302042000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES: 330' S line, 990' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.780721 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.235485 DATE COLLECTED:

SURFACE ELEVATION (FT.): 460.0 LOGGED (FT.): 80.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 413 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
419.7	CARBONDALE	DANVILLE	COAL	1.9	40.3	
417.7	CARBONDALE		CLAYSTONE & SHALE	13.1	42.3	
404.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	55.3	
402.8	CARBONDALE	LAWSON	DARK GRAY SHALE	8.1	57.2	
394.7	CARBONDALE	BRERETON	LIMESTONE	5.0	65.3	
389.7	CARBONDALE	ANNA	BLACK SHALE	3.8	70.3	
386.0	CARBONDALE	HERRIN	COAL	6.0	74.0	

MAPID: 16327279000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 29 **QUARTERS/FOOTAGES:** 300' S line, 2310' W line
QUADRANGLE: BALDWIN **LONGITUDE:** -89.787539 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.235393 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 421.0 **LOGGED (FT.):** 61.3 **LOG TYPE:** Drillers Log
SOURCE: H E WILLSON 75 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
421.0			UNCLASSIFIED	55.0	0.0	ROD SKELETON TO CO
366.0	CARBONDALE	HERRIN	COAL	6.3	55.0	

MAPID: 16327280000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 29 **QUARTERS/FOOTAGES:** NE NE SE
QUADRANGLE: BALDWIN **LONGITUDE:** -89.778374 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.241332 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 435.0 **LOGGED (FT.):** 57.1 **LOG TYPE:** Drillers Log
SOURCE: H E WILLSON 76 **WELL TYPE:** Coal Test
COMMENT: MAP FILE NO 13-87-28

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
383.4	CARBONDALE	HERRIN	COAL	5.5	51.6	

MAPID: 16327281000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 29 **QUARTERS/FOOTAGES:** NE NW NW
QUADRANGLE: BALDWIN **LONGITUDE:** -89.792529 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.249071 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 416.0 **LOGGED (FT.):** 52.0 **LOG TYPE:** Drillers Log
SOURCE: H E WILLSON **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
370.2	CARBONDALE	HERRIN	COAL	6.3	45.8	

MAPID: 1632729000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 29 QUARTERS/FOOTAGES: SE SW NW

QUADRANGLE: BALDWIN LONGITUDE: -89.79238 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.243266 DATE COLLECTED:

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 36.0 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 47 WELL TYPE: Coal Test

COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
390.3	CARBONDALE	HERRIN	COAL	6.3	29.7	

MAPID: 16300967000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: 1320' S line, 0' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.79572 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.238197 DATE COLLECTED: 7 / 12 / 1943

SURFACE ELEVATION (FT.): 430.0 LOGGED (FT.): 63.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 31D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
430.0			SOIL	22.0	0.0	
408.0			LIMESTONE	3.0	22.0	
405.0			BLACK SHALE	5.0	25.0	
400.0			BLACK SHALE	10.0	30.0	
390.0			LIMESTONE	3.0	40.0	
387.0			BLACK SHALE	7.0	43.0	
380.0			LIMESTONE	3.0	50.0	
377.0			BLACK SHALE	1.0	53.0	
376.0	CARBONDALE	BRERETON	LIMESTONE	2.0	54.0	
374.0	CARBONDALE	ANNA	BLACK SHALE	0.5	56.0	
373.5	CARBONDALE	HERRIN	COAL	6.0	56.5	
367.5	CARBONDALE		UNDERCLAY	0.5	62.5	

MAPID: 16300968000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: 1320' S line, 660' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.79803 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.238194 DATE COLLECTED: 7 / 20 / 1943

SURFACE ELEVATION (FT.): 433.0 LOGGED (FT.): 80.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 32D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
433.0			SOIL	32.0	0.0
401.0			LIMESTONE	9.0	32.0
392.0			BLACK SHALE	14.0	41.0
378.0			LIMESTONE	2.5	55.0
375.5			BLACK SHALE	6.5	57.5
369.0	CARBONDALE	BRERETON	LIMESTONE	9.0	64.0
360.0	CARBONDALE	ANNA	BLACK SHALE	0.5	73.0
359.5	CARBONDALE	HERRIN	COAL	6.0	73.5
353.5	CARBONDALE		UNDERCLAY	0.5	79.5

MAPID: 16300969000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: 0' S line, 660' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.79791 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.23455 DATE COLLECTED: 7 / 16 / 1943

SURFACE ELEVATION (FT.): 436.0 LOGGED (FT.): 50.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 33D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
436.0			SOIL	41.0	0.0
395.0	CARBONDALE	BRERETON	LIMESTONE	1.5	41.0
393.5	CARBONDALE	ANNA	BLACK SHALE	1.5	42.5
392.0	CARBONDALE	HERRIN	COAL	6.0	44.0
386.0	CARBONDALE		UNDERCLAY	0.5	50.0

MAPID: 16300970000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 30 **QUARTERS/FOOTAGES:** 660' S line, 660' E line
QUADRANGLE: BALDWIN **LONGITUDE:** -89.79797 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.236372 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 437.0 **LOGGED (FT.):** 68.5 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT 34D **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
437.0			SOIL	22.0	0.0
415.0			LIMESTONE	10.0	22.0
405.0			BLACK SHALE	16.0	32.0
389.0			LIMESTONE	3.0	48.0
386.0			BLACK SHALE	7.0	51.0
379.0	CARBONDALE	BRERETON	LIMESTONE	1.5	58.0
377.5	CARBONDALE	ANNA	BLACK SHALE	2.5	59.5
375.0	CARBONDALE	HERRIN	COAL	6.0	62.0
369.0	CARBONDALE		UNDERCLAY	0.5	68.0

MAPID: 16300972000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 30 **QUARTERS/FOOTAGES:** 0' S line, 990' E line
QUADRANGLE: BALDWIN **LONGITUDE:** -89.799065 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.234547 **DATE COLLECTED:** 7 / 22 / 1943
SURFACE ELEVATION (FT.): 435.0 **LOGGED (FT.):** 56.5 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT 35D **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
435.0			SOIL	19.0	0.0
416.0			LIMESTONE	2.0	19.0
414.0			SHALE	10.0	21.0
404.0			LIMESTONE	3.0	31.0
401.0			BLACK SHALE	6.0	34.0
395.0			LIMESTONE	2.0	40.0
393.0			BLACK SHALE	4.0	42.0
389.0			LIMESTONE	3.5	46.0
385.5			BLACK SHALE	0.5	49.5
385.0	CARBONDALE	HERRIN	COAL	6.0	50.0
379.0	CARBONDALE		UNDERCLAY	0.5	56.0

MAPID: 16300973000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: 1320' S line, 1980' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.80265 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.238182 DATE COLLECTED: 7 / 28 / 1943

SURFACE ELEVATION (FT.): 430.0 LOGGED (FT.): 75.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 36D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
430.0			SOIL	19.0	0.0
411.0			SAND	2.0	19.0
409.0			SHALE	6.0	21.0
403.0			LIMESTONE	10.0	27.0
393.0			BLACK SHALE	4.0	37.0
389.0			COAL	0.5	41.0
388.5			UNDERCLAY	2.5	41.5
386.0			BLACK SHALE	7.0	44.0
379.0			LIMESTONE	2.5	51.0
376.5			BLACK SHALE	8.5	53.5
368.0	CARBONDALE	BRERETON	LIMESTONE	4.0	62.0
364.0	CARBONDALE	ANNA	BLACK SHALE	2.5	66.0
361.5	CARBONDALE	HERRIN	COAL	6.5	68.5
355.0	CARBONDALE		UNDERCLAY	0.5	75.0

MAPID: 16300973000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: 1320' S line, 1980' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.80265 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.238182 DATE COLLECTED:

SURFACE ELEVATION (FT.): 430.0 LOGGED (FT.): 75.5 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
403.0	MODESTO	PIASA	LIMESTONE	10.0	27.0
393.0	MODESTO		BLACK SHALE	4.0	37.0
389.0	CARBONDALE	DANVILLE	COAL	0.5	41.0
388.5	CARBONDALE		GRAY SHALE	9.5	41.5
379.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	51.0
376.5	CARBONDALE	LAWSON	GRAY SHALE	8.5	53.5
368.0	CARBONDALE	BRERETON	LIMESTONE	4.0	62.0
364.0	CARBONDALE	ANNA	BLACK SHALE	2.5	66.0
361.0	CARBONDALE	HERRIN	COAL	6.5	69.0

MAPID: 16300974000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: SW

QUADRANGLE: BALDWIN LONGITUDE: -89.810824 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.238409 DATE COLLECTED: 8 / 2 / 1943

SURFACE ELEVATION (FT.): 428.0 LOGGED (FT.): 64.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 37D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
428.0			SOIL	37.0	0.0
391.0			LIMESTONE	2.0	37.0
389.0			SHALE	5.0	39.0
384.0			BLACK SHALE	3.0	44.0
381.0			LIMESTONE	4.0	47.0
377.0			BLACK SHALE	2.0	51.0
375.0	CARBONDALE	BRERETON	LIMESTONE	3.5	53.0
371.5	CARBONDALE	ANNA	BLACK SHALE	0.5	56.5
371.0	CARBONDALE	HERRIN	COAL	6.3	57.0
364.7	CARBONDALE		UNDERCLAY	0.8	63.3

MAPID: 16300975000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: 200' S line, 2440' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.804156 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.235086 DATE COLLECTED: 8 / 5 / 1943

SURFACE ELEVATION (FT.): 430.0 LOGGED (FT.): 67.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 38D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
430.0			SOIL	20.0	0.0
410.0			LIMESTONE	6.0	20.0
404.0			SHALE	13.0	26.0
391.0			LIMESTONE	1.0	39.0
390.0			BLACK SHALE	6.0	40.0
384.0			LIMESTONE	3.0	46.0
381.0			BLACK SHALE	7.0	49.0
374.0			LIMESTONE	1.5	56.0
372.5			BLACK SHALE	1.0	57.5
371.5	CARBONDALE	BRERETON	LIMESTONE	1.0	58.5
370.5	CARBONDALE	ANNA	BLACK SHALE	0.5	59.5
370.0	CARBONDALE	HERRIN	COAL	6.5	60.0
363.5	CARBONDALE		UNDERCLAY	0.5	66.5

MAPID: 16300976000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: SE SW

QUADRANGLE: BALDWIN LONGITUDE: -89.808292 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.236469 DATE COLLECTED: 8 / 9 / 1943

SURFACE ELEVATION (FT.): 427.0 LOGGED (FT.): 66.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 39D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
427.0			SOIL	20.0	0.0
407.0			CALCAREOUS SHALE	1.5	20.0
405.5			SHALE	3.5	21.5
402.0			LIMESTONE	1.0	25.0
401.0			SHALE	8.0	26.0
393.0			LIMESTONE	1.0	34.0
392.0			SHALE	6.0	35.0
386.0			LIMESTONE	3.0	41.0
383.0			BLACK SHALE	8.0	44.0
375.0	CARBONDALE	BRERETON	LIMESTONE	2.5	52.0
372.5	CARBONDALE	ANNA	BLACK SHALE	4.5	54.5
368.0	CARBONDALE	HERRIN	COAL	6.5	59.0
361.5	CARBONDALE		UNDERCLAY	0.5	65.5

MAPID: 16300982000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: BALDWIN LONGITUDE: -89.814609 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.235483 DATE COLLECTED: 8 / 16 / 1943

SURFACE ELEVATION (FT.): 415.0 LOGGED (FT.): 62.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 45D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
415.0			SOIL	22.0	0.0
393.0			SAND	2.0	22.0
391.0			SHALE	38.0	24.0

MAPID: 16300983000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: 0' S line, 1340' E line of NW

QUADRANGLE: BALDWIN LONGITUDE: -89.810533 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.242297 DATE COLLECTED: 8 / 18 / 1943

SURFACE ELEVATION (FT.): 423.0 LOGGED (FT.): 58.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 46D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
423.0			SOIL	32.0	0.0
391.0			LIMESTONE	3.0	32.0
388.0			BLACK SHALE	7.0	35.0
381.0	CARBONDALE	BRERETON	LIMESTONE	3.0	42.0
378.0	CARBONDALE	ANNA	BLACK SHALE	6.0	45.0
372.0	CARBONDALE	HERRIN	COAL	6.3	51.0
365.7	CARBONDALE		UNDERCLAY	0.7	57.3

MAPID: 16300984000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: BALDWIN LONGITUDE: -89.814609 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.235483 DATE COLLECTED: 8 / 18 / 1943

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 66.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 47D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
420.0			SOIL	40.0	0.0
380.0			LIMESTONE	1.5	40.0
378.5			SHALE	12.5	41.5
366.0			LIMESTONE	3.0	54.0
363.0			BLACK SHALE	2.0	57.0
361.0			LIMESTONE	1.0	59.0
360.0	CARBONDALE	SPRINGFIELD	COAL	1.0	60.0
359.0	CARBONDALE		UNDERCLAY	5.0	61.0

MAPID: 16300985000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES:

QUADRANGLE: BALDWIN LONGITUDE: -89.805842

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.242298

DATE COLLECTED: 8 / 28 / 1943

SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 73.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 48D

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
425.0			SOIL	25.0	0.0
400.0			LIMESTONE	7.0	25.0
393.0			BLACK SHALE	10.0	32.0
383.0			LIMESTONE	1.5	42.0
381.5			BLACK SHALE	4.0	43.5
377.5			LIMESTONE	2.5	47.5
375.0			BLACK SHALE	14.0	50.0
361.0	CARBONDALE	BRERETON	LIMESTONE	2.0	64.0
359.0	CARBONDALE	ANNA	BLACK SHALE	0.5	66.0
358.5	CARBONDALE	HERRIN	COAL	5.8	66.5
352.7	CARBONDALE		UNDERCLAY	0.8	72.3

MAPID: 16300986000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: 600' S line, 20' W line

QUADRANGLE: BALDWIN LONGITUDE: -89.815802

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.236164

DATE COLLECTED: 8 / 19 / 1921

SURFACE ELEVATION (FT.): 417.0 LOGGED (FT.): 70.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 49D

WELL TYPE: Coal Test

COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
417.0			SOIL	25.0	0.0
392.0			BLACK SHALE	45.0	25.0

MAPID: 16300987000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: 1990' S line, 20' W line
 QUADRANGLE: BALDWIN LONGITUDE: -89.815777 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.240002 DATE COLLECTED: 8 / 20 / 1943
 SURFACE ELEVATION (FT.): 417.0 LOGGED (FT.): 70.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 50D WELL TYPE: Coal Test
 COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
417.0			SOIL	25.0	0.0
392.0			SAND	10.0	25.0
382.0			BLACK SHALE	35.0	35.0

MAPID: 16300988000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: 100' S line, 0' E line of SW NW SW
 QUADRANGLE: BALDWIN LONGITUDE: -89.813339 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.238681 DATE COLLECTED: 8 / 21 / 1943
 SURFACE ELEVATION (FT.): 422.0 LOGGED (FT.): 55.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 51D WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
422.0			SOIL	20.0	0.0
402.0			CALCAREOUS SHALE	1.0	20.0
401.0			SHALE	22.0	21.0
379.0			LIMESTONE	4.5	43.0
374.5			SHALE	0.5	47.5
374.0	CARBONDALE	HERRIN	COAL	6.3	48.0
367.7	CARBONDALE		UNDERCLAY	0.8	54.3

MAPID: 16300989000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: 0' S line, 1980' E line of NW

QUADRANGLE: BALDWIN LONGITUDE: -89.812773 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.242296 DATE COLLECTED: 8 / 24 / 1943

SURFACE ELEVATION (FT.): 418.0 LOGGED (FT.): 62.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 989 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
418.0			SOIL	47.0	0.0
371.0			LIMESTONE	7.0	47.0
364.0	CARBONDALE	SPRINGFIELD	BLACK SHALE	2.0	54.0
362.0	CARBONDALE		COAL	0.5	56.0
361.5	CARBONDALE		UNDERCLAY	3.5	56.5
358.0	CARBONDALE		BLACK SHALE	2.0	60.0

MAPID: 16300990000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: 1370' S line, 2490' W line

QUADRANGLE: BALDWIN LONGITUDE: -89.807142 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.238311 DATE COLLECTED: 8 / 26 / 1943

SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 67.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 53D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
425.0			SOIL	22.0	0.0
403.0			LIMESTONE	7.0	22.0
396.0			BLACK SHALE	2.5	29.0
393.5	CARBONDALE	DANVILLE	COAL	1.8	31.5
391.7	CARBONDALE		UNDERCLAY	2.8	33.3
389.0	CARBONDALE		BLACK SHALE	9.5	36.0
379.5	CARBONDALE		LIMESTONE	4.0	45.5
375.5	CARBONDALE		BLACK SHALE	7.5	49.5
368.0	CARBONDALE	BRERETON	LIMESTONE	2.0	57.0
366.0	CARBONDALE	ANNA	BLACK SHALE	2.0	59.0
364.0	CARBONDALE	HERRIN	COAL	6.0	61.0
358.0	CARBONDALE		UNDERCLAY	0.5	67.0

MAPID: 16300991000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: 330' N line, 1980' E line of SW

QUADRANGLE: BALDWIN

LONGITUDE: -89.812762

GEOLOGIST: HINES

CONFIDENTIAL: N

LATITUDE: 38.241385

DATE COLLECTED: 8 / 26 / 1943

SURFACE ELEVATION (FT.): 420.0

LOGGED (FT.): 50.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 54D

WELL TYPE: Coal Test

COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
420.0			SOIL	35.0	0.0
385.0			SAND	12.0	35.0
373.0			LIMESTONE	3.0	47.0

MAPID: 16300992000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: NW

QUADRANGLE: BALDWIN

LONGITUDE: -89.810851

GEOLOGIST: HINES

CONFIDENTIAL: N

LATITUDE: 38.246183

DATE COLLECTED: 8 / 28 / 1943

SURFACE ELEVATION (FT.): 417.0

LOGGED (FT.): 59.5

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 55D

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
417.0			SOIL	26.0	0.0
391.0			LIMESTONE	1.5	26.0
389.5			SHALE	2.5	27.5
387.0			LIMESTONE	3.5	30.0
383.5			BLACK SHALE	6.5	33.5
377.0			LIMESTONE	2.0	40.0
375.0			BLACK SHALE	1.0	42.0
374.0			LIMESTONE	2.0	43.0
372.0			BLACK SHALE	2.0	45.0
370.0			LIMESTONE	2.0	47.0
368.0	CARBONDALE	SPRINGFIELD	BLACK SHALE	3.0	49.0
365.0	CARBONDALE		COAL	6.8	52.0
358.2	CARBONDALE		UNDERCLAY	0.8	58.8

MAPID: 16300993000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: N2

QUADRANGLE: BALDWIN LONGITUDE: -89.805894 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.24618 DATE COLLECTED: 8 / 30 / 1943

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 57.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 56D WELL TYPE: Coal Test

COMMENT: AS TYPED FROM LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
420.0			SOIL	34.0	0.0	
386.0			LIMESTONE	2.5	34.0	
383.5			BLACK SHALE	5.5	36.5	
378.0	CARBONDALE	BRERETON	LIMESTONE	2.5	42.0	
375.5	CARBONDALE	ANNA	BLACK SHALE	7.0	44.5	
368.5	CARBONDALE	HERRIN	COAL	5.0	51.5	AS TYPED FROM LOG
363.5	CARBONDALE		UNDERCLAY	0.5	56.5	

MAPID: 16300994000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: 5' N line, 2960' E line of NW

QUADRANGLE: BALDWIN LONGITUDE: -89.800489 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.24621 DATE COLLECTED: 8 / 30 / 1943

SURFACE ELEVATION (FT.): 415.0 LOGGED (FT.): 42.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 57D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.0			SOIL	31.0	0.0	
384.0	CARBONDALE	BRERETON	LIMESTONE	3.0	31.0	
381.0	CARBONDALE	ANNA	BLACK SHALE	1.5	34.0	
379.5	CARBONDALE	HERRIN	COAL	6.5	35.5	
373.0	CARBONDALE		UNDERCLAY	0.5	42.0	

MAPID: 16300995000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: NE SW NE

QUADRANGLE: BALDWIN LONGITUDE: -89.802158 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.245207 DATE COLLECTED: 9 / 3 / 1943

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 63.7 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 58D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
420.0			SOIL	15.5	0.0
404.5			LIMESTONE	4.5	15.5
400.0			BLACK SHALE	8.0	20.0
392.0			SANDSTONE	4.5	28.0
387.5			LIMESTONE	3.0	32.5
384.5			BLACK SHALE	3.5	35.5
381.0			LIMESTONE	2.5	39.0
378.5			BLACK SHALE	10.5	41.5
368.0	CARBONDALE	BRERETON	LIMESTONE	2.0	52.0
366.0	CARBONDALE	ANNA	BLACK SHALE	2.5	54.0
363.5	CARBONDALE	HERRIN	COAL	6.3	56.5
357.2	CARBONDALE		UNDERCLAY	0.7	62.8

MAPID: 16300998000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: 0' N line, 1320' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.800733 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.250053 DATE COLLECTED: 9 / 4 / 1943

SURFACE ELEVATION (FT.): 418.0 LOGGED (FT.): 57.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 62D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
418.0			SOIL	21.0	0.0
397.0			SAND	2.0	21.0
395.0			LIMESTONE	3.5	23.0
391.5			BLACK SHALE	3.5	26.5
388.0			LIMESTONE	2.0	30.0
386.0			BLACK SHALE	8.0	32.0
378.0			LIMESTONE	1.5	40.0
376.5			BLACK SHALE	2.5	41.5
374.0	CARBONDALE	BRERETON	LIMESTONE	4.0	44.0
370.0	CARBONDALE	ANNA	BLACK SHALE	2.0	48.0
368.0	CARBONDALE	HERRIN	COAL	6.7	50.0
361.3	CARBONDALE		UNDERCLAY	0.3	56.7

MAPID: 1630100000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: NE NW

QUADRANGLE: BALDWIN LONGITUDE: -89.808388 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.248125 DATE COLLECTED: 9 / 8 / 1943

SURFACE ELEVATION (FT.): 418.0 LOGGED (FT.): 46.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 64D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
418.0			SOIL	29.0	0.0
389.0			LIMESTONE	1.5	29.0
387.5			BLACK SHALE	3.5	30.5
384.0	CARBONDALE	BRERETON	LIMESTONE	2.5	34.0
381.5	CARBONDALE	ANNA	BLACK SHALE	2.0	36.5
379.5	CARBONDALE	HERRIN	COAL	6.8	38.5
372.7	CARBONDALE		UNDERCLAY	0.7	45.3

MAPID: 16301009000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: 2640' N line, 1320' W line of SE

QUADRANGLE: BALDWIN LONGITUDE: -89.801125 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.235008 DATE COLLECTED: 5 / 15 / 1943

SURFACE ELEVATION (FT.): LOGGED (FT.): 59.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 1D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			SOIL	20.0	0.0
-			LIMESTONE	1.5	20.0
-			SHALE	3.5	21.5
-			LIMESTONE	1.5	25.0
-			SHALE	14.5	26.5
-			LIMESTONE	3.0	41.0
-			BLACK SHALE	6.0	44.0
-			LIMESTONE	2.0	50.0
-			LIMESTONE	1.5	52.0
-			LIMESTONE	1.0	53.5
-			BLACK SHALE	3.5	54.5
-			COAL	0.5	58.0
-			LIMESTONE	0.5	58.5

MAPID: 16301012000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: 1' S line, 2140' E line
 QUADRANGLE: BALDWIN LONGITUDE: -89.80309 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.234539 DATE COLLECTED: 5 / 22 / 1943
 SURFACE ELEVATION (FT.): LOGGED (FT.): 58.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 4-D WELL TYPE: Coal Test
 COMMENT: MIDWEST RADIANT; LOCN CHCKD IN PLAT BOOK

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		SANDY CLAY	20.0	0.0
-			SHALE	20.0	20.0
-			LIMESTONE	2.5	40.0
-			BLUE SHALE	12.5	42.5
-			LIMESTONE	3.0	55.0

MAPID: 16301014000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: 2618' N line, 1320' E line
 QUADRANGLE: BALDWIN LONGITUDE: -89.800492 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.242826 DATE COLLECTED: 5 / 27 / 1943
 SURFACE ELEVATION (FT.): LOGGED (FT.): 60.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 6-D WELL TYPE: Coal Test
 COMMENT: MIDWEST RADIANT; LOCN CHCKD IN PLAT BOOK

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		CLAY	23.0	0.0
-			SHALE	12.0	23.0
-			LIMESTONE	11.0	35.0
-			BLACK SHALE	4.0	46.0
-			UNDERCLAY	4.0	50.0
-			SHALE	6.0	54.0

MAPID: 16301411000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 30 QUARTERS/FOOTAGES: 330' N line, 330' E line of SE SE

QUADRANGLE: BALDWIN LONGITUDE: -89.796851

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.237515

DATE COLLECTED: 2 / 0 / 1950

SURFACE ELEVATION (FT.): 433.0 LOGGED (FT.): 253.0

LOG TYPE: Drillers Log

SOURCE: C W YOUNG 1

WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
433.0			SOIL	17.0	0.0	
416.0			LIMESTONE	4.0	17.0	
412.0			SHALE	16.0	21.0	DARK GRAY
396.0			LIMESTONE	1.0	37.0	
395.0			SHALE	5.0	38.0	LT GY
390.0			LIMESTONE	2.0	43.0	
388.0			SHALE	7.0	45.0	BLACK
381.0	CARBONDALE	BRERETON	LIMESTONE	2.0	52.0	
379.0	CARBONDALE	ANNA	BLACK SHALE	3.0	54.0	
376.0	CARBONDALE	HERRIN	COAL	6.0	57.0	
370.0	CARBONDALE		DARK SHALE	5.0	63.0	
365.0	CARBONDALE		LIMESTONE	2.0	68.0	
363.0	CARBONDALE		CALCAREOUS SHALE	5.0	70.0	
358.0	CARBONDALE		SHALE	11.0	75.0	
347.0	CARBONDALE		SHALE	6.0	86.0	
341.0	CARBONDALE		SANDSTONE	5.0	92.0	
336.0	CARBONDALE		SANDSTONE	5.0	97.0	
331.0	CARBONDALE		SHALE	27.0	102.0	
304.0	CARBONDALE		BLACK SHALE	7.0	129.0	
297.0	CARBONDALE		SANDSTONE	6.0	136.0	
291.0	CARBONDALE		SANDSTONE	21.0	142.0	
270.0	CARBONDALE		DARK SHALE	10.0	163.0	
260.0	CARBONDALE		LIMESTONE	2.0	173.0	
258.0	CARBONDALE		BLACK SHALE	7.0	175.0	
251.0	CARBONDALE		SHALE	27.0	182.0	
224.0	CARBONDALE		SANDY SHALE	13.0	209.0	
211.0	CARBONDALE		SHALE	7.0	222.0	
204.0	MISSISSIPPIAN		LIMESTONE	9.0	229.0	
195.0	MISSISSIPPIAN		LIMESTONE	9.0	238.0	
186.0	MISSISSIPPIAN		LIMESTONE	6.0	247.0	

MAPID: 16300977000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 1120' N line, 1360' E line
 QUADRANGLE: BALDWIN LONGITUDE: -89.800322 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.231449 DATE COLLECTED: 8 / 11 / 1943
 SURFACE ELEVATION (FT.): 421.0 LOGGED (FT.): 100.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 40D WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
421.0			SOIL	40.0	0.0	
381.0			SANDY SLATE	40.0	40.0	
341.0			SANDSTONE	5.0	80.0	GRAY
336.0			BLACK SHALE	5.0	85.0	
331.0			BLACK SHALE	4.0	90.0	
327.0			COAL	0.5	94.0	
326.5			UNDERCLAY	5.5	94.5	

MAPID: 16300978000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 1320' N line, 1320' W line
 QUADRANGLE: BALDWIN LONGITUDE: -89.811229 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.230873 DATE COLLECTED: 8 / 11 / 1943
 SURFACE ELEVATION (FT.): LOGGED (FT.): 66.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 41-D WELL TYPE: Coal Test
 COMMENT: MIDWEST RADIANT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		CLAY	25.0	0.0	
-			GRAY SHALE	41.0	25.0	SOFT

MAPID: 16300979000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 660' N line, 0' W line of NE NW
 QUADRANGLE: BALDWIN LONGITUDE: -89.810793 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.232697 DATE COLLECTED: 8 / 12 / 1943
 SURFACE ELEVATION (FT.): 422.0 LOGGED (FT.): 57.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 42D WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
422.0			SOIL	25.0	0.0	
397.0			SHALE	26.0	25.0	
371.0			COAL	1.0	51.0	
370.0			UNDERCLAY	5.0	52.0	

MAPID: 1630098000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 660' N line, 2650' E line
 QUADRANGLE: BALDWIN LONGITUDE: -89.804853 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.23271 DATE COLLECTED: 8 / 14 / 1943
 SURFACE ELEVATION (FT.): LOGGED (FT.): 55.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 44-D WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		CLAY	24.0	0.0
-			SHALE	17.0	24.0
-	CARBONDALE	BRERETON	LIMESTONE	4.0	41.0
-	CARBONDALE	ANNA	BLACK SHALE	4.0	45.0
-	CARBONDALE	HERRIN	COAL	5.5	49.0
-	CARBONDALE		UNDERCLAY	0.5	54.5

MAPID: 16300981000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 600' N line, 1340' E line
 QUADRANGLE: BALDWIN LONGITUDE: -89.800269 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.232885 DATE COLLECTED: 8 / 14 / 1943
 SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 47.5 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 43D WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
425.0			SOIL	18.0	0.0
407.0			SAND	12.0	18.0
395.0			SHALE	5.0	30.0
390.0	CARBONDALE	BRERETON	LIMESTONE	4.0	35.0
386.0	CARBONDALE	ANNA	BLACK SHALE	2.5	39.0
383.5	CARBONDALE	HERRIN	COAL	3.0	41.5
380.5	CARBONDALE	HERRIN	COAL	2.0	44.5
378.5	CARBONDALE		UNDERCLAY	1.0	46.5

MAPID: 16301013000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 2640' S line, 2640' W line of NE

QUADRANGLE: BALDWIN LONGITUDE: -89.796499 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.234446 DATE COLLECTED: 5 / 23 / 1943

SURFACE ELEVATION (FT.): LOGGED (FT.): 47.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 5D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			SOIL	23.0	0.0
-			SANDSTONE	2.0	23.0
-			BLACK SHALE	5.0	25.0
-			SANDSTONE	2.0	30.0
-	CARBONDALE	ANNA	BLACK SHALE	8.5	32.0
-	CARBONDALE	HERRIN	COAL	6.0	40.5
-	CARBONDALE		UNDERCLAY	0.5	46.5

MAPID: 16301026000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 660' N line, 1' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.795582 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.232731 DATE COLLECTED: 6 / 15 / 1943

SURFACE ELEVATION (FT.): LOGGED (FT.): 37.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 18-D WELL TYPE: Coal Test

COMMENT: MIDWEST RADIANT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		CLAY	26.0	0.0
-			LIMESTONE	1.5	26.0
-			SHALE	3.5	27.5
-	CARBONDALE	HERRIN	COAL	4.0	31.0
-			UNDERCLAY	2.0	35.0

MAPID: 16301027000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 1' N line, 1320' E line
 QUADRANGLE: BALDWIN LONGITUDE: -89.800216 GEOLOGIST: KOROSE
 CONFIDENTIAL: N LATITUDE: 38.234539 DATE COLLECTED: 6 / 16 / 1943
 SURFACE ELEVATION (FT.): LOGGED (FT.): 47.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 19-D WELL TYPE: Coal Test
 COMMENT: MIDWEST RADIANT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		CLAY	30.0	0.0
-			LIMESTONE	2.0	30.0
-			BLUE SHALE	7.0	32.0
-			LIMESTONE	2.0	39.0
-			BLACK SHALE	3.0	41.0
-			LIMESTONE	3.0	44.0

MAPID: 16301972000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 500' N line, 770' E line
 QUADRANGLE: BALDWIN LONGITUDE: -89.798278 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.233166 DATE COLLECTED:
 SURFACE ELEVATION (FT.): LOGGED (FT.): 46.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 9W WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			CLAY	32.0	0.0
-			LIMESTONE	1.0	32.0
-			CLAYSTONE	4.5	33.0
-			LIMESTONE	0.4	37.5
-			CLAYSTONE	0.8	37.9
-	CARBONDALE	HERRIN	COAL	0.7	38.7
-	CARBONDALE	HERRIN	COAL	4.9	39.3
-	CARBONDALE		UNDERCLAY	1.8	44.3

MAPID: 16301973000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 470' N line, 350' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.796809 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.233253 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 36.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 8W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	20.0	0.0	
-			UNCONSOLIDATED	4.0	20.0	BLUE
-			CLAY	2.8	24.0	
-			LIMESTONE	1.3	26.8	
-			CLAYSTONE	1.8	28.1	
-	CARBONDALE	HERRIN	SMUT	1.8	29.8	WEATHERED HERRIN
-	CARBONDALE	HERRIN	COAL	2.5	31.7	
-	CARBONDALE	HERRIN	SHALE	0.5	34.2	
-	CARBONDALE	HERRIN	COAL	1.0	34.7	
-	CARBONDALE		UNDERCLAY	0.8	35.7	

MAPID: 16301974000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 380' N line, 940' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.798875 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.233496 DATE COLLECTED: 0 / 0 / 1974

SURFACE ELEVATION (FT.): LOGGED (FT.): 51.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 5W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	16.0	0.0	
-			SAND	5.0	16.0	
-			UNCONSOLIDATED	4.0	21.0	BLUE
-			CLAY	6.0	25.0	
-			CLAY	13.0	31.0	
-	CARBONDALE	HERRIN	SMUT	0.8	44.0	WEATHERED HERRIN
-	CARBONDALE	HERRIN	COAL	4.5	44.8	
-	CARBONDALE		UNDERCLAY	2.3	49.3	

MAPID: 16301975000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 565' N line, 1060' E line
 QUADRANGLE: BALDWIN LONGITUDE: -89.799289 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.232984 DATE COLLECTED: 0 / 0 / 1975
 SURFACE ELEVATION (FT.): LOGGED (FT.): 52.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 4W WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	16.0	0.0	
-			UNCONSOLIDATED	3.0	16.0	BLUE
-			CLAY	31.0	19.0	
-			LIMESTONE	2.0	50.0	

MAPID: 16301977000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 570' N line, 2250' E line
 QUADRANGLE: BALDWIN LONGITUDE: -89.803454 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.232962 DATE COLLECTED:
 SURFACE ELEVATION (FT.): LOGGED (FT.): 54.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 15W WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	14.0	0.0	
-			UNCONSOLIDATED	5.0	14.0	BLUE
-			SAND	3.0	19.0	BLUE
-			UNCONSOLIDATED	22.0	22.0	BLUE
-			CLAY	3.8	44.0	
-	CARBONDALE	HERRIN	COAL	0.7	47.8	TOP OF COAL ERODED
-	CARBONDALE	HERRIN	COAL	4.1	48.5	
-	CARBONDALE		UNDERCLAY	1.4	52.6	

MAPID: 16301978000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 540' N line, 2060' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.80279 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.233047 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 46.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 16W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	14.0	0.0	
-			UNCONSOLIDATED	16.0	14.0	BLUE
-			CLAY	4.0	30.0	
-			UNCONSOLIDATED	4.0	34.0	BLUE
-			LIMESTONE	2.0	38.0	
-			CLAYSTONE	2.3	40.0	
-			COAL	3.2	42.3	
-			UNDERCLAY	1.0	45.5	

MAPID: 16301979000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 550' N line, 1670' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.801424 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.233022 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 44.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 17W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	12.0	0.0	
-			CLAY	3.5	12.0	
-			UNCONSOLIDATED	1.5	15.5	BLUE
-			CLAY	4.5	17.0	
-			LIMESTONE	2.5	21.5	
-			CLAYSTONE	10.0	24.0	
-	CARBONDALE	ANNA	BLACK SHALE	2.2	34.0	
-	CARBONDALE	HERRIN	COAL	6.4	36.2	
-	CARBONDALE		UNDERCLAY	1.4	42.6	

MAPID: 1630198000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 700' N line, 1670' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.801419 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.232608 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 36.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 18W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	32.0	0.0	
-	CARBONDALE	HERRIN	COAL	4.0	32.0	TOP OF COAL ERODED
-	CARBONDALE		UNDERCLAY	0.5	36.0	

MAPID: 16301981000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 640' N line, 2970' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.805973 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.232762 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 54.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 19W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	18.3	0.0	
-			LIMESTONE	0.7	18.3	
-			CLAYSTONE	13.5	19.0	
-			LIMESTONE	2.0	32.5	
-			CLAYSTONE	10.8	34.5	
-	CARBONDALE	HERRIN	COAL	1.2	45.3	
-	CARBONDALE	HERRIN	COAL	5.1	46.5	
-	CARBONDALE		UNDERCLAY	2.4	51.6	

MAPID: 16301982000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 710' N line, 3320' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.807194 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.232568 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 61.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 20W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			CLAY	14.0	0.0
-			SANDY CLAY	5.0	14.0
-			CLAY	26.5	19.0
-			LIMESTONE	0.5	45.5
-			CLAYSTONE	0.5	46.0
-			LIMESTONE	1.5	46.5
-			LIMESTONE	4.0	48.0
-			CLAYSTONE	1.0	52.0
-	CARBONDALE	ANNA	BLACK SHALE	1.5	53.0
-	CARBONDALE	HERRIN	COAL	5.5	54.5
-	CARBONDALE		UNDERCLAY	1.5	60.0

MAPID: 16301985000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 560' N line, 3610' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.808214 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.23298 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 61.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 23W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			CLAY	12.0	0.0
-			SANDY CLAY	4.0	12.0
-			UNCONSOLIDATED	40.0	16.0 BLUE
-			LIMESTONE	0.5	56.0
-			CLAYSTONE	0.5	56.5
-	CARBONDALE	HERRIN	COAL	3.0	57.0 TOP OF COAL ERODED
-	CARBONDALE		UNDERCLAY	1.5	60.0

MAPID: 16325268000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 31 QUARTERS/FOOTAGES: 330' S line, 330' E line of SE

QUADRANGLE: BALDWIN LONGITUDE: -89.796592 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.220675 DATE COLLECTED: 3 / 11 / 1982

SURFACE ELEVATION (FT.): 448.7 LOGGED (FT.): 146.0 LOG TYPE: Drillers Log

SOURCE: RIVER KING OIL CO 1 WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
365.7	CARBONDALE	HERRIN	COAL	6.0	83.0	
305.7			COAL	3.0	143.0	

MAPID: 16300347000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 32 QUARTERS/FOOTAGES:

QUADRANGLE: BALDWIN LONGITUDE: -89.786298 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.227164 DATE COLLECTED:

SURFACE ELEVATION (FT.): 455.1 LOGGED (FT.): 64.3 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 70 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
455.1			UNCONSOLIDATED	22.5	0.0	
432.6			DARK SHALE	1.5	22.5	
431.1			CLAYSTONE	1.3	24.0	
429.8			SHALE	10.7	25.3	LT GY
419.1			SHALE	8.0	36.0	LIGHT
411.1			LIMESTONE	2.5	44.0	
408.6			DARK SHALE	0.3	46.5	
408.3			ROCK	0.7	46.8	LIGHT
407.6			SHALE	7.6	47.5	DARK GRAY
400.0	CARBONDALE	ANNA	BLACK SHALE	2.4	55.1	
397.6	CARBONDALE	HERRIN	COAL	6.8	57.5	ELEV COAL ABOVE SEA LEVEL 397.57

MAPID: 16300348000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 32 QUARTERS/FOOTAGES: 900' S line, 800' W line

QUADRANGLE: BALDWIN LONGITUDE: -89.792658 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.222245 DATE COLLECTED:

SURFACE ELEVATION (FT.): 446.4 LOGGED (FT.): 26.0 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 72 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
446.4			UNCONSOLIDATED	5.5	0.0	
440.9			CLAY	8.0	5.5	YELLOW
432.9			GRAVEL	2.2	13.5	
430.7			SHALE	0.8	15.7	LT GY
429.9			DARK SHALE	0.2	16.5	
429.7			LIMESTONE	0.5	16.7	
429.2			BLACK SHALE	0.5	17.2	
428.7			ROCK	1.7	17.7	BLACK
427.1	CARBONDALE	ANNA	SHALE	0.5	19.3	
426.6	CARBONDALE	HERRIN	COAL	6.2	19.8	COAL ELEV ABOVE SEA LEVEL 426.65

MAPID: 16300349000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 32 QUARTERS/FOOTAGES: W2 SW

QUADRANGLE: BALDWIN LONGITUDE: -89.79316 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.223458 DATE COLLECTED:

SURFACE ELEVATION (FT.): 447.6 LOGGED (FT.): 25.7 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 73 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
447.6			UNCONSOLIDATED	5.0	0.0	
442.6			CLAY	10.3	5.0	
432.3			GRAVEL	2.3	15.3	
430.1			SHALE	6.0	17.5	LT GY
424.1			COAL	2.2	23.5	COAL ELEV ABOVE SEA LEVEL 424.05

MAPID: 16300410000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 32 **QUARTERS/FOOTAGES:** SW/c
QUADRANGLE: BALDWIN **LONGITUDE:** -89.786298 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.227164 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 508.8 **LOGGED (FT.):** 120.0 **LOG TYPE:** Drillers Log
SOURCE: WHITE ASH COAL COMPANY 2 **WELL TYPE:** Coal Test
COMMENT: MINE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
394.3	CARBONDALE	HERRIN	COAL	5.5	114.5	DEVIL'S HOLE COAL COMPANY

MAPID: 16300410000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 32 **QUARTERS/FOOTAGES:** SW/c
QUADRANGLE: BALDWIN **LONGITUDE:** -89.786298 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.227164 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 508.8 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: WHITEASHCC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
388.8	CARBONDALE	HERRIN	COAL	5.5	120.0	

MAPID: 16300474000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 32 **QUARTERS/FOOTAGES:** SE NE NW
QUADRANGLE: BALDWIN **LONGITUDE:** -89.787528 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.231788 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 458.0 **LOGGED (FT.):** 58.0 **LOG TYPE:** Drillers Log
SOURCE: H E WILLSON 84 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
405.8	CARBONDALE	HERRIN	COAL	5.8	52.2	ROD SKELETON 58" TO 5'10" COAL #6

MAPID: 16300476000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 32 **QUARTERS/FOOTAGES:** NW NW SW
QUADRANGLE: BALDWIN **LONGITUDE:** -89.794351 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.226233 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 440.0 **LOGGED (FT.):** 54.0 **LOG TYPE:** Drillers Log
SOURCE: H E WILLSON 53 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
392.3	CARBONDALE	HERRIN	COAL	6.3	47.7	ROD SKELETON 54' TO 64" #6 COAL

MAPID: 16301031000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 32 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: BALDWIN LONGITUDE: -89.7804 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.220688 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 65.8 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 31W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	15.2	0.0	
-			LIMESTONE	9.8	15.2	
-			DARK SHALE	4.0	25.0	
-			COAL	0.5	29.0	
-			UNDERCLAY	3.0	29.5	
-			SHALE	2.8	32.5	LIGHT
-			LIMESTONE	1.7	35.3	
-			SHALE	2.5	37.0	LIGHT
-			LIMESTONE	2.3	39.5	
-			SHALE	5.8	41.8	
-			LIMESTONE	0.5	47.6	
-			SHALE	0.8	48.1	
-			LIMESTONE	1.1	48.9	
-			SHALE	2.8	50.0	BLACK
-			LIMESTONE	7.4	52.8	
-	CARBONDALE	HERRIN	COAL	5.7	60.2	

MAPID: 16301032000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 32 QUARTERS/FOOTAGES: 15' N line, 15' E line of SE

QUADRANGLE: BALDWIN LONGITUDE: -89.777139 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.227128 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 84.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 32W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	20.0	0.0	
-			SAND	6.0	20.0	
-			UNCONSOLIDATED	4.5	26.0	BLUE
-			LIMESTONE	9.8	30.5	
-			SHALE	0.6	40.3	LIGHT
-			BLACK SHALE	1.2	40.9	
-			UNDERCLAY	1.9	42.1	
-			LIMESTONE	0.5	44.0	
-			UNDERCLAY	2.5	44.5	
-			SHALE	3.0	47.0	LIGHT
-			LIMESTONE	1.8	50.0	
-			CALCAREOUS SHALE	4.3	51.8	
-			LIMESTONE	2.9	56.1	
-			DARK SHALE	6.0	59.0	
-			LIMESTONE	1.1	65.0	
-			SHALE	1.5	66.1	
-			LIMESTONE	0.9	67.6	
-			BLACK SHALE	2.8	68.5	
-			LIMESTONE	3.9	71.3	
-	CARBONDALE		COAL	6.5	75.3	
-	CARBONDALE	HERRIN	UNDERCLAY	2.8	81.8	

MAPID: 16301033000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 32 QUARTERS/FOOTAGES: 115' S line, 475' E line of NW NW

QUADRANGLE: BALDWIN LONGITUDE: -89.792628 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.231176 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 64.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 33W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	60.0	0.0	
-			LIMESTONE	4.5	60.0	LIGHT

MAPID: 16301034000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 32 QUARTERS/FOOTAGES: 198' S line, 10' E line of NW NW
 QUADRANGLE: BALDWIN LONGITUDE: -89.791002 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.231407 DATE COLLECTED:
 SURFACE ELEVATION (FT.): LOGGED (FT.): 64.5 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 34W WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	25.0	0.0	
-			UNCONSOLIDATED	3.9	25.0	BLUE
-			CLAY	21.1	28.9	
-			LIMESTONE	0.8	50.0	
-			LIMESTONE	4.3	50.8	
-			SHALE	0.8	55.2	LIGHT
-			LIMESTONE	1.0	56.0	
-			CLAYSTONE	5.5	57.0	DARK
-			UNDERCLAY	2.0	62.5	

MAPID: 16301035000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 32 QUARTERS/FOOTAGES: 348' S line, 18' E line of NW NW
 QUADRANGLE: BALDWIN LONGITUDE: -89.791038 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.231821 DATE COLLECTED:
 SURFACE ELEVATION (FT.): LOGGED (FT.): 64.5 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 35W WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	23.0	0.0	
-			SAND	7.0	23.0	
-			CLAY	10.0	30.0	
-			SAND	2.0	40.0	
-			CLAY	11.2	42.0	
-			LIMESTONE	0.8	53.2	
-			LIMESTONE	5.8	54.0	
-			CLAYSTONE	4.8	59.8	

MAPID: 16301482000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 32 QUARTERS/FOOTAGES: E2 SW

QUADRANGLE: BALDWIN LONGITUDE: -89.788544 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.223462 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 35.0 LOG TYPE: Drillers Log

SOURCE: SUNLIGHT COAL COMPANY WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	6.0	29.0	

MAPID: 16301519000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 32 QUARTERS/FOOTAGES: 75' N line, 330' W line

QUADRANGLE: BALDWIN LONGITUDE: -89.79444 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.234349 DATE COLLECTED: 1 / 0 / 1944

SURFACE ELEVATION (FT.): 440.0 LOGGED (FT.): 220.0 LOG TYPE: Drillers Log

SOURCE: C W YOUNG 3 WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
440.0			SOIL	3.0	0.0	
437.0			CLAY	22.0	3.0	
415.0			SHALE	12.0	25.0	BLUE
403.0	CARBONDALE	HERRIN	COAL	8.0	37.0	
395.0	CARBONDALE		SHALE	20.0	45.0	
375.0	CARBONDALE		SANDY SHALE	20.0	65.0	
355.0	CARBONDALE		SHALE	18.0	85.0	
337.0	CARBONDALE		BLACK SHALE	7.0	103.0	
330.0	CARBONDALE		DARK SHALE	10.0	110.0	
320.0	CARBONDALE		SANDSTONE	5.0	120.0	
315.0	CARBONDALE		SHALE	10.0	125.0	BLUE
305.0	CARBONDALE		DARK SHALE	25.0	135.0	
280.0	CARBONDALE		SHALE	10.0	160.0	BLUE
270.0	CARBONDALE		SANDY SHALE	25.0	170.0	
245.0	CARBONDALE		SANDSTONE	5.0	195.0	
240.0	MISSISSIPPIAN		LIMESTONE	20.0	200.0	

MAPID: 16301969000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 32 QUARTERS/FOOTAGES: 870' N line, 270' W line

QUADRANGLE: BALDWIN LONGITUDE: -89.794624 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.232154 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 36.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 11W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	14.0	0.0	
-			SANDY CLAY	16.5	14.0	
-	CARBONDALE	HERRIN	COAL	1.0	30.5	
-	CARBONDALE	HERRIN	COAL	4.5	31.5	
-	CARBONDALE		UNDERCLAY	0.5	36.0	

MAPID: 16301970000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 32 QUARTERS/FOOTAGES: 800' N line, 670' W line

QUADRANGLE: BALDWIN LONGITUDE: -89.793228 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.232348 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 41.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 12W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	19.0	0.0	
-			UNCONSOLIDATED	16.0	19.0	BLUE
-			CLAY	4.0	35.0	
-			SMUT	1.3	39.0	
-			UNDERCLAY	1.2	40.3	

MAPID: 16301971000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 32 QUARTERS/FOOTAGES: 770' N line, 960' W line

QUADRANGLE: BALDWIN LONGITUDE: -89.792213 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.232433 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 46.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 13W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	20.0	0.0	
-			SAND	1.0	20.0	
-			CLAY, SAND & SILTSTONE	7.0	21.0	BLUE
-			CLAY	12.0	28.0	
-	CARBONDALE	HERRIN	COAL	1.0	40.0	
-	CARBONDALE	HERRIN	COAL	4.5	41.0	
-	CARBONDALE		UNDERCLAY	1.0	45.5	

MAPID: 16301986000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 32 QUARTERS/FOOTAGES: 660' N line, 380' W line

QUADRANGLE: BALDWIN LONGITUDE: -89.794248 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.232735 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 41.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 10W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	14.0	0.0	
-			SANDY CLAY	6.3	14.0	
-			LIMESTONE	0.6	20.3	
-			MUDSTONE	2.2	20.8	BLUE
-			LIMESTONE	1.0	23.0	
-			CLAYSTONE	6.8	24.0	
-	CARBONDALE	ANNA	BLACK SHALE	2.6	30.8	
-	CARBONDALE	HERRIN	COAL	6.2	33.3	
-	CARBONDALE		UNDERCLAY	2.0	39.5	

MAPID: 1630205000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 32 QUARTERS/FOOTAGES: 990' S line, 990' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.780439 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.222496 DATE COLLECTED:

SURFACE ELEVATION (FT.): 460.0 LOGGED (FT.): 74.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 657 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
437.6	MODESTO	PIASA	LIMESTONE	7.3	22.4	
430.3	MODESTO		GRAY SHALE	8.6	29.7	
421.7	CARBONDALE	DANVILLE	COAL	0.9	38.3	
420.8	CARBONDALE		GRAY SHALE	5.9	39.2	
414.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	45.2	UPPER BENCH
413.6	CARBONDALE	BANKSTON FORK	GRAY SHALE	4.5	46.4	SHALE PARTING
409.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.4	50.9	LOWER BENCH
406.7	CARBONDALE	LAWSON	DARK GRAY SHALE	9.2	53.3	
397.5	CARBONDALE	CONANT	LIMESTONE	0.7	62.5	
396.8	CARBONDALE	JAMESTOWN	BLACK SHALE	1.8	63.2	
395.0	CARBONDALE	BRERETON	LIMESTONE	3.0	65.0	
392.0	CARBONDALE	HERRIN	COAL	6.4	68.0	

MAPID: 16327255000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 32 QUARTERS/FOOTAGES: NW SW SW

QUADRANGLE: BALDWIN LONGITUDE: -89.794304 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.222533 DATE COLLECTED:

SURFACE ELEVATION (FT.): 445.0 LOGGED (FT.): 25.0 LOG TYPE: Drillers Log

SOURCE: H E WILLSON WELL TYPE: Coal Test

COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
426.0	CARBONDALE	HERRIN	COAL	6.0	19.0	ROD DRILL SKELETON LOT 25' TO #6

MAPID: 16327258000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 32 QUARTERS/FOOTAGES: 330' S line, 990' W line

QUADRANGLE: BALDWIN LONGITUDE: -89.791973 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.22067 DATE COLLECTED: 0 / 0 / 1936

SURFACE ELEVATION (FT.): 461.7 LOGGED (FT.): 0.0 LOG TYPE: Drillers Log

SOURCE: W O SCHOCK 1 WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
461.7			MINE OPENING	0.0	0.0	SHIPPING MINE

MAPID: 16327258000C **VERSION:** 2 **PROJECT:** CIRC 71
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 32 **QUARTERS/FOOTAGES:** 330' S line, 990' W line
QUADRANGLE: BALDWIN **LONGITUDE:** -89.791973 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 38.22067 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 547.7 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: BOND MINE **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
346.7	CARBONDALE	HERRIN	COAL	-	201.0	

MAPID: 16327259000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 32 **QUARTERS/FOOTAGES:** 2600' S line, 2600' W line
QUADRANGLE: BALDWIN **LONGITUDE:** -89.786409 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.226937 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 450.4 **LOGGED (FT.):** 31.8 **LOG TYPE:** Drillers Log
SOURCE: H E WILLSON 68 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
450.4			UNCONSOLIDATED	6.0	0.0	
444.4			SHALE	7.3	6.0	
437.1			CLAYSTONE	5.3	13.3	YELLOW
431.9			CLAYSTONE	1.5	18.5	
430.4			CLAYSTONE	4.3	20.0	YELLOW
426.1			SHALE	4.2	24.3	
421.9	CARBONDALE	SPRINGFIELD	COAL	3.3	28.5	ELEV COAL 421.9 ABOVE SEA LEVEL

MAPID: 16327282000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 32 **QUARTERS/FOOTAGES:** SW NW NW
QUADRANGLE: BALDWIN **LONGITUDE:** -89.794419 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.231782 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 429.0 **LOGGED (FT.):** 60.0 **LOG TYPE:** Drillers Log
SOURCE: H E WILLSON 65 **WELL TYPE:** Coal Test
COMMENT: COAL TEST MAP FILES NO 473

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
429.0			UNCLASSIFIED	60.0	0.0	SKELETON ROD DRILL NO COAL

MAPID: 16327283000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 32 **QUARTERS/FOOTAGES:** NE NE NW
QUADRANGLE: BALDWIN **LONGITUDE:** -89.78756 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.23364 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 439.0 **LOGGED (FT.):** 47.7 **LOG TYPE:** Drillers Log
SOURCE: H E WILLSON 71 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
397.6	CARBONDALE	HERRIN	COAL	6.3	41.4	ROD SKELETON 47" 63" #6

MAPID: 16327287000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 32 **QUARTERS/FOOTAGES:** 2600' S line, 1400' W line
QUADRANGLE: BALDWIN **LONGITUDE:** -89.790613 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.226938 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 461.0 **LOGGED (FT.):** 29.0 **LOG TYPE:** Drillers Log
SOURCE: H E WILLSON **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
461.0			UNCLASSIFIED	29.0	0.0	ROD SKELETON TO COAL; NO CO

MAPID: 16327288000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 32 **QUARTERS/FOOTAGES:** SE SW SW
QUADRANGLE: BALDWIN **LONGITUDE:** -89.79197 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.220684 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 463.0 **LOGGED (FT.):** 36.0 **LOG TYPE:** Drillers Log
SOURCE: H E WILLSON **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
427.0	CARBONDALE	HERRIN	COAL	0.0	36.0	ROD DRILL HOLE COAL AT 36' NO THICKNESS

MAPID: 16327732000C **VERSION:** 1 **PROJECT:** LUMP
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 32 **QUARTERS/FOOTAGES:** 1218' N line, 2640' W line
QUADRANGLE: BALDWIN **LONGITUDE:** -89.786318 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 38.231203 **DATE COLLECTED:** 4 / 21 / 1982
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 73.5 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 7 **WELL TYPE:** Coal Test
COMMENT: PERMIT 63

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCLASSIFIED	68.5	0.0	
-			UNDERCLAY	5.0	68.5	FIRE CLAY

MAPID: 16302051000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 33 **QUARTERS/FOOTAGES:** 2310' S line, 2310' E line
QUADRANGLE: BALDWIN **LONGITUDE:** -89.766769 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.226126 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 483.0 **LOGGED (FT.):** 101.6 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. 520 **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
432.6	MODESTO	PIASA	LIMESTONE	12.6	50.4	
420.1	CARBONDALE		DARK GRAY SHALE	9.6	62.9	
410.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	72.5	UPPER BENCH
407.2	CARBONDALE	BANKSTON FORK	DARK GRAY SHALE	2.5	75.8	SHALE PARTING
404.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	78.3	LOWER BENCH
401.4	CARBONDALE	LAWSON	DARK GRAY SHALE	6.5	81.6	
394.9	CARBONDALE	BRERETON	LIMESTONE	3.6	88.1	
391.3	CARBONDALE	ANNA	BLACK SHALE	3.3	91.7	
388.0	CARBONDALE	HERRIN	COAL	6.6	95.0	

MAPID: 16327289000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 33 **QUARTERS/FOOTAGES:** NE SE SW
QUADRANGLE: BALDWIN **LONGITUDE:** -89.768985 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.222509 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 505.0 **LOGGED (FT.):** 136.0 **LOG TYPE:** Drillers Log
SOURCE: FARM WELL **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
369.0	CARBONDALE	HERRIN	COAL	0.0	136.0	WELL 136' TO #6 COAL NO THICKNESS

MAPID: 16302679000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 34 **QUARTERS/FOOTAGES:** 10' S line, 50' W line of SE
QUADRANGLE: TILDEN **LONGITUDE:** -89.749392 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.219666 **DATE COLLECTED:** 3 / 6 / 1956
SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 105.0 **LOG TYPE:** Drillers Log
SOURCE: SUN OIL COMPANY 11 **WELL TYPE:** Structure Test
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
460.0			CLAY	47.0	0.0	
413.0			SHALE	18.0	47.0	
395.0			DARK SHALE	1.0	65.0	
394.0			SHALE	10.0	66.0	
384.0			SANDSTONE	2.0	76.0	
382.0			DARK SHALE	1.0	78.0	
381.0			SHALE	10.0	79.0	
371.0			LIMESTONE	11.0	89.0	BROWN
360.0			SHALE	1.0	100.0	
359.0			DARK SHALE	3.0	101.0	
356.0			COAL	0.0	104.0	
356.0			SHALE	1.0	104.0	

MAPID: 16302680000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 34 **QUARTERS/FOOTAGES:** 790' N line, 200' W line
QUADRANGLE: BALDWIN **LONGITUDE:** -89.75794 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.232117 **DATE COLLECTED:** 10 / 13 / 1952
SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 96.0 **LOG TYPE:** Drillers Log
SOURCE: SUN OIL COMPANY ST752 **WELL TYPE:** Structure Test
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
410.0	MODESTO	PIASA	LIMESTONE	6.0	50.0	
370.0	CARBONDALE	HERRIN	COAL	6.0	90.0	

MAPID: 16303532000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 34 QUARTERS/FOOTAGES: 330' S line, 660' W line

QUADRANGLE: BALDWIN LONGITUDE: -89.756415 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.220625 DATE COLLECTED:

SURFACE ELEVATION (FT.): 500.0 LOGGED (FT.): 149.1 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. 10084C WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
403.0	MODESTO	PIASA	LIMESTONE	10.9	97.0	
392.1	MODESTO		CLAYSTONE & SHALE	2.4	107.9	
389.7	CARBONDALE	DANVILLE	BONE COAL	0.8	110.3	
388.9	CARBONDALE		CLAYSTONE & SHALE	7.4	111.1	
381.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	118.5	UPPER BENCH
379.5	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	6.0	120.5	SHALE PARTING
373.5	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	2.0	126.5	LOWER BENCH
371.5	CARBONDALE	LAWSON	CALCAREOUS SHALE	6.3	128.5	
365.2	CARBONDALE	CONANT	LIMESTONE	0.5	134.8	
364.7	CARBONDALE	JAMESTOWN	CARBONACEOUS SHALE	0.5	135.3	
364.2	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	3.0	135.8	
361.2	CARBONDALE	ANNA	BLACK SHALE	3.4	138.8	
358.0	CARBONDALE	HERRIN	COAL	7.1	142.0	

MAPID: 16300429000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 35 QUARTERS/FOOTAGES: 3100' S line, 1175' E line

QUADRANGLE: TILDEN LONGITUDE: -89.725856 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.228021 DATE COLLECTED: 0 / 0 / 1880

SURFACE ELEVATION (FT.): 508.7 LOGGED (FT.): 372.1 LOG TYPE: Drillers Log

SOURCE: WHITE OAK COAL CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
367.7	CARBONDALE	HERRIN	COAL	6.0	141.0	
361.7	CARBONDALE		UNDERCLAY	7.9	147.0	
353.8	CARBONDALE		CLAYSTONE	2.8	154.9	
350.9	CARBONDALE		UNDERCLAY	1.0	157.8	
349.9	CARBONDALE		CLAYSTONE	0.9	158.8	
349.0	CARBONDALE		IRONSTONE	52.8	159.7	
296.2	CARBONDALE		SHALE	5.5	212.5	BLACK
290.7	CARBONDALE		SHALE	31.0	218.0	
259.7	CARBONDALE		BLACK SHALE	18.3	249.0	
241.4	CARBONDALE		LIMESTONE	1.3	267.3	
240.2	CARBONDALE	MECCA QUARRY	BLACK SHALE	6.0	268.5	
234.2	CARBONDALE	COLCHESTER	COAL	1.3	274.5	
232.9			UNDERCLAY	2.6	275.8	
230.4			UNDERCLAY	5.3	278.3	
225.0			COAL	0.8	283.7	
224.2			UNDERCLAY	11.5	284.5	
212.7			SHALE	1.5	296.0	
211.2			SANDY SHALE	8.8	297.5	
202.4			LIMESTONE	0.3	306.3	DARK
202.2			SANDSTONE	15.5	306.5	
186.7			SHALE	44.6	322.0	
142.1			SHALE	5.5	366.6	

MAPID: 16300445000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 35 QUARTERS/FOOTAGES: 4225' S line, 2950' E line

QUADRANGLE: TILDEN LONGITUDE: -89.732089 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.231159 DATE COLLECTED:

SURFACE ELEVATION (FT.): 495.0 LOGGED (FT.): 0.0 LOG TYPE: Drillers Log

SOURCE: WHITE OAK COAL CO 1 WELL TYPE: Coal Test

COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
495.0			MINE OPENING	0.0	0.0	ABANDONED SHAFT

MAPID: 16302684000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1360' S line, 12' W line of NE
QUADRANGLE: TILDEN **LONGITUDE:** -89.731034 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.230626 **DATE COLLECTED:** 11 / 20 / 1952
SURFACE ELEVATION (FT.): 495.0 **LOGGED (FT.):** 98.0 **LOG TYPE:** Drillers Log
SOURCE: SUN OIL COMPANY 10-52 **WELL TYPE:** Structure Test
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
495.0			CLAY	22.0	0.0	
473.0			LIMESTONE	59.0	22.0	BLUE
414.0			LIMESTONE	11.0	81.0	
403.0	CARBONDALE	HERRIN	COAL	6.0	92.0	#6 BY INTERVAL

MAPID: 16303408000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 35 **QUARTERS/FOOTAGES:** 0' S line, 1320' E line
QUADRANGLE: TILDEN **LONGITUDE:** -89.726309 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.219465 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 503.0 **LOGGED (FT.):** 168.2 **LOG TYPE:** Survey Core Study
SOURCE: PEABODY COAL CO. 12753C **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
379.0	MODESTO	PIASA	LIMESTONE	9.0	124.0	
370.0	MODESTO		GRAY SHALE	1.2	133.0	
368.8	CARBONDALE	DANVILLE	DARK GRAY SHALE	1.0	134.2	
367.8	CARBONDALE		GRAY SHALE	4.0	135.2	
363.8	CARBONDALE	BANKSTON FORK	LIMESTONE	3.6	139.2	UPPER BENCH
360.2	CARBONDALE	BANKSTON FORK	SILTY SHALE	4.1	142.8	SHALE PARTING
356.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	146.9	LOWER BENCH
353.6	CARBONDALE	LAWSON	DARK GRAY SHALE	5.1	149.4	
348.5	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	1.2	154.5	
347.3	CARBONDALE		CALCAREOUS SHALE	0.7	155.7	
346.6	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	2.9	156.4	
343.7	CARBONDALE	ANNA	BLACK SHALE	2.6	159.3	
341.0	CARBONDALE	HERRIN	COAL	6.2	162.0	

MAPID: 16300148000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 36 QUARTERS/FOOTAGES: 0' S line, 0' E line

QUADRANGLE: TILDEN LONGITUDE: -89.703356 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.219445 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 520.9 LOGGED (FT.): 451.0 LOG TYPE: Drillers Log

SOURCE: ROTRAMEL WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
520.9			CLAY	22.0	0.0	
498.9			SANDSTONE	8.0	22.0	
490.9			SANDSTONE	0.3	30.0	
490.6			SHALE	32.7	30.3	
457.9			SHALE	35.0	63.0	BROWN
422.9			SHALE	2.0	98.0	DARK GRAY
420.9			SANDSTONE	1.0	100.0	
419.9			SHALE	11.0	101.0	
408.9			SANDSTONE	3.0	112.0	
405.9			SHALE	11.0	115.0	
394.9			SANDSTONE	1.0	126.0	
393.9			SHALE	7.0	127.0	
386.9			LIMESTONE	12.0	134.0	
374.9			SHALE	0.7	146.0	BLACK
374.2			SANDSTONE	7.3	146.7	
366.9			DARK SHALE	1.0	154.0	
365.9			DARK SHALE	1.0	155.0	
364.9			LIMESTONE	1.5	156.0	
363.4			SHALE	4.5	157.5	
358.9			LIMESTONE	1.5	162.0	
357.4			SHALY LIMESTONE	17.5	163.5	DARK
339.9			SHALY LIMESTONE	0.8	181.0	DARK
339.1	CARBONDALE	HERRIN	COAL	4.3	181.8	
334.9	CARBONDALE	HERRIN	COAL	2.8	186.0	
332.1	CARBONDALE		UNDERCLAY	3.3	188.8	
328.9	CARBONDALE		LIMESTONE	1.0	192.0	
327.9	CARBONDALE		SHALE	4.0	193.0	BLUE
323.9	CARBONDALE		SHALE	3.0	197.0	BLUE
320.9	CARBONDALE		LIMESTONE	4.0	200.0	
316.9	CARBONDALE		SHALE	4.0	204.0	BLUE
312.9	CARBONDALE		SHALE	3.0	208.0	BLUE
309.9	CARBONDALE		SANDY SHALE	11.0	211.0	
298.9	CARBONDALE		SHALE	3.0	222.0	
295.9	CARBONDALE		SHALE	18.0	225.0	
277.9	CARBONDALE		SHALE	4.0	243.0	
273.9	CARBONDALE		SHALE	7.0	247.0	BLACK
266.9	CARBONDALE		SHALE	7.0	254.0	
259.9	CARBONDALE		SHALE	15.0	261.0	DARK GRAY
244.9	CARBONDALE		SHALE	11.0	276.0	DARK BROWN

233.9	CARBONDALE		SHALE	3.0	287.0	
230.9	CARBONDALE		SHALE	4.0	290.0	
226.9	CARBONDALE		SHALE	6.0	294.0	
220.9	CARBONDALE		LIMESTONE	2.0	300.0	
218.9	CARBONDALE		SHALE	2.0	302.0	
216.9	CARBONDALE		SHALE	16.0	304.0	DARK BROWN
200.9	CARBONDALE		LIMESTONE	1.0	320.0	
199.9	CARBONDALE		SHALE	3.0	321.0	DARK BROWN
196.9	CARBONDALE		SHALE	2.0	324.0	
194.9	CARBONDALE	COLCHESTER	BONE COAL	0.9	326.0	
194.0	SPOON		SHALE	7.3	326.9	
186.7	SPOON		COAL	0.6	334.2	
186.1	SPOON		UNDERCLAY	0.3	334.8	
185.9	SPOON		SHALE	0.8	335.0	
185.1	SPOON		SHALE	3.1	335.8	
182.1	SPOON		SHALE	1.2	338.8	
180.9	SPOON		SANDY SHALE	3.0	340.0	
177.9	SPOON		SANDY SHALE	1.0	343.0	
176.9	SPOON		SHALE	3.0	344.0	
173.9	SPOON	DAVIS	COAL	2.8	347.0	
171.1	SPOON		DARK SHALE	2.3	349.8	
168.9	SPOON		SOFT SHALE	9.0	352.0	
159.9	SPOON		SOFT SHALE	4.0	361.0	
155.9	SPOON		SANDSTONE	5.0	365.0	
150.9	SPOON		SANDSTONE	7.0	370.0	
143.9	SPOON		DARK SHALE	3.0	377.0	
140.9	SPOON		SANDSTONE	1.0	380.0	
139.9	SPOON		DARK SHALE	16.0	381.0	
123.9	SPOON		SANDSTONE	32.0	397.0	
91.9	SPOON		SHALE	1.0	429.0	
90.9	SPOON		SANDY SHALE	10.0	430.0	
80.9	SPOON		SANDSTONE	7.0	440.0	
73.9	SPOON		DARK SHALE	4.0	447.0	

MAPID: 16300148000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 36 QUARTERS/FOOTAGES: 0' S line, 0' E line

QUADRANGLE: TILDEN LONGITUDE: -89.703356 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.219445 DATE COLLECTED:

SURFACE ELEVATION (FT.): 521.0 LOGGED (FT.): 189.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
387.0	MODESTO	PIASA	LIMESTONE	12.0	134.0	
375.0	MODESTO		BLACK SHALE	0.7	146.0	
374.3	CARBONDALE		SANDSTONE	7.3	146.7	
367.0	CARBONDALE		DARK GRAY SHALE	2.0	154.0	
365.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	156.0	
363.5	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	4.0	157.5	
359.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	161.5	
358.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	18.3	163.0	
339.0	CARBONDALE	HERRIN	COAL	7.0	182.0	

MAPID: 16300249000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 6W SECTION: 36 QUARTERS/FOOTAGES: 1450' S line, 2725' E line

QUADRANGLE: TILDEN LONGITUDE: -89.712901 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.223447 DATE COLLECTED:

SURFACE ELEVATION (FT.): 522.0 LOGGED (FT.): 0.0 LOG TYPE: Drillers Log

SOURCE: MEEK MINE WELL TYPE: Coal Test

COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
522.0			MINE OPENING	0.0	0.0	ABANDONED SHAFT

MAPID: 16302253000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 36 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of NE
QUADRANGLE: TILDEN **LONGITUDE:** -89.704528 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.227675 **DATE COLLECTED:** 4 / 0 / 1961
SURFACE ELEVATION (FT.): 509.0 **LOGGED (FT.):** 800.0 **LOG TYPE:** Drillers Log
SOURCE: ILLINOIS POWER CO 7 **WELL TYPE:** Oil and Gas Test
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
509.0			CLAY	15.0	0.0	
494.0			SAND	15.0	15.0	
479.0			UNCLASSIFIED	41.0	30.0	CASING RESET FROM 30' TO 70'
438.0			SHALE	1.0	71.0	
437.0			SHALE	61.0	72.0	
376.0			LIMESTONE	7.0	133.0	
369.0	CARBONDALE	HERRIN	COAL	5.0	140.0	
364.0	CARBONDALE		SHALE	205.0	145.0	
159.0	CARBONDALE		CALCAREOUS SHALE	55.0	350.0	
104.0	CARBONDALE		SANDSTONE	130.0	405.0	
-26.0	CARBONDALE		CALCAREOUS SHALE	135.0	535.0	
-161.0	CARBONDALE		CALCAREOUS SHALE	68.0	670.0	
-229.0	MISSISSIPPIAN		LIMESTONE	13.0	738.0	
-242.0	MISSISSIPPIAN		SHALE	17.0	751.0	
-259.0	MISSISSIPPIAN		SANDSTONE	2.0	768.0	
-261.0	MISSISSIPPIAN		UNCLASSIFIED	25.0	770.0	CASING RESET FROM 770' TO 795'
-286.0	MISSISSIPPIAN		SHALE	5.0	795.0	

MAPID: 16302949000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 3S 6W **SECTION:** 36 **QUARTERS/FOOTAGES:** 1650' S line, 330' W line of NW
QUADRANGLE: TILDEN **LONGITUDE:** -89.720613 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.23135 **DATE COLLECTED:** 5 / 22 / 1969
SURFACE ELEVATION (FT.): 493.0 **LOGGED (FT.):** 124.0 **LOG TYPE:** Drillers Log
SOURCE: CECIL W NEWCOMB 1 **WELL TYPE:** Plugged and/or Abandoned
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
374.0	CARBONDALE	HERRIN	COAL	5.0	119.0	INFORMATION FROM PLUGGING AFFIDAVIT

MAPID: 16300250000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 1 QUARTERS/FOOTAGES: 25' S line, 2500' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.82444 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.292552 DATE COLLECTED:

SURFACE ELEVATION (FT.): 429.0 LOGGED (FT.): 0.0 LOG TYPE: Drillers Log

SOURCE: GOLDEN RULE COAL MINE WELL TYPE: Mine Shaft

COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
429.0			MINE OPENING	0.0	0.0	COAL TEST

MAPID: 16300959000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 1 QUARTERS/FOOTAGES: 401' S line, 1599' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.828904 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.293627 DATE COLLECTED: 6 / 0 / 1946

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 105.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 535W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
420.0			SOIL	22.5	0.0	
397.5			SOFT SHALE	1.0	22.5	
396.5			MUDSTONE	37.8	23.5	BLUE
358.7			UNDERCLAY	0.7	61.3	
358.0			LIMESTONE	0.7	62.0	
357.3			SHALE	0.3	62.7	LIGHT
357.0			SHALE	1.7	63.0	LIGHT
355.3			SHALE	6.4	64.7	LIGHT
348.9			SHALE WITH LIMESTONE	1.0	71.1	
347.9			SHALE	21.2	72.1	
326.7			BLACK SHALE	3.7	93.3	
323.1			LIMESTONE	0.4	96.9	
322.7			COAL	1.2	97.3	
321.5			BLACK SHALE	1.8	98.5	
319.7			SHALE	4.7	100.3	

MAPID: 16301020000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 1 QUARTERS/FOOTAGES: 490' S line, 30' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.834402 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.293917 DATE COLLECTED: 6 / 5 / 1943

SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 40.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 12-D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
410.0			SOIL	20.0	0.0
390.0			BLACK SHALE	12.0	20.0
378.0	CARBONDALE	ANNA	BLACK SHALE	1.0	32.0
377.0	CARBONDALE	HERRIN	COAL	6.5	33.0
370.5	CARBONDALE		UNDERCLAY	0.5	39.5

MAPID: 16301020000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 1 QUARTERS/FOOTAGES: 490' S line, 30' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.834402 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.293917 DATE COLLECTED:

SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 39.5 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
390.0	CARBONDALE	LAWSON	GRAY SHALE	12.0	20.0
378.0	CARBONDALE	ANNA	BLACK SHALE	1.0	32.0
377.0	CARBONDALE	HERRIN	COAL	6.5	33.0

MAPID: 16301024000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 1 QUARTERS/FOOTAGES: 1980' N line, 1980' E line of SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.832043

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.29446

DATE COLLECTED: 6 / 12 / 1943

SURFACE ELEVATION (FT.): 418.0 LOGGED (FT.): 107.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 16-D

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
418.0			SOIL	20.0	0.0	
398.0			BLACK SHALE	12.5	20.0	
385.5	CARBONDALE	HERRIN	COAL	6.3	32.5	
379.2	CARBONDALE		UNDERCLAY	4.2	38.8	
375.0	CARBONDALE		LIMESTONE	8.0	43.0	
367.0	CARBONDALE		SANDY SLATE	40.0	51.0	
327.0	CARBONDALE		BLACK SHALE	7.0	91.0	
320.0	CARBONDALE		UNDERCLAY	8.0	98.0	
312.0	CARBONDALE		SANDSTONE	1.0	106.0	GRAY

MAPID: 16301024000C VERSION: 2

PROJECT: NCRDS87

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 1 QUARTERS/FOOTAGES: 1980' N line, 1980' E line of SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.832043

GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 38.29446

DATE COLLECTED: 6 / 12 / 1943

SURFACE ELEVATION (FT.): 418.0 LOGGED (FT.): 107.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
418.0			UNCONSOLIDATED	20.0	0.0	
398.0	CARBONDALE		GRAY SHALE	12.5	20.0	
385.5	CARBONDALE	HERRIN	COAL	6.3	32.5	UNCERTAIN CORRELATION
379.2	CARBONDALE		UNDERCLAY	4.2	38.8	
375.0	CARBONDALE		LIMESTONE	8.0	43.0	
367.0	CARBONDALE		SHALE	40.0	51.0	
327.0	CARBONDALE		BLACK SHALE	7.0	91.0	
320.0	CARBONDALE		UNDERCLAY	8.0	98.0	
312.0			SANDSTONE	1.0	106.0	

MAPID: 16300251000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 2 **QUARTERS/FOOTAGES:** 2650' S line, 700' E line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.837051 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.299937 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 455.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: KOLB COAL CO 3 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
455.0			MINE OPENING	0.0	0.0	ABANDONED SHAFT, SHIPPING MINE

MAPID: 16301019000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 2 **QUARTERS/FOOTAGES:** 390' S line, 1420' E line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.839481 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.293754 **DATE COLLECTED:** 6 / 4 / 1943
SURFACE ELEVATION (FT.): 418.0 **LOGGED (FT.):** 34.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT 11-D **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
418.0			SOIL	20.0	0.0	
398.0			SAND	3.0	20.0	
395.0			SHALE	2.0	23.0	
393.0	CARBONDALE	ANNA	BLACK SHALE	2.0	25.0	
391.0	CARBONDALE	HERRIN	COAL	6.5	27.0	
384.5	CARBONDALE		UNDERCLAY	0.5	33.5	

MAPID: 16301019000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 2 **QUARTERS/FOOTAGES:** 390' S line, 1420' E line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.839481 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.293754 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 418.0 **LOGGED (FT.):** 33.5 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
395.0	CARBONDALE		CLAYSTONE	2.0	23.0	
393.0	CARBONDALE	ANNA	BLACK SHALE	2.0	25.0	
391.0	CARBONDALE	HERRIN	COAL	6.5	27.0	

MAPID: 16390010000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 2 QUARTERS/FOOTAGES:

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.843904

GEOLOGIST: NORTH

CONFIDENTIAL: N LATITUDE: 38.300126

DATE COLLECTED: 3 / 15 / 1983

SURFACE ELEVATION (FT.): 445.9 LOGGED (FT.): 49.2

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 17291

WELL TYPE: Coal Test

COMMENT: PERMIT 153; RIVER KING #2

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
445.9	PLEISTOCENE		SANDY CLAY	23.0	0.0	
422.9	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	23.0	GRAY
421.9	CARBONDALE		GRAY SHALE	1.5	24.0	
420.4	CARBONDALE		DARK SHALE	5.0	25.5	
415.4	CARBONDALE		LIMESTONE	1.0	30.5	DARK
414.4	CARBONDALE		DARK SHALE	1.0	31.5	
413.4	CARBONDALE		LIMESTONE	1.0	32.5	DARK
412.4	CARBONDALE		DARK SHALE	2.5	33.5	
409.9	CARBONDALE	BRERETON	LIMESTONE	5.8	36.0	DARK
404.1	CARBONDALE		DARK SHALE	0.1	41.8	
404.0	CARBONDALE	HERRIN	COAL	6.0	41.9	
398.0	CARBONDALE		UNDERCLAY	1.3	47.9	

MAPID: 16390011000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 2 QUARTERS/FOOTAGES:

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.843904

GEOLOGIST: NORTH

CONFIDENTIAL: N LATITUDE: 38.300126

DATE COLLECTED: 4 / 19 / 1983

SURFACE ELEVATION (FT.): 451.2 LOGGED (FT.): 75.9

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 17307C

WELL TYPE: Coal Test

COMMENT: PERMIT 153; RIVER KING #2

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
451.2	PLEISTOCENE		SANDY CLAY	22.0	0.0	
429.2	PLEISTOCENE		CLAY	26.5	22.0	GRAY
402.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	48.5	GRAY
401.2	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.5	50.0	
397.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	53.5	GRAY
395.7	CARBONDALE		DARK SHALE	7.3	55.5	
388.4	CARBONDALE	BRERETON	LIMESTONE	1.7	62.8	DARK
386.7	CARBONDALE	BRERETON	DARK SHALE	0.6	64.5	
386.1	CARBONDALE	BRERETON	LIMESTONE	1.5	65.1	DARK
384.6	CARBONDALE	ENERGY	DARK SHALE	2.0	66.6	
382.6	CARBONDALE	HERRIN	COAL	6.5	68.6	
376.1	CARBONDALE		UNDERCLAY	0.8	75.1	

MAPID: 16390012000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 2 QUARTERS/FOOTAGES:

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.843904

GEOLOGIST: NORTH

CONFIDENTIAL: N LATITUDE: 38.300126

DATE COLLECTED: 10 / 10 / 1984

SURFACE ELEVATION (FT.): 442.1 LOGGED (FT.): 89.7

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 17505

WELL TYPE: Coal Test

COMMENT: PERMIT 153, RIVER KING #2

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
442.1	PLEISTOCENE		CLAY	22.8	0.0	
419.3	CARBONDALE		LIMESTONE	4.1	22.8	
415.2	CARBONDALE		BROWN SHALE	3.0	26.9	SANDY
412.2	CARBONDALE		GRAY SHALE	8.2	29.9	
404.0	CARBONDALE		BROWN SHALE	6.5	38.1	
397.5	CARBONDALE		GRAY SHALE	5.0	44.6	
392.5	CARBONDALE		CALCAREOUS SHALE	0.3	49.6	
392.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	49.9	
390.0	CARBONDALE		DARK SHALE	3.8	52.1	
386.2	CARBONDALE	BRERETON	LIMESTONE	1.3	55.9	
384.9	CARBONDALE	BRERETON	DARK SHALE	0.9	57.2	
384.0	CARBONDALE	BRERETON	LIMESTONE	0.4	58.1	
383.6	CARBONDALE	ANNA	DARK SHALE	1.1	58.5	
382.5	CARBONDALE	ANNA	BLACK SHALE	2.8	59.6	
379.7	CARBONDALE	HERRIN	COAL	6.3	62.4	
373.4	CARBONDALE		UNDERCLAY	1.5	68.7	
371.9	CARBONDALE		SHALE	3.8	70.2	
368.1	CARBONDALE		LIMESTONE	0.5	74.0	
367.6	CARBONDALE		GRAY SHALE	1.6	74.5	
366.0	CARBONDALE		LIMESTONE & SHALE	0.7	76.1	
365.3	CARBONDALE		GRAY SHALE	1.0	76.8	
364.3	CARBONDALE		LIMESTONE & SHALE	1.5	77.8	
362.8	CARBONDALE		CALCAREOUS SHALE	0.7	79.3	
362.1	CARBONDALE		LIMESTONE	1.2	80.0	
360.9	CARBONDALE		CALCAREOUS SHALE	3.1	81.2	
357.8	CARBONDALE		LIMESTONE	0.5	84.3	
357.3	CARBONDALE		CALCAREOUS SHALE	1.5	84.8	
355.8	CARBONDALE		LIMESTONE	3.4	86.3	GRAY

MAPID: 16390013000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 2 QUARTERS/FOOTAGES:

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.843904

GEOLOGIST: NORTH

CONFIDENTIAL: N LATITUDE: 38.300126

DATE COLLECTED: 3 / 11 / 1983

SURFACE ELEVATION (FT.): 447.2 LOGGED (FT.): 68.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 17287B

WELL TYPE: Coal Test

COMMENT: PERMIT 153, RIVER KING #3

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
447.2	PLEISTOCENE		SANDY CLAY	30.0	0.0	
417.2	PLEISTOCENE		CLAY	5.0	30.0	GRAY
412.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	35.0	GRAY
410.7	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.2	36.5	
407.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	39.7	GRAY
405.2	CARBONDALE		DARK SHALE	5.5	42.0	
399.7	CARBONDALE		LIMESTONE	2.5	47.5	DARK
397.2	CARBONDALE		DARK SHALE	1.5	50.0	
395.7	CARBONDALE		LIMESTONE	1.0	51.5	DARK
394.7	CARBONDALE		DARK SHALE	2.0	52.5	
392.7	CARBONDALE	BRERETON	LIMESTONE	2.0	54.5	DARK
390.7	CARBONDALE		DARK SHALE	0.1	56.5	
390.6	CARBONDALE	HERRIN	COAL	6.0	56.6	
384.6	CARBONDALE		UNDERCLAY	2.4	62.6	
382.2	CARBONDALE		GRAY SHALE	3.0	65.0	

MAPID: 16390014000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 2 QUARTERS/FOOTAGES:

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.843904

GEOLOGIST: NORTH

CONFIDENTIAL: N LATITUDE: 38.300126

DATE COLLECTED: 3 / 8 / 1982

SURFACE ELEVATION (FT.): 454.7

LOGGED (FT.): 66.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 17193B

WELL TYPE: Coal Test

COMMENT: PERMIT 153, RIVER KING #3

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
454.7	PLEISTOCENE		CLAY	22.5	0.0	
432.2	PLEISTOCENE		SAND & GRAVEL	13.2	22.5	
419.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	35.7	GRAY
417.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.5	37.3	
413.9	CARBONDALE	BANKSTON FORK	LIMESTONE	3.2	40.8	GRAY
410.7	CARBONDALE		GRAY SHALE	0.9	44.0	
409.8	CARBONDALE		DARK SHALE	5.8	44.9	
404.0	CARBONDALE		LIMESTONE	1.0	50.7	DARK
403.0	CARBONDALE		DARK SHALE	1.2	51.7	
401.8	CARBONDALE	BRERETON	LIMESTONE	3.5	52.9	DARK
398.3	CARBONDALE		DARK SHALE	1.5	56.4	
396.8	CARBONDALE	HERRIN	COAL	6.1	57.9	
390.7	CARBONDALE		UNDERCLAY	2.0	64.0	

MAPID: 16390015000C VERSION: 1

PROJECT: LUMP

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 2 QUARTERS/FOOTAGES:

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.843904

GEOLOGIST: NORTH

CONFIDENTIAL: N LATITUDE: 38.300126

DATE COLLECTED: 4 / 28 / 1982

SURFACE ELEVATION (FT.): 446.6

LOGGED (FT.): 62.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. 17183B

WELL TYPE: Coal Test

COMMENT: PERMIT 153, RIVER KING #3

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
446.6	PLEISTOCENE		CLAY	18.5	0.0	
428.1	PLEISTOCENE		SAND & GRAVEL	2.6	18.5	
425.5	PLEISTOCENE		CLAY	11.9	21.1	BROWN
413.6	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	33.0	
412.1	CARBONDALE		GRAY SHALE	2.4	34.5	
409.7	CARBONDALE		DARK SHALE	7.6	36.9	
402.1	CARBONDALE	BRERETON	LIMESTONE & SHALE	5.5	44.5	DARK
396.6	CARBONDALE		DARK SHALE	0.4	50.0	
396.2	CARBONDALE	HERRIN	COAL	6.1	50.4	
390.1	CARBONDALE		UNDERCLAY	4.0	56.5	
386.1	CARBONDALE	HIGGINSVILLE	LIMESTONE	1.5	60.5	

MAPID: 1630015000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 3 QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.861382 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.299468 DATE COLLECTED:

SURFACE ELEVATION (FT.): 435.0 LOGGED (FT.): 33.0 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 17 WELL TYPE: Coal Test

COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
402.0	CARBONDALE	HERRIN	COAL	0.0	33.0	ROD DRILL HOLE DEPTH TO CO ONLY 33'

MAPID: 16327876000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 3 QUARTERS/FOOTAGES: 1050' S line, 200' W line of NE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.861903 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.303285 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 18.9 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	12.3	0.0	
-	CARBONDALE		SHALE	0.5	12.3	
-	CARBONDALE	HERRIN	COAL	3.0	12.8	SOFT
-	CARBONDALE	HERRIN	COAL	3.1	15.8	

MAPID: 16327877000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 3 QUARTERS/FOOTAGES: 1400' S line, 950' W line of NE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.85929 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.304223 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 35.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 7 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	18.9	0.0	
-	CARBONDALE		SHALE	9.8	18.9	
-	CARBONDALE		SHALE	0.5	28.8	
-	CARBONDALE	HERRIN	COAL	5.8	29.3	

MAPID: 16327878000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 3 QUARTERS/FOOTAGES: 1400' N line, 2500' W line of SE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.853748 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.296436 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 47.3 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 8 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	23.0	0.0
-	CARBONDALE		SHALE	0.4	23.0
-	CARBONDALE		SANDY SHALE	0.6	23.4
-	CARBONDALE		LIMESTONE	6.0	24.0
-	CARBONDALE		ROCK	8.5	30.0
-	CARBONDALE		SHALE	1.5	38.5
-	CARBONDALE	HERRIN	COAL	7.3	40.0

MAPID: 16327879000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 3 QUARTERS/FOOTAGES: 40' S line, 140' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.853588 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.293093 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 46.2 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 10 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	27.8	0.0
-			ROCK	1.0	27.8
-	CARBONDALE		SHALE	11.2	28.8
-	CARBONDALE	HERRIN	COAL	6.3	39.9

MAPID: 1632788000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 680' N line, 2640' W line of SE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.853285 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.298417 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 42.6 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 11 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	23.6	0.0
-	CARBONDALE		ROCK	0.8	23.6
-	CARBONDALE		CLAYSTONE & SILTSTONE	2.9	24.3
-	CARBONDALE		ROCK	9.6	27.3
-	CARBONDALE		SHALE	0.6	36.8
-	CARBONDALE	HERRIN	COAL	5.2	37.4

MAPID: 16327881000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 780' N line, 2000' W line of SE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.855525 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.298164 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 35.8 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 13 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	22.0	0.0
-	CARBONDALE		SHALE	10.2	22.0
-	CARBONDALE		COAL	0.3	32.2
-	CARBONDALE		SHALE	3.3	32.5

MAPID: 16327882000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 500' S line, 700' W line of NE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.860129 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.301747 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 34.3 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 14 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	25.0	0.0
-	CARBONDALE		SHALE	1.7	25.0
-	CARBONDALE		SHALE	1.1	26.7 HARD
-	CARBONDALE	HERRIN	COAL	6.5	27.8

MAPID: 16327883000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 2640' N line, 640' E line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.855456 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.30034 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 32.8 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 16 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	21.5	0.0
-	CARBONDALE		SHALE	1.7	21.5
-	CARBONDALE		ROCK	2.8	23.2
-	CARBONDALE	HERRIN	COAL	6.8	26.0

MAPID: 16327884000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 640' S line, 640' E line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.855365 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.294774 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 38.7 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 19 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	25.0	0.0
-	CARBONDALE		ROCK	4.6	25.0
-	CARBONDALE		CLAYSTONE & SILTSTONE	0.3	29.6
-	CARBONDALE		ROCK	1.7	29.8
-	CARBONDALE		SHALE	0.8	31.5
-	CARBONDALE	HERRIN	COAL	6.3	32.3

MAPID: 16327885000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 2050' S line, 1400' W line of NE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.85774 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.306001 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 38.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 20 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	24.0	0.0
-	CARBONDALE		ROCK	4.7	24.0
-	CARBONDALE		SHALE	2.4	28.7
-	CARBONDALE	HERRIN	COAL	6.9	31.1

MAPID: 16327886000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 2050' S line, 100' W line of NE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.862295 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.30605 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 33.5 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 29 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	26.8	0.0	
-	CARBONDALE		SHALE	3.0	26.8	
-	CARBONDALE		COAL	3.7	29.8	SOFT

MAPID: 16327887000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 1' N line, 840' E line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.856273 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.307631 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 37.6 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 34 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	21.0	0.0	
-	CARBONDALE		SHALE	2.0	21.0	
-	CARBONDALE		ROCK	5.3	23.0	
-	CARBONDALE		SHALE	1.0	28.3	
-	CARBONDALE		ROCK	0.5	29.3	
-	CARBONDALE		SHALE	1.1	29.8	
-	CARBONDALE	HERRIN	COAL	6.7	30.9	

MAPID: 16327888000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 2050' S line, 2550' W line of NE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.853711 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.305958 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 57.7 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 35 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	27.0	0.0	
-	CARBONDALE		SHALE	25.2	27.0	
-	CARBONDALE	HERRIN	COAL	5.5	52.2	

MAPID: 16327889000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 1320' N line, 340' E line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.854461 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.303976 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 36.2 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 36 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	16.5	0.0	
-	CARBONDALE		SANDY SHALE	1.5	16.5	
-	CARBONDALE		ROCK	8.8	18.0	
-	CARBONDALE		ROCK	3.3	26.8	SOFT
-	CARBONDALE	HERRIN	COAL	6.1	30.1	

MAPID: 16327890000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 660' S line, 2000' W line of NE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.85558 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.302142 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 40.1 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 37 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	28.3	0.0	
-			ROCK	6.1	28.3	
-	CARBONDALE		SHALE	0.3	34.4	
-	CARBONDALE	HERRIN	COAL	6.1	34.7	

MAPID: 16327891000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 1600' S line, 50' W line of NE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.862453 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.30481 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 26.0 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 41 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	18.3	0.0	
-	PLEISTOCENE		SAND	1.8	18.3	
-	CARBONDALE	HERRIN	COAL	5.8	20.2	TOP OF COAL MAY BE ERODED

MAPID: 16327892000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 3 QUARTERS/FOOTAGES: 2100' S line, 330' W line of NE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.86149 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.30618 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 42.4 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 47 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	19.0	0.0
-	PLEISTOCENE		CLAY	6.0	19.0
-	PLEISTOCENE		SAND	2.0	25.0
-	CARBONDALE		SHALE	6.2	27.0
-	CARBONDALE		ROCK	0.5	33.2
-	CARBONDALE		SHALE	2.3	33.7
-	CARBONDALE	HERRIN	COAL	6.4	36.0

MAPID: 16327893000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 3 QUARTERS/FOOTAGES: 1320' S line, 1500' W line of NE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.857359 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.303981 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 40.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 49 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	22.0	0.0
-	PLEISTOCENE		SAND	5.0	22.0
-	CARBONDALE		ROCK	4.8	27.0
-	CARBONDALE		SHALE	2.7	31.8
-	CARBONDALE	HERRIN	COAL	6.1	34.4

MAPID: 16327894000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 3 QUARTERS/FOOTAGES: 2000' S line, 1900' W line of NE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.855984 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.305846 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 44.8 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 52 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	17.0	0.0
-	PLEISTOCENE		SAND	8.0	17.0
-	CARBONDALE		ROCK	10.1	25.0
-	CARBONDALE		SHALE	3.4	35.1
-	CARBONDALE	HERRIN	COAL	6.3	38.5

MAPID: 16327895000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 3 QUARTERS/FOOTAGES: 2540' S line, 2040' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.860356 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.300087 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 27.1 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 54 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	22.0	0.0
-	CARBONDALE		SANDY SHALE	1.3	22.0
-	CARBONDALE		SHALE	0.3	23.3
-	CARBONDALE		COAL	3.4	23.7

MAPID: 16327896000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 3 QUARTERS/FOOTAGES: 480' N line, 1050' W line of SE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.858865 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.299029 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 31.3 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 56 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	19.7	0.0
-	CARBONDALE		SHALE	0.7	19.7
-	CARBONDALE		ROCK	1.5	20.3
-	CARBONDALE	ENERGY	SHALE	3.3	21.8
-	CARBONDALE	HERRIN	COAL	6.2	25.2

MAPID: 16327897000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 300' N line, 2000' W line of SE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.855542 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.299489 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 27.2 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG & MIDWAY 59 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	19.0	0.0	
-			ROCK	2.5	19.0	
-			SHALE	1.6	21.5	
-			SANDSTONE	2.5	23.1	
-			CLAYSTONE & SILTSTONE	1.6	25.6	

MAPID: 16300487000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 11 **QUARTERS/FOOTAGES:** SW NW NE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.842609 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.290031 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 433.0 **LOGGED (FT.):** 30.0 **LOG TYPE:** Drillers Log
SOURCE: H E WILLSON 17 **WELL TYPE:** Coal Test
COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
410.5	CARBONDALE	HERRIN	COAL	7.5	22.5	ROD SKELETON 30' - 7'6" #6 COAL

MAPID: 16301023000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 11 **QUARTERS/FOOTAGES:** 2600' S line, 660' W line of NE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.841479 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.292668 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 435.0 **LOGGED (FT.):** 40.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT 15-D **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
435.0			SOIL	22.0	0.0	
413.0			SAND	3.0	22.0	
410.0			SHALE	4.0	25.0	
406.0			SANDSTONE	2.0	29.0	
404.0	CARBONDALE	ANNA	BLACK SHALE	2.0	31.0	
402.0	CARBONDALE	HERRIN	COAL	6.3	33.0	
395.7	CARBONDALE		UNDERCLAY	0.7	39.3	

MAPID: 16327256000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 11 QUARTERS/FOOTAGES: 2500' N line, 250' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.835302 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.285682 DATE COLLECTED:

SURFACE ELEVATION (FT.): 429.0 LOGGED (FT.): 33.9 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 15 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
429.0			UNCONSOLIDATED	8.0	0.0	
421.0			SHALE	12.7	8.0	LIGHT
408.3	CARBONDALE	ANNA	DARK SHALE	2.5	20.7	
405.8	CARBONDALE	ANNA	DARK SHALE	5.1	23.2	
400.7	CARBONDALE	HERRIN	COAL	5.7	28.3	

MAPID: 16327257000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 11 QUARTERS/FOOTAGES: 2550' N line, 2550' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.844119 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.285739 DATE COLLECTED:

SURFACE ELEVATION (FT.): 444.0 LOGGED (FT.): 45.4 LOG TYPE: Drillers Log

SOURCE: H E WILSON 18 WELL TYPE: Coal Test

COMMENT: ELEV CO 405

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
444.0			UNCONSOLIDATED	19.5	0.0	
424.5			SAND	2.5	19.5	
422.0			SHALE	4.2	22.0	LIGHT
417.8			LIMESTONE	1.4	26.2	
416.4			SHALE	4.5	27.6	LIGHT
411.9	CARBONDALE	BRERETON	LIMESTONE	5.1	32.1	
406.8	CARBONDALE	ANNA	DARK SHALE	0.3	37.2	
406.5	CARBONDALE	ANNA	BLACK SHALE	1.3	37.5	
405.2	CARBONDALE	HERRIN	COAL	6.6	38.8	CO ELEV 405'

MAPID: 16300167000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: SW SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.832046 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.279933 DATE COLLECTED:

SURFACE ELEVATION (FT.): 420.0 LOGGED (FT.): 43.6 LOG TYPE: Drillers Log

SOURCE: H E WILLSON WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
420.0			UNCONSOLIDATED	12.3	0.0	
407.7			CLAY	12.1	12.3	YELLOW
395.6			DARK SHALE	3.3	24.4	
392.3			SHALE	5.8	27.7	
386.6			SHALE	0.3	33.4	BLACK
386.3			ROCK	3.2	33.7	BLACK
383.2	CARBONDALE	ANNA	DARK SHALE	0.9	36.8	
382.2	CARBONDALE	HERRIN	COAL	5.8	37.8	

MAPID: 16300168000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: NE SW SE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.821574 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.280647 DATE COLLECTED:

SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 35.3 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 11 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
425.0			UNCONSOLIDATED	8.0	0.0	
417.0			CLAY	5.3	8.0	YELLOW
411.7			SHALE	2.4	13.3	
409.2			LIMESTONE	2.1	15.8	
407.2			SHALE	1.0	17.8	
406.2			DARK SHALE	5.2	18.8	
401.0	CARBONDALE	BRERETON	LIMESTONE	0.8	24.0	
400.2	CARBONDALE	ANNA	SHALE	1.2	24.8	
399.1	CARBONDALE	ANNA	BLACK SHALE	2.0	25.9	
397.1	CARBONDALE	ANNA	SHALE	1.2	27.9	
395.9	CARBONDALE	HERRIN	COAL	6.2	29.1	

MAPID: 16300169000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: NE NE NW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.826257 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.291591 DATE COLLECTED:

SURFACE ELEVATION (FT.): 419.0 LOGGED (FT.): 50.7 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 19 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
419.0			UNCONSOLIDATED	5.0	0.0	
414.0			CLAY	11.6	5.0	YELLOW
402.4			SHALE	3.9	16.6	
398.5			CLAYSTONE	1.0	20.5	YELLOW
397.5			ROCK	2.4	21.5	
395.1			CLAYSTONE	2.0	23.9	
393.1			SHALE	2.2	25.9	
390.9			CLAYSTONE	1.0	28.1	
389.9			LIMESTONE	1.3	29.1	
388.7			SHALE	1.2	30.3	
387.5			DARK SHALE	7.3	31.5	
380.2	CARBONDALE	BRERETON	LIMESTONE	2.4	38.8	
377.7	CARBONDALE	ANNA	DARK SHALE	1.0	41.3	
376.7	CARBONDALE	ANNA	BLACK SHALE	1.8	42.3	
374.9	CARBONDALE	HERRIN	COAL	6.6	44.1	

MAPID: 16300170000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: NW SE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.822739 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.283391 DATE COLLECTED:

SURFACE ELEVATION (FT.): 438.0 LOGGED (FT.): 50.3 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 21 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
438.0			UNCONSOLIDATED	21.0	0.0	
417.0			CLAY	4.0	21.0	YELLOW
413.0			ROCK	0.9	25.0	
412.1			CLAY	1.1	25.9	YELLOW
411.0			SHALE	2.3	27.0	
408.7			DARK SHALE	4.9	29.3	
403.7			LIMESTONE	1.3	34.3	
402.4			DARK SHALE	1.7	35.6	
400.7			LIMESTONE	1.5	37.3	
399.2			DARK SHALE	0.6	38.8	
398.7			ROCK	1.4	39.3	BLACK
397.2	CARBONDALE	BRERETON	LIMESTONE	2.8	40.8	
394.5	CARBONDALE	ANNA	SHALE	0.7	43.5	BLACK
393.8	CARBONDALE	HERRIN	COAL	6.1	44.2	

MAPID: 16300171000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: NE SE SE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.816919 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.280566 DATE COLLECTED:

SURFACE ELEVATION (FT.): 440.5 LOGGED (FT.): 48.0 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 23 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
440.5			UNCONSOLIDATED	12.0	0.0	
428.5			CLAY	13.5	12.0	
415.0			ROCK	0.5	25.5	
414.5			SHALE	4.3	26.0	LIGHT BLUE
410.2			SHALE	3.0	30.3	LT GY
407.2			SHALE	6.2	33.3	LIGHT
401.0	CARBONDALE	ANNA	DARK SHALE	1.3	39.5	
399.7	CARBONDALE	ANNA	BLACK SHALE	1.2	40.8	
398.5	CARBONDALE	HERRIN	COAL	6.0	42.0	

MAPID: 16300172000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: NE NE SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.826242 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.284353 DATE COLLECTED:

SURFACE ELEVATION (FT.): 438.3 LOGGED (FT.): 50.5 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 24 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
438.3			UNCONSOLIDATED	13.0	0.0	
425.3			CLAY	12.3	13.0	YELLOW
413.0			SHALE	2.1	25.3	
410.9			SANDSTONE	0.8	27.4	
410.0			SANDY SHALE	9.6	28.3	
400.5	CARBONDALE	BRERETON	LIMESTONE	1.7	37.8	
398.8	CARBONDALE	ANNA	SHALE	0.4	39.5	
398.4	CARBONDALE	ANNA	BLACK SHALE	3.9	39.9	
394.5	CARBONDALE	HERRIN	COAL	6.7	43.8	

MAPID: 16300173000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: 200' S line, 0' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.815767 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.278358 DATE COLLECTED:

SURFACE ELEVATION (FT.): 438.8 LOGGED (FT.): 60.7 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 25 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
438.8			UNCONSOLIDATED	15.0	0.0	
423.8			SANDY CLAY	27.0	15.0	
396.8			DARK SHALE	7.7	42.0	
389.1			SHALE	7.3	49.7	LIGHT
381.8	CARBONDALE	ANNA	BLACK SHALE	1.2	57.0	
380.6	CARBONDALE	HERRIN	COAL	2.5	58.2	

MAPID: 16300174000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: SE SW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.827395 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.279846 DATE COLLECTED:

SURFACE ELEVATION (FT.): 416.0 LOGGED (FT.): 37.3 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 34 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
416.0			UNCONSOLIDATED	21.0	0.0	
395.0			SHALE	4.3	21.0	
390.7			SHALE	3.8	25.3	GREEN
386.9			SANDSTONE	0.2	29.1	
386.7	CARBONDALE	ANNA	BLACK SHALE	2.3	29.3	
384.5	CARBONDALE	HERRIN	COAL	5.8	31.5	

MAPID: 16300453000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.8169 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.284213 DATE COLLECTED:

SURFACE ELEVATION (FT.): 448.4 LOGGED (FT.): 69.0 LOG TYPE: Drillers Log

SOURCE: UNITED ELECTRIC COAL COMPANY 733 WELL TYPE: Coal Test

COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
448.4			UNCLASSIFIED	69.0	0.0	DRILL HOLE;TOTAL DEPTH NO COAL

MAPID: 16300453000C VERSION: 2

PROJECT: CIRC 71

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.8169 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 38.284213 DATE COLLECTED:

SURFACE ELEVATION (FT.): 448.4 LOGGED (FT.): 69.0 LOG TYPE:

SOURCE: UN ELEC CC 733 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		

MAPID: 16300929000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: SE SE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.818085

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.279676

DATE COLLECTED: 9 / 0 / 1944

SURFACE ELEVATION (FT.): 440.0 LOGGED (FT.): 58.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 26

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
440.0			SOIL	50.0	0.0	
390.0	CARBONDALE	ANNA	BLACK SHALE	2.0	50.0	
388.0	CARBONDALE	HERRIN	COAL	2.0	52.0	
386.0	CARBONDALE	HERRIN	COAL	3.0	54.0	
383.0	CARBONDALE		UNDERCLAY	1.0	57.0	

MAPID: 16300933000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: 1320' N line, 2640' W line of SE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.815823

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.281466

DATE COLLECTED: 9 / 0 / 1944

SURFACE ELEVATION (FT.): 442.0 LOGGED (FT.): 68.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 30

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
442.0			SOIL	37.0	0.0	
405.0			LIMESTONE	10.0	37.0	
395.0			BLACK SHALE	13.5	47.0	
381.5	CARBONDALE	HERRIN	COAL	7.3	60.5	
374.2	CARBONDALE		UNDERCLAY	0.3	67.8	

MAPID: 16300934000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: 0' S line, 2640' W line of NE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.815829 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.28511 DATE COLLECTED: 9 / 0 / 1944

SURFACE ELEVATION (FT.): 443.0 LOGGED (FT.): 79.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 31 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
443.0			SOIL	31.0	0.0
412.0			LIMESTONE	2.0	31.0
410.0			SHALE	13.0	33.0
397.0			LIMESTONE	1.5	46.0
395.5			BLACK SHALE	4.5	47.5
391.0			LIMESTONE	3.0	52.0
388.0			BLACK SHALE	4.0	55.0
384.0			LIMESTONE	3.0	59.0
381.0			BLACK SHALE	2.0	62.0
379.0	CARBONDALE	BRERETON	LIMESTONE	7.0	64.0
372.0	CARBONDALE	ANNA	BLACK SHALE	1.0	71.0
371.0	CARBONDALE	HERRIN	COAL	6.5	72.0
364.5			UNDERCLAY	0.5	78.5

MAPID: 16300935000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: 1980' S line, 0' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.815736 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.283272 DATE COLLECTED: 9 / 0 / 1944

SURFACE ELEVATION (FT.): 444.0 LOGGED (FT.): 58.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 32 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
444.0			SOIL	26.0	0.0
418.0			LIMESTONE	1.5	26.0
416.5			SHALE	6.5	27.5
410.0			LIMESTONE	3.0	34.0
407.0	CARBONDALE	BRERETON	LIMESTONE	8.0	37.0
399.0	CARBONDALE		LIMESTONE	5.0	45.0
394.0	CARBONDALE	ANNA	BLACK SHALE	1.5	50.0
392.5	CARBONDALE	HERRIN	COAL	5.8	51.5
386.7	CARBONDALE		UNDERCLAY	0.8	57.3

MAPID: 16300935000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: 1980' S line, 0' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.815736

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 38.283272

DATE COLLECTED:

SURFACE ELEVATION (FT.): 444.0

LOGGED (FT.): 58.8

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
417.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	26.5
416.0	CARBONDALE	BANKSTON FORK	CLAYSTONE & SHALE	6.5	28.0
409.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	34.5
406.5	CARBONDALE	LAWSON	BLACK SHALE	8.0	37.5
398.5	CARBONDALE	BRERETON	LIMESTONE	5.0	45.5
393.5	CARBONDALE	ANNA	BLACK SHALE	1.5	50.5
392.0	CARBONDALE	HERRIN	COAL	6.8	52.0

MAPID: 16300936000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: 1320' N line, 1980' W line of SE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.818135

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.281498

DATE COLLECTED:

SURFACE ELEVATION (FT.): 436.0

LOGGED (FT.): 49.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 33

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
436.0			SOIL	35.0	0.0
401.0	CARBONDALE	BRERETON	LIMESTONE	1.0	35.0
400.0	CARBONDALE	ANNA	BLACK SHALE	5.5	36.0
394.5	CARBONDALE	HERRIN	COAL	7.0	41.5
387.5	CARBONDALE		UNDERCLAY	0.5	48.5

MAPID: 16300937000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: SE SE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.818085

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.279676

DATE COLLECTED: 9 / 0 / 1944

SURFACE ELEVATION (FT.): 441.0

LOGGED (FT.): 59.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 34

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
441.0			SOIL	38.0	0.0
403.0			LIMESTONE	1.0	38.0
402.0			SHALE	10.0	39.0
392.0	CARBONDALE	ANNA	BLACK SHALE	2.5	49.0
389.5	CARBONDALE	HERRIN	COAL	6.7	51.5
382.8	CARBONDALE		UNDERCLAY	0.8	58.2

MAPID: 16300939000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: 2640' N line, 1980' W line of SE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.818129

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.277854

DATE COLLECTED: 9 / 0 / 1944

SURFACE ELEVATION (FT.): 442.0

LOGGED (FT.): 60.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 36

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
442.0			SOIL	30.0	0.0
412.0			SHALE	30.0	30.0

MAPID: 16300944000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: W2

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.829749

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.285306

DATE COLLECTED: 10 / 0 / 1944

SURFACE ELEVATION (FT.): 440.0

LOGGED (FT.): 55.0

LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 41

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
440.0			SOIL	5.0	0.0
435.0			BLACK SHALE	40.0	5.0
395.0			SHALE	4.0	45.0
391.0	CARBONDALE	HERRIN	COAL	2.0	49.0
389.0	CARBONDALE	HERRIN	COAL	3.0	51.0
386.0	CARBONDALE		UNDERCLAY	1.0	54.0

MAPID: 16300946000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: 1320' S line, 1320' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.829767 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.281731 DATE COLLECTED: 10 / 0 / 1944

SURFACE ELEVATION (FT.): 423.0 LOGGED (FT.): 57.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 43 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
423.0			SOIL	20.0	0.0
403.0			SAND	8.0	20.0
395.0			BLACK SHALE	10.0	28.0
385.0	CARBONDALE	ANNA	BLACK SHALE	1.5	38.0
383.5	CARBONDALE	HERRIN	COAL	7.0	39.5
376.5	CARBONDALE		UNDERCLAY	10.5	46.5

MAPID: 16300947000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 12 QUARTERS/FOOTAGES: 1320' S line, 1980' W line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.827456 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.281685 DATE COLLECTED: 10 / 0 / 1944

SURFACE ELEVATION (FT.): 416.0 LOGGED (FT.): 32.5 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 44 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
416.0			SOIL	20.0	0.0
396.0			BLACK SHALE	2.0	20.0
394.0	CARBONDALE	BRERETON	LIMESTONE	3.0	22.0
391.0	CARBONDALE	ANNA	BLACK SHALE	0.5	25.0
390.5	CARBONDALE	HERRIN	COAL	6.3	25.5
384.2	CARBONDALE		UNDERCLAY	0.7	31.8

MAPID: 16301486000C **VERSION:** 1 **PROJECT:** ISGS96
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 12 **QUARTERS/FOOTAGES:** SW SE NE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.819227 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.286067 **DATE COLLECTED:** 12 / 0 / 1943
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 119.0 **LOG TYPE:** Drillers Log
SOURCE: C S WISE JR DRIG CO 1 **WELL TYPE:** Water Well
COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			SOIL	2.0	0.0	BLACK
-			CLAY	20.0	2.0	YELLOW
-			GRAVEL	1.0	22.0	
-			SANDY CLAY	3.0	23.0	
-			LIMESTONE	1.0	26.0	
-			CLAYSTONE	18.0	27.0	YELLOW
-			CLAYSTONE	2.0	45.0	
-			SHALE	4.0	47.0	
-			LIMESTONE	2.0	51.0	
-			SHALE	6.0	53.0	BLUE
-	CARBONDALE	BRERETON	LIMESTONE	5.0	59.0	
-	CARBONDALE	ANNA	BLACK SHALE	3.0	64.0	
-	CARBONDALE	HERRIN	COAL	8.0	67.0	
-	CARBONDALE		SHALE	4.0	75.0	GY WT
-	CARBONDALE		LIMESTONE	4.0	79.0	
-	CARBONDALE		SHALE	12.0	83.0	
-	CARBONDALE		LIMESTONE	18.0	95.0	
-	CARBONDALE		SHALE	6.0	113.0	

MAPID: 16327266000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 12 **QUARTERS/FOOTAGES:** NE NE SE
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.8169 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.284213 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 438.0 **LOGGED (FT.):** 56.3 **LOG TYPE:** Drillers Log
SOURCE: H E WILLSON 58 **WELL TYPE:** Coal Test
COMMENT: COAL TEST MAP FILE NO 13-87-38

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
388.2	CARBONDALE	HERRIN	COAL	6.5	49.8	ROD SKELETON #6 COAL

MAPID: 16300175000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: N2

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.825079 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.274348 DATE COLLECTED:

SURFACE ELEVATION (FT.): 418.3 LOGGED (FT.): 36.6 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
418.3			UNCONSOLIDATED	11.3	0.0	
407.0			CLAY	2.8	11.3	YELLOW
404.1			SANDSTONE	2.3	14.2	
401.9			CLAYSTONE	1.7	16.4	YELLOW
400.2			SHALE	4.1	18.1	
396.1			LIMESTONE	0.4	22.2	
395.7			CLAYSTONE	2.6	22.6	
393.1			LIMESTONE	4.3	25.2	
388.9			SHALE	1.4	29.4	LTGY
387.5	CARBONDALE	HERRIN	COAL	5.8	30.8	

MAPID: 16300176000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: SW SE NW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.828562 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.271679 DATE COLLECTED:

SURFACE ELEVATION (FT.): 429.5 LOGGED (FT.): 47.5 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 4 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
429.5			UNCONSOLIDATED	22.3	0.0	
407.2			SHALE	8.0	22.3	LIGHT
399.2			ROCK	0.7	30.3	
398.5			CLAYSTONE	3.3	31.0	
395.2	CARBONDALE	BRERETON	LIMESTONE	5.7	34.3	
389.5	CARBONDALE	ANNA	DARK SHALE	0.7	40.0	
388.8	CARBONDALE	HERRIN	COAL	6.8	40.7	

MAPID: 16300177000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: SE SW NE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.821621 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.271544 DATE COLLECTED:

SURFACE ELEVATION (FT.): 431.7 LOGGED (FT.): 50.7 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 10 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
431.7			UNCONSOLIDATED	20.5	0.0	
411.2			SAND	3.8	20.5	
407.4			SHALE	23.0	24.3	LIGHT
384.4	CARBONDALE	HERRIN	COAL	3.3	47.3	

MAPID: 16300178000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: SW SE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.822814 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.265188 DATE COLLECTED:

SURFACE ELEVATION (FT.): 429.7 LOGGED (FT.): 33.8 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 26 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
429.7			UNCONSOLIDATED	10.0	0.0	
419.7			CLAY	7.0	10.0	
412.7			CLAY	3.3	17.0	LIGHT
409.4			CLAY	3.0	20.3	
406.4			CLAY	2.0	23.3	
404.4			ROCK	0.5	25.3	BLACK
403.9			SHALE	1.2	25.8	LIGHT
402.7	CARBONDALE	ANNA	BLACK SHALE	0.4	27.0	
402.3	CARBONDALE	HERRIN	COAL	6.4	27.4	

MAPID: 16300179000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: SW NE NE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.819276 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.275143 DATE COLLECTED:

SURFACE ELEVATION (FT.): 429.8 LOGGED (FT.): 37.1 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 27A WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
429.8			UNCONSOLIDATED	12.0	0.0	
417.8			SHALE	2.0	12.0	LIGHT
415.8			CLAYSTONE	11.0	14.0	YELLOW
404.8	CARBONDALE	ANNA	DARK SHALE	6.1	25.0	
398.7	CARBONDALE	ANNA	BLACK SHALE	0.4	31.1	
398.3	CARBONDALE	ANNA	COAL	5.6	31.5	

MAPID: 16300180000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: NW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.829716 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.274437 DATE COLLECTED:

SURFACE ELEVATION (FT.): 430.0 LOGGED (FT.): 44.9 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 28 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
430.0			UNCONSOLIDATED	14.0	0.0	
416.0			CLAY	14.5	14.0	YELLOW
401.5			DARK SHALE	5.5	28.5	
396.0			ROCK	0.6	34.0	BLACK
395.4	CARBONDALE	ANNA	DARK SHALE	2.5	34.6	
392.9	CARBONDALE	ANNA	BLACK SHALE	1.1	37.1	
391.8	CARBONDALE	HERRIN	COAL	6.8	38.2	

MAPID: 16300181000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: NE NE NW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.82623 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.277103 DATE COLLECTED:

SURFACE ELEVATION (FT.): 424.7 LOGGED (FT.): 37.0 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 29 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
424.7			UNCONSOLIDATED	10.0	0.0	
414.7			CLAY	13.3	10.0	YELLOW
401.4			SHALE	2.2	23.3	
399.2			ROCK	0.8	25.5	BLACK
398.4			CLAYSTONE	2.3	26.3	YELLOW
396.2	CARBONDALE	BRERETON	LIMESTONE	1.4	28.5	
394.8	CARBONDALE	ANNA	SHALE	1.4	29.9	
393.4	CARBONDALE	HERRIN	COAL	5.7	31.3	

MAPID: 16300182000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: 0' S line, 200' E line of NW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.825795 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.270715 DATE COLLECTED:

SURFACE ELEVATION (FT.): 429.3 LOGGED (FT.): 53.9 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 30A WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
429.3			UNCONSOLIDATED	20.0	0.0	
409.3			BOULDER	0.8	20.0	
408.5			CLAY	18.3	20.8	YELLOW
390.2			ROCK	0.9	39.1	
389.3			SHALE	4.5	40.0	WHITE
384.8			CLAYSTONE	1.0	44.5	YELLOW
383.8	CARBONDALE	ANNA	DARK SHALE	1.7	45.5	
382.1	CARBONDALE	HERRIN	COAL	1.2	47.2	
381.0	CARBONDALE	HERRIN	COAL	5.6	48.3	

MAPID: 16300183000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: SW NE NW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.828554 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.275326 DATE COLLECTED:

SURFACE ELEVATION (FT.): 410.0 LOGGED (FT.): 33.4 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 31 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
410.0			UNCONSOLIDATED	16.0	0.0	
394.0			CLAY	4.8	16.0	YELLOW
389.2			SHALE	1.4	20.8	
387.7			LIMESTONE	1.8	22.3	
385.9			CLAYSTONE	2.5	24.1	YELLOW
383.4			SLATY SHALE	0.5	26.6	
382.9			ROCK	0.5	27.1	BLACK
382.4	CARBONDALE	HERRIN	COAL	5.8	27.6	

MAPID: 16300184000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: SE SW NW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.830877 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.271725 DATE COLLECTED:

SURFACE ELEVATION (FT.): 427.6 LOGGED (FT.): 43.3 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 35 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
427.6			UNCONSOLIDATED	8.0	0.0	
419.6			CLAY	6.0	8.0	
413.6			SANDY CLAY	5.5	14.0	
408.1			CLAY	2.0	19.5	
406.1			GRAVEL	1.0	21.5	
405.1			SHALE	3.5	22.5	LIGHT
401.6			DARK SHALE	4.2	26.0	
397.4			ROCK	2.0	30.2	
395.4			SHALE	1.8	32.2	LIGHT
393.6			ROCK	1.2	34.0	
392.4			SHALE	0.8	35.2	LIGHT
391.7	CARBONDALE	ANNA	BLACK SHALE	1.8	35.9	
389.8	CARBONDALE	HERRIN	COAL	5.2	37.8	

MAPID: 16300185000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: NW SE NW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.82856 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.273504 DATE COLLECTED:

SURFACE ELEVATION (FT.): 415.0 LOGGED (FT.): 37.7 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 38 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.0			UNCONSOLIDATED	20.2	0.0	
394.8			DARK SHALE	4.3	20.2	
390.5			ROCK	0.9	24.5	
389.6			DARK SHALE	2.7	25.4	
386.9	CARBONDALE	BRERETON	LIMESTONE	4.1	28.1	
382.8	CARBONDALE	ANNA	DARK SHALE	0.3	32.2	
382.6	CARBONDALE	HERRIN	COAL	5.3	32.4	

MAPID: 16300186000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: NE NW NE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.821586 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.277011 DATE COLLECTED:

SURFACE ELEVATION (FT.): 440.0 LOGGED (FT.): 47.8 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 40 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
440.0			UNCONSOLIDATED	4.0	0.0	
436.0			UNCONSOLIDATED	22.3	4.0	
413.7			SHALE	3.7	26.3	GREEN
410.0			SHALE	9.3	30.0	LIGHT BLUE
400.7			SHALE	0.6	39.3	GREEN
400.1			DARK SHALE	1.1	39.9	
399.0			ROCK	0.3	41.0	BLACK
398.7	CARBONDALE	ANNA	SHALE	0.6	41.3	
398.1	CARBONDALE	HERRIN	COAL	5.8	41.9	

MAPID: 16300187000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: SE NW NW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.830873 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.275372 DATE COLLECTED:

SURFACE ELEVATION (FT.): 427.6 LOGGED (FT.): 47.9 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 41 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
427.6			UNCONSOLIDATED	6.0	0.0	
421.6			CLAY	13.0	6.0	
408.6			CLAY	9.0	19.0	
399.6			CLAY	2.2	28.0	
397.4			SHALE	9.3	30.2	LIGHT
388.1			CLAYSTONE	1.3	39.5	
386.8	CARBONDALE	ANNA	BLACK SHALE	1.5	40.8	
385.3	CARBONDALE	HERRIN	COAL	5.7	42.3	

MAPID: 16300496000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: SE SW NE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.821621 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.271544 DATE COLLECTED:

SURFACE ELEVATION (FT.): 429.0 LOGGED (FT.): 47.0 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 9 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
429.0			UNCLASSIFIED	47.0	0.0	NO COAL, MAP FILE NO 13-87-38, COAL TST

MAPID: 16300498000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.833189 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.271771 DATE COLLECTED:

SURFACE ELEVATION (FT.): 430.0 LOGGED (FT.): 110.0 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 5 WELL TYPE: Coal Test

COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
430.0			UNCLASSIFIED	110.0	0.0	NO COAL, MAP FILE NO 13-87-38

MAPID: 16300499000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: NW NE NW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.828552 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.277151 DATE COLLECTED:

SURFACE ELEVATION (FT.): 412.0 LOGGED (FT.): 2.5 LOG TYPE: Drillers Log

SOURCE: H E WILLSON WELL TYPE: Coal Test

COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
412.0	CARBONDALE	HERRIN	COAL	2.5	0.0	SKELETON ROD 2 1/2" COAL #6 NO DEPTH

MAPID: 16300501000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: SE NW NW

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.830873 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.275372 DATE COLLECTED:

SURFACE ELEVATION (FT.): 428.0 LOGGED (FT.): 48.1 LOG TYPE: Drillers Log

SOURCE: H E WILLSON 39 WELL TYPE: Coal Test

COMMENT: COAL TEST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
385.2	CARBONDALE	HERRIN	COAL	5.3	42.8	SKELETON ROD, MAP FILES NO 13-87-38

MAPID: 16300506000C VERSION: 1

PROJECT: ISGS96

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: 165' S line, 165' E line of NW NE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.821019 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.274721 DATE COLLECTED: 10 / 0 / 1939

SURFACE ELEVATION (FT.): 430.0 LOGGED (FT.): 0.0 LOG TYPE: Drillers Log

SOURCE: CORNAGIE ET AL 1 WELL TYPE: Oil and Gas Test

COMMENT: LOG NOT SUITABLE FOR RESOURCE CALCULATIO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
430.0			UNCONSOLIDATED	19.0	0.0	
398.0			ROCK	13.0	32.0	
398.0			COAL	6.0	32.0	
392.0			LIMESTONE	20.0	38.0	
372.0			SHALE	52.0	58.0	
320.0			COAL	8.0	110.0	
312.0			SHALE	157.0	118.0	
155.0			SANDSTONE	10.0	275.0	

MAPID: 16300930000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: 1320' N line, 1320' E line
 QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.820428 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.274256 DATE COLLECTED: 9 / 0 / 1944
 SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 35.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 27 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
425.0			SOIL	24.0	0.0	
401.0	CARBONDALE	BRERETON	LIMESTONE	2.0	24.0	
399.0	CARBONDALE	ANNA	BLACK SHALE	1.5	26.0	
397.5	CARBONDALE	HERRIN	COAL	6.8	27.5	
390.7	CARBONDALE		UNDERCLAY	0.8	34.3	

MAPID: 16300930000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: 1320' N line, 1320' E line
 QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.820428 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 38.274256 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 425.0 LOGGED (FT.): 34.8 LOG TYPE: Drillers Log
 SOURCE: WELL TYPE: Coal Test
 COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
400.5	CARBONDALE	BRERETON	LIMESTONE	2.0	24.5	
398.5	CARBONDALE	ANNA	BLACK SHALE	1.5	26.5	
397.0	CARBONDALE	HERRIN	COAL	6.8	28.0	

MAPID: 16300931000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: NE NE
 QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.818111 GEOLOGIST: HINES
 CONFIDENTIAL: N LATITUDE: 38.276032 DATE COLLECTED: 9 / 0 / 1944
 SURFACE ELEVATION (FT.): 435.0 LOGGED (FT.): 60.0 LOG TYPE: Drillers Log
 SOURCE: MIDWEST RADIANT 28 WELL TYPE: Coal Test
 COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
435.0			SOIL	30.0	0.0	
405.0			BLACK SHALE	30.0	30.0	

MAPID: 16300932000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: NE

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.820442 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.274256 DATE COLLECTED: 9 / 0 / 1944

SURFACE ELEVATION (FT.): 441.0 LOGGED (FT.): 60.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 29 WELL TYPE: Coal Test

COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
441.0			SOIL	30.0	0.0
411.0			BLACK SHALE	26.0	30.0
385.0			BLACK SHALE	2.0	56.0
383.0			UNDERCLAY	2.0	58.0

MAPID: 16300938000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 13 QUARTERS/FOOTAGES: 660' N line, 660' E line

QUADRANGLE: NEW ATHENS EAST LONGITUDE: -89.8181 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.276032 DATE COLLECTED: 9 / 25 / 1944

SURFACE ELEVATION (FT.): LOGGED (FT.): 60.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 35 WELL TYPE: Coal Test

COMMENT: MIDWEST RADIANT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		CLAY	30.0	0.0
-			SHALE	19.0	30.0
-			LIMESTONE	6.0	49.0
-			BLACK SHALE	2.0	55.0
-			UNDERCLAY	2.0	57.0
-			GRAY SHALE	1.0	59.0

MAPID: 16300941000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 13 **QUARTERS/FOOTAGES:** 2640' N line, 1320' E line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.820468 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.270612 **DATE COLLECTED:** 9 / 0 / 1944
SURFACE ELEVATION (FT.): 430.0 **LOGGED (FT.):** 60.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT 38 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
430.0			SOIL	30.0	0.0
400.0			BLACK SHALE	20.0	30.0
380.0			LIMESTONE	2.0	50.0
378.0			BLACK SHALE	3.0	52.0
375.0			BLACK SHALE	4.0	55.0
371.0			UNDERCLAY	1.0	59.0

MAPID: 16300942000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 13 **QUARTERS/FOOTAGES:** 2640' N line, 1980' E line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.822776 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.270658 **DATE COLLECTED:** 9 / 0 / 1944
SURFACE ELEVATION (FT.): 430.0 **LOGGED (FT.):** 62.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT 39 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
430.0			SOIL	30.0	0.0
400.0			BLACK SHALE	27.0	30.0
373.0			LIMESTONE	3.0	57.0
370.0			SHALE	2.0	60.0

MAPID: 16300943000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 13 **QUARTERS/FOOTAGES:**
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.825094 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.270701 **DATE COLLECTED:** 10 / 0 / 1944
SURFACE ELEVATION (FT.): 428.0 **LOGGED (FT.):** 50.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT 40 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
428.0			SOIL	30.0	0.0
398.0			SHALE	19.0	30.0
379.0			LIMESTONE	1.0	49.0

MAPID: 16300945000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 13 **QUARTERS/FOOTAGES:** 1980' S line, 1320' W line
QUADRANGLE: NEW ATHENS EAST **LONGITUDE:** -89.829719 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.268965 **DATE COLLECTED:** 10 / 0 / 1944
SURFACE ELEVATION (FT.): 422.0 **LOGGED (FT.):** 55.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT 42 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
422.0			SOIL	20.0	0.0	
402.0			SAND	6.0	20.0	
396.0			BLACK SHALE	29.0	26.0	NO COAL

MAPID: 16301038000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 25 **QUARTERS/FOOTAGES:**
QUADRANGLE: BALDWIN **LONGITUDE:** -89.825043 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.242317 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 65.0 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT 38W **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			SOIL	35.0	0.0	
-			SAND	30.0	35.0	NO COAL

MAPID: 16301039000C **VERSION:** 1 **PROJECT:** NCRDS95
COUNTY: ST. CLAIR **TWP/RNG:** 3S 7W **SECTION:** 25 **QUARTERS/FOOTAGES:** 840' S line, 1300' W line
QUADRANGLE: BALDWIN **LONGITUDE:** -89.829733 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.236893 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 43.2 **LOG TYPE:** Drillers Log
SOURCE: MIDWEST RADIANT 39W **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			SOIL	36.5	0.0	
-	CARBONDALE	SPRINGFIELD	COAL	1.7	36.5	
-	CARBONDALE		UNDERCLAY	5.0	38.2	

MAPID: 16301040000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 25 QUARTERS/FOOTAGES: NE NW SW

QUADRANGLE: BALDWIN LONGITUDE: -89.830804 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.241362 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 55.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 40W WELL TYPE: Coal Test

COMMENT: NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			SOIL	25.0	0.0
-			SAND	30.0	25.0

MAPID: 16327899000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 29 QUARTERS/FOOTAGES: 2640' N line, 1320' W line

QUADRANGLE: RED BUD LONGITUDE: -89.903068 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.242596 DATE COLLECTED: 6 / 21 / 1943

SURFACE ELEVATION (FT.): LOGGED (FT.): 43.5 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 21-D WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		SANDY CLAY	23.0	0.0
-	CARBONDALE		BLACK SHALE	4.0	23.0
-	CARBONDALE	CONANT	LIMESTONE	2.0	27.0
-	CARBONDALE	JAMESTOWN	BLACK SHALE	4.0	29.0
-	CARBONDALE	BRERETON	LIMESTONE	3.0	33.0
-	CARBONDALE	ANNA	BLACK SHALE	1.0	36.0
-	CARBONDALE	HERRIN	COAL	6.0	37.0
-	CARBONDALE		UNDERCLAY	0.5	43.0

MAPID: 16327869000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 34 QUARTERS/FOOTAGES: 60' S line, 1240' E line

QUADRANGLE: BALDWIN LONGITUDE: -89.856972 GEOLOGIST: KOROSE

CONFIDENTIAL: N LATITUDE: 38.220584 DATE COLLECTED: 0 / 0 / 1944

SURFACE ELEVATION (FT.): LOGGED (FT.): 46.4 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & MIDWAY 23 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	27.0	0.0
-			SHALE	10.4	27.0
-			SHALE	1.1	37.4
-			SHALE	2.0	38.5 HARD
-	CARBONDALE	HERRIN	COAL	5.9	40.5

MAPID: 16300844000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 36 QUARTERS/FOOTAGES: 2900' N line, 5200' E line of NE

QUADRANGLE: BALDWIN LONGITUDE: -89.834012 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.226589 DATE COLLECTED: 5 / 0 / 1948

SURFACE ELEVATION (FT.): 421.0 LOGGED (FT.): 74.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 115W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
421.0			CLAY	19.0	0.0	DARK
402.0			UNCONSOLIDATED	15.0	19.0	BLUE
387.0			SHALE	5.0	34.0	LIGHT
382.0			SANDSTONE	24.5	39.0	
357.5			BLACK SHALE	6.3	63.5	
351.2	CARBONDALE	SPRINGFIELD	COAL	1.7	69.8	
349.6	CARBONDALE		UNDERCLAY	2.6	71.4	

MAPID: 16301037000C VERSION: 1

PROJECT: NCRDS95

COUNTY: ST. CLAIR TWP/RNG: 3S 7W SECTION: 36 QUARTERS/FOOTAGES: NE

QUADRANGLE: BALDWIN LONGITUDE: -89.820455 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 38.230884 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 32.0 LOG TYPE: Drillers Log

SOURCE: MIDWEST RADIANT 37W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	23.0	0.0	
-			SHALE	2.4	23.0	BLUE
-			SMUT	2.2	25.4	
-			COAL	0.7	27.6	MAY BE WEATHERED HERRIN
-			COAL	1.9	28.3	
-			UNDERCLAY	1.8	30.2	