

Status Report

Total Records: 2224

Top 3 County Records		Top 3 Log Type Records		Top 3 Coal Records		Top 3 Member Records	
Macoupin	2224	Drillers Log	1401	HERRIN	2097	HERRIN COAL	2097
		Survey Core Study	220	DANVILLE	618	PIASA LIMESTONE	878
		Multiple log types	200	CHAPEL	215	BRERETON LIMESTONE	709

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
SEAHORNE		597.5	597.5	597.5	2.8	2.8	2.8
CYCLOTHEM							
SURVANT - UPPER		433.4	395.7	471.0	2.3	1.8	2.8
SURVANT - LOWER		460.0	399.7	520.3	1.1	0.7	1.6
ATTILA		203.6	158.5	248.6	0.7	0.6	0.8
CARTHAGE	LIMESTONE	65.3	13.0	125.0	8.1	1.0	16.0
NEW HAVEN	COAL	83.5	22.0	149.2	0.6	0.1	1.0
MACOUPIN	LIMESTONE	90.8	27.0	165.0	2.3	0.3	11.0
WOMAC	COAL	103.0	35.3	170.6	1.4	0.2	30.0
BURROUGHS	LIMESTONE	101.3	41.0	187.0	3.2	0.5	8.0
CARLINVILLE	LIMESTONE	119.6	13.0	223.0	5.2	0.8	17.0
CRAMER	LIMESTONE	117.2	117.2	117.2	5.3	5.3	5.3
CHAPEL	COAL	158.5	22.4	278.0	0.8	0.1	3.0
TRIVOLI	SANDSTONE	165.1	107.0	252.0	25.4	5.0	87.0
EXLINE	LIMESTONE	221.7	221.7	221.7	1.7	1.7	1.7
ROCK BRANCH	COAL	142.8	63.7	192.3	0.8	0.3	2.7
PIASA	LIMESTONE	256.2	46.0	390.5	4.1	0.9	20.0
DANVILLE	COAL	242.5	7.6	390.5	1.4	0.1	46.0
GALUM	LIMESTONE	262.5	150.4	379.9	0.9	0.2	2.5
ALLENBY	COAL	250.7	151.6	381.9	0.8	0.2	1.8
BANKSTON FORK	LIMESTONE	271.4	14.7	408.0	6.0	0.6	41.0
ANVIL ROCK	SANDSTONE	279.6	24.0	395.5	2.4	0.2	22.0
LAWSON	SHALE	257.8	16.7	406.0	4.6	0.1	26.0
CONANT	LIMESTONE	313.8	204.8	351.1	1.0	0.3	3.0
JAMESTOWN	COAL	221.0	61.4	344.4	1.3	0.2	4.0
BRERETON	LIMESTONE	273.1	22.5	400.6	5.8	0.3	28.0
ANNA	SHALE	263.3	6.7	410.0	2.0	0.1	22.0
ENERGY	SHALE	301.3	36.0	416.0	31.9	0.4	72.9
HERRIN	COAL	261.5	8.5	436.3	5.9	0.3	14.9
HIGGINSVILLE	LIMESTONE	294.1	214.8	327.8	3.9	1.3	8.9

ST. DAVID	LIMESTONE	343.5	340.2	346.8	1.0	0.7	1.4
TURNER MINE	SHALE	298.3	264.3	347.5	1.3	0.5	3.3
SPRINGFIELD	COAL	267.5	57.0	410.0	1.8	1.0	3.6
EXCELLO	SHALE	382.3	323.0	445.8	2.5	0.4	4.5
HOUCHIN CREEK	COAL	357.6	120.4	540.2	2.2	0.3	4.4
ROODHOUSE	COAL	245.8	177.8	331.0	1.6	1.2	2.5
SURVANT	COAL	377.1	239.0	505.8	3.1	1.0	8.2
MECCA QUARRY	SHALE	445.7	322.1	546.5	10.6	1.0	63.0
FRANCIS CREEK	SANDSTONE	366.0	366.0	366.0	0.1	0.1	0.1
COLCHESTER	COAL	415.9	206.7	554.0	2.5	0.3	4.5
SEELYVILLE	COAL	458.2	458.2	458.2	3.2	3.2	3.2
DAVIS	COAL	518.9	451.3	568.5	1.3	0.7	2.0
MURPHYSBORO	COAL	498.8	498.8	498.8	3.7	3.7	3.7
LITCHFIELD	COAL	518.7	428.0	609.4	3.5	2.0	5.1
				Net Coal	35.9		

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: 11700028202M **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 1 **QUARTERS/FOOTAGES:**
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.708469 **GEOLOGIST:** TREWORYG,J
CONFIDENTIAL: N **LATITUDE:** 39.079779 **DATE COLLECTED:** 12 / 18 / 1909
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 7.1 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-MOUNT OLIVE C C **WELL TYPE:** Underground mine
COMMENT: FACE OF ENTRY 11 N OFF MAIN W

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			UNKNOWN	417.9	0.0
-	CARBONDALE	HERRIN	COAL	7.1	417.9

MAPID: 11700028201M **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 1 **QUARTERS/FOOTAGES:** 100' N line, 1990' W line
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.710697 **GEOLOGIST:** TREWORYG,J
CONFIDENTIAL: N **LATITUDE:** 39.086945 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 682.0 **LOGGED (FT.):** 8.4 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-MOUNT OLIVE C C-HOOSIER **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
682.0			UNKNOWN	420.0	0.0
262.0	CARBONDALE	HERRIN	COAL	8.4	420.0

MAPID: 11700255000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 1 QUARTERS/FOOTAGES: 4950' S line, 3400' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.711338 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.085859 DATE COLLECTED: 9 / 30 / 1887

SURFACE ELEVATION (FT.): 681.8 LOGGED (FT.): 426.0 LOG TYPE: Drillers Log

SOURCE: MADISON COAL CORP. WELL TYPE: Coal Test

COMMENT: W.LEE SAYS ITS SHAFT#1,MT. OLIVE COAL CO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
681.8			UNCONSOLIDATED	96.0	0.0
585.8	BOND		UNCLASSIFIED	4.0	96.0
581.8	BOND		SHALE	3.0	100.0
578.8	BOND	CARTHAGE	LIMESTONE	15.0	103.0
563.8	MODESTO		SHALE	11.0	118.0
552.8	MODESTO	NEW HAVEN	COAL	1.0	129.0
551.8	MODESTO		UNDERCLAY	20.0	130.0
531.8	MODESTO		UNCLASSIFIED	8.0	150.0
523.8	MODESTO		SHALE	20.0	158.0
503.8	MODESTO		SANDSTONE	1.0	178.0
502.8	MODESTO		BLACK SHALE	3.0	179.0
499.8	MODESTO		SANDSTONE	1.0	182.0
498.8	MODESTO		COAL	0.5	183.0
498.3	MODESTO		UNDERCLAY	3.0	183.5
495.3	MODESTO		LIMESTONE	2.5	186.5
492.8	MODESTO		SHALE	17.0	189.0
475.8	MODESTO		UNCLASSIFIED	7.0	206.0
468.8	MODESTO		SHALE	35.0	213.0
433.8	MODESTO	CHAPEL	COAL	0.3	248.0
433.5	MODESTO		UNDERCLAY	2.0	248.3
431.5	MODESTO		LIMESTONE	1.7	250.3
429.8	MODESTO	TRIVOLI	SANDSTONE	22.0	252.0
407.8	MODESTO		SHALE	60.0	274.0
347.8	MODESTO		LIMESTONE	0.5	334.0
347.3	MODESTO		BLACK SHALE	0.5	334.5
346.8	MODESTO		UNDERCLAY	5.0	335.0
341.8	MODESTO		SHALE	5.0	340.0
336.8	MODESTO		BLACK SHALE	1.0	345.0
335.8	MODESTO		UNDERCLAY	4.0	346.0
331.8	MODESTO		UNCLASSIFIED	5.0	350.0
326.8	MODESTO		UNCLASSIFIED	7.0	355.0
319.8	MODESTO		UNCLASSIFIED	4.0	362.0
315.8	MODESTO		UNDERCLAY	2.0	366.0
313.8	MODESTO		UNCLASSIFIED	5.0	368.0
308.8	CARBONDALE		UNDERCLAY	5.5	373.0
303.3	CARBONDALE		BLACK SHALE	1.5	378.5
301.8	CARBONDALE		UNDERCLAY	6.0	380.0
295.8	CARBONDALE	BRERETON	LIMESTONE	21.0	386.0
274.8	CARBONDALE	ANNA	BLACK SHALE	2.5	407.0

272.3	CARBONDALE	HERRIN	COAL	8.5	409.5
263.8	CARBONDALE		UNDERCLAY	0.5	418.0
263.3	CARBONDALE		UNCLASSIFIED	4.0	418.5
259.3	CARBONDALE		UNCLASSIFIED	3.5	422.5

MAPID: 11700255000C **VERSION:** 2 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 1 **QUARTERS/FOOTAGES:** 4950' S line, 3400' E line
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.711338 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.085859 **DATE COLLECTED:** 9 / 30 / 1887
SURFACE ELEVATION (FT.): 682.0 **LOGGED (FT.):** 426.0 **LOG TYPE:** Drillers Log
SOURCE: MADISON COAL CORP. **WELL TYPE:** Coal Test
COMMENT: "W. LEE SAYS THIS IS SHAFT #1 MT. OLIVE"

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
682.0			UNCONSOLIDATED	8.0	0.0
674.0			ROCK	121.0	8.0
553.0			COAL	1.0	129.0
552.0			ROCK	53.0	130.0
499.0			COAL	0.5	183.0
498.5			ROCK	64.5	183.5
434.0			COAL	0.3	248.0
433.7			ROCK	130.2	248.3
303.5	CARBONDALE		BLACK SHALE	1.5	378.5
302.0	CARBONDALE		UNDERCLAY	6.0	380.0
296.0	CARBONDALE		LIMESTONE	21.0	386.0
275.0	CARBONDALE		BLACK SHALE	2.5	407.0
272.5	CARBONDALE	HERRIN	COAL	8.5	409.5
264.0	CARBONDALE		ROCK	8.0	418.0

MAPID: 11700255000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 1 QUARTERS/FOOTAGES: 4950' S line, 3400' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.711338 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.085859 DATE COLLECTED: 9 / 0 / 1887

SURFACE ELEVATION (FT.): 682.0 LOGGED (FT.): 418.5 LOG TYPE: Drillers Log

SOURCE: MADISON COAL CORP WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
313.5	MODESTO	PIASA	LIMESTONE	5.0	368.5
308.5	MODESTO		UNCLASSIFIED	3.0	373.5
305.5	CARBONDALE		UNCLASSIFIED	10.0	376.5
295.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	386.5
286.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	395.5
284.5	CARBONDALE		UNCLASSIFIED	1.0	397.5
283.5	CARBONDALE	BRERETON	LIMESTONE	9.0	398.5
274.5	CARBONDALE	ANNA	BLACK SHALE	2.5	407.5
272.0	CARBONDALE	HERRIN	COAL	8.5	410.0

MAPID: 11700255000C VERSION: 4

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 1 QUARTERS/FOOTAGES: 4950' S line, 3400' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.711338 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.085859 DATE COLLECTED: 0 / 0 / 1987

SURFACE ELEVATION (FT.): 681.8 LOGGED (FT.): 426.0 LOG TYPE:

SOURCE: MT OLV CC 5 WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
271.8	CARBONDALE	HERRIN	COAL	8.5	410.0

MAPID: 11700289401M VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 1 QUARTERS/FOOTAGES: SE SW NW

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.714269 GEOLOGIST: TREWORY,J

CONFIDENTIAL: N LATITUDE: 39.080566 DATE COLLECTED: 0 / 0 / 1882

SURFACE ELEVATION (FT.): 688.0 LOGGED (FT.): 8.0 LOG TYPE: Measured section

SOURCE: MINE NOTES-CONSOLIDATED C C # 10 WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
688.0			UNKNOWN	420.0	0.0
268.0	CARBONDALE	HERRIN	COAL	8.0	420.0

MAPID: 11700316000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 1 QUARTERS/FOOTAGES: 3300' S line, 792' W line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.71494 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.081167 DATE COLLECTED:

SURFACE ELEVATION (FT.): 688.1 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: CONSOL STL0010 WELL TYPE: Underground mine

COMMENT:

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

MAPID: 11700316000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 1 QUARTERS/FOOTAGES: 3300' S line, 792' W line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.71494 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.081167 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 688.0 LOGGED (FT.): 428.0 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATION COAL CO. WELL TYPE: Plugged and/or Abandoned

COMMENT:

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

MAPID: 11700358000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 1 QUARTERS/FOOTAGES: 400' N line, 1890' W line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.711052 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.086113 DATE COLLECTED: 0 / 0 / 1924

SURFACE ELEVATION (FT.): 681.7 LOGGED (FT.): 750.0 LOG TYPE: Drillers Log

SOURCE: MADISON COAL CORP. WELL TYPE: Coal Test

COMMENT: CORE #156, 107-750

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
681.7			UNCONSOLIDATED	103.0	0.0	
578.7	BOND	CARTHAGE	LIMESTONE	15.0	103.0	
563.7	MODESTO		CLAYSTONE & SHALE	46.0	118.0	
517.7	MODESTO		GRAY SHALE	5.8	164.0	
511.9	MODESTO		COAL	0.3	169.8	
511.7	MODESTO		UNDERCLAY	22.0	170.0	
489.7	MODESTO		CALCAREOUS SHALE	8.8	192.0	
480.9	MODESTO		SANDY SHALE	18.2	200.8	
462.7	MODESTO		GRAY SHALE	15.3	219.0	
447.4	MODESTO		CLAYSTONE	3.1	234.3	
444.4	MODESTO		SANDY SHALE	0.9	237.3	
443.4	MODESTO		GRAY SHALE	8.8	238.3	
434.7	MODESTO	TRIVOLI	SANDSTONE	16.7	247.0	
418.0	MODESTO		SANDSTONE/SHALE	4.3	263.7	
413.7	MODESTO		SHALE	79.0	268.0	
334.7	MODESTO		SHALE	21.0	347.0	
313.7	MODESTO	PIASA	LIMESTONE	2.0	368.0	
311.7	CARBONDALE		SHALE	11.0	370.0	
300.7	CARBONDALE	BRERETON	LIMESTONE	20.7	381.0	
280.0	CARBONDALE	ANNA	BLACK SHALE	2.3	401.7	
277.7	CARBONDALE	HERRIN	COAL	8.0	404.0	
269.7	CARBONDALE		UNDERCLAY	1.0	412.0	
268.7	CARBONDALE		LIMESTONE	4.0	413.0	
264.7	CARBONDALE		CLAYSTONE & SHALE	37.8	417.0	
226.9	CARBONDALE		LIMESTONE	1.3	454.8	
225.7	CARBONDALE		CLAYSTONE & SHALE	11.0	456.0	
214.7	CARBONDALE		SANDSTONE	26.0	467.0	
188.7	CARBONDALE		GRAY SHALE	34.0	493.0	
154.7	CARBONDALE	MECCA QUARRY	BLACK SHALE	13.2	527.0	UNCERTAIN CORRELATION
141.5	CARBONDALE	COLCHESTER	COAL	2.2	540.2	UNCERTAIN CORRELATION
139.5	SPOON		LIMESTONE	2.7	542.2	
136.7	SPOON		GRAY SHALE	9.0	545.0	
127.7	SPOON		CLAYSTONE & SHALE	8.7	554.0	
119.0	SPOON		COAL	0.6	562.7	
118.4	SPOON		GRAY SHALE	9.0	563.3	
109.4	SPOON		SANDY SHALE	1.8	572.3	
107.7	SPOON		SHALE	13.5	574.0	
94.2	SPOON		SANDSTONE	4.0	587.5	
90.2	SPOON		BLACK SHALE	15.8	591.5	

74.4	SPOON	COAL	0.4	607.3
73.9	SPOON	CLAYSTONE & SHALE	0.6	607.8
73.4	SPOON	BLACK SHALE	0.7	608.3
72.7	SPOON	SANDSTONE/SHALE	1.0	609.0
71.7	SPOON	GRAY SHALE	35.7	610.0
36.0	SPOON	SANDSTONE	0.8	645.7
35.3	SPOON	GRAY SHALE	7.1	646.4
28.2		SANDSTONE	8.5	653.5
19.7		SHALE	1.0	662.0
18.7		SANDSTONE	5.5	663.0
13.2		SANDSTONE/SHALE	55.2	668.5
-42.0	MISSISSIPPIAN	LIMESTONE	26.3	723.7

MAPID: 11700358000C **VERSION:** 2 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 1 **QUARTERS/FOOTAGES:** 400' N line, 1890' W line
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.711052 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.086113 **DATE COLLECTED:** 2 / 0 / 1924
SURFACE ELEVATION (FT.): 682.0 **LOGGED (FT.):** 750.0 **LOG TYPE:** Survey Core Study
SOURCE: MADISON COAL CORP. **WELL TYPE:** Coal Test
COMMENT: CORE #156, 107-750

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
682.0			UNCONSOLIDATED	103.0	0.0
579.0			ROCK	66.8	103.0
512.2			COAL	0.3	169.8
512.0			ROCK	211.0	170.0
301.0			LIMESTONE	20.7	381.0
280.3			BLACK SHALE	2.3	401.7
278.0	CARBONDALE	HERRIN	COAL	8.0	404.0
270.0	CARBONDALE		ROCK	128.2	412.0
141.8	CARBONDALE	HOUCHIN CREEK	COAL	2.2	540.2
141.7	CARBONDALE		ROCK	11.3	540.3
130.3	CARBONDALE	COLCHESTER	COAL	0.8	551.7
129.6			ROCK	10.3	552.4
119.3			COAL	0.6	562.7
118.8			ROCK	44.1	563.2
74.7			COAL	0.4	607.3
74.2			ROCK	142.3	607.8

MAPID: 11700358000C **VERSION:** 3 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 1 **QUARTERS/FOOTAGES:** 400' N line, 1890' W line
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.711052 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.086113 **DATE COLLECTED:** 0 / 0 / 1924
SURFACE ELEVATION (FT.): 681.7 **LOGGED (FT.):** 750.0 **LOG TYPE:**
SOURCE: MADISON CC0018 **WELL TYPE:** Coal Test
COMMENT: CORE #156, 107-750

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
277.7	CARBONDALE	HERRIN	COAL	8.0	404.0	

MAPID: 11700358000C **VERSION:** 4 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 1 **QUARTERS/FOOTAGES:** 400' N line, 1890' W line
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.711052 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.086113 **DATE COLLECTED:** 0 / 0 / 1924
SURFACE ELEVATION (FT.): 682.0 **LOGGED (FT.):** 412.0 **LOG TYPE:** Survey Core Study
SOURCE: PENNSYLVANIAN DRILLING CO. 18 **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
314.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	2.0	368.0	
312.0	CARBONDALE		CLAYSTONE & SHALE	11.0	370.0	
301.0	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	17.0	381.0	
284.0	CARBONDALE	BRERETON	LIMESTONE	3.0	398.0	
281.0	CARBONDALE	ANNA	BLACK SHALE	2.2	401.0	
278.0	CARBONDALE	HERRIN	COAL	8.0	404.0	

MAPID: 11700289501M **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 2 **QUARTERS/FOOTAGES:** SW SE SE
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.721269 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.07295 **DATE COLLECTED:** 0 / 0 / 1882
SURFACE ELEVATION (FT.): 683.0 **LOGGED (FT.):** 8.0 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-CONSOLIDATED C C # 9 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
683.0			UNKNOWN	416.0	0.0	
267.0	CARBONDALE	HERRIN	COAL	8.0	416.0	

MAPID: 11700317000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 2 **QUARTERS/FOOTAGES:** 500' S line, 4100' W line
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.722011 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.073402 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 683.2 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: CONSOL STL0009 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
267.2	CARBONDALE	HERRIN	COAL	8.0	416.0	

MAPID: 11700317000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 2 **QUARTERS/FOOTAGES:** 500' S line, 4100' W line
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.722011 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.073402 **DATE COLLECTED:** 0 / 0 / 1900
SURFACE ELEVATION (FT.): 683.0 **LOGGED (FT.):** 424.0 **LOG TYPE:** Drillers Log
SOURCE: CONSOLIDATION COAL CO. **WELL TYPE:** Plugged and/or Abandoned
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
267.0	CARBONDALE	HERRIN	COAL	8.0	416.0	

MAPID: 11700361000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 3 **QUARTERS/FOOTAGES:** NW NE NW
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.749434 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.085816 **DATE COLLECTED:** 0 / 0 / 1931
SURFACE ELEVATION (FT.): 650.0 **LOGGED (FT.):** 259.0 **LOG TYPE:**
SOURCE: MTOLV TEST 1 **WELL TYPE:** Coal Test
COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

MAPID: 11700234000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 5 QUARTERS/FOOTAGES: NE NW NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.789132 GEOLOGIST: TREWORYG,J

CONFIDENTIAL: N LATITUDE: 39.085059 DATE COLLECTED: 0 / 0 / 1902

SURFACE ELEVATION (FT.): 634.0 LOGGED (FT.): 341.5 LOG TYPE: Survey Core Study

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
634.0			UNCONSOLIDATED	72.0	0.0	
562.0			ROCK	23.1	72.0	
538.9			COAL	0.4	95.1	
538.5			ROCK	71.1	95.5	
467.4			COAL	0.3	166.6	
467.1			ROCK	125.6	166.9	
341.5	CARBONDALE	DANVILLE	COAL	1.0	292.5	
340.5	CARBONDALE		ROCK	6.5	293.5	
334.0	CARBONDALE		LIMESTONE	28.5	300.0	
305.5	CARBONDALE		BLACK SHALE	3.0	328.5	
302.5	CARBONDALE	HERRIN	COAL	7.5	331.5	
295.0	CARBONDALE		ROCK	2.5	339.0	

MAPID: 11700234000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 5 QUARTERS/FOOTAGES: NE NW NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.789132 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.085059 DATE COLLECTED:

SURFACE ELEVATION (FT.): 634.0 LOGGED (FT.): 339.5 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
346.0	MODESTO	PIASA	LIMESTONE	1.8	288.0	
344.2	MODESTO		CLAYSTONE & SHALE	3.1	289.8	
341.2	CARBONDALE	DANVILLE	COAL	1.0	292.8	
340.2	CARBONDALE		CLAYSTONE & SHALE	6.5	293.8	
333.7	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	24.5	300.3	
309.2	CARBONDALE	BRERETON	LIMESTONE	4.0	324.8	
305.2	CARBONDALE	ANNA	BLACK SHALE	3.0	328.8	
302.0	CARBONDALE	HERRIN	COAL	7.5	332.0	

MAPID: 11700234000C VERSION: 3

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 5 QUARTERS/FOOTAGES: NE NW NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.789132 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.085059 DATE COLLECTED: 0 / 0 / 1902

SURFACE ELEVATION (FT.): 634.3 LOGGED (FT.): 341.5 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
634.3			UNCONSOLIDATED	72.3	0.0
562.0	MODESTO		BLUE SHALE	12.7	72.3
549.3	MODESTO		DARK SHALE	3.2	85.0
546.1	MODESTO		LIMESTONE & CLAY	2.9	88.2
543.2	MODESTO		SHALE	4.0	91.1
539.2	MODESTO		COAL	0.4	95.1
538.8	MODESTO		BLACK SHALE	2.5	95.5
536.3	MODESTO		CLAYSTONE & SHALE	9.0	98.0
527.3	MODESTO		SANDY SHALE	6.0	107.0
521.3	MODESTO		SHALE	14.4	113.0
506.9	MODESTO		LIMESTONE	7.1	127.4
499.8	MODESTO		SHALE	26.5	134.5
473.3	MODESTO		DARK SHALE	2.5	161.0
470.8	MODESTO		SHALE	3.1	163.5
467.7	MODESTO	CHAPEL	COAL	0.3	166.6
467.4	MODESTO		SHALE	11.6	166.9
455.8	MODESTO		CLAYSTONE & SHALE	1.5	178.5
454.3	MODESTO		SHALE	43.9	180.0
410.4	MODESTO		CLAYSTONE & SHALE	37.1	223.9
373.3	MODESTO		SHALE	2.0	261.0
371.3	MODESTO		CLAYSTONE & SHALE	11.8	263.0
359.5	MODESTO		SHALE	0.5	274.8
359.0	MODESTO		SHALE	2.0	275.3
357.0	MODESTO		CLAYSTONE & SHALE	4.9	277.3
352.0	MODESTO		BLACK SHALE	2.5	282.3
349.5	MODESTO		CLAYSTONE & SHALE	2.9	284.8
346.6	MODESTO	PIASA	LIMESTONE	1.8	287.7
344.9	MODESTO		BLACK SHALE	3.1	289.4
341.8	CARBONDALE	DANVILLE	COAL	1.0	292.5
340.8	CARBONDALE		UNDERCLAY	6.5	293.5
334.3	CARBONDALE		LIMESTONE	28.5	300.0
305.8	CARBONDALE	ANNA	BLACK SHALE	3.0	328.5
302.8	CARBONDALE	HERRIN	COAL	7.5	331.5
295.3	CARBONDALE		UNDERCLAY	0.5	339.0
294.8	CARBONDALE		LIMESTONE	2.0	339.5

MAPID: 11700234000C VERSION: 4

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 5 QUARTERS/FOOTAGES: NE NW NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.789132 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.085059 DATE COLLECTED: 0 / 0 / 1902

SURFACE ELEVATION (FT.): 634.0 LOGGED (FT.): 339.5 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
345.9	MODESTO	PIASA	LIMESTONE	1.8	288.1
344.1	MODESTO		UNCLASSIFIED	3.1	289.9
341.0	CARBONDALE	DANVILLE	COAL	1.0	293.0
340.0	CARBONDALE		UNCLASSIFIED	11.0	294.0
329.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	305.0
320.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.5	314.0
316.5	CARBONDALE		UNCLASSIFIED	2.5	317.5
314.0	CARBONDALE	BRERETON	LIMESTONE	9.0	320.0
305.0	CARBONDALE	ANNA	BLACK SHALE	3.0	329.0
302.0	CARBONDALE	HERRIN	COAL	7.5	332.0

MAPID: 11700234000C VERSION: 5

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 5 QUARTERS/FOOTAGES: NE NW NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.789132 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.085059 DATE COLLECTED: 0 / 0 / 1902

SURFACE ELEVATION (FT.): 634.4 LOGGED (FT.): 342.0 LOG TYPE:

SOURCE: SUPERIORCC0002 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
302.4	CARBONDALE	HERRIN	COAL	7.5	332.0

MAPID: 11700050301M VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 6 QUARTERS/FOOTAGES: 1970' N line, 2520' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.802427 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.080291 DATE COLLECTED: 0 / 0 / 1948

SURFACE ELEVATION (FT.): 626.0 LOGGED (FT.): 7.4 LOG TYPE: Measured section

SOURCE: MINE NOTES-SUPERIOR C C # 2 WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
626.0			UNKNOWN	320.0	0.0
306.0	CARBONDALE	HERRIN	COAL	7.4	320.0

MAPID: 11700050303M **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 6 **QUARTERS/FOOTAGES:** 1990' N line, 2140' W line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.803773 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.080216 **DATE COLLECTED:** 1 / 10 / 1978
SURFACE ELEVATION (FT.): 630.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-BAUER-SUPERIOR C C # 2 **WELL TYPE:** Underground mine
COMMENT: AIR SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
630.0			UNKNOWN	0.0	0.0	

MAPID: 11700256000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 6 **QUARTERS/FOOTAGES:** 2050' N line, 2400' W line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.802851 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.080064 **DATE COLLECTED:** 0 / 0 / 1904
SURFACE ELEVATION (FT.): 625.6 **LOGGED (FT.):** 321.0 **LOG TYPE:**
SOURCE: SUPERIORCC 2HS **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
311.6	CARBONDALE	HERRIN	COAL	7.5	314.0	

MAPID: 11700256000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 6 **QUARTERS/FOOTAGES:** 2050' N line, 2400' W line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.802851 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.080064 **DATE COLLECTED:** 0 / 0 / 1904
SURFACE ELEVATION (FT.): 626.0 **LOGGED (FT.):** 327.5 **LOG TYPE:** Drillers Log
SOURCE: SUPERIOR COAL CO. **WELL TYPE:** Mine Shaft
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
306.0	CARBONDALE	HERRIN	COAL	7.5	320.0	

MAPID: 11700411000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 6 QUARTERS/FOOTAGES: 1800' N line, 3200' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.80391 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.080737 DATE COLLECTED:

SURFACE ELEVATION (FT.): 605.0 LOGGED (FT.): 332.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
605.0			UNCONSOLIDATED	70.0	0.0
535.0	MODESTO		SHALE	12.0	70.0
523.0	MODESTO		BLACK SHALE	2.0	82.0
521.0	MODESTO		CLAYSTONE	3.0	84.0
518.0	MODESTO		LIMESTONE	2.0	87.0
516.0	MODESTO		CLAYSTONE	5.0	89.0
511.0	MODESTO		BLUE SHALE	23.0	94.0
488.0	MODESTO		LIMESTONE	13.0	117.0
475.0	MODESTO		DARK SHALE	13.0	130.0
462.0	MODESTO		UNDERCLAY	12.0	143.0
450.0	MODESTO	TRIVOLI	SANDSTONE	5.0	155.0
445.0	MODESTO		SANDY SHALE	61.0	160.0
384.0	MODESTO		CLAYSTONE	3.0	221.0
381.0	MODESTO		DARK SHALE	20.0	224.0
361.0	MODESTO		SHALE	6.0	244.0
355.0	MODESTO		CLAYSTONE	3.0	250.0
352.0	MODESTO		UNCLASSIFIED	3.0	253.0
349.0	MODESTO		SANDSTONE/SHALE	18.0	256.0
331.0	MODESTO		CLAYSTONE	3.0	274.0
328.0	MODESTO	PIASA	LIMESTONE	3.5	277.0
324.5	MODESTO		SANDSTONE	1.5	280.5
323.0	MODESTO		BLUE SHALE	3.0	282.0
320.0	CARBONDALE	DANVILLE	COAL	1.0	285.0
319.0	CARBONDALE		UNDERCLAY	5.0	286.0
314.0	CARBONDALE	BANKSTON FORK	LIMESTONE	19.0	291.0
295.0	CARBONDALE		BLUE SHALE	2.0	310.0
293.0	CARBONDALE	BRERETON	LIMESTONE	12.5	312.0
280.5	CARBONDALE	HERRIN	COAL	7.5	324.5

MAPID: 11700411000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 6 QUARTERS/FOOTAGES: 1800' N line, 3200' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.80391 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.080737 DATE COLLECTED:

SURFACE ELEVATION (FT.): 605.0 LOGGED (FT.): 332.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
605.0			UNCONSOLIDATED	0.8	0.0
604.2			ROCK	284.2	0.8
320.0	CARBONDALE	DANVILLE	COAL	1.0	285.0
319.0	CARBONDALE		ROCK	5.0	286.0
314.0	CARBONDALE		LIMESTONE	19.0	291.0
295.0	CARBONDALE		SHALE	2.0	310.0
293.0	CARBONDALE		LIMESTONE	12.5	312.0
280.5	CARBONDALE	HERRIN	COAL	7.5	324.5

MAPID: 11700411000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 6 QUARTERS/FOOTAGES: 1800' N line, 3200' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.80391 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.080737 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 332.5 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Mine Shaft

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
357.5	MODESTO	PIASA	LIMESTONE	3.5	277.5
354.0	MODESTO		UNCLASSIFIED	4.5	281.0
349.5	CARBONDALE	DANVILLE	COAL	1.0	285.5
348.5	CARBONDALE		UNCLASSIFIED	10.5	286.5
338.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.0	297.0
328.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.5	307.0
324.5	CARBONDALE		UNCLASSIFIED	2.0	310.5
322.5	CARBONDALE	BRERETON	LIMESTONE	12.5	312.5
310.0	CARBONDALE	HERRIN	COAL	7.5	325.0

MAPID: 11700411000C **VERSION:** 4 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 6 **QUARTERS/FOOTAGES:** 1800' N line, 3200' E line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.80391 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.080737 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 635.0 **LOGGED (FT.):** 332.0 **LOG TYPE:**
SOURCE: SUPERIORCC 2AS **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
310.0	CARBONDALE	HERRIN	COAL	7.5	325.0	

MAPID: 11700235000C **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 7 **QUARTERS/FOOTAGES:** NE SE SW SW
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.80712 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.058166 **DATE COLLECTED:** 0 / 0 / 1903
SURFACE ELEVATION (FT.): 618.0 **LOGGED (FT.):** 298.0 **LOG TYPE:** Survey Core Study
SOURCE: SUPERIOR COAL CO. **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
618.0			UNCONSOLIDATED	121.0	0.0	
497.0			ROCK	138.0	121.0	
359.0	CARBONDALE		LIMESTONE	28.8	259.0	
330.2	CARBONDALE		BLACK SHALE	1.4	287.8	
328.7	CARBONDALE	HERRIN	COAL	7.5	289.3	
321.2	CARBONDALE		ROCK	1.3	296.8	

MAPID: 11700235000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 7 **QUARTERS/FOOTAGES:** NE SE SW SW
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.80712 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.058166 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 617.0 **LOGGED (FT.):** 296.5 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
372.0	MODESTO	PIASA	LIMESTONE	4.0	245.0	
368.0	MODESTO		CLAYSTONE & SHALE	3.0	249.0	
365.0	CARBONDALE		CLAYSTONE & SHALE	7.0	252.0	
358.0	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	24.8	259.0	
333.2	CARBONDALE	BRERETON	LIMESTONE	4.0	283.8	
329.2	CARBONDALE	ANNA	BLACK SHALE	1.4	287.8	
328.0	CARBONDALE	HERRIN	COAL	7.5	289.0	

MAPID: 11700235000C VERSION: 3

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 7 QUARTERS/FOOTAGES: NE SE SW SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.80712 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.058166 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 617.4 LOGGED (FT.): 298.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
617.4			UNCONSOLIDATED	121.0	0.0	
496.4	MODESTO		CLAYSTONE & SHALE	16.0	121.0	
480.4	MODESTO		SANDY SHALE	70.0	137.0	
410.4	MODESTO		CLAYSTONE	2.0	207.0	
408.4	MODESTO		SHALE	10.0	209.0	
398.4	MODESTO		BLACK SHALE	0.7	219.0	
397.7	MODESTO		SHALE	0.3	219.7	
397.5	MODESTO		DARK SHALE	2.3	219.9	
395.1	MODESTO		SHALE	3.5	222.3	
391.6	MODESTO		SANDSTONE	1.7	225.8	
390.0	MODESTO		SANDY SHALE	2.0	227.4	
388.0	MODESTO		SANDSTONE	0.8	229.4	
387.1	MODESTO		SANDY SHALE	9.8	230.3	
377.4	MODESTO		SHALE	1.4	240.0	
376.0	MODESTO		BLACK SHALE	3.6	241.4	
372.4	MODESTO	PIASA	LIMESTONE	4.0	245.0	UNCERTAIN CORRELATION
368.4	MODESTO		BLACK SHALE	3.0	249.0	
365.4	CARBONDALE	DANVILLE	COAL	0.0	252.0	
365.4	CARBONDALE		UNDERCLAY	7.0	252.0	
358.4	CARBONDALE		LIMESTONE	28.8	259.0	
329.6	CARBONDALE	ANNA	BLACK SHALE	1.4	287.8	
328.1	CARBONDALE	HERRIN	COAL	7.5	289.3	
320.6	CARBONDALE		UNDERCLAY	0.5	296.8	
320.1	CARBONDALE		UNCLASSIFIED	0.8	297.3	

MAPID: 11700235000C VERSION: 4

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 7 QUARTERS/FOOTAGES: NE SE SW SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.80712 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.058166 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 617.0 LOGGED (FT.): 296.5 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
372.2	MODESTO	PIASA	LIMESTONE	4.0	244.8
368.2	MODESTO		UNCLASSIFIED	3.0	248.8
365.2	CARBONDALE		UNCLASSIFIED	7.0	251.8
358.2	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	11.0	258.8
347.2	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	269.8
344.2	CARBONDALE		UNCLASSIFIED	2.0	272.8
342.2	CARBONDALE	BRERETON	LIMESTONE	12.8	274.8
329.4	CARBONDALE	ANNA	BLACK SHALE	1.4	287.6
328.0	CARBONDALE	HERRIN	COAL	7.5	289.0

MAPID: 11700235000C VERSION: 5

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 7 QUARTERS/FOOTAGES: NE SE SW SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.80712 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.058166 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 617.4 LOGGED (FT.): 298.0 LOG TYPE:

SOURCE: SUPERIORCC0006 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
328.4	CARBONDALE	HERRIN	COAL	7.5	289.0

MAPID: 11700006803M VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 9 QUARTERS/FOOTAGES:

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.764534 GEOLOGIST: TREWORYG,J

CONFIDENTIAL: N LATITUDE: 39.064683 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 7.5 LOG TYPE: Measured section

SOURCE: MINE NOTES-CONSOLIDATED # 15 WELL TYPE: Underground mine

COMMENT: EXACT LOCATION UNKNOWN-RM.6, 1ST E OFF N

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			UNKNOWN	361.5	0.0
-	CARBONDALE	HERRIN	COAL	7.5	361.5

MAPID: 11700006802M **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 9 **QUARTERS/FOOTAGES:**
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.764534 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.064683 **DATE COLLECTED:** 8 / 17 / 1940
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 10.6 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-CONSOLIDATED C C # 15 **WELL TYPE:** Underground mine
COMMENT: LOCATION UNKNOWN-RM 24-16TH W OFF MAIN N

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			LIMESTONE		1.7	
-			BLACK SHALE		1.4	
-	CARBONDALE	HERRIN	COAL		7.5	

MAPID: 11700006801M **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 9 **QUARTERS/FOOTAGES:** 620' N line, 2540' E line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.764239 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.070247 **DATE COLLECTED:** 0 / 0 / 1948
SURFACE ELEVATION (FT.): 654.0 **LOGGED (FT.):** 7.5 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-CONSOLIDATED C C # 15 **WELL TYPE:** Underground mine
COMMENT: SEVERAL MEASURED SECTIONS IN THIS MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
654.0			UNKNOWN	362.0	0.0	
292.0	CARBONDALE	HERRIN	COAL	7.5	362.0	

MAPID: 11700257000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 9 **QUARTERS/FOOTAGES:** 750' N line, 2710' W line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.764334 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.069885 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 654.4 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: CONSOL STL 15 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
279.4	CARBONDALE	HERRIN	COAL	7.7	375.0	

MAPID: 11700257000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 9 QUARTERS/FOOTAGES: 750' N line, 2710' W line
 QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.764334 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.069885 DATE COLLECTED: 0 / 0 / 1900
 SURFACE ELEVATION (FT.): 654.0 LOGGED (FT.): 382.7 LOG TYPE: Drillers Log
 SOURCE: CONSOLIDATION COAL CO. WELL TYPE: Mine Shaft
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
279.0	CARBONDALE	HERRIN	COAL	7.7	375.0	

MAPID: 11700076102M VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 10 QUARTERS/FOOTAGES: 2310' S line, 1890' E line
 QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.743213 GEOLOGIST: TREWORGY,J
 CONFIDENTIAL: N LATITUDE: 39.06394 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 7.8 LOG TYPE: Measured section
 SOURCE: MINE NOTES-CONSOLIDATED C C # 8 WELL TYPE: Underground mine
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
650.0			UNKNOWN	392.2	0.0	
257.8	CARBONDALE	HERRIN	COAL	7.8	392.2	

MAPID: 11700076101M VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 11 QUARTERS/FOOTAGES: NE NE SW
 QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.728305 GEOLOGIST: TREWORGY,J
 CONFIDENTIAL: N LATITUDE: 39.063879 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 7.8 LOG TYPE: Measured section
 SOURCE: MINE NOTES-CONSOLIDATED C C # 8 WELL TYPE: Underground mine
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
675.0			UNKNOWN	401.0	0.0	
274.0	CARBONDALE	HERRIN	COAL	7.8	401.0	

MAPID: 11700258000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 11 QUARTERS/FOOTAGES: 2300' S line, 3250' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.729254 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.06383 DATE COLLECTED: 9 / 0 / 1887

SURFACE ELEVATION (FT.): 674.9 LOGGED (FT.): 417.5 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
674.9			UNCONSOLIDATED	96.0	0.0
578.9			UNCLASSIFIED	4.0	96.0
574.9	BOND		SHALE	3.0	100.0
571.9	BOND	CARTHAGE	LIMESTONE	15.0	103.0
556.9	MODESTO		BLUE SHALE	1.0	118.0
555.9	MODESTO		SHALE	10.0	119.0
545.9	MODESTO	NEW HAVEN	COAL	1.0	129.0
544.9	MODESTO		UNDERCLAY	20.0	130.0
524.9	MODESTO		UNCLASSIFIED	8.0	150.0
516.9	MODESTO		SHALE	20.0	158.0
496.9	MODESTO		SANDSTONE	1.0	178.0
495.9	MODESTO		BLACK SHALE	3.0	179.0
492.9	MODESTO		SANDSTONE	1.0	182.0
491.9	MODESTO		COAL	0.5	183.0
491.4	MODESTO		UNDERCLAY	3.0	183.5
488.4	MODESTO		LIMESTONE	2.5	186.5
485.9	MODESTO		SHALE	17.0	189.0
468.9	MODESTO		UNCLASSIFIED	7.0	206.0
461.9	MODESTO		SHALE	35.0	213.0
426.9	MODESTO	CHAPEL	COAL	0.3	248.0
426.6	MODESTO		UNDERCLAY	2.0	248.3
424.6	MODESTO		LIMESTONE	1.7	250.3
422.9	MODESTO	TRIVOLI	SANDSTONE	22.0	252.0
400.9	MODESTO		SHALE	60.0	274.0
340.9	MODESTO		LIMESTONE	0.5	334.0
340.4	MODESTO		BLACK SHALE	0.5	334.5
339.9	MODESTO		CLAYSTONE	5.0	335.0
334.9	MODESTO		SHALE	5.0	340.0
329.9	MODESTO		BLACK SHALE	1.0	345.0
328.9	MODESTO		CLAYSTONE	4.0	346.0
324.9	MODESTO		UNCLASSIFIED	5.0	350.0
319.9	MODESTO		SANDSTONE	7.0	355.0
312.9	CARBONDALE		SANDSTONE/CLAYSTONE	4.0	362.0
308.9	CARBONDALE		CLAYSTONE	2.0	366.0
306.9	CARBONDALE		UNCLASSIFIED	5.0	368.0
301.9	CARBONDALE		CLAYSTONE	4.0	373.0
297.9	CARBONDALE		LIMESTONE	21.0	377.0
276.9	CARBONDALE	ANNA	BLACK SHALE	2.0	398.0
274.9	CARBONDALE	HERRIN	COAL	9.0	400.0

265.9	CARBONDALE	UNDERCLAY	0.5	409.0
265.4	CARBONDALE	LIMESTONE	4.0	409.5
261.4	CARBONDALE	UNCLASSIFIED	4.0	413.5

MAPID: 11700258000C **VERSION:** 2 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 11 **QUARTERS/FOOTAGES:** 2300' S line, 3250' E line
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.729254 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.06383 **DATE COLLECTED:** 9 / 0 / 1887
SURFACE ELEVATION (FT.): 675.0 **LOGGED (FT.):** 417.5 **LOG TYPE:** Drillers Log
SOURCE: MT. OLIVE & STAUNTON COAL CO. **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
675.0			UNCONSOLIDATED	100.0	0.0
575.0			ROCK	29.0	100.0
546.0			COAL	1.0	129.0
545.0			ROCK	53.0	130.0
492.0			COAL	0.5	183.0
491.5			ROCK	64.5	183.5
427.0			COAL	0.3	248.0
426.7			ROCK	128.7	248.3
298.0			LIMESTONE	21.0	377.0
277.0			SHALE	2.0	398.0
275.0	CARBONDALE	HERRIN	COAL	9.0	400.0
266.0			ROCK	8.5	409.0

MAPID: 11700258000C **VERSION:** 3 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 11 **QUARTERS/FOOTAGES:** 2300' S line, 3250' E line
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.729254 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.06383 **DATE COLLECTED:** 9 / 0 / 1887
SURFACE ELEVATION (FT.): 675.0 **LOGGED (FT.):** 408.8 **LOG TYPE:** Drillers Log
SOURCE: MT OLIVE COAL CO. **WELL TYPE:** Mine Shaft
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
307.3	MODESTO	PIASA	LIMESTONE	5.0	367.7
302.3	MODESTO		UNCLASSIFIED	2.0	372.7
300.3	CARBONDALE		UNCLASSIFIED	4.0	374.7
296.3	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	378.7
288.3	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	386.7
286.3	CARBONDALE		UNCLASSIFIED	1.0	388.7
285.3	CARBONDALE	BRERETON	LIMESTONE	8.0	389.7
277.3	CARBONDALE	ANNA	BLACK SHALE	3.3	397.7
274.0	CARBONDALE	HERRIN	COAL	7.8	401.0

MAPID: 11700258000C **VERSION:** 4 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 11 **QUARTERS/FOOTAGES:** 2300' S line, 3250' E line
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.729254 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.06383 **DATE COLLECTED:** 0 / 0 / 1987
SURFACE ELEVATION (FT.): 674.9 **LOGGED (FT.):** 418.0 **LOG TYPE:**
SOURCE: CONSOL STL0008 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
273.9	CARBONDALE	HERRIN	COAL	7.8	401.0	

MAPID: 11700528000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 12 **QUARTERS/FOOTAGES:** 10' S line, 1768' E line
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.705227 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.057605 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 648.0 **LOGGED (FT.):** 397.3 **LOG TYPE:** Survey Core Study
SOURCE: CONSOLIDATED COAL CO. 17 **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
280.0	CARBONDALE		ROCK	3.4	368.0	
276.6	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.9	371.4	UPPER BENCH
273.7	CARBONDALE	BANKSTON FORK	CLAYSTONE & SHALE	1.5	374.3	SHALE PARTING
272.2	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	9.2	375.8	LOWER BENCH
263.0	CARBONDALE	BRERETON	LIMESTONE	3.0	385.0	
260.0	CARBONDALE	ANNA	BLACK SHALE	2.0	388.0	
258.0	CARBONDALE	HERRIN	COAL	7.3	390.0	

MAPID: 11700528000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 12 **QUARTERS/FOOTAGES:** 10' S line, 1768' E line
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.705227 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.057605 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 648.0 **LOGGED (FT.):** 397.3 **LOG TYPE:** Drillers Log
SOURCE: CONSOLIDATED COAL CO. 17 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
280.0	CARBONDALE		UNCLASSIFIED	1.8	368.0	
278.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	369.8	
273.7	CARBONDALE	ANVIL ROCK	SANDSTONE	1.5	374.3	
272.2	CARBONDALE	BRERETON	LIMESTONE	12.2	375.8	
260.0	CARBONDALE	ANNA	BLACK SHALE	2.0	388.0	
258.0	CARBONDALE	HERRIN	COAL	7.3	390.0	

MAPID: 11700528000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 12 QUARTERS/FOOTAGES: 10' S line, 1768' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.705227 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.057605 DATE COLLECTED:

SURFACE ELEVATION (FT.): 648.4 LOGGED (FT.): 642.0 LOG TYPE: Drillers Log

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

COMMENT: CORE SURVEY STUDY; CORE:368'-642'2"

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
258.4	CARBONDALE	HERRIN	COAL	7.3	390.0	
50.9	SPOON	SEAHORNE CYCLOTH	COAL	2.8	597.5	CORRELATION UNKNOWN

MAPID: 11700529000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 13 QUARTERS/FOOTAGES: 1991' N line, 14' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.698952 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.052216 DATE COLLECTED:

SURFACE ELEVATION (FT.): 654.0 LOGGED (FT.): 410.6 LOG TYPE: Survey Core Study

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

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
288.0	MODESTO	PIASA	LIMESTONE	1.1	366.0	
286.9	MODESTO		CLAYSTONE & SHALE	4.8	367.1	
282.2	CARBONDALE	DANVILLE	DARK GRAY SHALE	0.3	371.8	
281.8	CARBONDALE		CLAYSTONE & SHALE	7.8	372.2	
274.1	CARBONDALE	GALUM	LIMESTONE W/ SHALE	1.6	379.9	
272.5	CARBONDALE		CLAYSTONE & SHALE	0.4	381.5	
272.1	CARBONDALE	ALLENBY	BONE COAL	0.3	381.9	
271.8	CARBONDALE		CLAYSTONE & SHALE	4.2	382.2	
267.6	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	5.3	386.4	UPPER BENCH
262.3	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	0.6	391.7	SHALE PARTING
261.8	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	8.3	392.2	LOWER BENCH
253.4	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.3	400.6	
253.2	CARBONDALE	ANNA	BLACK SHALE	1.3	400.8	
252.0	CARBONDALE	HERRIN	COAL	8.6	402.0	

MAPID: 11700529000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 13 QUARTERS/FOOTAGES: 1991' N line, 14' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.698952 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.052216 DATE COLLECTED:

SURFACE ELEVATION (FT.): 654.0 LOGGED (FT.): 410.6 LOG TYPE: Drillers Log

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

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
288.4	MODESTO	PIASA	LIMESTONE	1.1	365.6
287.3	MODESTO		UNCLASSIFIED	4.8	366.7
282.5	CARBONDALE	DANVILLE	COAL	0.3	371.5
282.2	CARBONDALE		UNCLASSIFIED	14.4	371.8
267.8	CARBONDALE	BANKSTON FORK	LIMESTONE	5.3	386.2
262.5	CARBONDALE	ANVIL ROCK	SANDSTONE	0.6	391.5
261.9	CARBONDALE	BRERETON	LIMESTONE	8.6	392.1
253.3	CARBONDALE	ANNA	BLACK SHALE	1.3	400.7
252.0	CARBONDALE	HERRIN	COAL	8.6	402.0

MAPID: 11700529000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 13 QUARTERS/FOOTAGES: 1991' N line, 14' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.698952 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.052216 DATE COLLECTED:

SURFACE ELEVATION (FT.): 654.0 LOGGED (FT.): 711.0 LOG TYPE: Drillers Log

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

COMMENT: CORE SURVEY STUDY; CORE:XC-2448

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
251.7	CARBONDALE	HERRIN	COAL	8.6	402.3

MAPID: 11700964000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 13 QUARTERS/FOOTAGES: 425' S line, 1065' W line of SE

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.704494 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.043977 DATE COLLECTED: 5 / 0 / 1951

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 406.0 LOG TYPE: Electric Log

SOURCE: SANVIDO GUERING E WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
283.0	MODESTO	PIASA	LIMESTONE	4.0	367.0
279.0	MODESTO		UNCLASSIFIED	3.0	371.0
276.0	CARBONDALE	DANVILLE	COAL	1.0	374.0
275.0	CARBONDALE		UNCLASSIFIED	8.0	375.0
267.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	383.0
263.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	387.0
262.0	CARBONDALE		UNCLASSIFIED	1.0	388.0
261.0	CARBONDALE	BRERETON	LIMESTONE	9.0	389.0
252.0	CARBONDALE	ANNA	BLACK SHALE	3.0	398.0
249.0	CARBONDALE	HERRIN	COAL	5.0	401.0

MAPID: 11700362000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 14 QUARTERS/FOOTAGES: 2440' S line, 2490' W line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.727689 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.049514 DATE COLLECTED: 0 / 0 / 1921

SURFACE ELEVATION (FT.): 655.6 LOGGED (FT.): 615.0 LOG TYPE: Drillers Log

SOURCE: MADISON COAL CORP. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
655.6			UNCONSOLIDATED	112.0	0.0	
543.6	MODESTO		BLUE SHALE	32.0	112.0	
511.6	MODESTO		LIMESTONE	2.0	144.0	
509.6	MODESTO		BLACK SHALE	3.2	146.0	
506.4	MODESTO	NEW HAVEN	COAL	0.3	149.2	UNCERTAIN CORRELATION
506.1	MODESTO		UNDERCLAY	4.5	149.5	
501.6	MODESTO		LIMESTONE	1.0	154.0	
500.6	MODESTO		SHALE	25.0	155.0	
475.6	MODESTO		LIMESTONE	7.0	180.0	
468.6	MODESTO		SANDY SHALE	28.0	187.0	
440.6	MODESTO		BLUE SHALE	7.8	215.0	
432.8	MODESTO	CHAPEL	COAL	0.5	222.8	UNCERTAIN CORRELATION
432.3	MODESTO		UNDERCLAY	2.8	223.3	
429.6	MODESTO		SHALE	1.0	226.0	
428.6	MODESTO		UNDERCLAY	1.0	227.0	
427.6	MODESTO		GRAY SHALE	15.0	228.0	
412.6	MODESTO		SANDY SHALE	1.0	243.0	
411.6	MODESTO	TRIVOLI	SANDSTONE	8.0	244.0	
403.6	MODESTO		SANDY SHALE	42.0	252.0	
361.6	MODESTO		BLUE SHALE	34.0	294.0	
327.6	MODESTO		BLACK SHALE	1.5	328.0	
326.1	MODESTO		GRAY SHALE	1.5	329.5	
324.6	MODESTO		SANDSTONE	4.5	331.0	
320.1	MODESTO		SANDY SHALE	3.5	335.5	
316.6	MODESTO		SHALE	5.5	339.0	
311.1	MODESTO	PIASA	LIMESTONE	5.0	344.5	
306.1	MODESTO		BLUE SHALE	5.5	349.5	
300.6	CARBONDALE	DANVILLE	BLACK SHALE	2.0	355.0	
298.6	CARBONDALE		UNDERCLAY	3.0	357.0	
295.6	CARBONDALE		GRAY SHALE	4.0	360.0	
291.6	CARBONDALE		COAL	0.3	364.0	
291.3	CARBONDALE		GRAY SHALE	2.7	364.3	
288.6	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	367.0	
286.6	CARBONDALE		SHALE	3.0	369.0	
283.6	CARBONDALE	BRERETON	LIMESTONE	15.6	372.0	
268.0	CARBONDALE	HERRIN	COAL	4.9	387.6	
263.1	CARBONDALE		UNDERCLAY	0.5	392.5	
262.6	CARBONDALE		LIMESTONE	5.0	393.0	
257.6	CARBONDALE		UNDERCLAY	2.0	398.0	

255.6	CARBONDALE		SHALE	1.0	400.0
254.6	CARBONDALE		UNDERCLAY	5.0	401.0
249.6	CARBONDALE		LIMESTONE	1.0	406.0
248.6	CARBONDALE		GRAY SHALE	6.5	407.0
242.1	CARBONDALE		BLACK SHALE	0.5	413.5
241.6	CARBONDALE		SHALE	18.0	414.0
223.6	CARBONDALE		LIMESTONE	2.0	432.0
221.6	CARBONDALE		SHALE	44.6	434.0
177.0	CARBONDALE	SURVANT	COAL	2.4	478.6
174.6	CARBONDALE		DARK SHALE	0.3	481.0
174.3	CARBONDALE		SANDY SHALE	4.7	481.3
169.6	CARBONDALE		SANDSTONE	10.0	486.0
159.6	CARBONDALE		SANDY SHALE	12.0	496.0
147.6	CARBONDALE		BLUE SHALE	22.8	508.0
124.8	CARBONDALE	MECCA QUARRY	BLACK SHALE	1.0	530.8
123.8	CARBONDALE	COLCHESTER	COAL	3.2	531.8
120.6	SPOON		UNDERCLAY	0.5	535.0
120.1	SPOON		SHALE	2.0	535.5
118.1	SPOON		BLUE SHALE	3.2	537.5
114.9	SPOON		COAL	3.0	540.7
111.9	SPOON		BLUE SHALE	1.8	543.7
110.1	SPOON		UNDERCLAY	2.0	545.5
108.1	SPOON		SHALE	35.5	547.5
72.6	SPOON		COAL	2.6	583.0
70.0	SPOON		UNDERCLAY	0.4	585.6
69.6	SPOON		UNCLASSIFIED	1.0	586.0
68.6	SPOON		SANDY SHALE	14.0	587.0
54.6	SPOON		BLUE SHALE	8.4	601.0
46.2	SPOON	LITCHFIELD	COAL	5.1	609.4
41.1	SPOON		UNDERCLAY	0.5	614.5

MAPID: 11700362000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 14 QUARTERS/FOOTAGES: 2440' S line, 2490' W line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.727689 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.049514 DATE COLLECTED: 0 / 0 / 1921

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 615.0 LOG TYPE: Survey Core Study

SOURCE: MADISON COAL CORP. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
656.0			UNCONSOLIDATED	112.0	0.0
544.0			ROCK	37.2	112.0
506.8			COAL	0.3	149.2
506.5			ROCK	73.3	149.5
433.2			COAL	0.5	222.8
432.7			ROCK	140.8	223.3
292.0			COAL	0.3	364.0
291.7			SHALE	2.7	364.3
289.0			LIMESTONE	2.0	367.0
287.0			SHALE	3.0	369.0
284.0			LIMESTONE	15.6	372.0
268.4	CARBONDALE	HERRIN	COAL	4.9	387.6
263.5			ROCK	86.1	392.5
177.4			COAL	2.4	478.6
175.0			ROCK	27.0	481.0
148.0			SHALE	22.8	508.0
125.2			BLACK SHALE	1.0	530.8
124.2			COAL	3.2	531.8
121.0			UNDERCLAY	0.5	535.0
120.5			SHALE	5.2	535.5
115.3			COAL	3.0	540.7
112.3			ROCK	39.3	543.7
73.0			COAL	2.6	583.0
70.4			UNDERCLAY	0.4	585.6
70.0			LIMESTONE	1.0	586.0
69.0			SHALE	22.4	587.0
46.6			COAL	5.1	609.4
41.5			ROCK	0.5	614.5

MAPID: 11700362000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 14 QUARTERS/FOOTAGES: 2440' S line, 2490' W line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.727689 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.049514 DATE COLLECTED: 0 / 0 / 1921

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 392.9 LOG TYPE: Drillers Log

SOURCE: MADISON COAL CORP WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
311.3	MODESTO	PIASA	LIMESTONE	5.0	344.7
306.3	MODESTO		UNCLASSIFIED	5.5	349.7
300.8	CARBONDALE	DANVILLE	COAL	1.0	355.2
299.8	CARBONDALE		UNCLASSIFIED	11.0	356.2
288.8	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	2.0	367.2
286.8	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.6	369.2
285.2	CARBONDALE		UNCLASSIFIED	1.4	370.8
283.8	CARBONDALE	BRERETON	LIMESTONE	15.6	372.2
268.2	CARBONDALE	ANNA	BLACK SHALE	0.2	387.8
268.0	CARBONDALE	HERRIN	COAL	4.9	388.0

MAPID: 11700362000C VERSION: 4

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 14 QUARTERS/FOOTAGES: 2440' S line, 2490' W line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.727689 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.049514 DATE COLLECTED: 0 / 0 / 1921

SURFACE ELEVATION (FT.): 655.6 LOGGED (FT.): 615.0 LOG TYPE:

SOURCE: MADISON CC0004 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
267.6	CARBONDALE	HERRIN	COAL	4.9	388.0

MAPID: 11700530000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 14 QUARTERS/FOOTAGES: NE SE SW

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.728285 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.045537 DATE COLLECTED:

SURFACE ELEVATION (FT.): 652.0 LOGGED (FT.): 388.1 LOG TYPE: Drillers Log

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

COMMENT: CORE SURVEY STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
265.5	CARBONDALE	HERRIN	COAL	5.0	386.5

MAPID: 11700530000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 14 QUARTERS/FOOTAGES: NE SE SW
 QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.728285 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.045537 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 652.0 LOGGED (FT.): 391.0 LOG TYPE: Drillers Log
 SOURCE: CONSOLIDATED COAL CO. 11 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
282.3	CARBONDALE		UNCLASSIFIED	1.5	369.7
280.8	CARBONDALE	BANKSTON FORK	LIMESTONE	3.4	371.2
277.4	CARBONDALE	ANVIL ROCK	SANDSTONE	1.8	374.6
275.6	CARBONDALE	BRERETON	LIMESTONE	8.1	376.4
267.5	CARBONDALE	ANNA	BLACK SHALE	1.5	384.5
266.0	CARBONDALE	HERRIN	COAL	5.0	386.0

MAPID: 11700531000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 14 QUARTERS/FOOTAGES: SE SE NW
 QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.728292 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.051045 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 391.1 LOG TYPE: Drillers Log
 SOURCE: CONSOLIDATED COAL CO. 12 WELL TYPE: Coal Test
 COMMENT: CORE SURVEY STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
269.5	CARBONDALE	HERRIN	COAL	6.0	385.5

MAPID: 11700531000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 14 QUARTERS/FOOTAGES: SE SE NW
 QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.728292 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.051045 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 391.0 LOG TYPE: Drillers Log
 SOURCE: CONSOLIDATED COAL CO. 12 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
285.0	CARBONDALE	ANVIL ROCK	SANDSTONE	2.3	370.0
282.7	CARBONDALE	BRERETON	LIMESTONE	11.9	372.3
270.8	CARBONDALE	ANNA	BLACK SHALE	0.8	384.2
270.0	CARBONDALE	HERRIN	COAL	6.0	385.0

MAPID: 11700532000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 14 QUARTERS/FOOTAGES: 60' S line, 80' E line of SW SE SE

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.720347 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.042858 DATE COLLECTED:

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 386.1 LOG TYPE: Drillers Log

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

COMMENT: CORE SURVEY STUDY; CORE:XC-2441

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
253.9	CARBONDALE	HERRIN	COAL	6.8	378.1

MAPID: 11700532000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 14 QUARTERS/FOOTAGES: 60' S line, 80' E line of SW SE SE

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.720347 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.042858 DATE COLLECTED:

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 384.8 LOG TYPE: Drillers Log

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

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
289.4	MODESTO	PIASA	LIMESTONE	5.0	342.6
284.4	MODESTO		UNCLASSIFIED	5.2	347.6
279.2	CARBONDALE	DANVILLE	COAL	1.5	352.8
277.7	CARBONDALE		UNCLASSIFIED	10.1	354.3
267.6	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	364.4
264.9	CARBONDALE	ANVIL ROCK	SANDSTONE	1.9	367.1
263.0	CARBONDALE	BRERETON	LIMESTONE	7.7	369.0
255.3	CARBONDALE	ANNA	BLACK SHALE	1.3	376.7
254.0	CARBONDALE	HERRIN	COAL	6.8	378.0

MAPID: 11700533000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 14 QUARTERS/FOOTAGES: 510' N line, 1010' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.721319 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.055958 DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 381.8 LOG TYPE: Survey Core Study

SOURCE: CONSOLIDATED COAL CO. 16A WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
313.0	MODESTO	PIASA	LIMESTONE	3.2	337.0	
309.8	MODESTO		CLAYSTONE & SHALE	4.1	340.2	
305.7	CARBONDALE	DANVILLE	DARK GRAY SHALE	1.9	344.3	
303.8	CARBONDALE		CLAYSTONE & SHALE	4.7	346.2	
299.2	CARBONDALE	GALUM	LIMESTONE W/ SHALE	1.5	350.8	
297.7	CARBONDALE		CALCAREOUS SHALE	2.1	352.3	
295.6	CARBONDALE	ALLENBY	BONE COAL	0.2	354.4	
295.4	CARBONDALE		CLAYSTONE & SHALE	6.2	354.6	
289.2	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.8	360.8	UPPER BENCH
286.4	CARBONDALE	BANKSTON FORK	CLAYSTONE & SHALE	3.3	363.6	SHALE PARTING
283.1	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.5	366.9	LOWER BENCH
280.7	CARBONDALE	BRERETON	LIMESTONE	4.9	369.3	
275.8	CARBONDALE	ANNA	BLACK SHALE	1.3	374.2	
274.6	CARBONDALE	HERRIN	COAL	6.3	375.4	

MAPID: 11700533000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 14 QUARTERS/FOOTAGES: 510' N line, 1010' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.721319 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.055958 DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 384.7 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATED COAL CO. 16A WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
308.2	MODESTO	PIASA	LIMESTONE	3.2	341.8	
305.0	MODESTO		UNCLASSIFIED	5.0	345.0	
300.0	CARBONDALE		UNCLASSIFIED	12.7	350.0	
287.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	362.7	
284.3	CARBONDALE	ANVIL ROCK	SANDSTONE	1.9	365.7	
282.4	CARBONDALE		SHALE	1.4	367.6	
281.0	CARBONDALE	BRERETON	LIMESTONE	7.8	369.0	
273.2	CARBONDALE	ANNA	BLACK SHALE	1.2	376.8	
272.0	CARBONDALE	HERRIN	COAL	6.7	378.0	

MAPID: 11700533000C **VERSION:** 3 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 14 **QUARTERS/FOOTAGES:** 510' N line, 1010' E line
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.721319 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.055958 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 650.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: CONSOLIDATED COAL CO. 16A **WELL TYPE:** Coal Test
COMMENT: CORE SURVEY STUDY; CORE:XC-2416

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
275.3	CARBONDALE	HERRIN	COAL	3.3	374.7	6.3 reported by driller?

MAPID: 11700965000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 14 **QUARTERS/FOOTAGES:** 538' N line, 330' W line of NE
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.725957 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.055949 **DATE COLLECTED:** 10 / 0 / 1952
SURFACE ELEVATION (FT.): 644.0 **LOGGED (FT.):** 385.0 **LOG TYPE:** Electric Log
SOURCE: MAZZARINO, M. **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
281.0	CARBONDALE	BRERETON	LIMESTONE	14.0	363.0	
267.0	CARBONDALE	HERRIN	COAL	8.0	377.0	

MAPID: 11700289601M **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 15 **QUARTERS/FOOTAGES:** NW NE SE
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.739991 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.049307 **DATE COLLECTED:** 0 / 0 / 1887
SURFACE ELEVATION (FT.): 668.0 **LOGGED (FT.):** 7.5 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-CONSOLIDATED C C-ANCHOR **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
668.0			UNKNOWN	382.0	0.0	
286.0	CARBONDALE	HERRIN	COAL	7.5	382.0	

MAPID: 11700318000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 15 QUARTERS/FOOTAGES: 2650' N line, 1100' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.740401 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.050258 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 668.0 LOGGED (FT.): 382.0 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATION COAL CO. WELL TYPE: Plugged and/or Abandoned

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
293.0	CARBONDALE	HERRIN	COAL	7.0	375.0	

MAPID: 11700534000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 15 QUARTERS/FOOTAGES: 160' S line, 1420' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.741525 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.043316 DATE COLLECTED:

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 385.5 LOG TYPE: Survey Core Study

SOURCE: CONSOLIDATED COAL CO. 4 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
310.0	MODESTO	PIASA	LIMESTONE	2.9	345.0	
307.1	MODESTO		CLAYSTONE & SHALE	5.8	347.9	
301.2	CARBONDALE	DANVILLE	COAL	0.5	353.8	
300.7	CARBONDALE		CLAYSTONE & SHALE	7.3	354.3	
293.5	CARBONDALE	GALUM	LIMESTONE W/ SHALE	1.2	361.5	
292.3	CARBONDALE		DARK GRAY SHALE	0.1	362.7	
292.2	CARBONDALE		CLAYSTONE & SHALE	2.5	362.8	
289.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.8	365.3	UPPER BENCH
287.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.7	368.0	SHALE PARTING
285.3	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.7	369.7	LOWER BENCH
280.6	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	3.2	374.4	
277.4	CARBONDALE	ANNA	BLACK SHALE	1.3	377.6	
276.0	CARBONDALE	HERRIN	COAL	6.5	379.0	

MAPID: 11700534000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 15 QUARTERS/FOOTAGES: 160' S line, 1420' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.741525 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.043316 DATE COLLECTED:

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 384.6 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATED COAL CO. 4 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
309.9	MODESTO	PIASA	LIMESTONE	2.9	345.1
307.0	MODESTO		UNCLASSIFIED	5.8	348.0
301.2	CARBONDALE	DANVILLE	COAL	0.5	353.8
300.7	CARBONDALE		UNCLASSIFIED	11.0	354.3
289.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.8	365.3
286.9	CARBONDALE	ANVIL ROCK	SANDSTONE	1.7	368.1
285.2	CARBONDALE	BRERETON	LIMESTONE	7.9	369.8
277.3	CARBONDALE	ANNA	BLACK SHALE	1.3	377.7
276.0	CARBONDALE	HERRIN	COAL	5.6	379.0

MAPID: 11700535000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 15 QUARTERS/FOOTAGES: 51' N line, 102' E line of SE SW SE

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.741504 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.044569 DATE COLLECTED:

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 484.0 LOG TYPE: Drillers Log

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

COMMENT: CORE SURVEY STUDY; CORE:XC-2440

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
270.5	CARBONDALE	HERRIN	COAL	6.5	384.5

MAPID: 11700535000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 15 QUARTERS/FOOTAGES: 51' N line, 102' E line of SE SW SE

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.741504 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.044569 DATE COLLECTED:

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 389.5 LOG TYPE: Drillers Log

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

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
308.8	MODESTO	PIASA	LIMESTONE	4.0	346.2
304.8	MODESTO		UNCLASSIFIED	8.0	350.2
296.8	CARBONDALE	DANVILLE	COAL	0.5	358.2
296.3	CARBONDALE		UNCLASSIFIED	9.5	358.7
286.8	CARBONDALE	BANKSTON FORK	LIMESTONE	3.2	368.2
283.6	CARBONDALE	ANVIL ROCK	SANDSTONE	1.2	371.4
282.4	CARBONDALE		SHALE	1.0	372.6
281.4	CARBONDALE	BRERETON	LIMESTONE	8.4	373.6
273.0	CARBONDALE	ANNA	BLACK SHALE	1.0	382.0
272.0	CARBONDALE	HERRIN	COAL	6.5	383.0

MAPID: 11700236000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 17 QUARTERS/FOOTAGES: NW NE SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.786542 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.04884 DATE COLLECTED:

SURFACE ELEVATION (FT.): 628.2 LOGGED (FT.): 639.0 LOG TYPE:

SOURCE: MILLER OC 0001 WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
313.2	CARBONDALE	HERRIN	COAL	5.0	315.0

MAPID: 11700236000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 17 QUARTERS/FOOTAGES: NW NE SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.786542 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.04884 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 628.0 LOGGED (FT.): 320.0 LOG TYPE: Drillers Log

SOURCE: MILLER OIL CO WELL TYPE: Unsuccessful or Unknown Results

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
352.0	MODESTO	PIASA	LIMESTONE	4.0	276.0
348.0	MODESTO		UNCLASSIFIED	2.0	280.0
346.0	CARBONDALE		UNCLASSIFIED	6.0	282.0
340.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	288.0
336.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	292.0
334.0	CARBONDALE		UNCLASSIFIED	2.0	294.0
332.0	CARBONDALE	BRERETON	LIMESTONE	18.0	296.0
314.0	CARBONDALE	ANNA	BLACK SHALE	1.0	314.0
313.0	CARBONDALE	HERRIN	COAL	5.0	315.0

MAPID: 11700966000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 18 QUARTERS/FOOTAGES: 639' S line, 160' E line of NW NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.807064 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.054938 DATE COLLECTED: 8 / 0 / 1949

SURFACE ELEVATION (FT.): 616.0 LOGGED (FT.): 275.0 LOG TYPE: Electric Log

SOURCE: LANGE H A DRLG WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
388.0	MODESTO	PIASA	LIMESTONE	3.0	228.0
385.0	MODESTO		UNCLASSIFIED	3.0	231.0
382.0	CARBONDALE		UNCLASSIFIED	9.0	234.0
373.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	243.0
367.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	249.0
365.0	CARBONDALE		UNCLASSIFIED	2.0	251.0
363.0	CARBONDALE	BRERETON	LIMESTONE	15.0	253.0
348.0	CARBONDALE	ANNA	BLACK SHALE	2.0	268.0
346.0	CARBONDALE	HERRIN	COAL	5.0	270.0

MAPID: 11700204000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 19 **QUARTERS/FOOTAGES:** SW NE NW
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.805096 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.039528 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 535.0 **LOGGED (FT.):** 549.0 **LOG TYPE:**
SOURCE: MILLER OC **WELL TYPE:** Oil and Gas Test
COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
309.0	CARBONDALE	HERRIN	COAL	7.0	226.0	

MAPID: 11700204000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 19 **QUARTERS/FOOTAGES:** SW NE NW
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.805096 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.039528 **DATE COLLECTED:** 0 / 0 / 1900
SURFACE ELEVATION (FT.): 553.0 **LOGGED (FT.):** 207.0 **LOG TYPE:** Drillers Log
SOURCE: MILLER OIL CO **WELL TYPE:** Dry Hole
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
353.0	CARBONDALE	HERRIN	COAL	7.0	200.0	

MAPID: 11700967000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 20 **QUARTERS/FOOTAGES:** 404' S line, 113' W line of SE SW
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.78712 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.028981 **DATE COLLECTED:** 10 / 0 / 1949
SURFACE ELEVATION (FT.): 587.0 **LOGGED (FT.):** 258.0 **LOG TYPE:** Electric Log
SOURCE: SLOAN R A **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
377.0	MODESTO	PIASA	LIMESTONE	6.0	210.0	
371.0	MODESTO		UNCLASSIFIED	2.0	216.0	
369.0	CARBONDALE		UNCLASSIFIED	7.0	218.0	
362.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	225.0	
356.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	231.0	
354.0	CARBONDALE		UNCLASSIFIED	2.0	233.0	
352.0	CARBONDALE	BRERETON	LIMESTONE	17.0	235.0	
335.0	CARBONDALE	ANNA	BLACK SHALE	1.0	252.0	
334.0	CARBONDALE	HERRIN	COAL	5.0	253.0	

MAPID: 11700018902M VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 21 QUARTERS/FOOTAGES:

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.76435 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.035395 DATE COLLECTED: 8 / 12 / 1940

SURFACE ELEVATION (FT.): LOGGED (FT.): 4.4 LOG TYPE: Measured section

SOURCE: MINE NOTES-CONSOLIDATED C C # 7 WELL TYPE: Underground mine

COMMENT: OFF MAIN S, 3RD R OFF 8TH L, OFF 11TH R

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			LIMESTONE	-	
-			SHALE	3.3	
-			BLACK SHALE	1.2	
-	CARBONDALE	HERRIN	COAL	7.0	

MAPID: 11700018901M VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 21 QUARTERS/FOOTAGES: 300' S line, 1940' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.76193 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.028921 DATE COLLECTED: 0 / 0 / 1948

SURFACE ELEVATION (FT.): 651.0 LOGGED (FT.): 7.0 LOG TYPE: Measured section

SOURCE: MINE NOTES-CONSOLIDATED C C # 7 WELL TYPE: Underground mine

COMMENT: SEVERAL OTHER MEASURED SECTIONS IN MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
651.0			UNKNOWN	350.0	0.0
301.0	CARBONDALE	HERRIN	COAL	7.0	350.0

MAPID: 11700259000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 21 QUARTERS/FOOTAGES: SE SW SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.760847 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.02902 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 651.0 LOGGED (FT.): 363.5 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATION COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
325.0	MODESTO	PIASA	LIMESTONE	3.0	326.0
322.0	MODESTO		UNCLASSIFIED	3.0	329.0
319.0	CARBONDALE		UNCLASSIFIED	5.0	332.0
314.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	2.0	337.0
312.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	339.0
311.0	CARBONDALE		UNCLASSIFIED	1.0	340.0
310.0	CARBONDALE	BRERETON	LIMESTONE	15.0	341.0
295.0	CARBONDALE	ANNA	BLACK SHALE	1.0	356.0
294.0	CARBONDALE	HERRIN	COAL	6.5	357.0

MAPID: 11700259000C **VERSION:** 2 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 21 **QUARTERS/FOOTAGES:** SE SW SE
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.760847 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.02902 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 651.0 **LOGGED (FT.):** 374.5 **LOG TYPE:** Drillers Log
SOURCE: CONSOLIDATED COAL CO. **WELL TYPE:** Coal Test
COMMENT: "SHAFT"

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
651.0			UNCONSOLIDATED	188.0	0.0	
463.0			ROCK	133.0	188.0	
330.0	CARBONDALE	DANVILLE	COAL	2.0	321.0	
328.0	CARBONDALE		ROCK	16.0	323.0	
312.0	CARBONDALE		SANDSTONE	2.0	339.0	
310.0	CARBONDALE		LIMESTONE	15.0	341.0	
295.0	CARBONDALE		SHALE	1.0	356.0	
294.0	CARBONDALE	HERRIN	COAL	6.5	357.0	
287.5	CARBONDALE		ROCK	11.0	363.5	

MAPID: 11700259000C **VERSION:** 3 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 21 **QUARTERS/FOOTAGES:** SE SW SE
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.760847 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.02902 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 651.4 **LOGGED (FT.):** 375.0 **LOG TYPE:**
SOURCE: CONSOL STL 7 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
294.4	CARBONDALE	HERRIN	COAL	6.5	357.0	

MAPID: 11700228000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 22 **QUARTERS/FOOTAGES:**
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.745774 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.035527 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 447.0 **LOG TYPE:**
SOURCE: HFSTETTER 0002 **WELL TYPE:** Oil and Gas Test
COMMENT: LOC & SURF ELEV UNCERT/NOT USED FOR CALC

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	-	-	DATA SUSPECT/NOT USED FOR CALCULATIONS

MAPID: 11700537000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 23 QUARTERS/FOOTAGES: 0' N line, 2640' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.727065

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.04277

DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 394.1

LOG TYPE: Survey Core Study

SOURCE: CONSOLIDATED COAL CO. 10

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
298.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.5	352.0	
293.5	MODESTO		DARK GRAY SHALE	4.7	356.5	
288.8	CARBONDALE	DANVILLE	BONE COAL	0.5	361.2	
288.3	CARBONDALE		CLAYSTONE & SHALE	5.1	361.7	
283.2	CARBONDALE	GALUM	LIMESTONE/UNDERCLAY	0.6	366.8	
282.6	CARBONDALE		LIMESTONE W/ SHALE	0.2	367.4	
282.5	CARBONDALE	ALLENBY	BONE COAL	1.1	367.5	
281.3	CARBONDALE		CLAYSTONE & SHALE	6.0	368.7	
275.3	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	374.7	UPPER BENCH
273.3	CARBONDALE	BANKSTON FORK	SHALE & SILTSTONE	1.5	376.7	SHALE PARTING
271.8	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.8	378.2	LOWER BENCH
269.0	CARBONDALE	BRERETON	LIMESTONE	5.3	381.0	
263.7	CARBONDALE	ANNA	BLACK SHALE	1.8	386.3	
262.0	CARBONDALE	HERRIN	COAL	6.1	388.0	

MAPID: 11700537000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 23 QUARTERS/FOOTAGES: 0' N line, 2640' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.727065

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.04277

DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 390.0

LOG TYPE: Drillers Log

SOURCE: CONSOLIDATED COAL CO. 10

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
299.7	MODESTO	PIASA	LIMESTONE	4.5	350.3	
295.2	MODESTO		UNCLASSIFIED	4.6	354.8	
290.6	CARBONDALE	DANVILLE	COAL	0.6	359.4	
290.0	CARBONDALE		UNCLASSIFIED	9.6	360.0	
280.4	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	369.6	
276.9	CARBONDALE	ANVIL ROCK	SANDSTONE	1.5	373.1	
275.4	CARBONDALE	BRERETON	LIMESTONE	8.1	374.6	
267.3	CARBONDALE	ANNA	BLACK SHALE	1.3	382.7	
266.0	CARBONDALE	HERRIN	COAL	6.0	384.0	

MAPID: 11700537000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 23 QUARTERS/FOOTAGES: 0' N line, 2640' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.727065 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.04277 DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 328.0 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATED COAL CO. 10 WELL TYPE: Coal Test

COMMENT: CORE SURVEY STUDY; CORE:XC-2415

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
265.9	CARBONDALE	HERRIN	COAL	5.6	384.1	

MAPID: 11700538000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 24 QUARTERS/FOOTAGES: 10' N line, 2410' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.707323 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.042746 DATE COLLECTED:

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 399.4 LOG TYPE: Survey Core Study

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

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
281.0	MODESTO	PIASA	LIMESTONE	1.9	359.0	
279.1	MODESTO		CLAYSTONE & SHALE	8.4	360.9	
270.7	CARBONDALE	DANVILLE	COAL	0.8	369.3	
269.9	CARBONDALE	GALUM	LIMESTONE W/ SHALE	1.6	370.1	
268.3	CARBONDALE		GRAY SHALE	3.0	371.7	
265.3	CARBONDALE	ALLENBY	BONE COAL	1.1	374.7	
264.2	CARBONDALE		CLAYSTONE & SHALE	2.8	375.8	
261.5	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	1.0	378.5	UPPER BENCH
260.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.8	379.5	LOWER BENCH
257.7	CARBONDALE		CLAYSTONE & SHALE	2.1	382.3	
255.6	CARBONDALE	BRERETON	LIMESTONE	7.5	384.4	
248.0	CARBONDALE	ANNA	BLACK SHALE	1.0	392.0	
246.0	CARBONDALE	HERRIN	COAL	5.4	394.0	

MAPID: 11700538000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 24 QUARTERS/FOOTAGES: 10' N line, 2410' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.707323 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.042746 DATE COLLECTED:

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 401.4 LOG TYPE: Drillers Log

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

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
280.9	MODESTO	PIASA	LIMESTONE	3.4	359.1
277.5	MODESTO		UNCLASSIFIED	6.9	362.5
270.6	CARBONDALE	DANVILLE	COAL	0.8	369.4
269.8	CARBONDALE		UNCLASSIFIED	9.3	370.2
260.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.9	379.5
256.6	CARBONDALE	ANVIL ROCK	SANDSTONE	1.5	383.4
255.1	CARBONDALE		SHALE	0.6	384.9
254.5	CARBONDALE	BRERETON	LIMESTONE	7.5	385.5
247.0	CARBONDALE	ANNA	BLACK SHALE	1.0	393.0
246.0	CARBONDALE	HERRIN	COAL	7.4	394.0

MAPID: 11700538000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 24 QUARTERS/FOOTAGES: 10' N line, 2410' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.707323 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.042746 DATE COLLECTED:

SURFACE ELEVATION (FT.): 640.2 LOGGED (FT.): 401.1 LOG TYPE: Drillers Log

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

COMMENT: CORE SURVEY STUDY; CORE:XC-2442

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
246.1	CARBONDALE	HERRIN	COAL	5.3	394.1

MAPID: 11700239000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 26 QUARTERS/FOOTAGES: SW SW NW SW

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.735645 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.017686 DATE COLLECTED:

SURFACE ELEVATION (FT.): 634.4 LOGGED (FT.): 369.0 LOG TYPE: Drillers Log

SOURCE: T. WILLIAMSON WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
634.4			UNCONSOLIDATED	140.0	0.0	
494.4	MODESTO		SANDSTONE	9.0	140.0	
485.4	MODESTO		BLUE SHALE	7.0	149.0	
478.4	MODESTO	MACOUPIN	LIMESTONE	7.0	156.0	UNCERTAIN CORRELATION
471.4	MODESTO		SHALE & SANDSTONE	15.0	163.0	
456.4	MODESTO		SANDY SHALE	19.0	178.0	
437.4	MODESTO		CLAYSTONE & SHALE	2.3	197.0	
435.1	MODESTO	CHAPEL	COAL	0.2	199.3	
434.9	MODESTO		CLAYSTONE & SHALE	30.5	199.5	
404.4	MODESTO		SANDY SHALE	30.0	230.0	
374.4	MODESTO		CLAYSTONE & SHALE	33.5	260.0	
340.9	MODESTO		SANDSTONE	0.5	293.5	
340.4	MODESTO		SHALE & SANDSTONE	8.0	294.0	
332.4	MODESTO		RED SHALE	1.0	302.0	
331.4	MODESTO		CLAYSTONE & SHALE	3.0	303.0	
328.4	MODESTO	PIASA	LIMESTONE	4.0	306.0	
324.4	MODESTO		SHALE & SANDSTONE	8.0	310.0	
316.4	MODESTO		SANDY SHALE	2.0	318.0	
314.4	MODESTO		BLUE SHALE	4.0	320.0	
310.4	CARBONDALE	DANVILLE	COAL	0.7	324.0	
309.7	CARBONDALE		UNDERCLAY	22.3	324.7	
287.4	CARBONDALE		BLUE SHALE	3.0	347.0	
284.4	CARBONDALE		CALCAREOUS SHALE	1.0	350.0	
283.4	CARBONDALE	BRERETON	LIMESTONE	8.7	351.0	
274.7	CARBONDALE		CLAYSTONE & SHALE	1.3	359.7	
273.4	CARBONDALE		BLACK SHALE	0.5	361.0	
272.9	CARBONDALE	HERRIN	COAL	7.0	361.5	
265.9	CARBONDALE		UNDERCLAY	0.5	368.5	

MAPID: 11700239000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 26 QUARTERS/FOOTAGES: SW SW NW SW
 QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.735645 GEOLOGIST: TREWORGY,J
 CONFIDENTIAL: N LATITUDE: 39.017686 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 634.0 LOGGED (FT.): 369.0 LOG TYPE: Drillers Log
 SOURCE: T. WILLIAMSON WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
634.0			UNCONSOLIDATED	149.0	0.0	
485.0			ROCK	50.3	149.0	
434.7			COAL	0.2	199.3	
434.5			ROCK	124.5	199.5	
310.0			COAL	0.7	324.0	
309.3			ROCK	22.3	324.7	
287.0			SHALE	4.0	347.0	
283.0			LIMESTONE	8.7	351.0	
274.3			SHALE	1.3	359.7	
273.0			BLACK SHALE	0.5	361.0	
272.5	CARBONDALE	HERRIN	COAL	7.0	361.5	
265.5			ROCK	0.5	368.5	

MAPID: 11700239000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 26 QUARTERS/FOOTAGES: SW SW NW SW
 QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.735645 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.017686 DATE COLLECTED: 0 / 0 / 1900
 SURFACE ELEVATION (FT.): 634.0 LOGGED (FT.): 368.0 LOG TYPE: Drillers Log
 SOURCE: WILLIAMSON T WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
329.5	MODESTO	PIASA	LIMESTONE	4.0	304.5	
325.5	MODESTO		UNCLASSIFIED	6.0	308.5	
319.5	CARBONDALE		UNCLASSIFIED	15.0	314.5	
304.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.0	329.5	
294.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	6.0	339.5	
288.5	CARBONDALE		UNCLASSIFIED	3.0	345.5	
285.5	CARBONDALE	BRERETON	LIMESTONE	9.7	348.5	
275.8	CARBONDALE	ANNA	BLACK SHALE	2.8	358.2	
273.0	CARBONDALE	HERRIN	COAL	7.0	361.0	

MAPID: 11700239000C **VERSION:** 4 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 26 **QUARTERS/FOOTAGES:** SW SW NW SW
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.735645 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.017686 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 634.4 **LOGGED (FT.):** 369.0 **LOG TYPE:**
SOURCE: WILLIAMSON **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
272.4	CARBONDALE	HERRIN	COAL	7.0	362.0	

MAPID: 11700908000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 26 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of SW NW
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.732819 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.023613 **DATE COLLECTED:** 8 / 0 / 1961
SURFACE ELEVATION (FT.): 582.0 **LOGGED (FT.):** 317.0 **LOG TYPE:** Electric Log
SOURCE: MARTIN, PAUL H. **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
310.0	MODESTO	PIASA	LIMESTONE	5.0	272.0	
305.0	MODESTO		UNCLASSIFIED	5.0	277.0	
300.0	CARBONDALE		UNCLASSIFIED	14.0	282.0	
286.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	296.0	
280.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	302.0	
278.0	CARBONDALE		UNCLASSIFIED	1.0	304.0	
277.0	CARBONDALE	BRERETON	LIMESTONE	6.0	305.0	
271.0	CARBONDALE	ANNA	BLACK SHALE	1.0	311.0	
270.0	CARBONDALE	HERRIN	COAL	5.0	312.0	

MAPID: 11700968000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 26 QUARTERS/FOOTAGES: 330' S line, 330' W line of SE SW

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.730287 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.014475 DATE COLLECTED: 12 / 0 / 1948

SURFACE ELEVATION (FT.): 636.0 LOGGED (FT.): 357.0 LOG TYPE: Electric Log

SOURCE: MCLAUGHLIN, D. W. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
323.0	MODESTO	PIASA	LIMESTONE	7.0	313.0
316.0	MODESTO		UNCLASSIFIED	2.5	320.0
313.5	CARBONDALE		UNCLASSIFIED	7.5	322.5
306.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	330.0
300.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	336.0
299.0	CARBONDALE		UNCLASSIFIED	1.0	337.0
298.0	CARBONDALE	BRERETON	LIMESTONE	10.0	338.0
288.0	CARBONDALE	ANNA	BLACK SHALE	2.0	348.0
286.0	CARBONDALE	HERRIN	COAL	7.0	350.0

MAPID: 11700969000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 26 QUARTERS/FOOTAGES: 330' S line, 330' W line of SE NW

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.730442 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.021771 DATE COLLECTED: 7 / 0 / 1949

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 362.0 LOG TYPE: Electric Log

SOURCE: MCLAUGHLIN, D. W. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
321.0	MODESTO	PIASA	LIMESTONE	7.0	314.0
314.0	MODESTO		UNCLASSIFIED	4.5	321.0
309.5	CARBONDALE		UNCLASSIFIED	12.5	325.5
297.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	338.0
291.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	344.0
289.0	CARBONDALE		UNCLASSIFIED	2.0	346.0
287.0	CARBONDALE	BRERETON	LIMESTONE	7.0	348.0
280.0	CARBONDALE	ANNA	BLACK SHALE	1.0	355.0
279.0	CARBONDALE	HERRIN	COAL	6.0	356.0

MAPID: 11700289701M **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 29 **QUARTERS/FOOTAGES:** SE SW SE
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.779201 **GEOLOGIST:** TREWORY,J
CONFIDENTIAL: N **LATITUDE:** 39.014288 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 628.0 **LOGGED (FT.):** 7.0 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-CONSOLIDATED C C # 5 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
628.0			UNKNOWN	325.0	0.0	
303.0	CARBONDALE	HERRIN	COAL	7.0	325.0	

MAPID: 11700319000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 29 **QUARTERS/FOOTAGES:** 190' S line, 3900' W line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.778166 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.013923 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 628.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: CONSOL STL0005 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
303.0	CARBONDALE	HERRIN	COAL	7.0	325.0	

MAPID: 11700319000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 6W **SECTION:** 29 **QUARTERS/FOOTAGES:** 190' S line, 3900' W line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.778166 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.013923 **DATE COLLECTED:** 0 / 0 / 1900
SURFACE ELEVATION (FT.): 628.0 **LOGGED (FT.):** 332.0 **LOG TYPE:** Drillers Log
SOURCE: CONSOLIDATION COAL CO. **WELL TYPE:** Plugged and/or Abandoned
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
303.0	CARBONDALE	HERRIN	COAL	7.0	325.0	

MAPID: 11700019002M VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 30 QUARTERS/FOOTAGES:

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.801464

GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.020372

DATE COLLECTED: 6 / 12 / 1906

SURFACE ELEVATION (FT.): LOGGED (FT.): 6.9

LOG TYPE: Measured section

SOURCE: MINE NOTES-CONSOLIDATED C C # 14

WELL TYPE: Underground mine

COMMENT: BETWEEN # 6 & 7 RM. 2ND R ON E SIDE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNKNOWN	285.1	0.0	
-	CARBONDALE	HERRIN	COAL	6.9	285.1	

MAPID: 11700019001M VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 30 QUARTERS/FOOTAGES: SE NE NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.802683

GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.024935

DATE COLLECTED:

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 7.0

LOG TYPE: Measured section

SOURCE: MINE NOTES-CONSOLIDATED C C # 14

WELL TYPE: Underground mine

COMMENT: A FEW OTHER MEASURED SECTS. IN THIS MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
625.0			UNKNOWN	280.0	0.0	
345.0	CARBONDALE	HERRIN	COAL	7.0	280.0	

MAPID: 11700272000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 30 QUARTERS/FOOTAGES: 775' N line, 2775' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.801953

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.02555

DATE COLLECTED:

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 0.0

LOG TYPE:

SOURCE: CONSOL STL 14

WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
345.0	CARBONDALE	HERRIN	COAL	7.0	280.0	

MAPID: 11700272000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 30 QUARTERS/FOOTAGES: 775' N line, 2775' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.801953 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.02555 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 287.0 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATION COAL CO. WELL TYPE: Plugged and/or Abandoned

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
345.0	CARBONDALE	HERRIN	COAL	7.0	280.0	

MAPID: 11700076201M VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 32 QUARTERS/FOOTAGES: NW NE SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.786127 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.004843 DATE COLLECTED:

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 7.0 LOG TYPE: Measured section

SOURCE: MINE NOTES-CONSOLIDATED C C # 6 WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
625.0			UNKNOWN	309.0	0.0	
316.0	CARBONDALE	HERRIN	COAL	7.0	309.0	

MAPID: 11700320000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 32 QUARTERS/FOOTAGES: 3075' N line, 1850' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.785416 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.004754 DATE COLLECTED:

SURFACE ELEVATION (FT.): 624.7 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: CONSOL STL0006 WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
315.7	CARBONDALE	HERRIN	COAL	7.0	309.0	

MAPID: 11700320000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 32 QUARTERS/FOOTAGES: 3075' N line, 1850' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.785416 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.004754 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 316.0 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATION COAL CO. WELL TYPE: Plugged and/or Abandoned

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
316.0	CARBONDALE	HERRIN	COAL	7.0	309.0	

MAPID: 11700240000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 35 QUARTERS/FOOTAGES: NE NE NE SW

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.72728 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.005771 DATE COLLECTED:

SURFACE ELEVATION (FT.): 619.0 LOGGED (FT.): 347.4 LOG TYPE: Drillers Log

SOURCE: T. WILLIAMSON WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
619.0			UNCONSOLIDATED	104.0	0.0	
515.0			ROCK	160.0	104.0	
355.0			COAL	0.3	264.0	
354.7			ROCK	43.7	264.3	
311.0			COAL	0.5	308.0	
310.5			UNDERCLAY	1.0	308.5	
309.5			SHALE	9.0	309.5	
300.5			LIMESTONE	5.2	318.5	
295.3			SHALE	5.3	323.7	
290.0	CARBONDALE	HERRIN	COAL	4.0	329.0	
286.0			ROCK	14.4	333.0	

MAPID: 11700240000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 35 QUARTERS/FOOTAGES: NE NE NE SW

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.72728 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.005771 DATE COLLECTED:

SURFACE ELEVATION (FT.): 619.0 LOGGED (FT.): 333.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
328.0	MODESTO	PIASA	LIMESTONE	4.0	291.0
324.0	MODESTO		GRAY SHALE	13.5	295.0
310.5	CARBONDALE	DANVILLE	COAL	0.5	308.5
310.0	CARBONDALE		CLAYSTONE & SHALE	6.0	309.0
304.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.2	315.0
298.8	CARBONDALE	BRERETON	GRAY SHALE	4.0	320.2
294.8	CARBONDALE	ANNA	BLACK SHALE	2.0	324.2
290.0	CARBONDALE	HERRIN	COAL	4.0	329.0

MAPID: 11700240000C VERSION: 3

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 35 QUARTERS/FOOTAGES: NE NE NE SW

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.72728 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.005771 DATE COLLECTED:

SURFACE ELEVATION (FT.): 619.0 LOGGED (FT.): 347.4 LOG TYPE: Drillers Log

SOURCE: T. WILLIAMSON WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
619.0			UNCONSOLIDATED	104.0	0.0	
515.0	MODESTO		GRAY SHALE	4.0	104.0	
511.0	MODESTO		SANDSTONE	6.0	108.0	
505.0	MODESTO		GRAY SHALE	10.0	114.0	
495.0	MODESTO		DARK SHALE	6.0	124.0	
489.0	MODESTO		LIMESTONE	6.0	130.0	
483.0	MODESTO		SANDY SHALE	12.5	136.0	
470.5	MODESTO		DARK SHALE	22.0	148.5	
448.5	MODESTO		SANDY SHALE	11.5	170.5	
437.0	MODESTO		DARK SHALE	33.0	182.0	
404.0	MODESTO		GRAY SHALE	24.0	215.0	
380.0	MODESTO		DARK SHALE	22.0	239.0	
358.0	MODESTO		SANDSTONE	2.0	261.0	
356.0	MODESTO		BLACK SHALE	1.0	263.0	
355.0	MODESTO		COAL	0.3	264.0	UNCERTAIN CORRELATION
354.7	MODESTO		UNDERCLAY	8.7	264.3	
346.0	MODESTO		SANDY SHALE	4.0	273.0	
342.0	MODESTO		GRAY SHALE	10.0	277.0	
332.0	MODESTO		RED SHALE	1.0	287.0	
331.0	MODESTO		DARK SHALE	2.5	288.0	
328.5	MODESTO	PIASA	LIMESTONE	3.5	290.5	
325.0	MODESTO		GRAY SHALE	1.0	294.0	
324.0	MODESTO		BLACK SHALE	5.3	295.0	
318.7	MODESTO		GRAY SHALE	4.7	300.3	
314.0	MODESTO		SHALE	3.0	305.0	
311.0	CARBONDALE	DANVILLE	COAL	0.5	308.0	
310.5	CARBONDALE		UNDERCLAY	1.0	308.5	
309.5	CARBONDALE		SHALE	9.0	309.5	
300.5	CARBONDALE	BRERETON	LIMESTONE	5.2	318.5	
295.3	CARBONDALE	ENERGY	GRAY SHALE	3.3	323.7	
292.0	CARBONDALE	ENERGY	DARK SHALE	2.0	327.0	
290.0	CARBONDALE	HERRIN	COAL	4.0	329.0	
286.0	CARBONDALE		UNDERCLAY	14.5	333.0	

MAPID: 1170024000C VERSION: 4

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 35 QUARTERS/FOOTAGES: NE NE NE SW
 QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.72728 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.005771 DATE COLLECTED: 0 / 0 / 1900
 SURFACE ELEVATION (FT.): 619.0 LOGGED (FT.): 333.0 LOG TYPE: Drillers Log
 SOURCE: WILLIAMSON T WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
328.5	MODESTO	PIASA	LIMESTONE	4.0	290.5
324.5	MODESTO		UNCLASSIFIED	5.5	294.5
319.0	CARBONDALE		UNCLASSIFIED	13.5	300.0
305.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	313.5
301.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	317.5
300.5	CARBONDALE	BRERETON	LIMESTONE	5.2	318.5
295.3	CARBONDALE	ANNA	BLACK SHALE	5.3	323.7
290.0	CARBONDALE	HERRIN	COAL	4.0	329.0

MAPID: 1170024000C VERSION: 5

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 35 QUARTERS/FOOTAGES: NE NE NE SW
 QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.72728 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 39.005771 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 619.0 LOGGED (FT.): 347.0 LOG TYPE:
 SOURCE: WILLIAMSON0003 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
290.0	CARBONDALE	HERRIN	COAL	4.0	329.0

MAPID: 11700621000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 35 QUARTERS/FOOTAGES: 330' N line, 330' W line of NE NW
 QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.730263 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.012653 DATE COLLECTED: 12 / 0 / 1956
 SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 0.0 LOG TYPE: Electric Log
 SOURCE: WILSON, CARLINE WELL TYPE: Dry Hole
 COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	6.0	
-	MODESTO		UNCLASSIFIED	5.5	
-	CARBONDALE		UNCLASSIFIED	15.5	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	
-	CARBONDALE	ENERGY	UNCLASSIFIED	15.0	

MAPID: 11700972000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 35 QUARTERS/FOOTAGES: 330' S line, 330' W line of NE SW

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.730216 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.003465 DATE COLLECTED: 6 / 0 / 1953

SURFACE ELEVATION (FT.): 623.0 LOGGED (FT.): 334.0 LOG TYPE: Electric Log

SOURCE: SCHENK, S. B. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
333.0	MODESTO	PIASA	LIMESTONE	4.0	290.0
329.0	MODESTO		UNCLASSIFIED	4.0	294.0
325.0	CARBONDALE		UNCLASSIFIED	12.0	298.0
313.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	310.0
309.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	314.0
307.0	CARBONDALE		UNCLASSIFIED	2.0	316.0
305.0	CARBONDALE	BRERETON	LIMESTONE	8.0	318.0
297.0	CARBONDALE	ANNA	BLACK SHALE	2.0	326.0
295.0	CARBONDALE	HERRIN	COAL	6.0	328.0

MAPID: 11700973000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 6W SECTION: 35 QUARTERS/FOOTAGES: 330' S line, 330' W line of NE SE

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.720808 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.003492 DATE COLLECTED: 11 / 0 / 1950

SURFACE ELEVATION (FT.): 622.0 LOGGED (FT.): 0.0 LOG TYPE: Electric Log

SOURCE: SCHENK, S. B. WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	6.0	
-	CARBONDALE	ENERGY	UNCLASSIFIED	30.0	

MAPID: 11700050302M VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 1 QUARTERS/FOOTAGES: 2720' N line, 3080' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.822242 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.07812 DATE COLLECTED: 7 / 23 / 1931

SURFACE ELEVATION (FT.): 633.0 LOGGED (FT.): 9.0 LOG TYPE: Measured section

SOURCE: MINE NOTES-SUPERIOR C C # 2 WELL TYPE: Underground mine

COMMENT: MANY OTHER MEASURED SECTS. IN THIS MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	ANNA	SHALE	1.5	
-	CARBONDALE	HERRIN	COAL	7.5	

MAPID: 11700018802M **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 2 **QUARTERS/FOOTAGES:** 201' S line, 1625' W line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.842624 **GEOLOGIST:** TREWORYG,J
CONFIDENTIAL: N **LATITUDE:** 39.071235 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 631.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-SUPERIOR C C # 4 **WELL TYPE:** Underground mine
COMMENT: MANY OTHER MEASURED SECTS. IN THIS MINE

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

MAPID: 11700739000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 330' S line, 232' W line of NE
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.856943 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.079093 **DATE COLLECTED:** 1 / 0 / 1959
SURFACE ELEVATION (FT.): 621.0 **LOGGED (FT.):** 308.0 **LOG TYPE:** Electric Log
SOURCE: EAST CENT. DEV. CO., INC **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
327.0	MODESTO	PIASA	LIMESTONE	7.0	294.0	
320.0	CARBONDALE	HERRIN	COAL	7.0	301.0	

MAPID: 11700860000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 590' N line, 350' E line of SW
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.85897 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.076561 **DATE COLLECTED:** 1 / 0 / 1959
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 0.0 **LOG TYPE:** Electric Log
SOURCE: EAST CENT. DEV. CO., INC **WELL TYPE:** Dry Hole
COMMENT: NO DEPTH VALUES AVAILABLE

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

MAPID: 11700188000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 4 QUARTERS/FOOTAGES: 4200' S line, 120' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.88534 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.082531 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 656.3 LOGGED (FT.): 319.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
656.3			UNCONSOLIDATED	90.0	0.0	
566.3	MODESTO		GRAY SHALE	12.0	90.0	
554.3	MODESTO		UNCLASSIFIED	7.3	102.0	
547.0	MODESTO		SANDY SHALE	24.7	109.3	
522.3	MODESTO		GRAY SHALE	10.0	134.0	
512.3	MODESTO	CHAPEL	COAL	0.5	144.0	UNCERTAIN CORRELATION
511.8	MODESTO		GRAY SHALE	11.5	144.5	
500.3	MODESTO	TRIVOLI	SANDSTONE	21.0	156.0	
479.3	MODESTO		SANDY SHALE	28.0	177.0	
451.3	MODESTO		GRAY SHALE	23.0	205.0	
428.3	MODESTO		SANDY SHALE	25.0	228.0	
403.3	MODESTO		LIMESTONE	1.7	253.0	
401.6	MODESTO		SHALE	12.8	254.7	
388.8	MODESTO		DARK SHALE	2.5	267.5	
386.3	MODESTO	PIASA	LIMESTONE	3.0	270.0	
383.3	MODESTO		DARK SHALE	5.5	273.0	
377.8	CARBONDALE	DANVILLE	COAL	2.2	278.5	
375.6	CARBONDALE		SHALE	6.8	280.7	
368.8	CARBONDALE	BANKSTON FORK	LIMESTONE	18.4	287.5	
350.4	CARBONDALE		GRAY SHALE	0.3	305.9	
350.0	CARBONDALE		UNCLASSIFIED	5.3	306.3	
344.8	CARBONDALE	HERRIN	COAL	7.1	311.5	
337.7	CARBONDALE		UNDERCLAY	0.4	318.6	

MAPID: 11700188000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 4 QUARTERS/FOOTAGES: 4200' S line, 120' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.88534 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.082531 DATE COLLECTED:

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 319.6 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
386.0	MODESTO	PIASA	LIMESTONE	3.0	270.0
383.0	MODESTO		DARK GRAY SHALE	5.5	273.0
377.5	CARBONDALE	DANVILLE	COAL	2.2	278.5
375.3	CARBONDALE		LIMESTONE W/ SHALE	6.8	280.7
368.5	CARBONDALE	BANKSTON FORK	LIMESTONE	14.4	287.5
354.1	CARBONDALE	BRERETON	LIMESTONE	4.0	301.9
350.1	CARBONDALE	ANNA	BLACK SHALE	5.3	305.9
344.0	CARBONDALE	HERRIN	COAL	7.6	312.0

MAPID: 11700188000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 4 QUARTERS/FOOTAGES: 4200' S line, 120' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.88534 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.082531 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 319.1 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
385.5	MODESTO	PIASA	LIMESTONE	3.0	270.5
382.5	MODESTO		UNCLASSIFIED	5.5	273.5
377.0	CARBONDALE	DANVILLE	COAL	2.2	279.0
374.8	CARBONDALE		UNCLASSIFIED	6.8	281.2
368.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	288.0
360.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.4	296.0
358.6	CARBONDALE		UNCLASSIFIED	1.0	297.4
357.6	CARBONDALE	BRERETON	LIMESTONE	8.0	298.4
349.6	CARBONDALE	ANNA	BLACK SHALE	5.6	306.4
344.0	CARBONDALE	HERRIN	COAL	7.1	312.0

MAPID: 11700188000C VERSION: 4

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 4 QUARTERS/FOOTAGES: 4200' S line, 120' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.88534 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.082531 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 656.3 LOGGED (FT.): 319.0 LOG TYPE:

SOURCE: SUPERIORCC0034 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
344.3	CARBONDALE	HERRIN	COAL	7.1	312.0	

MAPID: 11700188000C VERSION: 5

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 4 QUARTERS/FOOTAGES: 4200' S line, 120' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.88534 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.082531 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 656.3 LOGGED (FT.): 319.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO., HOLE #34 WELL TYPE: Coal Test

COMMENT: ESOURCE IS PLAIN TABLE, J.HOUSCHILD FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
656.3			UNCONSOLIDATED	15.0	0.0	
641.3			SAND/CLAY	16.0	15.0	
625.3			SANDY CLAY	20.0	31.0	
605.3			SANDY CLAY	39.0	51.0	
566.3	MODESTO		SHALE	12.0	90.0	
554.3	MODESTO		UNKNOWN	7.3	102.0	LOG HAS ROCK
547.0	MODESTO		SANDY SHALE	24.7	109.3	
522.3	MODESTO		SHALE	10.0	134.0	
512.3	MODESTO	CHAPEL	COAL	0.5	144.0	
511.8	MODESTO		SHALE	11.5	144.5	
500.3	MODESTO		SANDSTONE	21.0	156.0	
479.3	MODESTO		SANDY SHALE	28.0	177.0	
451.3	MODESTO		SHALE	23.0	205.0	
428.3	MODESTO		SANDY SHALE	25.0	228.0	
403.3	MODESTO		LIMESTONE	1.7	253.0	
401.6	MODESTO		CALCAREOUS SHALE	12.8	254.7	
388.8	MODESTO		SHALE	2.5	267.5	
386.3	MODESTO	PIASA	LIMESTONE	3.0	270.0	
383.3	MODESTO		SHALE	5.5	273.0	
377.8	CARBONDALE	DANVILLE	COAL	2.2	278.5	
375.6	CARBONDALE		CALCAREOUS SHALE	6.8	280.7	
368.8	CARBONDALE		LIMESTONE	18.4	287.5	
350.4	CARBONDALE		SHALE	0.3	305.9	
350.0	CARBONDALE		UNKNOWN	5.3	306.3	LOG HAS ROCK
344.8	CARBONDALE	HERRIN	COAL	7.1	311.5	
337.7	CARBONDALE		UNDERCLAY	0.4	318.6	

MAPID: 11700721000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 4 QUARTERS/FOOTAGES: 330' S line, 410' E line of NW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.87783 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.079152 DATE COLLECTED: 2 / 0 / 1959

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 318.0 LOG TYPE: Electric Log

SOURCE: KESL JOE JR ETAL WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
372.0	MODESTO	PIASA	LIMESTONE	5.0	270.0
367.0	MODESTO		UNCLASSIFIED	3.5	275.0
363.5	CARBONDALE		UNCLASSIFIED	9.5	278.5
354.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	288.0
346.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	296.0
344.0	CARBONDALE		UNCLASSIFIED	2.0	298.0
342.0	CARBONDALE	BRERETON	LIMESTONE	8.0	300.0
334.0	CARBONDALE	ANNA	BLACK SHALE	4.0	308.0
330.0	CARBONDALE	HERRIN	COAL	6.0	312.0

MAPID: 11722364000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 5 QUARTERS/FOOTAGES: 70' S line, 1875' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.897319 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.071202 DATE COLLECTED: 9 / 22 / 1977

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 325.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-58 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIS, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
655.0			UNCONSOLIDATED	115.0	0.0	
540.0	MODESTO		GRAY SHALE	22.0	115.0	
518.0	MODESTO		SANDY SHALE	29.0	137.0	
489.0	MODESTO		GRAY SHALE	59.0	166.0	
430.0	MODESTO		BLACK SHALE	2.0	225.0	
428.0	MODESTO		GRAY SHALE	11.0	227.0	
417.0	MODESTO		SANDSTONE	16.0	238.0	
401.0	MODESTO		SHALE	6.0	254.0	
395.0	MODESTO	PIASA	LIMESTONE	2.0	260.0	
393.0	MODESTO		GRAY SHALE	3.0	262.0	
390.0	MODESTO		BLACK SHALE	2.0	265.0	
388.0	CARBONDALE	DANVILLE	COAL	1.0	267.0	
387.0	CARBONDALE		GRAY SHALE	14.0	268.0	
373.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	282.0	
368.0	CARBONDALE		SHALE	1.0	287.0	
367.0	CARBONDALE	BRERETON	LIMESTONE	11.0	288.0	
356.0	CARBONDALE	ANNA	BLACK SHALE	1.5	299.0	
354.5	CARBONDALE	HERRIN	COAL	5.5	300.5	
349.0	CARBONDALE		UNDERCLAY	1.0	306.0	
348.0	CARBONDALE		LIMESTONE	5.0	307.0	
343.0	CARBONDALE		BLACK SHALE	2.0	312.0	
341.0	CARBONDALE		GRAY SHALE	4.0	314.0	
337.0	CARBONDALE		LIMESTONE	1.0	318.0	
336.0	CARBONDALE		CALCAREOUS SHALE	6.0	319.0	

MAPID: 11700629000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 6 QUARTERS/FOOTAGES: 330' N line, 450' E line of SW NE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.910363 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.081073 DATE COLLECTED: 3 / 0 / 1957

SURFACE ELEVATION (FT.): 667.0 LOGGED (FT.): 303.0 LOG TYPE: Electric Log

SOURCE: MILLER HARRY M WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
409.0	MODESTO	PIASA	LIMESTONE	5.0	258.0
404.0	MODESTO		UNCLASSIFIED	4.0	263.0
400.0	CARBONDALE		UNCLASSIFIED	12.0	267.0
388.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	279.0
383.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	284.0
382.0	CARBONDALE		UNCLASSIFIED	2.0	285.0
380.0	CARBONDALE	BRERETON	LIMESTONE	8.0	287.0
372.0	CARBONDALE	ANNA	BLACK SHALE	2.0	295.0
370.0	CARBONDALE	HERRIN	COAL	6.0	297.0

MAPID: 11701352000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 6 QUARTERS/FOOTAGES: NW NW NE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.912368 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.084716 DATE COLLECTED:

SURFACE ELEVATION (FT.): 672.0 LOGGED (FT.): 317.0 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO ED-2 WELL TYPE: Coal Test

COMMENT: CORE C-8761

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
364.0	CARBONDALE	HERRIN	COAL	7.2	308.0

MAPID: 11701352000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 6 QUARTERS/FOOTAGES: NW NW NE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.912368

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.084716

DATE COLLECTED:

SURFACE ELEVATION (FT.): 672.0 LOGGED (FT.): 322.2

LOG TYPE: Survey Core Study

SOURCE: TRUAX-TRAER COAL CO ED-2

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
417.0	MODESTO	PIASA	LIMESTONE	7.0	255.0	
410.0	MODESTO		ROCK	15.5	262.0	
394.5	CARBONDALE	DANVILLE	COAL	1.5	277.5	
393.0	CARBONDALE		SHALE & SILTSTONE	2.2	279.0	
390.8	CARBONDALE		LIMESTONE W/ SHALE	3.4	281.2	
387.4	CARBONDALE	BANKSTON FORK	LIMESTONE	0.6	284.6	UPPER BENCH
386.8	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.0	285.2	SHALE PARTING
384.8	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	9.3	287.2	LOWER BENCH
375.5	CARBONDALE	BRERETON	LIMESTONE W/ SHALE	3.6	296.5	
372.0	CARBONDALE	ANNA	BLACK SHALE	3.2	300.0	
357.0	CARBONDALE	HERRIN	COAL	7.2	315.0	

MAPID: 11722168000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 6 QUARTERS/FOOTAGES: 78' S line, 2622' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.91354 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.071298 DATE COLLECTED: 9 / 17 / 1979

SURFACE ELEVATION (FT.): 664.0 LOGGED (FT.): 320.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-6-25C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
664.0			UNCONSOLIDATED	62.0	0.0
602.0	MODESTO		BLACK SHALE	3.0	62.0
599.0	MODESTO		GRAY SHALE	25.0	65.0
574.0	MODESTO	CARLINVILLE	LIMESTONE	7.0	90.0
567.0	MODESTO		GRAY SHALE	23.0	97.0
544.0	MODESTO		SANDY SHALE	62.0	120.0
482.0	MODESTO		GRAY SHALE	48.0	182.0
434.0	MODESTO		BLACK SHALE	2.0	230.0
432.0	MODESTO		GRAY SHALE	19.0	232.0
413.0	MODESTO		SHALE	4.5	251.0
408.5	MODESTO	PIASA	LIMESTONE	2.5	255.5
406.0	MODESTO		SHALE	7.3	258.0
398.7	CARBONDALE	DANVILLE	COAL	1.0	265.3
397.7	CARBONDALE		CALCAREOUS SHALE	11.5	266.3
386.2	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	11.1	277.8
375.1	CARBONDALE		GRAY SHALE	2.7	288.9
372.4	CARBONDALE	BRERETON	LIMESTONE	3.6	291.6
368.8	CARBONDALE		BLACK SHALE	1.8	295.2
367.0	CARBONDALE	HERRIN	COAL	6.1	297.0
360.9	CARBONDALE		SHALE	1.3	303.1
359.6	CARBONDALE		CORE LOSS	0.2	304.4
359.5	CARBONDALE		LIMESTONE	1.5	304.5
358.0	CARBONDALE		CALCAREOUS SHALE	12.0	306.0
346.0	CARBONDALE		GRAY SHALE	2.0	318.0

MAPID: 11700786000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 7 QUARTERS/FOOTAGES: 455' S line, 150' W line of SE SW SE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.910459

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.057933

DATE COLLECTED: 9 / 0 / 1959

SURFACE ELEVATION (FT.): 649.0

LOGGED (FT.): 291.0

LOG TYPE: Electric Log

SOURCE: SHULL, O. R.

WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
399.0	MODESTO	PIASA	LIMESTONE	4.0	250.0
395.0	MODESTO		UNCLASSIFIED	3.0	254.0
392.0	CARBONDALE		UNCLASSIFIED	8.0	257.0
384.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	265.0
378.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	271.0
376.0	CARBONDALE		UNCLASSIFIED	1.0	273.0
375.0	CARBONDALE	BRERETON	LIMESTONE	10.0	274.0
365.0	CARBONDALE	ANNA	BLACK SHALE	1.0	284.0
364.0	CARBONDALE	HERRIN	COAL	6.0	285.0

MAPID: 11722365000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 7 QUARTERS/FOOTAGES: 1426' S line, 2187' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.911696

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.060612

DATE COLLECTED: 9 / 19 / 1979

SURFACE ELEVATION (FT.): 655.0

LOGGED (FT.): 310.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-54A

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
655.0			UNCONSOLIDATED	80.0	0.0
575.0	MODESTO	CARLINVILLE	LIMESTONE	7.0	80.0
568.0	MODESTO		UNCLASSIFIED	132.0	87.0
436.0	MODESTO		BLACK SHALE	1.0	219.0
435.0	MODESTO		SHALE	25.5	220.0
409.5	MODESTO	PIASA	LIMESTONE	3.5	245.5
406.0	MODESTO		GRAY SHALE	3.0	249.0
403.0	CARBONDALE	DANVILLE	COAL	2.0	252.0
401.0	CARBONDALE		GRAY SHALE	16.5	254.0
384.5	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	5.5	270.5
379.0	CARBONDALE		SHALE	1.5	276.0
377.5	CARBONDALE	BRERETON	LIMESTONE	5.5	277.5
372.0	CARBONDALE	ANNA	BLACK SHALE	1.0	283.0
371.0	CARBONDALE	HERRIN	COAL	6.0	284.0
365.0	CARBONDALE		UNDERCLAY	2.0	290.0
363.0	CARBONDALE		SHALY LIMESTONE	7.0	292.0
356.0	CARBONDALE		GRAY SHALE	4.0	299.0
352.0	CARBONDALE		GRAY SHALE	7.0	303.0

MAPID: 1172236600C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 7 QUARTERS/FOOTAGES: 369' S line, 414' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.921254 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.057679 DATE COLLECTED: 9 / 17 / 1977

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 300.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-57 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
655.0			UNCONSOLIDATED	105.0	0.0	
550.0	MODESTO		SANDY SHALE	5.0	105.0	
545.0	MODESTO		GRAY SHALE	17.0	110.0	
528.0	MODESTO		SANDY LIMESTONE	1.0	127.0	
527.0	MODESTO		SANDSTONE/SHALE	12.0	128.0	
515.0	MODESTO		GRAY SHALE	78.0	140.0	
437.0	MODESTO		BLACK SHALE	1.5	218.0	
435.5	MODESTO		SHALE	7.5	219.5	
428.0	MODESTO		GRAY SHALE	11.0	227.0	
417.0	MODESTO		SHALE	3.5	238.0	
413.5	MODESTO	PIASA	LIMESTONE	3.5	241.5	
410.0	MODESTO		GRAY SHALE	5.0	245.0	
405.0	CARBONDALE	DANVILLE	COAL	1.0	250.0	
404.0	CARBONDALE		GRAY SHALE	7.0	251.0	
397.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	258.0	
394.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.0	261.0	
392.0	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	5.0	263.0	
387.0	CARBONDALE		GRAY SHALE	2.0	268.0	
385.0	CARBONDALE	BRERETON	LIMESTONE	7.0	270.0	
378.0	CARBONDALE		GRAY SHALE	1.0	277.0	
377.0	CARBONDALE	HERRIN	COAL	5.0	278.0	
372.0	CARBONDALE		UNDERCLAY	1.0	283.0	
371.0	CARBONDALE		LIMESTONE	6.5	284.0	
364.5	CARBONDALE		GRAY SHALE	9.5	290.5	

MAPID: 11700089000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 8 QUARTERS/FOOTAGES: 100' S line, 440' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.902391 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.056951 DATE COLLECTED:

SURFACE ELEVATION (FT.): 647.1 LOGGED (FT.): 288.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
647.1			UNCONSOLIDATED	57.0	0.0
590.1	MODESTO		SANDSTONE	13.0	57.0
577.1	MODESTO		DARK SHALE	5.0	70.0
572.1	MODESTO		LIMESTONE	8.0	75.0
564.1	MODESTO		SANDY SHALE	35.0	83.0
529.1	MODESTO		SHALE	5.0	118.0
524.1	MODESTO	TRIVOLI	SANDSTONE	19.0	123.0
505.1	MODESTO		SANDY SHALE	48.0	142.0
457.1	MODESTO		SHALE	28.0	190.0
429.1	MODESTO		SANDSTONE	12.0	218.0
417.1	MODESTO		SANDY SHALE	14.0	230.0
403.1	MODESTO	PIASA	LIMESTONE	2.0	244.0
401.1	MODESTO		SHALE	5.0	246.0
396.1	CARBONDALE	DANVILLE	COAL	0.0	251.0
396.1	CARBONDALE		SHALE	5.0	251.0
391.1	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	256.0
385.1	CARBONDALE		SHALE	13.7	262.0
371.4	CARBONDALE	BRERETON	LIMESTONE	4.0	275.7
367.4	CARBONDALE	ANNA	BLACK SHALE	0.3	279.7
367.1	CARBONDALE	HERRIN	COAL	5.8	280.0
361.3	CARBONDALE		UNDERCLAY	1.0	285.8
360.3	CARBONDALE		SHALE	1.2	286.8

MAPID: 11700189000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 8 QUARTERS/FOOTAGES: 100' S line, 440' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.902391 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.056951 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 647.0 LOGGED (FT.): 285.8 LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
403.0	MODESTO	PIASA	LIMESTONE	2.0	244.0
401.0	MODESTO		UNCLASSIFIED	2.5	246.0
398.5	CARBONDALE		UNCLASSIFIED	7.5	248.5
391.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	256.0
385.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.7	262.0
382.3	CARBONDALE		UNCLASSIFIED	2.0	264.7
380.3	CARBONDALE	BRERETON	LIMESTONE	13.0	266.7
367.3	CARBONDALE	ANNA	BLACK SHALE	0.3	279.7
367.0	CARBONDALE	HERRIN	COAL	5.8	280.0

MAPID: 11700189000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 8 QUARTERS/FOOTAGES: 100' S line, 440' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.902391 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.056951 DATE COLLECTED:

SURFACE ELEVATION (FT.): 647.0 LOGGED (FT.): 285.8 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	2.0	244.0
401.0	MODESTO		GRAY SHALE	4.0	246.0
397.0	CARBONDALE	DANVILLE	BONE COAL	1.0	250.0
396.0	CARBONDALE		SHALE & SANDSTONE	5.0	251.0
391.0	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	17.0	256.0
374.0	CARBONDALE	BRERETON	LIMESTONE	4.0	273.0
370.0	CARBONDALE	ANNA	BLACK SHALE	0.3	277.0
367.0	CARBONDALE	HERRIN	COAL	5.8	280.0

MAPID: 11700189000C VERSION: 3

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 8 QUARTERS/FOOTAGES: 100' S line, 440' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.902391 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.056951 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 647.1 LOGGED (FT.): 288.0 LOG TYPE:

SOURCE: HUNT R W 00C1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
367.1	CARBONDALE	HERRIN	COAL	5.8	280.0

MAPID: 11700189000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 8 QUARTERS/FOOTAGES: 100' S line, 440' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.902391 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.056951 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 647.1 LOGGED (FT.): 288.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT, NO. C-1 WELL TYPE: Coal Test

COMMENT: ESOURCE IN PLAIN TABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
647.1			CLAY & GRAVEL	57.0	0.0
590.1	MODESTO		SANDSTONE	13.0	57.0
577.1	MODESTO		SHALE	5.0	70.0
572.1	MODESTO	CARLINVILLE	LIMESTONE	8.0	75.0
564.1	MODESTO		SANDY SHALE	35.0	83.0
529.1	MODESTO		CALCAREOUS SHALE	5.0	118.0
524.1	MODESTO		SANDSTONE	19.0	123.0
505.1	MODESTO		SANDY SHALE	48.0	142.0
457.1	MODESTO		SHALE	11.0	190.0
446.1	MODESTO		CALCAREOUS SHALE	8.0	201.0
438.1	MODESTO		SHALE	9.0	209.0
429.1	MODESTO		SANDSTONE	12.0	218.0
417.1	MODESTO		SANDY SHALE	14.0	230.0
403.1	MODESTO	PIASA	LIMESTONE	2.0	244.0
401.1			SHALE	10.0	246.0
391.1	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	256.0
385.1	CARBONDALE		CALCAREOUS SHALE	13.7	262.0
371.4	CARBONDALE	BRERETON	LIMESTONE	4.0	275.7
367.4	CARBONDALE	ANNA	BLACK SHALE	0.3	279.7
367.1	CARBONDALE	HERRIN	COAL	5.8	280.0
361.3	CARBONDALE		UNDERCLAY	1.0	285.8
360.3	CARBONDALE		CALCAREOUS SHALE	1.2	286.8

MAPID: 11700561000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 8 QUARTERS/FOOTAGES: 760' S line, 330' E line of SW SW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.900475 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.05876 DATE COLLECTED: 9 / 0 / 1955

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 280.0 LOG TYPE: Electric Log

SOURCE: KESL JOE JR ETAL WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
412.0	MODESTO	PIASA	LIMESTONE	4.0	230.0
408.0	MODESTO		UNCLASSIFIED	4.0	234.0
404.0	CARBONDALE		UNCLASSIFIED	12.0	238.0
392.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	250.0
385.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	257.0
382.0	CARBONDALE		UNCLASSIFIED	3.0	260.0
379.0	CARBONDALE	BRERETON	LIMESTONE	13.0	263.0
366.0	CARBONDALE	HERRIN	COAL	4.0	276.0

MAPID: 11700690000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 8 QUARTERS/FOOTAGES: 630' N line, 330' E line of SE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.886595 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.062009 DATE COLLECTED: 9 / 0 / 1958

SURFACE ELEVATION (FT.): 644.0 LOGGED (FT.): 0.0 LOG TYPE: Electric Log

SOURCE: WILSON, CARLINE WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

MAPID: 11700787000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 8 QUARTERS/FOOTAGES: 330' N line, 330' W line of SW SE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.893499 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.059292 DATE COLLECTED: 7 / 0 / 1959

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 267.0 LOG TYPE: Electric Log

SOURCE: ROSE, HUBERT W. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
419.0	MODESTO	PIASA	LIMESTONE	4.0	221.0
415.0	MODESTO		UNCLASSIFIED	4.0	225.0
411.0	CARBONDALE		UNCLASSIFIED	11.0	229.0
400.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.0	240.0
390.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	250.0
389.0	CARBONDALE		UNCLASSIFIED	1.0	251.0
388.0	CARBONDALE	BRERETON	LIMESTONE	10.0	252.0
378.0	CARBONDALE	HERRIN	COAL	5.0	262.0

MAPID: 11790212000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 8 QUARTERS/FOOTAGES: 700' N line, 63' E line of NE NE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.885773 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.069057 DATE COLLECTED: 9 / 20 / 1977

SURFACE ELEVATION (FT.): 645.5 LOGGED (FT.): 318.0 LOG TYPE: Drillers Log

SOURCE: AMAX 005-012 WELL TYPE: Coal Test

COMMENT: GILLESPIE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
645.5	PLEISTOCENE		UNCONSOLIDATED	92.0	0.0
553.5			ROCK	208.0	92.0
345.5	CARBONDALE	HERRIN	COAL	7.0	300.0
338.5	CARBONDALE		ROCK	11.0	307.0

MAPID: 11790214000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 8 QUARTERS/FOOTAGES: 48' N line, 124' W line of NW NW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.903622 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.070976 DATE COLLECTED: 9 / 22 / 1977

SURFACE ELEVATION (FT.): 656.5 LOGGED (FT.): 294.0 LOG TYPE: Drillers Log

SOURCE: AMAX 005-014 WELL TYPE: Coal Test

COMMENT: GILLESPIE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
656.5	PLEISTOCENE		UNCONSOLIDATED	60.0	0.0
596.5			ROCK	217.0	60.0
379.5	CARBONDALE	HERRIN	COAL	7.0	277.0
372.5	CARBONDALE		ROCK	10.0	284.0

MAPID: 11700190000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 9 QUARTERS/FOOTAGES: SW SW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.875072 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.064614 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 650.4 LOGGED (FT.): 316.6 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
650.4			UNCONSOLIDATED	71.0	0.0	
579.4			GRAY SHALE	2.0	71.0	
577.4			SANDY SHALE	5.0	73.0	
572.4			SHALE	16.0	78.0	
556.4			SANDSTONE	52.0	94.0	
504.4			SANDY SHALE	38.0	146.0	
466.4			GRAY SHALE	57.0	184.0	
409.4			DARK SHALE	2.0	241.0	
407.4			SANDY SHALE	19.0	243.0	
388.4	MODESTO		GRAY SHALE	6.0	262.0	
382.4	MODESTO	PIASA	LIMESTONE	2.0	268.0	
380.4	MODESTO		GRAY SHALE	4.0	270.0	
376.4	MODESTO		DARK SHALE	1.0	274.0	
375.4	CARBONDALE	DANVILLE	COAL	0.8	275.0	
374.6	CARBONDALE		GRAY SHALE	4.2	275.8	
370.4	CARBONDALE		SANDSTONE	1.0	280.0	
369.4	CARBONDALE		SHALE	3.0	281.0	
366.4	CARBONDALE	BANKSTON FORK	LIMESTONE	11.0	284.0	
355.4	CARBONDALE		GRAY SHALE	5.0	295.0	
350.4	CARBONDALE	BRERETON	LIMESTONE	6.0	300.0	
344.4	CARBONDALE	ENERGY	GRAY SHALE	2.6	306.0	
341.8	CARBONDALE	HERRIN	COAL	7.0	308.6	
334.8	CARBONDALE		UNDERCLAY	1.0	315.6	

MAPID: 11700190000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 9 QUARTERS/FOOTAGES: SW SW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.875072

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.064614

DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 322.0

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
380.0	MODESTO	PIASA	LIMESTONE	2.0	270.0
378.0	MODESTO		GRAY SHALE	5.0	272.0
373.0	CARBONDALE	DANVILLE	COAL	0.8	277.0
372.2	CARBONDALE		SHALE & SANDSTONE	5.2	277.8
367.0	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	14.0	283.0
353.0	CARBONDALE		GRAY SHALE	5.0	297.0
348.0	CARBONDALE	BRERETON	LIMESTONE	6.0	302.0
342.0	CARBONDALE	ANNA	BLACK SHALE	2.6	308.0
335.0	CARBONDALE	HERRIN	COAL	7.0	315.0

MAPID: 11700190000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 9 QUARTERS/FOOTAGES: SW SW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.875072

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.064614

DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 316.0

LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO.

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
381.6	MODESTO	PIASA	LIMESTONE	2.0	268.4
379.6	MODESTO		UNCLASSIFIED	5.0	270.4
374.6	CARBONDALE	DANVILLE	COAL	0.8	275.4
373.8	CARBONDALE		UNCLASSIFIED	8.2	276.2
365.6	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	11.0	284.4
354.6	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	295.4
351.6	CARBONDALE		UNCLASSIFIED	2.0	298.4
349.6	CARBONDALE	BRERETON	LIMESTONE	6.0	300.4
343.6	CARBONDALE	ANNA	BLACK SHALE	2.6	306.4
341.0	CARBONDALE	HERRIN	COAL	7.0	309.0

MAPID: 11700190000C VERSION: 4

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 9 QUARTERS/FOOTAGES: SW SW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.875072 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.064614 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 650.4 LOGGED (FT.): 317.0 LOG TYPE:

SOURCE: SUPERIORCC0018 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
341.4	CARBONDALE	HERRIN	COAL	7.0	309.0	

MAPID: 11700192000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 9 QUARTERS/FOOTAGES: 4100' S line, 100' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.88515 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.067867 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 307.9 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
389.0	MODESTO	PIASA	LIMESTONE	3.0	261.0	
386.0	MODESTO		UNCLASSIFIED	5.3	264.0	
380.7	CARBONDALE	DANVILLE	COAL	1.7	269.3	
379.0	CARBONDALE		UNCLASSIFIED	10.0	271.0	
369.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.5	281.0	
362.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	287.5	
360.5	CARBONDALE		UNCLASSIFIED	2.0	289.5	
358.5	CARBONDALE	BRERETON	LIMESTONE	8.0	291.5	
350.5	CARBONDALE	ANNA	BLACK SHALE	1.5	299.5	
349.0	CARBONDALE	HERRIN	COAL	6.9	301.0	

MAPID: 11700192000C VERSION: 2

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 9 QUARTERS/FOOTAGES: 4100' S line, 100' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.88515 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.067867 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 650.4 LOGGED (FT.): 309.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
650.4			UNCONSOLIDATED	112.0	0.0
538.4	MODESTO		GRAY SHALE	28.0	112.0
510.4	MODESTO		UNCLASSIFIED	3.0	140.0
507.4	MODESTO	TRIVOLI	SANDY SHALE	23.0	143.0
484.4	MODESTO		GRAY SHALE	56.0	166.0
428.4	MODESTO		SANDSTONE	3.5	222.0
424.9	MODESTO		DARK SHALE	7.5	225.5
417.4	MODESTO		LIGHT SHALE	2.0	233.0
415.4	MODESTO		SANDSTONE	16.0	235.0
399.4	MODESTO		SANDY SHALE	10.0	251.0
389.4	MODESTO	PIASA	LIMESTONE	3.0	261.0
386.4	MODESTO		DARK SHALE	5.3	264.0
381.1	CARBONDALE	DANVILLE	COAL	1.7	269.3
379.4	CARBONDALE		SHALE	28.5	271.0
350.9	CARBONDALE		DARK SHALE	1.0	299.5
349.9	CARBONDALE		BLACK SHALE	0.5	300.5
349.4	CARBONDALE	HERRIN	COAL	6.9	301.0
342.5	CARBONDALE		UNDERCLAY	1.1	307.9

MAPID: 11700192000C VERSION: 3

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 9 QUARTERS/FOOTAGES: 4100' S line, 100' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.88515 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.067867 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 650.4 LOGGED (FT.): 309.0 LOG TYPE:

SOURCE: SUPERIORCC0033 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
349.4	CARBONDALE	HERRIN	COAL	6.9	301.0

MAPID: 11700731000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 9 QUARTERS/FOOTAGES: 280' S line, 330' W line of NE SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.870452 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.060869 DATE COLLECTED: 3 / 0 / 1959

SURFACE ELEVATION (FT.): 631.0 LOGGED (FT.): 305.0 LOG TYPE: Electric Log

SOURCE: WILSON, CARLINE WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
376.0	MODESTO	PIASA	LIMESTONE	4.0	255.0
372.0	MODESTO		UNCLASSIFIED	4.0	259.0
368.0	CARBONDALE		UNCLASSIFIED	10.0	263.0
358.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	273.0
351.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	4.0	280.0
347.0	CARBONDALE		UNCLASSIFIED	3.0	284.0
344.0	CARBONDALE	BRERETON	LIMESTONE	9.0	287.0
335.0	CARBONDALE	ANNA	BLACK SHALE	1.0	296.0
334.0	CARBONDALE	HERRIN	COAL	8.0	297.0

MAPID: 11700740000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 9 QUARTERS/FOOTAGES: 420' S line, 330' W line of SE NW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.879677 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.064887 DATE COLLECTED: 2 / 0 / 1959

SURFACE ELEVATION (FT.): 644.0 LOGGED (FT.): 312.0 LOG TYPE: Electric Log

SOURCE: LASCODY MICHAEL C WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
379.0	MODESTO	PIASA	LIMESTONE	7.0	265.0
372.0	MODESTO		UNCLASSIFIED	3.5	272.0
368.5	CARBONDALE		UNCLASSIFIED	9.5	275.5
359.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.5	285.0
350.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	293.5
347.5	CARBONDALE		UNCLASSIFIED	2.0	296.5
345.5	CARBONDALE	BRERETON	LIMESTONE	8.5	298.5
337.0	CARBONDALE	ANNA	BLACK SHALE	1.0	307.0
336.0	CARBONDALE	HERRIN	COAL	4.0	308.0

MAPID: 11700018803M VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES:

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.857672

GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.063625

DATE COLLECTED: 9 / 4 / 1940

SURFACE ELEVATION (FT.): LOGGED (FT.): 11.3

LOG TYPE: Measured section

SOURCE: MINE NOTES-SUPERIOR C C # 4

WELL TYPE: Underground mine

COMMENT: N RIB NEAR RM. 15, 5TH E, 5TH SE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			LIMESTONE	-	
-				0.2	
-			BLACK SHALE	0.9	
-			SHALE	3.0	
-	CARBONDALE	HERRIN	COAL	7.3	

MAPID: 11700018801M VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 2610' N line, 1730' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.854478

GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.063569

DATE COLLECTED: 0 / 0 / 1921

SURFACE ELEVATION (FT.): 638.0 LOGGED (FT.): 7.0

LOG TYPE: Measured section

SOURCE: MINE NOTES-SUPERIOR C C # 4

WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
638.0			UNKNOWN	307.0	0.0
331.0	CARBONDALE	HERRIN	COAL	7.0	307.0

MAPID: 11700193000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 300' N line, 900' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.851556 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.069914 DATE COLLECTED: 1 / 0 / 1903

SURFACE ELEVATION (FT.): 639.0 LOGGED (FT.): 319.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
639.0			UNCONSOLIDATED	119.0	0.0
520.0	MODESTO		CLAYSTONE & SHALE	32.0	119.0
488.0	MODESTO		SANDY SHALE	1.0	151.0
487.0	MODESTO		SANDSTONE	8.0	152.0
479.0	MODESTO		SANDY SHALE	10.0	160.0
469.0	MODESTO		CLAYSTONE & SHALE	4.8	170.0
464.2	MODESTO		SANDY SHALE	3.3	174.8
461.0	MODESTO		CLAYSTONE & SHALE	1.3	178.0
459.7	MODESTO		SANDY SHALE	4.5	179.3
455.2	MODESTO		CLAYSTONE & SHALE	4.7	183.8
450.5	MODESTO		SANDY SHALE	7.5	188.5
443.0	MODESTO		CLAYSTONE & SHALE	17.5	196.0
425.5	MODESTO		BLACK SHALE	3.1	213.5
422.4	MODESTO		SHALE	0.2	216.6
422.2	MODESTO		BLACK SHALE	9.3	216.8
413.0	MODESTO		LIMESTONE	0.5	226.0
412.5	MODESTO		CLAYSTONE & SHALE	1.5	226.5
411.0	MODESTO		SANDY SHALE	15.0	228.0
396.0	MODESTO		BLACK SHALE	1.5	243.0
394.5	MODESTO		CLAYSTONE & SHALE	5.5	244.5
389.0	MODESTO		SANDSTONE	5.0	250.0
384.0	MODESTO		SANDSTONE/SHALE	3.0	255.0
381.0	MODESTO		SANDY SHALE	4.5	258.0
376.5	MODESTO		DARK SHALE	2.3	262.5
374.2	MODESTO		SHALE	1.3	264.8
372.9	MODESTO		BLACK SHALE	2.4	266.1
370.5	MODESTO	PIASA	LIMESTONE	2.5	268.5
368.0	MODESTO		BLACK SHALE	5.6	271.0
362.4	CARBONDALE	DANVILLE	COAL	1.2	276.6
361.2	CARBONDALE		BLUE SHALE	9.3	277.8
352.0	CARBONDALE		LIMESTONE	18.8	287.0
333.2	CARBONDALE	ANNA	BLACK SHALE	4.2	305.8
329.0	CARBONDALE	HERRIN	COAL	7.5	310.0
321.5			UNDERCLAY	1.5	317.5

MAPID: 11700193000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 300' N line, 900' E line
 QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.851556 GEOLOGIST: TREWORGY,J
 CONFIDENTIAL: N LATITUDE: 39.069914 DATE COLLECTED: 0 / 0 / 1903
 SURFACE ELEVATION (FT.): 639.0 LOGGED (FT.): 319.0 LOG TYPE: Multiple log types
 SOURCE: SUPERIOR C C WELL TYPE: Coal Test
 COMMENT: 4, 1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
639.0			UNCONSOLIDATED	119.0	0.0
520.0			ROCK	157.6	119.0
362.4	CARBONDALE	DANVILLE	COAL	1.2	276.6
361.2	CARBONDALE		SHALE	9.3	277.8
352.0	CARBONDALE		LIMESTONE	18.8	287.0
333.2	CARBONDALE		BLACK SHALE	4.2	305.8
329.0	CARBONDALE	HERRIN	COAL	7.5	310.0
321.4	CARBONDALE		ROCK	1.4	317.6

MAPID: 11700193000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 300' N line, 900' E line
 QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.851556 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.069914 DATE COLLECTED: 2 / 0 / 1903
 SURFACE ELEVATION (FT.): 639.0 LOGGED (FT.): 317.5 LOG TYPE: Drillers Log
 SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
370.6	MODESTO	PIASA	LIMESTONE	2.5	268.4
368.1	MODESTO		UNCLASSIFIED	5.6	270.9
362.5	CARBONDALE	DANVILLE	COAL	1.2	276.5
361.3	CARBONDALE		UNCLASSIFIED	9.3	277.7
352.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	287.0
345.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	294.0
343.0	CARBONDALE		UNCLASSIFIED	1.8	296.0
341.2	CARBONDALE	BRERETON	LIMESTONE	8.0	297.8
333.2	CARBONDALE	ANNA	BLACK SHALE	4.2	305.8
329.0	CARBONDALE	HERRIN	COAL	7.5	310.0

MAPID: 11700193000C VERSION: 4

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 300' N line, 900' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.851556 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.069914 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 639.0 LOGGED (FT.): 319.0 LOG TYPE:

SOURCE: SUPERIORCC0007 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
329.0	CARBONDALE	HERRIN	COAL	7.5	310.0	

MAPID: 11700194000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 2625' S line, 1740' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.854514 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.063679 DATE COLLECTED: 4 / 0 / 1913

SURFACE ELEVATION (FT.): 636.0 LOGGED (FT.): 304.9 LOG TYPE: Survey Core Study

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
636.0			UNCONSOLIDATED	75.8	0.0	
560.2			ROCK	185.8	75.8	
374.5	CARBONDALE	DANVILLE	COAL	2.2	261.5	
372.3	CARBONDALE		ROCK	13.8	263.7	
358.5	CARBONDALE		LIMESTONE	17.3	277.5	
341.2	CARBONDALE		SHALE	2.0	294.8	
339.2	CARBONDALE	HERRIN	COAL	7.2	296.8	
332.1	CARBONDALE		ROCK	1.0	303.9	

MAPID: 11700194000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 2625' S line, 1740' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.854514

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.063679

DATE COLLECTED:

SURFACE ELEVATION (FT.): 636.0

LOGGED (FT.): 311.2

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
374.9	MODESTO	PIASA	ROCK	4.0	261.1
370.9	MODESTO		BLACK SHALE	3.7	265.1
367.2	CARBONDALE	DANVILLE	COAL	2.2	268.8
365.0	CARBONDALE		SILTY SHALE	13.8	271.0
351.2	CARBONDALE	BANKSTON FORK	LIMESTONE	11.2	284.8
340.0	CARBONDALE	BRERETON	LIMESTONE	6.0	296.0
334.0	CARBONDALE	ANNA	BLACK SHALE	2.0	302.0
332.0	CARBONDALE	HERRIN	COAL	7.2	304.0

MAPID: 11700194000C VERSION: 3

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 2625' S line, 1740' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.854514

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.063679

DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 635.7

LOGGED (FT.): 305.0

LOG TYPE:

SOURCE: SUPERIORCC0017

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
338.7	CARBONDALE	HERRIN	COAL	7.2	297.0

MAPID: 11700194000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 2625' S line, 1740' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.854514 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.063679 DATE COLLECTED: 4 / 0 / 1913

SURFACE ELEVATION (FT.): 635.7 LOGGED (FT.): 304.9 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO., HOLE #17 WELL TYPE: Coal Test

COMMENT: J.GAHGAN FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
635.7			SANDY CLAY	17.0	0.0
618.7			SAND & GRAVEL	5.0	17.0
613.7			SANDY CLAY	20.4	22.0
593.3			SANDY CLAY	14.6	42.4
578.7			SANDY CLAY	18.8	57.0
559.9	MODESTO		SHALE	17.3	75.8
542.7	MODESTO		SANDSTONE	5.5	93.0
537.2	MODESTO		SHALE	31.5	98.5
505.7	MODESTO		SANDY SHALE	40.8	130.0
464.9	MODESTO		SANDY SHALE	44.3	170.8
420.7	MODESTO		SANDY SHALE	5.5	215.0
415.2	MODESTO		SHALE	11.5	220.5
403.7	MODESTO		SANDSTONE	6.3	232.0
397.4	MODESTO		SANDY SHALE	15.5	238.3
381.9	MODESTO	PIASA	LIMESTONE	3.2	253.8
378.7	MODESTO		BLACK SHALE	4.5	257.0
374.2	CARBONDALE	DANVILLE	COAL	2.2	261.5
372.0	CARBONDALE		SANDY SHALE	13.8	263.7
358.2	CARBONDALE		LIMESTONE	17.3	277.5
340.9	CARBONDALE		SHALE	2.0	294.8
338.9	CARBONDALE	HERRIN	COAL	7.2	296.8
331.8	CARBONDALE		UNDERCLAY	1.0	303.9

MAPID: 11700195000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: NE NW SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.85418 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.062706 DATE COLLECTED: 10 / 13 / 1913

SURFACE ELEVATION (FT.): 633.0 LOGGED (FT.): 405.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
633.0			UNCONSOLIDATED	96.5	0.0
536.5			GRAY SHALE	38.5	96.5
498.0			SANDY SHALE	17.0	135.0
481.0			SANDSTONE	3.0	152.0
478.0			SANDY SHALE	72.0	155.0
406.0			GRAY SHALE	11.0	227.0
395.0			DARK SHALE	1.0	238.0
394.0			SANDY SHALE	14.0	239.0
380.0			LIMESTONE	3.0	253.0
377.0	MODESTO		SHALE	6.0	256.0
371.0	MODESTO	PIASA	LIMESTONE	3.0	262.0
368.0	MODESTO		GRAY SHALE	7.0	265.0
361.0	CARBONDALE	DANVILLE	COAL	1.0	272.0
360.0	CARBONDALE		GRAY SHALE	5.0	273.0
355.0	CARBONDALE		SANDY SHALE	14.0	278.0
341.0	CARBONDALE		GRAY SHALE	2.0	292.0
339.0	CARBONDALE	BRERETON	LIMESTONE	9.0	294.0
330.0	CARBONDALE		GRAY SHALE	0.7	303.0
329.3	CARBONDALE	ANNA	BLACK SHALE	2.1	303.7
327.2	CARBONDALE	HERRIN	COAL	6.0	305.8
321.2	CARBONDALE	HERRIN	SHALE	0.2	311.8
321.1	CARBONDALE	HERRIN	COAL	0.8	311.9
320.3	CARBONDALE		UNDERCLAY	2.3	312.7
318.0	CARBONDALE		UNCLASSIFIED	11.0	315.0
307.0	CARBONDALE		GREEN SHALE	7.0	326.0
300.0	CARBONDALE		LIMESTONE	1.0	333.0
299.0	CARBONDALE		GREEN SHALE	12.0	334.0
287.0	CARBONDALE		GRAY SHALE	5.0	346.0
282.0	CARBONDALE		SANDSTONE	2.0	351.0
280.0	CARBONDALE		SANDY SHALE	1.0	353.0
279.0	CARBONDALE		GRAY SHALE	45.8	354.0
233.2	CARBONDALE	SURVANT	COAL	2.5	399.8
230.7	CARBONDALE		GRAY SHALE	2.7	402.3

MAPID: 11700195000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: NE NW SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.85418 GEOLOGIST: TREWORY,J

CONFIDENTIAL: N LATITUDE: 39.062706 DATE COLLECTED: 10 / 13 / 1913

SURFACE ELEVATION (FT.): 633.0 LOGGED (FT.): 405.0 LOG TYPE: Survey Core Study

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
633.0			UNCONSOLIDATED	90.0	0.0	
543.0			ROCK	182.0	90.0	
361.0	CARBONDALE	DANVILLE	COAL	1.0	272.0	
360.0	CARBONDALE		ROCK	5.0	273.0	
355.0	CARBONDALE		SHALE	16.0	278.0	
339.0	CARBONDALE		LIMESTONE	9.0	294.0	
330.0	CARBONDALE		SHALE	0.7	303.0	
329.3	CARBONDALE		BLACK SHALE	2.1	303.7	
327.2	CARBONDALE	HERRIN	COAL	6.9	305.8	
320.3	CARBONDALE		ROCK	87.2	312.7	
233.2	CARBONDALE	SURVANT	COAL	2.5	399.8	
230.7	CARBONDALE		ROCK	2.7	402.3	

MAPID: 11700195000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: NE NW SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.85418 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.062706 DATE COLLECTED: 13 / 0 / 1913

SURFACE ELEVATION (FT.): 633.0 LOGGED (FT.): 312.9 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
370.8	MODESTO	PIASA	LIMESTONE	3.0	262.2	
367.8	MODESTO		UNCLASSIFIED	7.0	265.2	
360.8	CARBONDALE	DANVILLE	COAL	1.0	272.2	
359.8	CARBONDALE		UNCLASSIFIED	9.0	273.2	
350.8	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	282.2	
344.8	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	4.0	288.2	
340.8	CARBONDALE		UNCLASSIFIED	2.0	292.2	
338.8	CARBONDALE	BRERETON	LIMESTONE	9.0	294.2	
329.8	CARBONDALE	ANNA	BLACK SHALE	2.8	303.2	
327.0	CARBONDALE	HERRIN	COAL	6.9	306.0	

MAPID: 11700195000C VERSION: 4

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: NE NW SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.85418 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.062706 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 633.0 LOGGED (FT.): 405.0 LOG TYPE:

SOURCE: SUPERIORCC0022 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
327.0	CARBONDALE	HERRIN	COAL	6.9	306.0	

MAPID: 11700196000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: SE SW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.854178 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.064498 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 633.6 LOGGED (FT.): 310.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
633.6			UNCONSOLIDATED	96.0	0.0	
537.6	MODESTO		GRAY SHALE	37.8	96.0	
499.8	MODESTO	CHAPEL	COAL	0.3	133.8	UNCERTAIN CORRELATION
499.6	MODESTO		LIGHT SHALE	11.0	134.0	
488.6	MODESTO		SANDY SHALE	88.0	145.0	
400.6	MODESTO		DARK SHALE	5.0	233.0	
395.6	MODESTO		SANDY SHALE	19.0	238.0	
376.6	MODESTO		GRAY SHALE	4.0	257.0	
372.6	MODESTO	PIASA	LIMESTONE	2.5	261.0	
370.1	MODESTO		DARK SHALE	4.5	263.5	
365.6	CARBONDALE	DANVILLE	COAL	2.0	268.0	
363.6	CARBONDALE		CALCAREOUS SHALE	14.0	270.0	
349.6	CARBONDALE		UNCLASSIFIED	8.0	284.0	
341.6	CARBONDALE	BRERETON	LIMESTONE	4.0	292.0	
337.6	CARBONDALE	ENERGY	DARK SHALE	6.0	296.0	UNCERTAIN CORRELATION
331.6	CARBONDALE	HERRIN	COAL	7.2	302.0	
324.4	CARBONDALE		UNDERCLAY	0.8	309.2	

MAPID: 11700196000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: SE SW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.854178 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.064498 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 664.0 LOGGED (FT.): 310.0 LOG TYPE: Survey Core Study

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
664.0			UNCONSOLIDATED	96.0	0.0	
568.0			ROCK	37.8	96.0	
530.2	MODESTO	CHAPEL	COAL	0.3	133.8	
530.0	MODESTO		ROCK	104.0	134.0	
426.0	MODESTO		SHALE	23.0	238.0	
403.0	MODESTO		LIMESTONE	2.5	261.0	
400.5	MODESTO		SHALE	4.5	263.5	
396.0	CARBONDALE	DANVILLE	COAL	2.0	268.0	
394.0	CARBONDALE		SHALE	14.0	270.0	
380.0	CARBONDALE		LIMESTONE	12.0	284.0	
368.0	CARBONDALE		SHALE	6.0	296.0	
362.0	CARBONDALE	HERRIN	COAL	7.2	302.0	
354.8	CARBONDALE		ROCK	0.8	309.2	

MAPID: 11700196000C VERSION: 3

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: SE SW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.854178 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.064498 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 633.6 LOGGED (FT.): 310.0 LOG TYPE:

SOURCE: SUPERIORCC0030 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
331.6	CARBONDALE	HERRIN	COAL	7.2	302.0	

MAPID: 11700197000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 2750' S line, 1150' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.852423 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.064017 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 630.5 LOGGED (FT.): 309.8 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
630.5			UNCONSOLIDATED	95.0	0.0	
535.5	MODESTO		GRAY SHALE	33.0	95.0	
502.5	MODESTO	CHAPEL	COAL	0.5	128.0	UNCERTAIN CORRELATION
502.0	MODESTO		LIGHT SHALE	7.5	128.5	
494.5	MODESTO	TRIVOLI	SANDSTONE	54.0	136.0	
440.5	MODESTO		SANDY SHALE	41.3	190.0	
399.2	MODESTO		DARK SHALE	5.0	231.3	
394.2	MODESTO		SANDY SHALE	4.0	236.3	
390.2	MODESTO		SANDSTONE	2.5	240.3	
387.7	MODESTO		SANDY SHALE	10.5	242.8	
377.2	MODESTO		GRAY SHALE	8.5	253.3	
368.7	MODESTO		LIMESTONE	4.0	261.8	
364.7	MODESTO		DARK SHALE	3.0	265.8	
361.7	CARBONDALE	DANVILLE	COAL	1.5	268.8	
360.2	CARBONDALE		SHALE	8.0	270.3	
352.2	CARBONDALE		LIMESTONE	20.1	278.3	
332.2	CARBONDALE		DARK SHALE	2.6	298.3	
329.6	CARBONDALE	HERRIN	COAL	7.6	300.9	
322.0	CARBONDALE		UNDERCLAY	1.3	308.5	

MAPID: 11700197000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 2750' S line, 1150' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.852423 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.064017 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 631.0 LOGGED (FT.): 309.8 LOG TYPE: Survey Core Study

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
631.0			UNCONSOLIDATED	95.0	0.0	
536.0			ROCK	33.0	95.0	
503.0			COAL	0.5	128.0	
502.5			ROCK	114.3	128.5	
388.2			SHALE	10.5	242.8	
377.7			SHALE	8.5	253.3	
369.2			LIMESTONE	4.0	261.8	
365.2			SHALE	3.0	265.8	
362.2	CARBONDALE	DANVILLE	COAL	1.5	268.8	
360.7	CARBONDALE		ROCK	8.0	270.3	
352.7	CARBONDALE		LIMESTONE	20.1	278.3	
332.7	CARBONDALE		SHALE	2.6	298.3	
330.1	CARBONDALE	HERRIN	COAL	7.6	300.9	
322.5	CARBONDALE		ROCK	1.3	308.5	

MAPID: 11700197000C VERSION: 3

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 2750' S line, 1150' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.852423 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.064017 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 630.5 LOGGED (FT.): 310.0 LOG TYPE:

SOURCE: SUPERIORCC0031 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
329.5	CARBONDALE	HERRIN	COAL	7.6	301.0	

MAPID: 11700198000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 50' S line, 422' E line of SW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.854507 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.063743 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 633.4 LOGGED (FT.): 314.4 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
633.4			UNCONSOLIDATED	77.0	0.0	
556.4	MODESTO		GRAY SHALE	16.0	77.0	
540.4	MODESTO		UNCLASSIFIED	6.0	93.0	
534.4	MODESTO		GRAY SHALE	33.0	99.0	
501.4	MODESTO	CHAPEL	COAL	1.0	132.0	UNCERTAIN CORRELATION
500.4	MODESTO		LIGHT SHALE	10.0	133.0	
490.4	MODESTO	TRIVOLI	SANDSTONE	30.0	143.0	
460.4	MODESTO		SANDY SHALE	61.0	173.0	
399.4	MODESTO		DARK SHALE	3.0	234.0	
396.4	MODESTO		SANDY SHALE	25.0	237.0	
371.4	MODESTO	PIASA	LIMESTONE	3.5	262.0	
367.9	MODESTO		DARK SHALE	5.7	265.5	
362.2	CARBONDALE	DANVILLE	COAL	1.7	271.2	
360.6	CARBONDALE		UNCLASSIFIED	11.3	272.8	
349.2	CARBONDALE	BANKSTON FORK	LIMESTONE	20.3	284.2	
329.0	CARBONDALE		GRAY SHALE	0.4	304.4	
328.6	CARBONDALE	BRERETON	LIMESTONE	1.2	304.8	
327.4	CARBONDALE	ENERGY	GRAY SHALE	1.3	306.0	
326.1	CARBONDALE	HERRIN	COAL	5.7	307.3	
320.4	CARBONDALE		UNDERCLAY	1.4	313.0	

MAPID: 11700198000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 50' S line, 422' E line of SW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.854507 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.063743 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 633.0 LOGGED (FT.): 314.0 LOG TYPE: Survey Core Study

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
633.0			UNCONSOLIDATED	77.0	0.0
556.0			ROCK	55.0	77.0
501.0			COAL	1.0	132.0
500.0			ROCK	138.2	133.0
361.8	CARBONDALE	DANVILLE	COAL	1.7	271.2
360.2	CARBONDALE		ROCK	11.3	272.8
348.8	CARBONDALE		LIMESTONE	20.3	284.2
328.6	CARBONDALE		SHALE	0.4	304.4
328.2	CARBONDALE		LIMESTONE	1.2	304.8
327.0	CARBONDALE		SHALE	1.3	306.0
325.7	CARBONDALE	HERRIN	COAL	5.7	307.3
320.0	CARBONDALE		ROCK	1.0	313.0

MAPID: 11700198000C VERSION: 3

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 50' S line, 422' E line of SW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.854507 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.063743 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 633.4 LOGGED (FT.): 314.0 LOG TYPE:

SOURCE: SUPERIORCC 29 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
326.4	CARBONDALE	HERRIN	COAL	5.7	307.0

MAPID: 11700199000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: SW SW SW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.85709 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.064072 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 640.3 LOGGED (FT.): 400.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
640.3			UNCONSOLIDATED	87.0	0.0	
553.3	MODESTO		LIMESTONE	7.0	87.0	
546.3	MODESTO		BLUE SHALE	29.0	94.0	
517.3	MODESTO		SANDY SHALE	3.0	123.0	
514.3	MODESTO		BLUE SHALE	2.5	126.0	
511.8	MODESTO	CHAPEL	COAL	0.2	128.5	UNCERTAIN CORRELATION
511.6	MODESTO		UNDERCLAY	2.9	128.7	
508.7	MODESTO		LIMESTONE W/ SHALE	1.4	131.6	
507.3	MODESTO		SANDSTONE/LIMESTONE	3.0	133.0	
504.3	MODESTO	TRIVOLI	SANDSTONE	15.0	136.0	
489.3	MODESTO		SANDY SHALE	39.0	151.0	
450.3	MODESTO		BLUE SHALE	23.6	190.0	
426.7	MODESTO		LIMESTONE	0.6	213.6	
426.1	MODESTO		CLAYSTONE & SHALE	1.8	214.2	
424.3	MODESTO		SANDY SHALE	12.5	216.0	
411.8	MODESTO		DARK SHALE	0.8	228.5	
411.0	MODESTO		SHALE	3.3	229.3	
407.6	MODESTO		SANDSTONE/SHALE	6.3	232.7	
401.3	MODESTO		SANDY SHALE	13.0	239.0	
388.3	MODESTO		BLUE SHALE	3.0	252.0	
385.3	MODESTO		CLAYSTONE & SHALE	3.5	255.0	
381.8	MODESTO	PIASA	LIMESTONE	2.0	258.5	
379.8	MODESTO	PIASA	LIMESTONE & SHALE	3.0	260.5	
376.8	MODESTO	PIASA	LIMESTONE	0.6	263.5	
376.2	MODESTO		DARK SHALE	2.0	264.1	
374.2	CARBONDALE	DANVILLE	COAL	0.8	266.1	
373.4	CARBONDALE		UNDERCLAY	6.1	266.9	
367.3	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	273.0	
366.0	CARBONDALE		CLAYSTONE & SHALE	4.8	274.3	
361.3	CARBONDALE		SANDY LIMESTONE	10.0	279.0	
351.3	CARBONDALE	ENERGY	BLUE SHALE	2.5	289.0	
348.8	CARBONDALE	ENERGY	DARK SHALE	4.8	291.5	
344.0	CARBONDALE	HERRIN	COAL	6.3	296.3	
337.8	CARBONDALE	HERRIN	SHALE	0.1	302.5	
337.7	CARBONDALE	HERRIN	COAL	1.2	302.6	
336.5	CARBONDALE		UNDERCLAY	2.3	303.8	
334.3	CARBONDALE		LIMESTONE W/ SHALE	5.5	306.0	
328.8	CARBONDALE		LIGHT SHALE	5.5	311.5	
323.3	CARBONDALE		LIMESTONE	4.0	317.0	

319.3	CARBONDALE		BLUE SHALE	1.3	321.0	
318.0	CARBONDALE		CLAYSTONE & SHALE	3.7	322.3	
314.3	CARBONDALE		SANDSTONE/SHALE	19.0	326.0	
295.3	CARBONDALE		SANDY SHALE	10.0	345.0	
285.3	CARBONDALE		BLUE SHALE	27.3	355.0	
258.0	CARBONDALE	SURVANT	COAL	2.0	382.3	UNCERTAIN CORRELATION
256.0	CARBONDALE		SANDY SHALE	5.0	384.3	
251.0	CARBONDALE		SANDSTONE/SHALE	10.8	389.3	

MAPID: 11700199000C **VERSION:** 2 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 10 **QUARTERS/FOOTAGES:** SW SW SW NE
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.85709 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.064072 **DATE COLLECTED:** 0 / 0 / 1913
SURFACE ELEVATION (FT.): 640.0 **LOGGED (FT.):** 400.0 **LOG TYPE:** Survey Core Study
SOURCE: SUPERIOR C C **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
640.0			UNCONSOLIDATED	87.0	0.0	
553.0			ROCK	41.5	87.0	
511.5	MODESTO	CHAPEL	COAL	0.2	128.5	
511.3	MODESTO		ROCK	137.4	128.7	
373.9	CARBONDALE	DANVILLE	COAL	0.9	266.1	
373.1	CARBONDALE		CLAYSTONE	6.1	266.9	
367.0	CARBONDALE		LIMESTONE	1.3	273.0	
365.7	CARBONDALE		SHALE	4.8	274.3	
361.0	CARBONDALE		LIMESTONE	10.0	279.0	
351.0	CARBONDALE		SHALE	7.3	289.0	
343.7	CARBONDALE	HERRIN	COAL	7.5	296.3	
336.2	CARBONDALE		ROCK	51.3	303.8	
285.0	CARBONDALE		SHALE	27.3	355.0	
257.7	CARBONDALE	HOUCHIN CREEK	COAL	2.0	382.3	
255.7	CARBONDALE		ROCK	15.8	384.3	

MAPID: 11700199000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: SW SW SW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.85709 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.064072 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 303.5 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
381.8	MODESTO	PIASA	LIMESTONE	5.6	258.2
376.2	MODESTO		UNCLASSIFIED	2.0	263.8
374.2	CARBONDALE	DANVILLE	COAL	0.8	265.8
373.4	CARBONDALE		UNCLASSIFIED	6.1	266.6
367.3	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	272.7
361.3	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.5	278.7
359.8	CARBONDALE		UNCLASSIFIED	1.0	280.2
358.8	CARBONDALE	BRERETON	LIMESTONE	10.0	281.2
348.8	CARBONDALE	ANNA	BLACK SHALE	4.8	291.2
344.0	CARBONDALE	HERRIN	COAL	7.5	296.0

MAPID: 11700199000C VERSION: 4

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: SW SW SW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.85709 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.064072 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 640.3 LOGGED (FT.): 400.0 LOG TYPE:

SOURCE: SUPERIORCC0024 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
344.3	CARBONDALE	HERRIN	COAL	7.5	296.0

MAPID: 11700200000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 3250' S line, 2000' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.85544 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.065407 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 633.3 LOGGED (FT.): 314.8 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
633.3			UNCONSOLIDATED	69.5	0.0	
563.8	MODESTO		GRAY SHALE	26.0	69.5	
537.8	MODESTO		UNCLASSIFIED	7.5	95.5	
530.3	MODESTO		GRAY SHALE	35.0	103.0	
495.3	MODESTO	CHAPEL	COAL	0.5	138.0	UNCERTAIN CORRELATION
494.8	MODESTO		LIGHT SHALE	10.5	138.5	
484.3	MODESTO	TRIVOLI	SANDSTONE	32.0	149.0	
452.3	MODESTO		SANDY SHALE	19.0	181.0	
433.3	MODESTO		GRAY SHALE	35.7	200.0	
397.6	MODESTO		DARK SHALE	3.3	235.7	
394.3	MODESTO		SANDY SHALE	22.7	239.0	
371.6	MODESTO		GRAY SHALE	3.6	261.7	
368.0	MODESTO	PIASA	LIMESTONE	3.4	265.3	
364.6			LIMESTONE	6.0	268.7	
358.6	CARBONDALE	DANVILLE	COAL	1.6	274.7	
357.0	CARBONDALE		GRAY SHALE	10.4	276.3	
346.6	CARBONDALE	BRERETON	LIMESTONE	18.6	286.7	
328.0	CARBONDALE	ANNA	DARK SHALE	1.2	305.3	
326.9	CARBONDALE	HERRIN	COAL	7.8	306.4	
319.1	CARBONDALE		UNDERCLAY	0.7	314.2	

MAPID: 11700200000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 3250' S line, 2000' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.85544 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.065407 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 633.0 LOGGED (FT.): 314.8 LOG TYPE: Survey Core Study

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
633.0			UNCONSOLIDATED	69.5	0.0	
563.5			ROCK	68.5	69.5	
495.0			COAL	0.5	138.0	
494.5			ROCK	136.2	138.5	
358.3	CARBONDALE	DANVILLE	COAL	1.6	274.7	
356.7	CARBONDALE		SHALE	10.4	276.3	
346.3	CARBONDALE		SANDSTONE	8.0	286.7	
338.3	CARBONDALE		LIMESTONE	10.6	294.7	
327.7	CARBONDALE		SHALE	1.2	305.3	
326.6	CARBONDALE	HERRIN	COAL	7.8	306.4	
318.8	CARBONDALE		ROCK	0.7	314.2	

MAPID: 11700200000C VERSION: 3

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 3250' S line, 2000' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.85544 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.065407 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 633.3 LOGGED (FT.): 315.0 LOG TYPE:

SOURCE: SUPERIORCC0032 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
327.3	CARBONDALE	HERRIN	COAL	7.8	306.0	

MAPID: 11700254000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 2825' S line, 1775' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.854637 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.064234 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 638.1 LOGGED (FT.): 314.0 LOG TYPE:

SOURCE: SUPERIORCC0004 WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
331.1	CARBONDALE	HERRIN	COAL	7.0	307.0	

MAPID: 11700720000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 10 QUARTERS/FOOTAGES: 150' S line, 450' E line of NE SE SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.859283 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.058662 DATE COLLECTED: 12 / 0 / 1958

SURFACE ELEVATION (FT.): 628.0 LOGGED (FT.): 299.0 LOG TYPE: Electric Log

SOURCE: OLIVER, JOHN WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
378.0	MODESTO	PIASA	LIMESTONE	3.0	250.0
375.0	MODESTO		UNCLASSIFIED	4.0	253.0
371.0	CARBONDALE		UNCLASSIFIED	10.0	257.0
361.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	267.0
355.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	4.0	273.0
351.0	CARBONDALE		UNCLASSIFIED	2.0	277.0
349.0	CARBONDALE	BRERETON	LIMESTONE	9.0	279.0
340.0	CARBONDALE	ANNA	BLACK SHALE	3.0	288.0
337.0	CARBONDALE	HERRIN	COAL	8.0	291.0

MAPID: 11700788000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 11 QUARTERS/FOOTAGES: 330' S line, 50' E line of SW SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.84387 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.057301 DATE COLLECTED: 9 / 0 / 1959

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 293.0 LOG TYPE: Electric Log

SOURCE: KESL JOE JR ETAL WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
365.0	MODESTO	PIASA	LIMESTONE	5.0	255.0
360.0	MODESTO		UNCLASSIFIED	2.5	260.0
357.5	CARBONDALE		UNCLASSIFIED	7.5	262.5
350.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	270.0
344.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	276.0
343.0	CARBONDALE		UNCLASSIFIED	1.0	277.0
342.0	CARBONDALE	BRERETON	LIMESTONE	6.0	278.0
336.0	CARBONDALE	ANNA	BLACK SHALE	1.0	284.0
335.0	CARBONDALE	HERRIN	COAL	8.0	285.0

MAPID: 11700202000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 12 **QUARTERS/FOOTAGES:** 2440' N line, 660' W line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.827454 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.063949 **DATE COLLECTED:** 0 / 0 / 1915
SURFACE ELEVATION (FT.): 634.0 **LOGGED (FT.):** 511.0 **LOG TYPE:**
SOURCE: OHIO OIL **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
345.0	CARBONDALE	HERRIN	COAL	8.0	289.0

MAPID: 11700202000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 12 **QUARTERS/FOOTAGES:** 2440' N line, 660' W line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.827454 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.063949 **DATE COLLECTED:** 8 / 0 / 1915
SURFACE ELEVATION (FT.): 634.0 **LOGGED (FT.):** 297.0 **LOG TYPE:** Drillers Log
SOURCE: OHIO OIL CO., THE **WELL TYPE:** Dry Hole
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
379.0	MODESTO	PIASA	LIMESTONE	3.0	255.0
376.0	MODESTO		UNCLASSIFIED	2.0	258.0
374.0	CARBONDALE		UNCLASSIFIED	6.0	260.0
368.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	266.0
364.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	4.0	270.0
360.0	CARBONDALE		UNCLASSIFIED	4.0	274.0
356.0	CARBONDALE	BRERETON	LIMESTONE	11.0	278.0
345.0	CARBONDALE	HERRIN	COAL	8.0	289.0

MAPID: 11700565000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 12 **QUARTERS/FOOTAGES:** 315' N line, 300' W line of NE SW
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.824084 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.062722 **DATE COLLECTED:** 11 / 0 / 1955
SURFACE ELEVATION (FT.): 624.0 **LOGGED (FT.):** 295.0 **LOG TYPE:** Electric Log
SOURCE: BRYANT, G. & M. **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
337.0	CARBONDALE	HERRIN	COAL	8.0	287.0

MAPID: 11700689000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 12 QUARTERS/FOOTAGES: 330' S line, 330' E line of NE NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.821697 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.068153 DATE COLLECTED: 10 / 0 / 1958

SURFACE ELEVATION (FT.): 622.0 LOGGED (FT.): 285.0 LOG TYPE: Electric Log

SOURCE: BURKETT, M. D. OIL WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
377.0	MODESTO	PIASA	LIMESTONE	3.0	245.0	
374.0	MODESTO		UNCLASSIFIED	2.0	248.0	
372.0	CARBONDALE		UNCLASSIFIED	7.0	250.0	
365.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	257.0	
360.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	4.0	262.0	
356.0	CARBONDALE		UNCLASSIFIED	4.0	266.0	
352.0	CARBONDALE	BRERETON	LIMESTONE	10.0	270.0	
342.0	CARBONDALE	HERRIN	COAL	5.0	280.0	

MAPID: 11700203000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 13 QUARTERS/FOOTAGES: NE SE SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.812164 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.044782 DATE COLLECTED: 0 / 0 / 1914

SURFACE ELEVATION (FT.): 551.1 LOGGED (FT.): 660.0 LOG TYPE:

SOURCE: SNOWDENBRO WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
321.1	CARBONDALE	HERRIN	COAL	7.0	230.0	

MAPID: 11700205000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 14 QUARTERS/FOOTAGES: 184' S line, 1452' E line of SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.844039 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.042393 DATE COLLECTED: 0 / 0 / 1915

SURFACE ELEVATION (FT.): 611.7 LOGGED (FT.): 465.0 LOG TYPE:

SOURCE: MILLER OC WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
366.7	CARBONDALE	HERRIN	COAL	7.0	245.0	

MAPID: 11700208000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 14 **QUARTERS/FOOTAGES:** 200' S line, 2440' W line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.83955 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.04237 **DATE COLLECTED:** 0 / 0 / 1915
SURFACE ELEVATION (FT.): 611.3 **LOGGED (FT.):** 500.0 **LOG TYPE:**
SOURCE: MILLER OC **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
363.3	CARBONDALE	HERRIN	COAL	7.0	248.0	

MAPID: 11700292000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 14 **QUARTERS/FOOTAGES:** 593' S line, 701' E line of SW
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.841392 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.043483 **DATE COLLECTED:** 0 / 0 / 1931
SURFACE ELEVATION (FT.): 613.1 **LOGGED (FT.):** 558.0 **LOG TYPE:**
SOURCE: DUNCANBROS **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
370.1	CARBONDALE	HERRIN	COAL	7.0	243.0	

MAPID: 11700292000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 14 **QUARTERS/FOOTAGES:** 593' S line, 701' E line of SW
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.841392 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.043483 **DATE COLLECTED:** 3 / 0 / 1931
SURFACE ELEVATION (FT.): 613.0 **LOGGED (FT.):** 250.0 **LOG TYPE:** Drillers Log
SOURCE: DUNCAN BROTHERS **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
410.0	MODESTO	PIASA	LIMESTONE	5.0	203.0	
405.0	MODESTO		UNCLASSIFIED	3.0	208.0	
402.0	CARBONDALE		UNCLASSIFIED	9.0	211.0	
393.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	220.0	
388.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	4.0	225.0	
384.0	CARBONDALE		UNCLASSIFIED	4.0	229.0	
380.0	CARBONDALE	BRERETON	LIMESTONE	10.0	233.0	
370.0	CARBONDALE	HERRIN	COAL	7.0	243.0	

MAPID: 11700338000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 14 **QUARTERS/FOOTAGES:** 500' S line, 50' E line of NW SW
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.843767 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.046888 **DATE COLLECTED:** 0 / 0 / 1915
SURFACE ELEVATION (FT.): 611.0 **LOGGED (FT.):** 467.0 **LOG TYPE:**
SOURCE: FLEEG LAMB 1 **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
364.0	CARBONDALE	HERRIN	COAL	7.0	247.0	

MAPID: 11700338000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 14 **QUARTERS/FOOTAGES:** 500' S line, 50' E line of NW SW
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.843767 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.046888 **DATE COLLECTED:** 0 / 0 / 1900
SURFACE ELEVATION (FT.): 611.0 **LOGGED (FT.):** 254.0 **LOG TYPE:** Drillers Log
SOURCE: MILLER GAS CO. **WELL TYPE:** Producer-Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
364.0	CARBONDALE	HERRIN	COAL	7.0	247.0	

MAPID: 11700339000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 14 **QUARTERS/FOOTAGES:** 300' S line, 2160' E line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.837264 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.042614 **DATE COLLECTED:** 0 / 0 / 1915
SURFACE ELEVATION (FT.): 612.0 **LOGGED (FT.):** 525.0 **LOG TYPE:**
SOURCE: MILLER GAS CO. **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
355.0	CARBONDALE	HERRIN	COAL	7.0	257.0	

MAPID: 11700339000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 14 **QUARTERS/FOOTAGES:** 300' S line, 2160' E line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.837264 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.042614 **DATE COLLECTED:** 0 / 0 / 1915
SURFACE ELEVATION (FT.): 612.0 **LOGGED (FT.):** 264.0 **LOG TYPE:** Drillers Log
SOURCE: MILLER GAS CO. **WELL TYPE:** Producer-Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
355.0	CARBONDALE	HERRIN	COAL	7.0	257.0	

MAPID: 11700379000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 14 **QUARTERS/FOOTAGES:** 330' S line, 1000' E line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.833158 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.042637 **DATE COLLECTED:** 0 / 0 / 1916
SURFACE ELEVATION (FT.): 609.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: MILLER OC **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
352.0	CARBONDALE	HERRIN	COAL	- 257.0	

MAPID: 11700381000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 14 **QUARTERS/FOOTAGES:** 2612' S line, 1268' E line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.834175 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.04895 **DATE COLLECTED:** 0 / 0 / 1916
SURFACE ELEVATION (FT.): 612.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: SCHOOL HSE **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
360.0	CARBONDALE	HERRIN	COAL	- 252.0	

MAPID: 11700383000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 14 **QUARTERS/FOOTAGES:** 180' S line, 870' W line of NE
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.835895 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.049553 **DATE COLLECTED:** 0 / 0 / 1917
SURFACE ELEVATION (FT.): 613.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: OHIO OIL **WELL TYPE:** Oil and Gas Test
COMMENT:

MAPID: 11700384000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 14 **QUARTERS/FOOTAGES:** 1600' N line, 150' W line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.847753 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.051992 **DATE COLLECTED:** 0 / 0 / 1919
SURFACE ELEVATION (FT.): 577.9 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: MILLER OC **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
355.9	CARBONDALE	HERRIN	COAL	- 222.0	

MAPID: 11700865000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 14 QUARTERS/FOOTAGES: 130' N line, 330' E line of SW NW NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.847155 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.054238 DATE COLLECTED: 9 / 0 / 1960

SURFACE ELEVATION (FT.): 623.0 LOGGED (FT.): 273.0 LOG TYPE: Electric Log

SOURCE: KESL JOE JR ETAL WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
397.0	MODESTO	PIASA	LIMESTONE	4.0	226.0
393.0	MODESTO		UNCLASSIFIED	4.0	230.0
389.0	CARBONDALE		UNCLASSIFIED	11.0	234.0
378.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	245.0
372.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	251.0
369.0	CARBONDALE		UNCLASSIFIED	3.0	254.0
366.0	CARBONDALE	BRERETON	LIMESTONE	8.0	257.0
358.0	CARBONDALE	ANNA	BLACK SHALE	1.0	265.0
357.0	CARBONDALE	HERRIN	COAL	7.0	266.0

MAPID: 11700929000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 14 QUARTERS/FOOTAGES: 347' S line, 330' E line of SW SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.835427 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.042716 DATE COLLECTED: 9 / 0 / 1962

SURFACE ELEVATION (FT.): 604.0 LOGGED (FT.): 248.0 LOG TYPE: Electric Log

SOURCE: NELSON MAURICE E WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
404.0	MODESTO	PIASA	LIMESTONE	5.0	200.0
399.0	MODESTO		UNCLASSIFIED	3.0	205.0
396.0	CARBONDALE		UNCLASSIFIED	9.0	208.0
387.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	217.0
380.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	224.0
377.0	CARBONDALE		UNCLASSIFIED	3.0	227.0
374.0	CARBONDALE	BRERETON	LIMESTONE	10.0	230.0
364.0	CARBONDALE	HERRIN	COAL	8.0	240.0

MAPID: 11700950000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 14 QUARTERS/FOOTAGES: 102' S line, 1336' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.834341

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.042023

DATE COLLECTED:

SURFACE ELEVATION (FT.): 596.0 LOGGED (FT.): 246.9

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. G-23

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
402.0	MODESTO	PIASA	LIMESTONE	2.6	194.0	
399.4	CARBONDALE		ROCK	28.3	196.6	
371.1	CARBONDALE	BANKSTON FORK	LIMESTONE	0.2	224.9	UPPER BENCH
370.8	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	7.7	225.2	SHALE PARTING
363.2	CARBONDALE	BANKSTON FORK	LIMESTONE	6.6	232.8	LOWER BENCH
356.6	CARBONDALE	ANNA	BLACK SHALE	0.3	239.4	
356.0	CARBONDALE	HERRIN	COAL	6.9	240.0	

MAPID: 11700950000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 14 QUARTERS/FOOTAGES: 102' S line, 1336' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.834341

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.042023

DATE COLLECTED:

SURFACE ELEVATION (FT.): 596.0 LOGGED (FT.): 246.9

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-23

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
401.5	MODESTO	PIASA	LIMESTONE	2.6	194.5	
398.9	MODESTO		UNCLASSIFIED	6.3	197.1	
392.6	CARBONDALE		UNCLASSIFIED	13.0	203.4	
379.6	CARBONDALE	BANKSTON FORK	LIMESTONE	9.2	216.4	
370.4	CARBONDALE	ANVIL ROCK	SANDSTONE	2.4	225.6	
368.0	CARBONDALE		SHALE	2.3	228.0	
365.7	CARBONDALE	BRERETON	LIMESTONE	9.4	230.3	
356.3	CARBONDALE	ANNA	BLACK SHALE	0.3	239.7	
356.0	CARBONDALE	HERRIN	COAL	6.9	240.0	

MAPID: 11700950000C **VERSION:** 3 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 14 **QUARTERS/FOOTAGES:** 102' S line, 1336' E line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.834341 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.042023 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 596.4 **LOGGED (FT.):** 248.1 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. G-23 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
356.3	CARBONDALE	HERRIN	COAL	6.9	240.1	

MAPID: 11700386000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 15 **QUARTERS/FOOTAGES:** 2690' S line, 200' E line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.848969 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.049374 **DATE COLLECTED:** 0 / 0 / 1916
SURFACE ELEVATION (FT.): 596.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: HUCKLEBRY **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
356.0	CARBONDALE	HERRIN	COAL	-	240.0	

MAPID: 11700387000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 15 **QUARTERS/FOOTAGES:** 300' N line, 300' E line of SE NW
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.858711 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.052008 **DATE COLLECTED:** 0 / 0 / 1915
SURFACE ELEVATION (FT.): 574.0 **LOGGED (FT.):** 1500.0 **LOG TYPE:**
SOURCE: OHIO OIL **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
332.0	CARBONDALE	HERRIN	COAL	6.0	242.0	

MAPID: 11700388000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 15 **QUARTERS/FOOTAGES:** 1820' N line, 1120' W line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.863039 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.05144 **DATE COLLECTED:** 0 / 0 / 1916
SURFACE ELEVATION (FT.): 621.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: MILLER OC **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
336.0	CARBONDALE	HERRIN	COAL	-	285.0	

MAPID: 11700389000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 15 **QUARTERS/FOOTAGES:** 790' N line, 550' E line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.850257 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.054237 **DATE COLLECTED:** 0 / 0 / 1916
SURFACE ELEVATION (FT.): 613.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: HOOD H **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
353.0	CARBONDALE	HERRIN	COAL	-	260.0	

MAPID: 11700390000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 15 **QUARTERS/FOOTAGES:** 1120' N line, 2280' E line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.856374 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.053349 **DATE COLLECTED:** 0 / 0 / 1916
SURFACE ELEVATION (FT.): 612.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: OHIO OIL **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
344.0	CARBONDALE	HERRIN	COAL	-	268.0	

MAPID: 11700633000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 15 **QUARTERS/FOOTAGES:** 360' S line, 330' E line of SW
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.858719 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.042992 **DATE COLLECTED:** 7 / 0 / 1957
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 0.0 **LOG TYPE:** Electric Log
SOURCE: FAULKNER, C. M. **WELL TYPE:** Dry Hole
COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	MODESTO	PIASA	LIMESTONE	5.0		
-	MODESTO		UNCLASSIFIED	5.0		
-	CARBONDALE		UNCLASSIFIED	15.0		
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.5		
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.5		
-	CARBONDALE		UNCLASSIFIED	1.0		
-	CARBONDALE	BRERETON	LIMESTONE	10.0		
-	CARBONDALE	ANNA	BLACK SHALE	1.0		
-	CARBONDALE	HERRIN	COAL	6.0		

MAPID: 11700762000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 15 QUARTERS/FOOTAGES: 330' N line, 330' W line of NE NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.861201 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.055545 DATE COLLECTED: 6 / 0 / 1959

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

SOURCE: WILSON, CARLINE WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	2.0	
-	MODESTO		UNCLASSIFIED	4.0	
-	CARBONDALE		UNCLASSIFIED	12.0	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	
-	CARBONDALE		UNCLASSIFIED	1.0	
-	CARBONDALE	BRERETON	LIMESTONE	10.0	
-	CARBONDALE	ANNA	BLACK SHALE	1.0	
-	CARBONDALE	HERRIN	COAL	7.0	

MAPID: 11700859000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 15 QUARTERS/FOOTAGES: 575' N line, 530' E line of SE NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.859518 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.051252 DATE COLLECTED: 6 / 0 / 1960

SURFACE ELEVATION (FT.): 574.0 LOGGED (FT.): 240.0 LOG TYPE: Electric Log

SOURCE: KESL JOE JR ETAL WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
384.5	MODESTO	PIASA	LIMESTONE	2.5	189.5
382.0	MODESTO		UNCLASSIFIED	6.0	192.0
376.0	CARBONDALE	DANVILLE	COAL	1.0	198.0
375.0	CARBONDALE		UNCLASSIFIED	13.0	199.0
362.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	212.0
355.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.5	219.0
352.5	CARBONDALE		UNCLASSIFIED	2.0	221.5
350.5	CARBONDALE	BRERETON	LIMESTONE	8.5	223.5
342.0	CARBONDALE	ANNA	BLACK SHALE	2.0	232.0
340.0	CARBONDALE	HERRIN	COAL	6.0	234.0

MAPID: 11700979000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 15 QUARTERS/FOOTAGES: 434' S line, 448' W line of NW SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.865366 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.046839 DATE COLLECTED: 7 / 0 / 1954

SURFACE ELEVATION (FT.): 621.0 LOGGED (FT.): 305.0 LOG TYPE: Electric Log

SOURCE: FRANK, A. R. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
361.0	MODESTO	PIASA	LIMESTONE	5.0	260.0
356.0	MODESTO		UNCLASSIFIED	2.5	265.0
353.5	CARBONDALE		UNCLASSIFIED	7.5	267.5
346.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	275.0
339.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	282.0
336.0	CARBONDALE		UNCLASSIFIED	2.0	285.0
334.0	CARBONDALE	BRERETON	LIMESTONE	10.0	287.0
324.0	CARBONDALE	HERRIN	COAL	8.0	297.0

MAPID: 11700678000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 16 QUARTERS/FOOTAGES: 330' N line, 330' E line of SE SW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.877201 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.044761 DATE COLLECTED: 7 / 0 / 1958

SURFACE ELEVATION (FT.): 622.0 LOGGED (FT.): 269.0 LOG TYPE: Electric Log

SOURCE: HILL BROTHERS WELL TYPE: Junked Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
400.0	MODESTO	PIASA	LIMESTONE	2.5	222.0
397.5	MODESTO		UNCLASSIFIED	4.5	224.5
393.0	CARBONDALE	DANVILLE	COAL	1.0	229.0
392.0	CARBONDALE		UNCLASSIFIED	18.5	230.0
373.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	248.5
369.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.5	252.5
368.0	CARBONDALE		UNCLASSIFIED	1.5	254.0
366.5	CARBONDALE	BRERETON	LIMESTONE	6.5	255.5
360.0	CARBONDALE	ANNA	BLACK SHALE	3.0	262.0
357.0	CARBONDALE	HERRIN	COAL	4.0	265.0

MAPID: 11700683000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 16 QUARTERS/FOOTAGES: 352' S line, 421' W line of NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.874624 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.050252 DATE COLLECTED: 7 / 0 / 1958

SURFACE ELEVATION (FT.): 623.0 LOGGED (FT.): 271.0 LOG TYPE: Electric Log

SOURCE: WAITUKAITIS, JOSEPH WELL TYPE: Producer-Oil

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
398.0	MODESTO	PIASA	LIMESTONE	6.0	225.0
392.0	MODESTO		UNCLASSIFIED	3.0	231.0
389.0	CARBONDALE		UNCLASSIFIED	9.0	234.0
380.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	243.0
374.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	249.0
372.0	CARBONDALE		UNCLASSIFIED	2.0	251.0
370.0	CARBONDALE	BRERETON	LIMESTONE	11.0	253.0
359.0	CARBONDALE	HERRIN	COAL	7.0	264.0

MAPID: 11700687000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 16 QUARTERS/FOOTAGES: 374' S line, 399' E line of NE NW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.877582 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.053936 DATE COLLECTED: 7 / 0 / 1958

SURFACE ELEVATION (FT.): 631.0 LOGGED (FT.): 288.0 LOG TYPE: Electric Log

SOURCE: CAHILL & SMITH WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
390.1	MODESTO	PIASA	LIMESTONE	3.0	240.9
387.1	MODESTO		UNCLASSIFIED	4.3	243.9
382.8	CARBONDALE		UNCLASSIFIED	12.3	248.2
370.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.5	260.5
362.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.5	269.0
359.5	CARBONDALE		UNCLASSIFIED	1.0	271.5
358.5	CARBONDALE	BRERETON	LIMESTONE	6.5	272.5
352.0	CARBONDALE	ANNA	BLACK SHALE	3.0	279.0
349.0	CARBONDALE	HERRIN	COAL	6.0	282.0

MAPID: 11700693000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 16 QUARTERS/FOOTAGES: 330' S line, 330' W line of NE SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.870335 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.046566 DATE COLLECTED: 9 / 0 / 1958

SURFACE ELEVATION (FT.): 622.0 LOGGED (FT.): 282.0 LOG TYPE: Electric Log

SOURCE: KIMZEY CHARLES A WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
382.0	MODESTO	PIASA	LIMESTONE	5.0	240.0
377.0	MODESTO		UNCLASSIFIED	4.0	245.0
373.0	CARBONDALE		UNCLASSIFIED	11.0	249.0
362.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	260.0
356.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	266.0
355.0	CARBONDALE	BRERETON	LIMESTONE	8.0	267.0
347.0	CARBONDALE	HERRIN	COAL	7.0	275.0

MAPID: 11700769000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 16 QUARTERS/FOOTAGES: 267' S line, 350' W line of NW SW NW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.884026 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.051853 DATE COLLECTED: 6 / 0 / 1959

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

SOURCE: WAITUKAITIS, JOSEPH WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	5.0	
-	MODESTO		UNCLASSIFIED	2.5	
-	CARBONDALE		UNCLASSIFIED	7.5	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	
-	CARBONDALE		UNCLASSIFIED	2.0	
-	CARBONDALE	BRERETON	LIMESTONE	7.0	
-	CARBONDALE	HERRIN	COAL	5.0	

MAPID: 11700819000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 16 QUARTERS/FOOTAGES: 990' S line, 990' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.881633 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.044799 DATE COLLECTED: 2 / 0 / 1959

SURFACE ELEVATION (FT.): 626.0 LOGGED (FT.): 265.0 LOG TYPE: Electric Log

SOURCE: ATKINS AND HALE WELL TYPE: Temporarily Abandoned

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
406.0	MODESTO	PIASA	LIMESTONE	2.0	220.0
404.0	MODESTO		UNCLASSIFIED	5.0	222.0
399.0	CARBONDALE		UNCLASSIFIED	14.5	227.0
384.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.5	241.5
378.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	248.0
376.0	CARBONDALE		UNCLASSIFIED	1.5	250.0
374.5	CARBONDALE	BRERETON	LIMESTONE	5.5	251.5
369.0	CARBONDALE	ANNA	BLACK SHALE	3.0	257.0
366.0	CARBONDALE	HERRIN	COAL	5.0	260.0

MAPID: 11700819000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 16 QUARTERS/FOOTAGES: 990' S line, 990' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.881633 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.044799 DATE COLLECTED:

SURFACE ELEVATION (FT.): 626.0 LOGGED (FT.): 266.5 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
406.0	MODESTO	PIASA	LIMESTONE	3.0	220.0
403.0	CARBONDALE		SHALE	21.0	223.0
382.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	244.0
377.0	CARBONDALE	LAWSON	SHALE	4.0	249.0
373.0	CARBONDALE	BRERETON	LIMESTONE	5.0	253.0
368.0	CARBONDALE	ANNA	SHALE	3.0	258.0
365.0	CARBONDALE	HERRIN	COAL	5.5	261.0

MAPID: 11700898000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 16 QUARTERS/FOOTAGES: 833' S line, 311' E line of NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.868109 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.051559 DATE COLLECTED: 6 / 0 / 1961

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 297.0 LOG TYPE: Electric Log

SOURCE: WILSON, CARLINE WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
384.0	MODESTO	PIASA	LIMESTONE	5.0	248.0
379.0	MODESTO		UNCLASSIFIED	5.0	253.0
374.0	CARBONDALE		UNCLASSIFIED	13.0	258.0
361.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	271.0
355.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	277.0
353.0	CARBONDALE		UNCLASSIFIED	1.0	279.0
352.0	CARBONDALE	BRERETON	LIMESTONE	8.0	280.0
344.0	CARBONDALE	ANNA	BLACK SHALE	3.0	288.0
341.0	CARBONDALE	HERRIN	COAL	6.0	291.0

MAPID: 11701103000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 16 QUARTERS/FOOTAGES: 330' N line, 330' W line of SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.874919 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.048371 DATE COLLECTED: 8 / 0 / 1967

SURFACE ELEVATION (FT.): 626.0 LOGGED (FT.): 274.0 LOG TYPE: Electric Log

SOURCE: ATKINS AND HALE WELL TYPE: Producer-Oil

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
398.0	MODESTO	PIASA	LIMESTONE	3.0	228.0
395.0	MODESTO		UNCLASSIFIED	4.0	231.0
391.0	CARBONDALE		UNCLASSIFIED	9.0	235.0
382.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	244.0
374.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	252.0
371.0	CARBONDALE		UNCLASSIFIED	2.0	255.0
369.0	CARBONDALE	BRERETON	LIMESTONE	10.0	257.0
359.0	CARBONDALE	HERRIN	COAL	7.0	267.0

MAPID: 11700774000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 17 QUARTERS/FOOTAGES: 500' S line, 330' E line of SW NE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.89109 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.050739 DATE COLLECTED: 12 / 0 / 1959

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

SOURCE: BRADY, JACK J. WELL TYPE: Producer-Oil

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	5.0	
-	MODESTO		UNCLASSIFIED	3.0	
-	CARBONDALE	DANVILLE	COAL	2.0	
-	CARBONDALE		UNCLASSIFIED	10.0	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	
-	CARBONDALE		UNCLASSIFIED	2.5	
-	CARBONDALE	BRERETON	LIMESTONE	7.5	
-	CARBONDALE	HERRIN	COAL	5.0	

MAPID: 11700782000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 17 QUARTERS/FOOTAGES: 340' S line, 380' E line of NW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.895938 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.050339 DATE COLLECTED: 9 / 0 / 1959

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

SOURCE: RAMBO L W WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	7.0	
-	MODESTO		UNCLASSIFIED	5.0	
-	CARBONDALE		UNCLASSIFIED	13.0	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	
-	CARBONDALE		UNCLASSIFIED	2.0	
-	CARBONDALE	BRERETON	LIMESTONE	7.0	
-	CARBONDALE	HERRIN	COAL	4.0	

MAPID: 11700792000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 17 QUARTERS/FOOTAGES: 990' S line, 990' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.888643 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.044839 DATE COLLECTED: 9 / 0 / 1959

SURFACE ELEVATION (FT.): 628.0 LOGGED (FT.): 261.5 LOG TYPE: Electric Log

SOURCE: ROSE, HUBERT W. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
405.5	MODESTO	PIASA	LIMESTONE	3.5	222.5
402.0	MODESTO		UNCLASSIFIED	4.5	226.0
397.5	CARBONDALE	DANVILLE	COAL	1.0	230.5
396.5	CARBONDALE		UNCLASSIFIED	11.0	231.5
385.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	242.5
381.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	246.5
380.5	CARBONDALE		UNCLASSIFIED	1.0	247.5
379.5	CARBONDALE	BRERETON	LIMESTONE	5.5	248.5
374.0	CARBONDALE	ANNA	BLACK SHALE	3.0	254.0
371.0	CARBONDALE	HERRIN	COAL	4.5	257.0

MAPID: 11700792000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 17 QUARTERS/FOOTAGES: 990' S line, 990' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.888643 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.044839 DATE COLLECTED:

SURFACE ELEVATION (FT.): 628.0 LOGGED (FT.): 261.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
405.0	MODESTO	PIASA	LIMESTONE	3.0	223.0
402.0	CARBONDALE		SHALE	16.0	226.0
386.0	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	7.5	242.0
378.5	CARBONDALE	BRERETON	LIMESTONE	4.6	249.5
373.9	CARBONDALE	ANNA	BLACK SHALE	3.0	254.1
372.0	CARBONDALE	HERRIN	COAL	5.0	256.0

MAPID: 11700795000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 17 QUARTERS/FOOTAGES: 550' S line, 330' E line of NE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.886417 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.05084 DATE COLLECTED: 9 / 0 / 1959

SURFACE ELEVATION (FT.): 638.0 LOGGED (FT.): 276.0 LOG TYPE: Electric Log

SOURCE: BRADY, JACK J. WELL TYPE: Producer-Oil

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
404.5	MODESTO	PIASA	LIMESTONE	3.0	233.5
401.5	MODESTO		UNCLASSIFIED	5.0	236.5
396.5	CARBONDALE	DANVILLE	COAL	1.0	241.5
395.5	CARBONDALE		UNCLASSIFIED	12.0	242.5
383.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	254.5
378.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	259.5
376.5	CARBONDALE		UNCLASSIFIED	1.5	261.5
375.0	CARBONDALE	BRERETON	LIMESTONE	6.0	263.0
369.0	CARBONDALE	ANNA	BLACK SHALE	3.0	269.0
366.0	CARBONDALE	HERRIN	COAL	4.0	272.0

MAPID: 11701330000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 17 QUARTERS/FOOTAGES: 330' S line, 330' W line of NW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.902775 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.050365 DATE COLLECTED: 8 / 0 / 1970

SURFACE ELEVATION (FT.): 652.0 LOGGED (FT.): 292.0 LOG TYPE: Drillers Log

SOURCE: WAITUKAITIS, JOSEPH WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
405.0	MODESTO	PIASA	LIMESTONE	4.0	247.0
401.0	MODESTO		UNCLASSIFIED	5.5	251.0
395.5	CARBONDALE		UNCLASSIFIED	15.5	256.5
380.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	272.0
375.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	277.0
373.0	CARBONDALE		UNCLASSIFIED	1.0	279.0
372.0	CARBONDALE	BRERETON	LIMESTONE	6.0	280.0
366.0	CARBONDALE	ANNA	BLACK SHALE	2.0	286.0
364.0	CARBONDALE	HERRIN	COAL	4.0	288.0

MAPID: 11722169000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 17 QUARTERS/FOOTAGES: 1370' N line, 350' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.902708 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.052897 DATE COLLECTED: 9 / 6 / 1979

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 305.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NC-79-17-26C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
640.0			UNCONSOLIDATED	54.0	0.0
586.0	MODESTO		SHALE	25.0	54.0
561.0	MODESTO	CARLINVILLE	LIMESTONE	7.0	79.0
554.0	MODESTO		GRAY SHALE	35.5	86.0
518.5	MODESTO	CHAPEL	BLACK SHALE	0.5	121.5
518.0	MODESTO		GRAY SHALE	4.0	122.0
514.0	MODESTO		SANDY SHALE	8.0	126.0
506.0	MODESTO		GRAY SHALE	20.0	134.0
486.0	MODESTO		SANDY SHALE	26.0	154.0
460.0	MODESTO		GRAY SHALE	27.0	180.0
433.0	MODESTO		CALCAREOUS SHALE	12.5	207.0
420.5	MODESTO		BLACK SHALE	2.5	219.5
418.0	MODESTO		GRAY SHALE	2.5	222.0
415.5	MODESTO		LIMESTONE	1.5	224.5
414.0	MODESTO		SANDY SHALE	16.0	226.0
398.0	MODESTO		SHALE	2.5	242.0
395.5	MODESTO	PIASA	LIMESTONE	3.5	244.5
392.0	MODESTO		SHALE	4.0	248.0
388.0	CARBONDALE	DANVILLE	COAL	1.0	252.0
387.0	CARBONDALE		GRAY SHALE	7.4	253.0
379.6	CARBONDALE	BANKSTON FORK	LIMESTONE	8.6	260.4
371.0	CARBONDALE		GRAY SHALE	5.4	269.0
365.6	CARBONDALE	BRERETON	LIMESTONE	7.9	274.4
357.7	CARBONDALE		GRAY SHALE	0.7	282.3
357.0	CARBONDALE	HERRIN	COAL	6.4	283.0
350.6	CARBONDALE		SHALE	0.6	289.4
350.1	CARBONDALE		CORE LOSS	0.6	289.9
349.5	CARBONDALE		GRAY SHALE	2.5	290.5
347.0	CARBONDALE		CALCAREOUS SHALE	3.0	293.0
344.0	CARBONDALE		LIMESTONE	2.0	296.0
342.0	CARBONDALE		CALCAREOUS SHALE	4.0	298.0
338.0	CARBONDALE		LIMESTONE	3.0	302.0

MAPID: 11722195000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 17 QUARTERS/FOOTAGES: 1540' S line, 1675' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.898012 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.046439 DATE COLLECTED: 10 / 24 / 1979

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 312.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-17-59A-C WELL TYPE: Coal Test

COMMENT: DRILL LOG AND COMPANY CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
640.0			UNCONSOLIDATED	55.0	0.0
585.0	MODESTO	MACOUPIN	LIMESTONE	1.0	55.0
584.0	MODESTO		SHALE	8.0	56.0
576.0	MODESTO		GRAY SHALE	20.0	64.0
556.0	MODESTO	CARLINVILLE	LIMESTONE	6.7	84.0
549.3	MODESTO		SANDY SHALE	59.6	90.7
489.7	MODESTO	CHAPEL	COAL	0.5	150.3
489.2	MODESTO		SHALE	2.2	150.8
487.0	MODESTO		GRAY SHALE	2.0	153.0
485.0	MODESTO		SANDY SHALE	71.0	155.0
414.0	MODESTO		SHALE	6.0	226.0
408.0	MODESTO		SANDY SHALE	17.0	232.0
391.0	MODESTO	PIASA	LIMESTONE	3.7	249.0
387.3	MODESTO		GRAY SHALE	4.7	252.7
382.6	CARBONDALE	DANVILLE	BLACK SHALE	0.4	257.4
382.2	CARBONDALE		SHALE	6.2	257.8
376.0	CARBONDALE		CALCAREOUS SHALE	0.6	264.0
375.4	CARBONDALE		SHALE	3.4	264.6
372.0	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	4.0	268.0
368.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	272.0
366.1	CARBONDALE	BANKSTON FORK	CORE LOSS	0.2	273.9
366.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	274.0
364.0	CARBONDALE		SHALE	1.6	276.0
362.4	CARBONDALE	BRERETON	SHALY LIMESTONE	14.8	277.6
347.6	CARBONDALE		SHALE	0.3	292.4
347.3	CARBONDALE	HERRIN	BONE COAL	3.8	292.7
343.5	CARBONDALE		SHALE	1.6	296.5
341.9	CARBONDALE		LIMESTONE	4.9	298.1
337.0	CARBONDALE		GRAY SHALE	0.7	303.0
336.3	CARBONDALE		LIMESTONE	3.4	303.7
332.9	CARBONDALE		GRAY SHALE	4.2	307.1
328.7	CARBONDALE		LIMESTONE	0.5	311.3
328.3	CARBONDALE		CORE LOSS	0.3	311.7

MAPID: 11722499000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 17 QUARTERS/FOOTAGES: 144' N line, 1833' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.891835 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.0562 DATE COLLECTED: 9 / 16 / 1977

SURFACE ELEVATION (FT.): 645.0 LOGGED (FT.): 311.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-53 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
645.0			UNCONSOLIDATED	60.0	0.0
585.0			SANDY LIMESTONE	6.5	60.0
578.5			GRAY SHALE	20.0	66.5
558.5			LIMESTONE	6.5	86.5
552.0			SANDY SHALE	4.0	93.0
548.0			GRAY SHALE	35.0	97.0
513.0			SANDY LIMESTONE	2.0	132.0
511.0			SHALE & SANDSTONE	4.5	134.0
506.5			GRAY SHALE	6.5	138.5
500.0	MODESTO		SILTY SHALE	13.0	145.0
487.0	MODESTO		GRAY SHALE	51.0	158.0
436.0	MODESTO		GRAY SHALE	5.0	209.0
431.0	MODESTO		GRAY SHALE	6.0	214.0
425.0	MODESTO		BLACK SHALE	1.5	220.0
423.5	MODESTO		SHALE	3.5	221.5
420.0	MODESTO		CALCAREOUS SHALE	13.5	225.0
406.5	MODESTO		GRAY SHALE	8.5	238.5
398.0	MODESTO		SHALE	2.5	247.0
395.5	MODESTO	PIASA	LIMESTONE	2.5	249.5
393.0	MODESTO		SHALE	5.0	252.0
388.0	MODESTO		SHALE	2.0	257.0
386.0	CARBONDALE		GRAY SHALE	11.0	259.0
375.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	270.0
373.5	CARBONDALE	BANKSTON FORK	SHALE	1.3	271.5
372.2	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	9.0	272.8
363.2	CARBONDALE		FOSSILIFEROUS LIMESTONE	1.2	281.8
362.0	CARBONDALE		SILTY SHALE	1.6	283.0
360.4	CARBONDALE	CONANT	LIMESTONE	0.7	284.6
359.7	CARBONDALE		SILTSTONE	1.7	285.3
358.0	CARBONDALE	BRERETON	FOSSILIFEROUS LIMESTONE	1.5	287.0
356.5	CARBONDALE	ANNA	BLACK SHALE	0.9	288.5
355.6	CARBONDALE	HERRIN	COAL	6.5	289.4
349.1	CARBONDALE		SILTY CLAYSTONE	0.9	295.9
348.2	CARBONDALE		CLAYSTONE	1.2	296.8
347.0	CARBONDALE		LIMESTONE	6.0	298.0
341.0	CARBONDALE		SHALE	5.5	304.0
335.5	CARBONDALE		SHALY LIMESTONE	1.5	309.5

MAPID: 11700209000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 18 QUARTERS/FOOTAGES: 2800' S line, 1300' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.918135 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.049971 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 623.9 LOGGED (FT.): 281.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT AND CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
623.9			UNCONSOLIDATED	68.0	0.0	
555.9	MODESTO		LIMESTONE	6.0	68.0	
549.9	MODESTO		SHALE	3.0	74.0	
546.9	MODESTO		SANDY SHALE	31.0	77.0	
515.9	MODESTO		BLUE SHALE	2.0	108.0	
513.9	MODESTO	CHAPEL	COAL	0.3	110.0	UNCERTAIN CORRELATION
513.6	MODESTO		UNDERCLAY	2.8	110.3	
510.9	MODESTO	TRIVOLI	SANDSTONE	9.0	113.0	
501.9	MODESTO		SHALE	15.0	122.0	
486.9	MODESTO		SANDY SHALE	43.0	137.0	
443.9	MODESTO		SHALE	30.0	180.0	
413.9	MODESTO		DARK SHALE	1.0	210.0	
412.9	MODESTO		SHALE	29.0	211.0	
383.9	CARBONDALE	DANVILLE	COAL	0.0	240.0	
383.9	CARBONDALE		SHALE	10.0	240.0	
373.9	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	250.0	
369.9	CARBONDALE		SHALE	7.0	254.0	
362.9	CARBONDALE	BRERETON	LIMESTONE	8.3	261.0	
354.6	CARBONDALE	ANNA	BLACK SHALE	0.6	269.3	
354.0	CARBONDALE	HERRIN	COAL	6.6	269.9	
347.5	CARBONDALE		UNDERCLAY	2.6	276.4	
344.9	CARBONDALE		SHALE	2.0	279.0	

MAPID: 11700209000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 18 QUARTERS/FOOTAGES: 2800' S line, 1300' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.918135

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.049971

DATE COLLECTED:

SURFACE ELEVATION (FT.): 624.0 LOGGED (FT.): 276.5

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
412.9	CARBONDALE		CALCAREOUS SHALE	39.0	211.1
373.9	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	250.1
369.9	CARBONDALE		CALCAREOUS SHALE	7.0	254.1
362.9	CARBONDALE	BRERETON	LIMESTONE	8.3	261.1
354.6	CARBONDALE	ANNA	BLACK SHALE	0.6	269.4
354.0	CARBONDALE	HERRIN	COAL	6.5	270.0

MAPID: 11700209000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 18 QUARTERS/FOOTAGES: 2800' S line, 1300' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.918135

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.049971

DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 624.0 LOGGED (FT.): 276.5

LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
373.9	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	250.1
369.9	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	4.0	254.1
365.9	CARBONDALE		UNCLASSIFIED	3.0	258.1
362.9	CARBONDALE	BRERETON	LIMESTONE	8.3	261.1
354.6	CARBONDALE	ANNA	BLACK SHALE	0.6	269.4
354.0	CARBONDALE	HERRIN	COAL	6.5	270.0

MAPID: 11700209000C VERSION: 4

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 18 QUARTERS/FOOTAGES: 2800' S line, 1300' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.918135

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.049971

DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 623.9 LOGGED (FT.): 281.0

LOG TYPE:

SOURCE: HUNT R W 00C2

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
353.9	CARBONDALE	HERRIN	COAL	6.6	270.0

MAPID: 11700542000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 18 QUARTERS/FOOTAGES: 340' S line, 500' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.905712 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.04318 DATE COLLECTED: 6 / 0 / 1949

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

SOURCE: KESL JOE JR ETAL WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	4.0	
-	MODESTO		UNCLASSIFIED	4.0	
-	CARBONDALE		UNCLASSIFIED	11.0	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	
-	CARBONDALE		UNCLASSIFIED	2.0	
-	CARBONDALE	BRERETON	LIMESTONE	8.0	
-	CARBONDALE	HERRIN	COAL	6.0	

MAPID: 11722170000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 18 QUARTERS/FOOTAGES: 2613' N line, 39' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.9226 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.049444 DATE COLLECTED: 9 / 12 / 1979

SURFACE ELEVATION (FT.): 644.0 LOGGED (FT.): 305.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-18-29C WELL TYPE: Coal Test

COMMENT: DRILL LOG AND COMPANY CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
644.0			UNCONSOLIDATED	92.0	0.0
552.0	MODESTO		GRAY SHALE	32.0	92.0
520.0	MODESTO	CHAPEL	COAL	0.5	124.0
519.5	MODESTO		GRAY SHALE	26.5	124.5
493.0	MODESTO		GRAY SHALE	41.0	151.0
452.0	MODESTO		SHALE	33.0	192.0
419.0	MODESTO		SANDSTONE	5.0	225.0
414.0	MODESTO		SANDSTONE	17.5	230.0
396.5	MODESTO	PIASA	LIMESTONE	2.5	247.5
394.0	MODESTO		GRAY SHALE	6.0	250.0
388.0	CARBONDALE	DANVILLE	COAL	0.5	256.0
387.5	CARBONDALE		GRAY SHALE	6.5	256.5
381.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	263.0
375.0	CARBONDALE		GRAY SHALE	4.3	269.0
370.7	CARBONDALE	BRERETON	LIMESTONE	9.2	273.3
361.5	CARBONDALE		GRAY SHALE	0.2	282.5
361.3	CARBONDALE		SHALE/COAL	0.2	282.7
361.1	CARBONDALE	HERRIN	COAL	5.5	282.9
355.6	CARBONDALE		CLAYSTONE & SHALE	0.4	288.4
355.2	CARBONDALE		CORE LOSS	0.2	288.8
355.0	CARBONDALE		GRAY SHALE	1.0	289.0
354.0	CARBONDALE		LIMESTONE	8.0	290.0
346.0	CARBONDALE		CALCAREOUS SHALE	6.0	298.0
340.0	CARBONDALE		LIMESTONE	1.0	304.0

MAPID: 11722131000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 19 QUARTERS/FOOTAGES: 1344' S line, 27' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.922567 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.031395 DATE COLLECTED: 4 / 27 / 1979

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 285.5 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-19-16 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
632.0			UNCONSOLIDATED	102.0	0.0	
530.0	MODESTO		GRAY SHALE	95.0	102.0	
435.0	MODESTO		BLACK SHALE	1.0	197.0	
434.0	MODESTO		SHALE	22.0	198.0	
412.0	MODESTO		SHALE	2.0	220.0	
410.0	MODESTO	PIASA	LIMESTONE	2.5	222.0	
407.5	MODESTO		SHALE	3.5	224.5	
404.0	CARBONDALE	DANVILLE	COAL	0.5	228.0	
403.5	CARBONDALE		GRAY SHALE	11.5	228.5	
392.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	240.0	
389.5	CARBONDALE		GRAY SHALE	1.0	242.5	
388.5	CARBONDALE	BRERETON	LIMESTONE	6.5	243.5	
382.0	CARBONDALE		GRAY SHALE	7.5	250.0	
374.5	CARBONDALE	HERRIN	COAL	5.0	257.5	
369.5	CARBONDALE		GRAY SHALE	2.0	262.5	
367.5	CARBONDALE		LIMESTONE	6.0	264.5	
361.5	CARBONDALE		GRAY SHALE	4.0	270.5	
357.5	CARBONDALE		SHALY LIMESTONE	6.0	274.5	
351.5	CARBONDALE		GRAY SHALE	5.0	280.5	

MAPID: 11722132000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 19 QUARTERS/FOOTAGES: 75' N line, 55' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.92257 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.042035 DATE COLLECTED: 5 / 9 / 1979

SURFACE ELEVATION (FT.): 639.0 LOGGED (FT.): 310.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-19-12 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
639.0			UNCONSOLIDATED	82.0	0.0
557.0	MODESTO	CARLINVILLE	LIMESTONE	6.0	82.0
551.0	MODESTO		GRAY SHALE	35.0	88.0
516.0	MODESTO		SANDSTONE	16.0	123.0
500.0	MODESTO		GRAY SHALE	6.0	139.0
494.0	MODESTO		SANDY SHALE	75.0	145.0
419.0	MODESTO		BLACK SHALE	1.5	220.0
417.5	MODESTO		SHALE	4.0	221.5
413.5	MODESTO		CALCAREOUS SHALE	19.0	225.5
394.5	MODESTO		SHALE	3.5	244.5
391.0	MODESTO	PIASA	LIMESTONE	2.5	248.0
388.5	MODESTO		GRAY SHALE	13.5	250.5
375.0	CARBONDALE	DANVILLE	COAL	1.0	264.0
374.0	CARBONDALE		GRAY SHALE	9.0	265.0
365.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	274.0
361.0	CARBONDALE		GRAY SHALE	1.0	278.0
360.0	CARBONDALE	BRERETON	LIMESTONE	3.0	279.0
357.0	CARBONDALE		SHALE	2.0	282.0
355.0	CARBONDALE	HERRIN	COAL	5.0	284.0
350.0	CARBONDALE		UNDERCLAY	1.0	289.0
349.0	CARBONDALE		LIMESTONE	5.5	290.0
343.5	CARBONDALE		GRAY SHALE	4.0	295.5
339.5	CARBONDALE		LIMESTONE	1.0	299.5
338.5	CARBONDALE		GRAY SHALE	3.0	300.5
335.5	CARBONDALE		LIMESTONE	1.0	303.5
334.5	CARBONDALE		GRAY SHALE	4.5	304.5
330.0	CARBONDALE		SHALE	1.0	309.0

MAPID: 11722133000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 19 QUARTERS/FOOTAGES: 2160' S line, 30' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.903983 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.033703 DATE COLLECTED: 5 / 7 / 1979

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 270.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-19-17C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
620.0			UNCONSOLIDATED	122.0	0.0	
498.0	MODESTO		GRAY SHALE	49.0	122.0	
449.0	MODESTO		SANDY SHALE	9.0	171.0	
440.0	MODESTO		BLACK SHALE	1.0	180.0	
439.0	MODESTO		GRAY SHALE	4.5	181.0	
434.5	MODESTO		SHALY SANDSTONE	20.5	185.5	
414.0	MODESTO		SHALE	5.0	206.0	
409.0	MODESTO	PIASA	LIMESTONE	3.0	211.0	
406.0	MODESTO		SHALE	3.0	214.0	
403.0	CARBONDALE		GRAY SHALE	10.5	217.0	
392.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	227.5	
389.0	CARBONDALE	BANKSTON FORK	SHALE	1.0	231.0	
388.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	232.0	
382.5	CARBONDALE		SHALE	2.0	237.5	
380.5	CARBONDALE	BRERETON	LIMESTONE	6.0	239.5	
374.5	CARBONDALE		BLACK SHALE	0.2	245.5	
374.3	CARBONDALE	HERRIN	COAL	6.0	245.7	
368.3	CARBONDALE		GRAY SHALE	3.3	251.7	
365.0	CARBONDALE		LIMESTONE	4.0	255.0	
361.0	CARBONDALE		GRAY SHALE	1.0	259.0	
360.0	CARBONDALE		LIMESTONE	2.5	260.0	
357.5	CARBONDALE		GRAY SHALE	7.5	262.5	

MAPID: 11722367000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 19 QUARTERS/FOOTAGES: 75' N line, 1294' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.908519

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.042032

DATE COLLECTED: 9 / 23 / 1977

SURFACE ELEVATION (FT.): 625.0

LOGGED (FT.): 287.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-52

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
625.0			UNCONSOLIDATED	128.0	0.0	
497.0	MODESTO		SILTY SHALE	73.0	128.0	
424.0	MODESTO		BLACK SHALE	2.0	201.0	
422.0	MODESTO		GRAY SHALE	19.0	203.0	
403.0	MODESTO		SHALE	6.0	222.0	
397.0	MODESTO	PIASA	LIMESTONE	3.0	228.0	
394.0	MODESTO		GRAY SHALE	3.0	231.0	
391.0	MODESTO		BLACK SHALE	2.0	234.0	
389.0	CARBONDALE	DANVILLE	COAL	0.0	236.0	
389.0	CARBONDALE		GRAY SHALE	12.0	236.0	
377.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	248.0	
372.0	CARBONDALE		GRAY SHALE	1.0	253.0	
371.0	CARBONDALE	BRERETON	LIMESTONE	9.0	254.0	
362.0	CARBONDALE	ANNA	BLACK SHALE	2.0	263.0	
360.0	CARBONDALE	HERRIN	COAL	6.0	265.0	
354.0	CARBONDALE		UNDERCLAY	2.0	271.0	
352.0	CARBONDALE		SHALY LIMESTONE	5.0	273.0	
347.0	CARBONDALE		GRAY SHALE	5.2	278.0	
341.8	CARBONDALE		LIMESTONE	2.0	283.2	
339.8	CARBONDALE		GRAY SHALE	1.8	285.2	

MAPID: 11700926000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 20 QUARTERS/FOOTAGES: 360' N line, 365' E line of NW SE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.891181

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.033904

DATE COLLECTED: 7 / 0 / 1962

SURFACE ELEVATION (FT.): 590.0

LOGGED (FT.): 235.0

LOG TYPE: Electric Log

SOURCE: CAMP, W. E.

WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
362.0	CARBONDALE	HERRIN	COAL	7.0	228.0	

MAPID: 11700391000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 21 QUARTERS/FOOTAGES: 4620' S line, 2110' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.874352 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.040386 DATE COLLECTED:

SURFACE ELEVATION (FT.): 588.0 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: BAUER A WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
340.0	CARBONDALE	HERRIN	COAL	-	248.0

MAPID: 11700618000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 21 QUARTERS/FOOTAGES: 610' N line, 540' E line of SW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.873346 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.036762 DATE COLLECTED: 10 / 0 / 1956

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

SOURCE: NOLLAU LELAND WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE		4.0
-	MODESTO		UNCLASSIFIED		4.0
-	CARBONDALE		UNCLASSIFIED		10.0
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED		8.0
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED		3.0
-	CARBONDALE		UNCLASSIFIED		3.0
-	CARBONDALE	BRERETON	LIMESTONE		8.0
-	CARBONDALE	ANNA	BLACK SHALE		2.0
-	CARBONDALE	HERRIN	COAL		6.0

MAPID: 1170076000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 21 QUARTERS/FOOTAGES: 330' N line, 330' E line of NW SW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.881791 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.03394 DATE COLLECTED: 6 / 0 / 1959

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 264.0 LOG TYPE: Electric Log

SOURCE: WYANET DRLG CO WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
395.0	MODESTO	PIASA	LIMESTONE	5.0	225.0
390.0	MODESTO		UNCLASSIFIED	4.0	230.0
386.0	CARBONDALE		UNCLASSIFIED	12.0	234.0
374.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	246.0
369.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	251.0
368.0	CARBONDALE	BRERETON	LIMESTONE	6.0	252.0
362.0	CARBONDALE	HERRIN	COAL	6.0	258.0

MAPID: 11700952000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 21 QUARTERS/FOOTAGES: 31' N line, 1595' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.872541 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.041963 DATE COLLECTED:

SURFACE ELEVATION (FT.): 596.0 LOGGED (FT.): 263.6 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. G-22 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
378.6	MODESTO	PIASA	LIMESTONE	2.8	217.4
375.8	CARBONDALE		SHALE	15.9	220.2
359.8	CARBONDALE	BANKSTON FORK	LIMESTONE	4.2	236.2
355.7	CARBONDALE	LAWSON	SANDSTONE	7.4	240.3
348.2	CARBONDALE	LAWSON	GRAY SHALE	1.5	247.8
346.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	6.2	249.3
340.5	CARBONDALE	ANNA	BLACK SHALE	2.5	255.5
338.0	CARBONDALE	HERRIN	COAL	5.6	258.0

MAPID: 11700952000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 21 QUARTERS/FOOTAGES: 31' N line, 1595' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.872541 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.041963 DATE COLLECTED:

SURFACE ELEVATION (FT.): 596.0 LOGGED (FT.): 264.6 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-22 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
377.9	MODESTO	PIASA	LIMESTONE	2.8	218.1
375.1	MODESTO		UNCLASSIFIED	4.0	220.9
371.1	CARBONDALE		UNCLASSIFIED	11.9	224.9
359.2	CARBONDALE	BANKSTON FORK	LIMESTONE	9.2	236.8
350.0	CARBONDALE	ANVIL ROCK	SANDSTONE	2.4	246.0
347.6	CARBONDALE		SHALE	1.5	248.4
346.1	CARBONDALE	BRERETON	LIMESTONE	6.3	249.9
339.8	CARBONDALE	ANNA	BLACK SHALE	2.8	256.2
337.0	CARBONDALE	HERRIN	COAL	5.6	259.0

MAPID: 11700952000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 21 QUARTERS/FOOTAGES: 31' N line, 1595' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.872541 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.041963 DATE COLLECTED:

SURFACE ELEVATION (FT.): 595.6 LOGGED (FT.): 264.7 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-22 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
337.4	CARBONDALE	HERRIN	COAL	5.6	258.2

MAPID: 11700983000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 21 QUARTERS/FOOTAGES: 330' S line, 330' E line of NE NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.868042 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.039349 DATE COLLECTED: 6 / 0 / 1954

SURFACE ELEVATION (FT.): 608.0 LOGGED (FT.): 280.0 LOG TYPE: Electric Log

SOURCE: UPDIKE ROY WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
374.0	MODESTO	PIASA	LIMESTONE	4.0	234.0
370.0	MODESTO		UNCLASSIFIED	4.0	238.0
366.0	CARBONDALE	DANVILLE	COAL	2.0	242.0
364.0	CARBONDALE		UNCLASSIFIED	8.0	244.0
356.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	252.0
348.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	260.0
346.0	CARBONDALE		UNCLASSIFIED	2.0	262.0
344.0	CARBONDALE	BRERETON	LIMESTONE	8.0	264.0
336.0	CARBONDALE	ANNA	BLACK SHALE	2.0	272.0
334.0	CARBONDALE	HERRIN	COAL	6.0	274.0

MAPID: 11700210000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 22 QUARTERS/FOOTAGES: 1440' N line, 2140' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.859288 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.038023 DATE COLLECTED: 2 / 0 / 1903

SURFACE ELEVATION (FT.): 608.8 LOGGED (FT.): 283.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
608.8			UNCONSOLIDATED	100.0	0.0
508.8	MODESTO		LIMESTONE	1.0	100.0
507.8	MODESTO		UNDERCLAY	8.0	101.0
499.8	MODESTO		SHALE	4.0	109.0
495.8	MODESTO		SANDY SHALE	62.0	113.0
433.8	MODESTO		DARK SHALE	16.0	175.0
417.8	MODESTO		CLAYSTONE	4.0	191.0
413.8	MODESTO		SHALE	12.0	195.0
401.8	MODESTO		LIMESTONE	2.0	207.0
399.8	MODESTO		SANDSTONE/LIMESTONE	16.0	209.0
383.8	MODESTO		SHALE	8.0	225.0
375.8	MODESTO	PIASA	LIMESTONE	5.0	233.0
370.8	MODESTO		DARK SHALE	3.0	238.0
367.8	CARBONDALE	DANVILLE	COAL	0.7	241.0
367.1	CARBONDALE		UNDERCLAY	0.3	241.7
366.8	CARBONDALE		CLAYSTONE & SHALE	12.0	242.0
354.8	CARBONDALE		LIMESTONE	19.0	254.0
335.8	CARBONDALE	ANNA	BLACK SHALE	2.7	273.0
333.1	CARBONDALE	HERRIN	COAL	6.7	275.7
326.5	CARBONDALE		UNDERCLAY	0.7	282.3

MAPID: 11700210000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 22 QUARTERS/FOOTAGES: 1440' N line, 2140' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.859288 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.038023 DATE COLLECTED: 2 / 0 / 1903

SURFACE ELEVATION (FT.): 609.0 LOGGED (FT.): 283.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
609.0			UNCONSOLIDATED	100.0	0.0
509.0			ROCK	141.0	100.0
368.0	CARBONDALE	DANVILLE	COAL	0.7	241.0
367.3	CARBONDALE		ROCK	12.3	241.7
355.0	CARBONDALE		LIMESTONE	19.0	254.0
336.0	CARBONDALE		BLACK SHALE	2.7	273.0
333.3	CARBONDALE	HERRIN	COAL	6.7	275.7
326.7	CARBONDALE		ROCK	0.7	282.3

MAPID: 11700210000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 22 QUARTERS/FOOTAGES: 1440' N line, 2140' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.859288 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.038023 DATE COLLECTED: 2 / 0 / 1903

SURFACE ELEVATION (FT.): 609.0 LOGGED (FT.): 282.7 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
376.7	MODESTO	PIASA	LIMESTONE	6.0	232.3
370.7	MODESTO		UNCLASSIFIED	3.0	238.3
367.7	CARBONDALE	DANVILLE	COAL	0.7	241.3
367.0	CARBONDALE		UNCLASSIFIED	12.3	242.0
354.7	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	254.3
347.7	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	261.3
345.7	CARBONDALE		UNCLASSIFIED	2.0	263.3
343.7	CARBONDALE	BRERETON	LIMESTONE	8.0	265.3
335.7	CARBONDALE	ANNA	BLACK SHALE	2.7	273.3
333.0	CARBONDALE	HERRIN	COAL	6.7	276.0

MAPID: 11700210000C **VERSION:** 4 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 22 **QUARTERS/FOOTAGES:** 1440' N line, 2140' W line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.859288 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.038023 **DATE COLLECTED:** 0 / 0 / 1903
SURFACE ELEVATION (FT.): 608.8 **LOGGED (FT.):** 283.0 **LOG TYPE:**
SOURCE: SUPERIORCC0008 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
332.8	CARBONDALE	HERRIN	COAL	6.7	276.0	

MAPID: 11700392000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 22 **QUARTERS/FOOTAGES:** 100' N line, 300' E line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.849246 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.041673 **DATE COLLECTED:** 0 / 0 / 1916
SURFACE ELEVATION (FT.): 595.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: OHIO OIL **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
352.0	CARBONDALE	HERRIN	COAL	-	243.0	

MAPID: 11700771000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 22 **QUARTERS/FOOTAGES:** 770' S line, 885' E line of SW
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.860616 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.029712 **DATE COLLECTED:** 8 / 0 / 1959
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 0.0 **LOG TYPE:** Electric Log
SOURCE: KESL JOE JR ETAL **WELL TYPE:** Dry Hole
COMMENT: NO DEPTH VALUES AVAILABLE

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

MAPID: 11700985000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 22 QUARTERS/FOOTAGES: 615' S line, 330' W line of NW NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.865714 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.040126 DATE COLLECTED: 6 / 0 / 1954

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

SOURCE: UPDIKE ROY WELL TYPE: Plugged and/or Abandoned

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	MODESTO	PIASA	LIMESTONE	3.0		
-	MODESTO		UNCLASSIFIED	5.0		
-	CARBONDALE		UNCLASSIFIED	15.0		
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0		
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0		
-	CARBONDALE		UNCLASSIFIED	2.0		
-	CARBONDALE	BRERETON	LIMESTONE	8.0		
-	CARBONDALE	ANNA	BLACK SHALE	1.0		
-	CARBONDALE	HERRIN	COAL	5.0		

MAPID: 11700207000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 23 QUARTERS/FOOTAGES: 164' N line, 1312' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.843538 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.041425 DATE COLLECTED: 0 / 0 / 1915

SURFACE ELEVATION (FT.): 613.2 LOGGED (FT.): 500.0 LOG TYPE:

SOURCE: MILLER OC WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
366.2	CARBONDALE	HERRIN	COAL	7.0	247.0	

MAPID: 11700211000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 23 QUARTERS/FOOTAGES: NE NW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.835411 GEOLOGIST: TREWORY,J

CONFIDENTIAL: N LATITUDE: 39.040858 DATE COLLECTED: 3 / 0 / 1903

SURFACE ELEVATION (FT.): 609.0 LOGGED (FT.): 257.5 LOG TYPE: Survey Core Study

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
609.0			UNCONSOLIDATED	64.0	0.0	
545.0			ROCK	159.0	64.0	
386.0			LIMESTONE	26.0	223.0	
360.0			BLACK SHALE	0.8	249.0	
359.2	CARBONDALE	HERRIN	COAL	6.9	249.8	
352.3	CARBONDALE		ROCK	0.8	256.7	

MAPID: 11700211000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 23 QUARTERS/FOOTAGES: NE NW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.835411 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.040858 DATE COLLECTED:

SURFACE ELEVATION (FT.): 609.0 LOGGED (FT.): 256.9 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
402.0	MODESTO	PIASA	LIMESTONE	3.3	207.0	
398.7	MODESTO		CLAYSTONE & SHALE	2.0	210.3	
396.7	CARBONDALE	DANVILLE	CARBONACEOUS SHALE	3.0	212.3	
393.7	CARBONDALE		CLAYSTONE & SHALE	8.0	215.3	
385.7	CARBONDALE	BANKSTON FORK	LIMESTONE	19.5	223.3	
366.2	CARBONDALE	BRERETON	LIMESTONE	6.0	242.8	
360.2	CARBONDALE	ANNA	BLACK SHALE	0.8	248.8	
359.0	CARBONDALE	HERRIN	COAL	6.9	250.0	

MAPID: 11700211000C VERSION: 3

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 23 QUARTERS/FOOTAGES: NE NW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.835411 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.040858 DATE COLLECTED:

SURFACE ELEVATION (FT.): 608.9 LOGGED (FT.): 257.5 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
608.9			UNCONSOLIDATED	64.0	0.0	
544.9	MODESTO		SHALE	18.0	64.0	
526.9	MODESTO		LIMESTONE	2.0	82.0	
524.9	MODESTO		CLAYSTONE & SHALE	4.0	84.0	
520.9	MODESTO		SANDY SHALE	67.0	88.0	
453.9	MODESTO		CLAYSTONE & SHALE	9.0	155.0	
444.9	MODESTO		LIMESTONE	0.5	164.0	
444.4	MODESTO		SHALE	0.3	164.5	
444.1	MODESTO		SANDY SHALE	19.3	164.8	
424.9	MODESTO		SANDSTONE	12.0	184.0	
412.9	MODESTO		SANDY SHALE	7.0	196.0	
405.9	MODESTO		SHALE	1.8	203.0	
404.1	MODESTO		CLAYSTONE & SHALE	2.0	204.8	
402.1	MODESTO	PIASA	LIMESTONE	3.3	206.8	
398.9	MODESTO		CLAYSTONE & SHALE	2.0	210.0	
396.9	CARBONDALE	DANVILLE	BLACK SHALE	3.0	212.0	
393.9	CARBONDALE		CLAYSTONE & SHALE	8.0	215.0	
385.9	CARBONDALE		LIMESTONE	26.0	223.0	
359.9	CARBONDALE	ANNA	BLACK SHALE	0.8	249.0	
359.1	CARBONDALE	HERRIN	COAL	6.9	249.8	
352.2	CARBONDALE		UNDERCLAY	0.8	256.7	

MAPID: 11700211000C VERSION: 4

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 23 QUARTERS/FOOTAGES: NE NW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.835411 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.040858 DATE COLLECTED: 3 / 0 / 1903

SURFACE ELEVATION (FT.): 609.0 LOGGED (FT.): 256.9 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
402.1	MODESTO	PIASA	LIMESTONE	3.3	206.9
398.8	MODESTO		UNCLASSIFIED	5.0	210.2
393.8	CARBONDALE		UNCLASSIFIED	12.0	215.2
381.8	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	227.2
373.8	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	235.2
370.8	CARBONDALE		UNCLASSIFIED	2.0	238.2
368.8	CARBONDALE	BRERETON	LIMESTONE	9.0	240.2
359.8	CARBONDALE	ANNA	BLACK SHALE	0.8	249.2
359.0	CARBONDALE	HERRIN	COAL	6.9	250.0

MAPID: 11700211000C VERSION: 5

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 23 QUARTERS/FOOTAGES: NE NW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.835411 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.040858 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 608.9 LOGGED (FT.): 258.0 LOG TYPE:

SOURCE: SUPERIORCC0011 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
358.9	CARBONDALE	HERRIN	COAL	6.9	250.0

MAPID: 11700212000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 23 QUARTERS/FOOTAGES: 2340' S line, 160' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.830146 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.033731 DATE COLLECTED:

SURFACE ELEVATION (FT.): 599.5 LOGGED (FT.): 610.0 LOG TYPE:

SOURCE: MILLER GAS CO. WELL TYPE: Oil and Gas Test

COMMENT:

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

MAPID: 11700212000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 23 **QUARTERS/FOOTAGES:** 2340' S line, 160' E line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.830146 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.033731 **DATE COLLECTED:** 0 / 0 / 1900
SURFACE ELEVATION (FT.): 600.0 **LOGGED (FT.):** 277.0 **LOG TYPE:** Drillers Log
SOURCE: MILLER GAS CO. **WELL TYPE:** Dry Hole
COMMENT:

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

MAPID: 11700213000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 23 **QUARTERS/FOOTAGES:** 600' N line, 600' E line of NW NW
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.84566 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.040251 **DATE COLLECTED:** 0 / 0 / 1916
SURFACE ELEVATION (FT.): 607.5 **LOGGED (FT.):** 495.0 **LOG TYPE:**
SOURCE: MILLER OC 0001 **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
347.5	CARBONDALE	HERRIN	COAL	7.0	260.0	

MAPID: 11700213000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 23 **QUARTERS/FOOTAGES:** 600' N line, 600' E line of NW NW
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.84566 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.040251 **DATE COLLECTED:** 2 / 0 / 1916
SURFACE ELEVATION (FT.): 608.0 **LOGGED (FT.):** 267.0 **LOG TYPE:** Drillers Log
SOURCE: MILLER OIL CO **WELL TYPE:** Unsuccessful or Unknown Results
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
348.0	CARBONDALE	HERRIN	COAL	7.0	260.0	

MAPID: 11700260000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 23 **QUARTERS/FOOTAGES:** NE NW NE
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.835411 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.040858 **DATE COLLECTED:** 0 / 0 / 1917
SURFACE ELEVATION (FT.): 609.1 **LOGGED (FT.):** 500.0 **LOG TYPE:**
SOURCE: LANGERWSCH **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
360.1	CARBONDALE	HERRIN	COAL	6.0	249.0	

MAPID: 11700261000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 23 **QUARTERS/FOOTAGES:** 550' S line, 450' W line of NW NE
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.837296 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.039698 **DATE COLLECTED:** 0 / 0 / 1916
SURFACE ELEVATION (FT.): 610.0 **LOGGED (FT.):** 500.0 **LOG TYPE:**
SOURCE: MILLER OC **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
363.0	CARBONDALE	HERRIN	COAL	6.0	247.0	

MAPID: 11700262000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 23 **QUARTERS/FOOTAGES:** NW NE NE
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.833089 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.040823 **DATE COLLECTED:** 0 / 0 / 1916
SURFACE ELEVATION (FT.): 584.7 **LOGGED (FT.):** 470.0 **LOG TYPE:**
SOURCE: MILLER GAS CO. **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
360.7	CARBONDALE	HERRIN	COAL	-	224.0	

MAPID: 11700263000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 23 **QUARTERS/FOOTAGES:** NW NE
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.836568 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.039974 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 609.4 **LOGGED (FT.):** 497.0 **LOG TYPE:**
SOURCE: MILLER GAS CO. **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
353.4	CARBONDALE	HERRIN	COAL	7.0	256.0	

MAPID: 11700293000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 23 **QUARTERS/FOOTAGES:** NW NE
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.836568 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.039974 **DATE COLLECTED:** 0 / 0 / 1931
SURFACE ELEVATION (FT.): 608.0 **LOGGED (FT.):** 2371.0 **LOG TYPE:**
SOURCE: DUNCANBROS **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
348.0	CARBONDALE	HERRIN	COAL	5.0	260.0	

MAPID: 11700293000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 23 QUARTERS/FOOTAGES: NW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.836568 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.039974 DATE COLLECTED: 9 / 0 / 1931

SURFACE ELEVATION (FT.): 608.0 LOGGED (FT.): 265.0 LOG TYPE: Drillers Log

SOURCE: DUNCAN BROTHERS WELL TYPE: Unsuccessful or Unknown Results

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
388.0	MODESTO	PIASA	LIMESTONE	4.0	220.0
384.0	MODESTO		UNCLASSIFIED	4.0	224.0
380.0	CARBONDALE		UNCLASSIFIED	10.0	228.0
370.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	238.0
363.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	245.0
361.0	CARBONDALE		UNCLASSIFIED	2.0	247.0
359.0	CARBONDALE	BRERETON	LIMESTONE	8.0	249.0
351.0	CARBONDALE	ANNA	BLACK SHALE	3.0	257.0
348.0	CARBONDALE	HERRIN	COAL	5.0	260.0

MAPID: 11700393000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 23 QUARTERS/FOOTAGES: 2330' S line, 2860' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.839703 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.033825 DATE COLLECTED:

SURFACE ELEVATION (FT.): 601.0 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: WILDER E G WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
328.0	CARBONDALE	HERRIN	COAL	-	273.0

MAPID: 11700395000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 23 QUARTERS/FOOTAGES: 1570' N line, 1620' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.835328 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.037424 DATE COLLECTED: 0 / 0 / 1916

SURFACE ELEVATION (FT.): 605.0 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: MILLER OC WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
345.0	CARBONDALE	HERRIN	COAL	-	260.0

MAPID: 11700396000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 23 **QUARTERS/FOOTAGES:** 1020' N line, 1000' E line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.833137 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.03891 **DATE COLLECTED:** 0 / 0 / 1916
SURFACE ELEVATION (FT.): 608.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: MILLER OC **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
362.0	CARBONDALE	HERRIN	COAL	-	246.0

MAPID: 11700551000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 23 **QUARTERS/FOOTAGES:** 200' N line, 330' E line of NW
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.840061 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.041275 **DATE COLLECTED:** 3 / 0 / 1955
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 0.0 **LOG TYPE:** Electric Log
SOURCE: UPDIKE ROY **WELL TYPE:** Dry Hole
COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE		4.0
-	MODESTO		UNCLASSIFIED		5.0
-	CARBONDALE		UNCLASSIFIED		13.0
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED		8.0
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED		3.0
-	CARBONDALE		UNCLASSIFIED		2.0
-	CARBONDALE	BRERETON	LIMESTONE		9.0
-	CARBONDALE	HERRIN	COAL		6.0

MAPID: 11700215000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 24 **QUARTERS/FOOTAGES:** 300' S line, 350' W line of NW SE
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.819009 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.031824 **DATE COLLECTED:** 0 / 0 / 1915
SURFACE ELEVATION (FT.): 526.5 **LOGGED (FT.):** 450.0 **LOG TYPE:**
SOURCE: MILLER GAS CO. **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
341.5	CARBONDALE	HERRIN	COAL	6.0	185.0

MAPID: 11700215000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 24 QUARTERS/FOOTAGES: 300' S line, 350' W line of NW SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.819009 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.031824 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 527.0 LOGGED (FT.): 192.0 LOG TYPE: Drillers Log

SOURCE: MILLER GAS CO. WELL TYPE: Unsuccessful or Unknown Results

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
376.0	MODESTO	PIASA	LIMESTONE	4.0	151.0
372.0	MODESTO		UNCLASSIFIED	4.0	155.0
368.0	CARBONDALE		UNCLASSIFIED	12.0	159.0
356.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	171.0
350.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	177.0
349.0	CARBONDALE		UNCLASSIFIED	1.0	178.0
348.0	CARBONDALE	BRERETON	LIMESTONE	7.0	179.0
341.0	CARBONDALE	HERRIN	COAL	6.0	186.0

MAPID: 11700397000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 24 QUARTERS/FOOTAGES: 300' N line, 300' E line of SE SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.821305 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.030139 DATE COLLECTED: 0 / 0 / 1915

SURFACE ELEVATION (FT.): 530.0 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: IBBETSON E WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
328.0	CARBONDALE	HERRIN	COAL	-	202.0

MAPID: 11700398000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 24 QUARTERS/FOOTAGES: 200' N line, 175' E line of SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.820874 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.034047 DATE COLLECTED: 0 / 0 / 1915

SURFACE ELEVATION (FT.): 532.0 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: MILLER OC WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
332.0	CARBONDALE	HERRIN	COAL	-	200.0

MAPID: 11700398000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 24 QUARTERS/FOOTAGES: 200' N line, 175' E line of SW
 QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.820874 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.034047 DATE COLLECTED: 0 / 0 / 1915
 SURFACE ELEVATION (FT.): 531.0 LOGGED (FT.): 206.0 LOG TYPE: Drillers Log
 SOURCE: MILLER & BACHELOR BR WELL TYPE: Producer-Oil
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
331.0	CARBONDALE	HERRIN	COAL	6.0	200.0	

MAPID: 11700400000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 24 QUARTERS/FOOTAGES: 2730' S line, 2730' E line
 QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.820594 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 39.034887 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 531.0 LOGGED (FT.): 0.0 LOG TYPE:
 SOURCE: SUPERIORCC WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
331.0	CARBONDALE	HERRIN	COAL	-	200.0	

MAPID: 11700401000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 24 QUARTERS/FOOTAGES: 2440' N line, 2440' W line
 QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.820946 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 39.035115 DATE COLLECTED: 0 / 0 / 1916
 SURFACE ELEVATION (FT.): 534.0 LOGGED (FT.): 0.0 LOG TYPE:
 SOURCE: OHIO OIL WELL TYPE: Oil and Gas Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
329.0	CARBONDALE	HERRIN	COAL	-	205.0	

MAPID: 11700402000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 24 QUARTERS/FOOTAGES: 4050' S line, 2815' E line
 QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.820908 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 39.038527 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 581.0 LOGGED (FT.): 0.0 LOG TYPE:
 SOURCE: ADLER H WELL TYPE: Oil and Gas Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
330.0	CARBONDALE	HERRIN	COAL	-	251.0	

MAPID: 11700403000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 24 **QUARTERS/FOOTAGES:** 4090' S line, 4090' E line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.825422 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.038595 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 571.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: ADLER H **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
331.0	CARBONDALE	HERRIN	COAL	-	240.0

MAPID: 11700924000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 24 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of SE
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.819084 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.033715 **DATE COLLECTED:** 5 / 0 / 1962
SURFACE ELEVATION (FT.): 530.0 **LOGGED (FT.):** 205.0 **LOG TYPE:** Electric Log
SOURCE: NELSON MAURICE E **WELL TYPE:** Plugged and/or Abandoned
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
368.0	MODESTO	PIASA	LIMESTONE	5.0	162.0
363.0	MODESTO		UNCLASSIFIED	4.0	167.0
359.0	CARBONDALE		UNCLASSIFIED	10.0	171.0
349.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	181.0
343.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	187.0
341.0	CARBONDALE		UNCLASSIFIED	1.0	189.0
340.0	CARBONDALE	BRERETON	LIMESTONE	8.0	190.0
332.0	CARBONDALE	HERRIN	COAL	7.0	198.0

MAPID: 11700201000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 7W **SECTION:** 25 **QUARTERS/FOOTAGES:** 275' S line, 1970' E line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.817795 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.013678 **DATE COLLECTED:** 0 / 0 / 1915
SURFACE ELEVATION (FT.): 598.7 **LOGGED (FT.):** 538.0 **LOG TYPE:**
SOURCE: MILLER OC 0002 **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
338.7	CARBONDALE	HERRIN	COAL	7.0	260.0

MAPID: 11700217000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 25 QUARTERS/FOOTAGES: 1517' S line, 860' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.826388 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.01702 DATE COLLECTED: 0 / 0 / 1915

SURFACE ELEVATION (FT.): 531.9 LOGGED (FT.): 474.0 LOG TYPE:

SOURCE: MILLER OC 1 WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
334.9	CARBONDALE	HERRIN	COAL	7.0	197.0	

MAPID: 11700217000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 25 QUARTERS/FOOTAGES: 1517' S line, 860' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.826388 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.01702 DATE COLLECTED: 5 / 0 / 1915

SURFACE ELEVATION (FT.): 532.0 LOGGED (FT.): 204.0 LOG TYPE: Drillers Log

SOURCE: MILLER GAS CO. WELL TYPE: Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
370.0	MODESTO	PIASA	LIMESTONE	3.0	162.0	
367.0	MODESTO		UNCLASSIFIED	5.0	165.0	
362.0	CARBONDALE		UNCLASSIFIED	15.0	170.0	
347.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	185.0	
342.0	CARBONDALE	BRERETON	LIMESTONE	5.0	190.0	
337.0	CARBONDALE	ANNA	BLACK SHALE	2.0	195.0	
335.0	CARBONDALE	HERRIN	COAL	7.0	197.0	

MAPID: 11700268000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 25 QUARTERS/FOOTAGES: SE SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.813153 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.014773 DATE COLLECTED: 0 / 0 / 1871

SURFACE ELEVATION (FT.): 552.0 LOGGED (FT.): 211.0 LOG TYPE: Drillers Log

SOURCE: NO COMPANY WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
385.5	MODESTO	PIASA	LIMESTONE	5.0	166.5
380.5	MODESTO		UNCLASSIFIED	3.5	171.5
377.0	CARBONDALE	DANVILLE	COAL	2.0	175.0
375.0	CARBONDALE		UNCLASSIFIED	9.0	177.0
366.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	186.0
359.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	193.0
357.0	CARBONDALE		UNCLASSIFIED	1.0	195.0
356.0	CARBONDALE	BRERETON	LIMESTONE	7.0	196.0
349.0	CARBONDALE	ANNA	BLACK SHALE	2.0	203.0
347.0	CARBONDALE	HERRIN	COAL	6.0	205.0

MAPID: 11700268000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 25 QUARTERS/FOOTAGES: SE SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.813153 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.014773 DATE COLLECTED: 0 / 0 / 1871

SURFACE ELEVATION (FT.): 552.0 LOGGED (FT.): 211.1 LOG TYPE: Survey Core Study

SOURCE: IL. REPTS. VOL, P. 292 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
552.0			UNCONSOLIDATED	10.0	0.0
542.0			ROCK	46.0	10.0
496.0	MODESTO	CHAPEL	COAL	0.3	56.0
495.8	MODESTO		ROCK	110.0	56.2
385.7	MODESTO		SHALE	0.3	166.3
385.4	MODESTO		LIMESTONE	5.0	166.6
380.4	MODESTO		SHALE	3.5	171.6
376.9	CARBONDALE	DANVILLE	COAL	2.0	175.1
374.9	CARBONDALE		SHALE	9.0	177.1
365.9	CARBONDALE		LIMESTONE	17.0	186.1
348.9	CARBONDALE		SHALE	2.0	203.1
346.9	CARBONDALE	HERRIN	COAL	6.0	205.1

MAPID: 11700503000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 25 QUARTERS/FOOTAGES: 300' S line, 300' W line of NW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.819146 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.024577 DATE COLLECTED: 8 / 0 / 1941

SURFACE ELEVATION (FT.): 566.0 LOGGED (FT.): 233.0 LOG TYPE: Electric Log

SOURCE: DORTOMEDGE 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
376.0	MODESTO	PIASA	LIMESTONE	4.0	190.0
372.0	MODESTO		UNCLASSIFIED	4.0	194.0
368.0	CARBONDALE		UNCLASSIFIED	12.0	198.0
356.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	210.0
350.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	216.0
349.0	CARBONDALE		UNCLASSIFIED	1.0	217.0
348.0	CARBONDALE	BRERETON	LIMESTONE	7.0	218.0
341.0	CARBONDALE	ANNA	BLACK SHALE	1.0	225.0
340.0	CARBONDALE	HERRIN	COAL	7.0	226.0

MAPID: 11700218000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 26 QUARTERS/FOOTAGES: 330' N line, 100' W line of SW NW SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.847747 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.017507 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 588.5 LOGGED (FT.): 0.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
588.5			UNCONSOLIDATED	155.0	0.0
433.5	MODESTO		SHALE	29.5	155.0
404.0	MODESTO		LIMESTONE	2.5	184.5
401.5	MODESTO		SHALE	18.0	187.0
383.5	MODESTO	PIASA	LIMESTONE	5.0	205.0
378.5	MODESTO		CLAYSTONE & SHALE	4.0	210.0
374.5	MODESTO		BLACK SHALE	1.0	214.0
373.5	CARBONDALE	DANVILLE	COAL	2.0	215.0
371.5	CARBONDALE		BLACK SHALE	9.0	217.0
362.5	CARBONDALE	BRERETON	LIMESTONE	9.0	226.0
353.5	CARBONDALE	ENERGY	BLUE SHALE	6.7	235.0
346.8	CARBONDALE	HERRIN	COAL	7.0	241.7
339.8	CARBONDALE		UNDERCLAY	0.3	248.7

MAPID: 11700218000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 26 QUARTERS/FOOTAGES: 330' N line, 100' W line of SW NW SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.847747 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.017507 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 589.0 LOGGED (FT.): 249.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
589.0			UNCONSOLIDATED	155.0	0.0	
434.0			ROCK	32.0	155.0	
402.0			SHALE	18.0	187.0	
384.0			LIMESTONE	5.0	205.0	
379.0			SHALE	4.0	210.0	
375.0			BLACK SHALE	1.0	214.0	
374.0	CARBONDALE	DANVILLE	COAL	2.0	215.0	
372.0	CARBONDALE		BLACK SHALE	9.0	217.0	
363.0	CARBONDALE		LIMESTONE	9.0	226.0	
354.0	CARBONDALE		SHALE	6.7	235.0	
347.3	CARBONDALE	HERRIN	COAL	7.0	241.7	
340.3	CARBONDALE		ROCK	0.3	248.7	

MAPID: 11700218000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 26 QUARTERS/FOOTAGES: 330' N line, 100' W line of SW NW SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.847747 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.017507 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 589.0 LOGGED (FT.): 249.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
383.7	MODESTO	PIASA	LIMESTONE	5.0	205.3	
378.7	MODESTO		UNCLASSIFIED	5.0	210.3	
373.7	CARBONDALE	DANVILLE	COAL	2.0	215.3	
371.7	CARBONDALE		UNCLASSIFIED	9.0	217.3	
362.7	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	226.3	
355.7	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	233.3	
353.7	CARBONDALE	BRERETON	LIMESTONE	6.7	235.3	
347.0	CARBONDALE	HERRIN	COAL	7.0	242.0	

MAPID: 11700218000C VERSION: 4

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 26 QUARTERS/FOOTAGES: 330' N line, 100' W line of SW NW SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.847747 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.017507 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 588.5 LOGGED (FT.): 249.0 LOG TYPE:

SOURCE: SUPERIORCC0010 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
346.5	CARBONDALE	HERRIN	COAL	7.0	242.0	

MAPID: 11700219000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 26 QUARTERS/FOOTAGES: 2660' N line, 30' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.848011 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.020157 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 593.0 LOGGED (FT.): 271.2 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
593.0			UNCONSOLIDATED	147.0	0.0	
446.0			SANDY SHALE	33.0	147.0	
413.0			GRAY SHALE	23.0	180.0	
390.0			COAL	1.0	203.0	
389.0			SANDY SHALE	18.0	204.0	
371.0			GRAY SHALE	3.0	222.0	
368.0			UNCLASSIFIED	2.0	225.0	
366.0			GRAY SHALE	5.0	227.0	
361.0	CARBONDALE	DANVILLE	COAL	2.0	232.0	
359.0			UNDERCLAY	2.0	234.0	
357.0			GRAY SHALE	7.0	236.0	
350.0			LIMESTONE	12.0	243.0	
338.0			GRAY SHALE	7.5	255.0	
330.5			COAL	7.7	262.5	
322.8			UNDERCLAY	1.0	270.2	

MAPID: 11700219000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 26 QUARTERS/FOOTAGES: 2660' N line, 30' W line
 QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.848011 GEOLOGIST: TREWORY,J
 CONFIDENTIAL: N LATITUDE: 39.020157 DATE COLLECTED: 0 / 0 / 1918
 SURFACE ELEVATION (FT.): 593.0 LOGGED (FT.): 271.2 LOG TYPE: Drillers Log
 SOURCE: SUPERIOR C C WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
593.0			UNCONSOLIDATED	147.0	0.0	
446.0			ROCK	56.0	147.0	
390.0			COAL	1.0	203.0	
389.0			SHALE	28.0	204.0	
361.0	CARBONDALE	DANVILLE	COAL	2.0	232.0	
359.0	CARBONDALE		ROCK	9.0	234.0	
350.0	CARBONDALE		LIMESTONE	12.0	243.0	
338.0	CARBONDALE		SHALE	7.5	255.0	
330.5	CARBONDALE	HERRIN	COAL	7.7	262.5	
322.8	CARBONDALE		ROCK	1.0	270.2	

MAPID: 11700219000C VERSION: 3

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 26 QUARTERS/FOOTAGES: 2660' N line, 30' W line
 QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.848011 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 39.020157 DATE COLLECTED: 0 / 0 / 1918
 SURFACE ELEVATION (FT.): 593.0 LOGGED (FT.): 271.0 LOG TYPE:
 SOURCE: SUPERIORCC0036 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
330.0	CARBONDALE	HERRIN	COAL	7.7	263.0	

MAPID: 11700669000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 26 QUARTERS/FOOTAGES: 410' N line, 330' E line of SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.839951 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.019016 DATE COLLECTED: 5 / 0 / 1958

SURFACE ELEVATION (FT.): 571.0 LOGGED (FT.): 236.0 LOG TYPE: Electric Log

SOURCE: INSALACO FRANK WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
387.0	MODESTO	PIASA	LIMESTONE	6.0	184.0
381.0	MODESTO		UNCLASSIFIED	7.0	190.0
374.0	CARBONDALE		UNCLASSIFIED	21.0	197.0
353.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	218.0
348.0	CARBONDALE	BRERETON	LIMESTONE	5.0	223.0
343.0	CARBONDALE	ANNA	BLACK SHALE	2.0	228.0
341.0	CARBONDALE	HERRIN	COAL	6.0	230.0

MAPID: 11700673000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 26 QUARTERS/FOOTAGES: 400' S line, 275' E line of SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.839708 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.014 DATE COLLECTED: 5 / 0 / 1958

SURFACE ELEVATION (FT.): 591.0 LOGGED (FT.): 256.0 LOG TYPE: Electric Log

SOURCE: INSALACO FRANK WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
379.0	MODESTO	PIASA	LIMESTONE	5.0	212.0
374.0	MODESTO		UNCLASSIFIED	5.0	217.0
369.0	CARBONDALE		UNCLASSIFIED	13.0	222.0
356.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	235.0
351.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	240.0
350.0	CARBONDALE		UNCLASSIFIED	1.0	241.0
349.0	CARBONDALE	BRERETON	LIMESTONE	6.0	242.0
343.0	CARBONDALE	ANNA	BLACK SHALE	2.0	248.0
341.0	CARBONDALE	HERRIN	COAL	6.0	250.0

MAPID: 11700951000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 26 QUARTERS/FOOTAGES: 2697' N line, 2513' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.838359 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.019931 DATE COLLECTED:

SURFACE ELEVATION (FT.): 554.0 LOGGED (FT.): 223.7 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. G-21 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
377.0	MODESTO	PIASA	LIMESTONE	3.5	177.0
373.5	CARBONDALE		GRAY SHALE	20.9	180.5
352.6	CARBONDALE	BANKSTON FORK	LIMESTONE	4.8	201.4
347.8	CARBONDALE	BRERETON	LIMESTONE	5.9	206.2
341.9	CARBONDALE	ANNA	BLACK SHALE	1.6	212.1
337.0	CARBONDALE	HERRIN	COAL	6.7	217.0

MAPID: 11700951000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 26 QUARTERS/FOOTAGES: 2697' N line, 2513' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.838359 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.019931 DATE COLLECTED:

SURFACE ELEVATION (FT.): 554.0 LOGGED (FT.): 223.6 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-21 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
376.5	MODESTO	PIASA	LIMESTONE	3.5	177.5
373.0	MODESTO		UNCLASSIFIED	5.0	181.0
368.0	CARBONDALE		UNCLASSIFIED	13.9	186.0
354.1	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	199.9
350.1	CARBONDALE	ANVIL ROCK	SANDSTONE	1.0	203.9
349.1	CARBONDALE	BRERETON	LIMESTONE	10.7	204.9
338.4	CARBONDALE	ANNA	BLACK SHALE	1.4	215.6
337.0	CARBONDALE	HERRIN	COAL	6.6	217.0

MAPID: 11700220000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: NE NE NE NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.848749 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.027051 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 602.2 LOGGED (FT.): 271.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
602.2			UNCONSOLIDATED	138.0	0.0
464.2	MODESTO		SANDY SHALE	66.0	138.0
398.2	MODESTO		SHALE	1.0	204.0
397.2	MODESTO		SANDY SHALE	15.0	205.0
382.2	MODESTO		GRAY SHALE	4.0	220.0
378.2	MODESTO	PIASA	LIMESTONE	6.0	224.0
372.2	CARBONDALE	DANVILLE	COAL	0.0	230.0
372.2	CARBONDALE		GRAY SHALE	14.0	230.0
358.2	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	244.0
350.2	CARBONDALE		SHALE	2.0	252.0
348.2	CARBONDALE	BRERETON	LIMESTONE	8.0	254.0
340.2	CARBONDALE	ENERGY	GRAY SHALE	1.5	262.0
338.7	CARBONDALE	HERRIN	COAL	7.3	263.5
331.4	CARBONDALE		UNDERCLAY	0.2	270.8

MAPID: 11700220000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: NE NE NE NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.848749 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.027051 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 602.0 LOGGED (FT.): 271.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
602.0			UNCONSOLIDATED	138.0	0.0
464.0			ROCK	92.0	138.0
372.0			SHALE	14.0	230.0
358.0			LIMESTONE	8.0	244.0
350.0			SHALE	2.0	252.0
348.0			LIMESTONE	8.0	254.0
340.0			SHALE	1.5	262.0
338.5	CARBONDALE	HERRIN	COAL	7.3	263.5
331.2	CARBONDALE		ROCK	0.2	270.8

MAPID: 11700220000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: NE NE NE NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.848749 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.027051 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 602.0 LOGGED (FT.): 271.3 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
377.5	MODESTO	PIASA	LIMESTONE	6.0	224.5
371.5	MODESTO		UNCLASSIFIED	4.0	230.5
367.5	CARBONDALE		UNCLASSIFIED	10.0	234.5
357.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	244.5
349.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	252.5
348.5	CARBONDALE		UNCLASSIFIED	1.0	253.5
347.5	CARBONDALE	BRERETON	LIMESTONE	8.0	254.5
339.5	CARBONDALE	ANNA	BLACK SHALE	1.5	262.5
338.0	CARBONDALE	HERRIN	COAL	7.3	264.0

MAPID: 11700220000C VERSION: 4

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: NE NE NE NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.848749 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.027051 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 602.2 LOGGED (FT.): 271.0 LOG TYPE:

SOURCE: SUPERIORCC0040 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
338.2	CARBONDALE	HERRIN	COAL	7.3	264.0

MAPID: 11700221000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: 50' S line, 330' E line of SW SE NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.851619 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.020386 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 594.8 LOGGED (FT.): 266.4 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
594.8			UNCONSOLIDATED	135.0	0.0
459.8	MODESTO		SANDY SHALE	52.0	135.0
407.8	MODESTO		COAL	1.0	187.0
406.8	MODESTO		SHALE	30.0	188.0
376.8	MODESTO		UNCLASSIFIED	2.0	218.0
374.8	MODESTO		GRAY SHALE	12.0	220.0
362.8	CARBONDALE	DANVILLE	COAL	2.0	232.0
360.8	CARBONDALE		UNDERCLAY	2.0	234.0
358.8	CARBONDALE		GRAY SHALE	3.0	236.0
355.8	CARBONDALE	BRERETON	LIMESTONE	12.0	239.0
343.8	CARBONDALE	ENERGY	GRAY SHALE	7.0	251.0
336.8	CARBONDALE	HERRIN	COAL	7.4	258.0
329.4	CARBONDALE		UNDERCLAY	1.0	265.4

MAPID: 11700221000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: 50' S line, 330' E line of SW SE NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.851619 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.020386 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 595.0 LOGGED (FT.): 266.4 LOG TYPE: Drillers Log

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
595.0			UNCONSOLIDATED	135.0	0.0
460.0			ROCK	52.0	135.0
408.0			COAL	1.0	187.0
407.0			ROCK	44.0	188.0
363.0	CARBONDALE	DANVILLE	COAL	2.0	232.0
361.0	CARBONDALE		ROCK	5.0	234.0
356.0	CARBONDALE		LIMESTONE	12.0	239.0
344.0	CARBONDALE		SHALE	7.0	251.0
337.0	CARBONDALE	HERRIN	COAL	7.4	258.0
329.6	CARBONDALE		ROCK	1.0	265.4

MAPID: 11700221000C VERSION: 3

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: 50' S line, 330' E line of SW SE NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.851619 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.020386 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 594.8 LOGGED (FT.): 266.0 LOG TYPE:

SOURCE: SUPERIORCC0038 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
336.8	CARBONDALE	HERRIN	COAL	7.4	258.0	

MAPID: 11700222000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: 3275' S line, 700' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.850607 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.022013 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 596.1 LOGGED (FT.): 270.1 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
596.1			UNCONSOLIDATED	132.0	0.0	
464.1	MODESTO		SANDY SHALE	88.0	132.0	
376.1	MODESTO		SHALE	4.0	220.0	
372.1	MODESTO		UNCLASSIFIED	2.0	224.0	
370.1	MODESTO		SANDY SHALE	3.0	226.0	
367.1	MODESTO		GRAY SHALE	3.0	229.0	
364.1	CARBONDALE	DANVILLE	COAL	1.0	232.0	
363.1	CARBONDALE		UNDERCLAY	1.0	233.0	
362.1	CARBONDALE		GRAY SHALE	8.0	234.0	
354.1	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	242.0	
346.1	CARBONDALE		SHALE	4.0	250.0	
342.1	CARBONDALE	BRERETON	LIMESTONE	7.0	254.0	
335.1	CARBONDALE	ENERGY	GRAY SHALE	2.0	261.0	
333.1	CARBONDALE	HERRIN	COAL	6.8	263.0	
326.3	CARBONDALE		UNDERCLAY	0.3	269.8	

MAPID: 11700222000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: 3275' S line, 700' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.850607 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.022013 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 596.0 LOGGED (FT.): 270.1 LOG TYPE: Drillers Log

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
596.0			UNCONSOLIDATED	132.0	0.0	
464.0			ROCK	100.0	132.0	
364.0	CARBONDALE	DANVILLE	COAL	1.0	232.0	
363.0	CARBONDALE		ROCK	9.0	233.0	
354.0	CARBONDALE		LIMESTONE	8.0	242.0	
346.0	CARBONDALE		SHALE	4.0	250.0	
342.0	CARBONDALE		LIMESTONE	7.0	254.0	
335.0	CARBONDALE		SHALE	2.0	261.0	
333.0	CARBONDALE	HERRIN	COAL	6.8	263.0	
326.2	CARBONDALE		ROCK	0.3	269.8	

MAPID: 11700222000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: 3275' S line, 700' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.850607 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.022013 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 596.0 LOGGED (FT.): 269.8 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
372.0	MODESTO	PIASA	LIMESTONE	5.0	224.0	
367.0	MODESTO		UNCLASSIFIED	3.0	229.0	
364.0	CARBONDALE	DANVILLE	COAL	1.0	232.0	
363.0	CARBONDALE		UNCLASSIFIED	9.0	233.0	
354.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	242.0	
346.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	250.0	
344.0	CARBONDALE		UNCLASSIFIED	2.0	252.0	
342.0	CARBONDALE	BRERETON	LIMESTONE	7.0	254.0	
335.0	CARBONDALE	ANNA	BLACK SHALE	2.0	261.0	
333.0	CARBONDALE	HERRIN	COAL	6.8	263.0	

MAPID: 11700222000C VERSION: 4

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: 3275' S line, 700' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.850607 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.022013 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 596.1 LOGGED (FT.): 270.0 LOG TYPE:

SOURCE: SUPERIORCC0039 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
333.1	CARBONDALE	HERRIN	COAL	6.8	263.0

MAPID: 11700223000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: NW NW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.856304 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.026644 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 599.5 LOGGED (FT.): 271.8 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
599.5			UNCONSOLIDATED	174.8	0.0
424.7	MODESTO		SHALE	7.2	174.8
417.5	MODESTO		DARK GRAY SHALE	19.0	182.0
398.5	MODESTO		LIGHT SHALE	21.0	201.0
377.5	MODESTO		SANDY SHALE	3.0	222.0
374.5	MODESTO	PIASA	LIMESTONE	3.0	225.0
371.5	MODESTO		DARK GRAY SHALE	2.0	228.0
369.5	MODESTO		DARK SHALE	1.0	230.0
368.5	CARBONDALE	DANVILLE	COAL	1.0	231.0
367.5	CARBONDALE		LIGHT SHALE	10.0	232.0
357.5	CARBONDALE		GRAY SHALE	5.0	242.0
352.5	CARBONDALE		LIMESTONE W/ SHALE	3.0	247.0
349.5	CARBONDALE		SHALE	1.0	250.0
348.5	CARBONDALE	BRERETON	LIMESTONE	2.0	251.0
346.5	CARBONDALE	ENERGY	SHALE	5.0	253.0
341.5	CARBONDALE	ENERGY	DARK SHALE	5.0	258.0
336.5	CARBONDALE	HERRIN	COAL	7.6	263.0
328.9	CARBONDALE		UNDERCLAY	1.2	270.6

MAPID: 11700223000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: NW NW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.856304 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.026644 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 271.8 LOG TYPE: Drillers Log

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
600.0			UNCONSOLIDATED	107.0	0.0	
493.0			ROCK	124.0	107.0	
369.0	CARBONDALE	DANVILLE	COAL	1.0	231.0	
368.0	CARBONDALE		ROCK	10.0	232.0	
358.0	CARBONDALE		SHALE	5.0	242.0	
353.0	CARBONDALE		LIMESTONE	3.0	247.0	
350.0	CARBONDALE		SHALE	1.0	250.0	
349.0	CARBONDALE		LIMESTONE	7.0	251.0	
342.0	CARBONDALE		SHALE	5.0	258.0	
337.0	CARBONDALE	HERRIN	COAL	7.6	263.0	
329.4	CARBONDALE		ROCK	1.2	270.6	

MAPID: 11700223000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: NW NW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.856304 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.026644 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 599.0 LOGGED (FT.): 269.6 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
375.0	MODESTO	PIASA	LIMESTONE	3.0	224.0	
372.0	MODESTO		UNCLASSIFIED	3.0	227.0	
369.0	CARBONDALE	DANVILLE	COAL	1.0	230.0	
368.0	CARBONDALE		UNCLASSIFIED	10.0	231.0	
358.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	241.0	
350.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	249.0	
349.0	CARBONDALE	BRERETON	LIMESTONE	7.0	250.0	
342.0	CARBONDALE	ANNA	BLACK SHALE	5.0	257.0	
337.0	CARBONDALE	HERRIN	COAL	7.6	262.0	

MAPID: 11700223000C VERSION: 4

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: NW NW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.856304 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.026644 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 599.5 LOGGED (FT.): 272.0 LOG TYPE:

SOURCE: SUPERIORCC0043 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
336.5	CARBONDALE	HERRIN	COAL	7.6	263.0

MAPID: 11700224000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: 1100' N line, 3175' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.859386 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.024542 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 598.0 LOGGED (FT.): 272.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
598.0			UNCONSOLIDATED	102.0	0.0
496.0	MODESTO		SANDY SHALE	63.0	102.0
433.0	MODESTO		GRAY SHALE	20.0	165.0
413.0	MODESTO		LIMESTONE	2.0	185.0
411.0	MODESTO		GRAY SHALE	11.0	187.0
400.0	MODESTO		SANDY SHALE	13.0	198.0
387.0	MODESTO		SHALE	13.0	211.0
374.0	MODESTO	PIASA	LIMESTONE	5.0	224.0
369.0	MODESTO		DARK SHALE	2.9	229.0
366.1	CARBONDALE	DANVILLE	COAL	1.3	231.9
364.7	CARBONDALE		SHALE	13.8	233.3
351.0	CARBONDALE		LIMESTONE W/ SHALE	3.8	247.0
347.2	CARBONDALE	BRERETON	LIMESTONE	11.0	250.8
336.2	CARBONDALE	ANNA	DARK SHALE	1.5	261.8
334.7	CARBONDALE	HERRIN	COAL	7.3	263.3
327.5	CARBONDALE		UNDERCLAY	1.5	270.5

MAPID: 11700224000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: 1100' N line, 3175' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.859386 GEOLOGIST: TREWORY,J

CONFIDENTIAL: N LATITUDE: 39.024542 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 272.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.0			UNCONSOLIDATED	102.0	0.0	
448.0			ROCK	129.9	102.0	
318.1	CARBONDALE	DANVILLE	COAL	1.3	231.9	
316.7	CARBONDALE		ROCK	5.8	233.3	
311.0	CARBONDALE		SHALE	8.0	239.0	
303.0	CARBONDALE		LIMESTONE	14.0	247.0	
289.0	CARBONDALE		SHALE	2.3	261.0	
286.7	CARBONDALE	HERRIN	COAL	7.3	263.3	
279.5	CARBONDALE		ROCK	1.5	270.5	

MAPID: 11700224000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: 1100' N line, 3175' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.859386 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.024542 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 598.0 LOGGED (FT.): 270.3 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
374.3	MODESTO	PIASA	LIMESTONE	5.0	223.7	
369.3	MODESTO		UNCLASSIFIED	2.9	228.7	
366.4	CARBONDALE	DANVILLE	COAL	1.3	231.6	
365.1	CARBONDALE		UNCLASSIFIED	11.8	232.9	
353.3	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.8	244.7	
347.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	250.5	
345.5	CARBONDALE		UNCLASSIFIED	1.0	252.5	
344.5	CARBONDALE	BRERETON	LIMESTONE	8.0	253.5	
336.5	CARBONDALE	ANNA	BLACK SHALE	1.5	261.5	
335.0	CARBONDALE	HERRIN	COAL	7.3	263.0	

MAPID: 11700224000C VERSION: 4

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: 1100' N line, 3175' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.859386 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.024542 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 598.0 LOGGED (FT.): 272.0 LOG TYPE:

SOURCE: SUPERIORCC0042 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
335.0	CARBONDALE	HERRIN	COAL	7.3	263.0	

MAPID: 11700953000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 27 QUARTERS/FOOTAGES: 105' S line, 315' W line of SW SW SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.85629 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.013249 DATE COLLECTED:

SURFACE ELEVATION (FT.): 538.0 LOGGED (FT.): 209.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-20 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
384.9	MODESTO	PIASA	LIMESTONE	2.8	153.1	
382.1	MODESTO		UNCLASSIFIED	7.0	155.9	
375.1	CARBONDALE		UNCLASSIFIED	19.6	162.9	
355.5	CARBONDALE	BANKSTON FORK	LIMESTONE	7.9	182.5	
347.6	CARBONDALE	ANVIL ROCK	SANDSTONE	3.5	190.4	
344.1	CARBONDALE		SHALE	1.8	193.9	
342.3	CARBONDALE	BRERETON	LIMESTONE	8.2	195.7	
334.1	CARBONDALE	ANNA	BLACK SHALE	0.1	203.9	
334.0	CARBONDALE	HERRIN	COAL	5.8	204.0	

MAPID: 11700225000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 28 QUARTERS/FOOTAGES: SW SW SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.874857 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.013903 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 590.8 LOGGED (FT.): 249.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
590.8			UNCONSOLIDATED	135.0	0.0	
455.8	MODESTO		CLAYSTONE & SHALE	44.0	135.0	
411.8	MODESTO		SANDSTONE	10.0	179.0	
401.8	MODESTO		SANDY SHALE	9.5	189.0	
392.3	CARBONDALE	DANVILLE	SHALE	1.8	198.5	
390.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.2	200.3	
384.3	CARBONDALE		CLAYSTONE & SHALE	13.5	206.5	
370.8	CARBONDALE		LIMESTONE	3.8	220.0	
367.0	CARBONDALE		SHALE	0.7	223.8	
366.4	CARBONDALE	BRERETON	LIMESTONE	17.1	224.4	
349.3	CARBONDALE	ANNA	BLACK SHALE	0.5	241.5	
348.8	CARBONDALE	HERRIN	COAL	6.3	242.0	
342.5	CARBONDALE		UNDERCLAY	0.8	248.3	

MAPID: 11700225000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 28 QUARTERS/FOOTAGES: SW SW SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.874857 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.013903 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 591.0 LOGGED (FT.): 249.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
591.0			UNCONSOLIDATED	135.0	0.0	
456.0			ROCK	85.0	135.0	
371.0			LIMESTONE	3.8	220.0	
367.2			SHALE	0.7	223.8	
366.6			LIMESTONE	17.1	224.4	
349.5			BLACK SHALE	0.5	241.5	
349.0	CARBONDALE	HERRIN	COAL	6.3	242.0	
342.7	CARBONDALE		ROCK	0.8	248.3	

MAPID: 11700225000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 28 QUARTERS/FOOTAGES: SW SW SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.874857 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.013903 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 591.0 LOGGED (FT.): 248.3 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
390.8	MODESTO	PIASA	LIMESTONE	6.2	200.2
384.6	MODESTO		UNCLASSIFIED	3.8	206.4
380.8	CARBONDALE		UNCLASSIFIED	9.8	210.2
371.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.5	220.0
363.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	227.5
360.5	CARBONDALE		UNCLASSIFIED	2.0	230.5
358.5	CARBONDALE	BRERETON	LIMESTONE	9.0	232.5
349.5	CARBONDALE	ANNA	BLACK SHALE	0.5	241.5
349.0	CARBONDALE	HERRIN	COAL	6.3	242.0

MAPID: 11700225000C VERSION: 4

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 28 QUARTERS/FOOTAGES: SW SW SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.874857 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.013903 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 590.8 LOGGED (FT.): 249.0 LOG TYPE:

SOURCE: SUPERIORCC0009 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
348.8	CARBONDALE	HERRIN	COAL	6.3	242.0

MAPID: 11700989000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 29 QUARTERS/FOOTAGES: 330' S line, 330' W line of NE SW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.898077 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.01768 DATE COLLECTED: 8 / 0 / 1954

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

SOURCE: VESPER WILLIAM WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
-	MODESTO	PIASA	LIMESTONE	5.0	
-	MODESTO		UNCLASSIFIED	3.0	
-	CARBONDALE		UNCLASSIFIED	9.0	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.0	
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	
-	CARBONDALE		UNCLASSIFIED	3.0	
-	CARBONDALE	BRERETON	LIMESTONE	9.0	
-	CARBONDALE	ANNA	BLACK SHALE	2.0	
-	CARBONDALE	HERRIN	COAL	2.0	

MAPID: 11722196000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 29 QUARTERS/FOOTAGES: 2530' N line, 1890' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.897185

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.020709

DATE COLLECTED: 10 / 15 / 1979

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 270.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-29-62C

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
620.0			UNCONSOLIDATED	104.0	0.0	
516.0	MODESTO		GRAY SHALE	56.0	104.0	
460.0	MODESTO		LIMESTONE	2.5	160.0	
457.5	MODESTO		SHALE	3.5	162.5	
454.0	MODESTO		GRAY SHALE	44.0	166.0	
410.0	MODESTO	PIASA	LIMESTONE	3.5	210.0	
406.5	MODESTO		GRAY SHALE	5.5	213.5	
401.0	CARBONDALE	DANVILLE	COAL	1.0	219.0	
400.0	CARBONDALE		GRAY SHALE	10.4	220.0	
389.6	CARBONDALE	BANKSTON FORK	LIMESTONE	5.2	230.4	
384.4	CARBONDALE		GRAY SHALE	6.8	235.6	
377.6	CARBONDALE	BRERETON	LIMESTONE	7.6	242.4	
370.0	CARBONDALE	HERRIN	COAL	4.6	250.0	
365.4	CARBONDALE		SHALE	1.5	254.6	
363.9	CARBONDALE		SHALY LIMESTONE	2.4	256.1	
361.5	CARBONDALE		GRAY SHALE	1.5	258.5	
360.0	CARBONDALE		SHALY LIMESTONE	2.0	260.0	
358.0	CARBONDALE		GRAY SHALE	2.0	262.0	
356.0	CARBONDALE		SHALY LIMESTONE	4.0	264.0	
352.0	CARBONDALE		GRAY SHALE	2.0	268.0	

MAPID: 11722368000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 29 QUARTERS/FOOTAGES: 240' N line, 1495' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.890616 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.026982 DATE COLLECTED: 9 / 23 / 1975

SURFACE ELEVATION (FT.): 605.0 LOGGED (FT.): 270.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-28 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
605.0			UNCONSOLIDATED	158.0	0.0
447.0	MODESTO		GRAY SHALE	15.0	158.0
432.0	MODESTO		LIMESTONE	2.0	173.0
430.0	MODESTO		GRAY SHALE	13.0	175.0
417.0	MODESTO		SHALE	4.0	188.0
413.0	MODESTO		GRAY SHALE	29.0	192.0
384.0	MODESTO	PIASA	LIMESTONE	3.0	221.0
381.0	MODESTO		SHALE	7.0	224.0
374.0	CARBONDALE	DANVILLE	COAL	2.0	231.0
372.0	CARBONDALE		GRAY SHALE	13.0	233.0
359.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	246.0
356.5	CARBONDALE		GRAY SHALE	1.5	248.5
355.0	CARBONDALE	BRERETON	LIMESTONE	6.0	250.0
349.0	CARBONDALE	ANNA	BLACK SHALE	2.7	256.0
346.3	CARBONDALE	HERRIN	COAL	6.3	258.7
340.0	CARBONDALE		UNDERCLAY	2.0	265.0
338.0	CARBONDALE		LIMESTONE	3.0	267.0

MAPID: 11700226000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 30 QUARTERS/FOOTAGES: NE NE NW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.914402 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.0268 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 591.7 LOGGED (FT.): 227.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT AND CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
591.7			UNCONSOLIDATED	44.0	0.0
547.7	MODESTO		BLUE SHALE	18.0	44.0
529.7	MODESTO		SANDY SHALE	8.0	62.0
521.7	MODESTO		SANDSTONE	20.0	70.0
501.7	MODESTO		SANDY SHALE	42.0	90.0
459.7	MODESTO		SHALE	54.0	132.0
405.7	CARBONDALE	DANVILLE	COAL	0.0	186.0
405.7	CARBONDALE		DARK SHALE	8.0	186.0
397.7	CARBONDALE		SHALE	10.0	194.0
387.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	204.0
384.2	CARBONDALE		SHALE	4.0	207.5
380.2	CARBONDALE	BRERETON	LIMESTONE	8.3	211.5
371.9	CARBONDALE	ANNA	DARK SHALE	1.8	219.8
370.2	CARBONDALE	HERRIN	COAL	5.2	221.5
365.0	CARBONDALE		DARK SHALE	0.3	226.7

MAPID: 11700226000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 30 QUARTERS/FOOTAGES: NE NE NW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.914402 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.0268 DATE COLLECTED:

SURFACE ELEVATION (FT.): 592.0 LOGGED (FT.): 227.1 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
387.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	204.5
384.0	CARBONDALE		LIMESTONE W/ SHALE	4.0	208.0
380.0	CARBONDALE	BRERETON	LIMESTONE	8.3	212.0
371.7	CARBONDALE	ANNA	BLACK SHALE	1.8	220.3
370.0	CARBONDALE	HERRIN	COAL	5.1	222.0

MAPID: 11700226000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 30 QUARTERS/FOOTAGES: NE NE NW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.914402 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.0268 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 592.0 LOGGED (FT.): 227.2 LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
409.6	MODESTO	PIASA	LIMESTONE	4.0	182.4
405.6	MODESTO		UNCLASSIFIED	4.0	186.4
401.6	CARBONDALE		UNCLASSIFIED	10.0	190.4
391.6	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.5	200.4
384.1	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	207.9
382.1	CARBONDALE		UNCLASSIFIED	2.0	209.9
380.1	CARBONDALE	BRERETON	LIMESTONE	8.3	211.9
371.8	CARBONDALE	ANNA	BLACK SHALE	1.8	220.2
370.0	CARBONDALE	HERRIN	COAL	5.2	222.0

MAPID: 11700226000C VERSION: 4

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 30 QUARTERS/FOOTAGES: NE NE NW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.914402 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.0268 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 591.7 LOGGED (FT.): 227.0 LOG TYPE:

SOURCE: HUNT R W 00C3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
369.7	CARBONDALE	HERRIN	COAL	5.2	222.0

MAPID: 11700813000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 30 QUARTERS/FOOTAGES: 970' N line, 400' W line of SW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.921155 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.01777 DATE COLLECTED: 3 / 0 / 1960

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

SOURCE: EDWARDSVILLE OIL CO WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	5.0
-	MODESTO		UNCLASSIFIED	4.0
-	CARBONDALE		UNCLASSIFIED	10.0
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0
-	CARBONDALE		UNCLASSIFIED	2.0
-	CARBONDALE	BRERETON	LIMESTONE	8.0
-	CARBONDALE	HERRIN	COAL	5.0

MAPID: 11722134000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 30 QUARTERS/FOOTAGES: 2004' N line, 33' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.903985 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.022207 DATE COLLECTED: 5 / 2 / 1979

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 270.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-30-20C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.0			UNCONSOLIDATED	96.0	0.0
524.0	MODESTO		GRAY SHALE	24.0	96.0
500.0	MODESTO		SANDY SHALE	25.0	120.0
475.0	MODESTO		GRAY SHALE	17.5	145.0
457.5	MODESTO		LIMESTONE	1.5	162.5
456.0	MODESTO		GRAY SHALE	13.0	164.0
443.0	MODESTO		SHALE	3.0	177.0
440.0	MODESTO		GRAY SHALE	26.2	180.0
413.8	MODESTO	PIASA	LIMESTONE	2.8	206.2
411.0	MODESTO		GRAY SHALE	2.0	209.0
409.0	MODESTO		SHALE	4.0	211.0
405.0	MODESTO		GRAY SHALE	3.0	215.0
402.0	CARBONDALE	DANVILLE	COAL	1.0	218.0
401.0	CARBONDALE		GRAY SHALE	8.0	219.0
393.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	227.0
388.0	CARBONDALE		GRAY SHALE	2.0	232.0
386.0	CARBONDALE		LIMESTONE	1.0	234.0
385.0	CARBONDALE		SHALE	3.0	235.0
382.0	CARBONDALE	BRERETON	LIMESTONE	4.1	238.0
377.9	CARBONDALE		GRAY SHALE	0.1	242.1
377.8	CARBONDALE	HERRIN	COAL	6.3	242.2
371.5	CARBONDALE		SHALE	0.3	248.5
371.2	CARBONDALE		SHALE	3.3	248.8
368.0	CARBONDALE		SHALY LIMESTONE	4.0	252.0
364.0	CARBONDALE		GRAY SHALE	6.0	256.0
358.0	CARBONDALE		CALCAREOUS SHALE	2.0	262.0
356.0	CARBONDALE		GRAY SHALE	6.0	264.0

MAPID: 11722197000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 30 QUARTERS/FOOTAGES: 2100' S line, 1290' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.918012 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.018996 DATE COLLECTED: 9 / 25 / 1979

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 260.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-30-24C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
600.0			UNCONSOLIDATED	80.0	0.0	
520.0	MODESTO		SANDSTONE/SHALE	7.0	80.0	
513.0	MODESTO		GRAY SHALE	84.0	87.0	
429.0	MODESTO		GRAY SHALE	5.0	171.0	
424.0	MODESTO		SANDSTONE	2.0	176.0	
422.0	MODESTO		GRAY SHALE	11.0	178.0	
411.0	MODESTO		SHALE	8.5	189.0	
402.5	MODESTO	PIASA	LIMESTONE	4.5	197.5	
398.0			GRAY SHALE	13.8	202.0	
384.2	CARBONDALE	DANVILLE	COAL	0.9	215.8	
383.3	CARBONDALE		GRAY SHALE	1.3	216.7	
382.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	218.0	
377.5	CARBONDALE	BANKSTON FORK	SHALE	3.0	222.5	
374.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	225.5	
370.5	CARBONDALE		SHALE	2.5	229.5	
368.0	CARBONDALE	BRERETON	LIMESTONE	6.5	232.0	
361.5	CARBONDALE	ANNA	BLACK SHALE	0.5	238.5	
361.0	CARBONDALE	HERRIN	COAL	4.7	239.0	
356.3	CARBONDALE		UNDERCLAY	1.1	243.7	
355.2	CARBONDALE		CORE LOSS	0.2	244.8	
355.0	CARBONDALE		CALCAREOUS SHALE	4.0	245.0	
351.0	CARBONDALE		SHALY LIMESTONE	4.0	249.0	
347.0	CARBONDALE		GRAY SHALE	7.0	253.0	

MAPID: 11722369000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 30 QUARTERS/FOOTAGES: 580' N line, 1765' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.91637 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.026103 DATE COLLECTED: 9 / 4 / 1975

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 276.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-29 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
625.0			UNCONSOLIDATED	163.0	0.0	
462.0	MODESTO		SHALY SANDSTONE	4.0	163.0	
458.0	MODESTO		GRAY SHALE	32.0	167.0	
426.0	MODESTO		BLACK SHALE	2.0	199.0	
424.0	MODESTO		GRAY SHALE	20.0	201.0	
404.0	MODESTO		SHALE	7.0	221.0	
397.0	MODESTO	PIASA	LIMESTONE	2.0	228.0	
395.0			GRAY SHALE	13.0	230.0	
382.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	243.0	
377.0	CARBONDALE		GRAY SHALE	1.5	248.0	
375.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	249.5	
371.0	CARBONDALE		SHALE	3.5	254.0	
367.5	CARBONDALE	BRERETON	LIMESTONE	7.0	257.5	
360.5	CARBONDALE		SHALE	0.5	264.5	
360.0	CARBONDALE	HERRIN	COAL	5.0	265.0	
355.0	CARBONDALE		UNDERCLAY	1.5	270.0	
353.5	CARBONDALE		LIMESTONE	4.5	271.5	

MAPID: 11722198000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 31 QUARTERS/FOOTAGES: 940' S line, 1740' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.909983 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.001323 DATE COLLECTED: 10 / 18 / 1979

SURFACE ELEVATION (FT.): 602.0 LOGGED (FT.): 270.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-31-57C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
602.0			UNCONSOLIDATED	53.0	0.0
549.0	MODESTO		SHALE	19.0	53.0
530.0	MODESTO		GRAY SHALE	15.0	72.0
515.0	MODESTO	CHAPEL	COAL	0.7	87.0
514.3	MODESTO		GRAY SHALE	67.3	87.7
447.0	MODESTO		SANDSTONE	5.0	155.0
442.0	MODESTO		SANDY SHALE	5.0	160.0
437.0	MODESTO		LIMESTONE	2.0	165.0
435.0	MODESTO		SHALE	9.0	167.0
426.0	MODESTO		SANDY SHALE	21.0	176.0
405.0	MODESTO		SANDSTONE	10.0	197.0
395.0	MODESTO		SHALE	3.8	207.0
391.2	MODESTO	PIASA	LIMESTONE	5.2	210.8
386.0	MODESTO		SHALE	2.0	216.0
384.0	MODESTO		GRAY SHALE	10.8	218.0
373.2	CARBONDALE	DANVILLE	COAL	1.2	228.8
372.0	CARBONDALE		GRAY SHALE	3.9	230.0
368.1	CARBONDALE	BANKSTON FORK	LIMESTONE	3.6	233.9
364.5	CARBONDALE		GRAY SHALE	0.7	237.5
363.8	CARBONDALE	BRERETON	LIMESTONE	7.5	238.2
356.3	CARBONDALE	ANNA	BLACK SHALE	2.2	245.7
354.1	CARBONDALE	HERRIN	COAL	6.5	247.9
347.6	CARBONDALE		CLAYSTONE & SHALE	0.6	254.4
347.0	CARBONDALE		CORE LOSS	0.5	255.0
346.5	CARBONDALE		GRAY SHALE	2.5	255.5
344.0	CARBONDALE		SHALY LIMESTONE	6.0	258.0
338.0	CARBONDALE		GRAY SHALE	6.0	264.0

MAPID: 11722370000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 31 QUARTERS/FOOTAGES: 888' N line, 1311' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.908541 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.010723 DATE COLLECTED: 9 / 23 / 1977

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 300.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-46 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.0			UNCONSOLIDATED	50.0	0.0
570.0	MODESTO		GRAY SHALE	17.0	50.0
553.0	MODESTO		SANDY SHALE	70.5	67.0
482.5	MODESTO		LIMESTONE	3.0	137.5
479.5	MODESTO		GRAY SHALE	10.5	140.5
469.0	MODESTO		SHALE	4.0	151.0
465.0	MODESTO		GRAY SHALE	14.0	155.0
451.0	MODESTO		SANDSTONE	11.0	169.0
440.0	MODESTO		SHALE	4.0	180.0
436.0	MODESTO	PIASA	LIMESTONE	2.0	184.0
434.0	MODESTO		SHALE	5.0	186.0
429.0	CARBONDALE		GRAY SHALE	12.5	191.0
416.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	203.5
413.5	CARBONDALE	BANKSTON FORK	SHALE	1.5	206.5
412.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	208.0
409.0	CARBONDALE		SHALE	3.0	211.0
406.0	CARBONDALE	BRERETON	LIMESTONE	6.0	214.0
400.0	CARBONDALE	ANNA	BLACK SHALE	3.0	220.0
397.0	CARBONDALE	HERRIN	COAL	3.0	223.0
394.0	CARBONDALE		UNDERCLAY	2.0	226.0
392.0	CARBONDALE		LIMESTONE	6.5	228.0
385.5	CARBONDALE		CALCAREOUS SHALE	4.5	234.5
381.0	CARBONDALE		LIMESTONE	1.5	239.0
379.5	CARBONDALE		GRAY SHALE	8.5	240.5
371.0	CARBONDALE		SHALE	7.0	249.0
364.0	CARBONDALE		GRAY SHALE	44.0	256.0

MAPID: 11700957000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 32 QUARTERS/FOOTAGES: 610' S line, 10' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.885112

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.000331

DATE COLLECTED:

SURFACE ELEVATION (FT.): 535.0 LOGGED (FT.): 173.8

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. G-18

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
392.6	CARBONDALE		GRAY SHALE	8.1	142.4	
384.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.9	150.5	UPPER BENCH
381.6	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.7	153.4	SHALE PARTING
380.9	CARBONDALE	BANKSTON FORK	LIMESTONE	9.3	154.1	LOWER BENCH
371.6	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.8	163.4	
370.9	CARBONDALE	ANNA	BLACK SHALE	3.9	164.1	
367.0	CARBONDALE	HERRIN	COAL	5.8	168.0	

MAPID: 11700957000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 32 QUARTERS/FOOTAGES: 610' S line, 10' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.885112

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.000331

DATE COLLECTED:

SURFACE ELEVATION (FT.): 535.0 LOGGED (FT.): 174.8

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-18

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
403.7	MODESTO	PIASA	LIMESTONE	2.8	131.3	
400.9	MODESTO		UNCLASSIFIED	5.1	134.1	
395.8	CARBONDALE		UNCLASSIFIED	13.1	139.2	
382.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.8	152.3	
379.9	CARBONDALE	ANVIL ROCK	SANDSTONE	0.7	155.1	
379.2	CARBONDALE	BRERETON	LIMESTONE	9.3	155.8	
369.9	CARBONDALE	ANNA	BLACK SHALE	3.9	165.1	
366.0	CARBONDALE	HERRIN	COAL	5.8	169.0	

MAPID: 11722371000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 32 QUARTERS/FOOTAGES: 1590' S line, 1215' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.899542 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.003093 DATE COLLECTED: 9 / 23 / 1977

SURFACE ELEVATION (FT.): 605.0 LOGGED (FT.): 260.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-47 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
605.0			UNCONSOLIDATED	76.5	0.0	
528.5	MODESTO		SANDY SHALE	78.5	76.5	
450.0	MODESTO		GRAY SHALE	36.0	155.0	
414.0	MODESTO		SHALE	3.0	191.0	
411.0	MODESTO	PIASA	LIMESTONE	4.0	194.0	
407.0	MODESTO		SHALE	4.0	198.0	
403.0	CARBONDALE		GRAY SHALE	4.0	202.0	
399.0	CARBONDALE		CALCAREOUS SHALE	4.0	206.0	
395.0	CARBONDALE		GRAY SHALE	7.0	210.0	
388.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	217.0	
384.5	CARBONDALE	BANKSTON FORK	SHALE	0.5	220.5	
384.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	221.0	
379.5	CARBONDALE		SHALE	2.5	225.5	
377.0	CARBONDALE	BRERETON	LIMESTONE	6.0	228.0	
371.0	CARBONDALE	ANNA	BLACK SHALE	2.0	234.0	
369.0	CARBONDALE	HERRIN	COAL	6.5	236.0	
362.5	CARBONDALE		UNDERCLAY	3.0	242.5	
359.5	CARBONDALE		SHALY LIMESTONE	7.5	245.5	
352.0	CARBONDALE		GRAY SHALE	7.0	253.0	

MAPID: 11700928000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 34 QUARTERS/FOOTAGES: 555' S line, 275' E line of NW NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.863019 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.010888 DATE COLLECTED: 7 / 0 / 1962

SURFACE ELEVATION (FT.): 587.0 LOGGED (FT.): 252.0 LOG TYPE: Electric Log

SOURCE: INSALACO FRANK WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
381.0	MODESTO	PIASA	LIMESTONE	3.0	206.0
378.0	MODESTO		UNCLASSIFIED	4.0	209.0
374.0	CARBONDALE		UNCLASSIFIED	12.0	213.0
362.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	225.0
355.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	232.0
353.0	CARBONDALE		UNCLASSIFIED	2.0	234.0
351.0	CARBONDALE	BRERETON	LIMESTONE	9.0	236.0
342.0	CARBONDALE	ANNA	BLACK SHALE	3.0	245.0
339.0	CARBONDALE	HERRIN	COAL	4.0	248.0

MAPID: 11700991000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 34 QUARTERS/FOOTAGES: 330' S line, 590' W line of NW NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.864611 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.010264 DATE COLLECTED: 0 / 0 / 1951

SURFACE ELEVATION (FT.): 532.0 LOGGED (FT.): 191.0 LOG TYPE: Electric Log

SOURCE: LIVERMORE, H. E. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
386.0	MODESTO	PIASA	LIMESTONE	5.0	146.0
381.0	MODESTO		UNCLASSIFIED	3.0	151.0
378.0	CARBONDALE		UNCLASSIFIED	9.0	154.0
369.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	163.0
360.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	172.0
357.0	CARBONDALE		UNCLASSIFIED	3.0	175.0
354.0	CARBONDALE	BRERETON	LIMESTONE	9.0	178.0
345.0	CARBONDALE	ANNA	BLACK SHALE	2.0	187.0
343.0	CARBONDALE	HERRIN	COAL	2.0	189.0

MAPID: 11700992000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 34 QUARTERS/FOOTAGES: 440' S line, 330' E line of NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.849192 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.006974 DATE COLLECTED: 10 / 0 / 1953

SURFACE ELEVATION (FT.): 575.0 LOGGED (FT.): 212.0 LOG TYPE: Electric Log

SOURCE: LIVERMORE, H. E. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
407.0	MODESTO	PIASA	LIMESTONE	6.0	168.0
401.0	MODESTO		UNCLASSIFIED	5.0	174.0
396.0	CARBONDALE		UNCLASSIFIED	13.0	179.0
383.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	192.0
376.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	199.0
375.0	CARBONDALE		UNCLASSIFIED	1.0	200.0
374.0	CARBONDALE	BRERETON	LIMESTONE	7.0	201.0
367.0	CARBONDALE	HERRIN	COAL	4.0	208.0

MAPID: 11700993000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 35 QUARTERS/FOOTAGES: 330' S line, 330' W line of NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.837514 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.006594 DATE COLLECTED: 10 / 0 / 1953

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 170.0 LOG TYPE: Electric Log

SOURCE: LIVERMORE, H. E. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
415.0	MODESTO	PIASA	LIMESTONE	3.0	125.0
412.0	MODESTO		UNCLASSIFIED	4.0	128.0
408.0	CARBONDALE		UNCLASSIFIED	10.0	132.0
398.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	142.0
389.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	151.0
386.0	CARBONDALE		UNCLASSIFIED	3.0	154.0
383.0	CARBONDALE	BRERETON	LIMESTONE	9.0	157.0
374.0	CARBONDALE	ANNA	BLACK SHALE	1.0	166.0
373.0	CARBONDALE	HERRIN	COAL	3.0	167.0

MAPID: 11700216000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 36 QUARTERS/FOOTAGES: 177' N line, 1600' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.816466 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.012442 DATE COLLECTED: 0 / 0 / 1915

SURFACE ELEVATION (FT.): 532.5 LOGGED (FT.): 671.0 LOG TYPE:

SOURCE: MILLER OC 0001 WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
337.5	CARBONDALE	HERRIN	COAL	7.0	195.0	

MAPID: 11700216000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 36 QUARTERS/FOOTAGES: 177' N line, 1600' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.816466 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.012442 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 532.0 LOGGED (FT.): 201.0 LOG TYPE: Drillers Log

SOURCE: MILLER OIL CO WELL TYPE: Unsuccessful or Unknown Results

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
378.0	MODESTO	PIASA	LIMESTONE	2.0	154.0	
376.0	MODESTO		UNCLASSIFIED	6.0	156.0	
370.0	CARBONDALE		UNCLASSIFIED	17.0	162.0	
353.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	179.0	
347.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	185.0	
346.0	CARBONDALE	BRERETON	LIMESTONE	8.0	186.0	
338.0	CARBONDALE	HERRIN	COAL	7.0	194.0	

MAPID: 11700637000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 36 QUARTERS/FOOTAGES: 330' S line, 330' W line of SE SE

QUADRANGLE: WORDEN LONGITUDE: -89.813987 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 38.99933 DATE COLLECTED: 9 / 0 / 1957

SURFACE ELEVATION (FT.): 606.0 LOGGED (FT.): 265.0 LOG TYPE: Electric Log

SOURCE: MARTIN, PAUL H. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
383.0	MODESTO	PIASA	LIMESTONE	5.0	223.0
378.0	MODESTO		UNCLASSIFIED	4.0	228.0
374.0	CARBONDALE		UNCLASSIFIED	10.0	232.0
364.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	242.0
358.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	248.0
356.0	CARBONDALE		UNCLASSIFIED	1.0	250.0
355.0	CARBONDALE	BRERETON	LIMESTONE	8.0	251.0
347.0	CARBONDALE	ANNA	BLACK SHALE	1.0	259.0
346.0	CARBONDALE	HERRIN	COAL	5.0	260.0

MAPID: 11700994000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 7N 7W SECTION: 36 QUARTERS/FOOTAGES: 150' S line, 115' E line of SW SE NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.822728 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.006064 DATE COLLECTED: 1 / 0 / 1952

SURFACE ELEVATION (FT.): 608.0 LOGGED (FT.): 233.0 LOG TYPE: Electric Log

SOURCE: GROSSMANN WALTER G WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
418.0	MODESTO	PIASA	LIMESTONE	4.0	190.0
414.0	MODESTO		UNCLASSIFIED	5.0	194.0
409.0	CARBONDALE		UNCLASSIFIED	14.0	199.0
395.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	213.0
389.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	219.0
388.0	CARBONDALE	BRERETON	LIMESTONE	7.0	220.0
381.0	CARBONDALE	ANNA	BLACK SHALE	2.0	227.0
379.0	CARBONDALE	HERRIN	COAL	4.0	229.0

MAPID: 11722500000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 1 QUARTERS/FOOTAGES: 1988' S line, 348' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.92415 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.076629 DATE COLLECTED: 9 / 15 / 1977

SURFACE ELEVATION (FT.): 670.0 LOGGED (FT.): 320.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-60 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
670.0			UNCONSOLIDATED	66.0	0.0
604.0	MODESTO		GRAY SHALE	19.0	66.0
585.0	MODESTO		SHALE	5.0	85.0
580.0	MODESTO	CARLINVILLE	LIMESTONE	7.0	90.0
573.0	MODESTO		SANDSTONE	11.5	97.0
561.5	MODESTO		SANDY SHALE	25.0	108.5
536.5	MODESTO	CHAPEL	COAL	0.5	133.5
536.0	MODESTO		SANDY SHALE	82.0	134.0
454.0	MODESTO		CALCAREOUS SHALE	13.0	216.0
441.0	MODESTO		BLACK SHALE	2.0	229.0
439.0	MODESTO		CALCAREOUS SHALE	20.0	231.0
419.0	MODESTO		SHALE	3.0	251.0
416.0	MODESTO	PIASA	LIMESTONE	4.0	254.0
412.0	MODESTO		GRAY SHALE	4.0	258.0
408.0	MODESTO		BLACK SHALE	1.5	262.0
406.5	CARBONDALE	DANVILLE	COAL	1.5	263.5
405.0	CARBONDALE		GRAY SHALE	11.0	265.0
394.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	276.0
388.5	CARBONDALE		SHALE	1.0	281.5
387.5	CARBONDALE	BRERETON	SHALY LIMESTONE	5.0	282.5
382.5	CARBONDALE	ANNA	BLACK SHALE	3.0	287.5
379.5	CARBONDALE	HERRIN	COAL	5.0	290.5
374.5	CARBONDALE		SILTY CLAYSTONE	1.0	295.5
373.5	CARBONDALE		CLAYSTONE	1.5	296.5
372.0	CARBONDALE		LIMESTONE	7.0	298.0
365.0	CARBONDALE		GRAY SHALE	5.0	305.0
360.0	CARBONDALE		LIMESTONE	5.0	310.0
355.0	CARBONDALE		GRAY SHALE	5.0	315.0

MAPID: 11722349000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 3 QUARTERS/FOOTAGES: 550' S line, 2445' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.970316 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.073666 DATE COLLECTED: 9 / 30 / 1975

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 228.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-36 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
650.0			UNCONSOLIDATED	68.0	0.0
582.0	MODESTO		GRAY SHALE	91.0	68.0
491.0	MODESTO		BLACK SHALE	3.0	159.0
488.0	MODESTO		GRAY SHALE	14.0	162.0
474.0	MODESTO		SHALE	8.0	176.0
466.0	MODESTO	PIASA	LIMESTONE	2.5	184.0
463.5	MODESTO		SHALE	7.5	186.5
456.0	CARBONDALE		GRAY SHALE	7.0	194.0
449.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	201.0
445.0	CARBONDALE		GRAY SHALE	9.5	205.0
435.4	CARBONDALE	BRERETON	LIMESTONE	4.5	214.6
431.0	CARBONDALE		SHALE	0.5	219.0
430.5	CARBONDALE	HERRIN	COAL	4.5	219.5
426.0	CARBONDALE		UNDERCLAY	1.0	224.0
425.0	CARBONDALE		LIMESTONE	3.0	225.0

MAPID: 1172235000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 3 QUARTERS/FOOTAGES: 1239' N line, 20' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.96038 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.082609 DATE COLLECTED: 9 / 21 / 1979

SURFACE ELEVATION (FT.): 665.0 LOGGED (FT.): 280.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-61 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
665.0			UNCONSOLIDATED	37.0	0.0
628.0	MODESTO	MACOUPIN	LIMESTONE	2.0	37.0
626.0	MODESTO		SHALE	3.0	39.0
623.0	MODESTO		BLACK SHALE	2.0	42.0
621.0	MODESTO		SHALE	17.0	44.0
604.0	MODESTO	CARLINVILLE	LIMESTONE	6.0	61.0
598.0	MODESTO		GRAY SHALE	42.0	67.0
556.0	MODESTO		CALCAREOUS SANDSTONE	2.5	109.0
553.5	MODESTO		GRAY SHALE	5.0	111.5
548.5	MODESTO		SILTY SHALE	24.0	116.5
524.5	MODESTO		GRAY SHALE	57.5	140.5
467.0	MODESTO		BLACK SHALE	2.0	198.0
465.0	MODESTO		GRAY SHALE	19.0	200.0
446.0	MODESTO		CALCAREOUS SHALE	6.0	219.0
440.0	MODESTO	PIASA	LIMESTONE	3.0	225.0
437.0	MODESTO		GRAY SHALE	4.0	228.0
433.0	MODESTO		BLACK SHALE	1.0	232.0
432.0	CARBONDALE	DANVILLE	COAL	1.5	233.0
430.5	CARBONDALE		GRAY SHALE	3.0	234.5
427.5	CARBONDALE		CALCAREOUS SHALE	6.0	237.5
421.5	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	5.5	243.5
416.0	CARBONDALE		SHALE	1.5	249.0
414.5	CARBONDALE	BRERETON	SHALY LIMESTONE	5.5	250.5
409.0	CARBONDALE	ANNA	BLACK SHALE	2.7	256.0
406.3	CARBONDALE	HERRIN	COAL	4.9	258.7
401.4	CARBONDALE		UNDERCLAY	1.2	263.6
400.2	CARBONDALE		LIMESTONE	8.6	264.8
391.6	CARBONDALE		GRAY SHALE	6.6	273.4

MAPID: 11721829000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 4 QUARTERS/FOOTAGES: 40' S line, 785' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.98174 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.072361 DATE COLLECTED: 6 / 20 / 1978

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 235.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-78-9 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
640.0			UNCONSOLIDATED	70.0	0.0
570.0	MODESTO		SHALE	10.0	70.0
560.0	MODESTO		GRAY SHALE	70.0	80.0
490.0	MODESTO		BLACK SHALE	2.0	150.0
488.0	MODESTO		SHALE	5.0	152.0
483.0	MODESTO		SANDSTONE	12.0	157.0
471.0	MODESTO		GRAY SHALE	8.5	169.0
462.5	MODESTO		SHALE	2.5	177.5
460.0	MODESTO	PIASA	LIMESTONE	4.0	180.0
456.0	MODESTO		BLACK SHALE	5.0	184.0
451.0	MODESTO		GRAY SHALE	9.5	189.0
441.5	CARBONDALE	ALLENBY	COAL	0.5	198.5
441.0	CARBONDALE		GRAY SHALE	4.5	199.0
436.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	203.5
433.5	CARBONDALE		SHALE	5.0	206.5
428.5	CARBONDALE	BRERETON	LIMESTONE	5.5	211.5
423.0	CARBONDALE	ANNA	BLACK SHALE	1.1	217.0
421.9	CARBONDALE	HERRIN	COAL	2.8	218.1
419.1	CARBONDALE		CLAYSTONE & SHALE	1.7	220.9
417.4	CARBONDALE		CORE LOSS	0.5	222.6
417.0	CARBONDALE		LIMESTONE	5.0	223.0
412.0	CARBONDALE		SHALE	7.0	228.0

MAPID: 11722351000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 7 QUARTERS/FOOTAGES: 2085' S line, 1905' E line

QUADRANGLE: SHIPMAN LONGITUDE: -90.022667 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.062823 DATE COLLECTED: 9 / 30 / 1975

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 190.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-37 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIS, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
620.0			UNCONSOLIDATED	94.0	0.0	
526.0	MODESTO		GRAY SHALE	21.0	94.0	
505.0	MODESTO		COAL	2.0	115.0	
503.0	MODESTO		GRAY SHALE	2.0	117.0	
501.0	MODESTO		BLACK SHALE	1.5	119.0	
499.5	MODESTO		GRAY SHALE	15.5	120.5	
484.0	MODESTO		SHALE	3.0	136.0	
481.0	MODESTO		GRAY SHALE	4.0	139.0	
477.0	MODESTO	PIASA	LIMESTONE	2.0	143.0	
475.0	MODESTO		GRAY SHALE	17.0	145.0	
458.0	CARBONDALE	DANVILLE	COAL	2.0	162.0	
456.0	CARBONDALE		CALCAREOUS SHALE	6.0	164.0	
450.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	170.0	
447.0	CARBONDALE		SHALE	3.0	173.0	
444.0	CARBONDALE	BRERETON	LIMESTONE	5.0	176.0	
439.0	CARBONDALE	ANNA	BLACK SHALE	1.0	181.0	
438.0	CARBONDALE	HERRIN	COAL	1.0	182.0	
437.0	CARBONDALE		UNDERCLAY	3.0	183.0	
434.0	CARBONDALE		LIMESTONE	4.0	186.0	

MAPID: 11722352000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 9 QUARTERS/FOOTAGES: 40' S line, 2610' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.987987 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.057369 DATE COLLECTED: 9 / 29 / 1975

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 162.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-34 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
600.0			UNCONSOLIDATED	70.0	0.0	
530.0	MODESTO		GRAY SHALE	14.0	70.0	
516.0	MODESTO		SHALE	3.0	84.0	
513.0	MODESTO		SANDSTONE	24.0	87.0	
489.0	MODESTO		SHALE	5.0	111.0	
484.0	MODESTO	PIASA	LIMESTONE	3.0	116.0	
481.0	MODESTO		SHALE	6.0	119.0	
475.0	MODESTO		GRAY SHALE	10.0	125.0	
465.0	CARBONDALE	DANVILLE	COAL	1.0	135.0	
464.0	CARBONDALE		GRAY SHALE	2.0	136.0	
462.0	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	6.0	138.0	
456.0	CARBONDALE		GRAY SHALE	3.5	144.0	
452.5	CARBONDALE	BRERETON	LIMESTONE	5.5	147.5	
447.0	CARBONDALE	ANNA	BLACK SHALE	1.0	153.0	
446.0	CARBONDALE	HERRIN	COAL	3.0	154.0	
443.0	CARBONDALE		UNDERCLAY	3.0	157.0	
440.0	CARBONDALE		LIMESTONE	2.0	160.0	

MAPID: 11701353000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 10 QUARTERS/FOOTAGES: NE NW NE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.966063 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.071099 DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 239.0 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAEER COAL CO ED-6 WELL TYPE: Coal Test

COMMENT: CORE C-8765

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
416.2	CARBONDALE	HERRIN	COAL	3.8	233.8	

MAPID: 11701353000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 10 QUARTERS/FOOTAGES: NE NW NE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.966063

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.071099

DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 238.8

LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO ED-6

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
450.6	MODESTO	PIASA	LIMESTONE	1.5	199.4	
449.1	MODESTO		GRAY SHALE	2.3	200.9	
446.8	CARBONDALE	DANVILLE	COAL	0.3	203.2	
446.6	CARBONDALE		GRAY SHALE	11.9	203.4	
434.7	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	2.6	215.3	UPPER BENCH
432.1	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.0	217.9	SHALE PARTING
429.1	CARBONDALE	BANKSTON FORK	LIMESTONE	9.2	220.9	LOWER BENCH
419.9	CARBONDALE	LAWSON	CLAYSTONE & SHALE	0.8	230.1	
419.2	CARBONDALE	BRERETON	LIMESTONE	2.6	230.8	
416.6	CARBONDALE	ANNA	BLACK SHALE	0.6	233.4	
416.0	CARBONDALE	HERRIN	COAL	4.8	234.0	

MAPID: 11721830000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 10 QUARTERS/FOOTAGES: 2544' S line, 645' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.962425 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.064389 DATE COLLECTED: 6 / 19 / 1978

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 265.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-78-5 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
656.0			UNCONSOLIDATED	157.0	0.0	
499.0	MODESTO		GRAY SHALE	23.0	157.0	
476.0	MODESTO		BLACK SHALE	3.5	180.0	
472.5	MODESTO		GRAY SHALE	4.5	183.5	
468.0	MODESTO		SANDY SHALE	13.0	188.0	
455.0	MODESTO		SHALE	6.0	201.0	
449.0	MODESTO	PIASA	LIMESTONE	4.5	207.0	
444.5	MODESTO		BLACK SHALE	5.0	211.5	
439.5			GRAY SHALE	11.5	216.5	
428.0	CARBONDALE	ALLENBY	COAL	1.0	228.0	
427.0	CARBONDALE		GRAY SHALE	3.0	229.0	
424.0	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	2.0	232.0	
422.0	CARBONDALE		SHALE	2.0	234.0	
420.0	CARBONDALE	BRERETON	LIMESTONE	6.5	236.0	
413.5	CARBONDALE	ANNA	BLACK SHALE	1.0	242.5	
412.5	CARBONDALE	HERRIN	COAL	4.0	243.5	
408.5	CARBONDALE		UNDERCLAY	1.8	247.5	
406.7	CARBONDALE		CALCAREOUS SHALE	13.7	249.3	
393.0	CARBONDALE		LIMESTONE	1.0	263.0	
392.0	CARBONDALE		GRAY SHALE	1.0	264.0	

MAPID: 11722171000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 10 QUARTERS/FOOTAGES: 33' S line, 1310' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.974003 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.057808 DATE COLLECTED: 9 / 18 / 1979

SURFACE ELEVATION (FT.): 649.0 LOGGED (FT.): 240.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-10-35C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
649.0			UNCONSOLIDATED	96.0	0.0
553.0	MODESTO		LIMESTONE	4.0	96.0
549.0	MODESTO		GRAY SHALE	29.5	100.0
519.5	MODESTO		LIMESTONE	1.5	129.5
518.0	MODESTO		SHALE	40.0	131.0
478.0	MODESTO		GRAY SHALE	11.0	171.0
467.0	MODESTO		SHALE	9.5	182.0
457.5	MODESTO	PIASA	LIMESTONE	1.5	191.5
456.0	MODESTO		GRAY SHALE	3.0	193.0
453.0	MODESTO		BLACK SHALE	1.5	196.0
451.5	CARBONDALE	DANVILLE	COAL	1.5	197.5
450.0	CARBONDALE		GRAY SHALE	3.0	199.0
447.0	CARBONDALE		CALCAREOUS SHALE	6.5	202.0
440.5	CARBONDALE	ALLENBY	COAL	0.5	208.5
440.0	CARBONDALE		GRAY SHALE	4.1	209.0
435.9	CARBONDALE	BANKSTON FORK	LIMESTONE	5.1	213.1
430.8	CARBONDALE		GRAY SHALE	2.8	218.2
428.0	CARBONDALE	ANNA	BLACK SHALE	2.1	221.0
425.9	CARBONDALE	HERRIN	COAL	5.0	223.1
421.0	CARBONDALE		SHALE	0.9	228.0
420.1	CARBONDALE		CORE LOSS	0.1	228.9
420.0	CARBONDALE		GRAY SHALE	2.5	229.0
417.5	CARBONDALE		LIMESTONE	6.5	231.5
411.0	CARBONDALE		GRAY SHALE	2.0	238.0

MAPID: 11722501000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 10 QUARTERS/FOOTAGES: 57' S line, 1302' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.964675 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.057591 DATE COLLECTED: 9 / 14 / 1977

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 240.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-56 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
655.0			UNCONSOLIDATED	155.0	0.0	
500.0	MODESTO		SHALE	2.0	155.0	
498.0	MODESTO		BLACK SHALE	3.0	157.0	
495.0	MODESTO		CALCAREOUS SHALE	20.0	160.0	
475.0	MODESTO		SHALE	5.5	180.0	
469.5	MODESTO	PIASA	LIMESTONE	3.5	185.5	
466.0	MODESTO		GRAY SHALE	3.0	189.0	
463.0	MODESTO		BLACK SHALE	1.5	192.0	
461.5	CARBONDALE	DANVILLE	COAL	1.0	193.5	
460.5	CARBONDALE		GRAY SHALE	2.5	194.5	
458.0	CARBONDALE		CALCAREOUS SHALE	6.5	197.0	
451.5	CARBONDALE	ALLENBY	COAL	1.0	203.5	
450.5	CARBONDALE		GRAY SHALE	3.0	204.5	
447.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	207.5	
443.5	CARBONDALE		GRAY SHALE	1.0	211.5	
442.5	CARBONDALE	BRERETON	SHALY LIMESTONE	3.5	212.5	
439.0	CARBONDALE	BRERETON	SILTY LIMESTONE	2.6	216.0	
436.4	CARBONDALE		SHALE	0.6	218.6	
435.8	CARBONDALE	ANNA	BLACK SHALE	0.7	219.2	
435.2	CARBONDALE	HERRIN	COAL	4.5	219.8	
430.7	CARBONDALE		CLAYSTONE	2.2	224.3	
428.5	CARBONDALE		CORE LOSS	0.5	226.5	
428.0	CARBONDALE		LIMESTONE	6.0	227.0	
422.0	CARBONDALE		UNCLASSIFIED	7.0	233.0	

MAPID: 11722199000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 11 QUARTERS/FOOTAGES: 60' N line, 320' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.94273 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.071389 DATE COLLECTED: 10 / 11 / 1979

SURFACE ELEVATION (FT.): 658.0 LOGGED (FT.): 280.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-11-60 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
658.0			UNCONSOLIDATED	38.0	0.0
620.0	MODESTO		GRAY SHALE	9.0	38.0
611.0	MODESTO		GRAY SHALE	12.5	47.0
598.5	MODESTO	CARLINVILLE	LIMESTONE	4.5	59.5
594.0	MODESTO		GRAY SHALE	92.5	64.0
501.5	MODESTO		LIMESTONE	1.0	156.5
500.5	MODESTO		GRAY SHALE	35.5	157.5
465.0	MODESTO		SANDY SHALE	11.0	193.0
454.0	MODESTO		SHALE	17.0	204.0
437.0	MODESTO	PIASA	LIMESTONE	4.2	221.0
432.8	MODESTO		SHALE	5.8	225.2
427.0	MODESTO		BLACK SHALE	1.0	231.0
426.0	CARBONDALE	DANVILLE	COAL	1.0	232.0
425.0	CARBONDALE		GRAY SHALE	5.7	233.0
419.3	CARBONDALE	ALLENBY	COAL	0.5	238.7
418.8	CARBONDALE		GRAY SHALE	4.6	239.2
414.2	CARBONDALE	BANKSTON FORK	LIMESTONE	5.4	243.8
408.8	CARBONDALE		SHALE	1.2	249.2
407.6	CARBONDALE	BRERETON	LIMESTONE	6.2	250.4
401.4	CARBONDALE	ANNA	BLACK SHALE	2.2	256.6
399.2	CARBONDALE	HERRIN	COAL	5.8	258.8
393.4	CARBONDALE		UNDERCLAY	1.4	264.6
392.0	CARBONDALE		LIMESTONE	9.0	266.0
383.0	CARBONDALE		GRAY SHALE	5.0	275.0

MAPID: 11722353000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 11 QUARTERS/FOOTAGES: 1695' S line, 1365' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.946374 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.061757 DATE COLLECTED: 10 / 3 / 1975

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 270.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-41A WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
655.0			UNCONSOLIDATED	130.0	0.0	
525.0	MODESTO		GRAY SHALE	49.0	130.0	
476.0	MODESTO		LIMESTONE	1.0	179.0	
475.0	MODESTO		GRAY SHALE	12.0	180.0	
463.0	MODESTO		BLACK SHALE	1.0	192.0	
462.0	MODESTO		GRAY SHALE	3.0	193.0	
459.0	MODESTO		SHALE	5.0	196.0	
454.0	MODESTO		GRAY SHALE	2.0	201.0	
452.0	MODESTO		SHALY LIMESTONE	3.0	203.0	
449.0	MODESTO		SANDY SHALE	14.0	206.0	
435.0	MODESTO		SHALE	5.0	220.0	
430.0	MODESTO	PIASA	LIMESTONE	4.0	225.0	
426.0	MODESTO		GRAY SHALE	4.0	229.0	
422.0	MODESTO		BLACK SHALE	2.0	233.0	
420.0	CARBONDALE		GRAY SHALE	7.0	235.0	
413.0	CARBONDALE	ALLENBY	COAL	1.0	242.0	
412.0	CARBONDALE		GRAY SHALE	3.0	243.0	
409.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	246.0	
403.5	CARBONDALE		GRAY SHALE	1.5	251.5	
402.0	CARBONDALE	BRERETON	LIMESTONE	3.0	253.0	
399.0	CARBONDALE	ANNA	BLACK SHALE	4.0	256.0	
395.0	CARBONDALE	HERRIN	COAL	5.0	260.0	
390.0	CARBONDALE		UNDERCLAY	1.0	265.0	
389.0	CARBONDALE		SHALY LIMESTONE	4.0	266.0	

MAPID: 11700178000C VERSION: 1

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 12 QUARTERS/FOOTAGES: 3425' S line, 400' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.924205 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.066141 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 651.3 LOGGED (FT.): 282.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT AND CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
651.3			UNCONSOLIDATED	37.0	0.0
614.3			BLACK SHALE	4.0	37.0
610.3			LIGHT SHALE	6.0	41.0
604.3			LIMESTONE	1.0	47.0
603.3			SHALE	20.0	48.0
583.3			LIMESTONE	8.0	68.0
575.3			LIGHT SHALE	8.0	76.0
567.3			SANDSTONE	2.0	84.0
565.3			GRAY SHALE	13.0	86.0
552.3	MODESTO		SANDSTONE	5.0	99.0
547.3	MODESTO		SHALE	5.0	104.0
542.3	MODESTO	CHAPEL	COAL	0.1	109.0
542.2	MODESTO		GRAY SHALE	5.9	109.1
536.3	MODESTO		DARK SHALE	6.0	115.0
530.3	MODESTO	TRIVOLI	SANDSTONE	17.0	121.0
513.3	MODESTO		SHALE	78.0	138.0
435.3	MODESTO		DARK SHALE	6.0	216.0
429.3	MODESTO		SHALE	15.0	222.0
414.3	MODESTO	PIASA	LIMESTONE	4.0	237.0
410.3	CARBONDALE	DANVILLE	COAL	0.0	241.0
410.3	CARBONDALE		DARK SHALE	17.0	241.0
393.3	CARBONDALE		SHALE	4.0	258.0
389.3	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	262.0
384.3	CARBONDALE		BLUE SHALE	1.0	267.0
383.3	CARBONDALE	BRERETON	LIMESTONE	2.5	268.0
380.8	CARBONDALE		GREEN SHALE	0.3	270.5
380.5	CARBONDALE	ANNA	BLACK SHALE	2.0	270.8
378.5	CARBONDALE	HERRIN	COAL	5.8	272.8
372.7	CARBONDALE		UNDERCLAY	2.5	278.6
370.2	CARBONDALE		LIMESTONE	0.9	281.1

MAPID: 11700178000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 12 QUARTERS/FOOTAGES: 3425' S line, 400' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.924205

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.066141

DATE COLLECTED:

SURFACE ELEVATION (FT.): 511.0

LOGGED (FT.): 278.8

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
273.8	MODESTO	PIASA	LIMESTONE	4.0	237.2
269.8	CARBONDALE		DARK GRAY SHALE	21.0	241.2
248.8	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	262.2
243.8	CARBONDALE	LAWSON	GRAY SHALE	1.0	267.2
242.8	CARBONDALE	BRERETON	LIMESTONE	2.5	268.2
240.3	CARBONDALE	ANNA	BLACK SHALE	2.3	270.7
238.0	CARBONDALE	HERRIN	COAL	5.8	273.0

MAPID: 11700178000C VERSION: 3

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 12 QUARTERS/FOOTAGES: 3425' S line, 400' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.924205

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.066141

DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 651.3

LOGGED (FT.): 282.0

LOG TYPE:

SOURCE: HUNT R W 00D1

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
378.3	CARBONDALE	HERRIN	COAL	5.8	273.0

MAPID: 11700178000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 12 QUARTERS/FOOTAGES: 3425' S line, 400' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.924205 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.066141 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 651.3 LOGGED (FT.): 282.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE #D-1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
651.3			CLAY	30.0	0.0	
621.3			GRAVEL	7.0	30.0	
614.3	MODESTO	WOMAC	BLACK SHALE	4.0	37.0	W/.17' COAL
610.3	MODESTO		SHALE	6.0	41.0	
604.3	MODESTO	BURROUGHS	LIMESTONE	1.0	47.0	
603.3	MODESTO		CALCAREOUS SHALE	20.0	48.0	
583.3	MODESTO	CARLINVILLE	LIMESTONE	8.0	68.0	
575.3	MODESTO		SHALE	8.0	76.0	
567.3	MODESTO		SANDSTONE	2.0	84.0	
565.3	MODESTO		SHALE	13.0	86.0	
552.3	MODESTO		SANDSTONE	5.0	99.0	
547.3	MODESTO		CALCAREOUS SHALE	5.0	104.0	
542.3	MODESTO	CHAPEL	COAL	0.1	109.0	
542.2	MODESTO		SHALE	5.9	109.1	
536.3	MODESTO		SHALE	6.0	115.0	
530.3	MODESTO		SANDSTONE	17.0	121.0	
513.3	MODESTO		SHALE	53.0	138.0	
460.3	MODESTO		CALCAREOUS SHALE	18.0	191.0	
442.3	MODESTO		SHALE	7.0	209.0	
435.3	MODESTO		SHALE	6.0	216.0	
429.3	MODESTO		SHALE	9.0	222.0	
420.3	MODESTO		CALCAREOUS SHALE	6.0	231.0	
414.3	MODESTO	PIASA	LIMESTONE	4.0	237.0	
410.3	MODESTO		SHALE	17.0	241.0	
393.3	CARBONDALE		CALCAREOUS SHALE	4.0	258.0	
389.3	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	262.0	
384.3	CARBONDALE		SHALE	1.0	267.0	
383.3	CARBONDALE	BRERETON	LIMESTONE	2.5	268.0	
380.8	CARBONDALE		SHALE	0.3	270.5	
380.5	CARBONDALE	ANNA	BLACK SHALE	2.0	270.8	
378.5	CARBONDALE	HERRIN	COAL	5.8	272.8	
372.7	CARBONDALE		UNDERCLAY	2.4	278.6	
370.3	CARBONDALE		LIMESTONE	1.0	281.0	

MAPID: 11722135000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 12 QUARTERS/FOOTAGES: 52' N line, 1610' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.928527 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.071097 DATE COLLECTED: 5 / 2 / 1979

SURFACE ELEVATION (FT.): 645.0 LOGGED (FT.): 274.5 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-12-8C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
645.0			UNCONSOLIDATED	25.0	0.0
620.0	MODESTO		BLACK SHALE	2.0	25.0
618.0	MODESTO		GRAY SHALE	7.0	27.0
611.0	MODESTO	MACOUPIN	SHALY LIMESTONE	5.5	34.0
605.5	MODESTO		GRAY SHALE	18.5	39.5
587.0	MODESTO	CARLINVILLE	LIMESTONE	6.5	58.0
580.5	MODESTO		SANDY SHALE	42.5	64.5
538.0	MODESTO		SHALY SANDSTONE	13.0	107.0
525.0	MODESTO		GRAY SHALE	76.0	120.0
449.0	MODESTO		BLACK SHALE	1.0	196.0
448.0	MODESTO		SHALE	21.5	197.0
426.5	MODESTO	PIASA	LIMESTONE	3.5	218.5
423.0	MODESTO		GRAY SHALE	5.0	222.0
418.0	CARBONDALE	DANVILLE	COAL	1.0	227.0
417.0	CARBONDALE		SHALE	2.0	228.0
415.0	CARBONDALE		SHALE	2.8	230.0
412.2	CARBONDALE		FOSSILIFEROUS LIMESTONE	0.8	232.8
411.4	CARBONDALE		GRAY SHALE	4.3	233.6
407.1	CARBONDALE		CORE LOSS	0.1	237.9
407.0	CARBONDALE		SHALE	0.6	238.0
406.4	CARBONDALE	BANKSTON FORK	LIMESTONE	0.4	238.6
406.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.1	239.0
403.9	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.8	241.1
403.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	241.9
401.2	CARBONDALE		SHALE	1.2	243.8
400.0	CARBONDALE	BRERETON	LIMESTONE	4.7	245.0
395.4	CARBONDALE		SHALE	0.7	249.6
394.7	CARBONDALE	ANNA	BLACK SHALE	2.3	250.3
392.4	CARBONDALE	HERRIN	COAL	6.9	252.6
385.5	CARBONDALE		SHALE	1.1	259.5
384.4	CARBONDALE		SHALY LIMESTONE	3.2	260.6
381.2	CARBONDALE		GRAY SHALE	1.2	263.8
380.1	CARBONDALE		SHALY LIMESTONE	2.9	264.9
377.2	CARBONDALE		GRAY SHALE	0.8	267.8
376.5	CARBONDALE		SHALE	5.7	268.5
370.8	CARBONDALE		CORE LOSS	0.3	274.2

MAPID: 11722136000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 12 QUARTERS/FOOTAGES: 40' S line, 2110' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.934043 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.056975 DATE COLLECTED: 4 / 27 / 1979

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 271.6 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-12-9C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
630.0			UNCONSOLIDATED	13.0	0.0
617.0	MODESTO		SHALE	2.0	13.0
615.0	MODESTO		LIMESTONE	1.5	15.0
613.5	MODESTO		BLACK SHALE	2.5	16.5
611.0	MODESTO		GRAY SHALE	7.0	19.0
604.0	MODESTO		CALCAREOUS SANDSTONE	6.0	26.0
598.0	MODESTO		GRAY SHALE	17.5	32.0
580.5	MODESTO	CARLINVILLE	LIMESTONE	6.0	49.5
574.5	MODESTO		GRAY SHALE	31.5	55.5
543.0	MODESTO		GRAY SHALE	11.0	87.0
532.0	MODESTO		SANDSTONE	1.0	98.0
531.0	MODESTO		GRAY SHALE	75.0	99.0
456.0	MODESTO		GRAY SHALE	11.0	174.0
445.0	MODESTO		BLACK SHALE	1.0	185.0
444.0	MODESTO		GRAY SHALE	6.0	186.0
438.0	MODESTO		SANDSTONE	4.0	192.0
434.0	MODESTO		SHALE	10.0	196.0
424.0	MODESTO		SHALE	7.0	206.0
417.0	MODESTO	PIASA	LIMESTONE	5.0	213.0
412.0	MODESTO		SHALE	1.5	218.0
410.5	MODESTO		BLACK SHALE	1.0	219.5
409.5	CARBONDALE		GRAY SHALE	10.5	220.5
399.0	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	6.0	231.0
393.0	CARBONDALE		SHALE	5.0	237.0
388.0	CARBONDALE	BRERETON	LIMESTONE	7.0	242.0
381.0	CARBONDALE		SHALE	0.7	249.0
380.3	CARBONDALE	HERRIN	COAL	4.3	249.7
376.0	CARBONDALE		GRAY SHALE	0.9	254.0
375.1	CARBONDALE		LIMESTONE	0.4	254.9
374.6	CARBONDALE		CORE LOSS	0.3	255.4
374.4	CARBONDALE		LIMESTONE	4.5	255.6
369.9	CARBONDALE		GRAY SHALE	1.0	260.1
368.9	CARBONDALE		LIMESTONE	2.0	261.1
366.9	CARBONDALE		SHALE	7.0	263.1
359.9	CARBONDALE		LIMESTONE	1.5	270.1

MAPID: 11700179000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 13 QUARTERS/FOOTAGES:

QUADRANGLE: BUNKER HILL LONGITUDE: -89.932079 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.049655 DATE COLLECTED: 0 / 0 / 1906

SURFACE ELEVATION (FT.): 619.1 LOGGED (FT.): 245.0 LOG TYPE:

SOURCE: BAUSER ED WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
379.1	CARBONDALE	HERRIN	COAL	5.0	240.0

MAPID: 11722137000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 13 QUARTERS/FOOTAGES: 1710' N line, 1990' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.934403 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.052151 DATE COLLECTED: 5 / 10 / 1979

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 275.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NC-79-13-11 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
640.0			UNCONSOLIDATED	45.0	0.0
595.0	MODESTO		SHALE	7.5	45.0
587.5	MODESTO	CARLINVILLE	LIMESTONE	7.0	52.5
580.5	MODESTO		GRAY SHALE	31.5	59.5
549.0	MODESTO		SHALE	14.0	91.0
535.0	MODESTO		SANDSTONE	12.0	105.0
523.0	MODESTO		GRAY SHALE	59.5	117.0
463.5	MODESTO		SANDSTONE	0.5	176.5
463.0	MODESTO		SHALE	10.5	177.0
452.5	MODESTO		BLACK SHALE	2.5	187.5
450.0	MODESTO		SHALE	3.0	190.0
447.0	MODESTO		GRAY SHALE	22.0	193.0
425.0	MODESTO	PIASA	LIMESTONE	3.0	215.0
422.0	MODESTO		GRAY SHALE	5.0	218.0
417.0	MODESTO		BLACK SHALE	2.0	223.0
415.0	CARBONDALE	DANVILLE	COAL	1.0	225.0
414.0	CARBONDALE		GRAY SHALE	11.0	226.0
403.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	237.0
398.0	CARBONDALE		GRAY SHALE	4.0	242.0
394.0	CARBONDALE	BRERETON	LIMESTONE	6.0	246.0
388.0	CARBONDALE	ANNA	BLACK SHALE	0.6	252.0
387.4	CARBONDALE	HERRIN	COAL	5.0	252.6
382.4	CARBONDALE		GRAY SHALE	1.4	257.6
381.0	CARBONDALE		LIMESTONE	6.0	259.0
375.0	CARBONDALE		SHALE	10.0	265.0

MAPID: 11722354000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 13 QUARTERS/FOOTAGES: 2598' S line, 891' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.925893 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.049493 DATE COLLECTED: 9 / 22 / 1977

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 300.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-55 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
650.0			UNCONSOLIDATED	116.0	0.0
534.0	MODESTO		GRAY SHALE	24.0	116.0
510.0	MODESTO		SANDSTONE	9.5	140.0
500.5	MODESTO		GRAY SHALE	68.5	149.5
432.0	MODESTO		BLACK SHALE	2.0	218.0
430.0	MODESTO		GRAY SHALE	4.0	220.0
426.0	MODESTO		GRAY SHALE	11.0	224.0
415.0	MODESTO		GRAY SHALE	5.0	235.0
410.0	MODESTO		SHALE	4.5	240.0
405.5	MODESTO	PIASA	LIMESTONE	3.0	244.5
402.5	MODESTO		SHALE	4.5	247.5
398.0	MODESTO		BLACK SHALE	1.5	252.0
396.5	CARBONDALE	DANVILLE	COAL	0.5	253.5
396.0	CARBONDALE		GRAY SHALE	7.0	254.0
389.0	CARBONDALE	ALLENBY	COAL	1.0	261.0
388.0	CARBONDALE		GRAY SHALE	2.5	262.0
385.5	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	264.5
380.5	CARBONDALE		GRAY SHALE	5.5	269.5
375.0	CARBONDALE		BLACK SHALE	3.0	275.0
372.0	CARBONDALE		SHALE	0.7	278.0
371.3	CARBONDALE	HERRIN	COAL	3.3	278.7
368.1	CARBONDALE		UNDERCLAY	1.3	281.9
366.8	CARBONDALE		CORE LOSS	0.3	283.2
366.5	CARBONDALE		SHALY LIMESTONE	7.6	283.5
358.9	CARBONDALE		GRAY SHALE	4.9	291.1
354.0	CARBONDALE		LIMESTONE	2.0	296.0
352.0	CARBONDALE		GRAY SHALE	2.0	298.0

MAPID: 11700177000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 14 QUARTERS/FOOTAGES: 900' S line, 2200' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.952191 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.045074 DATE COLLECTED: 0 / 0 / 1924

SURFACE ELEVATION (FT.): 672.7 LOGGED (FT.): 585.0 LOG TYPE:

SOURCE: IND C MILK WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
426.7	CARBONDALE	HERRIN	COAL	4.0	246.0	

MAPID: 11700253000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 14 QUARTERS/FOOTAGES: 2275' S line, 1700' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.947426 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.048924 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 639.2 LOGGED (FT.): 0.0 LOG TYPE:

SOURCE: CONSOL STL0001 WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
395.2	CARBONDALE	HERRIN	COAL	5.5	244.0	

MAPID: 11722138000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 14 QUARTERS/FOOTAGES: 490' N line, 2390' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.951587 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.05581 DATE COLLECTED: 5 / 8 / 1979

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 280.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-14-10 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
655.0			UNCONSOLIDATED	61.5	0.0
593.5	MODESTO		LIMESTONE	0.7	61.5
592.8	MODESTO		GRAY SHALE	43.8	62.2
549.0	MODESTO		SANDY SHALE	4.0	106.0
545.0	MODESTO		GRAY SHALE	87.0	110.0
458.0	MODESTO		SANDSTONE	2.0	197.0
456.0	MODESTO		GRAY SHALE	20.5	199.0
435.5	MODESTO	PIASA	LIMESTONE	2.5	219.5
433.0	MODESTO		GRAY SHALE	5.0	222.0
428.0	MODESTO		BLACK SHALE	2.0	227.0
426.0	CARBONDALE	DANVILLE	COAL	1.0	229.0
425.0	CARBONDALE		GRAY SHALE	8.0	230.0
417.0	CARBONDALE	ALLENBY	COAL	0.5	238.0
416.5	CARBONDALE		GRAY SHALE	6.0	238.5
410.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	244.5
408.0	CARBONDALE		GRAY SHALE	1.5	247.0
406.5	CARBONDALE	BRERETON	LIMESTONE	1.5	248.5
405.0	CARBONDALE	ANNA	BLACK SHALE	3.5	250.0
401.5	CARBONDALE	HERRIN	COAL	5.0	253.5
396.5	CARBONDALE		UNDERCLAY	2.0	258.5
394.5	CARBONDALE		LIMESTONE	4.0	260.5
390.5	CARBONDALE		SHALE	1.5	264.5
389.0	CARBONDALE		LIMESTONE	1.5	266.0
387.5	CARBONDALE		GRAY SHALE	6.0	267.5
381.5	CARBONDALE		LIMESTONE	1.0	273.5
380.5	CARBONDALE		GRAY SHALE	1.5	274.5
379.0	CARBONDALE		GRAY SHALE	4.0	276.0

MAPID: 11721831000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 15 QUARTERS/FOOTAGES: 2540' S line, 2390' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.970204

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.049914

DATE COLLECTED: 6 / 16 / 1978

SURFACE ELEVATION (FT.): 630.0

LOGGED (FT.): 220.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-78-6

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
630.0			UNCONSOLIDATED	153.0	0.0
477.0	MODESTO		GRAY SHALE	4.0	153.0
473.0	MODESTO		SHALE	5.5	157.0
467.5	MODESTO	PIASA	LIMESTONE	3.0	162.5
464.5	MODESTO		GRAY SHALE	3.5	165.5
461.0	MODESTO		BLACK SHALE	3.0	169.0
458.0	CARBONDALE	DANVILLE	COAL	1.5	172.0
456.5	CARBONDALE		GRAY SHALE	18.5	173.5
438.0	CARBONDALE	BRERETON	LIMESTONE	3.5	192.0
434.5	CARBONDALE	ANNA	BLACK SHALE	3.0	195.5
431.5	CARBONDALE	HERRIN	COAL	5.3	198.5
426.2	CARBONDALE		SHALE	1.6	203.8
424.6	CARBONDALE		CORE LOSS	0.2	205.4
424.5	CARBONDALE		CALCAREOUS SHALE	1.5	205.5
423.0	CARBONDALE		LIMESTONE	3.0	207.0
420.0	CARBONDALE		GRAY SHALE	7.0	210.0
413.0	CARBONDALE		GRAY SHALE	3.0	217.0

MAPID: 11700181000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 16 QUARTERS/FOOTAGES: 150' S line, 1100' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.982577

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.043422

DATE COLLECTED:

SURFACE ELEVATION (FT.): 590.1

LOGGED (FT.): 0.0

LOG TYPE:

SOURCE: CROWHOLLOW00HS

WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
430.1	CARBONDALE	HERRIN	COAL	5.0	160.0

MAPID: 11700180000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 8W **SECTION:** 21 **QUARTERS/FOOTAGES:** 250' N line, 600' E line
QUADRANGLE: BUNKER HILL **LONGITUDE:** -89.980807 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.042422 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 588.3 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: CROWHOLLOW AS **WELL TYPE:** Underground mine
COMMENT:

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

MAPID: 11722172000C **VERSION:** 1 **PROJECT:** NCRDS89
COUNTY: MACOUPIN **TWP/RNG:** 7N 8W **SECTION:** 21 **QUARTERS/FOOTAGES:** 2100' N line, 650' E line
QUADRANGLE: BUNKER HILL **LONGITUDE:** -89.980985 **GEOLOGIST:** SROKA
CONFIDENTIAL: N **LATITUDE:** 39.037303 **DATE COLLECTED:** 9 / 19 / 1979
SURFACE ELEVATION (FT.): 630.0 **LOGGED (FT.):** 206.0 **LOG TYPE:** Multiple log types
SOURCE: MOBIL OIL ND-79-21-34C **WELL TYPE:** Coal Test
COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
630.0			UNCONSOLIDATED	121.5	0.0
508.5	MODESTO		SANDSTONE	8.5	121.5
500.0	MODESTO		SHALE	12.0	130.0
488.0	MODESTO		SHALE	4.0	142.0
484.0	MODESTO	PIASA	LIMESTONE	5.5	146.0
478.5	MODESTO		GRAY SHALE	18.1	151.5
460.4	CARBONDALE	DANVILLE	COAL	2.2	169.6
458.2	CARBONDALE		GRAY SHALE	7.0	171.8
451.2	CARBONDALE	BRERETON	LIMESTONE	4.6	178.8
446.6	CARBONDALE		GRAY SHALE	1.6	183.4
445.0	CARBONDALE	ANNA	BLACK SHALE	1.5	185.0
443.5	CARBONDALE	HERRIN	COAL	4.4	186.5
439.1	CARBONDALE		SHALE	0.8	190.9
438.4	CARBONDALE		CORE LOSS	0.4	191.6
438.0	CARBONDALE		GRAY SHALE	1.0	192.0
437.0	CARBONDALE		LIMESTONE	5.0	193.0
432.0	CARBONDALE		GRAY SHALE	5.0	198.0
427.0	CARBONDALE		LIMESTONE	2.0	203.0
425.0	CARBONDALE		GRAY SHALE	1.0	205.0

MAPID: 11722355000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 21 QUARTERS/FOOTAGES: 325' N line, 60' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.978895

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.04233

DATE COLLECTED: 9 / 26 / 1975

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 202.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-33

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
635.0			UNCONSOLIDATED	150.0	0.0
485.0	MODESTO	PIASA	LIMESTONE	3.0	150.0
482.0	MODESTO		GRAY SHALE	19.0	153.0
463.0	CARBONDALE	DANVILLE	COAL	2.0	172.0
461.0	CARBONDALE		GRAY SHALE	3.0	174.0
458.0	CARBONDALE	BRERETON	LIMESTONE	6.0	177.0
452.0	CARBONDALE	ANNA	BLACK SHALE	4.0	183.0
448.0	CARBONDALE	HERRIN	COAL	5.0	187.0
443.0	CARBONDALE		UNDERCLAY	3.0	192.0
440.0	CARBONDALE		LIMESTONE	3.0	195.0
437.0	CARBONDALE		SHALE	4.0	198.0

MAPID: 11722173000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 22 QUARTERS/FOOTAGES: 300' S line, 2540' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.969698 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.029053 DATE COLLECTED: 9 / 20 / 1979

SURFACE ELEVATION (FT.): 614.0 LOGGED (FT.): 210.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-22-32C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
614.0			UNCONSOLIDATED	116.0	0.0	
498.0	MODESTO		SANDY SHALE	21.0	116.0	
477.0	MODESTO		SANDSTONE	3.0	137.0	
474.0	MODESTO		GRAY SHALE	8.0	140.0	
466.0	MODESTO		SHALE	4.5	148.0	
461.5	MODESTO	PIASA	LIMESTONE	1.5	152.5	
460.0	MODESTO		SHALE	18.9	154.0	
441.1	CARBONDALE	DANVILLE	COAL	1.8	172.9	
439.3	CARBONDALE		GRAY SHALE	3.3	174.7	
436.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.9	178.0	
431.1	CARBONDALE	ENERGY	GRAY SHALE	5.5	182.9	
425.6	CARBONDALE	HERRIN	COAL	5.2	188.4	
420.4	CARBONDALE		SHALE	0.8	193.6	
419.6	CARBONDALE		GRAY SHALE	9.6	194.4	
410.0	CARBONDALE		LIMESTONE	2.0	204.0	
408.0	CARBONDALE		GRAY SHALE	4.0	206.0	

MAPID: 11722356000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 22 QUARTERS/FOOTAGES: 2618' S line, 2589' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.969521 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.035445 DATE COLLECTED: 7 / 26 / 1977

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 200.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-51 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
620.0			UNCONSOLIDATED	123.0	0.0	
497.0	MODESTO		SANDSTONE/SHALE	14.0	123.0	
483.0	MODESTO		SHALE	10.5	137.0	
472.5	MODESTO	PIASA	LIMESTONE	2.5	147.5	
470.0	MODESTO		GRAY SHALE	17.0	150.0	
453.0	CARBONDALE	DANVILLE	COAL	2.0	167.0	
451.0	CARBONDALE		GRAY SHALE	9.0	169.0	
442.0	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	2.5	178.0	
439.5	CARBONDALE		GRAY SHALE	1.5	180.5	
438.0	CARBONDALE	BRERETON	LIMESTONE	3.0	182.0	
435.0	CARBONDALE	ANNA	BLACK SHALE	1.8	185.0	
433.2	CARBONDALE	HERRIN	COAL	3.8	186.8	
429.4	CARBONDALE		UNDERCLAY	1.9	190.6	
427.5	CARBONDALE		LIMESTONE	4.5	192.5	
423.0	CARBONDALE		GRAY SHALE	3.0	197.0	
420.0	CARBONDALE		UNCLASSIFIED	0.0	200.0	

MAPID: 11722139000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 23 QUARTERS/FOOTAGES: 2320' S line, 2061' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.952601 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.034396 DATE COLLECTED: 5 / 1 / 1979

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 270.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-23-14C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
640.0			UNCONSOLIDATED	91.0	0.0
549.0	MODESTO		GRAY SHALE	49.0	91.0
500.0	MODESTO		GRAY SHALE	30.5	140.0
469.5	MODESTO		LIMESTONE	1.0	170.5
468.5	MODESTO		SHALE	12.5	171.5
456.0	MODESTO		BLACK SHALE	1.0	184.0
455.0	MODESTO		GRAY SHALE	5.0	185.0
450.0	MODESTO		GRAY SHALE	6.0	190.0
444.0	MODESTO		GRAY SHALE	10.0	196.0
434.0	MODESTO	PIASA	LIMESTONE	5.0	206.0
429.0	MODESTO		GRAY SHALE	14.5	211.0
414.5	CARBONDALE	DANVILLE	COAL	1.5	225.5
413.0	CARBONDALE		CALCAREOUS SHALE	5.0	227.0
408.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.3	232.0
403.7	CARBONDALE		SHALE	1.7	236.3
402.0	CARBONDALE	BRERETON	LIMESTONE	5.3	238.0
396.7	CARBONDALE	ANNA	BLACK SHALE	2.2	243.3
394.5	CARBONDALE	HERRIN	COAL	5.1	245.5
389.4	CARBONDALE		GRAY SHALE	3.4	250.6
386.0	CARBONDALE		SHALY LIMESTONE	4.5	254.0
381.5	CARBONDALE		GRAY SHALE	1.5	258.5
380.0	CARBONDALE		GRAY SHALE	10.0	260.0

MAPID: 11700182000C VERSION: 1

PROJECT: NCRDS87

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 24 QUARTERS/FOOTAGES: 4450' S line, 5100' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.940801 GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 39.040242 DATE COLLECTED:

SURFACE ELEVATION (FT.): 619.6 LOGGED (FT.): 243.7 LOG TYPE: Drillers Log

SOURCE: NAYLOR MINE WELL TYPE: Mine Shaft

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
619.6			UNCONSOLIDATED	28.0	0.0	
591.6	BOND		SHALE	12.0	28.0	
579.6	BOND	CARTHAGE	LIMESTONE	8.3	40.0	
571.3	MODESTO		SHALE	30.0	48.3	
541.3	MODESTO		LIMESTONE	2.0	78.3	
539.3	MODESTO		SHALE	1.3	80.3	
537.9	MODESTO	CHAPEL	COAL	0.3	81.7	UNCERTAIN CORRELATION
537.7	MODESTO		UNDERCLAY	2.0	81.9	
535.7	MODESTO		SHALE	10.5	83.9	
525.2	MODESTO		SHALE & SANDSTONE	55.0	94.4	
470.2	MODESTO		BLACK SHALE	3.0	149.4	
467.2	MODESTO		SANDSTONE	30.0	152.4	
437.2	MODESTO		SHALE	18.0	182.4	
419.2	MODESTO		COAL	1.7	200.4	
417.5	MODESTO		SHALE	10.0	202.1	
407.5	CARBONDALE	DANVILLE	COAL	1.6	212.1	
405.9	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	213.7	
397.9	CARBONDALE		SHALE	7.0	221.7	
390.9	CARBONDALE	BRERETON	LIMESTONE	7.0	228.7	
383.9	CARBONDALE	ANNA	BLACK SHALE	2.0	235.7	
381.9	CARBONDALE	HERRIN	COAL	6.0	237.7	

MAPID: 11700182000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 24 QUARTERS/FOOTAGES: 4450' S line, 5100' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.940801

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.040242

DATE COLLECTED:

SURFACE ELEVATION (FT.): 620.0

LOGGED (FT.): 244.0

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
437.0	MODESTO	PIASA	LIMESTONE W/ SHALE	15.0	183.0
422.0	MODESTO		CLAYSTONE & SHALE	3.0	198.0
419.0	CARBONDALE	DANVILLE	COAL	1.7	201.0
417.3	CARBONDALE		LIMESTONE W/ SHALE	10.0	202.7
407.3	CARBONDALE	ALLENBY	COAL	1.5	212.7
405.8	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	214.2
397.8	CARBONDALE	BANKSTON FORK	SHALE	7.0	222.2
390.8	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	229.2
386.8	CARBONDALE	BRERETON	LIMESTONE	3.0	233.2
383.8	CARBONDALE	ANNA	BLACK SHALE	2.0	236.2
382.0	CARBONDALE	HERRIN	COAL	6.0	238.0

MAPID: 11700182000C VERSION: 3

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 24 QUARTERS/FOOTAGES: 4450' S line, 5100' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.940801

GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.040242

DATE COLLECTED:

SURFACE ELEVATION (FT.): 619.6

LOGGED (FT.): 253.0

LOG TYPE:

SOURCE: NAYLOR MN

WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
372.6	CARBONDALE	HERRIN	COAL	6.0	247.0

MAPID: 11722140000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 24 QUARTERS/FOOTAGES: 63' N line, 2400' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.932831 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.042323 DATE COLLECTED: 5 / 2 / 1979

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 290.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-24-15 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
640.0			UNCONSOLIDATED	106.0	0.0	
534.0	MODESTO		CALCAREOUS SANDSTONE	1.5	106.0	
532.5	MODESTO		GRAY SHALE	81.5	107.5	
451.0	MODESTO		GRAY SHALE	7.0	189.0	
444.0	MODESTO		GRAY SHALE	3.0	196.0	
441.0	MODESTO		BLACK SHALE	2.0	199.0	
439.0	MODESTO		GRAY SHALE	6.0	201.0	
433.0	MODESTO		GRAY SHALE	10.0	207.0	
423.0	MODESTO		GRAY SHALE	7.0	217.0	
416.0	MODESTO	PIASA	LIMESTONE	3.0	224.0	
413.0	MODESTO		SHALE	6.5	227.0	
406.5	CARBONDALE	DANVILLE	COAL	1.5	233.5	
405.0	CARBONDALE		GRAY SHALE	16.0	235.0	
389.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	251.0	
387.0	CARBONDALE		GRAY SHALE	2.0	253.0	
385.0	CARBONDALE	BRERETON	LIMESTONE	5.0	255.0	
380.0	CARBONDALE	ANNA	BLACK SHALE	2.8	260.0	
377.2	CARBONDALE	HERRIN	COAL	4.2	262.8	
373.0	CARBONDALE		GRAY SHALE	3.0	267.0	
370.0	CARBONDALE		SHALY LIMESTONE	4.0	270.0	
366.0	CARBONDALE		GRAY SHALE	8.0	274.0	
358.0	CARBONDALE		SHALY LIMESTONE	0.5	282.0	
357.5	CARBONDALE		GRAY SHALE	7.5	282.5	

MAPID: 11722357000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 24 QUARTERS/FOOTAGES: 15' S line, 1730' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.935189 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.027914 DATE COLLECTED: 9 / 25 / 1975

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 274.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-30 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
625.0			UNCONSOLIDATED	84.0	0.0	
541.0	MODESTO		GRAY SHALE	110.0	84.0	
431.0	MODESTO		SHALY LIMESTONE	4.0	194.0	
427.0	MODESTO		GRAY SHALE	5.0	198.0	
422.0	MODESTO		BLACK SHALE	2.0	203.0	
420.0	MODESTO		GRAY SHALE	15.0	205.0	
405.0	MODESTO		SHALE	7.0	220.0	
398.0	MODESTO	PIASA	LIMESTONE	2.0	227.0	
396.0	MODESTO		SHALE	14.0	229.0	
382.0	CARBONDALE	DANVILLE	COAL	1.0	243.0	
381.0	CARBONDALE		GRAY SHALE	6.0	244.0	
375.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	250.0	
371.0	CARBONDALE		GRAY SHALE	1.0	254.0	
370.0	CARBONDALE	BRERETON	LIMESTONE	5.0	255.0	
365.0	CARBONDALE	ANNA	BLACK SHALE	1.5	260.0	
363.5	CARBONDALE	HERRIN	COAL	5.5	261.5	
358.0	CARBONDALE		UNDERCLAY	2.0	267.0	
356.0	CARBONDALE		LIMESTONE	5.0	269.0	

MAPID: 11722141000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 25 QUARTERS/FOOTAGES: 2577' N line, 2622' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.931998 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.020712 DATE COLLECTED: 5 / 7 / 1979

SURFACE ELEVATION (FT.): 614.0 LOGGED (FT.): 258.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-25-19C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
614.0			UNCONSOLIDATED	33.0	0.0
581.0	MODESTO		SHALE	1.0	33.0
580.0	MODESTO	CARLINVILLE	LIMESTONE	1.5	34.0
578.5	MODESTO		SHALE	28.5	35.5
550.0	MODESTO		GRAY SHALE	39.0	64.0
511.0	MODESTO		SANDSTONE	35.0	103.0
476.0	MODESTO		GRAY SHALE	17.0	138.0
459.0	MODESTO	CHAPEL	COAL	1.0	155.0
458.0	MODESTO		GRAY SHALE	18.0	156.0
440.0	MODESTO		BLACK SHALE	2.0	174.0
438.0	MODESTO		GRAY SHALE	4.0	176.0
434.0	MODESTO		SANDSTONE	6.5	180.0
427.5	MODESTO		GRAY SHALE	11.5	186.5
416.0	MODESTO		SHALE	3.5	198.0
412.5	MODESTO	PIASA	LIMESTONE	1.5	201.5
411.0	MODESTO		GRAY SHALE	8.0	203.0
403.0	MODESTO		SHALE	1.7	211.0
401.3	MODESTO		LIMESTONE	0.6	212.7
400.7	MODESTO		SHALE	1.9	213.3
398.8	MODESTO		SHALY LIMESTONE	0.8	215.2
398.0	MODESTO		SHALE	1.6	216.0
396.3	MODESTO		GRAY SHALE	1.0	217.7
395.3	CARBONDALE	DANVILLE	COAL	2.0	218.7
393.3	CARBONDALE		CORE LOSS	0.4	220.7
393.0	CARBONDALE		GRAY SHALE	3.8	221.0
389.2	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	5.3	224.8
384.0	CARBONDALE		CALCAREOUS SHALE	1.1	230.0
382.9	CARBONDALE	BRERETON	SHALY LIMESTONE	0.4	231.1
382.5	CARBONDALE	BRERETON	LIMESTONE	3.8	231.5
378.7	CARBONDALE	BRERETON	CALCAREOUS SHALE	0.3	235.3
378.4	CARBONDALE	ANNA	BLACK SHALE	2.2	235.6
376.2	CARBONDALE		CORE LOSS	0.3	237.8
376.0	CARBONDALE	HERRIN	COAL	5.1	238.0
370.9	CARBONDALE		GRAY SHALE	2.2	243.1
368.7	CARBONDALE		GRAY SHALE	1.8	245.3
366.9	CARBONDALE		LIMESTONE	1.8	247.1
365.2	CARBONDALE		GRAY SHALE	2.0	248.8
363.2	CARBONDALE		GRAY SHALE	5.0	250.8
358.2	CARBONDALE		LIMESTONE	2.1	255.8

356.2 CARBONDALE

CORE LOSS

0.2 257.8

MAPID: 11700183000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 26 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.944727 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.014282 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 580.6 LOGGED (FT.): 218.0 LOG TYPE:

SOURCE: HUNT R W 00C4 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN COMMENT
372.6	CARBONDALE	HERRIN	COAL	5.2	208.0

MAPID: 11700183000C VERSION: 2

PROJECT: NCRDS88

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 26 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.944727 GEOLOGIST: R. SMITH

CONFIDENTIAL: N LATITUDE: 39.014282 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 580.6 LOGGED (FT.): 218.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN COMMENT
580.6			UNCONSOLIDATED	55.0	0.0
525.6	MODESTO		SANDSTONE	17.0	55.0
508.6	MODESTO		SANDY SHALE	58.0	72.0
450.6	MODESTO		SHALE	43.0	130.0
407.6	CARBONDALE	DANVILLE	COAL	3.0	173.0
404.6	CARBONDALE		SHALE	14.3	176.0
390.3	CARBONDALE		COAL	1.7	190.3
388.6	CARBONDALE		GRAY SHALE	3.0	192.0
385.6	CARBONDALE		LIMESTONE	10.5	195.0
375.1	CARBONDALE	ANNA	DARK SHALE	2.8	205.5
372.3	CARBONDALE	HERRIN	COAL	5.2	208.3
367.1	CARBONDALE		SHALE	0.5	213.5
366.6	CARBONDALE		DARK SHALE	3.0	214.0
363.6	CARBONDALE		SHALE	1.0	217.0

MAPID: 11701354000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 26 QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.949387 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.019788 DATE COLLECTED:

SURFACE ELEVATION (FT.): 631.0 LOGGED (FT.): 257.0 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO ED-7 WELL TYPE: Coal Test

COMMENT: CORE C-8766

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
381.0	CARBONDALE	HERRIN	COAL	5.4	250.0	

MAPID: 11701354000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 26 QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.949387 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.019788 DATE COLLECTED:

SURFACE ELEVATION (FT.): 631.0 LOGGED (FT.): 255.4 LOG TYPE: Survey Core Study

SOURCE: TRUAX-TRAER COAL CO ED-7 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
416.0	MODESTO	PIASA	LIMESTONE	2.8	215.0	
413.2	MODESTO		ROCK	16.7	217.8	
396.6	CARBONDALE	DANVILLE	COAL	1.8	234.4	
394.8	CARBONDALE		GRAY SHALE	0.3	236.2	
394.5	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	7.4	236.5	
387.1	CARBONDALE	ANNA	BLACK SHALE	2.0	243.9	
381.0	CARBONDALE	HERRIN	COAL	5.4	250.0	

MAPID: 11722174000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 26 QUARTERS/FOOTAGES: 2320' N line, 340' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.942486 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.021565 DATE COLLECTED: 9 / 20 / 1979

SURFACE ELEVATION (FT.): 576.0 LOGGED (FT.): 230.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-26-28C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
576.0			UNCONSOLIDATED	36.0	0.0
540.0	MODESTO		GRAY SHALE	30.0	36.0
510.0	MODESTO		SANDY SHALE	4.0	66.0
506.0	MODESTO		GRAY SHALE	81.0	70.0
425.0	MODESTO		BLACK SHALE	2.0	151.0
423.0	MODESTO		SHALE	8.0	153.0
415.0	MODESTO		GRAY SHALE	8.0	161.0
407.0	MODESTO		SHALE	2.0	169.0
405.0	MODESTO		GRAY SHALE	3.0	171.0
402.0	MODESTO	PIASA	LIMESTONE	4.0	174.0
398.0	MODESTO		CALCAREOUS SHALE	14.0	178.0
384.0	CARBONDALE	DANVILLE	COAL	1.2	192.0
382.8	CARBONDALE		GRAY SHALE	2.4	193.2
380.4	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	9.0	195.6
371.4	CARBONDALE		GRAY SHALE	0.9	204.6
370.5	CARBONDALE	BRERETON	LIMESTONE	2.2	205.5
368.3	CARBONDALE	ANNA	BLACK SHALE	0.9	207.7
367.4	CARBONDALE	HERRIN	COAL	6.9	208.6
360.5	CARBONDALE		SHALE	1.1	215.5
359.5	CARBONDALE		GRAY SHALE	2.0	216.5
357.5	CARBONDALE		LIMESTONE	3.5	218.5
354.0	CARBONDALE		GRAY SHALE	8.0	222.0

MAPID: 11722358000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 26 QUARTERS/FOOTAGES: 1450' N line, 1025' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.956205 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.023996 DATE COLLECTED: 9 / 25 / 1975

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 242.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-31 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
620.0			UNCONSOLIDATED	127.0	0.0	
493.0	MODESTO		GRAY SHALE	42.0	127.0	
451.0	MODESTO		BLACK SHALE	2.0	169.0	
449.0	MODESTO		GRAY SHALE	7.0	171.0	
442.0	MODESTO		LIMESTONE	1.0	178.0	
441.0	MODESTO		GRAY SHALE	11.0	179.0	
430.0	MODESTO		SHALE	2.0	190.0	
428.0	MODESTO	PIASA	LIMESTONE	3.0	192.0	
425.0	MODESTO		GRAY SHALE	17.0	195.0	
408.0	CARBONDALE	DANVILLE	COAL	2.0	212.0	
406.0	CARBONDALE		GRAY SHALE	4.0	214.0	
402.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	218.0	
399.0	CARBONDALE		GRAY SHALE	1.0	221.0	
398.0	CARBONDALE	BRERETON	LIMESTONE	2.0	222.0	
396.0	CARBONDALE	ANNA	BLACK SHALE	3.0	224.0	
393.0	CARBONDALE	HERRIN	COAL	6.0	227.0	
387.0	CARBONDALE		UNDERCLAY	2.5	233.0	
384.5	CARBONDALE		LIMESTONE	6.5	235.5	

MAPID: 11721832000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 27 QUARTERS/FOOTAGES: 2613' N line, 690' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.976168

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.021153

DATE COLLECTED: 6 / 16 / 1978

SURFACE ELEVATION (FT.): 612.0

LOGGED (FT.): 215.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-78-7

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
612.0			UNCONSOLIDATED	177.0	0.0
435.0	CARBONDALE	DANVILLE	COAL	3.0	177.0
432.0	CARBONDALE		GRAY SHALE	2.0	180.0
430.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	182.0
426.0	CARBONDALE	ENERGY	GRAY SHALE	4.0	186.0
422.0	CARBONDALE	HERRIN	COAL	5.6	190.0
416.4	CARBONDALE		UNDERCLAY	4.4	195.6
412.0	CARBONDALE		LIMESTONE	1.0	200.0
411.0	CARBONDALE		GRAY SHALE	14.0	201.0

MAPID: 11722200000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 27 QUARTERS/FOOTAGES: 2595' N line, 978' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.963284 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.020921 DATE COLLECTED: 10 / 17 / 1979

SURFACE ELEVATION (FT.): 590.0 LOGGED (FT.): 205.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-27-58C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
590.0			UNCONSOLIDATED	115.0	0.0	
475.0	MODESTO		GRAY SHALE	7.0	115.0	
468.0	MODESTO		SANDSTONE	8.0	122.0	
460.0	MODESTO		GRAY SHALE	11.0	130.0	
449.0	MODESTO		SHALE	6.5	141.0	
442.5	MODESTO	PIASA	LIMESTONE	3.5	147.5	
439.0	MODESTO		GRAY SHALE	13.0	151.0	
426.0	CARBONDALE	DANVILLE	COAL	0.8	164.0	
425.2	CARBONDALE		GRAY SHALE	1.4	164.8	
423.8	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	166.2	
421.6	CARBONDALE	BANKSTON FORK	SHALE	1.9	168.4	
419.7	CARBONDALE	BANKSTON FORK	LIMESTONE	7.1	170.3	
412.6	CARBONDALE		SHALE	2.6	177.4	
410.0	CARBONDALE		CORE LOSS	1.1	180.0	
408.9	CARBONDALE	BRERETON	LIMESTONE	4.0	181.1	
405.0	CARBONDALE		SHALE	0.4	185.0	
404.6	CARBONDALE	HERRIN	COAL	3.3	185.4	
401.3	CARBONDALE		CORE LOSS	0.3	188.7	
401.0	CARBONDALE		CLAYSTONE & SHALE	2.5	189.0	
398.5	CARBONDALE		SHALY LIMESTONE	4.5	191.5	
394.0	CARBONDALE		GRAY SHALE	9.0	196.0	

MAPID: 11722359000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 28 QUARTERS/FOOTAGES: 150' N line, 1300' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.983281 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.027857 DATE COLLECTED: 9 / 26 / 1975

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 206.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-32 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
620.0			UNCONSOLIDATED	135.0	0.0	
485.0	MODESTO		LIMESTONE	4.0	135.0	
481.0	MODESTO		GRAY SHALE	21.0	139.0	
460.0	MODESTO	PIASA	LIMESTONE	3.0	160.0	
457.0	MODESTO		GRAY SHALE	16.0	163.0	
441.0	CARBONDALE	DANVILLE	COAL	2.0	179.0	
439.0	CARBONDALE		UNDERCLAY	2.0	181.0	
437.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	183.0	
435.5	CARBONDALE		GRAY SHALE	1.5	184.5	
434.0	CARBONDALE	BRERETON	LIMESTONE	6.0	186.0	
428.0	CARBONDALE	ANNA	BLACK SHALE	3.0	192.0	
425.0	CARBONDALE	HERRIN	COAL	4.5	195.0	
420.5	CARBONDALE		UNDERCLAY	3.5	199.5	
417.0	CARBONDALE		LIMESTONE	3.0	203.0	

MAPID: 11700184000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 32 QUARTERS/FOOTAGES: 1775' N line, 540' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.998986 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.008292 DATE COLLECTED: 0 / 0 / 1906

SURFACE ELEVATION (FT.): 541.6 LOGGED (FT.): 155.0 LOG TYPE:

SOURCE: BIVENS 0003 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
390.6	CARBONDALE	HERRIN	COAL	3.2	151.0	

MAPID: 11700184000C VERSION: 2

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 32 QUARTERS/FOOTAGES: 1775' N line, 540' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.998986 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.008292 DATE COLLECTED: 0 / 0 / 1906

SURFACE ELEVATION (FT.): 541.6 LOGGED (FT.): 155.0 LOG TYPE: Drillers Log

SOURCE: A. T. BIVENS B-1 WELL TYPE: Coal Test

COMMENT: ZIMMERMAN FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
541.6			UNCONSOLIDATED	86.0	0.0	
455.6	MODESTO		SHALE	2.0	86.0	
453.6	MODESTO		SANDY SHALE	18.0	88.0	
435.6	MODESTO		CLAYSTONE & SHALE	7.0	106.0	
428.6	MODESTO	PIASA	LIMESTONE	3.0	113.0	
425.6	MODESTO		CALCAREOUS SHALE	2.5	116.0	
423.1	MODESTO		GRAY SHALE	1.0	118.5	
422.1	MODESTO		BLACK SHALE	0.5	119.5	
421.6	MODESTO		SHALE	9.1	120.0	
412.5	MODESTO		SHALE	0.7	129.1	
411.8	MODESTO		BLACK SHALE	0.3	129.8	
411.6	CARBONDALE	DANVILLE	COAL	1.7	130.0	
409.9	CARBONDALE		SHALE	2.9	131.7	
407.1	CARBONDALE		LIMESTONE	15.5	134.5	
391.6	CARBONDALE		GRAY SHALE	0.8	150.0	
390.8	CARBONDALE	HERRIN	COAL	2.3	150.8	
388.5	CARBONDALE	HERRIN	SHALE	0.2	153.1	
388.3	CARBONDALE	HERRIN	COAL	0.8	153.3	
387.6	CARBONDALE		UNDERCLAY	1.0	154.0	

MAPID: 11700184000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 32 QUARTERS/FOOTAGES: 1775' N line, 540' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.998986 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.008292 DATE COLLECTED: 0 / 0 / 1906

SURFACE ELEVATION (FT.): 541.6 LOGGED (FT.): 155.0 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MACHY. CO. WELL TYPE: Coal Test

COMMENT: ZIMMERMAN FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
541.6			SOIL	7.0	0.0	
534.6			CLAY	77.0	7.0	
457.6			SAND & GRAVEL	2.0	84.0	
455.6	MODESTO		SHALE	2.0	86.0	
453.6	MODESTO		SANDY SHALE	18.0	88.0	
435.6	MODESTO		CLAYSTONE & SHALE	7.0	106.0	
428.6	MODESTO	PIASA	LIMESTONE	3.0	113.0	
425.6	MODESTO		CALCAREOUS SHALE	2.5	116.0	
423.1	MODESTO		SHALE	1.0	118.5	
422.1	MODESTO		BLACK SHALE	0.5	119.5	
421.6	MODESTO		SHALE	9.1	120.0	W/ LS PEBBLES
412.5	MODESTO		FOSSILIFEROUS SHALE	0.7	129.1	
411.8	MODESTO		BLACK SHALE	0.3	129.8	
411.6	CARBONDALE	DANVILLE	COAL	1.7	130.0	
409.9	CARBONDALE		SHALE	2.8	131.7	
407.1	CARBONDALE		LIMESTONE	15.5	134.5	
391.6	CARBONDALE		SHALE	0.8	150.0	
390.8	CARBONDALE	HERRIN	COAL	2.3	150.8	
388.5	CARBONDALE	HERRIN	UNKNOWN	0.2	153.1	BLUE BAND
388.3	CARBONDALE	HERRIN	COAL	0.8	153.3	
387.6	CARBONDALE		UNDERCLAY	1.0	154.0	

MAPID: 1172236000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 33 QUARTERS/FOOTAGES: 723' N line, 1945' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.990345 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.011316 DATE COLLECTED: 9 / 26 / 1979

SURFACE ELEVATION (FT.): 605.0 LOGGED (FT.): 212.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-1 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
605.0			UNCONSOLIDATED	178.0	0.0	
427.0	CARBONDALE	BRERETON	LIMESTONE	4.0	178.0	
423.0	CARBONDALE	ANNA	BLACK SHALE	2.5	182.0	
420.5	CARBONDALE	HERRIN	COAL	4.9	184.5	
415.6	CARBONDALE		UNDERCLAY	2.6	189.4	
413.0	CARBONDALE		LIMESTONE	4.3	192.0	
408.7	CARBONDALE		GRAY SHALE	6.2	196.3	
402.5	CARBONDALE		LIMESTONE	2.3	202.5	
400.2	CARBONDALE		GRAY SHALE	5.2	204.8	
395.0	CARBONDALE		SANDY SHALE	2.0	210.0	

MAPID: 11700185000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 34 QUARTERS/FOOTAGES: NW SE SW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.972335 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.001462 DATE COLLECTED: 0 / 0 / 1906

SURFACE ELEVATION (FT.): 543.0 LOGGED (FT.): 130.0 LOG TYPE: Drillers Log

SOURCE: A.T. BIVENS #B-1 WELL TYPE: Coal Test

COMMENT: HERMAN ZIMMERMAN FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
543.0			SOIL	1.0	0.0	
542.0			CLAY	5.0	1.0	
537.0			SAND	29.0	6.0	
508.0			SANDY CLAY	58.7	35.0	
449.3			BOULDER	1.0	93.7	BOULDERS
448.3	MODESTO		SHALE	10.3	94.7	
438.0	MODESTO		BLACK SHALE	0.7	105.0	
437.3	CARBONDALE	DANVILLE	COAL	2.7	105.7	
434.7	CARBONDALE		UNDERCLAY	3.7	108.3	
431.0	CARBONDALE		SHALY LIMESTONE	7.0	112.0	
424.0	CARBONDALE		LIMESTONE	2.8	119.0	
421.2	CARBONDALE		SHALE	1.0	121.8	
420.2	CARBONDALE	ANNA	BLACK SHALE	0.8	122.8	
419.4	CARBONDALE	HERRIN	COAL	2.0	123.6	
417.4	CARBONDALE		UNDERCLAY	4.4	125.6	

MAPID: 11700185000C VERSION: 2

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 34 QUARTERS/FOOTAGES: NW SE SW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.972335 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.001462 DATE COLLECTED: 0 / 0 / 1906

SURFACE ELEVATION (FT.): 543.0 LOGGED (FT.): 130.0 LOG TYPE:

SOURCE: BIVENS 00B1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
419.0	CARBONDALE	HERRIN	COAL	2.0	124.0

MAPID: 11722361000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 34 QUARTERS/FOOTAGES: 2240' N line, 1971' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.97132 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.007355 DATE COLLECTED: 9 / 27 / 1977

SURFACE ELEVATION (FT.): 580.0 LOGGED (FT.): 220.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-50 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
580.0			UNCONSOLIDATED	74.0	0.0
506.0	MODESTO		SILTY SHALE	52.0	74.0
454.0	MODESTO		BLACK SHALE	2.0	126.0
452.0	MODESTO		SHALE	5.0	128.0
447.0	MODESTO		GRAY SHALE	16.0	133.0
431.0	MODESTO		SHALE	3.5	149.0
427.5	MODESTO	PIASA	LIMESTONE	3.0	152.5
424.5	MODESTO		SHALE	6.0	155.5
418.5	MODESTO		GRAY SHALE	9.5	161.5
409.0	CARBONDALE	DANVILLE	COAL	2.5	171.0
406.5	CARBONDALE		UNDERCLAY	1.5	173.5
405.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	175.0
400.0	CARBONDALE		SHALE	3.0	180.0
397.0	CARBONDALE	BRERETON	LIMESTONE	4.0	183.0
393.0	CARBONDALE		SHALE	1.5	187.0
391.5	CARBONDALE	HERRIN	COAL	5.5	188.5
386.0	CARBONDALE		UNDERCLAY	2.0	194.0
384.0	CARBONDALE		CALCAREOUS SHALE	4.0	196.0
380.0	CARBONDALE		LIMESTONE	1.0	200.0
379.0	CARBONDALE		SHALE	1.0	201.0
378.0	CARBONDALE		GRAY SHALE	12.0	202.0
366.0	CARBONDALE		SHALE	6.0	214.0

MAPID: 11700186000C **VERSION:** 1 **PROJECT:** CIRC 71
COUNTY: MACOUPIN **TWP/RNG:** 7N 8W **SECTION:** 35 **QUARTERS/FOOTAGES:** 0' N line, 2640' W line
QUADRANGLE: BUNKER HILL **LONGITUDE:** -89.950461 **GEOLOGIST:** J.N. PAYNE
CONFIDENTIAL: N **LATITUDE:** 39.013423 **DATE COLLECTED:** 0 / 0 / 1929
SURFACE ELEVATION (FT.): 590.6 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: JORDAN LAN **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
365.6	CARBONDALE	HERRIN	COAL	6.0	225.0

MAPID: 11721833000C **VERSION:** 1 **PROJECT:** NCRDS89
COUNTY: MACOUPIN **TWP/RNG:** 7N 8W **SECTION:** 35 **QUARTERS/FOOTAGES:** 2590' S line, 1100' W line
QUADRANGLE: BUNKER HILL **LONGITUDE:** -89.955851 **GEOLOGIST:** SROKA
CONFIDENTIAL: N **LATITUDE:** 39.005843 **DATE COLLECTED:** 6 / 15 / 1978
SURFACE ELEVATION (FT.): 619.0 **LOGGED (FT.):** 255.0 **LOG TYPE:** Multiple log types
SOURCE: MOBIL OIL ND-78-8 **WELL TYPE:** Coal Test
COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
619.0			UNCONSOLIDATED	66.0	0.0
553.0	MODESTO		SHALE	15.0	66.0
538.0	MODESTO		GRAY SHALE	71.0	81.0
467.0	MODESTO		GRAY SHALE	18.0	152.0
449.0	MODESTO		SHALE	3.0	170.0
446.0	MODESTO		GRAY SHALE	20.0	173.0
426.0	MODESTO		SHALE	4.0	193.0
422.0	MODESTO	PIASA	LIMESTONE	3.0	197.0
419.0	MODESTO		SHALE	2.0	200.0
417.0	MODESTO		SANDSTONE	14.0	202.0
403.0	CARBONDALE	DANVILLE	COAL	2.0	216.0
401.0	CARBONDALE		GRAY SHALE	7.0	218.0
394.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	225.0
392.5	CARBONDALE		GRAY SHALE	2.0	226.5
390.5	CARBONDALE	BRERETON	LIMESTONE	3.5	228.5
387.0	CARBONDALE	BRERETON	SHALE	0.8	232.0
386.2	CARBONDALE	ANNA	BLACK SHALE	0.3	232.8
385.9	CARBONDALE	HERRIN	COAL	3.8	233.1
382.1	CARBONDALE		CLAYSTONE & SHALE	2.6	236.9
379.5	CARBONDALE		SHALY LIMESTONE	3.5	239.5
376.0	CARBONDALE		SHALE	8.0	243.0
368.0	CARBONDALE		LIMESTONE	1.0	251.0
367.0	CARBONDALE		CALCAREOUS SHALE	3.0	252.0

MAPID: 11722142000C VERSION: 1

PROJECT: NCRDS92

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 35 QUARTERS/FOOTAGES: 25' N line, 1740' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.953645 GEOLOGIST: C TREWORY

CONFIDENTIAL: N LATITUDE: 39.013383 DATE COLLECTED: 5 / 8 / 1979

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 260.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL CO. 79-35-18 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
625.0			CLAY	17.0	0.0	
608.0			SAND	1.0	17.0	SD & GRAVEL
607.0			CLAY	29.0	18.0	
578.0	MODESTO		GRAY SHALE	19.0	47.0	
559.0	MODESTO		BLACK SHALE	0.5	66.0	
558.5	MODESTO		GRAY SHALE	2.5	66.5	
556.0	MODESTO		SANDSTONE	1.0	69.0	
555.0	MODESTO		GRAY SHALE	8.8	70.0	
546.2	MODESTO		COAL	0.2	78.8	
546.0	MODESTO		GRAY SHALE	3.5	79.0	
542.5	MODESTO		LIMESTONE	0.5	82.5	
542.0	MODESTO		GRAY SHALE	8.0	83.0	
534.0	MODESTO		SANDSTONE	4.0	91.0	
530.0	MODESTO		SANDY SHALE	69.0	95.0	
461.0	MODESTO		GRAY SHALE	8.0	164.0	
453.0	MODESTO		GRAY SHALE	8.5	172.0	
444.5	MODESTO		GRAY SHALE	17.5	180.5	
427.0	MODESTO	PIASA	LIMESTONE	3.0	198.0	
424.0	MODESTO		GRAY SHALE	16.5	201.0	
407.5	CARBONDALE	DANVILLE	COAL	1.0	217.5	
406.5	CARBONDALE		GRAY SHALE	6.5	218.5	
400.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	225.0	
395.5	CARBONDALE		SANDSTONE	1.0	229.5	
394.5	CARBONDALE	BRERETON	LIMESTONE	4.5	230.5	
390.0	CARBONDALE		GRAY SHALE	2.0	235.0	
388.0	CARBONDALE	HERRIN	COAL	4.2	237.0	
383.8	CARBONDALE		GRAY SHALE	2.3	241.2	
381.5	CARBONDALE		LIMESTONE	3.5	243.5	
378.0	CARBONDALE		GRAY SHALE	7.2	247.0	
370.8	CARBONDALE		LIMESTONE	1.3	254.2	
369.5	CARBONDALE		GRAY SHALE	4.5	255.5	

MAPID: 11722362000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 35 QUARTERS/FOOTAGES: 2600' S line, 675' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.943414 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.005877 DATE COLLECTED: 9 / 27 / 1979

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 270.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-49 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
600.0			UNCONSOLIDATED	132.0	0.0	
468.0	MODESTO		GRAY SHALE	48.0	132.0	
420.0	MODESTO		SHALE	7.0	180.0	
413.0	MODESTO		SANDSTONE	13.5	187.0	
399.5	MODESTO		GRAY SHALE	6.5	200.5	
393.0	MODESTO		SHALE	7.5	207.0	
385.5	MODESTO		LIMESTONE	4.5	214.5	
381.0	MODESTO		GRAY SHALE	12.0	219.0	
369.0	CARBONDALE	DANVILLE	COAL	2.0	231.0	
367.0	CARBONDALE		GRAY SHALE	6.0	233.0	
361.0	CARBONDALE	BRERETON	LIMESTONE	6.0	239.0	
355.0	CARBONDALE	ANNA	BLACK SHALE	3.0	245.0	
352.0	CARBONDALE	HERRIN	COAL	6.0	248.0	
346.0	CARBONDALE		UNDERCLAY	2.0	254.0	
344.0	CARBONDALE		LIMESTONE	10.0	256.0	
334.0	CARBONDALE		GRAY SHALE	4.0	266.0	

MAPID: 11700187000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 36 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.923758 GEOLOGIST: J.N. PAYNE

CONFIDENTIAL: N LATITUDE: 39.005075 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 588.3 LOGGED (FT.): 227.0 LOG TYPE:

SOURCE: HUNT R W 00C5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
366.3	CARBONDALE	HERRIN	COAL	4.5	222.0	

MAPID: 11700187000C VERSION: 2

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 36 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.923758 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.005075 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 588.3 LOGGED (FT.): 226.9 LOG TYPE: Drillers Log

SOURCE: R. W. HUNT C-5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
588.3			UNCONSOLIDATED	22.0	0.0	
566.3	MODESTO	CARLINVILLE	LIMESTONE	6.5	22.0	
559.8	MODESTO		SHALE	2.5	28.5	
557.3	MODESTO		SANDY SHALE	32.0	31.0	
525.3	MODESTO	CHAPEL	COAL	0.3	63.0	
525.0	MODESTO		UNDERCLAY	2.8	63.3	
522.3	MODESTO		SANDY SHALE	8.0	66.0	
514.3	MODESTO		SANDSTONE	9.0	74.0	
505.3	MODESTO		SANDY SHALE	51.0	83.0	
454.3	MODESTO		CALCAREOUS SHALE	26.0	134.0	
428.3	MODESTO		SANDY SHALE	17.0	160.0	
411.3	MODESTO		VARRIGATED SHALE	6.0	177.0	
405.3	MODESTO	PIASA	LIMESTONE	4.0	183.0	
401.3	MODESTO		GRAY SHALE	13.5	187.0	
387.8	CARBONDALE	DANVILLE	COAL	1.5	200.5	
386.3	CARBONDALE		SHALE	1.0	202.0	
385.3	CARBONDALE		LIMESTONE	2.0	203.0	
383.3	CARBONDALE		SHALE	1.4	205.0	
381.9	CARBONDALE		LIMESTONE	15.0	206.4	
366.9	CARBONDALE		SHALE	1.0	221.4	
365.9	CARBONDALE	HERRIN	COAL	4.5	222.4	

MAPID: 11700187000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 36 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.923758 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.005075 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 588.3 LOGGED (FT.): 226.9 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT CO., #C-5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
588.3			CLAY & GRAVEL	22.0	0.0	
566.3	MODESTO	CARLINVILLE	LIMESTONE	6.5	22.0	
559.8	MODESTO		SHALE	2.5	28.5	
557.3	MODESTO		SANDY SHALE	32.0	31.0	
525.3	MODESTO	CHAPEL	COAL	0.3	63.0	
525.0	MODESTO		UNDERCLAY	2.8	63.3	
522.3	MODESTO		SANDY SHALE	8.0	66.0	
514.3	MODESTO		SANDSTONE	9.0	74.0	
505.3	MODESTO		SANDY SHALE	51.0	83.0	
454.3	MODESTO		CALCAREOUS SHALE	26.0	134.0	
428.3	MODESTO		SANDY SHALE	17.0	160.0	
411.3	MODESTO		SHALE	6.0	177.0	
405.3	MODESTO	PIASA	LIMESTONE	4.0	183.0	
401.3	MODESTO		SHALE	13.5	187.0	W/LS
387.8	CARBONDALE	DANVILLE	COAL	1.5	200.5	
386.3	CARBONDALE		SHALE	1.0	202.0	
385.3	CARBONDALE		LIMESTONE	2.0	203.0	
383.3	CARBONDALE		CALCAREOUS SHALE	1.4	205.0	
381.9	CARBONDALE		LIMESTONE	15.0	206.4	
366.9	CARBONDALE		SHALE	1.0	221.4	
365.9	CARBONDALE	HERRIN	COAL	4.5	222.4	

MAPID: 11722143000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 36 QUARTERS/FOOTAGES: 1030' N line, 2590' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.931734 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.01043 DATE COLLECTED: 4 / 30 / 1979

SURFACE ELEVATION (FT.): 612.0 LOGGED (FT.): 260.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-36-21 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
612.0			UNCONSOLIDATED	45.0	0.0
567.0	MODESTO	CARLINVILLE	LIMESTONE	1.0	45.0
566.0	MODESTO		SANDY SHALE	39.5	46.0
526.5	MODESTO	CHAPEL	COAL	1.0	85.5
525.5	MODESTO		GRAY SHALE	4.5	86.5
521.0	MODESTO		SANDY SHALE	12.0	91.0
509.0	MODESTO		SANDSTONE	31.0	103.0
478.0	MODESTO		SANDY SHALE	27.5	134.0
450.5	MODESTO		SHALE	11.5	161.5
439.0	MODESTO		BLACK SHALE	1.5	173.0
437.5	MODESTO		SHALE	11.5	174.5
426.0	MODESTO		SHALE	17.0	186.0
409.0	MODESTO	PIASA	LIMESTONE	2.5	203.0
406.5	MODESTO		GRAY SHALE	14.5	205.5
392.0	CARBONDALE	DANVILLE	COAL	1.5	220.0
390.5	CARBONDALE		GRAY SHALE	4.0	221.5
386.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	225.5
382.5	CARBONDALE		GRAY SHALE	1.3	229.5
381.2	CARBONDALE	BRERETON	LIMESTONE	3.2	230.8
378.0	CARBONDALE		SHALE	4.0	234.0
374.0	CARBONDALE	HERRIN	COAL	4.2	238.0
369.8	CARBONDALE		UNDERCLAY	1.8	242.2
368.0	CARBONDALE		LIMESTONE	3.0	244.0
365.0	CARBONDALE		GRAY SHALE	6.5	247.0
358.5	CARBONDALE		LIMESTONE	2.0	253.5
356.5	CARBONDALE		SHALE	4.5	255.5

MAPID: 11722201000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 36 QUARTERS/FOOTAGES: 1140' S line, 1450' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.935779 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.001862 DATE COLLECTED: 9 / 25 / 1979

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 285.5 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-36-31C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.0			UNCONSOLIDATED	110.0	0.0
510.0	MODESTO		GRAY SHALE	72.0	110.0
438.0	MODESTO		SHALY LIMESTONE	2.0	182.0
436.0	MODESTO		GRAY SHALE	39.5	184.0
396.5	MODESTO		SHALE	6.0	223.5
390.5	MODESTO	PIASA	LIMESTONE	3.0	229.5
387.5	MODESTO		GRAY SHALE	1.5	232.5
386.0	MODESTO		BLACK SHALE	1.0	234.0
385.0	MODESTO		SHALE	3.0	235.0
382.0	MODESTO		SHALE	1.8	238.0
380.2	MODESTO		CALCAREOUS SHALE	0.8	239.8
379.4	MODESTO		SHALE	3.4	240.6
376.0	MODESTO		GRAY SHALE	1.7	244.0
374.3	CARBONDALE	DANVILLE	COAL	1.5	245.7
372.8	CARBONDALE		UNDERCLAY	0.2	247.2
372.6	CARBONDALE		CORE LOSS	0.6	247.4
372.0	CARBONDALE		GRAY SHALE	1.9	248.0
370.1	CARBONDALE	BANKSTON FORK	LIMESTONE	8.6	249.9
361.4	CARBONDALE		SHALE	0.5	258.6
361.0	CARBONDALE	BRERETON	LIMESTONE	4.7	259.0
356.3	CARBONDALE		CALCAREOUS SHALE	0.4	263.7
355.9	CARBONDALE	ANNA	BLACK SHALE	1.3	264.1
354.6	CARBONDALE		CORE LOSS	0.1	265.4
354.5	CARBONDALE	HERRIN	COAL	4.5	265.5
350.0	CARBONDALE		UNDERCLAY	2.0	270.0
348.0	CARBONDALE		GRAY SHALE	1.9	272.0
346.1	CARBONDALE		LIMESTONE	2.1	273.9
344.1	CARBONDALE		SHALE	0.7	275.9
343.3	CARBONDALE		GRAY SHALE	2.4	276.7
341.0	CARBONDALE		GRAY SHALE	2.5	279.0
338.5	CARBONDALE		SHALE	4.0	281.5

MAPID: 11722363000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 7N 8W SECTION: 36 QUARTERS/FOOTAGES: 406' N line, 39' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.922696 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.012089 DATE COLLECTED: 9 / 27 / 1977

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 275.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-48 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
625.0			UNCONSOLIDATED	35.0	0.0
590.0	MODESTO		GRAY SHALE	3.0	35.0
587.0	MODESTO		SHALE	6.0	38.0
581.0	MODESTO		GRAY SHALE	10.5	44.0
570.5	MODESTO	CARLINVILLE	LIMESTONE	7.0	54.5
563.5	MODESTO		GRAY SHALE	34.5	61.5
529.0	MODESTO		SANDY SHALE	90.0	96.0
439.0	MODESTO		BLACK SHALE	1.5	186.0
437.5	MODESTO		GRAY SHALE	8.5	187.5
429.0	MODESTO		SANDSTONE	4.0	196.0
425.0	MODESTO		SANDY SHALE	7.0	200.0
418.0	MODESTO		GRAY SHALE	4.0	207.0
414.0	MODESTO	PIASA	LIMESTONE	7.0	211.0
407.0	MODESTO		SHALE	3.0	218.0
404.0	MODESTO		GRAY SHALE	11.0	221.0
393.0	CARBONDALE	DANVILLE	COAL	1.0	232.0
392.0	CARBONDALE		GRAY SHALE	5.0	233.0
387.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	238.0
383.0	CARBONDALE		GRAY SHALE	1.0	242.0
382.0	CARBONDALE	BRERETON	LIMESTONE	4.0	243.0
378.0	CARBONDALE	ANNA	BLACK SHALE	3.0	247.0
375.0	CARBONDALE	HERRIN	COAL	6.0	250.0
369.0	CARBONDALE		UNDERCLAY	2.0	256.0
367.0	CARBONDALE		SHALY LIMESTONE	1.0	258.0
366.0	CARBONDALE		GRAY SHALE	7.5	259.0
358.5	CARBONDALE		LIMESTONE	1.5	266.5
357.0	CARBONDALE		GRAY SHALE	7.0	268.0

MAPID: 11700844000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 7N 9W **SECTION:** 21 **QUARTERS/FOOTAGES:** 25' S line, 2650' E line
QUADRANGLE: SHIPMAN **LONGITUDE:** -90.09955 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.031693 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 630.0 **LOGGED (FT.):** 94.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES 5 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
541.2	CARBONDALE	HERRIN	COAL	1.5	88.8

MAPID: 11700844000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 7N 9W **SECTION:** 21 **QUARTERS/FOOTAGES:** 25' S line, 2650' E line
QUADRANGLE: SHIPMAN **LONGITUDE:** -90.09955 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.031693 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 631.0 **LOGGED (FT.):** 91.5 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES 5 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
557.3	MODESTO	PIASA	LIMESTONE	2.6	73.7
554.7	MODESTO		DARK GRAY SHALE	6.1	76.3
548.7	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	1.8	82.3
546.8	CARBONDALE	LAWSON	SILTY SHALE	5.8	84.2
541.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	1.5	90.0

MAPID: 11790471000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 7N 9W **SECTION:** 21 **QUARTERS/FOOTAGES:** 25' S line, 10' E line of NE SW
QUADRANGLE: SHIPMAN **LONGITUDE:** -90.09955 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.031693 **DATE COLLECTED:** 4 / 23 / 1958
SURFACE ELEVATION (FT.): 630.0 **LOGGED (FT.):** 94.0 **LOG TYPE:** Drillers Log
SOURCE: CC DRILLING COMPANY 5-1 **WELL TYPE:** Coal Test
COMMENT: BRIGHTON BOX44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
630.0	PLEISTOCENE		UNCONSOLIDATED	21.0	0.0
609.0			ROCK	67.8	21.0
541.2			COAL	0.3	88.8
540.9			ROCK	0.7	89.1
540.2			COAL	0.6	89.8
539.6			ROCK	3.6	90.4

MAPID: 11790354000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 22 QUARTERS/FOOTAGES: 1' N line, 1' E line of SE SW
 QUADRANGLE: SHIPMAN LONGITUDE: -90.080788 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.031424 DATE COLLECTED: 11 / 16 / 1961
 SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 88.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE A480 WELL TYPE: Coal Test
 COMMENT: FOSTERBURG BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.0	PLEISTOCENE		UNCONSOLIDATED	56.0	0.0	
504.0	CARBONDALE	DANVILLE	COAL	2.4	56.0	TOP ERODED
501.6	CARBONDALE		ROCK	18.0	58.4	
483.6	CARBONDALE	HERRIN	COAL	1.2	76.4	
482.4	CARBONDALE		ROCK	10.4	77.6	

MAPID: 11790464000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 29 QUARTERS/FOOTAGES: 1' S line, 1' E line of SE SE
 QUADRANGLE: SHIPMAN LONGITUDE: -90.108557 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.013494 DATE COLLECTED: 4 / 27 / 1961
 SURFACE ELEVATION (FT.): 553.0 LOGGED (FT.): 108.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE P217 WELL TYPE: Coal Test
 COMMENT: FOSTERBURG BOX44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
553.0	PLEISTOCENE		UNCONSOLIDATED	108.0	0.0	

MAPID: 11790466000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 29 QUARTERS/FOOTAGES: 165' N line, 1' W line of SE SE
 QUADRANGLE: SHIPMAN LONGITUDE: -90.113242 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.016772 DATE COLLECTED: 8 / 22 / 1962
 SURFACE ELEVATION (FT.): 618.6 LOGGED (FT.): 138.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE P265 WELL TYPE: Coal Test
 COMMENT: FOSTERBURG BOX44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
618.6	PLEISTOCENE		UNCONSOLIDATED	138.0	0.0	

MAPID: 11790468000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 29 QUARTERS/FOOTAGES: 90' N line, 30' W line of NW
 QUADRANGLE: BRIGHTON LONGITUDE: -90.127093 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.02797 DATE COLLECTED: 4 / 23 / 1958
 SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 130.0 LOG TYPE: Drillers Log
 SOURCE: CC DRILLING COMPANY 1-1 WELL TYPE: Coal Test
 COMMENT: BRIGHTON BOX44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.0	PLEISTOCENE		UNCONSOLIDATED	101.5	0.0
518.5			ROCK	28.5	101.5

MAPID: 11790461000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 30 QUARTERS/FOOTAGES: 1' S line, 1' E line of SE SE
 QUADRANGLE: BRIGHTON LONGITUDE: -90.127134 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.013824 DATE COLLECTED: 4 / 26 / 1961
 SURFACE ELEVATION (FT.): 617.0 LOGGED (FT.): 88.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE P209 WELL TYPE: Coal Test
 COMMENT: FOSTERBURG BOX44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
617.0	PLEISTOCENE		UNCONSOLIDATED	44.0	0.0
573.0			ROCK	31.8	44.0
541.2	CARBONDALE	DANVILLE	COAL	2.6	75.8
538.6			ROCK	9.6	78.4

MAPID: 11790467000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 30 QUARTERS/FOOTAGES: 1' N line, 1' E line of SE NW
 QUADRANGLE: BRIGHTON LONGITUDE: -90.136402 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.024797 DATE COLLECTED: 4 / 24 / 1961
 SURFACE ELEVATION (FT.): 651.1 LOGGED (FT.): 104.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE P355 WELL TYPE: Coal Test
 COMMENT: BRIGHTON BOX44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
651.1	PLEISTOCENE		UNCONSOLIDATED	58.0	0.0
593.1			ROCK	15.8	58.0
577.3	PLEISTOCENE		COAL	3.0	73.8
574.3			ROCK	27.2	76.8

MAPID: 11790355000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 7N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 1' S line, 1' E line of SE SW
QUADRANGLE: ALTON **LONGITUDE:** -90.136744 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 38.999074 **DATE COLLECTED:** 9 / 25 / 1959
SURFACE ELEVATION (FT.): 598.8 **LOGGED (FT.):** 108.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE B5 **WELL TYPE:** Coal Test
COMMENT: FOSTERBURG BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
598.8	PLEISTOCENE		UNCONSOLIDATED	100.0	0.0
498.8			ROCK	8.0	100.0

MAPID: 11790356000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 7N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 1' N line, 1' E line of NW SW
QUADRANGLE: BRIGHTON **LONGITUDE:** -90.141216 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.006534 **DATE COLLECTED:** 9 / 30 / 1959
SURFACE ELEVATION (FT.): 545.9 **LOGGED (FT.):** 51.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE B103 **WELL TYPE:** Coal Test
COMMENT: FOSTERBURG BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
545.9	PLEISTOCENE		UNCONSOLIDATED	51.0	0.0

MAPID: 11790357000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 7N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 1' N line, 1' E line of NE SW
QUADRANGLE: BRIGHTON **LONGITUDE:** -90.136581 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.006501 **DATE COLLECTED:** 9 / 29 / 1959
SURFACE ELEVATION (FT.): 606.5 **LOGGED (FT.):** 98.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE B105 **WELL TYPE:** Coal Test
COMMENT: FOSTERBURG BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
606.5	PLEISTOCENE		UNCONSOLIDATED	41.8	0.0
564.7	MODESTO		ROCK	36.2	41.8
528.5	MODESTO	ROCK BRANCH	COAL	2.7	78.0
525.8	MODESTO		ROCK	14.8	80.7
511.0	CARBONDALE	DANVILLE	COAL	1.7	95.5
509.3	CARBONDALE		ROCK	0.8	97.2

MAPID: 11700842000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 7N 9W **SECTION:** 32 **QUARTERS/FOOTAGES:** 301' N line, 10' W line
QUADRANGLE: BRIGHTON **LONGITUDE:** -90.127098 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.013736 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 613.0 **LOGGED (FT.):** 78.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES 2 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
543.0	CARBONDALE	HERRIN	COAL	3.5	70.0

MAPID: 11700842000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 7N 9W **SECTION:** 32 **QUARTERS/FOOTAGES:** 301' N line, 10' W line
QUADRANGLE: BRIGHTON **LONGITUDE:** -90.127098 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.013736 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 613.0 **LOGGED (FT.):** 73.5 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES 2 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
557.0	MODESTO	PIASA	LIMESTONE	2.5	56.0
554.5	MODESTO		GRAY SHALE	2.5	58.5
552.0	CARBONDALE	DANVILLE	DARK GRAY SHALE	1.0	61.0
551.0	CARBONDALE	ANNA	GRAY SHALE	8.5	62.0
543.0	CARBONDALE	HERRIN	COAL	3.5	70.0

MAPID: 11790456000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 7N 9W **SECTION:** 32 **QUARTERS/FOOTAGES:** 1' N line, 1' E line of NW SW
QUADRANGLE: SHIPMAN **LONGITUDE:** -90.122642 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.006397 **DATE COLLECTED:** 8 / 23 / 1962
SURFACE ELEVATION (FT.): 610.9 **LOGGED (FT.):** 99.0 **LOG TYPE:** Drillers Log
SOURCE: NO COMPANY P111 **WELL TYPE:** Coal Test
COMMENT: FOSTERBURG BOX44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
610.9	PLEISTOCENE		UNCONSOLIDATED	37.0	0.0
573.9			ROCK	62.0	37.0

MAPID: 11790457000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 32 QUARTERS/FOOTAGES: 660' N line, 1' E line of SE NW
 QUADRANGLE: SHIPMAN LONGITUDE: -90.117945 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.008186 DATE COLLECTED: 8 / 23 / 1962
 SURFACE ELEVATION (FT.): 587.9 LOGGED (FT.): 88.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE P138 WELL TYPE: Coal Test
 COMMENT: FOSTERBURG BOX44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
587.9	PLEISTOCENE		UNCONSOLIDATED	71.0	0.0
516.9			ROCK	5.0	71.0
511.9			COAL	1.0	76.0
510.9			ROCK	11.0	77.0

MAPID: 11790458000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 32 QUARTERS/FOOTAGES: 1' N line, 1' E line of SW NW
 QUADRANGLE: SHIPMAN LONGITUDE: -90.122568 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.010066 DATE COLLECTED: 8 / 22 / 1962
 SURFACE ELEVATION (FT.): 625.7 LOGGED (FT.): 103.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE P161 WELL TYPE: Coal Test
 COMMENT: FOSTERBURG BOX44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
625.7	PLEISTOCENE		UNCONSOLIDATED	87.0	0.0
538.7	CARBONDALE		ROCK	11.0	87.0
527.7	CARBONDALE	HERRIN	COAL	3.3	98.0
524.4	CARBONDALE		ROCK	1.9	101.3

MAPID: 11790459000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 32 QUARTERS/FOOTAGES: 1' N line, 1' E line of SE NW
 QUADRANGLE: SHIPMAN LONGITUDE: -90.117911 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.010003 DATE COLLECTED: 8 / 23 / 1962
 SURFACE ELEVATION (FT.): 617.9 LOGGED (FT.): 118.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE P163 WELL TYPE: Coal Test
 COMMENT: FOSTERBURG BOX44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
617.9	PLEISTOCENE		UNCONSOLIDATED	78.0	0.0
539.9			ROCK	40.0	78.0

MAPID: 1179046000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 32 QUARTERS/FOOTAGES: 1' N line, 1' E line of SW NE
 QUADRANGLE: SHIPMAN LONGITUDE: -90.113258 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.009942 DATE COLLECTED: 8 / 22 / 1962
 SURFACE ELEVATION (FT.): 543.0 LOGGED (FT.): 49.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE P165 WELL TYPE: Coal Test
 COMMENT: FOSTERBURG BOX44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
543.0	PLEISTOCENE		UNCONSOLIDATED	39.0	0.0
504.0			ROCK	6.0	39.0
498.0	CARBONDALE	HERRIN	COAL	3.0	45.0
495.0			ROCK	1.0	48.0

MAPID: 11790462000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 32 QUARTERS/FOOTAGES: 1' N line, 1' E line of NE NW
 QUADRANGLE: SHIPMAN LONGITUDE: -90.117847 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.013653 DATE COLLECTED: 8 / 22 / 1962
 SURFACE ELEVATION (FT.): 601.1 LOGGED (FT.): 105.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE P213 WELL TYPE: Coal Test
 COMMENT: FOSTERBURG BOX44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
601.1	PLEISTOCENE		UNCONSOLIDATED	52.0	0.0
549.1			ROCK	48.0	52.0
501.1	CARBONDALE	HERRIN	COAL	3.2	100.0
497.9			ROCK	1.8	103.2

MAPID: 11790463000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 32 QUARTERS/FOOTAGES: 1' N line, 1' E line of NW NE
 QUADRANGLE: SHIPMAN LONGITUDE: -90.1132 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.01357 DATE COLLECTED: 8 / 22 / 1962
 SURFACE ELEVATION (FT.): 609.2 LOGGED (FT.): 138.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE P215 WELL TYPE: Coal Test
 COMMENT: FOSTERBURG BOX44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
609.2	PLEISTOCENE		UNCONSOLIDATED	119.0	0.0
490.2			ROCK	19.0	119.0

MAPID: 11790469000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 7N 9W **SECTION:** 32 **QUARTERS/FOOTAGES:** 30' N line, 10' W line of NW
QUADRANGLE: BRIGHTON **LONGITUDE:** -90.127098 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.013736 **DATE COLLECTED:** 4 / 23 / 1958
SURFACE ELEVATION (FT.): 613.0 **LOGGED (FT.):** 78.0 **LOG TYPE:** Drillers Log
SOURCE: CC DRILLING COMPANY 2-1 **WELL TYPE:** Coal Test
COMMENT: BRIGHTON BOX44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
613.0	PLEISTOCENE		UNCONSOLIDATED	35.1	0.0
577.9			ROCK	34.9	35.1
543.0			COAL	3.5	70.0
539.5			ROCK	4.5	73.5

MAPID: 11790472000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 7N 9W **SECTION:** 32 **QUARTERS/FOOTAGES:** 150' S line, 150' E line of SE
QUADRANGLE: BETHALTO **LONGITUDE:** -90.109261 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 38.999466 **DATE COLLECTED:** 4 / 23 / 1958
SURFACE ELEVATION (FT.): 600.0 **LOGGED (FT.):** 80.0 **LOG TYPE:** Drillers Log
SOURCE: CC DRILLING COMPANY 6-1 **WELL TYPE:** Coal Test
COMMENT: BRIGHTON BOX44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
600.0	PLEISTOCENE		UNCONSOLIDATED	80.0	0.0

MAPID: 11700843000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 7N 9W **SECTION:** 33 **QUARTERS/FOOTAGES:** 40' N line, 2630' E line
QUADRANGLE: SHIPMAN **LONGITUDE:** -90.099294 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.006091 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 605.0 **LOGGED (FT.):** 94.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES 4 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
516.9	CARBONDALE	HERRIN	COAL	2.6	88.1

MAPID: 11700843000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 33 QUARTERS/FOOTAGES: 40' N line, 2630' E line
 QUADRANGLE: SHIPMAN LONGITUDE: -90.099294 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 39.006091 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 605.0 LOGGED (FT.): 90.6 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES 4 WELL TYPE: Coal Test
 COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
533.0	MODESTO	PIASA	LIMESTONE	2.5	72.0
530.5	MODESTO		DARK GRAY SHALE	4.0	74.5
526.5	CARBONDALE		GRAY SHALE	9.0	78.5
517.5	CARBONDALE	ANNA	BLACK SHALE	1.1	87.5
516.5	CARBONDALE	HERRIN	COAL	2.6	88.5

MAPID: 11790465000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 33 QUARTERS/FOOTAGES: 1' N line, 165' E line of NE NW
 QUADRANGLE: SHIPMAN LONGITUDE: -90.099909 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.013473 DATE COLLECTED: 11 / 16 / 1961
 SURFACE ELEVATION (FT.): 602.8 LOGGED (FT.): 152.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE P220P WELL TYPE: Coal Test
 COMMENT: FOSTERBURG BOX44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
602.8	PLEISTOCENE		UNCONSOLIDATED	69.0	0.0
533.8			ROCK	20.0	69.0
513.8	CARBONDALE	DANVILLE	COAL	2.4	89.0
511.4	CARBONDALE		ROCK	13.6	91.4
497.8	CARBONDALE	HERRIN	COAL	2.4	105.0
495.4	CARBONDALE		ROCK	44.6	107.4

MAPID: 11790470000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 33 QUARTERS/FOOTAGES: 40' N line, 10' W line of NW SE
 QUADRANGLE: SHIPMAN LONGITUDE: -90.099294 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.006091 DATE COLLECTED: 4 / 23 / 1958
 SURFACE ELEVATION (FT.): 605.0 LOGGED (FT.): 94.0 LOG TYPE: Drillers Log
 SOURCE: CC DRILLING COMPANY 4-1 WELL TYPE: Coal Test
 COMMENT: BRIGHTON BOX44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
605.0	PLEISTOCENE		UNCONSOLIDATED	71.5	0.0
533.5			ROCK	16.6	71.5
516.9	CARBONDALE	DANVILLE	COAL	2.6	88.1
514.3			ROCK	3.3	90.7

MAPID: 11700846000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 7N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** 1' S line, 1' E line of SE
QUADRANGLE: BETHALTO **LONGITUDE:** -90.071475 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 38.998523 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 600.0 **LOGGED (FT.):** 111.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES 14 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
494.9	CARBONDALE	HERRIN	COAL	2.8	105.1	

MAPID: 11700847000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 7N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** 0' N line, 600' E line
QUADRANGLE: SHIPMAN **LONGITUDE:** -90.073753 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.013342 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 565.0 **LOGGED (FT.):** 70.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES 15 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
500.0	CARBONDALE	DANVILLE	COAL	1.8	65.0	

MAPID: 11700847000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 7N 9W **SECTION:** 34 **QUARTERS/FOOTAGES:** 0' N line, 600' E line
QUADRANGLE: SHIPMAN **LONGITUDE:** -90.073753 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.013342 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 565.0 **LOGGED (FT.):** 66.8 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES 15 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
519.0	MODESTO	PIASA	LIMESTONE	2.4	46.0	
516.6	MODESTO		DARK GRAY SHALE	0.6	48.4	
516.0	CARBONDALE		GRAY SHALE	13.0	49.0	
503.0	CARBONDALE		BLACK SHALE	3.0	62.0	
500.0	CARBONDALE	DANVILLE	COAL	1.8	65.0	

MAPID: 11790473000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 34 QUARTERS/FOOTAGES: 1' S line, 1' E line of SE

QUADRANGLE: BETHALTO LONGITUDE: -90.071475 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 38.998523 DATE COLLECTED: 4 / 23 / 1958

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 111.0 LOG TYPE: Drillers Log

SOURCE: CC DRILLING COMPANY 14-1 WELL TYPE: Coal Test

COMMENT: BRIGHTON BOX44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
600.0	PLEISTOCENE		UNCONSOLIDATED	67.0	0.0	
533.0			ROCK	38.1	67.0	
494.9	CARBONDALE	HERRIN	COAL	0.8	105.1	
494.1			ROCK	5.1	105.9	

MAPID: 11790474000C VERSION: 1

PROJECT: OMM

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 34 QUARTERS/FOOTAGES: 1' N line, 600' E line of NE

QUADRANGLE: SHIPMAN LONGITUDE: -90.073753 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 39.013342 DATE COLLECTED: 9 / 12 / 1977

SURFACE ELEVATION (FT.): 568.0 LOGGED (FT.): 230.0 LOG TYPE: Drillers Log

SOURCE: AMAX U401CA WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX 43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
568.0	PLEISTOCENE		SOIL	2.0	0.0	
566.0	PLEISTOCENE		CLAY	17.0	2.0	
549.0	PLEISTOCENE		UNCONSOLIDATED	6.0	19.0	
543.0	PLEISTOCENE		UNCONSOLIDATED	10.0	25.0	SANDY GRAY
533.0	PLEISTOCENE		UNCONSOLIDATED	7.0	35.0	SANDY GREEN
526.0	SHELBURN		GRAY SHALE	31.0	42.0	
495.0	SHELBURN		CALCAREOUS SHALE	50.0	73.0	
445.0	SHELBURN		CALCAREOUS SHALE	16.0	123.0	
429.0	SHELBURN		DARK SHALE	16.0	139.0	
413.0	SHELBURN		CALCAREOUS SHALE	4.0	155.0	
409.0	SHELBURN		DARK SHALE	11.0	159.0	
398.0	SHELBURN		LIMESTONE & SHALE	3.0	170.0	
395.0	SHELBURN		CALCAREOUS SHALE	6.0	173.0	
389.0	SHELBURN		LIMESTONE	6.0	179.0	
383.0	SHELBURN		CALCAREOUS SHALE	5.0	185.0	
378.0	CARBONDALE	HERRIN	COAL	6.0	190.0	
372.0	CARBONDALE		CALCAREOUS SHALE	5.0	196.0	
367.0	CARBONDALE		SHALE	4.0	201.0	
363.0	CARBONDALE		LIMESTONE	2.0	205.0	
361.0	CARBONDALE		SHALE	23.0	207.0	

MAPID: 11790474000C VERSION: 2

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 34 QUARTERS/FOOTAGES: 1' N line, 600' E line of NE
 QUADRANGLE: SHIPMAN LONGITUDE: -90.073753 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.013342 DATE COLLECTED: 4 / 23 / 1958
 SURFACE ELEVATION (FT.): 565.0 LOGGED (FT.): 70.0 LOG TYPE: Drillers Log
 SOURCE: CC DRILLING COMPANY 15-1 WELL TYPE: Coal Test
 COMMENT: BRIGHTON BOX44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
565.0	PLEISTOCENE		UNCONSOLIDATED	13.0	0.0	
552.0			ROCK	52.0	13.0	
500.0	CARBONDALE	HERRIN	COAL	1.8	65.0	
498.2			ROCK	3.2	66.8	

MAPID: 11790353000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 35 QUARTERS/FOOTAGES: 1' S line, 165' W line of SE NE
 QUADRANGLE: SHIPMAN LONGITUDE: -90.056891 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.005978 DATE COLLECTED: 11 / 16 / 1961
 SURFACE ELEVATION (FT.): 515.0 LOGGED (FT.): 80.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE A115N WELL TYPE: Coal Test
 COMMENT: FOSTERBURG BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
515.0	PLEISTOCENE		UNCONSOLIDATED	36.1	0.0	
478.9	CARBONDALE	HERRIN	COAL	2.2	36.1	TOP ERODED
476.7	CARBONDALE		ROCK	18.7	38.3	
458.0	CARBONDALE	SPRINGFIELD	COAL	3.6	57.0	
454.4	CARBONDALE		ROCK	19.4	60.6	

MAPID: 11700333000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 7N 9W SECTION: 36 QUARTERS/FOOTAGES: 2825' S line, 4300' E line
 QUADRANGLE: SHIPMAN LONGITUDE: -90.04962 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 39.006452 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 576.9 LOGGED (FT.): 0.0 LOG TYPE:
 SOURCE: MOORE CC HS WELL TYPE: Underground mine
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
461.9	CARBONDALE	HERRIN	COAL	5.0	115.0	

MAPID: 11700607000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 2 QUARTERS/FOOTAGES: 330' N line, 330' E line of SE NW NE

QUADRANGLE: LITCHFIELD LONGITUDE: -89.724578

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.172756

DATE COLLECTED: 5 / 0 / 1956

SURFACE ELEVATION (FT.): 628.0

LOGGED (FT.): 356.0

LOG TYPE: Electric Log

SOURCE: NICKERSON JAMES C

WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
334.0	MODESTO	PIASA	LIMESTONE	7.0	294.0
327.0	CARBONDALE	ENERGY	UNCLASSIFIED	49.0	301.0
278.0	CARBONDALE	HERRIN	COAL	6.0	350.0

MAPID: 11700285000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 4 QUARTERS/FOOTAGES: 200' S line, 200' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.756972

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.160998

DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 667.0

LOGGED (FT.): 391.0

LOG TYPE: Drillers Log

SOURCE: DUNCAN BROTHERS

WELL TYPE: Unsuccessful or Unknown Results

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
334.0	MODESTO	PIASA	LIMESTONE	4.0	333.0
330.0	MODESTO		UNCLASSIFIED	5.0	337.0
325.0	CARBONDALE		UNCLASSIFIED	10.0	342.0
315.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	2.0	352.0
313.0	CARBONDALE	ENERGY	UNCLASSIFIED	32.0	354.0
281.0	CARBONDALE	HERRIN	COAL	5.0	386.0

MAPID: 11700285000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 4 QUARTERS/FOOTAGES: 200' S line, 200' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.756972

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.160998

DATE COLLECTED:

SURFACE ELEVATION (FT.): 667.0

LOGGED (FT.): 391.0

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
343.0	MODESTO	PIASA	LIMESTONE	4.0	324.0
339.0	MODESTO		GRAY SHALE	5.0	328.0
334.0	CARBONDALE		DARK GRAY SHALE	10.0	333.0
324.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	2.0	343.0
322.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	7.0	345.0
315.0	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	9.0	352.0
306.0	CARBONDALE	ENERGY	GRAY SHALE	25.0	361.0
281.0	CARBONDALE	HERRIN	COAL	5.0	386.0

MAPID: 11700267000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 7 QUARTERS/FOOTAGES: 950' N line, 700' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.796029

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.157123

DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 663.0

LOGGED (FT.): 386.0

LOG TYPE: Drillers Log

SOURCE: PERRY COAL CO.

WELL TYPE: Plugged and/or Abandoned

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
286.0	CARBONDALE	HERRIN	COAL	9.0	377.0

MAPID: 11700954000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 7 QUARTERS/FOOTAGES: 48' N line, 1678' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.806609

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.159481

DATE COLLECTED:

SURFACE ELEVATION (FT.): 666.0 LOGGED (FT.): 351.1

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. G-16

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
378.3	MODESTO	PIASA	LIMESTONE	4.4	287.7	
373.9	CARBONDALE		GRAY SHALE	11.2	292.1	
362.7	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.0	303.3	UPPER BENCH
359.7	CARBONDALE	BANKSTON FORK	GRAY SHALE	7.0	306.3	SHALE PARTING
352.7	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	10.0	313.3	
342.7	CARBONDALE	ANNA	BLACK SHALE	0.8	323.3	
341.9	CARBONDALE	ENERGY	GRAY SHALE	19.9	324.1	
322.0	CARBONDALE	HERRIN	COAL	7.1	344.0	

MAPID: 11700954000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 7 QUARTERS/FOOTAGES: 48' N line, 1678' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.806609

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.159481

DATE COLLECTED:

SURFACE ELEVATION (FT.): 665.0 LOGGED (FT.): 351.1

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-16

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
368.3	MODESTO	PIASA	LIMESTONE	4.4	296.7	
363.9	MODESTO		UNCLASSIFIED	3.0	301.1	
360.9	CARBONDALE		UNCLASSIFIED	8.2	304.1	
352.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	312.3	
349.7	CARBONDALE	ANNA	BLACK SHALE	0.9	315.3	
348.8	CARBONDALE	ENERGY	SHALE	27.8	316.2	
321.0	CARBONDALE	HERRIN	COAL	7.1	344.0	

MAPID: 11700954000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 7 QUARTERS/FOOTAGES: 48' N line, 1678' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.806609 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.159481 DATE COLLECTED:

SURFACE ELEVATION (FT.): 665.5 LOGGED (FT.): 352.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-16 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
321.2	CARBONDALE	HERRIN	COAL	7.1	344.3	

MAPID: 11700555000C VERSION: 1

PROJECT: NCRDS87

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 8 QUARTERS/FOOTAGES: 330' N line, 330' W line of SE NE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.778482 GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 39.155582 DATE COLLECTED: 12 / 0 / 1963

SURFACE ELEVATION (FT.): 662.0 LOGGED (FT.): 650.0 LOG TYPE: Drillers Log

SOURCE: ED KAPES WELL TYPE: Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
662.0			UNCONSOLIDATED	58.0	0.0	
604.0	BOND	CARTHAGE	LIMESTONE	14.0	58.0	
590.0	MODESTO		SHALE	10.0	72.0	
580.0	MODESTO		LIMESTONE	2.0	82.0	
578.0	MODESTO		SHALE	41.0	84.0	
537.0	MODESTO		BLACK SHALE	13.0	125.0	
524.0	MODESTO		SHALE	27.0	138.0	
497.0	MODESTO	CARLINVILLE	LIMESTONE	7.0	165.0	
490.0	MODESTO		SHALE	160.0	172.0	
330.0	MODESTO	PIASA	LIMESTONE	4.0	332.0	
326.0	MODESTO		BLACK SHALE	14.0	336.0	
312.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	350.0	UNCERTAIN CORRELATION
308.0	CARBONDALE		SHALE	29.0	354.0	
279.0	CARBONDALE	HERRIN	COAL	6.0	383.0	
273.0	CARBONDALE		SHALE	21.0	389.0	
252.0	CARBONDALE		BLACK SHALE	10.0	410.0	
242.0	CARBONDALE		SHALE	52.0	420.0	
190.0	CARBONDALE	MECCA QUARRY	BLACK SHALE	63.0	472.0	UNCERTAIN CORRELATION
127.0	SPOON		SHALE	35.0	535.0	
92.0	SPOON		BLACK SHALE	5.0	570.0	
87.0	SPOON		SHALE	75.0	575.0	

MAPID: 11700558000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 8 QUARTERS/FOOTAGES: 330' S line, 330' W line of NE SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.778378

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.149895

DATE COLLECTED: 7 / 0 / 1955

SURFACE ELEVATION (FT.): 662.0

LOGGED (FT.): 664.0

LOG TYPE: Electric Log

SOURCE: LAMBERT DALE E

WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
347.0	MODESTO	PIASA	LIMESTONE	5.0	315.0	
342.0	MODESTO		UNCLASSIFIED	3.0	320.0	
339.0	CARBONDALE		UNCLASSIFIED	9.0	323.0	
330.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	332.0	
326.0	CARBONDALE	ENERGY	UNCLASSIFIED	34.0	336.0	
292.0	CARBONDALE	HERRIN	COAL	-	370.0	UNRELIABLE LOG; 2FT THICKNESS REPORTED

MAPID: 11700933000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 8 QUARTERS/FOOTAGES: 330' S line, 330' E line of NW NE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.780854

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.157337

DATE COLLECTED: 10 / 0 / 1962

SURFACE ELEVATION (FT.): 664.0

LOGGED (FT.): 378.0

LOG TYPE: Electric Log

SOURCE: KESL JOE JR ETAL

WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
344.0	MODESTO	PIASA	LIMESTONE	5.0	320.0	
339.0	MODESTO		UNCLASSIFIED	4.0	325.0	
335.0	CARBONDALE		UNCLASSIFIED	11.0	329.0	
324.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	340.0	
321.0	CARBONDALE	ENERGY	UNCLASSIFIED	31.0	343.0	
290.0	CARBONDALE	HERRIN	COAL	4.0	374.0	

MAPID: 11700955000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 8 QUARTERS/FOOTAGES: 45' N line, 1300' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.788991

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.159797

DATE COLLECTED:

SURFACE ELEVATION (FT.): 668.0 LOGGED (FT.): 368.8

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. G-17

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
365.7	MODESTO	PIASA	LIMESTONE	3.9	302.3	
361.8	CARBONDALE		GRAY SHALE	11.8	306.2	
350.0	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.7	318.0	UPPER BENCH
347.3	CARBONDALE	BANKSTON FORK	GRAY SHALE	7.3	320.7	SHALE PARTING
340.0	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	10.0	328.0	
330.0	CARBONDALE	ANNA	CONGLOMERATE	0.4	338.0	
329.6	CARBONDALE	ENERGY	GRAY SHALE	22.7	338.4	
306.9	CARBONDALE	ENERGY	DARK GRAY SHALE	0.9	361.1	
306.0	CARBONDALE	HERRIN	COAL	6.8	362.0	

MAPID: 11700955000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 8 QUARTERS/FOOTAGES: 45' N line, 1300' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.788991

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.159797

DATE COLLECTED:

SURFACE ELEVATION (FT.): 668.0 LOGGED (FT.): 368.8

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-17

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
355.7	MODESTO	PIASA	LIMESTONE	3.9	312.3	
351.8	MODESTO		UNCLASSIFIED	3.0	316.2	
348.8	CARBONDALE		UNCLASSIFIED	8.8	319.2	
340.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	328.0	
337.3	CARBONDALE	ENERGY	SHALE	31.3	330.7	
306.0	CARBONDALE	HERRIN	COAL	6.8	362.0	

MAPID: 11700955000C **VERSION:** 3 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 8N 6W **SECTION:** 8 **QUARTERS/FOOTAGES:** 45' N line, 1300' W line
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.788991 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.159797 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 667.6 **LOGGED (FT.):** 369.2 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. G-17 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
306.0	CARBONDALE	HERRIN	COAL	6.8	361.6

MAPID: 11700962000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 8N 6W **SECTION:** 8 **QUARTERS/FOOTAGES:** 400' N line, 15' E line of SE NE
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.775085 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.155485 **DATE COLLECTED:** 8 / 0 / 1962
SURFACE ELEVATION (FT.): 664.0 **LOGGED (FT.):** 385.0 **LOG TYPE:** Electric Log
SOURCE: ATKINS AND HALE **WELL TYPE:** Water Injection
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
337.0	MODESTO	PIASA	LIMESTONE	4.0	327.0
333.0	MODESTO		UNCLASSIFIED	3.5	331.0
329.5	CARBONDALE		UNCLASSIFIED	9.5	334.5
320.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	344.0
316.0	CARBONDALE	ENERGY	UNCLASSIFIED	33.0	348.0
283.0	CARBONDALE	HERRIN	COAL	4.0	381.0

MAPID: 11701002000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 8N 6W **SECTION:** 9 **QUARTERS/FOOTAGES:** 335' N line, 330' W line
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.77393 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.159436 **DATE COLLECTED:** 2 / 0 / 1955
SURFACE ELEVATION (FT.): 666.0 **LOGGED (FT.):** 386.0 **LOG TYPE:** Electric Log
SOURCE: LAMBERT DALE E **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
341.0	MODESTO	PIASA	LIMESTONE	4.0	325.0
337.0	MODESTO		UNCLASSIFIED	4.0	329.0
333.0	CARBONDALE		UNCLASSIFIED	12.0	333.0
321.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	345.0
318.0	CARBONDALE	ENERGY	UNCLASSIFIED	32.0	348.0
286.0	CARBONDALE	HERRIN	COAL	6.0	380.0

MAPID: 11722548000C VERSION: 1

PROJECT: ISGS89

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 9 QUARTERS/FOOTAGES: 355' N line, 340' W line of NE SW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.769047 GEOLOGIST: S SROKA

CONFIDENTIAL: N LATITUDE: 39.151908 DATE COLLECTED: 7 / 26 / 1982

SURFACE ELEVATION (FT.): 663.6 LOGGED (FT.): 682.0 LOG TYPE: Drillers Log

SOURCE: C & W OIL & GAS INC, A-1 WELL TYPE: Producer-Oil and Gas

COMMENT: ALFRED HENRICH FARM-THICKNESS INACCURATE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
663.6			UNCONSOLIDATED	52.0	0.0	
611.6	BOND		SHALE	2.0	52.0	BLUE/GRY
609.6	BOND		SANDSTONE/SILTSTONE	8.0	54.0	
601.6	BOND	CARTHAGE	LIMESTONE	10.0	62.0	TAN/WHIT
591.6	MODESTO		SHALE	8.0	72.0	
583.6	MODESTO		SHALE	31.0	80.0	BLUE/GRN
552.6	MODESTO		SANDY SHALE	14.0	111.0	
538.6	MODESTO		BLACK SHALE	2.0	125.0	
536.6	MODESTO	WOMAC	COAL	5.0	127.0	
531.6	MODESTO		SHALE	11.0	132.0	BLUE/GRN
520.6	MODESTO		SHALE	21.0	143.0	DRK/GRAY
499.6	MODESTO	CARLINVILLE	LIMESTONE	6.0	164.0	GRAY
493.6	MODESTO		SANDY SHALE	35.0	170.0	
458.6	MODESTO		SHALE	2.0	205.0	
456.6	MODESTO		SANDSTONE	21.0	207.0	BLUE/GRN
435.6	MODESTO		SHALE	74.0	228.0	
361.6	MODESTO		SANDY LIMESTONE	5.0	302.0	BRN/TAN
356.6	MODESTO		SHALY SANDSTONE	5.0	307.0	W/BLACK SH OR COAL PARTS
351.6	MODESTO		SHALE	13.0	312.0	
338.6	MODESTO		SHALE	4.0	325.0	PURPLE, RED, GRAY; MULTI
334.6	MODESTO		SHALE	3.0	329.0	
331.6	MODESTO	PIASA	LIMESTONE	4.0	332.0	OCCASIONALLY CHERTY; TAN
327.6			SHALE	5.0	336.0	
322.6	CARBONDALE		SHALE	10.0	341.0	
312.6	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	351.0	CHERTY; BROWN
308.6	CARBONDALE	ENERGY	SHALE	29.0	355.0	DRK/GRY
279.6	CARBONDALE	ENERGY	BLACK SHALE	1.0	384.0	
278.6	CARBONDALE	HERRIN	COAL	7.0	385.0	
271.6	CARBONDALE		SHALE	2.0	392.0	
269.6	CARBONDALE		LIMESTONE	3.0	394.0	TAN/BRN
266.6	CARBONDALE		SHALE	7.0	397.0	GRAY TO SANDY
259.6	CARBONDALE		LIMESTONE	2.0	404.0	GRAY
257.6	CARBONDALE		SHALE	13.0	406.0	DRK/GRY
244.6	CARBONDALE		SANDSTONE	5.0	419.0	BLUE
239.6	CARBONDALE		SHALE	44.0	424.0	GRY
195.6	CARBONDALE		COAL	4.0	468.0	
191.6	CARBONDALE		SANDY SHALE	42.0	472.0	GRAY
149.6	CARBONDALE		BLACK SHALE	4.0	514.0	BK SH W/ CO
145.6			LIMESTONE	7.0	518.0	TAN

138.6	SHALE	9.0	525.0	W/LS STRINGERS
129.6	SHALE	21.0	534.0	
108.6	SHALE	21.0	555.0	DRK/GRAY
87.6	BLACK SHALE	1.0	576.0	
86.6	COAL	5.0	577.0	W/BKSH
81.6	SHALE	20.0	582.0	
61.6	SHALY COAL	2.0	602.0	
59.6	SHALE	12.0	604.0	GRAY TO SANDY
47.6	SHALY SANDSTONE	4.0	616.0	GRAY
43.6	SHALE	7.0	620.0	SH W/WHITE SS
36.6	SHALE	55.0	627.0	DRK/GRY

MAPID: 11722549000C VERSION: 1

PROJECT: ISGS89

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 9 QUARTERS/FOOTAGES: 1015' N line, 340' W line of NE SW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.769015 GEOLOGIST: S SROKA

CONFIDENTIAL: N LATITUDE: 39.150086 DATE COLLECTED: 4 / 7 / 1982

SURFACE ELEVATION (FT.): 662.7 LOGGED (FT.): 682.0 LOG TYPE: Drillers Log

SOURCE: C & W OIL & GAS, INC. C-1 WELL TYPE: Producer-Oil and Gas

COMMENT: ALFRED HENRICH'S FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
662.7			UNCONSOLIDATED	86.0	0.0	
576.7	MODESTO		SHALE	43.0	86.0	
533.7	MODESTO	WOMAC	COAL	3.0	129.0	
530.7	MODESTO		SHALE	6.0	132.0	
524.7	MODESTO	BURROUGHS	SANDY LIMESTONE	2.0	138.0	GRAY
522.7	MODESTO		SHALE	26.0	140.0	
496.7	MODESTO	CARLINVILLE	LIMESTONE	4.0	166.0	BROWN
492.7	MODESTO		SHALE	20.0	170.0	DRK GRAY
472.7	MODESTO		CALCAREOUS SANDSTONE	1.0	190.0	GRAY
471.7	MODESTO		SHALE	16.0	191.0	DRK GRAY
455.7	MODESTO		SHALE	4.0	207.0	GRAY/GRN
451.7	MODESTO		CALCAREOUS SANDSTONE	15.0	211.0	DRK GRAY
436.7	MODESTO		SHALE WITH LIMESTONE	63.0	226.0	
373.7	MODESTO		LIMESTONE	1.0	289.0	
372.7	MODESTO		SHALE	25.0	290.0	
347.7	MODESTO		SHALE	2.0	315.0	RED AND YELLOW BROWN
345.7	MODESTO		SHALY SANDSTONE	5.0	317.0	BLUE/GRN
340.7	MODESTO		SANDSTONE	7.0	322.0	GRAY
333.7	MODESTO		SHALE	5.0	329.0	
328.7	MODESTO	PIASA	LIMESTONE	4.0	334.0	TAN/BRN
324.7	MODESTO		BLACK SHALE	3.0	338.0	
321.7	CARBONDALE	DANVILLE	COAL	5.0	341.0	
316.7	CARBONDALE		SHALE	6.0	346.0	
310.7	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	352.0	TAN/BRN
305.7	CARBONDALE	ENERGY	SHALE	29.0	357.0	
276.7	CARBONDALE	HERRIN	COAL	6.5	386.0	
270.2	CARBONDALE		SHALE	11.5	392.5	
258.7	CARBONDALE		SANDY LIMESTONE	3.0	404.0	BLUE/GRY
255.7	CARBONDALE		BLACK SHALE	3.0	407.0	
252.7	CARBONDALE		SHALE	6.0	410.0	
246.7	CARBONDALE		SANDSTONE	18.0	416.0	BLUE/GRN
228.7	CARBONDALE		SANDY SHALE	9.0	434.0	
219.7	CARBONDALE		SHALE	22.0	443.0	W/LS STRINGERS
197.7	CARBONDALE		COAL	2.0	465.0	
195.7	CARBONDALE		SANDY SHALE	31.0	467.0	
164.7	CARBONDALE		SHALE	22.0	498.0	
142.7	CARBONDALE		COAL	2.0	520.0	W/BKSH
140.7	CARBONDALE		SHALE	3.0	522.0	

137.7	CARBONDALE	LIMESTONE	1.5	525.0	BROWN
136.2	CARBONDALE	COAL	4.5	526.5	W/BKSH
131.7		SHALE	4.0	531.0	DRK/GRAY
127.7		SHALE	7.0	535.0	
120.7		SHALE	6.0	542.0	DRK/GRAY
114.7		SHALE	17.0	548.0	
97.7		COAL	1.0	565.0	
96.7		SHALE	19.0	566.0	TAN/GRAY
77.7		COAL	3.0	585.0	W/BKSH
74.7		SHALE	1.0	588.0	
73.7		LIMESTONE	1.0	589.0	WHITE
72.7		SHALE	32.0	590.0	
40.7		SHALE	2.0	622.0	W/SANDY LS
38.7		SHALE	16.0	624.0	DRK BLUE GRAY, W/PYRITE
22.7		SHALE	10.0	640.0	W/SS STRINGERS; DRK/GRAY
12.7		LIMESTONE	3.0	650.0	SHALEY TO PYRITIC
9.7		SHALE	3.0	653.0	DRK/GRAY
6.7		CALCAREOUS SANDSTONE	2.0	656.0	GRAY
4.7		SHALE	24.0	658.0	DRK/GRAY

MAPID: 11722637000C VERSION: 1

PROJECT: ISGS89

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 9 QUARTERS/FOOTAGES: 330' S line, 330' E line of NW SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.761963 GEOLOGIST: S SROKA

CONFIDENTIAL: N LATITUDE: 39.150146 DATE COLLECTED: 11 / 18 / 1983

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 655.0 LOG TYPE: Drillers Log

SOURCE: BC ENERGY EXPLORATION #1 WELL TYPE: Producer-Oil and Gas

COMMENT: THICKNESSES OF COALS ARE NOT ACCURATE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
660.0			UNCONSOLIDATED	51.5	0.0	
608.5	MODESTO		SHALE	5.5	51.5	
603.0	MODESTO		SHALE	5.0	57.0	GRN/GRAY
598.0	MODESTO		SHALE	15.0	62.0	
583.0	MODESTO		SANDY SHALE	3.5	77.0	
579.5	MODESTO		SHALE	25.5	80.5	W/LS STRINGERS
554.0	MODESTO		BLACK SHALE	1.5	106.0	
552.5	MODESTO	WOMAC	COAL	1.5	107.5	
551.0	MODESTO		SHALE	2.0	109.0	
549.0	MODESTO	BURROUGHS	LIMESTONE	7.0	111.0	GRAY TO TAN; W/SANDY GRAY LS
542.0	MODESTO		SANDY SHALE	6.0	118.0	
536.0	MODESTO		SHALE	21.0	124.0	
515.0	MODESTO	CARLINVILLE	LIMESTONE	7.5	145.0	TAN/GRAY
507.5	MODESTO		SHALE	38.5	152.5	
469.0	MODESTO		SHALE	15.0	191.0	GRN/GRAY
454.0	MODESTO		SHALE	64.0	206.0	W/LS STRINGER
390.0	MODESTO		SHALE	8.0	270.0	GRN/GRAY
382.0	MODESTO		SHALE WITH LIMESTONE	3.0	278.0	
379.0	MODESTO		SHALE	1.0	281.0	
378.0	MODESTO		SHALE	7.5	282.0	
370.5	MODESTO		SHALE	1.5	289.5	
369.0	MODESTO		SHALE	2.0	291.0	
367.0	MODESTO		SHALE	3.0	293.0	GRN/GRAY
364.0	MODESTO		SANDSTONE	5.5	296.0	GRN/GRAY
358.5	MODESTO		SHALE	3.5	301.5	
355.0	MODESTO		SHALE	3.0	305.0	INTERBEDDED RED AND GREEN
352.0	MODESTO		SHALE	4.5	308.0	GRAY TO BLUE GRAY
347.5	MODESTO	PIASA	LIMESTONE	1.5	312.5	TAN/GRAY
346.0	MODESTO	PIASA	SHALY LIMESTONE	2.0	314.0	
344.0	MODESTO		BLACK SHALE	2.0	316.0	
342.0	CARBONDALE	DANVILLE	COAL	3.0	318.0	
339.0	CARBONDALE		SHALE	1.0	321.0	GRN/GRAY
338.0	CARBONDALE		BLACK SHALE	3.0	322.0	
335.0	CARBONDALE		SHALE	3.0	325.0	
332.0	CARBONDALE		LIMESTONE	5.0	328.0	
327.0	CARBONDALE	ENERGY	SHALE	30.0	333.0	W/LS STRINGERS
297.0	CARBONDALE	ENERGY	BLACK SHALE	1.0	363.0	
296.0	CARBONDALE	HERRIN	COAL	6.0	364.0	
290.0	CARBONDALE		SHALE	1.5	370.0	BLUE/GRY

288.5	CARBONDALE	LIMESTONE	1.5	371.5	TAN
287.0	CARBONDALE	LIMESTONE	1.0	373.0	BROWN
286.0	CARBONDALE	SHALE	1.5	374.0	GRN/GRAY
284.5	CARBONDALE	SHALE	5.0	375.5	
279.5	CARBONDALE	LIMESTONE	0.5	380.5	BROWN
279.0	CARBONDALE	SHALE	1.5	381.0	BLUE/GRY
277.5	CARBONDALE	LIMESTONE	0.5	382.5	GRAY
277.0	CARBONDALE	SHALE	3.0	383.0	BLUE/GRY
274.0	CARBONDALE	LIMESTONE	1.0	386.0	FOSSILIFEROUS; GRAY/TAN
273.0	CARBONDALE	LIMESTONE	9.0	387.0	TAN
264.0	CARBONDALE	SANDY SHALE	17.0	396.0	W/SS 402-403
247.0	CARBONDALE	SANDY SHALE	19.0	413.0	
228.0	CARBONDALE	SHALE & SANDSTONE	18.5	432.0	SANDY GRAY SH
209.5	CARBONDALE	BLACK SHALE	1.5	450.5	
208.0	CARBONDALE	SHALE	5.0	452.0	
203.0		COAL	4.0	457.0	
199.0		LIMESTONE	16.0	461.0	GRAY
183.0		SANDSTONE	7.5	477.0	
175.5		SHALE	1.5	484.5	
174.0		LIMESTONE	1.0	486.0	DRK/GRY
173.0		COAL	4.0	487.0	W/PYRITE
169.0		SHALE	0.5	491.0	
168.5		LIMESTONE	4.0	491.5	BROWN
164.5		COAL	2.0	495.5	
162.5		SHALE WITH LIMESTONE	1.0	497.5	
161.5		COAL	2.0	498.5	
159.5		SHALE	1.5	500.5	
158.0		BLACK SHALE	3.5	502.0	
154.5		SHALE	2.5	505.5	
152.0		SHALE	4.0	508.0	
148.0		SHALE	25.0	512.0	W/SS STRINGERS
123.0		SHALE	15.5	537.0	PYRITE AND SS STRINGERS; DRK/GRAY
107.5		SHALE	12.5	552.5	TAN TO GRAY
95.0		SHALE	23.0	565.0	W/BRN SH AND ORGANIC STREAKS
72.0		SHALY SANDSTONE	6.0	588.0	GRAY
66.0		LIMESTONE AND SANDSTONE	2.5	594.0	SANDY LS TO LIMY SS
63.5		LIMESTONE	1.0	596.5	GRAY
62.5		SHALE	1.5	597.5	DARK GRAY TO BLACK
61.0		SHALE	10.5	599.0	DARK GRAY TO BLACK
50.5		SANDY SHALE	3.5	609.5	GRAY TO BROWN
47.0		LIMESTONE	1.0	613.0	BROWN
46.0		SHALE	4.0	614.0	DARK GRAY TO BROWN
42.0		LIMESTONE	0.8	618.0	BROWN
41.2		SHALE	7.7	618.8	
33.5		SHALE	14.5	626.5	W/LS STRINGER; DRK/GRAY
19.0		SHALY SANDSTONE	2.0	641.0	GRAY

17.0

SANDSTONE/SHALE

12.0

643.0

SS INTERBEDDED W/DRK
GRAY SH

MAPID: 11722638000C VERSION: 1

PROJECT: ISGS89

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 9 QUARTERS/FOOTAGES: 330' S line, 330' E line of NE SW SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.761932

GEOLOGIST: S SROKA

CONFIDENTIAL: N LATITUDE: 39.14828

DATE COLLECTED: 11 / 22 / 1983

SURFACE ELEVATION (FT.): 659.0 LOGGED (FT.): 650.0

LOG TYPE: Drillers Log

SOURCE: BC ENERGY EXPLORATION #2

WELL TYPE: Producer-Oil and Gas

COMMENT: THICKNESS OF COALS ARE NOT ACCURATE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
659.0			UNCONSOLIDATED	58.0	0.0	
601.0	BOND	CARTHAGE	LIMESTONE	1.5	58.0	GRAY/TAN
599.5	MODESTO		SHALE	6.5	59.5	GRN/GRAY
593.0	MODESTO		SHALE	55.0	66.0	W/LS STEAKS
538.0	MODESTO	BURROUGHS	SANDY LIMESTONE	4.0	121.0	GRAY
534.0	MODESTO		SHALE	12.0	125.0	GRN/GRY
522.0	MODESTO		SHALE	11.0	137.0	
511.0	MODESTO	CARLINVILLE	LIMESTONE	1.0	148.0	TAN/GRAY
510.0	MODESTO	CARLINVILLE	LIMESTONE	6.0	149.0	GRAY
504.0	MODESTO		SHALE	14.0	155.0	
490.0	MODESTO		SANDSTONE	5.0	169.0	GRN/GRAY
485.0	MODESTO		SHALE	17.0	174.0	
468.0	MODESTO	CHAPEL	COAL	1.0	191.0	
467.0	MODESTO		SHALE	6.0	192.0	
461.0	MODESTO		SANDY SHALE	10.5	198.0	
450.5	MODESTO		SANDY SHALE	12.5	208.5	
438.0	MODESTO		SHALE	56.5	221.0	W/LS STREAKS
381.5	MODESTO		SHALY LIMESTONE	5.5	277.5	W/LIMY SH; GRN/GRAY
376.0	MODESTO		SHALE	13.0	283.0	TO BLUE GRAY
363.0	MODESTO		SHALE WITH LIMESTONE	8.0	296.0	
355.0	MODESTO		SANDSTONE	12.0	304.0	SHALY IN PART; GRAY
343.0	MODESTO		SHALE	3.0	316.0	
340.0	MODESTO		SHALE	2.0	319.0	RED/BRN
338.0	MODESTO		SHALE	1.5	321.0	
336.5	MODESTO	PIASA	LIMESTONE	3.5	322.5	TAN
333.0	MODESTO		SHALE	4.0	326.0	
329.0	CARBONDALE	DANVILLE	SHALY COAL	3.5	330.0	
325.5	CARBONDALE		SHALE	4.0	333.5	GRN/GRAY
321.5	CARBONDALE		SHALE	5.5	337.5	
316.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	343.0	TAN
311.5	CARBONDALE	ENERGY	SHALE	28.5	347.5	
283.0	CARBONDALE	HERRIN	COAL	6.5	376.0	
276.5	CARBONDALE		SHALE	3.5	382.5	
273.0	CARBONDALE		LIMESTONE	4.5	386.0	TAN
268.5	CARBONDALE		SHALE	12.0	390.5	GRN/GRAY
256.5	CARBONDALE		LIMESTONE	3.5	402.5	TAN/BRN
253.0	CARBONDALE		SHALE	7.0	406.0	
246.0	CARBONDALE		SHALE WITH LIMESTONE	10.0	413.0	
236.0	CARBONDALE		SHALE	11.0	423.0	

225.0	CARBONDALE	SHALE WITH LIMESTONE	27.0	434.0	SH/W/BROWN LS
198.0	CARBONDALE	COAL	3.0	461.0	
195.0	CARBONDALE	CALCAREOUS SHALE	19.0	464.0	DRK GRAY LIMY SH TO SHALY LS
176.0	CARBONDALE	SANDY LIMESTONE	2.0	483.0	GRAY
174.0	CARBONDALE	SHALY LIMESTONE	2.0	485.0	DRK/GRAY
172.0	CARBONDALE	BLACK SHALE	7.0	487.0	W/COAL
165.0		LIMESTONE	2.0	494.0	DRK GRAY
163.0		SHALE	1.5	496.0	
161.5		LIMESTONE	2.5	497.5	W/GRN GRAY INCLUSIONS; BROWN
159.0		COAL	6.0	500.0	W/PYRITE BANDS
153.0		SHALE WITH LIMESTONE	2.0	506.0	
151.0		SHALE	3.0	508.0	
148.0		SHALE	5.0	511.0	W/DRK GRAY TO BLACK SHALE AND PYRITE; GR
143.0		SHALE	6.0	516.0	
137.0		SHALE WITH LIMESTONE	5.5	522.0	
131.5		SHALY COAL	1.5	527.5	BLACK
130.0		SHALY COAL	8.5	529.0	GRAY
121.5		SHALE	3.5	537.5	
118.0		SHALE	4.0	541.0	
114.0		SHALE WITH LIMESTONE	40.0	545.0	
74.0		LIMESTONE	1.0	585.0	TAN/BRN
73.0		SANDY SHALE	2.0	586.0	
71.0		SHALE	2.0	588.0	
69.0		SANDY LIMESTONE	5.5	590.0	TAN
63.5		SHALE	5.5	595.5	W/SS
58.0		SHALY COAL	3.0	601.0	W/PYRITE; BLACK
55.0		SANDY SHALE	14.0	604.0	W/PYRITE
41.0		LIMESTONE AND SANDSTONE	1.5	618.0	BRN/SNDY LS TO LIMY SS
39.5		SANDSTONE	23.5	619.5	W/SOME SHALE
16.0		CALCAREOUS SANDSTONE	1.0	643.0	GRAY
15.0		SHALY SANDSTONE	3.0	644.0	W/WHITE SS AND LIMY SS/SH; GRAY
12.0		SANDSTONE	3.0	647.0	GRAY

MAPID: 11700134000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 11 QUARTERS/FOOTAGES: 1350' S line, 2400' E line

QUADRANGLE: LITCHFIELD LONGITUDE: -89.726976 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.149711 DATE COLLECTED: 0 / 0 / 1914

SURFACE ELEVATION (FT.): 666.0 LOGGED (FT.): 412.2 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
319.7	MODESTO	PIASA	LIMESTONE	4.5	346.3
315.2	MODESTO		UNCLASSIFIED	4.5	350.8
310.7	CARBONDALE	DANVILLE	COAL	2.0	355.3
308.7	CARBONDALE		UNCLASSIFIED	8.7	357.3
300.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	366.0
295.0	CARBONDALE	ANNA	BLACK SHALE	1.8	371.0
293.2	CARBONDALE	ENERGY	UNCLASSIFIED	32.2	372.8
261.0	CARBONDALE	HERRIN	COAL	7.2	405.0

MAPID: 11700134000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 11 QUARTERS/FOOTAGES: 1350' S line, 2400' E line

QUADRANGLE: LITCHFIELD LONGITUDE: -89.726976 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.149711 DATE COLLECTED:

SURFACE ELEVATION (FT.): 666.0 LOGGED (FT.): 412.2 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
317.6	MODESTO	PIASA	LIMESTONE	3.5	348.4
314.1	MODESTO		DARK GRAY SHALE	6.5	351.9
307.6	CARBONDALE	DANVILLE	COAL	0.8	358.4
306.8	CARBONDALE		GRAY SHALE	8.7	359.2
298.1	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	3.3	367.9
294.8	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	1.3	371.2
293.5	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	0.3	372.5
293.2	CARBONDALE	ENERGY	SILTY SHALE	2.3	372.8
290.8	CARBONDALE	ENERGY	GRAY SHALE	28.0	375.2
262.8	CARBONDALE	ENERGY	DARK GRAY SHALE	1.8	403.2
261.0	CARBONDALE	HERRIN	COAL	7.2	405.0

MAPID: 11700134000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 11 QUARTERS/FOOTAGES: 1350' S line, 2400' E line

QUADRANGLE: LITCHFIELD LONGITUDE: -89.726976 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.149711 DATE COLLECTED: 0 / 0 / 1914

SURFACE ELEVATION (FT.): 666.3 LOGGED (FT.): 413.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO., #28 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
666.3			SOIL	12.0	0.0	
654.3			SAND & GRAVEL	11.0	12.0	
643.3			UNCONSOLIDATED	27.0	23.0	
616.3	BOND		SANDY SHALE	20.0	50.0	
596.3	BOND		UNKNOWN	1.0	70.0	LOG HAS "ROCK"
595.3	BOND		CALCAREOUS SHALE	2.0	71.0	
593.3	BOND		CALCAREOUS SHALE	2.0	73.0	
591.3	BOND	CARTHAGE	LIMESTONE	13.0	75.0	
578.3	MODESTO		SHALE	2.0	88.0	W/ COAL STREAKS
576.3	MODESTO		CALCAREOUS SHALE	6.0	90.0	
570.3	MODESTO		SANDSTONE	3.0	96.0	
567.3	MODESTO		SANDY SHALE	8.0	99.0	
559.3	MODESTO		UNKNOWN	3.0	107.0	LOG HAS "ROCK"
556.3	MODESTO		SHALE	15.0	110.0	W/ ROCK BANDS
541.3	MODESTO		SHALE	17.0	125.0	
524.3	MODESTO		BLACK SHALE	2.0	142.0	
522.3	MODESTO		BLACK SHALE	1.5	144.0	
520.8	MODESTO		COAL	0.5	145.5	
520.3	MODESTO		SHALE	6.0	146.0	
514.3	MODESTO		CALCAREOUS SHALE	2.0	152.0	W/ ROCK
512.3	MODESTO		SANDY SHALE	2.0	154.0	
510.3	MODESTO		SHALE	15.0	156.0	
495.3	MODESTO		UNKNOWN	0.5	171.0	LOG HAS "ROCK"
494.8	MODESTO		SHALE	9.5	171.5	
485.3	MODESTO		UNKNOWN	7.0	181.0	LOG HAS "ROCK"
478.3	MODESTO		SHALE	35.0	188.0	
443.3	MODESTO		SHALE	22.0	223.0	W/ ROCK
421.3	MODESTO		SANDY SHALE	50.0	245.0	
371.3	MODESTO		SHALE & SANDSTONE	14.0	295.0	
357.3	MODESTO		SANDY SHALE	14.0	309.0	
343.3	MODESTO		SHALE	6.0	323.0	"MIXED"
337.3	MODESTO		SANDY SHALE	15.0	329.0	
322.3	MODESTO		SHALE	3.0	344.0	"MIXED"
319.3	MODESTO		CALCAREOUS SHALE	1.0	347.0	
318.3	MODESTO	PIASA	LIMESTONE	3.5	348.0	
314.8	MODESTO		SHALE	1.0	351.5	
313.8	MODESTO		SHALE	1.0	352.5	
312.8	MODESTO		SHALE	3.5	353.5	
309.3	CARBONDALE	DANVILLE	COAL	2.0	357.0	

307.3	CARBONDALE		SHALE	8.7	359.0
298.6	CARBONDALE	BANKSTON FORK	LIMESTONE	3.6	367.7
295.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	1.1	371.3
294.0	CARBONDALE	BANKSTON FORK	LIMESTONE	0.3	372.3
293.6	CARBONDALE	ENERGY	SANDY SHALE	2.3	372.7
291.3	CARBONDALE	ENERGY	SHALE	28.0	375.0
263.3	CARBONDALE	ENERGY	SHALE	1.8	403.0
261.5	CARBONDALE	HERRIN	COAL	7.2	404.8
254.3	CARBONDALE		UNDERCLAY	1.0	412.0

MAPID: 11700556000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 8N 6W **SECTION:** 11 **QUARTERS/FOOTAGES:** 40' S line, 100' E line of NW SW SW
QUADRANGLE: LITCHFIELD **LONGITUDE:** -89.735436 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.147781 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 661.4 **LOGGED (FT.):** 410.6 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. G-4 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN COMMENT
258.4	CARBONDALE	HERRIN	COAL	6.5	403.0

MAPID: 11700556000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 8N 6W **SECTION:** 11 **QUARTERS/FOOTAGES:** 40' S line, 100' E line of NW SW SW
QUADRANGLE: LITCHFIELD **LONGITUDE:** -89.735436 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.147781 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 661.0 **LOGGED (FT.):** 409.5 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. G-4 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN COMMENT
315.2	MODESTO	PIASA	LIMESTONE	3.4	345.8
311.8	MODESTO		UNCLASSIFIED	4.0	349.2
307.8	CARBONDALE		UNCLASSIFIED	10.7	353.2
297.1	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	363.9
293.8	CARBONDALE	ENERGY	SHALE	35.8	367.2
258.0	CARBONDALE	HERRIN	COAL	6.5	403.0

MAPID: 11700738000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 11 QUARTERS/FOOTAGES: 330' S line, 330' W line of SE NW

QUADRANGLE: LITCHFIELD LONGITUDE: -89.73155 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.154205 DATE COLLECTED: 4 / 0 / 1959

SURFACE ELEVATION (FT.): 663.0 LOGGED (FT.): 0.0 LOG TYPE: Electric Log

SOURCE: SULLIVAN & BENNETT WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
-	MODESTO	PIASA	LIMESTONE	3.0	
-	MODESTO		UNCLASSIFIED	2.0	
-	CARBONDALE	DANVILLE	COAL	2.0	
-	CARBONDALE		UNCLASSIFIED	10.0	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	

MAPID: 11700135000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 12 QUARTERS/FOOTAGES: 3075' S line, 2045' E line

QUADRANGLE: LITCHFIELD LONGITUDE: -89.707297 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.154963 DATE COLLECTED: 0 / 0 / 1914

SURFACE ELEVATION (FT.): 665.0 LOGGED (FT.): 415.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO., #26 WELL TYPE: Coal Test

COMMENT: MIRBURGER FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
665.0			SOIL	12.0	0.0	
653.0			SANDY CLAY	4.0	12.0	
649.0			UNCONSOLIDATED	26.0	16.0	
623.0			SAND	5.0	42.0	
618.0			UNCONSOLIDATED	19.0	47.0	
599.0	BOND		SHALE	11.0	66.0	
588.0	BOND		UNKNOWN	0.5	77.0	LOG HAS ROCK
587.5	BOND		CALCAREOUS SHALE	8.0	77.5	
579.5	BOND	CARTHAGE	LIMESTONE	7.0	85.5	
572.5	MODESTO		SHALE	11.5	92.5	
561.0	MODESTO		SANDSTONE	5.0	104.0	
556.0	MODESTO		SANDY SHALE	28.3	109.0	W/ ROCK
527.7	MODESTO	WOMAC	COAL	0.3	137.3	
527.4	MODESTO		SANDSTONE/SHALE	11.4	137.6	
516.0	MODESTO		SHALE	2.0	149.0	
514.0	MODESTO		SHALE	5.0	151.0	
509.0	MODESTO	BURROUGHS	LIMESTONE	8.0	156.0	CORRELATION UNCERTAIN
501.0	MODESTO		SANDY SHALE	10.0	164.0	
491.0	MODESTO		SHALE	12.0	174.0	
479.0	MODESTO	CARLINVILLE	UNKNOWN	6.0	186.0	LOG HAS ROCK
473.0	MODESTO		SANDY SHALE	20.0	192.0	
453.0	MODESTO		SHALE	13.0	212.0	
440.0	MODESTO		SHALE	1.0	225.0	
439.0	MODESTO	CHAPEL	COAL	0.5	226.0	CORRELATION UNCERTAIN
438.5	MODESTO		SHALE	4.5	226.5	
434.0	MODESTO		SANDSTONE	40.0	231.0	
394.0	MODESTO		SANDY SHALE	40.0	271.0	
354.0	MODESTO		SHALE	20.0	311.0	W/ ROCK
334.0	MODESTO		SHALE	2.0	331.0	
332.0	MODESTO		SHALE	15.0	333.0	"MIXED"
317.0	MODESTO		LIMESTONE	1.0	348.0	
316.0	MODESTO		SHALE	2.8	349.0	MIXED
313.2	MODESTO	PIASA	LIMESTONE	4.0	351.8	
309.2			SHALE	11.3	355.8	"MIXED"
298.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	367.0	
294.0	CARBONDALE	ENERGY	SANDY SHALE	5.0	371.0	
289.0	CARBONDALE	ENERGY	SHALE	26.0	376.0	
263.0	CARBONDALE	ENERGY	SHALE	6.0	402.0	
257.0	CARBONDALE	ENERGY	SHALE	1.2	408.0	

255.8 CARBONDALE HERRIN COAL 5.3 409.2
 250.6 CARBONDALE UNDERCLAY 0.6 414.4

MAPID: 11700135000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 8N 6W **SECTION:** 12 **QUARTERS/FOOTAGES:** 3075' S line, 2045' E line
QUADRANGLE: LITCHFIELD **LONGITUDE:** -89.707297 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.154963 **DATE COLLECTED:** 0 / 0 / 1914
SURFACE ELEVATION (FT.): 665.0 **LOGGED (FT.):** 414.3 **LOG TYPE:** Drillers Log
SOURCE: SUPERIOR COAL CO. **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
313.4	MODESTO	PIASA	LIMESTONE	4.0	351.6
309.4	MODESTO		UNCLASSIFIED	3.0	355.6
306.4	CARBONDALE		UNCLASSIFIED	8.2	358.6
298.2	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	366.8
294.2	CARBONDALE	ENERGY	UNCLASSIFIED	38.2	370.8
256.0	CARBONDALE	HERRIN	COAL	5.3	409.0

MAPID: 11701061000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 8N 6W **SECTION:** 12 **QUARTERS/FOOTAGES:** 2647' S line, 18' E line
QUADRANGLE: LITCHFIELD **LONGITUDE:** -89.700093 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.153987 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 675.0 **LOGGED (FT.):** 430.1 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. G-13 **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
302.0	MODESTO	PIASA	LIMESTONE	3.1	373.0
299.0	CARBONDALE		GRAY SHALE	10.0	376.0
289.0	CARBONDALE	ENERGY	GRAY SHALE	37.0	386.0
252.0	CARBONDALE	HERRIN	COAL	7.1	423.0

MAPID: 11701061000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 12 QUARTERS/FOOTAGES: 2647' S line, 18' E line

QUADRANGLE: LITCHFIELD LONGITUDE: -89.700093 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.153987 DATE COLLECTED:

SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 430.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-13 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
315.6	MODESTO	PIASA	LIMESTONE	4.7	359.4
310.9	MODESTO		UNCLASSIFIED	2.3	364.1
308.6	CARBONDALE		UNCLASSIFIED	6.3	366.4
302.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	372.7
299.3	CARBONDALE	ENERGY	SHALE	47.3	375.7
252.0	CARBONDALE	HERRIN	COAL	7.1	423.0

MAPID: 11701430000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 13 QUARTERS/FOOTAGES: 2046' N line, 1995' W line

QUADRANGLE: LITCHFIELD LONGITUDE: -89.711317 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.140708 DATE COLLECTED:

SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 438.5 LOG TYPE: Survey Core Study

SOURCE: CARTER OIL COMPANY 20-629 WELL TYPE: Coal Test

COMMENT: "CORE #C-11235; SAMPLE STUDY INCLUDED"

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
308.5	CARBONDALE	DANVILLE	COAL	2.0	366.5
263.7	CARBONDALE	HERRIN	COAL	6.9	411.3

MAPID: 11701430000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 13 QUARTERS/FOOTAGES: 2046' N line, 1995' W line

QUADRANGLE: LITCHFIELD LONGITUDE: -89.711317

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.140708

DATE COLLECTED:

SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 416.9

LOG TYPE: Survey Core Study

SOURCE: CARTER OIL COMPANY 20-629

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
329.2	MODESTO	PIASA	LIMESTONE	5.0	345.8	
324.2	MODESTO		GRAY SHALE	4.0	350.8	
320.2	CARBONDALE	DANVILLE	COAL	2.0	354.8	
318.2	CARBONDALE		CLAYSTONE & SHALE	9.0	356.8	
309.2	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.8	365.8	UPPER BENCH
305.4	CARBONDALE	BANKSTON FORK	SHALE & SILTSTONE	7.0	369.6	SHALE PARTING
298.4	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	10.8	376.6	
287.6	CARBONDALE	ENERGY	CARBONACEOUS SHALE	1.3	387.4	
286.3	CARBONDALE	ENERGY	GRAY SHALE	20.4	388.7	
265.9	CARBONDALE	ENERGY	DARK GRAY SHALE	1.0	409.1	
265.0	CARBONDALE	HERRIN	COAL	6.9	410.0	

MAPID: 11700610000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 14 QUARTERS/FOOTAGES: 330' S line, 330' W line of NE

QUADRANGLE: LITCHFIELD LONGITUDE: -89.726731

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.139552

DATE COLLECTED: 6 / 0 / 1956

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 391.0

LOG TYPE: Electric Log

SOURCE: NICKERSON JAMES C

WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
299.0	MODESTO	PIASA	LIMESTONE	6.0	333.0	
293.0	MODESTO		UNCLASSIFIED	3.5	339.0	
289.5	CARBONDALE	DANVILLE	COAL	0.5	342.5	
289.0	CARBONDALE		UNCLASSIFIED	12.0	343.0	
277.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	355.0	
273.0	CARBONDALE	ENERGY	UNCLASSIFIED	27.0	359.0	
246.0	CARBONDALE	HERRIN	COAL	5.0	386.0	

MAPID: 1170062000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 14 QUARTERS/FOOTAGES: 330' N line, 330' E line of SE NW

QUADRANGLE: LITCHFIELD LONGITUDE: -89.729083 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.141356 DATE COLLECTED: 9 / 0 / 1956

SURFACE ELEVATION (FT.): 641.0 LOGGED (FT.): 402.0 LOG TYPE: Electric Log

SOURCE: NICKERSON JAMES C WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
302.0	MODESTO	PIASA	LIMESTONE	6.0	339.0
296.0	MODESTO		UNCLASSIFIED	4.0	345.0
292.0	CARBONDALE	DANVILLE	COAL	2.0	349.0
290.0	CARBONDALE		UNCLASSIFIED	8.0	351.0
282.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	359.0
276.0	CARBONDALE	ENERGY	UNCLASSIFIED	31.0	365.0
245.0	CARBONDALE	HERRIN	COAL	6.0	396.0

MAPID: 11700737000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 14 QUARTERS/FOOTAGES: 330' N line, 330' W line of SW SE

QUADRANGLE: LITCHFIELD LONGITUDE: -89.726692 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.134059 DATE COLLECTED: 4 / 0 / 1959

SURFACE ELEVATION (FT.): 669.0 LOGGED (FT.): 409.5 LOG TYPE: Electric Log

SOURCE: E & G DRLG. CO. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
313.0	MODESTO	PIASA	LIMESTONE	3.5	356.0
309.5	MODESTO		UNCLASSIFIED	4.5	359.5
305.0	CARBONDALE	DANVILLE	COAL	1.0	364.0
304.0	CARBONDALE		UNCLASSIFIED	7.0	365.0
297.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	372.0
293.0	CARBONDALE	ENERGY	UNCLASSIFIED	28.0	376.0
265.0	CARBONDALE	HERRIN	COAL	5.5	404.0

MAPID: 11700747000C VERSION: 1

PROJECT: IDMM-GWQX

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 14 QUARTERS/FOOTAGES: 330' N line, 330' W line of SE

QUADRANGLE: LITCHFIELD LONGITUDE: -89.726718 GEOLOGIST: C TREWORGY

CONFIDENTIAL: N LATITUDE: 39.13773 DATE COLLECTED: 3 / 0 / 1959

SURFACE ELEVATION (FT.): 657.0 LOGGED (FT.): 531.0 LOG TYPE: Electric Log

SOURCE: MITCHELL ROBERT J WELL TYPE: Producer-Oil

COMMENT: ELEV. IS SURF,NOT LOG DATUM: DEPTHS OFF

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
325.0	MODESTO	PIASA	UNCLASSIFIED	-	332.0	
257.0	CARBONDALE	HERRIN	UNCLASSIFIED	-	400.0	ENERGY SHALE ROOF
247.0	CARBONDALE	SPRINGFIELD	UNCLASSIFIED	0.0	410.0	
232.0	CARBONDALE	HOUCHIN CREEK	UNCLASSIFIED	-	425.0	
180.0	CARBONDALE	SURVANT	UNCLASSIFIED	4.0	477.0	GRAY SHALE ROOF
126.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	531.0	

MAPID: 11700747000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 14 QUARTERS/FOOTAGES: 330' N line, 330' W line of SE

QUADRANGLE: LITCHFIELD LONGITUDE: -89.726718 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.13773 DATE COLLECTED: 3 / 0 / 1959

SURFACE ELEVATION (FT.): 657.0 LOGGED (FT.): 404.0 LOG TYPE: Electric Log

SOURCE: MITCHELL ROBERT J WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
310.0	MODESTO	PIASA	LIMESTONE	4.0	347.0	
306.0	MODESTO		UNCLASSIFIED	5.5	351.0	
300.5	CARBONDALE	DANVILLE	COAL	1.5	356.5	
299.0	CARBONDALE		UNCLASSIFIED	7.0	358.0	
292.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	365.0	
288.0	CARBONDALE	ENERGY	UNCLASSIFIED	29.0	369.0	
259.0	CARBONDALE	HERRIN	COAL	6.0	398.0	

MAPID: 11701062000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 14 QUARTERS/FOOTAGES: 577' S line, 19' E line

QUADRANGLE: LITCHFIELD LONGITUDE: -89.718402

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.133086

DATE COLLECTED:

SURFACE ELEVATION (FT.): 652.0 LOGGED (FT.): 395.4

LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. G-14

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
322.1	MODESTO	PIASA	LIMESTONE	3.5	329.9	
318.6	CARBONDALE		GRAY SHALE	15.0	333.4	
303.6	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.2	348.4	UPPER BENCH
299.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	5.8	352.6	SHALE PARTING
293.6	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	10.0	358.4	
283.6	CARBONDALE	ENERGY	GRAY SHALE	19.4	368.4	
264.2	CARBONDALE	ENERGY	DARK GRAY SHALE	1.2	387.8	
263.0	CARBONDALE	HERRIN	COAL	6.4	389.0	

MAPID: 11701062000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 14 QUARTERS/FOOTAGES: 577' S line, 19' E line

QUADRANGLE: LITCHFIELD LONGITUDE: -89.718402

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.133086

DATE COLLECTED:

SURFACE ELEVATION (FT.): 652.0 LOGGED (FT.): 395.3

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-14

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
312.1	MODESTO	PIASA	LIMESTONE	3.5	339.9	
308.6	MODESTO		UNCLASSIFIED	4.0	343.4	
304.6	CARBONDALE		UNCLASSIFIED	11.0	347.4	
293.6	CARBONDALE	BANKSTON FORK	LIMESTONE	4.2	358.4	
289.4	CARBONDALE	ENERGY	SHALE	26.4	362.6	
263.0	CARBONDALE	HERRIN	COAL	6.3	389.0	

MAPID: 11701062000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 14 QUARTERS/FOOTAGES: 577' S line, 19' E line

QUADRANGLE: LITCHFIELD LONGITUDE: -89.718402

GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.133086

DATE COLLECTED:

SURFACE ELEVATION (FT.): 651.6 LOGGED (FT.): 399.7

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-14

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
262.7	CARBONDALE	HERRIN	COAL	6.4	388.9	

MAPID: 11700136000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 15 QUARTERS/FOOTAGES: 450' S line, 2550' E line

QUADRANGLE: LITCHFIELD LONGITUDE: -89.746407 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.132142 DATE COLLECTED: 0 / 0 / 1915

SURFACE ELEVATION (FT.): 602.9 LOGGED (FT.): 361.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO., #25 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
602.9			SOIL	13.0	0.0	
589.9	BOND		SHALE	9.0	13.0	
580.9	BOND		UNKNOWN	2.0	22.0	LOG HAS "ROCK"
578.9	BOND		CALCAREOUS SHALE	5.0	24.0	
573.9	BOND	CARTHAGE	LIMESTONE	13.0	29.0	
560.9	MODESTO		SHALE	55.0	42.0	
505.9	MODESTO		BLACK SHALE	2.0	97.0	
503.9	MODESTO	WOMAC	COAL	0.3	99.0	
503.6	MODESTO		SHALE	77.7	99.3	
425.9	MODESTO		SANDY SHALE	35.0	177.0	
390.9	MODESTO		SHALE	53.0	212.0	
337.9	MODESTO		CALCAREOUS SHALE	6.0	265.0	
331.9	MODESTO		SANDY SHALE	9.0	271.0	W/ ROCK
322.9	MODESTO		CALCAREOUS SHALE	16.0	280.0	
306.9	MODESTO		SHALE	2.0	296.0	MIXED
304.9	MODESTO		SHALE	3.0	298.0	
301.9	MODESTO	PIASA	LIMESTONE	4.5	301.0	
297.4	MODESTO		SHALE	2.0	305.5	
295.4	MODESTO		SHALE	2.8	307.5	
292.6	CARBONDALE	DANVILLE	COAL	1.8	310.3	
290.9	CARBONDALE		SHALE	3.0	312.0	
287.9	CARBONDALE		SHALE	5.0	315.0	
282.9	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	320.0	
276.9	CARBONDALE	ENERGY	SHALE	27.3	326.0	
249.6	CARBONDALE	HERRIN	COAL	6.7	353.3	
242.9	CARBONDALE		UNDERCLAY	1.0	360.0	

MAPID: 11700136000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 15 QUARTERS/FOOTAGES: 450' S line, 2550' E line

QUADRANGLE: LITCHFIELD LONGITUDE: -89.746407 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.132142 DATE COLLECTED: 0 / 0 / 1915

SURFACE ELEVATION (FT.): 603.0 LOGGED (FT.): 359.7 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
302.4	MODESTO	PIASA	LIMESTONE	4.5	300.6
297.9	MODESTO		UNCLASSIFIED	4.8	305.1
293.1	CARBONDALE	DANVILLE	COAL	2.7	309.9
290.4	CARBONDALE		UNCLASSIFIED	7.1	312.6
283.3	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	319.7
277.3	CARBONDALE	ENERGY	UNCLASSIFIED	27.3	325.7
250.0	CARBONDALE	HERRIN	COAL	6.7	353.0

MAPID: 11700611000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 15 QUARTERS/FOOTAGES: 330' N line, 330' E line of NW SW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.752472 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.137308 DATE COLLECTED: 7 / 0 / 1956

SURFACE ELEVATION (FT.): 641.0 LOGGED (FT.): 386.0 LOG TYPE: Electric Log

SOURCE: NICKERSON JAMES C WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
317.0	MODESTO	PIASA	LIMESTONE	3.0	324.0
314.0	MODESTO		UNCLASSIFIED	5.0	327.0
309.0	CARBONDALE		UNCLASSIFIED	15.0	332.0
294.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	347.0
287.0	CARBONDALE	ENERGY	UNCLASSIFIED	26.0	354.0
261.0	CARBONDALE	HERRIN	COAL	6.0	380.0

MAPID: 11701431000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 15 QUARTERS/FOOTAGES: 1327' N line, 1148' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.751908 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.141977 DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 416.0 LOG TYPE: Survey Core Study

SOURCE: CARTER OIL COMPANY 20-643 WELL TYPE: Coal Test

COMMENT: "COMPANY SAMPLE STUDY INCLUDED"

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
307.0	CARBONDALE	DANVILLE	COAL	1.5	343.0
263.6	CARBONDALE	HERRIN	COAL	7.1	386.4

MAPID: 11701431000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 15 QUARTERS/FOOTAGES: 1327' N line, 1148' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.751908

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.141977

DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 393.1

LOG TYPE: Survey Core Study

SOURCE: CARTER OIL COMPANY 20-643

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
326.5	MODESTO	PIASA	LIMESTONE	3.5	323.5	
323.0	MODESTO		GRAY SHALE	6.5	327.0	
316.5	CARBONDALE	DANVILLE	COAL	1.5	333.5	
315.0	CARBONDALE		CLAYSTONE & SHALE	7.5	335.0	
307.5	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	5.6	342.5	UPPER BENCH
301.9	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.1	348.1	SHALE PARTING
298.8	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	8.7	351.2	
290.1	CARBONDALE	ENERGY	DARK GRAY SHALE	1.9	359.9	
288.2	CARBONDALE	ENERGY	GRAY SHALE	23.0	361.8	
265.2	CARBONDALE	ENERGY	DARK GRAY SHALE	1.2	384.8	
264.0	CARBONDALE	HERRIN	COAL	7.1	386.0	

MAPID: 11701063000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 16 QUARTERS/FOOTAGES: 25' N line, 36' W line of NW NE NW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.770007

GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.145305

DATE COLLECTED:

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 384.7

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-3

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
279.9	CARBONDALE	HERRIN	COAL	6.9	376.1	

MAPID: 11701063000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 16 QUARTERS/FOOTAGES: 25' N line, 36' W line of NW NE NW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.770007 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.145305 DATE COLLECTED:

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 383.9 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
330.6	MODESTO	PIASA	LIMESTONE	2.8	325.4
327.8	MODESTO		UNCLASSIFIED	4.0	328.2
323.8	CARBONDALE		UNCLASSIFIED	11.9	332.2
311.9	CARBONDALE	BANKSTON FORK	LIMESTONE	4.8	344.1
307.1	CARBONDALE	ANNA	BLACK SHALE	0.3	348.9
306.8	CARBONDALE	ENERGY	SHALE	27.8	349.2
279.0	CARBONDALE	HERRIN	COAL	6.9	377.0

MAPID: 11700138000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 18 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.796679 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.131039 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 374.8 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
331.4	MODESTO	PIASA	LIMESTONE	4.7	323.6
326.7	MODESTO		UNCLASSIFIED	5.8	328.3
320.9	CARBONDALE	DANVILLE	COAL	2.7	334.1
318.2	CARBONDALE		UNCLASSIFIED	8.8	336.8
309.4	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.3	345.6
305.1	CARBONDALE	ENERGY	UNCLASSIFIED	17.1	349.9
288.0	CARBONDALE	HERRIN	COAL	7.8	367.0

MAPID: 11700138000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 18 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.796679

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.131039

DATE COLLECTED:

SURFACE ELEVATION (FT.): 654.0

LOGGED (FT.): 373.8

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
338.7	MODESTO	PIASA	LIMESTONE	4.7	315.3
334.1	MODESTO		GRAY SHALE	5.8	319.9
328.2	CARBONDALE	DANVILLE	COAL	2.7	325.8
325.6	CARBONDALE		SILTY SHALE	8.8	328.4
316.7	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	4.3	337.3
312.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.0	341.6
309.4	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	7.3	344.6
302.1	CARBONDALE	ENERGY	GRAY SHALE	13.8	351.9
288.3	CARBONDALE	ENERGY	DARK GRAY SHALE	0.3	365.7
288.0	CARBONDALE	HERRIN	COAL	7.8	366.0

MAPID: 11700138000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 18 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.796679 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.131039 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 654.5 LOGGED (FT.): 374.5 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO., #15 WELL TYPE: Coal Test

COMMENT: MATERIAL YARDS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
654.5			SOIL	18.0	0.0	
636.5			SAND & GRAVEL	6.3	18.0	
630.2			UNCONSOLIDATED	4.2	24.3	
626.0			SAND & GRAVEL	2.3	28.5	
623.7			SANDY CLAY	1.3	30.8	
622.5			SAND & GRAVEL	3.2	32.0	
619.3			SANDY CLAY	13.8	35.2	
605.5			SANDY CLAY	3.0	49.0	
602.5	BOND	CARTHAGE	LIMESTONE	2.7	52.0	
599.8	MODESTO		SHALE	10.6	54.7	MIXED
589.2	MODESTO		SANDY SHALE	5.0	65.3	W/ROCK
584.2	MODESTO		SHALE	41.3	70.3	"GRAVELLY SANDY SH"
542.9	MODESTO		BLACK SHALE	1.5	111.6	
541.4	MODESTO		SHALE	5.9	113.1	
535.5	MODESTO	MACOUPIN	LIMESTONE	2.0	119.0	
533.5	MODESTO		SHALE	3.2	121.0	
530.3	MODESTO		SHALE	27.3	124.2	"GRAVELLY SANDY SH"
503.0	MODESTO	CARLINVILLE	LIMESTONE	5.5	151.5	
497.5	MODESTO		SANDY SHALE	23.0	157.0	
474.5	MODESTO		SHALE	26.3	180.0	
448.2	MODESTO		SANDY SHALE	12.7	206.3	
435.5	MODESTO		SANDY SHALE	51.3	219.0	
384.2	MODESTO		SHALE	11.5	270.3	
372.7	MODESTO		SANDY SHALE	16.5	281.8	
356.2	MODESTO		SANDY SHALE	5.5	298.3	"GRAVELLY SANDY SH"
350.7	MODESTO		BLACK SHALE	2.2	303.8	
348.5	MODESTO		SANDY SHALE	14.0	306.0	
334.5	MODESTO		UNKNOWN	0.7	320.0	LOG HAS "BROWN ROCK"
333.8	MODESTO		SHALE	1.3	320.7	MIXED
332.5	MODESTO	PIASA	LIMESTONE	5.0	322.0	
327.5	MODESTO		SHALE	2.3	327.0	
325.2	MODESTO		SHALE	3.5	329.3	
321.7	CARBONDALE	DANVILLE	COAL	2.7	332.8	
319.0	CARBONDALE		SHALE	2.8	335.5	
316.2	CARBONDALE		SANDY SHALE	6.0	338.3	
310.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.3	344.3	
305.8	CARBONDALE	ENERGY	SHALE	16.8	348.7	
289.1	CARBONDALE		CLOD	0.3	365.4	
288.7	CARBONDALE	HERRIN	COAL	7.8	365.8	

281.0 CARBONDALE

UNDERCLAY

1.0 373.5

MAPID: 11700288000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 18 QUARTERS/FOOTAGES: SW NE SW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.806211 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.134636 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 353.0 LOG TYPE: Drillers Log

SOURCE: DUNCAN BROTHERS WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
348.0	MODESTO	PIASA	LIMESTONE	4.0	307.0
344.0	MODESTO		UNCLASSIFIED	3.0	311.0
341.0	CARBONDALE		UNCLASSIFIED	11.0	314.0
330.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	325.0
322.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	333.0
320.0	CARBONDALE		UNCLASSIFIED	2.0	335.0
318.0	CARBONDALE	BRERETON	LIMESTONE	8.0	337.0
310.0	CARBONDALE	HERRIN	COAL	8.0	345.0

MAPID: 11700314000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 18 QUARTERS/FOOTAGES: 2000' S line, 3600' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.805946 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.135534 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 654.0 LOGGED (FT.): 374.0 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATION COAL CO. WELL TYPE: Plugged and/or Abandoned

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
288.0	CARBONDALE	HERRIN	COAL	8.0	366.0

MAPID: 11700139000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 19 QUARTERS/FOOTAGES: NW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.80727 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.126299 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 654.0 LOGGED (FT.): 348.8 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
359.3	MODESTO	PIASA	LIMESTONE	7.0	294.7
352.3	MODESTO		UNCLASSIFIED	3.0	301.7
349.3	CARBONDALE	DANVILLE	COAL	1.0	304.7
348.3	CARBONDALE		UNCLASSIFIED	8.0	305.7
340.3	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	313.7
331.3	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.7	322.7
327.6	CARBONDALE		UNCLASSIFIED	3.0	326.4
324.6	CARBONDALE	BRERETON	LIMESTONE	9.0	329.4
315.6	CARBONDALE	ANNA	BLACK SHALE	1.6	338.4
314.0	CARBONDALE	HERRIN	COAL	8.8	340.0

MAPID: 11700139000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 19 QUARTERS/FOOTAGES: NW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.80727 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.126299 DATE COLLECTED:

SURFACE ELEVATION (FT.): 654.0 LOGGED (FT.): 348.8 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
359.0	MODESTO	PIASA	LIMESTONE	7.0	295.0
352.0	MODESTO		GRAY SHALE	3.0	302.0
349.0	CARBONDALE	DANVILLE	COAL	1.0	305.0
348.0	CARBONDALE		GRAY SHALE	8.0	306.0
340.0	CARBONDALE	BANKSTON FORK	LIMESTONE	14.7	314.0
325.3	CARBONDALE	BRERETON	LIMESTONE	10.0	328.7
315.3	CARBONDALE	ANNA	BLACK SHALE	1.6	338.7
314.0	CARBONDALE	HERRIN	COAL	8.8	340.0

MAPID: 11700139000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 19 QUARTERS/FOOTAGES: NW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.80727 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.126299 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 654.4 LOGGED (FT.): 350.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO., #20 WELL TYPE: Coal Test

COMMENT: ROBT. MCKECKAN FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
654.4			SOIL	22.0	0.0	
632.4			UNCONSOLIDATED	19.0	22.0	
613.4	MODESTO		BLACK SHALE	1.0	41.0	
612.4	MODESTO	NEW HAVEN	COAL	1.0	42.0	
611.4	MODESTO		MUDSTONE	24.0	43.0	
587.4	MODESTO		SHALE	24.0	67.0	
563.4	MODESTO		BLACK SHALE	1.0	91.0	
562.4	MODESTO		BLACK SHALE	2.0	92.0	
560.4	MODESTO	WOMAC	COAL	1.0	94.0	CORRELATION UNCERTAIN
559.4	MODESTO		SHALE	2.0	95.0	
557.4	MODESTO		SANDY SHALE	9.0	97.0	
548.4	MODESTO		SANDSTONE	7.0	106.0	
541.4	MODESTO		SANDY SHALE	17.0	113.0	
524.4	MODESTO	CARLINVILLE	LIMESTONE	9.0	130.0	CORRELATION UNCERTAIN
515.4	MODESTO		SHALE	36.0	139.0	
479.4	MODESTO		SANDY SHALE	20.0	175.0	
459.4	MODESTO		SHALE	59.0	195.0	
400.4	MODESTO		SANDY SHALE	16.0	254.0	
384.4	MODESTO		SHALE	8.0	270.0	
376.4	MODESTO	CHAPEL	COAL	1.0	278.0	
375.4	MODESTO		SHALE	3.0	279.0	
372.4	MODESTO		SANDSTONE	2.0	282.0	
370.4	MODESTO		SANDY SHALE	11.0	284.0	
359.4	MODESTO	PIASA	LIMESTONE	7.0	295.0	
352.4	MODESTO		SHALE	3.0	302.0	
349.4	CARBONDALE	DANVILLE	COAL	1.0	305.0	
348.4	CARBONDALE		SHALE	8.0	306.0	
340.4	CARBONDALE		LIMESTONE	24.7	314.0	
315.7	CARBONDALE	ANNA	BLACK SHALE	1.6	338.7	
314.1	CARBONDALE	HERRIN	COAL	8.8	340.3	
305.4	CARBONDALE		UNDERCLAY	1.0	349.0	

MAPID: 11700606000C VERSION: 1

PROJECT: IDMM-GWQX

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 20 QUARTERS/FOOTAGES: 253' S line, 280' W line of NE SE SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.784979

GEOLOGIST: C TREWORGY

CONFIDENTIAL: N LATITUDE: 39.118074

DATE COLLECTED: 5 / 0 / 1956

SURFACE ELEVATION (FT.): 644.0 LOGGED (FT.): 468.0

LOG TYPE: Electric Log

SOURCE: MAZZARINO, 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	
348.0	CARBONDALE	DANVILLE	UNCLASSIFIED	-	296.0	
317.0	CARBONDALE	HERRIN	UNCLASSIFIED	-	327.0	
304.0	CARBONDALE	SPRINGFIELD	UNCLASSIFIED	-	340.0	THIN OR ABSENT
292.0	CARBONDALE	HOUCHIN CREEK	UNCLASSIFIED	-	352.0	
232.0	CARBONDALE	SURVANT	UNCLASSIFIED	-	412.0	
176.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	3.0	468.0	

MAPID: 11700606000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 20 QUARTERS/FOOTAGES: 253' S line, 280' W line of NE SE SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.784979

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.118074

DATE COLLECTED: 5 / 0 / 1956

SURFACE ELEVATION (FT.): 644.0 LOGGED (FT.): 330.0

LOG TYPE: Electric Log

SOURCE: MAZZARINO, M.

WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
363.0	MODESTO	PIASA	LIMESTONE	4.0	281.0	
359.0	MODESTO		UNCLASSIFIED	6.5	285.0	
352.5	CARBONDALE	DANVILLE	COAL	1.0	291.5	
351.5	CARBONDALE		UNCLASSIFIED	9.5	292.5	
342.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	302.0	
334.0	CARBONDALE	ENERGY	UNCLASSIFIED	13.0	310.0	
321.0	CARBONDALE	HERRIN	COAL	7.0	323.0	

MAPID: 11700818000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 20 QUARTERS/FOOTAGES: 441' S line, 496' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.791093 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.116631 DATE COLLECTED: 8 / 0 / 1959

SURFACE ELEVATION (FT.): 648.0 LOGGED (FT.): 343.5 LOG TYPE: Electric Log

SOURCE: ILLINOIS POWER CO. WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
353.0	MODESTO	PIASA	LIMESTONE	4.0	295.0
349.0	MODESTO		UNCLASSIFIED	6.0	299.0
343.0	CARBONDALE	DANVILLE	COAL	1.5	305.0
341.5	CARBONDALE		UNCLASSIFIED	9.5	306.5
332.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	316.0
323.0	CARBONDALE	ENERGY	UNCLASSIFIED	11.0	325.0
312.0	CARBONDALE	HERRIN	COAL	7.5	336.0

MAPID: 11701004000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 24 QUARTERS/FOOTAGES: 330' S line, 650' W line of SE

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.706554 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.117921 DATE COLLECTED: 7 / 0 / 1947

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

SOURCE: CASSENS GEORGE WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	7.0	
-	MODESTO		UNCLASSIFIED	4.0	
-	CARBONDALE		UNCLASSIFIED	14.0	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	
-	CARBONDALE	ENERGY	UNCLASSIFIED	18.0	
-	CARBONDALE	HERRIN	COAL	7.0	

MAPID: 11700140000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 25 QUARTERS/FOOTAGES: NE NE NW NE

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.704725 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.116605 DATE COLLECTED: 0 / 0 / 1914

SURFACE ELEVATION (FT.): 693.0 LOGGED (FT.): 443.3 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
302.8	MODESTO	PIASA	LIMESTONE	4.5	390.2
298.3	MODESTO		UNCLASSIFIED	4.0	394.7
294.3	CARBONDALE		UNCLASSIFIED	9.0	398.7
285.3	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	407.7
277.3	CARBONDALE	ENERGY	UNCLASSIFIED	20.3	415.7
257.0	CARBONDALE	HERRIN	COAL	7.3	436.0

MAPID: 11700140000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 25 QUARTERS/FOOTAGES: NE NE NW NE

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.704725 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.116605 DATE COLLECTED: 0 / 0 / 1914

SURFACE ELEVATION (FT.): 693.0 LOGGED (FT.): 444.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR C C # 27 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
693.0			UNCONSOLIDATED	108.0	0.0
585.0			ROCK	76.5	108.0
508.5			COAL	0.5	184.5
508.0			ROCK	78.5	185.0
429.5			COAL	0.3	263.5
429.2			ROCK	144.2	263.8
285.0			LIMESTONE	8.0	408.0
277.0			SHALE	20.3	416.0
256.7	CARBONDALE	HERRIN	COAL	7.3	436.3
249.4			ROCK	0.4	443.6

MAPID: 11700140000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 25 QUARTERS/FOOTAGES: NE NE NW NE

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.704725 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.116605 DATE COLLECTED: 0 / 0 / 1914

SURFACE ELEVATION (FT.): 693.3 LOGGED (FT.): 444.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO., #27 WELL TYPE: Coal Test

COMMENT: FRED ERNST FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
693.3			SOIL	25.0	0.0	
668.3			SANDY CLAY	9.0	25.0	
659.3			UNCONSOLIDATED	66.0	34.0	
593.3	BOND		SHALE	8.0	100.0	
585.3	BOND		UNKNOWN	1.0	108.0	LOG HAS "ROCK"
584.3	BOND		CALCAREOUS SHALE	2.0	109.0	
582.3	BOND	CARTHAGE	LIMESTONE	14.0	111.0	
568.3	MODESTO		SHALE	17.0	125.0	MIXED
551.3	MODESTO		SHALE	13.0	142.0	LIGHT GRAY
538.3	MODESTO		SHALE	28.0	155.0	
510.3	MODESTO		BLACK SHALE	1.5	183.0	
508.8	MODESTO	CHAPEL	COAL	0.5	184.5	
508.3	MODESTO		SHALE	7.0	185.0	
501.3	MODESTO		SANDSTONE	3.0	192.0	
498.3	MODESTO		SANDY SHALE	13.0	195.0	
485.3	MODESTO		SHALE	11.0	208.0	
474.3	MODESTO		UNKNOWN	5.5	219.0	
468.8	MODESTO		SANDY SHALE	25.5	224.5	
443.3	MODESTO		SHALE	12.0	250.0	
431.3	MODESTO		SHALE	1.5	262.0	
429.8	MODESTO		COAL	0.3	263.5	
429.5	MODESTO		SHALE	6.2	263.8	
423.3	MODESTO		SANDY SHALE	18.0	270.0	
405.3	MODESTO		SANDY SHALE	27.0	288.0	LIGHT GRAY
378.3	MODESTO		SHALE	42.0	315.0	
336.3	MODESTO		SANDY SHALE	3.0	357.0	
333.3	MODESTO		SHALE	7.0	360.0	
326.3	MODESTO		SHALE	7.0	367.0	
319.3	MODESTO		CALCAREOUS SHALE	9.0	374.0	
310.3	MODESTO		SHALE	7.5	383.0	MIXED
302.8	MODESTO	PIASA	LIMESTONE	2.0	390.5	
300.8	MODESTO		CALCAREOUS SHALE	2.5	392.5	W/ROCK
298.3	MODESTO		SHALE	4.0	395.0	MIXED
294.3	CARBONDALE		SHALE	9.0	399.0	MIXED
285.3	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	408.0	
277.3	CARBONDALE	ENERGY	SHALE	18.0	416.0	
259.3	CARBONDALE	ENERGY	SHALE	2.3	434.0	
257.0	CARBONDALE	HERRIN	COAL	7.3	436.3	
249.7	CARBONDALE		UNDERCLAY	0.4	443.6	

MAPID: 11700322000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 25 QUARTERS/FOOTAGES: 125' S line, 1276' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.703951 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.102613 DATE COLLECTED: 5 / 0 / 1924

SURFACE ELEVATION (FT.): 684.0 LOGGED (FT.): 424.0 LOG TYPE: Drillers Log

SOURCE: MADISON COAL CORP WELL TYPE: Structure Test

COMMENT: CORE #157 & #4176

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
307.8	MODESTO	PIASA	LIMESTONE	2.9	376.2
304.9	MODESTO		UNCLASSIFIED	5.8	379.1
299.1	CARBONDALE	DANVILLE	COAL	0.5	384.9
298.6	CARBONDALE		UNCLASSIFIED	6.5	385.4
292.1	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.3	391.9
283.8	CARBONDALE	ENERGY	UNCLASSIFIED	15.8	400.2
268.0	CARBONDALE	HERRIN	COAL	8.0	416.0

MAPID: 11700322000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 25 QUARTERS/FOOTAGES: 125' S line, 1276' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.703951 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.102613 DATE COLLECTED: 5 / 0 / 1924

SURFACE ELEVATION (FT.): 684.0 LOGGED (FT.): 750.0 LOG TYPE: Survey Core Study

SOURCE: MADISON C C WELL TYPE: Coal Test

COMMENT: CORE #157 & #4176

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
684.0			UNCONSOLIDATED	107.0	0.0	
577.0			ROCK	63.6	107.0	
513.4			COAL	0.4	170.6	
513.0			ROCK	78.7	171.0	
434.3			COAL	0.3	249.7	
434.0			ROCK	142.0	250.0	
292.0			LIMESTONE	9.2	392.0	
282.8			SHALE	14.8	401.2	
268.0	CARBONDALE	HERRIN	COAL	8.3	416.0	
259.7			ROCK	81.5	424.3	
178.2			COAL	1.0	505.8	
177.2			ROCK	19.9	506.8	
157.3			SANDSTONE	1.3	526.7	
156.0			SHALE	24.5	528.0	
131.5			BLACK SHALE	1.0	552.5	
130.5			LIMESTONE	0.5	553.5	
130.0			COAL	3.0	554.0	
127.0			ROCK	11.5	557.0	
115.5			COAL	2.0	568.5	
113.5			ROCK	24.5	570.5	
89.0			COAL	1.0	595.0	
88.0			ROCK	40.3	596.0	
47.7			COAL	0.3	636.3	
47.3			ROCK	113.3	636.7	

MAPID: 11700322000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 25 QUARTERS/FOOTAGES: 125' S line, 1276' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.703951 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.102613 DATE COLLECTED: 5 / 0 / 1924

SURFACE ELEVATION (FT.): 684.0 LOGGED (FT.): 750.0 LOG TYPE: Survey Core Study

SOURCE: MADISON COAL CORP. MINE #5, HOLE #19 WELL TYPE: Coal Test

COMMENT: CORE #157 & #4176

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
684.0			CLAY	10.0	0.0	
674.0			UNCONSOLIDATED	50.0	10.0	CLAY, SAND, GRAVEL
624.0			CLAY	47.0	60.0	
577.0	BOND	CARTHAGE	LIMESTONE	6.0	107.0	CRYSTALLINE
571.0	MODESTO		BLACK SHALE	2.0	113.0	LAMINATED
569.0	MODESTO		SHALE	18.0	115.0	W/ SOME LS & SS
551.0	MODESTO		SHALE	15.0	133.0	LAMINATED, W/ SS PARTINGS
536.0	MODESTO		SANDY SHALE	10.0	148.0	
526.0	MODESTO		SHALE	3.0	158.0	W/ MANY SS PARTINGS
523.0	MODESTO		SHALE	4.0	161.0	FOSSILIFEROUS
519.0	MODESTO	MACOUPIN	SHALY LIMESTONE	1.0	165.0	FOSSILIFEROUS
518.0	MODESTO		SHALE	3.2	166.0	
514.8	MODESTO		BLACK SHALE	1.4	169.2	
513.4	MODESTO	WOMAC	BONE COAL	0.4	170.6	
513.0	MODESTO		SHALE	4.0	171.0	
509.0	MODESTO		SHALE	12.0	175.0	W/ LS PARTINGS
497.0	MODESTO	BURROUGHS	SHALY LIMESTONE	7.5	187.0	
489.5	MODESTO		SHALE	6.5	194.5	W/ SOME SS
483.0	MODESTO	CARLINVILLE	LIMESTONE	6.6	201.0	SHALY IN PART
476.4	MODESTO		SANDSTONE	17.1	207.6	SHALY IN PART
459.3	MODESTO		SANDY SHALE	7.1	224.7	
452.2	MODESTO		SHALE	12.3	231.8	
440.0	MODESTO		SHALE	5.7	244.0	W/ SOME LS PARTINGS
434.3	MODESTO	CHAPEL	BONE COAL	0.3	249.7	
434.0	MODESTO		UNDERCLAY	5.0	250.0	
429.0	MODESTO		CALCAREOUS SHALE	4.8	255.0	
424.2	MODESTO		SANDSTONE	16.3	259.8	W/ SH PARTINGS
408.0	MODESTO		SANDY SHALE	30.0	276.0	SAND DECREASING W/ DEPTH
378.0	MODESTO		SHALE	36.0	306.0	
342.0	MODESTO		SHALE	3.0	342.0	
339.0	MODESTO		SHALE	11.0	345.0	W/ SS PARTINGS & STREAKS
328.0	MODESTO		SHALE	4.0	356.0	
324.0	MODESTO		BLACK SHALE	1.0	360.0	
323.0	MODESTO		CALCAREOUS SHALE	6.2	361.0	
316.8	MODESTO		SHALE	3.0	367.2	
313.8	MODESTO		SHALE	4.4	370.2	"LIME SH CONGLOMERATE"
309.4	MODESTO	PIASA	LIMESTONE	3.2	374.6	
306.2	MODESTO		SHALE	6.8	377.8	

299.5	MODESTO		BLACK SHALE	0.5	384.5	
299.0	CARBONDALE		SHALE	7.2	385.0	
291.8	CARBONDALE	BANKSTON FORK	LIMESTONE	9.0	392.2	
282.8	CARBONDALE	ENERGY	SHALE	9.7	401.2	
273.2	CARBONDALE	ENERGY	SHALE	4.2	410.8	
269.0	CARBONDALE	ENERGY	SHALE	1.0	415.0	
268.0	CARBONDALE	HERRIN	COAL	8.3	416.0	W/ PYRITE & SH PARTINGS
259.7	CARBONDALE		UNDERCLAY	2.8	424.3	
257.0	CARBONDALE		LIMESTONE	2.3	427.0	W/ SH STREAKS
254.7	CARBONDALE		SHALE	1.8	429.3	
253.0	CARBONDALE		CALCAREOUS SHALE	4.3	431.0	GRADING FROM GRAY SH TO DARK SHALY LS
248.7	CARBONDALE		LIMESTONE W/ SHALE	8.8	435.3	GRAY SANDY LS & GRN SH
240.0	CARBONDALE		LIMESTONE	1.8	444.0	FOSSILIFEROUS
238.2	CARBONDALE	EXCELLO	BLACK SHALE	2.2	445.8	
236.0	CARBONDALE		SHALE	7.0	448.0	
229.0	CARBONDALE		SANDSTONE	50.5	455.0	FINE GRAINED
178.5	CARBONDALE		SANDY DARK SHALE	0.3	505.5	
178.2	CARBONDALE	SURVANT	COAL	1.0	505.8	
177.2	CARBONDALE		SANDY SHALE	9.3	506.8	
168.0	CARBONDALE		SANDSTONE/SHALE	4.0	516.0	INTERBDD GRAY SS & SH
164.0	CARBONDALE		SHALE	6.7	520.0	
157.3	CARBONDALE		SANDSTONE/SHALE	1.3	526.7	INTERBDD SS & DARK SH
156.0	CARBONDALE		SHALE	18.5	528.0	
137.5	CARBONDALE	MECCA QUARRY	BLACK SHALE	7.0	546.5	
130.5	CARBONDALE	MECCA QUARRY	LIMESTONE	0.5	553.5	
130.0	CARBONDALE	COLCHESTER	COAL	3.4	554.0	
126.6	SPOON		UNDERCLAY	5.1	557.4	
121.5	SPOON		SHALE	1.4	562.5	
120.1	SPOON		LIMESTONE	1.6	563.9	FOSSILIFEROUS
118.5	SPOON		UNDERCLAY	1.5	565.5	
117.0	SPOON		SHALE	1.5	567.0	
115.5	SPOON	DAVIS	COAL	2.0	568.5	CORRELATION UNCERTAIN
113.5	SPOON		UNDERCLAY	8.5	570.5	
105.0	SPOON		SHALE	16.0	579.0	
89.0	SPOON		COAL	1.0	595.0	
88.0	SPOON		SANDY SHALE	10.0	596.0	
78.0			SHALE	8.0	606.0	W/ SS STREAKS
70.0			SANDY SHALE	1.0	614.0	
69.0			SHALE	3.0	615.0	FOSSILIFEROUS
66.0			SHALE	4.3	618.0	W/ SS PARTINGS
61.7			SHALE	3.3	622.3	
58.5			SHALE	1.8	625.5	DARK GRAY & GRAY
56.7			SHALE	4.7	627.3	
52.0			CALCAREOUS SHALE	4.0	632.0	
48.0			SANDY SHALE	0.3	636.0	
47.7			COAL	0.3	636.3	
47.3			UNDERCLAY	0.5	636.7	

46.8	SHALE	36.8	637.2	W/LS & SS PARTINGS
10.0	SANDSTONE/SHALE	13.0	674.0	INTERBDD SS & SNADY SH
-3.0	SHALE	27.0	687.0	W/SS PARTINGS
-30.0	CONGLOMERATE	0.7	714.0	
-30.7	SHALE	8.8	714.7	W/SS PARTINGS
-39.5	SANDSTONE	0.5	723.5	
-40.0	SHALE	1.0	724.0	W/SS PARTINGS
-41.0	SANDSTONE	2.0	725.0	
-43.0	SHALE	23.0	727.0	CORE LOSS

MAPID: 11700956000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 8N 6W **SECTION:** 25 **QUARTERS/FOOTAGES:** 18' N line, 1728' E line
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.705552 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.116993 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 696.0 **LOGGED (FT.):** 430.9 **LOG TYPE:** Survey Core Study
SOURCE: PEABODY COAL CO. G-15 **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
326.4	MODESTO	PIASA	LIMESTONE	4.4	369.6	
322.0	CARBONDALE		GRAY SHALE	11.2	374.0	
310.8	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	7.0	385.2	UPPER BENCH
303.8	CARBONDALE	BANKSTON FORK	GRAY SHALE	5.0	392.2	SHALE PARTING
298.8	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	13.0	397.2	
285.8	CARBONDALE	ENERGY	GRAY SHALE	14.9	410.2	
271.0	CARBONDALE	HERRIN	COAL	5.9	425.0	

MAPID: 11700956000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 8N 6W **SECTION:** 25 **QUARTERS/FOOTAGES:** 18' N line, 1728' E line
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.705552 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.116993 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 696.0 **LOGGED (FT.):** 430.9 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. G-15 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
314.3	MODESTO	PIASA	LIMESTONE	3.6	381.7	
310.7	MODESTO		UNCLASSIFIED	3.5	385.3	
307.2	CARBONDALE		UNCLASSIFIED	9.4	388.8	
297.8	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	398.2	
290.8	CARBONDALE	ENERGY	SHALE	19.8	405.2	
271.0	CARBONDALE	HERRIN	COAL	5.9	425.0	

MAPID: 11700956000C **VERSION:** 3 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 8N 6W **SECTION:** 25 **QUARTERS/FOOTAGES:** 18' N line, 1728' E line
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.705552 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.116993 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 696.4 **LOGGED (FT.):** 430.9 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. G-15 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
271.4	CARBONDALE	HERRIN	COAL	5.9	425.0

MAPID: 11700750000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 8N 6W **SECTION:** 27 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NW NW
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.754495 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.113285 **DATE COLLECTED:** 5 / 0 / 1959
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 0.0 **LOG TYPE:** Electric Log
SOURCE: MARTIN C & GENCZO F **WELL TYPE:** Unsuccessful or Unknown Results
COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	9.0	
-	MODESTO		UNCLASSIFIED	6.0	
-	CARBONDALE		UNCLASSIFIED	19.0	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	5.0	
-	CARBONDALE		UNCLASSIFIED	5.0	
-	CARBONDALE	BRERETON	LIMESTONE	3.0	
-	CARBONDALE	HERRIN	COAL	6.0	

MAPID: 11701005000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 8N 6W **SECTION:** 27 **QUARTERS/FOOTAGES:** 420' S line, 450' E line of NE NW
QUADRANGLE: MOUNT OLIVE **LONGITUDE:** -89.748019 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.113644 **DATE COLLECTED:** 12 / 0 / 1954
SURFACE ELEVATION (FT.): 654.0 **LOGGED (FT.):** 394.0 **LOG TYPE:** Electric Log
SOURCE: SHULL, O. R. **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
309.0	MODESTO	PIASA	LIMESTONE	7.0	345.0
302.0	MODESTO		UNCLASSIFIED	4.0	352.0
298.0	CARBONDALE		UNCLASSIFIED	12.0	356.0
286.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	368.0
279.0	CARBONDALE	ENERGY	UNCLASSIFIED	17.0	375.0
262.0	CARBONDALE	HERRIN	COAL	2.0	392.0

MAPID: 11700141000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 28 QUARTERS/FOOTAGES: SW NE NE SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.766641 GEOLOGIST: TREWORY,J

CONFIDENTIAL: N LATITUDE: 39.107174 DATE COLLECTED: 3 / 0 / 1913

SURFACE ELEVATION (FT.): 581.0 LOGGED (FT.): 301.9 LOG TYPE: Drillers Log

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
581.0			UNCONSOLIDATED	68.8	0.0
512.3			ROCK	195.7	68.7
316.6	CARBONDALE	DANVILLE	COAL	0.5	264.4
316.1	CARBONDALE		ROCK	6.5	264.9
309.6	CARBONDALE		LIMESTONE	18.7	271.4
290.8	CARBONDALE		SHALE	2.7	290.2
288.2	CARBONDALE	HERRIN	COAL	8.0	292.8
280.2	CARBONDALE		ROCK	1.1	300.8

MAPID: 11700141000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 28 QUARTERS/FOOTAGES: SW NE NE SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.766641 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.107174 DATE COLLECTED:

SURFACE ELEVATION (FT.): 581.0 LOGGED (FT.): 300.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
327.0	MODESTO	PIASA	LIMESTONE	6.2	254.0
320.8	MODESTO		DARK GRAY SHALE	4.7	260.2
316.2	CARBONDALE	DANVILLE	COAL	0.5	264.8
315.7	CARBONDALE		GRAY SHALE	6.5	265.3
309.2	CARBONDALE	BANKSTON FORK	LIMESTONE	10.8	271.8
298.4	CARBONDALE	BRERETON	LIMESTONE	8.0	282.6
290.4	CARBONDALE	ANNA	BLACK SHALE	2.7	290.6
289.0	CARBONDALE	HERRIN	COAL	8.0	292.0

MAPID: 11700141000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 28 QUARTERS/FOOTAGES: SW NE NE SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.766641

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.107174

DATE COLLECTED: 3 / 0 / 1913

SURFACE ELEVATION (FT.): 581.0

LOGGED (FT.): 301.0

LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO.

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
327.4	MODESTO	PIASA	LIMESTONE	6.2	253.6
321.2	MODESTO		UNCLASSIFIED	4.7	259.8
316.5	CARBONDALE	DANVILLE	COAL	0.5	264.5
316.0	CARBONDALE		UNCLASSIFIED	6.5	265.0
309.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	271.5
301.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	279.5
298.5	CARBONDALE		UNCLASSIFIED	3.0	282.5
295.5	CARBONDALE	BRERETON	LIMESTONE	4.8	285.5
290.7	CARBONDALE	ANNA	BLACK SHALE	2.7	290.3
288.0	CARBONDALE	HERRIN	COAL	8.0	293.0

MAPID: 11700141000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 28 QUARTERS/FOOTAGES: SW NE NE SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.766641 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.107174 DATE COLLECTED: 3 / 0 / 1913

SURFACE ELEVATION (FT.): 581.3 LOGGED (FT.): 301.9 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO., HOLE #16 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
581.3			SANDY CLAY	15.0	0.0	
566.3			SAND & GRAVEL	27.0	15.0	
539.3			SANDY CLAY	26.8	42.0	
512.5	MODESTO		SHALE	14.3	68.8	MIXED
498.3	MODESTO	CARLINVILLE	LIMESTONE	7.5	83.0	
490.8	MODESTO		SANDY SHALE	32.2	90.5	
458.6	MODESTO		SHALE	5.3	122.7	
453.3	MODESTO		SANDY SHALE	18.0	128.0	
435.3	MODESTO		SANDY SHALE	61.1	146.0	
374.2	MODESTO		SANDSTONE	1.0	207.1	
373.2	MODESTO		SANDY SHALE	3.6	208.1	
369.6	MODESTO		SANDSTONE	2.3	211.7	
367.3	MODESTO		SANDY SHALE	10.8	214.0	
356.5	MODESTO		SHALE	4.7	224.8	MIXED
351.8	MODESTO		LIMESTONE	0.5	229.5	
351.3	MODESTO		CALCARIOUS SANDY SHALE	3.0	230.0	
348.3	MODESTO		SANDSTONE	10.8	233.0	
337.5	MODESTO		SANDY SHALE	5.5	243.8	
332.0	MODESTO		SHALE	1.3	249.3	MIXED
330.7	MODESTO		SANDY SHALE	3.0	250.6	
327.7	MODESTO	PIASA	LIMESTONE	6.2	253.6	
321.5	MODESTO		BLACK SHALE	4.7	259.8	
316.9	CARBONDALE	DANVILLE	COAL	0.5	264.4	
316.4	CARBONDALE		SHALE	6.5	264.9	
309.9	CARBONDALE		LIMESTONE	18.8	271.4	
291.1	CARBONDALE		SHALE	2.7	290.2	
288.5	CARBONDALE	HERRIN	COAL	8.0	292.8	
280.5	CARBONDALE		UNDERCLAY	1.1	300.8	

MAPID: 11700041302M VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 29 QUARTERS/FOOTAGES:

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.783515

GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.108263

DATE COLLECTED: 8 / 13 / 1940

SURFACE ELEVATION (FT.): LOGGED (FT.): 2.6

LOG TYPE: Measured section

SOURCE: MINE NOTES-SUPERIOR C C # 1

WELL TYPE: Underground mine

COMMENT: 17 S OFF 19 E OFF MAIN S

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			LIMESTONE	-		
-				0.1		
-			BLACK SHALE	1.5		
-			BLACK SHALE	2.0		

MAPID: 11700041301M VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 29 QUARTERS/FOOTAGES: 1540' N line, 1440' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.78768

GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.111229

DATE COLLECTED: 0 / 0 / 1948

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 7.5

LOG TYPE: Measured section

SOURCE: MINE NOTES-SUPERIOR C C # 1

WELL TYPE: Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
630.0			UNKNOWN	320.0	0.0	
310.0	CARBONDALE	HERRIN	COAL	7.5	320.0	

MAPID: 11700142000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 29 QUARTERS/FOOTAGES: 3150' N line, 1225' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.788395

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.106768

DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 321.0

LOG TYPE: Drillers Log

SOURCE: GOAG OIL & GAS CO

WELL TYPE: Unsuccessful or Unknown Results

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
310.0	CARBONDALE	HERRIN	COAL	6.0	315.0	

MAPID: 11700250000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 29 QUARTERS/FOOTAGES: 1580' N line, 1450' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.787644 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.111118 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 345.5 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Mine Shaft

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
292.0	CARBONDALE	HERRIN	COAL	7.5	338.0	

MAPID: 11700816000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 29 QUARTERS/FOOTAGES: 344' N line, 486' W line of NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.781893 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.114639 DATE COLLECTED: 8 / 0 / 1959

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

SOURCE: ILLINOIS POWER CO. WELL TYPE: Gas Injection

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	MODESTO	PIASA	LIMESTONE	4.0		
-	MODESTO		UNCLASSIFIED	6.0		
-	CARBONDALE	DANVILLE	COAL	1.0		
-	CARBONDALE		UNCLASSIFIED	15.0		
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0		
-	CARBONDALE	ENERGY	UNCLASSIFIED	10.0		
-	CARBONDALE	HERRIN	COAL	6.0		

MAPID: 11700817000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 29 QUARTERS/FOOTAGES: 560' N line, 150' W line of SW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.783017 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.110373 DATE COLLECTED: 9 / 0 / 1959

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

SOURCE: ILLINOIS POWER CO. WELL TYPE: Plugged and/or Abandoned

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	3.0	
-	MODESTO		UNCLASSIFIED	4.0	
-	CARBONDALE	DANVILLE	COAL	1.0	
-	CARBONDALE		UNCLASSIFIED	8.0	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.5	
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	
-	CARBONDALE		UNCLASSIFIED	2.5	
-	CARBONDALE	BRERETON	LIMESTONE	11.0	
-	CARBONDALE	ANNA	BLACK SHALE	3.0	
-	CARBONDALE	HERRIN	COAL	7.0	

MAPID: 11701008000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 29 QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.782349 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.107371 DATE COLLECTED: 3 / 0 / 1925

SURFACE ELEVATION (FT.): 624.0 LOGGED (FT.): 331.0 LOG TYPE: Drillers Log

SOURCE: ILLINOIS POWER CO. WELL TYPE: Producer-Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
344.0	MODESTO	PIASA	LIMESTONE	5.0	280.0
339.0	MODESTO		UNCLASSIFIED	4.0	285.0
335.0	CARBONDALE		UNCLASSIFIED	9.0	289.0
326.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	298.0
317.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	307.0
314.0	CARBONDALE		UNCLASSIFIED	3.0	310.0
311.0	CARBONDALE	BRERETON	LIMESTONE	9.0	313.0
302.0	CARBONDALE	ANNA	BLACK SHALE	2.0	322.0
300.0	CARBONDALE	HERRIN	COAL	7.0	324.0

MAPID: 11700144000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 30 QUARTERS/FOOTAGES: 450' S line, 400' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.794105 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.101978 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 346.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
346.5	MODESTO	PIASA	LIMESTONE	3.3	295.5
343.2	MODESTO		UNCLASSIFIED	4.0	298.8
339.2	CARBONDALE	DANVILLE	COAL	1.7	302.8
337.5	CARBONDALE		UNCLASSIFIED	9.0	304.5
328.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	313.5
321.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	320.5
318.5	CARBONDALE		UNCLASSIFIED	3.0	323.5
315.5	CARBONDALE	BRERETON	LIMESTONE	11.0	326.5
304.5	CARBONDALE	ANNA	BLACK SHALE	1.5	337.5
303.0	CARBONDALE	HERRIN	COAL	7.0	339.0

MAPID: 11700144000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 30 QUARTERS/FOOTAGES: 450' S line, 400' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.794105 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.101978 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 347.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
642.0			UNCONSOLIDATED	79.0	0.0
563.0			ROCK	92.3	79.0
470.7			COAL	0.3	171.3
470.4			ROCK	130.8	171.6
339.7	CARBONDALE	DANVILLE	COAL	0.7	302.3
339.0	CARBONDALE		ROCK	6.0	303.0
333.0	CARBONDALE		LIMESTONE	28.0	309.0
305.0	CARBONDALE		BLACK SHALE	1.5	337.0
303.5	CARBONDALE	HERRIN	COAL	7.0	338.5
296.5	CARBONDALE		ROCK	1.5	345.5

MAPID: 11700144000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 30 QUARTERS/FOOTAGES: 450' S line, 400' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.794105 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.101978 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 641.8 LOGGED (FT.): 347.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO., #3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
641.8			CLAY	42.0	0.0
599.8			SAND	1.0	42.0
598.8			CLAY & GRAVEL	36.0	43.0
562.8			CLAYSTONE & SHALE	16.0	79.0
546.8	MODESTO	MACOUPIN	LIMESTONE	1.0	95.0
545.8	MODESTO		BLACK SHALE	0.5	96.0
545.3	MODESTO		SHALE	8.0	96.5
537.3	MODESTO	BURROUGHS	LIMESTONE	0.5	104.5
536.8	MODESTO		SHALE	27.0	105.0
509.8	MODESTO	CARLINVILLE	LIMESTONE	9.5	132.0
500.3	MODESTO		SANDY SHALE	29.8	141.5
470.5	MODESTO	CHAPEL	COAL	0.3	171.3
470.2	MODESTO		CLAYSTONE & SHALE	16.4	171.6
453.8	MODESTO		SANDSTONE	5.8	188.0
448.0	MODESTO		SANDY SHALE	23.2	193.8
424.8	MODESTO		CLAYSTONE & SHALE	33.0	217.0
391.8	MODESTO		SANDY SHALE	4.0	250.0
387.8	MODESTO		SANDSTONE	1.0	254.0
386.8	MODESTO		SANDY SHALE	11.0	255.0
375.8	MODESTO		SHALE	5.5	266.0
370.3	MODESTO		SANDY SHALE	1.0	271.5
369.3	MODESTO		SANDSTONE	7.0	272.5
362.3	MODESTO		SANDY SHALE	7.5	279.5
354.8	MODESTO		CLAYSTONE & SHALE	3.5	287.0
351.3	MODESTO		SHALE	1.5	290.5
349.8	MODESTO		CLAYSTONE & SHALE	3.0	292.0
346.8	MODESTO	PIASA	LIMESTONE	3.3	295.0
343.5	MODESTO		SHALE	4.0	298.3
339.5	CARBONDALE	DANVILLE	COAL	0.7	302.3
338.8	CARBONDALE		CARBONACEOUS SHALE	1.0	303.0
337.8	CARBONDALE		CLAYSTONE & SHALE	5.0	304.0
332.8	CARBONDALE	BRERETON	LIMESTONE	28.0	309.0
304.8	CARBONDALE	ANNA	BLACK SHALE	1.5	337.0
303.3	CARBONDALE	HERRIN	COAL	7.0	338.5
296.3	CARBONDALE		UNDERCLAY	1.5	345.5

MAPID: 11700145000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 30 QUARTERS/FOOTAGES: 300' N line, 1700' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.805851 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.11439 DATE COLLECTED: 12 / 0 / 1913

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 346.1 LOG TYPE: Drillers Log

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
642.0			UNCONSOLIDATED	53.0	0.0
589.0			ROCK	119.0	53.0
470.0			COAL	1.0	172.0
469.0			ROCK	138.0	173.0
331.0			LIMESTONE	24.3	311.0
306.7			SHALE	0.7	335.3
306.0			BLACK SHALE	2.8	336.0
303.2	CARBONDALE	HERRIN	COAL	7.3	338.8

MAPID: 11700145000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 30 QUARTERS/FOOTAGES: 300' N line, 1700' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.805851 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.11439 DATE COLLECTED:

SURFACE ELEVATION (FT.): 652.0 LOGGED (FT.): 346.3 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
370.0	MODESTO	PIASA	LIMESTONE	8.0	282.0
362.0	CARBONDALE		GRAY SHALE	12.0	290.0
350.0	CARBONDALE	BANKSTON FORK	LIMESTONE	14.3	302.0
335.7	CARBONDALE	BRERETON	LIMESTONE	10.0	316.3
325.7	CARBONDALE	ANNA	BLACK SHALE	3.0	326.3
313.0	CARBONDALE	HERRIN	COAL	7.3	339.0

MAPID: 11700145000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 30 QUARTERS/FOOTAGES: 300' N line, 1700' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.805851

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.11439

DATE COLLECTED: 12 / 0 / 1913

SURFACE ELEVATION (FT.): 652.0

LOGGED (FT.): 346.3

LOG TYPE: Drillers Log

SOURCE: COYNE DRLG CO

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
360.8	MODESTO	PIASA	LIMESTONE	8.0	291.2
352.8	MODESTO		UNCLASSIFIED	3.0	299.2
349.8	CARBONDALE		UNCLASSIFIED	9.0	302.2
340.8	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.3	311.2
333.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	318.5
330.5	CARBONDALE		UNCLASSIFIED	3.0	321.5
327.5	CARBONDALE	BRERETON	LIMESTONE	11.0	324.5
316.5	CARBONDALE	ANNA	BLACK SHALE	3.5	335.5
313.0	CARBONDALE	HERRIN	COAL	7.3	339.0

MAPID: 11700145000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 30 QUARTERS/FOOTAGES: 300' N line, 1700' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.805851 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.11439 DATE COLLECTED: 12 / 0 / 1913

SURFACE ELEVATION (FT.): 652.0 LOGGED (FT.): 346.1 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO., COYNE DRILL HOLE #23 WELL TYPE: Coal Test

COMMENT: R.E. DORSEY FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
652.0			SOIL	21.0	0.0
631.0			UNCONSOLIDATED	7.0	21.0
624.0			SAND	4.0	28.0
620.0			SANDY CLAY	3.0	32.0
617.0			UNCONSOLIDATED	18.0	35.0
599.0	MODESTO		SHALE	42.0	53.0
557.0	MODESTO		SANDSTONE	5.0	95.0
552.0	MODESTO		SHALE	2.0	100.0
550.0	MODESTO	BURROUGHS	LIMESTONE	2.0	102.0
548.0	MODESTO		SANDY SHALE	22.0	104.0
526.0	MODESTO	CARLINVILLE	LIMESTONE	7.0	126.0
519.0	MODESTO		SHALE	39.0	133.0
480.0	MODESTO		COAL	1.0	172.0
479.0	MODESTO		SHALE	2.0	173.0
477.0	MODESTO		LIMESTONE	3.0	175.0
474.0	MODESTO		SANDY SHALE	80.0	178.0
394.0	MODESTO		SHALE	3.0	258.0
391.0	MODESTO		LIMESTONE	2.0	261.0
389.0	MODESTO		SANDY SHALE	11.0	263.0
378.0	MODESTO		BLACK SHALE	1.0	274.0
377.0	MODESTO		SHALE	7.0	275.0
370.0	MODESTO		LIMESTONE	3.0	282.0
367.0	MODESTO		SANDY SHALE	6.0	285.0
361.0	MODESTO		LIMESTONE	8.0	291.0
353.0	CARBONDALE		SHALE	12.0	299.0
341.0	CARBONDALE		LIMESTONE	24.3	311.0
316.7	CARBONDALE		SHALE	0.7	335.3
316.0	CARBONDALE	ANNA	BLACK SHALE	2.8	336.0
313.2	CARBONDALE	HERRIN	COAL	7.3	338.8

MAPID: 11701089000C VERSION: 1

PROJECT: IDMM-GWQX

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 30 QUARTERS/FOOTAGES: 307' S line, 307' E line of NW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.798646 GEOLOGIST: C TREWORGY

CONFIDENTIAL: N LATITUDE: 39.11249 DATE COLLECTED: 3 / 0 / 1966

SURFACE ELEVATION (FT.): 648.0 LOGGED (FT.): 471.0 LOG TYPE: Electric Log

SOURCE: HOUSER, DANIEL M. WELL TYPE: Producer-Oil

COMMENT: ELEV. IS SURF,NOT LOG DATUM: DEPTHS OFF

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
361.0	MODESTO	PIASA	UNCLASSIFIED	-	287.0
311.0	CARBONDALE	HERRIN	UNCLASSIFIED	-	337.0
303.0	CARBONDALE	SPRINGFIELD	UNCLASSIFIED	0.0	345.0
293.0	CARBONDALE	HOUCHIN CREEK	UNCLASSIFIED	-	355.0
229.0	CARBONDALE	SURVANT	UNCLASSIFIED	-	419.0
177.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	2.5	471.0

MAPID: 11701089000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 30 QUARTERS/FOOTAGES: 307' S line, 307' E line of NW NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.798646 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.11249 DATE COLLECTED: 3 / 0 / 1966

SURFACE ELEVATION (FT.): 648.0 LOGGED (FT.): 338.5 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.)	
				UNIT	OVERBURDEN COMMENT
360.0	MODESTO	PIASA	LIMESTONE	4.0	288.0
356.0	MODESTO		UNCLASSIFIED	5.0	292.0
351.0	CARBONDALE	DANVILLE	COAL	1.0	297.0
350.0	CARBONDALE		UNCLASSIFIED	10.0	298.0
340.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	308.0
335.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	313.0
333.0	CARBONDALE		UNCLASSIFIED	2.0	315.0
331.0	CARBONDALE	BRERETON	LIMESTONE	11.5	317.0
319.5	CARBONDALE	ANNA	BLACK SHALE	3.5	328.5
316.0	CARBONDALE	HERRIN	COAL	6.5	332.0

MAPID: 11700146000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 31 QUARTERS/FOOTAGES: NW NW NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.810467 GEOLOGIST: TREWORYG,J

CONFIDENTIAL: N LATITUDE: 39.099479 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 638.0 LOGGED (FT.): 349.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
638.0			UNCONSOLIDATED	47.0	0.0
591.0			ROCK	120.0	47.0
471.0			COAL	0.3	167.0
470.7			ROCK	138.7	167.3
332.0			SANDSTONE	25.0	306.0
307.0			LIMESTONE	6.0	331.0
301.0			BLACK SHALE	2.8	337.0
298.2	CARBONDALE	HERRIN	COAL	8.1	339.8
290.1	CARBONDALE		ROCK	1.1	347.9

MAPID: 11700146000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 31 QUARTERS/FOOTAGES: NW NW NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.810467 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.099479 DATE COLLECTED:

SURFACE ELEVATION (FT.): 638.0 LOGGED (FT.): 348.1 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
348.8	MODESTO	PIASA	LIMESTONE	4.0	289.2
344.8	MODESTO		DARK GRAY SHALE	7.0	293.2
337.8	CARBONDALE		CLAYSTONE & SHALE	5.0	300.2
332.8	CARBONDALE	LAWSON	GRAY SHALE	1.0	305.2
331.8	CARBONDALE	LAWSON	CALCAREOUS SANDSTONE	25.0	306.2
306.8	CARBONDALE	BRERETON	LIMESTONE	6.0	331.2
300.8	CARBONDALE	ANNA	BLACK SHALE	2.8	337.2
298.0	CARBONDALE	HERRIN	COAL	8.1	340.0

MAPID: 11700146000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 31 QUARTERS/FOOTAGES: NW NW NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.810467 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.099479 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 638.0 LOGGED (FT.): 348.1 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
348.8	MODESTO	PIASA	LIMESTONE	4.0	289.2
344.8	MODESTO		UNCLASSIFIED	7.0	293.2
337.8	CARBONDALE		UNCLASSIFIED	9.0	300.2
328.8	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.0	309.2
318.8	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	319.2
315.8	CARBONDALE		UNCLASSIFIED	3.0	322.2
312.8	CARBONDALE	BRERETON	LIMESTONE	12.0	325.2
300.8	CARBONDALE	ANNA	BLACK SHALE	2.8	337.2
298.0	CARBONDALE	HERRIN	COAL	8.1	340.0

MAPID: 11700146000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 31 QUARTERS/FOOTAGES: NW NW NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.810467 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.099479 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 637.6 LOGGED (FT.): 349.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO., HOLE #4 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
637.6			SOIL	15.0	0.0	YELLOW
622.6			BOULDERS & CLAY	32.0	15.0	
590.6	BOND		SHALE	1.0	47.0	
589.6	BOND	CARTHAGE	LIMESTONE	4.0	48.0	
585.6	MODESTO		SANDY SHALE	35.0	52.0	
550.6	MODESTO		BLACK SHALE	3.0	87.0	
547.6	MODESTO		UNDERCLAY	5.0	90.0	
542.6	MODESTO		CALCAREOUS SHALE	10.0	95.0	
532.6	MODESTO		SANDY SHALE	16.0	105.0	
516.6	MODESTO	CARLINVILLE	LIMESTONE	8.0	121.0	
508.6	MODESTO		SANDY SHALE	23.0	129.0	
485.6	MODESTO		SHALE	15.0	152.0	
470.6	MODESTO	CHAPEL	COAL	0.3	167.0	
470.3	MODESTO		CLAYSTONE & SHALE	4.7	167.3	
465.6	MODESTO		SHALE	6.0	172.0	
459.6	MODESTO		SANDY SHALE	38.0	178.0	
421.6	MODESTO		SHALE	32.0	216.0	
389.6	MODESTO		SANDY SHALE	14.0	248.0	
375.6	MODESTO		SHALE	2.0	262.0	
373.6	MODESTO		BLACK SHALE	1.0	264.0	
372.6	MODESTO		CLAYSTONE & SHALE	5.0	265.0	
367.6	MODESTO		CALCAREOUS SHALE	4.0	270.0	
363.6	MODESTO		SANDY SHALE	5.0	274.0	
358.6	MODESTO		SHALE	10.0	279.0	
348.6	MODESTO	PIASA	LIMESTONE	4.0	289.0	
344.6	MODESTO		BLACK SHALE	7.0	293.0	
337.6	CARBONDALE		CLAYSTONE & SHALE	5.0	300.0	
332.6	CARBONDALE		SHALE	1.0	305.0	
331.6	CARBONDALE		CALCAREOUS SANDSTONE	25.0	306.0	
306.6	CARBONDALE	BRERETON	LIMESTONE	6.0	331.0	
300.6	CARBONDALE	ANNA	BLACK SHALE	2.8	337.0	
297.8	CARBONDALE	HERRIN	COAL	8.1	339.8	
289.7	CARBONDALE		CLAYSTONE & SHALE	1.1	347.9	

MAPID: 11700147000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 31 QUARTERS/FOOTAGES: 515' S line, 140' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.810933 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.087018 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 634.0 LOGGED (FT.): 330.2 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
362.0	MODESTO	PIASA	LIMESTONE	5.0	272.0
357.0	MODESTO		UNCLASSIFIED	4.8	277.0
352.2	CARBONDALE	DANVILLE	COAL	1.6	281.8
350.6	CARBONDALE		UNCLASSIFIED	7.6	283.4
343.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.5	291.0
333.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.5	300.5
330.0	CARBONDALE		UNCLASSIFIED	3.0	304.0
327.0	CARBONDALE	BRERETON	LIMESTONE	12.0	307.0
315.0	CARBONDALE	ANNA	BLACK SHALE	3.0	319.0
312.0	CARBONDALE	HERRIN	COAL	8.2	322.0

MAPID: 11700147000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 31 QUARTERS/FOOTAGES: 515' S line, 140' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.810933 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.087018 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 634.0 LOGGED (FT.): 332.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
634.0			UNCONSOLIDATED	101.0	0.0
533.0			ROCK	52.4	101.0
480.6			COAL	0.2	153.4
480.4			ROCK	128.3	153.6
352.2	CARBONDALE	DANVILLE	COAL	1.6	281.8
350.6	CARBONDALE		ROCK	7.6	283.4
343.0	CARBONDALE		LIMESTONE	28.0	291.0
315.0	CARBONDALE		BLACK SHALE	3.0	319.0
312.0	CARBONDALE	HERRIN	COAL	8.2	322.0
303.8	CARBONDALE		ROCK	1.8	330.2

MAPID: 11700147000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 31 QUARTERS/FOOTAGES: 515' S line, 140' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.810933 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.087018 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 634.4 LOGGED (FT.): 332.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO., HOLE #1A WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
634.4			CLAY	49.0	0.0
585.4			CLAY & GRAVEL	52.0	49.0
533.4	MODESTO		CLAYSTONE & SHALE	8.0	101.0
525.4	MODESTO	CARLINVILLE	LIMESTONE	8.0	109.0
517.4	MODESTO		SANDY SHALE	3.0	117.0
514.4	MODESTO		CLAYSTONE & SHALE	33.4	120.0
481.0	MODESTO	CHAPEL	COAL	0.2	153.4
480.8	MODESTO		SANDY SHALE	60.4	153.6
420.4	MODESTO		CLAYSTONE & SHALE	29.0	214.0
391.4	MODESTO		SHALE	12.0	243.0
379.4	MODESTO		SANDSTONE	3.0	255.0
376.4	MODESTO		SANDY SHALE	12.0	258.0
364.4	MODESTO		SHALE	2.0	270.0
362.4	MODESTO		CALCAREOUS SHALE	5.0	272.0
357.4	MODESTO		CLAYSTONE & SHALE	4.8	277.0
352.6	CARBONDALE	DANVILLE	COAL	1.6	281.8
351.0	CARBONDALE		UNDERCLAY	7.6	283.4
343.4	CARBONDALE		LIMESTONE	28.0	291.0
315.4	CARBONDALE	ANNA	BLACK SHALE	3.0	319.0
312.4	CARBONDALE	HERRIN	COAL	8.2	322.0
304.2	CARBONDALE		UNDERCLAY	0.8	330.2
303.4	CARBONDALE		LIMESTONE	1.0	331.0

MAPID: 11700148000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 34 QUARTERS/FOOTAGES: 3400' S line, 275' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.754317 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.096054 DATE COLLECTED: 8 / 0 / 1913

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 360.6 LOG TYPE: Drillers Log

SOURCE: SUPERIOR C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
655.0			UNCONSOLIDATED	128.0	0.0	
527.0			ROCK	56.0	128.0	
471.0			COAL	1.0	184.0	
470.0			ROCK	129.0	185.0	
341.0	CARBONDALE	DANVILLE	COAL	1.0	314.0	
340.0	CARBONDALE		ROCK	8.0	315.0	
332.0	CARBONDALE		LIMESTONE	25.5	323.0	
306.5	CARBONDALE		SHALE	0.5	348.5	
306.0	CARBONDALE		BLACK SHALE	2.8	349.0	
303.2	CARBONDALE	HERRIN	COAL	7.8	351.8	
295.4	CARBONDALE		ROCK	1.0	359.6	

MAPID: 11700148000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 34 QUARTERS/FOOTAGES: 3400' S line, 275' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.754317 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.096054 DATE COLLECTED:

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 359.8 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
350.0	MODESTO	PIASA	LIMESTONE	4.0	305.0	
346.0	MODESTO		GRAY SHALE	5.0	309.0	
341.0	CARBONDALE	DANVILLE	COAL	1.0	314.0	
340.0	CARBONDALE		GRAY SHALE	8.0	315.0	
332.0	CARBONDALE	BANKSTON FORK	LIMESTONE	15.5	323.0	
316.5	CARBONDALE	BRERETON	LIMESTONE	10.0	338.5	
306.5	CARBONDALE	ANNA	BLACK SHALE	3.3	348.5	
303.0	CARBONDALE	HERRIN	COAL	7.8	352.0	

MAPID: 11700148000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 34 QUARTERS/FOOTAGES: 3400' S line, 275' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.754317 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.096054 DATE COLLECTED: 8 / 0 / 1913

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 359.8 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
349.5	MODESTO	PIASA	LIMESTONE	4.0	305.5
345.5	MODESTO		UNCLASSIFIED	5.0	309.5
340.5	CARBONDALE	DANVILLE	COAL	1.0	314.5
339.5	CARBONDALE		UNCLASSIFIED	8.0	315.5
331.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	323.5
323.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	331.5
320.5	CARBONDALE		UNCLASSIFIED	3.0	334.5
317.5	CARBONDALE	BRERETON	LIMESTONE	11.0	337.5
306.5	CARBONDALE	ANNA	BLACK SHALE	3.5	348.5
303.0	CARBONDALE	HERRIN	COAL	7.8	352.0

MAPID: 11700148000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 34 QUARTERS/FOOTAGES: 3400' S line, 275' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.754317 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.096054 DATE COLLECTED: 8 / 0 / 1913

SURFACE ELEVATION (FT.): 655.4 LOGGED (FT.): 360.6 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO., HOLE #21 WELL TYPE: Coal Test

COMMENT: FRICKE FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
655.4			SOIL	26.0	0.0
629.4			UNCONSOLIDATED	102.0	26.0
527.4	MODESTO		SHALE	13.0	128.0
514.4	MODESTO	CARLINVILLE	LIMESTONE	9.0	141.0
505.4	MODESTO		SHALE	34.0	150.0
471.4	MODESTO	CHAPEL	COAL	1.0	184.0
470.4	MODESTO		SANDY SHALE	12.0	185.0
458.4	MODESTO		SANDY SHALE	70.0	197.0
388.4	MODESTO		SANDSTONE	1.0	267.0
387.4	MODESTO		SANDY SHALE	14.0	268.0
373.4	MODESTO		SHALE	5.0	282.0
368.4	MODESTO		SHALE	3.0	287.0
365.4	MODESTO		SANDY SHALE	15.0	290.0
350.4	MODESTO	PIASA	LIMESTONE	4.0	305.0
346.4	MODESTO		SHALE	3.0	309.0
343.4	MODESTO		SHALE	2.0	312.0
341.4	CARBONDALE	DANVILLE	COAL	1.0	314.0
340.4	CARBONDALE		SHALE	8.0	315.0
332.4	CARBONDALE		LIMESTONE	25.5	323.0
306.9	CARBONDALE		SHALE	0.5	348.5
306.4	CARBONDALE	ANNA	BLACK SHALE	2.8	349.0
303.6	CARBONDALE	HERRIN	COAL	7.8	351.8
295.8	CARBONDALE		UNDERCLAY	1.0	359.6

MAPID: 11700149000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 35 QUARTERS/FOOTAGES: 1177' N line, 1734' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.7243 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.098622 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 678.0 LOGGED (FT.): 2000.0 LOG TYPE: Survey Core Study

SOURCE: MADISON C C WELL TYPE: Coal Test

COMMENT: CORE #C153 & C4175 (COALS)

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
678.0			UNCONSOLIDATED	113.0	0.0	
565.0			ROCK	46.9	113.0	
518.1			COAL	0.8	159.9	
517.3			ROCK	79.3	160.7	
438.0			COAL	0.3	240.0	
437.7			ROCK	134.9	240.3	
302.8			COAL	2.4	375.2	
300.4			ROCK	4.3	377.6	
296.2			SHALE	4.7	381.8	
291.5			LIMESTONE	13.3	386.5	
278.2			SHALE	0.9	399.8	
277.2			BLACK SHALE	7.8	400.8	
269.5	CARBONDALE	HERRIN	COAL	8.0	408.5	
261.5			ROCK	31.8	416.5	
229.7			COAL	2.7	448.3	
227.0			ROCK	9.8	451.0	
217.2			COAL	0.2	460.8	
217.0			ROCK	10.0	461.0	
207.0			COAL	1.8	471.0	
205.2			ROCK	47.4	472.8	
157.7			COAL	1.6	520.3	
156.2			ROCK	11.4	521.8	
144.7			COAL	0.3	533.3	
144.5			ROCK	3.3	533.5	
141.2			COAL	1.1	536.8	
140.2			ROCK	1.2	537.8	
139.0			COAL	1.0	539.0	
138.0			ROCK	23.2	540.0	
114.8			COAL	0.2	563.2	
114.7			ROCK	20.9	563.3	
93.7			COAL	0.9	584.3	
92.8			ROCK	26.7	585.2	
66.2			COAL	4.2	611.8	
62.0			ROCK	1384.0	616.0	

MAPID: 11700149000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 35 QUARTERS/FOOTAGES: 1177' N line, 1734' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.7243 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.098622 DATE COLLECTED:

SURFACE ELEVATION (FT.): 678.0 LOGGED (FT.): 416.0 LOG TYPE: Survey Core Study

SOURCE: WELL TYPE: Coal Test

COMMENT: CORE #C153 & C4175 (COALS)

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
305.6	MODESTO	PIASA	LIMESTONE & SHALE	3.3	372.4
302.4	MODESTO		CLAYSTONE & SHALE	6.3	375.6
296.1	CARBONDALE	DANVILLE	COAL	2.4	381.9
293.7	CARBONDALE		CLAYSTONE & SHALE	8.4	384.3
285.3	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	7.2	392.7
278.1	CARBONDALE	LAWSON	MOTTLED SHALE	8.1	399.9
270.0	CARBONDALE	HERRIN	COAL	8.0	408.0

MAPID: 11700149000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 35 QUARTERS/FOOTAGES: 1177' N line, 1734' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.7243 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.098622 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 678.0 LOGGED (FT.): 416.0 LOG TYPE: Drillers Log

SOURCE: MADISON COAL CORP WELL TYPE: Structure Test

COMMENT: CORE #C153 & C4175 (COALS)

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
312.9	MODESTO	PIASA	LIMESTONE	4.1	365.1
308.8	MODESTO		UNCLASSIFIED	5.8	369.2
303.0	CARBONDALE	DANVILLE	COAL	2.1	375.0
300.9	CARBONDALE		UNCLASSIFIED	8.9	377.1
292.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	13.3	386.0
278.7	CARBONDALE	ENERGY	UNCLASSIFIED	8.7	399.3
270.0	CARBONDALE	HERRIN	COAL	8.0	408.0

MAPID: 11700149000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 35 QUARTERS/FOOTAGES: 1177' N line, 1734' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.7243 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.098622 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 678.3 LOGGED (FT.): 2000.0 LOG TYPE: Company Sample Study

SOURCE: MADISON COAL CORP., MINE #5; HOLE #15 WELL TYPE: Coal Test

COMMENT: CORE #C153 & C4175 (COALS)

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
678.3			CLAY & GRAVEL	102.5	0.0	
575.8			SAND & GRAVEL	10.5	102.5	
565.3	MODESTO		SHALE	11.0	113.0	
554.3	MODESTO		SHALE	31.8	124.0	W/ SS & SANDY SH
522.5	MODESTO		CALCARIOUS SANDY SHALE	1.3	155.8	FOSSILIFEROUS
521.3	MODESTO		SHALE	2.7	157.0	
518.6	MODESTO		CALCARIOUS SANDY SHALE	0.3	159.7	FOSSILIFEROUS
518.4	MODESTO	WOMAC	COAL	0.8	159.9	
517.6	MODESTO		CLOD	8.0	160.7	
509.6	MODESTO		SHALE	2.6	168.7	W/ LS PEBBLES
507.0	MODESTO	BURROUGHS	LIMESTONE	3.0	171.3	W/ GREEN SH
504.0	MODESTO		SHALE	24.4	174.3	W/ SS PARTINGS
479.6	MODESTO	CARLINVILLE	LIMESTONE	6.5	198.7	W/ SH PARTINGS AT BASE
473.1	MODESTO		SHALE	34.8	205.2	W/ SS
438.3	MODESTO	CHAPEL	COAL	0.3	240.0	
438.0	MODESTO		SHALE	14.4	240.3	
423.6	MODESTO		SANDSTONE	0.7	254.7	
423.0	MODESTO		LIMESTONE	0.7	255.3	
422.3	MODESTO		SANDSTONE	7.2	256.0	INTERLAM W/ BLACK SH
415.1	MODESTO		SHALE	15.8	263.2	W/ SS PARTINGS
399.3	MODESTO		SHALE	19.0	279.0	W/ SS STREAKS & PARTINGS
380.3	MODESTO		SHALE	28.7	298.0	
351.6	MODESTO		CALCAREOUS SHALE	0.7	326.7	
351.0	MODESTO		SHALE	2.0	327.3	W/ WOODY FRAGMENT
349.0	MODESTO		SHALE	5.9	329.3	
343.0	MODESTO		SHALE	7.6	335.3	W/ DARK GREEN SS
335.5	MODESTO		SHALE	1.2	342.8	
334.3	MODESTO		SHALE	0.3	344.0	
334.0	MODESTO		SHALE	3.0	344.3	
331.0	MODESTO		CALCARIOUS SANDY SHALE	3.0	347.3	
328.0	MODESTO		SANDY SHALE	11.7	350.3	INTERBDD W/ MULTI SH
316.3	MODESTO		SHALE	3.6	362.0	
312.7	MODESTO	PIASA	LIMESTONE	4.1	365.6	
308.6	MODESTO		BLACK SHALE	5.5	369.7	ALSO DRK GRAY AT TOP
303.1	CARBONDALE	DANVILLE	COAL	2.4	375.2	
300.7	CARBONDALE		SHALE	4.3	377.6	

296.5	CARBONDALE		SHALE	4.7	381.8	ALSO GREEN; W/ LS PEBBLES
291.8	CARBONDALE		LIMESTONE	13.3	386.5	FOSSILIF; SHALY IN PART
278.5	CARBONDALE		SHALE	0.6	399.8	
277.9	CARBONDALE		SHALE	0.3	400.4	
277.5	CARBONDALE	ANNA	BLACK SHALE	7.8	400.8	
269.8	CARBONDALE	HERRIN	COAL	8.0	408.5	W/ PYRITE
261.8	CARBONDALE		UNDERCLAY	2.5	416.5	
259.3	CARBONDALE		SHALE	3.5	419.0	
255.8	CARBONDALE		LIMESTONE	2.5	422.5	
253.3	CARBONDALE		SHALE	11.0	425.0	
242.3	CARBONDALE		LIMESTONE	0.8	436.0	
241.5	CARBONDALE		SHALE	4.3	436.8	W/ GREEN SS
237.1	CARBONDALE		LIMESTONE	3.1	441.2	FOSSILIF.
234.0	CARBONDALE		SHALE	0.6	444.3	
233.5	CARBONDALE		LIMESTONE	0.5	444.8	FOSSILIF.
233.0	CARBONDALE	EXCELLO	BLACK SHALE	3.0	445.3	
230.0	CARBONDALE	HOUCHIN CREEK	COAL	2.7	448.3	
227.3	CARBONDALE		BLACK SHALE	1.0	451.0	
226.3	CARBONDALE		SHALE	4.0	452.0	
222.3	CARBONDALE		SHALE	4.8	456.0	
217.5	CARBONDALE		COAL	0.2	460.8	
217.3	CARBONDALE		SANDSTONE	10.0	461.0	
207.3	CARBONDALE	SURVANT - UPPER	COAL	1.8	471.0	
205.5	CARBONDALE		SHALE	16.2	472.8	W/ INTERBDDDS OF SS
189.3	CARBONDALE		SANDSTONE	1.0	489.0	
188.3	CARBONDALE		SHALE	30.3	490.0	DRK GRAY & BLACK
158.0	CARBONDALE	SURVANT - LOWER	COAL	1.6	520.3	
156.5	CARBONDALE		SHALE	1.2	521.8	
155.3	CARBONDALE		LIMESTONE	2.0	523.0	
153.3	CARBONDALE		SHALE	4.0	525.0	
149.3	CARBONDALE		CALCAREOUS SHALE	1.0	529.0	
148.3	CARBONDALE		LIMESTONE	2.2	530.0	
146.1	CARBONDALE		SHALE	0.7	532.2	
145.5	CARBONDALE		BLACK SHALE	0.4	532.8	
145.0	CARBONDALE	COLCHESTER	COAL	0.3	533.3	
144.8	SPOON		BLACK SHALE	1.1	533.5	
143.7	SPOON		LIMESTONE	1.9	534.6	
141.8	SPOON		BLACK SHALE	0.3	536.5	
141.5	SPOON	DAVIS	COAL	1.1	536.8	CORRELATION UNCERTAIN
140.5			SHALE	1.2	537.8	
139.3			COAL	1.0	539.0	
138.3			SHALE	2.4	540.0	
135.9			SHALE	1.6	542.4	
134.3			UNDERCLAY	8.2	544.0	
126.1			SHALE	7.8	552.2	DRK GRAY-BLACK; W/ SS
118.3			SANDY SHALE	3.2	560.0	
115.1			COAL	0.2	563.2	

115.0		SHALE	6.8	563.3	
108.1		BLACK SHALE	6.8	570.2	
101.3		SHALE	1.5	577.0	
99.8		BLACK SHALE	5.8	578.5	
94.0		COAL	0.9	584.3	
93.1		SHALE	0.8	585.2	
92.3		SHALE	3.3	586.0	
89.0		SANDSTONE	6.2	589.3	
82.8		SHALE	16.3	595.5	
66.5		COAL	4.2	611.8	
62.3		SHALE	3.2	616.0	
59.1		SANDY SHALE	4.3	619.2	
54.9		SHALE	40.8	623.4	W/ GRAY TO WHITE SS
14.0		SHALE	4.6	664.3	
9.5		SHALE	19.2	668.8	W/ SS
-9.7		CONGLOMERATE	7.0	688.0	CGL OF SS, LS CHERT PEBBLES
-16.7		SHALE	6.7	695.0	
-23.4		LIMESTONE	0.5	701.7	
-23.9		CONGLOMERATE	0.4	702.2	
-24.3	MISSISSIPPIAN	SANDSTONE/LIMESTONE	996.9	702.6	MISSISSIPPIAN SS, LS, SH
-1021.2		SANDY LIMESTONE	27.5	1699.5	
-1048.7	SILURIAN	SHALY LIMESTONE	231.0	1727.0	
-1279.7	ORDOVICIAN	SHALY LIMESTONE	42.0	1958.0	

MAPID: 11700324000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 36 QUARTERS/FOOTAGES: 580' S line, 35' E line
 QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.699459 GEOLOGIST: TREWORGY,J
 CONFIDENTIAL: N LATITUDE: 39.088994 DATE COLLECTED: 8 / 0 / 1923
 SURFACE ELEVATION (FT.): 673.0 LOGGED (FT.): 1000.0 LOG TYPE: Survey Core Study
 SOURCE: MADISON C C WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
673.0			UNCONSOLIDATED	97.0	0.0
576.0			ROCK	156.0	97.0
420.0			COAL	0.2	253.0
419.8			ROCK	137.3	253.2
282.5			COAL	0.5	390.5
282.0			UNDERCLAY	5.0	391.0
277.0			LIMESTONE	10.0	396.0
267.0			SHALE	6.0	406.0
261.0	CARBONDALE	HERRIN	COAL	8.0	412.0
253.0			ROCK	20.8	420.0
232.2			COAL	0.3	440.8
231.9			ROCK	112.6	441.1
119.3			COAL	0.3	553.7
119.1			ROCK	40.1	553.9
79.0			COAL	0.2	594.0
78.8			ROCK	41.7	594.2
37.2			COAL	0.7	635.8
36.5			ROCK	363.5	636.5

MAPID: 11700324000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 36 QUARTERS/FOOTAGES: 580' S line, 35' E line
 QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.699459 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 39.088994 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 673.0 LOGGED (FT.): 420.0 LOG TYPE: Survey Core Study
 SOURCE: WELL TYPE: Coal Test
 COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
293.5	MODESTO	PIASA	LIMESTONE	2.6	379.5
290.9	MODESTO		CLAYSTONE & SHALE	8.4	382.1
282.5	CARBONDALE	DANVILLE	COAL	0.5	390.5
282.0	CARBONDALE		CLAYSTONE	5.0	391.0
277.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	10.0	396.0
267.0	CARBONDALE	LAWSON	GRAY SHALE	4.0	406.0
263.0	CARBONDALE	ANNA	BLACK SHALE	2.0	410.0
261.0	CARBONDALE	HERRIN	COAL	8.0	412.0

MAPID: 11700324000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 36 QUARTERS/FOOTAGES: 580' S line, 35' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.699459 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.088994 DATE COLLECTED: 8 / 0 / 1923

SURFACE ELEVATION (FT.): 673.0 LOGGED (FT.): 420.0 LOG TYPE: Drillers Log

SOURCE: MADISON COAL CORP WELL TYPE: Structure Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
293.5	MODESTO	PIASA	LIMESTONE	4.5	379.5
289.0	MODESTO		UNCLASSIFIED	6.5	384.0
282.5	CARBONDALE	DANVILLE	COAL	0.5	390.5
282.0	CARBONDALE		UNCLASSIFIED	5.0	391.0
277.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.0	396.0
267.0	CARBONDALE	ENERGY	UNCLASSIFIED	6.0	406.0
261.0	CARBONDALE	HERRIN	COAL	8.0	412.0

MAPID: 11700324000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 6W SECTION: 36 QUARTERS/FOOTAGES: 580' S line, 35' E line

QUADRANGLE: MOUNT OLIVE LONGITUDE: -89.699459 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.088994 DATE COLLECTED: 8 / 0 / 1923

SURFACE ELEVATION (FT.): 673.2 LOGGED (FT.): 1000.0 LOG TYPE: Company Sample Study

SOURCE: MADISON COAL CORP., MINE #5, HOLE #16 WELL TYPE: Coal Test

COMMENT: CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
673.2			CLAY & GRAVEL	91.0	0.0	
582.2			SILT & SAND	6.0	91.0	
576.2	BOND	CARTHAGE	LIMESTONE	12.0	97.0	
564.2	MODESTO		CARBONACEOUS SHALE	0.5	109.0	
563.7	MODESTO		SHALE	53.5	109.5	W/ SS
510.2	MODESTO		FOSSILIFEROUS SHALE	4.0	163.0	
506.2	MODESTO		CARBONACEOUS SHALE	1.0	167.0	
505.2	MODESTO		SHALE	42.0	168.0	
463.2	MODESTO		SHALE	13.0	210.0	W/ SS
450.2	MODESTO	CARLINVILLE	LIMESTONE	3.0	223.0	
447.2	MODESTO	CARLINVILLE	SANDSTONE	0.3	226.0	
446.9	MODESTO	CARLINVILLE	LIMESTONE	3.0	226.3	
443.9	MODESTO		SHALE	5.0	229.3	
438.9	MODESTO		SHALE	18.7	234.3	
420.2	MODESTO	CHAPEL	COAL	0.2	253.0	
420.0	MODESTO		UNDERCLAY	6.8	253.2	
413.2	MODESTO		SHALE	4.0	260.0	
409.2	MODESTO		SANDSTONE	10.0	264.0	
399.2	MODESTO		SANDSTONE/SHALE	26.0	274.0	INTERBDD SS & SANDY SH
373.2	MODESTO		SHALE	46.5	300.0	W/ SS STREAKS
326.7	MODESTO		SHALE	0.4	346.5	
326.3	MODESTO		SHALE	2.1	346.9	
324.2	MODESTO		SHALE	12.7	349.0	SANDY STREAKS UPPER 4'
311.5	MODESTO		SHALE	17.8	361.7	
293.7	MODESTO	PIASA	LIMESTONE	2.6	379.5	
291.1	MODESTO		CALCAREOUS SHALE	2.9	382.1	FOSSILIFEROUS
288.2	MODESTO		SHALE	5.5	385.0	
282.7	CARBONDALE	DANVILLE	COAL	0.5	390.5	
282.2	CARBONDALE		UNDERCLAY	5.0	391.0	
277.2	CARBONDALE		LIMESTONE	10.0	396.0	
267.2	CARBONDALE		SHALE	6.0	406.0	GRADES TO BLACK SH
261.2	CARBONDALE	HERRIN	COAL	8.0	412.0	
253.2	CARBONDALE		UNDERCLAY	5.5	420.0	
247.7	CARBONDALE		SHALE	0.5	425.5	
247.2	CARBONDALE		CALCAREOUS SHALE	11.6	426.0	
235.6	CARBONDALE		SHALY LIMESTONE	1.0	437.6	QTZ GEODE
234.6	CARBONDALE		SHALE	2.2	438.6	DRK GRAY TO BLACK
232.4	CARBONDALE	HOUCHIN CREEK	COAL	0.3	440.8	
232.1	CARBONDALE		UNDERCLAY	8.9	441.1	

223.2	CARBONDALE		CALCARIOUS SANDY SHALE	14.0	450.0	
209.2	CARBONDALE		SANDY SHALE	12.8	464.0	W/ SS PARTINGS
196.4	CARBONDALE		SANDSTONE	20.0	476.8	
176.4	CARBONDALE		SHALE	4.2	496.8	
172.2	CARBONDALE		SANDSTONE/SHALE	14.7	501.0	SANDY SH
157.5	CARBONDALE		SHALE	24.6	515.7	
132.9	CARBONDALE		CLAYSTONE & SHALE	3.0	540.3	
129.9	CARBONDALE		CARBONACEOUS SHALE	3.0	543.3	
126.9	CARBONDALE		CLAYSTONE & SHALE	0.5	546.3	
126.4	CARBONDALE		LIMESTONE	1.0	546.8	
125.4	CARBONDALE		SHALE	4.4	547.8	
121.0	CARBONDALE		CLAYSTONE & SHALE	1.5	552.2	
119.5	CARBONDALE	COLCHESTER	COAL	0.3	553.7	
119.3	SPOON		SHALE	7.1	553.9	
112.2	SPOON		CALCAREOUS SHALE	1.0	561.0	
111.2	SPOON		CLAYSTONE & SHALE	8.3	562.0	
102.9	SPOON		SHALE	9.8	570.3	
93.0	SPOON		SHALE	0.1	580.2	W/ COAL STREAKS
92.9			SHALE	0.3	580.3	
92.7			SHALE	3.5	580.5	
89.2			SANDSTONE	4.0	584.0	SHALY IN PARTS
85.2			SHALE	6.0	588.0	SANDY IN BOTTOM
79.2			COAL	0.2	594.0	
79.0			SANDSTONE/SHALE	5.8	594.2	
73.2			SHALE	11.5	600.0	
61.7			CALCAREOUS SHALE	8.5	611.5	W/ COAL STREAKS
53.2			SHALE	15.8	620.0	W/ SS
37.4			COAL	0.7	635.8	
36.7			GRAY SHALE	10.7	636.5	W/ COAL STREAKS
26.0			SANDSTONE	9.8	647.2	W/ SH & COAL STREAKS
16.2			SANDY LIMESTONE	1.2	657.0	W/ PEBBLES & PYRITE
15.0	MISSISSIPPIAN		SHALE/SANDSTONE/LIMESTONE	118.7	658.2	SHALE, SANDSTONE & LIMESTONE
-103.6			LIMESTONE	223.2	776.8	DEVONIAN & SILURIAN

MAPID: 11700688000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 2 QUARTERS/FOOTAGES: 330' S line, 330' E line of SW SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.836735

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.159329

DATE COLLECTED: 9 / 0 / 1958

SURFACE ELEVATION (FT.): 652.0

LOGGED (FT.): 308.0

LOG TYPE: Electric Log

SOURCE: WILSON W HERSCHEL

WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
392.0	MODESTO	PIASA	LIMESTONE	5.0	260.0
387.0	MODESTO		UNCLASSIFIED	4.0	265.0
383.0	CARBONDALE		UNCLASSIFIED	10.0	269.0
373.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	11.0	279.0
362.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	4.0	290.0
358.0	CARBONDALE		UNCLASSIFIED	3.0	294.0
355.0	CARBONDALE	BRERETON	LIMESTONE	5.0	297.0
350.0	CARBONDALE	HERRIN	COAL	6.0	302.0

MAPID: 11723741000C VERSION: 1

PROJECT: LUMP

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 2 QUARTERS/FOOTAGES: 10' S line, 15' E line of SE NE SW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.84026 GEOLOGIST: J. MCBETH

CONFIDENTIAL: N LATITUDE: 39.162242 DATE COLLECTED: 9 / 22 / 1969

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 312.0 LOG TYPE: Drillers Log

SOURCE: MONTEREY; J. HOSKINS DRILLING J-86 WELL TYPE: Coal Test

COMMENT: PERMIT 56; MINE #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
655.0	PLEISTOCENE		UNCONSOLIDATED	8.0	0.0	
647.0	PLEISTOCENE		CLAY	12.0	8.0	
635.0	BOND		SHALE	6.0	20.0	WEATHERED
629.0	BOND		SANDY SHALE	31.0	26.0	WITH SANDSTONE
598.0	BOND		LIMESTONE	1.0	57.0	
597.0	BOND		BLACK SHALE	4.0	58.0	
593.0	BOND		GRAY SHALE	5.0	62.0	
588.0	BOND		CALCAREOUS SANDSTONE	5.0	67.0	
583.0	BOND		SILTY SHALE	21.0	72.0	
562.0	BOND	CARTHAGE	LIMESTONE	6.5	93.0	
555.5	MODESTO		SANDY SHALE	23.5	99.5	WITH SANDSTONE
532.0	MODESTO		SILTY SHALE	7.0	123.0	
525.0	MODESTO		LIMESTONE	0.5	130.0	
524.5	MODESTO		SILTY SHALE	9.5	130.5	
515.0	MODESTO		SILTY SHALE	64.0	140.0	WITH SANDSTONE
451.0	MODESTO		SILTY SHALE	16.0	204.0	WITH SIDERITE
435.0	MODESTO		GRAY SHALE	15.0	220.0	WITH NODULES
420.0	MODESTO		BLACK SHALE	2.0	235.0	
418.0	MODESTO		SHALE	3.0	237.0	
415.0	MODESTO		GRAY SHALE	13.0	240.0	WITH NODULES
402.0	MODESTO		SHALE	2.8	253.0	
399.2	MODESTO	PIASA	LIMESTONE	3.2	255.8	
396.0			SHALE	7.0	259.0	MULTICOLORED
389.0			SHALE	0.5	266.0	DARK
388.5			GRAY SHALE	2.5	266.5	WITH NODULES
386.0			SANDY SHALE	8.5	269.0	WITH SANDSTONE
377.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.8	277.5	
373.7	CARBONDALE		CALCAREOUS SHALE	6.0	281.3	WITH LIMESTONE NODULES
367.7	CARBONDALE		LIMESTONE	0.5	287.3	
367.2	CARBONDALE		CALCAREOUS SHALE	2.6	287.8	FOSSILIFEROUS
364.6	CARBONDALE	BRERETON	LIMESTONE	3.8	290.4	DARK
360.7	CARBONDALE	ANNA	BLACK SHALE	0.5	294.3	
360.2	CARBONDALE	HERRIN	COAL	8.0	294.8	
352.3	CARBONDALE		UNDERCLAY	1.1	302.7	
351.2	CARBONDALE	HIGGINSVILLE	LIMESTONE	1.3	303.8	
349.8	CARBONDALE		CLAYSTONE	2.0	305.2	
347.8	CARBONDALE		CLAYSTONE	1.8	307.2	
346.0	CARBONDALE		CALCAREOUS SHALE	1.2	309.0	

344.8 CARBONDALE LIMESTONE 0.7 310.2 WITH CLAY
 344.2 CARBONDALE CLAYSTONE 1.2 310.8 WITH NODULES

MAPID: 11700627000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 8N 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 45' N line, 170' W line of NE NW NW
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.865114 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.173265 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 650.0 **LOGGED (FT.):** 279.9 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. G-6 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
402.7	MODESTO	PIASA	LIMESTONE	3.5	247.3	
399.2	MODESTO		UNCLASSIFIED	4.0	250.8	
395.2	CARBONDALE		UNCLASSIFIED	10.7	254.8	
384.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.1	265.5	
378.4	CARBONDALE	ENERGY	SHALE	7.4	271.6	
371.0	CARBONDALE	HERRIN	COAL	0.9	279.0	

MAPID: 11700729000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 8N 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 40' N line, 2316' W line
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.85982 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.173372 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 649.0 **LOGGED (FT.):** 299.8 **LOG TYPE:** Survey Core Study
SOURCE: MT. OLIVE & STAUNTON COAL CO. 15 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
396.4	MODESTO	PIASA	LIMESTONE/UNDERCLAY	2.7	252.6	
393.7	MODESTO		GRAY SHALE	3.6	255.3	
390.2	CARBONDALE	DANVILLE	COAL	1.6	258.8	
388.6	CARBONDALE		CLAYSTONE & SHALE	4.0	260.4	
384.6	CARBONDALE		SILTY SHALE	1.8	264.4	
382.8	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	0.8	266.2	UPPER BENCH
382.0	CARBONDALE	BANKSTON FORK	CLAYSTONE & SHALE	0.3	267.0	SHALE PARTING
381.7	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.7	267.3	LOWER BENCH
377.1	CARBONDALE	LAWSON	CALCAREOUS SHALE	9.3	271.9	
367.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	10.5	281.3	
357.2	CARBONDALE	ANNA	BLACK SHALE	0.3	291.8	
357.0	CARBONDALE	HERRIN	COAL	7.8	292.0	

MAPID: 11700729000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 3 QUARTERS/FOOTAGES: 40' N line, 2316' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.85982 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.173372 DATE COLLECTED:

SURFACE ELEVATION (FT.): 649.0 LOGGED (FT.): 299.8 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 15 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
398.3	MODESTO	PIASA	LIMESTONE	3.3	250.7
395.0	MODESTO		UNCLASSIFIED	3.6	254.0
391.4	CARBONDALE	DANVILLE	COAL	1.6	257.6
389.8	CARBONDALE		UNCLASSIFIED	6.9	259.2
382.9	CARBONDALE	BANKSTON FORK	LIMESTONE	5.8	266.1
377.1	CARBONDALE	ANVIL ROCK	SANDSTONE	6.3	271.9
370.8	CARBONDALE		SHALE	3.0	278.2
367.8	CARBONDALE	BRERETON	LIMESTONE	10.5	281.2
357.3	CARBONDALE	ANNA	BLACK SHALE	0.3	291.7
357.0	CARBONDALE	HERRIN	COAL	7.8	292.0

MAPID: 11700729000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 3 QUARTERS/FOOTAGES: 40' N line, 2316' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.85982 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.173372 DATE COLLECTED:

SURFACE ELEVATION (FT.): 649.0 LOGGED (FT.): 350.5 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 15 WELL TYPE: Coal Test

COMMENT: CORE NO.42'-350'

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
392.7	CARBONDALE	DANVILLE	COAL	1.6	256.3
357.2	CARBONDALE	HERRIN	COAL	7.8	291.8

MAPID: 11700151000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 4 QUARTERS/FOOTAGES: 1600' N line, 1200' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.882344 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.168643 DATE COLLECTED: 11 / 18 / 1912

SURFACE ELEVATION (FT.): 652.7 LOGGED (FT.): 293.0 LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R.R., HOLE #4 WELL TYPE: Coal Test

COMMENT: E SOURCE IS ALIDADE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
652.7			SOIL	28.0	0.0	
624.7			SAND	2.0	28.0	
622.7			CLAY	24.0	30.0	GRAVELLY
598.7	MODESTO		CALCAREOUS SHALE	2.0	54.0	
596.7	MODESTO	BURROUGHS	LIMESTONE	3.2	56.0	
593.5	MODESTO		SHALE	19.3	59.2	
574.2	MODESTO	CARLINVILLE	LIMESTONE	7.5	78.5	
566.7	MODESTO		SANDY SHALE	13.0	86.0	
553.7	MODESTO		SHALE	11.0	99.0	
542.7	MODESTO		SANDY SHALE	12.5	110.0	
530.2	MODESTO	CHAPEL	COAL	0.3	122.5	
529.9	MODESTO		CLAYSTONE & SHALE	6.3	122.8	
523.7	MODESTO		SANDSTONE	29.0	129.0	
494.7	MODESTO		SANDY SHALE	6.0	158.0	
488.7	MODESTO		SHALE	64.0	164.0	
424.7	MODESTO		SANDY SHALE	9.3	228.0	
415.4	MODESTO		LIMESTONE	0.5	237.3	
414.9	MODESTO		SHALE	2.0	237.8	
412.9	MODESTO	PIASA	LIMESTONE	8.2	239.8	
404.7	MODESTO		SHALE	4.3	248.0	
400.4	CARBONDALE	DANVILLE	COAL	0.2	252.3	
400.2	CARBONDALE		CALCAREOUS SHALE	8.0	252.5	W/ PEBBLES (PROV. NODS)
392.2	CARBONDALE		LIMESTONE W/ SHALE	18.3	260.5	
373.9	CARBONDALE	BRERETON	LIMESTONE	1.9	278.8	
372.0	CARBONDALE		SHALE	0.2	280.7	
371.9	CARBONDALE	HERRIN	COAL	7.4	280.8	
364.4	CARBONDALE		UNDERCLAY	2.3	288.3	
362.1	CARBONDALE		LIMESTONE	2.4	290.6	

MAPID: 11700151000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 4 QUARTERS/FOOTAGES: 1600' N line, 1200' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.882344 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.168643 DATE COLLECTED: 11 / 0 / 1912

SURFACE ELEVATION (FT.): 653.0 LOGGED (FT.): 288.4 LOG TYPE: Drillers Log

SOURCE: NO COMPANY WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
412.8	MODESTO	PIASA	LIMESTONE	8.2	240.2
404.6	MODESTO		UNCLASSIFIED	4.2	248.4
400.4	CARBONDALE	DANVILLE	COAL	0.2	252.6
400.2	CARBONDALE		UNCLASSIFIED	8.0	252.8
392.2	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.5	260.8
384.7	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.5	268.3
382.2	CARBONDALE		UNCLASSIFIED	2.5	270.8
379.7	CARBONDALE	BRERETON	LIMESTONE	7.5	273.3
372.2	CARBONDALE	ANNA	BLACK SHALE	0.2	280.8
372.0	CARBONDALE	HERRIN	COAL	7.4	281.0

MAPID: 11700152000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 4 QUARTERS/FOOTAGES: 100' S line, 50' E line of SW SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.872763 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.158118 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 651.0 LOGGED (FT.): 303.5 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
392.5	MODESTO	PIASA	LIMESTONE	4.0	258.5
388.5	MODESTO		UNCLASSIFIED	4.0	262.5
384.5	CARBONDALE	DANVILLE	COAL	2.0	266.5
382.5	CARBONDALE		UNCLASSIFIED	8.0	268.5
374.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	276.5
368.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	282.5
366.5	CARBONDALE		UNCLASSIFIED	1.0	284.5
365.5	CARBONDALE	BRERETON	LIMESTONE	6.0	285.5
359.5	CARBONDALE	ANNA	BLACK SHALE	4.5	291.5
355.0	CARBONDALE	HERRIN	COAL	7.5	296.0

MAPID: 11700152000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 4 QUARTERS/FOOTAGES: 100' S line, 50' E line of SW SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.872763

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.158118

DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0

LOGGED (FT.): 300.5

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
394.0	MODESTO	PIASA	LIMESTONE	4.0	256.0
390.0	MODESTO		CLAYSTONE & SHALE	4.0	260.0
386.0	CARBONDALE	DANVILLE	COAL	2.0	264.0
384.0	CARBONDALE		CLAYSTONE & SHALE	8.0	266.0
376.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	274.0
374.0	CARBONDALE	BANKSTON FORK	CLAYSTONE & SHALE	1.7	276.0
372.3	CARBONDALE	BANKSTON FORK	LIMESTONE	8.3	277.7
364.0	CARBONDALE	BRERETON	LIMESTONE	3.0	286.0
361.0	CARBONDALE	ANNA	BLACK SHALE	4.5	289.0
357.0	CARBONDALE	HERRIN	COAL	7.5	293.0

MAPID: 11700152000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 4 QUARTERS/FOOTAGES: 100' S line, 50' E line of SW SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.872763 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.158118 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 650.5 LOGGED (FT.): 304.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO., HOLE #14 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
650.5			CLAY	18.0	0.0	
632.5			GRAVEL	26.0	18.0	
606.5			CLAY & GRAVEL	34.0	44.0	
572.5			CLAY	12.0	78.0	
560.5			GRAVEL	3.0	90.0	
557.5	MODESTO	CARLINVILLE	LIMESTONE	6.0	93.0	
551.5	MODESTO		CLAYSTONE & SHALE	4.0	99.0	
547.5	MODESTO		SANDY SHALE	32.0	103.0	
515.5	MODESTO	CHAPEL	COAL	0.3	135.0	
515.2	MODESTO		CLAYSTONE & SHALE	8.8	135.3	
506.5	MODESTO		SANDY SHALE	63.0	144.0	
443.5	MODESTO		CLAYSTONE & SHALE	6.0	207.0	
437.5	MODESTO		FOSSILIFEROUS SHALE	0.4	213.0	
437.1	MODESTO		CLAYSTONE & SHALE	2.8	213.4	
434.3	MODESTO		CALCARIOUS SANDY SHALE	4.8	216.2	
429.5	MODESTO		SANDY SHALE	9.0	221.0	
420.5	MODESTO		CLAYSTONE & SHALE	2.0	230.0	
418.5	MODESTO		CLAYSTONE & SHALE	4.0	232.0	
414.5	MODESTO		CALCAREOUS SHALE	15.0	236.0	SANDY SH
399.5	MODESTO		SHALE	2.0	251.0	
397.5	MODESTO		LIMESTONE	0.7	253.0	
396.8	MODESTO		CLAYSTONE & SHALE	4.3	253.7	
392.5	MODESTO	PIASA	LIMESTONE	4.0	258.0	
388.5	MODESTO		CLAYSTONE & SHALE	4.0	262.0	
384.5	CARBONDALE	DANVILLE	COAL	2.0	266.0	
382.5	CARBONDALE		CLAYSTONE & SHALE	8.0	268.0	
374.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	276.0	
372.5	CARBONDALE		CLAYSTONE & SHALE	1.7	278.0	
370.8	CARBONDALE	BRERETON	LIMESTONE	11.3	279.7	
359.5	CARBONDALE	ANNA	CLAYSTONE & SHALE	4.5	291.0	
355.0	CARBONDALE	HERRIN	COAL	7.5	295.5	
347.5	CARBONDALE		UNDERCLAY	1.0	303.0	

MAPID: 11721834000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 4 QUARTERS/FOOTAGES: 1275' S line, 1360' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.881744 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.161313 DATE COLLECTED: 5 / 1 / 1978

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 295.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-64 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
642.0			UNCONSOLIDATED	71.0	0.0
571.0	MODESTO	CARLINVILLE	LIMESTONE	6.0	71.0
565.0	MODESTO		SANDY SHALE	37.0	77.0
528.0	MODESTO	CHAPEL	COAL	0.5	114.0
527.5	MODESTO		GRAY SHALE	3.5	114.5
524.0	MODESTO		GRAY SHALE	6.0	118.0
518.0	MODESTO		SANDY SHALE	15.0	124.0
503.0	MODESTO		GRAY SHALE	57.0	139.0
446.0	MODESTO		GRAY SHALE	11.0	196.0
435.0	MODESTO		GRAY SHALE	3.0	207.0
432.0	MODESTO		BLACK SHALE	2.0	210.0
430.0	MODESTO		SANDY SHALE	16.0	212.0
414.0	MODESTO		SHALE	5.0	228.0
409.0	MODESTO	PIASA	LIMESTONE	4.5	233.0
404.5	MODESTO		GRAY SHALE	5.5	237.5
399.0	CARBONDALE	DANVILLE	COAL	1.5	243.0
397.5	CARBONDALE		GRAY SHALE	5.5	244.5
392.0	CARBONDALE	BANKSTON FORK	LIMESTONE	10.0	250.0
382.0	CARBONDALE		GRAY SHALE	6.0	260.0
376.0	CARBONDALE	BRERETON	BLACK SHALE	8.0	266.0
368.0	CARBONDALE	HERRIN	COAL	8.1	274.0
359.9	CARBONDALE		SHALE	0.3	282.1
359.5	CARBONDALE		CORE LOSS	0.6	282.5
359.0	CARBONDALE		GRAY SHALE	1.0	283.0
358.0	CARBONDALE		LIMESTONE	6.0	284.0
352.0	CARBONDALE		GRAY SHALE	5.0	290.0

MAPID: 11790153000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 4 QUARTERS/FOOTAGES: 37' S line, 30' E line of NE SW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.877458 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.161564 DATE COLLECTED: 8 / 29 / 1977

SURFACE ELEVATION (FT.): 651.1 LOGGED (FT.): 303.0 LOG TYPE: Drillers Log

SOURCE: AMAX U470PM WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
651.1	PLEISTOCENE		UNCONSOLIDATED	74.0	0.0	
577.1			ROCK	213.0	74.0	
364.1	CARBONDALE	HERRIN	COAL	7.0	287.0	
357.1	CARBONDALE		ROCK	9.0	294.0	

MAPID: 11790155000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 4 QUARTERS/FOOTAGES: 76' N line, 45' E line of NE NE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.868238 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.17315 DATE COLLECTED: 8 / 22 / 1977

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 283.0 LOG TYPE: Drillers Log

SOURCE: AMAX U599GI WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
650.0	PLEISTOCENE		UNCONSOLIDATED	69.0	0.0	
581.0			ROCK	199.0	69.0	
382.0	CARBONDALE	HERRIN	COAL	6.0	268.0	
376.0	CARBONDALE		ROCK	9.0	274.0	

MAPID: 11700730000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 5 QUARTERS/FOOTAGES: 1250' S line, 1090' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.890431

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.161243

DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 296.1

LOG TYPE: Survey Core Study

SOURCE: MT. OLIVE & STAUNTON COAL CO. 16

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
403.1	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.6	246.9	
398.5	MODESTO		GRAY SHALE	4.0	251.5	
394.5	CARBONDALE	DANVILLE	COAL	2.0	255.5	
392.5	CARBONDALE		CLAYSTONE & SHALE	4.9	257.5	
387.7	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.3	262.3	UPPER BENCH
384.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	1.0	265.6	SHALE PARTING
383.4	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	4.3	266.6	
379.2	CARBONDALE	LAWSON	SANDSTONE/SILTSTONE	6.4	270.8	
372.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	11.3	277.3	
361.5	CARBONDALE	ANNA	BLACK SHALE	0.5	288.5	
361.0	CARBONDALE	HERRIN	COAL	7.1	289.0	

MAPID: 11700730000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 5 QUARTERS/FOOTAGES: 1250' S line, 1090' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.890431

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.161243

DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 295.1

LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 16

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
400.4	MODESTO	PIASA	LIMESTONE	4.6	249.6	
395.8	MODESTO		UNCLASSIFIED	4.0	254.2	
391.8	CARBONDALE	DANVILLE	COAL	2.0	258.2	
389.8	CARBONDALE		UNCLASSIFIED	5.4	260.2	
384.4	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	265.6	
381.1	CARBONDALE	ANVIL ROCK	SANDSTONE	4.4	268.9	
376.7	CARBONDALE		SHALE	3.0	273.3	
373.7	CARBONDALE	BRERETON	LIMESTONE	10.9	276.3	
362.8	CARBONDALE	ANNA	BLACK SHALE	0.8	287.2	
362.0	CARBONDALE	HERRIN	COAL	7.1	288.0	

MAPID: 11700730000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 5 QUARTERS/FOOTAGES: 1250' S line, 1090' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.890431 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.161243 DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 302.0 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 16 WELL TYPE: Coal Test

COMMENT: CORE NO.75'-302'

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
391.5	CARBONDALE	DANVILLE	COAL	2.0	258.5
361.5	CARBONDALE	HERRIN	COAL	7.1	288.5

MAPID: 11701009000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 5 QUARTERS/FOOTAGES: 330' N line, 330' W line of NE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.89476 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.171879 DATE COLLECTED: 4 / 0 / 1953

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 256.0 LOG TYPE: Electric Log

SOURCE: WHITE EDGAR WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
404.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	236.0
397.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	243.0
395.0	CARBONDALE		UNCLASSIFIED	1.0	245.0
394.0	CARBONDALE	BRERETON	LIMESTONE	6.0	246.0
388.0	CARBONDALE	HERRIN	COAL	4.0	252.0

MAPID: 11723742000C VERSION: 1

PROJECT: LUMP

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 5 QUARTERS/FOOTAGES: SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.891147 GEOLOGIST: J. MCBETH

CONFIDENTIAL: N LATITUDE: 39.164396 DATE COLLECTED: 8 / 22 / 1977

SURFACE ELEVATION (FT.): 648.0 LOGGED (FT.): 301.0 LOG TYPE: Drillers Log

SOURCE: AMAX COAL CO U490CH WELL TYPE: Coal Test

COMMENT: PERMIT 56; MINE #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
648.0	PLEISTOCENE		UNKNOWN	4.0	0.0	
644.0	PLEISTOCENE		CLAY	2.0	4.0	
642.0	PLEISTOCENE		SANDY CLAY	6.0	6.0	
636.0	PLEISTOCENE		CLAY	27.0	12.0	
609.0	PLEISTOCENE		GRAVEL	1.0	39.0	
608.0	PLEISTOCENE		CLAY	30.0	40.0	
578.0	BOND		GRAY SHALE	13.0	70.0	
565.0	BOND	CARTHAGE	LIMESTONE	6.0	83.0	
559.0	MODESTO		CLAYSTONE	11.0	89.0	
548.0	MODESTO		GRAY SHALE	144.0	100.0	
404.0	MODESTO	PIASA	LIMESTONE	4.0	244.0	
400.0	MODESTO		GRAY SHALE	7.0	248.0	DARK
393.0	CARBONDALE	DANVILLE	COAL	1.0	255.0	
392.0	CARBONDALE		SHALE	2.0	256.0	
390.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	258.0	WHITE
386.0	CARBONDALE		GRAY SHALE	1.0	262.0	
385.0	CARBONDALE	BRERETON	LIMESTONE	7.0	263.0	
378.0	CARBONDALE	BRERETON	GRAY SHALE	2.0	270.0	
376.0	CARBONDALE	BRERETON	LIMESTONE	9.0	272.0	
367.0	CARBONDALE	HERRIN	COAL	7.0	281.0	
360.0	CARBONDALE		UNDERCLAY	1.0	288.0	
359.0	CARBONDALE	HIGGINSVILLE	LIMESTONE	8.5	289.0	
350.5	CARBONDALE		GRAY SHALE	3.5	297.5	

MAPID: 11790154000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 5 QUARTERS/FOOTAGES: 1070' S line, 36' W line of NE SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.891147 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.164396 DATE COLLECTED: 8 / 22 / 1977

SURFACE ELEVATION (FT.): 648.0 LOGGED (FT.): 301.0 LOG TYPE: Drillers Log

SOURCE: AMAX U490CH WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
648.0	PLEISTOCENE		UNCONSOLIDATED	70.0	0.0	
578.0			ROCK	185.0	70.0	
393.0	CARBONDALE	DANVILLE	COAL	1.0	255.0	
392.0	CARBONDALE		ROCK	25.0	256.0	
367.0	CARBONDALE	HERRIN	COAL	7.0	281.0	
360.0	CARBONDALE		ROCK	13.0	288.0	

MAPID: 11700804000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 6 QUARTERS/FOOTAGES: 2310' S line, 2640' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.914548 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.164362 DATE COLLECTED:

SURFACE ELEVATION (FT.): 596.0 LOGGED (FT.): 198.9 LOG TYPE: Survey Core Study

SOURCE: AYRSHIRE COLLIERIES A9-5 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
432.6	MODESTO	PIASA	LIMESTONE/UNDERCLAY	3.5	163.4	
429.1	MODESTO		GRAY SHALE	5.6	166.9	
423.5	CARBONDALE	DANVILLE	COAL	1.6	172.5	
421.9	CARBONDALE		CLAYSTONE & SHALE	0.9	174.1	
421.0	CARBONDALE		GRAY SHALE	3.0	175.0	
418.0	CARBONDALE	ALLENBY	BONE COAL	0.4	178.0	
417.6	CARBONDALE		GRAY SHALE	0.5	178.4	
417.1	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	4.7	178.9	UPPER BENCH
412.4	CARBONDALE	BANKSTON FORK	CLAYSTONE & SHALE	4.1	183.6	SHALE PARTING
408.3	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	1.1	187.7	LOWER BENCH
407.2	CARBONDALE	LAWSON	MOTTLED SHALE	0.6	188.8	
406.7	CARBONDALE	LAWSON	MOTTLED SHALE	1.7	189.3	
405.0	CARBONDALE	ANNA	BLACK SHALE	1.0	191.0	
404.0	CARBONDALE	HERRIN	COAL	6.9	192.0	

MAPID: 11700804000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 6 QUARTERS/FOOTAGES: 2310' S line, 2640' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.914548 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.164362 DATE COLLECTED:

SURFACE ELEVATION (FT.): 596.0 LOGGED (FT.): 198.7 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A9-5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
433.7	MODESTO	PIASA	LIMESTONE	3.5	162.3
430.2	MODESTO		UNCLASSIFIED	5.6	165.8
424.6	CARBONDALE	DANVILLE	COAL	1.6	171.4
423.0	CARBONDALE		UNCLASSIFIED	5.8	173.0
417.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	178.8
413.2	CARBONDALE	ANVIL ROCK	SANDSTONE	0.7	182.8
412.5	CARBONDALE	BRERETON	LIMESTONE	5.2	183.5
407.3	CARBONDALE	ANNA	BLACK SHALE	3.3	188.7
404.0	CARBONDALE	HERRIN	COAL	6.7	192.0

MAPID: 11700804000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 6 QUARTERS/FOOTAGES: 2310' S line, 2640' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.914548 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.164362 DATE COLLECTED:

SURFACE ELEVATION (FT.): 595.5 LOGGED (FT.): 199.0 LOG TYPE: Survey Core Study

SOURCE: AYRSHIRE COLLIERIES A9-5 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG; 660 S OF C OF S 1/2 SEC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
425.7	CARBONDALE	DANVILLE	COAL	1.6	169.8
403.6	CARBONDALE	HERRIN	COAL	6.7	191.9

MAPID: 11790086000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 6 QUARTERS/FOOTAGES: 660' N line, 1' W line of NW SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.914408 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.163369 DATE COLLECTED: 12 / 15 / 1959

SURFACE ELEVATION (FT.): 565.5 LOGGED (FT.): 199.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE A9-5 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43; ISGS CORE DESC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
565.5	PLEISTOCENE		UNCONSOLIDATED	18.0	0.0	
547.5	MODESTO		ROCK	111.5	18.0	
436.0	MODESTO	ROCK BRANCH	COAL	0.5	129.5	
435.5	MODESTO		ROCK	40.5	130.0	
395.0	CARBONDALE	DANVILLE	COAL	1.8	170.5	
393.2	CARBONDALE		ROCK	4.0	172.3	
389.2	CARBONDALE	JAMESTOWN	COAL	0.4	176.3	
388.8	CARBONDALE		ROCK	15.1	176.7	
373.7	CARBONDALE	HERRIN	COAL	6.5	191.8	
367.2	CARBONDALE		ROCK	0.7	198.3	

MAPID: 11700710000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 7 QUARTERS/FOOTAGES: 245' N line, 755' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.921004 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.157374 DATE COLLECTED:

SURFACE ELEVATION (FT.): 561.0 LOGGED (FT.): 198.0 LOG TYPE: Survey Core Study

SOURCE: MT. OLIVE & STAUNTON COAL CO. 8 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
402.2	MODESTO	PIASA	LIMESTONE/UNDERCLAY	3.8	158.8	
398.4	MODESTO		CARBONACEOUS SHALE	5.3	162.6	
393.1	CARBONDALE	DANVILLE	COAL	2.8	167.9	
390.2	CARBONDALE		CLAYSTONE & SHALE	5.4	170.8	
384.8	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	11.9	176.2	UPPER BENCH
372.9	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.9	188.1	SHALE PARTING
372.0	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	1.8	189.0	LOWER BENCH
370.2	CARBONDALE	LAWSON	CALCAREOUS SHALE	0.3	190.8	
369.8	CARBONDALE	ANNA	BLACK SHALE	0.8	191.2	
369.0	CARBONDALE	HERRIN	COAL	6.0	192.0	

MAPID: 11700710000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 7 QUARTERS/FOOTAGES: 245' N line, 755' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.921004 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.157374 DATE COLLECTED:

SURFACE ELEVATION (FT.): 561.0 LOGGED (FT.): 197.0 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 8 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
404.8	MODESTO	PIASA	LIMESTONE	3.8	156.2
401.0	MODESTO		UNCLASSIFIED	5.5	160.0
395.5	CARBONDALE	DANVILLE	COAL	2.8	165.5
392.7	CARBONDALE		UNCLASSIFIED	7.0	168.3
385.7	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	175.3
380.7	CARBONDALE	ANVIL ROCK	SANDSTONE	0.3	180.3
380.4	CARBONDALE	BRERETON	LIMESTONE	9.3	180.6
371.1	CARBONDALE	ANNA	BLACK SHALE	1.1	189.9
370.0	CARBONDALE	HERRIN	COAL	6.0	191.0

MAPID: 11700710000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 7 QUARTERS/FOOTAGES: 245' N line, 755' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.921004 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.157374 DATE COLLECTED:

SURFACE ELEVATION (FT.): 561.0 LOGGED (FT.): 200.0 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 8 WELL TYPE: Coal Test

COMMENT: CORE NO.60'-200'

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
394.2	CARBONDALE	DANVILLE	COAL	2.8	166.8
369.5	CARBONDALE	HERRIN	COAL	6.0	191.5

MAPID: 11722144000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 7 QUARTERS/FOOTAGES: 1970' S line, 60' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.923329 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.148931 DATE COLLECTED: 5 / 8 / 1979

SURFACE ELEVATION (FT.): 648.0 LOGGED (FT.): 290.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-7-7 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
648.0			UNCONSOLIDATED	71.0	0.0
577.0	MODESTO	CARLINVILLE	LIMESTONE	3.0	71.0
574.0	MODESTO		GRAY SHALE	23.0	74.0
551.0	MODESTO		GRAY SHALE	8.0	97.0
543.0	MODESTO		SANDY SHALE	8.0	105.0
535.0	MODESTO	CHAPEL	COAL	1.0	113.0
534.0	MODESTO		GRAY SHALE	22.0	114.0
512.0	MODESTO		SANDSTONE	56.5	136.0
455.5	MODESTO		LIMESTONE	0.5	192.5
455.0	MODESTO		GRAY SHALE	17.0	193.0
438.0	MODESTO		BLACK SHALE	1.0	210.0
437.0	MODESTO		GRAY SHALE	6.0	211.0
431.0	MODESTO		CALCAREOUS SHALE	4.0	217.0
427.0	MODESTO		GRAY SHALE	10.0	221.0
417.0	MODESTO		SHALE	3.5	231.0
413.5	MODESTO	PIASA	LIMESTONE	3.5	234.5
410.0	MODESTO		GRAY SHALE	4.0	238.0
406.0	MODESTO		BLACK SHALE	2.5	242.0
403.5	CARBONDALE	DANVILLE	COAL	1.0	244.5
402.5	CARBONDALE		GRAY SHALE	8.0	245.5
394.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	253.5
392.0	CARBONDALE		GRAY SHALE	1.5	256.0
390.5	CARBONDALE	BRERETON	LIMESTONE	8.0	257.5
382.5	CARBONDALE	ANNA	BLACK SHALE	2.1	265.5
380.4	CARBONDALE	HERRIN	COAL	5.7	267.6
374.7	CARBONDALE		UNDERCLAY	2.7	273.3
372.0	CARBONDALE		LIMESTONE	6.0	276.0
366.0	CARBONDALE		GRAY SHALE	8.0	282.0

MAPID: 11700723000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 8 QUARTERS/FOOTAGES: 1290' S line, 1270' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.891069

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.146985

DATE COLLECTED:

SURFACE ELEVATION (FT.): 637.0 LOGGED (FT.): 294.9

LOG TYPE: Survey Core Study

SOURCE: MT. OLIVE & STAUNTON COAL CO. 12

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
389.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	3.5	248.0	
385.5	MODESTO		GRAY SHALE	7.3	251.5	
378.2	CARBONDALE	DANVILLE	COAL	2.8	258.8	
375.4	CARBONDALE		CLAYSTONE & SHALE	1.3	261.6	
374.2	CARBONDALE		GRAY SHALE	0.7	262.8	
373.5	CARBONDALE		GRAY SHALE	11.0	263.5	
362.5	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	3.6	274.5	UPPER BENCH
358.9	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.9	278.1	SHALE PARTING
358.0	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	4.5	279.0	
353.5	CARBONDALE	BRERETON	LIMESTONE W/ SHALE	7.6	283.5	
345.9	CARBONDALE	ANNA	BLACK SHALE	0.5	291.1	
346.0	CARBONDALE	HERRIN	COAL	3.9	291.0	

MAPID: 11700723000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 8 QUARTERS/FOOTAGES: 1290' S line, 1270' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.891069

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.146985

DATE COLLECTED:

SURFACE ELEVATION (FT.): 637.0 LOGGED (FT.): 294.9

LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 12

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
384.7	MODESTO	PIASA	LIMESTONE	3.5	252.3	
381.2	MODESTO		UNCLASSIFIED	6.8	255.8	
374.4	CARBONDALE	DANVILLE	COAL	2.8	262.6	
371.6	CARBONDALE		UNCLASSIFIED	13.0	265.4	
358.6	CARBONDALE	BANKSTON FORK	LIMESTONE	3.6	278.4	
355.0	CARBONDALE	ANVIL ROCK	SANDSTONE	0.9	282.0	
354.1	CARBONDALE	BRERETON	LIMESTONE	6.5	282.9	
347.6	CARBONDALE	ANNA	BLACK SHALE	1.6	289.4	
346.0	CARBONDALE	HERRIN	COAL	3.9	291.0	

MAPID: 11700723000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 8 QUARTERS/FOOTAGES: 1290' S line, 1270' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.891069 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.146985 DATE COLLECTED:

SURFACE ELEVATION (FT.): 637.0 LOGGED (FT.): 297.0 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 12 WELL TYPE: Coal Test

COMMENT: CORE NO.140'-297'

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
376.2	CARBONDALE	DANVILLE	COAL	2.8	260.8
345.9	CARBONDALE	HERRIN	COAL	3.9	291.1

MAPID: 11721835000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 8 QUARTERS/FOOTAGES: 34' N line, 1085' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.90128 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.157772 DATE COLLECTED: 4 / 28 / 1978

SURFACE ELEVATION (FT.): 647.0 LOGGED (FT.): 309.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-63 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSTIY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
647.0			UNCONSOLIDATED	88.0	0.0
559.0	MODESTO	CARLINVILLE	LIMESTONE	2.0	88.0
557.0	MODESTO		SHALE	14.0	90.0
543.0	MODESTO		GRAY SHALE	26.0	104.0
517.0	MODESTO	CHAPEL	COAL	0.3	130.0
516.7	MODESTO		SANDY SHALE	7.7	130.3
509.0	MODESTO		GRAY SHALE	8.0	138.0
501.0	MODESTO		SANDSTONE	5.0	146.0
496.0	MODESTO		GRAY SHALE	4.0	151.0
492.0	MODESTO		GRAY SHALE	55.5	155.0
436.5	MODESTO		GRAY SHALE	12.5	210.5
424.0	MODESTO		BLACK SHALE	2.0	223.0
422.0	MODESTO		SHALE	6.5	225.0
415.5	MODESTO		SANDY SHALE	13.0	231.5
402.5	MODESTO		SHALE	5.5	244.5
397.0	MODESTO	PIASA	LIMESTONE	5.0	250.0
392.0	MODESTO		GRAY SHALE	3.0	255.0
389.0	MODESTO		BLACK SHALE	2.8	258.0
386.2	CARBONDALE	DANVILLE	COAL	2.7	260.8
383.5	CARBONDALE		CLAYSTONE	1.5	263.5
382.0	CARBONDALE		CLAYSTONE	1.8	265.0
380.2	CARBONDALE		CLAYSTONE	2.2	266.8
378.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	269.0
376.0	CARBONDALE		CLAYSTONE & SILTSTONE	1.5	271.0
374.5	CARBONDALE		CALCAREOUS SILTSTONE	2.8	272.5
371.7	CARBONDALE	BRERETON	LIMESTONE	10.3	275.3
361.4	CARBONDALE	ANNA	BLACK SHALE	1.9	285.6
359.5	CARBONDALE	HERRIN	COAL	6.6	287.5
352.9	CARBONDALE		CLAYSTONE & SILTSTONE	2.6	294.1
350.3	CARBONDALE		LIMESTONE	2.2	296.7
348.1	CARBONDALE		CALCAREOUS SHALE	3.8	298.9
344.3	CARBONDALE		CLAYSTONE	6.3	302.7

MAPID: 11790151000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 8 QUARTERS/FOOTAGES: 64' N line, 74' W line of NW NW
 QUADRANGLE: PLAINVIEW LONGITUDE: -89.904865 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.157712 DATE COLLECTED: 8 / 29 / 1977
 SURFACE ELEVATION (FT.): 638.8 LOGGED (FT.): 291.0 LOG TYPE: Drillers Log
 SOURCE: AMAX U384DA WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
638.8	PLEISTOCENE		UNCONSOLIDATED	32.0	0.0
606.8			ROCK	238.0	32.0
368.8	CARBONDALE	HERRIN	COAL	7.0	270.0
361.8	CARBONDALE		ROCK	14.0	277.0

MAPID: 11790152000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 8 QUARTERS/FOOTAGES: 422' S line, 86' W line of SW SW
 QUADRANGLE: PLAINVIEW LONGITUDE: -89.904712 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.144592 DATE COLLECTED: 9 / 12 / 1977
 SURFACE ELEVATION (FT.): 568.2 LOGGED (FT.): 230.0 LOG TYPE: Drillers Log
 SOURCE: AMAX U401CA WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
568.2	PLEISTOCENE		UNCONSOLIDATED	42.0	0.0
526.2			ROCK	148.0	42.0
378.2	CARBONDALE	HERRIN	COAL	6.0	190.0
372.2	CARBONDALE		ROCK	34.0	196.0

MAPID: 11790211000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 8 QUARTERS/FOOTAGES: 221' N line, 35' E line of NE SE
 QUADRANGLE: BUNKER HILL LONGITUDE: -89.885631 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.06313 DATE COLLECTED: 9 / 19 / 1977
 SURFACE ELEVATION (FT.): 643.2 LOGGED (FT.): 305.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 005-011 WELL TYPE: Coal Test
 COMMENT: GILLESPIE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
643.2	PLEISTOCENE		UNCONSOLIDATED	79.0	0.0
564.2	MODESTO		ROCK	181.0	79.0
383.2	CARBONDALE	DANVILLE	COAL	1.0	260.0
382.2	CARBONDALE		ROCK	28.0	261.0
354.2	CARBONDALE	HERRIN	COAL	6.0	289.0
348.2	CARBONDALE		ROCK	10.0	295.0

MAPID: 11700153000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 10 QUARTERS/FOOTAGES: NE SE NW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.859768 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.153482 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 649.0 LOGGED (FT.): 314.5 LOG TYPE: Drillers Log

SOURCE: CRAWFORD A W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
387.0	MODESTO	PIASA	LIMESTONE	4.5	262.0
382.5	MODESTO		UNCLASSIFIED	4.5	266.5
378.0	CARBONDALE	DANVILLE	COAL	3.5	271.0
374.5	CARBONDALE		UNCLASSIFIED	8.0	274.5
366.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	282.5
358.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	290.5
355.5	CARBONDALE		UNCLASSIFIED	3.0	293.5
352.5	CARBONDALE	BRERETON	LIMESTONE	9.0	296.5
343.5	CARBONDALE	ANNA	BLACK SHALE	1.5	305.5
342.0	CARBONDALE	HERRIN	COAL	7.5	307.0

MAPID: 11700153000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 10 QUARTERS/FOOTAGES: NE SE NW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.859768 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.153482 DATE COLLECTED:

SURFACE ELEVATION (FT.): 649.0 LOGGED (FT.): 313.5 LOG TYPE: Drillers Log

SOURCE: FAIR DESCRIPTION WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
388.0	MODESTO	PIASA	LIMESTONE	4.5	261.0
383.5	MODESTO		GRAY SHALE	4.5	265.5
379.0	CARBONDALE	DANVILLE	COAL	3.5	270.0
375.5	CARBONDALE		CLAYSTONE & SHALE	2.5	273.5
373.0	CARBONDALE	GALUM	LIMESTONE	0.5	276.0
372.5	CARBONDALE		GRAY SHALE	1.0	276.5
371.5	CARBONDALE	BANKSTON FORK	LIMESTONE AND SANDSTONE	19.0	277.5
352.5	CARBONDALE	BRERETON	LIMESTONE AND SANDSTONE	8.0	296.5
344.5	CARBONDALE	ANNA	BLACK SHALE	1.5	304.5
343.0	CARBONDALE	HERRIN	COAL	7.5	306.0

MAPID: 11700154000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 11 QUARTERS/FOOTAGES: 70' N line, 1120' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.84542 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.158045 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 646.0 LOGGED (FT.): 301.1 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
388.0	MODESTO	PIASA	LIMESTONE	4.0	258.0
384.0	MODESTO		UNCLASSIFIED	2.8	262.0
381.2	CARBONDALE	DANVILLE	COAL	0.3	264.8
380.9	CARBONDALE		UNCLASSIFIED	9.0	265.1
371.9	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	274.1
364.9	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	281.1
361.9	CARBONDALE		UNCLASSIFIED	3.3	284.1
358.6	CARBONDALE	BRERETON	LIMESTONE	6.3	287.4
352.3	CARBONDALE	ANNA	BLACK SHALE	0.3	293.7
352.0	CARBONDALE	HERRIN	COAL	7.1	294.0

MAPID: 11700154000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 11 QUARTERS/FOOTAGES: 70' N line, 1120' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.84542 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.158045 DATE COLLECTED:

SURFACE ELEVATION (FT.): 646.0 LOGGED (FT.): 301.1 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
392.0	MODESTO	PIASA	LIMESTONE	4.0	254.0
388.0	MODESTO		CLAYSTONE & SHALE	2.8	258.0
385.2	CARBONDALE	DANVILLE	COAL	0.3	260.8
385.0	CARBONDALE		CLAYSTONE & SHALE	5.0	261.0
380.0	CARBONDALE	BANKSTON FORK	LIMESTONE	18.0	266.0
362.0	CARBONDALE		DARK GRAY SHALE	3.3	284.0
358.7	CARBONDALE	BRERETON	LIMESTONE	6.3	287.3
352.4	CARBONDALE	ANNA	BLACK SHALE	0.3	293.6
352.0	CARBONDALE	HERRIN	COAL	7.1	294.0

MAPID: 11700154000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 11 QUARTERS/FOOTAGES: 70' N line, 1120' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.84542 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.158045 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 645.8 LOGGED (FT.): 303.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO., HOLE #12 WELL TYPE: Coal Test

COMMENT: ESOURCE IS PLAIN TABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
645.8			SAND/CLAY	34.0	0.0	
611.8	MODESTO		CLAYSTONE & SHALE	18.0	34.0	
593.8	MODESTO		LIMESTONE	1.5	52.0	
592.3	MODESTO		CLAYSTONE & SHALE	3.1	53.5	
589.2	MODESTO		COAL	0.4	56.6	
588.8	MODESTO		FOSSILIFEROUS SHALE	0.5	57.0	
588.3	MODESTO		CLAYSTONE & SHALE	5.5	57.5	
582.8	MODESTO		SANDSTONE	4.5	63.0	
578.3	MODESTO		SANDY SHALE	15.5	67.5	
562.8	MODESTO		CLAYSTONE & SHALE	9.0	83.0	
553.8	MODESTO	CARLINVILLE	LIMESTONE	6.0	92.0	
547.8	MODESTO		FOSSILIFEROUS SHALE	0.4	98.0	
547.4	MODESTO		CLAYSTONE & SHALE	3.6	98.4	
543.8	MODESTO		SANDY SHALE	17.0	102.0	
526.8	MODESTO		CLAYSTONE & SHALE	9.0	119.0	
517.8	MODESTO		BLACK SHALE	1.0	128.0	
516.8	MODESTO		CLAYSTONE & SHALE	3.9	129.0	
512.9	MODESTO	CHAPEL	COAL	0.1	132.9	
512.8	MODESTO		CLAYSTONE & SHALE	5.0	133.0	
507.8	MODESTO		SANDY SHALE	43.0	138.0	
464.8	MODESTO		CLAYSTONE & SHALE	34.5	181.0	
430.3	MODESTO		CALCAREOUS SHALE	0.5	215.5	
429.8	MODESTO		CLAYSTONE & SHALE	3.0	216.0	
426.8	MODESTO		SANDY SHALE	4.0	219.0	
422.8	MODESTO		CLAYSTONE & SHALE	6.3	223.0	
416.5	MODESTO		CARBONACEOUS SHALE	1.3	229.3	
415.1	MODESTO		SHALE	2.3	230.7	
412.8	MODESTO		LIMESTONE W/ DARK SILTSTONE	14.3	233.0	
398.5	MODESTO		CLAYSTONE	6.7	247.3	
391.8	MODESTO	PIASA	LIMESTONE	4.0	254.0	
387.8	MODESTO		CLAYSTONE & SHALE	2.0	258.0	
385.8	MODESTO		FOSSILIFEROUS SHALE	0.8	260.0	
385.0	CARBONDALE	DANVILLE	COAL	0.3	260.8	
384.8	CARBONDALE		CLAYSTONE & SHALE	5.0	261.0	
379.8	CARBONDALE	BANKSTON FORK	LIMESTONE	18.0	266.0	
361.8	CARBONDALE		BLACK SHALE	3.3	284.0	W/ FOSSILS
358.5	CARBONDALE	BRERETON	LIMESTONE	6.3	287.3	
352.2	CARBONDALE	ANNA	BLACK SHALE	0.3	293.6	

352.0	CARBONDALE	HERRIN	COAL	7.1	293.8
344.9	CARBONDALE		UNDERCLAY	1.3	300.9
343.6	CARBONDALE		LIMESTONE	0.8	302.2

MAPID: 11700155000C **VERSION:** 1 **PROJECT:** NCRDS90
COUNTY: MACOUPIN **TWP/RNG:** 8N 7W **SECTION:** 13 **QUARTERS/FOOTAGES:** 3800' S line, 2450' E line
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.820915 **GEOLOGIST:** S.SROKA
CONFIDENTIAL: N **LATITUDE:** 39.140159 **DATE COLLECTED:** 7 / 0 / 1913
SURFACE ELEVATION (FT.): 667.1 **LOGGED (FT.):** 368.5 **LOG TYPE:** Drillers Log
SOURCE: SUPERIOR COAL CO., HOLE #19 **WELL TYPE:** Coal Test
COMMENT: ESOURCE IS AN ALIDADE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN COMMENT
667.1			SOIL	19.0	0.0
648.1			UNCONSOLIDATED	18.0	19.0
630.1			UNCONSOLIDATED	21.0	37.0
609.1	MODESTO		SHALE	36.0	58.0
573.1	MODESTO		SANDSTONE	1.0	94.0
572.1	MODESTO		SHALE	14.0	95.0
558.1	MODESTO		BLACK SHALE	1.0	109.0
557.1	MODESTO		SHALE	1.0	110.0
556.1	MODESTO	MACOUPIN	LIMESTONE	1.0	111.0
555.1	MODESTO		SHALE	8.0	112.0
547.1	MODESTO		SANDSTONE	3.0	120.0
544.1	MODESTO		SHALE	26.0	123.0
518.1	MODESTO	CARLINVILLE	LIMESTONE	8.0	149.0
510.1	MODESTO		SANDY SHALE	21.0	157.0
489.1	MODESTO		SHALE	22.0	178.0
467.1	MODESTO		SANDY SHALE	12.0	200.0
455.1	MODESTO		SANDY SHALE	78.0	212.0
377.1	MODESTO		SANDSTONE	22.0	290.0
355.1	MODESTO		LIMESTONE	2.0	312.0
353.1	MODESTO		SHALE	2.0	314.0
351.1	MODESTO		LIMESTONE	1.0	316.0
350.1	MODESTO		SANDY SHALE	5.0	317.0
345.1	MODESTO	PIASA	LIMESTONE	4.0	322.0
341.1			SHALE	11.0	326.0
330.1	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	337.0
323.1	CARBONDALE		CALCAREOUS SHALE	1.0	344.0
322.1	CARBONDALE	BRERETON	LIMESTONE	9.6	345.0
312.5	CARBONDALE		BLACK SHALE	4.8	354.6
307.7	CARBONDALE	HERRIN	COAL	8.0	359.4
299.7	CARBONDALE		UNDERCLAY	1.0	367.4

MAPID: 11700155000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 13 QUARTERS/FOOTAGES: 3800' S line, 2450' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.820915 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.140159 DATE COLLECTED: 7 / 0 / 1913

SURFACE ELEVATION (FT.): 667.0 LOGGED (FT.): 368.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
344.4	MODESTO	PIASA	LIMESTONE	4.0	322.6
340.4	MODESTO		UNCLASSIFIED	3.0	326.6
337.4	CARBONDALE		UNCLASSIFIED	8.0	329.6
329.4	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	337.6
322.4	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	344.6
321.4	CARBONDALE	BRERETON	LIMESTONE	9.6	345.6
311.8	CARBONDALE	ANNA	BLACK SHALE	4.8	355.2
307.0	CARBONDALE	HERRIN	COAL	8.0	360.0

MAPID: 11700156000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 13 QUARTERS/FOOTAGES: W2 SW NE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.820285 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.138872 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 663.0 LOGGED (FT.): 353.0 LOG TYPE: Drillers Log

SOURCE: GILLESPIE COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
663.0			SOIL	20.0	0.0	
643.0			UNCONSOLIDATED	14.0	20.0	
629.0			UNCONSOLIDATED	15.0	34.0	
614.0			UNCONSOLIDATED	4.0	49.0	
610.0	MODESTO		SHALE	41.0	53.0	
569.0	MODESTO		SANDSTONE	2.0	94.0	
567.0	MODESTO		SHALE	2.0	96.0	
565.0	MODESTO		UNKNOWN	1.0	98.0	LOG HAS DARK ROCK
564.0	MODESTO		SHALE	5.0	99.0	
559.0	MODESTO		SANDSTONE	3.0	104.0	
556.0	MODESTO		SANDY SHALE	14.0	107.0	
542.0	MODESTO		SHALE	14.0	121.0	
528.0	MODESTO		SANDSTONE	1.0	135.0	
527.0	MODESTO	CARLINVILLE	LIMESTONE	7.0	136.0	
520.0	MODESTO		SANDY SHALE	19.0	143.0	
501.0	MODESTO		SHALE	21.0	162.0	
480.0	MODESTO		SHALE	6.0	183.0	
474.0	MODESTO		SANDY SHALE	1.0	189.0	
473.0	MODESTO		SANDSTONE	1.0	190.0	
472.0	MODESTO		SANDY SHALE	20.0	191.0	
452.0	MODESTO		SANDY SHALE	34.0	211.0	
418.0	MODESTO		SHALE	21.0	245.0	
397.0	MODESTO		SANDY SHALE	5.0	266.0	
392.0	MODESTO		SANDSTONE	1.0	271.0	
391.0	MODESTO		SANDY SHALE	8.0	272.0	
383.0	MODESTO		SHALE	11.0	280.0	
372.0	MODESTO		SANDSTONE	1.0	291.0	
371.0	MODESTO		SHALE	2.0	292.0	
369.0	MODESTO		SANDSTONE	1.0	294.0	
368.0	MODESTO		SHALE	1.0	295.0	MIXED
367.0	MODESTO		SANDSTONE	1.0	296.0	
366.0	MODESTO		SHALE	2.0	297.0	
364.0	MODESTO		LIMESTONE	2.0	299.0	
362.0	MODESTO		SHALE	2.0	301.0	
360.0	MODESTO		SANDY SHALE	1.0	303.0	
359.0	MODESTO		LIMESTONE	3.0	304.0	
356.0	MODESTO		SHALE	8.0	307.0	
348.0	MODESTO		SANDY SHALE	1.0	315.0	
347.0	MODESTO		SHALE	3.0	316.0	MIXED

344.0	MODESTO	PIASA	LIMESTONE	4.0	319.0
340.0	CARBONDALE		CALCAREOUS SHALE	1.0	323.0
339.0	CARBONDALE		LIMESTONE	1.0	324.0
338.0	CARBONDALE		SANDY SHALE	1.0	325.0
337.0	CARBONDALE		LIMESTONE	15.0	326.0
322.0	CARBONDALE		SHALE	2.0	341.0
320.0	CARBONDALE	HERRIN	COAL	7.5	343.0
312.5	CARBONDALE		SHALE	0.5	350.5
312.0	CARBONDALE		UNDERCLAY	2.0	351.0

MAPID: 11700156000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 13 QUARTERS/FOOTAGES: W2 SW NE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.820285 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.138872 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 663.0 LOGGED (FT.): 350.5 LOG TYPE: Drillers Log

SOURCE: GILLESPIE COAL CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN COMMENT
359.0	MODESTO	PIASA	LIMESTONE	3.0	304.0
356.0	MODESTO		UNCLASSIFIED	3.0	307.0
353.0	CARBONDALE		UNCLASSIFIED	9.0	310.0
344.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	319.0
338.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	325.0
335.0	CARBONDALE		UNCLASSIFIED	3.0	328.0
332.0	CARBONDALE	BRERETON	LIMESTONE	10.0	331.0
322.0	CARBONDALE	ANNA	BLACK SHALE	2.0	341.0
320.0	CARBONDALE	HERRIN	COAL	7.5	343.0

MAPID: 11700315000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 13 QUARTERS/FOOTAGES: 150' S line, 350' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.813303 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.130322 DATE COLLECTED: 0 / 0 / 1880

SURFACE ELEVATION (FT.): 659.8 LOGGED (FT.): 373.4 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATED COAL CO. WELL TYPE: Coal Test

COMMENT: SHAFT OF DORSEY MINE, IL RPTS V.7:12-13

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
659.8			CLAY	24.0	0.0	
635.8	BOND	CARTHAGE	LIMESTONE	4.0	24.0	
631.8	MODESTO		BLACK SHALE	2.0	28.0	
629.8	MODESTO	NEW HAVEN	COAL	0.1	30.0	
629.7	MODESTO		UNDERCLAY	1.7	30.1	
628.0	MODESTO		SHALE	3.0	31.8	
625.0	MODESTO	MACOUPIN	LIMESTONE	0.5	34.8	
624.5	MODESTO	WOMAC	SHALE	30.0	35.3	
594.5	MODESTO		COAL	0.3	65.3	
594.2	MODESTO		UNDERCLAY	2.0	65.6	
592.2	MODESTO		SHALE	40.0	67.6	
552.2	MODESTO		UNDERCLAY	20.0	107.6	
532.2	MODESTO		CARBONACEOUS SHALE	6.0	127.6	
526.2	MODESTO	CARLINVILLE	LIMESTONE	6.7	133.6	
519.5	MODESTO		CARBONACEOUS SHALE	1.8	140.3	
517.7	MODESTO		COAL	0.3	142.1	
517.5	MODESTO		UNDERCLAY	1.5	142.3	
516.0	MODESTO		SHALE	58.0	143.8	
458.0	MODESTO		LIMESTONE	2.0	201.8	
456.0	MODESTO		CARBONACEOUS SHALE	3.0	203.8	
453.0	MODESTO	CHAPEL	COAL	0.6	206.8	
452.4	MODESTO		SANDY SHALE	40.0	207.4	
412.4	MODESTO		SHALE	17.0	247.4	W/ THIN COAL STREAKS
395.4	MODESTO		SANDSTONE/SHALE	55.0	264.4	
340.4	MODESTO	PIASA	LIMESTONE	5.0	319.4	
335.4	CARBONDALE	DANVILLE	COAL	0.5	324.4	
334.9	CARBONDALE		UNDERCLAY	1.7	324.9	
333.2	CARBONDALE		SHALE	8.0	326.6	
325.2	CARBONDALE	BRERETON	LIMESTONE	27.0	334.6	
298.2	CARBONDALE	ANNA	BLACK SHALE	4.0	361.6	
294.2	CARBONDALE	HERRIN	COAL	7.8	365.6	

MAPID: 11700315000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 13 QUARTERS/FOOTAGES: 150' S line, 350' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.813303

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.130322

DATE COLLECTED: 0 / 0 / 1880

SURFACE ELEVATION (FT.): 660.0

LOGGED (FT.): 373.8

LOG TYPE: Drillers Log

SOURCE: CONSOLIDATION COAL CO.

WELL TYPE: Mine Shaft

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
340.2	MODESTO	PIASA	LIMESTONE	4.0	319.8
336.2	MODESTO		UNCLASSIFIED	1.0	323.8
335.2	CARBONDALE	DANVILLE	COAL	0.5	324.8
334.7	CARBONDALE		UNCLASSIFIED	9.7	325.3
325.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.0	335.0
315.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.5	345.0
311.5	CARBONDALE		UNCLASSIFIED	3.5	348.5
308.0	CARBONDALE	BRERETON	LIMESTONE	10.0	352.0
298.0	CARBONDALE	ANNA	BLACK SHALE	4.0	362.0
294.0	CARBONDALE	HERRIN	COAL	7.8	366.0

MAPID: 11701010000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 13 QUARTERS/FOOTAGES: SW SW SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.820131 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.130612 DATE COLLECTED: 0 / 0 / 1918

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 356.0 LOG TYPE: Drillers Log

SOURCE: GILLESPIE COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
660.0			SOIL	20.0	0.0	
640.0			UNCONSOLIDATED	14.0	20.0	
626.0			UNCONSOLIDATED	15.0	34.0	
611.0			UNCONSOLIDATED	4.0	49.0	
607.0	MODESTO		SHALE	41.0	53.0	
566.0	MODESTO		SANDSTONE	2.0	94.0	
564.0	MODESTO		SHALE	2.0	96.0	
562.0	MODESTO		UNKNOWN	1.0	98.0	LOG HAS DARK ROCK
561.0	MODESTO		SHALE	6.0	99.0	
555.0	MODESTO		SANDSTONE	3.0	105.0	
552.0	MODESTO		SANDY SHALE	14.0	108.0	
538.0	MODESTO		SHALE	14.0	122.0	
524.0	MODESTO		SANDSTONE	1.0	136.0	
523.0	MODESTO	CARLINVILLE	LIMESTONE	7.0	137.0	
516.0	MODESTO		SANDY SHALE	19.0	144.0	
497.0	MODESTO		SHALE	21.0	163.0	
476.0	MODESTO		SHALE	6.0	184.0	
470.0	MODESTO		SANDY SHALE	1.0	190.0	
469.0	MODESTO		SANDSTONE	1.0	191.0	
468.0	MODESTO	CHAPEL	COAL	1.0	192.0	
467.0	MODESTO		SANDY SHALE	20.0	193.0	
447.0	MODESTO		SANDY SHALE	34.0	213.0	
413.0	MODESTO		SHALE	21.0	247.0	
392.0	MODESTO		SANDY SHALE	5.0	268.0	
387.0	MODESTO		SANDSTONE	1.0	273.0	
386.0	MODESTO		SANDY SHALE	8.0	274.0	
378.0	MODESTO		SHALE	11.0	282.0	
367.0	MODESTO		SANDSTONE	1.0	293.0	
366.0	MODESTO		SHALE	2.0	294.0	
364.0	MODESTO		SANDSTONE	1.0	296.0	
363.0	MODESTO		SHALE	1.0	297.0	MIXED
362.0	MODESTO		SANDSTONE	1.0	298.0	
361.0	MODESTO		SHALE	3.0	299.0	
358.0	MODESTO		LIMESTONE	2.0	302.0	
356.0	MODESTO		SHALE	2.0	304.0	
354.0	MODESTO		SANDY SHALE	1.0	306.0	
353.0	MODESTO		LIMESTONE	3.0	307.0	
350.0	MODESTO		SHALE	8.0	310.0	
342.0	MODESTO		SANDY SHALE	1.0	318.0	

341.0	MODESTO		SHALE	3.0	319.0	MIXED
338.0	MODESTO	PIASA	LIMESTONE	4.0	322.0	
334.0	CARBONDALE		CALCAREOUS SHALE	1.0	326.0	
333.0	CARBONDALE		LIMESTONE	1.0	327.0	
332.0	CARBONDALE		SANDY SHALE	1.0	328.0	
331.0	CARBONDALE		LIMESTONE	15.0	329.0	
316.0	CARBONDALE		SHALE	2.0	344.0	
314.0	CARBONDALE	HERRIN	COAL	7.5	346.0	
306.5	CARBONDALE		SHALE	0.5	353.5	
306.0	CARBONDALE		UNDERCLAY	2.0	354.0	

MAPID: 11700157000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 15 QUARTERS/FOOTAGES: 50' S line, 120' E line of SW SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.854134 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.129283 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 654.4 LOGGED (FT.): 328.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO., HOLE #13 WELL TYPE: Coal Test

COMMENT: ESOURCE IS AN ALIDADE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
654.4			CLAY	10.0	0.0
644.4			UNKNOWN	20.0	10.0
624.4			BOULDERS & CLAY	14.0	30.0
610.4	MODESTO		SANDY SHALE	32.0	44.0
578.4	MODESTO		FOSSILIFEROUS SHALE	0.4	76.0
578.0	MODESTO		CLAYSTONE & SHALE	3.6	76.4
574.4	MODESTO		CLAYSTONE & SHALE	6.0	80.0
568.4	MODESTO	BURROUGHS	LIMESTONE	5.0	86.0
563.4	MODESTO		SANDY SHALE	9.0	91.0
554.4	MODESTO		CLAYSTONE & SHALE	16.0	100.0
538.4	MODESTO	CARLINVILLE	LIMESTONE	7.0	116.0
531.4	MODESTO		FOSSILIFEROUS SHALE	1.0	123.0
530.4	MODESTO		SANDY SHALE	27.0	124.0
503.4	MODESTO		CLAYSTONE & SHALE	7.0	151.0
496.4	MODESTO	CHAPEL	COAL	0.2	158.0
496.2	MODESTO		CLAYSTONE & SHALE	6.8	158.2
489.4			SANDY SHALE	41.0	165.0
448.4			CLAYSTONE & SHALE	45.0	206.0
403.4			CALCAREOUS SHALE	2.4	251.0
401.0			CLAYSTONE & SHALE	14.6	253.4
386.4			SANDY SHALE	14.0	268.0
372.4	CARBONDALE		CLAYSTONE & SHALE	7.0	282.0
365.4	CARBONDALE		LIMESTONE	20.0	289.0
345.4	CARBONDALE		BLACK SHALE & LIMESTONE	5.0	309.0
340.4	CARBONDALE	BRERETON	LIMESTONE	5.0	314.0
335.4	CARBONDALE		CLAYSTONE & SHALE	0.5	319.0
334.9	CARBONDALE	HERRIN	COAL	7.5	319.5
327.4	CARBONDALE		UNDERCLAY	1.0	327.0

MAPID: 11700157000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 15 QUARTERS/FOOTAGES: 50' S line, 120' E line of SW SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.854134 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.129283 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 654.0 LOGGED (FT.): 327.5 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
371.5	CARBONDALE		UNCLASSIFIED	11.5	282.5	
360.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.5	294.0	
350.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	303.5	
347.5	CARBONDALE		UNCLASSIFIED	3.0	306.5	
344.5	CARBONDALE	BRERETON	LIMESTONE	10.0	309.5	
334.5	CARBONDALE	ANNA	BLACK SHALE	0.5	319.5	
334.0	CARBONDALE	HERRIN	COAL	7.5	320.0	

MAPID: 11700725000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 16 QUARTERS/FOOTAGES: 1120' S line, 2600' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.876992 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.132088 DATE COLLECTED:

SURFACE ELEVATION (FT.): 651.0 LOGGED (FT.): 297.2 LOG TYPE: Survey Core Study

SOURCE: MT. OLIVE & STAUNTON COAL CO. 14 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
396.5	MODESTO	PIASA	LIMESTONE/UNDERCLAY	3.3	254.5	
393.2	MODESTO		DARK GRAY SHALE	4.9	257.8	
388.2	CARBONDALE	DANVILLE	COAL	1.2	262.8	
387.1	CARBONDALE		CLAYSTONE & SHALE	3.5	263.9	
383.6	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	0.3	267.4	UPPER BENCH
383.3	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.0	267.7	SHALE PARTING
381.3	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.2	269.7	LOWER BENCH
378.2	CARBONDALE	LAWSON	CLAYSTONE & SHALE	0.8	272.8	
377.4	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	15.2	273.6	
362.2	CARBONDALE	ANNA	BLACK SHALE	1.3	288.8	
361.0	CARBONDALE	HERRIN	COAL	7.2	290.0	

MAPID: 11700725000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 16 QUARTERS/FOOTAGES: 1120' S line, 2600' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.876992 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.132088 DATE COLLECTED:

SURFACE ELEVATION (FT.): 651.0 LOGGED (FT.): 297.2 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 14 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
396.7	MODESTO	PIASA	LIMESTONE	3.3	254.3
393.4	MODESTO		UNCLASSIFIED	4.9	257.6
388.5	CARBONDALE	DANVILLE	COAL	1.2	262.5
387.3	CARBONDALE		UNCLASSIFIED	6.0	263.7
381.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.2	269.7
378.1	CARBONDALE	ANVIL ROCK	SANDSTONE	2.7	272.9
375.4	CARBONDALE		SHALE	2.0	275.6
373.4	CARBONDALE	BRERETON	LIMESTONE	11.0	277.6
362.4	CARBONDALE	ANNA	BLACK SHALE	1.4	288.6
361.0	CARBONDALE	HERRIN	COAL	7.2	290.0

MAPID: 11700725000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 16 QUARTERS/FOOTAGES: 1120' S line, 2600' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.876992 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.132088 DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.8 LOGGED (FT.): 307.2 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 14 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
387.5	CARBONDALE	DANVILLE	COAL	1.2	263.3
350.8	CARBONDALE	HERRIN	COAL	7.2	300.0

MAPID: 11722202000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 17 QUARTERS/FOOTAGES: 2480' N line, 115' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.886874 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.136574 DATE COLLECTED: 9 / 8 / 1979

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 295.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-17-63C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
640.0			UNCONSOLIDATED	69.0	0.0
571.0	MODESTO	CARLINVILLE	LIMESTONE	7.5	69.0
563.5	MODESTO		SILTY SHALE	10.5	76.5
553.0	MODESTO		GRAY SHALE	34.0	87.0
519.0	MODESTO		SANDY SHALE	13.0	121.0
506.0	MODESTO	CHAPEL	COAL	0.3	134.0
505.7	MODESTO		GRAY SHALE	9.7	134.3
496.0	MODESTO		SANDY SHALE	18.0	144.0
478.0	MODESTO		GRAY SHALE	28.0	162.0
450.0	MODESTO		SANDY SHALE	15.0	190.0
435.0	MODESTO		GRAY SHALE	7.0	205.0
428.0	MODESTO		BLACK SHALE	2.0	212.0
426.0	MODESTO		GRAY SHALE	20.0	214.0
406.0	MODESTO		SHALE	3.0	234.0
403.0	MODESTO	PIASA	LIMESTONE	4.0	237.0
399.0	MODESTO		GRAY SHALE	2.0	241.0
397.0	MODESTO		SHALE	3.5	243.0
393.5	CARBONDALE	DANVILLE	COAL	2.5	246.5
391.0	CARBONDALE		GRAY SHALE	9.4	249.0
381.6	CARBONDALE	BANKSTON FORK	LIMESTONE	6.8	258.4
374.8	CARBONDALE		SHALE	1.0	265.2
373.8	CARBONDALE	BRERETON	LIMESTONE	1.9	266.2
371.9	CARBONDALE		SHALE	3.9	268.1
368.0	CARBONDALE	HERRIN	COAL	6.9	272.0
361.1	CARBONDALE		SHALE	1.0	278.9
360.0	CARBONDALE		LIMESTONE	5.5	280.0
354.5	CARBONDALE		GRAY SHALE	2.0	285.5
352.5	CARBONDALE		GRAY SHALE	7.5	287.5

MAPID: 11700158000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 18 QUARTERS/FOOTAGES: 10' S line, 200' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.922509 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.129135 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 640.1 LOGGED (FT.): 270.0 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MCHY. CO., HOLE #5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
640.1			SOIL	15.0	0.0	
625.1			SAND & GRAVEL	5.0	15.0	
620.1			CLAY	44.0	20.0	W/ SAND STREAKS
576.1			BOULDERS & GRAVEL	6.0	64.0	
570.1	MODESTO		SHALE	32.0	70.0	
538.1	MODESTO	CHAPEL	COAL	0.2	102.0	
537.9	MODESTO		UNDERCLAY	6.8	102.2	
531.1	MODESTO		SHALE	71.0	109.0	
460.1	MODESTO		LIMESTONE	1.0	180.0	
459.1	MODESTO		SHALE	44.0	181.0	
415.1	MODESTO	PIASA	LIMESTONE	2.0	225.0	
413.1	MODESTO		SHALE	7.3	227.0	
405.8	CARBONDALE	DANVILLE	COAL	2.2	234.3	
403.7	CARBONDALE		SHALE	12.8	236.4	
390.8	CARBONDALE	BRERETON	LIMESTONE	7.8	249.3	
383.1	CARBONDALE	ANNA	BLACK SHALE	2.8	257.0	
380.3	CARBONDALE	HERRIN	COAL	5.7	259.8	
374.7	CARBONDALE		SHALE	1.0	265.4	
373.7	CARBONDALE		SHALY LIMESTONE	3.6	266.4	

MAPID: 11700158000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 18 QUARTERS/FOOTAGES: 10' S line, 200' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.922509 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.129135 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 265.7 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MACHINE CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
414.9	MODESTO	PIASA	LIMESTONE	2.0	225.1
412.9	MODESTO		UNCLASSIFIED	7.3	227.1
405.6	CARBONDALE	DANVILLE	COAL	2.2	234.4
403.4	CARBONDALE		UNCLASSIFIED	5.0	236.6
398.4	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.8	241.6
392.6	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	247.4
391.6	CARBONDALE		UNCLASSIFIED	1.0	248.4
390.6	CARBONDALE	BRERETON	LIMESTONE	7.8	249.4
382.8	CARBONDALE	ANNA	BLACK SHALE	2.8	257.2
380.0	CARBONDALE	HERRIN	COAL	5.7	260.0

MAPID: 11700708000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 18 QUARTERS/FOOTAGES: 3940' S line, 1520' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.918007 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.139967 DATE COLLECTED:

SURFACE ELEVATION (FT.): 646.0 LOGGED (FT.): 281.2 LOG TYPE: Survey Core Study

SOURCE: MT. OLIVE & STAUNTON COAL CO. 6 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
408.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	2.9	238.0
405.1	MODESTO		DARK GRAY SHALE	5.8	240.9
399.3	CARBONDALE	DANVILLE	COAL	0.9	246.7
398.4	CARBONDALE		CLAYSTONE & SHALE	3.0	247.6
395.4	CARBONDALE		SHALE & SANDSTONE	2.2	250.6
393.2	CARBONDALE		CALCAREOUS SHALE	12.3	252.8
381.0	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	4.5	265.0
376.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	6.2	269.5
370.3	CARBONDALE	ANNA	GRAY SHALE	0.9	275.7
369.0	CARBONDALE	HERRIN	COAL	4.2	277.0

MAPID: 11700708000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 18 QUARTERS/FOOTAGES: 3940' S line, 1520' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.918007 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.139967 DATE COLLECTED:

SURFACE ELEVATION (FT.): 646.0 LOGGED (FT.): 281.2 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
408.7	MODESTO	PIASA	LIMESTONE	2.9	237.3
405.8	MODESTO		UNCLASSIFIED	6.8	240.2
399.0	CARBONDALE	DANVILLE	COAL	0.9	247.0
398.1	CARBONDALE		UNCLASSIFIED	14.1	247.9
384.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.7	262.0
378.3	CARBONDALE	ANVIL ROCK	SANDSTONE	1.3	267.7
377.0	CARBONDALE	BRERETON	LIMESTONE	7.1	269.0
369.9	CARBONDALE	ANNA	BLACK SHALE	0.9	276.1
369.0	CARBONDALE	HERRIN	COAL	4.2	277.0

MAPID: 11700708000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 18 QUARTERS/FOOTAGES: 3940' S line, 1520' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.918007 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.139967 DATE COLLECTED:

SURFACE ELEVATION (FT.): 645.6 LOGGED (FT.): 284.0 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
398.6	CARBONDALE	DANVILLE	COAL	0.9	247.0
368.5	CARBONDALE	HERRIN	COAL	4.2	277.1

MAPID: 11700719000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 18 QUARTERS/FOOTAGES: 51' S line, 152' W line of SW NW NE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.913654 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.140002 DATE COLLECTED:

SURFACE ELEVATION (FT.): 653.3 LOGGED (FT.): 295.0 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 11 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
394.2	CARBONDALE	DANVILLE	COAL	2.5	259.1
366.8	CARBONDALE	HERRIN	COAL	5.3	286.5

MAPID: 11700719000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 18 QUARTERS/FOOTAGES: 51' S line, 152' W line of SW NW NE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.913654 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.140002 DATE COLLECTED:

SURFACE ELEVATION (FT.): 653.0 LOGGED (FT.): 291.3 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 11 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
403.0	MODESTO	PIASA	LIMESTONE	3.4	250.0
399.6	MODESTO		UNCLASSIFIED	5.8	253.4
393.8	CARBONDALE	DANVILLE	COAL	2.5	259.2
391.3	CARBONDALE		UNCLASSIFIED	7.0	261.7
384.3	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	268.7
379.3	CARBONDALE	ANVIL ROCK	SANDSTONE	1.5	273.7
377.8	CARBONDALE		SHALE	1.5	275.2
376.3	CARBONDALE	BRERETON	LIMESTONE	7.3	276.7
369.0	CARBONDALE	ANNA	BLACK SHALE	2.0	284.0
367.0	CARBONDALE	HERRIN	COAL	5.3	286.0

MAPID: 11721836000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 18 QUARTERS/FOOTAGES: 46' N line, 39' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.905147 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.143298 DATE COLLECTED: 5 / 2 / 1978

SURFACE ELEVATION (FT.): 654.0 LOGGED (FT.): 305.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-62 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
654.0			UNCONSOLIDATED	86.0	0.0
568.0	MODESTO	CARLINVILLE	LIMESTONE	6.0	86.0
562.0	MODESTO		SANDY SHALE	33.5	92.0
528.5	MODESTO	CHAPEL	COAL	0.4	125.5
528.1	MODESTO		GRAY SHALE	10.6	125.9
517.5	MODESTO		SANDSTONE	10.5	136.5
507.0	MODESTO		SANDY SHALE	59.0	147.0
448.0	MODESTO		GRAY SHALE	13.0	206.0
435.0	MODESTO		BLACK SHALE	2.0	219.0
433.0	MODESTO		SHALE	12.0	221.0
421.0	MODESTO		SANDSTONE	4.0	233.0
417.0	MODESTO		GRAY SHALE	12.5	237.0
404.5	MODESTO	PIASA	LIMESTONE	3.0	249.5
401.5	MODESTO		GRAY SHALE	3.5	252.5
398.0	MODESTO		BLACK SHALE	3.7	256.0
394.3	CARBONDALE	DANVILLE	COAL	2.3	259.7
392.0	CARBONDALE		GRAY SHALE	4.5	262.0
387.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	266.5
385.0	CARBONDALE		GRAY SHALE	1.7	269.0
383.3	CARBONDALE	BRERETON	LIMESTONE	8.3	270.7
375.0	CARBONDALE	ANNA	BLACK SHALE	3.1	279.0
371.9	CARBONDALE	HERRIN	COAL	6.2	282.1
365.7	CARBONDALE		CLAYSTONE & SHALE	0.3	288.3
365.3	CARBONDALE		CORE LOSS	1.4	288.7
364.0	CARBONDALE		LIMESTONE	6.5	290.0
357.5	CARBONDALE		GRAY SHALE	7.5	296.5
350.0	CARBONDALE		LIMESTONE	1.0	304.0

MAPID: 11722203000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 18 QUARTERS/FOOTAGES: 60' S line, 2590' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.91412 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.129242 DATE COLLECTED: 10 / 3 / 1979

SURFACE ELEVATION (FT.): 659.0 LOGGED (FT.): 305.5 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-18-61C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
659.0			UNCONSOLIDATED	92.0	0.0
567.0	MODESTO		GRAY SHALE	12.0	92.0
555.0	MODESTO		LIMESTONE	1.0	104.0
554.0	MODESTO		SANDY SHALE	18.6	105.0
535.4	MODESTO	CHAPEL	COAL	1.4	123.6
534.0	MODESTO		GRAY SHALE	12.5	125.0
521.5	MODESTO		GRAY SHALE	7.0	137.5
514.5	MODESTO		GRAY SHALE	73.5	144.5
441.0	MODESTO		BLACK SHALE	2.0	218.0
439.0	MODESTO		SHALE	6.0	220.0
433.0	MODESTO		GRAY SHALE	12.0	226.0
421.0	MODESTO		SHALE	7.0	238.0
414.0	MODESTO	PIASA	LIMESTONE	2.5	245.0
411.5	MODESTO		SHALE	7.0	247.5
404.5	CARBONDALE	DANVILLE	COAL	3.0	254.5
401.5	CARBONDALE		CORE LOSS	6.5	257.5
395.0	CARBONDALE		GRAY SHALE	1.3	264.0
393.7	CARBONDALE	BANKSTON FORK	LIMESTONE	5.1	265.3
388.6	CARBONDALE		SHALE	0.9	270.4
387.7	CARBONDALE	BRERETON	LIMESTONE	11.2	271.3
376.5	CARBONDALE		SHALE	0.4	282.5
376.1	CARBONDALE	ANNA	BLACK SHALE	0.7	282.9
375.5	CARBONDALE	HERRIN	BONE COAL	6.4	283.5
369.1	CARBONDALE		SHALE	1.4	289.9
367.7	CARBONDALE		LIMESTONE	2.8	291.3
365.0	CARBONDALE		SHALE	0.9	294.0
364.1	CARBONDALE		SHALY LIMESTONE	1.8	294.9
362.4	CARBONDALE		SHALE	0.3	296.6
362.1	CARBONDALE		SHALE	2.0	296.9
360.1	CARBONDALE		SHALE	0.6	298.9
359.5	CARBONDALE		GRAY SHALE	4.0	299.5
355.5	CARBONDALE		SHALE	2.0	303.5
353.5	CARBONDALE		CORE LOSS	0.1	305.5

MAPID: 11700803000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 19 QUARTERS/FOOTAGES: 1745' N line, 1990' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.9119 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.124251 DATE COLLECTED:

SURFACE ELEVATION (FT.): 602.0 LOGGED (FT.): 244.0 LOG TYPE: Survey Core Study

SOURCE: AYRSHIRE COLLIERIES A9-3 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
402.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.8	200.0
397.2	MODESTO		DARK GRAY SHALE	5.1	204.8
392.1	CARBONDALE	DANVILLE	COAL	1.8	209.9
390.3	CARBONDALE		CLAYSTONE & SHALE	1.0	211.7
389.3	CARBONDALE		GRAY SHALE	5.9	212.7
383.3	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	4.6	218.7
378.8	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	6.0	223.2
372.8	CARBONDALE	ANNA	BLACK SHALE	3.1	229.2
365.0	CARBONDALE	HERRIN	COAL	7.0	237.0

MAPID: 11700803000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 19 QUARTERS/FOOTAGES: 1745' N line, 1990' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.9119 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.124251 DATE COLLECTED:

SURFACE ELEVATION (FT.): 602.0 LOGGED (FT.): 244.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A9-3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
401.0	MODESTO	PIASA	LIMESTONE	4.8	201.0
396.2	MODESTO		UNCLASSIFIED	5.1	205.8
391.1	CARBONDALE	DANVILLE	COAL	1.8	210.9
389.3	CARBONDALE		UNCLASSIFIED	6.9	212.7
382.4	CARBONDALE	BANKSTON FORK	LIMESTONE	4.6	219.6
377.8	CARBONDALE	BRERETON	LIMESTONE	9.7	224.2
368.1	CARBONDALE	ANNA	BLACK SHALE	3.1	233.9
365.0	CARBONDALE	HERRIN	COAL	7.0	237.0

MAPID: 11700803000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 19 QUARTERS/FOOTAGES: 1745' N line, 1990' E line
 QUADRANGLE: BUNKER HILL LONGITUDE: -89.9119 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.124251 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 602.0 LOGGED (FT.): 245.0 LOG TYPE: Survey Core Study
 SOURCE: AYRSHIRE COLLIERIES A9-3 WELL TYPE: Coal Test
 COMMENT: DRILLERS LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
391.2	CARBONDALE	DANVILLE	COAL	1.8	210.8
364.7	CARBONDALE	HERRIN	COAL	7.0	237.3

MAPID: 11790084000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 19 QUARTERS/FOOTAGES: 425' N line, 650' W line of SW NE
 QUADRANGLE: BUNKER HILL LONGITUDE: -89.911709 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.124287 DATE COLLECTED: 12 / 15 / 1959
 SURFACE ELEVATION (FT.): 602.0 LOGGED (FT.): 246.7 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE A9-3 WELL TYPE: Coal Test
 COMMENT: MACOUPIN COUNTY BOX #43; ISGS CORE DESC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
602.0	PLEISTOCENE		UNCONSOLIDATED	23.0	0.0
579.0	MODESTO		ROCK	190.3	23.0
388.7	CARBONDALE	DANVILLE	COAL	1.8	213.3
386.9	CARBONDALE		ROCK	24.3	215.1
362.6	CARBONDALE	HERRIN	COAL	7.0	239.4
355.6	CARBONDALE		ROCK	0.4	246.4

MAPID: 11790206000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 19 QUARTERS/FOOTAGES: 45' S line, 52' W line of SW SW
 QUADRANGLE: BUNKER HILL LONGITUDE: -89.922976 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.114758 DATE COLLECTED: 9 / 12 / 1977
 SURFACE ELEVATION (FT.): 656.5 LOGGED (FT.): 272.0 LOG TYPE: Drillers Log
 SOURCE: AMAX BB401XX WELL TYPE: Coal Test
 COMMENT: GILLESPIE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
656.5	PLEISTOCENE		UNCONSOLIDATED	38.0	0.0
618.5			ROCK	220.5	38.0
398.0	CARBONDALE	HERRIN	COAL	5.5	258.5
392.5	CARBONDALE		ROCK	8.0	264.0

MAPID: 11790207000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 19 QUARTERS/FOOTAGES: 92' S line, 32' W line of NE NW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.914287 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.128775 DATE COLLECTED: 9 / 6 / 1977

SURFACE ELEVATION (FT.): 653.2 LOGGED (FT.): 296.0 LOG TYPE: Drillers Log

SOURCE: AMAX BB579GI WELL TYPE: Coal Test

COMMENT: GILLESPIE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
653.2	PLEISTOCENE		UNCONSOLIDATED	79.0	0.0	
574.2	MODESTO		ROCK	46.0	79.0	
528.2	MODESTO	CHAPEL	COAL	1.0	125.0	
527.2	MODESTO		ROCK	128.0	126.0	
399.2	CARBONDALE	DANVILLE	COAL	3.0	254.0	
396.2	CARBONDALE		ROCK	24.0	257.0	
372.2	CARBONDALE	HERRIN	COAL	5.0	281.0	
367.2	CARBONDALE		ROCK	10.0	286.0	

MAPID: 11700696000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 20 QUARTERS/FOOTAGES: 30' S line, 30' W line of SW SE SW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.89992 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.114682 DATE COLLECTED:

SURFACE ELEVATION (FT.): 659.2 LOGGED (FT.): 315.0 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 2 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
355.4	CARBONDALE	HERRIN	COAL	6.6	303.8	

MAPID: 11700696000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 20 QUARTERS/FOOTAGES: 30' S line, 30' W line of SW SE SW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.89992 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.114682 DATE COLLECTED:

SURFACE ELEVATION (FT.): 659.0 LOGGED (FT.): 310.6 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 2 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
394.6	MODESTO	PIASA	LIMESTONE	2.8	264.4
391.8	MODESTO		UNCLASSIFIED	6.9	267.2
384.9	CARBONDALE	DANVILLE	COAL	0.5	274.1
384.4	CARBONDALE		UNCLASSIFIED	7.5	274.6
376.9	CARBONDALE	BANKSTON FORK	LIMESTONE	7.7	282.1
369.2	CARBONDALE	ANVIL ROCK	SANDSTONE	2.8	289.8
366.4	CARBONDALE		SHALE	2.4	292.6
364.0	CARBONDALE	BRERETON	LIMESTONE	8.6	295.0
355.4	CARBONDALE	ANNA	BLACK SHALE	0.4	303.6
355.0	CARBONDALE	HERRIN	COAL	6.6	304.0

MAPID: 11700698000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 20 QUARTERS/FOOTAGES: 132' N line, 452' E line of SE NE NW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.89721 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.126844 DATE COLLECTED:

SURFACE ELEVATION (FT.): 648.0 LOGGED (FT.): 303.0 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
392.2	CARBONDALE	DANVILLE	COAL	2.7	255.8
365.4	CARBONDALE	HERRIN	COAL	7.0	282.6

MAPID: 11700698000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 20 QUARTERS/FOOTAGES: 132' N line, 452' E line of SE NE NW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.89721 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.126844 DATE COLLECTED:

SURFACE ELEVATION (FT.): 648.0 LOGGED (FT.): 290.0 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
401.9	MODESTO	PIASA	LIMESTONE	4.4	246.1
397.5	MODESTO		UNCLASSIFIED	5.8	250.5
391.7	CARBONDALE	DANVILLE	COAL	2.7	256.3
389.0	CARBONDALE		UNCLASSIFIED	10.3	259.0
378.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.1	269.3
374.6	CARBONDALE	ANVIL ROCK	SANDSTONE	1.0	273.4
373.6	CARBONDALE	BRERETON	LIMESTONE	5.8	274.4
367.8	CARBONDALE	ANNA	BLACK SHALE	2.8	280.2
365.0	CARBONDALE	HERRIN	COAL	7.0	283.0

MAPID: 11700704000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 20 QUARTERS/FOOTAGES: 3440' S line, 1900' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.893012 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.124056 DATE COLLECTED:

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 302.8 LOG TYPE: Survey Core Study

SOURCE: MT. OLIVE & STAUNTON COAL CO. 4 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
399.5	MODESTO	PIASA	LIMESTONE/UNDERCLAY	1.6	256.5
397.9	MODESTO		DARK GRAY SHALE	8.4	258.1
389.5	CARBONDALE	DANVILLE	COAL	2.6	266.5
386.9	CARBONDALE		CLAYSTONE & SHALE	2.0	269.1
384.9	CARBONDALE		CLAYSTONE & SHALE	1.0	271.1
383.9	CARBONDALE		CLAYSTONE & SHALE	5.2	272.1
378.7	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	4.7	277.3
374.0	CARBONDALE	LAWSON	CLAYSTONE & SHALE	0.9	282.0
373.1	CARBONDALE	LAWSON	SILTSTONE	1.4	282.9
371.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	12.1	284.3
359.6	CARBONDALE	ANNA	BLACK SHALE	0.6	296.4
359.0	CARBONDALE	HERRIN	COAL	5.8	297.0

MAPID: 11700704000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 20 QUARTERS/FOOTAGES: 3440' S line, 1900' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.893012 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.124056 DATE COLLECTED:

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 302.8 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 4 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
401.3	MODESTO	PIASA	LIMESTONE	3.4	254.7
397.9	MODESTO		UNCLASSIFIED	8.3	258.1
389.6	CARBONDALE	DANVILLE	COAL	2.6	266.4
387.0	CARBONDALE		UNCLASSIFIED	9.3	269.0
377.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.7	278.3
373.0	CARBONDALE	ANVIL ROCK	SANDSTONE	1.3	283.0
371.7	CARBONDALE		SHALE	1.0	284.3
370.7	CARBONDALE	BRERETON	LIMESTONE	10.8	285.3
359.9	CARBONDALE	ANNA	BLACK SHALE	0.9	296.1
359.0	CARBONDALE	HERRIN	COAL	5.8	297.0

MAPID: 11700704000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 20 QUARTERS/FOOTAGES: 3440' S line, 1900' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.893012 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.124056 DATE COLLECTED:

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 314.0 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 4 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
389.2	CARBONDALE	DANVILLE	COAL	2.6	266.8
359.0	CARBONDALE	HERRIN	COAL	5.8	297.0

MAPID: 11700711000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 20 QUARTERS/FOOTAGES: 140' S line, 180' W line of NW SE NE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.890279 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.123955 DATE COLLECTED:

SURFACE ELEVATION (FT.): 655.2 LOGGED (FT.): 317.0 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 9 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
390.7	CARBONDALE	DANVILLE	COAL	2.4	264.5
359.5	CARBONDALE	HERRIN	COAL	6.1	295.7

MAPID: 11700711000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 20 QUARTERS/FOOTAGES: 140' S line, 180' W line of NW SE NE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.890279 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.123955 DATE COLLECTED:

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 302.1 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 9 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
400.5	MODESTO	PIASA	LIMESTONE	4.0	254.5
396.5	MODESTO		UNCLASSIFIED	5.7	258.5
390.8	CARBONDALE	DANVILLE	COAL	2.4	264.2
388.4	CARBONDALE		UNCLASSIFIED	8.7	266.6
379.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.2	275.3
375.5	CARBONDALE	ANVIL ROCK	SANDSTONE	2.8	279.5
372.7	CARBONDALE		SHALE	2.0	282.3
370.7	CARBONDALE	BRERETON	LIMESTONE	11.0	284.3
359.7	CARBONDALE	ANNA	BLACK SHALE	0.7	295.3
359.0	CARBONDALE	HERRIN	COAL	6.1	296.0

MAPID: 11700724000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 21 QUARTERS/FOOTAGES: 3440' S line, 1310' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.872374 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.123958 DATE COLLECTED:

SURFACE ELEVATION (FT.): 664.0 LOGGED (FT.): 325.6 LOG TYPE: Survey Core Study

SOURCE: MT. OLIVE & STAUNTON COAL CO. 13 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
387.9	MODESTO	PIASA	LIMESTONE/UNDERCLAY	3.8	276.1
384.1	MODESTO		GRAY SHALE	5.3	279.9
378.8	CARBONDALE	DANVILLE	COAL	1.8	285.2
377.0	CARBONDALE		CLAYSTONE & SHALE	4.0	287.0
373.0	CARBONDALE		CALCAREOUS SHALE	2.3	291.0
370.8	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	2.5	293.2
368.3	CARBONDALE	LAWSON	SILTSTONE	9.9	295.7
358.3	CARBONDALE	LAWSON	SILTY SHALE	2.1	305.7
356.3	CARBONDALE	LAWSON	GRAY SHALE	1.9	307.7
354.3	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	8.2	309.7
346.2	CARBONDALE	ANNA	BLACK SHALE	0.2	317.8
346.0	CARBONDALE	HERRIN	COAL	7.6	318.0

MAPID: 11700724000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 21 QUARTERS/FOOTAGES: 3440' S line, 1310' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.872374 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.123958 DATE COLLECTED:

SURFACE ELEVATION (FT.): 664.0 LOGGED (FT.): 325.6 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 13 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
390.9	MODESTO	PIASA	LIMESTONE	3.8	273.1
387.1	MODESTO		UNCLASSIFIED	5.3	276.9
381.8	CARBONDALE	DANVILLE	COAL	1.8	282.2
380.0	CARBONDALE		UNCLASSIFIED	6.3	284.0
373.7	CARBONDALE	BANKSTON FORK	LIMESTONE	6.8	290.3
366.9	CARBONDALE	ANVIL ROCK	SANDSTONE	4.5	297.1
362.4	CARBONDALE		SHALE	4.0	301.6
358.4	CARBONDALE	BRERETON	LIMESTONE	12.2	305.6
346.2	CARBONDALE	ANNA	BLACK SHALE	0.2	317.8
346.0	CARBONDALE	HERRIN	COAL	7.6	318.0

MAPID: 11700724000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 21 QUARTERS/FOOTAGES: 3440' S line, 1310' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.872374 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.123958 DATE COLLECTED:

SURFACE ELEVATION (FT.): 663.8 LOGGED (FT.): 327.0 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 13 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
379.1	CARBONDALE	DANVILLE	COAL	1.8	284.7
345.5	CARBONDALE	HERRIN	COAL	7.6	318.3

MAPID: 11700733000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 21 QUARTERS/FOOTAGES: 469' S line, 427' W line of NW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.884748 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.123049 DATE COLLECTED: 4 / 0 / 1959

SURFACE ELEVATION (FT.): 661.0 LOGGED (FT.): 306.0 LOG TYPE: Electric Log

SOURCE: SHULL, O. R. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
402.0	MODESTO	PIASA	LIMESTONE	5.0	259.0
397.0	MODESTO		UNCLASSIFIED	4.0	264.0
393.0	CARBONDALE		UNCLASSIFIED	12.0	268.0
381.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	280.0
376.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	285.0
373.0	CARBONDALE		UNCLASSIFIED	2.0	288.0
371.0	CARBONDALE	BRERETON	LIMESTONE	10.0	290.0
361.0	CARBONDALE	ANNA	BLACK SHALE	2.0	300.0
359.0	CARBONDALE	HERRIN	COAL	4.0	302.0

MAPID: 11790201000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 21 QUARTERS/FOOTAGES: 80' N line, 88' W line of NW NW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.886148 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.128772 DATE COLLECTED: 8 / 30 / 1977

SURFACE ELEVATION (FT.): 653.1 LOGGED (FT.): 306.0 LOG TYPE: Drillers Log

SOURCE: AMAX BB592DA WELL TYPE: Coal Test

COMMENT: GILLESPIE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
653.1	PLEISTOCENE		UNCONSOLIDATED	95.0	0.0
558.1			ROCK	189.0	95.0
369.1	CARBONDALE	HERRIN	COAL	7.0	284.0
362.1	CARBONDALE		ROCK	15.0	291.0

MAPID: 11790215000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 21 QUARTERS/FOOTAGES: 206' N line, 371' W line of NE NE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.871156 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.128388 DATE COLLECTED: 9 / 21 / 1977

SURFACE ELEVATION (FT.): 647.4 LOGGED (FT.): 311.0 LOG TYPE: Drillers Log

SOURCE: AMAX 005-015 WELL TYPE: Coal Test

COMMENT: GILLESPIE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
647.4	PLEISTOCENE		UNCONSOLIDATED	45.0	0.0
602.4			ROCK	244.0	45.0
358.4	CARBONDALE	HERRIN	COAL	7.0	289.0
351.4	CARBONDALE		ROCK	15.0	296.0

MAPID: 11700691000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 22 QUARTERS/FOOTAGES: 410' N line, 350' E line of SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.85958 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.120689 DATE COLLECTED: 10 / 0 / 1958

SURFACE ELEVATION (FT.): 664.0 LOGGED (FT.): 292.0 LOG TYPE: Electric Log

SOURCE: BURKETT, M. D. OIL WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
414.0	MODESTO	PIASA	LIMESTONE	6.0	250.0
408.0	MODESTO		UNCLASSIFIED	3.0	256.0
405.0	CARBONDALE		UNCLASSIFIED	5.0	259.0
400.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	264.0
391.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	273.0
388.0	CARBONDALE		UNCLASSIFIED	3.0	276.0
385.0	CARBONDALE	BRERETON	LIMESTONE	10.0	279.0
375.0	CARBONDALE	HERRIN	COAL	3.0	289.0

MAPID: 11700770000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 22 QUARTERS/FOOTAGES: 330' N line, 360' E line of NW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.859664 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.128173 DATE COLLECTED: 7 / 0 / 1959

SURFACE ELEVATION (FT.): 658.0 LOGGED (FT.): 321.0 LOG TYPE: Electric Log

SOURCE: SUN PRODUCTION COMPANY WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
383.0	MODESTO	PIASA	LIMESTONE	5.0	275.0
378.0	MODESTO		UNCLASSIFIED	3.0	280.0
375.0	CARBONDALE		UNCLASSIFIED	7.0	283.0
368.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	290.0
360.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	298.0
357.0	CARBONDALE		UNCLASSIFIED	3.0	301.0
354.0	CARBONDALE	BRERETON	LIMESTONE	10.0	304.0
344.0	CARBONDALE	HERRIN	COAL	7.0	314.0

MAPID: 11700773000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 22 QUARTERS/FOOTAGES: 330' N line, 330' E line of SW SW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.86417 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.117215 DATE COLLECTED: 8 / 0 / 1959

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

SOURCE: BURKETT, M. D. OIL WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	6.0	
-	MODESTO		UNCLASSIFIED	4.0	
-	CARBONDALE		UNCLASSIFIED	10.0	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	
-	CARBONDALE		UNCLASSIFIED	2.0	
-	CARBONDALE	BRERETON	LIMESTONE	9.0	
-	CARBONDALE	HERRIN	COAL	6.0	

MAPID: 11700290000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 23 QUARTERS/FOOTAGES: 60' S line, 1205' E line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.834494 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.114988 DATE COLLECTED: 2 / 0 / 1931

SURFACE ELEVATION (FT.): 648.0 LOGGED (FT.): 313.0 LOG TYPE: Drillers Log

SOURCE: HERCULES OIL & GAS WELL TYPE: Unsuccessful or Unknown Results

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
395.0	MODESTO	PIASA	LIMESTONE	5.0	253.0
390.0	MODESTO		UNCLASSIFIED	5.0	258.0
385.0	CARBONDALE		UNCLASSIFIED	14.0	263.0
371.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	13.0	277.0
358.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	290.0
355.0	CARBONDALE		UNCLASSIFIED	3.0	293.0
352.0	CARBONDALE	BRERETON	LIMESTONE	12.0	296.0
340.0	CARBONDALE	HERRIN	COAL	5.0	308.0

MAPID: 11700557000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 23 QUARTERS/FOOTAGES: 2610' N line, 350' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.847739 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.122005 DATE COLLECTED:

SURFACE ELEVATION (FT.): 666.0 LOGGED (FT.): 390.9 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-5 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
325.7	MODESTO	PIASA	LIMESTONE	2.8	340.3
322.9	CARBONDALE		GRAY SHALE	15.8	343.1
307.1	CARBONDALE	BANKSTON FORK	LIMESTONE	5.2	358.9
301.9	CARBONDALE	LAWSON	GRAY SHALE	20.9	364.1
281.0	CARBONDALE	HERRIN	COAL	5.9	385.0

MAPID: 11700557000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 23 QUARTERS/FOOTAGES: 2610' N line, 350' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.847739 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.122005 DATE COLLECTED:

SURFACE ELEVATION (FT.): 666.0 LOGGED (FT.): 391.8 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
324.7	MODESTO	PIASA	LIMESTONE	2.8	341.3
321.9	MODESTO		UNCLASSIFIED	4.0	344.1
317.9	CARBONDALE		UNCLASSIFIED	11.8	348.1
306.1	CARBONDALE	BANKSTON FORK	LIMESTONE	5.2	359.9
300.9	CARBONDALE	ENERGY	SHALE	20.9	365.1
280.0	CARBONDALE	HERRIN	COAL	5.8	386.0

MAPID: 11700557000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 23 QUARTERS/FOOTAGES: 2610' N line, 350' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.847739 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.122005 DATE COLLECTED:

SURFACE ELEVATION (FT.): 665.9 LOGGED (FT.): 394.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
280.5	CARBONDALE	HERRIN	COAL	5.9	385.4

MAPID: 11700772000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 23 QUARTERS/FOOTAGES: 330' N line, 330' E line of SW NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.845516 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.124695 DATE COLLECTED: 7 / 0 / 1959

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

SOURCE: BURKETT, M. D. OIL WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	5.0	
-	MODESTO		UNCLASSIFIED	3.0	
-	CARBONDALE		UNCLASSIFIED	10.5	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.0	
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.5	
-	CARBONDALE		UNCLASSIFIED	2.0	
-	CARBONDALE	BRERETON	LIMESTONE	6.0	
-	CARBONDALE	HERRIN	COAL	6.0	

MAPID: 11700159000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 25 QUARTERS/FOOTAGES: NE NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.814152 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.113264 DATE COLLECTED: 10 / 0 / 1923

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 323.0 LOG TYPE: Drillers Log

SOURCE: SHERMAN BROS WELL TYPE: Producer-Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
372.0	MODESTO	PIASA	LIMESTONE	2.0	270.0
370.0	MODESTO		UNCLASSIFIED	4.0	272.0
366.0	CARBONDALE		UNCLASSIFIED	9.0	276.0
357.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	12.0	285.0
345.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	297.0
342.0	CARBONDALE		UNCLASSIFIED	3.0	300.0
339.0	CARBONDALE	BRERETON	LIMESTONE	11.0	303.0
328.0	CARBONDALE	ANNA	BLACK SHALE	2.0	314.0
326.0	CARBONDALE	HERRIN	COAL	7.0	316.0

MAPID: 11700159000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 25 QUARTERS/FOOTAGES: NE NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.814152 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.113264 DATE COLLECTED:

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 323.0 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	MODESTO	PIASA	LIMESTONE	2.0	270.0
370.0	CARBONDALE		DARK GRAY SHALE	13.0	272.0
357.0	CARBONDALE	BANKSTON FORK	LIMESTONE	19.0	285.0
338.0	CARBONDALE	BRERETON	LIMESTONE	10.0	304.0
328.0	CARBONDALE	ANNA	BLACK SHALE	2.0	314.0
326.0	CARBONDALE	HERRIN	COAL	7.0	316.0

MAPID: 11700163000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 25 QUARTERS/FOOTAGES: SW NE NE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.815286 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.112328 DATE COLLECTED: 0 / 0 / 1923

SURFACE ELEVATION (FT.): 649.0 LOGGED (FT.): 344.0 LOG TYPE: Drillers Log

SOURCE: SHERMAN BROS WELL TYPE: Unsuccessful or Unknown Results

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
359.0	MODESTO	PIASA	LIMESTONE	2.0	290.0
357.0	MODESTO		UNCLASSIFIED	3.0	292.0
354.0	CARBONDALE		UNCLASSIFIED	9.0	295.0
345.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	13.0	304.0
332.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.5	317.0
328.5	CARBONDALE		UNCLASSIFIED	3.5	320.5
325.0	CARBONDALE	BRERETON	LIMESTONE	12.0	324.0
313.0	CARBONDALE	HERRIN	COAL	8.0	336.0

MAPID: 11700870000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 27 QUARTERS/FOOTAGES: 330' S line, 330' W line of NW

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.866366 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.108134 DATE COLLECTED: 11 / 0 / 1960

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 311.0 LOG TYPE: Electric Log

SOURCE: OLDFIELD OTIS R WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
408.0	MODESTO	PIASA	LIMESTONE	3.0	252.0
405.0	MODESTO		UNCLASSIFIED	4.0	255.0
401.0	CARBONDALE		UNCLASSIFIED	12.0	259.0
389.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	12.0	271.0
377.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	283.0
374.0	CARBONDALE		UNCLASSIFIED	3.0	286.0
371.0	CARBONDALE	BRERETON	LIMESTONE	15.0	289.0
356.0	CARBONDALE	HERRIN	COAL	7.0	304.0

MAPID: 11701106000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 28 QUARTERS/FOOTAGES: 67' S line, 25' E line of SE SE SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.867462 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.100166 DATE COLLECTED:

SURFACE ELEVATION (FT.): 664.0 LOGGED (FT.): 0.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-29 WELL TYPE: Coal Test

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	3.3	
-	MODESTO		UNCLASSIFIED	5.9	
-	CARBONDALE	DANVILLE	COAL	2.8	

MAPID: 11700160000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 29 QUARTERS/FOOTAGES: 200' S line, 2350' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.894186 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.100683 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 661.0 LOGGED (FT.): 316.7 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
390.7	MODESTO	PIASA	LIMESTONE	4.0	270.3
386.7	MODESTO		UNCLASSIFIED	5.5	274.3
381.2	CARBONDALE	DANVILLE	COAL	1.5	279.8
379.7	CARBONDALE		UNCLASSIFIED	6.5	281.3
373.2	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	287.8
364.2	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	296.8
362.2	CARBONDALE		UNCLASSIFIED	1.8	298.8
360.4	CARBONDALE	BRERETON	LIMESTONE	9.0	300.6
351.4	CARBONDALE	ANNA	BLACK SHALE	0.4	309.6
351.0	CARBONDALE	HERRIN	COAL	6.7	310.0

MAPID: 11700160000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 29 QUARTERS/FOOTAGES: 200' S line, 2350' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.894186

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.100683

DATE COLLECTED:

SURFACE ELEVATION (FT.): 661.0

LOGGED (FT.): 316.7

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
391.0	MODESTO	PIASA	LIMESTONE	4.0	270.0
387.0	MODESTO		DARK GRAY SHALE	5.5	274.0
381.5	CARBONDALE	DANVILLE	COAL	1.5	279.5
380.0	CARBONDALE		CALCAREOUS SHALE	6.5	281.0
373.5	CARBONDALE	BANKSTON FORK	LIMESTONE	13.8	287.5
359.7	CARBONDALE	BRERETON	LIMESTONE	8.0	301.3
351.7	CARBONDALE	ANNA	GRAY SHALE	0.4	309.3
351.0	CARBONDALE	HERRIN	COAL	6.7	310.0

MAPID: 11700160000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 29 QUARTERS/FOOTAGES: 200' S line, 2350' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.894186 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.100683 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 660.6 LOGGED (FT.): 316.8 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO., HOLE #35 WELL TYPE: Coal Test

COMMENT: ESOURCE IS AN ALIDADE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
660.6			SOIL	16.0	0.0	
644.6			UNCONSOLIDATED	19.0	16.0	
625.6	MODESTO		SHALE	25.0	35.0	
600.6	MODESTO		SANDSTONE	2.0	60.0	
598.6	MODESTO		SHALE	13.0	62.0	
585.6	MODESTO		UNKNOWN	3.0	75.0	LOG HAS LIGHT ROCK
582.6	MODESTO		SHALE	4.0	78.0	
578.6	MODESTO	WOMAC	COAL	1.0	82.0	
577.6	MODESTO		SHALE	3.0	83.0	
574.6	MODESTO	BURROUGHS	LIMESTONE	1.5	86.0	
573.1	MODESTO		CALCAREOUS SHALE	18.8	87.5	
554.3	MODESTO	CARLINVILLE	LIMESTONE	7.0	106.3	
547.3	MODESTO		SANDSTONE	1.7	113.3	
545.6	MODESTO		SHALE	26.0	115.0	
519.6	MODESTO		SANDY SHALE	11.5	141.0	
508.1	MODESTO	CHAPEL	COAL	0.5	152.5	
507.6	MODESTO		SHALE	2.0	153.0	
505.6	MODESTO		SANDSTONE	9.0	155.0	
496.6	MODESTO		SANDY SHALE	17.0	164.0	
479.6	MODESTO		SHALE	49.0	181.0	
430.6	MODESTO		SANDY SHALE	18.0	230.0	
412.6	MODESTO		SHALE	6.0	248.0	
406.6	MODESTO		CALCAREOUS SHALE	16.0	254.0	
390.6	MODESTO	PIASA	LIMESTONE	4.0	270.0	
386.6	MODESTO		SHALE	5.5	274.0	
381.1	CARBONDALE	DANVILLE	COAL	1.5	279.5	
379.6	CARBONDALE		CALCAREOUS SHALE	6.5	281.0	
373.1	CARBONDALE		LIMESTONE	21.8	287.5	
351.3	CARBONDALE		SHALE	0.4	309.3	
350.9	CARBONDALE	HERRIN	COAL	6.7	309.7	
344.3	CARBONDALE		UNDERCLAY	0.3	316.3	
343.9	CARBONDALE		UNKNOWN	0.2	316.7	LOG HAS "ROCK IN FIRE CLAY"

MAPID: 11790202000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 29 QUARTERS/FOOTAGES: 28' N line, 53' E line of NE NE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.886289 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.114419 DATE COLLECTED: 8 / 31 / 1977

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 313.0 LOG TYPE: Drillers Log

SOURCE: AMAX BB391GG WELL TYPE: Coal Test

COMMENT: GILLESPIE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
656.0	PLEISTOCENE		UNCONSOLIDATED	30.0	0.0
626.0	MODESTO		ROCK	38.0	30.0
588.0	MODESTO	CHAPEL	COAL	1.0	68.0
587.0	MODESTO		ROCK	196.0	69.0
391.0	CARBONDALE	DANVILLE	COAL	2.0	265.0
389.0	CARBONDALE		ROCK	28.0	267.0
361.0	CARBONDALE	HERRIN	COAL	7.0	295.0
354.0	CARBONDALE		ROCK	11.0	302.0

MAPID: 11790203000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 29 QUARTERS/FOOTAGES: 36' S line, 73' E line of SE SE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.886027 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.100145 DATE COLLECTED: 8 / 31 / 1977

SURFACE ELEVATION (FT.): 662.5 LOGGED (FT.): 332.0 LOG TYPE: Drillers Log

SOURCE: AMAX BB216PL WELL TYPE: Coal Test

COMMENT: GILLESPIE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
662.5	PLEISTOCENE		UNCONSOLIDATED	40.0	0.0
622.5	MODESTO		ROCK	242.0	40.0
380.5	CARBONDALE	DANVILLE	COAL	1.5	282.0
379.0	CARBONDALE		ROCK	28.5	283.5
350.5	CARBONDALE	HERRIN	COAL	7.0	312.0
343.5	CARBONDALE		ROCK	13.0	319.0

MAPID: 11790204000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 29 QUARTERS/FOOTAGES: 37' S line, 33' E line of SE SW
 QUADRANGLE: BUNKER HILL LONGITUDE: -89.895104 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.10018 DATE COLLECTED: 9 / 1 / 1977
 SURFACE ELEVATION (FT.): 659.6 LOGGED (FT.): 323.0 LOG TYPE: Drillers Log
 SOURCE: AMAX BB212PM WELL TYPE: Coal Test
 COMMENT: GILLESPIE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
659.6	PLEISTOCENE		UNCONSOLIDATED	40.0	0.0
619.6			ROCK	268.0	40.0
351.6	CARBONDALE	HERRIN	COAL	5.0	308.0
346.6	CARBONDALE		ROCK	10.0	313.0

MAPID: 11790216000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 29 QUARTERS/FOOTAGES: 21' N line, 74' E line of NW NW
 QUADRANGLE: BUNKER HILL LONGITUDE: -89.900309 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.114573 DATE COLLECTED: 9 / 22 / 1977
 SURFACE ELEVATION (FT.): 659.7 LOGGED (FT.): 315.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 005-016 WELL TYPE: Coal Test
 COMMENT: GILLESPIE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
659.7	PLEISTOCENE		UNCONSOLIDATED	40.0	0.0
619.7	MODESTO		ROCK	230.0	40.0
389.7	CARBONDALE	DANVILLE	COAL	2.0	270.0
387.7	CARBONDALE		ROCK	27.0	272.0
360.7	CARBONDALE	HERRIN	COAL	5.0	299.0
355.7	CARBONDALE		ROCK	11.0	304.0

MAPID: 11790205000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 31 QUARTERS/FOOTAGES: 41' N line, 34' W line of NW NW
 QUADRANGLE: BUNKER HILL LONGITUDE: -89.923012 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.100066 DATE COLLECTED: 9 / 1 / 1977
 SURFACE ELEVATION (FT.): 652.4 LOGGED (FT.): 299.0 LOG TYPE: Drillers Log
 SOURCE: AMAX BB176DE WELL TYPE: Coal Test
 COMMENT: GILLESPIE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
652.4	PLEISTOCENE		UNCONSOLIDATED	19.0	0.0
633.4			ROCK	264.0	19.0
369.4	CARBONDALE	HERRIN	COAL	6.0	283.0
363.4	CARBONDALE		ROCK	10.0	289.0

MAPID: 1179021000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 31 QUARTERS/FOOTAGES: 3' S line, 42' W line of SW SW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.922912 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.085677 DATE COLLECTED: 9 / 15 / 1977

SURFACE ELEVATION (FT.): 671.9 LOGGED (FT.): 312.0 LOG TYPE: Drillers Log

SOURCE: AMAX 005=010 WELL TYPE: Coal Test

COMMENT: GILLESPIE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
671.9	PLEISTOCENE		UNCONSOLIDATED	29.0	0.0
642.9	MODESTO		ROCK	240.0	29.0
402.9	CARBONDALE	DANVILLE	COAL	1.0	269.0
401.9	CARBONDALE		ROCK	23.0	270.0
378.9	CARBONDALE	HERRIN	COAL	6.5	293.0
372.4	CARBONDALE		ROCK	12.5	299.5

MAPID: 11790213000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 31 QUARTERS/FOOTAGES: 42' S line, 42' E line of SE SE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.904386 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.085743 DATE COLLECTED: 9 / 20 / 1977

SURFACE ELEVATION (FT.): 655.9 LOGGED (FT.): 318.0 LOG TYPE: Drillers Log

SOURCE: AMAX 005-013 WELL TYPE: Coal Test

COMMENT: GILLESPIE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
655.9	PLEISTOCENE		UNCONSOLIDATED	50.0	0.0
605.9			ROCK	250.5	50.0
355.4	CARBONDALE	HERRIN	COAL	5.0	300.5
350.4	CARBONDALE		ROCK	12.5	305.5

MAPID: 11700161000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 32 QUARTERS/FOOTAGES: 2100' S line, 3000' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.896458 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.0914 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 663.8 LOGGED (FT.): 310.0 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MACHY CO., HOLE #15 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
663.8			SOIL	30.0	0.0
633.8	MODESTO		SHALE	11.0	30.0
622.8	MODESTO		SANDY SHALE	28.3	41.0
594.5	MODESTO		SHALE	3.7	69.3
590.8	MODESTO	WOMAC	COAL	0.2	73.0
590.6	MODESTO		SHALE	3.8	73.2
586.8	MODESTO	BURROUGHS	LIMESTONE	3.5	77.0
583.3	MODESTO		SHALE	18.0	80.5
565.3	MODESTO	CARLINVILLE	LIMESTONE	8.0	98.5
557.3	MODESTO		SANDY SHALE	32.5	106.5
524.8	MODESTO		SHALE	4.0	139.0
520.8	MODESTO		LIMESTONE AND SANDSTONE	2.0	143.0
518.8	MODESTO		SANDY SHALE	35.0	145.0
483.8	MODESTO		SHALE	61.0	180.0
422.8	MODESTO		SANDSTONE/LIMESTONE	16.0	241.0
406.8	MODESTO		SHALE	1.7	257.0
405.1	MODESTO		SANDSTONE/LIMESTONE	1.0	258.7
404.1	MODESTO		SHALE	9.7	259.7
394.5	CARBONDALE	DANVILLE	COAL	1.1	269.3
393.4	CARBONDALE		SHALE	8.6	270.4
384.8	CARBONDALE		LIMESTONE	22.3	279.0
362.5	CARBONDALE		SHALE	0.7	301.3
361.9	CARBONDALE	HERRIN	COAL	5.5	301.9
356.4	CARBONDALE		UNDERCLAY	0.8	307.4
355.5	CARBONDALE		LIMESTONE W/ SHALE	1.8	308.3

MAPID: 11700161000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 32 QUARTERS/FOOTAGES: 2100' S line, 3000' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.896458 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.0914 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 664.0 LOGGED (FT.): 307.5 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MACHINE CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
405.4	MODESTO	PIASA	LIMESTONE	5.0	258.6
400.4	MODESTO		UNCLASSIFIED	5.7	263.6
394.7	CARBONDALE	DANVILLE	COAL	1.1	269.3
393.6	CARBONDALE		UNCLASSIFIED	8.6	270.4
385.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	279.0
378.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.3	286.0
375.7	CARBONDALE		UNCLASSIFIED	2.0	288.3
373.7	CARBONDALE	BRERETON	LIMESTONE	11.0	290.3
362.7	CARBONDALE	ANNA	BLACK SHALE	0.7	301.3
362.0	CARBONDALE	HERRIN	COAL	5.5	302.0

MAPID: 11700697000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 32 QUARTERS/FOOTAGES: 330' S line, 330' W line of SE SW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.89834 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.086518 DATE COLLECTED: 10 / 0 / 1958

SURFACE ELEVATION (FT.): 669.0 LOGGED (FT.): 297.0 LOG TYPE: Electric Log

SOURCE: GENTILE, PAT WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
414.0	MODESTO	PIASA	LIMESTONE	5.0	255.0
409.0	MODESTO		UNCLASSIFIED	3.0	260.0
406.0	CARBONDALE		UNCLASSIFIED	7.0	263.0
399.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	270.0
392.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	277.0
389.0	CARBONDALE		UNCLASSIFIED	2.0	280.0
387.0	CARBONDALE	BRERETON	LIMESTONE	8.0	282.0
379.0	CARBONDALE	HERRIN	COAL	7.0	290.0

MAPID: 11701011000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 32 QUARTERS/FOOTAGES: 502' N line, 30' W line of SE NE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.890311 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.095092 DATE COLLECTED: 5 / 0 / 1954

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

SOURCE: KNOCHE HENRY W WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	6.0	
-	MODESTO		UNCLASSIFIED	3.0	
-	CARBONDALE	DANVILLE	COAL	1.0	
-	CARBONDALE		UNCLASSIFIED	7.0	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	
-	CARBONDALE		UNCLASSIFIED	2.0	
-	CARBONDALE	BRERETON	LIMESTONE	13.0	
-	CARBONDALE	ANNA	BLACK SHALE	1.0	
-	CARBONDALE	HERRIN	COAL	5.0	

MAPID: 11700695000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 33 QUARTERS/FOOTAGES: 33' N line, 1285' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.881293 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.099967 DATE COLLECTED:

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 304.8 LOG TYPE: Survey Core Study

SOURCE: MT. OLIVE & STAUNTON COAL CO. 1 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
385.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	2.3	271.0
382.7	MODESTO		DARK GRAY SHALE	4.8	273.3
378.0	CARBONDALE	DANVILLE	COAL	1.3	278.0
376.7	CARBONDALE		CLAYSTONE & SHALE	0.4	279.3
376.3	CARBONDALE		GRAY SHALE	2.1	279.7
374.2	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	5.7	281.8
368.5	CARBONDALE	LAWSON	SILTY SHALE	2.7	287.5
365.9	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	7.8	290.1
358.1	CARBONDALE	ANNA	CARBONACEOUS SHALE	0.1	297.9
358.0	CARBONDALE	HERRIN	COAL	6.8	298.0

MAPID: 11700695000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 33 QUARTERS/FOOTAGES: 33' N line, 1285' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.881293 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.099967 DATE COLLECTED:

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 304.8 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
394.0	MODESTO	PIASA	LIMESTONE	2.3	262.0
391.7	MODESTO		UNCLASSIFIED	4.8	264.3
386.9	CARBONDALE	DANVILLE	COAL	1.3	269.1
385.6	CARBONDALE		UNCLASSIFIED	5.7	270.4
379.9	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	276.1
374.4	CARBONDALE	ANVIL ROCK	SANDSTONE	4.8	281.6
369.6	CARBONDALE		SHALE	3.7	286.4
365.9	CARBONDALE	BRERETON	LIMESTONE	7.8	290.1
358.1	CARBONDALE	ANNA	BLACK SHALE	0.1	297.9
358.0	CARBONDALE	HERRIN	COAL	6.8	298.0

MAPID: 11700695000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 33 QUARTERS/FOOTAGES: 33' N line, 1285' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.881293 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.099967 DATE COLLECTED:

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 308.0 LOG TYPE: Drillers Log

SOURCE: MT. OLIVE & STAUNTON COAL CO. 1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
389.0	CARBONDALE	DANVILLE	COAL	1.3	267.0
357.6	CARBONDALE	HERRIN	COAL	6.8	298.4

MAPID: 11790208000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 33 QUARTERS/FOOTAGES: 82' S line, 206' E line of SE SE
 QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.867757 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.085994 DATE COLLECTED: 9 / 14 / 1977
 SURFACE ELEVATION (FT.): 650.8 LOGGED (FT.): 336.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 005-008 WELL TYPE: Coal Test
 COMMENT: GILLESPIE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
650.8	PLEISTOCENE		UNCONSOLIDATED	52.0	0.0
598.8			ROCK	264.0	52.0
334.8	CARBONDALE	HERRIN	COAL	6.0	316.0
328.8	CARBONDALE		ROCK	14.0	322.0

MAPID: 11790209000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 33 QUARTERS/FOOTAGES: 495' S line, 41' E line of NE SW
 QUADRANGLE: BUNKER HILL LONGITUDE: -89.876617 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.090778 DATE COLLECTED: 9 / 15 / 1977
 SURFACE ELEVATION (FT.): 649.7 LOGGED (FT.): 310.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 005-009 WELL TYPE: Coal Test
 COMMENT: GILLESPIE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
649.7	PLEISTOCENE		UNCONSOLIDATED	31.0	0.0
618.7			ROCK	262.0	31.0
356.7	CARBONDALE	HERRIN	COAL	6.5	293.0
350.2	CARBONDALE		ROCK	10.5	299.5

MAPID: 11700162000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 34 QUARTERS/FOOTAGES: 560' S line, 600' W line of NW NW SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.85582 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.092547 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 657.0 LOGGED (FT.): 324.0 LOG TYPE: Survey Core Study

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
657.0			UNCONSOLIDATED	15.0	0.0
642.0			ROCK	7.0	15.0
635.0			COAL	0.2	22.0
634.8			ROCK	56.8	22.2
578.0			COAL	0.3	79.0
577.7			ROCK	63.8	79.3
514.0			COAL	0.2	143.0
513.8			ROCK	136.1	143.2
377.7	CARBONDALE	DANVILLE	COAL	1.7	279.3
376.0	CARBONDALE		ROCK	5.5	281.0
370.5	CARBONDALE		LIMESTONE	10.5	286.5
360.0	CARBONDALE		SANDSTONE	10.0	297.0
350.0	CARBONDALE		LIMESTONE	8.3	307.0
341.7	CARBONDALE		BLACK SHALE	0.1	315.3
341.7	CARBONDALE	HERRIN	COAL	7.0	315.3
334.7	CARBONDALE		ROCK	1.7	322.3

MAPID: 11700162000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 34 QUARTERS/FOOTAGES: 560' S line, 600' W line of NW NW SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.85582 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.092547 DATE COLLECTED:

SURFACE ELEVATION (FT.): 652.0 LOGGED (FT.): 322.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
381.2	MODESTO	PIASA	LIMESTONE	3.0	270.8
378.2	MODESTO		ROCK	5.3	273.8
373.0	CARBONDALE	DANVILLE	COAL	1.8	279.0
371.2	CARBONDALE		GRAY SHALE	5.5	280.8
365.7	CARBONDALE	BANKSTON FORK	LIMESTONE	10.5	286.3
355.2	CARBONDALE	LAWSON	SANDSTONE	10.0	296.8
345.2	CARBONDALE	BRERETON	LIMESTONE	8.3	306.8
337.0	CARBONDALE	HERRIN	COAL	7.0	315.0

MAPID: 11700162000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 34 QUARTERS/FOOTAGES: 560' S line, 600' W line of NW NW SE

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.85582 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.092547 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 652.0 LOGGED (FT.): 322.0 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
381.5	MODESTO	PIASA	LIMESTONE	3.0	270.5
378.5	MODESTO		UNCLASSIFIED	5.3	273.5
373.2	CARBONDALE	DANVILLE	COAL	1.8	278.8
371.4	CARBONDALE		UNCLASSIFIED	5.5	280.6
365.9	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.5	286.1
355.4	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	5.0	296.6
350.4	CARBONDALE		UNCLASSIFIED	5.0	301.6
345.4	CARBONDALE	BRERETON	LIMESTONE	8.3	306.6
337.1	CARBONDALE	ANNA	BLACK SHALE	0.1	314.9
337.0	CARBONDALE	HERRIN	COAL	7.0	315.0

MAPID: 11700162000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 34 QUARTERS/FOOTAGES: 560' S line, 600' W line of NW NW SE

QUADRANGLE: GILLESPIE SOUTH

LONGITUDE: -89.85582

GEOLOGIST: S.SROKA

CONFIDENTIAL: N

LATITUDE: 39.092547

DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 651.9

LOGGED (FT.): 324.0

LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO., HOLE #5

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
651.9			CLAY	15.0	0.0	
636.9	BOND	CARTHAGE	LIMESTONE	6.0	15.0	
630.9	MODESTO		CLAYSTONE & SHALE	1.0	21.0	
629.9	MODESTO	NEW HAVEN	COAL	0.2	22.0	
629.7	MODESTO		UNDERCLAY	2.0	22.2	
627.7	MODESTO		CLAYSTONE & SHALE	3.8	24.2	
623.9	MODESTO		CLAYSTONE & SHALE	8.0	28.0	
615.9	MODESTO		LIMESTONE	1.0	36.0	
614.9	MODESTO		SANDY SHALE	37.0	37.0	
577.9	MODESTO		LIMESTONE	0.2	74.0	
577.7	MODESTO		BLACK SHALE	1.0	74.2	
576.7	MODESTO	MACOUPIN	LIMESTONE	0.3	75.2	
576.5	MODESTO		CLAYSTONE & SHALE	3.6	75.4	
572.9	MODESTO	WOMAC	COAL	0.3	79.0	
572.6	MODESTO		UNDERCLAY	4.0	79.3	
568.6	MODESTO		CALCAREOUS SHALE	3.4	83.3	
565.2	MODESTO		SANDY SHALE	4.2	86.7	
561.1	MODESTO		CLAYSTONE & SHALE	15.7	90.8	
545.4	MODESTO	CARLINVILLE	LIMESTONE	7.5	106.5	
537.9	MODESTO		SANDSTONE	6.5	114.0	
531.4	MODESTO		SANDY SHALE	22.5	120.5	
508.9	MODESTO	CHAPEL	COAL	0.2	143.0	
508.7	MODESTO		UNDERCLAY	3.0	143.2	
505.7	MODESTO		LIMESTONE	2.8	146.2	
502.9	MODESTO		CLAYSTONE & SHALE	1.0	149.0	
501.9	MODESTO		SHALE	2.0	150.0	CONGLOMERATE SHALES
499.9	MODESTO		SANDSTONE	2.0	152.0	
497.9	MODESTO		CLAYSTONE & SHALE	32.0	154.0	
465.9	MODESTO		SANDY SHALE	10.0	186.0	
455.9	MODESTO		CLAYSTONE & SHALE	6.0	196.0	
449.9	MODESTO		SANDY SHALE	8.5	202.0	
441.4	MODESTO		CLAYSTONE & SHALE	5.5	210.5	
435.9	MODESTO		SANDY SHALE	13.0	216.0	
422.9	MODESTO		SHALE	1.0	229.0	
421.9	MODESTO		CONGLOMERATE	0.7	230.0	
421.2	MODESTO		SHALE	2.0	230.7	
419.2	MODESTO		SANDSTONE/SHALE	2.3	232.7	
416.9	MODESTO		SHALE	3.5	235.0	
413.4	MODESTO		SANDY SHALE	8.0	238.5	

405.4	MODESTO		CLAYSTONE & SHALE	2.5	246.5
402.9	MODESTO		CLAYSTONE & SHALE	3.5	249.0
399.4	MODESTO		SANDY SHALE	5.5	252.5
393.9	MODESTO		SANDY SHALE	8.6	258.0
385.3	MODESTO		SHALE	2.0	266.6
383.3	MODESTO		CLAYSTONE & SHALE	2.4	268.6
380.9	MODESTO	PIASA	LIMESTONE	3.0	271.0
377.9	MODESTO		SANDY CLAYSTONE	2.0	274.0
375.9	MODESTO		CLAYSTONE & SHALE	3.3	276.0
372.6	CARBONDALE	DANVILLE	COAL	1.8	279.3
370.9	CARBONDALE		SHALE	5.5	281.0
365.4	CARBONDALE	BANKSTON FORK	LIMESTONE	10.5	286.5
354.9	CARBONDALE	ANVIL ROCK	SANDSTONE	10.0	297.0
344.9	CARBONDALE	BRERETON	LIMESTONE	8.3	307.0
336.6	CARBONDALE	ANNA	BLACK SHALE	0.1	315.3
336.6	CARBONDALE	HERRIN	COAL	7.0	315.3
329.6			UNDERCLAY	1.3	322.3
328.2			LIMESTONE	0.3	323.7

MAPID: 11700006601M **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 8N 7W **SECTION:** 36 **QUARTERS/FOOTAGES:** 50' N line, 440' W line
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.828535 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.100155 **DATE COLLECTED:** 0 / 0 / 1948
SURFACE ELEVATION (FT.): 650.0 **LOGGED (FT.):** 7.6 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-SUPERIOR C C # 3 **WELL TYPE:** Underground mine
COMMENT: SEVERAL MEASURED SECTIONS IN THIS MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
650.0			UNKNOWN	346.0	0.0
304.0	CARBONDALE	HERRIN	COAL	7.6	346.0

MAPID: 11700006602M **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 8N 7W **SECTION:** 36 **QUARTERS/FOOTAGES:**
QUADRANGLE: GILLESPIE SOUTH **LONGITUDE:** -89.820758 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.092977 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 8.3 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-SUPERIOR C C # 3 **WELL TYPE:** Underground mine
COMMENT: 5TH E, 1ST S

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	COAL	8.3	

MAPID: 11700252000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 8N 7W SECTION: 36 QUARTERS/FOOTAGES: 200' N line, 495' W line

QUADRANGLE: GILLESPIE SOUTH LONGITUDE: -89.828331 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.099742 DATE COLLECTED: 0 / 0 / 1905

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 353.5 LOG TYPE: Drillers Log

SOURCE: SUPERIOR COAL CO. WELL TYPE: Mine Shaft

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
304.0	CARBONDALE	HERRIN	COAL	7.5	346.0

MAPID: 11700164000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 2 QUARTERS/FOOTAGES: 150' S line, 1800' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.948447 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.159336 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 581.2 LOGGED (FT.): 192.0 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MACHY. CO., HOLE #10 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
581.2			SOIL	14.0	0.0
567.2			SAND & GRAVEL	4.0	14.0
563.2			CLAY	20.0	18.0
543.2			SAND & GRAVEL	5.0	38.0
538.2	MODESTO		SHALE	43.0	43.0
495.2	MODESTO		SANDY SHALE	14.0	86.0
481.2	MODESTO		SHALE	49.0	100.0
432.2	MODESTO	PIASA	LIMESTONE	3.0	149.0
429.2	MODESTO		SHALE	6.3	152.0
422.9	CARBONDALE	DANVILLE	COAL	1.3	158.3
421.6	CARBONDALE		SHALE	9.4	159.6
412.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	169.0
409.2			SHALE	1.5	172.0
407.7	CARBONDALE	BRERETON	LIMESTONE	6.5	173.5
401.2	CARBONDALE	ANNA	BLACK SHALE	1.9	180.0
399.3	CARBONDALE	HERRIN	COAL	5.3	181.9
393.9			UNDERCLAY	1.8	187.3
392.2			LIMESTONE W/ SHALE	3.0	189.0

MAPID: 11700164000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 2 QUARTERS/FOOTAGES: 150' S line, 1800' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.948447

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.159336

DATE COLLECTED:

SURFACE ELEVATION (FT.): 581.0

LOGGED (FT.): 186.3

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
432.8	MODESTO	PIASA	LIMESTONE	3.0	148.2
429.8	MODESTO		SHALE	6.3	151.2
423.6	CARBONDALE	DANVILLE	COAL	1.3	157.4
422.3	CARBONDALE		SHALE	9.4	158.7
412.9	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	168.1
409.9	CARBONDALE	LAWSON	GRAY SHALE	1.5	171.1
408.4	CARBONDALE	BRERETON	LIMESTONE	6.5	172.6
401.9	CARBONDALE	ANNA	BLACK SHALE	1.9	179.1
400.0	CARBONDALE	HERRIN	COAL	5.3	181.0

MAPID: 11700543000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 3 QUARTERS/FOOTAGES: SW SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.968048 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.160744 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 205.0 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MACHINERY CO., #S-1 WELL TYPE: Coal Test

COMMENT: NO ELEV. GIVEN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			SOIL	2.0	0.0	
-			CLAY	29.0	2.0	
-	MODESTO		SANDY SHALE	11.0	31.0	
-	MODESTO		SHALE	17.0	42.0	
-	MODESTO		SANDY SHALE	6.0	59.0	
-	MODESTO		SHALE	68.8	65.0	
-	MODESTO		LIMESTONE	0.6	133.8	
-	MODESTO		BLACK SHALE	0.8	134.3	
-	MODESTO		BONE COAL	0.6	135.2	
-	MODESTO		SHALE	6.3	135.8	W/LS BANDS
-	MODESTO		SHALE	11.0	142.0	
-	MODESTO		BLACK SHALE	2.0	153.0	
-	MODESTO		UNDERCLAY	4.0	155.0	
-	MODESTO		CALCAREOUS SHALE	4.5	159.0	
-	MODESTO		SHALE	6.0	163.5	
-	MODESTO	PIASA	LIMESTONE	4.0	169.5	
-	MODESTO		SHALE	1.5	173.5	
-	CARBONDALE		CALCAREOUS SHALE	15.0	175.0	
-	CARBONDALE	BRERETON	LIMESTONE	4.0	190.0	
-	CARBONDALE		LIMESTONE W/ SHALE	5.7	194.0	
-	CARBONDALE	HERRIN	COAL	1.8	199.7	
-	CARBONDALE	HERRIN		0.0	201.4	PROBABLY CLAY
-	CARBONDALE	HERRIN	COAL	3.2	201.5	
-	CARBONDALE		UNDERCLAY	0.3	204.7	

MAPID: 11700543000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 3 QUARTERS/FOOTAGES: SW SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.968048

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.160744

DATE COLLECTED:

SURFACE ELEVATION (FT.): 620.0

LOGGED (FT.): 204.0

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
447.0	MODESTO	PIASA	LIMESTONE	4.0	173.0
443.0	CARBONDALE		SHALE	16.0	177.0
427.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	193.0
423.0	CARBONDALE	LAWSON	DARK GRAY SHALE	2.0	197.0
421.0	CARBONDALE	HERRIN	COAL	5.0	199.0

MAPID: 11700165000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 10 QUARTERS/FOOTAGES: 1200' S line, 3900' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.974655 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.147671 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 625.8 LOGGED (FT.): 253.0 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MCHY. CO., HOLE #7 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
625.8			SOIL	25.0	0.0	
600.8			SAND	4.0	25.0	
596.8			SANDY CLAY	23.5	29.0	
573.3	MODESTO		LIMESTONE	0.2	52.5	
573.1	MODESTO		SANDY SHALE	70.3	52.7	
502.8	MODESTO		SHALE	23.3	123.0	
479.5	MODESTO	ROCK BRANCH	COAL	0.5	146.3	CORRELATION UNCERTAIN
479.0	MODESTO		SHALE	24.7	146.8	
454.3	MODESTO	PIASA	LIMESTONE	4.3	171.5	
450.0	MODESTO		CALCAREOUS SHALE	2.5	175.8	
447.5	MODESTO		LIMESTONE	0.3	178.3	
447.2	MODESTO		SHALE	9.2	178.6	
438.0	CARBONDALE	DANVILLE	COAL	0.3	187.8	
437.7	CARBONDALE		CALCAREOUS SHALE	9.9	188.1	
427.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	198.0	
426.8	CARBONDALE		CALCAREOUS SHALE	2.0	199.0	
424.8	CARBONDALE	BRERETON	LIMESTONE	4.0	201.0	
420.8	CARBONDALE	ANNA	SHALE	1.7	205.0	
419.1	CARBONDALE	HERRIN	COAL	2.7	206.7	
416.5	CARBONDALE		UNDERCLAY	1.7	209.3	
414.8	CARBONDALE		LIMESTONE W/ SHALE	5.5	211.0	
409.3	CARBONDALE		SHALE	5.0	216.5	
404.3	CARBONDALE		LIMESTONE	1.0	221.5	
403.3	CARBONDALE		SHALE	7.5	222.5	
395.8	CARBONDALE		SANDSTONE	23.0	230.0	

MAPID: 11700165000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 10 QUARTERS/FOOTAGES: 1200' S line, 3900' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.974655

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.147671

DATE COLLECTED:

SURFACE ELEVATION (FT.): 626.0

LOGGED (FT.): 209.7

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
454.2	MODESTO	PIASA	LIMESTONE	4.3	171.8
449.8	MODESTO		LIMESTONE W/ SHALE	11.9	176.2
437.9	CARBONDALE	DANVILLE	COAL	0.3	188.1
437.6	CARBONDALE		CALCAREOUS SHALE	9.9	188.4
427.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	198.3
426.7	CARBONDALE	LAWSON	DARK GRAY SHALE	2.0	199.3
424.7	CARBONDALE	BRERETON	LIMESTONE	4.0	201.3
420.7	CARBONDALE	ANNA	BLACK SHALE	1.7	205.3
419.0	CARBONDALE	HERRIN	COAL	2.7	207.0

MAPID: 11721837000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 10 QUARTERS/FOOTAGES: 2595' N line, 1302' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.974973 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.1517 DATE COLLECTED: 6 / 21 / 1978

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 225.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NC-78-2 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
625.0			UNCONSOLIDATED	35.0	0.0
590.0	MODESTO		SANDSTONE	3.0	35.0
587.0	MODESTO		GRAY SHALE	18.0	38.0
569.0	MODESTO		GRAY SHALE	8.0	56.0
561.0	MODESTO		GRAY SHALE	36.0	64.0
525.0	MODESTO		SANDY SHALE	32.0	100.0
493.0	MODESTO		GRAY SHALE	14.0	132.0
479.0	MODESTO		BLACK SHALE	3.0	146.0
476.0	MODESTO		GRAY SHALE	16.0	149.0
460.0	MODESTO		SHALE	6.0	165.0
454.0	MODESTO	PIASA	LIMESTONE	5.0	171.0
449.0	MODESTO		SHALE	3.0	176.0
446.0	MODESTO		BLACK SHALE	2.0	179.0
444.0	CARBONDALE	DANVILLE	COAL	1.0	181.0
443.0	CARBONDALE		GRAY SHALE	11.0	182.0
432.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	193.0
429.0	CARBONDALE		GRAY SHALE	2.0	196.0
427.0	CARBONDALE	BRERETON	LIMESTONE	4.0	198.0
423.0	CARBONDALE	ANNA	BLACK SHALE	1.8	202.0
421.2	CARBONDALE	HERRIN	COAL	3.6	203.8
417.6	CARBONDALE		UNDERCLAY	1.0	207.4
416.6	CARBONDALE		UNDERCLAY	0.9	208.4
415.8	CARBONDALE		CORE LOSS	0.3	209.2
415.5	CARBONDALE		CALCAREOUS SHALE	1.5	209.5
414.0	CARBONDALE		LIMESTONE	5.0	211.0
409.0	CARBONDALE		CALCAREOUS SHALE	5.0	216.0
404.0	CARBONDALE		LIMESTONE	1.0	221.0
403.0	CARBONDALE		GRAY SHALE	3.0	222.0

MAPID: 11722372000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 10 QUARTERS/FOOTAGES: 2220' N line, 960' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.964343

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.152839

DATE COLLECTED: 10 / 1 / 1975

SURFACE ELEVATION (FT.): 620.0

LOGGED (FT.): 230.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-39

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.0			UNCONSOLIDATED	50.0	0.0
570.0	MODESTO		GRAY SHALE	116.0	50.0
454.0	MODESTO		BLACK SHALE	2.0	166.0
452.0	MODESTO		GRAY SHALE	6.5	168.0
445.5	MODESTO		SHALE	9.5	174.5
436.0	MODESTO	PIASA	LIMESTONE	3.0	184.0
433.0	MODESTO		GRAY SHALE	8.0	187.0
425.0	CARBONDALE	DANVILLE	COAL	1.0	195.0
424.0	CARBONDALE		GRAY SHALE	11.0	196.0
413.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	207.0
409.5	CARBONDALE		SHALE	2.0	210.5
407.5	CARBONDALE	BRERETON	LIMESTONE	6.5	212.5
401.0	CARBONDALE	ANNA	BLACK SHALE	0.5	219.0
400.5	CARBONDALE	HERRIN	COAL	5.0	219.5
395.5	CARBONDALE		UNDERCLAY	1.5	224.5
394.0	CARBONDALE		LIMESTONE	4.0	226.0

MAPID: 11722373000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 10 QUARTERS/FOOTAGES: 1295' N line, 17' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.979577 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.155245 DATE COLLECTED: 9 / 8 / 1977

SURFACE ELEVATION (FT.): 624.0 LOGGED (FT.): 226.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-68 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
624.0			UNCONSOLIDATED	54.0	0.0
570.0	MODESTO		CALCAREOUS SANDSTONE	2.0	54.0
568.0	MODESTO		GRAY SHALE	97.0	56.0
471.0	MODESTO		BLACK SHALE	2.0	153.0
469.0	MODESTO		SHALE	18.0	155.0
451.0	MODESTO	PIASA	LIMESTONE	5.0	173.0
446.0	MODESTO		GRAY SHALE	3.0	178.0
443.0	CARBONDALE		BLACK SHALE	2.0	181.0
441.0	CARBONDALE	DANVILLE	COAL	1.0	183.0
440.0	CARBONDALE		GRAY SHALE	8.0	184.0
432.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	192.0
429.5	CARBONDALE		GRAY SHALE	1.5	194.5
428.0	CARBONDALE	BRERETON	LIMESTONE	5.0	196.0
423.0	CARBONDALE		GRAY SHALE	2.0	201.0
421.0	CARBONDALE	ANNA	BLACK SHALE	2.0	203.0
419.0	CARBONDALE	HERRIN	COAL	4.5	205.0
414.5	CARBONDALE		UNDERCLAY	1.0	209.5
413.5	CARBONDALE		LIMESTONE	9.0	210.5
404.5	CARBONDALE		GRAY SHALE	6.5	219.5

MAPID: 11722502000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 10 QUARTERS/FOOTAGES: 48' N line, 325' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.978537 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.158698 DATE COLLECTED: 9 / 9 / 1977

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 220.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-69 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSTIY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.0			UNCONSOLIDATED	29.0	0.0
591.0	MODESTO		SILTSTONE	10.0	29.0
581.0	MODESTO		GRAY SHALE	4.0	39.0
577.0	MODESTO		LIMESTONE	5.0	43.0
572.0	MODESTO		SANDY SHALE	17.0	48.0
555.0	MODESTO		GRAY SHALE	61.0	65.0
494.0	MODESTO		BLACK SHALE	2.0	126.0
492.0	MODESTO		GRAY SHALE	16.0	128.0
476.0	MODESTO		BLACK SHALE	2.0	144.0
474.0	MODESTO		GRAY SHALE	4.0	146.0
470.0	MODESTO		SHALE	9.0	150.0
461.0	MODESTO	PIASA	LIMESTONE	4.0	159.0
457.0	MODESTO		GRAY SHALE	5.0	163.0
452.0	MODESTO		BLACK SHALE	2.0	168.0
450.0	CARBONDALE		GRAY SHALE	13.5	170.0
436.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	183.5
433.0	CARBONDALE		GRAY SHALE	2.0	187.0
431.0	CARBONDALE	BRERETON	SHALY LIMESTONE	3.9	189.0
427.1	CARBONDALE	ANNA	BLACK SHALE	0.7	192.9
426.4	CARBONDALE	HERRIN	COAL	2.9	193.6
423.5	CARBONDALE		UNDERCLAY	1.0	196.5
422.5	CARBONDALE		LIMESTONE	1.1	197.5
421.4	CARBONDALE		SHALE	2.9	198.6
418.5	CARBONDALE		CORE LOSS	0.6	201.5
418.0	CARBONDALE		GRAY SHALE	2.0	202.0
416.0	CARBONDALE		LIMESTONE	3.0	204.0
413.0	CARBONDALE		GRAY SHALE	13.0	207.0

MAPID: 11721838000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 11 QUARTERS/FOOTAGES: 2610' N line, 2310' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.950175 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.151727 DATE COLLECTED: 6 / 20 / 1978

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 260.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-78-3 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
632.0			UNCONSOLIDATED	94.0	0.0
538.0	MODESTO		GRAY SHALE	21.0	94.0
517.0	MODESTO		GRAY SHALE	59.5	115.0
457.5	MODESTO		SHALE	0.5	174.5
457.0	MODESTO		SHALE	17.0	175.0
440.0	MODESTO		BLACK SHALE	3.0	192.0
437.0	MODESTO		GRAY SHALE	10.0	195.0
427.0	MODESTO		SHALE	7.5	205.0
419.5	MODESTO	PIASA	LIMESTONE	2.0	212.5
417.5	MODESTO		SHALE	6.5	214.5
411.0	CARBONDALE	DANVILLE	COAL	1.0	221.0
410.0	CARBONDALE		GRAY SHALE	9.5	222.0
400.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	231.5
399.0	CARBONDALE		GRAY SHALE	2.0	233.0
397.0	CARBONDALE	BRERETON	LIMESTONE	6.0	235.0
391.0	CARBONDALE	ANNA	BLACK SHALE	2.3	241.0
388.7	CARBONDALE	HERRIN	COAL	4.3	243.3
384.4	CARBONDALE		SHALE	1.1	247.6
383.3	CARBONDALE		CORE LOSS	0.3	248.7
383.0	CARBONDALE		SHALY LIMESTONE	5.0	249.0
378.0	CARBONDALE		GRAY SHALE	4.0	254.0
374.0	CARBONDALE		LIMESTONE	1.0	258.0
373.0	CARBONDALE		SHALE	1.0	259.0

MAPID: 11722503000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 11 QUARTERS/FOOTAGES: 2600' S line, 315' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.9431 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.151492 DATE COLLECTED: 9 / 7 / 1977

SURFACE ELEVATION (FT.): 638.0 LOGGED (FT.): 260.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-67 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
638.0			UNCONSOLIDATED	55.0	0.0
583.0	MODESTO		SILTSTONE	10.0	55.0
573.0	MODESTO		GRAY SHALE	103.0	65.0
470.0	MODESTO		COAL	0.5	168.0
469.5	MODESTO		GRAY SHALE	6.5	168.5
463.0	MODESTO		CALCAREOUS SHALE	5.0	175.0
458.0	MODESTO		GRAY SHALE	7.0	180.0
451.0	MODESTO		BLACK SHALE	3.0	187.0
448.0	MODESTO		SHALE	17.0	190.0
431.0	MODESTO	PIASA	LIMESTONE	3.0	207.0
428.0	MODESTO		GRAY SHALE	4.0	210.0
424.0	MODESTO		BLACK SHALE	2.0	214.0
422.0	CARBONDALE	DANVILLE	COAL	1.0	216.0
421.0	CARBONDALE		GRAY SHALE	6.0	217.0
415.0	CARBONDALE		LIMESTONE	2.0	223.0
413.0	CARBONDALE		GRAY SHALE	5.0	225.0
408.0	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	4.3	230.0
403.7	CARBONDALE		SHALE	1.4	234.3
402.4	CARBONDALE	BRERETON	LIMESTONE	2.8	235.6
399.6	CARBONDALE	ANNA	BLACK SHALE	1.4	238.4
398.2	CARBONDALE	HERRIN	COAL	4.2	239.8
394.0	CARBONDALE		CLAYSTONE	3.0	244.0
391.0	CARBONDALE		LIMESTONE	5.0	247.0
386.0	CARBONDALE		GRAY SHALE	6.0	252.0
380.0	CARBONDALE		LIMESTONE W/ SHALE	2.0	258.0

MAPID: 11722504000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 11 QUARTERS/FOOTAGES: 186' N line, 2370' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.950452 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.15842 DATE COLLECTED: 9 / 8 / 1977

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 260.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-70 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSTIY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.0			UNCONSOLIDATED	82.0	0.0
538.0	MODESTO		GRAY SHALE	10.0	82.0
528.0	MODESTO		SANDSTONE	9.0	92.0
519.0	MODESTO		GRAY SHALE	64.0	101.0
455.0	MODESTO		SHALE	2.0	165.0
453.0	MODESTO		GRAY SHALE	10.0	167.0
443.0	MODESTO		SHALE	3.0	177.0
440.0	MODESTO		SHALY LIMESTONE	2.0	180.0
438.0	MODESTO		SHALE	2.0	182.0
436.0	MODESTO		BLACK SHALE	3.5	184.0
432.5	MODESTO		GRAY SHALE	8.5	187.5
424.0	MODESTO		SHALE	6.0	196.0
418.0	MODESTO	PIASA	LIMESTONE	3.0	202.0
415.0	MODESTO		GRAY SHALE	5.0	205.0
410.0	MODESTO		BLACK SHALE	2.0	210.0
408.0	CARBONDALE	DANVILLE	COAL	2.0	212.0
406.0	CARBONDALE		GRAY SHALE	4.0	214.0
402.0	CARBONDALE		LIMESTONE	1.0	218.0
401.0	CARBONDALE		GRAY SHALE	4.0	219.0
397.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	223.0
394.0	CARBONDALE		GRAY SHALE	2.0	226.0
392.0	CARBONDALE	BRERETON	LIMESTONE	4.1	228.0
387.9	CARBONDALE	ANNA	BLACK SHALE	1.9	232.1
386.0	CARBONDALE	HERRIN	COAL	6.5	234.0
379.5	CARBONDALE		CLAYSTONE	1.0	240.5
378.5	CARBONDALE		CLAYSTONE	3.0	241.5
375.5	CARBONDALE		SHALE	2.0	244.5
373.5	CARBONDALE		GRAY SHALE	8.0	246.5
365.5	CARBONDALE		LIMESTONE W/ SHALE	5.5	254.5

MAPID: 11700166000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 12 QUARTERS/FOOTAGES: 2620' S line, 380' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.940636 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.151476 DATE COLLECTED: 8 / 23 / 1912

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 243.6 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: 400' E OF SCHOOL, 75' N OF ROAD

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
630.0			UNCLASSIFIED	18.0	0.0	
612.0			CLAY & GRAVEL	32.0	18.0	
580.0	MODESTO		SHALE	39.0	50.0	
541.0	MODESTO		SHALY LIMESTONE	10.0	89.0	
531.0	MODESTO		SHALE	86.0	99.0	
445.0	MODESTO		BLACK SHALE	2.5	185.0	
442.5	MODESTO		UNDERCLAY	3.5	187.5	
439.0	MODESTO		SHALY LIMESTONE	6.0	191.0	
433.0	MODESTO		SHALE	5.5	197.0	
427.5	MODESTO	PIASA	LIMESTONE	3.5	202.5	
424.0	MODESTO		SHALE	3.0	206.0	
421.0	MODESTO		BLACK SHALE	4.3	209.0	
416.7	CARBONDALE	DANVILLE	COAL	2.0	213.3	
414.7	CARBONDALE		UNDERCLAY	5.7	215.3	
409.0	CARBONDALE		SHALE	1.0	221.0	
408.0	CARBONDALE		SANDY LIMESTONE	12.5	222.0	
395.5	CARBONDALE	ANNA	BLACK SHALE	1.4	234.5	
394.1	CARBONDALE	HERRIN	COAL	6.6	235.9	
387.5	CARBONDALE		UNDERCLAY	1.1	242.5	LOG HAS FIRECLAY, SS

MAPID: 11700167000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 12 QUARTERS/FOOTAGES: 1775' S line, 3300' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.930255 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.148691 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 639.0 LOGGED (FT.): 254.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE D-7 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
639.0			CLAY	38.0	0.0	& HARD PAN
601.0			SAND & GRAVEL	5.0	38.0	
596.0	MODESTO		SHALE	17.0	43.0	
579.0	MODESTO		SANDSTONE	10.0	60.0	
569.0	MODESTO		SHALE	10.0	70.0	
559.0	MODESTO		SANDSTONE	10.0	80.0	
549.0	MODESTO		SHALE	11.0	90.0	
538.0	MODESTO		SANDY SHALE	10.0	101.0	
528.0	MODESTO		SHALE	7.0	111.0	
521.0	MODESTO		SHALE	57.0	118.0	
464.0	MODESTO		SHALE	20.0	175.0	
444.0	MODESTO		SHALE	7.0	195.0	
437.0	MODESTO		SHALE	7.0	202.0	
430.0	MODESTO		SHALE	2.0	209.0	
428.0	MODESTO		SHALE	3.0	211.0	
425.0	MODESTO	PIASA	LIMESTONE	2.5	214.0	
422.5	MODESTO		SHALE	4.5	216.5	
418.0	MODESTO		BLACK SHALE	1.0	221.0	
417.0	CARBONDALE		SHALE	4.0	222.0	
413.0	CARBONDALE		SHALE	4.0	226.0	
409.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	230.0	
406.0	CARBONDALE		SANDY SHALE	4.0	233.0	
402.0	CARBONDALE	BRERETON	LIMESTONE	10.0	237.0	
392.0	CARBONDALE		SHALE	0.8	247.0	
391.2	CARBONDALE	HERRIN	COAL	5.6	247.8	
385.7	CARBONDALE		UNDERCLAY	0.7	253.3	

MAPID: 11700167000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 12 QUARTERS/FOOTAGES: 1775' S line, 3300' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.930255

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.148691

DATE COLLECTED:

SURFACE ELEVATION (FT.): 639.0

LOGGED (FT.): 253.6

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
424.7	MODESTO	PIASA	LIMESTONE	2.5	214.3
422.2	MODESTO		DARK GRAY SHALE	4.5	216.8
417.7	CARBONDALE	DANVILLE	BONE COAL	1.0	221.3
416.7	CARBONDALE		GRAY SHALE	8.0	222.3
408.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	230.3
405.7	CARBONDALE	LAWSON	SILTY SHALE	4.0	233.3
401.7	CARBONDALE	BRERETON	LIMESTONE	10.0	237.3
391.7	CARBONDALE	ANNA	BLACK SHALE	0.8	247.3
391.0	CARBONDALE	HERRIN	COAL	5.6	248.0

MAPID: 11700168000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 14 QUARTERS/FOOTAGES: SE NW SE SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.944839 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.132069 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 627.3 LOGGED (FT.): 259.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., #D-6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
627.3			SOIL	20.0	0.0
607.3			SAND & GRAVEL	5.0	20.0
602.3	MODESTO		SHALE	28.0	25.0
574.3	MODESTO	CARLINVILLE	LIMESTONE	6.0	53.0
568.3	MODESTO		SANDY SHALE	21.0	59.0
547.3	MODESTO		SHALE	1.0	80.0
546.3	MODESTO		SANDY SHALE	5.0	81.0
541.3	MODESTO		SHALE	8.0	86.0
533.3	MODESTO		SHALE	2.0	94.0
531.3	MODESTO		SHALE	16.5	96.0
514.8	MODESTO		SANDSTONE	0.5	112.5
514.3	MODESTO		SHALE	2.0	113.0
512.3	MODESTO		SANDSTONE	4.0	115.0
508.3	MODESTO		SHALE	63.0	119.0
445.3	MODESTO		CALCAREOUS SHALE	6.0	182.0
439.3	MODESTO		SHALE	11.0	188.0
428.3	MODESTO		SANDSTONE	2.5	199.0
425.8	MODESTO		SHALE	8.5	201.5
417.3	MODESTO		SHALE	2.5	210.0
414.8	MODESTO		SHALE	3.0	212.5
411.8	MODESTO		SHALE	2.5	215.5
409.3	MODESTO	PIASA	LIMESTONE	2.5	218.0
406.8	MODESTO		SHALE	2.5	220.5
404.3	MODESTO		SHALE	5.5	223.0
398.8	MODESTO		BLACK SHALE	1.0	228.5
397.8	CARBONDALE	DANVILLE	COAL	0.8	229.5
397.0	CARBONDALE		SHALE	14.7	230.3
382.3	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	245.0
381.3	CARBONDALE		CALCAREOUS SHALE	1.0	246.0
380.3	CARBONDALE	BRERETON	LIMESTONE	6.0	247.0
374.3	CARBONDALE	ANNA	BLACK SHALE	1.5	253.0
372.8	CARBONDALE	HERRIN	COAL	4.2	254.5
368.6	CARBONDALE		UNDERCLAY	0.3	258.7

MAPID: 11700168000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 14 QUARTERS/FOOTAGES: SE NW SE SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.944839

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.132069

DATE COLLECTED:

SURFACE ELEVATION (FT.): 627.0

LOGGED (FT.): 258.2

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
409.0	MODESTO	PIASA	LIMESTONE	2.5	218.0
406.5	MODESTO		DARK GRAY SHALE	9.2	220.5
397.3	CARBONDALE	DANVILLE	COAL	0.8	229.7
396.5	CARBONDALE		DARK GRAY SHALE	14.0	230.5
382.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	244.5
381.5	CARBONDALE	LAWSON	CALCAREOUS SHALE	1.0	245.5
380.5	CARBONDALE	BRERETON	LIMESTONE	6.0	246.5
374.5	CARBONDALE	ANNA	BLACK SHALE	1.5	252.5
373.0	CARBONDALE	HERRIN	COAL	4.2	254.0

MAPID: 11722505000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 14 QUARTERS/FOOTAGES: 1296' S line, 30' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.94198 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.133328 DATE COLLECTED: 9 / 7 / 1977

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 282.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-66 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
640.0			UNCONSOLIDATED	40.0	0.0
600.0	MODESTO	MACOUPIN	SHALY LIMESTONE	4.0	40.0
596.0	MODESTO		GRAY SHALE	23.5	44.0
572.5	MODESTO	CARLINVILLE	LIMESTONE	7.5	67.5
565.0	MODESTO		GRAY SHALE	23.0	75.0
542.0	MODESTO		CALCAREOUS SANDSTONE	3.0	98.0
539.0	MODESTO		GRAY SHALE	24.0	101.0
515.0	MODESTO		SANDY SHALE	16.0	125.0
499.0	MODESTO		GRAY SHALE	62.5	141.0
436.5	MODESTO		SHALE	5.0	203.5
431.5	MODESTO		GRAY SHALE	15.5	208.5
416.0	MODESTO		SHALE	2.0	224.0
414.0	MODESTO	PIASA	LIMESTONE	4.0	226.0
410.0	MODESTO		SHALE	5.0	230.0
405.0	MODESTO		BLACK SHALE	2.5	235.0
402.5	CARBONDALE	DANVILLE	COAL	2.5	237.5
400.0	CARBONDALE		GRAY SHALE	6.5	240.0
393.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	246.5
392.0	CARBONDALE		SHALE	1.5	248.0
390.5	CARBONDALE	BRERETON	LIMESTONE	6.9	249.5
383.6	CARBONDALE		SHALE	2.6	256.4
381.0	CARBONDALE	HERRIN	COAL	7.5	259.0
373.5	CARBONDALE		CLAYSTONE	2.0	266.5
371.5	CARBONDALE		LIMESTONE	4.7	268.5
366.8	CARBONDALE		GRAY SHALE	7.8	273.2
359.0	CARBONDALE		LIMESTONE	1.0	281.0

MAPID: 11700454000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 15 QUARTERS/FOOTAGES: SE NE SW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.97134 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.134444 DATE COLLECTED:

SURFACE ELEVATION (FT.): 636.0 LOGGED (FT.): 243.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
431.0	MODESTO	PIASA	LIMESTONE	4.0	205.0
427.0	MODESTO		DARK GRAY SHALE	5.0	209.0
422.0	CARBONDALE	DANVILLE	BONE COAL	4.0	214.0
418.0	CARBONDALE		ROCK	7.0	218.0
411.0	CARBONDALE	BRERETON	LIMESTONE	7.0	225.0
404.0	CARBONDALE	ANNA	BLACK SHALE	2.0	232.0
399.0	CARBONDALE	HERRIN	COAL	6.0	237.0

MAPID: 11700838000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 17 QUARTERS/FOOTAGES: 330' N line, 330' W line

QUADRANGLE: SUMMERVILLE LONGITUDE: -90.015407 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.144522 DATE COLLECTED:

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 199.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
458.0	MODESTO	PIASA	LIMESTONE	6.0	167.0
452.0	MODESTO		CARBONACEOUS SHALE	5.0	173.0
447.0	CARBONDALE		GRAY SHALE	9.0	178.0
438.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	6.0	187.0
432.0	CARBONDALE	LAWSON	CALCAREOUS SHALE	4.0	193.0
428.0	CARBONDALE	HERRIN	COAL	2.0	197.0

MAPID: 11722374000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 19 QUARTERS/FOOTAGES: 365' S line, 2050' E line

QUADRANGLE: SHIPMAN LONGITUDE: -90.023574 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.11747 DATE COLLECTED: 10 / 2 / 1975

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 230.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-40 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
625.0			UNCONSOLIDATED	43.0	0.0	
582.0	MODESTO		GRAY SHALE	23.0	43.0	
559.0	MODESTO		SANDSTONE	12.0	66.0	
547.0	MODESTO		GRAY SHALE	69.5	78.0	
477.5	MODESTO		LIMESTONE	0.5	147.5	
477.0	MODESTO		GRAY SHALE	15.0	148.0	
462.0	MODESTO		LIMESTONE	1.0	163.0	
461.0	MODESTO		BLACK SHALE	2.5	164.0	
458.5	MODESTO		GRAY SHALE	11.5	166.5	
447.0	MODESTO		SHALE	6.0	178.0	
441.0	MODESTO		LIMESTONE	2.5	184.0	
438.5	MODESTO		SHALE	13.0	186.5	
425.5	CARBONDALE	DANVILLE	COAL	1.5	199.5	
424.0	CARBONDALE		GRAY SHALE	4.5	201.0	
419.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	205.5	
415.5	CARBONDALE		GRAY SHALE	2.5	209.5	
413.0	CARBONDALE	BRERETON	LIMESTONE	8.0	212.0	
405.0	CARBONDALE	ANNA	BLACK SHALE	1.0	220.0	
404.0	CARBONDALE	HERRIN	COAL	1.0	221.0	
403.0	CARBONDALE		UNDERCLAY	5.0	222.0	
398.0	CARBONDALE		SHALY LIMESTONE	3.0	227.0	

MAPID: 11700545000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 22 QUARTERS/FOOTAGES: 0' S line, 2640' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.970254 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.115491 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 224.0 LOG TYPE: Drillers Log

SOURCE: A.M. CRAWFORD WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			SOIL	2.0	0.0	
-			CLAY	8.0	2.0	
-			SANDY CLAY	16.0	10.0	
-			CLAY	8.0	26.0	
-			GRAVEL	2.0	34.0	
-	MODESTO		SHALE	4.5	36.0	
-	MODESTO		SANDSTONE	1.0	40.5	
-	MODESTO		SHALE	14.5	41.5	
-	MODESTO		SHALE	14.5	56.0	
-	MODESTO		LIMESTONE	0.5	70.5	
-			SHALE	23.0	71.0	
-	MODESTO		SHALE	8.0	94.0	
-	MODESTO		SANDY SHALE	47.0	102.0	
-	MODESTO		SHALE	16.0	149.0	
-	MODESTO		BONE COAL	0.5	165.0	
-	MODESTO		UNDERCLAY	6.5	165.5	
-	MODESTO		CALCAREOUS SHALE	5.0	172.0	
-	MODESTO		SHALE	3.5	177.0	
-	MODESTO		SHALE	3.5	180.5	MIXED
-	MODESTO		LIMESTONE	0.5	184.0	
-	MODESTO		SHALE	3.5	184.5	
-	MODESTO	PIASA	LIMESTONE	2.0	188.0	
-	MODESTO		SHALE	4.0	190.0	
-	MODESTO		SHALE	3.0	194.0	
-	CARBONDALE	DANVILLE	COAL	0.7	197.0	
-	CARBONDALE		SHALE	4.3	197.7	
-	CARBONDALE		COAL	0.3	202.0	
-	CARBONDALE		CALCAREOUS SHALE	3.7	202.3	
-	CARBONDALE	BRERETON	LIMESTONE	6.0	206.0	
-	CARBONDALE		SHALE	3.0	212.0	
-	CARBONDALE		SHALE	1.3	215.0	
-	CARBONDALE		BLACK SHALE	0.4	216.3	
-	CARBONDALE	HERRIN	COAL	6.2	216.8	
-	CARBONDALE		UNDERCLAY	1.1	222.9	

MAPID: 11700545000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 22 QUARTERS/FOOTAGES: 0' S line, 2640' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.970254

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.115491

DATE COLLECTED:

SURFACE ELEVATION (FT.): 640.0

LOGGED (FT.): 223.2

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
451.7	MODESTO	PIASA	LIMESTONE	2.0	188.3
449.7	MODESTO		GRAY SHALE	7.0	190.3
442.7	CARBONDALE	DANVILLE	BLACK SHALE	0.7	197.3
442.1	CARBONDALE		GRAY SHALE	4.3	197.9
437.7	CARBONDALE	ALLENBY	COAL	0.3	202.3
437.4	CARBONDALE		CALCAREOUS SHALE	3.7	202.6
433.8	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	206.2
427.8	CARBONDALE	LAWSON	GRAY SHALE	4.3	212.2
423.4	CARBONDALE	ANNA	BLACK SHALE	0.4	216.6
423.0	CARBONDALE	HERRIN	COAL	6.2	217.0

MAPID: 11722375000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 22 QUARTERS/FOOTAGES: 425' S line, 2010' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.968004

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.116651

DATE COLLECTED: 10 / 1 / 1975

SURFACE ELEVATION (FT.): 650.0

LOGGED (FT.): 238.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-38

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
650.0			UNCONSOLIDATED	96.0	0.0
554.0	MODESTO		GRAY SHALE	77.0	96.0
477.0	MODESTO		BLACK SHALE	3.0	173.0
474.0	MODESTO		GRAY SHALE	14.0	176.0
460.0	MODESTO		SHALE	6.5	190.0
453.5	MODESTO	PIASA	LIMESTONE	2.5	196.5
451.0	MODESTO		SHALE	6.5	199.0
444.5	CARBONDALE	DANVILLE	COAL	1.5	205.5
443.0	CARBONDALE		GRAY SHALE	13.5	207.0
429.5	CARBONDALE	BRERETON	LIMESTONE	3.5	220.5
426.0	CARBONDALE	ANNA	BLACK SHALE	4.0	224.0
422.0	CARBONDALE	HERRIN	COAL	5.4	228.0
416.6	CARBONDALE		UNDERCLAY	2.1	233.4
414.5	CARBONDALE		LIMESTONE	2.5	235.5

MAPID: 11722506000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 22 QUARTERS/FOOTAGES: 2097' S line, 999' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.975988 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.121315 DATE COLLECTED: 9 / 9 / 1977

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 260.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-65 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
642.0			UNCONSOLIDATED	63.0	0.0	
579.0	MODESTO		SILTSTONE	14.0	63.0	
565.0	MODESTO		SANDY SHALE	105.0	77.0	
460.0	MODESTO		BLACK SHALE	2.0	182.0	
458.0	MODESTO		SHALE	19.0	184.0	
439.0	MODESTO	PIASA	LIMESTONE	3.0	203.0	
436.0	MODESTO		SHALE	3.0	206.0	
433.0	CARBONDALE	DANVILLE	COAL	1.0	209.0	
432.0	CARBONDALE		GRAY SHALE	10.0	210.0	
422.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.9	220.0	
418.1	CARBONDALE		SHALE	1.1	223.9	
417.0	CARBONDALE		SHALE	1.5	225.0	
415.5	CARBONDALE	BRERETON	SANDY LIMESTONE	2.5	226.5	
413.0	CARBONDALE	BRERETON	SHALE	0.5	229.0	
412.5	CARBONDALE	BRERETON	SHALY LIMESTONE	5.1	229.5	
407.4	CARBONDALE		CALCAREOUS SHALE	0.5	234.6	
406.9	CARBONDALE	HERRIN	COAL	4.1	235.1	
402.8	CARBONDALE		UNDERCLAY	0.5	239.2	
402.3	CARBONDALE		UNDERCLAY	0.9	239.7	
401.4	CARBONDALE		LIMESTONE	2.4	240.6	
399.0	CARBONDALE		GRAY SHALE	17.0	243.0	

MAPID: 11700169000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 23 QUARTERS/FOOTAGES: 2625' N line, 60' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.942018 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.122503 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 651.4 LOGGED (FT.): 270.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., #D-5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
651.4			CLAY	25.0	0.0	& HARD PAN
626.4			SAND & GRAVEL	5.0	25.0	
621.4	MODESTO		SHALE	11.0	30.0	
610.4	MODESTO	BURROUGHS	LIMESTONE	3.0	41.0	
607.4	MODESTO		SHALE	20.0	44.0	
587.4	MODESTO	CARLINVILLE	LIMESTONE	7.0	64.0	
580.4	MODESTO		SHALE	9.0	71.0	
571.4	MODESTO		SHALE	22.0	80.0	
549.4	MODESTO		BLACK SHALE	0.5	102.0	
548.9	MODESTO		SHALE	9.5	102.5	
539.4	MODESTO		SANDY SHALE	2.0	112.0	
537.4	MODESTO		SHALE	68.0	114.0	
469.4	MODESTO		LIMESTONE	0.5	182.0	
468.9	MODESTO		SHALE	6.5	182.5	
462.4	MODESTO		SHALE	1.0	189.0	
461.4	MODESTO		SHALE	12.0	190.0	
449.4	MODESTO		SANDY SHALE	9.0	202.0	
440.4	MODESTO		SANDSTONE	2.0	211.0	
438.4	MODESTO		SHALE	1.0	213.0	
437.4	MODESTO		SANDSTONE	4.0	214.0	
433.4	MODESTO		SHALE	3.0	218.0	
430.4	MODESTO		SHALE	3.0	221.0	
427.4	MODESTO		SHALE	3.0	224.0	
424.4	MODESTO		SHALE	2.0	227.0	
422.4	MODESTO	PIASA	LIMESTONE	2.5	229.0	
419.9	MODESTO		SHALE	6.0	231.5	
413.9	CARBONDALE	DANVILLE	COAL	0.5	237.5	
413.4	CARBONDALE		SANDSTONE	1.0	238.0	
412.4	CARBONDALE		SHALE	6.0	239.0	
406.4	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	245.0	
403.4	CARBONDALE		SHALE	1.5	248.0	
401.9	CARBONDALE		SANDY SHALE	8.0	249.5	
393.9	CARBONDALE	BRERETON	LIMESTONE	5.0	257.5	
388.9	CARBONDALE		SHALE	0.5	262.5	
388.4	CARBONDALE	HERRIN	COAL	5.8	263.0	
382.6	CARBONDALE		UNDERCLAY	1.2	268.8	

MAPID: 11700169000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 23 QUARTERS/FOOTAGES: 2625' N line, 60' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.942018

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.122503

DATE COLLECTED:

SURFACE ELEVATION (FT.): 651.0

LOGGED (FT.): 268.8

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
422.0	MODESTO	PIASA	LIMESTONE	2.5	229.0
419.5	MODESTO		DARK GRAY SHALE	6.0	231.5
413.5	CARBONDALE	DANVILLE	COAL	0.5	237.5
413.0	CARBONDALE		SHALE & SANDSTONE	7.0	238.0
406.0	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	4.5	245.0
401.5	CARBONDALE	LAWSON	SHALE & SANDSTONE	8.0	249.5
393.5	CARBONDALE	BRERETON	LIMESTONE	5.0	257.5
388.5	CARBONDALE	ANNA	BLACK SHALE	0.5	262.5
388.0	CARBONDALE	HERRIN	COAL	5.8	263.0

MAPID: 11700170000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 25 QUARTERS/FOOTAGES: 270' S line, 130' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.923573 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.100922 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 297.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., #D-3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
656.0			CLAY	20.0	0.0	& HARD PAN
636.0			SAND & GRAVEL	5.0	20.0	
631.0	MODESTO		SHALE	2.0	25.0	
629.0	MODESTO	MACOUPIN	LIMESTONE	0.5	27.0	
628.5	MODESTO		SHALE	16.5	27.5	
612.0	MODESTO		SHALE	12.0	44.0	
600.0	MODESTO		BLACK SHALE	1.3	56.0	
598.7	MODESTO		SHALE	1.5	57.3	
597.2	MODESTO	WOMAC	COAL	0.3	58.8	
597.0	MODESTO		SHALE	9.0	59.0	
588.0	MODESTO		SANDSTONE	1.0	68.0	
587.0	MODESTO		SHALE	8.0	69.0	
579.0	MODESTO		SHALE	11.0	77.0	
568.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	88.0	
564.0	MODESTO		SHALE	24.0	92.0	
540.0	MODESTO		BLACK SHALE	0.5	116.0	
539.5	MODESTO		SANDY SHALE	4.5	116.5	
535.0	MODESTO		SHALE	6.5	121.0	
528.5	MODESTO	CHAPEL	COAL	0.2	127.5	
528.3	MODESTO		SHALE	6.3	127.7	
522.0	MODESTO		SHALE	74.0	134.0	
448.0	MODESTO		SHALE	12.0	208.0	
436.0	MODESTO		SHALE	5.0	220.0	
431.0	MODESTO		SHALE	23.0	225.0	
408.0	MODESTO	PIASA	LIMESTONE	3.0	248.0	
405.0	MODESTO		BLACK SHALE	1.5	251.0	
403.5	CARBONDALE	DANVILLE	COAL	1.0	252.5	
402.5	CARBONDALE		SHALE	7.5	253.5	
395.0	CARBONDALE		CALCAREOUS SHALE	10.0	261.0	
385.0	CARBONDALE		SHALE	7.0	271.0	
378.0	CARBONDALE	BRERETON	LIMESTONE	7.7	278.0	
370.3	CARBONDALE	HERRIN	COAL	6.1	285.7	
364.2	CARBONDALE		UNDERCLAY	2.2	291.8	
362.0	CARBONDALE		LIMESTONE	3.0	294.0	

MAPID: 11700170000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 25 QUARTERS/FOOTAGES: 270' S line, 130' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.923573

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.100922

DATE COLLECTED:

SURFACE ELEVATION (FT.): 656.0

LOGGED (FT.): 291.8

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
408.0	MODESTO	PIASA	LIMESTONE	3.0	248.0
405.0	MODESTO		DARK GRAY SHALE	1.5	251.0
403.5	CARBONDALE	DANVILLE	COAL	1.0	252.5
402.5	CARBONDALE		SHALE & SANDSTONE	24.0	253.5
378.5	CARBONDALE	BANKSTON FORK	LIMESTONE	7.7	277.5
370.8	CARBONDALE	ANNA	BLACK SHALE	0.3	285.2
370.0	CARBONDALE	HERRIN	COAL	5.8	286.0

MAPID: 11700171000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 26 QUARTERS/FOOTAGES: SE SE SW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.952584 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.101539 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 636.6 LOGGED (FT.): 250.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., #D-4 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
636.6			CLAY	30.0	0.0	& HARD PAN
606.6			GRAVEL	5.0	30.0	
601.6			SAND & GRAVEL	10.0	35.0	
591.6	MODESTO		SHALE	26.0	45.0	
565.6	MODESTO		SHALE	11.0	71.0	
554.6	MODESTO		SHALE	19.0	82.0	
535.6	MODESTO		SHALE	83.0	101.0	
452.6	MODESTO		SHALE	2.0	184.0	
450.6	MODESTO		SANDSTONE	4.5	186.0	
446.1	MODESTO		SHALE	8.5	190.5	
437.6	MODESTO		SHALE	2.0	199.0	
435.6	MODESTO		SHALE	5.0	201.0	
430.6	MODESTO		CALCAREOUS SHALE	4.0	206.0	
426.6	MODESTO		SHALE	2.0	210.0	
424.6	MODESTO		BLACK SHALE	4.0	212.0	
420.6	CARBONDALE	DANVILLE	COAL	2.0	216.0	
418.6	CARBONDALE		SHALE	7.0	218.0	
411.6	CARBONDALE		LIMESTONE	7.0	225.0	
404.6	CARBONDALE		SHALE	5.6	232.0	
399.0	CARBONDALE	ANNA	BLACK SHALE	1.5	237.6	
397.5	CARBONDALE	HERRIN	COAL	6.4	239.1	
391.1	CARBONDALE		UNDERCLAY	2.0	245.5	
389.1	CARBONDALE		LIMESTONE	2.5	247.5	

MAPID: 11700171000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 26 QUARTERS/FOOTAGES: SE SE SW

QUADRANGLE: BUNKER HILL LONGITUDE: -89.952584

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.101539

DATE COLLECTED:

SURFACE ELEVATION (FT.): 636.0

LOGGED (FT.): 245.4

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
430.1	MODESTO	PIASA	CALCAREOUS SHALE	4.0	205.9
426.1	MODESTO		DARK GRAY SHALE	6.0	209.9
420.1	CARBONDALE	DANVILLE	COAL	2.0	215.9
418.1	CARBONDALE		DARK GRAY SHALE	7.0	217.9
411.1	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	224.9
404.1	CARBONDALE	LAWSON	DARK GRAY SHALE	5.6	231.9
398.5	CARBONDALE	ANNA	BLACK SHALE	1.5	237.5
397.0	CARBONDALE	HERRIN	COAL	6.4	239.0

MAPID: 11700458000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 27 QUARTERS/FOOTAGES: 180' S line, 1920' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.972668

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.101308

DATE COLLECTED:

SURFACE ELEVATION (FT.): 658.0

LOGGED (FT.): 240.0

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
460.5	MODESTO	PIASA	LIMESTONE	5.0	197.5
455.5	MODESTO		DARK GRAY SHALE	5.0	202.5
450.5	CARBONDALE	DANVILLE	COAL	1.0	207.5
449.5	CARBONDALE		GRAY SHALE	9.0	208.5
440.5	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	217.5
435.5	CARBONDALE	LAWSON	CALCAREOUS SHALE	5.0	222.5
430.5	CARBONDALE	BRERETON	LIMESTONE & SHALE	5.0	227.5
425.5	CARBONDALE	ANNA	BLACK SHALE	2.5	232.5
423.0	CARBONDALE	HERRIN	COAL	5.0	235.0

MAPID: 11721839000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 27 QUARTERS/FOOTAGES: 93' N line, 1842' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.973016 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.115251 DATE COLLECTED: 6 / 20 / 1978

SURFACE ELEVATION (FT.): 645.0 LOGGED (FT.): 250.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-78-4 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
645.0			UNCONSOLIDATED	111.0	0.0
534.0	MODESTO		GRAY SHALE	31.0	111.0
503.0	MODESTO		SANDY SHALE	30.0	142.0
473.0	MODESTO		SHALE	9.0	172.0
464.0	MODESTO		GRAY SHALE	12.0	181.0
452.0	MODESTO	PIASA	LIMESTONE	4.0	193.0
448.0	MODESTO		SHALE	5.0	197.0
443.0	CARBONDALE	DANVILLE	COAL	1.0	202.0
442.0	CARBONDALE		GRAY SHALE	12.0	203.0
430.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	215.0
425.0	CARBONDALE		SHALE	3.0	220.0
422.0	CARBONDALE	BRERETON	LIMESTONE	5.7	223.0
416.3	CARBONDALE		SHALE	0.1	228.7
416.2	CARBONDALE	HERRIN	COAL	3.4	228.8
412.9	CARBONDALE		UNDERCLAY	1.1	232.1
411.8	CARBONDALE		SHALY LIMESTONE	6.8	233.2
405.0	CARBONDALE		GRAY SHALE	3.0	240.0
402.0	CARBONDALE		SHALY LIMESTONE	4.0	243.0
398.0	CARBONDALE		GRAY SHALE	3.0	247.0

MAPID: 11722376000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 28 QUARTERS/FOOTAGES: 2388' S line, 78' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.979782 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.107468 DATE COLLECTED: 9 / 13 / 1977

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 250.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-64 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
650.0			UNCONSOLIDATED	59.0	0.0
591.0	MODESTO		SILTSTONE	17.0	59.0
574.0	MODESTO		SILTY SHALE	103.0	76.0
471.0	MODESTO		BLACK SHALE	1.0	179.0
470.0	MODESTO		GRAY SHALE	12.0	180.0
458.0	MODESTO		SHALE	7.0	192.0
451.0	MODESTO	PIASA	LIMESTONE	3.0	199.0
448.0	MODESTO		GRAY SHALE	3.0	202.0
445.0	MODESTO		BLACK SHALE	2.0	205.0
443.0	MODESTO		GRAY SHALE	7.0	207.0
436.0	CARBONDALE	DANVILLE	COAL	1.0	214.0
435.0	CARBONDALE		CALCAREOUS SHALE	6.0	215.0
429.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	221.0
425.5	CARBONDALE		GRAY SHALE	1.0	224.5
424.5	CARBONDALE	BRERETON	LIMESTONE	1.5	225.5
423.0	CARBONDALE	ANNA	BLACK SHALE	2.2	227.0
420.8	CARBONDALE	HERRIN	COAL	4.8	229.2
416.0	CARBONDALE		UNDERCLAY	2.5	234.0
413.5	CARBONDALE		SHALY LIMESTONE	3.0	236.5
410.5	CARBONDALE		CALCAREOUS SHALE	3.5	239.5
407.0	CARBONDALE		GRAY SHALE	5.2	243.0
401.8	CARBONDALE		LIMESTONE	1.8	248.2

MAPID: 11701355000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 33 QUARTERS/FOOTAGES: SW SW SE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.987467 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.087413 DATE COLLECTED:

SURFACE ELEVATION (FT.): 653.0 LOGGED (FT.): 243.0 LOG TYPE: Survey Core Study

SOURCE: TRUAX-TRAEER COAL CO ED-3 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
433.0	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	10.0	220.0
423.0	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	10.0	230.0
413.0	CARBONDALE	HERRIN	COAL	3.0	240.0

MAPID: 11722377000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 33 QUARTERS/FOOTAGES: 60' N line, 2585' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.988627

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.100974

DATE COLLECTED: 9 / 30 / 1975

SURFACE ELEVATION (FT.): 625.0

LOGGED (FT.): 207.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-35

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
625.0			UNCONSOLIDATED	58.0	0.0
567.0	MODESTO		GRAY SHALE	8.0	58.0
559.0	MODESTO		CALCAREOUS SANDSTONE	11.0	66.0
548.0	MODESTO		GRAY SHALE	53.0	77.0
495.0	MODESTO		LIMESTONE	1.0	130.0
494.0	MODESTO		GRAY SHALE	16.0	131.0
478.0	MODESTO		BLACK SHALE	3.0	147.0
475.0	MODESTO		GRAY SHALE	14.0	150.0
461.0	MODESTO		SHALE	4.0	164.0
457.0	MODESTO	PIASA	LIMESTONE	2.5	168.0
454.5	MODESTO		GRAY SHALE	4.5	170.5
450.0	MODESTO		BLACK SHALE	1.5	175.0
448.5	MODESTO		GRAY SHALE	7.5	176.5
441.0	CARBONDALE	DANVILLE	COAL	1.0	184.0
440.0	CARBONDALE		GRAY SHALE	2.0	185.0
438.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	187.0
434.0	CARBONDALE		GRAY SHALE	1.0	191.0
433.0	CARBONDALE	BRERETON	LIMESTONE	3.0	192.0
430.0	CARBONDALE	ANNA	BLACK SHALE	2.0	195.0
428.0	CARBONDALE	HERRIN	COAL	5.2	197.0
422.8	CARBONDALE		UNDERCLAY	1.8	202.2
421.0	CARBONDALE		LIMESTONE	3.0	204.0

MAPID: 11722378000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 33 QUARTERS/FOOTAGES: 1355' S line, 1310' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.984054 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.090171 DATE COLLECTED: 9 / 13 / 1977

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 260.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NDI-77-62 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
650.0			UNCONSOLIDATED	47.0	0.0
603.0	MODESTO		SANDY SHALE	11.0	47.0
592.0	MODESTO		GRAY SHALE	4.0	58.0
588.0	MODESTO		LIMESTONE	1.0	62.0
587.0	MODESTO		SANDSTONE	7.0	63.0
580.0	MODESTO		SHALE	8.0	70.0
572.0	MODESTO		SANDY SHALE	88.0	78.0
484.0	MODESTO		LIMESTONE	1.0	166.0
483.0	MODESTO		GRAY SHALE	13.0	167.0
470.0	MODESTO		BLACK SHALE	3.0	180.0
467.0	MODESTO		SHALE	19.0	183.0
448.0	MODESTO	PIASA	LIMESTONE	4.0	202.0
444.0	MODESTO		GRAY SHALE	4.0	206.0
440.0	MODESTO		BLACK SHALE	2.0	210.0
438.0	MODESTO		GRAY SHALE	7.0	212.0
431.0	CARBONDALE	DANVILLE	COAL	1.5	219.0
429.5	CARBONDALE		GRAY SHALE	5.5	220.5
424.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	226.0
422.5	CARBONDALE		SHALE	2.0	227.5
420.5	CARBONDALE	BRERETON	LIMESTONE	3.5	229.5
417.0	CARBONDALE	ANNA	BLACK SHALE	3.5	233.0
413.5	CARBONDALE	HERRIN	COAL	3.0	236.5
410.5	CARBONDALE		UNDERCLAY	2.5	239.5
408.0	CARBONDALE		LIMESTONE	4.0	242.0
404.0	CARBONDALE		CALCAREOUS SHALE	13.5	246.0
390.5	CARBONDALE		LIMESTONE	0.5	259.5

MAPID: 11700546000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 34 QUARTERS/FOOTAGES: 2640' N line, 0' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.979429 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.093581 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 233.0 LOG TYPE: Drillers Log

SOURCE: A.M. CRAWFORD, #R-5 WELL TYPE: Coal Test

COMMENT: NO ELEV. GIVEN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			UNCONSOLIDATED	2.0	0.0
-			CLAY	6.0	2.0
-			CLAY	8.0	8.0
-			CLAY & GRAVEL	35.6	16.0
-	MODESTO		SHALE	20.4	51.6
-	MODESTO		CLAYSTONE & SHALE	6.0	72.0
-	MODESTO		SHALE	7.2	78.0
-	MODESTO		SANDY SHALE	11.8	85.2
-	MODESTO		SANDSTONE	9.0	97.0
-	MODESTO		SANDY SHALE	42.0	106.0
-	MODESTO		SHALE	11.0	148.0
-	MODESTO		CALCAREOUS SHALE	3.3	159.0
-	MODESTO		COAL	0.5	162.3
-	MODESTO		UNDERCLAY	3.2	162.8
-	MODESTO		CALCAREOUS SHALE	23.0	166.0
-	MODESTO		SHALE	3.0	189.0
-	MODESTO		SHALE	2.0	192.0
-	MODESTO	PIASA	LIMESTONE	4.0	194.0
-	MODESTO		CALCAREOUS SHALE	4.0	198.0
-	MODESTO		BLACK SHALE	1.0	202.0
-	MODESTO		SHALE	0.5	203.0
-	MODESTO		CALCAREOUS SHALE	8.0	203.5
-	CARBONDALE	DANVILLE	COAL	1.2	211.5
-	CARBONDALE		CALCAREOUS SHALE	1.3	212.7
-	CARBONDALE		LIMESTONE	8.5	214.0
-	CARBONDALE		CALCAREOUS SHALE	2.5	222.5
-	CARBONDALE		SHALE	1.0	225.0
-	CARBONDALE	HERRIN	COAL	5.6	226.0
-	CARBONDALE		UNDERCLAY	1.2	231.6
-	CARBONDALE		CALCAREOUS SHALE	0.3	232.8

MAPID: 11700546000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 34 QUARTERS/FOOTAGES: 2640' N line, 0' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.979429

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.093581

DATE COLLECTED:

SURFACE ELEVATION (FT.): 640.0

LOGGED (FT.): 231.6

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
446.0	MODESTO	PIASA	LIMESTONE	4.0	194.0
442.0	MODESTO		CALCAREOUS SHALE	4.0	198.0
438.0	CARBONDALE	DANVILLE	BONE COAL	1.0	202.0
437.0	CARBONDALE		CALCAREOUS SHALE	8.5	203.0
428.5	CARBONDALE	ALLENBY	COAL	1.2	211.5
427.3	CARBONDALE		CALCAREOUS SHALE	1.3	212.7
426.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	214.0
421.5	CARBONDALE	BRERETON	LIMESTONE W/ SHALE	6.5	218.5
415.0	CARBONDALE	ANNA	BLACK SHALE	1.0	225.0
414.0	CARBONDALE	HERRIN	COAL	5.6	226.0

MAPID: 11722175000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 34 QUARTERS/FOOTAGES: 1050' N line, 1315' W line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.974796 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.097931 DATE COLLECTED: 9 / 13 / 1979

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 250.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL ND-79-34-37C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
660.0			UNCONSOLIDATED	90.0	0.0
570.0	MODESTO		SILTY SHALE	20.0	90.0
550.0	MODESTO		GRAY SHALE	54.5	110.0
495.5	MODESTO		LIMESTONE	0.5	164.5
495.0	MODESTO		BLACK SHALE	1.0	165.0
494.0	MODESTO		GRAY SHALE	13.0	166.0
481.0	MODESTO		BLACK SHALE	2.0	179.0
479.0	MODESTO		GRAY SHALE	11.0	181.0
468.0	MODESTO		SHALE	7.0	192.0
461.0	MODESTO	PIASA	LIMESTONE	4.5	199.0
456.5	MODESTO		GRAY SHALE	3.5	203.5
453.0	MODESTO		BLACK SHALE	2.0	207.0
451.0	MODESTO		GRAY SHALE	6.0	209.0
445.0	CARBONDALE	DANVILLE	COAL	1.0	215.0
444.0	CARBONDALE		GRAY SHALE	4.0	216.0
440.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.8	220.0
434.2	CARBONDALE		GRAY SHALE	1.2	225.8
433.0	CARBONDALE	BRERETON	LIMESTONE	1.3	227.0
431.7	CARBONDALE		CARBONACEOUS SHALE	1.7	228.3
430.0	CARBONDALE	ANNA	BLACK SHALE	1.2	230.0
428.8	CARBONDALE	HERRIN	COAL	4.9	231.2
423.9	CARBONDALE		SHALE	0.8	236.1
423.1	CARBONDALE		CORE LOSS	0.6	236.9
422.5	CARBONDALE		GRAY SHALE	0.5	237.5
422.0	CARBONDALE		LIMESTONE	5.0	238.0
417.0	CARBONDALE		GRAY SHALE	6.5	243.0
410.5	CARBONDALE		LIMESTONE	0.5	249.5

MAPID: 11722507000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 34 QUARTERS/FOOTAGES: 516' N line, 630' E line
QUADRANGLE: BUNKER HILL LONGITUDE: -89.963369 GEOLOGIST: SROKA
CONFIDENTIAL: N LATITUDE: 39.099308 DATE COLLECTED: 9 / 14 / 1977
SURFACE ELEVATION (FT.): 654.0 LOGGED (FT.): 260.0 LOG TYPE: Multiple log types
SOURCE: MOBIL OIL NDI-77-63 WELL TYPE: Coal Test
COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
654.0			UNCONSOLIDATED	38.0	0.0
616.0	MODESTO	CARLINVILLE	LIMESTONE	6.5	38.0
609.5	MODESTO		GRAY SHALE	39.5	44.5
570.0	MODESTO		CALCAREOUS SANDSTONE	5.0	84.0
565.0	MODESTO		SILTY SHALE	92.0	89.0
473.0	MODESTO		BLACK SHALE	2.5	181.0
470.5	MODESTO		CALCAREOUS SHALE	5.5	183.5
465.0	MODESTO		SHALE	13.0	189.0
452.0	MODESTO	PIASA	LIMESTONE	3.0	202.0
449.0	MODESTO		GRAY SHALE	5.0	205.0
444.0	MODESTO		BLACK SHALE	1.0	210.0
443.0	CARBONDALE	DANVILLE	COAL	1.0	211.0
442.0	CARBONDALE		CALCAREOUS SHALE	6.5	212.0
435.5	CARBONDALE		GRAY SHALE	4.5	218.5
431.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.7	223.0
424.3	CARBONDALE		SHALE	1.1	229.7
423.2	CARBONDALE	BRERETON	LIMESTONE	1.7	230.8
421.5	CARBONDALE		CALCAREOUS SHALE	0.5	232.5
421.0	CARBONDALE	ANNA	BLACK SHALE	2.5	233.0
418.5	CARBONDALE	HERRIN	COAL	5.1	235.5
413.5	CARBONDALE		CLAYSTONE	2.1	240.5
411.4	CARBONDALE		CORE LOSS	0.4	242.6
411.0	CARBONDALE		LIMESTONE	2.0	243.0
409.0	CARBONDALE		GRAY SHALE	15.0	245.0

MAPID: 11700172000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 36 QUARTERS/FOOTAGES: SE SE SE

QUADRANGLE: BUNKER HILL LONGITUDE: -89.924238 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.086553 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 671.7 LOGGED (FT.): 303.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., #D-2 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
671.7			CLAY	18.0	0.0	& HARD PAN
653.7			GRAVEL	3.0	18.0	
650.7			SAND & GRAVEL	2.0	21.0	
648.7	MODESTO		SHALE	25.5	23.0	
623.2	MODESTO		SANDY SHALE	5.5	48.5	
617.7	MODESTO		SHALE	10.0	54.0	
607.7	MODESTO		SANDY SHALE	1.0	64.0	
606.7	MODESTO		BLACK SHALE	3.0	65.0	
603.7	MODESTO		CALCAREOUS SHALE	22.0	68.0	
581.7	MODESTO		SHALE	7.0	90.0	
574.7	MODESTO	CARLINVILLE	LIMESTONE	6.5	97.0	
568.2	MODESTO		SHALE	7.5	103.5	
560.7	MODESTO		SANDY SHALE	9.0	111.0	
551.7	MODESTO		SHALE	22.0	120.0	
529.7	MODESTO	CHAPEL	COAL	0.3	142.0	
529.4	MODESTO		UNDERCLAY	1.8	142.3	
527.7	MODESTO		SHALE	11.0	144.0	
516.7	MODESTO		SHALE	66.0	155.0	
450.7	MODESTO		LIMESTONE	0.5	221.0	
450.2	MODESTO		SHALE	15.5	221.5	
434.7	MODESTO		SHALE	2.0	237.0	SOFT
432.7	MODESTO		LIMESTONE	1.0	239.0	
431.7	MODESTO		CALCAREOUS SHALE	12.0	240.0	
419.7	MODESTO		SHALE	2.0	252.0	
417.7	MODESTO		SHALE	1.0	254.0	
416.7	MODESTO	PIASA	LIMESTONE	1.0	255.0	
415.7	MODESTO		SHALE	8.0	256.0	
407.7	CARBONDALE	DANVILLE	COAL	0.5	264.0	
407.2	CARBONDALE		SHALE	1.5	264.5	
405.7	CARBONDALE		CALCAREOUS SHALE	10.0	266.0	
395.7	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	3.0	276.0	
392.7	CARBONDALE		CALCAREOUS SHALE	3.0	279.0	
389.7	CARBONDALE		LIMESTONE	1.0	282.0	
388.7	CARBONDALE		CALCAREOUS SHALE	5.0	283.0	
383.7	CARBONDALE	BRERETON	LIMESTONE	7.0	288.0	
376.7	CARBONDALE	ANNA	BLACK SHALE	0.5	295.0	
376.2	CARBONDALE	HERRIN	COAL	5.8	295.5	
370.4	CARBONDALE		UNDERCLAY	1.7	301.3	

MAPID: 11700173000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 8W SECTION: 36 QUARTERS/FOOTAGES: 1150' S line, 3875' E line

QUADRANGLE: BUNKER HILL LONGITUDE: -89.936807 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.088939 DATE COLLECTED: 12 / 21 / 1912

SURFACE ELEVATION (FT.): 669.6 LOGGED (FT.): 293.0 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MACHINERY CO., #13 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
669.6			SOIL	17.0	0.0
652.6			CLAY & GRAVEL	31.0	17.0
621.6	MODESTO		SHALE	15.0	48.0
606.6	MODESTO	BURROUGHS	LIMESTONE	1.0	63.0
605.6	MODESTO		SHALE	22.0	64.0
583.6	MODESTO	CARLINVILLE	LIMESTONE	5.5	86.0
578.1	MODESTO		SANDY SHALE	34.0	91.5
544.1	MODESTO	CHAPEL	COAL	0.3	125.5
543.8	MODESTO		SHALE	78.3	125.8
465.6	MODESTO		LIMESTONE	1.0	204.0
464.6	MODESTO		SHALE	33.0	205.0
431.6	MODESTO	PIASA	LIMESTONE	13.0	238.0
418.6	MODESTO		CALCAREOUS SHALE	5.2	251.0
413.4	CARBONDALE	DANVILLE	COAL	1.2	256.2
412.3	CARBONDALE		CALCAREOUS SHALE	12.2	257.3
400.1	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	269.5
395.1	CARBONDALE		SHALE	1.2	274.5
393.9	CARBONDALE	BRERETON	LIMESTONE	6.1	275.7
387.8	CARBONDALE		SHALE	2.6	281.8
385.3	CARBONDALE	HERRIN	COAL	5.3	284.3
379.9	CARBONDALE		UNDERCLAY	1.3	289.7
378.6	CARBONDALE		LIMESTONE W/ SHALE	2.0	291.0

MAPID: 11700174000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 8N 9W SECTION: 6 QUARTERS/FOOTAGES: 1420' N line, 1520' W line

QUADRANGLE: MEDORA LONGITUDE: -90.14108 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.170609 DATE COLLECTED:

SURFACE ELEVATION (FT.): 609.3 LOGGED (FT.): 351.3 LOG TYPE: Drillers Log

SOURCE: GEORGE GARRETT, COOP. MINE SHAFT WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
609.3			SOIL	4.0	0.0	
605.3			CLAY	20.0	4.0	
585.3			CLAY	30.0	24.0	
555.3			GRAVEL	20.0	54.0	
535.3			CLAYSTONE & SHALE	10.0	74.0	LISTED IN LOG AS PLEISTOCENE
525.3	CARBONDALE		SHALE	4.0	84.0	
521.3	CARBONDALE	BRERETON	LIMESTONE	2.0	88.0	
519.3	CARBONDALE	ANNA	BLACK SHALE	3.0	90.0	
516.3	CARBONDALE	HERRIN	COAL	0.4	93.0	
515.9	CARBONDALE		UNDERCLAY	4.0	93.4	
511.9	CARBONDALE		BLACK SHALE	5.0	97.4	
506.9	CARBONDALE		SANDSTONE	5.0	102.4	
501.9	CARBONDALE		CLAYSTONE & SHALE	5.0	107.4	
496.9	CARBONDALE		SHALE	5.0	112.4	
491.9	CARBONDALE		BLACK SHALE	3.0	117.4	
488.9	CARBONDALE	HOUCHIN CREEK	COAL	1.0	120.4	
487.9	CARBONDALE		UNDERCLAY	4.0	121.4	
483.9	CARBONDALE		CLAYSTONE & SHALE	0.7	125.4	
483.2	CARBONDALE		SANDSTONE	8.0	126.1	
475.2	CARBONDALE		LIMESTONE	2.0	134.1	
473.2	CARBONDALE		NODULAR CLAYSTONE	5.0	136.1	
468.2	CARBONDALE		CLAYSTONE & SHALE	5.0	141.1	
463.2	CARBONDALE		CLOD	1.0	146.1	
462.2	CARBONDALE		LIMESTONE	6.0	147.1	
456.2	CARBONDALE		CLAYSTONE & SHALE	3.0	153.1	
453.2	CARBONDALE		BLACK SHALE	1.5	156.1	
451.7	CARBONDALE		CLAYSTONE & SHALE	6.0	157.6	
445.7	CARBONDALE		SHALE	9.5	163.6	
436.2	CARBONDALE		UNDERCLAY	6.3	173.1	
429.9	CARBONDALE		CLAYSTONE & SHALE	2.8	179.4	
427.0	CARBONDALE		UNKNOWN	0.7	182.3	LOG HAS SULPHUR BAND
426.4	CARBONDALE		UNDERCLAY	3.0	182.9	
423.4	CARBONDALE		NODULAR CLAYSTONE	4.0	185.9	
419.4	SPOON		UNDERCLAY	14.5	189.9	
404.9	SPOON		SANDSTONE	12.3	204.4	
392.5	SPOON		SHALE	50.2	216.8	
342.4	SPOON		SHALE	19.4	266.9	
323.0	SPOON		CLAYSTONE & SHALE	6.5	286.3	
316.5	SPOON		SHALE	7.5	292.8	

309.0	SPOON	BLACK SHALE	1.3	300.3
307.6	SPOON	SANDY CLAYSTONE	6.3	301.7
301.3	SPOON	SHALE	30.6	308.0
270.7	SPOON	BLACK SHALE	2.0	338.6
268.7	SPOON	COAL	3.0	340.6
265.7	SPOON	UNDERCLAY	1.8	343.6
264.0	SPOON	LIMESTONE	6.0	345.3

MAPID: 11700547000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 8N 9W **SECTION:** 12 **QUARTERS/FOOTAGES:** 990' S line, 2310' E line
QUADRANGLE: SUMMERVILLE **LONGITUDE:** -90.043271 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.148962 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 590.0 **LOGGED (FT.):** 196.0 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	OVERBURDEN COMMENT
407.0	MODESTO	PIASA	LIMESTONE	6.0	183.0
401.0	CARBONDALE	ANNA	GRAY SHALE	6.0	189.0
395.0	CARBONDALE	HERRIN	COAL	1.0	195.0

MAPID: 11700460000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 8N 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** 140' S line, 835' W line
QUADRANGLE: SUMMERVILLE **LONGITUDE:** -90.050916 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.13187 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 638.0 **LOGGED (FT.):** 182.0 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	OVERBURDEN COMMENT
473.0	MODESTO	PIASA	LIMESTONE	5.0	165.0
468.0	CARBONDALE	ANNA	BLACK SHALE	8.0	170.0
458.0	CARBONDALE	HERRIN	COAL	2.0	180.0

MAPID: 11701435000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 1 QUARTERS/FOOTAGES: 170' S line, 25' W line

QUADRANGLE: ATWATER LONGITUDE: -89.720066 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.250054 DATE COLLECTED:

SURFACE ELEVATION (FT.): 647.0 LOGGED (FT.): 360.0 LOG TYPE: Survey Core Study

SOURCE: CARTER OIL COMPANY J-30 WELL TYPE: Coal Test

COMMENT: "CORE #C-10989"

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
296.9	CARBONDALE	HERRIN	COAL	5.9	350.1	

MAPID: 11701435000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 1 QUARTERS/FOOTAGES: 170' S line, 25' W line

QUADRANGLE: ATWATER LONGITUDE: -89.720066 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.250054 DATE COLLECTED:

SURFACE ELEVATION (FT.): 647.0 LOGGED (FT.): 355.9 LOG TYPE: Survey Core Study

SOURCE: CARTER OIL COMPANY J-30 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
337.2	CARBONDALE	ENERGY	SILTY SHALE	21.2	309.8	
316.0	CARBONDALE	ENERGY	GRAY SHALE	1.5	331.0	
314.5	CARBONDALE	ENERGY	SILTY SHALE	17.1	332.5	
297.4	CARBONDALE	ENERGY	CARBONACEOUS SHALE	0.4	349.6	
297.0	CARBONDALE	HERRIN	COAL	5.9	350.0	

MAPID: 11701435000C VERSION: 3

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 1 QUARTERS/FOOTAGES: 170' S line, 25' W line

QUADRANGLE: ATWATER LONGITUDE: -89.720066 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.250054 DATE COLLECTED: 7 / 7 / 1967

SURFACE ELEVATION (FT.): 647.0 LOGGED (FT.): 360.0 LOG TYPE: Drillers Log

SOURCE: CARTER OIL COMPANY J30 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
346.0			GRAY SHALE	9.9	301.0	
336.1			GRAY SHALE	9.7	310.9	
326.4			GRAY SHALE	6.4	320.6	
320.0			GRAY SHALE	3.1	327.0	
316.9			GRAY SHALE	1.5	330.1	
315.4			GRAY SHALE	8.2	331.6	
307.2			GRAY SHALE	2.6	339.8	
304.6			GRAY SHALE	2.1	342.4	
302.5			SHALE	3.5	344.5	SILTY
299.0			GRAY SHALE	1.5	348.0	
297.5			SHALE	0.2	349.5	
297.3			GRAY SHALE	0.4	349.7	
296.9	CARBONDALE	HERRIN	COAL	5.9	350.1	#6
291.0	CARBONDALE		CLAYSTONE & SILTSTONE	1.4	356.0	GRAY
289.7	CARBONDALE		LIMESTONE	0.8	357.3	GRAY
288.9	CARBONDALE		CLAYSTONE & SILTSTONE	0.9	358.1	GRAY

MAPID: 11722423000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 1 QUARTERS/FOOTAGES: 145' S line, 1290' E line

QUADRANGLE: ATWATER LONGITUDE: -89.706456 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.250636 DATE COLLECTED: 6 / 18 / 1974

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 414.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL R-74-17 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
660.0			UNCONSOLIDATED	40.0	0.0
620.0	BOND		SHALE	22.0	40.0
598.0	BOND	CARTHAGE	LIMESTONE	12.0	62.0
586.0	MODESTO		BLACK SHALE	2.0	74.0
584.0	MODESTO		SHALE	13.0	76.0
571.0	MODESTO		LIMESTONE	3.0	89.0
568.0	MODESTO		GRAY SHALE	27.0	92.0
541.0	MODESTO		BLACK SHALE	3.0	119.0
538.0	MODESTO		GRAY SHALE	3.0	122.0
535.0	MODESTO		SANDY LIMESTONE	7.0	125.0
528.0	MODESTO		GRAY SHALE	19.0	132.0
509.0	MODESTO	CARLINVILLE	LIMESTONE	11.0	151.0
498.0	MODESTO		GRAY SHALE	38.0	162.0
460.0	MODESTO	CHAPEL	COAL	0.5	200.0
459.5	MODESTO		GRAY SHALE	97.5	200.5
362.0	MODESTO		BLACK SHALE	2.0	298.0
360.0	MODESTO		GRAY SHALE	10.0	300.0
350.0	MODESTO	PIASA	LIMESTONE	12.0	310.0
338.0			GRAY SHALE	30.0	322.0
308.0	CARBONDALE	ENERGY	GRAY SHALE	35.0	352.0
273.0	CARBONDALE	HERRIN	COAL	3.0	387.0
270.0	CARBONDALE		GRAY SHALE	10.0	390.0
260.0	CARBONDALE		LIMESTONE	4.0	400.0
256.0	CARBONDALE		GRAY SHALE	10.0	404.0

MAPID: 11722424000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 1 QUARTERS/FOOTAGES: 37' N line, 6' E line

QUADRANGLE: ATWATER LONGITUDE: -89.702453 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.265123 DATE COLLECTED: 7 / 20 / 1977

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 410.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-8 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
655.0			UNCONSOLIDATED	36.0	0.0
619.0	BOND		SHALE	6.0	36.0
613.0	BOND		GRAY SHALE	28.0	42.0
585.0	BOND	CARTHAGE	LIMESTONE	11.0	70.0
574.0	MODESTO		BLACK SHALE	2.0	81.0
572.0	MODESTO		GRAY SHALE	14.5	83.0
557.5	MODESTO		CALCAREOUS SANDSTONE	12.5	97.5
545.0	MODESTO		SANDY SHALE	16.5	110.0
528.5	MODESTO	MACOUPIN	LIMESTONE	1.5	126.5
527.0	MODESTO	WOMAC	BLACK SHALE	3.0	128.0
524.0	MODESTO		GRAY SHALE	4.0	131.0
520.0	MODESTO		CALCAREOUS SANDSTONE	10.0	135.0
510.0	MODESTO		SANDY SHALE	21.5	145.0
488.5	MODESTO	CARLINVILLE	LIMESTONE	4.5	166.5
484.0	MODESTO		SANDY SHALE	33.0	171.0
451.0	MODESTO	CHAPEL	COAL	1.0	204.0
450.0	MODESTO		GRAY SHALE	5.0	205.0
445.0	MODESTO		SANDSTONE	9.5	210.0
435.5	MODESTO		SANDY SHALE	59.5	219.5
376.0	MODESTO		GRAY SHALE	19.0	279.0
357.0	MODESTO		BLACK SHALE	2.0	298.0
355.0	MODESTO		SHALE	14.0	300.0
341.0	MODESTO	PIASA	SHALY LIMESTONE	7.0	314.0
334.0			GRAY SHALE	5.0	321.0
329.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	326.0
324.0	CARBONDALE	ENERGY	GRAY SHALE	60.0	331.0
264.0	CARBONDALE	HERRIN	COAL	3.0	391.0
261.0	CARBONDALE		LIMESTONE	4.0	394.0
257.0	CARBONDALE		GRAY SHALE	12.0	398.0

MAPID: 11722425000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 2 QUARTERS/FOOTAGES: 65' S line, 555' E line

QUADRANGLE: LITCHFIELD LONGITUDE: -89.722117 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.249746 DATE COLLECTED: 6 / 19 / 1974

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 444.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL R-74-16 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
660.0			UNCONSOLIDATED	40.0	0.0
620.0	BOND	CARTHAGE	LIMESTONE	10.0	40.0
610.0	MODESTO		BLACK SHALE	3.0	50.0
607.0	MODESTO		GRAY SHALE	14.0	53.0
593.0	MODESTO		LIMESTONE	6.0	67.0
587.0	MODESTO		GRAY SHALE	25.0	73.0
562.0	MODESTO		BLACK SHALE	2.0	98.0
560.0	MODESTO		GRAY SHALE	5.0	100.0
555.0	MODESTO		SHALY LIMESTONE	6.0	105.0
549.0	MODESTO		GRAY SHALE	24.0	111.0
525.0	MODESTO	CARLINVILLE	LIMESTONE	5.0	135.0
520.0	MODESTO		GRAY SHALE	130.0	140.0
390.0	MODESTO		BLACK SHALE	2.0	270.0
388.0	MODESTO		GRAY SHALE	8.0	272.0
380.0	MODESTO		LIMESTONE	8.0	280.0
372.0	MODESTO		SHALE	4.0	288.0
368.0	MODESTO	PIASA	LIMESTONE	3.0	292.0
365.0			SHALE	4.0	295.0
361.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	299.0
356.0	CARBONDALE	ENERGY	GRAY SHALE	34.0	304.0
322.0	CARBONDALE	ENERGY	GRAY SHALE	23.0	338.0
299.0	CARBONDALE	HERRIN	COAL	4.0	361.0
295.0	CARBONDALE	HERRIN	SHALE	2.0	365.0
293.0	CARBONDALE	HERRIN	COAL	3.0	367.0
290.0	CARBONDALE		SHALE	6.0	370.0
284.0	CARBONDALE		SHALY LIMESTONE	10.0	376.0
274.0	CARBONDALE		BLACK SHALE	2.0	386.0
272.0	CARBONDALE		GRAY SHALE	54.0	388.0
218.0	CARBONDALE		COAL	2.0	442.0

MAPID: 11722426000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 2 QUARTERS/FOOTAGES: 520' N line, 1665' W line

QUADRANGLE: ATWATER LONGITUDE: -89.733086 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.263354 DATE COLLECTED: 6 / 27 / 1975

SURFACE ELEVATION (FT.): 645.0 LOGGED (FT.): 360.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL R-75-40 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
645.0			UNCONSOLIDATED	37.0	0.0
608.0	BOND	CARTHAGE	LIMESTONE	9.5	37.0
598.5	MODESTO		BLACK SHALE	1.5	46.5
597.0	MODESTO		GRAY SHALE	38.0	48.0
559.0	MODESTO	MACOUPIN	LIMESTONE	1.0	86.0
558.0	MODESTO		BLACK SHALE	2.0	87.0
556.0	MODESTO	WOMAC	COAL	1.0	89.0
555.0	MODESTO		GRAY SHALE	35.5	90.0
519.5	MODESTO	CARLINVILLE	LIMESTONE	5.0	125.5
514.5	MODESTO		GRAY SHALE	31.5	130.5
483.0	MODESTO	CHAPEL	COAL	1.0	162.0
482.0	MODESTO		GRAY SHALE	91.0	163.0
391.0	MODESTO		BLACK SHALE	2.0	254.0
389.0	MODESTO		SHALE	5.0	256.0
384.0	MODESTO		SANDSTONE	12.0	261.0
372.0	MODESTO		GRAY SHALE	4.0	273.0
368.0	MODESTO	PIASA	LIMESTONE	5.5	277.0
362.5			SHALE	4.5	282.5
358.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	287.0
356.0	CARBONDALE	ENERGY	SHALE	61.0	289.0
295.0	CARBONDALE	HERRIN	COAL	4.0	350.0
291.0	CARBONDALE		UNDERCLAY	3.0	354.0
288.0	CARBONDALE		LIMESTONE	3.0	357.0

MAPID: 11722427000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 2 QUARTERS/FOOTAGES: 2571' S line, 1283' E line

QUADRANGLE: ATWATER LONGITUDE: -89.724852 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.256643 DATE COLLECTED: 7 / 18 / 1977

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 363.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-1 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
660.0			UNCONSOLIDATED	37.0	0.0
623.0	BOND	CARTHAGE	LIMESTONE	4.0	37.0
619.0	MODESTO		BLACK SHALE	1.5	41.0
617.5	MODESTO		GRAY SHALE	13.0	42.5
604.5	MODESTO		CALCAREOUS SANDSTONE	5.0	55.5
599.5	MODESTO		SHALE & SANDSTONE	9.5	60.5
590.0	MODESTO		GRAY SHALE	15.0	70.0
575.0	MODESTO	MACOUPIN	LIMESTONE	1.0	85.0
574.0	MODESTO		BLACK SHALE	2.0	86.0
572.0	MODESTO	WOMAC	COAL	1.0	88.0
571.0	MODESTO		SANDY SHALE	14.0	89.0
557.0	MODESTO		GRAY SHALE	20.0	103.0
537.0	MODESTO	CARLINVILLE	LIMESTONE	5.0	123.0
532.0	MODESTO		SANDY SHALE	9.0	128.0
523.0	MODESTO		GRAY SHALE	24.5	137.0
498.5	MODESTO	CHAPEL	COAL	0.5	161.5
498.0	MODESTO		GRAY SHALE	5.0	162.0
493.0	MODESTO		CALCAREOUS SHALE	2.0	167.0
491.0	MODESTO		SANDY SHALE	7.0	169.0
484.0	MODESTO		GRAY SHALE	61.0	176.0
423.0	MODESTO		LIMESTONE	1.0	237.0
422.0	MODESTO		SHALE	2.5	238.0
419.5	MODESTO		GRAY SHALE	15.5	240.5
404.0	MODESTO		BLACK SHALE	2.0	256.0
402.0	MODESTO		GRAY SHALE	11.0	258.0
391.0	MODESTO		CALCAREOUS SHALE	4.0	269.0
387.0	MODESTO		GRAY SHALE	2.0	273.0
385.0	MODESTO	PIASA	LIMESTONE	3.5	275.0
381.5	MODESTO		SHALE	2.5	278.5
379.0	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	5.0	281.0
374.0	CARBONDALE	ENERGY	GRAY SHALE	12.0	286.0
362.0	CARBONDALE	ENERGY	SANDY SHALE	22.0	298.0
340.0	CARBONDALE	ENERGY	SHALE	19.3	320.0
320.7	CARBONDALE	ENERGY	BLACK SHALE	0.9	339.3
319.8	CARBONDALE	ENERGY	GRAY SHALE	3.4	340.2
316.5	CARBONDALE	ENERGY	BLACK SHALE	0.2	343.5
316.3	CARBONDALE	HERRIN	COAL	4.2	343.7
312.1	CARBONDALE		UNDERCLAY	1.7	347.9

310.4	CARBONDALE	LIMESTONE	2.5	349.6
308.0	CARBONDALE	GRAY SHALE	6.0	352.0
302.0	CARBONDALE	LIMESTONE	2.0	358.0
300.0	CARBONDALE	GRAY SHALE	3.0	360.0

MAPID: 1170102600C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 9N 6W **SECTION:** 3 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of NE
QUADRANGLE: ATWATER **LONGITUDE:** -89.747153 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.263626 **DATE COLLECTED:** 3 / 0 / 1947
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 0.0 **LOG TYPE:** Electric Log
SOURCE: SUN PRODUCTION COMPANY **WELL TYPE:** Dry Hole
COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
-	CARBONDALE	ENERGY	UNCLASSIFIED	67.0	
-	CARBONDALE	HERRIN	COAL	5.0	

MAPID: 11722428000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 3 QUARTERS/FOOTAGES: 120' N line, 50' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.75746 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.263988 DATE COLLECTED: 6 / 30 / 1975

SURFACE ELEVATION (FT.): 645.0 LOGGED (FT.): 334.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL R-75-41 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
645.0			UNCONSOLIDATED	43.0	0.0
602.0	BOND	CARTHAGE	LIMESTONE	4.0	43.0
598.0	MODESTO		GRAY SHALE	21.5	47.0
576.5	MODESTO	MACOUPIN	SHALY LIMESTONE	1.0	68.5
575.5	MODESTO		BLACK SHALE	3.0	69.5
572.5	MODESTO	WOMAC	COAL	0.5	72.5
572.0	MODESTO		GRAY SHALE	32.0	73.0
540.0	MODESTO	CARLINVILLE	LIMESTONE	5.0	105.0
535.0	MODESTO		GRAY SHALE	32.5	110.0
502.5	MODESTO	CHAPEL	COAL	0.5	142.5
502.0	MODESTO		SHALY SANDSTONE	15.0	143.0
487.0	MODESTO		GRAY SHALE	54.0	158.0
433.0	MODESTO		LIMESTONE	2.0	212.0
431.0	MODESTO		GRAY SHALE	43.0	214.0
388.0	MODESTO		LIMESTONE	1.0	257.0
387.0	MODESTO		GRAY SHALE	9.0	258.0
378.0	MODESTO	PIASA	LIMESTONE	1.5	267.0
376.5	MODESTO		SHALE	4.5	268.5
372.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	273.0
368.5	CARBONDALE	ENERGY	SHALE	45.3	276.5
323.2	CARBONDALE	HERRIN	COAL	4.7	321.8
318.5	CARBONDALE		UNDERCLAY	1.0	326.5
317.5	CARBONDALE		SHALY LIMESTONE	5.0	327.5
312.5	CARBONDALE		GRAY SHALE	1.5	332.5

MAPID: 11722429000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 3 QUARTERS/FOOTAGES: 2625' N line, 2627' E line

QUADRANGLE: ATWATER LONGITUDE: -89.748214 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.257269 DATE COLLECTED: 7 / 14 / 1977

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 333.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-2 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
650.0			UNCONSOLIDATED	42.0	0.0
608.0	MODESTO		GRAY SHALE	20.0	42.0
588.0	MODESTO	MACOUPIN	LIMESTONE	1.5	62.0
586.5	MODESTO		BLACK SHALE	1.5	63.5
585.0	MODESTO	WOMAC	COAL	1.3	65.0
583.7	MODESTO		GRAY SHALE	34.7	66.3
549.0	MODESTO	CARLINVILLE	LIMESTONE	5.0	101.0
544.0	MODESTO		GRAY SHALE	36.0	106.0
508.0	MODESTO	CHAPEL	COAL	0.5	142.0
507.5	MODESTO		GRAY SHALE	65.0	142.5
442.5	MODESTO		LIMESTONE	1.5	207.5
441.0	MODESTO		GRAY SHALE	16.0	209.0
425.0	MODESTO		BLACK SHALE	1.0	225.0
424.0	MODESTO		SHALE	6.5	226.0
417.5	MODESTO		GRAY SHALE	7.5	232.5
410.0	MODESTO		GRAY SHALE	14.5	240.0
395.5	MODESTO	PIASA	LIMESTONE	4.0	254.5
391.5	MODESTO		GRAY SHALE	7.5	258.5
384.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	266.0
381.5	CARBONDALE	ENERGY	SILTY SHALE	48.5	268.5
333.0	CARBONDALE	HERRIN	COAL	5.0	317.0
328.0	CARBONDALE		UNDERCLAY	1.0	322.0
327.0	CARBONDALE		UNDERCLAY	3.5	323.0
323.5	CARBONDALE		LIMESTONE	2.5	326.5
321.0	CARBONDALE		GRAY SHALE	4.0	329.0

MAPID: 11722430000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 3 QUARTERS/FOOTAGES: 60' N line, 2382' E line

QUADRANGLE: ATWATER LONGITUDE: -89.747479 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.264365 DATE COLLECTED: 7 / 13 / 1977

SURFACE ELEVATION (FT.): 645.0 LOGGED (FT.): 345.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-7 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSTIY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
645.0			UNCONSOLIDATED	25.0	0.0
620.0	BOND		LIMESTONE	1.3	25.0
618.7	BOND		GRAY SHALE	15.7	26.3
603.0	BOND		CALCAREOUS SANDSTONE	3.5	42.0
599.5	MODESTO		GRAY SHALE	22.5	45.5
577.0	MODESTO	MACOUPIN	LIMESTONE	2.0	68.0
575.0	MODESTO		BLACK SHALE	1.5	70.0
573.5	MODESTO	WOMAC	COAL	0.5	71.5
573.0	MODESTO		GRAY SHALE	8.5	72.0
564.5	MODESTO		LIMESTONE	1.0	80.5
563.5	MODESTO		GRAY SHALE	23.5	81.5
540.0	MODESTO	CARLINVILLE	LIMESTONE	5.0	105.0
535.0	MODESTO		GRAY SHALE	38.5	110.0
496.5	MODESTO	CHAPEL	COAL	0.5	148.5
496.0	MODESTO		GRAY SHALE	40.0	149.0
456.0	MODESTO		SHALY SANDSTONE	6.0	189.0
450.0	MODESTO		GRAY SHALE	19.0	195.0
431.0	MODESTO		LIMESTONE	1.0	214.0
430.0	MODESTO		GRAY SHALE	17.0	215.0
413.0	MODESTO		SHALE	8.0	232.0
405.0	MODESTO		SILTY SHALE	3.5	240.0
401.5	MODESTO		SANDY SHALE	6.5	243.5
395.0	MODESTO		SANDSTONE	3.0	250.0
392.0	MODESTO		GRAY SHALE	4.0	253.0
388.0	MODESTO		CALCAREOUS SHALE	3.5	257.0
384.5	MODESTO	PIASA	LIMESTONE	4.0	260.5
380.5			GRAY SHALE	2.5	264.5
378.0			CALCAREOUS SHALE	3.0	267.0
375.0	CARBONDALE	ENERGY	GRAY SHALE	54.0	270.0
321.0	CARBONDALE	HERRIN	COAL	5.0	324.0
316.0	CARBONDALE		UNDERCLAY	2.5	329.0
313.5	CARBONDALE		LIMESTONE	3.5	331.5
310.0	CARBONDALE		GRAY SHALE	10.0	335.0

MAPID: 11700536000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 4 QUARTERS/FOOTAGES: 330' S line, 330' W line of NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.766143 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.257506 DATE COLLECTED: 5 / 0 / 1944

SURFACE ELEVATION (FT.): 638.0 LOGGED (FT.): 320.0 LOG TYPE: Electric Log

SOURCE: FULLER G & TURNER J WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
378.0	MODESTO	PIASA	LIMESTONE	5.0	260.0
373.0	MODESTO		UNCLASSIFIED	1.5	265.0
371.5	CARBONDALE		UNCLASSIFIED	3.5	266.5
368.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	270.0
361.0	CARBONDALE	ENERGY	UNCLASSIFIED	38.0	277.0
323.0	CARBONDALE	HERRIN	COAL	5.0	315.0

MAPID: 11722431000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 4 QUARTERS/FOOTAGES: 2626' N line, 2589' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.766854 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.256883 DATE COLLECTED: 7 / 20 / 1977

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 340.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-3 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
642.0			UNCONSOLIDATED	84.0	0.0
558.0	MODESTO		SILTSTONE	2.0	84.0
556.0	MODESTO		GRAY SHALE	19.0	86.0
537.0	MODESTO	CARLINVILLE	LIMESTONE	6.0	105.0
531.0	MODESTO		SANDY SHALE	9.0	111.0
522.0	MODESTO		GRAY SHALE	24.0	120.0
498.0	MODESTO	CHAPEL	COAL	0.5	144.0
497.5	MODESTO		SANDY SHALE	35.5	144.5
462.0	MODESTO		GRAY SHALE	39.5	180.0
422.5	MODESTO		LIMESTONE	1.0	219.5
421.5	MODESTO		COAL	0.5	220.5
421.0	MODESTO		CALCAREOUS SHALE	12.0	221.0
409.0	MODESTO		GRAY SHALE	9.0	233.0
400.0	MODESTO		BLACK SHALE	3.0	242.0
397.0	MODESTO		SHALE	9.0	245.0
388.0	MODESTO		SILTY SHALE	6.0	254.0
382.0	MODESTO		CALCAREOUS SHALE	7.0	260.0
375.0	MODESTO	PIASA	LIMESTONE	2.0	267.0
373.0	MODESTO		SHALE	8.0	269.0
365.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	277.0
362.0	CARBONDALE	ENERGY	GRAY SHALE	39.0	280.0
323.0	CARBONDALE	HERRIN	COAL	5.0	319.0
317.9	CARBONDALE		UNDERCLAY	1.7	324.1
316.2	CARBONDALE		LIMESTONE	1.1	325.8
315.2	CARBONDALE		LIMESTONE W/ SHALE	6.2	326.8
309.0	CARBONDALE		GRAY SHALE	5.0	333.0
304.0	CARBONDALE		LIMESTONE	2.0	338.0

MAPID: 11700625000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 5 QUARTERS/FOOTAGES: 330' S line, 330' W line of SE NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.780509 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.257259 DATE COLLECTED: 9 / 0 / 1950

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 340.0 LOG TYPE: Electric Log

SOURCE: MID-CONTINENT PETROL WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
356.0	MODESTO	PIASA	LIMESTONE	3.0	284.0
353.0	MODESTO		UNCLASSIFIED	2.0	287.0
351.0	CARBONDALE		UNCLASSIFIED	5.0	289.0
346.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	294.0
343.0	CARBONDALE	ENERGY	UNCLASSIFIED	39.0	297.0
304.0	CARBONDALE	HERRIN	COAL	4.0	336.0

MAPID: 11701074000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 5 QUARTERS/FOOTAGES: 510' S line, 330' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.794724 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.249975 DATE COLLECTED: 6 / 0 / 1965

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 346.0 LOG TYPE: Electric Log

SOURCE: JEFFERIS JOHN L WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
360.0	MODESTO	PIASA	LIMESTONE	3.0	280.0
357.0	MODESTO		UNCLASSIFIED	1.5	283.0
355.5	CARBONDALE		UNCLASSIFIED	4.5	284.5
351.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	289.0
347.0	CARBONDALE	ENERGY	UNCLASSIFIED	46.0	293.0
301.0	CARBONDALE	HERRIN	COAL	7.0	339.0

MAPID: 11701074000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 5 QUARTERS/FOOTAGES: 510' S line, 330' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.794724

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.249975

DATE COLLECTED:

SURFACE ELEVATION (FT.): 640.0

LOGGED (FT.): 353.0

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
353.0	MODESTO	PIASA	LIMESTONE	3.0	287.0
350.0	CARBONDALE	ENERGY	DARK GRAY SHALE	6.0	290.0
344.0	CARBONDALE	ENERGY	CALCAREOUS SHALE	24.0	296.0
320.0	CARBONDALE	ENERGY	GRAY SHALE	10.0	320.0
310.0	CARBONDALE	ENERGY	CALCAREOUS SHALE	13.0	330.0
297.0	CARBONDALE	ENERGY	LIMESTONE	3.0	343.0
294.0	CARBONDALE	HERRIN	COAL	7.0	346.0

MAPID: 11700867000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 6 QUARTERS/FOOTAGES: 330' N line, 330' W line of NE NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.799266

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.262588

DATE COLLECTED: 9 / 0 / 1960

SURFACE ELEVATION (FT.): 642.0

LOGGED (FT.): 344.0

LOG TYPE: Electric Log

SOURCE: STRIBLING, W. C.

WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
352.0	MODESTO	PIASA	LIMESTONE	4.0	290.0
348.0	MODESTO		UNCLASSIFIED	1.0	294.0
347.0	CARBONDALE		UNCLASSIFIED	3.0	295.0
344.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	298.0
338.0	CARBONDALE	ENERGY	UNCLASSIFIED	35.0	304.0
303.0	CARBONDALE	HERRIN	COAL	5.0	339.0

MAPID: 11723665000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 6 QUARTERS/FOOTAGES: 1150' N line, 1800' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.807199 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.260138 DATE COLLECTED: 4 / 17 / 1991

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 384.0 LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO. EHB-89-71 WELL TYPE: Coal Test

COMMENT: FROM MINE PERMIT 56

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
635.0	PLEISTOCENE		SOIL	3.0	0.0	BR GY
632.0	PLEISTOCENE		CLAY	24.0	3.0	TAN-GY
608.0			SOFT SHALE	19.0	27.0	
589.0			LIMESTONE	8.0	46.0	BUFF
581.0			SHALE	6.0	54.0	FIRM; BK
575.0			SOFT SHALE	15.0	60.0	
560.0			SANDSTONE	18.0	75.0	FINE; GNGY
542.0			ARGILLACEOUS LIMESTONE	2.0	93.0	GN GY
540.0			SHALE/COAL	5.0	95.0	
535.0			SANDSTONE	15.0	100.0	GNGY
520.0			SOFT SHALE	20.0	115.0	
500.0			ARGILLACEOUS LIMESTONE	6.0	135.0	OLIVE GY
494.0			BLACK SHALE	4.0	141.0	
490.0			SOFT SHALE	25.0	145.0	
465.0			SANDSTONE	10.0	170.0	FINE; GNGY
455.0			SOFT SHALE	57.0	180.0	
398.0			ARGILLACEOUS LIMESTONE	3.0	237.0	OLIVE GY
395.0			SHALE & SILTSTONE	20.0	240.0	
375.0			SOFT SHALE	5.0	260.0	
370.0			SHALE & SILTSTONE	32.0	265.0	
338.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	297.0	BANKSTON FORK UPPER BENCH; BUFF
334.0	CARBONDALE		SOFT SHALE	7.0	301.0	
327.0	CARBONDALE	BANKSTON FORK	ARGILLACEOUS LIMESTONE	4.0	308.0	BANKSTON FORK LOWER BENCH; LT GY
323.0	CARBONDALE	ENERGY	SOFT SHALE	13.0	312.0	
310.0	CARBONDALE	ENERGY	SHALE & SILTSTONE	30.0	325.0	
280.0	CARBONDALE	HERRIN	COAL	7.1	355.0	NO. 6 COAL
272.9	CARBONDALE		CALCAREOUS CLAYSTONE	2.0	362.1	GY-GN GY
270.9			ARGILLACEOUS LIMESTONE	4.9	364.1	GY-GN GY
266.0			CLAYSTONE & SILTSTONE	14.4	369.0	LS NOD IN LOWER HALF; GNGY
251.6			LIMESTONE	0.6	383.4	GY-BUFF

MAPID: 11723666000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 7 QUARTERS/FOOTAGES: 1250' S line, 450' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.811724 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.237055 DATE COLLECTED: 5 / 7 / 1991

SURFACE ELEVATION (FT.): 637.0 LOGGED (FT.): 338.8 LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO. EHB-89-75 WELL TYPE: Coal Test

COMMENT: FROM MINE PERMIT 56

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
637.0	PLEISTOCENE		SOIL	5.0	0.0	BR GY
632.0	PLEISTOCENE		CLAY	25.0	5.0	TAN
607.0	PLEISTOCENE		CLAY	10.0	30.0	OLIVE
597.0	PLEISTOCENE		CLAY	20.0	40.0	TAN
577.0			SOFT SHALE	13.0	60.0	
564.0			SHALE	3.0	73.0	FIRM; BK
561.0			SILTSTONE	24.0	76.0	FIRM; GN GY
537.0			SOFT SHALE	6.0	100.0	
531.0			LIMESTONE	6.0	106.0	GRANULAR; LT BR
525.0			SOFT SHALE	18.0	112.0	
507.0			SOFT SHALE	15.0	130.0	
492.0			SOFT SHALE	5.0	145.0	VERY SOFT
487.0			SANDSTONE	16.0	150.0	FINE; GN GY
471.0			SOFT SHALE	23.0	166.0	
448.0			SOFT SHALE	28.0	189.0	
420.0			ARGILLACEOUS LIMESTONE	2.0	217.0	OLIVE GY
418.0			SANDSTONE	10.0	219.0	FINE; LT GNGY
408.0			SHALE & SILTSTONE	15.0	229.0	
393.0			SOFT SHALE	5.0	244.0	
388.0			SOFT SHALE	18.0	249.0	
370.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	267.0	BANKSTON FORK UPPER; GRANULAR; BUFF
365.0	CARBONDALE		SOFT SHALE	5.0	272.0	
360.0	CARBONDALE	BANKSTON FORK	ARGILLACEOUS LIMESTONE	4.0	277.0	BANKSTON FORK LOWER BENCH; LT GNGY
356.0	CARBONDALE	ENERGY	SOFT SHALE	13.0	281.0	
343.0	CARBONDALE	ENERGY	SHALE & SILTSTONE	24.8	294.0	
318.2	CARBONDALE	HERRIN	COAL	7.6	318.8	NO. 6 COAL
310.6	CARBONDALE		CLAYSTONE	1.8	326.4	LS NOD AT BASE; GY- GNGY
308.8			NODULAR LIMESTONE	2.9	328.2	TO CLYSTN W. LS NOD; GNGY
305.9			SILTY CLAYSTONE	6.7	331.1	CALCAREOUS LOWER HALF, HD; GNGY
299.2			SANDSTONE/SILTSTONE	1.0	337.8	FINE; LT GNGY

MAPID: 11723993000C VERSION: 1

PROJECT: NCRDS 2013

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 7 QUARTERS/FOOTAGES: 75' N line, 220' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.801378 GEOLOGIST: LOUCHIOS

CONFIDENTIAL: N LATITUDE: 39.24831 DATE COLLECTED: 8 / 23 / 2008

SURFACE ELEVATION (FT.): 526.0 LOGGED (FT.): 519.0 LOG TYPE: Survey Core Study

SOURCE: ISGS MAC #1 WELL TYPE: Coal Test

COMMENT: DESCRIBED BY WJN AT ISGS ANNEX

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
526.0			CORE LOSS	56.0	0.0	
470.0	BOND	CARTHAGE	LIMESTONE	3.1	56.0	
466.9	PATOKA		SILTSTONE	2.4	59.1	
464.5	PATOKA		SILTSTONE & SHALE	14.3	61.5	
450.2	PATOKA	MACOUPIN	LIMESTONE	3.2	75.8	
447.0	PATOKA		GREEN SHALE	0.6	79.0	
446.4	PATOKA		BLACK SHALE	2.4	79.6	HUSHPUCKNEY SHALE
444.0	PATOKA	WOMAC	COAL	0.5	82.0	
443.5	PATOKA		CLAYSTONE & SILTSTONE	5.1	82.5	
438.5	PATOKA		LIMESTONE/SILTSTONE	1.6	87.5	
436.9	PATOKA		SILTSTONE	10.3	89.1	LS NODULES
426.6	PATOKA		SILTSTONE	11.1	99.4	NON- CALCAREOUS
415.5	PATOKA		GRAY SHALE	6.7	110.5	
408.8	PATOKA	CRAMER	LIMESTONE	5.3	117.2	
403.5	PATOKA		BLACK SHALE	0.5	122.5	
403.0	PATOKA		LIMESTONE	1.0	123.0	
402.0	PATOKA		SILTSTONE	12.3	124.0	
389.7	PATOKA		SILTSTONE/SANDSTONE	11.2	136.3	
378.5	PATOKA		DARK SHALE	2.5	147.5	
376.0	PATOKA	CHAPEL	COAL	0.2	150.0	BRIGHT BANDED
375.8	PATOKA		CLAYSTONE & SILTSTONE	3.9	150.2	
371.9	PATOKA		SILTSTONE	3.5	154.1	
368.4	PATOKA		SILTSTONE	11.4	157.6	MOSTLY LAMINATED
357.0	PATOKA		SILTSTONE	13.0	169.0	10-20% INTERLAMINATED SANDSTONE
344.0	PATOKA		SILTSTONE	13.0	182.0	GRADING DOWNWARD TO SILTY SHALE
331.0	PATOKA		SILTY SHALE	16.0	195.0	
315.0	PATOKA		DARK SHALE	10.7	211.0	
304.3	SHELBURN	EXLINE	LIMESTONE	1.7	221.7	
302.6	SHELBURN		CLAYSTONE & SILTSTONE	3.1	223.4	
299.5	SHELBURN		SILTSTONE	4.5	226.5	UPPER PART CALCAREOUS
295.0	SHELBURN		SILTSTONE	17.6	231.0	
277.4	SHELBURN	ATTILA	BLACK SHALE	0.8	248.6	
276.6	SHELBURN		CLAYSTONE & SILTSTONE	3.1	249.4	MASSIVE, SLICKENSIDED
273.5	SHELBURN		CLAYSTONE & SILTSTONE	2.6	252.5	REDDISH BROWN
270.9	SHELBURN		MUDSTONE	2.4	255.1	
268.5	SHELBURN		CLAYSTONE & SILTSTONE	2.4	257.5	
266.1	SHELBURN		MUDSTONE	4.3	259.9	
261.8	SHELBURN		SILTSTONE/SANDSTONE	5.2	264.2	

256.6	SHELBURN		CONGLOMERATE	5.7	269.4	
250.9	SHELBURN		CLAYSTONE & SILTSTONE	1.2	275.1	
249.7	SHELBURN		MUDSTONE	3.3	276.3	
246.4	SHELBURN	PIASA	LIMESTONE	3.1	279.6	
243.3	SHELBURN		GRAY SHALE	3.3	282.7	
240.0	SHELBURN	DANVILLE	COAL	0.1	286.0	DULL, SHALY
240.0	SHELBURN		MUDSTONE	5.6	286.0	
234.4	SHELBURN	BANKSTON FORK	LIMESTONE	3.8	291.6	
230.6	SHELBURN		MUDSTONE	5.5	295.4	
225.1	SHELBURN		CLAY & SHALE	1.4	300.9	
223.7	SHELBURN		SILTSTONE	14.7	302.3	
209.0	SHELBURN		SILTY SHALE	31.5	317.0	
177.5	SHELBURN		DARK SHALE	2.2	348.5	
175.3	CARBONDALE	HERRIN	COAL	7.8	350.7	
167.5	CARBONDALE		SILTSTONE	6.5	358.5	
161.0	CARBONDALE		SHALE	10.0	365.0	
151.0	CARBONDALE		SILTSTONE/SANDSTONE	4.2	375.0	
146.8	CARBONDALE		CLAYSTONE & SILTSTONE	2.0	379.2	BLOCKY, SLICKENSIDED
144.8	CARBONDALE		CLAYSTONE & SILTSTONE	8.6	381.2	BADLY WASHED-OUT AND BROKEN
136.2	CARBONDALE		CLAYSTONE & SILTSTONE	4.2	389.8	SLICKENSIDED
132.0	CARBONDALE	SURVANT	COAL	3.2	394.0	UPPER BENCH
128.8	CARBONDALE	SURVANT	DARK SHALE	1.7	397.2	
127.1	CARBONDALE	SURVANT	COAL	2.1	398.9	MIDDLE BENCH
125.0	CARBONDALE	SURVANT	SILTSTONE	0.3	401.0	
124.7	CARBONDALE	SURVANT	DARK SHALE	0.6	401.3	
124.1	CARBONDALE	SURVANT	COAL	0.3	401.9	LOWER BENCH
123.8	CARBONDALE		SILTSTONE/SANDSTONE	13.3	402.2	INTERLAMINATED
110.5	CARBONDALE		SILTY SHALE	24.5	415.5	
86.0	CARBONDALE		DARK SHALE	7.2	440.0	FISSILE
78.8	CARBONDALE	MECCA QUARRY	BLACK SHALE	2.1	447.2	
76.7	CARBONDALE	COLCHESTER	COAL	2.0	449.3	
74.7	CARBONDALE		BLACK SHALE	0.3	451.3	
74.4	CARBONDALE		CLAYSTONE & SILTSTONE	1.4	451.6	
73.0	CARBONDALE		SILTSTONE	2.4	453.0	
70.6	CARBONDALE		DOLOMITE	0.9	455.4	
69.7	CARBONDALE		MUDSTONE	0.7	456.3	MUDSTONE CONGLAMERATE
69.0	CARBONDALE		MUDSTONE	1.2	457.0	
67.8	CARBONDALE	SEELYVILLE	COAL	3.2	458.2	UNCERTAIN CORRELATION
64.6	TRADEWATER		LIMESTONE W/ SHALE	2.4	461.4	
62.2	TRADEWATER		MUDSTONE	4.6	463.8	
57.6	TRADEWATER		MUDSTONE	3.6	468.4	
54.0	TRADEWATER		SANDSTONE	1.5	472.0	
52.5	TRADEWATER		SANDSTONE/SHALE	9.3	473.5	
43.2	TRADEWATER		DARK SHALE	16.0	482.8	
27.2	TRADEWATER	MURPHYSBORO	COAL	3.7	498.8	UNCERTAIN CORRELATION
23.5	TRADEWATER		SILTSTONE	3.0	502.5	
20.5	TRADEWATER		GRAY SHALE	2.4	505.5	

MAPID: 11723667000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 8 QUARTERS/FOOTAGES: 1500' N line, 650' W line

QUADRANGLE: GILLESPIE NORTH

LONGITUDE: -89.79354

GEOLOGIST: HOKE

CONFIDENTIAL: N

LATITUDE: 39.244448

DATE COLLECTED: 5 / 7 / 1991

SURFACE ELEVATION (FT.): 649.0

LOGGED (FT.): 363.0

LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO.

WELL TYPE: Coal Test

COMMENT: FROM MINE PERMIT 56

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
649.0	PLEISTOCENE		SILTY CLAY	10.0	0.0	YLBR-GY
639.0	PLEISTOCENE		SILT, SAND & GRAVEL	20.0	10.0	OLIVE GY
619.0	PLEISTOCENE		CLAY	10.0	30.0	YL BR
609.0	PLEISTOCENE		CLAY, SAND & GRAVEL	70.0	40.0	OLIVE GY
539.0			SHALE	7.0	110.0	OLIVE GY
532.0			LIMESTONE	7.0	117.0	
525.0			SOFT SHALE	9.0	124.0	
516.0			SILTSTONE	10.0	133.0	GN GY
506.0			SOFT SHALE	14.0	143.0	
492.0			SHALE & SILTSTONE	11.0	157.0	
481.0			SANDSTONE	8.0	168.0	GN GY
473.0			DARK GRAY SHALE	49.0	176.0	
424.0			LIMESTONE	2.0	225.0	
422.0			SHALE & SILTSTONE	24.0	227.0	
398.0			BLACK SHALE	2.0	251.0	
396.0			SHALE	19.0	253.0	GN GY
377.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	272.0	BANKSTON FORK UPPER BENCH
374.0	CARBONDALE		SHALE	6.0	275.0	GN GY
368.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	281.0	BANKSTON FORK LOWER BENCH
366.0	CARBONDALE	ENERGY	SHALE	10.0	283.0	GN GY
356.0	CARBONDALE	ENERGY	SHALE & SILTSTONE	43.7	293.0	
312.3	CARBONDALE	HERRIN	COAL	5.2	336.7	NO. 6 COAL
307.1	CARBONDALE		UNDERCLAY	1.5	341.9	GY-OLIVE
305.6			NODULAR LIMESTONE	3.7	343.4	TO CLYSTN W LS NOD
301.9			BRECCIA	2.3	347.1	
299.6			CLAYSTONE	5.4	349.4	MODERATLY SF; DK GY
294.2			LIMESTONE	1.7	354.8	LT GY
292.5			SILTY CLAYSTONE	2.3	356.5	VERY STY; GN GY
290.2			SANDSTONE	1.0	358.8	FINE; GN GY
289.2			SILTY CLAYSTONE	1.4	359.8	GN GY
287.8			BLACK SHALE	1.3	361.2	
286.5			UNKNOWN	0.5	362.5	CORE LOSS

MAPID: 11723668000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 8 QUARTERS/FOOTAGES: 1500' N line, 2000' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.783888 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.244627 DATE COLLECTED: 4 / 29 / 1991

SURFACE ELEVATION (FT.): 643.0 LOGGED (FT.): 391.2 LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO. WELL TYPE: Coal Test

COMMENT: FROM MINE PERMIT 56

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
643.0	PLEISTOCENE		SOIL	5.0	0.0	OLIVE GY
638.0	PLEISTOCENE		CLAY	15.0	5.0	GRAY
623.0	PLEISTOCENE		CLAY	10.0	20.0	TAN
613.0	PLEISTOCENE		CLAY & GRAVEL	10.0	30.0	GRAY
603.0	PLEISTOCENE		CLAY	20.0	40.0	TAN
583.0	PLEISTOCENE		CLAY	10.0	60.0	OLIVE GN
573.0			SHALE/COAL	10.0	70.0	
563.0			SANDSTONE	15.0	80.0	FINE; GN GY
548.0			SHALE & SILTSTONE	21.0	95.0	
527.0			LIMESTONE	6.0	116.0	OLIVE GY
521.0			SHALE	30.0	122.0	GY-GNGY
491.0			SANDSTONE	23.0	152.0	LT GN GY
468.0			SHALE	47.0	175.0	GY-DK GY
421.0			SANDSTONE/SHALE	13.0	222.0	LT GN GY
408.0			SOFT SHALE	13.0	235.0	
395.0			BLACK SHALE	5.0	248.0	
390.0			SHALE & SILTSTONE	14.0	253.0	
376.0			LIMESTONE	7.0	267.0	TAN
369.0			SOFT SHALE	5.0	274.0	
364.0			ARGILLACEOUS LIMESTONE	3.0	279.0	GN GY
361.0			SHALE	18.0	282.0	GN GY
343.0			SILTSTONE & SHALE	19.4	300.0	LT GY
323.6	CARBONDALE	ENERGY	SHALE & SILTSTONE	44.0	319.4	
279.6	CARBONDALE	HERRIN	COAL	11.5	363.4	NO. 6 COAL
268.1			SHALE & CLAYSTONE	3.3	374.9	WITH SS LAYER
264.8			CONGLOMERATE	2.0	378.2	
262.8			SILTSTONE	5.2	380.2	GRAY
257.6			SANDSTONE	5.8	385.4	FINE; LT GN GY

MAPID: 11700567000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 10 QUARTERS/FOOTAGES: 330' N line, 330' E line

QUADRANGLE: LITCHFIELD LONGITUDE: -89.739886 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.248516 DATE COLLECTED: 12 / 0 / 1955

SURFACE ELEVATION (FT.): 657.0 LOGGED (FT.): 347.0 LOG TYPE: Electric Log

SOURCE: CARROLL & SMITH WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
379.5	MODESTO	PIASA	LIMESTONE	2.5	277.5
377.0	MODESTO		UNCLASSIFIED	1.0	280.0
376.0	CARBONDALE		UNCLASSIFIED	2.5	281.0
373.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	283.5
370.5	CARBONDALE	ENERGY	UNCLASSIFIED	56.5	286.5
314.0	CARBONDALE	HERRIN	COAL	4.0	343.0

MAPID: 11701303000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 10 QUARTERS/FOOTAGES: 50' N line, 50' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.757508 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.249017 DATE COLLECTED: 8 / 0 / 1947

SURFACE ELEVATION (FT.): 649.0 LOGGED (FT.): 341.0 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
371.5	MODESTO	PIASA	LIMESTONE	4.5	277.5
367.0	MODESTO		UNCLASSIFIED	1.5	282.0
365.5	CARBONDALE		UNCLASSIFIED	4.5	283.5
361.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	288.0
357.0	CARBONDALE	ENERGY	UNCLASSIFIED	44.0	292.0
313.0	CARBONDALE	HERRIN	COAL	5.0	336.0

MAPID: 11701304000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 11 QUARTERS/FOOTAGES: 50' N line, 50' E line

QUADRANGLE: LITCHFIELD LONGITUDE: -89.72032 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.249441 DATE COLLECTED: 8 / 0 / 1947

SURFACE ELEVATION (FT.): 646.0 LOGGED (FT.): 354.0 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
365.0	MODESTO	PIASA	LIMESTONE	3.0	281.0
362.0	MODESTO		UNCLASSIFIED	1.0	284.0
361.0	CARBONDALE		UNCLASSIFIED	3.0	285.0
358.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	288.0
354.0	CARBONDALE	ENERGY	UNCLASSIFIED	56.0	292.0
298.0	CARBONDALE	HERRIN	COAL	6.0	348.0

MAPID: 11701305000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 15 QUARTERS/FOOTAGES: 50' N line, 50' E line

QUADRANGLE: LITCHFIELD LONGITUDE: -89.738532 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.234503 DATE COLLECTED: 8 / 0 / 1947

SURFACE ELEVATION (FT.): 665.0 LOGGED (FT.): 372.0 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
368.1	MODESTO	PIASA	LIMESTONE	5.0	296.9
363.1	MODESTO		UNCLASSIFIED	0.8	301.9
362.3	CARBONDALE		UNCLASSIFIED	2.3	302.7
360.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	305.0
356.0	CARBONDALE	ENERGY	UNCLASSIFIED	58.0	309.0
298.0	CARBONDALE	HERRIN	COAL	5.0	367.0

MAPID: 11701306000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 16 QUARTERS/FOOTAGES: 50' N line, 5' W line
QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.776596 GEOLOGIST: D. JOHNSON
CONFIDENTIAL: N LATITUDE: 39.233878 DATE COLLECTED: 8 / 0 / 1947
SURFACE ELEVATION (FT.): 652.0 LOGGED (FT.): 344.0 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
382.0	MODESTO	PIASA	LIMESTONE	4.0	270.0
378.0	MODESTO		UNCLASSIFIED	1.0	274.0
377.0	CARBONDALE		UNCLASSIFIED	3.0	275.0
374.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	278.0
370.0	CARBONDALE	ENERGY	UNCLASSIFIED	56.0	282.0
314.0	CARBONDALE	HERRIN	COAL	6.0	338.0

MAPID: 11723664000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 17 QUARTERS/FOOTAGES: 1400' N line, 2300' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.78751 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.229995 DATE COLLECTED: 5 / 7 / 1991

SURFACE ELEVATION (FT.): 652.0 LOGGED (FT.): 378.5 LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO. EHB-89-66 WELL TYPE: Coal Test

COMMENT: FROM MINE PERMIT 56

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
652.0	PLEISTOCENE		CLAY	10.0	0.0	YLGY
642.0	PLEISTOCENE		CLAY	20.0	10.0	GY-GYBR
622.0	PLEISTOCENE		CLAY	30.0	30.0	OLIVE GY
592.0	PLEISTOCENE		CLAY	20.0	60.0	GRAY
572.0	PLEISTOCENE		CLAY	20.0	80.0	OLIVE GY
552.0			LIMESTONE	10.0	100.0	BN
542.0			GRAY SHALE	22.0	110.0	
520.0			SILTSTONE	15.0	132.0	GRAY
505.0			SHALE	16.0	147.0	GNGY
489.0			SHALE & SILTSTONE	50.0	163.0	
439.0			SHALE	20.0	213.0	OLIVE GY
419.0			LIMESTONE	2.0	233.0	
417.0			GRAY SHALE	23.0	235.0	
394.0			BLACK SHALE	2.0	258.0	
392.0			SHALE	8.0	260.0	OLIVE GY
384.0			SHALE & SILTSTONE	10.0	268.0	
374.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	278.0	BANKSTON FORK UPPER BENCH; OLIVEGY
371.0	CARBONDALE		SHALE	7.0	281.0	GN GY
364.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	288.0	BANKSTON FORK LOWER BENCH; OLIVEGY
361.0	CARBONDALE	ENERGY	SHALE	9.0	291.0	OLIVE GY
352.0	CARBONDALE	ENERGY	SHALE & SILTSTONE	47.2	300.0	
304.8	CARBONDALE	HERRIN	COAL	6.4	347.2	NO. 6 COAL
298.4	CARBONDALE		CLAYSTONE & SILTSTONE	1.7	353.6	OLIVE GY
296.7			CLAYSTONE & SILTSTONE	2.1	355.3	LS NOD
294.6			CLAYSTONE & SILTSTONE	3.6	357.4	GN GY
291.0			CLAYSTONE & SILTSTONE	6.8	361.0	GRAY
284.2			LIMESTONE	3.2	367.8	WITH SLT CLYSTN; OLIVE GY
281.0			SHALE & SILTSTONE	2.0	371.0	
279.0			CLAYSTONE & SILTSTONE	5.5	373.0	DK GR

MAPID: 11700125000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 18 QUARTERS/FOOTAGES: 1675' N line, 220' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.796451 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.229114 DATE COLLECTED: 10 / 0 / 1903

SURFACE ELEVATION (FT.): 638.0 LOGGED (FT.): 337.0 LOG TYPE: Drillers Log

SOURCE: WILMINGTON STAR MINING CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
379.0	MODESTO	PIASA	LIMESTONE	6.5	259.0
372.5	MODESTO		UNCLASSIFIED	1.5	265.5
371.0	CARBONDALE		UNCLASSIFIED	3.0	267.0
368.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	270.0
365.0	CARBONDALE	ANNA	BLACK SHALE	0.5	273.0
364.5	CARBONDALE	ENERGY	UNCLASSIFIED	56.5	273.5
308.0	CARBONDALE	HERRIN	COAL	7.0	330.0

MAPID: 11700125000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 18 QUARTERS/FOOTAGES: 1675' N line, 220' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.796451 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.229114 DATE COLLECTED:

SURFACE ELEVATION (FT.): 638.0 LOGGED (FT.): 337.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
367.5	MODESTO	PIASA	LIMESTONE	3.0	270.5
364.5	CARBONDALE	ENERGY	GRAY SHALE	34.0	273.5
330.5	CARBONDALE	ENERGY	DARK GRAY SHALE	22.0	307.5
308.5	CARBONDALE	ENERGY	BLACK SHALE	0.5	329.5
308.0	CARBONDALE	HERRIN	COAL	7.0	330.0

MAPID: 1170085000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 18 QUARTERS/FOOTAGES: 330' N line, 544' E line of SE SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.797591

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.22176

DATE COLLECTED: 1 / 0 / 1960

SURFACE ELEVATION (FT.): LOGGED (FT.): 0.0

LOG TYPE: Electric Log

SOURCE: HALLOWAY HENRY J

WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
-	MODESTO	PIASA	LIMESTONE	2.5	
-	MODESTO		UNCLASSIFIED	0.8	
-	CARBONDALE		UNCLASSIFIED	1.8	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	2.5	
-	CARBONDALE	ENERGY	UNCLASSIFIED	60.0	
-	CARBONDALE	HERRIN	COAL	5.0	

MAPID: 11723661000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 18 QUARTERS/FOOTAGES: 1850' N line, 100' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.812843 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.228489 DATE COLLECTED: 4 / 18 / 1991

SURFACE ELEVATION (FT.): 646.0 LOGGED (FT.): 374.6 LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO. EHB-89-58 WELL TYPE: Coal Test

COMMENT: FROM MINE PERMIT 56

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
646.0	PLEISTOCENE		CLAY & GRAVEL	10.0	0.0	YLBR
636.0	PLEISTOCENE		CLAY	10.0	10.0	FIRM; OLIVEGY
626.0	PLEISTOCENE		CLAY	30.0	20.0	YLBR
596.0	PLEISTOCENE		SANDY CLAY	50.0	50.0	FIRM; OLIVEGY
546.0			LIMESTONE	10.0	100.0	OLIVEGY
536.0			SHALE & SILTSTONE	24.0	110.0	
512.0			SILTSTONE	3.0	134.0	BR GY
509.0			SHALE	18.0	137.0	DKGY
491.0			COAL	0.5	155.0	
490.5			CLAYSTONE & SILTSTONE	4.5	155.5	NGY
486.0			SILTSTONE	10.0	160.0	BRGY
476.0			SHALE	60.0	170.0	DKGY
416.0			LIMESTONE	1.5	230.0	
414.5			CLAYSTONE & SILTSTONE	2.5	231.5	NGY
412.0			SILTY SHALE	11.0	234.0	
401.0			SILTSTONE	4.0	245.0	NGY
397.0			SHALE	4.0	249.0	NGY
393.0			BLACK SHALE	3.0	253.0	
390.0			CLAYSTONE & SILTSTONE	2.0	256.0	NGY
388.0			SILTY SHALE	23.0	258.0	
365.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	281.0	BANKSTON FORK UPPER BENCH; OLIVEGY
361.0	CARBONDALE		CLAYSTONE & SILTSTONE	4.0	285.0	NGY
357.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	289.0	BANKSTON FORK LOWER BENCH; OLIVEGY
354.5	CARBONDALE	ENERGY	SHALE	5.5	291.5	NGY
349.0	CARBONDALE	ENERGY	SILTY SHALE	47.8	297.0	
301.2	CARBONDALE	HERRIN	COAL	6.2	344.8	NO. 6 COAL
295.0	CARBONDALE		CLAYSTONE & SILTSTONE	1.9	351.0	DKGY
293.1			LIMESTONE	8.1	352.9	WITH LS NODULES
285.0			CLAYSTONE & SILTSTONE	6.9	361.0	NGY
278.1			NODULAR LIMESTONE	4.4	367.9	OLIVEGY
273.7			CLAYSTONE & SILTSTONE	0.8	372.3	NGY
272.9			UNKNOWN	1.5	373.1	CORE LOSS

MAPID: 1172222000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 19 QUARTERS/FOOTAGES: 1880' S line, 680' E line of SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.797959 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.209557 DATE COLLECTED: 10 / 30 / 1979

SURFACE ELEVATION (FT.): 601.0 LOGGED (FT.): 320.0 LOG TYPE: Drillers Log

SOURCE: CARTER OIL COMPANY 17E017 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
601.0	PLEISTOCENE		CLAY	5.0	0.0	
596.0	PLEISTOCENE		SAND & GRAVEL	10.0	5.0	
586.0			CLAY	65.0	15.0	GRAY
521.0			CLAYSTONE & SILTSTONE	14.0	80.0	GR, GY
507.0			LIMESTONE	1.0	94.0	
506.0			SHALE & CLAYSTONE	30.0	95.0	
476.0			SANDSTONE	30.0	125.0	
446.0			GRAY SHALE	35.0	155.0	
411.0			GRAY SHALE	20.0	190.0	
391.0			GRAY SHALE	10.0	210.0	
381.0			LIMESTONE	1.0	220.0	
380.0			GRAY SHALE	4.0	221.0	
376.0	MODESTO	PIASA	LIMESTONE	5.0	225.0	
371.0	CARBONDALE	ENERGY	GRAY SHALE	5.0	230.0	
366.0	CARBONDALE	ENERGY	SHALE WITH LIMESTONE	5.0	235.0	
361.0	CARBONDALE	ENERGY	GREEN SHALE	10.0	240.0	
351.0	CARBONDALE	ENERGY	GRAY SHALE	6.0	250.0	
345.0	CARBONDALE	ENERGY	GRAY SHALE	32.6	256.0	
312.4	CARBONDALE	ENERGY	BLACK SHALE	0.5	288.6	
311.9	CARBONDALE	HERRIN	COAL	6.2	289.1	
305.7	CARBONDALE		UNDERCLAY	2.0	295.3	GRAY
303.7	CARBONDALE		LIMESTONE	2.0	297.3	
301.7	CARBONDALE		GREEN SHALE	3.7	299.3	
298.0	CARBONDALE		GREEN SHALE	2.9	303.0	
295.1	CARBONDALE		GRAY SHALE	6.2	305.9	

MAPID: 1172366000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 19 QUARTERS/FOOTAGES: 2550' S line, 2000' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.802665 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.211386 DATE COLLECTED: 4 / 17 / 1991

SURFACE ELEVATION (FT.): 645.0 LOGGED (FT.): 336.1 LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO. EHB-89-48 WELL TYPE: Coal Test

COMMENT: FROM MINE PERMIT 56

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
645.0	PLEISTOCENE		SOIL	5.0	0.0	BROWN
640.0	PLEISTOCENE		CLAY	30.0	5.0	L BR
610.0	PLEISTOCENE		SAND & GRAVEL	20.0	35.0	
590.0	PLEISTOCENE		CLAY	25.0	55.0	SDY LGY CLY
565.0	PLEISTOCENE		CLAY	20.0	80.0	OLIVE GY
545.0	PLEISTOCENE		CLAY	40.0	100.0	GRAY
505.0			SOFT SHALE	25.0	140.0	
480.0			SANDSTONE	20.0	165.0	FINE; GN GY
460.0			SOFT SHALE	15.0	185.0	
445.0			SHALE	20.0	200.0	FIRM; DK GY
425.0			SANDY SILTSTONE	25.0	220.0	NGY
400.0			SHALE	5.0	245.0	FIRM; BK
395.0			SOFT SHALE	8.0	250.0	
387.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	258.0	BANKSTON FORK UPPER BENCH; BUFF
382.0	CARBONDALE		SOFT SHALE	7.0	263.0	
375.0	CARBONDALE	BANKSTON FORK	ARGILLACEOUS LIMESTONE	1.0	270.0	BANKSTON FORK LOWER BENCH; GNGY
374.0	CARBONDALE	ENERGY	SILTY SHALE	14.0	271.0	
360.0	CARBONDALE	ENERGY	SILTY SHALE	37.6	285.0	
322.4	CARBONDALE	HERRIN	COAL	7.0	322.6	NO. 6 COAL
315.4	CARBONDALE		CLAYSTONE & SILTSTONE	1.5	329.6	GRAY
313.9			NODULAR LIMESTONE	4.4	331.1	GNGY
309.5			UNKNOWN	0.6	335.5	CORE LOSS

MAPID: 11700126000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 20 QUARTERS/FOOTAGES: 200' N line, 80' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.795367 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.218452 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 643.0 LOGGED (FT.): 350.4 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & BUFFALO CO. WELL TYPE: Unsuccessful or Unknown Results

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
375.2	MODESTO	PIASA	LIMESTONE	6.8	267.8
368.4	MODESTO		UNCLASSIFIED	1.0	274.6
367.4	CARBONDALE		UNCLASSIFIED	2.8	275.6
364.6	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	2.0	278.4
362.6	CARBONDALE	ENERGY	UNCLASSIFIED	65.6	280.4
297.0	CARBONDALE	HERRIN	COAL	4.4	346.0

MAPID: 11700126000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 20 QUARTERS/FOOTAGES: 200' N line, 80' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.795367 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.218452 DATE COLLECTED:

SURFACE ELEVATION (FT.): 643.0 LOGGED (FT.): 349.5 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
357.6	MODESTO	PIASA	LIMESTONE	3.0	285.4
354.6	CARBONDALE	ENERGY	GRAY SHALE	54.2	288.4
300.4	CARBONDALE	ENERGY	DARK GRAY SHALE	2.4	342.6
298.0	CARBONDALE	HERRIN	COAL	4.5	345.0

MAPID: 11700126000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 20 QUARTERS/FOOTAGES: 200' N line, 80' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.795367 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.218452 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 643.0 LOGGED (FT.): 392.3 LOG TYPE: Drillers Log

SOURCE: PITTSBURG-BUFFALO 34 WELL TYPE: Coal Test

COMMENT: JOHN MILLER FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
643.0			SANDY CLAY	29.0	0.0	
614.0			UNCONSOLIDATED	120.3	29.0	
493.7	MODESTO		SHALE	9.3	149.3	
484.3	MODESTO	CARLINVILLE	LIMESTONE	0.8	158.7	
483.5	MODESTO		SANDY SHALE	31.0	159.5	
452.5	MODESTO		SANDSTONE	12.3	190.5	
440.2	MODESTO		SANDY SHALE	21.3	202.8	
419.0	MODESTO		SANDSTONE	1.5	224.0	
417.5	MODESTO		SANDY SHALE	1.5	225.5	
416.0	MODESTO		SANDSTONE	6.7	227.0	
409.3	MODESTO		SANDY SHALE	18.3	233.7	
391.0	MODESTO		SHALE	1.2	252.0	
389.8	MODESTO		SANDY SHALE	5.0	253.2	
384.8	MODESTO		SANDSTONE	5.0	258.2	
379.8	MODESTO		SHALE	4.0	263.2	MIXED
375.8	MODESTO	PIASA	LIMESTONE	7.3	267.2	
368.5			SHALE	3.8	274.5	
364.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	278.3	
362.7	CARBONDALE	ENERGY	SHALE	60.2	280.3	
302.5	CARBONDALE	ENERGY	UNKNOWN	0.3	340.5	LOG HAS BROWN ROCK
302.2	CARBONDALE	ENERGY	SHALE	2.7	340.8	
299.5	CARBONDALE	ENERGY	BLACK SHALE	2.4	343.5	
297.1	CARBONDALE	HERRIN	COAL	4.4	345.9	
292.7	CARBONDALE		UNDERCLAY	1.3	350.3	
291.4	CARBONDALE		SHALE	6.4	351.6	
285.0	CARBONDALE		LIMESTONE	1.2	358.0	
283.8	CARBONDALE		SANDY SHALE	7.7	359.2	
276.2	CARBONDALE		LIMESTONE	5.4	366.8	
270.7	CARBONDALE		SHALE	2.2	372.3	
268.6	CARBONDALE	EXCELLO	BLACK SHALE	3.2	374.4	
265.4	CARBONDALE		SHALE	2.3	377.6	
263.2	CARBONDALE		SHALE	12.5	379.8	MIXED

MAPID: 11722508000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 20 QUARTERS/FOOTAGES: 2593' N line, 2180' E line of NE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.78408 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.211971 DATE COLLECTED: 10 / 5 / 1979

SURFACE ELEVATION (FT.): 651.0 LOGGED (FT.): 367.2 LOG TYPE: Drillers Log

SOURCE: CARTER OIL 17E010 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
651.0			UNCLASSIFIED	302.0	0.0	NO RECORD
349.0	CARBONDALE	ENERGY	GRAY SHALE	32.0	302.0	
317.0	CARBONDALE	ENERGY	GRAY SHALE	5.0	334.0	
312.0	CARBONDALE	HERRIN	COAL	6.1	339.0	#6
305.9	CARBONDALE		UNDERCLAY	0.7	345.1	GRAY
305.2	CARBONDALE		UNDERCLAY	1.1	345.8	GRAY
304.1	CARBONDALE		LIMESTONE & CLAY	5.0	346.9	GREEN
299.1	CARBONDALE		SHALE WITH LIMESTONE	0.7	351.9	
298.5	CARBONDALE		CLAYSTONE & SILTSTONE	2.2	352.5	GRAY
296.3	CARBONDALE		CORE LOSS	0.9	354.7	
295.5	CARBONDALE		GREEN SHALE	2.4	355.5	
293.1	CARBONDALE		LIMESTONE	2.4	357.9	GRAY
290.7	CARBONDALE		SHALE WITH LIMESTONE	1.9	360.3	
288.9	CARBONDALE		BLACK SHALE	1.9	362.1	
287.0	CARBONDALE		BROWN SHALE	1.6	364.0	
285.4	CARBONDALE		LIMESTONE	1.7	365.6	GRAY

MAPID: 11723662000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 20 QUARTERS/FOOTAGES: 1350' S line, 2100' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.788078 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.208171 DATE COLLECTED: 5 / 7 / 1991

SURFACE ELEVATION (FT.): 648.0 LOGGED (FT.): 349.7 LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO. EHB-89-59A WELL TYPE: Coal Test

COMMENT: FROM MINE PERMIT 56

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
648.0	PLEISTOCENE		CLAY	20.0	0.0	LTBN
628.0	PLEISTOCENE		CLAY	10.0	20.0	BR
618.0	PLEISTOCENE		CLAY	20.0	30.0	GRAY
598.0	PLEISTOCENE		SAND	10.0	50.0	COARSE
588.0	PLEISTOCENE		CLAY	20.0	60.0	SDY GY CLY
568.0	PLEISTOCENE		SAND	20.0	80.0	COARSE
548.0	PLEISTOCENE		CLAY & GRAVEL	10.0	100.0	GRAY
538.0	PLEISTOCENE		SAND	45.0	110.0	COARSE
493.0			SOFT SHALE	25.0	155.0	
468.0			SHALE/COAL	5.0	180.0	
463.0			SANDSTONE	15.0	185.0	FINE; GNGY
448.0			SHALE	22.0	200.0	FIRM; DK GY
426.0			SANDSTONE	13.0	222.0	FINE; GNGY
413.0			SANDY SILTSTONE	20.0	235.0	GRAY
393.0			SHALE/COAL	7.0	255.0	
386.0			SOFT SHALE	4.0	262.0	
382.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	266.0	BANKSTON FORK UPPER BENCH; BUFF
376.0	CARBONDALE		SOFT SHALE	4.0	272.0	
372.0	CARBONDALE	BANKSTON FORK	ARGILLACEOUS LIMESTONE	3.0	276.0	BANKSTON FORK LOWER BENCH; GNGY
369.0	CARBONDALE	ENERGY	SOFT SHALE	21.0	279.0	
348.0	CARBONDALE	ENERGY	SILTY SHALE	31.0	300.0	
317.0	CARBONDALE	HERRIN	COAL	6.0	331.0	.75 CORE LOSS
311.0	CARBONDALE		CLAYSTONE	1.7	337.0	LS NOD AT BASE; GY- GNGY
309.3			NODULAR LIMESTONE	2.7	338.7	OLIVEGY
306.6			BRECCIA	1.8	341.4	
304.8			CLAYSTONE	5.0	343.2	LS NOD; GNGY
299.8			SANDSTONE	1.5	348.2	FINE; GNGY

MAPID: 11700127000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 21 QUARTERS/FOOTAGES: NE NE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.759697 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.217657 DATE COLLECTED: 1 / 0 / 1913

SURFACE ELEVATION (FT.): 685.5 LOGGED (FT.): 402.7 LOG TYPE: Drillers Log

SOURCE: PITTSBURG-BUFFALO CO., HOLE #2 WELL TYPE: Coal Test

COMMENT: N.E. BARNES FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
685.5			SOIL	12.0	0.0	
673.5			UNCONSOLIDATED	131.3	12.0	
542.2	MODESTO	CARLINVILLE	LIMESTONE	6.5	143.3	
535.7	MODESTO		SANDY SHALE	10.3	149.8	
525.4	MODESTO		SANDSTONE	1.0	160.1	
524.4	MODESTO		SANDY SHALE	28.3	161.1	
496.2	MODESTO		SHALE	16.2	189.3	
480.0	MODESTO		SHALE	1.0	205.5	
479.0	MODESTO	CHAPEL	COAL	1.3	206.5	
477.7	MODESTO		SANDSTONE	6.0	207.8	
471.7	MODESTO		SANDY SHALE	14.8	213.8	
457.0	MODESTO		SANDSTONE	18.2	228.5	
438.8	MODESTO		SANDY SHALE	7.0	246.7	
431.8	MODESTO		SHALE	10.3	253.7	
421.5	MODESTO		SANDY SHALE	3.5	264.0	
418.0	MODESTO		SANDSTONE	8.5	267.5	
409.5	MODESTO		SANDY SHALE	22.0	276.0	
387.5	MODESTO		SHALE	0.5	298.0	
387.0	MODESTO		BLACK SHALE	2.8	298.5	
384.2	MODESTO		UNKNOWN	0.3	301.3	LOG HAS BROWN ROCK
383.8	MODESTO		BLACK SHALE	1.2	301.7	
382.7	CARBONDALE	DANVILLE	COAL	1.4	302.8	
381.2	CARBONDALE	ENERGY	SANDY SHALE	14.8	304.3	
366.5	CARBONDALE	ENERGY	SANDY SHALE	0.3	319.0	
366.2	CARBONDALE	ENERGY	SANDSTONE	33.9	319.3	
332.2	CARBONDALE	ENERGY	SHALE	7.4	353.3	
324.8	CARBONDALE	HERRIN	COAL	4.8	360.7	.25' BLUE BAND AT 363.17
320.1	CARBONDALE		SANDY SHALE	2.1	365.4	
318.0	CARBONDALE		SANDSTONE	2.0	367.5	
316.0	CARBONDALE		SHALE	4.5	369.5	
311.5	CARBONDALE		LIMESTONE	1.5	374.0	
310.0	CARBONDALE		SANDY SHALE	12.2	375.5	
297.8	CARBONDALE		SHALE	15.0	387.7	MIXED

MAPID: 11700626000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 21 QUARTERS/FOOTAGES: 330' N line, 330' E line
 QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.75849 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.218617 DATE COLLECTED: 6 / 0 / 1949
 SURFACE ELEVATION (FT.): 668.0 LOGGED (FT.): 359.0 LOG TYPE: Electric Log
 SOURCE: MAZZARINO, M. WELL TYPE: Dry Hole
 COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
388.0	MODESTO	PIASA	LIMESTONE	5.0	280.0
383.0	MODESTO		UNCLASSIFIED	1.5	285.0
381.5	CARBONDALE		UNCLASSIFIED	4.5	286.5
377.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	291.0
373.0	CARBONDALE	ENERGY	UNCLASSIFIED	58.0	295.0
315.0	CARBONDALE	HERRIN	COAL	6.0	353.0

MAPID: 11700759000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 22 QUARTERS/FOOTAGES: 352' S line, 355' W line of NW
 QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.75604 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.213135 DATE COLLECTED: 6 / 0 / 1959
 SURFACE ELEVATION (FT.): LOGGED (FT.): 0.0 LOG TYPE: Electric Log
 SOURCE: POPPENHOUSE & HUGHES WELL TYPE: Dry Hole
 COMMENT: NO DEPTH VALUES AVAILABLE

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

MAPID: 11700469000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 23 QUARTERS/FOOTAGES: 400' S line, 1250' E line
 QUADRANGLE: LITCHFIELD LONGITUDE: -89.72394 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.206468 DATE COLLECTED: 0 / 0 / 1900
 SURFACE ELEVATION (FT.): 670.0 LOGGED (FT.): 382.2 LOG TYPE: Drillers Log
 SOURCE: WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
294.0	CARBONDALE	HERRIN	COAL	6.2	376.0

MAPID: 11701308000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 24 QUARTERS/FOOTAGES: 50' N line, 50' W line
 QUADRANGLE: LITCHFIELD LONGITUDE: -89.719646 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.219975 DATE COLLECTED: 8 / 0 / 1947
 SURFACE ELEVATION (FT.): 666.0 LOGGED (FT.): 391.0 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
350.0	MODESTO	PIASA	LIMESTONE	5.0	316.0
345.0	MODESTO		UNCLASSIFIED	1.5	321.0
343.5	CARBONDALE		UNCLASSIFIED	4.5	322.5
339.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	327.0
334.0	CARBONDALE	ENERGY	UNCLASSIFIED	54.0	332.0
280.0	CARBONDALE	HERRIN	COAL	5.0	386.0

MAPID: 11701309000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 25 QUARTERS/FOOTAGES: 50' S line, 50' W line of SE NW
 QUADRANGLE: LITCHFIELD LONGITUDE: -89.714629 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.198184 DATE COLLECTED: 7 / 0 / 1947
 SURFACE ELEVATION (FT.): 662.0 LOGGED (FT.): 384.0 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
357.0	MODESTO	PIASA	LIMESTONE	4.0	305.0
353.0	MODESTO		UNCLASSIFIED	1.5	309.0
351.5	CARBONDALE		UNCLASSIFIED	3.5	310.5
348.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	314.0
345.0	CARBONDALE	ENERGY	UNCLASSIFIED	63.0	317.0
282.0	CARBONDALE	HERRIN	COAL	4.0	380.0

MAPID: 1170131000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 26 QUARTERS/FOOTAGES: 50' S line, 50' E line of NW

QUADRANGLE: LITCHFIELD LONGITUDE: -89.729121 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.197933 DATE COLLECTED: 8 / 0 / 1947

SURFACE ELEVATION (FT.): 670.0 LOGGED (FT.): 392.0 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
353.0	MODESTO	PIASA	LIMESTONE	3.0	317.0
350.0	MODESTO		UNCLASSIFIED	2.5	320.0
347.5	CARBONDALE		UNCLASSIFIED	7.5	322.5
340.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	330.0
334.0	CARBONDALE	ENERGY	UNCLASSIFIED	52.0	336.0
282.0	CARBONDALE	HERRIN	COAL	4.0	388.0

MAPID: 11701311000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 27 QUARTERS/FOOTAGES: 330' N line, 330' W line of SE NE

QUADRANGLE: LITCHFIELD LONGITUDE: -89.741969 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.2004 DATE COLLECTED: 12 / 0 / 1958

SURFACE ELEVATION (FT.): 669.0 LOGGED (FT.): 368.0 LOG TYPE: Electric Log

SOURCE: SUN PRODUCTION COMPANY WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
379.0	MODESTO	PIASA	LIMESTONE	4.0	290.0
375.0	MODESTO		UNCLASSIFIED	1.5	294.0
373.5	CARBONDALE		UNCLASSIFIED	3.5	295.5
370.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	299.0
367.0	CARBONDALE	ENERGY	UNCLASSIFIED	60.0	302.0
307.0	CARBONDALE	HERRIN	COAL	6.0	362.0

MAPID: 11701060000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 28 QUARTERS/FOOTAGES: 55' N line, 2629' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.7666 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.20449 DATE COLLECTED:

SURFACE ELEVATION (FT.): 664.0 LOGGED (FT.): 380.0 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. G-12 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
368.2	MODESTO	PIASA	LIMESTONE	3.3	295.8
364.9	CARBONDALE	ENERGY	SILTY SHALE	54.4	299.1
310.5	CARBONDALE	ENERGY	GRAY SHALE	18.5	353.5
292.0	CARBONDALE	HERRIN	COAL	8.0	372.0

MAPID: 11701060000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 28 QUARTERS/FOOTAGES: 55' N line, 2629' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.7666 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.20449 DATE COLLECTED:

SURFACE ELEVATION (FT.): 664.0 LOGGED (FT.): 380.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-12 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
364.9	CARBONDALE	ENERGY	SHALE	72.9	299.1
292.0	CARBONDALE	HERRIN	COAL	8.3	372.0

MAPID: 11701060000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 28 QUARTERS/FOOTAGES: 55' N line, 2629' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.7666 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.20449 DATE COLLECTED:

SURFACE ELEVATION (FT.): 664.0 LOGGED (FT.): 381.2 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-12 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
291.6	CARBONDALE	HERRIN	COAL	8.3	372.4

MAPID: 11723659000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 29 QUARTERS/FOOTAGES: 2600' S line, 25' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.776363 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.196759 DATE COLLECTED: 4 / 29 / 1991

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 361.9 LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO. EHB-89-26 WELL TYPE: Coal Test

COMMENT: FROM MINE PERMIT 56

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
655.0	PLEISTOCENE		SOIL	2.0	0.0	GRAY
653.0	PLEISTOCENE		CLAY	18.0	2.0	TAN
635.0	PLEISTOCENE		CLAY	10.0	20.0	GRAY
625.0	PLEISTOCENE		CLAY & GRAVEL	25.0	30.0	STIFF; GY
600.0			SHALE	21.3	55.0	
578.7			ARGILLACEOUS LIMESTONE	0.8	76.3	GRAY
577.9			SHALE/COAL	2.6	77.1	
575.3			CALCAREOUS CLAYSTONE	8.3	79.7	GRAY
567.0			SHALE WITH LIMESTONE	3.8	88.0	
563.2			SANDSTONE/SILTSTONE	9.7	91.8	FINE; GRAY
553.5			SILTSTONE	9.5	101.5	GRAY
544.0			SHALE	4.7	111.0	
539.3			ARGILLACEOUS LIMESTONE	6.0	115.7	GRAY
533.3			SILTY, SANDY SHALE	3.4	121.7	
529.9			SANDSTONE/SILTSTONE	8.4	125.1	FINE; GRAY
521.5			SANDY SILTSTONE	13.6	133.5	GRAY
507.9			SHALE	7.9	147.1	CO AT BASE; DK GRAY
500.0			CLAYSTONE & SILTSTONE	8.0	155.0	LS AT BASE; GRAY
492.0			SANDY SILTSTONE	7.7	163.0	GRAY
484.3			SANDSTONE/SILTSTONE	41.6	170.7	FINE; GRAY
442.7			SILTSTONE	26.6	212.3	GRAY
416.1			LIMESTONE	0.4	238.9	GRAY
415.7			CLAYSTONE & SILTSTONE	3.7	239.3	CO AT TOP; GRAY
412.0			SILTSTONE	14.5	243.0	SDY AT TOP; GN GY
397.5			SILTY SHALE	15.0	257.5	
382.5			CLAYSTONE & SILTSTONE	9.3	272.5	CO AT TOP; GRN GRAY
373.2			ARGILLACEOUS LIMESTONE	1.4	281.8	OLIVEGRY
371.8			CALCAREOUS CLAYSTONE	10.4	283.2	GRAY
361.4	CARBONDALE	BANKSTON FORK	ARGILLACEOUS LIMESTONE	2.4	293.6	OLIVEGRY
359.0	CARBONDALE		CLAYSTONE & SILTSTONE	4.8	296.0	GRAY
354.2	CARBONDALE	ENERGY	SILTY SHALE	32.5	300.8	
321.7	CARBONDALE	HERRIN	COAL	6.5	333.3	NO. 6 COAL; BLACK GRAY
315.2	CARBONDALE		CLAYSTONE & SILTSTONE	1.6	339.8	
313.6			LIMESTONE	3.5	341.4	

310.1	CALCAREOUS CLAYSTONE	4.2	344.9	GRNGRAY
305.9	LIMESTONE	4.6	349.1	GRNGRAY
301.3	CLAYSTONE & SILTSTONE	5.3	353.7	GY TO BN
296.0	SILTSTONE/LIMESTONE	2.9	359.0	GN GY

MAPID: 11700128000C **VERSION:** 1 **PROJECT:** NCRDS90
COUNTY: MACOUPIN **TWP/RNG:** 9N 6W **SECTION:** 30 **QUARTERS/FOOTAGES:** NE NE SE
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.796507 **GEOLOGIST:** S.SROKA
CONFIDENTIAL: N **LATITUDE:** 39.195975 **DATE COLLECTED:** 2 / 0 / 1913
SURFACE ELEVATION (FT.): 654.0 **LOGGED (FT.):** 342.2 **LOG TYPE:** Drillers Log
SOURCE: PITTSBURG-BUFFALO, HOLE #5 **WELL TYPE:** Coal Test
COMMENT: 100 YDS S RD CROSS. OPP. NEW ERA SCHOOL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
654.0			CLAY	19.0	0.0	
635.0			UNCONSOLIDATED	48.0	19.0	
587.0	MODESTO		SHALE	13.0	67.0	
574.0	MODESTO		SHALE	2.0	80.0	
572.0	MODESTO		BLACK SHALE	1.0	82.0	
571.0	MODESTO	WOMAC	COAL	0.8	83.0	
570.2	MODESTO		SHALE	10.3	83.8	
560.0	MODESTO		SANDSTONE	1.0	94.0	
559.0	MODESTO		SANDY SHALE	8.0	95.0	
551.0	MODESTO		SHALE	18.0	103.0	
533.0	MODESTO	CARLINVILLE	LIMESTONE	5.6	121.0	
527.4	MODESTO		SHALE	40.4	126.6	
487.0	MODESTO		CALCAREOUS SHALE	5.0	167.0	
482.0	MODESTO		SHALE	16.0	172.0	
466.0	MODESTO		SANDY SHALE	40.0	188.0	
426.0	MODESTO		SHALE	22.0	228.0	
404.0	MODESTO		SANDY SHALE	17.0	250.0	
387.0	MODESTO		SHALE	12.0	267.0	
375.0	MODESTO		SHALE	1.0	279.0	
374.0	MODESTO		BLACK SHALE	1.6	280.0	
372.4	CARBONDALE	DANVILLE	COAL	0.7	281.6	
371.7	CARBONDALE	ENERGY	SHALE	52.3	282.3	
319.4	CARBONDALE	HERRIN	COAL	6.0	334.6	
313.4	CARBONDALE		UNDERCLAY	1.3	340.6	
312.1	CARBONDALE		UNKNOWN	0.3	341.9	LOG HAS ROCK

MAPID: 11700128000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 30 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.796507 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.195975 DATE COLLECTED: 2 / 0 / 1913

SURFACE ELEVATION (FT.): 654.0 LOGGED (FT.): 341.0 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & BUFFALO CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
371.3	CARBONDALE	ENERGY	UNCLASSIFIED	52.3	282.7
319.0	CARBONDALE	HERRIN	COAL	6.0	335.0

MAPID: 11701057000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 30 QUARTERS/FOOTAGES: 6' S line, 30' E line of SW SW SW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.810807 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.189216 DATE COLLECTED:

SURFACE ELEVATION (FT.): 659.5 LOGGED (FT.): 342.2 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-9 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
324.3	CARBONDALE	HERRIN	COAL	6.4	335.2

MAPID: 11701057000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 30 QUARTERS/FOOTAGES: 6' S line, 30' E line of SW SW SW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.810807 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.189216 DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 342.4 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-9 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
376.1	MODESTO	PIASA	LIMESTONE	4.5	283.9
371.6	CARBONDALE	ENERGY	SHALE	47.6	288.4
324.0	CARBONDALE	HERRIN	COAL	6.4	336.0

MAPID: 11701059000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 30 QUARTERS/FOOTAGES: 322' N line, 2630' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.804802 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.203449 DATE COLLECTED:

SURFACE ELEVATION (FT.): 666.0 LOGGED (FT.): 336.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-11 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
382.0	MODESTO	PIASA	LIMESTONE	3.6	284.0
378.4	CARBONDALE	ENERGY	GRAY SHALE	34.8	287.6
343.6	CARBONDALE	ENERGY	LIMESTONE	0.5	322.4
343.1	CARBONDALE	ENERGY	GRAY SHALE	7.1	322.9
336.0	CARBONDALE	HERRIN	COAL	6.1	330.0

MAPID: 11701059000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 30 QUARTERS/FOOTAGES: 322' N line, 2630' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.804802 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.203449 DATE COLLECTED:

SURFACE ELEVATION (FT.): 666.0 LOGGED (FT.): 335.1 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-11 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
391.3	MODESTO	PIASA	LIMESTONE	6.5	274.7
384.8	MODESTO		UNCLASSIFIED	2.1	281.2
382.7	CARBONDALE		UNCLASSIFIED	3.3	283.3
379.4	CARBONDALE	ENERGY	SHALE	42.4	286.6
337.0	CARBONDALE	HERRIN	COAL	6.1	329.0

MAPID: 11701059000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 30 QUARTERS/FOOTAGES: 322' N line, 2630' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.804802 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.203449 DATE COLLECTED:

SURFACE ELEVATION (FT.): 666.2 LOGGED (FT.): 336.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-11 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
336.6	CARBONDALE	HERRIN	COAL	6.1	329.6

MAPID: 11723663000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 30 QUARTERS/FOOTAGES: 950' N line, 1100' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.799342 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.201738 DATE COLLECTED: 5 / 7 / 1991

SURFACE ELEVATION (FT.): 653.0 LOGGED (FT.): 358.0 LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO. EHB-89-61 WELL TYPE: Coal Test

COMMENT: FROM MINE PERMIT 56

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
653.0	PLEISTOCENE		SOIL	3.0	0.0	BROWN
650.0	PLEISTOCENE		CLAY & GRAVEL	17.0	3.0	TAN
633.0	PLEISTOCENE		CLAY	30.0	20.0	GRAY
603.0	PLEISTOCENE		CLAY & GRAVEL	10.0	50.0	TAN
593.0	PLEISTOCENE		CLAY	40.0	60.0	LT GY
553.0	PLEISTOCENE		CLAY	10.0	100.0	TAN & GY
543.0			SOFT SHALE	12.0	110.0	
531.0			LIMESTONE	5.0	122.0	OLIVE GY
526.0			SOFT SHALE	3.0	127.0	
523.0			SHALE	35.0	130.0	FIRM; GY
488.0			SANDSTONE	25.0	165.0	FINE; LT GNGY
463.0			SOFT SHALE	45.0	190.0	
418.0			SOFT SHALE	10.0	235.0	
408.0			SHALE & SILTSTONE	15.0	245.0	
393.0			SOFT SHALE	10.0	260.0	
383.0			SHALE/COAL	5.0	270.0	
378.0			SOFT SHALE	11.0	275.0	
367.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	286.0	BANKSTON FORK UPPER BENCH; LT YLBN
363.0	CARBONDALE		SOFT SHALE	9.0	290.0	
354.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	299.0	BANKSTON FORK LOWER; ARGILL; LT GNGY
351.0	CARBONDALE	ENERGY	SOFT SHALE	13.0	302.0	
338.0	CARBONDALE	ENERGY	SHALE & SILTSTONE	22.1	315.0	
315.9	CARBONDALE	HERRIN	COAL	7.5	337.1	NO. 6 COAL
308.4	CARBONDALE		SILTY CLAYSTONE	1.6	344.6	GY,GNGY
306.8	CARBONDALE		CLAYSTONE	1.3	346.2	CALCAREOUS WITH LS NOD
305.5			BRECCIA	3.8	347.5	VERY HD
301.7			NODULAR LIMESTONE	0.7	351.3	BLU-GNGY
301.0			SILTY CLAYSTONE	6.0	352.0	OCCASIONAL LS NOD; GNGY

MAPID: 11700129000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 31 QUARTERS/FOOTAGES: 600' S line, 60' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.79529 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.176339 DATE COLLECTED: 2 / 0 / 1913

SURFACE ELEVATION (FT.): 656.5 LOGGED (FT.): 364.9 LOG TYPE: Drillers Log

SOURCE: PITTSBURG-BUFFALO #3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
656.5			SOIL	18.0	0.0	
638.5			UNCONSOLIDATED	24.0	18.0	
614.5			BOULDERS & CLAY	3.0	42.0	
611.5	BOND	CARTHAGE	LIMESTONE	9.0	45.0	
602.5	MODESTO		SHALE	9.0	54.0	
593.5	MODESTO		SANDY SHALE	13.0	63.0	
580.5	MODESTO		SHALE	30.0	76.0	
550.5	MODESTO		BLACK SHALE	2.0	106.0	
548.5	MODESTO		SHALE	3.0	108.0	
545.5	MODESTO		SANDY SHALE	19.0	111.0	
526.5	MODESTO		SHALE	4.0	130.0	
522.5	MODESTO		SHALE	11.0	134.0	
511.5	MODESTO	CARLINVILLE	LIMESTONE	7.3	145.0	
504.2	MODESTO		SHALE	40.7	152.3	
463.5	MODESTO		CALCAREOUS SHALE	4.0	193.0	
459.5	MODESTO		SHALE & SANDSTONE	14.0	197.0	SANDY SH & SS
445.5	MODESTO		SHALE	48.0	211.0	
397.5	MODESTO		CALCAREOUS SHALE	11.0	259.0	LIMEY SH & LS
386.5	MODESTO		SANDY SHALE	5.0	270.0	
381.5	MODESTO		SHALE	9.0	275.0	
372.5	MODESTO		SHALE	3.0	284.0	
369.5	MODESTO		SANDY SHALE	11.0	287.0	
358.5	MODESTO		SANDY SHALE	2.0	298.0	
356.5	MODESTO		CALCAREOUS SHALE	2.0	300.0	
354.5	MODESTO	PIASA	LIMESTONE	5.6	302.0	
348.9	MODESTO		SHALE	2.0	307.6	
346.9	CARBONDALE		SHALE	1.4	309.6	
345.5	CARBONDALE		SHALE	6.0	311.0	
339.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	317.0	
335.5	CARBONDALE	ENERGY	CALCAREOUS SHALE	7.0	321.0	
328.5	CARBONDALE	ENERGY	SHALE	28.5	328.0	
300.0	CARBONDALE	ENERGY	BLACK SHALE	0.3	356.5	
299.7	CARBONDALE	HERRIN	COAL	7.3	356.8	
292.3	CARBONDALE		UNDERCLAY	0.8	364.2	

MAPID: 11700129000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 31 QUARTERS/FOOTAGES: 600' S line, 60' E line
 QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.79529 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.176339 DATE COLLECTED: 2 / 0 / 1913
 SURFACE ELEVATION (FT.): 657.0 LOGGED (FT.): 364.3 LOG TYPE: Drillers Log
 SOURCE: PITTSBURG WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
354.9	MODESTO	PIASA	LIMESTONE	5.6	302.1	
349.3	MODESTO		UNCLASSIFIED	2.0	307.7	
347.3	CARBONDALE		UNCLASSIFIED	7.5	309.7	
339.8	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	317.2	
335.8	CARBONDALE	ENERGY	UNCLASSIFIED	35.8	321.2	
300.0	CARBONDALE	HERRIN	COAL	7.3	357.0	

MAPID: 11700958000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 31 QUARTERS/FOOTAGES: 2792' N line, 252' E line
 QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.796029 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 39.181743 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 657.0 LOGGED (FT.): 381.5 LOG TYPE: Survey Core Study
 SOURCE: PEABODY COAL CO. G-24 WELL TYPE: Coal Test
 COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
328.1	MODESTO	PIASA	LIMESTONE	3.2	328.9	
324.9	CARBONDALE	ENERGY	GRAY SHALE	36.3	332.1	
288.6	CARBONDALE	ENERGY	DARK GRAY SHALE	0.2	368.4	
288.5	CARBONDALE	ENERGY	GRAY SHALE	4.7	368.5	
283.7	CARBONDALE	ENERGY	BLACK SHALE	0.8	373.3	
283.0	CARBONDALE	HERRIN	COAL	-	374.0	COAL NOT DRILLED THRU - 4.9' RECOVERED

MAPID: 11700958000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 31 QUARTERS/FOOTAGES: 2792' N line, 252' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.796029 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.181743 DATE COLLECTED:

SURFACE ELEVATION (FT.): 657.0 LOGGED (FT.): 377.9 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-24 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
348.8	MODESTO	PIASA	LIMESTONE	2.5	308.2	
346.3	MODESTO		UNCLASSIFIED	5.0	310.7	
341.3	CARBONDALE		UNCLASSIFIED	14.6	315.7	
326.7	CARBONDALE	ANNA	BLACK SHALE	0.8	330.3	
325.9	CARBONDALE	ENERGY	SHALE	41.9	331.1	
284.0	CARBONDALE	HERRIN	COAL	-	373.0	COAL NOT DRILLED THRU - 4.9' RECOVERED

MAPID: 11700959000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 31 QUARTERS/FOOTAGES: 387' S line, 147' E line of SE SE NE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.795673 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.183135 DATE COLLECTED:

SURFACE ELEVATION (FT.): 663.0 LOGGED (FT.): 362.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-25 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
356.8	MODESTO	PIASA	LIMESTONE	4.2	306.2	
352.6	MODESTO		UNCLASSIFIED	3.3	310.4	
349.3	CARBONDALE		UNCLASSIFIED	9.3	313.7	
340.0	CARBONDALE	ANNA	BLACK SHALE	0.6	323.0	
339.4	CARBONDALE	ENERGY	SHALE	35.4	323.6	
304.0	CARBONDALE	HERRIN	COAL	3.5	359.0	

MAPID: 11701055000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 31 QUARTERS/FOOTAGES: 64' S line, 150' E line of NE SE NE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.795695 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.18409 DATE COLLECTED:

SURFACE ELEVATION (FT.): 662.4 LOGGED (FT.): 382.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-7 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
288.9	CARBONDALE	HERRIN	COAL	7.5	373.5	

MAPID: 11701055000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 31 QUARTERS/FOOTAGES: 64' S line, 150' E line of NE SE NE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.795695 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.18409 DATE COLLECTED:

SURFACE ELEVATION (FT.): 662.0 LOGGED (FT.): 380.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-7 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
359.5	MODESTO	PIASA	LIMESTONE	2.9	302.5
356.6	MODESTO		UNCLASSIFIED	7.0	305.4
349.6	CARBONDALE		UNCLASSIFIED	19.6	312.4
330.0	CARBONDALE	ENERGY	SHALE	41.0	332.0
289.0	CARBONDALE	HERRIN	COAL	7.5	373.0

MAPID: 11700130000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 32 QUARTERS/FOOTAGES: SE NE NE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.777406 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.186813 DATE COLLECTED: 9 / 22 / 1903

SURFACE ELEVATION (FT.): 668.2 LOGGED (FT.): 373.0 LOG TYPE: Drillers Log

SOURCE: WILMINGTON STAR COAL CO., #2 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN COMMENT	
668.2			UNCONSOLIDATED	50.0	0.0	
618.2			SAND	13.0	50.0	
605.2	BOND	CARTHAGE	SANDY LIMESTONE	8.0	63.0	
597.2	MODESTO		UNDERCLAY	16.0	71.0	
581.2	MODESTO		SHALE	44.5	87.0	
536.7	MODESTO	CARLINVILLE	LIMESTONE	6.0	131.5	
530.7	MODESTO		SHALE	37.5	137.5	
493.2	MODESTO		SANDSTONE	37.0	175.0	
456.2	MODESTO		SHALE	82.0	212.0	
374.2	MODESTO		CHERT	4.7	294.0	
369.5	MODESTO		CLAYSTONE & SHALE	7.3	298.7	
362.2	MODESTO	PIASA	LIMESTONE	3.0	306.0	
359.2	MODESTO		UNDERCLAY	12.0	309.0	
347.2	MODESTO		SHALE	9.0	321.0	LOG HAS SLATE
338.2	CARBONDALE	DANVILLE	COAL	0.3	330.0	
337.9	CARBONDALE	ENERGY	SHALE	28.3	330.3	LOG HAS SLATE
309.6	CARBONDALE	HERRIN	COAL	5.3	358.6	
304.3	CARBONDALE		UNDERCLAY	0.1	363.9	
304.2	CARBONDALE		LIMESTONE	2.0	364.0	
302.2	CARBONDALE		UNDERCLAY	7.0	366.0	

MAPID: 11700130000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 32 QUARTERS/FOOTAGES: SE NE NE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.777406 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.186813 DATE COLLECTED: 9 / 0 / 1903

SURFACE ELEVATION (FT.): 668.0 LOGGED (FT.): 364.3 LOG TYPE: Drillers Log

SOURCE: WILMINGTON STAR MINING CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
373.6	MODESTO	PIASA	LIMESTONE	4.7	294.4
368.9	MODESTO		UNCLASSIFIED	2.0	299.1
366.9	CARBONDALE		UNCLASSIFIED	5.3	301.1
361.6	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	306.4
358.6	CARBONDALE	ENERGY	UNCLASSIFIED	49.6	309.4
309.0	CARBONDALE	HERRIN	COAL	5.3	359.0

MAPID: 11700131000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 33 QUARTERS/FOOTAGES: 390' S line, 1140' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.761219 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.176139 DATE COLLECTED: 1 / 0 / 1913

SURFACE ELEVATION (FT.): 672.0 LOGGED (FT.): 379.2 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & BUFFALO CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
379.3	MODESTO	PIASA	LIMESTONE	8.0	292.7
371.3	MODESTO		UNCLASSIFIED	4.0	300.7
367.3	CARBONDALE		UNCLASSIFIED	11.0	304.7
356.3	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.6	315.7
351.7	CARBONDALE	ENERGY	UNCLASSIFIED	52.7	320.3
299.0	CARBONDALE	HERRIN	COAL	6.2	373.0

MAPID: 11700131000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 33 QUARTERS/FOOTAGES: 390' S line, 1140' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.761219

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.176139

DATE COLLECTED:

SURFACE ELEVATION (FT.): 672.0

LOGGED (FT.): 379.2

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
356.2	MODESTO	PIASA	LIMESTONE	4.6	315.8
351.7	MODESTO		DARK GRAY SHALE	2.4	320.3
349.2	CARBONDALE	DANVILLE	COAL	1.7	322.8
347.6	CARBONDALE	BANKSTON FORK	LIMESTONE	0.6	324.4
347.0	CARBONDALE	ENERGY	CALCAREOUS SHALE	16.8	325.0
330.2	CARBONDALE	ENERGY	GRAY SHALE	31.3	341.8
299.0	CARBONDALE	HERRIN	COAL	6.2	373.0

MAPID: 11700131000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 33 QUARTERS/FOOTAGES: 390' S line, 1140' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.761219 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.176139 DATE COLLECTED: 1 / 0 / 1913

SURFACE ELEVATION (FT.): 672.0 LOGGED (FT.): 382.4 LOG TYPE: Drillers Log

SOURCE: PITTSBURG-BUFFALO, HOLE #1 WELL TYPE: Coal Test

COMMENT: LEN HART FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
672.0			SOIL	20.0	0.0	
652.0			SANDY CLAY	43.0	20.0	
609.0	MODESTO		SHALE	7.0	63.0	
602.0	MODESTO		CALCAREOUS SHALE	33.0	70.0	
569.0	MODESTO		SHALE	2.0	103.0	
567.0	MODESTO		SHALE	5.3	105.0	
561.7	MODESTO	WOMAC	COAL	0.8	110.3	
560.9	MODESTO		UNDERCLAY	0.6	111.1	
560.3	MODESTO		SHALE	3.3	111.7	
557.0	MODESTO		CALCAREOUS SHALE	12.0	115.0	
545.0	MODESTO		SHALE	18.0	127.0	
527.0	MODESTO	CARLINVILLE	LIMESTONE	5.3	145.0	
521.7	MODESTO		SANDSTONE	3.8	150.3	
518.0	MODESTO		SANDY SHALE	15.0	154.0	
503.0	MODESTO		SHALE	19.0	169.0	
484.0	MODESTO		SANDY SHALE	2.0	188.0	
482.0	MODESTO		SANDSTONE	6.0	190.0	
476.0	MODESTO		SANDY SHALE	14.0	196.0	
462.0	MODESTO		SANDY SHALE	32.0	210.0	
430.0	MODESTO		SHALE	31.0	242.0	
399.0	MODESTO		CALCAREOUS SHALE	6.0	273.0	
393.0	MODESTO		LIMESTONE	5.0	279.0	
388.0	MODESTO		CALCAREOUS SHALE	6.0	284.0	
382.0	MODESTO		SANDY SHALE	3.0	290.0	
379.0	MODESTO		LIMESTONE	8.0	293.0	
371.0	MODESTO		SHALE	15.0	301.0	
356.0	MODESTO	PIASA	LIMESTONE	4.6	316.0	
351.4	MODESTO		SHALE	2.4	320.6	
349.0	CARBONDALE	DANVILLE	COAL	1.7	323.0	
347.3	CARBONDALE		UNCLASSIFIED	0.6	324.7	
346.7	CARBONDALE		CALCAREOUS SHALE	16.8	325.3	LIMEY SH & LS
330.0	CARBONDALE	ENERGY	SHALE	31.3	342.0	
298.7	CARBONDALE	HERRIN	COAL	6.2	373.3	
292.6	CARBONDALE		UNDERCLAY	3.0	379.4	

MAPID: 11700150000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 33 QUARTERS/FOOTAGES: 260' N line, 880' E line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.760302 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.189149 DATE COLLECTED: 0 / 0 / 1938

SURFACE ELEVATION (FT.): 662.0 LOGGED (FT.): 368.0 LOG TYPE: Drillers Log

SOURCE: WINDSOR & GANEY WELL TYPE: Unsuccessful or Unknown Results

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
359.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	303.0
356.0	CARBONDALE	ENERGY	UNCLASSIFIED	56.0	306.0
300.0	CARBONDALE	HERRIN	COAL	6.0	362.0

MAPID: 11701056000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 34 QUARTERS/FOOTAGES: 30' N line, 1010' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.7536 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.189896 DATE COLLECTED:

SURFACE ELEVATION (FT.): 668.0 LOGGED (FT.): 367.4 LOG TYPE: Survey Core Study

SOURCE: PEABODY COAL CO. G-8 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
354.4	MODESTO	PIASA	LIMESTONE	1.5	313.6
352.9	CARBONDALE	ENERGY	GRAY SHALE	26.1	315.1
326.8	CARBONDALE	ENERGY	GRAY SHALE	20.8	341.2
306.0	CARBONDALE	HERRIN	COAL	5.4	362.0

MAPID: 11701056000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 6W SECTION: 34 QUARTERS/FOOTAGES: 30' N line, 1010' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.7536 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.189896 DATE COLLECTED:

SURFACE ELEVATION (FT.): 668.0 LOGGED (FT.): 366.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. G-8 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
366.5	MODESTO	PIASA	LIMESTONE	3.2	301.5
363.3	MODESTO		UNCLASSIFIED	2.5	304.7
360.8	CARBONDALE		UNCLASSIFIED	6.9	307.2
353.9	CARBONDALE	ENERGY	SHALE	46.9	314.1
307.0	CARBONDALE	HERRIN	COAL	5.0	361.0

MAPID: 11701056000C **VERSION:** 3 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 9N 6W **SECTION:** 34 **QUARTERS/FOOTAGES:** 30' N line, 1010' W line
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.7536 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.189896 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 667.9 **LOGGED (FT.):** 367.0 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. G-8 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
306.9	CARBONDALE	HERRIN	COAL	5.1	361.0

MAPID: 11701312000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 9N 6W **SECTION:** 34 **QUARTERS/FOOTAGES:** 50' N line, 50' E line
QUADRANGLE: LITCHFIELD **LONGITUDE:** -89.738467 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.190071 **DATE COLLECTED:** 7 / 0 / 1947
SURFACE ELEVATION (FT.): 668.0 **LOGGED (FT.):** 394.0 **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
348.0	MODESTO	PIASA	LIMESTONE	2.0	320.0
346.0	MODESTO		UNCLASSIFIED	3.0	322.0
343.0	CARBONDALE		UNCLASSIFIED	8.0	325.0
335.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	333.0
332.0	CARBONDALE	ENERGY	UNCLASSIFIED	54.0	336.0
278.0	CARBONDALE	HERRIN	COAL	4.0	390.0

MAPID: 11701029000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 1 **QUARTERS/FOOTAGES:** 333' N line, 328' W line of NE SW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.82603 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.253944 **DATE COLLECTED:** 0 / 0 / 1941
SURFACE ELEVATION (FT.): 633.0 **LOGGED (FT.):** 325.0 **LOG TYPE:** Electric Log
SOURCE: BRIDGE, FRANK **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
324.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	309.0
323.0	CARBONDALE		UNCLASSIFIED	1.0	310.0
322.0	CARBONDALE	BRERETON	LIMESTONE	6.0	311.0
316.0	CARBONDALE	ANNA	BLACK SHALE	3.0	317.0
313.0	CARBONDALE	HERRIN	COAL	5.0	320.0

MAPID: 117191D0002F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 2 **QUARTERS/FOOTAGES:** SW SW SE NW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.845071 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.254439 **DATE COLLECTED:** 7 / 6 / 1931
SURFACE ELEVATION (FT.): 600.0 **LOGGED (FT.):** 37.8 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-EKBLAW **WELL TYPE:** Outcrop
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
600.0			UNCONSOLIDATED	20.0	0.0	
580.0			ROCK	16.0	20.0	
564.0			COAL	0.5	36.0	
563.5			ROCK	1.3	36.5	

MAPID: 117191D0001F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 2 **QUARTERS/FOOTAGES:** NE NW NW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.846803 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.260805 **DATE COLLECTED:** 7 / 12 / 1929
SURFACE ELEVATION (FT.): 550.0 **LOGGED (FT.):** 34.3 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-BALL **WELL TYPE:** Outcrop
COMMENT: ALSO DESCRIBED BY WANLESS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.0			ROCK	15.3	0.0	
534.7			COAL	0.7	15.3	
534.0			ROCK	18.3	16.0	

MAPID: 11723743000C VERSION: 1

PROJECT: LUMP

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 3 QUARTERS/FOOTAGES: SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.854471 GEOLOGIST: J. MCBETH

CONFIDENTIAL: N LATITUDE: 39.248348 DATE COLLECTED: 3 / 30 / 1976

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 343.0 LOG TYPE:

SOURCE: MONTEREY COAL CO. 1M-9 WELL TYPE: Coal Test

COMMENT: PERMIT 56

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
632.0	PLEISTOCENE		CLAY	8.0	0.0	
624.0	PLEISTOCENE		UNCONSOLIDATED	68.0	8.0	WITH GRAVEL
556.0	BOND		SHALE	3.0	76.0	
553.0	BOND		SANDY SHALE	1.7	79.0	
551.3	BOND		LIMESTONE	1.6	80.7	
549.7	BOND		SILTY SHALE	10.9	82.3	
538.8	BOND		GRAY SHALE	7.3	93.2	WITH SIDERITE
531.5	BOND		CORE LOSS	1.2	100.5	CORE LOSS
530.3	BOND	CARTHAGE	LIMESTONE	6.3	101.7	DARK GRAY
524.0	MODESTO		SILTY SHALE	22.2	108.0	
501.8	MODESTO		CORE LOSS	0.8	130.2	CORE LOSS
501.0	MODESTO		SHALE	6.0	131.0	WITH SIDERITE
495.0	MODESTO		GRAY SHALE	2.6	137.0	
492.4	MODESTO		COAL	0.4	139.6	
492.0	MODESTO		CLAYSTONE	1.0	140.0	
491.0	MODESTO		CORE LOSS	1.4	141.0	CORE LOSS
489.6	MODESTO		SHALE	0.8	142.4	GREEN GRAY
488.8	MODESTO		SANDY SHALE	20.3	143.2	WITH SANDSTONE
468.5	MODESTO		SILTY SHALE	40.7	163.5	
427.8	MODESTO		SHALE	12.3	204.2	WITH SIDERITE; DARK GRAY
415.5	MODESTO		LIMESTONE	0.8	216.5	DARK FOSSILIFEROUS
414.7	MODESTO		GRAY SHALE	1.7	217.3	
413.0	MODESTO		COAL	0.2	219.0	
412.8	MODESTO		GRAY SHALE	1.5	219.2	
411.3	MODESTO		CALCAREOUS SHALE	6.4	220.7	
404.9	MODESTO		SILTY SHALE	9.9	227.1	
395.0	MODESTO		SHALE	1.6	237.0	
393.4	MODESTO		SHALE	1.4	238.6	DARK GRAY WITH COAL TRACE
392.0	MODESTO		CLAYSTONE	3.8	240.0	
388.2	MODESTO		SILTY SHALE	1.8	243.8	
386.4	MODESTO		SANDSTONE	6.2	245.6	
380.2	MODESTO		SANDY SHALE	7.7	251.8	
372.5	MODESTO		GRAY SHALE	2.3	259.5	
370.2	MODESTO		CALCAREOUS SHALE	0.3	261.8	GREEN GRAY
369.9	MODESTO	PIASA	LIMESTONE	5.1	262.1	
364.8	MODESTO		SHALE	0.9	267.2	
363.9	MODESTO		BLACK SHALE	3.4	268.1	
360.5	CARBONDALE	DANVILLE	COAL	2.2	271.5	
358.3	CARBONDALE		SHALE	4.6	273.7	

353.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	278.3	
351.0	CARBONDALE		SHALE	3.0	281.0	
348.0	CARBONDALE		SILTY SHALE	2.4	284.0	
345.6	CARBONDALE		LIMESTONE	0.2	286.4	
345.4	CARBONDALE		SILTY SHALE	3.6	286.6	
341.8	CARBONDALE	BRERETON	LIMESTONE	4.8	290.2	
337.0	CARBONDALE	ANNA	FOSSILIFEROUS SHALE	0.3	295.0	DARK
336.7	CARBONDALE	ANNA	BLACK SHALE	1.3	295.3	
335.4	CARBONDALE	HERRIN	COAL	7.6	296.6	
327.8	CARBONDALE		CLAYSTONE	9.9	304.2	WITH LIMESTONE NODULES
317.9	CARBONDALE		LIMESTONE	2.6	314.1	
315.3	CARBONDALE		SHALE	0.7	316.7	
314.6	CARBONDALE		CORE LOSS	1.6	317.4	CORE LOSS
313.0	CARBONDALE		CALCAREOUS SILTY SHALE	1.0	319.0	
312.0	CARBONDALE		SILTY SHALE	1.6	320.0	
310.4	CARBONDALE		SHALE	1.4	321.6	WITH LIMESTONE NODULES
309.0	CARBONDALE		CLAYSTONE	1.6	323.0	
307.4	CARBONDALE		SANDY SHALE	6.9	324.6	
300.5	CARBONDALE		SILTSTONE	6.0	331.5	WITH LIMESTONE NODULES
294.5	CARBONDALE		SILTSTONE	5.5	337.5	

MAPID: 11723744000C VERSION: 1

PROJECT: LUMP

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 3 QUARTERS/FOOTAGES:

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.854539

GEOLOGIST: J. MCBETH

CONFIDENTIAL: N LATITUDE: 39.24917

DATE COLLECTED: 4 / 7 / 1976

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 342.7

LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO. 1M-10

WELL TYPE: Coal Test

COMMENT: PERMIT 56; MINE #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
632.0	PLEISTOCENE		CLAY	9.0	0.0	
623.0	PLEISTOCENE		UNCONSOLIDATED	62.0	9.0	WITH GRAVEL
561.0	BOND		SHALE	5.0	71.0	WEATHERED
556.0	BOND		LIMESTONE	1.8	76.0	
554.2	BOND		CORE LOSS	5.0	77.8	CORE LOSS
549.2	BOND		SILTY SHALE	5.4	82.8	
543.8	BOND		CORE LOSS	11.3	88.2	CORE LOSS
532.5	BOND	CARTHAGE	LIMESTONE	6.6	99.5	DARK, FOSSILIFEROUS
525.9	MODESTO		SILTY SHALE	33.2	106.1	WITH SHALE
492.7	MODESTO		COAL	0.4	139.3	
492.3	MODESTO		SHALE	0.6	139.7	GREEN-GRAY
491.7	MODESTO		CORE LOSS	4.7	140.3	CORE LOSS
487.0	MODESTO		CALCAREOUS SILTY SHALE	1.0	145.0	
486.0	MODESTO		SANDY SHALE	17.4	146.0	WITH SANDSTONE
468.6	MODESTO		SILTY SHALE	41.0	163.4	
427.6	MODESTO		SHALE	12.5	204.4	WITH SIDERITE
415.1	MODESTO		SHALE	0.4	216.9	DARK FOSSILIFEROUS
414.7	MODESTO		LIMESTONE	0.5	217.3	DARK FOSSILIFEROUS
414.2	MODESTO		GRAY SHALE	1.4	217.8	
412.8	MODESTO		COAL	0.3	219.2	
412.5	MODESTO		CLAYSTONE	1.0	219.5	
411.5	MODESTO		SILTY SHALE	1.4	220.5	
410.1	MODESTO		SHALE	13.4	221.9	GREEN-GRAY
396.7	MODESTO		SHALE	3.5	235.3	DARK GREEN- GRAY
393.2	MODESTO		SHALE	0.9	238.8	
392.3	MODESTO		GRAY SHALE	0.5	239.7	
391.8	MODESTO		CORE LOSS	0.9	240.2	CORE LOSS
390.9	MODESTO		SHALE	4.5	241.1	
386.4	MODESTO		CALCAREOUS SILTY SHALE	3.5	245.6	
382.9	MODESTO		CALCAREOUS SANDSTONE	5.0	249.1	
377.9	MODESTO		CALCAREOUS SILTY SHALE	7.1	254.1	
370.8	MODESTO		SILTY SHALE	3.2	261.2	
367.6	MODESTO		CALCAREOUS SHALE	3.7	264.4	
363.9	MODESTO	PIASA	LIMESTONE	4.7	268.1	
359.2	MODESTO		SHALE	2.2	272.8	GREEN GRAY
357.0	MODESTO		SHALE	0.2	275.0	DARK

356.8	CARBONDALE	DANVILLE	COAL	1.3	275.2	
355.5	CARBONDALE		SHALE	4.1	276.5	
351.4	CARBONDALE	BANKSTON FORK	LIMESTONE	3.2	280.6	
348.2	CARBONDALE		CALCAREOUS SHALE	2.2	283.8	GREEN GRAY
346.0	CARBONDALE		CALCAREOUS SILTY SHALE	4.0	286.0	
342.0	CARBONDALE	BRERETON	LIMESTONE	5.0	290.0	
337.0	CARBONDALE	ANNA	CALCAREOUS SHALE	0.2	295.0	
336.8	CARBONDALE	ANNA	BLACK SHALE	4.6	295.2	
332.2	CARBONDALE	HERRIN	COAL	7.9	299.8	
324.3	CARBONDALE		CLAYSTONE	0.8	307.7	
323.5	CARBONDALE	HIGGINSVILLE	LIMESTONE	6.0	308.5	WITH CALCAREOUS SHALE
317.5	CARBONDALE		CALCAREOUS SHALE	3.6	314.5	GREEN GRAY
313.9	CARBONDALE		GRAY SHALE	1.5	318.1	WITH NODULES
312.4	CARBONDALE		SHALE	5.8	319.6	
306.6	CARBONDALE		GRAY SHALE	0.9	325.4	DARK
305.7	CARBONDALE		SHALE	0.7	326.3	
305.0	CARBONDALE		GRAY SHALE	10.4	327.0	
294.6	CARBONDALE		CALCAREOUS SILTSTONE	5.3	337.4	

MAPID: 11700091000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 4 **QUARTERS/FOOTAGES:** SW NW SE
QUADRANGLE: PLAINVIEW **LONGITUDE:** -89.876872 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.250009 **DATE COLLECTED:** 3 / 0 / 1912
SURFACE ELEVATION (FT.): 548.0 **LOGGED (FT.):** 195.0 **LOG TYPE:** Drillers Log
SOURCE: ROWE A A & CO **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
358.0	CARBONDALE	HERRIN	COAL	5.0	190.0	

MAPID: 11700447000C **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 4 **QUARTERS/FOOTAGES:** NE NE SW NE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.874055 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.256342 **DATE COLLECTED:** 0 / 0 / 1935
SURFACE ELEVATION (FT.): 548.0 **LOGGED (FT.):** 85.0 **LOG TYPE:** Drillers Log
SOURCE: CARLINVILLE CITY SUPPLY **WELL TYPE:** Water Well
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
548.0			UNCONSOLIDATED	50.0	0.0	
498.0			COAL	4.0	50.0	
494.0			UNCONSOLIDATED	31.0	54.0	

MAPID: 11723745000C VERSION: 1

PROJECT: LUMP

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 4 QUARTERS/FOOTAGES:

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.876969

GEOLOGIST: J. MCBETH

CONFIDENTIAL: N LATITUDE: 39.245437

DATE COLLECTED: 1 / 19 / 1989

SURFACE ELEVATION (FT.): 543.0 LOGGED (FT.): 194.9

LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO. 17M-948

WELL TYPE: Coal Test

COMMENT: PERMIT 56; MINE #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
543.0	PLEISTOCENE		SILT & CLAY	5.5	0.0	
537.5	PLEISTOCENE		SAND/CLAY	11.0	5.5	
526.5	PLEISTOCENE		SANDY CLAY	5.0	16.5	
521.5	MODESTO		SHALE	5.0	21.5	WEATHERED
516.5	MODESTO		SANDY SHALE	7.5	26.5	WITH SANDSTONE
509.0	MODESTO		SHALE	58.0	34.0	
451.0	MODESTO		SHALE	4.5	92.0	WITH SIDERITE
446.5	MODESTO		LIMESTONE	0.5	96.5	FOSSILIFEROUS
446.0	MODESTO		CARBONACEOUS SHALE	1.5	97.0	DARK GRAY
444.5	MODESTO		COAL	0.5	98.5	
444.0	MODESTO		SHALE	5.5	99.0	WITH LIMESTONE NODULES
438.5	MODESTO		SANDY SHALE	17.5	104.5	
421.0	MODESTO		SHALE	7.0	122.0	
414.0	MODESTO		SANDY SHALE	8.0	129.0	WITH LIMESTONE
406.0	MODESTO		LIMESTONE	1.0	137.0	
405.0	MODESTO		CALCAREOUS SHALE	2.0	138.0	
403.0	MODESTO	PIASA	LIMESTONE	5.0	140.0	
398.0	MODESTO		CALCAREOUS SHALE	1.0	145.0	
397.0	MODESTO		BLACK SHALE & COAL	2.0	146.0	
395.0	CARBONDALE	DANVILLE	COAL	1.5	148.0	
393.5	CARBONDALE		CALCAREOUS CLAYSTONE	1.5	149.5	
392.0	CARBONDALE		CALCAREOUS SHALE	2.5	151.0	
389.5	CARBONDALE	BANKSTON FORK	LIMESTONE	0.5	153.5	
389.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	154.0	WITH CLAYSTONE
383.0	CARBONDALE		CALCAREOUS CLAYSTONE	5.0	160.0	
378.0	CARBONDALE	BRERETON	LIMESTONE	7.8	165.0	BLUE GRAY FOSSILIFEROUS
370.2	CARBONDALE	ANNA	CALCAREOUS CLAYSTONE	0.2	172.8	
370.0	CARBONDALE	HERRIN	COAL	6.2	173.0	
363.8	CARBONDALE		CLAYSTONE	1.1	179.2	CALCAREOUS TOWARDS BASE
362.7	CARBONDALE		CALCAREOUS CLAYSTONE	7.0	180.3	ABUNDANT LS NODS; SOME SILTST
355.7	CARBONDALE		CORE LOSS	3.4	187.3	CORE LOSS
352.3	CARBONDALE		CALCAREOUS CLAYSTONE	1.5	190.7	
350.8	CARBONDALE		CALCAREOUS SILTSTONE	2.7	192.2	

MAPID: 11700093000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 5 QUARTERS/FOOTAGES: NW SW SW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.90469 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.247434 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 617.0 LOGGED (FT.): 252.0 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MACHINE CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
399.3	MODESTO	PIASA	LIMESTONE	6.0	217.7
393.3	MODESTO		UNCLASSIFIED	3.3	223.7
390.0	CARBONDALE	DANVILLE	COAL	2.0	227.0
388.0	CARBONDALE		UNCLASSIFIED	6.7	229.0
381.3	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	235.7
378.3	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	238.7
376.3	CARBONDALE		UNCLASSIFIED	2.0	240.7
374.3	CARBONDALE	BRERETON	LIMESTONE	2.0	242.7
372.3	CARBONDALE	ANNA	BLACK SHALE	1.3	244.7
371.0	CARBONDALE	HERRIN	COAL	6.0	246.0

MAPID: 11700093000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 5 QUARTERS/FOOTAGES: NW SW SW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.90469 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.247434 DATE COLLECTED:

SURFACE ELEVATION (FT.): 617.0 LOGGED (FT.): 251.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
402.3	MODESTO	PIASA	LIMESTONE	6.0	214.7
396.3	MODESTO		DARK GRAY SHALE	3.3	220.7
393.0	CARBONDALE	DANVILLE	COAL	2.0	224.0
391.0	CARBONDALE		GRAY SHALE	3.9	226.0
387.1	CARBONDALE	ALLENBY	COAL	1.8	229.9
385.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	231.7
382.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	234.7
379.3	CARBONDALE	ENERGY	GRAY SHALE	7.3	237.7
372.0	CARBONDALE	HERRIN	COAL	6.0	245.0

MAPID: 11700093000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 5 QUARTERS/FOOTAGES: NW SW SW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.90469 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.247434 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 616.6 LOGGED (FT.): 256.0 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MACHINE CO, HOLE #3 WELL TYPE: Coal Test

COMMENT: UNION PACIFIC COAL CO. LISTED UNDER FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
616.6			CLAY	11.0	0.0	
605.6			SAND & GRAVEL	51.0	11.0	
554.6	MODESTO		SHALE	59.0	62.0	
495.6	MODESTO		SANDSTONE	11.0	121.0	
484.6	MODESTO		SANDY SHALE	33.0	132.0	
451.6	MODESTO		SHALE	4.7	165.0	
446.9	MODESTO		COAL	0.1	169.7	
446.8	MODESTO		SHALE	10.3	169.8	
436.6	MODESTO		LIMESTONE	5.0	180.0	W/ SH GRAY
431.6	MODESTO		SHALE	12.0	185.0	
419.6	MODESTO		SANDSTONE	8.0	197.0	
411.6	MODESTO		SANDY SHALE	7.0	205.0	
404.6	MODESTO		SHALE	5.0	212.0	
399.6	MODESTO	PIASA	LIMESTONE	6.0	217.0	
393.6	MODESTO		SHALE	3.3	223.0	
390.3	CARBONDALE	DANVILLE	COAL	2.0	226.3	
388.3	CARBONDALE		SHALE	3.9	228.3	
384.3	CARBONDALE		COAL	1.8	232.3	
382.6	CARBONDALE		LIMESTONE	4.0	234.0	
378.6	CARBONDALE		SHALE	7.3	238.0	
371.3	CARBONDALE	HERRIN	COAL	6.0	245.3	W/ THIN SH BANDS
365.3	CARBONDALE		UNDERCLAY	1.0	251.3	
364.3	CARBONDALE		LIMESTONE	3.0	252.3	
361.3	CARBONDALE		SHALE	0.7	255.3	

MAPID: 11700785000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 5 QUARTERS/FOOTAGES: 200' N line, 330' E line of SW SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.893038 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.248117 DATE COLLECTED: 8 / 0 / 1959

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 247.0 LOG TYPE: Electric Log

SOURCE: FAULKNER, C. M. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
410.0	MODESTO	PIASA	LIMESTONE	6.0	210.0
404.0	MODESTO		UNCLASSIFIED	2.0	216.0
402.0	CARBONDALE	DANVILLE	COAL	4.0	218.0
398.0	CARBONDALE		UNCLASSIFIED	8.0	222.0
390.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	230.0
385.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	235.0
383.0	CARBONDALE		UNCLASSIFIED	2.0	237.0
381.0	CARBONDALE	BRERETON	LIMESTONE	4.0	239.0
377.0	CARBONDALE	ANNA	BLACK SHALE	2.0	243.0
375.0	CARBONDALE	HERRIN	COAL	2.0	245.0

MAPID: 11700094000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 6 QUARTERS/FOOTAGES: 1200' N line, 2280' E line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.914019 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.25565 DATE COLLECTED: 4 / 0 / 1912

SURFACE ELEVATION (FT.): 628.0 LOGGED (FT.): 268.0 LOG TYPE: Drillers Log

SOURCE: ROWE A A & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
367.0	CARBONDALE	HERRIN	COAL	7.0	261.0

MAPID: 11700094000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 6 QUARTERS/FOOTAGES: 1200' N line, 2280' E line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.914019 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.25565 DATE COLLECTED: 4 / 29 / 1912

SURFACE ELEVATION (FT.): 618.0 LOGGED (FT.): 507.0 LOG TYPE: Drillers Log

SOURCE: A. A. ROWE & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
618.0			UNKNOWN	261.0	0.0
357.0	CARBONDALE	HERRIN	COAL	7.0	261.0
350.0			UNKNOWN	239.0	268.0

MAPID: 11721630000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 6 QUARTERS/FOOTAGES: 62' N line, 22' W line of NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.923878 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.25838 DATE COLLECTED:

SURFACE ELEVATION (FT.): 610.0 LOGGED (FT.): 243.0 LOG TYPE: Survey Core Study

SOURCE: AMAX C.C. M47 WELL TYPE: Coal Test

COMMENT: DRILLER'S LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
396.3	CARBONDALE	DANVILLE	COAL	1.3	213.7
382.0	CARBONDALE	HERRIN	COAL	5.0	228.0

MAPID: 11790146000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 6 QUARTERS/FOOTAGES: 15' S line, 79' E line of SE SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.906116 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.244704 DATE COLLECTED: 5 / 13 / 1977

SURFACE ELEVATION (FT.): 616.7 LOGGED (FT.): 275.0 LOG TYPE: Drillers Log

SOURCE: AMAX P408PB WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
616.7	PLEISTOCENE		UNCONSOLIDATED	40.0	0.0
576.7			COAL	2.0	40.0
574.7			ROCK	183.0	42.0
391.7	CARBONDALE	JAMESTOWN	COAL	2.0	225.0
389.7	CARBONDALE		ROCK	2.0	227.0
387.7	CARBONDALE	JAMESTOWN	COAL	1.0	229.0
386.7	CARBONDALE		ROCK	13.0	230.0
373.7	CARBONDALE	HERRIN	COAL	7.0	243.0
366.7	CARBONDALE		ROCK	25.0	250.0

MAPID: 11790147000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 6 QUARTERS/FOOTAGES: 38' N line, 73' W line of NW SE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.915005 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.251886 DATE COLLECTED: 5 / 17 / 1977

SURFACE ELEVATION (FT.): 616.7 LOGGED (FT.): 249.0 LOG TYPE: Drillers Log

SOURCE: AMAX P480DF WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
616.7	PLEISTOCENE		UNCONSOLIDATED	108.0	0.0
508.7			ROCK	124.0	108.0
384.7	CARBONDALE	HERRIN	COAL	5.0	232.0
379.7	CARBONDALE		ROCK	12.0	237.0

MAPID: 11790148000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 6 QUARTERS/FOOTAGES: 30' S line, 30' E line of SE NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.896537 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.252191 DATE COLLECTED: 5 / 19 / 1977

SURFACE ELEVATION (FT.): 619.0 LOGGED (FT.): 270.0 LOG TYPE: Drillers Log

SOURCE: AMAX P512PM WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
619.0	PLEISTOCENE		UNCONSOLIDATED	146.0	0.0
473.0			ROCK	30.0	146.0
443.0			COAL	1.0	176.0
442.0			ROCK	77.0	177.0
365.0	CARBONDALE	HERRIN	COAL	6.0	254.0
359.0	CARBONDALE		ROCK	10.0	260.0

MAPID: 11790247000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 6 QUARTERS/FOOTAGES: 62' N line, 22' W line of NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.923878 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.25838 DATE COLLECTED: 2 / 6 / 1975

SURFACE ELEVATION (FT.): 616.9 LOGGED (FT.): 243.0 LOG TYPE: Drillers Log

SOURCE: AMAX M47 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
616.9	PLEISTOCENE		UNCONSOLIDATED	50.0	0.0
566.9	MODESTO		ROCK	127.0	50.0
439.9	CARBONDALE	DANVILLE	COAL	2.0	177.0
437.9	CARBONDALE		ROCK	34.0	179.0
403.9	CARBONDALE	JAMESTOWN	COAL	2.0	213.0
401.9	CARBONDALE	JAMESTOWN	ROCK	1.0	215.0
400.9	CARBONDALE	JAMESTOWN	COAL	1.0	216.0
399.9	CARBONDALE		ROCK	11.0	217.0
388.9	CARBONDALE	HERRIN	COAL	5.0	228.0
383.9	CARBONDALE		ROCK	10.0	233.0

MAPID: 11700810000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 7 QUARTERS/FOOTAGES: 160' S line, 120' W line of NE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.91476 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.237893 DATE COLLECTED: 10 / 0 / 1959

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 240.0 LOG TYPE: Electric Log

SOURCE: FAULKNER, C. M. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
418.0	MODESTO	PIASA	LIMESTONE	8.0	202.0
410.0	MODESTO		UNCLASSIFIED	4.0	210.0
406.0	CARBONDALE		UNCLASSIFIED	12.0	214.0
394.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	226.0
388.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.5	232.0
386.5	CARBONDALE		UNCLASSIFIED	1.5	233.5
385.0	CARBONDALE	BRERETON	LIMESTONE	2.0	235.0
383.0	CARBONDALE	ANNA	BLACK SHALE	1.0	237.0
382.0	CARBONDALE	HERRIN	COAL	2.0	238.0

MAPID: 11790145000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 7 QUARTERS/FOOTAGES: 364' S line, 97' E line of NW SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.910712 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.234785 DATE COLLECTED: 8 / 17 / 1977

SURFACE ELEVATION (FT.): 535.3 LOGGED (FT.): 217.0 LOG TYPE: Drillers Log

SOURCE: AMAX P2561L WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
535.3	PLEISTOCENE		UNCONSOLIDATED	83.0	0.0
452.3			ROCK	61.0	83.0
391.3	CARBONDALE	JAMESTOWN	COAL	1.0	144.0
390.3	CARBONDALE		ROCK	2.0	145.0
388.3	CARBONDALE	JAMESTOWN	COAL	2.0	147.0
386.3	CARBONDALE		ROCK	12.0	149.0
374.3	CARBONDALE	HERRIN	COAL	6.0	161.0
368.3	CARBONDALE		ROCK	50.0	167.0

MAPID: 11700099000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 8 QUARTERS/FOOTAGES: SE NW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.898772 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.239398 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 541.0 LOGGED (FT.): 5.0 LOG TYPE: Drillers Log

SOURCE: IMPROMPTU OIL & GAS WELL TYPE: Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO		UNCLASSIFIED	5.0	
-	CARBONDALE	DANVILLE	COAL	3.0	
-	CARBONDALE		UNCLASSIFIED	7.0	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.5	
-	CARBONDALE		UNCLASSIFIED	3.5	
-	CARBONDALE	BRERETON	LIMESTONE	5.0	
-	CARBONDALE	HERRIN	COAL	5.0	

MAPID: 11700104000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 8 QUARTERS/FOOTAGES: NW NW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.903485 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.242902 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 616.0 LOGGED (FT.): 259.0 LOG TYPE: Drillers Log

SOURCE: OHIO OIL CO., THE WELL TYPE: Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
366.0	CARBONDALE	BRERETON	LIMESTONE	5.0	250.0
361.0	CARBONDALE	HERRIN	COAL	4.0	255.0

MAPID: 11700105000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 8 QUARTERS/FOOTAGES: SW SW NE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.895239 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.23858 DATE COLLECTED: 10 / 0 / 1911

SURFACE ELEVATION (FT.): 541.0 LOGGED (FT.): 165.0 LOG TYPE: Drillers Log

SOURCE: IBBETSON E A WELL TYPE: Plugged and/or Abandoned

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
421.0	MODESTO		UNCLASSIFIED	4.0	120.0	
417.0	CARBONDALE		UNCLASSIFIED	11.0	124.0	
406.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	135.0	
398.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	4.0	143.0	
394.0	CARBONDALE		UNCLASSIFIED	4.0	147.0	
390.0	CARBONDALE	BRERETON	LIMESTONE	8.0	151.0	
382.0	CARBONDALE	HERRIN	COAL	6.0	159.0	

MAPID: 11700623000C VERSION: 1

PROJECT: IDMM-GWQX

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 8 QUARTERS/FOOTAGES: 330' S line, 330' E line of NW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.897585 GEOLOGIST: C TREWORYG

CONFIDENTIAL: N LATITUDE: 39.238536 DATE COLLECTED: 4 / 0 / 1955

SURFACE ELEVATION (FT.): 531.0 LOGGED (FT.): 283.0 LOG TYPE: Electric Log

SOURCE: CALVERT DRILLING, INC. WELL TYPE: Producer-Oil

COMMENT: ELEV. IS SURF, NOT LOG DATUM: DEPTHS OFF

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
369.0	CARBONDALE	HERRIN	UNCLASSIFIED	-	162.0	
356.0	CARBONDALE	SPRINGFIELD	UNCLASSIFIED	0.0	175.0	THIN OR ABSENT
349.0	CARBONDALE	HOUCHIN CREEK	UNCLASSIFIED	-	182.0	
292.0	CARBONDALE	SURVANT	UNCLASSIFIED	-	239.0	
248.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	4.0	283.0	

MAPID: 11700109000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 9 QUARTERS/FOOTAGES: NW SE NE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.87218 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.240814 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 613.0 LOGGED (FT.): 247.0 LOG TYPE: Drillers Log

SOURCE: NO COMPANY WELL TYPE: Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
373.0	CARBONDALE	HERRIN	COAL	7.0	240.0	

MAPID: 11700615000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 9 QUARTERS/FOOTAGES: 330' N line, 330' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.885933 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.244143 DATE COLLECTED: 10 / 0 / 1956

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 165.0 LOG TYPE: Electric Log

SOURCE: STRIBLING, W. C. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
422.0	MODESTO		UNCLASSIFIED	4.5	118.0
417.5	CARBONDALE		UNCLASSIFIED	12.5	122.5
405.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	135.0
400.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	6.0	140.0
394.0	CARBONDALE		UNCLASSIFIED	7.0	146.0
387.0	CARBONDALE	BRERETON	LIMESTONE	5.0	153.0
382.0	CARBONDALE	ANNA	BLACK SHALE	5.0	158.0
377.0	CARBONDALE	HERRIN	COAL	2.0	163.0

MAPID: 11700111000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 10 QUARTERS/FOOTAGES: NE SE NW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.860682 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.24106 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 553.0 LOGGED (FT.): 215.0 LOG TYPE: Drillers Log

SOURCE: CHRYSLER ETAL WELL TYPE: Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
383.0	MODESTO	PIASA	LIMESTONE	5.0	170.0
378.0	MODESTO		UNCLASSIFIED	2.5	175.0
375.5	CARBONDALE		UNCLASSIFIED	7.5	177.5
368.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	185.0
363.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	5.0	190.0
358.0	CARBONDALE		UNCLASSIFIED	5.0	195.0
353.0	CARBONDALE	BRERETON	LIMESTONE	10.0	200.0
343.0	CARBONDALE	HERRIN	COAL	5.0	210.0

MAPID: 11700112000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 10 QUARTERS/FOOTAGES: SE NE NE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.851459 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.243095 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 556.0 LOGGED (FT.): 240.0 LOG TYPE: Drillers Log

SOURCE: IMPROMPTU OIL & GAS WELL TYPE: Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
366.0	MODESTO		UNCLASSIFIED	5.0	190.0
361.0	CARBONDALE		UNCLASSIFIED	15.0	195.0
346.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	210.0
339.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	8.0	217.0
331.0	CARBONDALE		UNCLASSIFIED	5.0	225.0
326.0	CARBONDALE	BRERETON	LIMESTONE	5.0	230.0
321.0	CARBONDALE	HERRIN	COAL	5.0	235.0

MAPID: 11700296000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 10 QUARTERS/FOOTAGES: SE NE SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.851487 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.235816 DATE COLLECTED: 11 / 0 / 1912

SURFACE ELEVATION (FT.): 633.0 LOGGED (FT.): 301.3 LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R R CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
373.9	MODESTO	PIASA	LIMESTONE	6.0	259.1
367.9	MODESTO		UNCLASSIFIED	3.5	265.1
364.4	CARBONDALE		UNCLASSIFIED	9.5	268.6
354.9	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	278.1
349.9	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	283.1
347.9	CARBONDALE		UNCLASSIFIED	1.0	285.1
346.9	CARBONDALE	BRERETON	LIMESTONE	6.0	286.1
340.9	CARBONDALE	ANNA	BLACK SHALE	1.9	292.1
339.0	CARBONDALE	HERRIN	COAL	7.3	294.0

MAPID: 11700296000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 10 QUARTERS/FOOTAGES: SE NE SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.851487 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.235816 DATE COLLECTED:

SURFACE ELEVATION (FT.): 633.0 LOGGED (FT.): 301.3 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
374.0	MODESTO	PIASA	LIMESTONE	6.0	259.0
368.0	CARBONDALE		GRAY SHALE	13.0	265.0
355.0	CARBONDALE	BANKSTON FORK	LIMESTONE	9.5	278.0
345.5	CARBONDALE	BANKSTON FORK	LIMESTONE	9.5	287.5
336.0	CARBONDALE	BRERETON	LIMESTONE	4.5	297.0
331.5	CARBONDALE	ANNA	DARK GRAY SHALE	1.9	301.5
339.0	CARBONDALE	HERRIN	COAL	7.3	294.0

MAPID: 11700296000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 10 QUARTERS/FOOTAGES: SE NE SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.851487 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.235816 DATE COLLECTED: 11 / 8 / 1912

SURFACE ELEVATION (FT.): 633.4 LOGGED (FT.): 307.0 LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R.R. CO., HOLE #1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
633.4			SOIL	16.0	0.0	
617.4			SAND & GRAVEL	10.0	16.0	
607.4			CLAY & GRAVEL	20.0	26.0	
587.4			SAND	8.0	46.0	
579.4			CLAY & GRAVEL	60.0	54.0	
519.4			SAND	8.0	114.0	
511.4	MODESTO		SHALE	10.5	122.0	
500.9	MODESTO	CHAPEL	COAL	0.2	132.5	
500.7	MODESTO		UNDERCLAY	4.0	132.7	
496.7	MODESTO		SANDSTONE	20.3	136.7	
476.4	MODESTO		SANDY SHALE	47.0	157.0	
429.4	MODESTO		SHALE	13.0	204.0	
416.4	MODESTO		LIMESTONE	1.0	217.0	
415.4	MODESTO		SHALE	2.3	218.0	
413.1	MODESTO		COAL	0.5	220.3	
412.6	MODESTO		SHALE	38.3	220.8	
374.4	MODESTO	PIASA	LIMESTONE	6.0	259.0	
368.4			SHALE	13.0	265.0	
355.4	CARBONDALE	BRERETON	LIMESTONE	14.0	278.0	
341.4	CARBONDALE		SHALE	1.9	292.0	
339.5	CARBONDALE	HERRIN	COAL	7.3	293.9	W/ .04' BLUE BAND
332.1	CARBONDALE		UNDERCLAY	1.9	301.3	
330.2	CARBONDALE		LIMESTONE W/ SHALE	3.8	303.2	

MAPID: 11721506000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 10 QUARTERS/FOOTAGES: 660' N line, 660' E line of NE NW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.861878 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.243707 DATE COLLECTED:

SURFACE ELEVATION (FT.): 623.0 LOGGED (FT.): 313.4 LOG TYPE: Survey Core Study

SOURCE: CARTER OIL COMPANY 17M-814 WELL TYPE: Coal Test

COMMENT: "CORE #C-10993; DRILLER'S LOG INCLU."

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
342.7	CARBONDALE	HERRIN	COAL	7.7	280.3	

MAPID: 11721507000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 10 QUARTERS/FOOTAGES: 50' N line, 350' E line of NE SW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.860767 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.238219 DATE COLLECTED:

SURFACE ELEVATION (FT.): 625.3 LOGGED (FT.): 307.8 LOG TYPE: Survey Core Study

SOURCE: CARTER OIL COMPANY 17M-818 WELL TYPE: Coal Test

COMMENT: "CORE #C-10996; DRILLER'S LOG INCLU."

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
350.2	CARBONDALE	HERRIN	COAL	8.0	275.1	

MAPID: 11721508000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 10 QUARTERS/FOOTAGES: 330' N line, 330' E line of NE NE SW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.860696 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.237447 DATE COLLECTED:

SURFACE ELEVATION (FT.): 633.4 LOGGED (FT.): 328.1 LOG TYPE: Survey Core Study

SOURCE: CARTER OIL COMPANY 17M-819 WELL TYPE: Coal Test

COMMENT: "CORE #C-10991; DRILLER'S LOG INCLU."

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
335.5	CARBONDALE	HERRIN	COAL	7.8	297.9	

MAPID: 11723746000C VERSION: 1

PROJECT: LUMP

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 10 QUARTERS/FOOTAGES:

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.861351

GEOLOGIST: J. MCBETH

CONFIDENTIAL: N LATITUDE: 39.243971

DATE COLLECTED: 3 / 28 / 1974

SURFACE ELEVATION (FT.): 623.0 LOGGED (FT.): 314.0

LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO. 17M-814

WELL TYPE: Coal Test

COMMENT: PERMIT 56; MINE #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
623.0	PLEISTOCENE		CLAY	8.5	0.0	
614.5	PLEISTOCENE		UNCONSOLIDATED	61.0	8.5	WITH GRAVEL
553.5	BOND		SILTY SHALE	13.0	69.5	
540.5	BOND	CARTHAGE	LIMESTONE	6.5	82.5	
534.0	MODESTO		SILTY SHALE	11.0	89.0	
523.0	MODESTO		SANDY SHALE	24.0	100.0	
499.0	MODESTO		COAL	0.5	124.0	
498.5	MODESTO		CLAYSTONE	1.5	124.5	
497.0	MODESTO		SHALE	4.0	126.0	WITH LIMESTONE NODULES
493.0	MODESTO		SANDY SHALE	50.0	130.0	WITH SANDSTONE
443.0	MODESTO		SILTY SHALE	24.5	180.0	WITH SIDERITE
418.5	MODESTO		LIMESTONE	1.0	204.5	DARK FOSSILIFEROUS
417.5	MODESTO		SILTY SHALE	4.5	205.5	
413.0	MODESTO		SHALE	10.0	210.0	WITH LIMESTONE NODULES
403.0	MODESTO		SILTY SHALE	8.0	220.0	
395.0	MODESTO		BLACK SHALE	3.0	228.0	
392.0	MODESTO		COAL	0.5	231.0	
391.5	MODESTO		CLAYSTONE	1.5	231.5	
390.0	MODESTO		SHALE	15.0	233.0	WITH LIMESTONE NODULES
375.0	MODESTO	PIASA	LIMESTONE	5.0	248.0	
370.0	MODESTO		GRAY SHALE	4.0	253.0	
366.0	CARBONDALE	DANVILLE	COAL	0.5	257.0	
365.5	CARBONDALE		CLAYSTONE	1.7	257.5	
363.8	CARBONDALE		CLAYSTONE	3.9	259.2	WITH LIMESTONE NODULES
359.9	CARBONDALE	BANKSTON FORK	LIMESTONE	3.4	263.1	LIGHT GRAY DOLOMITIC
356.5	CARBONDALE		CLAYSTONE	1.8	266.5	
354.7	CARBONDALE		CALCAREOUS SILTSTONE	3.3	268.3	
351.4	CARBONDALE	BRERETON	FOSSILIFEROUS LIMESTONE	5.0	271.6	GRAY
346.4	CARBONDALE	ANNA	CALCAREOUS SHALE	0.2	276.6	
346.2	CARBONDALE	ANNA	BLACK SHALE	3.5	276.8	
342.7	CARBONDALE	HERRIN	COAL	7.7	280.3	
335.0	CARBONDALE		CLAYSTONE	1.3	288.0	
333.7	CARBONDALE	HIGGINSVILLE	LIMESTONE	2.5	289.3	
331.2	CARBONDALE		CLAYSTONE	3.4	291.8	WITH LIMESTONE NODULES
327.8	CARBONDALE		SILTY SHALE	0.5	295.2	
327.3	CARBONDALE		CALCAREOUS CLAYSTONE	5.8	295.7	WITH LIMESTONE NODULES
321.5	CARBONDALE		SILTSTONE	1.3	301.5	

320.2	CARBONDALE	CLAYSTONE	1.2	302.8	VERY SILTY
319.0	CARBONDALE	CARBONACEOUS SHALE	0.8	304.0	DARK GRAY
318.2	CARBONDALE	CLAYSTONE	0.3	304.8	
317.9	CARBONDALE	COAL	0.2	305.1	
317.7	CARBONDALE	CLAYSTONE	1.9	305.3	SILTY
315.8	CARBONDALE	SILTSTONE	6.8	307.2	

MAPID: 11700539000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 12 **QUARTERS/FOOTAGES:** 339' S line, 330' E line of SW
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.823667 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.233586 **DATE COLLECTED:** 4 / 0 / 1950
SURFACE ELEVATION (FT.): 635.0 **LOGGED (FT.):** 324.0 **LOG TYPE:** Electric Log
SOURCE: LAMBERT DALE E **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
371.0	MODESTO	PIASA	LIMESTONE	3.0	264.0
368.0	CARBONDALE	ENERGY	UNCLASSIFIED	51.0	267.0
317.0	CARBONDALE	HERRIN	COAL	6.0	318.0

MAPID: 11700919000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 12 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of SE SE
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.816716 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.23419 **DATE COLLECTED:** 2 / 0 / 1962
SURFACE ELEVATION (FT.): 640.0 **LOGGED (FT.):** 320.0 **LOG TYPE:** Electric Log
SOURCE: LAMBERT DALE E **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
380.0	MODESTO	PIASA	LIMESTONE	8.0	260.0
372.0	MODESTO		UNCLASSIFIED	1.5	268.0
370.5	CARBONDALE		UNCLASSIFIED	4.5	269.5
366.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	274.0
360.0	CARBONDALE	ENERGY	UNCLASSIFIED	34.0	280.0
326.0	CARBONDALE	HERRIN	COAL	6.0	314.0

MAPID: 11700540000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 13 QUARTERS/FOOTAGES: 430' N line, 430' W line of NE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.82095 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.231708 DATE COLLECTED: 9 / 0 / 1949

SURFACE ELEVATION (FT.): 641.0 LOGGED (FT.): 315.0 LOG TYPE: Electric Log

SOURCE: LAMBERT DALE E WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
391.0	MODESTO	PIASA	LIMESTONE	6.0	250.0
385.0	MODESTO		UNCLASSIFIED	2.5	256.0
382.5	CARBONDALE		UNCLASSIFIED	7.5	258.5
375.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	266.0
371.0	CARBONDALE	ENERGY	UNCLASSIFIED	40.0	270.0
331.0	CARBONDALE	HERRIN	COAL	5.0	310.0

MAPID: 11700632000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 13 QUARTERS/FOOTAGES: 330' N line, 330' W line of NE NW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.825919 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.231534 DATE COLLECTED: 7 / 0 / 1957

SURFACE ELEVATION (FT.): 639.0 LOGGED (FT.): 342.0 LOG TYPE: Electric Log

SOURCE: GENESEO DEVELOP CO WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
349.0	MODESTO	PIASA	LIMESTONE	4.0	290.0
345.0	MODESTO		UNCLASSIFIED	6.0	294.0
339.0	CARBONDALE		UNCLASSIFIED	16.0	300.0
323.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	316.0
314.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	325.0
313.0	CARBONDALE		UNCLASSIFIED	1.0	326.0
312.0	CARBONDALE	BRERETON	LIMESTONE	9.0	327.0
303.0	CARBONDALE	HERRIN	COAL	6.0	336.0

MAPID: 11700861000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 13 QUARTERS/FOOTAGES: 1830' N line, 330' E line of NW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.823601 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.227603 DATE COLLECTED: 9 / 0 / 1960

SURFACE ELEVATION (FT.): 575.0 LOGGED (FT.): 262.0 LOG TYPE: Electric Log

SOURCE: LAMBERT DALE E WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
376.0	MODESTO	PIASA	LIMESTONE	5.0	199.0
371.0	MODESTO		UNCLASSIFIED	2.0	204.0
369.0	CARBONDALE		UNCLASSIFIED	6.0	206.0
363.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	212.0
359.0	CARBONDALE	ENERGY	UNCLASSIFIED	40.0	216.0
319.0	CARBONDALE	HERRIN	COAL	6.0	256.0

MAPID: 11700939000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 13 QUARTERS/FOOTAGES: 330' N line, 330' E line of NW SW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.828188 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.224085 DATE COLLECTED: 12 / 0 / 1962

SURFACE ELEVATION (FT.): 639.0 LOGGED (FT.): 308.0 LOG TYPE: Electric Log

SOURCE: ST CLAIR EXPLOR INC WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
383.0	MODESTO	PIASA	LIMESTONE	4.0	256.0
379.0	MODESTO		UNCLASSIFIED	1.5	260.0
377.5	CARBONDALE		UNCLASSIFIED	4.5	261.5
373.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	266.0
367.0	CARBONDALE	ENERGY	UNCLASSIFIED	30.0	272.0
337.0	CARBONDALE	HERRIN	COAL	6.0	302.0

MAPID: 11701441000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 14 QUARTERS/FOOTAGES: 783' S line, 1462' W line of NW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.84509 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.226462 DATE COLLECTED:

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 335.0 LOG TYPE: Survey Core Study

SOURCE: CARTER OIL COMPANY 17M-702 WELL TYPE: Coal Test

COMMENT: "CORE #C-10997; DRILL & C.C. STUDY INC."

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
339.8	CARBONDALE	HERRIN	COAL	7.5	295.2

MAPID: 11701457000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 14 QUARTERS/FOOTAGES: 1210' N line, 3670' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.837284 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.22839 DATE COLLECTED:

SURFACE ELEVATION (FT.): 637.0 LOGGED (FT.): 331.0 LOG TYPE: Survey Core Study

SOURCE: CARTER OIL COMPANY 17M-706 WELL TYPE: Coal Test

COMMENT: "CORE #C-10994; DRILL & C.C. STUDY INC."

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
340.2	CARBONDALE	HERRIN	COAL	7.1	296.8	

MAPID: 11701457000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 14 QUARTERS/FOOTAGES: 1210' N line, 3670' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.837284 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.22839 DATE COLLECTED:

SURFACE ELEVATION (FT.): 637.0 LOGGED (FT.): 304.1 LOG TYPE: Survey Core Study

SOURCE: CARTER OIL COMPANY 17M-706 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
385.4	MODESTO	PIASA	LIMESTONE	4.5	251.6	
380.9	CARBONDALE		GRAY SHALE	8.5	256.1	
372.4	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.7	264.6	UPPER BENCH
369.7	CARBONDALE	BANKSTON FORK	GRAY SHALE	7.4	267.3	SHALE PARTING
362.3	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	10.1	274.7	
352.2	CARBONDALE	LAWSON	ROCK	4.0	284.8	
348.2	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	5.2	288.8	
343.0	CARBONDALE	ANNA	BLACK SHALE	3.0	294.0	
340.0	CARBONDALE	HERRIN	COAL	7.1	297.0	

MAPID: 11700113000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 15 QUARTERS/FOOTAGES: SW NW SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.858201 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.221357 DATE COLLECTED: 1 / 0 / 1910

SURFACE ELEVATION (FT.): 683.0 LOGGED (FT.): 365.0 LOG TYPE: Drillers Log

SOURCE: NO COMPANY WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
368.0	MODESTO	PIASA	LIMESTONE	5.0	315.0
363.0	MODESTO		UNCLASSIFIED	4.0	320.0
359.0	CARBONDALE		UNCLASSIFIED	10.0	324.0
349.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.0	334.0
339.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	344.0
336.0	CARBONDALE		UNCLASSIFIED	3.0	347.0
333.0	CARBONDALE	BRERETON	LIMESTONE	10.0	350.0
323.0	CARBONDALE	HERRIN	COAL	5.0	360.0

MAPID: 11701320000C VERSION: 1

PROJECT: LUMP

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 15 QUARTERS/FOOTAGES: 150' S line, 150' E line of SW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.860068 GEOLOGIST: J. MCBETH

CONFIDENTIAL: N LATITUDE: 39.217357 DATE COLLECTED: 3 / 17 / 1969

SURFACE ELEVATION (FT.): 674.8 LOGGED (FT.): 366.0 LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO. 1M-8 WELL TYPE: Coal Test

COMMENT: PERMIT 56; MINE #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
674.8	PLEISTOCENE		SILT	4.0	0.0	
670.8	PLEISTOCENE		UNCONSOLIDATED	48.7	4.0	SANDY
622.1	PLEISTOCENE		SAND	1.8	52.7	
620.3	PLEISTOCENE		UNCONSOLIDATED	26.0	54.5	WITH GRAVEL
594.3	PLEISTOCENE		SAND & GRAVEL	2.5	80.5	
591.8	PLEISTOCENE		UNCONSOLIDATED	78.0	83.0	WITH SAND AND GRAVEL
513.8	PLEISTOCENE		SAND	2.5	161.0	
511.3	PLEISTOCENE		UNCONSOLIDATED	9.5	163.5	SANDY
501.8	MODESTO		SILTY SHALE	11.9	173.0	
489.9	MODESTO		ARGILLACEOUS SANDSTONE	7.5	184.9	
482.4	MODESTO		SILTY SHALE	20.7	192.4	GRAY OCC. SANDY
461.7	MODESTO		GRAY SHALE	13.3	213.1	
448.4	MODESTO		GRAY SHALE	15.9	226.4	WITH SIDERITE
432.5	MODESTO		LIMESTONE	0.6	242.3	GRAY FOSSILIFEROUS DARK GRAY
431.9	MODESTO		CALCAREOUS SHALE	0.9	242.9	
431.0	MODESTO		BLACK SHALE	0.5	243.8	
430.5	MODESTO		CLAYSTONE	2.4	244.3	
428.1	MODESTO		CLAYSTONE	1.5	246.7	WITH LIMESTONE NODULES
426.6	MODESTO		LIMESTONE	0.3	248.2	GRAY GN
426.3	MODESTO		CALCAREOUS SHALE	11.5	248.5	
414.8	MODESTO		SILTY SHALE	5.2	260.0	
409.6	MODESTO		GRAY SHALE	3.8	265.2	
405.8	MODESTO		SHALE	9.4	269.0	GREEN GRAY
396.4	MODESTO		SILTY SHALE	1.0	278.4	
395.4	MODESTO		LIMESTONE	1.0	279.4	
394.4	MODESTO		GRAY SHALE	0.5	280.4	
393.9	MODESTO	PIASA	LIMESTONE	4.0	280.9	GRAY FOSSILIFEROUS DARK GRAY
389.9			SHALE	8.1	284.9	
381.8			CALCAREOUS SILTY SHALE	2.5	293.0	
379.3			LIMESTONE	2.6	295.5	GRAY TO TAN
376.7			SHALE	1.5	298.1	GREEN
375.2			LIMESTONE	5.5	299.6	
369.7			CALCAREOUS SHALE	6.3	305.1	
363.4	CARBONDALE	BRERETON	LIMESTONE	7.0	311.4	FOSSILIFEROUS
356.4	CARBONDALE	ANNA	BLACK SHALE	0.2	318.4	
356.2	CARBONDALE	HERRIN	COAL	7.1	318.6	
349.1	CARBONDALE		CLAYSTONE	2.1	325.7	

347.0	CARBONDALE	HIGGINSVILLE	LIMESTONE	2.3	327.8	GRAY
344.7	CARBONDALE		CALCAREOUS CLAYSTONE	0.8	330.1	
343.9	CARBONDALE		CLAYSTONE	0.4	330.9	
343.5	CARBONDALE		CALCAREOUS CLAYSTONE	8.9	331.3	WITH LIMESTONE NODULES
334.6	CARBONDALE	ST. DAVID	LIMESTONE	1.4	340.2	
333.2	CARBONDALE	TURNER MINE	BLACK SHALE	1.4	341.6	
331.8	CARBONDALE		CLAYSTONE	5.2	343.0	
326.6	CARBONDALE		SILTY CLAYSTONE	2.9	348.2	
323.7	CARBONDALE		SILTSTONE	1.9	351.1	
321.8	CARBONDALE		SILTY SHALE	13.0	353.0	GREEN GRAY

MAPID: 11701320000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 15 **QUARTERS/FOOTAGES:** 150' S line, 150' E line of SW
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.860068 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.217357 **DATE COLLECTED:** 0 / 0 / 1900
SURFACE ELEVATION (FT.): 674.0 **LOGGED (FT.):** 326.2 **LOG TYPE:** Drillers Log
SOURCE: MONTEREY COAL CO **WELL TYPE:** Mine Shaft
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
394.2	MODESTO	PIASA	LIMESTONE	5.4	279.8	
388.8	MODESTO		UNCLASSIFIED	3.4	285.2	
385.4	CARBONDALE		UNCLASSIFIED	7.3	288.6	
378.1	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.6	295.9	
368.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.3	305.5	
365.2	CARBONDALE		UNCLASSIFIED	3.0	308.8	
362.2	CARBONDALE	BRERETON	LIMESTONE	7.0	311.8	
355.2	CARBONDALE	ANNA	BLACK SHALE	0.2	318.8	
355.0	CARBONDALE	HERRIN	COAL	7.2	319.0	

MAPID: 11701393000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 15 **QUARTERS/FOOTAGES:** 125' S line, 50' E line of SE SE
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.850305 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.217337 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 647.0 **LOGGED (FT.):** 347.0 **LOG TYPE:** Survey Core Study
SOURCE: CARTER OIL COMPANY 17M-609 **WELL TYPE:** Coal Test
COMMENT: "DRILLER. LOG & CO. SAMPLE STUDY INCL."

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
345.2	CARBONDALE	HERRIN	COAL	7.5	301.8	

MAPID: 11701394000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 15 **QUARTERS/FOOTAGES:** 935' S line, 1315' E line
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.85483 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.219515 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 682.0 **LOGGED (FT.):** 377.0 **LOG TYPE:** Multiple log types
SOURCE: CARTER OIL COMPANY 17M-627 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
352.6	CARBONDALE	HERRIN	COAL	7.4	329.4	

MAPID: 11701394000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 15 **QUARTERS/FOOTAGES:** 935' S line, 1315' E line
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.85483 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.219515 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 682.0 **LOGGED (FT.):** 336.4 **LOG TYPE:** Survey Core Study
SOURCE: CARTER OIL COMPANY 17M-627 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
398.9	MODESTO	PIASA	LIMESTONE	4.0	283.1	
394.9	CARBONDALE		GRAY SHALE	10.5	287.1	
384.4	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.0	297.6	UPPER BENCH
382.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	6.9	299.6	SHALE PARTING
375.5	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	8.9	306.5	
366.6	CARBONDALE	LAWSON	DARK GRAY SHALE	3.9	315.4	
362.7	CARBONDALE	LAWSON	MOTTLED SHALE	1.5	319.3	
361.2	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	7.4	320.8	
353.8	CARBONDALE	ANNA	BLACK SHALE	0.9	328.2	
353.0	CARBONDALE	HERRIN	COAL	7.4	329.0	

MAPID: 11701397000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 15 **QUARTERS/FOOTAGES:** 1135' S line, 2225' E line of SE
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.85807 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.220027 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 697.0 **LOGGED (FT.):** 395.0 **LOG TYPE:** Survey Core Study
SOURCE: CARTER OIL COMPANY 17M-604 **WELL TYPE:** Coal Test
COMMENT: "CO. CORE STUDY & SAMPLE DESCRIPT. INC."

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
350.7	CARBONDALE	HERRIN	COAL	7.2	346.3	

MAPID: 11701398000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 15 **QUARTERS/FOOTAGES:** 2075' N line, 885' E line of NE
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.853405 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.225515 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 626.0 **LOGGED (FT.):** 331.0 **LOG TYPE:** Survey Core Study
SOURCE: CARTER OIL COMPANY 17M-628 **WELL TYPE:** Coal Test
COMMENT: "CO. CORE STUDY & SAMPLE DESCRIPT. INC."

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
339.3	CARBONDALE	HERRIN	COAL	7.4	286.7	

MAPID: 11700114000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 16 **QUARTERS/FOOTAGES:** SE NE NW
QUADRANGLE: PLAINVIEW **LONGITUDE:** -89.878896 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.228174 **DATE COLLECTED:** 0 / 0 / 1900
SURFACE ELEVATION (FT.): 628.0 **LOGGED (FT.):** 264.0 **LOG TYPE:** Drillers Log
SOURCE: IMPROMPTU EXPLOR CO **WELL TYPE:** Dry Hole
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
413.0	MODESTO	PIASA	LIMESTONE	5.0	215.0	
408.0	MODESTO		UNCLASSIFIED	4.5	220.0	
403.5	CARBONDALE		UNCLASSIFIED	12.5	224.5	
391.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	237.0	
385.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	243.0	
383.0	CARBONDALE		UNCLASSIFIED	2.0	245.0	
381.0	CARBONDALE	BRERETON	LIMESTONE	10.0	247.0	
371.0	CARBONDALE	HERRIN	COAL	7.0	257.0	

MAPID: 11700116000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 17 QUARTERS/FOOTAGES: SE SW SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.892776 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.217044 DATE COLLECTED: 12 / 0 / 1912

SURFACE ELEVATION (FT.): 551.0 LOGGED (FT.): 189.0 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MACHINE CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
402.4	MODESTO	PIASA	LIMESTONE	8.0	148.6
394.4	MODESTO		UNCLASSIFIED	1.0	156.6
393.4	CARBONDALE	DANVILLE	COAL	0.5	157.6
392.9	CARBONDALE		UNCLASSIFIED	5.5	158.1
387.4	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	163.6
384.4	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	5.0	166.6
379.4	CARBONDALE		UNCLASSIFIED	4.0	171.6
375.4	CARBONDALE	BRERETON	LIMESTONE	7.4	175.6
368.0	CARBONDALE	ANNA	BLACK SHALE	1.0	183.0
367.0	CARBONDALE	HERRIN	COAL	5.0	184.0

MAPID: 11700116000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 17 QUARTERS/FOOTAGES: SE SW SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.892776 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.217044 DATE COLLECTED:

SURFACE ELEVATION (FT.): 550.0 LOGGED (FT.): 189.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
406.2	MODESTO	PIASA	LIMESTONE	8.0	143.8
398.2	MODESTO		DARK GRAY SHALE	1.0	151.8
397.2	CARBONDALE	DANVILLE	COAL	0.5	152.8
396.7	CARBONDALE		CALCAREOUS SHALE	5.5	153.3
391.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	158.8
388.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	161.8
385.2	CARBONDALE	LAWSON	CALCAREOUS SHALE	9.0	164.8
376.2	CARBONDALE	BRERETON	LIMESTONE	7.4	173.8
368.8	CARBONDALE	ANNA	BLACK SHALE	2.8	181.2
366.0	CARBONDALE	HERRIN	COAL	5.0	184.0

MAPID: 11700116000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 17 QUARTERS/FOOTAGES: SE SW SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.892776 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.217044 DATE COLLECTED: 12 / 17 / 1912

SURFACE ELEVATION (FT.): 550.5 LOGGED (FT.): 192.0 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MACHY CO., HOLE #11 WELL TYPE: Coal Test

COMMENT: UNION PACIFIC R.R. ALSO LISTED UNDER CO.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
550.5			SAND & GRAVEL	52.0	0.0	
498.5			SANDSTONE/SHALE	28.0	52.0	
470.5	MODESTO		SHALE	22.0	80.0	
448.5	MODESTO		LIMESTONE	0.5	102.0	
448.0	MODESTO		COAL	0.2	102.5	
447.8	MODESTO		UNDERCLAY	4.3	102.7	
443.5	MODESTO		SHALE	16.0	107.0	
427.5	MODESTO		COAL	0.1	123.0	
427.4	MODESTO		UNDERCLAY	3.9	123.1	
423.5	MODESTO		SHALE	9.0	127.0	
414.5	MODESTO		SANDSTONE	2.0	136.0	
412.5	MODESTO		SHALE	10.0	138.0	
402.5	MODESTO	PIASA	LIMESTONE	8.0	148.0	
394.5	MODESTO		BLACK SHALE	1.0	156.0	
393.5	CARBONDALE	DANVILLE	COAL	0.5	157.0	
393.0	CARBONDALE		CALCAREOUS SHALE	5.5	157.5	
387.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	163.0	
384.5	CARBONDALE		CALCAREOUS SHALE	9.0	166.0	
375.5	CARBONDALE	BRERETON	LIMESTONE	7.4	175.0	
368.1	CARBONDALE		BLACK SHALE	0.2	182.4	
367.9	CARBONDALE		SHALE	0.8	182.6	W/ COAL STREAKS
367.1	CARBONDALE	HERRIN	COAL	5.0	183.4	
362.1	CARBONDALE		UNDERCLAY	0.8	188.4	
361.3	CARBONDALE		LIMESTONE W/ SHALE	2.8	189.2	

MAPID: 11700117000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 17 QUARTERS/FOOTAGES: SW NW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.903368 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.224873 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 543.0 LOGGED (FT.): 177.0 LOG TYPE: Drillers Log

SOURCE: IMPROMPTU EXPLOR CO WELL TYPE: Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
408.0	MODESTO	PIASA	LIMESTONE	3.0	135.0
405.0	MODESTO		UNCLASSIFIED	3.0	138.0
402.0	CARBONDALE		UNCLASSIFIED	9.0	141.0
393.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	150.0
388.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	155.0
385.0	CARBONDALE		UNCLASSIFIED	2.0	158.0
383.0	CARBONDALE	BRERETON	LIMESTONE	8.0	160.0
375.0	CARBONDALE	ANNA	BLACK SHALE	4.0	168.0
371.0	CARBONDALE	HERRIN	COAL	5.0	172.0

MAPID: 11701163000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 17 QUARTERS/FOOTAGES: 340' N line, 330' E line of SE NW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.897486 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.22589 DATE COLLECTED: 3 / 0 / 1971

SURFACE ELEVATION (FT.): 566.0 LOGGED (FT.): 198.0 LOG TYPE: Electric Log

SOURCE: WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
415.0	MODESTO	PIASA	LIMESTONE	5.0	151.0
410.0	MODESTO		UNCLASSIFIED	2.0	156.0
408.0	CARBONDALE		UNCLASSIFIED	6.0	158.0
402.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.0	164.0
392.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	174.0
390.0	CARBONDALE		UNCLASSIFIED	4.0	176.0
386.0	CARBONDALE	BRERETON	LIMESTONE	10.0	180.0
376.0	CARBONDALE	ANNA	BLACK SHALE	6.0	190.0
370.0	CARBONDALE	HERRIN	COAL	2.0	196.0

MAPID: 11700120000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 18 QUARTERS/FOOTAGES: NW NE NE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.909286 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.229305 DATE COLLECTED: 0 / 0 / 1909

SURFACE ELEVATION (FT.): 539.0 LOGGED (FT.): 156.0 LOG TYPE: Drillers Log

SOURCE: CHRYSLER ETAL WELL TYPE: Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
428.0	MODESTO	PIASA	LIMESTONE	5.0	111.0
423.0	MODESTO		UNCLASSIFIED	3.0	116.0
420.0	CARBONDALE		UNCLASSIFIED	7.0	119.0
413.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	126.0
406.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	4.0	133.0
402.0	CARBONDALE		UNCLASSIFIED	4.0	137.0
398.0	CARBONDALE	BRERETON	LIMESTONE	7.0	141.0
391.0	CARBONDALE	ANNA	BLACK SHALE	3.0	148.0
388.0	CARBONDALE	HERRIN	COAL	5.0	151.0

MAPID: 11700680000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 18 QUARTERS/FOOTAGES: 555' S line, 300' W line of SE NE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.909279 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.224554 DATE COLLECTED: 8 / 0 / 1958

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

SOURCE: STRIBLING J B WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	ANNA	BLACK SHALE	3.0	
-	CARBONDALE	HERRIN	COAL	6.0	

MAPID: 11700743000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 18 QUARTERS/FOOTAGES: 490' N line, 54' E line of SW NW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.919481 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.225283 DATE COLLECTED: 1 / 0 / 1959

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

SOURCE: STRIBLING, W. C. WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE		UNCLASSIFIED	6.0	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	6.0	
-	CARBONDALE		UNCLASSIFIED	6.0	
-	CARBONDALE	BRERETON	LIMESTONE	8.0	
-	CARBONDALE	ANNA	BLACK SHALE	4.0	
-	CARBONDALE	HERRIN	COAL	3.0	

MAPID: 11700744000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 18 QUARTERS/FOOTAGES: 84' N line, 658' E line of SW SW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.921581 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.219218 DATE COLLECTED: 3 / 0 / 1959

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

SOURCE: STRIBLING, W. C. WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO		UNCLASSIFIED	2.0	
-	CARBONDALE		UNCLASSIFIED	6.0	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	4.5	
-	CARBONDALE		UNCLASSIFIED	4.5	
-	CARBONDALE	BRERETON	LIMESTONE	7.0	
-	CARBONDALE	ANNA	BLACK SHALE	2.0	
-	CARBONDALE	HERRIN	COAL	2.0	

MAPID: 11700851000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 18 QUARTERS/FOOTAGES: 32' N line, 6' E line of SW NW SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.912585 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.221144 DATE COLLECTED: 4 / 0 / 1959

SURFACE ELEVATION (FT.): 617.0 LOGGED (FT.): 225.0 LOG TYPE: Electric Log

SOURCE: STRIBLING, W. C. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
454.0	MODESTO	PIASA	LIMESTONE	7.0	163.0
447.0	MODESTO		UNCLASSIFIED	4.0	170.0
443.0	CARBONDALE		UNCLASSIFIED	10.0	174.0
433.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	12.0	184.0
421.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	6.0	196.0
415.0	CARBONDALE		UNCLASSIFIED	6.0	202.0
409.0	CARBONDALE	BRERETON	LIMESTONE	10.0	208.0
399.0	CARBONDALE	ANNA	BLACK SHALE	5.0	218.0
394.0	CARBONDALE	HERRIN	COAL	2.0	223.0

MAPID: 11701032000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 18 QUARTERS/FOOTAGES: 330' N line, 300' W line of SW SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.913709 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.218529 DATE COLLECTED: 5 / 0 / 1951

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

SOURCE: LIVERMORE, H. E. WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	6.0	
-	MODESTO		UNCLASSIFIED	5.0	
-	CARBONDALE		UNCLASSIFIED	15.0	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	10.0	
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	5.0	
-	CARBONDALE		UNCLASSIFIED	5.0	
-	CARBONDALE	BRERETON	LIMESTONE	8.0	
-	CARBONDALE	ANNA	BLACK SHALE	5.0	
-	CARBONDALE	HERRIN	COAL	2.0	

MAPID: 11790144000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 18 QUARTERS/FOOTAGES: 25' S line, 55' E line of SE SE
 QUADRANGLE: PLAINVIEW LONGITUDE: -89.905869 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.215892 DATE COLLECTED: 5 / 11 / 1977
 SURFACE ELEVATION (FT.): 615.9 LOGGED (FT.): 277.0 LOG TYPE: Drillers Log
 SOURCE: AMAX P8PM WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
615.9	PLEISTOCENE		UNCONSOLIDATED	195.0	0.0
420.9			ROCK	64.0	195.0
356.9	CARBONDALE	HERRIN	COAL	8.0	259.0
348.9	CARBONDALE		ROCK	10.0	267.0

MAPID: 11700745000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 19 QUARTERS/FOOTAGES: 77' N line, 188' E line of SW NE NW
 QUADRANGLE: PLAINVIEW LONGITUDE: -89.917603 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.213833 DATE COLLECTED: 1 / 0 / 1959
 SURFACE ELEVATION (FT.): 613.0 LOGGED (FT.): 219.0 LOG TYPE: Electric Log
 SOURCE: STRIBLING, W. C. WELL TYPE: Dry Hole
 COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
396.0	CARBONDALE	HERRIN	COAL	2.0	217.0

MAPID: 11790150000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 19 QUARTERS/FOOTAGES: 45' S line, 1' W line of SW NE
 QUADRANGLE: PLAINVIEW LONGITUDE: -89.914859 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.208785 DATE COLLECTED: 5 / 13 / 1977
 SURFACE ELEVATION (FT.): 620.5 LOGGED (FT.): 271.0 LOG TYPE: Drillers Log
 SOURCE: AMAX R505ZZ WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.5	PLEISTOCENE		UNCONSOLIDATED	22.0	0.0
598.5			ROCK	210.0	22.0
388.5	CARBONDALE	JAMESTOWN	COAL	1.0	232.0
387.5	CARBONDALE		ROCK	18.0	233.0
369.5	CARBONDALE	HERRIN	COAL	7.0	251.0
362.5	CARBONDALE		ROCK	13.0	258.0

MAPID: 11700277000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 21 QUARTERS/FOOTAGES: 1200' S line, 2970' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.878965 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.205288 DATE COLLECTED: 1 / 0 / 1931

SURFACE ELEVATION (FT.): 567.0 LOGGED (FT.): 202.0 LOG TYPE: Drillers Log

SOURCE: HERCULES OIL & GAS WELL TYPE: Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
419.0	MODESTO	PIASA	LIMESTONE	9.0	148.0
410.0	MODESTO		UNCLASSIFIED	3.0	157.0
407.0	CARBONDALE		UNCLASSIFIED	8.0	160.0
399.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	168.0
390.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	5.0	177.0
385.0	CARBONDALE		UNCLASSIFIED	5.0	182.0
380.0	CARBONDALE	BRERETON	LIMESTONE	8.0	187.0
372.0	CARBONDALE	ANNA	BLACK SHALE	2.0	195.0
370.0	CARBONDALE	HERRIN	COAL	5.0	197.0

MAPID: 11700278000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 21 QUARTERS/FOOTAGES: SW NW NW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.885777 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.213608 DATE COLLECTED: 0 / 0 / 1930

SURFACE ELEVATION (FT.): 564.0 LOGGED (FT.): 197.0 LOG TYPE: Drillers Log

SOURCE: SCHMIDT, W. E., ETAL WELL TYPE: Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
414.0	MODESTO	PIASA	LIMESTONE	7.0	150.0
407.0	MODESTO		UNCLASSIFIED	2.0	157.0
405.0	CARBONDALE	DANVILLE	COAL	1.0	159.0
404.0	CARBONDALE		UNCLASSIFIED	9.0	160.0
395.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	169.0
392.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	5.0	172.0
387.0	CARBONDALE		UNCLASSIFIED	5.0	177.0
382.0	CARBONDALE	BRERETON	LIMESTONE	8.0	182.0
374.0	CARBONDALE	ANNA	BLACK SHALE	2.0	190.0
372.0	CARBONDALE	HERRIN	COAL	5.0	192.0

MAPID: 11700636000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 21 QUARTERS/FOOTAGES: 2310' N line, 990' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.883405 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.209997 DATE COLLECTED: 4 / 0 / 1955

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 265.0 LOG TYPE: Electric Log

SOURCE: CALVERT DRILLING, INC. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
412.5	MODESTO	PIASA	LIMESTONE	6.5	222.5
406.0	MODESTO		UNCLASSIFIED	3.0	229.0
403.0	CARBONDALE	DANVILLE	COAL	0.5	232.0
402.5	CARBONDALE		UNCLASSIFIED	6.5	232.5
396.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	239.0
387.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	248.0
385.0	CARBONDALE		UNCLASSIFIED	2.0	250.0
383.0	CARBONDALE	BRERETON	LIMESTONE	6.0	252.0
377.0	CARBONDALE	ANNA	BLACK SHALE	2.0	258.0
375.0	CARBONDALE	HERRIN	COAL	5.0	260.0

MAPID: 11700636000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 21 QUARTERS/FOOTAGES: 2310' N line, 990' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.883405 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.209997 DATE COLLECTED:

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 266.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
413.0	MODESTO	PIASA	LIMESTONE	4.0	222.0
409.0	CARBONDALE		SHALE	12.0	226.0
397.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	238.0
394.0	CARBONDALE	BANKSTON FORK	SHALE	4.0	241.0
390.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	3.0	245.0
387.0	CARBONDALE	LAWSON	SHALE	5.0	248.0
382.0	CARBONDALE	BRERETON	LIMESTONE	6.0	253.0
376.0	CARBONDALE	ANNA	BLACK SHALE	2.0	259.0
374.0	CARBONDALE	HERRIN	COAL	5.0	261.0

MAPID: 11700636000C VERSION: 3

PROJECT: IDMM-GWQX

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 21 QUARTERS/FOOTAGES: 2310' N line, 990' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.883405 GEOLOGIST: C TREWORGY

CONFIDENTIAL: N LATITUDE: 39.209997 DATE COLLECTED: 4 / 0 / 1955

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 383.0 LOG TYPE: Electric Log

SOURCE: CALVERT DRILLING, INC. WELL TYPE: Producer-Oil

COMMENT: ELEV. IS SURF,NOT LOG DATUM: DEPTHS OFF

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
412.0	MODESTO	PIASA	UNCLASSIFIED	-	223.0	
375.0	CARBONDALE	HERRIN	UNCLASSIFIED	-	260.0	
361.0	CARBONDALE	SPRINGFIELD	UNCLASSIFIED	0.0	274.0	THIN OR ABSENT
358.0	CARBONDALE	HOUCHIN CREEK	UNCLASSIFIED	-	277.0	
298.0	CARBONDALE	SURVANT	UNCLASSIFIED	-	337.0	
252.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	4.5	383.0	

MAPID: 11700122000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 22 QUARTERS/FOOTAGES: NE SW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.861517 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.207726 DATE COLLECTED: 11 / 13 / 1912

SURFACE ELEVATION (FT.): 641.7 LOGGED (FT.): 300.0 LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R.R. CO., HOLE #2 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
641.7			SOIL	15.0	0.0	
626.7			SAND & GRAVEL	11.0	15.0	
615.7			SAND/CLAY	44.0	26.0	
571.7			CLAY	37.0	70.0	
534.7	MODESTO	CARLINVILLE	LIMESTONE	4.5	107.0	
530.2	MODESTO		CLAYSTONE	1.5	111.5	
528.7	MODESTO		SHALE	26.5	113.0	
502.2	MODESTO	CHAPEL	COAL	0.2	139.5	
502.0	MODESTO		UNDERCLAY	9.3	139.7	
492.7	MODESTO		SHALE	62.0	149.0	
430.7	MODESTO		COAL	0.4	211.0	
430.3	MODESTO		UNDERCLAY	5.6	211.4	
424.7	MODESTO		SHALE	32.0	217.0	
392.7	MODESTO	PIASA	LIMESTONE	4.0	249.0	
388.7	MODESTO		SHALE	9.0	253.0	
379.7	CARBONDALE		LIMESTONE	3.5	262.0	
376.2	CARBONDALE		LIMESTONE W/ SHALE	16.5	265.5	SANDY SHALE
359.7	CARBONDALE	BRERETON	LIMESTONE	5.4	282.0	
354.3	CARBONDALE	ANNA	BLACK SHALE	0.3	287.4	
354.1	CARBONDALE	HERRIN	COAL	7.3	287.6	
346.8	CARBONDALE		UNDERCLAY	1.1	294.9	
345.7	CARBONDALE		LIMESTONE W/ SHALE	4.0	296.0	

MAPID: 11700122000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 22 QUARTERS/FOOTAGES: NE SW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.861517 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.207726 DATE COLLECTED: 11 / 0 / 1912

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 295.3 LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R R CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
392.7	MODESTO	PIASA	LIMESTONE	4.0	249.3	
388.7	MODESTO		UNCLASSIFIED	2.5	253.3	
386.2	CARBONDALE		UNCLASSIFIED	6.5	255.8	
379.7	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	262.3	
371.7	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	5.0	270.3	
366.7	CARBONDALE		UNCLASSIFIED	5.0	275.3	
361.7	CARBONDALE	BRERETON	LIMESTONE	7.4	280.3	
354.3	CARBONDALE	ANNA	BLACK SHALE	0.3	287.7	
354.0	CARBONDALE	HERRIN	COAL	7.3	288.0	

MAPID: 11701248000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 22 QUARTERS/FOOTAGES: NE NE NW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.860409 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.215951 DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 335.0 LOG TYPE: Survey Core Study

SOURCE: HUMBLE OIL CO. J-38 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
360.0	CARBONDALE	HERRIN	COAL	7.4	300.0	

MAPID: 11701248000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 22 QUARTERS/FOOTAGES: NE NE NW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.860409 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.215951 DATE COLLECTED:

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

SOURCE: HUMBLE OIL CO. J-38 WELL TYPE: Coal Test

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	ANNA	BLACK SHALE	0.3		
-	CARBONDALE	HERRIN	COAL	7.4		ELEVATION OF HERRIN = 370

MAPID: 11701399000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 22 **QUARTERS/FOOTAGES:** 1165' N line, 885' E line
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.853219 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.213739 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 648.0 **LOGGED (FT.):** 348.0 **LOG TYPE:** Survey Core Study
SOURCE: CARTER OIL COMPANY 17M-603 **WELL TYPE:** Coal Test
COMMENT: "CO. CORE STUDY & SAMPLE DESCRIPT. INC."

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
349.7	CARBONDALE	HERRIN	COAL	7.2	298.3	

MAPID: 11701399000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 22 **QUARTERS/FOOTAGES:** 1165' N line, 885' E line
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.853219 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.213739 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 648.0 **LOGGED (FT.):** 305.2 **LOG TYPE:** Survey Core Study
SOURCE: CARTER OIL COMPANY 17M-603 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
384.0	MODESTO	PIASA	LIMESTONE	4.5	264.0	
379.5	CARBONDALE		GRAY SHALE	5.0	268.5	
374.5	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.0	273.5	UPPER BENCH
370.5	CARBONDALE	BANKSTON FORK	SHALE & SILTSTONE	3.5	277.5	SHALE PARTING
367.0	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	4.4	281.0	LOWER BENCH
362.6	CARBONDALE	LAWSON	GRAY SHALE	4.0	285.4	
358.6	CARBONDALE	LAWSON	CALCAREOUS SHALE	4.0	289.4	
354.6	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	3.7	293.4	
351.0	CARBONDALE	ANNA	BLACK SHALE	1.0	297.0	
350.0	CARBONDALE	HERRIN	COAL	7.2	298.0	

MAPID: 11701408000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 22 **QUARTERS/FOOTAGES:** 1045' N line, 400' E line of SW
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.860624 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.20668 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 641.3 **LOGGED (FT.):** 377.0 **LOG TYPE:** Survey Core Study
SOURCE: CARTER OIL COMPANY IM-1 **WELL TYPE:** Coal Test
COMMENT: "COMPANY CORE STUDY INCLUDED"

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
351.6	CARBONDALE	HERRIN	COAL	7.4	289.7	

MAPID: 11701409000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 22 QUARTERS/FOOTAGES: 1295' N line, 815' E line of SW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.862093 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.205966 DATE COLLECTED:

SURFACE ELEVATION (FT.): 648.9 LOGGED (FT.): 348.0 LOG TYPE: Survey Core Study

SOURCE: CARTER OIL COMPANY IM-6 WELL TYPE: Coal Test

COMMENT: "COMPANY CORE STUDY INCLUDED"

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
358.9	CARBONDALE	HERRIN	COAL	7.4	290.0	

MAPID: 11700123000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 23 QUARTERS/FOOTAGES: 365' S line, 140' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.849442 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.203506 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 644.0 LOGGED (FT.): 284.3 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: NO CO. GIVEN, J.D. HURD (AUTHORITY)

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
644.0			UNCONSOLIDATED	80.0	0.0	
564.0	MODESTO	CARLINVILLE	LIMESTONE	7.0	80.0	
557.0	MODESTO		SHALE	77.0	87.0	
480.0	MODESTO		SANDY LIMESTONE	3.0	164.0	
477.0	MODESTO		SANDSTONE	16.0	167.0	
461.0	MODESTO		SHALE	17.0	183.0	
444.0	MODESTO		SANDY LIMESTONE	7.0	200.0	
437.0	MODESTO		SHALE	13.0	207.0	
424.0	MODESTO		BLACK SHALE	3.5	220.0	
420.5	MODESTO		UNDERCLAY	2.5	223.5	
418.0	MODESTO		SANDSTONE	7.0	226.0	
411.0	MODESTO		SHALE	3.0	233.0	
408.0	MODESTO	PIASA	LIMESTONE	5.0	236.0	
403.0	MODESTO		SHALE	11.0	241.0	
392.0	CARBONDALE		SANDY LIMESTONE	23.2	252.0	
368.8	CARBONDALE	ANNA	BLACK SHALE	0.3	275.2	
368.6	CARBONDALE	HERRIN	COAL	6.8	275.4	
361.7	CARBONDALE		UNDERCLAY	1.7	282.3	
360.1	CARBONDALE		LIMESTONE	0.3	283.9	

MAPID: 11700123000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 23 QUARTERS/FOOTAGES: 365' S line, 140' W line
 QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.849442 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.203506 DATE COLLECTED: 0 / 0 / 1912
 SURFACE ELEVATION (FT.): 644.0 LOGGED (FT.): 281.8 LOG TYPE: Drillers Log
 SOURCE: NO COMPANY WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
408.5	MODESTO	PIASA	LIMESTONE	5.0	235.5
403.5	MODESTO		UNCLASSIFIED	3.0	240.5
400.5	CARBONDALE		UNCLASSIFIED	8.0	243.5
392.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	251.5
384.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	4.2	259.5
380.3	CARBONDALE		UNCLASSIFIED	4.0	263.7
376.3	CARBONDALE	BRERETON	LIMESTONE	7.0	267.7
369.3	CARBONDALE	ANNA	BLACK SHALE	0.3	274.7
369.0	CARBONDALE	HERRIN	COAL	6.8	275.0

MAPID: 11701406000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 23 QUARTERS/FOOTAGES: 1335' S line, 1750' E line of SE
 QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.837648 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.206423 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 641.0 LOGGED (FT.): 325.0 LOG TYPE: Survey Core Study
 SOURCE: CARTER OIL COMPANY 17M-676 WELL TYPE: Coal Test
 COMMENT: "COMPANY CORE STUDY INCLUDED"

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
352.5	CARBONDALE	HERRIN	COAL	6.7	288.5

MAPID: 11701458000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 23 QUARTERS/FOOTAGES: 1627' N line, 961' W line of SW NE
 QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.837335 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.209223 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 327.3 LOG TYPE: Drillers Log
 SOURCE: CARTER OIL COMPANY 17M-704 WELL TYPE: Coal Test
 COMMENT: CO & SURVEY CORE STUDIES;NO C10998

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
349.9	CARBONDALE	HERRIN	COAL	6.7	282.1

MAPID: 11701459000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 23 **QUARTERS/FOOTAGES:** 1425' N line, 220' E line
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.832309 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.213585 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 637.0 **LOGGED (FT.):** 324.9 **LOG TYPE:** Drillers Log
SOURCE: CARTER OIL COMPANY 17M-705 **WELL TYPE:** Coal Test
COMMENT: LOGS:CO CORE STUDY;SURVEY CORE;NO C10999

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
349.6	CARBONDALE	HERRIN	COAL	7.6	287.4	

MAPID: 11701459000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 23 **QUARTERS/FOOTAGES:** 1425' N line, 220' E line
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.832309 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.213585 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 637.0 **LOGGED (FT.):** 294.6 **LOG TYPE:** Survey Core Study
SOURCE: CARTER OIL COMPANY 17M-705 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
388.8	MODESTO	PIASA	LIMESTONE	5.0	248.2	
383.8	MODESTO		SHALE	12.0	253.2	
371.8	CARBONDALE	LAWSON	CALCAREOUS SHALE	11.0	265.2	
360.8	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	9.4	276.2	
351.4	CARBONDALE	ANNA	BLACK SHALE	1.4	285.6	
350.0	CARBONDALE	HERRIN	COAL	7.6	287.0	

MAPID: 11721504000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 23 **QUARTERS/FOOTAGES:** 2500' S line, 1760' W line of NE SE
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.833778 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.208311 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 620.0 **LOGGED (FT.):** 300.0 **LOG TYPE:** Drillers Log
SOURCE: CARTER OIL COMPANY 17M-813 **WELL TYPE:** Coal Test
COMMENT: SURVEY CORE STUDY; CORE NO C10992

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
358.1	CARBONDALE	HERRIN	COAL	8.1	261.9	

MAPID: 11722228000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 23 QUARTERS/FOOTAGES: 57' S line, 1250' E line of SE SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.835828 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.20293 DATE COLLECTED:

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 356.8 LOG TYPE: Drillers Log

SOURCE: CARTER OIL SEIS #2 WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
344.2	CARBONDALE	HERRIN	COAL	8.2	297.8	

MAPID: 11722230000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 24 QUARTERS/FOOTAGES: 2640' S line, 460' W line of SW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.829852 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.210255 DATE COLLECTED:

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 300.0 LOG TYPE: Drillers Log

SOURCE: CARTER OIL 17E-012 WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
367.6	CARBONDALE	HERRIN	COAL	8.4	272.4	

MAPID: 11723669000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 24 QUARTERS/FOOTAGES: 800' N line, 1350' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.826765 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.215636 DATE COLLECTED: 4 / 29 / 1991

SURFACE ELEVATION (FT.): 648.0 LOGGED (FT.): 354.0 LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO. EHB-90-81 WELL TYPE: Coal Test

COMMENT: FROM MINE PERMIT 56

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
648.0	PLEISTOCENE		SOIL	6.4	0.0	BR
641.6	PLEISTOCENE		SILT, SAND & GRAVEL	19.7	6.4	BR
621.9	PLEISTOCENE		SILT, SAND & GRAVEL	11.8	26.1	GY BR
610.1	PLEISTOCENE		SILTY CLAY	9.6	37.9	TRACE SD & GRVL; BR
600.5	PLEISTOCENE		SILT & CLAY	34.0	47.5	TRACE SD & GRVL
566.5	PLEISTOCENE		CLAY, SAND & GRAVEL	10.8	81.5	BLU GY
555.7			LIMESTONE	4.9	92.3	LT GY
550.8			SHALE & SILTSTONE	5.1	97.2	
545.7			SANDSTONE	6.2	102.3	FINE; GN GY
539.5			SANDY SILTSTONE	7.5	108.5	GRAY
532.0			SHALE & SILTSTONE	20.1	116.0	
511.9			SHALE WITH LIMESTONE	9.9	136.1	SLT AT BASE
502.0			SANDSTONE	34.5	146.0	FINE; GY
467.5			SHALE & SILTSTONE	31.5	180.5	
436.0			UNDERCLAY	2.0	212.0	BLU GY
434.0			SANDSTONE	11.7	214.0	FINE; GY
422.3			SHALE	12.6	225.7	SDY AT TOP; DK GY
409.7			SHALE/COAL	0.7	238.3	
409.0			SHALE	11.0	239.0	GY-GR GY
398.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	250.0	BANKSTON FORK UPPER BENCH; LT GY
394.5			SOFT SHALE	9.0	253.5	
385.5	CARBONDALE	BANKSTON FORK	ARGILLACEOUS LIMESTONE	5.5	262.5	BANKSTON FORK LOWER BENCH; GNGY
380.0	CARBONDALE	ENERGY	SHALE	5.0	268.0	GN GY
375.0	CARBONDALE	ENERGY	SHALE & SILTSTONE	31.2	273.0	
343.8	CARBONDALE	HERRIN	COAL	6.6	304.2	NO. 6 COAL
337.2	CARBONDALE		CLAYSTONE	1.0	310.8	DARK GRAY
336.2			NODULAR LIMESTONE	4.2	311.8	GN GY
332.0			SHALE	11.0	316.0	GN GY-GY
321.0			SHALE/COAL	3.0	327.0	
318.0			GRAY SHALE	2.0	330.0	
316.0			SILTSTONE	12.0	332.0	SS AT BASE; GY BR
304.0			NODULAR LIMESTONE	4.0	344.0	GRAY
300.0			SANDSTONE	6.0	348.0	FINE; GN GY

MAPID: 11723747000C VERSION: 1

PROJECT: LUMP

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 25 QUARTERS/FOOTAGES:

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.817327 GEOLOGIST: J. MCBETH

CONFIDENTIAL: N LATITUDE: 39.202662 DATE COLLECTED: 10 / 27 / 1983

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 332.6 LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO. 17E-106 WELL TYPE: Coal Test

COMMENT: PERMIT 56; MINE #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
640.0	PLEISTOCENE		UNCONSOLIDATED	15.0	0.0	
625.0	PLEISTOCENE		UNCONSOLIDATED	32.0	15.0	
593.0	PLEISTOCENE		UNCONSOLIDATED	20.0	47.0	WITH GRAVEL
573.0	PLEISTOCENE		SAND & GRAVEL	4.0	67.0	
569.0	PLEISTOCENE		UNCONSOLIDATED	25.5	71.0	WITH GRAVEL
543.5	BOND	CARTHAGE	LIMESTONE	6.5	96.5	
537.0	MODESTO		SILTY SHALE	32.5	103.0	
504.5	MODESTO		BLACK SHALE	1.4	135.5	
503.1	MODESTO		COAL	0.5	136.9	
502.6	MODESTO		SILTY SHALE	39.6	137.4	
463.0	MODESTO		SANDSTONE	19.0	177.0	
444.0	MODESTO		SANDY SHALE	11.0	196.0	
433.0	MODESTO		SILTY SHALE	17.0	207.0	
416.0			SHALE	22.5	224.0	WITH LIMESTONE NODULES
393.5			BLACK SHALE	0.5	246.5	
393.0			SHALE	9.4	247.0	WITH LIMESTONE NODULES
383.6	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	256.4	
380.6	CARBONDALE		CALCAREOUS SHALE	1.5	259.4	
379.1	CARBONDALE		SILTY SHALE	1.4	260.9	
377.7	CARBONDALE		SHALE	0.7	262.3	BLACK & GREEN
377.0	CARBONDALE		SILTY CLAYSTONE	3.8	263.0	
373.2	CARBONDALE		CLAYSTONE	1.1	266.8	WITH LIMESTONE NODULES
372.1	CARBONDALE		CALCAREOUS SHALE	0.4	267.9	
371.7	CARBONDALE	BRERETON	LIMESTONE	1.7	268.3	
370.0	CARBONDALE	ENERGY	CALCAREOUS CLAYSTONE	0.9	270.0	
369.1	CARBONDALE	ENERGY	SHALE	4.1	270.9	WITH LIMESTONE NODULES
365.0	CARBONDALE	ENERGY	SILTY SHALE	3.8	275.0	
361.2	CARBONDALE	ENERGY	CARBONACEOUS SHALE	1.3	278.8	
359.9	CARBONDALE	ENERGY	SILTY SHALE	18.8	280.1	
341.1	CARBONDALE	ENERGY	CORE LOSS	1.2	298.9	CORE LOSS
339.9	CARBONDALE	ENERGY	SILTY SHALE	2.7	300.1	
337.2	CARBONDALE	ENERGY	CARBONACEOUS SHALE	4.8	302.8	
332.4	CARBONDALE	HERRIN	COAL	7.2	307.6	
325.2	CARBONDALE		CLAYSTONE	0.2	314.8	BLACK SILTY
325.0	CARBONDALE		CLAYSTONE	1.7	315.0	DARK GRAY, SILTY
323.3	CARBONDALE	HIGGINSVILLE	LIMESTONE	2.3	316.7	
321.0	CARBONDALE		CLAYSTONE	3.1	319.0	WITH LIMESTONE NODULES
317.9	CARBONDALE		SILTY SHALE	1.1	322.1	

316.8	CARBONDALE	CALCAREOUS CLAYSTONE	4.2	323.2	
312.6	CARBONDALE	LIMESTONE	1.4	327.4	
311.2	CARBONDALE	SANDY SHALE	2.6	328.8	
308.6	CARBONDALE	CORE LOSS	1.2	331.4	CORE LOSS

MAPID: 11723748000C **VERSION:** 1 **PROJECT:** LUMP
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 25 **QUARTERS/FOOTAGES:**
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.826891 **GEOLOGIST:** J. MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.203052 **DATE COLLECTED:** 12 / 30 / 1983
SURFACE ELEVATION (FT.): 647.0 **LOGGED (FT.):** 336.0 **LOG TYPE:** Drillers Log
SOURCE: MOTEREY COAL CO 17E-11717 **WELL TYPE:** Coal Test
COMMENT: PERMIT 56; MINE #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
647.0	PLEISTOCENE		UNCONSOLIDATED	23.0	0.0	
624.0	PLEISTOCENE		UNCONSOLIDATED	86.0	23.0	
538.0	BOND	CARTHAGE	LIMESTONE	7.0	109.0	
531.0	MODESTO		SANDY SHALE	68.0	116.0	
463.0	MODESTO		SANDSTONE	2.0	184.0	
461.0	MODESTO		SILTY SHALE	31.0	186.0	
430.0	MODESTO		SANDSTONE	1.2	217.0	
428.8	CARBONDALE		SILTY SHALE	28.8	218.2	
400.0	CARBONDALE		BLACK SHALE	3.0	247.0	
397.0	CARBONDALE		SHALE	4.0	250.0	WITH LIMESTONE NODULES
393.0	CARBONDALE		SHALE	3.5	254.0	
389.5	CARBONDALE	BRERETON	LIMESTONE	4.5	257.5	
385.0	CARBONDALE	ENERGY	CLAYSTONE	13.7	262.0	WITH LIMESTONE NODULES
371.3	CARBONDALE	ENERGY	SILTY SHALE	29.1	275.7	
342.2	CARBONDALE	ENERGY	CARBONACEOUS SHALE	2.7	304.8	DARK
339.5	CARBONDALE	HERRIN	COAL	7.7	307.5	
331.8	CARBONDALE		CLAYSTONE	0.8	315.2	
331.0	CARBONDALE	HIGGINSVILLE	LIMESTONE	2.9	316.0	
328.1	CARBONDALE	HIGGINSVILLE	CLAYSTONE	0.5	318.9	WITH LIMESTONE NODULES
327.6	CARBONDALE	HIGGINSVILLE	LIMESTONE	5.5	319.4	
322.1	CARBONDALE		SHALE	0.6	324.9	
321.5	CARBONDALE		CLAYSTONE	5.3	325.5	SILTY
316.2	CARBONDALE		LIMESTONE	0.5	330.8	
315.7	CARBONDALE		SANDY SHALE	2.6	331.3	
313.1	CARBONDALE		LIMESTONE	1.5	333.9	
311.6	CARBONDALE		GRAY SHALE	0.6	335.4	

MAPID: 11701473000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 26 QUARTERS/FOOTAGES: 1985' N line, 835' W line of SW NE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.837636 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.193644 DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 317.0 LOG TYPE: Drillers Log

SOURCE: CARTER OIL COMPANY 17M-809 WELL TYPE: Coal Test

COMMENT: LOGS:CO.CORE STUDY;SURVEY CORE;NO.C10995

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
369.2	CARBONDALE	HERRIN	COAL	7.4	280.8	

MAPID: 11700550000C VERSION: 1

PROJECT: IDMM-GWQX

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 27 QUARTERS/FOOTAGES: 330' N line, 330' W line of NE SE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.853381 GEOLOGIST: C TREWORY

CONFIDENTIAL: N LATITUDE: 39.194331 DATE COLLECTED: 5 / 0 / 1955

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 404.0 LOG TYPE: Electric Log

SOURCE: CALVERT DRILLING, INC. WELL TYPE: Producer-Oil

COMMENT: ELEV. IS SURF,NOT LOG DATUM: DEPTHS OFF

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
400.0	MODESTO	PIASA	UNCLASSIFIED	-	240.0	
356.0	CARBONDALE	HERRIN	UNCLASSIFIED	-	284.0	
348.0	CARBONDALE	SPRINGFIELD	UNCLASSIFIED	0.0	292.0	
344.0	CARBONDALE	HOUCHIN CREEK	UNCLASSIFIED	-	296.0	
280.0	CARBONDALE	SURVANT	UNCLASSIFIED	-	360.0	
236.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	3.0	404.0	

MAPID: 11700283000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 28 QUARTERS/FOOTAGES: 220' N line, 2140' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.876021 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.201405 DATE COLLECTED: 1 / 0 / 1931

SURFACE ELEVATION (FT.): 637.0 LOGGED (FT.): 289.0 LOG TYPE: Drillers Log

SOURCE: HERCULES OIL & GAS WELL TYPE: Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
392.0	MODESTO	PIASA	LIMESTONE	6.0	245.0
386.0	MODESTO		UNCLASSIFIED	3.0	251.0
383.0	CARBONDALE	DANVILLE	COAL	1.0	254.0
382.0	CARBONDALE		UNCLASSIFIED	6.0	255.0
376.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	261.0
369.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	268.0
367.0	CARBONDALE		UNCLASSIFIED	2.0	270.0
365.0	CARBONDALE	BRERETON	LIMESTONE	9.0	272.0
356.0	CARBONDALE	ANNA	BLACK SHALE	2.0	281.0
354.0	CARBONDALE	HERRIN	COAL	6.0	283.0

MAPID: 11700559000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 28 QUARTERS/FOOTAGES: 330' S line, 330' W line of NW NW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.885684 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.199193 DATE COLLECTED: 7 / 0 / 1955

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

SOURCE: WHITE EDGAR WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	6.0	
-	MODESTO		UNCLASSIFIED	2.0	
-	CARBONDALE		UNCLASSIFIED	4.0	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	
-	CARBONDALE		UNCLASSIFIED	2.0	
-	CARBONDALE	BRERETON	LIMESTONE	6.0	
-	CARBONDALE	ANNA	BLACK SHALE	2.0	
-	CARBONDALE	HERRIN	COAL	3.0	

MAPID: 11723749000C VERSION: 1

PROJECT: LUMP

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 28 QUARTERS/FOOTAGES: SE NE NE

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.869571 GEOLOGIST: J. MCBETH

CONFIDENTIAL: N LATITUDE: 39.199402 DATE COLLECTED:

SURFACE ELEVATION (FT.): 579.0 LOGGED (FT.): 225.0 LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO. 1M-20 WELL TYPE: Coal Test

COMMENT: PERMIT 56

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
579.0	PLEISTOCENE		SOIL	3.0	0.0	
576.0	PLEISTOCENE		SAND	10.5	3.0	
565.5	PLEISTOCENE		CLAY	2.5	13.5	
563.0	MODESTO		GRAY SHALE	15.0	16.0	
548.0	MODESTO		SANDSTONE	39.5	31.0	
508.5	MODESTO		SILTY SHALE	49.5	70.5	
459.0	MODESTO		COAL	0.5	120.0	
458.5	MODESTO		GRAY SHALE	10.5	120.5	
448.0	MODESTO		LIMESTONE	2.5	131.0	
445.5	MODESTO		SILTY SHALE	12.5	133.5	
433.0	MODESTO		SHALE	6.0	146.0	MULTICOLORED
427.0	MODESTO		GRAY SHALE	2.0	152.0	
425.0	MODESTO		CALCAREOUS SANDSTONE	0.5	154.0	
424.5	MODESTO		SILTY SHALE	7.5	154.5	
417.0	MODESTO		SHALE	3.0	162.0	MULTICOLORED
414.0	MODESTO	PIASA	LIMESTONE	5.0	165.0	
409.0	MODESTO		SILTY SHALE	4.5	170.0	
404.5	CARBONDALE	DANVILLE	COAL	1.5	174.5	
403.0	CARBONDALE		GRAY SHALE	2.5	176.0	
400.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	178.5	
398.9	CARBONDALE		SILTSTONE	7.6	180.1	WITH LIMESTONE NODULES; GREEN-GRAY
391.3	CARBONDALE		FOSSILIFEROUS SHALE	2.3	187.7	DARK BROWN GRAY; LS NODS
389.0	CARBONDALE		SHALE	2.2	190.0	SLIGHTLY CLACAREOUS
386.8	CARBONDALE	BRERETON	LIMESTONE	5.3	192.2	FOSSILS
381.5	CARBONDALE	ANNA	SHALE	0.1	197.5	DARK GRAY
381.4	CARBONDALE	HERRIN	COAL	9.0	197.6	
372.4	CARBONDALE		CLAYSTONE	0.4	206.6	DARK GRAY
372.0	CARBONDALE		LIMESTONE	2.0	207.0	NODULAR; LT. GRAY
370.0	CARBONDALE		CLAYSTONE	5.8	209.0	WITH LIMESTONE NODULES
364.2	CARBONDALE	HIGGINSVILLE	LIMESTONE	1.4	214.8	NODULAR
362.8	CARBONDALE		LIMESTONE & DOLOMITE	0.5	216.2	
362.3	CARBONDALE		CLAYSTONE	0.2	216.7	
362.1	CARBONDALE		CORE LOSS	8.1	216.9	CORE LOSS

MAPID: 11700124000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 29 QUARTERS/FOOTAGES: NW SW SW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.90408 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.189755 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 268.6 LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R R CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
392.5	MODESTO	PIASA	LIMESTONE	4.0	232.5
388.5	MODESTO		UNCLASSIFIED	3.0	236.5
385.5	CARBONDALE		UNCLASSIFIED	8.5	239.5
377.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	248.0
373.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	252.0
372.0	CARBONDALE		UNCLASSIFIED	1.0	253.0
371.0	CARBONDALE	BRERETON	LIMESTONE	4.0	254.0
367.0	CARBONDALE	ANNA	BLACK SHALE	2.0	258.0
365.0	CARBONDALE	HERRIN	COAL	8.6	260.0

MAPID: 11700124000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 29 QUARTERS/FOOTAGES: NW SW SW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.90408 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.189755 DATE COLLECTED:

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 268.6 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
392.5	MODESTO	PIASA	LIMESTONE	4.0	232.5
388.5	MODESTO		SHALE	8.0	236.5
380.5	CARBONDALE	DANVILLE	COAL	1.5	244.5
379.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	12.0	246.0
367.0	CARBONDALE	LAWSON	SHALE	2.0	258.0
365.0	CARBONDALE	HERRIN	COAL	8.6	260.0

MAPID: 11700124000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 29 QUARTERS/FOOTAGES: NW SW SW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.90408 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.189755 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 624.9 LOGGED (FT.): 351.0 LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R.R. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
624.9			UNCONSOLIDATED	17.0	0.0
607.9			SAND & GRAVEL	29.0	17.0
578.9			LIMESTONE	2.0	46.0
576.9			SHALE	30.0	48.0
546.9	MODESTO	CARLINVILLE	LIMESTONE	7.0	78.0
539.9	MODESTO		SHALE	107.0	85.0
432.9	MODESTO		LIMESTONE	3.0	192.0
429.9	MODESTO		SHALE	12.5	195.0
417.4	MODESTO		UNDERCLAY	3.5	207.5
413.9	MODESTO		SANDY LIMESTONE	16.0	211.0
397.9	MODESTO		SANDY SHALE	5.5	227.0
392.4	MODESTO	PIASA	LIMESTONE	4.0	232.5
388.4	MODESTO		SHALE	8.0	236.5
380.4	CARBONDALE	DANVILLE	COAL	1.5	244.5
378.9	CARBONDALE	ENERGY	SHALY SANDSTONE	12.0	246.0
366.9	CARBONDALE	ENERGY	SHALE	2.0	258.0
364.9	CARBONDALE	HERRIN	COAL	8.6	260.0
356.3	CARBONDALE		UNDERCLAY	0.4	268.6
355.9	CARBONDALE		SHALY LIMESTONE	7.0	269.0
348.9	CARBONDALE		SHALE	6.0	276.0
342.9	CARBONDALE		LIMESTONE	2.5	282.0
340.4	CARBONDALE		SHALE	4.5	284.5
335.9	CARBONDALE		LIMESTONE	15.0	289.0
320.9	CARBONDALE		SHALE	12.0	304.0
308.9	CARBONDALE		SANDSTONE	29.5	316.0
279.4	CARBONDALE		BLACK SHALE	1.5	345.5
277.9	CARBONDALE	SURVANT	COAL	2.8	347.0
275.1	CARBONDALE		UNDERCLAY	1.3	349.8

MAPID: 11723750000C VERSION: 1

PROJECT: LUMP

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 29 QUARTERS/FOOTAGES: 27' N line, 500' W line of SE NE NE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.887402 GEOLOGIST: J. MCBETH

CONFIDENTIAL: N LATITUDE: 39.199985 DATE COLLECTED:

SURFACE ELEVATION (FT.): 636.0 LOGGED (FT.): 311.7 LOG TYPE:

SOURCE: MONTEREY COAL CO. 1M-89-104 WELL TYPE: Coal Test

COMMENT: PERMIT 56

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
636.0	PLEISTOCENE		SOIL	1.3	0.0	
634.7	PLEISTOCENE		CLAY	14.9	1.3	
619.8	PLEISTOCENE		SAND	6.8	16.2	
613.0	PLEISTOCENE		SILT & SAND	9.5	23.0	WITH PEAT
603.5	PLEISTOCENE		SILT & SAND	14.7	32.5	WITH TRACE OF COAL
588.8	BOND		SHALE	9.8	47.2	WITH TRACE OF COAL
579.0	BOND		LIMESTONE	1.4	57.0	GREEN GRAY
577.6	BOND		SANDSTONE	0.7	58.4	
576.9	BOND		CALCAREOUS CLAYSTONE	3.5	59.1	WITH SANDSTONE LAYERS
573.4	BOND		CORE LOSS	4.8	62.6	CORE LOSS
568.6	BOND		ARGILLACEOUS SANDSTONE	4.2	67.4	LIGHT GREEN-GRAY
564.4	BOND		SANDY SHALE	6.2	71.6	HARD, GREENGRAY; FINE GR.
558.2	BOND		SHALE	7.9	77.8	SIDERITE NODULES
550.3	BOND	CARTHAGE	LIMESTONE	6.6	85.7	LIGHT OLIVE GRAY
543.7	MODESTO		SILTSTONE	16.3	92.3	
527.4	MODESTO		GRAY SHALE	6.6	108.6	SIDERITE NODULES
520.8	MODESTO		SILTY SANDSTONE	11.3	115.2	
509.5	MODESTO		GRAY SHALE	3.5	126.5	HARD; SIDERITE NODULES
506.0	MODESTO		COAL	0.4	130.0	
505.6	MODESTO		CALCAREOUS CLAYSTONE	2.3	130.4	LS NODS AT BASE
503.3	MODESTO		LIMESTONE	1.9	132.7	NODULAR, MEDIUM OLIVE GRAY
501.4	MODESTO		SILTSTONE	14.1	134.6	OCC. SANDY
487.3	MODESTO		SHALY SANDSTONE	2.3	148.7	LIGHT OLIVE GRAY RIPPLES
485.0	MODESTO		SILTY SHALE	11.3	151.0	GREEN GRAY
473.7	MODESTO		SILTSTONE	10.7	162.3	
463.0	MODESTO		GRAY SHALE	34.1	173.0	MEDIUM DARK, SIDERITE BANDS
428.9	MODESTO		LIMESTONE	0.3	207.1	FOSSILIFEROUS
428.6	MODESTO		COAL	0.3	207.4	DARK GRAY SH
428.3	MODESTO		CALCAREOUS CLAYSTONE	10.1	207.7	SH; LS NODS
418.2	MODESTO		SHALE	9.3	217.8	
408.9	MODESTO		CALCAREOUS CLAYSTONE	7.1	227.1	LS NODS AT BASE
401.8	MODESTO		LIMESTONE	0.8	234.2	NODULAR
401.0	MODESTO		SILTY SHALE	14.7	235.0	OCCASIONAL SANDSTONE LENSES
386.3	MODESTO	PIASA	LIMESTONE	5.7	249.7	LIGHT OLIVE GRAY - LIGHT BLUE GRAY; FOSS
380.7	MODESTO		CLAYSTONE	4.1	255.3	GREEN GRAY

376.6	CARBONDALE	DANVILLE	COAL	1.2	259.4	
375.4	CARBONDALE		CLAYSTONE	5.1	260.6	LS NODS AT BASE
370.3	CARBONDALE	BANKSTON FORK	LIMESTONE	4.1	265.7	
366.2	CARBONDALE		CALCAREOUS SILTSTONE	6.1	269.8	WITH LIMESTONE NODULES
360.1	CARBONDALE		LIMESTONE	0.6	275.9	NODULAR
359.5	CARBONDALE		CALCAREOUS SILTY SHALE	6.6	276.5	FOSSILIFEROUS
352.9	CARBONDALE	BRERETON	LIMESTONE	7.6	283.1	
345.3	CARBONDALE	ANNA	GRAY SHALE	0.1	290.7	
345.2	CARBONDALE	HERRIN	COAL	7.2	290.8	
338.0	CARBONDALE		CLAYSTONE	0.8	298.0	SILTY
337.2	CARBONDALE		CLAYSTONE	1.5	298.8	SUPFRACTURED
335.7	CARBONDALE	HIGGINSVILLE	LIMESTONE	1.7	300.3	
334.0	CARBONDALE		CLAYSTONE	1.8	302.0	WITH LIMESTONE NODULES
332.2	CARBONDALE		CLAYSTONE	1.1	303.8	MEDIUM DARK GRAY
331.1	CARBONDALE		CLAYSTONE	1.0	304.9	SILTY
330.1	CARBONDALE		CALCAREOUS CLAYSTONE	1.5	305.9	
328.6	CARBONDALE		LIMESTONE	1.4	307.4	NODULAR
327.2	CARBONDALE		CALCAREOUS CLAYSTONE	2.9	308.8	WITH LIMESTONE NODULES

MAPID: 11701356000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 30 QUARTERS/FOOTAGES: SE SW NE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.911011 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.19512 DATE COLLECTED:

SURFACE ELEVATION (FT.): 621.0 LOGGED (FT.): 264.0 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAEER COAL CO ED-4 WELL TYPE: Coal Test

COMMENT: CORE C-8763

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT	OVERBURDEN	COMMENT
393.0	CARBONDALE	DANVILLE	COAL	2.7	228.0		
364.2	CARBONDALE	HERRIN	COAL	4.7	256.8		

MAPID: 11701356000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 30 QUARTERS/FOOTAGES: SE SW NE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.911011 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.19512 DATE COLLECTED:

SURFACE ELEVATION (FT.): 621.0 LOGGED (FT.): 261.7 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO ED-4 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
405.8	MODESTO	PIASA	LIMESTONE	5.8	215.2	
400.0	MODESTO		BLACK SHALE	5.3	221.0	
394.7	CARBONDALE	DANVILLE	COAL	2.7	226.3	
392.0	CARBONDALE		GRAY SHALE	3.3	229.0	
388.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	232.2	UPPER BENCH
386.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	234.2	
384.9	CARBONDALE	LAWSON	GRAY SHALE	1.0	236.1	
383.9	CARBONDALE	LAWSON	CALCAREOUS SHALE	11.5	237.1	
372.4	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	6.2	248.6	
366.2	CARBONDALE	ANNA	BLACK SHALE	2.3	254.8	
364.0	CARBONDALE	HERRIN	COAL	4.7	257.0	

MAPID: 11790089000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 32 QUARTERS/FOOTAGES: 30' N line, 710' W line of SE SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.888877 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.176459 DATE COLLECTED: 8 / 19 / 1965

SURFACE ELEVATION (FT.): 632.1 LOGGED (FT.): 271.5 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE A65-3 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
632.1	PLEISTOCENE		UNCONSOLIDATED	69.3	0.0	
562.8	MODESTO		ROCK	33.8	69.3	
529.1	MODESTO	CHAPEL	COAL	0.5	103.0	
528.6	MODESTO		ROCK	88.8	103.5	
439.8	MODESTO	ROCK BRANCH	COAL	0.3	192.3	
439.4	MODESTO		ROCK	41.4	192.7	
398.1	CARBONDALE	DANVILLE	COAL	0.5	234.0	
397.6	CARBONDALE		ROCK	29.5	234.5	
368.1	CARBONDALE	HERRIN	COAL	7.2	264.0	
360.9	CARBONDALE		ROCK	0.3	271.2	

MAPID: 11723751000C VERSION: 1

PROJECT: LUMP

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 33 QUARTERS/FOOTAGES: 100' S line, 600' W line of SW SW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.884674 GEOLOGIST: J. MCBETH

CONFIDENTIAL: N LATITUDE: 39.17329 DATE COLLECTED: 8 / 13 / 1965

SURFACE ELEVATION (FT.): 631.7 LOGGED (FT.): 270.6 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES CORP. A65-1 WELL TYPE: Coal Test

COMMENT: PERMIT 56; MINE #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
631.7	PLEISTOCENE		UNCONSOLIDATED	6.0	0.0
625.7	PLEISTOCENE		CLAY	12.0	6.0
613.7	PLEISTOCENE		SAND & GRAVEL	12.0	18.0
601.7	PLEISTOCENE		CLAY	4.0	30.0
597.7	BOND		GRAY SHALE	3.0	34.0
594.7	BOND		SANDY SHALE	7.0	37.0
587.7	BOND		SANDSTONE	8.0	44.0
579.7	BOND		GRAY SHALE	5.0	52.0
574.7	BOND	CARTHAGE	LIMESTONE	7.0	57.0
567.7	MODESTO		SANDSTONE	29.0	64.0
538.7	MODESTO		GRAY SHALE	7.6	93.0
531.1	MODESTO		COAL	0.4	100.6
530.7	MODESTO		UNDERCLAY	4.0	101.0
526.7	MODESTO		SANDSTONE	19.0	105.0
507.7	MODESTO		SANDY SHALE	14.0	124.0
493.7	MODESTO		SANDSTONE	10.0	138.0
483.7	MODESTO		LIMESTONE	4.0	148.0
479.7	MODESTO		SANDY SHALE	6.0	152.0
473.7	MODESTO		SANDSTONE	3.0	158.0
470.7	MODESTO		GRAY SHALE	15.0	161.0
455.7	MODESTO		SANDSTONE	3.0	176.0
452.7	MODESTO		GRAY SHALE	4.0	179.0
448.7	MODESTO		SANDSTONE	4.0	183.0
444.7	MODESTO		SHALE	20.0	187.0
424.7	MODESTO		BLACK SHALE	0.6	207.0
424.1	MODESTO		SANDY SHALE	16.0	207.6
408.1	MODESTO	PIASA	LIMESTONE	3.4	223.6
404.7	MODESTO		SANDY SHALE	6.0	227.0
398.7	CARBONDALE	DANVILLE	COAL	1.6	233.0
397.1	CARBONDALE		UNDERCLAY	2.0	234.6
395.1	CARBONDALE		SANDY SHALE	3.4	236.6
391.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	240.0
389.0	CARBONDALE	BANKSTON FORK	SHALE	1.0	242.7
388.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.4	243.7
383.6	CARBONDALE		SHALE	1.8	248.1
381.8	CARBONDALE		LIMESTONE	0.6	249.9
381.2	CARBONDALE		SHALE	3.4	250.5
377.8	CARBONDALE	BRERETON	LIMESTONE	8.2	253.9
369.6	CARBONDALE	HERRIN	COAL	7.5	262.1

MAPID: 11790087000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 33 **QUARTERS/FOOTAGES:** 100' S line, 600' W line of SW SW
QUADRANGLE: PLAINVIEW **LONGITUDE:** -89.884674 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.17329 **DATE COLLECTED:** 8 / 13 / 1965
SURFACE ELEVATION (FT.): 631.7 **LOGGED (FT.):** 270.5 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE A65-1 **WELL TYPE:** Coal Test
COMMENT: BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
631.7	PLEISTOCENE		UNCONSOLIDATED	34.0	0.0
597.7			ROCK	66.5	34.0
531.2	MODESTO	CHAPEL	COAL	0.5	100.5
530.7	MODESTO		ROCK	132.0	101.0
398.7	CARBONDALE	DANVILLE	COAL	1.5	233.0
397.2	CARBONDALE		ROCK	28.3	234.5
368.9	CARBONDALE	HERRIN	COAL	6.7	262.8
362.2	CARBONDALE		ROCK	1.0	269.5

MAPID: 11790088000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 33 **QUARTERS/FOOTAGES:** 210' N line, 33' W line of SE SW
QUADRANGLE: PLAINVIEW **LONGITUDE:** -89.882182 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.176098 **DATE COLLECTED:** 8 / 13 / 1965
SURFACE ELEVATION (FT.): 634.7 **LOGGED (FT.):** 277.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES A65-2 **WELL TYPE:** Coal Test
COMMENT: BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
634.7	PLEISTOCENE		UNCONSOLIDATED	41.0	0.0
593.7			ROCK	65.5	41.0
528.2	MODESTO	CHAPEL	COAL	0.3	106.5
527.9	MODESTO		ROCK	130.5	106.8
397.4	CARBONDALE	DANVILLE	COAL	1.2	237.3
396.2	CARBONDALE		ROCK	30.0	238.5
366.2	CARBONDALE	HERRIN	COAL	6.8	268.5
359.4	CARBONDALE		ROCK	1.8	275.3

MAPID: 11790090000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 33 QUARTERS/FOOTAGES: 1' N line, 1182' E line of NE SW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.881907 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.180295 DATE COLLECTED: 8 / 20 / 1965

SURFACE ELEVATION (FT.): 643.7 LOGGED (FT.): 288.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A65-4 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
643.7	PLEISTOCENE		UNCONSOLIDATED	54.0	0.0
589.7			ROCK	62.0	54.0
527.7	MODESTO	CHAPEL	COAL	0.7	116.0
527.0	MODESTO		ROCK	132.4	116.7
394.6	CARBONDALE	DANVILLE	COAL	1.1	249.1
393.5	CARBONDALE		ROCK	29.1	250.2
364.4	CARBONDALE	HERRIN	COAL	7.5	279.3
356.9	CARBONDALE		ROCK	1.3	286.8

MAPID: 11700284000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 34 QUARTERS/FOOTAGES: 280' N line, 525' W line

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.86653 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.187014 DATE COLLECTED: 1 / 0 / 1931

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 275.0 LOG TYPE: Drillers Log

SOURCE: HERCULES OIL & GAS WELL TYPE: Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
408.0	MODESTO	PIASA	LIMESTONE	6.0	227.0
402.0	MODESTO		UNCLASSIFIED	2.0	233.0
400.0	CARBONDALE	DANVILLE	COAL	1.0	235.0
399.0	CARBONDALE		UNCLASSIFIED	6.0	236.0
393.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	242.0
385.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	5.5	250.0
379.5	CARBONDALE		UNCLASSIFIED	5.5	255.5
374.0	CARBONDALE	BRERETON	LIMESTONE	7.0	261.0
367.0	CARBONDALE	ANNA	BLACK SHALE	2.0	268.0
365.0	CARBONDALE	HERRIN	COAL	5.0	270.0

MAPID: 11700960000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 34 QUARTERS/FOOTAGES: 23' S line, 231' W line of SW SE SW
 QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.863349 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.173483 DATE COLLECTED:
 SURFACE ELEVATION (FT.): LOGGED (FT.): 0.0 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. G-26 WELL TYPE: Coal Test
 COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	ANNA	BLACK SHALE	0.7		

MAPID: 11701247000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 34 QUARTERS/FOOTAGES: SE NW NE
 QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.855716 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.185305 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 622.0 LOGGED (FT.): 244.2 LOG TYPE: Survey Core Study
 SOURCE: HUMBLE OIL CO. 244.21 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
387.5	CARBONDALE	HERRIN	COAL	7.3	234.5	

MAPID: 11701247000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 34 QUARTERS/FOOTAGES: SE NW NE
 QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.855716 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.185305 DATE COLLECTED:
 SURFACE ELEVATION (FT.): LOGGED (FT.): 0.0 LOG TYPE: Drillers Log
 SOURCE: HUMBLE OIL CO. 244.21 WELL TYPE: Coal Test
 COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	ANNA	BLACK SHALE	0.2		
-	CARBONDALE	HERRIN	COAL	7.3		ELEVATION OF HERRIN = 388

MAPID: 11723752000C VERSION: 1

PROJECT: LUMP

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 34 QUARTERS/FOOTAGES:

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.859261

GEOLOGIST: J. MCBETH

CONFIDENTIAL: N LATITUDE: 39.180715

DATE COLLECTED: 8 / 24 / 1979

SURFACE ELEVATION (FT.): 648.0 LOGGED (FT.): 307.0

LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO. 1M-25

WELL TYPE: Coal Test

COMMENT: PERMIT 56; MINE #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
648.0	PLEISTOCENE		SOIL	3.0	0.0	
645.0	PLEISTOCENE		UNCONSOLIDATED	78.0	3.0	
567.0	BOND	CARTHAGE	LIMESTONE	5.5	81.0	
561.5	MODESTO		COAL	0.5	86.5	
561.0	MODESTO		CALCAREOUS SHALE	1.0	87.0	
560.0	MODESTO		SHALE	31.0	88.0	
529.0	MODESTO		CALCAREOUS SHALE	13.0	119.0	
516.0	MODESTO		SILTY SHALE	52.0	132.0	
464.0	MODESTO		LIMESTONE	0.5	184.0	
463.5	MODESTO		SHALE	15.5	184.5	
448.0	MODESTO		CALCAREOUS SHALE	20.0	200.0	
428.0	MODESTO		COAL	0.3	220.0	
427.7	MODESTO		SHALE	3.7	220.3	
424.0	MODESTO		LIMESTONE	0.3	224.0	
423.7	MODESTO		GRAY SHALE	10.5	224.3	
413.2	MODESTO	PIASA	LIMESTONE	3.6	234.8	
409.6	MODESTO	PIASA	LIMESTONE	3.1	238.4	
406.5	MODESTO		CLAYSTONE	3.4	241.5	
403.1	CARBONDALE	DANVILLE	COAL	0.1	244.9	
403.0	CARBONDALE		CLAYSTONE	4.6	245.0	
398.4	CARBONDALE		CORE LOSS	0.4	249.6	CORE LOSS
398.0	CARBONDALE		CLAYSTONE	2.2	250.0	WITH LIMESTONE NODULES
395.8	CARBONDALE	BANKSTON FORK	LIMESTONE	0.9	252.2	
394.9	CARBONDALE		CALCAREOUS CLAYSTONE	1.2	253.1	
393.7	CARBONDALE		SILTSTONE	6.2	254.3	
387.5	CARBONDALE		SILTY SHALE	7.5	260.5	WITH LIMESTONE NODULES
380.0	CARBONDALE		SILTY SHALE	3.4	268.0	
376.6	CARBONDALE	BRERETON	LIMESTONE	7.5	271.4	
369.1	CARBONDALE	ANNA	SHALE	0.1	278.9	DARK GRAY, FOSSILFEKONS
369.0	CARBONDALE	HERRIN	COAL	7.8	279.0	
361.2	CARBONDALE		CLAYSTONE	0.5	286.8	
360.7	CARBONDALE		CLAYSTONE	1.8	287.3	WITH LIMESTONE NODULES
358.9	CARBONDALE	HIGGINSVILLE	LIMESTONE	2.0	289.1	WITH CLAYST PTS.
356.9	CARBONDALE		SHALE	1.9	291.1	WITH LIMESTONE NODULES
355.0	CARBONDALE		SILTSTONE	1.0	293.0	
354.0	CARBONDALE		GRAY SHALE	3.0	294.0	
351.0	CARBONDALE		CALCAREOUS SHALE	5.3	297.0	WITH LIMESTONE NODULES
345.7	CARBONDALE		SHALE	3.6	302.3	WITH SILTSTONE

MAPID: 11723753000C VERSION: 1

PROJECT: LUMP

COUNTY: MACOUPIN TWP/RNG: 9N 7W SECTION: 34 QUARTERS/FOOTAGES: NW SW NW

QUADRANGLE: GILLESPIE NORTH LONGITUDE: -89.867386 GEOLOGIST: J.MCBETH

CONFIDENTIAL: N LATITUDE: 39.183262 DATE COLLECTED:

SURFACE ELEVATION (FT.): 647.0 LOGGED (FT.): 288.0 LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO. 1M-89-83 WELL TYPE: Coal Test

COMMENT: PERMIT 56

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
647.0	PLEISTOCENE		SOIL	2.0	0.0	
645.0	PLEISTOCENE		CLAY	18.0	2.0	
627.0	PLEISTOCENE		SANDY CLAY	10.0	20.0	
617.0	PLEISTOCENE		CLAY	10.0	30.0	WITH PEAT
607.0	PLEISTOCENE		CLAY	18.0	40.0	
589.0	BOND		SILTY SHALE	14.0	58.0	MEDIUM DARK GRAY
575.0	BOND	CARTHAGE	FOSSILIFEROUS LIMESTONE	6.0	72.0	
569.0	MODESTO		SHALE	12.0	78.0	DARK GRAY
557.0	MODESTO		SILTY SHALE	35.0	90.0	
522.0	MODESTO		SILTSTONE	10.0	125.0	
512.0	MODESTO		SILTY SHALE	25.0	135.0	
487.0	MODESTO		SHALE	30.0	160.0	MEDIUM TO DARK GRAY
457.0	MODESTO		SILTSTONE	7.0	190.0	
450.0	MODESTO		SHALE	8.0	197.0	GREEN-GRAY
442.0	MODESTO		SHALE	5.0	205.0	DARK GRAY
437.0	MODESTO		SHALE	16.0	210.0	GREEN-GRAY
421.0	MODESTO	PIASA	FOSSILIFEROUS LIMESTONE	5.0	226.0	
416.0	MODESTO		SHALE	4.0	231.0	DARK GRAY
412.0	CARBONDALE	DANVILLE	COAL	2.0	235.0	
410.0	CARBONDALE		SHALE	4.0	237.0	
406.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	241.0	LIGHT OLIVE GRAY
402.0	CARBONDALE		SILTY SHALE	7.4	245.0	WITH LIMESTONE NODULES; GREEN-GRAY
394.6	CARBONDALE		LIMESTONE	1.0	252.4	GREEN GRAY TO BLUE GRAY; NODULAR
393.6	CARBONDALE		CALCAREOUS SHALE	6.3	253.4	
387.3	CARBONDALE		CALCAREOUS SHALE	2.1	259.7	FOSSILIFEROUS
385.2	CARBONDALE	BRERETON	LIMESTONE	3.4	261.8	FOSSILIFEROUS
381.8	CARBONDALE	BRERETON	LIMESTONE	3.8	265.2	NODULAR
378.0	CARBONDALE	ANNA	GRAY SHALE	0.1	269.0	DARK, HARD
377.9	CARBONDALE	HERRIN	COAL	7.0	269.1	
370.9	CARBONDALE		CLAYSTONE	1.0	276.1	
369.9	CARBONDALE	HIGGINSVILLE	LIMESTONE	4.8	277.1	NODULAR; LT. GRAY TO GREEN GRAY
365.1	CARBONDALE	HIGGINSVILLE	CALCAREOUS CLAYSTONE	0.4	281.9	FOSSILIFEROUS
364.7	CARBONDALE	HIGGINSVILLE	LIMESTONE	1.2	282.3	
363.5	CARBONDALE		CONGLOMERATE	1.4	283.5	LIMESTONE, SHALE, CLAYSTONE PEBBLES
362.1	CARBONDALE		CLAYSTONE	2.7	284.9	
359.4	CARBONDALE		CORE LOSS	0.4	287.6	CORE LOSS

MAPID: 11701058000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 36 **QUARTERS/FOOTAGES:** 75' N line, 40' W line
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.831033 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.188161 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 648.0 **LOGGED (FT.):** 313.7 **LOG TYPE:** Survey Core Study
SOURCE: PEABODY COAL CO. G-10 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
379.2	MODESTO	PIASA	LIMESTONE	5.4	268.8
373.8	CARBONDALE		GRAY SHALE	12.0	274.2
361.8	CARBONDALE	BANKSTON FORK	LIMESTONE	6.7	286.2
355.1	CARBONDALE	ENERGY	GRAY SHALE	13.1	292.9
342.0	CARBONDALE	HERRIN	COAL	7.7	306.0

MAPID: 11701058000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 36 **QUARTERS/FOOTAGES:** 75' N line, 40' W line
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.831033 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.188161 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 648.0 **LOGGED (FT.):** 313.6 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. G-10 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
379.2	MODESTO	PIASA	LIMESTONE	5.4	268.8
373.8	MODESTO		UNCLASSIFIED	3.0	274.2
370.8	CARBONDALE		UNCLASSIFIED	9.0	277.2
361.8	CARBONDALE	BANKSTON FORK	LIMESTONE	6.7	286.2
355.1	CARBONDALE	ENERGY	SHALE	13.1	292.9
342.0	CARBONDALE	HERRIN	COAL	7.6	306.0

MAPID: 11701058000C **VERSION:** 3 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 9N 7W **SECTION:** 36 **QUARTERS/FOOTAGES:** 75' N line, 40' W line
QUADRANGLE: GILLESPIE NORTH **LONGITUDE:** -89.831033 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.188161 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 648.1 **LOGGED (FT.):** 314.8 **LOG TYPE:** Drillers Log
SOURCE: PEABODY COAL CO. G-10 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
341.8	CARBONDALE	HERRIN	COAL	7.7	306.3

MAPID: 11721622000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 9N 8W **SECTION:** 1 **QUARTERS/FOOTAGES:** 46' N line, 436' W line of NW
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.927409 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.258514 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 622.0 **LOGGED (FT.):** 243.5 **LOG TYPE:** Survey Core Study
SOURCE: AMAX C.C. M23 **WELL TYPE:** Coal Test
COMMENT: DRILLER'S LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
392.8	CARBONDALE	HERRIN	COAL	5.0	229.2

MAPID: 11790273000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 9N 8W **SECTION:** 1 **QUARTERS/FOOTAGES:** 46' N line, 436' W line of NE NE
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.927409 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.258514 **DATE COLLECTED:** 1 / 24 / 1975
SURFACE ELEVATION (FT.): 620.5 **LOGGED (FT.):** 243.5 **LOG TYPE:** Drillers Log
SOURCE: AMAX M23 **WELL TYPE:** Coal Test
COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.5	PLEISTOCENE		UNCONSOLIDATED	75.0	0.0
545.5			ROCK	137.3	75.0
408.2	CARBONDALE	JAMESTOWN	COAL	1.3	212.3
406.9	CARBONDALE		ROCK	13.4	213.6
393.5	CARBONDALE	HERRIN	COAL	6.5	227.0
387.0	CARBONDALE		ROCK	10.0	233.5

MAPID: 11721626000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 9N 8W **SECTION:** 2 **QUARTERS/FOOTAGES:** 49' N line, 378' W line of NW
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.960833 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.259546 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 611.0 **LOGGED (FT.):** 247.0 **LOG TYPE:** Survey Core Study
SOURCE: AMAX C.C. M-31 **WELL TYPE:** Coal Test
COMMENT: DRILLER'S LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
381.4	CARBONDALE	DANVILLE	COAL	1.5	229.6

MAPID: 11790262000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 2 QUARTERS/FOOTAGES: 556' S line, 565' W line of SW NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.951362 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.253377 DATE COLLECTED: 5 / 2 / 1977

SURFACE ELEVATION (FT.): 618.6 LOGGED (FT.): 253.0 LOG TYPE: Drillers Log

SOURCE: AMAX N513GL WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
618.6	PLEISTOCENE		UNCONSOLIDATED	20.0	0.0
598.6			ROCK	216.0	20.0
382.6	CARBONDALE	HERRIN	COAL	6.0	236.0
376.6	CARBONDALE		ROCK	11.0	242.0

MAPID: 11790281000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 2 QUARTERS/FOOTAGES: 49' N line, 378' W line of NW NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.960833 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.259546 DATE COLLECTED: 1 / 23 / 1975

SURFACE ELEVATION (FT.): 620.1 LOGGED (FT.): 267.0 LOG TYPE: Drillers Log

SOURCE: AMAX M31 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.1	PLEISTOCENE		UNCONSOLIDATED	50.0	0.0
570.1	MODESTO		ROCK	179.5	50.0
390.6	CARBONDALE	DANVILLE	COAL	2.5	229.5
388.1	CARBONDALE		ROCK	3.0	232.0
385.1	CARBONDALE	JAMESTOWN	COAL	0.6	235.0
384.5	CARBONDALE		ROCK	16.4	235.6
368.1	CARBONDALE	HERRIN	COAL	7.0	252.0
361.1	CARBONDALE		ROCK	8.0	259.0

MAPID: 11701127000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 3 QUARTERS/FOOTAGES: 2601' N line, 2440' E line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.970849 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.252867 DATE COLLECTED:

SURFACE ELEVATION (FT.): 615.3 LOGGED (FT.): 242.8 LOG TYPE: Survey Core Study

SOURCE: AYRSHIRE COLLIERIES A-67-20 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
379.8	CARBONDALE	HERRIN	COAL	7.2	235.5

MAPID: 11701127000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 3 QUARTERS/FOOTAGES: 2601' N line, 2440' E line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.970849 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.252867 DATE COLLECTED:

SURFACE ELEVATION (FT.): 615.0 LOGGED (FT.): 243.2 LOG TYPE: Survey Core Study

SOURCE: AYRSHIRE COLLIERIES A-67-20 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
418.4	MODESTO	PIASA	LIMESTONE	2.7	196.6
415.7	MODESTO		SHALE & SILTSTONE	7.5	199.3
408.2	CARBONDALE	DANVILLE	CARBONACEOUS SHALE	0.8	206.8
407.4	CARBONDALE		CALCAREOUS SHALE	1.2	207.6
406.2	CARBONDALE	GALUM	NODULAR LIMESTONE	0.2	208.8
406.1	CARBONDALE		GRAY SHALE	0.8	208.9
405.2	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	7.6	209.8
397.7	CARBONDALE	LAWSON	DARK GRAY SHALE	4.8	217.3
392.9	CARBONDALE	LAWSON	CALCAREOUS SHALE	6.2	222.1
386.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	3.1	228.3
383.7	CARBONDALE	ANNA	GRAY SHALE	4.7	231.3
379.0	CARBONDALE	HERRIN	COAL	7.2	236.0

MAPID: 11790110000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 3 QUARTERS/FOOTAGES: 39' N line, 200' E line of NE NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.972025 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.259979 DATE COLLECTED: 11 / 20 / 1967

SURFACE ELEVATION (FT.): 615.3 LOGGED (FT.): 243.7 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A67-20 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
615.3	PLEISTOCENE		UNCONSOLIDATED	80.0	0.0
535.3	MODESTO		ROCK	103.5	80.0
431.8	CARBONDALE	DANVILLE	COAL	0.8	183.5
431.0	CARBONDALE		ROCK	51.3	184.3
379.8	CARBONDALE	HERRIN	COAL	7.2	235.5
372.6	CARBONDALE		ROCK	1.0	242.7

MAPID: 11701357000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 4 QUARTERS/FOOTAGES: NW NW NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.988639 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.259758 DATE COLLECTED:

SURFACE ELEVATION (FT.): 626.0 LOGGED (FT.): 244.0 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO ED-5 WELL TYPE: Coal Test

COMMENT: CORE C-8764

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
391.4	CARBONDALE	HERRIN	COAL	7.2	234.6

MAPID: 11701357000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 4 QUARTERS/FOOTAGES: NW NW NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.988639 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.259758 DATE COLLECTED:

SURFACE ELEVATION (FT.): 626.0 LOGGED (FT.): 242.2 LOG TYPE: Survey Core Study

SOURCE: TRUAX-TRAER COAL CO ED-5 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
410.6	MODESTO	PIASA	LIMESTONE	1.3	215.4
409.3	CARBONDALE	DANVILLE	CARBONACEOUS SHALE	0.3	216.7
409.1	CARBONDALE		GRAY SHALE	9.2	216.9
399.9	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.0	226.1
396.9	CARBONDALE	LAWSON	GRAY SHALE	2.5	229.1
394.4	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.3	231.6
394.2	CARBONDALE	ANNA	BLACK SHALE	3.2	231.8
391.0	CARBONDALE	HERRIN	COAL	7.2	235.0

MAPID: 11790280000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 4 QUARTERS/FOOTAGES: 50' N line, 28' W line of NE NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.99437 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.260761 DATE COLLECTED: 1 / 23 / 1975

SURFACE ELEVATION (FT.): 619.4 LOGGED (FT.): 227.0 LOG TYPE: Drillers Log

SOURCE: AMAX M30 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
619.4	PLEISTOCENE		UNCONSOLIDATED	150.0	0.0
469.4			ROCK	62.0	150.0
407.4	CARBONDALE	HERRIN	COAL	6.9	212.0
400.5	CARBONDALE		ROCK	8.1	218.9

MAPID: 11701125000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 5 QUARTERS/FOOTAGES: 145' S line, 2633' E line

QUADRANGLE: SUMMERVILLE LONGITUDE: -90.008643 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.246629 DATE COLLECTED:

SURFACE ELEVATION (FT.): 608.3 LOGGED (FT.): 206.0 LOG TYPE: Survey Core Study

SOURCE: AYRSHIRE COLLIERIES A-67-21 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
408.0	CARBONDALE	HERRIN	COAL	4.5	200.3

MAPID: 11701125000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 5 QUARTERS/FOOTAGES: 145' S line, 2633' E line

QUADRANGLE: SUMMERVILLE LONGITUDE: -90.008643 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.246629 DATE COLLECTED:

SURFACE ELEVATION (FT.): 608.0 LOGGED (FT.): 204.5 LOG TYPE: Survey Core Study

SOURCE: AYRSHIRE COLLIERIES A-67-21 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
436.7	MODESTO	PIASA	LIMESTONE	8.5	171.3
428.2	CARBONDALE		GRAY SHALE	10.5	179.8
417.7	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.0	190.3
413.7	CARBONDALE	LAWSON	MOTTLED SHALE	4.8	194.3
408.9	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.3	199.1
408.7	CARBONDALE	ANNA	BLACK SHALE	0.7	199.3
408.0	CARBONDALE	HERRIN	COAL	4.5	200.0

MAPID: 11790111000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 5 QUARTERS/FOOTAGES: 145' S line, 7' W line of SW SE

QUADRANGLE: SUMMERVILLE LONGITUDE: -90.008373 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.246633 DATE COLLECTED: 11 / 20 / 1967

SURFACE ELEVATION (FT.): 608.3 LOGGED (FT.): 206.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A67-21 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
608.3	PLEISTOCENE		UNCONSOLIDATED	158.0	0.0
450.3			ROCK	42.3	158.0
408.0	CARBONDALE	HERRIN	COAL	4.5	200.3
403.5	CARBONDALE		ROCK	1.2	204.8

MAPID: 11790278000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 5 QUARTERS/FOOTAGES: 59' S line, 36' E line of SE SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.999425 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.246442 DATE COLLECTED: 1 / 22 / 1975

SURFACE ELEVATION (FT.): 615.8 LOGGED (FT.): 220.0 LOG TYPE: Drillers Log

SOURCE: AMAX M28 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
615.8	PLEISTOCENE		UNCONSOLIDATED	115.0	0.0
500.8			ROCK	88.5	115.0
412.3	CARBONDALE	HERRIN	COAL	5.3	203.5
407.0	CARBONDALE		ROCK	11.2	208.8

MAPID: 11790220000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 8 QUARTERS/FOOTAGES: 38' S line, 61' W line of SW SW

QUADRANGLE: SUMMERVILLE LONGITUDE: -90.01754 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.232066 DATE COLLECTED: 5 / 5 / 1977

SURFACE ELEVATION (FT.): 611.3 LOGGED (FT.): 275.0 LOG TYPE: Drillers Log

SOURCE: AMAX L209XX WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
611.3	PLEISTOCENE		UNCONSOLIDATED	20.0	0.0
591.3			ROCK	160.0	20.0
431.3	CARBONDALE	HERRIN	COAL	3.0	180.0
428.3	CARBONDALE		ROCK	78.0	183.0
350.3	CARBONDALE	SURVANT	COAL	4.0	261.0
346.3	CARBONDALE		ROCK	10.0	265.0

MAPID: 11790221000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 8 QUARTERS/FOOTAGES: 38' S line, 66' W line of SW SW

QUADRANGLE: SUMMERVILLE LONGITUDE: -90.017522 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.232064 DATE COLLECTED: 5 / 6 / 1977

SURFACE ELEVATION (FT.): 611.3 LOGGED (FT.): 195.0 LOG TYPE: Drillers Log

SOURCE: AMAX L209XX-1 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
611.3	PLEISTOCENE		UNCONSOLIDATED	24.0	0.0
587.3			ROCK	152.0	24.0
435.3	CARBONDALE	HERRIN	COAL	3.0	176.0
432.3	CARBONDALE		ROCK	16.0	179.0

MAPID: 11790222000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 8 QUARTERS/FOOTAGES: 67' N line, 66' W line of NW NW

QUADRANGLE: SUMMERVILLE LONGITUDE: -90.017259 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.245998 DATE COLLECTED: 5 / 5 / 1977

SURFACE ELEVATION (FT.): 611.3 LOGGED (FT.): 500.0 LOG TYPE: Drillers Log

SOURCE: AMAX L384DA WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
611.3	PLEISTOCENE		UNCONSOLIDATED	175.0	0.0
436.3			ROCK	32.0	175.0
404.3	CARBONDALE	HERRIN	COAL	6.0	207.0
398.3	CARBONDALE		ROCK	114.0	213.0
284.3	CARBONDALE	COLCHESTER	COAL	3.0	327.0
281.3	CARBONDALE		ROCK	98.0	330.0
183.3	TRADEWATER	LITCHFIELD	COAL	2.0	428.0
181.3			ROCK	70.0	430.0

MAPID: 11790260000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 10 QUARTERS/FOOTAGES: 570' N line, 93' E line of NE SW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.971596 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.236109 DATE COLLECTED: 5 / 2 / 1977

SURFACE ELEVATION (FT.): 614.2 LOGGED (FT.): 242.0 LOG TYPE: Drillers Log

SOURCE: AMAX N279PA WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
614.2	PLEISTOCENE		UNCONSOLIDATED	20.0	0.0
594.2			ROCK	201.0	20.0
393.2	CARBONDALE	HERRIN	COAL	5.0	221.0
388.2	CARBONDALE		ROCK	16.0	226.0

MAPID: 11790274000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 10 QUARTERS/FOOTAGES: 69' N line, 27' W line of NW NW
 QUADRANGLE: PLAINVIEW LONGITUDE: -89.980472 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.245161 DATE COLLECTED: 1 / 14 / 1975
 SURFACE ELEVATION (FT.): 618.2 LOGGED (FT.): 225.5 LOG TYPE: Drillers Log
 SOURCE: AMAX M24 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
618.2	PLEISTOCENE		UNCONSOLIDATED	85.0	0.0	
533.2			ROCK	125.5	85.0	
407.7	CARBONDALE	HERRIN	COAL	5.0	210.5	
402.7	CARBONDALE		ROCK	9.5	215.5	

MAPID: 11721625000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 11 QUARTERS/FOOTAGES: 358' N line, 195' W line of NW
 QUADRANGLE: PLAINVIEW LONGITUDE: -89.961474 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.243449 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 254.4 LOG TYPE: Survey Core Study
 SOURCE: AMAX M-29 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP PROJ.; DRILLER'S LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
400.6	CARBONDALE	DANVILLE	COAL	0.8	219.4	
379.0	CARBONDALE	HERRIN	COAL	6.5	241.0	

MAPID: 11790279000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 11 QUARTERS/FOOTAGES: 358' N line, 195' W line of NW NW
 QUADRANGLE: PLAINVIEW LONGITUDE: -89.961474 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.243449 DATE COLLECTED: 1 / 16 / 1975
 SURFACE ELEVATION (FT.): 616.2 LOGGED (FT.): 253.0 LOG TYPE: Drillers Log
 SOURCE: AMAX M29 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
616.2	PLEISTOCENE		UNCONSOLIDATED	150.0	0.0	
466.2	MODESTO		ROCK	10.0	150.0	
456.2	CARBONDALE	DANVILLE	COAL	2.0	160.0	
454.2	CARBONDALE		ROCK	79.0	162.0	
375.2	CARBONDALE	HERRIN	COAL	6.5	241.0	
368.7	CARBONDALE		ROCK	5.5	247.5	

MAPID: 11790252000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 12 QUARTERS/FOOTAGES: 683' N line, 665' W line of NE NE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.92665 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.242331 DATE COLLECTED: 2 / 21 / 1975

SURFACE ELEVATION (FT.): 609.7 LOGGED (FT.): 245.0 LOG TYPE: Drillers Log

SOURCE: AMAX M52 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
609.7	PLEISTOCENE		UNCONSOLIDATED	145.0	0.0
464.7	MODESTO		ROCK	56.0	145.0
408.7	CARBONDALE	DANVILLE	COAL	2.0	201.0
406.7	CARBONDALE		ROCK	2.8	203.0
403.9	CARBONDALE	JAMESTOWN	COAL	0.8	205.8
403.1			ROCK	19.0	206.6
384.1	CARBONDALE	HERRIN	COAL	4.4	225.6
379.7	CARBONDALE		ROCK	15.0	230.0

MAPID: 11790261000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 12 QUARTERS/FOOTAGES: 10' N line, 41' W line of NW SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.933902 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.237004 DATE COLLECTED: 5 / 19 / 1977

SURFACE ELEVATION (FT.): 611.9 LOGGED (FT.): 265.0 LOG TYPE: Drillers Log

SOURCE: AMAX N321YY WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
611.9	PLEISTOCENE		UNCONSOLIDATED	174.0	0.0
437.9	MODESTO		ROCK	1.0	174.0
436.9	MODESTO	ROCK BRANCH	COAL	1.0	175.0
435.9			ROCK	74.0	176.0
361.9	CARBONDALE	HERRIN	COAL	6.0	250.0
355.9	CARBONDALE		ROCK	9.0	256.0

MAPID: 11721627000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 14 QUARTERS/FOOTAGES: 54' N line, 1' E line of NE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.944016 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.229625 DATE COLLECTED:

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 225.0 LOG TYPE: Survey Core Study

SOURCE: AMAX 32 WELL TYPE: Coal Test

COMMENT: DRILLER'S LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
410.1	CARBONDALE	DANVILLE	COAL	0.5	189.9
385.0	CARBONDALE	HERRIN	COAL	6.3	215.0

MAPID: 11790259000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 14 QUARTERS/FOOTAGES: 41' N line, 256' W line of NW SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.951979 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.222748 DATE COLLECTED: 5 / 16 / 1977

SURFACE ELEVATION (FT.): 597.0 LOGGED (FT.): 239.0 LOG TYPE: Drillers Log

SOURCE: AMAX N88EF WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
597.0	PLEISTOCENE		UNCONSOLIDATED	120.0	0.0
477.0	MODESTO		ROCK	14.0	120.0
463.0	MODESTO		COAL	1.0	134.0
462.0	MODESTO		ROCK	23.0	135.0
439.0	MODESTO		COAL	1.0	158.0
438.0	MODESTO		ROCK	35.0	159.0
403.0	CARBONDALE	DANVILLE	COAL	1.0	194.0
402.0	CARBONDALE		ROCK	20.0	195.0
382.0	CARBONDALE	HERRIN	COAL	4.0	215.0
378.0	CARBONDALE		ROCK	20.0	219.0

MAPID: 11790282000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 14 QUARTERS/FOOTAGES: 54' N line, 1' E line of NE NE
 QUADRANGLE: PLAINVIEW LONGITUDE: -89.944016 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.229625 DATE COLLECTED: 1 / 24 / 1975
 SURFACE ELEVATION (FT.): 606.5 LOGGED (FT.): 230.0 LOG TYPE: Drillers Log
 SOURCE: AMAX M32 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
606.5	PLEISTOCENE		UNCONSOLIDATED	131.0	0.0
475.5	MODESTO		ROCK	62.7	131.0
412.8	CARBONDALE	DANVILLE	COAL	0.6	193.7
412.2	CARBONDALE		ROCK	3.9	194.3
408.3	CARBONDALE	JAMESTOWN	COAL	0.8	198.2
407.5	CARBONDALE		ROCK	16.0	199.0
391.5	CARBONDALE	HERRIN	COAL	5.6	215.0
385.9	CARBONDALE		ROCK	9.4	220.6

MAPID: 11721623000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 15 QUARTERS/FOOTAGES: 51' N line, 26' W line of NW NW
 QUADRANGLE: PLAINVIEW LONGITUDE: -89.980574 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.230502 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 615.9 LOGGED (FT.): 215.9 LOG TYPE: Survey Core Study
 SOURCE: AMAX M-25 WELL TYPE: Coal Test
 COMMENT: DRILLER'S LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
435.4	CARBONDALE	DANVILLE	COAL	1.5	180.5
414.6	CARBONDALE	HERRIN	COAL	6.3	201.3

MAPID: 11790254000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 15 QUARTERS/FOOTAGES: 100' S line, 43' E line of SE SE
 QUADRANGLE: PLAINVIEW LONGITUDE: -89.962084 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.216207 DATE COLLECTED: 2 / 20 / 1975
 SURFACE ELEVATION (FT.): 540.2 LOGGED (FT.): 213.0 LOG TYPE: Drillers Log
 SOURCE: AMAX M54 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
540.2	PLEISTOCENE		UNCONSOLIDATED	40.0	0.0
500.2			ROCK	173.0	40.0

MAPID: 11790257000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 15 QUARTERS/FOOTAGES: 1200' N line, 319' E line of SE SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.963063 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.216226 DATE COLLECTED: 8 / 10 / 1977

SURFACE ELEVATION (FT.): 539.9 LOGGED (FT.): 167.0 LOG TYPE: Drillers Log

SOURCE: AMAX N33FJ WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
539.9	PLEISTOCENE		UNCONSOLIDATED	39.0	0.0	
500.9			ROCK	114.0	39.0	
386.9	CARBONDALE	HERRIN	COAL	6.0	153.0	
380.9	CARBONDALE		ROCK	8.0	159.0	

MAPID: 11790258000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 15 QUARTERS/FOOTAGES: 50' N line, 52' W line of NW SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.970992 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.223173 DATE COLLECTED: 5 / 11 / 1977

SURFACE ELEVATION (FT.): 607.0 LOGGED (FT.): 232.0 LOG TYPE: Drillers Log

SOURCE: AMAX N80DE WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
607.0	PLEISTOCENE		UNCONSOLIDATED	105.0	0.0	
502.0			ROCK	103.0	105.0	
399.0	CARBONDALE	HERRIN	COAL	7.0	208.0	
392.0	CARBONDALE		ROCK	17.0	215.0	

MAPID: 11790275000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 15 QUARTERS/FOOTAGES: 51' N line, 26' W line of NW NW
 QUADRANGLE: PLAINVIEW LONGITUDE: -89.980574 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.230502 DATE COLLECTED: 1 / 16 / 1974
 SURFACE ELEVATION (FT.): 615.9 LOGGED (FT.): 218.0 LOG TYPE: Drillers Log
 SOURCE: AMAX M25 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
615.9	PLEISTOCENE		UNCONSOLIDATED	140.0	0.0
475.9	MODESTO		ROCK	40.3	140.0
435.6	CARBONDALE	DANVILLE	COAL	1.9	180.3
433.7	CARBONDALE		ROCK	3.1	182.2
430.6	CARBONDALE	JAMESTOWN	COAL	0.7	185.3
429.9	CARBONDALE		ROCK	15.2	186.0
414.7	CARBONDALE	HERRIN	COAL	6.3	201.2
408.4	CARBONDALE		ROCK	10.5	207.5

MAPID: 11790277000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 15 QUARTERS/FOOTAGES: 41' S line, 56' W line of SW SW
 QUADRANGLE: PLAINVIEW LONGITUDE: -89.980192 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.216554 DATE COLLECTED: 1 / 29 / 1975
 SURFACE ELEVATION (FT.): 614.1 LOGGED (FT.): 223.6 LOG TYPE: Drillers Log
 SOURCE: AMAX M27 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
614.1	PLEISTOCENE		UNCONSOLIDATED	145.0	0.0
469.1			ROCK	63.2	145.0
405.9	CARBONDALE	HERRIN	COAL	6.3	208.2
399.6	CARBONDALE		ROCK	9.1	214.5

MAPID: 11701279000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 16 QUARTERS/FOOTAGES: 1' N line, 1700' E line of NE
 QUADRANGLE: PLAINVIEW LONGITUDE: -89.986715 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.230951 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 605.0 LOGGED (FT.): 188.0 LOG TYPE: Survey Core Study
 SOURCE: ATLANTIC RICHFIELD P-11 WELL TYPE: Coal Test
 COMMENT: DRILLERS LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
424.0	CARBONDALE	HERRIN	COAL	4.9	181.0

MAPID: 11790276000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 16 QUARTERS/FOOTAGES: 36' N line, 19' W line of NW NW
 QUADRANGLE: PLAINVIEW LONGITUDE: -89.998993 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.231487 DATE COLLECTED: 1 / 20 / 1975
 SURFACE ELEVATION (FT.): 612.8 LOGGED (FT.): 230.0 LOG TYPE: Drillers Log
 SOURCE: AMAX M26 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
612.8	PLEISTOCENE		UNCONSOLIDATED	150.0	0.0	
462.8			ROCK	64.5	150.0	
398.3			COAL	6.0	214.5	
392.3	CARBONDALE		ROCK	9.5	220.5	

MAPID: 11790283000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 17 QUARTERS/FOOTAGES: 35' N line, 47' W line of NW NW
 QUADRANGLE: SUMMERVILLE LONGITUDE: -90.017592 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.231865 DATE COLLECTED: 2 / 7 / 1975
 SURFACE ELEVATION (FT.): 637.4 LOGGED (FT.): 280.0 LOG TYPE: Drillers Log
 SOURCE: AMAX M33 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
637.4	PLEISTOCENE		UNCONSOLIDATED	138.0	0.0	
499.4	MODESTO		ROCK	101.3	138.0	
398.1	CARBONDALE	DANVILLE	COAL	2.2	239.3	
395.9	CARBONDALE		ROCK	21.5	241.5	
374.4	CARBONDALE	HERRIN	COAL	7.4	263.0	
367.0	CARBONDALE		ROCK	9.6	270.4	

MAPID: 1170045000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 22 QUARTERS/FOOTAGES: 0' S line, 2640' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.970913 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.201748 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): LOGGED (FT.): 224.0 LOG TYPE: Drillers Log

SOURCE: SINCLAIR REFINING CO. WELL TYPE: Coal Test

COMMENT: #6 ELV 100FT LOW; PROBABLY MIS-LOCATED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			SOIL	34.0	0.0
-			GRAVEL	2.0	34.0
-	MODESTO		SHALE	4.5	36.0
-	MODESTO		SANDSTONE	1.0	40.5
-	MODESTO		SHALE	29.0	41.5
-	MODESTO		LIMESTONE	0.5	70.5
-	MODESTO		SHALE	94.0	71.0
-	MODESTO		COAL	0.5	165.0
-	MODESTO		SHALE	18.5	165.5
-	MODESTO		LIMESTONE	0.5	184.0
-	MODESTO		SHALE	3.5	184.5
-	MODESTO	PIASA	LIMESTONE	2.0	188.0
-	MODESTO		SHALE	7.0	190.0
-	CARBONDALE	DANVILLE	COAL	0.7	197.0
-	CARBONDALE		SHALE	4.3	197.7
-	CARBONDALE		COAL	0.3	202.0
-	CARBONDALE		CALCAREOUS SHALE	3.7	202.3
-	CARBONDALE		LIMESTONE	6.0	206.0
-	CARBONDALE		SHALE	4.3	212.0
-	CARBONDALE	ANNA	BLACK SHALE	0.4	216.3
-	CARBONDALE	HERRIN	COAL	6.2	216.8
-	CARBONDALE		UNDERCLAY	1.1	222.9

MAPID: 1170045000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 22 QUARTERS/FOOTAGES: 0' S line, 2640' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.970913

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.201748

DATE COLLECTED:

SURFACE ELEVATION (FT.): 530.0

LOGGED (FT.): 222.2

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: #6 ELV 100FT LOW; PROBABLY MIS-LOCATED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
342.8	MODESTO	PIASA	LIMESTONE	2.0	187.2
340.8	MODESTO		GRAY SHALE	7.0	189.2
333.8	CARBONDALE	DANVILLE	COAL	0.7	196.2
333.1	CARBONDALE		GRAY SHALE	4.3	196.9
328.8	CARBONDALE	ALLENBY	COAL	0.3	201.2
328.4	CARBONDALE		GRAY SHALE	3.7	201.6
324.8	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	205.2
318.8	CARBONDALE	LAWSON	GRAY SHALE	4.3	211.2
314.4	CARBONDALE	ANNA	BLACK SHALE	0.4	215.6
314.0	CARBONDALE	HERRIN	COAL	6.2	216.0

MAPID: 11700086000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 23 QUARTERS/FOOTAGES: SE SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.945992 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.203027 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 608.4 LOGGED (FT.): 245.0 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MCHY. CO., HOLE #6 WELL TYPE: Coal Test

COMMENT: UNION PACIFIC COAL CO. LISTED AS FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
608.4			CLAY	18.0	0.0	
590.4			SAND & GRAVEL	104.0	18.0	
486.4	MODESTO		SHALE	46.0	122.0	
440.4	MODESTO	PIASA	LIMESTONE	7.0	168.0	
433.4	MODESTO		SHALE	4.8	175.0	
428.6	CARBONDALE	DANVILLE	COAL	0.3	179.8	
428.4	CARBONDALE		LIMESTONE	21.5	180.0	
406.9	CARBONDALE		SHALE	2.0	201.5	
404.9	CARBONDALE	HERRIN	COAL	3.6	203.5	W/ BLUE BAND .42'
401.3	CARBONDALE		SHALE	2.8	207.1	
398.5	CARBONDALE		LIMESTONE	0.7	209.9	
397.8	CARBONDALE		SHALE	0.3	210.6	
397.5	CARBONDALE		LIMESTONE	0.4	210.9	
397.1	CARBONDALE		SHALE	0.3	211.3	
396.7	CARBONDALE		LIMESTONE	1.0	211.7	
395.7	CARBONDALE		SHALE	6.8	212.7	
388.9	CARBONDALE		LIMESTONE	2.3	219.5	
386.6	CARBONDALE		SHALE	3.3	221.8	
383.4	CARBONDALE		SANDY SHALE	10.0	225.0	
373.4	CARBONDALE		SHALY SANDSTONE	10.0	235.0	

MAPID: 11700086000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 23 QUARTERS/FOOTAGES: SE SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.945992 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.203027 DATE COLLECTED:

SURFACE ELEVATION (FT.): 608.0 LOGGED (FT.): 206.6 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
440.0	MODESTO	PIASA	LIMESTONE	7.0	168.0
433.0	MODESTO		GRAY SHALE	4.8	175.0
428.2	CARBONDALE	DANVILLE	COAL	3.3	179.8
425.0	CARBONDALE	BANKSTON FORK	LIMESTONE	11.5	183.0
413.5	CARBONDALE	BRERETON	LIMESTONE	8.0	194.5
405.5	CARBONDALE	ANNA	GRAY SHALE	6.2	202.5
405.0	CARBONDALE	HERRIN	COAL	3.6	203.0

MAPID: 11790149000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 23 QUARTERS/FOOTAGES: 359' N line, 48' W line of NW SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.952624 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.207538 DATE COLLECTED: 5 / 9 / 1977

SURFACE ELEVATION (FT.): 562.4 LOGGED (FT.): 169.0 LOG TYPE: Drillers Log

SOURCE: AMAX Q488JE WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
562.4	PLEISTOCENE		UNCONSOLIDATED	90.0	0.0
472.4			ROCK	66.0	90.0
406.4	CARBONDALE	HERRIN	COAL	3.0	156.0
403.4	CARBONDALE		ROCK	10.0	159.0

MAPID: 11721634000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 24 QUARTERS/FOOTAGES: 2593' S line, 1245' E line of SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.92848 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.208082 DATE COLLECTED:

SURFACE ELEVATION (FT.): 605.0 LOGGED (FT.): 243.0 LOG TYPE: Survey Core Study

SOURCE: AMAX M-53 WELL TYPE: Coal Test

COMMENT: DRILLER'S LOG PUTS COAL SEAM 222-224'

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
383.0	CARBONDALE	DANVILLE	COAL	2.0	222.0
370.0	CARBONDALE	HERRIN	COAL	5.0	235.0

MAPID: 11790253000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 24 QUARTERS/FOOTAGES: 47' N line, 75' W line of NE SE

QUADRANGLE: PLAINVIEW LONGITUDE: -89.92848 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.208082 DATE COLLECTED: 2 / 18 / 1975

SURFACE ELEVATION (FT.): 612.9 LOGGED (FT.): 243.0 LOG TYPE: Drillers Log

SOURCE: AMAX M53 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
612.9	PLEISTOCENE		UNCONSOLIDATED	90.0	0.0	
522.9			ROCK	145.0	90.0	
377.9	CARBONDALE	HERRIN	COAL	4.0	235.0	
373.9	CARBONDALE		ROCK	4.0	239.0	

MAPID: 11700628000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 25 QUARTERS/FOOTAGES: 330' S line, 1650' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.937573 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.187776 DATE COLLECTED:

SURFACE ELEVATION (FT.): 610.0 LOGGED (FT.): 236.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.0	MODESTO	PIASA	LIMESTONE	4.0	195.0	
411.0	CARBONDALE		SILTY SHALE	10.0	199.0	
401.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	209.0	
393.0	CARBONDALE	BRERETON	LIMESTONE AND SANDSTONE	5.0	217.0	
388.0	CARBONDALE	ANNA	SILTY SHALE	9.0	222.0	
379.0	CARBONDALE	HERRIN	COAL	5.0	231.0	

MAPID: 11700931000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 26 QUARTERS/FOOTAGES: 390' N line, 2310' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.951899 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.200225 DATE COLLECTED:

SURFACE ELEVATION (FT.): 615.0 LOGGED (FT.): 229.5 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
421.5	MODESTO	PIASA	LIMESTONE	5.0	193.5
416.5	CARBONDALE		SHALE	12.0	198.5
404.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	210.5
401.5	CARBONDALE	LAWSON	SHALE	3.5	213.5
398.0	CARBONDALE	BRERETON	LIMESTONE	6.0	217.0
392.0	CARBONDALE	ANNA	SHALE	2.0	223.0
390.0	CARBONDALE	HERRIN	COAL	4.5	225.0

MAPID: 11700371000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 28 QUARTERS/FOOTAGES: 375' N line, 50' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.980452 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.201049 DATE COLLECTED: 1 / 0 / 1919

SURFACE ELEVATION (FT.): 532.2 LOGGED (FT.): 123.0 LOG TYPE: Drillers Log

SOURCE: SINCLAIR REFINING CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
532.2			SAND	4.0	0.0
528.2			WOOD	1.5	4.0
526.7			CLAY	1.5	5.5
525.2			SAND	15.0	7.0
510.2	MODESTO		SHALE	26.6	22.0
483.6	MODESTO		COAL	0.4	48.6
483.2	MODESTO		SHALE	22.2	49.0
461.0	MODESTO		COAL	0.3	71.2
460.7	MODESTO		SHALE	15.5	71.5
445.2	MODESTO	PIASA	LIMESTONE	8.0	87.0
437.2	MODESTO		SHALE	9.0	95.0
428.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	104.0
425.2	CARBONDALE		CALCAREOUS SHALE	3.0	107.0
422.2	CARBONDALE	BRERETON	LIMESTONE	5.4	110.0
416.8	CARBONDALE	ANNA	BLACK SHALE	2.6	115.4
414.2	CARBONDALE	HERRIN	COAL	4.5	118.0
409.7	CARBONDALE		UNDERCLAY	0.5	122.5

MAPID: 11700371000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 28 QUARTERS/FOOTAGES: 375' N line, 50' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.980452

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.201049

DATE COLLECTED:

SURFACE ELEVATION (FT.): 523.0

LOGGED (FT.): 122.5

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
436.0	MODESTO	PIASA	LIMESTONE	8.0	87.0
428.0	CARBONDALE		GRAY SHALE	9.0	95.0
419.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	104.0
416.0	CARBONDALE	LAWSON	CALCAREOUS SHALE	3.0	107.0
413.0	CARBONDALE	BRERETON	LIMESTONE	5.4	110.0
407.6	CARBONDALE	ANNA	BLACK SHALE	2.6	115.4
405.0	CARBONDALE	HERRIN	COAL	4.5	118.0

MAPID: 11700088000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 33 QUARTERS/FOOTAGES: 4280' S line, 2735' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.989859 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.185307 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 605.3 LOGGED (FT.): 228.0 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MACHINE CO, HOLE #8 WELL TYPE: Coal Test

COMMENT: UNION PACIFIC COAL CO. FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
605.3			SOIL	10.0	0.0
595.3			HARD PAN	17.0	10.0
578.3			SANDY CLAY	16.0	27.0
562.3	MODESTO		SANDY SHALE	15.8	43.0
546.5	MODESTO	CHAPEL	COAL	0.3	58.8
546.3	MODESTO		SHALE	3.0	59.0
543.3	MODESTO		LIMESTONE	6.0	62.0
537.3	MODESTO		SHALE	83.6	68.0
453.7	MODESTO		COAL	0.2	151.6
453.5	MODESTO		SHALE	17.3	151.8
436.3	MODESTO		LIMESTONE	1.0	169.0
435.3	MODESTO		SHALE	18.0	170.0
417.3	MODESTO	PIASA	LIMESTONE	4.0	188.0
413.3	MODESTO		SHALE	7.0	192.0
406.3	CARBONDALE		LIMESTONE	1.0	199.0
405.3	CARBONDALE		SHALE	2.0	200.0
403.3	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	202.0
397.3	CARBONDALE		SHALE	2.0	208.0
395.3	CARBONDALE	BRERETON	LIMESTONE	5.0	210.0
390.3	CARBONDALE	ANNA	BLACK SHALE	2.9	215.0
387.4	CARBONDALE	HERRIN	COAL	5.2	217.9
382.2	CARBONDALE		SHALE	1.1	223.1
381.1	CARBONDALE		LIMESTONE W/ SHALE	3.8	224.2

MAPID: 11700088000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 33 QUARTERS/FOOTAGES: 4280' S line, 2735' E line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.989859

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.185307

DATE COLLECTED:

SURFACE ELEVATION (FT.): 605.0

LOGGED (FT.): 217.2

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
422.9	MODESTO	PIASA	LIMESTONE	4.0	182.1
418.9	CARBONDALE		GRAY SHALE	7.0	186.1
411.9	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	9.0	193.1
402.9	CARBONDALE	LAWSON	DARK GRAY SHALE	2.0	202.1
400.9	CARBONDALE	BRERETON	LIMESTONE	5.0	204.1
395.9	CARBONDALE	ANNA	BLACK SHALE	2.9	209.1
393.0	CARBONDALE	HERRIN	COAL	5.2	212.0

MAPID: 11700341000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 34 QUARTERS/FOOTAGES: 315' S line, 150' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.979542 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.174073 DATE COLLECTED: 1 / 0 / 1919

SURFACE ELEVATION (FT.): 614.6 LOGGED (FT.): 237.0 LOG TYPE: Drillers Log

SOURCE: SINCLAIR REFINING CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
614.6			CLAY	34.0	0.0	
580.6	MODESTO		SHALE	1.0	34.0	
579.6	MODESTO	CARLINVILLE	LIMESTONE	6.0	35.0	
573.6	MODESTO		SHALE	16.5	41.0	
557.1	MODESTO		BONE COAL	0.5	57.5	
556.6	MODESTO		SHALE	11.1	58.0	
545.5	MODESTO	CHAPEL	COAL	0.5	69.1	
545.0	MODESTO		SHALE	89.4	69.6	
455.6	MODESTO		COAL	0.3	159.0	
455.3	MODESTO		SHALE	30.7	159.3	
424.6	MODESTO		LIMESTONE	1.0	190.0	
423.6	MODESTO		SHALE	7.0	191.0	
416.6	MODESTO	PIASA	LIMESTONE	4.5	198.0	
412.1	MODESTO		SHALE	5.3	202.5	
406.8	CARBONDALE	DANVILLE	COAL	2.3	207.8	
404.6	CARBONDALE		SHALE	6.5	210.0	
398.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	216.5	
396.1	CARBONDALE		SHALE	3.0	218.5	W/LS BANDS
393.1	CARBONDALE	BRERETON	LIMESTONE	4.8	221.5	
388.3	CARBONDALE	ANNA	BLACK SHALE	1.7	226.3	
386.6	CARBONDALE	HERRIN	COAL	7.5	228.0	
379.1	CARBONDALE		UNDERCLAY	1.5	235.5	

MAPID: 11700341000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 34 QUARTERS/FOOTAGES: 315' S line, 150' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.979542 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.174073 DATE COLLECTED:

SURFACE ELEVATION (FT.): 615.0 LOGGED (FT.): 235.5 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
417.1	MODESTO	PIASA	LIMESTONE	4.5	197.9
412.6	MODESTO		GRAY SHALE	5.3	202.4
407.2	CARBONDALE	DANVILLE	COAL	2.3	207.8
405.0	CARBONDALE		GRAY SHALE	6.5	210.0
398.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	216.5
396.5	CARBONDALE	LAWSON	LIMESTONE W/ SHALE	3.0	218.5
393.5	CARBONDALE	BRERETON	LIMESTONE	4.8	221.5
388.7	CARBONDALE	ANNA	BLACK SHALE	1.7	226.3
387.0	CARBONDALE	HERRIN	COAL	7.5	228.0

MAPID: 11700451000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 34 QUARTERS/FOOTAGES: 2640' S line, 1' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.980118 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.180509 DATE COLLECTED: 1 / 0 / 1919

SURFACE ELEVATION (FT.): 605.0 LOGGED (FT.): 233.0 LOG TYPE: Drillers Log

SOURCE: SINCLAIR REFINING CO. WELL TYPE: Coal Test

COMMENT: LOC. IS CENTER OF W. LINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
605.0			SOIL	16.0	0.0
589.0			CLAY & GRAVEL	35.6	16.0
553.4	MODESTO		SHALE	45.4	51.6
508.0	MODESTO		SANDSTONE	9.0	97.0
499.0	MODESTO		SHALE	56.3	106.0
442.7	MODESTO		COAL	0.6	162.3
442.1	MODESTO		SHALE	31.1	162.9
411.0	MODESTO	PIASA	LIMESTONE	4.0	194.0
407.0	MODESTO		SHALE	13.5	198.0
393.5	CARBONDALE	DANVILLE	COAL	1.2	211.5
392.3	CARBONDALE		CALCAREOUS SHALE	1.3	212.7
391.0	CARBONDALE		LIMESTONE	8.5	214.0
382.5	CARBONDALE		CALCAREOUS SHALE	2.5	222.5
380.0	CARBONDALE		SHALE	1.0	225.0
379.0	CARBONDALE	HERRIN	COAL	5.6	226.0
373.4	CARBONDALE		UNDERCLAY	1.2	231.6
372.2	CARBONDALE		SHALE	0.3	232.8

MAPID: 11700373000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 35 QUARTERS/FOOTAGES: 160' N line, 210' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.96116 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.186681 DATE COLLECTED: 1 / 0 / 1919

SURFACE ELEVATION (FT.): 603.3 LOGGED (FT.): 210.0 LOG TYPE: Drillers Log

SOURCE: SINCLAIR REFINING CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
603.3			SOIL	30.0	0.0	YELLOW CLAY
573.3			CLAY	10.0	30.0	LOG HAS "W/SS BANDS"
563.3			SANDY CLAY	40.0	40.0	
523.3			CLAY	35.0	80.0	
488.3	MODESTO		SHALE	22.2	115.0	
466.1	MODESTO		COAL	0.4	137.2	
465.7	MODESTO		SHALE	26.9	137.6	
438.8	MODESTO		LIMESTONE	1.0	164.5	
437.8	MODESTO		SHALE	7.5	165.5	
430.3	MODESTO	PIASA	LIMESTONE	3.0	173.0	
427.3	MODESTO		SHALE	10.0	176.0	
417.3	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	186.0	
415.3	CARBONDALE		SHALE	9.0	188.0	
406.3	CARBONDALE	BRERETON	LIMESTONE	6.5	197.0	
399.8	CARBONDALE		CALCAREOUS SHALE	0.3	203.5	
399.5	CARBONDALE	HERRIN	COAL	5.0	203.8	
394.5	CARBONDALE		UNDERCLAY	1.3	208.8	

MAPID: 11700373000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 35 QUARTERS/FOOTAGES: 160' N line, 210' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.96116 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.186681 DATE COLLECTED:

SURFACE ELEVATION (FT.): 603.0 LOGGED (FT.): 209.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
429.8	MODESTO	PIASA	LIMESTONE	3.0	173.2	
426.8	CARBONDALE		GRAY SHALE	10.0	176.2	
416.8	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	186.2	
414.8	CARBONDALE	LAWSON	GRAY SHALE	9.0	188.2	
405.8	CARBONDALE	BRERETON	LIMESTONE	6.5	197.2	
399.3	CARBONDALE	ANNA	CALCAREOUS SHALE	0.3	203.7	
399.0	CARBONDALE	HERRIN	COAL	5.0	204.0	

MAPID: 11700470000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 35 QUARTERS/FOOTAGES: 700' S line, 150' W line

QUADRANGLE: PLAINVIEW LONGITUDE: -89.961234 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.174633 DATE COLLECTED: 1 / 0 / 1919

SURFACE ELEVATION (FT.): 551.4 LOGGED (FT.): 176.0 LOG TYPE: Drillers Log

SOURCE: SINCLAIR REFINING CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
551.4			SOIL	14.0	0.0	SANDY CLAY
537.4			SAND	14.0	14.0	
523.4			SAND & GRAVEL	1.4	28.0	
522.0	MODESTO		SANDY LIMESTONE	2.1	29.4	
519.9	MODESTO		SHALE	96.5	31.5	
423.4	MODESTO		LIMESTONE	1.0	128.0	
422.4	MODESTO		SHALE	9.0	129.0	
413.4	MODESTO	PIASA	LIMESTONE	3.0	138.0	
410.4	MODESTO		SHALE	10.0	141.0	
400.4	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	151.0	
399.4	CARBONDALE		SHALE	4.0	152.0	
395.4	CARBONDALE	BRERETON	LIMESTONE	11.8	156.0	
383.6	CARBONDALE	ANNA	BLACK SHALE	1.5	167.8	
382.1	CARBONDALE	HERRIN	COAL	5.8	169.3	
376.3	CARBONDALE		UNDERCLAY	0.9	175.1	

MAPID: 11700090000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 36 QUARTERS/FOOTAGES: NE NE NW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.934653 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.185902 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 619.7 LOGGED (FT.): 240.0 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MACHY. CO., HOLE #9 WELL TYPE: Coal Test

COMMENT: UNION PACIFIC COAL CO. FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
619.7			SOIL	7.0	0.0
612.7			HARD PAN	19.0	7.0
593.7			BOULDERS & GRAVEL	3.0	26.0
590.7			SANDY CLAY	104.0	29.0
486.7			GRAVEL	5.0	133.0
481.7	MODESTO		SHALE	55.0	138.0
426.7	MODESTO	PIASA	LIMESTONE	6.0	193.0
420.7	MODESTO		SHALE	12.0	199.0
408.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	211.0
406.7	CARBONDALE		SHALE	9.0	213.0
397.7	CARBONDALE	BRERETON	LIMESTONE	8.0	222.0
389.7	CARBONDALE		SHALE	0.8	230.0
388.9	CARBONDALE	HERRIN	COAL	5.0	230.8
383.9	CARBONDALE		SHALE	2.3	235.8
381.7	CARBONDALE		LIMESTONE	2.0	238.0

MAPID: 11700090000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 8W SECTION: 36 QUARTERS/FOOTAGES: NE NE NW

QUADRANGLE: PLAINVIEW LONGITUDE: -89.934653 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.185902 DATE COLLECTED:

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 236.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
429.7	MODESTO	PIASA	LIMESTONE	6.0	190.3
423.7	CARBONDALE		GRAY SHALE	12.0	196.3
411.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	208.3
409.7	CARBONDALE	LAWSON	GRAY SHALE	12.0	210.3
397.7	CARBONDALE	BRERETON	LIMESTONE	8.0	222.3
389.7	CARBONDALE	ANNA	GRAY SHALE	0.8	230.3
389.0	CARBONDALE	HERRIN	COAL	5.0	231.0

MAPID: 11700083000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 9N 9W SECTION: 2 QUARTERS/FOOTAGES: SE NW NW

QUADRANGLE: HETTICK LONGITUDE: -90.069969 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.259572 DATE COLLECTED:

SURFACE ELEVATION (FT.): 593.0 LOGGED (FT.): 154.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
465.0	CARBONDALE	ANNA	GRAY SHALE	22.0	128.0
443.0	CARBONDALE	HERRIN	COAL	4.0	150.0

MAPID: 11790113000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 9W SECTION: 12 QUARTERS/FOOTAGES: 77' N line, 733' E line of NE NW

QUADRANGLE: SUMMERVILLE LONGITUDE: -90.048263 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.2473 DATE COLLECTED: 11 / 21 / 1967

SURFACE ELEVATION (FT.): 559.7 LOGGED (FT.): 347.4 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A67-23 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
559.7	PLEISTOCENE		UNCONSOLIDATED	129.0	0.0
430.7			ROCK	2.0	129.0
428.7	CARBONDALE	HERRIN	COAL	2.8	131.0
425.9	CARBONDALE		ROCK	74.3	133.8
351.7	CARBONDALE	ROODHOUSE	COAL	1.2	208.0
350.5	CARBONDALE		ROCK	40.8	209.2
309.7	CARBONDALE	COLCHESTER	COAL	2.7	250.0
307.0	CARBONDALE		ROCK	94.7	252.7

MAPID: 11790114000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 9N 9W SECTION: 13 QUARTERS/FOOTAGES: 34' S line, 78' E line of SE NW

QUADRANGLE: SUMMERVILLE LONGITUDE: -90.045982 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.225919 DATE COLLECTED: 11 / 21 / 1967

SURFACE ELEVATION (FT.): 599.3 LOGGED (FT.): 140.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A67-24 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
599.3	PLEISTOCENE		UNCONSOLIDATED	140.0	0.0

MAPID: 11700604000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 9N 9W **SECTION:** 18 **QUARTERS/FOOTAGES:** SW
QUADRANGLE: MEDORA **LONGITUDE:** -90.14403 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.221905 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 559.0 **LOGGED (FT.):** 104.0 **LOG TYPE:** Drillers Log
SOURCE: ALUMINUM CO. OF AMERICA CHALLACOMB **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
458.0	CARBONDALE	HERRIN	COAL	2.0	101.0	

MAPID: 11701281000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 9N 9W **SECTION:** 23 **QUARTERS/FOOTAGES:** 0' N line, 2640' E line
QUADRANGLE: SUMMERVILLE **LONGITUDE:** -90.064399 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.218783 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 590.0 **LOGGED (FT.):** 131.3 **LOG TYPE:** Survey Core Study
SOURCE: ATLANTIC RICHFIELD P-10A **WELL TYPE:** Coal Test
COMMENT: LOC IS C OF N LINE; DRILLERS LOG INCL.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
466.4	CARBONDALE	HERRIN	COAL	2.1	123.6	

MAPID: 11701281000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 9N 9W **SECTION:** 23 **QUARTERS/FOOTAGES:** 0' N line, 2640' E line
QUADRANGLE: SUMMERVILLE **LONGITUDE:** -90.064399 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.218783 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 590.0 **LOGGED (FT.):** 127.3 **LOG TYPE:** Survey Core Study
SOURCE: ATLANTIC RICHFIELD P-10A **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
466.2	MODESTO	PIASA	LIMESTONE	1.5	123.8	
464.7	MODESTO		GRAY SHALE	0.4	125.3	
464.2	CARBONDALE	ANNA	BLACK SHALE	0.3	125.8	
464.0	CARBONDALE	HERRIN	COAL	1.3	126.0	

MAPID: 11700643000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 9N 12W SECTION: 4 QUARTERS/FOOTAGES: 1' N line, 1' E line of NW

QUADRANGLE: FRANKLIN LONGITUDE: -90.104845 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.520619 DATE COLLECTED:

SURFACE ELEVATION (FT.): 604.0 LOGGED (FT.): 71.3 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES CORP. F621 WELL TYPE: Coal Test

COMMENT: COORDINATES UPDATED. AGL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
537.0	CARBONDALE	HERRIN	COAL	2.3	67.0	

MAPID: 11700441000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 1 QUARTERS/FOOTAGES: 330' S line, 330' W line of SE SE

QUADRANGLE: ATWATER LONGITUDE: -89.707183 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.340998 DATE COLLECTED: 8 / 0 / 1940

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 327.0 LOG TYPE: Electric Log

SOURCE: MILLER PAUL L WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
345.0	MODESTO	PIASA	LIMESTONE	4.0	287.0	
341.0	MODESTO		UNCLASSIFIED	3.5	291.0	
337.5	CARBONDALE		UNCLASSIFIED	9.5	294.5	
328.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	304.0	
323.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	309.0	
321.0	CARBONDALE		UNCLASSIFIED	2.0	311.0	
319.0	CARBONDALE	BRERETON	LIMESTONE	5.0	313.0	
314.0	CARBONDALE	ANNA	BLACK SHALE	3.0	318.0	
311.0	CARBONDALE	HERRIN	COAL	6.0	321.0	

MAPID: 11722379000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 1 QUARTERS/FOOTAGES: 1752' S line, 1398' E line

QUADRANGLE: ATWATER LONGITUDE: -89.708553 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.344874 DATE COLLECTED: 8 / 16 / 1977

SURFACE ELEVATION (FT.): 605.0 LOGGED (FT.): 360.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-38 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
605.0			UNCONSOLIDATED	48.0	0.0
557.0	MODESTO		BLACK SHALE	3.0	48.0
554.0	MODESTO		GRAY SHALE	13.5	51.0
540.5	MODESTO		LIMESTONE	0.5	64.5
540.0	MODESTO		GRAY SHALE	13.0	65.0
527.0	MODESTO	MACOUPIN	LIMESTONE	3.0	78.0
524.0	MODESTO		BLACK SHALE	2.5	81.0
521.5	MODESTO	WOMAC	COAL	0.5	83.5
521.0	MODESTO		GRAY SHALE	6.5	84.0
514.5	MODESTO		SHALE	2.5	90.5
512.0	MODESTO		SANDY SHALE	8.0	93.0
504.0	MODESTO		GRAY SHALE	22.5	101.0
481.5	MODESTO		SHALE	5.5	123.5
476.0	MODESTO		GRAY SHALE	26.0	129.0
450.0	MODESTO	CHAPEL	COAL	1.0	155.0
449.0	MODESTO		SHALE	2.0	156.0
447.0	MODESTO		CALCAREOUS SANDSTONE	6.0	158.0
441.0	MODESTO		SANDY SHALE	16.0	164.0
425.0	MODESTO		GRAY SHALE	68.0	180.0
357.0	MODESTO		SANDY SHALE	42.0	248.0
315.0	MODESTO		BLACK SHALE	3.0	290.0
312.0	CARBONDALE	DANVILLE	COAL	1.0	293.0
311.0	CARBONDALE		GRAY SHALE	15.0	294.0
296.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	309.0
295.0	CARBONDALE	ENERGY	GRAY SHALE	14.0	310.0
281.0	CARBONDALE	HERRIN	COAL	4.0	324.0
277.0	CARBONDALE	HERRIN	SHALE	1.0	328.0
276.0	CARBONDALE	HERRIN	COAL	3.5	329.0
272.5	CARBONDALE		UNDERCLAY	1.5	332.5
271.0	CARBONDALE		LIMESTONE	4.0	334.0
267.0	CARBONDALE		BLACK SHALE	1.5	338.0
265.5	CARBONDALE		GRAY SHALE	7.0	339.5
258.5	CARBONDALE		LIMESTONE	2.0	346.5
256.5	CARBONDALE		GRAY SHALE	8.5	348.5
248.0	CARBONDALE		SHALE	3.0	357.0

MAPID: 11700443000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 2 QUARTERS/FOOTAGES: 280' S line, 397' E line of NE SW

QUADRANGLE: ATWATER LONGITUDE: -89.733562 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.34356 DATE COLLECTED: 8 / 0 / 1940

SURFACE ELEVATION (FT.): 618.0 LOGGED (FT.): 335.0 LOG TYPE: Electric Log

SOURCE: ADAMS & LAGERS WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
323.0	MODESTO	PIASA	LIMESTONE	5.0	295.0
318.0	MODESTO		UNCLASSIFIED	3.5	300.0
314.5	CARBONDALE		UNCLASSIFIED	10.0	303.5
304.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.5	313.5
300.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	318.0
299.0	CARBONDALE		UNCLASSIFIED	1.0	319.0
298.0	CARBONDALE	BRERETON	LIMESTONE	5.0	320.0
293.0	CARBONDALE	ANNA	BLACK SHALE	3.0	325.0
290.0	CARBONDALE	HERRIN	COAL	7.0	328.0

MAPID: 11700755000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 2 QUARTERS/FOOTAGES: 330' S line, 330' E line of SW

QUADRANGLE: ATWATER LONGITUDE: -89.733302 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.340063 DATE COLLECTED: 11 / 0 / 1959

SURFACE ELEVATION (FT.): 631.0 LOGGED (FT.): 342.0 LOG TYPE: Electric Log

SOURCE: E & G DRLG. CO. WELL TYPE: Temporarily Abandoned

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
327.0	MODESTO	PIASA	LIMESTONE	4.0	304.0
323.0	MODESTO		UNCLASSIFIED	3.0	308.0
320.0	CARBONDALE		UNCLASSIFIED	8.5	311.0
311.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.5	319.5
307.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	324.0
305.0	CARBONDALE		UNCLASSIFIED	2.0	326.0
303.0	CARBONDALE	BRERETON	LIMESTONE	6.0	328.0
297.0	CARBONDALE	ANNA	BLACK SHALE	3.0	334.0
294.0	CARBONDALE	HERRIN	COAL	5.0	337.0

MAPID: 11700761000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 2 QUARTERS/FOOTAGES: 330' S line, 330' E line of NW SE

QUADRANGLE: ATWATER LONGITUDE: -89.728668 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.343873 DATE COLLECTED: 7 / 0 / 1960

SURFACE ELEVATION (FT.): 636.0 LOGGED (FT.): 348.0 LOG TYPE: Electric Log

SOURCE: E & G DRLG. CO. WELL TYPE: Producer-Gas

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
326.5	MODESTO	PIASA	LIMESTONE	2.5	309.5
324.0	MODESTO		UNCLASSIFIED	4.5	312.0
319.5	CARBONDALE		UNCLASSIFIED	10.0	316.5
309.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	326.5
304.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	331.5
303.5	CARBONDALE		UNCLASSIFIED	1.0	332.5
302.5	CARBONDALE	BRERETON	LIMESTONE	5.0	333.5
297.5	CARBONDALE	ANNA	BLACK SHALE	3.5	338.5
294.0	CARBONDALE	HERRIN	COAL	6.0	342.0

MAPID: 1172238000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 2 QUARTERS/FOOTAGES: 1638' S line, 2292' W line

QUADRANGLE: ATWATER LONGITUDE: -89.73331 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.343673 DATE COLLECTED: 8 / 22 / 1977

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 350.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-39 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.0			UNCONSOLIDATED	68.0	0.0
552.0	MODESTO		GRAY SHALE	2.0	68.0
550.0	MODESTO		BLACK SHALE	3.0	70.0
547.0	MODESTO		GRAY SHALE	7.0	73.0
540.0	MODESTO		LIMESTONE	4.0	80.0
536.0	MODESTO		GRAY SHALE	11.0	84.0
525.0	MODESTO	MACOUPIN	LIMESTONE	1.5	95.0
523.5	MODESTO		BLACK SHALE	3.0	96.5
520.5	MODESTO	WOMAC	COAL	0.5	99.5
520.0	MODESTO		GRAY SHALE	6.0	100.0
514.0	MODESTO		LIMESTONE	1.0	106.0
513.0	MODESTO		GRAY SHALE	29.0	107.0
484.0	MODESTO	CARLINVILLE	LIMESTONE	3.5	136.0
480.5	MODESTO		BLACK SHALE	1.0	139.5
479.5	MODESTO		GRAY SHALE	25.0	140.5
454.5	MODESTO	CHAPEL	COAL	1.5	165.5
453.0	MODESTO		GRAY SHALE	5.0	167.0
448.0	MODESTO		SHALY LIMESTONE	2.0	172.0
446.0	MODESTO		GRAY SHALE	99.0	174.0
347.0	MODESTO		BLACK SHALE	2.0	273.0
345.0	MODESTO		GRAY SHALE	15.0	275.0
330.0	MODESTO	PIASA	SHALY LIMESTONE	8.0	290.0
322.0	MODESTO		GRAY SHALE	5.0	298.0
317.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	303.0
311.0	CARBONDALE		GRAY SHALE	8.0	309.0
303.0	CARBONDALE	BRERETON	LIMESTONE	5.1	317.0
297.9	CARBONDALE		CALCAREOUS SHALE	0.7	322.1
297.2	CARBONDALE	ANNA	BLACK SHALE	0.1	322.8
297.1	CARBONDALE	HERRIN	COAL	6.8	322.9
290.3	CARBONDALE		UNDERCLAY	0.6	329.7
289.7	CARBONDALE		LIMESTONE	3.7	330.3
286.0	CARBONDALE		GRAY SHALE	9.5	334.0
276.5	CARBONDALE		SHALY LIMESTONE	4.5	343.5
272.0	CARBONDALE		SANDY SHALE	2.0	348.0

MAPID: 11722381000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 2 QUARTERS/FOOTAGES: 58' N line, 7' W line

QUADRANGLE: ATWATER LONGITUDE: -89.741447 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.347676 DATE COLLECTED: 8 / 23 / 1977

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 340.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-40 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
600.0			UNCONSOLIDATED	57.0	0.0
543.0	BOND	CARTHAGE	LIMESTONE	7.0	57.0
536.0	MODESTO		GRAY SHALE	3.0	64.0
533.0	MODESTO		BLACK SHALE	4.0	67.0
529.0	MODESTO		GRAY SHALE	6.0	71.0
523.0	MODESTO		LIMESTONE	4.0	77.0
519.0	MODESTO		GRAY SHALE	11.0	81.0
508.0	MODESTO	MACOUPIN	LIMESTONE	2.5	92.0
505.5	MODESTO		BLACK SHALE	2.0	94.5
503.5	MODESTO	WOMAC	COAL	0.5	96.5
503.0	MODESTO		GRAY SHALE	6.0	97.0
497.0	MODESTO		LIMESTONE	1.0	103.0
496.0	MODESTO		SANDY SHALE	16.5	104.0
479.5	MODESTO		GRAY SHALE	12.5	120.5
467.0	MODESTO	CARLINVILLE	LIMESTONE	3.5	133.0
463.5	MODESTO		BLACK SHALE	1.5	136.5
462.0	MODESTO		LIMESTONE	1.0	138.0
461.0	MODESTO		SHALE	22.5	139.0
438.5	MODESTO	CHAPEL	COAL	1.5	161.5
437.0	MODESTO		GRAY SHALE	2.0	163.0
435.0	MODESTO		SHALY LIMESTONE	5.0	165.0
430.0	MODESTO		GRAY SHALE	81.0	170.0
349.0	MODESTO		GRAY SHALE	8.0	251.0
341.0	MODESTO		SANDY SHALE	8.0	259.0
333.0	MODESTO		BLACK SHALE	3.0	267.0
330.0	MODESTO		GRAY SHALE	18.0	270.0
312.0	MODESTO	PIASA	LIMESTONE	5.5	288.0
306.5	MODESTO		SHALE	3.0	293.5
303.5	CARBONDALE	DANVILLE	COAL	0.5	296.5
303.0	CARBONDALE		GRAY SHALE	6.0	297.0
297.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	303.0
290.0	CARBONDALE		GRAY SHALE	2.0	310.0
288.0	CARBONDALE	BRERETON	LIMESTONE	1.5	312.0
286.5	CARBONDALE		SHALE	1.5	313.5
285.0	CARBONDALE	ANNA	BLACK SHALE	2.0	315.0
283.0	CARBONDALE	HERRIN	COAL	6.8	317.0
276.2	CARBONDALE		UNDERCLAY	0.6	323.8
275.6	CARBONDALE		LIMESTONE	6.7	324.4
269.0	CARBONDALE		CALCAREOUS SHALE	9.0	331.0

MAPID: 11721844000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 3 QUARTERS/FOOTAGES: 1100' N line, 1800' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.753887

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.344715

DATE COLLECTED: 10 / 3 / 1978

SURFACE ELEVATION (FT.): 602.0 LOGGED (FT.): 330.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-26

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
602.0			UNCONSOLIDATED	109.5	0.0
492.5	MODESTO		GRAY SHALE	9.1	109.5
483.4	MODESTO	CARLINVILLE	LIMESTONE	2.9	118.6
480.5	MODESTO		BLACK SHALE	1.0	121.5
479.5	MODESTO		LIMESTONE	0.5	122.5
479.0	MODESTO		GRAY SHALE	22.4	123.0
456.6	MODESTO	CHAPEL	COAL	1.1	145.4
455.5	MODESTO		GRAY SHALE	3.5	146.5
452.0	MODESTO		GRAY SHALE	20.0	150.0
432.0	MODESTO		GRAY SHALE	50.0	170.0
382.0	MODESTO		SHALE	8.0	220.0
374.0	MODESTO		GRAY SHALE	16.0	228.0
358.0	MODESTO		BLACK SHALE	2.0	244.0
356.0	MODESTO		GRAY SHALE	16.0	246.0
340.0	MODESTO		LIMESTONE	0.7	262.0
339.3	MODESTO		GRAY SHALE	11.9	262.7
327.4	MODESTO	PIASA	LIMESTONE	4.4	274.6
323.0	MODESTO		BLACK SHALE	2.0	279.0
321.0	CARBONDALE	DANVILLE	COAL	1.4	281.0
319.6	CARBONDALE		GRAY SHALE	12.1	282.4
307.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	294.5
303.0	CARBONDALE		GRAY SHALE	8.6	299.0
294.4	CARBONDALE	BRERETON	LIMESTONE	1.4	307.6
293.0	CARBONDALE	ANNA	BLACK SHALE	1.2	309.0
291.8	CARBONDALE	HERRIN	COAL	4.7	310.2
287.1	CARBONDALE		SHALE	0.5	314.9
286.6	CARBONDALE		GRAY SHALE	0.6	315.4
286.0	CARBONDALE		CALCAREOUS SHALE	3.0	316.0
283.0	CARBONDALE		GRAY SHALE	7.0	319.0
276.0	CARBONDALE		LIMESTONE	4.0	326.0

MAPID: 11700022801M **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 4 **QUARTERS/FOOTAGES:** SE SW SE SW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.772582 **GEOLOGIST:** TREWORYG,J
CONFIDENTIAL: N **LATITUDE:** 39.338614 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 620.0 **LOGGED (FT.):** 6.4 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-STND. OIL MNG. CO. # B2 **WELL TYPE:** Underground mine
COMMENT: A FEW MEASURED SECTIONS IN THIS MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.0			UNKNOWN	311.0	0.0
309.0	CARBONDALE	HERRIN	COAL	6.4	311.0

MAPID: 11700022802M **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 4 **QUARTERS/FOOTAGES:**
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.76968 **GEOLOGIST:** TREWORYG,J
CONFIDENTIAL: N **LATITUDE:** 39.342938 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 6.7 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-STND. OIL MNG. CO # B2 **WELL TYPE:** Underground mine
COMMENT: 1ST N ENTRY, 2ND E, MAIN N, NW

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	COAL	6.7	

MAPID: 11700045000C **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 4 **QUARTERS/FOOTAGES:** SW SW SW SE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.769063 **GEOLOGIST:** TREWORYG,J
CONFIDENTIAL: N **LATITUDE:** 39.33863 **DATE COLLECTED:** 0 / 0 / 1913
SURFACE ELEVATION (FT.): 613.0 **LOGGED (FT.):** 313.0 **LOG TYPE:** Drillers Log
SOURCE: PEABODY C C **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
613.0			UNCONSOLIDATED	78.0	0.0
535.0			ROCK	66.6	78.0
468.4			COAL	0.3	144.6
468.2			ROCK	135.2	144.8
333.0			COAL	2.5	280.0
330.5			UNDERCLAY	1.5	282.5
329.0			SHALE	9.0	284.0
320.0			LIMESTONE	7.5	293.0
312.5			SHALE	5.0	300.5
307.5	CARBONDALE	HERRIN	COAL	6.0	305.5
301.5			ROCK	1.5	311.5

MAPID: 11700045000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 4 QUARTERS/FOOTAGES: SW SW SW SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.769063

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.33863

DATE COLLECTED:

SURFACE ELEVATION (FT.): 613.0 LOGGED (FT.): 312.0

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
340.0	MODESTO	PIASA	LIMESTONE	6.0	273.0
334.0	MODESTO		GRAY SHALE	1.0	279.0
333.0	CARBONDALE	DANVILLE	COAL	2.5	280.0
330.5	CARBONDALE		CLAYSTONE	1.5	282.5
329.0	CARBONDALE		CALCAREOUS SHALE	7.0	284.0
322.0	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	8.5	291.0
313.5	CARBONDALE	BRERETON	LIMESTONE & SHALE	1.0	299.5
312.5	CARBONDALE	ANNA	GRAY SHALE	5.0	300.5
307.0	CARBONDALE	HERRIN	COAL	6.0	306.0

MAPID: 11700045000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 4 QUARTERS/FOOTAGES: SW SW SW SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.769063

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.33863

DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 613.0 LOGGED (FT.): 312.0

LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO.

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
339.5	MODESTO	PIASA	LIMESTONE	6.0	273.5
333.5	MODESTO		UNCLASSIFIED	1.0	279.5
332.5	CARBONDALE	DANVILLE	COAL	2.5	280.5
330.0	CARBONDALE		UNCLASSIFIED	6.5	283.0
323.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	289.5
320.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	292.5
319.5	CARBONDALE		UNCLASSIFIED	1.0	293.5
318.5	CARBONDALE	BRERETON	LIMESTONE	6.5	294.5
312.0	CARBONDALE	ANNA	BLACK SHALE	5.0	301.0
307.0	CARBONDALE	HERRIN	COAL	6.0	306.0

MAPID: 11700045000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 4 QUARTERS/FOOTAGES: SW SW SW SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.769063 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.33863 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 612.8 LOGGED (FT.): 313.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO., HOLE #8 WELL TYPE: Coal Test

COMMENT: B.F. MASSA FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
612.8			SOIL	2.0	0.0	
610.8			CLAY	16.0	2.0	
594.8			CLAY & GRAVEL	5.0	18.0	
589.8			SAND	10.0	23.0	
579.8			BOULDERS & GRAVEL	8.0	33.0	
571.8			HARD PAN	5.0	41.0	
566.8			CLAY & GRAVEL	5.0	46.0	
561.8			CLAY	27.0	51.0	
534.8	MODESTO		BLACK SHALE	3.5	78.0	WOMAC COAL HORIZON
531.3	MODESTO		UNDERCLAY	6.5	81.5	
524.8	MODESTO		SHALE	4.0	88.0	
520.8	MODESTO	BURROUGHS	LIMESTONE	2.0	92.0	UNCERTAIN CORRELATION
518.8	MODESTO		SHALE	1.0	94.0	
517.8	MODESTO		SANDY SHALE	15.0	95.0	
502.8	MODESTO		SHALE	4.0	110.0	SOAPY
498.8	MODESTO	CARLINVILLE	LIMESTONE	4.5	114.0	
494.3	MODESTO		BLACK SHALE	0.5	118.5	
493.8	MODESTO		CALCAREOUS SHALE	2.0	119.0	
491.8	MODESTO		SANDY SHALE	23.6	121.0	
468.2	MODESTO	CHAPEL	COAL	0.3	144.6	
468.0	MODESTO		SANDY SHALE	2.4	144.8	
465.5	MODESTO		CALCARIOUS SANDY SHALE	9.8	147.3	
455.8	MODESTO		SANDY SHALE	35.0	157.0	
420.8	MODESTO		SHALE	27.0	192.0	
393.8	MODESTO		CALCAREOUS SHALE	11.0	219.0	
382.8	MODESTO		SHALE	8.0	230.0	SOAPY
374.8	MODESTO		BLACK SHALE	1.0	238.0	
373.8	MODESTO		CALCAREOUS SHALE	7.0	239.0	
366.8	MODESTO		LIMESTONE	2.3	246.0	
364.5	MODESTO		SHALE	7.5	248.3	
357.0	MODESTO		SANDSTONE	2.2	255.8	
354.8	MODESTO		SHALE	9.0	258.0	
345.8	MODESTO		SANDY SHALE	4.5	267.0	W/LS PARTINGS
341.3	MODESTO		CALCAREOUS SHALE	1.5	271.5	
339.8	MODESTO	PIASA	LIMESTONE	6.0	273.0	
333.8	MODESTO		SHALE	1.0	279.0	
332.8	CARBONDALE	DANVILLE	COAL	2.5	280.0	
330.3	CARBONDALE		UNDERCLAY	1.5	282.5	

328.8	CARBONDALE		SHALE	9.0	284.0	W/LS
319.8	CARBONDALE		LIMESTONE	7.5	293.0	
312.3	CARBONDALE		SHALE	1.5	300.5	
310.8	CARBONDALE		SHALE	3.5	302.0	W/SLATE
307.3	CARBONDALE	HERRIN	COAL	6.0	305.5	
301.3	CARBONDALE		UNDERCLAY	1.5	311.5	

MAPID: 11700046000C **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 6 **QUARTERS/FOOTAGES:** 200' N line, 1400' E line
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.803102 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.347129 **DATE COLLECTED:** 0 / 0 / 1917
SURFACE ELEVATION (FT.): 617.0 **LOGGED (FT.):** 308.0 **LOG TYPE:** Drillers Log
SOURCE: R. W. HUNT & CO **WELL TYPE:** Coal Test
COMMENT: SHORT SECTION, FOOTAGE ESTIMATED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
617.0			UNCONSOLIDATED	152.0	0.0	
465.0			ROCK	91.3	152.0	
373.7			COAL	0.7	243.3	
373.1			ROCK	33.6	243.9	
339.5			COAL	0.5	277.5	
339.0			SHALE	4.0	278.0	
335.0			LIMESTONE	2.0	282.0	
333.0			SHALE	2.0	284.0	
331.0			LIMESTONE	6.5	286.0	
324.5			LIMESTONE	3.3	292.5	
321.2			SHALE	3.0	295.8	
318.2	CARBONDALE	HERRIN	COAL	7.3	298.8	
310.8			ROCK	1.8	306.2	

MAPID: 11700046000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 6 QUARTERS/FOOTAGES: 200' N line, 1400' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.803102

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.347129

DATE COLLECTED:

SURFACE ELEVATION (FT.): 617.0 LOGGED (FT.): 306.3

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
346.0	MODESTO	PIASA	LIMESTONE	4.5	271.0
341.5	MODESTO		DARK GRAY SHALE	1.5	275.5
340.0	CARBONDALE	DANVILLE	COAL	0.5	277.0
339.5	CARBONDALE		CALCAREOUS SHALE	4.0	277.5
335.5	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	2.0	281.5
333.5	CARBONDALE	BANKSTON FORK	DARK GRAY SHALE	2.0	283.5
331.5	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	4.5	285.5
327.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	1.0	290.0
326.0	CARBONDALE	ANNA	BLACK SHALE	6.3	291.0
318.0	CARBONDALE	HERRIN	COAL	7.3	299.0

MAPID: 11700046000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 6 QUARTERS/FOOTAGES: 200' N line, 1400' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.803102

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.347129

DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 617.0 LOGGED (FT.): 306.3

LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
345.3	MODESTO	PIASA	LIMESTONE	4.5	271.7
340.8	MODESTO		UNCLASSIFIED	1.5	276.2
339.3	CARBONDALE	DANVILLE	COAL	0.5	277.7
338.8	CARBONDALE		UNCLASSIFIED	8.0	278.2
330.8	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.5	286.2
324.3	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.3	292.7
323.0	CARBONDALE		UNCLASSIFIED	2.0	294.0
321.0	CARBONDALE	ANNA	BLACK SHALE	3.0	296.0
318.0	CARBONDALE	HERRIN	COAL	7.3	299.0

MAPID: 11700046000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 6 QUARTERS/FOOTAGES: 200' N line, 1400' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.803102 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.347129 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 616.8 LOGGED (FT.): 308.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE #A-6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
616.8			SANDY CLAY	10.0	0.0	
606.8			HARD PAN	20.0	10.0	
586.8			CLAY	104.0	30.0	
482.8			SAND	5.0	134.0	
477.8			SAND & GRAVEL	13.0	139.0	
464.8			BOULDERS & GRAVEL	0.5	152.0	
464.3			LIMESTONE	5.5	152.5	
458.8			BOULDERS & GRAVEL	1.0	158.0	
457.8	MODESTO		SHALE	54.0	159.0	
403.8	MODESTO		SHALE	1.0	213.0	
402.8	MODESTO		LIMESTONE	3.0	214.0	
399.8	MODESTO		SHALE	10.0	217.0	
389.8	MODESTO		SHALE	8.0	227.0	W/LS
381.8	MODESTO		SHALE	6.0	235.0	
375.8	MODESTO		SANDY SHALE	2.3	241.0	
373.5	MODESTO		BLACK SHALE	0.7	243.3	
372.9	MODESTO		COAL	4.1	243.9	
368.8	MODESTO		UNDERCLAY	23.5	248.0	
345.3	MODESTO		SHALE	4.5	271.5	W/LS
340.8	MODESTO	PIASA	LIMESTONE	1.0	276.0	
339.8	MODESTO		SHALE	0.5	277.0	
339.3	MODESTO		BLACK SHALE	0.5	277.5	
338.8	CARBONDALE	DANVILLE	COAL	4.0	278.0	
334.8	CARBONDALE		SHALE	2.0	282.0	
332.8	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	284.0	
330.8	CARBONDALE		SHALE	6.5	286.0	
324.3	CARBONDALE	BRERETON	LIMESTONE	3.3	292.5	
321.0	CARBONDALE		SHALE	3.0	295.8	
318.0	CARBONDALE	HERRIN	COAL	7.3	298.8	
310.6	CARBONDALE		UNDERCLAY	1.3	306.2	
309.3	CARBONDALE		LIMESTONE	0.5	307.5	

MAPID: 11721845000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 6 QUARTERS/FOOTAGES: 48' S line, 30' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.798282 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.338092 DATE COLLECTED: 10 / 17 / 1978

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 340.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-25 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
632.0			UNCONSOLIDATED	101.0	0.0
531.0	MODESTO		LIMESTONE	1.0	101.0
530.0	MODESTO		GRAY SHALE	14.0	102.0
516.0	MODESTO	CARLINVILLE	LIMESTONE	3.5	116.0
512.5	MODESTO		BLACK SHALE	0.5	119.5
512.0	MODESTO		SANDY SHALE	32.0	120.0
480.0	MODESTO	CHAPEL	COAL	0.7	152.0
479.3	MODESTO		GRAY SHALE	81.3	152.7
398.0	MODESTO		GRAY SHALE	16.0	234.0
382.0	MODESTO		BLACK SHALE	2.0	250.0
380.0	MODESTO		COAL	1.0	252.0
379.0	MODESTO		GRAY SHALE	32.0	253.0
347.0	MODESTO	PIASA	LIMESTONE	1.5	285.0
345.5	MODESTO		BLACK SHALE	1.0	286.5
344.5	CARBONDALE		GRAY SHALE	8.0	287.5
336.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.7	295.5
331.8	CARBONDALE		GRAY SHALE	3.6	300.2
328.2	CARBONDALE	BRERETON	LIMESTONE	2.0	303.8
326.2	CARBONDALE	ANNA	BLACK SHALE	2.4	305.8
323.8	CARBONDALE	HERRIN	COAL	7.1	308.2
316.7	CARBONDALE		GRAY SHALE	1.8	315.3
315.0	CARBONDALE		LIMESTONE	4.0	317.0
311.0	CARBONDALE		BLACK SHALE	1.0	321.0
310.0	CARBONDALE		CALCAREOUS SHALE	5.0	322.0
305.0	CARBONDALE		LIMESTONE	2.0	327.0
303.0	CARBONDALE		GRAY SHALE	11.0	329.0

MAPID: 11723758000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 6 QUARTERS/FOOTAGES: NW NW NW NW
 QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.813618 GEOLOGIST: E. PRUSSEN
 CONFIDENTIAL: N LATITUDE: 39.347568 DATE COLLECTED: 9 / 1 / 1981
 SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 0.0 LOG TYPE: Other Core Study
 SOURCE: EXXON COAL RESOURCES 18-712 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
333.5	CARBONDALE	HERRIN	COAL	5.7	306.5	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.4		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11700246000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 7 QUARTERS/FOOTAGES: 100' S line, 3400' E line
 QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.810176 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.323317 DATE COLLECTED: 0 / 0 / 1900
 SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 317.4 LOG TYPE: Drillers Log
 SOURCE: STANDARD OIL CO WELL TYPE: Plugged and/or Abandoned
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
309.0	CARBONDALE	HERRIN	COAL	6.4	311.0	

MAPID: 11723759000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 7 QUARTERS/FOOTAGES: 940' S line, 40' W line
 QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.813612 GEOLOGIST: E. PRUSSEN
 CONFIDENTIAL: N LATITUDE: 39.32563 DATE COLLECTED: 5 / 17 / 1972
 SURFACE ELEVATION (FT.): 631.0 LOGGED (FT.): 346.8 LOG TYPE: Other Core Study
 SOURCE: CARTER OIL 18-596 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
302.2	CARBONDALE	HERRIN	COAL	7.1	328.8	CLEAN COAL, SEE LOG; COAL ANALYZED
-	CARBONDALE	HERRIN	ROCK	0.2		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 1172376000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 7 **QUARTERS/FOOTAGES:** SE SW SE NW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.810524 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.330538 **DATE COLLECTED:** 8 / 21 / 1981
SURFACE ELEVATION (FT.): 630.0 **LOGGED (FT.):** 354.3 **LOG TYPE:** Other Core Study
SOURCE: EXXON COAL RESOURCES 18-710 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
302.2	CARBONDALE	HERRIN	COAL	6.9	327.8	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.1		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723761000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 7 **QUARTERS/FOOTAGES:** 90' N line, 1000' W line
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.810218 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.337782 **DATE COLLECTED:** 7 / 17 / 1975
SURFACE ELEVATION (FT.): 630.0 **LOGGED (FT.):** 338.0 **LOG TYPE:** Other Core Study
SOURCE: CARTER OIL 18-932 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
316.4	CARBONDALE	HERRIN	COAL	5.8	313.6	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.4		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723762000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 7 **QUARTERS/FOOTAGES:** 39' S line, 1200' E line
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.802356 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.323164 **DATE COLLECTED:** 5 / 26 / 1976
SURFACE ELEVATION (FT.): 622.0 **LOGGED (FT.):** 349.1 **LOG TYPE:** Other Core Study
SOURCE: CARTER OIL 18-957 **WELL TYPE:** Coal Test
COMMENT: EW DISTANCE "FROM PHOTO"

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
289.0	CARBONDALE	HERRIN	COAL	6.9	333.0	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.2		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723773000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 7 QUARTERS/FOOTAGES: SE SW SE NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.810524 GEOLOGIST: E. PRUSSEN

CONFIDENTIAL: N LATITUDE: 39.330535 DATE COLLECTED: 8 / 21 / 1981

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 354.3 LOG TYPE: Other Core Study

SOURCE: EXXON COAL RESOURCES 18-710 WELL TYPE: Coal Test

COMMENT: CO. COORDS PUT THIS IN 6W NOT 7W

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
302.2	CARBONDALE	HERRIN	COAL	6.9	327.8	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.1		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11700047000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 8 QUARTERS/FOOTAGES: NE NE NE NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.789197 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.337577 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 621.0 LOGGED (FT.): 346.0 LOG TYPE: Drillers Log

SOURCE: PEABODY C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
621.0			UNCONSOLIDATED	70.0	0.0	
551.0			ROCK	225.0	70.0	
326.0			COAL	1.0	295.0	
325.0			ROCK	14.5	296.0	
310.5			COAL	2.0	310.5	
308.5			SHALE	10.5	312.5	
298.0			LIMESTONE	6.6	323.0	
291.4			SHALE	4.6	329.6	
286.8			BLACK SHALE	1.8	334.2	
285.0	CARBONDALE	HERRIN	COAL	7.7	336.0	
277.3			ROCK	2.3	343.7	

MAPID: 11700047000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 8 QUARTERS/FOOTAGES: NE NE NE NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.789197 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.337577 DATE COLLECTED:

SURFACE ELEVATION (FT.): 621.0 LOGGED (FT.): 343.7 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
316.0	MODESTO	PIASA	LIMESTONE	4.5	305.0
311.5	MODESTO		DARK GRAY SHALE	0.5	309.5
311.0	CARBONDALE	DANVILLE	COAL	2.0	310.0
309.0	CARBONDALE		CALCAREOUS SHALE	10.5	312.0
298.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.6	322.5
291.9	CARBONDALE	BRERETON	GRAY SHALE	4.6	329.1
287.3	CARBONDALE	ANNA	BLACK SHALE	1.8	333.7
285.0	CARBONDALE	HERRIN	COAL	7.7	336.0

MAPID: 11700047000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 8 QUARTERS/FOOTAGES: NE NE NE NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.789197 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.337577 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 621.0 LOGGED (FT.): 343.7 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
315.5	MODESTO	PIASA	LIMESTONE	4.5	305.5
311.0	MODESTO		UNCLASSIFIED	0.5	310.0
310.5	CARBONDALE	DANVILLE	COAL	2.0	310.5
308.5	CARBONDALE		UNCLASSIFIED	10.5	312.5
298.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.6	323.0
291.4	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	329.6
289.4	CARBONDALE		UNCLASSIFIED	2.6	331.6
286.8	CARBONDALE	ANNA	BLACK SHALE	1.8	334.2
285.0	CARBONDALE	HERRIN	COAL	7.7	336.0

MAPID: 11700047000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 8 QUARTERS/FOOTAGES: NE NE NE NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.789197 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.337577 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 621.1 LOGGED (FT.): 346.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO., HOLE #9 WELL TYPE: Coal Test

COMMENT: ROBLEY FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
621.1			SOIL	2.0	0.0	
619.1			CLAY	6.0	2.0	
613.1			SAND	2.0	8.0	
611.1			HARD PAN	26.0	10.0	
585.1			SAND	2.0	36.0	
583.1			HARD PAN	13.0	38.0	
570.1			SAND & GRAVEL	10.0	51.0	
560.1			CLAY & GRAVEL	9.0	61.0	
551.1	MODESTO		LIMESTONE	9.0	70.0	
542.1	MODESTO		BLACK SHALE	12.0	79.0	
530.1	MODESTO	MACOUPIN	LIMESTONE	11.0	91.0	
519.1	MODESTO		BLACK SHALE	5.0	102.0	
514.1	MODESTO		SHALE	7.0	107.0	
507.1	MODESTO		CALCAREOUS SHALE	5.0	114.0	
502.1	MODESTO		CLAYSTONE & SHALE	8.0	119.0	
494.1	MODESTO		SHALE	10.2	127.0	
483.9	MODESTO	CARLINVILLE	LIMESTONE	4.8	137.2	
479.1	MODESTO		BLACK SHALE	1.0	142.0	
478.1	MODESTO		LIMESTONE	1.0	143.0	
477.1	MODESTO		SANDY SHALE	8.0	144.0	
469.1	MODESTO		SANDY SHALE	24.0	152.0	W/LS BANDS
445.1	MODESTO		SHALE	3.0	176.0	
442.1	MODESTO		CALCARIOUS SANDY SHALE	14.0	179.0	
428.1	MODESTO		SANDSTONE	3.0	193.0	
425.1	MODESTO		SANDY SHALE	22.0	196.0	
403.1	MODESTO		SHALE	5.0	218.0	SOAPY
398.1	MODESTO		SHALE	31.3	223.0	SOAPY, W/LS BANDS
366.8	MODESTO		LIMESTONE	0.7	254.3	
366.1	MODESTO		BLACK SHALE	4.0	255.0	
362.1	MODESTO		LIMESTONE	4.0	259.0	
358.1	MODESTO		CALCAREOUS SHALE	3.0	263.0	
355.1	MODESTO		SANDY SHALE	24.0	266.0	
331.1	MODESTO		BLACK SHALE	5.0	290.0	
326.1	MODESTO		COAL	1.0	295.0	
325.1	MODESTO		SHALE	3.0	296.0	
322.1	MODESTO		CALCAREOUS SHALE	5.5	299.0	
316.6	MODESTO		SHALE	1.0	304.5	
315.6	MODESTO	PIASA	LIMESTONE	4.5	305.5	

311.1	MODESTO		BLACK SHALE	0.5	310.0	AND GOB
310.6	CARBONDALE	DANVILLE	COAL	2.0	310.5	
308.6	CARBONDALE		CALCAREOUS SHALE	10.5	312.5	
298.1	CARBONDALE		LIMESTONE	6.6	323.0	
291.5	CARBONDALE		SHALE	4.6	329.6	
286.9	CARBONDALE		BLACK SHALE	1.8	334.2	
285.1	CARBONDALE	HERRIN	COAL	7.7	336.0	
277.4	CARBONDALE		SHALE	1.0	343.7	
276.4	CARBONDALE		LIMESTONE	1.3	344.7	

MAPID: 11721846000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 8 QUARTERS/FOOTAGES: 19' S line, 51' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.797909 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.323117 DATE COLLECTED: 10 / 18 / 1978

SURFACE ELEVATION (FT.): 626.0 LOGGED (FT.): 360.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-29 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
626.0			UNCONSOLIDATED	110.0	0.0
516.0	MODESTO		GRAY SHALE	3.0	110.0
513.0	MODESTO		LIMESTONE	1.0	113.0
512.0	MODESTO		GRAY SHALE	1.0	114.0
511.0	MODESTO		SANDSTONE/LIMESTONE	1.0	115.0
510.0	MODESTO		GRAY SHALE	24.5	116.0
485.5	MODESTO	CARLINVILLE	LIMESTONE	4.5	140.5
481.0	MODESTO		BLACK SHALE	1.0	145.0
480.0	MODESTO		LIMESTONE	0.5	146.0
479.5	MODESTO		SANDY SHALE	33.5	146.5
446.0	MODESTO	CHAPEL	COAL	1.0	180.0
445.0	MODESTO		SANDY SHALE	10.0	181.0
435.0	MODESTO		GRAY SHALE	40.0	191.0
395.0	MODESTO		GRAY SHALE	20.0	231.0
375.0	MODESTO		SANDY SHALE	11.0	251.0
364.0	MODESTO		GRAY SHALE	6.0	262.0
358.0	MODESTO		BLACK SHALE	1.5	268.0
356.5	MODESTO		GRAY SHALE	8.5	269.5
348.0	MODESTO		LIMESTONE	2.5	278.0
345.5	MODESTO		SANDY SHALE	18.5	280.5
327.0	MODESTO		LIMESTONE	1.0	299.0
326.0	MODESTO		CALCAREOUS SHALE	6.5	300.0
319.5	MODESTO	PIASA	LIMESTONE	2.5	306.5
317.0	MODESTO		BLACK SHALE	1.5	309.0
315.5	CARBONDALE	DANVILLE	COAL	1.0	310.5
314.5	CARBONDALE		GRAY SHALE	6.5	311.5
308.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	318.0
301.5	CARBONDALE		CALCAREOUS SHALE	11.2	324.5
290.3	CARBONDALE	BRERETON	LIMESTONE	3.8	335.7
286.5	CARBONDALE	HERRIN	COAL	7.6	339.5
278.9	CARBONDALE		SHALE	1.9	347.1
277.0	CARBONDALE		CALCAREOUS SHALE	9.0	349.0
268.0	CARBONDALE		LIMESTONE	2.0	358.0

MAPID: 11721847000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 8 QUARTERS/FOOTAGES: 1272' N line, 1143' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.783046 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.334583 DATE COLLECTED: 11 / 15 / 1977

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 360.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-13 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
632.0			UNCONSOLIDATED	78.0	0.0
554.0	MODESTO		SHALE	3.0	78.0
551.0	MODESTO		BLACK SHALE	4.0	81.0
547.0	MODESTO		GRAY SHALE	7.0	85.0
540.0	MODESTO		CALCAREOUS SHALE	2.0	92.0
538.0	MODESTO		LIMESTONE	1.5	94.0
536.5	MODESTO		GRAY SHALE	10.0	95.5
526.5	MODESTO	MACOUPIN	LIMESTONE	0.5	105.5
526.0	MODESTO		BLACK SHALE	3.5	106.0
522.5	MODESTO	WOMAC	COAL	0.5	109.5
522.0	MODESTO		GRAY SHALE	7.0	110.0
515.0	MODESTO		CALCAREOUS SHALE	8.0	117.0
507.0	MODESTO		GRAY SHALE	19.0	125.0
488.0	MODESTO	CARLINVILLE	LIMESTONE	4.5	144.0
483.5	MODESTO		BLACK SHALE	1.0	148.5
482.5	MODESTO		LIMESTONE	0.5	149.5
482.0	MODESTO		SANDY SHALE	10.0	150.0
472.0	MODESTO		GRAY SHALE	25.0	160.0
447.0	MODESTO	CHAPEL	COAL	0.5	185.0
446.5	MODESTO		GRAY SHALE	4.5	185.5
442.0	MODESTO		SANDY SHALE	30.0	190.0
412.0	MODESTO		GRAY SHALE	43.0	220.0
369.0	MODESTO		COAL	1.0	263.0
368.0	MODESTO		GRAY SHALE	16.0	264.0
352.0	MODESTO		SHALE	11.0	280.0
341.0	MODESTO		BLACK SHALE	4.0	291.0
337.0	MODESTO		COAL	1.0	295.0
336.0	MODESTO		GRAY SHALE	10.0	296.0
326.0	MODESTO	PIASA	LIMESTONE	4.0	306.0
322.0	MODESTO		BLACK SHALE	1.0	310.0
321.0	CARBONDALE	DANVILLE	COAL	0.5	311.0
320.5	CARBONDALE		CALCAREOUS SHALE	10.0	311.5
310.5	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	321.5
305.5	CARBONDALE		GRAY SHALE	3.0	326.5
302.5	CARBONDALE	BRERETON	LIMESTONE	0.5	329.5
302.0	CARBONDALE		SHALE	2.0	330.0
300.0	CARBONDALE	ANNA	BLACK SHALE	2.1	332.0
297.9	CARBONDALE	HERRIN	COAL	8.1	334.1
289.8	CARBONDALE		UNDERCLAY	6.9	342.2

283.0	CARBONDALE	SHALY LIMESTONE	2.6	349.0
280.4	CARBONDALE	GRAY SHALE	1.3	351.6
279.1	CARBONDALE	CALCAREOUS SHALE	4.6	352.9
274.5	CARBONDALE	LIMESTONE	2.5	357.5

MAPID: 11700048000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 9 **QUARTERS/FOOTAGES:** SE SW NW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.775434 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.33167 **DATE COLLECTED:** 0 / 0 / 1917
SURFACE ELEVATION (FT.): 590.0 **LOGGED (FT.):** 279.0 **LOG TYPE:** Drillers Log
SOURCE: HUNT R W & CO **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
345.9	MODESTO	PIASA	LIMESTONE	4.0	244.1
341.9	MODESTO		UNCLASSIFIED	0.5	248.1
341.4	CARBONDALE	DANVILLE	COAL	2.3	248.6
339.1	CARBONDALE		UNCLASSIFIED	7.2	250.9
331.9	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.5	258.1
325.4	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	264.6
322.4	CARBONDALE		UNCLASSIFIED	2.0	267.6
320.4	CARBONDALE	ANNA	BLACK SHALE	1.4	269.6
319.0	CARBONDALE	HERRIN	COAL	8.0	271.0

MAPID: 11700048000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 9 QUARTERS/FOOTAGES: SE SW NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.775434 GEOLOGIST: TREWORYG,J

CONFIDENTIAL: N LATITUDE: 39.33167 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 590.0 LOGGED (FT.): 281.0 LOG TYPE: Drillers Log

SOURCE: R. W. HUNT & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
590.0			UNCONSOLIDATED	26.0	0.0
564.0			ROCK	18.0	26.0
546.0			COAL	0.3	44.0
545.7			ROCK	70.2	44.3
475.5			COAL	0.3	114.5
475.2			ROCK	78.4	114.8
396.7			COAL	0.3	193.3
396.4			ROCK	54.9	193.6
341.5			COAL	2.3	248.5
339.2			SHALE	7.2	250.8
332.0			LIMESTONE	6.5	258.0
325.5			SHALE	5.5	264.5
320.0			BLACK SHALE	1.4	270.0
318.6	CARBONDALE	HERRIN	COAL	8.0	271.4
310.6			ROCK	1.6	279.4

MAPID: 11700048000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 9 QUARTERS/FOOTAGES: SE SW NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.775434

GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.33167

DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 590.1 LOGGED (FT.): 281.0

LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., #A-7

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
590.1			CLAY	6.0	0.0	
584.1			SAND & GRAVEL	4.0	6.0	
580.1			HARD PAN	16.0	10.0	
564.1	MODESTO		SHALE	14.0	26.0	
550.1	MODESTO		SHALE	2.0	40.0	
548.1	MODESTO	MACOUPIN	LIMESTONE	2.0	42.0	
546.1	MODESTO	WOMAC	COAL	0.3	44.0	
545.8	MODESTO		SHALE	15.7	44.3	W/LS MIXED
530.1	MODESTO		SANDSTONE	4.0	60.0	
526.1	MODESTO		SHALE	6.0	64.0	
520.1	MODESTO		SHALE	5.0	70.0	
515.1	MODESTO	CARLINVILLE	LIMESTONE	6.0	75.0	
509.1	MODESTO		SANDY SHALE	19.0	81.0	
490.1	MODESTO		SHALE	14.0	100.0	
476.1	MODESTO		BLACK SHALE	0.5	114.0	
475.6	MODESTO	CHAPEL	COAL	0.3	114.5	
475.3	MODESTO		SHALE	9.2	114.8	W/LS
466.1	MODESTO		CALCAREOUS SHALE	2.0	124.0	
464.1	MODESTO		SANDY SHALE	45.0	126.0	
419.1	MODESTO		SHALE	22.3	171.0	W/HARD BANDS
396.8	MODESTO		COAL	0.3	193.3	
396.5	MODESTO		SHALE	16.4	193.6	W/LS
380.1	MODESTO		SHALE	2.0	210.0	
378.1	MODESTO		BLACK SHALE	1.0	212.0	
377.1	MODESTO		SHALE	10.0	213.0	W/LS
367.1	MODESTO		SANDSTONE	14.0	223.0	
353.1	MODESTO		CALCAREOUS SHALE	11.0	237.0	
342.1	MODESTO		SHALE	0.5	248.0	
341.6	CARBONDALE	DANVILLE	COAL	2.3	248.5	
339.3	CARBONDALE		SHALE	1.2	250.8	
338.1	CARBONDALE		CALCAREOUS SHALE	6.0	252.0	
332.1	CARBONDALE		LIMESTONE	6.5	258.0	
325.6	CARBONDALE		SHALE	3.0	264.5	
322.6	CARBONDALE		SHALE	2.5	267.5	
320.1	CARBONDALE	ANNA	BLACK SHALE	1.4	270.0	
318.7	CARBONDALE	HERRIN	COAL	8.0	271.4	
310.7	CARBONDALE		UNDERCLAY	0.6	279.4	
310.1	CARBONDALE		LIMESTONE	1.0	280.0	

MAPID: 11700049000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 9 QUARTERS/FOOTAGES: NE NE NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.761429 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.337276 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 597.0 LOGGED (FT.): 301.2 LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
331.0	MODESTO		UNCLASSIFIED	3.9	266.0
327.1	CARBONDALE	DANVILLE	COAL	2.0	269.9
325.1	CARBONDALE		UNCLASSIFIED	5.7	271.9
319.4	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	277.6
313.4	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.2	283.6
311.2	CARBONDALE	CONANT	UNCLASSIFIED	0.8	285.8
310.4	CARBONDALE		UNCLASSIFIED	3.1	286.6
307.3	CARBONDALE	BRERETON	LIMESTONE	3.5	289.7
303.8	CARBONDALE	ANNA	BLACK SHALE	1.8	293.2
302.0	CARBONDALE	HERRIN	COAL	6.2	295.0

MAPID: 11700049000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 9 QUARTERS/FOOTAGES: NE NE NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.761429 GEOLOGIST: TREWORY,J

CONFIDENTIAL: N LATITUDE: 39.337276 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 597.0 LOGGED (FT.): 695.0 LOG TYPE: Survey Core Study

SOURCE: R. W. HUNT WELL TYPE: Coal Test

COMMENT: USED COMPANY LOG FOR ACCURATE FOOTAGE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
597.0			UNCONSOLIDATED	61.0	0.0
536.0			ROCK	74.3	61.0
461.7			COAL	0.6	135.3
461.2			ROCK	135.2	135.8
326.0			COAL	2.2	271.0
323.8			SHALE	4.8	273.2
319.0			LIMESTONE	6.5	278.0
312.5			SHALE	2.2	284.5
310.3			LIMESTONE	0.8	286.7
309.6			SHALE	3.1	287.4
306.5			LIMESTONE	3.5	290.5
303.0			SHALE	0.5	294.0
302.5			LIMESTONE	0.5	294.5
302.0			SHALE	0.8	295.0
301.2	CARBONDALE	HERRIN	COAL	6.2	295.8
295.0			ROCK	93.7	302.0
201.3			COAL	2.8	395.7
198.6			ROCK	1.3	398.4
197.3			COAL	0.7	399.7
196.7			ROCK	39.8	400.3
156.8			COAL	2.8	440.2
154.0			ROCK	9.0	443.0
145.0			COAL	0.7	452.0
145.0			ROCK	81.8	452.0
63.2			COAL	2.6	533.8
60.7			ROCK	158.7	536.3

MAPID: 11700049000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 9 QUARTERS/FOOTAGES: NE NE NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.761429 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.337276 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 597.0 LOGGED (FT.): 695.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT, #A-11 WELL TYPE: Coal Test

COMMENT: CORE DES AVAIL BUT TOPS/BOTTOMS IN ERROR

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
597.0			CLAY	6.0	0.0	
591.0			SAND & GRAVEL	3.0	6.0	
588.0			BOULDERS & GRAVEL	11.0	9.0	
577.0			HARD PAN	8.0	20.0	
569.0			SAND & GRAVEL	12.0	28.0	
557.0			HARD PAN	21.0	40.0	
536.0	MODESTO		SHALE	1.5	61.0	
534.5	MODESTO	MACOUPIN	LIMESTONE	1.5	62.5	
533.0	MODESTO		SHALE	7.0	64.0	
526.0	MODESTO		BLACK SHALE	3.0	71.0	
523.0	MODESTO		SHALE	6.0	74.0	
517.0	MODESTO		LIMESTONE	1.0	80.0	
516.0	MODESTO		CALCAREOUS SHALE	7.0	81.0	W/LS BANDS
509.0	MODESTO	BURROUGHS	LIMESTONE	2.0	88.0	
507.0	MODESTO		CALCAREOUS SHALE	3.0	90.0	
504.0	MODESTO		SHALE	9.0	93.0	
495.0	MODESTO	CARLINVILLE	LIMESTONE	6.5	102.0	
488.5	MODESTO		BLACK SHALE	0.7	108.5	
487.8	MODESTO		SHALE	12.8	109.2	
475.0	MODESTO		SHALE	13.3	122.0	W/ HARD BANDS
461.7	MODESTO	CHAPEL	COAL	0.6	135.3	
461.2	MODESTO		UNDERCLAY	1.2	135.8	
460.0	MODESTO		CALCAREOUS SHALE	2.0	137.0	
458.0	MODESTO		CALCAREOUS SHALE	6.0	139.0	
452.0	MODESTO		SANDY SHALE	30.0	145.0	
422.0	MODESTO		SHALE	9.0	175.0	
413.0	MODESTO		SHALE	26.0	184.0	
387.0	MODESTO		CALCAREOUS SHALE	4.0	210.0	
383.0	MODESTO		SHALE	14.0	214.0	
369.0	MODESTO		SHALE	3.0	228.0	
366.0	MODESTO		CALCAREOUS SHALE	8.0	231.0	
358.0	MODESTO		SANDY SHALE	3.0	239.0	
355.0			CALCAREOUS SHALE	8.0	242.0	
347.0			SHALE	21.0	250.0	W/LS SPOTS
326.0	CARBONDALE	DANVILLE	COAL	2.2	271.0	
323.8	CARBONDALE		CALCAREOUS SHALE	4.8	273.2	
319.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	278.0	
312.5	CARBONDALE		CALCAREOUS SHALE	2.2	284.5	
310.3	CARBONDALE		LIMESTONE	0.8	286.7	

309.6	CARBONDALE		CALCAREOUS SHALE	3.1	287.4	
306.5	CARBONDALE	BRERETON	LIMESTONE	3.5	290.5	
303.0	CARBONDALE		SHALE	0.5	294.0	
302.5	CARBONDALE		LIMESTONE	0.5	294.5	
302.0	CARBONDALE		SHALE	0.8	295.0	
301.2	CARBONDALE	HERRIN	COAL	6.2	295.8	
295.0	CARBONDALE		UNDERCLAY	0.8	302.0	
294.2	CARBONDALE		CALCAREOUS SHALE	2.2	302.8	
292.0	CARBONDALE		LIMESTONE	3.0	305.0	
289.0	CARBONDALE		SHALE	6.0	308.0	
283.0	CARBONDALE		LIMESTONE	3.0	314.0	
280.0	CARBONDALE		SHALE	6.0	317.0	
274.0	CARBONDALE	EXCELLO	BLACK SHALE	2.0	323.0	
272.0	CARBONDALE		SANDY SHALE	17.0	325.0	
255.0	CARBONDALE		SANDSTONE	12.0	342.0	
243.0	CARBONDALE		SANDY SHALE	8.0	354.0	
235.0	CARBONDALE		SHALE	33.7	362.0	
201.3	CARBONDALE	SURVANT - UPPER	COAL	2.8	395.7	
198.6	CARBONDALE		SANDY SHALE	1.3	398.4	
197.3	CARBONDALE	SURVANT - LOWER	COAL	0.7	399.7	
196.7	CARBONDALE		SANDY SHALE	14.7	400.3	
182.0	CARBONDALE		SHALE	23.0	415.0	
159.0	CARBONDALE	MECCA QUARRY	BLACK SHALE	2.2	438.0	
156.8	CARBONDALE	COLCHESTER	COAL	2.8	440.2	
154.0	SPOON		BLACK SHALE	0.5	443.0	
153.5	SPOON		SANDY SHALE	4.5	443.5	
149.0	SPOON		LIMESTONE	1.0	448.0	
148.0	SPOON		SHALE	2.0	449.0	
146.0	SPOON		BLACK SHALE	0.3	451.0	
145.7	SPOON	DAVIS	COAL	0.7	451.3	
145.0	SPOON		BLACK SHALE	1.0	452.0	
144.0	SPOON		LIMESTONE	4.0	453.0	
140.0	SPOON		SHALE	2.0	457.0	
138.0	SPOON		UNDERCLAY	2.0	459.0	
136.0	SPOON		SANDY SHALE	14.0	461.0	
122.0			SHALE	2.0	475.0	
120.0			SHALE	9.0	477.0	W/ SS BANDS
111.0			SANDY SHALE	9.0	486.0	
102.0			SANDY SHALE	10.0	495.0	
92.0			SANDSTONE	4.0	505.0	
88.0			SHALE	24.8	509.0	
63.2			COAL	2.6	533.8	
60.7			UNDERCLAY	0.7	536.3	
60.0			CALCAREOUS SHALE	4.0	537.0	
56.0			BLACK SHALE	24.0	541.0	
32.0			SANDY SHALE	2.0	565.0	
30.0			SANDSTONE	1.0	567.0	
29.0			CALCAREOUS SHALE	1.5	568.0	

27.5		LIMESTONE	3.5	569.5	
24.0		SANDY SHALE	1.0	573.0	
23.0		LIMESTONE	1.0	574.0	
22.0		SHALE	6.0	575.0	
16.0		SHALE	23.5	581.0	
-7.5		BLACK SHALE	7.5	604.5	
-15.0		SHALE	3.0	612.0	
-18.0		BLACK SHALE	6.0	615.0	
-24.0		SANDSTONE	7.0	621.0	COARSE, BASE OF PENN.
-31.0	MISSISSIPPIAN	SHALE	26.0	628.0	MIXED W/ LS
-57.0	MISSISSIPPIAN	LIMESTONE	41.0	654.0	

MAPID: 11700523000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 9 **QUARTERS/FOOTAGES:** NE NE SE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.761383 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.32985 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 584.0 **LOGGED (FT.):** 284.0 **LOG TYPE:** Survey Core Study
SOURCE: CONSOLIDATED COAL CO. 2 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
340.4	MODESTO	PIASA	LIMESTONE/UNDERCLAY	6.5	243.6	
333.9	MODESTO		GRAY SHALE	0.2	250.1	
333.7	CARBONDALE	DANVILLE	COAL	1.9	250.3	
331.8	CARBONDALE		CLAYSTONE	2.1	252.2	
329.7	CARBONDALE	GALUM	CALCAREOUS SHALE	0.4	254.3	
329.3	CARBONDALE		CLAYSTONE & SHALE	7.0	254.7	
322.3	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	10.4	261.7	
311.9	CARBONDALE	LAWSON	CLAYSTONE & SHALE	1.3	272.1	
310.6	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.6	273.4	
310.0	CARBONDALE	ANNA	MOTTLED SHALE	3.0	274.0	
307.0	CARBONDALE	HERRIN	COAL	7.0	277.0	

MAPID: 11700523000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 9 QUARTERS/FOOTAGES: NE NE SE
 QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.761383 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.32985 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 585.0 LOGGED (FT.): 284.0 LOG TYPE: Drillers Log
 SOURCE: CONSOLIDATED COAL CO. 2 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
340.9	MODESTO	PIASA	LIMESTONE	6.2	244.1	
334.7	MODESTO		UNCLASSIFIED	0.5	250.3	
334.2	CARBONDALE	DANVILLE	COAL	1.9	250.8	
332.3	CARBONDALE		UNCLASSIFIED	9.5	252.7	
322.8	CARBONDALE	BANKSTON FORK	LIMESTONE	5.9	262.2	
316.9	CARBONDALE	ANVIL ROCK	SANDSTONE	0.5	268.1	
316.4	CARBONDALE		SHALE	0.5	268.6	
315.9	CARBONDALE	BRERETON	LIMESTONE	5.7	269.1	
310.2	CARBONDALE	ANNA	BLACK SHALE	3.2	274.8	
307.0	CARBONDALE	HERRIN	COAL	6.0	278.0	

MAPID: 11700523000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 9 QUARTERS/FOOTAGES: NE NE SE
 QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.761383 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.32985 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 584.5 LOGGED (FT.): 284.1 LOG TYPE: Drillers Log
 SOURCE: CONSOLIDATED COAL CO. 2 WELL TYPE: Coal Test
 COMMENT: CORE SURVEY STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
333.8	CARBONDALE	HERRIN	COAL	6.0	250.7	

MAPID: 11700523000C VERSION: 4

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 9 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.761383

GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.32985

DATE COLLECTED: 0 / 0 / 1948

SURFACE ELEVATION (FT.): 584.5 LOGGED (FT.): 284.8

LOG TYPE: Drillers Log

SOURCE: CONSOLIDATED COAL CO. 2

WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
584.5	PLEISTOCENE		UNCONSOLIDATED	84.0	0.0	
500.5	BOND		LIMESTONE	3.5	84.0	GRAY
497.0	BOND		GRAY SHALE	0.3	87.5	
496.7	BOND		BLACK SHALE	0.3	87.8	
496.5	BOND		GRAY SHALE	0.4	88.0	
496.1	BOND		GRAY SHALE	1.4	88.4	
494.7	BOND		GRAY SHALE	1.7	89.8	
493.0	BOND		GRAY SHALE	2.2	91.5	
490.8	BOND		NO RECORD	0.3	93.7	LOSS
490.5	BOND		GRAY SHALE	9.2	94.0	
481.3	BOND		SHALE & SILTSTONE	0.6	103.2	
480.7	BOND		GRAY SHALE	0.1	103.8	
480.7	BOND		NO RECORD	0.2	103.8	LOSS
480.5	BOND		GRAY SHALE	4.8	104.0	
475.7	BOND		GRAY SHALE	5.0	108.8	
470.7	BOND		NO RECORD	0.2	113.8	LOSS
470.5	BOND		GRAY SHALE	2.8	114.0	
467.7	BOND		BLACK SHALE	0.2	116.8	
467.5	BOND		BLACK SHALE	0.1	117.0	
467.4	MODESTO	CHAPEL	COAL	0.8	117.1	#8
466.6	MODESTO		UNDERCLAY	0.7	117.9	GRAY
465.9	MODESTO		SHALE WITH LIMESTONE	1.4	118.6	
464.5	MODESTO		SILTSTONE/LIMESTONE	2.4	120.0	GREEN
462.1	MODESTO		SHALE	1.6	122.4	
460.5	MODESTO		SHALE WITH LIMESTONE	1.2	124.0	
459.3	MODESTO		SILTSTONE	4.0	125.2	GREEN
455.3	MODESTO		SILTSTONE & SHALE	3.0	129.2	GRAY
452.3	MODESTO		SHALE & SILTSTONE	1.7	132.2	
450.7	MODESTO		NO RECORD	0.2	133.8	LOSS
450.5	MODESTO		SHALE & SILTSTONE	9.9	134.0	
440.6	MODESTO		NO RECORD	0.1	143.9	LOSS
440.5	MODESTO		SHALE & SILTSTONE	2.8	144.0	
437.7	MODESTO		GRAY SHALE	5.0	146.8	
432.7	MODESTO		SHALE & SILTSTONE	2.1	151.8	
430.6	MODESTO		NO RECORD	0.1	153.9	LOSS
430.5	MODESTO		SHALE & SILTSTONE	8.9	154.0	
421.6	MODESTO		SHALE & SILTSTONE	1.0	162.9	
420.6	MODESTO		NO RECORD	0.1	163.9	LOSS
420.5	MODESTO		SHALE & SILTSTONE	4.0	164.0	

416.5	MODESTO		GRAY SHALE	5.8	168.0	
410.7	MODESTO		NO RECORD	0.2	173.8	LOSS
410.5	MODESTO		GRAY SHALE	4.7	174.0	
405.8	MODESTO		GRAY SHALE	1.4	178.7	
404.4	MODESTO		SIDERITE	0.3	180.1	
404.2	MODESTO		GRAY SHALE	3.6	180.3	
400.6	MODESTO		NO RECORD	0.1	183.9	LOSS
400.5	MODESTO		GRAY SHALE	6.0	184.0	
394.5	MODESTO		SIDERITE	0.3	190.0	
394.2	MODESTO		GRAY SHALE	3.3	190.3	
390.8	MODESTO		LIMESTONE	0.3	193.7	
390.6	MODESTO		NO RECORD	0.1	193.9	LOSS
390.5	MODESTO		LIMESTONE	0.4	194.0	
390.1	MODESTO		GRAY SHALE	6.8	194.4	
383.3	MODESTO		BLACK SHALE	0.2	201.2	
383.1	MODESTO		GREEN SHALE	2.6	201.4	
380.5	MODESTO		NO RECORD	0.0	204.0	
380.5	MODESTO		SHALE & SILTSTONE	0.5	204.0	
380.0	MODESTO		SHALE WITH LIMESTONE	0.2	204.5	
379.7	MODESTO		UNDERCLAY	1.3	204.8	GRAY
378.5	MODESTO		GRAY SHALE	2.3	206.0	
376.2	MODESTO		GREEN SHALE	5.0	208.3	
371.2	MODESTO		SHALE	0.7	213.3	
370.5	MODESTO		SHALE & SILTSTONE	0.6	214.0	
369.9	MODESTO		GREEN SHALE	3.8	214.6	
366.2	MODESTO		SHALE	0.8	218.3	
365.4	MODESTO		SHALE & SILTSTONE	3.6	219.1	
361.8	MODESTO		GREEN SHALE	1.7	222.7	
360.2	MODESTO		GRAY SHALE	6.3	224.3	
353.8	MODESTO		SANDSTONE	1.7	230.7	
352.2	MODESTO		SANDSTONE	1.7	232.3	GRAY
350.5	MODESTO		GREEN SHALE	2.6	234.0	
347.9	MODESTO		CALCAREOUS SHALE	0.1	236.6	
347.8	MODESTO		SHALE W/ COAL STREAKS	0.7	236.7	
347.2	MODESTO		GREEN SHALE	0.4	237.3	
346.8	MODESTO		SHALE WITH LIMESTONE	2.8	237.7	
344.0	MODESTO		SHALE WITH LIMESTONE	3.5	240.5	
340.5	MODESTO	PIASA	SHALY LIMESTONE	6.5	244.0	GREEN
334.0	MODESTO		GREEN SHALE	0.2	250.5	
333.8	CARBONDALE	DANVILLE	COAL	1.9	250.7	
331.9	CARBONDALE		UNDERCLAY	0.3	252.6	GREEN
331.6	CARBONDALE		UNDERCLAY	0.1	252.9	GRAY
331.5	CARBONDALE		GREEN SHALE	0.5	253.0	
330.9	CARBONDALE		SHALE WITH LIMESTONE	1.1	253.6	
329.8	CARBONDALE		SHALE WITH LIMESTONE	0.4	254.7	
329.4	CARBONDALE		SHALE WITH LIMESTONE	7.0	255.1	
322.4	CARBONDALE	BANKSTON FORK	LIMESTONE	0.9	262.1	CREAM
321.5	CARBONDALE		NO RECORD	6.0	263.0	

315.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	269.0	CREAM
312.0	CARBONDALE		GREEN SHALE	0.3	272.5	
311.7	CARBONDALE		SHALE WITH LIMESTONE	1.0	272.8	
310.7	CARBONDALE	BRERETON	SHALY LIMESTONE	0.6	273.8	GRAY
310.1	CARBONDALE		SHALE WITH LIMESTONE	0.5	274.4	
309.6	CARBONDALE		GRAY SHALE	0.7	274.9	
309.0	CARBONDALE	ANNA	BLACK SHALE	0.5	275.5	
308.5	CARBONDALE	ANNA	BLACK SHALE	0.3	276.0	
308.2	CARBONDALE	ANNA	BLACK SHALE	0.8	276.3	
307.3	CARBONDALE	ANNA	BLACK SHALE	0.7	277.2	
306.7	CARBONDALE	HERRIN	COAL	1.2	277.8	#6
305.5	CARBONDALE	HERRIN	COAL	4.8	279.0	
300.7	CARBONDALE		UNDERCLAY	1.0	283.8	GRAY

MAPID: 11700624000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 9 QUARTERS/FOOTAGES:

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.769576 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.330759 DATE COLLECTED: 4 / 0 / 1955

SURFACE ELEVATION (FT.): 609.0 LOGGED (FT.): 307.0 LOG TYPE: Electric Log

SOURCE: CALVERT DRILLING, INC. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
339.1	MODESTO	PIASA	LIMESTONE	4.0	269.9	
335.1	MODESTO		UNCLASSIFIED	3.0	273.9	
332.1	CARBONDALE	DANVILLE	COAL	1.0	276.9	
331.1	CARBONDALE		UNCLASSIFIED	6.5	277.9	
324.6	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	284.4	
318.6	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.8	290.4	
316.8	CARBONDALE		UNCLASSIFIED	1.8	292.2	
315.0	CARBONDALE	BRERETON	LIMESTONE	1.0	294.0	
314.0	CARBONDALE	ANNA	BLACK SHALE	2.0	295.0	
312.0	CARBONDALE	HERRIN	COAL	10.0	297.0	

MAPID: 11721848000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 9 QUARTERS/FOOTAGES: 235' S line, 907' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.775621 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.323992 DATE COLLECTED: 10 / 19 / 1978

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 364.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-28 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
640.0			UNCONSOLIDATED	91.0	0.0
549.0	MODESTO		GRAY SHALE	11.0	91.0
538.0	MODESTO	MACOUPIN	LIMESTONE	1.0	102.0
537.0	MODESTO		BLACK SHALE	2.0	103.0
535.0	MODESTO	WOMAC	COAL	1.0	105.0
534.0	MODESTO		GRAY SHALE	7.0	106.0
527.0	MODESTO		LIMESTONE	1.5	113.0
525.5	MODESTO		GRAY SHALE	4.2	114.5
521.3	MODESTO		LIMESTONE	0.8	118.7
520.5	MODESTO		GRAY SHALE	18.5	119.5
502.0	MODESTO	CARLINVILLE	LIMESTONE	4.5	138.0
497.5	MODESTO		BLACK SHALE	0.5	142.5
497.0	MODESTO		LIMESTONE	1.0	143.0
496.0	MODESTO		SANDY SHALE	33.0	144.0
463.0	MODESTO	CHAPEL	COAL	1.0	177.0
462.0	MODESTO		CALCAREOUS SHALE	8.0	178.0
454.0	MODESTO		GRAY SHALE	22.0	186.0
432.0	MODESTO		SANDY SHALE	12.0	208.0
420.0	MODESTO		GRAY SHALE	13.0	220.0
407.0	MODESTO		CALCAREOUS SHALE	20.0	233.0
387.0	MODESTO		GRAY SHALE	9.0	253.0
378.0	MODESTO		BLACK SHALE	1.0	262.0
377.0	MODESTO		GRAY SHALE	3.0	263.0
374.0	MODESTO		SANDY SHALE	33.5	266.0
340.5	MODESTO		SHALE	2.5	299.5
338.0	MODESTO	PIASA	LIMESTONE	7.0	302.0
331.0	MODESTO		BLACK SHALE	2.0	309.0
329.0	CARBONDALE	DANVILLE	COAL	2.5	311.0
326.5	CARBONDALE		GRAY SHALE	2.5	313.5
324.0	CARBONDALE		LIMESTONE	0.5	316.0
323.5	CARBONDALE		GRAY SHALE	9.5	316.5
314.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	326.0
307.0	CARBONDALE		GRAY SHALE	2.0	333.0
305.0	CARBONDALE	BRERETON	LIMESTONE	1.2	335.0
303.8	CARBONDALE	ANNA	BLACK SHALE	3.9	336.2
299.9	CARBONDALE	HERRIN	COAL	7.2	340.1
292.7	CARBONDALE		CORE LOSS	0.2	347.3
292.5	CARBONDALE		GRAY SHALE	2.0	347.5
290.5	CARBONDALE		CALCAREOUS SHALE	3.5	349.5

287.0	CARBONDALE	GRAY SHALE	6.0	353.0
281.0	CARBONDALE	CALCAREOUS SHALE	2.0	359.0
279.0	CARBONDALE	GRAY SHALE	3.0	361.0

MAPID: 11700050000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 10 **QUARTERS/FOOTAGES:** NE NE NE
QUADRANGLE: ATWATER **LONGITUDE:** -89.742615 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.337893 **DATE COLLECTED:** 0 / 0 / 1917
SURFACE ELEVATION (FT.): 586.0 **LOGGED (FT.):** 302.2 **LOG TYPE:** Drillers Log
SOURCE: HUNT R W & CO **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
323.7	MODESTO	PIASA	LIMESTONE	7.5	262.3
316.2	MODESTO		UNCLASSIFIED	3.0	269.8
313.2	CARBONDALE		UNCLASSIFIED	10.0	272.8
303.2	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	282.8
298.2	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.3	287.8
296.9	CARBONDALE		UNCLASSIFIED	1.3	289.1
295.6	CARBONDALE	BRERETON	LIMESTONE	2.5	290.4
293.1	CARBONDALE	ANNA	BLACK SHALE	3.1	292.9
290.0	CARBONDALE	HERRIN	COAL	6.2	296.0

MAPID: 11700050000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 10 **QUARTERS/FOOTAGES:** NE NE NE
QUADRANGLE: ATWATER **LONGITUDE:** -89.742615 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.337893 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 587.0 **LOGGED (FT.):** 302.1 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
324.0	MODESTO	PIASA	LIMESTONE & SHALE	7.5	263.0
316.5	CARBONDALE	DANVILLE	BONE COAL	1.0	270.5
315.5	CARBONDALE		DARK GRAY SHALE	5.0	271.5
310.5	CARBONDALE		CALCAREOUS SHALE	7.0	276.5
303.5	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	9.0	283.5
294.5	CARBONDALE	BRERETON	LIMESTONE & SHALE	1.0	292.5
293.5	CARBONDALE	ANNA	BLACK SHALE	3.1	293.5
291.0	CARBONDALE	HERRIN	COAL	6.1	296.0

MAPID: 11700050000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 10 QUARTERS/FOOTAGES: NE NE NE

QUADRANGLE: ATWATER LONGITUDE: -89.742615 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.337893 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 586.2 LOGGED (FT.): 305.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., #A-8 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
586.2			CLAY	6.0	0.0	
580.2			HARD PAN	7.0	6.0	
573.2			SAND & GRAVEL	8.0	13.0	
565.2	MODESTO		CALCAREOUS SHALE	8.0	21.0	
557.2	MODESTO		LIMESTONE W/ SHALE	7.0	29.0	
550.2	MODESTO		BLACK SHALE	10.0	36.0	
540.2	MODESTO		CALCAREOUS SHALE	4.0	46.0	
536.2	MODESTO		LIMESTONE	3.0	50.0	
533.2	MODESTO		CALCAREOUS SHALE	13.0	53.0	
520.2	MODESTO		BLACK SHALE	4.3	66.0	
515.9	MODESTO		COAL	0.3	70.3	
515.7	MODESTO		SHALE	17.5	70.5	W/LS
498.2	MODESTO		SANDY SHALE	6.0	88.0	
492.2	MODESTO		SHALE	10.0	94.0	
482.2	MODESTO		LIMESTONE	5.0	104.0	
477.2	MODESTO		BLACK SHALE	1.0	109.0	
476.2	MODESTO		SHALE	25.3	110.0	
450.9	MODESTO		COAL	1.1	135.3	
449.9	MODESTO		SANDY SHALE	19.7	136.3	
430.2	MODESTO		SHALE	57.0	156.0	
373.2	MODESTO		BLACK SHALE	1.0	213.0	
372.2	MODESTO		CALCAREOUS SHALE	18.0	214.0	
354.2	MODESTO		SHALE	7.0	232.0	
347.2	MODESTO		BLACK SHALE	2.0	239.0	
345.2	MODESTO		COAL	0.5	241.0	
344.7	MODESTO		UNDERCLAY	0.5	241.5	
344.2			SHALE	3.0	242.0	
341.2			SANDY SHALE	11.0	245.0	W/LS
330.2	CARBONDALE		SHALE	6.5	256.0	
323.7	CARBONDALE	BANKSTON FORK	LIMESTONE	7.5	262.5	
316.2	CARBONDALE		BLACK SHALE	1.0	270.0	
315.2	CARBONDALE		SHALE	8.0	271.0	
307.2	CARBONDALE		CALCAREOUS SHALE	4.0	279.0	
303.2	CARBONDALE	BRERETON	LIMESTONE	5.0	283.0	
298.2	CARBONDALE	BRERETON	CALCAREOUS SHALE	2.5	288.0	
295.7	CARBONDALE	BRERETON	LIMESTONE	2.5	290.5	
293.2	CARBONDALE	ANNA	BLACK SHALE	3.1	293.0	
290.1	CARBONDALE	HERRIN	COAL	6.2	296.1	
283.9	CARBONDALE		UNDERCLAY	2.3	302.3	

281.7 CARBONDALE

LIMESTONE

0.5 304.5

MAPID: 11721849000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 10 QUARTERS/FOOTAGES: 2520' N line, 1378' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.755325

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.331423

DATE COLLECTED: 11 / 10 / 1977

SURFACE ELEVATION (FT.): 585.0 LOGGED (FT.): 320.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-14A

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
585.0			UNCONSOLIDATED	86.0	0.0
499.0	MODESTO		GRAY SHALE	9.0	86.0
490.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	95.0
486.0	MODESTO		BLACK SHALE	0.5	99.0
485.5	MODESTO		LIMESTONE	0.8	99.5
484.7	MODESTO		SANDY SHALE	27.8	100.3
457.0	MODESTO	CHAPEL	COAL	1.0	128.0
456.0	MODESTO		GRAY SHALE	19.0	129.0
437.0	MODESTO		UNCLASSIFIED	77.0	148.0
360.0	MODESTO		BLACK SHALE	2.0	225.0
358.0	MODESTO		GRAY SHALE	27.4	227.0
330.6	MODESTO		LIMESTONE	2.6	254.4
328.0	MODESTO		GRAY SHALE	4.0	257.0
324.0	MODESTO		COAL	3.0	261.0
321.0	MODESTO		GRAY SHALE	10.0	264.0
311.0	MODESTO	PIASA	LIMESTONE	6.0	274.0
305.0	MODESTO		GRAY SHALE	1.0	280.0
304.0	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	5.0	281.0
299.0	CARBONDALE		SHALE	1.0	286.0
298.0	CARBONDALE	BRERETON	LIMESTONE	3.5	287.0
294.5	CARBONDALE		SHALE	0.7	290.5
293.8	CARBONDALE	HERRIN	COAL	4.7	291.2
289.1	CARBONDALE		UNDERCLAY	6.1	295.9
283.0	CARBONDALE		SHALE	4.0	302.0
279.0	CARBONDALE		GRAY SHALE	2.0	306.0
277.0	CARBONDALE		LIMESTONE	4.0	308.0
273.0	CARBONDALE		GRAY SHALE	8.0	312.0

MAPID: 1172185000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 10 QUARTERS/FOOTAGES: 40' S line, 393' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.758779 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.323517 DATE COLLECTED: 11 / 2 / 1979

SURFACE ELEVATION (FT.): 615.0 LOGGED (FT.): 334.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-12 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
615.0			UNCONSOLIDATED	97.0	0.0
518.0	MODESTO		GRAY SHALE	5.5	97.0
512.5	MODESTO		GRAY SHALE	9.5	102.5
503.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	112.0
499.0	MODESTO		BLACK SHALE	1.5	116.0
497.5	MODESTO		SANDY SHALE	18.0	117.5
479.5	MODESTO		SANDSTONE	1.5	135.5
478.0	MODESTO		GRAY SHALE	13.5	137.0
464.5	MODESTO	CHAPEL	COAL	1.0	150.5
463.5	MODESTO		CALCAREOUS SHALE	31.5	151.5
432.0	MODESTO		GRAY SHALE	59.0	183.0
373.0	MODESTO		LIMESTONE	1.5	242.0
371.5	MODESTO		GRAY SHALE	5.5	243.5
366.0	MODESTO		BLACK SHALE	2.5	249.0
363.5	MODESTO		COAL	1.0	251.5
362.5	MODESTO		GRAY SHALE	22.5	252.5
340.0	MODESTO	PIASA	LIMESTONE	7.2	275.0
332.8	MODESTO		CLAYSTONE & SILTSTONE	0.7	282.2
332.1	CARBONDALE	DANVILLE	COAL	0.2	282.9
331.9	CARBONDALE		CLAYSTONE & SILTSTONE	1.9	283.1
330.0	CARBONDALE		SHALE	4.8	285.0
325.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.4	289.8
323.8	CARBONDALE	BANKSTON FORK	SANDY LIMESTONE	5.3	291.2
318.5	CARBONDALE		SHALE	0.7	296.5
317.8	CARBONDALE		CALCAREOUS SHALE	0.8	297.2
317.0	CARBONDALE	BRERETON	SHALY LIMESTONE	10.0	298.0
307.0	CARBONDALE		CARBONACEOUS CLAYSTONE	0.7	308.0
306.3	CARBONDALE	HERRIN	COAL	5.9	308.7
300.4	CARBONDALE		CARBONACEOUS CLAYSTONE	2.6	314.6
297.8	CARBONDALE		CLAYSTONE	2.3	317.2
295.5	CARBONDALE		BRECCIA	4.7	319.5
290.8	CARBONDALE		CLAYSTONE	3.8	324.2
287.0	CARBONDALE		SHALY LIMESTONE	3.2	328.0
283.8	CARBONDALE		GRAY SHALE	3.3	331.2

MAPID: 11700051000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 11 QUARTERS/FOOTAGES: SW SW SE

QUADRANGLE: ATWATER LONGITUDE: -89.73074 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.325263 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 636.6 LOGGED (FT.): 354.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., #A-9 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
636.6			SOIL	3.0	0.0	
633.6			CLAY	13.0	3.0	
620.6			HARD PAN	14.0	16.0	
606.6			SAND/CLAY	15.0	30.0	
591.6			CLAY & SHALE	12.0	45.0	
579.6	BOND		SHALE	11.0	57.0	
568.6	BOND		SHALE	3.0	68.0	
565.6	BOND	CARTHAGE	LIMESTONE	9.0	71.0	
556.6	MODESTO		SHALE	2.0	80.0	
554.6	MODESTO		SHALE	11.0	82.0	
543.6	MODESTO	MACOUPIN	LIMESTONE	8.0	93.0	
535.6	MODESTO		CALCAREOUS SHALE	18.0	101.0	
517.6	MODESTO		SHALE	3.0	119.0	
514.6	MODESTO		CALCAREOUS SHALE	7.0	122.0	
507.6	MODESTO		SANDY SHALE	11.0	129.0	
496.6	MODESTO		SHALE	16.0	140.0	
480.6	MODESTO	CARLINVILLE	LIMESTONE	4.0	156.0	
476.6	MODESTO		SANDY SHALE	32.0	160.0	
444.6	MODESTO		SHALE	0.5	192.0	
444.1	MODESTO	CHAPEL	COAL	1.3	192.5	
442.8	MODESTO		CALCAREOUS SHALE	10.2	193.8	
432.6	MODESTO		SANDY SHALE	14.0	204.0	
418.6	MODESTO		SHALE	7.0	218.0	
411.6	MODESTO		SHALE	17.0	225.0	
394.6	MODESTO		SHALE	31.0	242.0	
363.6	MODESTO		SANDY SHALE	29.5	273.0	W/LS
334.1	MODESTO		BLACK SHALE	2.8	302.5	
331.3	CARBONDALE	DANVILLE	COAL	1.3	305.3	
330.0	CARBONDALE		SHALE	22.4	306.6	W/LS
307.6	CARBONDALE		LIMESTONE	5.0	329.0	
302.6	CARBONDALE		CALCAREOUS SHALE	1.0	334.0	
301.6	CARBONDALE		LIMESTONE	1.0	335.0	
300.6	CARBONDALE		SHALE	2.0	336.0	
298.6	CARBONDALE		SHALE	6.9	338.0	
291.7	CARBONDALE	HERRIN	COAL	7.7	344.9	
284.0	CARBONDALE		LIMESTONE W/ SHALE	1.4	352.6	

MAPID: 11700051000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 11 QUARTERS/FOOTAGES: SW SW SE

QUADRANGLE: ATWATER LONGITUDE: -89.73074 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.325263 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 637.0 LOGGED (FT.): 352.7 LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
325.3	MODESTO	PIASA	LIMESTONE	4.4	311.7
320.9	MODESTO		UNCLASSIFIED	3.0	316.1
317.9	CARBONDALE		UNCLASSIFIED	10.0	319.1
307.9	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	329.1
302.9	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	334.1
301.9	CARBONDALE	CONANT	UNCLASSIFIED	1.0	335.1
300.9	CARBONDALE		UNCLASSIFIED	2.0	336.1
298.9	CARBONDALE	ANNA	BLACK SHALE	6.9	338.1
292.0	CARBONDALE	HERRIN	COAL	7.7	345.0

MAPID: 11700052000C VERSION: 1

PROJECT: NCRDS87

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 11 QUARTERS/FOOTAGES: SE NE NW

QUADRANGLE: ATWATER LONGITUDE: -89.733247 GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 39.336361 DATE COLLECTED: 3 / 0 / 1913

SURFACE ELEVATION (FT.): 631.2 LOGGED (FT.): 356.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
631.2			UNCONSOLIDATED	77.0	0.0
554.2	BOND	CARTHAGE	LIMESTONE	11.5	77.0
542.7	MODESTO		BLACK SHALE	8.5	88.5
534.2	MODESTO		SHALE	9.0	97.0
525.2	MODESTO		LIMESTONE	1.5	106.0
523.7	MODESTO		SHALE	13.0	107.5
510.7	MODESTO		BLACK SHALE	2.5	120.5
508.2	MODESTO	WOMAC	COAL	0.7	123.0
507.5	MODESTO		UNDERCLAY	5.3	123.7
502.2	MODESTO		SHALE	27.0	129.0
475.2	MODESTO	CARLINVILLE	LIMESTONE	4.0	156.0
471.2	MODESTO		BLACK SHALE	0.5	160.0
470.7	MODESTO		SHALE	1.0	160.5
469.7	MODESTO		SANDSTONE	1.5	161.5
468.2	MODESTO		SHALE	26.8	163.0
441.4	MODESTO		COAL	0.8	189.8
440.5	MODESTO		UNDERCLAY	2.3	190.7
438.2	MODESTO		SHALE	104.5	193.0
333.7	MODESTO		BLACK SHALE	2.3	297.5
331.4	MODESTO		COAL	1.0	299.8
330.4	MODESTO		UNDERCLAY	3.3	300.8
327.2	MODESTO		SHALE	11.0	304.0
316.2	MODESTO	PIASA	LIMESTONE	6.0	315.0
310.2	MODESTO		SHALE	2.0	321.0
308.2	MODESTO		BLACK SHALE	2.3	323.0
305.9	CARBONDALE	DANVILLE	COAL	0.3	325.3
305.7	CARBONDALE		SHALE	7.3	325.5
298.4	CARBONDALE	BANKSTON FORK	LIMESTONE	5.8	332.8
292.5	CARBONDALE		SHALE	1.0	338.7
291.5	CARBONDALE	BRERETON	LIMESTONE	8.8	339.7
282.7	CARBONDALE	ANNA	BLACK SHALE	1.0	348.5
281.7	CARBONDALE	HERRIN	COAL	5.7	349.5
276.0	CARBONDALE		UNDERCLAY	0.8	355.2

MAPID: 11700052000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 11 QUARTERS/FOOTAGES: SE NE NW

QUADRANGLE: ATWATER LONGITUDE: -89.733247 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.336361 DATE COLLECTED:

SURFACE ELEVATION (FT.): 631.0 LOGGED (FT.): 355.7 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
316.0	MODESTO	PIASA	LIMESTONE & SHALE	6.0	315.0
310.0	MODESTO		DARK GRAY SHALE	4.3	321.0
305.7	CARBONDALE	DANVILLE	COAL	0.3	325.3
305.5	CARBONDALE		CLAYSTONE & SHALE	7.3	325.5
298.2	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	5.8	332.8
292.3	CARBONDALE	BANKSTON FORK	CLAYSTONE & SHALE	1.0	338.7
291.3	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	5.8	339.7
285.5	CARBONDALE	BRERETON	LIMESTONE & SHALE	3.0	345.5
282.5	CARBONDALE	ANNA	BLACK SHALE	1.0	348.5
281.0	CARBONDALE	HERRIN	COAL	5.7	350.0

MAPID: 11700052000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 11 QUARTERS/FOOTAGES: SE NE NW

QUADRANGLE: ATWATER LONGITUDE: -89.733247 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.336361 DATE COLLECTED: 3 / 0 / 1913

SURFACE ELEVATION (FT.): 631.0 LOGGED (FT.): 355.7 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
315.6	MODESTO	PIASA	LIMESTONE	6.0	315.4
309.6	MODESTO		UNCLASSIFIED	4.3	321.4
305.3	CARBONDALE	DANVILLE	COAL	0.3	325.7
305.0	CARBONDALE		UNCLASSIFIED	7.3	326.0
297.7	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.8	333.3
291.9	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	339.1
290.9	CARBONDALE		UNCLASSIFIED	2.0	340.1
288.9	CARBONDALE	BRERETON	LIMESTONE	6.9	342.1
282.0	CARBONDALE	ANNA	BLACK SHALE	1.0	349.0
281.0	CARBONDALE	HERRIN	COAL	5.7	350.0

MAPID: 11700052000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 11 QUARTERS/FOOTAGES: SE NE NW

QUADRANGLE: ATWATER LONGITUDE: -89.733247 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.336361 DATE COLLECTED: 3 / 0 / 1913

SURFACE ELEVATION (FT.): 631.2 LOGGED (FT.): 356.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO., HOLE #7 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
631.2			SOIL	2.0	0.0	
629.2			CLAY	14.0	2.0	
615.2			HARD PAN	2.0	16.0	
613.2			CLAY	20.0	18.0	
593.2			CLAY & GRAVEL	10.0	38.0	
583.2			CLAY	26.0	48.0	
557.2			GRAVEL	3.0	74.0	
554.2	BOND	CARTHAGE	LIMESTONE	11.5	77.0	
542.7	MODESTO		BLACK SHALE	8.5	88.5	
534.2	MODESTO		SHALE	9.0	97.0	
525.2	MODESTO	MACOUPIN	LIMESTONE	1.5	106.0	
523.7	MODESTO		CALCAREOUS SHALE	1.5	107.5	
522.2	MODESTO		SHALE	9.5	109.0	
512.7	MODESTO		CALCAREOUS SHALE	2.0	118.5	
510.7	MODESTO		BLACK SHALE	2.5	120.5	
508.2	MODESTO	WOMAC	COAL	0.7	123.0	
507.5	MODESTO		UNDERCLAY	5.3	123.7	
502.2	MODESTO		CALCAREOUS SHALE	7.0	129.0	
495.2	MODESTO		SANDY SHALE	9.0	136.0	
486.2	MODESTO		SHALE	11.0	145.0	W/LS BANDS
475.2	MODESTO	CARLINVILLE	LIMESTONE	4.0	156.0	
471.2	MODESTO		BLACK SHALE	0.5	160.0	
470.7	MODESTO		CALCAREOUS SHALE	1.0	160.5	
469.7	MODESTO		SANDSTONE	1.5	161.5	
468.2	MODESTO		SHALE	26.8	163.0	
441.4	MODESTO	CHAPEL	COAL	0.8	189.8	
440.5	MODESTO		UNDERCLAY	2.3	190.7	
438.2	MODESTO		CALCAREOUS SHALE	6.0	193.0	
432.2	MODESTO		SANDY SHALE	41.0	199.0	
391.2	MODESTO		SHALE	14.0	240.0	
377.2	MODESTO		BLACK SHALE	11.0	254.0	
366.2	MODESTO		SHALE	4.0	265.0	
362.2	MODESTO		CLAYSTONE & SHALE	3.0	269.0	
359.2	MODESTO		SANDY SHALE	25.5	272.0	
333.7	MODESTO		BLACK SHALE	2.3	297.5	
331.4	MODESTO		COAL	1.0	299.8	
330.4	MODESTO		UNDERCLAY	3.3	300.8	
327.2	MODESTO		SANDY SHALE	8.0	304.0	
319.2	MODESTO		SHALE	3.0	312.0	

316.2	MODESTO	PIASA	LIMESTONE	6.0	315.0
310.2	MODESTO		SHALE	1.0	321.0
309.2	MODESTO		CLAYSTONE & SHALE	1.0	322.0
308.2	MODESTO		BLACK SHALE	2.3	323.0
305.9	CARBONDALE	DANVILLE	COAL	0.3	325.3
305.7	CARBONDALE		CLAYSTONE & SHALE	7.3	325.5
298.4	CARBONDALE	BANKSTON FORK	LIMESTONE	5.8	332.8
292.5	CARBONDALE		CLAYSTONE & SHALE	1.0	338.7
291.5	CARBONDALE	BRERETON	LIMESTONE	8.8	339.7
282.7	CARBONDALE	ANNA	BLACK SHALE	1.0	348.5
281.7	CARBONDALE	HERRIN	COAL	5.7	349.5
276.0	CARBONDALE		UNDERCLAY	0.8	355.2

MAPID: 11700749000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 11 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of NW NE
QUADRANGLE: ATWATER **LONGITUDE:** -89.728615 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.338407 **DATE COLLECTED:** 6 / 0 / 1959
SURFACE ELEVATION (FT.): 628.0 **LOGGED (FT.):** 363.5 **LOG TYPE:** Electric Log
SOURCE: E & G DRLG. CO. **WELL TYPE:** Temporarily Abandoned
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN COMMENT
305.0	MODESTO	PIASA	LIMESTONE	3.0	323.0
302.0	MODESTO		UNCLASSIFIED	5.0	326.0
297.0	CARBONDALE		UNCLASSIFIED	14.0	331.0
283.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	345.0
280.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	348.0
279.0	CARBONDALE		UNCLASSIFIED	1.0	349.0
278.0	CARBONDALE	BRERETON	LIMESTONE	5.0	350.0
273.0	CARBONDALE	ANNA	BLACK SHALE	4.0	355.0
269.0	CARBONDALE	HERRIN	COAL	4.5	359.0

MAPID: 11700932000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 11 **QUARTERS/FOOTAGES:** 330' S line, 330' E line
QUADRANGLE: ATWATER **LONGITUDE:** -89.723678 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.325428 **DATE COLLECTED:** 10 / 0 / 1962
SURFACE ELEVATION (FT.): 635.0 **LOGGED (FT.):** 367.0 **LOG TYPE:** Electric Log
SOURCE: STRIBLING, W. C. **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN COMMENT
271.0	CARBONDALE	HERRIN	COAL	3.0	364.0

MAPID: 11701035000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 11 QUARTERS/FOOTAGES: 330' S line, 330' E line of NW NW

QUADRANGLE: ATWATER LONGITUDE: -89.737924 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.336186 DATE COLLECTED: 2 / 0 / 1949

SURFACE ELEVATION (FT.): 623.0 LOGGED (FT.): 371.0 LOG TYPE: Electric Log

SOURCE: WHITE EDGAR WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
293.0	MODESTO	PIASA	LIMESTONE	5.0	330.0
288.0	MODESTO		UNCLASSIFIED	4.0	335.0
284.0	CARBONDALE		UNCLASSIFIED	11.0	339.0
273.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	350.0
269.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.5	354.0
266.5	CARBONDALE		UNCLASSIFIED	2.5	356.5
264.0	CARBONDALE	BRERETON	LIMESTONE	6.0	359.0
258.0	CARBONDALE	HERRIN	COAL	6.0	365.0

MAPID: 11722382000C VERSION: 1

PROJECT: NCRDS92

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 11 QUARTERS/FOOTAGES: 723' N line, 1536' W line

QUADRANGLE: ATWATER LONGITUDE: -89.735968 GEOLOGIST: C TREWORYG

CONFIDENTIAL: N LATITUDE: 39.337059 DATE COLLECTED: 8 / 19 / 1977

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 373.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL R1-77-26 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
630.0			CLAY	15.0	0.0	
615.0			SAND	22.0	15.0	SS & GRAVEL W/ CLAY STREAKS
593.0			UNCONSOLIDATED	46.0	37.0	GLACIAL DRIFT
547.0	MODESTO		DARK GRAY SHALE	10.0	83.0	
537.0	MODESTO		GRAY SHALE	8.5	93.0	
528.5	MODESTO		CALCAREOUS SHALE	2.0	101.5	
526.5	MODESTO		LIMESTONE	1.7	103.5	
524.8	MODESTO		GRAY SHALE	13.3	105.2	
511.5	MODESTO		BLACK SHALE	3.5	118.5	BK SH W/ TRACES OF COAL
508.0	MODESTO		GRAY SHALE	6.7	122.0	
501.3	MODESTO		GRAY SHALE	2.3	128.7	LGY SH W/ LS STREAKS
499.0	MODESTO		GRAY SHALE	2.2	131.0	
496.8	MODESTO		LIMESTONE	1.8	133.2	
495.0	MODESTO		SANDY SHALE	12.0	135.0	SDY SH W/ SS STREAKS
483.0	MODESTO		GRAY SHALE	9.0	147.0	
474.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	156.0	
470.0	MODESTO		GRAY SHALE	30.0	160.0	
440.0	MODESTO	CHAPEL	COAL	1.0	190.0	
439.0	MODESTO		GRAY SHALE	4.3	191.0	
434.7	MODESTO		LIMESTONE	1.7	195.3	
433.0	MODESTO		GRAY SHALE	73.0	197.0	
360.0	MODESTO		CALCAREOUS SHALE	3.0	270.0	
357.0	MODESTO		GRAY SHALE	23.0	273.0	
334.0	MODESTO		BLACK SHALE	2.0	296.0	BK SH W/ STREAKS OF COAL
332.0	MODESTO		GRAY SHALE	5.0	298.0	
327.0	MODESTO		SANDY SHALE	7.0	303.0	
320.0	MODESTO		GRAY SHALE	6.0	310.0	
314.0	MODESTO	PIASA	LIMESTONE	3.5	316.0	
310.5	MODESTO	PIASA	CALCAREOUS SHALE	1.5	319.5	
309.0	MODESTO	PIASA	LIMESTONE	3.5	321.0	
305.5	MODESTO		DARK GRAY SHALE	3.5	324.5	
302.0	MODESTO		GRAY SHALE	9.0	328.0	
293.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	337.0	
288.0	CARBONDALE		CALCAREOUS SHALE	3.0	342.0	
285.0	CARBONDALE		LIMESTONE	1.0	345.0	
284.0	CARBONDALE	BRERETON	LIMESTONE	5.0	346.0	
279.0	CARBONDALE		DARK GRAY SHALE	1.6	351.0	
277.4	CARBONDALE	HERRIN	COAL	4.5	352.6	
272.9	CARBONDALE		UNDERCLAY	0.6	357.1	

272.3	CARBONDALE	LIMESTONE	1.3	357.7	
271.0	CARBONDALE	CALCAREOUS SHALE	1.0	359.0	
270.0	CARBONDALE	LIMESTONE	13.0	360.0	LS W/ SHALE STREAKS

MAPID: 11722382000C VERSION: 2

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 11 QUARTERS/FOOTAGES: 723' N line, 1536' W line

QUADRANGLE: ATWATER LONGITUDE: -89.735968 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.337059 DATE COLLECTED: 8 / 19 / 1977

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 373.0 LOG TYPE: Multiple log types

SOURCE: WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
630.0			UNCONSOLIDATED	87.0	0.0
543.0	MODESTO		GRAY SHALE	2.0	87.0
541.0	MODESTO		BLACK SHALE	4.0	89.0
537.0	MODESTO		GRAY SHALE	8.5	93.0
528.5	MODESTO		SANDY LIMESTONE	3.7	101.5
524.8	MODESTO		GRAY SHALE	12.3	105.2
512.5	MODESTO	MACOUPIN	LIMESTONE	0.5	117.5
512.0	MODESTO		BLACK SHALE	3.5	118.0
508.5	MODESTO	WOMAC	COAL	0.5	121.5
508.0	MODESTO		GRAY SHALE	6.0	122.0
502.0	MODESTO		LIMESTONE	3.0	128.0
499.0	MODESTO		GRAY SHALE	2.0	131.0
497.0	MODESTO		LIMESTONE	2.0	133.0
495.0	MODESTO		SANDY SHALE	11.5	135.0
483.5	MODESTO		GRAY SHALE	9.5	146.5
474.0	MODESTO	CARLINVILLE	LIMESTONE	3.5	156.0
470.5	MODESTO		SHALE	1.0	159.5
469.5	MODESTO		LIMESTONE	0.5	160.5
469.0	MODESTO		GRAY SHALE	28.0	161.0
441.0	MODESTO	CHAPEL	COAL	1.0	189.0
440.0	MODESTO		GRAY SHALE	5.0	190.0
435.0	MODESTO		SHALY LIMESTONE	2.0	195.0
433.0	MODESTO		GRAY SHALE	72.0	197.0
361.0	MODESTO		CALCAREOUS SHALE	3.5	269.0
357.5	MODESTO		GRAY SHALE	21.5	272.5
336.0	MODESTO		BLACK SHALE	3.0	294.0
333.0	MODESTO		COAL	0.5	297.0
332.5	MODESTO		GRAY SHALE	3.5	297.5
329.0	MODESTO		SANDY SHALE	9.0	301.0
320.0	MODESTO		SHALE	6.0	310.0
314.0	MODESTO	PIASA	SHALY LIMESTONE	8.0	316.0
306.0	MODESTO		SHALE	5.0	324.0
301.0	CARBONDALE		GRAY SHALE	7.0	329.0
294.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	336.0
289.0	CARBONDALE		SHALE	4.0	341.0
285.0	CARBONDALE	BRERETON	LIMESTONE	6.0	345.0
279.0	CARBONDALE		SHALE	1.6	351.0
277.4	CARBONDALE	HERRIN	COAL	4.5	352.6
272.9	CARBONDALE		UNDERCLAY	0.6	357.1

272.3	CARBONDALE	LIMESTONE	1.3	357.7
271.0	CARBONDALE	SHALE	1.1	359.0
270.0	CARBONDALE	LIMESTONE	13.0	360.0

MAPID: 11700445000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 12 **QUARTERS/FOOTAGES:** 60' S line, 60' W line of NE SW SW
QUADRANGLE: ATWATER **LONGITUDE:** -89.719918 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.326694 **DATE COLLECTED:** 7 / 0 / 1940
SURFACE ELEVATION (FT.): 635.0 **LOGGED (FT.):** 362.5 **LOG TYPE:** Electric Log
SOURCE: COVER H A & LEE J H **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN COMMENT
320.0	MODESTO	PIASA	LIMESTONE	5.0	315.0
315.0	MODESTO		UNCLASSIFIED	1.5	320.0
313.5	CARBONDALE		UNCLASSIFIED	3.5	321.5
310.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	325.0
305.0	CARBONDALE	ANNA	BLACK SHALE	2.0	330.0
303.0	CARBONDALE	ENERGY	UNCLASSIFIED	23.0	332.0
280.0	CARBONDALE	HERRIN	COAL	7.5	355.0

MAPID: 11721851000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 12 QUARTERS/FOOTAGES: 2344' S line, 1977' E line

QUADRANGLE: ATWATER LONGITUDE: -89.710429 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.331523 DATE COLLECTED: 11 / 7 / 1977

SURFACE ELEVATION (FT.): 633.0 LOGGED (FT.): 406.7 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-3 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
633.0			UNCONSOLIDATED	44.0	0.0
589.0	BOND		GRAY SHALE	48.5	44.0
540.5	BOND	CARTHAGE	LIMESTONE	1.0	92.5
539.5	BOND	CARTHAGE	SHALE	2.5	93.5
537.0	BOND	CARTHAGE	LIMESTONE	8.0	96.0
529.0	MODESTO		BLACK SHALE	1.5	104.0
527.5	MODESTO		LIMESTONE	1.0	105.5
526.5	MODESTO		GRAY SHALE	11.5	106.5
515.0	MODESTO		CALCAREOUS SANDSTONE	9.5	118.0
505.5	MODESTO		GRAY SHALE	15.5	127.5
490.0	MODESTO	MACOUPIN	LIMESTONE	1.5	143.0
488.5	MODESTO		BLACK SHALE	3.0	144.5
485.5	MODESTO		SHALE	0.5	147.5
485.0	MODESTO	WOMAC	COAL	1.0	148.0
484.0	MODESTO		SHALE	6.5	149.0
477.5	MODESTO		SHALY LIMESTONE	2.0	155.5
475.5	MODESTO		SHALE	5.0	157.5
470.5	MODESTO		SHALY LIMESTONE	1.0	162.5
469.5	MODESTO		GRAY SHALE	23.5	163.5
446.0	MODESTO	CARLINVILLE	LIMESTONE	5.0	187.0
441.0	MODESTO		GRAY SHALE	33.0	192.0
408.0	MODESTO	CHAPEL	COAL	1.5	225.0
406.5	MODESTO		GRAY SHALE	7.5	226.5
399.0	MODESTO		GRAY SHALE	12.0	234.0
387.0	MODESTO		GRAY SHALE	34.0	246.0
353.0	MODESTO		GRAY SHALE	22.0	280.0
331.0	MODESTO		GRAY SHALE	5.0	302.0
326.0	MODESTO		GRAY SHALE	4.0	307.0
322.0	MODESTO		SANDY SHALE	29.0	311.0
293.0	MODESTO		BLACK SHALE	2.5	340.0
290.5	MODESTO		COAL	0.5	342.5
290.0	MODESTO		GRAY SHALE	6.5	343.0
283.5	MODESTO		LIMESTONE	0.5	349.5
283.0	MODESTO		SHALE	3.5	350.0
279.4	MODESTO	PIASA	LIMESTONE	3.5	353.6
276.0	MODESTO		BLACK SHALE	2.0	357.0
274.0	CARBONDALE		SHALE	4.8	359.0
269.2	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	0.9	363.8

268.3	CARBONDALE	BANKSTON FORK	SHALE	1.0	364.7
267.3	CARBONDALE	BANKSTON FORK	SILTY LIMESTONE	6.6	365.7
260.7	CARBONDALE		SHALE	1.0	372.3
259.7	CARBONDALE	BRERETON	SHALY LIMESTONE	1.6	373.3
258.1	CARBONDALE		SILTY SHALE	9.1	374.9
249.0	CARBONDALE	HERRIN	COAL	8.1	384.0
240.9	CARBONDALE		CLAYSTONE & SILTSTONE	0.7	392.1
240.2	CARBONDALE		LIMESTONE	7.2	392.8
233.0	CARBONDALE		BRECCIA	4.5	400.0
228.5	CARBONDALE		CORE LOSS	2.3	404.5

MAPID: 11722383000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 12 QUARTERS/FOOTAGES: 192' N line, 891' W line

QUADRANGLE: ATWATER LONGITUDE: -89.71962 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.339112 DATE COLLECTED: 8 / 17 / 1977

SURFACE ELEVATION (FT.): 638.0 LOGGED (FT.): 380.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-27 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
638.0			UNCONSOLIDATED	74.0	0.0
564.0	BOND		GRAY SHALE	8.0	74.0
556.0	BOND	CARTHAGE	LIMESTONE	10.0	82.0
546.0	MODESTO		BLACK SHALE	5.0	92.0
541.0	MODESTO		LIMESTONE	1.0	97.0
540.0	MODESTO		GRAY SHALE	24.5	98.0
515.5	MODESTO		LIMESTONE	1.0	122.5
514.5	MODESTO		BLACK SHALE	3.0	123.5
511.5	MODESTO	WOMAC	COAL	0.5	126.5
511.0	MODESTO		GRAY SHALE	6.0	127.0
505.0	MODESTO		LIMESTONE	2.0	133.0
503.0	MODESTO		SANDY SHALE	2.0	135.0
501.0	MODESTO		SHALY SANDSTONE	3.0	137.0
498.0	MODESTO		SANDY SHALE	10.0	140.0
488.0	MODESTO		GRAY SHALE	15.0	150.0
473.0	MODESTO	CARLINVILLE	LIMESTONE	3.0	165.0
470.0	MODESTO		BLACK SHALE	1.0	168.0
469.0	MODESTO		GRAY SHALE	28.0	169.0
441.0	MODESTO	CHAPEL	COAL	1.0	197.0
440.0	MODESTO		GRAY SHALE	2.0	198.0
438.0	MODESTO		SHALY LIMESTONE	7.0	200.0
431.0	MODESTO		SANDY SHALE	12.0	207.0
419.0	MODESTO		GRAY SHALE	58.0	219.0
361.0	MODESTO		SHALE	2.0	277.0
359.0	MODESTO		GRAY SHALE	5.5	279.0
353.5	MODESTO		SANDSTONE	8.0	284.5
345.5	MODESTO		SANDY SHALE	22.5	292.5
323.0	MODESTO		BLACK SHALE	2.5	315.0
320.5	MODESTO		COAL	0.5	317.5
320.0	MODESTO		GRAY SHALE	10.0	318.0
310.0	MODESTO	PIASA	LIMESTONE	3.0	328.0
307.0			GRAY SHALE	11.0	331.0
296.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	342.0
291.0	CARBONDALE		CALCAREOUS SHALE	4.0	347.0
287.0	CARBONDALE	BRERETON	SHALY LIMESTONE	7.0	351.0
280.0	CARBONDALE	HERRIN	COAL	5.5	358.0
274.5	CARBONDALE		UNDERCLAY	0.4	363.5
274.1	CARBONDALE		LIMESTONE	7.6	363.9
266.5	CARBONDALE		SHALE	3.0	371.5

263.5	CARBONDALE	LIMESTONE	3.0	374.5
260.5	CARBONDALE	GRAY SHALE	2.5	377.5

MAPID: 11722384000C **VERSION:** 1 **PROJECT:** NCRDS89
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 12 **QUARTERS/FOOTAGES:** 48' N line, 1326' E line
QUADRANGLE: ATWATER **LONGITUDE:** -89.70824 **GEOLOGIST:** SROKA
CONFIDENTIAL: N **LATITUDE:** 39.339917 **DATE COLLECTED:** 8 / 16 / 1977
SURFACE ELEVATION (FT.): 633.0 **LOGGED (FT.):** 385.0 **LOG TYPE:** Multiple log types
SOURCE: MOBIL OIL RI-77-28 **WELL TYPE:** Coal Test
COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
633.0			UNCONSOLIDATED	70.0	0.0
563.0	BOND		GRAY SHALE	5.0	70.0
558.0	BOND	CARTHAGE	LIMESTONE	10.0	75.0
548.0	MODESTO		BLACK SHALE	5.0	85.0
543.0	MODESTO		GRAY SHALE	14.0	90.0
529.0	MODESTO		SHALY LIMESTONE	4.0	104.0
525.0	MODESTO		UNCLASSIFIED	14.0	108.0
511.0	MODESTO	MACOUPIN	LIMESTONE	2.0	122.0
509.0	MODESTO		BLACK SHALE	2.0	124.0
507.0	MODESTO		LIMESTONE	1.0	126.0
506.0	MODESTO	WOMAC	COAL	1.0	127.0
505.0	MODESTO		GRAY SHALE	7.0	128.0
498.0	MODESTO		SHALY LIMESTONE	1.5	135.0
496.5	MODESTO		GRAY SHALE	29.5	136.5
467.0	MODESTO	CARLINVILLE	LIMESTONE	2.0	166.0
465.0	MODESTO		BLACK SHALE	2.0	168.0
463.0	MODESTO		GRAY SHALE	29.5	170.0
433.5	MODESTO	CHAPEL	COAL	1.5	199.5
432.0	MODESTO		GRAY SHALE	83.0	201.0
349.0	MODESTO		SHALE	2.0	284.0
347.0	MODESTO		SANDY SHALE	45.0	286.0
302.0	MODESTO		BLACK SHALE	3.0	331.0
299.0	CARBONDALE	DANVILLE	COAL	1.0	334.0
298.0	CARBONDALE		CALCAREOUS SHALE	8.0	335.0
290.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	343.0
284.5	CARBONDALE		CALCAREOUS SHALE	1.5	348.5
283.0	CARBONDALE	BRERETON	LIMESTONE	7.0	350.0
276.0	CARBONDALE	ANNA	BLACK SHALE	1.4	357.0
274.6	CARBONDALE	HERRIN	COAL	8.6	358.4
266.0	CARBONDALE		SHALY LIMESTONE	7.0	367.0
259.0	CARBONDALE		GRAY SHALE	5.5	374.0
253.5	CARBONDALE		LIMESTONE	5.5	379.5

MAPID: 11722385000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 13 QUARTERS/FOOTAGES: 48' S line, 33' E line

QUADRANGLE: ATWATER LONGITUDE: -89.703106 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.310393 DATE COLLECTED: 7 / 29 / 1977

SURFACE ELEVATION (FT.): 641.0 LOGGED (FT.): 405.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-18 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
641.0			UNCONSOLIDATED	30.0	0.0
611.0	BOND		GRAY SHALE	58.0	30.0
553.0	BOND	CARTHAGE	LIMESTONE	8.0	88.0
545.0	MODESTO		BLACK SHALE	2.0	96.0
543.0	MODESTO		GRAY SHALE	15.0	98.0
528.0	MODESTO		CALCAREOUS SANDSTONE	13.0	113.0
515.0	MODESTO		SANDY SHALE	12.5	126.0
502.5	MODESTO	MACOUPIN	LIMESTONE	0.5	138.5
502.0	MODESTO		BLACK SHALE	3.0	139.0
499.0	MODESTO	WOMAC	COAL	1.0	142.0
498.0	MODESTO		GRAY SHALE	6.0	143.0
492.0	MODESTO		CALCAREOUS SANDSTONE	2.5	149.0
489.5	MODESTO		SANDY SHALE	26.5	151.5
463.0	MODESTO	CARLINVILLE	LIMESTONE	4.5	178.0
458.5	MODESTO		GRAY SHALE	10.5	182.5
448.0	MODESTO		SANDY SHALE	25.0	193.0
423.0	MODESTO	CHAPEL	COAL	1.5	218.0
421.5	MODESTO		GRAY SHALE	72.5	219.5
349.0	MODESTO		SHALE	3.0	292.0
346.0	MODESTO		SANDY SHALE	22.0	295.0
324.0	MODESTO		BLACK SHALE	3.0	317.0
321.0	MODESTO		GRAY SHALE	4.0	320.0
317.0	MODESTO		SHALE	4.0	324.0
313.0	MODESTO		GRAY SHALE	9.0	328.0
304.0	MODESTO	PIASA	LIMESTONE	1.5	337.0
302.5			GRAY SHALE	4.5	338.5
298.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	343.0
296.0	CARBONDALE	ENERGY	SANDY SHALE	21.0	345.0
275.0	CARBONDALE	ENERGY	GRAY SHALE	20.0	366.0
255.0	CARBONDALE	HERRIN	COAL	4.0	386.0
251.0	CARBONDALE		UNDERCLAY	3.0	390.0
248.0	CARBONDALE		LIMESTONE	8.0	393.0
240.0	CARBONDALE		GRAY SHALE	4.0	401.0

MAPID: 11722386000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 13 QUARTERS/FOOTAGES: 35' N line, 1995' E line

QUADRANGLE: ATWATER LONGITUDE: -89.710392 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.324956 DATE COLLECTED: 8 / 25 / 1977

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 405.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-24 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSTIY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
635.0			UNCONSOLIDATED	37.0	0.0
598.0	BOND		GRAY SHALE	44.0	37.0
554.0	BOND		LIMESTONE	1.0	81.0
553.0	BOND		GRAY SHALE	3.0	82.0
550.0	BOND	CARTHAGE	LIMESTONE	7.0	85.0
543.0	MODESTO		BLACK SHALE	2.0	92.0
541.0			GRAY SHALE	12.0	94.0
529.0			LIMESTONE	10.0	106.0
519.0			GRAY SHALE	15.0	116.0
504.0	MODESTO	MACOUPIN	LIMESTONE	2.0	131.0
502.0	MODESTO		BLACK SHALE	3.5	133.0
498.5	MODESTO	WOMAC	COAL	0.5	136.5
498.0	MODESTO		GRAY SHALE	14.0	137.0
484.0	MODESTO		GRAY SHALE	22.0	151.0
462.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	173.0
458.0	MODESTO		GRAY SHALE	31.5	177.0
426.5	MODESTO	CHAPEL	COAL	1.5	208.5
425.0	MODESTO		SANDY SHALE	16.0	210.0
409.0	MODESTO		GRAY SHALE	59.0	226.0
350.0	MODESTO		SHALY SANDSTONE	15.0	285.0
335.0	MODESTO		SANDY SHALE	15.0	300.0
320.0	MODESTO		BLACK SHALE	2.5	315.0
317.5	MODESTO		GRAY SHALE	14.5	317.5
303.0	MODESTO	PIASA	LIMESTONE	2.0	332.0
301.0			GRAY SHALE	6.0	334.0
295.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	340.0
290.0	CARBONDALE	ENERGY	GRAY SHALE	36.5	345.0
253.5	CARBONDALE	HERRIN	COAL	6.0	381.5
247.5	CARBONDALE		UNDERCLAY	1.0	387.5
246.5	CARBONDALE		LIMESTONE	9.5	388.5
237.0	CARBONDALE		GRAY SHALE	4.5	398.0
232.5	CARBONDALE		LIMESTONE	2.5	402.5

MAPID: 11722387000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 13 QUARTERS/FOOTAGES: 51' N line, 13' W line

QUADRANGLE: ATWATER LONGITUDE: -89.722438 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.324409 DATE COLLECTED: 8 / 24 / 1977

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 376.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-25 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSTIY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
635.0			UNCONSOLIDATED	55.0	0.0
580.0	BOND		GRAY SHALE	10.0	55.0
570.0	BOND		LIMESTONE	1.0	65.0
569.0	BOND		SHALE	2.0	66.0
567.0	BOND	CARTHAGE	LIMESTONE	8.0	68.0
559.0	MODESTO		BLACK SHALE	3.0	76.0
556.0	MODESTO		GRAY SHALE	11.0	79.0
545.0	MODESTO		CALCAREOUS SANDSTONE	11.0	90.0
534.0	MODESTO		GRAY SHALE	16.0	101.0
518.0	MODESTO	MACOUPIN	LIMESTONE	1.0	117.0
517.0	MODESTO		BLACK SHALE	2.0	118.0
515.0	MODESTO	WOMAC	COAL	2.0	120.0
513.0	MODESTO		GRAY SHALE	6.0	122.0
507.0	MODESTO		GRAY SHALE	17.0	128.0
490.0	MODESTO		GRAY SHALE	12.0	145.0
478.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	157.0
474.0	MODESTO		BLACK SHALE	1.0	161.0
473.0	MODESTO		GRAY SHALE	31.5	162.0
441.5	MODESTO	CHAPEL	COAL	1.5	193.5
440.0	MODESTO		GRAY SHALE	78.5	195.0
361.5	MODESTO		SANDSTONE	1.0	273.5
360.5	MODESTO		SANDY SHALE	29.5	274.5
331.0	MODESTO		BLACK SHALE	3.0	304.0
328.0			COAL	1.0	307.0
327.0			GRAY SHALE	10.5	308.0
316.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	318.5
310.5	CARBONDALE	ENERGY	GRAY SHALE	26.0	324.5
284.5	CARBONDALE	HERRIN	COAL	7.5	350.5
277.0	CARBONDALE		UNDERCLAY	3.0	358.0
274.0	CARBONDALE		SHALE	3.0	361.0
271.0	CARBONDALE		LIMESTONE	2.0	364.0
269.0	CARBONDALE		SHALE	7.8	366.0
261.2	CARBONDALE		LIMESTONE	2.2	373.8

MAPID: 11722388000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 13 QUARTERS/FOOTAGES: 1954' S line, 625' W line

QUADRANGLE: ATWATER LONGITUDE: -89.720071 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.315099 DATE COLLECTED: 5 / 31 / 1979

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 392.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL R-79-13-16 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
271.0	CARBONDALE	HERRIN	COAL	2.5	369.0	CLEAN COAL, TOTAL SEAM THICKNESS ~5.6'

MAPID: 11722388000C VERSION: 2

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 13 QUARTERS/FOOTAGES: 1954' S line, 625' W line

QUADRANGLE: ATWATER LONGITUDE: -89.720071 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.315099 DATE COLLECTED: 5 / 31 / 1979

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 392.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL R-79-13-16 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
640.0			UNCONSOLIDATED	48.0	0.0	
592.0	BOND		GRAY SHALE	27.0	48.0	
565.0	BOND		GRAY SHALE	4.0	75.0	
561.0	BOND	CARTHAGE	LIMESTONE	5.0	79.0	
556.0	MODESTO		GRAY SHALE	16.0	84.0	
540.0	MODESTO		CALCAREOUS SANDSTONE	7.0	100.0	
533.0	MODESTO		GRAY SHALE	15.0	107.0	
518.0	MODESTO		SANDY SHALE	4.5	122.0	
513.5	MODESTO	MACOUPIN	LIMESTONE	0.5	126.5	
513.0	MODESTO		BLACK SHALE	3.0	127.0	
510.0	MODESTO	WOMAC	COAL	1.5	130.0	
508.5	MODESTO		GRAY SHALE	24.5	131.5	
484.0	MODESTO		GRAY SHALE	9.0	156.0	
475.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	165.0	
471.0	MODESTO		SANDY SHALE	35.0	169.0	
436.0	MODESTO	CHAPEL	COAL	1.0	204.0	
435.0	MODESTO		SANDY SHALE	13.0	205.0	
422.0	MODESTO		GRAY SHALE	52.0	218.0	
370.0	MODESTO		GRAY SHALE	14.0	270.0	
356.0	MODESTO		SANDSTONE	7.5	284.0	
348.5	MODESTO		GRAY SHALE	14.5	291.5	
334.0	MODESTO		BLACK SHALE	1.5	306.0	
332.5	MODESTO		COAL	0.5	307.5	
332.0	MODESTO		SANDY SHALE	15.0	308.0	
317.0	MODESTO	PIASA	LIMESTONE	4.8	323.0	
312.2			GRAY SHALE	1.9	327.8	
310.3	CARBONDALE	BANKSTON FORK	LIMESTONE	5.3	329.7	
305.0	CARBONDALE	ENERGY	SILTY SHALE	32.7	335.0	
272.3	CARBONDALE	HERRIN	COAL	5.6	367.7	CONTAINS PARTINGS: CLEAN COAL = ~2.5'
266.7	CARBONDALE		GRAY SHALE	0.7	373.3	
266.0	CARBONDALE		LIMESTONE	9.5	374.0	
256.5	CARBONDALE		GRAY SHALE	2.5	383.5	
254.0	CARBONDALE		GRAY SHALE	6.0	386.0	

MAPID: 11700053000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 14 QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: ATWATER LONGITUDE: -89.730596 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.31594 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 621.0 LOGGED (FT.): 339.5 LOG TYPE: Drillers Log

SOURCE: NO COMPANY WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
333.0	MODESTO	PIASA	LIMESTONE	3.5	288.0
329.5	MODESTO		UNCLASSIFIED	1.0	291.5
328.5	CARBONDALE		UNCLASSIFIED	3.5	292.5
325.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.5	296.0
320.5	CARBONDALE	ENERGY	UNCLASSIFIED	34.5	300.5
286.0	CARBONDALE	HERRIN	COAL	4.5	335.0

MAPID: 11700053000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 14 QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: ATWATER LONGITUDE: -89.730596 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.31594 DATE COLLECTED:

SURFACE ELEVATION (FT.): 621.0 LOGGED (FT.): 340.5 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
323.0	MODESTO	PIASA	LIMESTONE	3.5	298.0
319.5	MODESTO		CLAYSTONE	3.0	301.5
316.5	CARBONDALE	ENERGY	SHALE	31.5	304.5
285.0	CARBONDALE	HERRIN	BONE COAL	4.5	336.0

MAPID: 11700053000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 14 QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: ATWATER LONGITUDE: -89.730596 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.31594 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 621.4 LOGGED (FT.): 500.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: NO COMPANY LIST; A.W. CRAWFORD (OPTION)

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
621.4			UNCONSOLIDATED	46.0	0.0	
575.4	BOND		BLACK SHALE	2.0	46.0	
573.4	BOND	CARTHAGE	LIMESTONE	8.0	48.0	
565.4	MODESTO		UNDERCLAY	13.0	56.0	
552.4	MODESTO		UNDERCLAY	3.0	69.0	
549.4	MODESTO	MACOUPIN	LIMESTONE	8.0	72.0	
541.4	MODESTO		SHALE	17.0	80.0	
524.4	MODESTO		LIMESTONE	1.0	97.0	
523.4	MODESTO		BLACK SHALE	3.0	98.0	
520.4	MODESTO		UNDERCLAY	5.0	101.0	
515.4	MODESTO		SHALE	25.0	106.0	
490.4	MODESTO	CARLINVILLE	LIMESTONE	4.0	131.0	
486.4	MODESTO		SHALE	110.0	135.0	
376.4	MODESTO		SHALE & BOULDERS	5.0	245.0	
371.4	MODESTO	PIASA	LIMESTONE	6.5	250.0	
364.9	MODESTO		UNDERCLAY	3.5	256.5	W/ COAL STREAK
361.4	MODESTO		SHALE	5.0	260.0	
356.4	MODESTO		LIMESTONE	1.0	265.0	
355.4	MODESTO		SHALE	5.0	266.0	
350.4	CARBONDALE	DANVILLE	BLACK SHALE & COAL	1.5	271.0	BKSH & COAL
348.9	CARBONDALE		UNDERCLAY	6.0	272.5	
342.9	CARBONDALE		SHALE	10.0	278.5	
332.9	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	288.5	
329.4	CARBONDALE		SHALE	2.0	292.0	
327.4	CARBONDALE		BLACK SHALE	2.5	294.0	
324.9	CARBONDALE		LIMESTONE	4.5	296.5	
320.4	CARBONDALE		UNDERCLAY	3.0	301.0	
317.4	CARBONDALE	ENERGY	SHALE	31.5	304.0	
285.9	CARBONDALE	HERRIN	BLACK SHALE & COAL	1.5	335.5	BKSH & COAL
284.4	CARBONDALE	HERRIN	COAL WITH SHALE	3.0	337.0	BLUE SH IN COAL PARTINGS
281.4	CARBONDALE		UNDERCLAY	2.0	340.0	
279.4	CARBONDALE		SHALE	3.0	342.0	
276.4	CARBONDALE		LIMESTONE	9.0	345.0	
267.4	CARBONDALE		SHALE	1.0	354.0	
266.4	CARBONDALE		LIMESTONE	3.0	355.0	
263.4	CARBONDALE		UNDERCLAY	21.0	358.0	
242.4	CARBONDALE		SHALE	15.0	379.0	
227.4	CARBONDALE		SANDSTONE/LIMESTONE	40.0	394.0	
187.4	CARBONDALE		SANDY SHALE	4.5	434.0	

182.9	CARBONDALE	SURVANT	COAL	4.8	438.5	W/ SULPHUR PARTINGS
178.1	CARBONDALE		SHALE	1.0	443.3	
177.1	CARBONDALE		UNDERCLAY	2.0	444.3	
175.1	CARBONDALE		SHALE	27.8	446.3	
147.4	CARBONDALE		SHALE	8.0	474.0	
139.4	CARBONDALE	COLCHESTER	COAL	1.5	482.0	
137.9	SPOON		UNKNOWN	0.8	483.5	LOG HAS SULPHUR BOULDER
137.1	SPOON		SHALE	0.5	484.3	
136.6	SPOON		BLACK SHALE	2.0	484.8	
134.6	SPOON		UNDERCLAY	3.0	486.8	
131.6	SPOON		SHALE	10.2	489.8	

MAPID: 11721852000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 14 QUARTERS/FOOTAGES: 1320' S line, 54' W line

QUADRANGLE: ATWATER LONGITUDE: -89.741029 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.312781 DATE COLLECTED: 10 / 16 / 1978

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 377.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-30 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
635.0			UNCONSOLIDATED	126.0	0.0
509.0	MODESTO		GRAY SHALE	27.3	126.0
481.7	MODESTO	CARLINVILLE	LIMESTONE	4.2	153.3
477.5	MODESTO		SHALE	1.5	157.5
476.0	MODESTO		GRAY SHALE	34.0	159.0
442.0	MODESTO	CHAPEL	COAL	1.2	193.0
440.8	MODESTO		GRAY SHALE	85.8	194.2
355.0	MODESTO		GRAY SHALE	10.0	280.0
345.0	MODESTO		GRAY SHALE	4.0	290.0
341.0	MODESTO		BLACK SHALE	2.0	294.0
339.0	MODESTO		SHALE	6.0	296.0
333.0	MODESTO		CALCAREOUS SHALE	15.9	302.0
317.1	MODESTO	PIASA	LIMESTONE	2.1	317.9
315.0	MODESTO		SHALE	5.0	320.0
310.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	325.0
309.0	CARBONDALE	ENERGY	GRAY SHALE	5.0	326.0
304.0	CARBONDALE	ENERGY	SANDSTONE	2.0	331.0
302.0	CARBONDALE	ENERGY	GRAY SHALE	19.0	333.0
283.0	CARBONDALE	ENERGY	BLACK SHALE	2.1	352.0
280.9	CARBONDALE	HERRIN	COAL	7.0	354.1
273.9	CARBONDALE		SHALE	0.2	361.1
273.7	CARBONDALE		CORE LOSS	1.0	361.3
272.7	CARBONDALE		GRAY SHALE	11.7	362.3
261.0	CARBONDALE		SANDY LIMESTONE	2.0	374.0
259.0	CARBONDALE		CALCAREOUS SHALE	1.0	376.0

MAPID: 11722389000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 14 QUARTERS/FOOTAGES: 2481' N line, 2286' E line

QUADRANGLE: ATWATER LONGITUDE: -89.730466 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.317489 DATE COLLECTED: 7 / 28 / 1977

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 367.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-16 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
632.0			UNCONSOLIDATED	61.0	0.0
571.0	BOND	CARTHAGE	LIMESTONE	7.0	61.0
564.0	MODESTO		BLACK SHALE	2.0	68.0
562.0	MODESTO		GRAY SHALE	10.0	70.0
552.0	MODESTO		CALCAREOUS SANDSTONE	12.0	80.0
540.0	MODESTO		GRAY SHALE	15.5	92.0
524.5	MODESTO	MACOUPIN	LIMESTONE	1.5	107.5
523.0	MODESTO		BLACK SHALE	1.5	109.0
521.5	MODESTO	WOMAC	SHALY COAL	2.5	110.5
519.0	MODESTO		GRAY SHALE	32.0	113.0
487.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	145.0
483.0	MODESTO		SANDY SHALE	3.0	149.0
480.0	MODESTO		GRAY SHALE	28.0	152.0
452.0	MODESTO	CHAPEL	COAL	1.5	180.0
450.5	MODESTO		SANDY SHALE	13.5	181.5
437.0	MODESTO		GRAY SHALE	59.0	195.0
378.0	MODESTO		SANDY SHALE	12.0	254.0
366.0	MODESTO		GRAY SHALE	14.0	266.0
352.0	MODESTO		BLACK SHALE	3.0	280.0
349.0	MODESTO		CALCAREOUS SHALE	7.0	283.0
342.0	MODESTO		GRAY SHALE	9.0	290.0
333.0	MODESTO	PIASA	LIMESTONE	6.0	299.0
327.0			SHALE	2.0	305.0
325.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	307.0
322.0	CARBONDALE	ENERGY	GRAY SHALE	30.0	310.0
292.0	CARBONDALE	ENERGY	GRAY SHALE	2.4	340.0
289.6	CARBONDALE	ENERGY	BLACK SHALE	0.3	342.4
289.3	CARBONDALE	HERRIN	COAL	6.7	342.7
282.6	CARBONDALE		UNDERCLAY	1.0	349.4
281.6	CARBONDALE		CORE LOSS	0.1	350.4
281.5	CARBONDALE		GRAY SHALE	4.0	350.5
277.5	CARBONDALE		CALCAREOUS SHALE	4.7	354.5
272.8	CARBONDALE		GRAY SHALE	6.8	359.2
266.0	CARBONDALE		SANDY LIMESTONE	1.0	366.0

MAPID: 11700054000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 15 QUARTERS/FOOTAGES: SW SW SW NE

QUADRANGLE: ATWATER LONGITUDE: -89.750069 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.316795 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 634.0 LOGGED (FT.): 352.0 LOG TYPE: Drillers Log

SOURCE: R. W. HUNT & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
634.0			UNCONSOLIDATED	112.0	0.0	
522.0			ROCK	69.5	112.0	
452.5			COAL	1.5	181.5	
451.0			ROCK	103.0	183.0	
348.0			COAL	0.5	286.0	
347.5			ROCK	24.0	286.5	
323.5			SHALE	18.2	310.5	
305.3			LIMESTONE	8.8	328.7	
296.6			SHALE	5.9	337.4	
290.7			BLACK SHALE	1.0	343.3	
289.7	CARBONDALE	HERRIN	COAL	5.8	344.3	
283.8			ROCK	1.8	350.2	

MAPID: 11700054000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 15 QUARTERS/FOOTAGES: SW SW SW NE

QUADRANGLE: ATWATER LONGITUDE: -89.750069 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.316795 DATE COLLECTED:

SURFACE ELEVATION (FT.): 634.0 LOGGED (FT.): 349.8 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
324.0	MODESTO	PIASA	LIMESTONE	4.0	310.0	
320.0	CARBONDALE		GRAY SHALE	18.1	314.0	
301.9	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	8.8	332.1	
293.1	CARBONDALE	BRERETON	LIMESTONE W/ SHALE	1.9	340.9	
291.2	CARBONDALE	ANNA	BLACK SHALE	5.0	342.8	
290.0	CARBONDALE	HERRIN	COAL	5.8	344.0	

MAPID: 11700054000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 15 QUARTERS/FOOTAGES: SW SW SW NE

QUADRANGLE: ATWATER LONGITUDE: -89.750069 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.316795 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 634.0 LOGGED (FT.): 349.8 LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
328.9	MODESTO	PIASA	LIMESTONE	4.0	305.1
324.9	MODESTO		UNCLASSIFIED	5.0	309.1
319.9	CARBONDALE		UNCLASSIFIED	13.2	314.1
306.7	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.8	327.3
301.9	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	332.1
299.9	CARBONDALE		UNCLASSIFIED	2.0	334.1
297.9	CARBONDALE	BRERETON	LIMESTONE	1.9	336.1
296.0	CARBONDALE	ANNA	BLACK SHALE	1.0	338.0
295.0	CARBONDALE	ENERGY	UNCLASSIFIED	5.0	339.0
290.0	CARBONDALE	HERRIN	COAL	5.8	344.0

MAPID: 11700054000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 15 QUARTERS/FOOTAGES: SW SW SW NE

QUADRANGLE: ATWATER LONGITUDE: -89.750069 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.316795 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 634.2 LOGGED (FT.): 352.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE #C-9 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
634.2			CLAY	20.0	0.0
614.2			SAND & GRAVEL	28.0	20.0
586.2			CLAY	32.0	48.0
554.2			SAND	13.0	80.0
541.2			GRAVEL	2.0	93.0
539.2			CLAY	17.0	95.0
522.2	MODESTO	MACOUPIN	LIMESTONE	2.0	112.0
520.2	MODESTO		CLAYSTONE & SHALE	4.0	114.0
516.2	MODESTO		SHALE	12.0	118.0
504.2	MODESTO		SANDY SHALE	10.0	130.0
494.2	MODESTO	CARLINVILLE	LIMESTONE	5.5	140.0
488.7	MODESTO		BLACK SHALE	0.5	145.5
488.2	MODESTO		SANDY SHALE	35.5	146.0
452.7	MODESTO	CHAPEL	COAL	1.5	181.5
451.2	MODESTO		CALCAREOUS SHALE	5.0	183.0
446.2	MODESTO		SANDSTONE	3.0	188.0
443.2	MODESTO		SANDY SHALE	14.0	191.0
429.2	MODESTO		SHALE	18.0	205.0
411.2	MODESTO		SANDY SHALE	8.0	223.0
403.2	MODESTO		SHALE	37.0	231.0
366.2	MODESTO		SANDSTONE	12.0	268.0
354.2	MODESTO		SHALE	6.0	280.0
348.2	MODESTO		COAL	0.5	286.0
347.7	MODESTO		CALCAREOUS SHALE	1.5	286.5
346.2	MODESTO		SANDSTONE	4.0	288.0
342.2	MODESTO		SHALE	14.5	292.0
327.7	MODESTO	PIASA	LIMESTONE	4.0	306.5
323.7			SHALE	18.2	310.5
305.5	CARBONDALE	BRERETON	LIMESTONE	8.8	328.7
296.8	CARBONDALE		CALCAREOUS SHALE	1.9	337.4
294.9	CARBONDALE		SHALE	4.0	339.3
290.9	CARBONDALE	ANNA	BLACK SHALE	1.0	343.3
289.9	CARBONDALE	HERRIN	COAL	5.8	344.3
284.0	CARBONDALE		SHALE	0.3	350.2
283.7	CARBONDALE		UNDERCLAY	1.0	350.5
282.7	CARBONDALE		CALCAREOUS SHALE	0.5	351.5

MAPID: 11721853000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 15 QUARTERS/FOOTAGES: 90' S line, 2382' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.751456 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.309153 DATE COLLECTED: 11 / 4 / 1977

SURFACE ELEVATION (FT.): 628.0 LOGGED (FT.): 369.5 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-10 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
628.0			UNCONSOLIDATED	64.0	0.0
564.0	BOND	CARTHAGE	LIMESTONE	7.0	64.0
557.0	MODESTO		BLACK SHALE	3.0	71.0
554.0	MODESTO		GRAY SHALE	13.0	74.0
541.0	MODESTO		LIMESTONE	9.0	87.0
532.0	MODESTO		SHALE	10.0	96.0
522.0	MODESTO		GRAY SHALE	3.0	106.0
519.0	MODESTO	MACOUPIN	LIMESTONE	1.0	109.0
518.0	MODESTO		BLACK SHALE	3.5	110.0
514.5	MODESTO	WOMAC	COAL	1.0	113.5
513.5	MODESTO		GRAY SHALE	28.5	114.5
485.0	MODESTO	CARLINVILLE	LIMESTONE	4.5	143.0
480.5	MODESTO		SHALE	0.5	147.5
480.0	MODESTO		GRAY SHALE	7.0	148.0
473.0	MODESTO		SANDSTONE	5.0	155.0
468.0	MODESTO		GRAY SHALE	24.5	160.0
443.5	MODESTO	CHAPEL	COAL	1.0	184.5
442.5	MODESTO		GRAY SHALE	4.5	185.5
438.0	MODESTO		LIMESTONE	3.0	190.0
435.0	MODESTO		GRAY SHALE	55.0	193.0
380.0	MODESTO		GRAY SHALE	11.0	248.0
369.0	MODESTO		SHALE	4.0	259.0
365.0	MODESTO		GRAY SHALE	21.0	263.0
344.0	MODESTO		BLACK SHALE	2.0	284.0
342.0	MODESTO		GRAY SHALE	5.0	286.0
337.0	MODESTO		CALCAREOUS SHALE	7.0	291.0
330.0	MODESTO		LIMESTONE	1.0	298.0
329.0	MODESTO		GRAY SHALE	11.5	299.0
317.5	MODESTO	PIASA	LIMESTONE	1.5	310.5
316.0	MODESTO		BLACK SHALE	3.0	312.0
313.0	CARBONDALE		GRAY SHALE	1.5	315.0
311.5	CARBONDALE	BANKSTON FORK	SILTY LIMESTONE	3.3	316.5
308.2	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	0.5	319.8
307.7	CARBONDALE	BANKSTON FORK	LIMESTONE	0.6	320.3
307.1	CARBONDALE	ENERGY	SILTY SHALE	25.1	320.9
282.1	CARBONDALE	ENERGY	SHALE	0.2	345.9
281.9	CARBONDALE	HERRIN	COAL	7.4	346.1
274.5	CARBONDALE		CLAYSTONE	0.4	353.5
274.1	CARBONDALE		SHALY LIMESTONE	1.8	353.9

272.3	CARBONDALE	CLAYSTONE & SILTSTONE	4.4	355.7
267.9	CARBONDALE	CONGLOMERATE	4.9	360.1
263.1	CARBONDALE	CLAYSTONE & SILTSTONE	4.6	364.9

MAPID: 11721854000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 15 QUARTERS/FOOTAGES: 1755' N line, 2565' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.750389

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.31887

DATE COLLECTED: 12 / 20 / 1977

SURFACE ELEVATION (FT.): 630.0

LOGGED (FT.): 375.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-11

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
630.0			UNCONSOLIDATED	112.0	0.0
518.0	MODESTO		GRAY SHALE	27.5	112.0
490.5	MODESTO	CARLINVILLE	LIMESTONE	5.0	139.5
485.5	MODESTO		BLACK SHALE	1.0	144.5
484.5	MODESTO		SANDY SHALE	19.5	145.5
465.0	MODESTO		SANDSTONE	5.0	165.0
460.0	MODESTO		SANDY SHALE	11.5	170.0
448.5	MODESTO	CHAPEL	COAL	1.0	181.5
447.5	MODESTO		SANDY SHALE	23.0	182.5
424.5	MODESTO		SANDY SHALE	37.5	205.5
387.0	MODESTO		GRAY SHALE	15.0	243.0
372.0	MODESTO		GRAY SHALE	7.0	258.0
365.0	MODESTO		SANDY SHALE	2.0	265.0
363.0	MODESTO		SANDSTONE	8.0	267.0
355.0	MODESTO		SANDY SHALE	12.0	275.0
343.0	MODESTO		BLACK SHALE	3.0	287.0
340.0	MODESTO		COAL	0.5	290.0
339.5	MODESTO		GRAY SHALE	16.5	290.5
323.0	MODESTO	PIASA	LIMESTONE	5.5	307.0
317.5	MODESTO		SHALE	1.0	312.5
316.5	MODESTO		GRAY SHALE	6.5	313.5
310.0	CARBONDALE		CLAYSTONE	11.5	320.0
298.5	CARBONDALE	BANKSTON FORK	SANDY LIMESTONE	5.7	331.5
292.8	CARBONDALE		CALCAREOUS SHALE	0.9	337.2
292.0	CARBONDALE	BRERETON	SHALY LIMESTONE	6.0	338.0
286.0	CARBONDALE		CALCAREOUS SHALE	1.2	344.0
284.8	CARBONDALE		SILTY SHALE	3.4	345.2
281.4	CARBONDALE	HERRIN	COAL	4.5	348.6
277.0	CARBONDALE		CLAYSTONE	1.0	353.0
276.0	CARBONDALE		CLAYSTONE	6.0	354.0
270.0	CARBONDALE		CLAYSTONE & SILTSTONE	3.8	360.0
266.2	CARBONDALE		CORE LOSS	0.2	363.8
266.0	CARBONDALE		LIMESTONE	1.0	364.0
265.0	CARBONDALE		GRAY SHALE	3.0	365.0
262.0	CARBONDALE		LIMESTONE	4.0	368.0
258.0	CARBONDALE		CALCAREOUS SHALE	3.0	372.0

MAPID: 11700055000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 16 QUARTERS/FOOTAGES: SE SE NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.770653 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.31687 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 582.0 LOGGED (FT.): 298.0 LOG TYPE: Drillers Log

SOURCE: R. W. HUNT & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
582.0			UNCONSOLIDATED	13.0	0.0
569.0			ROCK	118.0	13.0
451.0			COAL	1.0	131.0
450.0			ROCK	128.4	132.0
321.6			COAL	0.8	260.4
320.7			PYRITE	0.5	261.3
320.2			COAL	0.3	261.8
320.0			SHALE	14.0	262.0
306.0			LIMESTONE	5.0	276.0
301.0			SHALE	2.3	281.0
298.7			LIMESTONE	1.8	283.3
296.8			SHALE	2.8	285.2
294.0	CARBONDALE	HERRIN	COAL	7.2	288.0
286.8			ROCK	2.8	295.2

MAPID: 11700055000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 16 QUARTERS/FOOTAGES: SE SE NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.770653 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.31687 DATE COLLECTED:

SURFACE ELEVATION (FT.): 582.0 LOGGED (FT.): 295.2 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
330.6	MODESTO	PIASA	LIMESTONE	8.0	251.4
322.6	MODESTO		DARK GRAY SHALE	0.4	259.4
322.2	CARBONDALE	DANVILLE	COAL	2.0	259.8
320.2	CARBONDALE		DARK GRAY SHALE	14.0	261.8
306.2	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	275.8
301.2	CARBONDALE	LAWSON	CALCAREOUS SHALE	2.3	280.8
298.8	CARBONDALE	BRERETON	LIMESTONE & SHALE	1.8	283.2
297.0	CARBONDALE	ANNA	BLACK SHALE	3.0	285.0
294.0	CARBONDALE	HERRIN	COAL	7.2	288.0

MAPID: 11700055000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 16 QUARTERS/FOOTAGES: SE SE NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.770653 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.31687 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 582.0 LOGGED (FT.): 295.2 LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
331.7	MODESTO	PIASA	LIMESTONE	4.0	250.3
327.7	MODESTO		UNCLASSIFIED	4.4	254.3
323.3	CARBONDALE	DANVILLE	COAL	1.6	258.7
321.7	CARBONDALE		UNCLASSIFIED	14.0	260.3
307.7	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	274.3
302.7	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.2	279.3
301.5	CARBONDALE		UNCLASSIFIED	1.2	280.5
300.3	CARBONDALE	BRERETON	LIMESTONE	1.8	281.7
298.5	CARBONDALE	ANNA	BLACK SHALE	1.7	283.5
296.8	CARBONDALE	ENERGY	UNCLASSIFIED	2.8	285.2
294.0	CARBONDALE	HERRIN	COAL	7.2	288.0

MAPID: 11700055000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 16 QUARTERS/FOOTAGES: SE SE NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.770653

GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.31687

DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 582.0 LOGGED (FT.): 298.0

LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE #D-8

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
582.0			CLAY & GRAVEL	13.0	0.0
569.0	BOND	CARTHAGE	LIMESTONE	9.0	13.0
560.0	MODESTO		SHALE	28.0	22.0
532.0	MODESTO	MACOUPIN	LIMESTONE	5.0	50.0
527.0	MODESTO		BLACK SHALE	5.0	55.0
522.0	MODESTO		LIMESTONE	2.0	60.0
520.0	MODESTO		CALCAREOUS SHALE	4.0	62.0
516.0	MODESTO		SHALE	5.0	66.0
511.0	MODESTO		LIMESTONE	1.0	71.0
510.0	MODESTO		SHALE	16.0	72.0
494.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	88.0
490.0	MODESTO		BLACK SHALE	0.5	92.0
489.5	MODESTO		LIMESTONE	0.5	92.5
489.0	MODESTO		CALCAREOUS SHALE	4.0	93.0
485.0	MODESTO		SANDY SHALE	34.0	97.0
451.0	MODESTO	CHAPEL	COAL	1.0	131.0
450.0	MODESTO		SHALE	2.0	132.0
448.0	MODESTO		SANDY SHALE	11.0	134.0
437.0	MODESTO		SHALE	2.0	145.0
435.0	MODESTO		SHALE	6.0	147.0
429.0	MODESTO		SANDY SHALE	23.0	153.0
406.0	MODESTO		SHALE	27.0	176.0
379.0	MODESTO		CALCAREOUS SHALE	4.0	203.0
375.0	MODESTO		SHALE	4.0	207.0
371.0	MODESTO		CALCAREOUS SHALE	5.0	211.0
366.0	MODESTO		SANDY SHALE	5.0	216.0
361.0	MODESTO		SHALE	5.0	221.0
356.0	MODESTO		CALCAREOUS SHALE	2.0	226.0
354.0	MODESTO		SANDY SHALE	24.0	228.0
330.0	MODESTO	PIASA	LIMESTONE	8.0	252.0
322.0	MODESTO		BLACK SHALE	0.4	260.0
321.6	CARBONDALE	DANVILLE	COAL	1.6	260.4
320.0	CARBONDALE		SHALE	13.0	262.0
307.0	CARBONDALE		SHALE	1.0	275.0
306.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	276.0
301.0	CARBONDALE		CALCAREOUS SHALE	2.3	281.0
298.7	CARBONDALE		LIMESTONE	1.8	283.3
296.8	CARBONDALE		SHALE	1.2	285.2
295.7	CARBONDALE		SHALE	1.7	286.3

294.0	CARBONDALE	HERRIN	COAL	7.2	288.0
286.8	CARBONDALE		UNDERCLAY	1.3	295.2
285.5	CARBONDALE		LIMESTONE	1.5	296.5

MAPID: 11721855000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 16 QUARTERS/FOOTAGES: 735' S line, 25' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.778859 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.310441 DATE COLLECTED: 10 / 23 / 1978

SURFACE ELEVATION (FT.): 585.0 LOGGED (FT.): 316.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-32 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
585.0			UNCONSOLIDATED	17.5	0.0
567.5	BOND	CARTHAGE	LIMESTONE	10.0	17.5
557.5	MODESTO		BLACK SHALE	6.0	27.5
551.5	MODESTO		GRAY SHALE	24.0	33.5
527.5	MODESTO	MACOUPIN	LIMESTONE	1.0	57.5
526.5	MODESTO		BLACK SHALE	3.5	58.5
523.0	MODESTO	WOMAC	COAL	1.0	62.0
522.0	MODESTO		GRAY SHALE	5.5	63.0
516.5	MODESTO		LIMESTONE	1.0	68.5
515.5	MODESTO		GRAY SHALE	4.5	69.5
511.0	MODESTO		SHALY LIMESTONE	5.0	74.0
506.0	MODESTO		GRAY SHALE	16.0	79.0
490.0	MODESTO	CARLINVILLE	LIMESTONE	4.5	95.0
485.5	MODESTO		BLACK SHALE	1.0	99.5
484.5	MODESTO		LIMESTONE	1.0	100.5
483.4	MODESTO		GRAY SHALE	28.5	101.6
455.0	MODESTO		GRAY SHALE	6.0	130.0
449.0	MODESTO	CHAPEL	COAL	1.0	136.0
448.0	MODESTO		CALCAREOUS SHALE	72.0	137.0
376.0	MODESTO		SHALE	2.0	209.0
374.0	MODESTO		GRAY SHALE	7.0	211.0
367.0	MODESTO		CALCAREOUS SHALE	10.0	218.0
357.0	MODESTO		BLACK SHALE	2.0	228.0
355.0	MODESTO		GRAY SHALE	32.8	230.0
322.2	MODESTO	PIASA	LIMESTONE	2.5	262.8
319.7	CARBONDALE		BLACK SHALE	4.2	265.3
315.5	CARBONDALE	DANVILLE	COAL	2.0	269.5
313.5	CARBONDALE		GRAY SHALE	7.5	271.5
306.0	CARBONDALE		LIMESTONE	5.5	279.0
300.5	CARBONDALE		GRAY SHALE	1.5	284.5
299.0	CARBONDALE	BRERETON	LIMESTONE	5.4	286.0
293.6	CARBONDALE	ANNA	BLACK SHALE	5.9	291.4
287.7	CARBONDALE	HERRIN	COAL	6.5	297.3
281.2	CARBONDALE		SHALE	0.1	303.8
281.1	CARBONDALE		CORE LOSS	0.6	303.9
280.5	CARBONDALE		GRAY SHALE	2.5	304.5
278.0	CARBONDALE		LIMESTONE	0.8	307.0
277.2	CARBONDALE		GRAY SHALE	2.7	307.8
274.5	CARBONDALE		CALCAREOUS SHALE	5.5	310.5

MAPID: 11700056000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 17 QUARTERS/FOOTAGES: SW SE NE SW
 QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.790288 GEOLOGIST: TREWORGY,J
 CONFIDENTIAL: N LATITUDE: 39.312431 DATE COLLECTED: 0 / 0 / 1917
 SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 333.0 LOG TYPE: Drillers Log
 SOURCE: R. W. HUNT & CO WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
600.0			UNCONSOLIDATED	28.0	0.0
572.0			ROCK	252.5	28.0
319.5			COAL	1.5	280.5
318.0			ROCK	7.8	282.0
310.2			COAL	2.4	289.8
307.8			SHALE	4.5	292.2
303.3			LIMESTONE	7.3	296.7
296.0			SHALE	2.0	304.0
294.0			LIMESTONE	1.3	306.0
292.7			SHALE	2.0	307.3
290.7			LIMESTONE	9.4	309.3
281.3	CARBONDALE	HERRIN	COAL	8.0	318.7
273.3			SHALE	6.3	326.7

MAPID: 11700056000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 17 QUARTERS/FOOTAGES: SW SE NE SW
 QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.790288 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 39.312431 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 612.0 LOGGED (FT.): 326.7 LOG TYPE: Drillers Log
 SOURCE: WELL TYPE: Coal Test
 COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
329.0	MODESTO	PIASA	LIMESTONE	4.0	283.0
325.0	MODESTO		GRAY SHALE	2.8	287.0
322.3	CARBONDALE	DANVILLE	COAL	2.4	289.7
319.8	CARBONDALE		GRAY SHALE	4.5	292.2
315.3	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	7.3	296.7
308.0	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.0	304.0
306.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	1.3	306.0
304.8	CARBONDALE	LAWSON	DARK GRAY SHALE	2.0	307.2
302.8	CARBONDALE	BRERETON	LIMESTONE & SHALE	9.4	309.2
293.3	CARBONDALE	ANNA	CARBONACEOUS SHALE	0.3	318.7
293.0	CARBONDALE	HERRIN	COAL	7.7	319.0

MAPID: 11700056000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 17 QUARTERS/FOOTAGES: SW SE NE SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.790288 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.312431 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 612.0 LOGGED (FT.): 327.0 LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
328.7	MODESTO	PIASA	LIMESTONE	4.0	283.3
324.7	MODESTO		UNCLASSIFIED	2.8	287.3
321.9	CARBONDALE	DANVILLE	COAL	2.4	290.1
319.5	CARBONDALE		UNCLASSIFIED	6.8	292.5
312.7	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	299.3
307.7	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	304.3
305.7	CARBONDALE	CONANT	UNCLASSIFIED	1.3	306.3
304.4	CARBONDALE		UNCLASSIFIED	2.0	307.6
302.4	CARBONDALE	BRERETON	LIMESTONE	9.4	309.6
293.0	CARBONDALE	HERRIN	COAL	8.0	319.0

MAPID: 11700056000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 17 QUARTERS/FOOTAGES: SW SE NE SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.790288 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.312431 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 621.1 LOGGED (FT.): 333.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE #D-9 WELL TYPE: Coal Test

COMMENT: S.SROKA

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
621.1			CLAY & GRAVEL	18.0	0.0
603.1			SAND & GRAVEL	10.0	18.0
593.1	BOND		SHALE	19.0	28.0
574.1	BOND	CARTHAGE	LIMESTONE	10.0	47.0
564.1	MODESTO		SHALE	6.0	57.0
558.1	MODESTO		BLACK SHALE	4.0	63.0
554.1	MODESTO		SHALE	15.0	67.0
539.1	MODESTO		LIMESTONE	3.0	82.0
536.1	MODESTO		SHALE	4.0	85.0
532.1	MODESTO		BLACK SHALE	4.0	89.0
528.1	MODESTO	MACOUPIN	LIMESTONE	4.0	93.0
524.1			SANDY SHALE	10.0	97.0
514.1			SHALE	13.0	107.0
501.1	MODESTO	CARLINVILLE	LIMESTONE	5.0	120.0
496.1			SANDY SHALE	29.5	125.0
466.6			BLACK SHALE	0.5	154.5
466.1			SANDY SHALE	3.0	155.0
463.1			SHALE	3.5	158.0
459.6			LIMESTONE	2.5	161.5
457.1			SHALE	1.0	164.0
456.1			SANDY SHALE	38.0	165.0
418.1			SHALE	28.0	203.0
390.1			LIMESTONE	2.0	231.0
388.1			SHALE	17.0	233.0
371.1			SHALE	5.0	250.0
366.1			SANDY SHALE	24.0	255.0
342.1			SHALE	1.0	279.0
341.1			SANDY SHALE	0.5	280.0
340.6			COAL	1.5	280.5
339.1			SHALE	1.0	282.0
338.1				4.0	283.0
334.1			SHALE	1.8	287.0
332.3	MODESTO		BLACK SHALE	1.0	288.8
331.3	CARBONDALE	DANVILLE	COAL	2.4	289.8
328.9	CARBONDALE		SHALE	4.5	292.2
324.4	CARBONDALE	BANKSTON FORK	LIMESTONE	7.3	296.7
317.1	CARBONDALE		SHALE	2.0	304.0
315.1	CARBONDALE		LIMESTONE	1.3	306.0
313.8	CARBONDALE		SHALE	2.0	307.3

311.8	CARBONDALE	BRERETON	LIMESTONE	9.4	309.3
302.4	CARBONDALE	HERRIN	COAL	8.0	318.7
294.4	CARBONDALE		UNDERCLAY	5.0	326.7
289.4	CARBONDALE		LIMESTONE	1.3	331.7

MAPID: 11700798000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 18 **QUARTERS/FOOTAGES:** NE SW NE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.803657 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.318266 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 618.0 **LOGGED (FT.):** 359.9 **LOG TYPE:** Survey Core Study
SOURCE: AYRSHIRE COLLIERIES A9-2 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
303.6	MODESTO	PIASA	LIMESTONE/UNDERCLAY	6.8	314.4	
296.8	MODESTO		CLAYSTONE & SHALE	0.5	321.2	
296.3	CARBONDALE	DANVILLE	BONE COAL	1.5	321.7	
294.8	CARBONDALE		CLAYSTONE	0.8	323.2	
294.1	CARBONDALE		GRAY SHALE	5.2	323.9	
288.9	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	5.9	329.1	UPPER BENCH
283.0	CARBONDALE	BANKSTON FORK	MOTTLED SHALE	2.3	335.0	SHALE PARTING
280.7	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	6.2	337.3	LOWER BENCH
274.5	CARBONDALE	LAWSON	GRAY SHALE	1.3	343.5	
273.2	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	7.0	344.8	
266.2	CARBONDALE	ANNA	DARK GRAY SHALE	0.3	351.8	
266.0	CARBONDALE	HERRIN	COAL	7.9	352.0	

MAPID: 11700798000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 18 QUARTERS/FOOTAGES: NE SW NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.803657 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.318266 DATE COLLECTED:

SURFACE ELEVATION (FT.): 618.0 LOGGED (FT.): 358.9 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A9-2 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
305.1	MODESTO	PIASA	LIMESTONE	6.7	312.9
298.4	MODESTO		UNCLASSIFIED	1.0	319.6
297.4	CARBONDALE	DANVILLE	COAL	1.5	320.6
295.9	CARBONDALE		UNCLASSIFIED	9.2	322.1
286.7	CARBONDALE	BANKSTON FORK	LIMESTONE	7.7	331.3
279.0	CARBONDALE	ANVIL ROCK	SANDSTONE	2.1	339.0
276.9	CARBONDALE	CONANT	LIMESTONE	1.3	341.1
275.6	CARBONDALE		SHALE	1.3	342.4
274.3	CARBONDALE	BRERETON	LIMESTONE	7.0	343.7
267.3	CARBONDALE	ANNA	BLACK SHALE	0.3	350.7
267.0	CARBONDALE	HERRIN	COAL	7.9	351.0

MAPID: 11700798000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 18 QUARTERS/FOOTAGES: NE SW NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.803657 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.318266 DATE COLLECTED:

SURFACE ELEVATION (FT.): 618.2 LOGGED (FT.): 360.0 LOG TYPE: Survey Core Study

SOURCE: AYRSHIRE COLLIERIES A9-2 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
266.5	CARBONDALE	HERRIN	COAL	7.9	351.7

MAPID: 11700798000C VERSION: 4

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 18 QUARTERS/FOOTAGES: NE SW NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.803657 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.318266 DATE COLLECTED: 0 / 0 / 1959

SURFACE ELEVATION (FT.): 618.2 LOGGED (FT.): 360.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A92 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
618.2			UNCONSOLIDATED	11.0	0.0	
607.2			SAND & GRAVEL	50.0	11.0	
557.2			BOULDER	3.0	61.0	
554.2			SAND & GRAVEL	28.0	64.0	
526.2			SANDSTONE	4.0	92.0	
522.2			SHALE & SANDSTONE	16.0	96.0	
506.2			SHALE & SANDSTONE	26.0	112.0	
480.2			SANDSTONE	6.0	138.0	
474.2			SHALE & SANDSTONE	10.0	144.0	
464.2			SANDSTONE	3.0	154.0	
461.2			BLACK SHALE	1.5	157.0	
459.7			DARK SHALE	1.5	158.5	
458.2			GRAY SHALE	15.0	160.0	
443.2			SANDSTONE	3.0	175.0	
440.2			GRAY SHALE	25.0	178.0	
415.2			GRAY SHALE	20.0	203.0	
395.2			SANDSTONE	2.0	223.0	
393.2			SHALE & SANDSTONE	35.0	225.0	
358.2			GRAY SHALE	7.2	260.0	
351.0			DARK SHALE	12.8	267.2	
338.2			BLACK SHALE	1.5	280.0	
336.7			SHALE & SANDSTONE	2.0	281.5	
334.7			SHALE	4.0	283.5	
330.7			GRAY SHALE	0.3	287.5	
330.4			SHALE WITH LIMESTONE	9.8	287.8	
320.7			SHALE & SANDSTONE	0.3	297.5	SD
320.4			SANDSTONE	10.8	297.8	
309.7			DARK SHALE	4.8	308.5	
304.9	MODESTO	PIASA	LIMESTONE	5.7	313.3	
299.2	MODESTO		DARK SHALE	1.0	319.0	
298.2	CARBONDALE	DANVILLE	COAL	1.5	320.0	
296.7	CARBONDALE		UNDERCLAY	2.5	321.5	GRAY
294.2	CARBONDALE		DARK SHALE	3.7	324.0	
290.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	327.7	
284.5	CARBONDALE		GRAY SHALE	2.5	333.7	
282.0	CARBONDALE		LIMESTONE	2.0	336.2	
280.0	CARBONDALE		GRAY SHALE	2.0	338.2	
278.0	CARBONDALE		LIMESTONE	1.4	340.2	
276.6	CARBONDALE		DARK SHALE	2.0	341.6	

274.6	CARBONDALE	BRERETON	LIMESTONE	6.6	343.6
267.0	CARBONDALE	HERRIN	COAL	7.9	351.2 #6
259.1	CARBONDALE		UNDERCLAY	1.5	359.1

MAPID: 11721856000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 18 QUARTERS/FOOTAGES: 1776' S line, 2583' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.807237 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.312774 DATE COLLECTED: 11 / 15 / 1977

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 380.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-9 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.0			UNCONSOLIDATED	105.0	0.0
515.0	MODESTO		GRAY SHALE	2.0	105.0
513.0	MODESTO		BLACK SHALE	3.0	107.0
510.0	MODESTO	WOMAC	COAL	0.5	110.0
509.4	MODESTO		GRAY SHALE	6.0	110.6
503.5	MODESTO		LIMESTONE	1.5	116.5
502.0	MODESTO		CALCAREOUS SHALE	27.0	118.0
475.0	MODESTO	CARLINVILLE	LIMESTONE	3.5	145.0
471.5	MODESTO		SHALE	1.0	148.5
470.5	MODESTO		LIMESTONE	1.0	149.5
469.5	MODESTO		GRAY SHALE	1.5	150.5
468.0	MODESTO		SANDSTONE	14.0	152.0
454.0	MODESTO		SANDY SHALE	23.0	166.0
431.0	MODESTO	CHAPEL	COAL	1.0	189.0
430.0	MODESTO		SANDY SHALE	58.0	190.0
372.0	MODESTO		GRAY SHALE	12.0	248.0
360.0	MODESTO		GRAY SHALE	3.0	260.0
357.0	MODESTO		CALCAREOUS SHALE	22.5	263.0
334.5	MODESTO		BLACK SHALE	4.0	285.5
330.5	MODESTO		COAL	1.0	289.5
329.5	MODESTO		GRAY SHALE	10.0	290.5
319.5	MODESTO		SANDSTONE	11.5	300.5
308.0	MODESTO		CLAYSTONE	2.0	312.0
306.0	MODESTO	PIASA	SHALY LIMESTONE	4.5	314.0
301.4	MODESTO		SHALE	0.4	318.6
301.1	CARBONDALE	DANVILLE	CARBONACEOUS SHALE	0.3	318.9
300.8	CARBONDALE		CLAYSTONE	11.1	319.2
289.7	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	8.5	330.3
281.2	CARBONDALE		CORE LOSS	0.2	338.8
281.0	CARBONDALE		SHALE	2.5	339.0
278.5	CARBONDALE	BRERETON	SHALY LIMESTONE	1.9	341.5
276.6	CARBONDALE		SHALE	1.6	343.4
275.0	CARBONDALE	ANNA	BLACK SHALE	2.0	345.0
273.0	CARBONDALE	HERRIN	COAL	8.7	347.0
264.3	CARBONDALE		CLAYSTONE	2.1	355.7
262.3	CARBONDALE		SHALY LIMESTONE	2.0	357.7
260.3	CARBONDALE		CLAYSTONE & LIMESTONE	4.0	359.7
256.3	CARBONDALE		BRECCIA	3.8	363.7

252.5 CARBONDALE CORE LOSS 0.2 367.5
 252.3 CARBONDALE GRAY SHALE 12.3 367.7

MAPID: 11723763000C VERSION: 1 PROJECT: EIA-DOE
 COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 18 QUARTERS/FOOTAGES: NW NE SW SW
 QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.811316 GEOLOGIST: E. PRUSSEN
 CONFIDENTIAL: N LATITUDE: 39.311109 DATE COLLECTED: 9 / 14 / 1981
 SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 398.0 LOG TYPE: Other Core Study
 SOURCE: EXXON COAL RESOURCES 18-716 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
277.9	CARBONDALE	HERRIN	COAL	7.4	347.1	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.1		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723791000C VERSION: 1 PROJECT: EIA-DOE
 COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 18 QUARTERS/FOOTAGES: NW NE SW SW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.810691 GEOLOGIST: E. PRUSSEN
 CONFIDENTIAL: N LATITUDE: 39.311263 DATE COLLECTED: 9 / 14 / 1981
 SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 398.0 LOG TYPE: Other Core Study
 SOURCE: EXXON COAL RESOURCES 18-716 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
277.9	CARBONDALE	HERRIN	COAL	7.4	347.1	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.1		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11790083000C VERSION: 1 PROJECT: AMAX DATA
 COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 18 QUARTERS/FOOTAGES: 1000' S line, 250' E line of SW NE
 QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.803657 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.318266 DATE COLLECTED: 12 / 8 / 1959
 SURFACE ELEVATION (FT.): 618.2 LOGGED (FT.): 360.6 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE A9-2 WELL TYPE: Coal Test
 COMMENT: MACOUPIN COUNTY BOX #43; ISGS CORE DESC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
618.2	PLEISTOCENE		UNCONSOLIDATED	92.0	0.0	
526.2	MODESTO		ROCK	228.0	92.0	
298.2	CARBONDALE	DANVILLE	COAL	1.5	320.0	
296.7	CARBONDALE		ROCK	29.7	321.5	
267.0	CARBONDALE	HERRIN	COAL	7.9	351.2	
259.1	CARBONDALE		ROCK	1.6	359.1	

MAPID: 11721857000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 19 QUARTERS/FOOTAGES: 396' N line, 2610' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.807299 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.306775 DATE COLLECTED: 11 / 11 / 1977

SURFACE ELEVATION (FT.): 575.0 LOGGED (FT.): 320.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-8 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
575.0			UNCONSOLIDATED	60.0	0.0
515.0	MODESTO		GRAY SHALE	22.0	60.0
493.0	MODESTO	CARLINVILLE	LIMESTONE	5.0	82.0
488.0	MODESTO		BLACK SHALE	0.5	87.0
487.5	MODESTO		LIMESTONE	0.5	87.5
487.0	MODESTO		GRAY SHALE	34.0	88.0
453.0	MODESTO	CHAPEL	COAL	1.0	122.0
452.0	MODESTO		GRAY SHALE	2.5	123.0
449.5	MODESTO		CALCAREOUS SHALE	4.5	125.5
445.0	MODESTO		SANDY SHALE	59.0	130.0
386.0	MODESTO		LIMESTONE	1.0	189.0
385.0	MODESTO		GRAY SHALE	18.0	190.0
367.0	MODESTO		BLACK SHALE	1.5	208.0
365.5	MODESTO		SANDY SHALE	18.5	209.5
347.0	MODESTO		SANDSTONE	18.0	228.0
329.0	MODESTO		GRAY SHALE	4.0	246.0
325.0	MODESTO	PIASA	LIMESTONE	6.0	250.0
319.0	MODESTO		BLACK SHALE	1.0	256.0
318.0	CARBONDALE	DANVILLE	COAL	1.0	257.0
317.0	CARBONDALE		GRAY SHALE	4.0	258.0
313.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	262.0
308.5	CARBONDALE		SHALE	2.5	266.5
306.0	CARBONDALE	BRERETON	LIMESTONE	14.1	269.0
291.9	CARBONDALE	HERRIN	COAL	8.4	283.1
283.5	CARBONDALE		GRAY SHALE	1.9	291.5
281.6	CARBONDALE		LIMESTONE	3.6	293.4
278.0	CARBONDALE		CALCAREOUS SHALE	3.0	297.0
275.0	CARBONDALE		GRAY SHALE	6.5	300.0
268.5	CARBONDALE		LIMESTONE	1.8	306.5
266.7	CARBONDALE		GRAY SHALE	4.7	308.3
262.0	CARBONDALE		GRAY SHALE	7.0	313.0

MAPID: 11721936000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 19 QUARTERS/FOOTAGES: 295' S line, 1200' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.802099 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.29401 DATE COLLECTED: 10 / 26 / 1978

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 380.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-33 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
630.0			UNCONSOLIDATED	62.0	0.0
568.0	BOND		SANDY SHALE	7.0	62.0
561.0	BOND		GRAY SHALE	13.0	69.0
548.0	BOND	CARTHAGE	LIMESTONE	10.5	82.0
537.5	MODESTO		BLACK SHALE	5.5	92.5
532.0	MODESTO		GRAY SHALE	10.0	98.0
522.0	MODESTO		LIMESTONE	2.5	108.0
519.5	MODESTO		GRAY SHALE	10.5	110.5
509.0	MODESTO	MACOUPIN	LIMESTONE	1.5	121.0
507.5	MODESTO		BLACK SHALE	3.5	122.5
504.0	MODESTO	WOMAC	COAL	1.0	126.0
503.0	MODESTO		GRAY SHALE	4.5	127.0
498.5	MODESTO		GRAY SHALE	7.0	131.5
491.5	MODESTO		CALCAREOUS SHALE	1.5	138.5
490.0	MODESTO		GRAY SHALE	16.0	140.0
474.0	MODESTO	CARLINVILLE	LIMESTONE	2.8	156.0
471.2	MODESTO		BLACK SHALE	0.7	158.8
470.5	MODESTO		LIMESTONE	0.5	159.5
470.0	MODESTO		SANDY SHALE	7.0	160.0
463.0	MODESTO		GRAY SHALE	9.0	167.0
454.0	MODESTO		CALCAREOUS SHALE	16.0	176.0
438.0	MODESTO		GRAY SHALE	2.0	192.0
436.0	MODESTO	CHAPEL	COAL	1.0	194.0
435.0	MODESTO		GRAY SHALE	4.0	195.0
431.0	MODESTO		SANDY SHALE	12.5	199.0
418.5	MODESTO		SANDY SHALE	24.5	211.5
394.0	MODESTO		GRAY SHALE	15.0	236.0
379.0	MODESTO		GRAY SHALE	10.0	251.0
369.0	MODESTO		LIMESTONE	1.5	261.0
367.5	MODESTO		CALCAREOUS SHALE	2.5	262.5
365.0	MODESTO		GRAY SHALE	20.0	265.0
345.0	MODESTO		SANDY SHALE	13.5	285.0
331.5	MODESTO		GRAY SHALE	1.5	298.5
330.0	MODESTO		SANDY SHALE	20.0	300.0
310.0	MODESTO	PIASA	LIMESTONE	3.2	320.0
306.8	MODESTO		CALCAREOUS SHALE	1.8	323.2
305.0	MODESTO		BLACK SHALE	2.0	325.0
303.0	CARBONDALE	DANVILLE	COAL	2.0	327.0
301.0	CARBONDALE		GRAY SHALE	6.7	329.0

294.3	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	335.7
288.8	CARBONDALE		GRAY SHALE	1.4	341.2
287.4	CARBONDALE	BRERETON	LIMESTONE	12.8	342.6
274.6	CARBONDALE	ANNA	BLACK SHALE	2.1	355.4
272.5	CARBONDALE	HERRIN	COAL	7.2	357.5
265.3	CARBONDALE		SHALE	0.2	364.7
265.1	CARBONDALE		CORE LOSS	0.1	364.9
265.0	CARBONDALE		SHALE	0.4	365.0
264.6	CARBONDALE		LIMESTONE	2.6	365.4
262.0	CARBONDALE		GRAY SHALE	9.5	368.0
252.5	CARBONDALE		SHALY LIMESTONE	2.5	377.5

MAPID: 11723764000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 19 **QUARTERS/FOOTAGES:** 2240' S line, 2630' W line
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.804421 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.299312 **DATE COLLECTED:** 6 / 9 / 1976
SURFACE ELEVATION (FT.): 630.0 **LOGGED (FT.):** 389.0 **LOG TYPE:** Other Core Study
SOURCE: CARTER OIL 18-960 **WELL TYPE:** Coal Test
COMMENT: "LOCATION FROM PHOTO"

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
271.8	CARBONDALE	HERRIN	COAL	7.8	358.2	CLEAN COAL-SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.2		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11700061000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 20 **QUARTERS/FOOTAGES:** 640' S line, 2580' E line
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.788043 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.295448 **DATE COLLECTED:** 0 / 0 / 1917
SURFACE ELEVATION (FT.): 623.0 **LOGGED (FT.):** 338.5 **LOG TYPE:** Drillers Log
SOURCE: HUNT R W & CO **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
331.5	MODESTO	PIASA	LIMESTONE	4.0	291.5	
327.5	MODESTO		UNCLASSIFIED	4.0	295.5	
323.5	CARBONDALE	DANVILLE	COAL	2.0	299.5	
321.5	CARBONDALE		UNCLASSIFIED	10.0	301.5	
311.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	311.5	
308.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	314.5	
306.5	CARBONDALE		UNCLASSIFIED	2.0	316.5	
304.5	CARBONDALE	BRERETON	LIMESTONE	8.0	318.5	
296.5	CARBONDALE	ANNA	BLACK SHALE	0.5	326.5	
296.0	CARBONDALE	ENERGY	UNCLASSIFIED	5.0	327.0	
291.0	CARBONDALE	HERRIN	COAL	6.5	332.0	

MAPID: 11700061000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 20 QUARTERS/FOOTAGES: 640' S line, 2580' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.788043 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.295448 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 623.0 LOGGED (FT.): 341.0 LOG TYPE: Drillers Log

SOURCE: R. W. HUNT & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
623.0			UNCONSOLIDATED	48.0	0.0
575.0			ROCK	50.0	48.0
525.0			COAL	0.4	98.0
524.6			ROCK	201.6	98.4
323.0			COAL	2.0	300.0
321.0			UNDERCLAY	1.0	302.0
320.0			SHALE	9.0	303.0
311.0			LIMESTONE	3.0	312.0
308.0			SHALE	4.0	315.0
304.0			LIMESTONE	8.0	319.0
296.0			SHALE	5.0	327.0
291.0	CARBONDALE	HERRIN	COAL	6.5	332.0
284.5			ROCK	2.5	338.5

MAPID: 11700061000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 20 QUARTERS/FOOTAGES: 640' S line, 2580' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.788043 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.295448 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 623.0 LOGGED (FT.): 341.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE #B-8 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
623.0			SOIL	2.0	0.0
621.0			CLAY	14.0	2.0
607.0			HARD PAN	32.0	16.0
575.0	BOND	CARTHAGE	LIMESTONE	13.0	48.0
562.0	MODESTO		SHALE	5.0	61.0
557.0	MODESTO		SHALE	9.0	66.0
548.0	MODESTO		SHALE	8.0	75.0
540.0	MODESTO		LIMESTONE	2.0	83.0
538.0	MODESTO		SANDY SHALE	7.0	85.0
531.0	MODESTO		SHALE	3.0	92.0
528.0	MODESTO	MACOUPIN	LIMESTONE	1.0	95.0
527.0	MODESTO		SHALE	1.0	96.0
526.0	MODESTO		BLACK SHALE	1.0	97.0
525.0	MODESTO	WOMAC	COAL	0.4	98.0
524.6	MODESTO		BLACK SHALE	1.6	98.4
523.0	MODESTO		LIMESTONE	1.0	100.0
522.0	MODESTO		SHALE	9.0	101.0
513.0	MODESTO		SANDY SHALE	4.0	110.0
509.0	MODESTO		SHALE	14.0	114.0
495.0	MODESTO	CARLINVILLE	LIMESTONE	3.0	128.0
492.0	MODESTO		SANDY SHALE	21.0	131.0
471.0	MODESTO		SHALE	2.0	152.0
469.0	MODESTO		SHALE	17.0	154.0
452.0	MODESTO		SHALE	2.0	171.0
450.0	MODESTO		CALCAREOUS SHALE	3.0	173.0
447.0	MODESTO		SANDSTONE	13.0	176.0
434.0	MODESTO		SANDY SHALE	13.0	189.0
421.0	MODESTO		SHALE	37.0	202.0
384.0	MODESTO		LIMESTONE	1.0	239.0
383.0	MODESTO		SANDY SHALE	12.0	240.0
371.0	MODESTO		SHALE	10.0	252.0
361.0	MODESTO		SHALE	1.0	262.0
360.0	MODESTO		SHALE	2.0	263.0
358.0	MODESTO		CALCAREOUS SHALE	3.0	265.0
355.0	MODESTO		SANDY SHALE	5.0	268.0
350.0	MODESTO		SHALE	17.0	273.0
333.0	MODESTO		CALCAREOUS SHALE	2.0	290.0
331.0	MODESTO	PIASA	LIMESTONE	7.0	292.0
324.0	MODESTO		SHALE	1.0	299.0

323.0	CARBONDALE	DANVILLE	COAL	2.0	300.0
321.0	CARBONDALE		UNDERCLAY	1.0	302.0
320.0	CARBONDALE		SHALE	9.0	303.0
311.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	312.0
308.0	CARBONDALE		SHALE	4.0	315.0
304.0	CARBONDALE	BRERETON	LIMESTONE	8.0	319.0
296.0	CARBONDALE	ENERGY	SHALE	4.5	327.0
291.5	CARBONDALE	ENERGY	SHALE	0.5	331.5
291.0	CARBONDALE	HERRIN	COAL	6.5	332.0
284.5	CARBONDALE		UNDERCLAY	1.5	338.5
283.0	CARBONDALE		LIMESTONE	1.0	340.0

MAPID: 11700524000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 20 QUARTERS/FOOTAGES: SW NW NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.787285

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.305542

DATE COLLECTED:

SURFACE ELEVATION (FT.): 575.0 LOGGED (FT.): 289.3

LOG TYPE: Survey Core Study

SOURCE: CONSOLIDATED COAL CO. 4

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
343.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	2.5	232.0	
340.5	MODESTO		CLAYSTONE & SHALE	3.3	234.5	
337.2	CARBONDALE	DANVILLE	COAL	2.3	237.8	
334.8	CARBONDALE		CLAYSTONE	1.8	240.2	
333.0	CARBONDALE	GALUM	CALCAREOUS SHALE	1.8	242.0	
331.2	CARBONDALE		CLAYSTONE & SHALE	0.8	243.8	
330.3	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.9	244.7	UPPER BENCH
325.4	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.1	249.6	SHALE PARTING
323.3	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	8.3	251.7	LOWER BENCH
315.0	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	4.1	260.0	
310.9	CARBONDALE	ANNA	CARBONACEOUS LIMESTONE	0.5	264.1	
293.0	CARBONDALE	HERRIN	COAL	7.3	282.0	

MAPID: 11700524000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 20 QUARTERS/FOOTAGES: SW NW NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.787285 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.305542 DATE COLLECTED:

SURFACE ELEVATION (FT.): 575.0 LOGGED (FT.): 293.3 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATED COAL CO. 4 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
323.1	MODESTO	PIASA	LIMESTONE	2.5	251.9
320.6	MODESTO		UNCLASSIFIED	3.3	254.4
317.3	CARBONDALE	DANVILLE	COAL	2.3	257.7
315.0	CARBONDALE		UNCLASSIFIED	11.5	260.0
303.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	271.5
297.0	CARBONDALE	ANVIL ROCK	SANDSTONE	1.0	278.0
296.0	CARBONDALE		SHALE	1.0	279.0
295.0	CARBONDALE	BRERETON	LIMESTONE	5.5	280.0
289.5	CARBONDALE	ANNA	BLACK SHALE	0.5	285.5
289.0	CARBONDALE	HERRIN	COAL	7.3	286.0

MAPID: 11700524000C VERSION: 3

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 20 QUARTERS/FOOTAGES: SW NW NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.787285 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.305542 DATE COLLECTED: 0 / 0 / 1948

SURFACE ELEVATION (FT.): 575.0 LOGGED (FT.): 301.5 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATED COAL CO. 4 WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
575.0			NO RECORD	24.0	0.0	
551.0			LIMESTONE	1.4	24.0	GREEN
549.6			GRAY SHALE	0.3	25.4	
549.3			SHALE	0.5	25.7	
548.8			BLACK SHALE	4.3	26.2	
544.5			BLACK SHALE	1.2	30.5	
543.3			LIMESTONE	0.1	31.7	
543.2			GRAY SHALE	2.2	31.8	
541.0			GRAY SHALE	1.3	34.0	
539.7			NO RECORD	3.7	35.3	NO CORE
536.0			CLAYSTONE & SILTSTONE	0.5	39.0	YELLOW
535.5			SHALE WITH LIMESTONE	0.5	39.5	
535.0			SHALY LIMESTONE	0.8	40.0	GREEN
534.2			SHALE	0.1	40.8	
534.1			SHALY LIMESTONE	0.1	40.9	BLUE
534.0			SHALE	0.8	41.0	GU
533.2			SILTSTONE	0.9	41.8	GRAY
532.4			LIMESTONE	0.4	42.6	GRAY
532.0			NO RECORD	10.0	43.0	NO CORE
522.0			LIMESTONE	0.2	53.0	
521.8			GREEN SHALE	3.0	53.2	
518.8			LIMESTONE	0.8	56.2	
518.0			BLACK SHALE	0.3	57.0	
517.7			NO RECORD	2.7	57.3	NO CORE
515.0			COAL	0.1	60.0	
514.9			UNDERCLAY	0.7	60.1	GRAY
514.2			UNDERCLAY	1.3	60.8	GRAY
513.0			GREEN SHALE	2.0	62.0	
511.0			SHALE WITH LIMESTONE	0.3	64.0	
510.7			SHALE WITH LIMESTONE	0.3	64.3	
510.4			SHALY LIMESTONE	1.3	64.6	GREEN
509.2			SHALE WITH LIMESTONE	2.8	65.8	
506.3			GREEN SHALE	0.8	68.7	
505.6			GREEN SHALE	1.7	69.4	
503.9	BOND	CARTHAGE	LIMESTONE	5.9	71.1	CREAM
498.0	MODESTO		GREEN SHALE	0.2	77.0	
497.8	MODESTO		SILTSTONE	0.7	77.2	GRAY
497.2	MODESTO		GREEN SHALE	1.2	77.8	
496.0	MODESTO		NO RECORD	1.0	79.0	NO CORE

495.0	MODESTO	GRAY SHALE	4.0	80.0	
491.0	MODESTO	GRAY SHALE	7.0	84.0	
484.0	MODESTO	GRAY SHALE	0.9	91.0	
483.1	MODESTO	LIMESTONE	4.2	91.9	
478.9	MODESTO	BLACK SHALE	0.9	96.1	
478.0	MODESTO	LIMESTONE	0.8	97.0	
477.2	MODESTO	GRAY SHALE	0.6	97.8	
476.5	MODESTO	GRAY SHALE	3.6	98.5	
472.9	MODESTO	SILTSTONE	1.9	102.1	
471.0	MODESTO	SILTSTONE	5.0	104.0	
466.0	MODESTO	SANDSTONE	2.0	109.0	GRAY
464.0	MODESTO	GRAY SHALE	3.0	111.0	
461.0	MODESTO	GRAY SHALE	7.0	114.0	
454.0	MODESTO	GRAY SHALE	6.0	121.0	
448.0	MODESTO	GRAY SHALE	1.7	127.0	
446.3	MODESTO	BLACK SHALE	0.5	128.7	
445.8	MODESTO	COAL	0.4	129.2	#8
445.4	MODESTO	UNDERCLAY	3.7	129.6	GRAY
441.7	MODESTO	GREEN SHALE	0.8	133.3	
441.0	MODESTO	SHALE & SILTSTONE	9.2	134.0	
431.8	MODESTO	NO RECORD	0.8	143.2	NO CORE
431.0	MODESTO	NO RECORD	2.0	144.0	NO CORE
429.0	MODESTO	SHALE & SILTSTONE	3.0	146.0	
426.0	MODESTO	SHALY SANDSTONE	1.2	149.0	GRAY
424.8	MODESTO	SHALE & SILTSTONE	6.1	150.2	
418.7	MODESTO	GRAY SHALE	4.1	156.3	
414.6	MODESTO	SHALE & SILTSTONE	13.6	160.4	
401.0	MODESTO	GRAY SHALE	10.0	174.0	
391.0	MODESTO	GRAY SHALE	11.3	184.0	
379.7	MODESTO	GRAY SHALE	0.7	195.3	
379.0	MODESTO	GRAY SHALE	1.9	196.0	
377.1	MODESTO	LIMESTONE	0.8	197.9	GRAY
376.3	MODESTO	GRAY SHALE	1.0	198.7	
375.3	MODESTO	GREEN SHALE	0.5	199.7	
374.8	MODESTO	SHALE WITH LIMESTONE	1.2	200.2	
373.6	MODESTO	GRAY SHALE	4.8	201.4	
368.7	MODESTO	GREEN SHALE	5.8	206.3	
363.0	MODESTO	GRAY SHALE	2.0	212.0	
361.0	MODESTO	GREEN SHALE	4.3	214.0	
356.7	MODESTO	BLACK SHALE	0.7	218.3	
356.1	MODESTO	CLAYSTONE & SILTSTONE	1.1	218.9	GRAY
355.0	MODESTO	CLAYSTONE & SILTSTONE	1.0	220.0	PURPLE
354.0	MODESTO	CLAYSTONE & SILTSTONE	0.7	221.0	BROWN
353.3	MODESTO	SILTSTONE	2.3	221.7	GREEN
351.0	MODESTO	SILTSTONE	3.0	224.0	
348.0	MODESTO	GRAY SHALE	10.8	227.0	
337.2	MODESTO	GREEN SHALE	1.0	237.8	
336.2	MODESTO	SHALY SANDSTONE	6.5	238.8	WHITE

329.6	MODESTO		GRAY SHALE	1.2	245.4	
328.4	MODESTO		GREEN SHALE	2.4	246.6	
326.0	MODESTO		GREEN SHALE	2.3	249.0	
323.7	MODESTO		SHALE WITH LIMESTONE	0.9	251.3	
322.8	MODESTO	PIASA	LIMESTONE	2.5	252.2	CREAM
320.3	MODESTO		GREEN SHALE	2.9	254.7	
317.4	MODESTO		BLACK SHALE	0.4	257.6	
317.0	CARBONDALE	DANVILLE	COAL	2.3	258.0	
314.7	CARBONDALE		BLACK SHALE	0.1	260.3	
314.6	CARBONDALE		UNDERCLAY	1.7	260.4	GRAY
312.8	CARBONDALE		SHALE WITH LIMESTONE	1.8	262.2	
311.0	CARBONDALE		SHALE	0.8	264.0	
310.2	CARBONDALE		LIMESTONE	15.4	264.8	GREEN
294.7	CARBONDALE		NO RECORD	1.4	280.3	
293.3	CARBONDALE	BRERETON	LIMESTONE	4.1	281.7	
289.2	CARBONDALE		GRAY SHALE	0.5	285.8	
288.7	CARBONDALE	HERRIN	COAL	7.5	286.3	
281.2	CARBONDALE		UNDERCLAY	1.5	293.8	
279.8	CARBONDALE		SHALE WITH LIMESTONE	1.7	295.2	
278.1	CARBONDALE		SHALE WITH LIMESTONE	1.5	296.9	
276.5	CARBONDALE		SHALE WITH LIMESTONE	1.5	298.5	
275.0	CARBONDALE		GRAY SHALE	1.5	300.0	

MAPID: 11700058000C **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 21 **QUARTERS/FOOTAGES:** NW NW NW SE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.768808 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.3008 **DATE COLLECTED:** 0 / 0 / 1917
SURFACE ELEVATION (FT.): 635.0 **LOGGED (FT.):** 338.0 **LOG TYPE:** Drillers Log
SOURCE: R. W. HUNT & CO **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
635.0			UNCONSOLIDATED	53.0	0.0	
582.0			ROCK	123.0	53.0	
459.0			COAL	0.5	176.0	
458.5			ROCK	123.5	176.5	
335.0			SHALE	12.0	300.0	
323.0			LIMESTONE	9.0	312.0	
314.0			SHALE	4.5	321.0	
309.5			BLACK SHALE	1.7	325.5	
307.8	CARBONDALE	HERRIN	COAL	6.8	327.2	
301.1			ROCK	4.1	333.9	

MAPID: 11700058000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 21 QUARTERS/FOOTAGES: NW NW NW SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.768808

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.3008

DATE COLLECTED:

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 333.8

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
339.2	MODESTO	PIASA	LIMESTONE	4.0	295.8
335.2	CARBONDALE		GRAY SHALE	12.0	299.8
323.2	CARBONDALE	BANKSTON FORK	LIMESTONE	9.0	311.8
314.2	CARBONDALE	LAWSON	GRAY SHALE	3.8	320.8
310.4	CARBONDALE	ANNA	BLACK SHALE	2.4	324.6
308.0	CARBONDALE	HERRIN	COAL	6.8	327.0

MAPID: 11700058000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 21 QUARTERS/FOOTAGES: NW NW NW SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.768808

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.3008

DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 333.8

LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
340.9	MODESTO	PIASA	LIMESTONE	4.0	294.1
336.9	MODESTO		UNCLASSIFIED	3.0	298.1
333.9	CARBONDALE		UNCLASSIFIED	9.0	301.1
324.9	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	310.1
321.9	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	313.1
320.9	CARBONDALE		UNCLASSIFIED	1.0	314.1
319.9	CARBONDALE	BRERETON	LIMESTONE	4.0	315.1
315.9	CARBONDALE	ANNA	BLACK SHALE	1.7	319.1
314.2	CARBONDALE	ENERGY	UNCLASSIFIED	6.2	320.8
308.0	CARBONDALE	HERRIN	COAL	6.8	327.0

MAPID: 11700058000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 21 QUARTERS/FOOTAGES: NW NW NW SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.768808 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.3008 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 634.7 LOGGED (FT.): 338.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE B-7 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
634.7			SOIL	2.0	0.0
632.7			CLAY	16.0	2.0
616.7			CLAY & GRAVEL	35.0	18.0
581.7	BOND	CARTHAGE	LIMESTONE	12.0	53.0
569.7	MODESTO		SHALE	4.0	65.0
565.7	MODESTO		SHALE	15.0	69.0
550.7	MODESTO		LIMESTONE	1.0	84.0
549.7	MODESTO		SHALE	9.0	85.0
540.7	MODESTO		SHALE	9.0	94.0
531.7	MODESTO		SHALE	4.0	103.0
527.7	MODESTO		SHALE	30.0	107.0
497.7	MODESTO	CARLINVILLE	LIMESTONE	6.5	137.0
491.2	MODESTO		SANDY SHALE	31.5	143.5
459.7	MODESTO		BLACK SHALE	1.0	175.0
458.7	MODESTO	CHAPEL	COAL	0.5	176.0
458.2	MODESTO		SHALE	2.5	176.5
455.7	MODESTO		SANDY SHALE	33.0	179.0
422.7	MODESTO		SHALE	10.0	212.0
412.7	MODESTO		SHALE	32.0	222.0
380.7	MODESTO		CALCAREOUS SHALE	3.0	254.0
377.7	MODESTO		SANDY SHALE	17.0	257.0
360.7	MODESTO		SHALE	5.0	274.0
355.7	MODESTO		SHALE	14.0	279.0
341.7	CARBONDALE		CALCAREOUS SHALE	3.0	293.0
338.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	296.0
334.7	CARBONDALE		SHALE	12.0	300.0
322.7	CARBONDALE	BRERETON	LIMESTONE	9.0	312.0
313.7	CARBONDALE		SHALE	4.5	321.0
309.2	CARBONDALE	ANNA	BLACK SHALE	1.7	325.5
307.5	CARBONDALE	HERRIN	COAL	6.8	327.2
300.8	CARBONDALE		UNDERCLAY	3.1	333.9
297.7	CARBONDALE		CALCAREOUS SHALE	1.0	337.0

MAPID: 11721858000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 21 QUARTERS/FOOTAGES: 322' N line, 2605' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.769165 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.307667 DATE COLLECTED: 10 / 24 / 1978

SURFACE ELEVATION (FT.): 628.0 LOGGED (FT.): 348.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-31 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
628.0			UNCONSOLIDATED	49.0	0.0	
579.0	BOND	CARTHAGE	LIMESTONE	7.5	49.0	
571.5	MODESTO		BLACK SHALE	4.0	56.5	
567.5	MODESTO		GRAY SHALE	13.3	60.5	
554.2	MODESTO		SANDSTONE	5.2	73.8	
549.0	MODESTO		SHALE	10.0	79.0	
539.0	MODESTO		BLACK SHALE	4.0	89.0	
535.0	MODESTO	WOMAC	COAL	0.8	93.0	
534.2	MODESTO		GRAY SHALE	30.0	93.8	
504.2	MODESTO	CARLINVILLE	LIMESTONE	4.2	123.8	
500.0	MODESTO		SHALE	0.5	128.0	
499.5	MODESTO		SANDY SHALE	35.5	128.5	
464.0	MODESTO	CHAPEL	COAL	0.5	164.0	
463.5	MODESTO		GRAY SHALE	88.5	164.5	
375.0	MODESTO		LIMESTONE	1.5	253.0	
373.5	MODESTO		GRAY SHALE	14.5	254.5	
359.0	MODESTO		BLACK SHALE	3.0	269.0	
356.0	MODESTO		GRAY SHALE	15.0	272.0	
341.0	MODESTO	PIASA	LIMESTONE	8.5	287.0	
332.5	CARBONDALE	DANVILLE	BLACK SHALE	1.5	295.5	
331.0	CARBONDALE		GRAY SHALE	3.0	297.0	
328.0	CARBONDALE		CARBONACEOUS SHALE	1.5	300.0	
326.5	CARBONDALE		SHALE	1.0	301.5	
325.5	CARBONDALE		GRAY SHALE	4.8	302.5	
320.7	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	7.1	307.3	
313.6	CARBONDALE		SHALE	0.9	314.4	
312.7	CARBONDALE	BRERETON	SHALY LIMESTONE	5.8	315.3	
306.8	CARBONDALE		SHALE	1.8	321.2	
305.0	CARBONDALE		SHALE	2.0	323.0	
303.0	CARBONDALE	ANNA	BLACK SHALE	1.8	325.0	UNCERTAIN CORRELATION
301.2	CARBONDALE	HERRIN	COAL	6.3	326.8	
294.9	CARBONDALE		SHALE	1.4	333.1	
293.5	CARBONDALE		LIMESTONE	5.1	334.5	
288.5	CARBONDALE		SHALE	3.4	339.5	
285.1	CARBONDALE		SHALE	1.7	342.9	
283.5	CARBONDALE		CORE LOSS	0.5	344.5	
283.0	CARBONDALE		SHALE	1.9	345.0	
281.1	CARBONDALE		SHALY LIMESTONE	1.1	346.9	

MAPID: 11700059000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 22 QUARTERS/FOOTAGES: SW NW NE

QUADRANGLE: ATWATER LONGITUDE: -89.749363 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.306182 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 344.4 LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
336.0	MODESTO	PIASA	LIMESTONE	4.0	294.0
332.0	MODESTO		UNCLASSIFIED	2.3	298.0
329.7	CARBONDALE		UNCLASSIFIED	4.2	300.3
325.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.5	304.5
321.0	CARBONDALE	ENERGY	UNCLASSIFIED	29.0	309.0
292.0	CARBONDALE	HERRIN	COAL	6.4	338.0

MAPID: 11700059000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 22 QUARTERS/FOOTAGES: SW NW NE

QUADRANGLE: ATWATER LONGITUDE: -89.749363 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.306182 DATE COLLECTED:

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 344.4 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
325.5	MODESTO	PIASA	LIMESTONE	4.5	304.5
321.0	CARBONDALE	ENERGY	GRAY SHALE	29.0	309.0
292.0	CARBONDALE	HERRIN	COAL	6.4	338.0

MAPID: 11700059000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 22 QUARTERS/FOOTAGES: SW NW NE

QUADRANGLE: ATWATER LONGITUDE: -89.749363 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.306182 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 629.9 LOGGED (FT.): 346.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE #C-10 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
629.9			CLAY	14.0	0.0	
615.9			HARD PAN	24.0	14.0	
591.9			CLAY	9.0	38.0	
582.9			SAND	4.0	47.0	
578.9			GRAVEL	3.0	51.0	
575.9	BOND	CARTHAGE	LIMESTONE	4.0	54.0	
571.9	MODESTO		CALCAREOUS SHALE	30.0	58.0	W/LS BANDS
541.9	MODESTO		SHALE	12.3	88.0	
529.6	MODESTO		SHALE	3.4	100.3	
526.2	MODESTO		SHALE	10.8	103.7	
515.4	MODESTO		SANDY SHALE	12.5	114.5	
502.9	MODESTO		SHALE	7.0	127.0	
495.9	MODESTO	CARLINVILLE	LIMESTONE	5.0	134.0	
490.9	MODESTO		BLACK SHALE	1.0	139.0	
489.9	MODESTO		SANDY SHALE	15.0	140.0	
474.9	MODESTO		SHALE	15.0	155.0	
459.9	MODESTO		SHALE	4.3	170.0	
455.6	MODESTO	CHAPEL	COAL	0.4	174.3	
455.1	MODESTO		SHALE	8.0	174.8	
447.1	MODESTO		SANDY SHALE	57.3	182.8	
389.9	MODESTO		SHALE	31.0	240.0	
358.9	MODESTO		SHALE	4.3	271.0	
354.6	MODESTO		COAL	0.3	275.3	
354.4	MODESTO		SHALE	4.5	275.5	
349.9	MODESTO		CALCAREOUS SHALE	4.0	280.0	
345.9	MODESTO		SHALE	2.3	284.0	
343.6	MODESTO		SANDY SHALE	7.3	286.3	
336.2	MODESTO	PIASA	LIMESTONE	6.3	293.7	
329.9	MODESTO		SHALE	4.2	300.0	
325.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	304.2	
321.2	CARBONDALE	ENERGY	SHALE	29.0	308.7	
292.2	CARBONDALE	HERRIN	COAL	6.4	337.7	
285.9	CARBONDALE		UNDERCLAY	0.6	344.0	
285.2	CARBONDALE		CALCAREOUS SHALE	1.3	344.7	

MAPID: 11721859000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 22 QUARTERS/FOOTAGES: 66' S line, 2409' E line

QUADRANGLE: ATWATER LONGITUDE: -89.749616 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.294355 DATE COLLECTED: 11 / 8 / 1977

SURFACE ELEVATION (FT.): 631.0 LOGGED (FT.): 354.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-4 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
631.0			UNCONSOLIDATED	64.0	0.0
567.0	MODESTO		SANDY SHALE	8.0	64.0
559.0	MODESTO		LIMESTONE	5.0	72.0
554.0	MODESTO		GRAY SHALE	13.0	77.0
541.0	MODESTO	MACOUPIN	LIMESTONE	2.0	90.0
539.0	MODESTO		BLACK SHALE	2.5	92.0
536.5	MODESTO	WOMAC	COAL	0.5	94.5
536.0	MODESTO		GRAY SHALE	6.0	95.0
530.0	MODESTO		LIMESTONE	5.5	101.0
524.5	MODESTO		GRAY SHALE	19.5	106.5
505.0	MODESTO		LIMESTONE	4.0	126.0
501.0	MODESTO		BLACK SHALE	1.0	130.0
500.0	MODESTO		GRAY SHALE	36.0	131.0
464.0	MODESTO		SHALE	5.0	167.0
459.0	MODESTO		SANDSTONE	3.0	172.0
456.0	MODESTO		SANDY SHALE	13.0	175.0
443.0	MODESTO		GRAY SHALE	62.0	188.0
381.0	MODESTO		SANDY SHALE	14.0	250.0
367.0	MODESTO		GRAY SHALE	2.0	264.0
365.0	MODESTO		BLACK SHALE	2.0	266.0
363.0	MODESTO		GRAY SHALE	19.5	268.0
343.5	MODESTO	PIASA	LIMESTONE	5.0	287.5
338.5	MODESTO		SHALE	2.0	292.5
336.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	294.5
330.0	CARBONDALE	ENERGY	SHALE	3.0	301.0
327.0	CARBONDALE	ENERGY	SILTY SHALE	12.0	304.0
315.0	CARBONDALE	ENERGY	SILTY SHALE	14.0	316.0
301.0	CARBONDALE	ENERGY	SHALE	3.1	330.0
297.9	CARBONDALE	HERRIN	COAL	6.1	333.1
291.8	CARBONDALE		CLAYSTONE	1.7	339.2
290.2	CARBONDALE		CLAYSTONE	3.2	340.8
287.0	CARBONDALE		CLAYSTONE & SILTSTONE	4.7	344.0
282.3	CARBONDALE		SHALY LIMESTONE	2.8	348.7
279.5	CARBONDALE		CLAYSTONE & SILTSTONE	2.5	351.5

MAPID: 11722390000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 22 QUARTERS/FOOTAGES: 115' S line, 2010' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.752736

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.294406

DATE COLLECTED: 6 / 26 / 1975

SURFACE ELEVATION (FT.): 625.0

LOGGED (FT.): 352.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL R-75-38

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
625.0			UNCONSOLIDATED	67.0	0.0
558.0	MODESTO		GRAY SHALE	7.0	67.0
551.0	MODESTO		LIMESTONE	4.5	74.0
546.5	MODESTO		GRAY SHALE	12.5	78.5
534.0	MODESTO	MACOUPIN	LIMESTONE	1.0	91.0
533.0	MODESTO		BLACK SHALE	3.0	92.0
530.0	MODESTO	WOMAC	COAL	1.0	95.0
529.0	MODESTO		GRAY SHALE	5.0	96.0
524.0	MODESTO		SHALY LIMESTONE	5.5	101.0
518.5	MODESTO		GRAY SHALE	21.5	106.5
497.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	128.0
493.0	MODESTO		GRAY SHALE	36.0	132.0
457.0	MODESTO	CHAPEL	COAL	1.0	168.0
456.0	MODESTO		GRAY SHALE	96.0	169.0
360.0	MODESTO		BLACK SHALE	5.0	265.0
355.0	MODESTO		GRAY SHALE	22.0	270.0
333.0	MODESTO	PIASA	LIMESTONE	3.5	292.0
329.5	MODESTO		BLACK SHALE	3.5	295.5
326.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	299.0
321.0	CARBONDALE	ENERGY	GRAY SHALE	37.0	304.0
284.0	CARBONDALE	HERRIN	COAL	5.7	341.0
278.3	CARBONDALE		UNDERCLAY	1.3	346.7
277.0	CARBONDALE		LIMESTONE	4.0	348.0

MAPID: 11722391000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 22 QUARTERS/FOOTAGES: 41' S line, 10' E line

QUADRANGLE: ATWATER LONGITUDE: -89.741098 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.294514 DATE COLLECTED: 7 / 26 / 1977

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 350.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-14 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
635.0			UNCONSOLIDATED	63.0	0.0
572.0	MODESTO		SANDSTONE/LIMESTONE	9.0	63.0
563.0	MODESTO		GRAY SHALE	15.5	72.0
547.5	MODESTO	MACOUPIN	LIMESTONE	1.5	87.5
546.0	MODESTO		BLACK SHALE	2.0	89.0
544.0	MODESTO	WOMAC	COAL	0.5	91.0
543.5	MODESTO		GRAY SHALE	6.0	91.5
537.5	MODESTO		CALCAREOUS SANDSTONE	6.5	97.5
531.0	MODESTO		GRAY SHALE	19.5	104.0
511.5	MODESTO	CARLINVILLE	LIMESTONE	5.5	123.5
506.0	MODESTO		SHALE	1.0	129.0
505.0	MODESTO		SANDSTONE	7.5	130.0
497.5	MODESTO		SANDY SHALE	28.5	137.5
469.0	MODESTO	CHAPEL	COAL	0.8	166.0
468.2	MODESTO		GRAY SHALE	4.2	166.8
464.0	MODESTO		SANDY SHALE	24.0	171.0
440.0	MODESTO		GRAY SHALE	38.0	195.0
402.0	MODESTO		GRAY SHALE	9.0	233.0
393.0	MODESTO		GRAY SHALE	4.0	242.0
389.0	MODESTO		SANDY SHALE	16.0	246.0
373.0	MODESTO		BLACK SHALE	2.5	262.0
370.5	MODESTO		SHALE	6.0	264.5
364.5	MODESTO		SANDY SHALE	14.0	270.5
350.5	MODESTO	PIASA	LIMESTONE	4.5	284.5
346.0	MODESTO		BLACK SHALE	1.5	289.0
344.5	CARBONDALE		GRAY SHALE	1.0	290.5
343.5	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	291.5
338.5	CARBONDALE	ENERGY	GRAY SHALE	33.0	296.5
305.5	CARBONDALE	HERRIN	COAL	4.7	329.5
300.8	CARBONDALE		UNDERCLAY	1.3	334.2
299.5	CARBONDALE		LIMESTONE	8.5	335.5
291.0	CARBONDALE		GRAY SHALE	6.0	344.0

MAPID: 11722392000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 22 QUARTERS/FOOTAGES: 1639' N line, 2600' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.750384 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.304405 DATE COLLECTED: 7 / 28 / 1977

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 368.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-15 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
632.0			UNCONSOLIDATED	56.0	0.0
576.0	BOND	CARTHAGE	LIMESTONE	5.5	56.0
570.5	MODESTO		BLACK SHALE	2.5	61.5
568.0	MODESTO		GRAY SHALE	15.0	64.0
553.0	MODESTO		SANDY LIMESTONE	1.5	79.0
551.5	MODESTO		SANDSTONE	9.3	80.5
542.2	MODESTO		GRAY SHALE	12.2	89.8
530.0	MODESTO	MACOUPIN	LIMESTONE	2.0	102.0
528.0	MODESTO		BLACK SHALE	2.5	104.0
525.5	MODESTO	WOMAC	COAL	1.0	106.5
524.5	MODESTO		GRAY SHALE	4.5	107.5
520.0	MODESTO		CALCAREOUS SANDSTONE	6.0	112.0
514.0	MODESTO		SANDY SHALE	10.0	118.0
504.0	MODESTO		GRAY SHALE	10.5	128.0
493.5	MODESTO	CARLINVILLE	LIMESTONE	5.0	138.5
488.5	MODESTO		SHALE	0.5	143.5
488.0	MODESTO		LIMESTONE	1.0	144.0
487.0	MODESTO		GRAY SHALE	4.0	145.0
483.0	MODESTO		SANDSTONE	7.0	149.0
476.0	MODESTO		SANDY SHALE	22.5	156.0
453.5	MODESTO	CHAPEL	COAL	0.5	178.5
453.0	MODESTO		GRAY SHALE	3.0	179.0
450.0	MODESTO		SANDY SHALE	4.5	182.0
445.5	MODESTO		SANDSTONE	8.0	186.5
437.5	MODESTO		SANDY SHALE	56.0	194.5
381.5	MODESTO		GRAY SHALE	4.5	250.5
377.0	MODESTO		SHALE	3.0	255.0
374.0	MODESTO		GRAY SHALE	21.0	258.0
353.0	MODESTO		BLACK SHALE	2.5	279.0
350.5	MODESTO		GRAY SHALE	18.5	281.5
332.0	MODESTO	PIASA	LIMESTONE	5.0	300.0
327.0	MODESTO		BLACK SHALE	3.0	305.0
324.0	CARBONDALE		GRAY SHALE	3.0	308.0
321.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	311.0
317.0	CARBONDALE	ENERGY	GRAY SHALE	30.6	315.0
286.4	CARBONDALE	HERRIN	COAL	6.4	345.6
280.0	CARBONDALE		UNDERCLAY	2.5	352.0
277.5	CARBONDALE		LIMESTONE	7.5	354.5

270.0 CARBONDALE

SHALE

6.0 362.0

MAPID: 11700060000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 23 QUARTERS/FOOTAGES: NE NW

QUADRANGLE: ATWATER LONGITUDE: -89.734039 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.307467 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 610.9 LOGGED (FT.): 326.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE #A-10 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
610.9			CLAY	10.0	0.0	
600.9			HARD PAN	6.0	10.0	
594.9			BOULDERS & GRAVEL	9.0	16.0	
585.9			HARD PAN	6.0	25.0	
579.9			SAND	5.0	31.0	
574.9			HARD PAN	2.0	36.0	
572.9			SANDY CLAY	30.0	38.0	
542.9	MODESTO		LIMESTONE	0.5	68.0	
542.4	MODESTO		SHALE	30.5	68.5	
511.9	MODESTO		CALCAREOUS SHALE	1.0	99.0	
510.9	MODESTO		SHALE	7.0	100.0	
503.9	MODESTO		SHALE	12.0	107.0	
491.9	MODESTO	CARLINVILLE	LIMESTONE	5.0	119.0	
486.9	MODESTO		SHALE	6.0	124.0	
480.9	MODESTO		SHALE	9.0	130.0	
471.9	MODESTO		SHALE	11.0	139.0	
460.9	MODESTO		SHALE	8.0	150.0	
452.9	MODESTO	CHAPEL	COAL	1.0	158.0	
451.9	MODESTO		UNDERCLAY	6.0	159.0	
445.9	MODESTO		LIMESTONE	2.0	165.0	W/ SH
443.9	MODESTO		SANDY SHALE	3.0	167.0	
440.9	MODESTO		CALCAREOUS SHALE	3.0	170.0	
437.9	MODESTO		SHALE	7.0	173.0	
430.9	MODESTO		SHALE	9.0	180.0	W/ SS PARTINGS
421.9	MODESTO		SANDY SHALE	16.0	189.0	
405.9	MODESTO		SHALE	30.0	205.0	
375.9	MODESTO		CALCAREOUS SHALE	5.0	235.0	
370.9	MODESTO		SANDY SHALE	2.0	240.0	
368.9	MODESTO		CALCAREOUS SHALE	14.0	242.0	
354.9	MODESTO		SHALE	2.0	256.0	
352.9	MODESTO		BLACK SHALE	1.0	258.0	
351.9	MODESTO		UNDERCLAY	2.0	259.0	
349.9	MODESTO		CALCAREOUS SHALE	6.0	261.0	
343.9	MODESTO		CLAYSTONE & SHALE	1.0	267.0	
342.9	MODESTO		SHALE	5.0	268.0	
337.9			CALCAREOUS SHALE	3.5	273.0	W/ LS BANDS
334.4			CALCAREOUS SHALE	3.0	276.5	
331.4	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	279.5	
328.9	CARBONDALE	BANKSTON FORK	CLAYSTONE & SHALE	2.0	282.0	

326.9	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	284.0	
321.4	CARBONDALE		CALCAREOUS SHALE	5.5	289.5	
315.9	CARBONDALE	ENERGY	SHALE	5.0	295.0	
310.9	CARBONDALE	ENERGY	SHALE	11.0	300.0	
299.9	CARBONDALE	ENERGY	SHALE	5.0	311.0	
294.9	CARBONDALE	ENERGY	BLACK SHALE	2.4	316.0	
292.5	CARBONDALE	HERRIN	COAL	6.1	318.4	W/ BLUE BANDS
286.4	CARBONDALE		UNDERCLAY	1.0	324.5	
285.4	CARBONDALE		LIMESTONE	0.5	325.5	

MAPID: 11700060000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 23 **QUARTERS/FOOTAGES:** NE NW
QUADRANGLE: ATWATER **LONGITUDE:** -89.734039 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.307467 **DATE COLLECTED:** 0 / 0 / 1917
SURFACE ELEVATION (FT.): 611.0 **LOGGED (FT.):** 324.1 **LOG TYPE:** Drillers Log
SOURCE: HUNT R W & CO **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
337.6	MODESTO	PIASA	LIMESTONE	3.5	273.4
334.1	MODESTO		UNCLASSIFIED	3.0	276.9
331.1	CARBONDALE		UNCLASSIFIED	4.5	279.9
326.6	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.5	284.4
322.1	CARBONDALE	ANNA	BLACK SHALE	0.2	288.9
321.9	CARBONDALE	ENERGY	UNCLASSIFIED	28.9	289.1
293.0	CARBONDALE	HERRIN	COAL	6.1	318.0

MAPID: 11722393000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 23 QUARTERS/FOOTAGES: 2430' S line, 2295' E line

QUADRANGLE: ATWATER LONGITUDE: -89.730206 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.301241 DATE COLLECTED: 6 / 24 / 1975

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 355.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL R-75-36 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
630.0			UNCONSOLIDATED	59.0	0.0
571.0	BOND	CARTHAGE	LIMESTONE	1.0	59.0
570.0	MODESTO		BLACK SHALE	1.5	60.0
568.5	MODESTO		SHALE	15.5	61.5
553.0	MODESTO		LIMESTONE	7.0	77.0
546.0	MODESTO		GRAY SHALE	18.0	84.0
528.0	MODESTO	MACOUPIN	LIMESTONE	2.0	102.0
526.0	MODESTO		BLACK SHALE	2.5	104.0
523.5	MODESTO	WOMAC	COAL	0.5	106.5
523.0	MODESTO		GRAY SHALE	35.0	107.0
488.0	MODESTO	CARLINVILLE	LIMESTONE	6.0	142.0
482.0	MODESTO		GRAY SHALE	36.0	148.0
446.0	MODESTO	CHAPEL	COAL	0.8	184.0
445.2	MODESTO		GRAY SHALE	107.2	184.8
338.0	MODESTO		BLACK SHALE	4.8	292.0
333.2	MODESTO		COAL	1.0	296.8
332.2	MODESTO		GRAY SHALE	6.2	297.8
326.0	MODESTO	PIASA	LIMESTONE	4.0	304.0
322.0	CARBONDALE	ENERGY	GRAY SHALE	36.0	308.0
286.0	CARBONDALE	HERRIN	COAL	4.5	344.0
281.5	CARBONDALE		UNDERCLAY	1.5	348.5
280.0	CARBONDALE		LIMESTONE	5.0	350.0

MAPID: 11722394000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 23 QUARTERS/FOOTAGES: 138' S line, 16' E line

QUADRANGLE: ATWATER LONGITUDE: -89.722015 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.295015 DATE COLLECTED: 7 / 26 / 1977

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 375.0 WELL TYPE: Coal Test

SOURCE: MOBIL OIL RI-77-12

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
640.0			UNCONSOLIDATED	57.0	0.0
583.0	BOND	CARTHAGE	LIMESTONE	8.0	57.0
575.0	MODESTO		BLACK SHALE	2.0	65.0
573.0	MODESTO		GRAY SHALE	17.0	67.0
556.0	MODESTO		SANDY LIMESTONE	6.0	84.0
550.0	MODESTO		GRAY SHALE	19.0	90.0
531.0	MODESTO	MACOUPIN	LIMESTONE	1.0	109.0
530.0	MODESTO		BLACK SHALE	2.5	110.0
527.5	MODESTO	WOMAC	COAL	0.5	112.5
527.0	MODESTO		GRAY SHALE	6.5	113.0
520.5	MODESTO		LIMESTONE	0.5	119.5
520.0	MODESTO		GRAY SHALE	2.0	120.0
518.0	MODESTO		GRAY SHALE	2.0	122.0
516.0	MODESTO		SANDSTONE	4.0	124.0
512.0	MODESTO		GRAY SHALE	21.0	128.0
491.0	MODESTO	CARLINVILLE	LIMESTONE	6.0	149.0
485.0	MODESTO		SANDY SHALE	13.0	155.0
472.0	MODESTO		GRAY SHALE	20.0	168.0
452.0	MODESTO	CHAPEL	COAL	2.0	188.0
450.0	MODESTO		GRAY SHALE	3.5	190.0
446.5	MODESTO		CALCAREOUS SHALE	2.5	193.5
444.0	MODESTO		SANDY SHALE	31.0	196.0
413.0	MODESTO		GRAY SHALE	60.0	227.0
353.0	MODESTO		BLACK SHALE	2.5	287.0
350.5	MODESTO		GRAY SHALE	3.0	289.5
347.5	MODESTO		CALCAREOUS SHALE	11.5	292.5
336.0	MODESTO	PIASA	LIMESTONE	1.5	304.0
334.5			SHALE	3.5	305.5
331.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	309.0
326.0	CARBONDALE	ENERGY	GRAY SHALE	35.0	314.0
291.0	CARBONDALE	HERRIN	COAL	4.2	349.0
286.8	CARBONDALE		UNDERCLAY	6.8	353.2
280.0	CARBONDALE		LIMESTONE	15.0	360.0

MAPID: 11722395000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 23 QUARTERS/FOOTAGES: 657' N line, 2533' W line

QUADRANGLE: ATWATER LONGITUDE: -89.732174 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.307556 DATE COLLECTED: 7 / 27 / 1977

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 367.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-17 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
630.0			UNCONSOLIDATED	98.0	0.0
532.0	MODESTO		GRAY SHALE	6.0	98.0
526.0	MODESTO	MACOUPIN	LIMESTONE	1.5	104.0
524.5	MODESTO		BLACK SHALE	3.0	105.5
521.5	MODESTO	WOMAC	COAL	0.5	108.5
521.0	MODESTO		GRAY SHALE	6.5	109.0
514.5	MODESTO		SANDY LIMESTONE	0.5	115.5
514.0	MODESTO		GRAY SHALE	3.5	116.0
510.5	MODESTO		SANDY LIMESTONE	1.5	119.5
509.0	MODESTO		GRAY SHALE	21.0	121.0
488.0	MODESTO	CARLINVILLE	LIMESTONE	7.0	142.0
481.0	MODESTO		GRAY SHALE	32.5	149.0
448.5	MODESTO	CHAPEL	COAL	0.7	181.5
447.8	MODESTO		GRAY SHALE	3.8	182.2
444.0	MODESTO		SANDSTONE	4.5	186.0
439.5	MODESTO		GRAY SHALE	76.5	190.5
363.0	MODESTO		SHALY SANDSTONE	3.5	267.0
359.5	MODESTO		SANDY SHALE	5.5	270.5
354.0	MODESTO		GRAY SHALE	8.5	276.0
345.5	MODESTO		BLACK SHALE	2.0	284.5
343.5	MODESTO		COAL	0.5	286.5
343.0	MODESTO		GRAY SHALE	13.0	287.0
330.0	MODESTO	PIASA	LIMESTONE	4.0	300.0
326.0			GRAY SHALE	4.0	304.0
322.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	308.0
318.0	CARBONDALE	ENERGY	GRAY SHALE	33.0	312.0
285.0	CARBONDALE	HERRIN	COAL	5.0	345.0
280.0	CARBONDALE		UNDERCLAY	7.0	350.0
273.0	CARBONDALE		LIMESTONE	5.0	357.0
268.0	CARBONDALE		GRAY SHALE	3.0	362.0
265.0	CARBONDALE		LIMESTONE	1.0	365.0
264.0	CARBONDALE		GRAY SHALE	1.0	366.0

MAPID: 11722404000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 23 QUARTERS/FOOTAGES: 1815' S line, 2600' E line

QUADRANGLE: ATWATER LONGITUDE: -89.731263 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.29953 DATE COLLECTED: 6 / 27 / 1975

SURFACE ELEVATION (FT.): 610.0 LOGGED (FT.): 330.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL R-75-39 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSTIY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
610.0			UNCONSOLIDATED	18.0	0.0
592.0	BOND		GRAY SHALE	7.0	18.0
585.0	BOND	CARTHAGE	LIMESTONE	7.0	25.0
578.0	MODESTO		BLACK SHALE	3.0	32.0
575.0	MODESTO		GRAY SHALE	18.0	35.0
557.0	MODESTO		SHALY LIMESTONE	2.0	53.0
555.0	MODESTO		GRAY SHALE	16.0	55.0
539.0	MODESTO	MACOUPIN	LIMESTONE	2.0	71.0
537.0	MODESTO		BLACK SHALE	3.0	73.0
534.0	MODESTO	WOMAC	COAL	1.0	76.0
533.0	MODESTO		GRAY SHALE	7.5	77.0
525.5	MODESTO		SHALY LIMESTONE	4.5	84.5
521.0	MODESTO		GRAY SHALE	20.0	89.0
501.0	MODESTO	CARLINVILLE	LIMESTONE	3.0	109.0
498.0	MODESTO		GRAY SHALE	34.5	112.0
463.5	MODESTO	CHAPEL	COAL	1.0	146.5
462.5	MODESTO		GRAY SHALE	3.5	147.5
459.0	MODESTO		SANDSTONE	8.0	151.0
451.0	MODESTO		SHALE	56.0	159.0
395.0	MODESTO		LIMESTONE	1.0	215.0
394.0	MODESTO		SHALE	1.0	216.0
393.0	MODESTO		LIMESTONE	3.0	217.0
390.0	MODESTO		GRAY SHALE	26.5	220.0
363.5	MODESTO		BLACK SHALE	2.5	246.5
361.0	MODESTO		GRAY SHALE	20.0	249.0
341.0	MODESTO	PIASA	LIMESTONE	4.5	269.0
336.5	MODESTO		BLACK SHALE	2.5	273.5
334.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.8	276.0
330.2	CARBONDALE	ENERGY	SHALE	39.7	279.8
290.5	CARBONDALE	HERRIN	COAL	6.0	319.5
284.5	CARBONDALE		UNDERCLAY	2.0	325.5
282.5	CARBONDALE		LIMESTONE	2.5	327.5

MAPID: 1172186000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 24 QUARTERS/FOOTAGES: 324' N line, 10' W line

QUADRANGLE: ATWATER LONGITUDE: -89.722129 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.308743 DATE COLLECTED: 11 / 3 / 1977

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 360.3 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-2 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
630.0			UNCONSOLIDATED	54.0	0.0
576.0	MODESTO		GRAY SHALE	18.0	54.0
558.0	MODESTO		SANDY LIMESTONE	6.0	72.0
552.0	MODESTO		SANDY SHALE	10.0	78.0
542.0	MODESTO		GRAY SHALE	9.5	88.0
532.5	MODESTO	MACOUPIN	LIMESTONE	1.0	97.5
531.5	MODESTO		BLACK SHALE	2.0	98.5
529.5	MODESTO		LIMESTONE	1.0	100.5
528.5	MODESTO	WOMAC	COAL	0.5	101.5
528.0	MODESTO		GRAY SHALE	5.0	102.0
523.0	MODESTO		SANDSTONE	2.5	107.0
520.5	MODESTO		SANDY SHALE	4.5	109.5
516.0	MODESTO		GRAY SHALE	20.0	114.0
496.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	134.0
492.0	MODESTO		SANDSTONE	2.0	138.0
490.0	MODESTO		SILTY SHALE	34.5	140.0
455.5	MODESTO	CHAPEL	COAL	1.0	174.5
454.5	MODESTO		GRAY SHALE	25.5	175.5
429.0	MODESTO		SILTY SHALE	19.0	201.0
410.0	MODESTO		GRAY SHALE	18.0	220.0
392.0	MODESTO		GRAY SHALE	10.0	238.0
382.0	MODESTO		CALCAREOUS SHALE	3.0	248.0
379.0	MODESTO		SANDY SHALE	7.0	251.0
372.0	MODESTO		CALCAREOUS SANDSTONE	12.0	258.0
360.0	MODESTO		GRAY SHALE	5.0	270.0
355.0	MODESTO		BLACK SHALE	3.0	275.0
352.0	MODESTO		GRAY SHALE	6.5	278.0
345.5	MODESTO	PIASA	SHALY LIMESTONE	10.5	284.5
335.0			CLAYSTONE & SILTSTONE	6.0	295.0
329.0	CARBONDALE	BANKSTON FORK	SILTY LIMESTONE	5.5	301.0
323.5	CARBONDALE	ENERGY	CLAYSTONE & SILTSTONE	0.7	306.5
322.8	CARBONDALE	ENERGY	SILTY SHALE	1.8	307.2
321.0	CARBONDALE	ENERGY	SILTY SHALE	10.0	309.0
311.0	CARBONDALE	ENERGY	SILTY SHALE	20.0	319.0
291.0	CARBONDALE	ENERGY	SILTY SHALE	1.3	339.0
289.7	CARBONDALE	HERRIN	COAL	5.5	340.3
284.2	CARBONDALE		CLAYSTONE & SILTSTONE	1.5	345.8
282.7	CARBONDALE		BRECCIA	8.0	347.3

274.7 CARBONDALE CLAYSTONE & SILTSTONE 4.4 355.3
 270.3 CARBONDALE CORE LOSS 0.6 359.7

MAPID: 11722396000C **VERSION:** 1 **PROJECT:** NCRDS89
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 24 **QUARTERS/FOOTAGES:** 150' N line, 15' W line
QUADRANGLE: ATWATER **LONGITUDE:** -89.72212 **GEOLOGIST:** SROKA
CONFIDENTIAL: N **LATITUDE:** 39.309224 **DATE COLLECTED:** 6 / 10 / 1974
SURFACE ELEVATION (FT.): 630.0 **LOGGED (FT.):** 427.0 **LOG TYPE:** Multiple log types
SOURCE: MOBIL OIL R-74-12 **WELL TYPE:** Coal Test
COMMENT: GAMMA, RESIST, DENSITY, S.P., DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
630.0			UNCONSOLIDATED	76.0	0.0
554.0	MODESTO		LIMESTONE	6.0	76.0
548.0	MODESTO		GRAY SHALE	4.0	82.0
544.0	MODESTO		LIMESTONE	6.0	86.0
538.0	MODESTO		GRAY SHALE	12.0	92.0
526.0	MODESTO		BLACK SHALE	1.0	104.0
525.0	MODESTO	WOMAC	COAL	1.0	105.0
524.0	MODESTO		GRAY SHALE	34.0	106.0
490.0	MODESTO	CARLINVILLE	LIMESTONE	6.0	140.0
484.0	MODESTO		GRAY SHALE	31.0	146.0
453.0	MODESTO	CHAPEL	COAL	2.0	177.0
451.0	MODESTO		GRAY SHALE	29.0	179.0
422.0	MODESTO		SANDY SHALE	17.0	208.0
405.0	MODESTO		GRAY SHALE	35.0	225.0
370.0	MODESTO		SANDY LIMESTONE	5.0	260.0
365.0	MODESTO		GRAY SHALE	7.0	265.0
358.0	MODESTO		BLACK SHALE	2.0	272.0
356.0	MODESTO		GRAY SHALE	28.0	274.0
328.0	MODESTO	PIASA	LIMESTONE	2.0	302.0
326.0			GRAY SHALE	3.0	304.0
323.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	307.0
319.0	CARBONDALE	ENERGY	GRAY SHALE	33.0	311.0
286.0	CARBONDALE	HERRIN	COAL	6.0	344.0
280.0	CARBONDALE		UNDERCLAY	2.0	350.0
278.0	CARBONDALE		LIMESTONE	8.0	352.0
270.0	CARBONDALE		GRAY SHALE	13.0	360.0
257.0	CARBONDALE		LIMESTONE	3.0	373.0
254.0	CARBONDALE		BLACK SHALE	3.0	376.0
251.0	CARBONDALE		GRAY SHALE	48.0	379.0

MAPID: 11722397000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 24 QUARTERS/FOOTAGES: 150' N line, 15' W line

QUADRANGLE: ATWATER LONGITUDE: -89.72212 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.309224 DATE COLLECTED: 6 / 17 / 1974

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 365.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL R-74-12C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
630.0			UNCONSOLIDATED	60.0	0.0
570.0	MODESTO		GRAY SHALE	14.0	60.0
556.0	MODESTO		LIMESTONE	6.5	74.0
549.5	MODESTO		SHALE	5.5	80.5
544.0	MODESTO		LIMESTONE	5.0	86.0
539.0	MODESTO		GRAY SHALE	8.0	91.0
531.0	MODESTO	MACOUPIN	LIMESTONE	2.5	99.0
528.5	MODESTO	WOMAC	BLACK SHALE	1.5	101.5
527.0	MODESTO		GRAY SHALE	35.0	103.0
492.0	MODESTO	CARLINVILLE	LIMESTONE	6.0	138.0
486.0	MODESTO		GRAY SHALE	32.0	144.0
454.0	MODESTO	CHAPEL	COAL	1.0	176.0
453.0	MODESTO		GRAY SHALE	82.0	177.0
371.0	MODESTO		SANDY LIMESTONE	4.0	259.0
367.0	MODESTO		GRAY SHALE	17.5	263.0
349.5	MODESTO		BLACK SHALE	2.0	280.5
347.5	MODESTO		GRAY SHALE	17.5	282.5
330.0	MODESTO	PIASA	LIMESTONE	2.0	300.0
328.0			GRAY SHALE	3.0	302.0
325.0	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	5.0	305.0
320.0	CARBONDALE	ENERGY	GRAY SHALE	33.6	310.0
286.4	CARBONDALE	ENERGY	GRAY SHALE	1.0	343.6
285.4	CARBONDALE	HERRIN	COAL	5.7	344.6
279.7	CARBONDALE		CORE LOSS	0.8	350.3
279.0	CARBONDALE		LIMESTONE	7.0	351.0
272.0	CARBONDALE		GRAY SHALE	7.0	358.0

MAPID: 11722398000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 24 QUARTERS/FOOTAGES: 210' S line, 225' E line

QUADRANGLE: ATWATER LONGITUDE: -89.703561

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.295783

DATE COLLECTED: 6 / 8 / 1974

SURFACE ELEVATION (FT.): 643.0

LOGGED (FT.): 400.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL R-74-14

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
643.0			UNCONSOLIDATED	78.0	0.0	
565.0	BOND	CARTHAGE	LIMESTONE	9.0	78.0	
556.0	BOND		BLACK SHALE	2.0	87.0	
554.0	BOND	CARTHAGE	LIMESTONE	7.0	89.0	
547.0	MODESTO		GRAY SHALE	8.0	96.0	
539.0	MODESTO		LIMESTONE	4.0	104.0	
535.0	MODESTO		GRAY SHALE	22.0	108.0	
513.0	MODESTO	MACOUPIN	LIMESTONE	2.0	130.0	
511.0	MODESTO		BLACK SHALE	3.0	132.0	
508.0	MODESTO	WOMAC	COAL	3.0	135.0	
505.0	MODESTO		GRAY SHALE	29.0	138.0	
476.0	MODESTO	CARLINVILLE	LIMESTONE	5.0	167.0	
471.0	MODESTO		GRAY SHALE	36.0	172.0	
435.0	MODESTO	CHAPEL	COAL	3.0	208.0	
432.0	MODESTO		SANDY SHALE	9.0	211.0	
423.0	MODESTO		GRAY SHALE	60.0	220.0	
363.0	MODESTO		SHALE	26.0	280.0	
337.0	MODESTO		BLACK SHALE	2.0	306.0	
335.0	MODESTO	PIASA	LIMESTONE	20.0	308.0	
315.0			GRAY SHALE	32.0	328.0	
283.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	360.0	PROBABLY NOT BRERETON
281.0	CARBONDALE	ENERGY	GRAY SHALE	6.0	362.0	
275.0	CARBONDALE	HERRIN	COAL	2.0	368.0	
273.0	CARBONDALE		UNDERCLAY	2.0	370.0	
271.0	CARBONDALE		LIMESTONE	28.0	372.0	

MAPID: 11722399000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 25 QUARTERS/FOOTAGES: 2615' N line, 890' E line

QUADRANGLE: ATWATER LONGITUDE: -89.705862 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.287914 DATE COLLECTED: 6 / 20 / 1974

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 401.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL R-74-18 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
650.0			UNCONSOLIDATED	70.0	0.0
580.0	BOND		GRAY SHALE	26.0	70.0
554.0	BOND	CARTHAGE	SHALY LIMESTONE	11.0	96.0
543.0	MODESTO		GRAY SHALE	40.0	107.0
503.0	MODESTO		BLACK SHALE	3.0	147.0
500.0	MODESTO	WOMAC	COAL	1.0	150.0
499.0	MODESTO		GRAY SHALE	33.0	151.0
466.0	MODESTO	CARLINVILLE	LIMESTONE	10.0	184.0
456.0	MODESTO		GRAY SHALE	44.0	194.0
412.0	MODESTO	CHAPEL	COAL	1.0	238.0
411.0	MODESTO		GRAY SHALE	84.0	239.0
327.0	MODESTO		BLACK SHALE	2.0	323.0
325.0	MODESTO		GRAY SHALE	17.0	325.0
308.0	MODESTO	PIASA	LIMESTONE	4.0	342.0
304.0			GRAY SHALE	4.0	346.0
300.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	350.0
296.0	CARBONDALE	ENERGY	GRAY SHALE	41.0	354.0
255.0	CARBONDALE	HERRIN	COAL	2.0	395.0
253.0	CARBONDALE		UNDERCLAY	3.0	397.0
250.0	CARBONDALE		LIMESTONE	1.0	400.0

MAPID: 11722400000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 25 QUARTERS/FOOTAGES: 1338' N line, 12' W line

QUADRANGLE: ATWATER LONGITUDE: -89.721867 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.290944 DATE COLLECTED: 8 / 4 / 1977

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 392.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-13 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
640.0			UNCONSOLIDATED	70.0	0.0
570.0	BOND		GRAY SHALE	10.0	70.0
560.0	BOND	CARTHAGE	SHALY LIMESTONE	10.0	80.0
550.0	MODESTO		BLACK SHALE	1.5	90.0
548.5	MODESTO		GRAY SHALE	16.5	91.5
532.0	MODESTO		CALCAREOUS SANDSTONE	5.5	108.0
526.5	MODESTO		GRAY SHALE	19.5	113.5
507.0	MODESTO	MACOUPIN	LIMESTONE	1.0	133.0
506.0	MODESTO		BLACK SHALE	2.5	134.0
503.5	MODESTO	WOMAC	COAL	1.0	136.5
502.5	MODESTO		GRAY SHALE	35.5	137.5
467.0	MODESTO	CARLINVILLE	LIMESTONE	5.0	173.0
462.0	MODESTO		GRAY SHALE	38.0	178.0
424.0	MODESTO	CHAPEL	COAL	0.5	216.0
423.5	MODESTO		SANDY SHALE	27.5	216.5
396.0	MODESTO		GRAY SHALE	67.0	244.0
329.0	MODESTO		SHALE	2.0	311.0
327.0	MODESTO		GRAY SHALE	3.0	313.0
324.0	MODESTO		SANDY SHALE	6.0	316.0
318.0	MODESTO		GRAY SHALE	5.5	322.0
312.5	MODESTO	PIASA	LIMESTONE	3.0	327.5
309.5			SHALE	3.5	330.5
306.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	334.0
302.5	CARBONDALE	ENERGY	SILTY SHALE	36.3	337.5
266.2	CARBONDALE	ENERGY	BLACK SHALE	0.4	373.8
265.8	CARBONDALE	HERRIN	COAL	2.2	374.2
263.7	CARBONDALE		UNDERCLAY	0.8	376.3
262.9	CARBONDALE		LIMESTONE	1.0	377.1
261.9	CARBONDALE		SHALE	0.3	378.1
261.6	CARBONDALE		LIMESTONE	0.5	378.4
261.1	CARBONDALE		CORE LOSS	0.4	378.9
260.7	CARBONDALE		LIMESTONE	12.7	379.3

MAPID: 11722401000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 26 QUARTERS/FOOTAGES: 1245' N line, 1315' W line

QUADRANGLE: ATWATER LONGITUDE: -89.736315 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.291023 DATE COLLECTED: 6 / 11 / 1974

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 405.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL R-74-7 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
640.0			UNCONSOLIDATED	60.0	0.0
580.0	MODESTO		GRAY SHALE	17.0	60.0
563.0	MODESTO		LIMESTONE	7.0	77.0
556.0	MODESTO		GRAY SHALE	18.0	84.0
538.0	MODESTO	MACOUPIN	LIMESTONE	2.0	102.0
536.0	MODESTO	WOMAC	BLACK SHALE	2.0	104.0
534.0	MODESTO		GRAY SHALE	33.0	106.0
501.0	MODESTO	CARLINVILLE	LIMESTONE	3.0	139.0
498.0	MODESTO		GRAY SHALE	41.0	142.0
457.0	MODESTO	CHAPEL	COAL	2.0	183.0
455.0	MODESTO		GRAY SHALE	97.0	185.0
358.0	MODESTO		BLACK SHALE	3.0	282.0
355.0	MODESTO		GRAY SHALE	14.0	285.0
341.0	MODESTO	PIASA	LIMESTONE	3.0	299.0
338.0			GRAY SHALE	2.0	302.0
336.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	304.0
332.0	CARBONDALE	ENERGY	SHALE	39.0	308.0
293.0	CARBONDALE	HERRIN	COAL	4.0	347.0
289.0	CARBONDALE		UNDERCLAY	2.0	351.0
287.0	CARBONDALE		LIMESTONE	10.0	353.0
277.0	CARBONDALE		GRAY SHALE	7.0	363.0
270.0	CARBONDALE		LIMESTONE	5.0	370.0
265.0	CARBONDALE		BLACK SHALE	3.0	375.0
262.0	CARBONDALE		SHALE	16.0	378.0
246.0	CARBONDALE		LIMESTONE	4.0	394.0
242.0	CARBONDALE		GRAY SHALE	7.0	398.0

MAPID: 11722145000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 27 QUARTERS/FOOTAGES: 45' S line, 1278' E line

QUADRANGLE: ATWATER LONGITUDE: -89.745273 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.279507 DATE COLLECTED: 5 / 15 / 1979

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 350.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL R-79-27-17C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
625.0			UNCONSOLIDATED	20.0	0.0
605.0	BOND		GRAY SHALE	5.0	20.0
600.0	BOND		SANDSTONE	4.0	25.0
596.0	BOND		GRAY SHALE	1.0	29.0
595.0	BOND	CARTHAGE	LIMESTONE	9.0	30.0
586.0	MODESTO		BLACK SHALE	1.0	39.0
585.0	MODESTO		GRAY SHALE	12.0	40.0
573.0	MODESTO		SANDSTONE	11.0	52.0
562.0	MODESTO		SILTY SHALE	17.0	63.0
545.0	MODESTO		GRAY SHALE	40.5	80.0
504.5	MODESTO	CARLINVILLE	LIMESTONE	5.0	120.5
499.5	MODESTO		BLACK SHALE	0.5	125.5
499.0	MODESTO		SANDY LIMESTONE	1.0	126.0
498.0	MODESTO		SHALE	15.0	127.0
483.0	MODESTO		SILTY SHALE	12.5	142.0
470.5	MODESTO	CHAPEL	COAL	1.0	154.5
469.5	MODESTO		GRAY SHALE	3.5	155.5
466.0	MODESTO		SANDSTONE	7.0	159.0
459.0	MODESTO		GRAY SHALE	5.0	166.0
454.0	MODESTO		SILTY SHALE	50.0	171.0
404.0	MODESTO		GRAY SHALE	10.0	221.0
394.0	MODESTO		SILTY SHALE	15.0	231.0
379.0	MODESTO		BLACK SHALE	2.0	246.0
377.0	MODESTO		SHALE	9.0	248.0
368.0	MODESTO		GRAY SHALE	14.0	257.0
354.0	MODESTO	PIASA	LIMESTONE	3.0	271.0
351.0			GRAY SHALE	4.0	274.0
347.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	278.0
345.0	CARBONDALE	ENERGY	SANDY SHALE	13.0	280.0
332.0	CARBONDALE	ENERGY	SILTY SHALE	34.4	293.0
297.6	CARBONDALE	HERRIN	COAL	4.8	327.4
292.7	CARBONDALE		SHALE	0.2	332.3
292.6	CARBONDALE		GRAY SHALE	1.0	332.4
291.6	CARBONDALE		GRAY SHALE	2.6	333.4
289.0	CARBONDALE		LIMESTONE	7.0	336.0
282.0	CARBONDALE		GRAY SHALE	1.0	343.0
281.0	CARBONDALE		GRAY SHALE	6.0	344.0

MAPID: 11722402000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 27 QUARTERS/FOOTAGES: 2589' S line, 2028' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.752593

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.28642

DATE COLLECTED: 7 / 22 / 1977

SURFACE ELEVATION (FT.): 635.0

LOGGED (FT.): 375.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-10

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
635.0			UNCONSOLIDATED	38.0	0.0
597.0	BOND		SANDY SHALE	9.0	38.0
588.0	BOND	CARTHAGE	LIMESTONE	8.0	47.0
580.0	MODESTO		BLACK SHALE	3.0	55.0
577.0	MODESTO		GRAY SHALE	13.0	58.0
564.0	MODESTO		CALCAREOUS SANDSTONE	7.5	71.0
556.5	MODESTO		GRAY SHALE	19.5	78.5
537.0	MODESTO	MACOUPIN	LIMESTONE	1.5	98.0
535.5	MODESTO		BLACK SHALE	3.0	99.5
532.5	MODESTO	WOMAC	COAL	1.0	102.5
531.5	MODESTO		GRAY SHALE	6.5	103.5
525.0	MODESTO		GRAY SHALE	2.5	110.0
522.5	MODESTO		GRAY SHALE	23.5	112.5
499.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	136.0
495.0	MODESTO		SHALE	34.0	140.0
461.0	MODESTO	CHAPEL	COAL	0.5	174.0
460.5	MODESTO		SHALE	3.5	174.5
457.0	MODESTO		SANDY SHALE	13.0	178.0
444.0	MODESTO		GRAY SHALE	78.0	191.0
366.0	MODESTO		BLACK SHALE	2.5	269.0
363.5	MODESTO		SHALE	5.5	271.5
358.0	MODESTO		SANDY SHALE	8.0	277.0
350.0	MODESTO		GRAY SHALE	9.0	285.0
341.0	MODESTO	PIASA	LIMESTONE	3.0	294.0
338.0	MODESTO		BLACK SHALE	2.0	297.0
336.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	299.0
332.0	CARBONDALE	ENERGY	GRAY SHALE	48.3	303.0
283.7	CARBONDALE	HERRIN	COAL	5.1	351.3
278.5	CARBONDALE		UNDERCLAY	1.9	356.5
276.6	CARBONDALE		CORE LOSS	0.2	358.4
276.5	CARBONDALE		UNDERCLAY	1.5	358.5
275.0	CARBONDALE		LIMESTONE	2.4	360.0
272.6	CARBONDALE		GRAY SHALE	12.6	362.4

MAPID: 11722403000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 27 QUARTERS/FOOTAGES: 2630' S line, 15' E line

QUADRANGLE: ATWATER LONGITUDE: -89.740947 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.28671 DATE COLLECTED: 7 / 27 / 1977

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 340.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-11 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
635.0			UNCONSOLIDATED	30.0	0.0
605.0	BOND	CARTHAGE	LIMESTONE	9.0	30.0
596.0	MODESTO		BLACK SHALE	1.0	39.0
595.0	MODESTO		GRAY SHALE	16.0	40.0
579.0	MODESTO		SANDSTONE	4.0	56.0
575.0	MODESTO		SANDY SHALE	20.0	60.0
555.0	MODESTO	MACOUPIN	LIMESTONE	1.0	80.0
554.0	MODESTO		BLACK SHALE	2.5	81.0
551.5	MODESTO	WOMAC	COAL	1.0	83.5
550.5	MODESTO		GRAY SHALE	5.5	84.5
545.0	MODESTO		CALCAREOUS SANDSTONE	2.5	90.0
542.5	MODESTO		SANDY SHALE	20.5	92.5
522.0	MODESTO		GRAY SHALE	3.0	113.0
519.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	116.0
515.0	MODESTO		BLACK SHALE	0.5	120.0
514.5	MODESTO		LIMESTONE	0.5	120.5
514.0	MODESTO		GRAY SHALE	33.5	121.0
480.5	MODESTO	CHAPEL	COAL	0.5	154.5
480.0	MODESTO		GRAY SHALE	3.5	155.0
476.5	MODESTO		LIMESTONE	1.5	158.5
475.0	MODESTO		GRAY SHALE	3.0	160.0
472.0	MODESTO		SANDSTONE	9.0	163.0
463.0	MODESTO		SANDY SHALE	62.0	172.0
401.0	MODESTO		GRAY SHALE	16.0	234.0
385.0	MODESTO		BLACK SHALE	2.0	250.0
383.0	MODESTO		SHALE	5.0	252.0
378.0	MODESTO		SHALY SANDSTONE	9.0	257.0
369.0	MODESTO		SANDY SHALE	4.5	266.0
364.5	MODESTO		LIMESTONE	4.5	270.5
360.0	MODESTO		BLACK SHALE	2.0	275.0
358.0	CARBONDALE		GRAY SHALE	2.0	277.0
356.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	279.0
351.0	CARBONDALE	ENERGY	SANDY SHALE	11.0	284.0
340.0	CARBONDALE	ENERGY	GRAY SHALE	25.0	295.0
315.0	CARBONDALE	HERRIN	COAL	4.4	320.0
310.6	CARBONDALE		UNDERCLAY	3.6	324.4
307.0	CARBONDALE		LIMESTONE	5.0	328.0
302.0	CARBONDALE		GRAY SHALE	7.0	333.0

MAPID: 11721861000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 28 QUARTERS/FOOTAGES: 2577' S line, 2603' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.769587

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.286103

DATE COLLECTED: 11 / 9 / 1977

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 360.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-5

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
632.0			UNCONSOLIDATED	44.0	0.0
588.0	BOND		SANDY SHALE	4.0	44.0
584.0	BOND	CARTHAGE	LIMESTONE	9.0	48.0
575.0	MODESTO		BLACK SHALE	3.0	57.0
572.0	MODESTO		GRAY SHALE	19.0	60.0
553.0	MODESTO		SILTY LIMESTONE	3.0	79.0
550.0	MODESTO		SANDY SHALE	13.5	82.0
536.5	MODESTO	MACOUPIN	LIMESTONE	1.5	95.5
535.0	MODESTO		BLACK SHALE	3.0	97.0
532.0	MODESTO	WOMAC	COAL	1.0	100.0
531.0	MODESTO		GRAY SHALE	6.0	101.0
525.0	MODESTO		CALCAREOUS SHALE	5.0	107.0
520.0	MODESTO		GRAY SHALE	58.7	112.0
461.3	MODESTO	CHAPEL	COAL	0.5	170.7
460.8	MODESTO		SANDY SHALE	5.8	171.2
455.0	MODESTO		SANDSTONE	5.0	177.0
450.0	MODESTO		SANDY SHALE	13.0	182.0
437.0	MODESTO		GRAY SHALE	39.0	195.0
398.0	MODESTO		CALCAREOUS SHALE	7.5	234.0
390.5	MODESTO		LIMESTONE	2.3	241.5
388.2	MODESTO		GRAY SHALE	20.2	243.8
368.0	MODESTO		BLACK SHALE	2.0	264.0
366.0	MODESTO		SHALE	4.0	266.0
362.0	MODESTO		GRAY SHALE	18.0	270.0
344.0	MODESTO		GRAY SHALE	4.5	288.0
339.5	MODESTO	PIASA	LIMESTONE	2.0	292.5
337.5			GRAY SHALE	7.5	294.5
330.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	302.0
329.0	CARBONDALE	ENERGY	SILTY SHALE	37.1	303.0
291.9	CARBONDALE	HERRIN	COAL	5.9	340.1
286.0	CARBONDALE		CLAYSTONE	7.0	346.0
279.0	CARBONDALE		SHALY LIMESTONE	3.0	353.0
276.0	CARBONDALE		CLAYSTONE & SILTSTONE	1.0	356.0
275.0	CARBONDALE		LIMESTONE	1.0	357.0
274.0	CARBONDALE		CLAYSTONE	2.0	358.0

MAPID: 11721862000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 29 QUARTERS/FOOTAGES: 80' N line, 1590' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.792174 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.293309 DATE COLLECTED: 10 / 26 / 1978

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 360.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-34 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.0			UNCONSOLIDATED	44.0	0.0
576.0	BOND		SANDY SHALE	7.0	44.0
569.0	BOND		SANDSTONE	4.0	51.0
565.0	BOND		GRAY SHALE	3.0	55.0
562.0	BOND	CARTHAGE	LIMESTONE	9.0	58.0
553.0	MODESTO		BLACK SHALE	3.0	67.0
550.0	MODESTO		GRAY SHALE	16.0	70.0
534.0	MODESTO		LIMESTONE	2.0	86.0
532.0	MODESTO		GRAY SHALE	11.0	88.0
521.0	MODESTO	MACOUPIN	LIMESTONE	1.0	99.0
520.0	MODESTO		BLACK SHALE	3.5	100.0
516.5	MODESTO	WOMAC	COAL	0.5	103.5
516.0	MODESTO		SANDY SHALE	17.0	104.0
499.0	MODESTO		GRAY SHALE	12.8	121.0
486.2	MODESTO	CARLINVILLE	LIMESTONE	3.8	133.8
482.4	MODESTO		BLACK SHALE	0.9	137.6
481.5	MODESTO		LIMESTONE	0.5	138.5
481.0	MODESTO		GRAY SHALE	33.0	139.0
448.0	MODESTO	CHAPEL	COAL	0.7	172.0
447.3	MODESTO		GRAY SHALE	23.3	172.7
424.0	MODESTO		GRAY SHALE	34.0	196.0
390.0	MODESTO		GRAY SHALE	11.0	230.0
379.0	MODESTO		SHALE	3.0	241.0
376.0	MODESTO		GRAY SHALE	16.0	244.0
360.0	MODESTO		BLACK SHALE	2.0	260.0
358.0	MODESTO		SANDSTONE	36.5	262.0
321.5	MODESTO	PIASA	LIMESTONE	3.0	298.5
318.5	MODESTO		BLACK SHALE	3.5	301.5
315.0	CARBONDALE	DANVILLE	COAL	1.5	305.0
313.5	CARBONDALE		GRAY SHALE	9.5	306.5
304.0	CARBONDALE	BANKSTON FORK	LIMESTONE	17.0	316.0
287.0	CARBONDALE		GRAY SHALE	1.8	333.0
285.2	CARBONDALE	BRERETON	LIMESTONE	2.2	334.8
283.0	CARBONDALE	ANNA	BLACK SHALE	1.0	337.0
282.0	CARBONDALE	HERRIN	BONE COAL	4.0	338.0
278.0	CARBONDALE		SHALE	1.7	342.0
276.3	CARBONDALE		SHALY LIMESTONE	0.2	343.7
276.1	CARBONDALE		CORE LOSS	0.1	343.9
276.0	CARBONDALE		CALCAREOUS SHALE	3.0	344.0

273.0	CARBONDALE	LIMESTONE	2.0	347.0
271.0	CARBONDALE	GRAY SHALE	9.0	349.0
262.0	CARBONDALE	LIMESTONE	1.5	358.0
260.5	CARBONDALE	GRAY SHALE	0.5	359.5

MAPID: 11721863000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 30 QUARTERS/FOOTAGES: 45' S line, 2047' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.804796

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.27848

DATE COLLECTED: 5 / 9 / 1978

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 380.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-7

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
635.0			UNCONSOLIDATED	48.0	0.0
587.0	BOND		GRAY SHALE	14.0	48.0
573.0	BOND	CARTHAGE	LIMESTONE	12.5	62.0
560.5	MODESTO		BLACK SHALE	2.5	74.5
558.0	MODESTO		GRAY SHALE	12.5	77.0
545.5	MODESTO		SHALE	4.5	89.5
541.0	MODESTO		GRAY SHALE	15.0	94.0
526.0	MODESTO	MACOUPIN	LIMESTONE	1.0	109.0
525.0	MODESTO		BLACK SHALE	2.0	110.0
523.0	MODESTO	WOMAC	COAL	1.0	112.0
522.0	MODESTO		GRAY SHALE	14.0	113.0
508.0	MODESTO		SANDY SHALE	10.0	127.0
498.0	MODESTO		GRAY SHALE	9.0	137.0
489.0	MODESTO	CARLINVILLE	LIMESTONE	5.0	146.0
484.0	MODESTO		BLACK SHALE	1.0	151.0
483.0	MODESTO		LIMESTONE	1.0	152.0
482.0	MODESTO		SANDY SHALE	17.0	153.0
465.0	MODESTO		GRAY SHALE	24.0	170.0
441.0	MODESTO		SANDY SHALE	10.0	194.0
431.0	MODESTO		GRAY SHALE	56.0	204.0
375.0	MODESTO		LIMESTONE	2.0	260.0
373.0	MODESTO		BLACK SHALE	2.0	262.0
371.0	MODESTO		GRAY SHALE	25.0	264.0
346.0	MODESTO		BLACK SHALE	5.0	289.0
341.0	MODESTO		GRAY SHALE	25.0	294.0
316.0	MODESTO	PIASA	LIMESTONE	5.0	319.0
311.0	MODESTO		BLACK SHALE	2.0	324.0
309.0	CARBONDALE		GRAY SHALE	1.7	326.0
307.3	CARBONDALE		CORE LOSS	0.3	327.7
307.0	CARBONDALE		GRAY SHALE	15.0	328.0
292.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	343.0
288.0	CARBONDALE		GRAY SHALE	1.0	347.0
287.0	CARBONDALE	BRERETON	LIMESTONE	7.0	348.0
280.0	CARBONDALE		SHALE	3.0	355.0
277.0	CARBONDALE	ANNA	BLACK SHALE	1.8	358.0
275.2	CARBONDALE	HERRIN	COAL	5.8	359.8
269.4	CARBONDALE		UNDERCLAY	0.3	365.6
269.1	CARBONDALE		CORE LOSS	0.4	365.9
268.7	CARBONDALE		UNDERCLAY	1.7	366.3

267.0	CARBONDALE	LIMESTONE	2.0	368.0
265.0	CARBONDALE	GRAY SHALE	10.0	370.0

MAPID: 11723765000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 6W **SECTION:** 30 **QUARTERS/FOOTAGES:** 1940' N line, 2630' W line
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.804399 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.28777 **DATE COLLECTED:** 6 / 16 / 1976
SURFACE ELEVATION (FT.): 630.0 **LOGGED (FT.):** 393.5 **LOG TYPE:** Other Core Study
SOURCE: CARTER OIL 18-961 **WELL TYPE:** Coal Test
COMMENT: "LOCATION FROM PHOTO"

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
268.8	CARBONDALE	HERRIN	COAL	8.1	361.2	CLEAN COAL-SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.2		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11721864000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 31 QUARTERS/FOOTAGES: 72' N line, 2604' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.804475 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.278169 DATE COLLECTED: 5 / 2 / 1978

SURFACE ELEVATION (FT.): 641.0 LOGGED (FT.): 363.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-64 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
641.0			UNCONSOLIDATED	37.0	0.0
604.0	BOND		GRAY SHALE	17.0	37.0
587.0	BOND	CARTHAGE	LIMESTONE	10.0	54.0
577.0	MODESTO		GRAY SHALE	23.0	64.0
554.0	MODESTO		SHALE	3.0	87.0
551.0	MODESTO		SANDY SHALE	14.5	90.0
536.5	MODESTO		BLACK SHALE	1.0	104.5
535.5	MODESTO		GRAY SHALE	7.0	105.5
528.5	MODESTO		SANDSTONE	10.5	112.5
518.0	MODESTO		GRAY SHALE	9.0	123.0
509.0	MODESTO		CALCAREOUS SHALE	5.0	132.0
504.0	MODESTO		GRAY SHALE	4.5	137.0
499.5	MODESTO	CARLINVILLE	LIMESTONE	6.5	141.5
493.0	MODESTO		SANDY SHALE	20.0	148.0
473.0	MODESTO		GRAY SHALE	20.0	168.0
453.0	MODESTO	CHAPEL	COAL	2.0	188.0
451.0	MODESTO		GRAY SHALE	56.5	190.0
394.5	MODESTO		LIMESTONE	1.5	246.5
393.0	MODESTO		CALCAREOUS SHALE	6.0	248.0
387.0	MODESTO		SANDY SHALE	9.5	254.0
377.5	MODESTO		GRAY SHALE	17.5	263.5
360.0	MODESTO		SANDY SHALE	12.0	281.0
348.0	MODESTO	PIASA	LIMESTONE	4.0	293.0
344.0	MODESTO		BLACK SHALE	3.0	297.0
341.0	CARBONDALE	DANVILLE	COAL	0.5	300.0
340.5	CARBONDALE		GRAY SHALE	2.0	300.5
338.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.4	302.5
334.1	CARBONDALE	ENERGY	GRAY SHALE	23.2	306.9
310.9	CARBONDALE	ENERGY	SHALE	10.5	330.1
300.4	CARBONDALE	ENERGY	BLACK SHALE	0.4	340.6
300.0	CARBONDALE	HERRIN	COAL	7.0	341.0
293.0	CARBONDALE		CLAYSTONE	2.7	348.0
290.3	CARBONDALE		LIMESTONE	4.6	350.7
285.7	CARBONDALE		LIMESTONE	1.0	355.3
284.7	CARBONDALE		SILTSTONE	6.7	356.3

MAPID: 11700063000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 32 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.782169 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.264767 DATE COLLECTED: 1 / 11 / 1903

SURFACE ELEVATION (FT.): 639.0 LOGGED (FT.): 327.0 LOG TYPE: Drillers Log

SOURCE: WILMINGTON STAR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
639.0			UNCONSOLIDATED	22.0	0.0	
617.0			ROCK	227.0	22.0	
390.0			COAL	0.2	249.0	
389.8			ROCK	0.7	249.2	
389.2			COAL	0.2	249.8	
389.0			ROCK	32.0	250.0	
357.0			UNDERCLAY	20.0	282.0	
337.0			SHALE	17.5	302.0	
319.5			BLACK SHALE	0.7	319.5	
318.8	CARBONDALE	HERRIN	COAL	6.0	320.2	
312.8			SHALE	0.8	326.2	

MAPID: 11700063000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 32 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.782169 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.264767 DATE COLLECTED:

SURFACE ELEVATION (FT.): 639.0 LOGGED (FT.): 326.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
361.2	MODESTO	PIASA	LIMESTONE	4.0	277.8	
357.2	CARBONDALE	ANNA	BLACK SHALE	0.7	281.8	
356.5	CARBONDALE	ENERGY	SHALE	37.5	282.5	
319.0	CARBONDALE	HERRIN	COAL	6.0	320.0	

MAPID: 11700063000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 32 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.782169 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.264767 DATE COLLECTED: 1 / 0 / 1903

SURFACE ELEVATION (FT.): 639.0 LOGGED (FT.): 326.0 LOG TYPE: Drillers Log

SOURCE: WILMINGTON COAL CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
369.9	MODESTO	PIASA	LIMESTONE	3.0	269.1
366.9	MODESTO		UNCLASSIFIED	1.5	272.1
365.4	CARBONDALE		UNCLASSIFIED	3.5	273.6
361.9	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	277.1
357.9	CARBONDALE	ANNA	BLACK SHALE	0.7	281.1
357.2	CARBONDALE	ENERGY	UNCLASSIFIED	38.2	281.8
319.0	CARBONDALE	HERRIN	COAL	6.0	320.0

MAPID: 11700063000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 32 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.782169 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.264767 DATE COLLECTED: 11 / 11 / 1903

SURFACE ELEVATION (FT.): 638.7 LOGGED (FT.): 327.0 LOG TYPE: Drillers Log

SOURCE: WILMINGTON STAR COAL CO., HOLE #5 WELL TYPE: Coal Test

COMMENT: F.P. BLAIR & THOMAS LOWRY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
638.7			UNCONSOLIDATED	22.0	0.0
616.7	BOND	CARTHAGE	LIMESTONE	10.0	22.0
606.7	MODESTO		UNDERCLAY	18.5	32.0
588.2	MODESTO		UNDERCLAY	5.5	50.5
582.7	MODESTO		UNDERCLAY	2.0	56.0
580.7	MODESTO		SHALE	22.5	58.0
558.2	MODESTO	BURROUGHS	LIMESTONE	1.5	80.5
556.7	MODESTO		SHALE	24.0	82.0
532.7	MODESTO	CARLINVILLE	LIMESTONE	6.0	106.0
526.7	MODESTO		UNDERCLAY	4.5	112.0
522.2	MODESTO		SANDSTONE	8.5	116.5
513.7	MODESTO		SHALE	53.0	125.0
460.7	MODESTO		SHALE	39.5	178.0
421.2	MODESTO		LIMESTONE	1.0	217.5
420.2	MODESTO		SHALE	0.5	218.5
419.7	MODESTO		SHALE	3.0	219.0
416.7	MODESTO		LIMESTONE	1.0	222.0
415.7	MODESTO		SHALE	26.0	223.0
389.7	MODESTO		COAL	0.2	249.0
389.5	MODESTO		SHALE	0.7	249.2
388.9	MODESTO		COAL	0.2	249.8
388.7	MODESTO		SHALE	17.0	250.0
371.7	MODESTO		LIMESTONE	1.0	267.0
370.7	MODESTO		UNDERCLAY	2.0	268.0
368.7	MODESTO	PIASA	LIMESTONE	3.0	270.0
365.7	MODESTO		UNDERCLAY	5.0	273.0
360.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	278.0
356.7	CARBONDALE	ENERGY	UNDERCLAY	20.0	282.0
336.7	CARBONDALE	ENERGY	SHALE	17.5	302.0
319.2	CARBONDALE	ENERGY	BLACK SHALE	0.7	319.5
318.5	CARBONDALE	HERRIN	COAL	6.0	320.2
312.5	CARBONDALE		UNDERCLAY	0.3	326.2
312.2	CARBONDALE		LIMESTONE	0.5	326.5

MAPID: 11700064000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 33 QUARTERS/FOOTAGES: SW SW SW SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.768474 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.264567 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 641.0 LOGGED (FT.): 369.7 LOG TYPE: Drillers Log

SOURCE: PITTSBURG-BUFFALO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
641.0			UNCONSOLIDATED	43.6	0.0
597.4			ROCK	102.8	43.6
494.6			COAL	0.3	146.4
494.3			ROCK	141.7	146.7
352.7			SHALE	27.3	288.3
325.3			LIMESTONE	0.7	315.7
324.7			SHALE	9.3	316.3
315.4	CARBONDALE	HERRIN	COAL	4.1	325.6
311.3			ROCK	40.0	329.7

MAPID: 11700064000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 33 QUARTERS/FOOTAGES: SW SW SW SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.768474 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.264567 DATE COLLECTED:

SURFACE ELEVATION (FT.): 641.0 LOGGED (FT.): 329.1 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
351.4	MODESTO	PIASA	LIMESTONE	1.2	289.6
350.2	CARBONDALE	ENERGY	SILTY SHALE	24.3	290.8
325.9	CARBONDALE	ENERGY	LIMESTONE & SHALE	0.7	315.1
325.2	CARBONDALE	ENERGY	SILTY SHALE	1.5	315.8
323.7	CARBONDALE	ENERGY	DARK GRAY SHALE	0.5	317.3
323.2	CARBONDALE	ENERGY	SILTY SHALE	7.3	317.8
316.0	CARBONDALE	HERRIN	COAL	4.1	325.0

MAPID: 11700064000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 33 QUARTERS/FOOTAGES: SW SW SW SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.768474 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.264567 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 641.0 LOGGED (FT.): 330.1 LOG TYPE: Drillers Log

SOURCE: PITTSBURG & BUFFALO CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
370.6	MODESTO	PIASA	LIMESTONE	3.0	270.4
367.6	MODESTO		UNCLASSIFIED	1.5	273.4
366.1	CARBONDALE		UNCLASSIFIED	4.5	274.9
361.6	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.3	279.4
352.3	CARBONDALE	ENERGY	UNCLASSIFIED	37.3	288.7
315.0	CARBONDALE	HERRIN	COAL	4.1	326.0

MAPID: 11700064000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 33 QUARTERS/FOOTAGES: SW SW SW SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.768474 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.264567 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 641.1 LOGGED (FT.): 369.7 LOG TYPE: Drillers Log

SOURCE: PITTSBURG-BUFFALO #6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
641.1			SOIL	12.0	0.0	
629.1			SAND & GRAVEL	3.2	12.0	
625.9			SANDY CLAY	6.8	15.2	
619.1			SAND	6.3	22.0	
612.8			UNCONSOLIDATED	15.3	28.3	
597.5	MODESTO		SHALE	2.3	43.6	
595.2	MODESTO		SANDSTONE	4.3	45.9	
590.8	MODESTO		SHALE	23.8	50.3	
567.1	MODESTO		SHALE	3.2	74.0	
563.9	MODESTO		SHALE	3.0	77.2	
560.9	MODESTO		SANDSTONE	6.2	80.2	
554.8	MODESTO		SANDY SHALE	12.2	86.3	
542.6	MODESTO		SHALE	7.9	98.5	
534.7	MODESTO	CARLINVILLE	LIMESTONE	5.7	106.4	
529.0	MODESTO		SANDY SHALE	34.3	112.1	
494.7	MODESTO	CHAPEL	COAL	0.3	146.4	
494.4	MODESTO		SHALE	4.7	146.7	
489.8	MODESTO		SANDY SHALE	64.7	151.3	
425.1	MODESTO		LIMESTONE	0.7	216.0	
424.4	MODESTO		SHALE	50.4	216.7	
374.0	MODESTO		LIMESTONE	1.5	267.1	
372.5	MODESTO		SHALE	1.4	268.6	
371.1	MODESTO		LIMESTONE	3.0	270.0	
368.1	MODESTO		SHALE	6.0	273.0	
362.1	MODESTO		LIMESTONE	2.5	279.0	
359.6	MODESTO		SHALE	5.7	281.5	
353.9	MODESTO		LIMESTONE	1.2	287.2	
352.8	CARBONDALE		SANDY SHALE	27.3	288.3	
325.4	CARBONDALE		LIMESTONE	0.7	315.7	
324.8	CARBONDALE	ENERGY	SANDY SHALE	1.5	316.3	
323.3	CARBONDALE	ENERGY	UNKNOWN	0.5	317.8	LOG HAS SOFT BLACK ROCK
322.8	CARBONDALE	ENERGY	SANDY SHALE	7.3	318.3	
315.5	CARBONDALE	HERRIN	COAL	4.1	325.6	
311.4	CARBONDALE		UNDERCLAY	1.2	329.7	
310.3	CARBONDALE		LIMESTONE W/ SHALE	18.9	330.8	
291.3	CARBONDALE		SHALE	3.7	349.8	
287.7	CARBONDALE		SANDY SHALE	16.3	353.4	

MAPID: 11722146000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 33 QUARTERS/FOOTAGES: 2610' N line, 2610' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.769464 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.271784 DATE COLLECTED: 5 / 17 / 1979

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 348.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL R-79-33-14C WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
635.0			UNCONSOLIDATED	28.0	0.0
607.0	BOND	CARTHAGE	LIMESTONE	10.0	28.0
597.0	MODESTO		BLACK SHALE	1.0	38.0
596.0	MODESTO		GRAY SHALE	40.0	39.0
556.0	MODESTO	MACOUPIN	LIMESTONE	1.0	79.0
555.0	MODESTO		BLACK SHALE	3.5	80.0
551.5	MODESTO	WOMAC	COAL	1.0	83.5
550.5	MODESTO		SANDY SHALE	20.5	84.5
530.0	MODESTO		GRAY SHALE	10.5	105.0
519.5	MODESTO	CARLINVILLE	LIMESTONE	5.5	115.5
514.0	MODESTO		GRAY SHALE	37.0	121.0
477.0	MODESTO	CHAPEL	COAL	0.5	158.0
476.5	MODESTO		GRAY SHALE	63.5	158.5
413.0	MODESTO		LIMESTONE	1.0	222.0
412.0	MODESTO		GRAY SHALE	23.0	223.0
389.0	MODESTO		SHALE	3.0	246.0
386.0	MODESTO		GRAY SHALE	23.0	249.0
363.0	MODESTO		LIMESTONE	1.0	272.0
362.0	MODESTO		SHALE	5.5	273.0
356.5	MODESTO	PIASA	LIMESTONE	2.0	278.5
354.5	MODESTO		BLACK SHALE	5.5	280.5
349.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	286.0
346.5	CARBONDALE	ENERGY	SANDY SHALE	11.5	288.5
335.0	CARBONDALE	ENERGY	GRAY SHALE	22.6	300.0
312.4	CARBONDALE	ENERGY	GRAY SHALE	5.2	322.6
307.2	CARBONDALE	HERRIN	COAL	5.1	327.8
302.1	CARBONDALE		SHALE	1.5	332.9
300.7	CARBONDALE		LIMESTONE	2.9	334.3
297.8	CARBONDALE		SHALE	2.0	337.2
295.8	CARBONDALE		SHALE	0.8	339.2
295.0	CARBONDALE		GRAY SHALE	4.7	340.0
290.3	CARBONDALE		LIMESTONE	1.7	344.7
288.6	CARBONDALE		GRAY SHALE	1.7	346.4

MAPID: 11722405000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 33 QUARTERS/FOOTAGES: 33' S line, 1298' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.774048 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.264082 DATE COLLECTED: 7 / 21 / 1977

SURFACE ELEVATION (FT.): 641.0 LOGGED (FT.): 340.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-4 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
641.0			UNCONSOLIDATED	40.0	0.0
601.0	MODESTO		GRAY SHALE	2.0	40.0
599.0	MODESTO		CALCAREOUS SANDSTONE	6.0	42.0
593.0	MODESTO		GRAY SHALE	21.0	48.0
572.0	MODESTO	MACOUPIN	LIMESTONE	2.0	69.0
570.0	MODESTO		BLACK SHALE	2.0	71.0
568.0	MODESTO		GRAY SHALE	6.0	73.0
562.0	MODESTO		SHALY SANDSTONE	3.0	79.0
559.0	MODESTO		GRAY SHALE	4.0	82.0
555.0	MODESTO		GRAY SHALE	18.5	86.0
536.5	MODESTO	CARLINVILLE	LIMESTONE	5.5	104.5
531.0	MODESTO		SANDY SHALE	7.5	110.0
523.5	MODESTO		SANDSTONE	3.5	117.5
520.0	MODESTO		GRAY SHALE	25.0	121.0
495.0	MODESTO	CHAPEL	COAL	0.5	146.0
494.5	MODESTO		GRAY SHALE	2.5	146.5
492.0	MODESTO		SHALY SILTSTONE	7.5	149.0
484.5	MODESTO		GRAY SHALE	14.5	156.5
470.0	MODESTO		SANDY SHALE	8.0	171.0
462.0	MODESTO		GRAY SHALE	28.0	179.0
434.0	MODESTO		GRAY SHALE	7.0	207.0
427.0	MODESTO		GRAY SHALE	22.0	214.0
405.0	MODESTO		SHALE	7.5	236.0
397.5	MODESTO		SANDSTONE	6.5	243.5
391.0	MODESTO		SHALE	14.0	250.0
377.0	MODESTO	PIASA	LIMESTONE	3.0	264.0
374.0	MODESTO		BLACK SHALE	4.0	267.0
370.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	271.0
367.0	CARBONDALE	ENERGY	GRAY SHALE	39.4	274.0
327.6	CARBONDALE	HERRIN	COAL	5.4	313.4
322.2	CARBONDALE		UNDERCLAY	3.2	318.8
319.0	CARBONDALE		SHALY LIMESTONE	6.0	322.0
313.0	CARBONDALE		GRAY SHALE	6.2	328.0
306.8	CARBONDALE		CALCAREOUS SHALE	5.8	334.2

MAPID: 11722406000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 33 QUARTERS/FOOTAGES: 78' N line, 1920' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.771981 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.278732 DATE COLLECTED: 7 / 25 / 1977

SURFACE ELEVATION (FT.): 627.0 LOGGED (FT.): 342.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-5 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
627.0			UNCONSOLIDATED	25.0	0.0
602.0	BOND		GRAY SHALE	5.0	25.0
597.0	BOND	CARTHAGE	LIMESTONE	10.0	30.0
587.0	MODESTO		BLACK SHALE	2.0	40.0
585.0	MODESTO		GRAY SHALE	19.5	42.0
565.5	MODESTO		SANDY SHALE	17.0	61.5
548.5	MODESTO	MACOUPIN	LIMESTONE	1.5	78.5
547.0	MODESTO		BLACK SHALE	3.0	80.0
544.0	MODESTO	WOMAC	COAL	0.5	83.0
543.5	MODESTO		GRAY SHALE	6.0	83.5
537.5	MODESTO		CALCAREOUS SANDSTONE	7.5	89.5
530.0	MODESTO		SANDY SHALE	17.0	97.0
513.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	114.0
509.0	MODESTO		BLACK SHALE	1.0	118.0
508.0	MODESTO		LIMESTONE	0.5	119.0
507.5	MODESTO		GRAY SHALE	32.0	119.5
475.5	MODESTO	CHAPEL	COAL	1.0	151.5
474.5	MODESTO		SANDY SHALE	8.5	152.5
466.0	MODESTO		SANDSTONE	9.0	161.0
457.0	MODESTO		SANDY SHALE	43.0	170.0
414.0	MODESTO		GRAY SHALE	27.0	213.0
387.0	MODESTO		GRAY SHALE	4.0	240.0
383.0	MODESTO		BLACK SHALE	2.0	244.0
381.0	MODESTO		SHALE	19.0	246.0
362.0	MODESTO		SANDY SHALE	6.6	265.0
355.4	MODESTO	PIASA	LIMESTONE	5.4	271.6
350.0	CARBONDALE	ENERGY	GRAY SHALE	45.0	277.0
305.0	CARBONDALE	HERRIN	COAL	5.4	322.0
299.6	CARBONDALE		CLAYSTONE	14.6	327.4

MAPID: 11700862000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 34 QUARTERS/FOOTAGES: 330' N line, 990' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.756191 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.278307 DATE COLLECTED: 10 / 0 / 1960

SURFACE ELEVATION (FT.): 639.0 LOGGED (FT.): 357.0 LOG TYPE: Electric Log

SOURCE: DAYTON WARD W WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
361.5	MODESTO	PIASA	LIMESTONE	4.5	277.5
357.0	MODESTO		UNCLASSIFIED	4.0	282.0
353.0	CARBONDALE		UNCLASSIFIED	9.0	286.0
344.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	295.0
335.0	CARBONDALE	ENERGY	UNCLASSIFIED	48.0	304.0
287.0	CARBONDALE	HERRIN	COAL	5.0	352.0

MAPID: 11722407000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 34 QUARTERS/FOOTAGES: 61' N line, 24' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.759632

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.278995

DATE COLLECTED: 7 / 22 / 1977

SURFACE ELEVATION (FT.): 638.0

LOGGED (FT.): 370.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-6

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
638.0			UNCONSOLIDATED	33.0	0.0
605.0	BOND		GRAY SHALE	10.3	33.0
594.7	BOND	CARTHAGE	SHALY LIMESTONE	9.7	43.3
585.0	MODESTO		BLACK SHALE	1.5	53.0
583.5	MODESTO		GRAY SHALE	15.5	54.5
568.0	MODESTO		LIMESTONE	5.5	70.0
562.5	MODESTO		GRAY SHALE	20.0	75.5
542.5	MODESTO	MACOUPIN	SHALY LIMESTONE	2.0	95.5
540.5	MODESTO		BLACK SHALE	2.5	97.5
538.0	MODESTO	WOMAC	COAL	1.0	100.0
537.0	MODESTO		GRAY SHALE	31.0	101.0
506.0	MODESTO	CARLINVILLE	LIMESTONE	4.8	132.0
501.2	MODESTO		BLACK SHALE	1.0	136.8
500.2	MODESTO		LIMESTONE	0.2	137.8
500.0	MODESTO		GRAY SHALE	34.5	138.0
465.5	MODESTO	CHAPEL	COAL	0.5	172.5
465.0	MODESTO		CALCAREOUS SHALE	7.0	173.0
458.0	MODESTO		SANDSTONE	12.0	180.0
446.0	MODESTO		SANDY SHALE	45.0	192.0
401.0	MODESTO		GRAY SHALE	12.0	237.0
389.0	MODESTO		GRAY SHALE	15.0	249.0
374.0	MODESTO		BLACK SHALE	2.0	264.0
372.0	MODESTO		SHALE	6.0	266.0
366.0	MODESTO		GRAY SHALE	6.0	272.0
360.0	MODESTO		SANDSTONE	5.0	278.0
355.0	MODESTO		SANDY SHALE	5.0	283.0
350.0	MODESTO	PIASA	LIMESTONE	6.0	288.0
344.0	MODESTO		SHALE	2.0	294.0
342.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	296.0
337.0	CARBONDALE	ENERGY	GRAY SHALE	46.0	301.0
291.0	CARBONDALE	HERRIN	COAL	6.0	347.0
285.0	CARBONDALE		UNDERCLAY	5.0	353.0
280.0	CARBONDALE		LIMESTONE	4.0	358.0
276.0	CARBONDALE		GRAY SHALE	8.0	362.0

MAPID: 11722117000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 35 QUARTERS/FOOTAGES: 2605' N line, 2600' W line

QUADRANGLE: ATWATER LONGITUDE: -89.731401

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.27244

DATE COLLECTED: 4 / 26 / 1989

SURFACE ELEVATION (FT.): 645.0 LOGGED (FT.): 350.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-1

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
645.0			UNCONSOLIDATED	30.0	0.0
615.0	BOND	CARTHAGE	LIMESTONE	11.0	30.0
604.0	MODESTO		BLACK SHALE	2.0	41.0
602.0	MODESTO		GRAY SHALE	14.0	43.0
588.0	MODESTO		SANDY LIMESTONE	5.0	57.0
583.0	MODESTO		GRAY SHALE	21.0	62.0
562.0	MODESTO	MACOUPIN	SHALY LIMESTONE	2.0	83.0
560.0	MODESTO		BLACK SHALE	2.0	85.0
558.0	MODESTO	WOMAC	COAL	1.0	87.0
557.0	MODESTO		GRAY SHALE	32.0	88.0
525.0	MODESTO	CARLINVILLE	LIMESTONE	5.0	120.0
520.0	MODESTO		GRAY SHALE	36.0	125.0
484.0	MODESTO	CHAPEL	COAL	1.5	161.0
482.5	MODESTO		GRAY SHALE	92.5	162.5
390.0	MODESTO		BLACK SHALE	2.0	255.0
388.0	MODESTO		GRAY SHALE	18.0	257.0
370.0	MODESTO	PIASA	LIMESTONE	4.0	275.0
366.0			GRAY SHALE	3.0	279.0
363.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	282.0
360.0	CARBONDALE	ENERGY	GRAY SHALE	25.0	285.0
335.0	CARBONDALE	ENERGY	SHALE	24.6	310.0
310.4	CARBONDALE	ENERGY	SHALE	1.1	334.6
309.3	CARBONDALE	ENERGY	SHALE	1.9	335.7
307.5	CARBONDALE		CORE LOSS	0.5	337.5
307.0	CARBONDALE	HERRIN	COAL	3.5	338.0
303.5	CARBONDALE		UNDERCLAY	1.6	341.5
302.0	CARBONDALE		LIMESTONE	7.0	343.0

MAPID: 11722408000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 35 QUARTERS/FOOTAGES: 280' S line, 10' E line

QUADRANGLE: ATWATER LONGITUDE: -89.721645 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.265718 DATE COLLECTED: 6 / 7 / 1974

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 400.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL R-74-6 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
650.0			UNCONSOLIDATED	44.0	0.0
606.0	BOND	CARTHAGE	LIMESTONE	12.0	44.0
594.0	MODESTO		BLACK SHALE	2.0	56.0
592.0	MODESTO		GRAY SHALE	42.0	58.0
550.0	MODESTO	WOMAC	BLACK SHALE	3.0	100.0
547.0	MODESTO		GRAY SHALE	33.0	103.0
514.0	MODESTO	CARLINVILLE	LIMESTONE	5.0	136.0
509.0	MODESTO		GRAY SHALE	36.0	141.0
473.0	MODESTO		COAL	3.0	177.0
470.0	MODESTO		SANDY SHALE	20.0	180.0
450.0	MODESTO		GRAY SHALE	67.0	200.0
383.0	MODESTO		BLACK SHALE	2.0	267.0
381.0	MODESTO		GRAY SHALE	3.0	269.0
378.0	MODESTO		CALCAREOUS SANDSTONE	13.0	272.0
365.0	MODESTO		GRAY SHALE	5.0	285.0
360.0	MODESTO	PIASA	LIMESTONE	4.0	290.0
356.0			GRAY SHALE	3.0	294.0
353.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	297.0
350.0	CARBONDALE	ENERGY	SILTY SHALE	55.0	300.0
295.0	CARBONDALE	HERRIN	COAL	4.0	355.0
291.0	CARBONDALE		UNDERCLAY	3.0	359.0
288.0	CARBONDALE		LIMESTONE	6.0	362.0
282.0	CARBONDALE		GRAY SHALE	12.0	368.0
270.0	CARBONDALE		BLACK SHALE	4.0	380.0
266.0	CARBONDALE		GRAY SHALE	16.0	384.0

MAPID: 11722409000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 35 QUARTERS/FOOTAGES: 120' N line, 385' W line

QUADRANGLE: ATWATER LONGITUDE: -89.739326 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.279149 DATE COLLECTED: 6 / 11 / 1974

SURFACE ELEVATION (FT.): 645.0 LOGGED (FT.): 400.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL R-74-11 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
645.0			UNCONSOLIDATED	47.0	0.0
598.0	BOND	CARTHAGE	LIMESTONE	9.0	47.0
589.0	MODESTO		BLACK SHALE	2.0	56.0
587.0	MODESTO		GRAY SHALE	15.0	58.0
572.0	MODESTO		SANDY LIMESTONE	5.0	73.0
567.0	MODESTO		GRAY SHALE	21.0	78.0
546.0	MODESTO	MACOUPIN	LIMESTONE	3.0	99.0
543.0	MODESTO		BLACK SHALE	2.0	102.0
541.0	MODESTO	WOMAC	COAL	1.0	104.0
540.0	MODESTO		GRAY SHALE	33.0	105.0
507.0	MODESTO	CARLINVILLE	LIMESTONE	5.0	138.0
502.0	MODESTO		GRAY SHALE	29.0	143.0
473.0	MODESTO	CHAPEL	COAL	2.0	172.0
471.0	MODESTO		GRAY SHALE	92.0	174.0
379.0	MODESTO		BLACK SHALE	3.0	266.0
376.0	MODESTO		GRAY SHALE	19.0	269.0
357.0	MODESTO	PIASA	LIMESTONE	5.0	288.0
352.0			GRAY SHALE	3.0	293.0
349.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	296.0
347.0	CARBONDALE	ENERGY	GRAY SHALE	45.0	298.0
302.0	CARBONDALE	HERRIN	COAL	5.0	343.0
297.0	CARBONDALE		UNDERCLAY	2.0	348.0
295.0	CARBONDALE		LIMESTONE	6.0	350.0
289.0	CARBONDALE		GRAY SHALE	20.0	356.0
269.0	CARBONDALE		BLACK SHALE	2.0	376.0
267.0	CARBONDALE		GRAY SHALE	22.0	378.0

MAPID: 11722410000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 10N 6W SECTION: 35 QUARTERS/FOOTAGES: 42' N line, 2430' E line

QUADRANGLE: ATWATER LONGITUDE: -89.730405 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.279534 DATE COLLECTED: 7 / 21 / 1977

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 365.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL RI-77-9 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
642.0			UNCONSOLIDATED	41.0	0.0
601.0	BOND	CARTHAGE	SHALY LIMESTONE	14.0	41.0
587.0	MODESTO		BLACK SHALE	2.5	55.0
584.5	MODESTO		GRAY SHALE	13.5	57.5
571.0	MODESTO		CALCAREOUS SANDSTONE	8.5	71.0
562.5	MODESTO		SANDY SHALE	18.5	79.5
544.0	MODESTO	MACOUPIN	LIMESTONE	2.0	98.0
542.0	MODESTO		BLACK SHALE	2.5	100.0
539.5	MODESTO	WOMAC	COAL	0.5	102.5
539.0	MODESTO		SANDY SHALE	33.0	103.0
506.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	136.0
502.0	MODESTO		SHALE	0.5	140.0
501.5	MODESTO		SANDY SHALE	34.0	140.5
467.5	MODESTO	CHAPEL	COAL	0.5	174.5
467.0	MODESTO		GRAY SHALE	5.0	175.0
462.0	MODESTO		SANDY SHALE	67.0	180.0
395.0	MODESTO		GRAY SHALE	4.0	247.0
391.0	MODESTO		SHALE	1.0	251.0
390.0	MODESTO		SANDY SHALE	19.0	252.0
371.0	MODESTO		BLACK SHALE	2.0	271.0
369.0	MODESTO		SANDY SHALE	19.0	273.0
350.0	MODESTO	PIASA	LIMESTONE	4.0	292.0
346.0			SHALE	2.5	296.0
343.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	298.5
339.0	CARBONDALE	ENERGY	GRAY SHALE	42.0	303.0
297.0	CARBONDALE	HERRIN	COAL	4.0	345.0
293.0	CARBONDALE		UNDERCLAY	2.0	349.0
291.0	CARBONDALE		LIMESTONE	14.0	351.0

MAPID: 11723766000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 1 **QUARTERS/FOOTAGES:** 1135' S line, 65' E line of SW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.823289 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.339215 **DATE COLLECTED:** 12 / 19 / 1972
SURFACE ELEVATION (FT.): 630.0 **LOGGED (FT.):** 348.0 **LOG TYPE:** Other Core Study
SOURCE: CARTER OIL 18-679 **WELL TYPE:** Coal Test
COMMENT: "PHOTO LOCATION MARKED W.FARMER"

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
318.5	CARBONDALE	HERRIN	COAL	6.9	311.5	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.1		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723767000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 2 **QUARTERS/FOOTAGES:** SE NE SE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.833 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.339773 **DATE COLLECTED:** 9 / 3 / 1981
SURFACE ELEVATION (FT.): 610.0 **LOGGED (FT.):** 335.2 **LOG TYPE:** Other Core Study
SOURCE: EXXON COAL RESOURCES 18-714 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
300.8	CARBONDALE	HERRIN	COAL	7.1	309.2	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.2		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723768000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 64' S line, 585' W line of SW SW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.867091 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.333313 **DATE COLLECTED:** 9 / 17 / 1969
SURFACE ELEVATION (FT.): 635.0 **LOGGED (FT.):** 315.3 **LOG TYPE:** Other Core Study
SOURCE: CARTER OIL J-84 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
332.8	CARBONDALE	HERRIN	COAL	7.8	302.2	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.2		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723769000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** NW NW SW NW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.868199 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.343933 **DATE COLLECTED:** 8 / 13 / 1981
SURFACE ELEVATION (FT.): 647.0 **LOGGED (FT.):** 353.0 **LOG TYPE:** Other Core Study
SOURCE: EXXON COAL RESOURCES 18-709 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
321.4	CARBONDALE	HERRIN	COAL	7.3	325.6	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.1		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723770000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 29' S line, 80' W line of SE SW SE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.857389 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.333702 **DATE COLLECTED:** 7 / 24 / 1975
SURFACE ELEVATION (FT.): 640.0 **LOGGED (FT.):** 374.0 **LOG TYPE:** Other Core Study
SOURCE: CARTER OIL 18-933 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
291.0	CARBONDALE	HERRIN	COAL	7.3	349.0	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.2		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723771000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 82' N line, 20' W line of NE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.860064 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.347395 **DATE COLLECTED:** 8 / 13 / 1975
SURFACE ELEVATION (FT.): 648.0 **LOGGED (FT.):** 373.4 **LOG TYPE:** Other Core Study
SOURCE: CARTER OIL 18-936 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
298.6	CARBONDALE	HERRIN	COAL	7.4	349.4	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.3		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11700065000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 4 QUARTERS/FOOTAGES: NE NE SW SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.874371 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.336042 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 318.0 LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R R CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
630.0			UNCONSOLIDATED	110.0	0.0
520.0			ROCK	172.2	110.0
347.8			COAL	0.8	282.2
347.0			SHALE	9.0	283.0
338.0			LIMESTONE	5.0	292.0
333.0			SHALE	4.0	297.0
329.0			LIMESTONE	4.4	301.0
324.6			BLACK SHALE	2.6	305.4
322.0	CARBONDALE	HERRIN	COAL	6.2	308.0
315.8			ROCK	3.8	314.2

MAPID: 11700065000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 4 QUARTERS/FOOTAGES: NE NE SW SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.874371 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.336042 DATE COLLECTED:

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 314.2 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
352.0	MODESTO	PIASA	LIMESTONE	4.0	278.0
348.0	MODESTO		DARK GRAY SHALE	0.2	282.0
347.8	CARBONDALE	DANVILLE	COAL	0.8	282.2
347.0	CARBONDALE		DARK GRAY SHALE	9.0	283.0
338.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	5.0	292.0
333.0	CARBONDALE	LAWSON	GRAY SHALE	4.0	297.0
329.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	4.4	301.0
324.6	CARBONDALE	ANNA	BLACK SHALE	2.6	305.4
322.0	CARBONDALE	HERRIN	COAL	6.2	308.0

MAPID: 11700065000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 4 QUARTERS/FOOTAGES: NE NE SW SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.874371 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.336042 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 314.2 LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R R CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
352.0	MODESTO	PIASA	LIMESTONE	4.0	278.0
348.0	MODESTO		UNCLASSIFIED	0.2	282.0
347.8	CARBONDALE	DANVILLE	COAL	0.8	282.2
347.0	CARBONDALE		UNCLASSIFIED	9.0	283.0
338.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	292.0
333.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	297.0
331.0	CARBONDALE		UNCLASSIFIED	2.0	299.0
329.0	CARBONDALE	BRERETON	LIMESTONE	4.4	301.0
324.6	CARBONDALE	ANNA	BLACK SHALE	2.6	305.4
322.0	CARBONDALE	HERRIN	COAL	6.2	308.0

MAPID: 11700065000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 4 QUARTERS/FOOTAGES: NE NE SW SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.874371 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.336042 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 629.6 LOGGED (FT.): 318.0 LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R.R. CO., HOLE #14 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
629.6			SOIL	9.0	0.0	
620.6			SAND & GRAVEL	19.0	9.0	
601.6			CLAY	48.0	28.0	
553.6			SAND & GRAVEL	32.0	76.0	QUICK SAND & GRAVEL
521.6			SAND	2.0	108.0	
519.6	MODESTO		SHALE	96.0	110.0	
423.6	MODESTO		LIMESTONE	2.5	206.0	
421.1	MODESTO		SHALE	58.5	208.5	
362.6	MODESTO		SANDSTONE	3.0	267.0	
359.6	MODESTO		SHALE	8.0	270.0	
351.6	MODESTO	PIASA	LIMESTONE	4.0	278.0	
347.6	MODESTO		SHALE	0.2	282.0	
347.4	CARBONDALE	DANVILLE	COAL	0.8	282.2	
346.6	CARBONDALE		SHALE	9.0	283.0	
337.6	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	292.0	
332.6	CARBONDALE		SHALE	4.0	297.0	
328.6	CARBONDALE	BRERETON	LIMESTONE	4.4	301.0	
324.2	CARBONDALE	ANNA	BLACK SHALE	2.6	305.4	
321.6	CARBONDALE	HERRIN	COAL	6.2	308.0	
315.4	CARBONDALE		SHALE	1.5	314.2	
313.8	CARBONDALE		LIMESTONE	1.0	315.8	
312.8	CARBONDALE		SHALE	1.3	316.8	

MAPID: 11790237000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 4 QUARTERS/FOOTAGES: 48' N line, 15' E line of NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.869412 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.347501 DATE COLLECTED: 1 / 27 / 1975

SURFACE ELEVATION (FT.): 649.5 LOGGED (FT.): 287.5 LOG TYPE: Drillers Log

SOURCE: AMAX M37 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
649.5	PLEISTOCENE		UNCONSOLIDATED	146.0	0.0	
503.5			ROCK	141.5	146.0	

MAPID: 11790238000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 5 QUARTERS/FOOTAGES: 50' N line, 8' E line of NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.887765 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.347438 DATE COLLECTED: 1 / 29 / 1975

SURFACE ELEVATION (FT.): 643.8 LOGGED (FT.): 280.0 LOG TYPE: Drillers Log

SOURCE: AMAX M38 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
643.8	PLEISTOCENE		UNCONSOLIDATED	185.0	0.0
458.8			ROCK	78.0	185.0
380.8	CARBONDALE	HERRIN	COAL	6.0	263.0
374.8	CARBONDALE		ROCK	11.0	269.0

MAPID: 11790239000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 5 QUARTERS/FOOTAGES: 52' N line, 29' W line of NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.906203 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.347401 DATE COLLECTED: 2 / 4 / 1974

SURFACE ELEVATION (FT.): 643.7 LOGGED (FT.): 257.5 LOG TYPE: Drillers Log

SOURCE: AMAX M39 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
643.7	PLEISTOCENE		UNCONSOLIDATED	190.0	0.0
453.7			ROCK	54.0	190.0
399.7	CARBONDALE	HERRIN	COAL	5.0	244.0
394.7	CARBONDALE		ROCK	8.5	249.0

MAPID: 11790299000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 5 QUARTERS/FOOTAGES: 45' N line, 46' E line of SE NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.897309 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.342633 DATE COLLECTED: 8 / 1 / 1977

SURFACE ELEVATION (FT.): 638.9 LOGGED (FT.): 280.0 LOG TYPE: Drillers Log

SOURCE: AMAX G537GG WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
638.9	PLEISTOCENE		UNCONSOLIDATED	136.0	0.0
502.9			ROCK	129.0	136.0
373.9	CARBONDALE	HERRIN	COAL	5.0	265.0
368.9	CARBONDALE		ROCK	10.0	270.0

MAPID: 11700808000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 6 QUARTERS/FOOTAGES: 1040' S line, 1480' E line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.911791

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.334486

DATE COLLECTED:

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 257.9

LOG TYPE: Survey Core Study

SOURCE: AYRSHIRE COLLIERIES CORP. A9-4

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
416.0	MODESTO	PIASA	LIMESTONE	3.5	216.0
412.5	MODESTO		GRAY SHALE	5.3	219.5
407.2	CARBONDALE	DANVILLE	COAL	0.8	224.8
406.3	CARBONDALE		CLAYSTONE	0.7	225.7
405.6	CARBONDALE		GRAY SHALE	3.0	226.4
402.6	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	16.0	229.4
386.6	CARBONDALE	LAWSON	CLAYSTONE & SHALE	0.1	245.4
386.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	4.1	245.5
382.5	CARBONDALE	ANNA	DARK GRAY SHALE	0.9	249.5
381.0	CARBONDALE	HERRIN	COAL	6.9	251.0

MAPID: 11700808000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 6 QUARTERS/FOOTAGES: 1040' S line, 1480' E line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.911791

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.334486

DATE COLLECTED:

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 257.9

LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES CORP. A9-4

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
416.5	MODESTO	PIASA	LIMESTONE	3.5	215.5
413.0	MODESTO		UNCLASSIFIED	5.3	219.0
407.7	CARBONDALE	DANVILLE	COAL	0.8	224.3
406.9	CARBONDALE		UNCLASSIFIED	8.3	225.1
398.6	CARBONDALE	BANKSTON FORK	LIMESTONE	8.3	233.4
390.3	CARBONDALE	ANVIL ROCK	SANDSTONE	1.4	241.7
388.9	CARBONDALE		SHALE	1.0	243.1
387.9	CARBONDALE	BRERETON	LIMESTONE	6.0	244.1
381.9	CARBONDALE	ANNA	BLACK SHALE	0.9	250.1
381.0	CARBONDALE	HERRIN	COAL	6.9	251.0

MAPID: 11700808000C **VERSION:** 3 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 6 **QUARTERS/FOOTAGES:** 1040' S line, 1480' E line
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.911791 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.334486 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 623.3 **LOGGED (FT.):** 259.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES CORP. A9-4 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
372.2	CARBONDALE	HERRIN	COAL	6.9	251.1	

MAPID: 11723772000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 6 **QUARTERS/FOOTAGES:** 280' N line, 160' E line of SW SE
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.911786 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.334818 **DATE COLLECTED:** 12 / 24 / 1959
SURFACE ELEVATION (FT.): 631.0 **LOGGED (FT.):** 257.5 **LOG TYPE:** Other Core Study
SOURCE: CARTER OIL A-9-4 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
380.3	CARBONDALE	HERRIN	COAL	6.5	250.7	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.3		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11790085000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 6 **QUARTERS/FOOTAGES:** 280' N line, 160' E line of SW SE
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.911786 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.334818 **DATE COLLECTED:** 12 / 21 / 1959
SURFACE ELEVATION (FT.): 632.3 **LOGGED (FT.):** 259.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE A9-4 **WELL TYPE:** Coal Test
COMMENT: MACOUPIN COUNTY BOX #43; ISGS CORE DESC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
632.3	PLEISTOCENE		UNCONSOLIDATED	138.0	0.0	
494.3	MODESTO		ROCK	51.0	138.0	
443.3	MODESTO	ROCK BRANCH	COAL	1.0	189.0	
442.3	MODESTO		ROCK	34.4	190.0	
407.9	CARBONDALE	DANVILLE	COAL	0.8	224.4	
407.1	CARBONDALE		ROCK	25.6	225.2	
381.5	CARBONDALE	HERRIN	COAL	6.8	250.8	
374.7	CARBONDALE		ROCK	1.4	257.6	

MAPID: 11790298000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 6 QUARTERS/FOOTAGES: 14' S line, 53' W line of SW NE
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.915635 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.338862 DATE COLLECTED: 5 / 24 / 1977
 SURFACE ELEVATION (FT.): 643.2 LOGGED (FT.): 263.0 LOG TYPE: Drillers Log
 SOURCE: AMAX G505YY WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
643.2	PLEISTOCENE		UNCONSOLIDATED	151.0	0.0
492.2			ROCK	95.0	151.0
397.2	CARBONDALE	HERRIN	COAL	6.5	246.0
390.7	CARBONDALE		ROCK	10.5	252.5

MAPID: 11701358000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 7 QUARTERS/FOOTAGES: SW SW NW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.922891 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.325237 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 618.0 LOGGED (FT.): 254.0 LOG TYPE: Drillers Log
 SOURCE: TRUAX-TRAER COAL CO CA-1 WELL TYPE: Coal Test
 COMMENT: CORE C-8749

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
374.2	CARBONDALE	HERRIN	COAL	8.6	243.8

MAPID: 11701358000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 7 QUARTERS/FOOTAGES: SW SW NW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.922891 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 39.325237 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 618.0 LOGGED (FT.): 252.6 LOG TYPE: Survey Core Study
 SOURCE: TRUAX-TRAER COAL CO CA-1 WELL TYPE: Coal Test
 COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
402.7	MODESTO	PIASA	LIMESTONE	2.0	215.3
400.7	CARBONDALE	DANVILLE	COAL	0.5	217.3
400.2	CARBONDALE		GRAY SHALE	5.4	217.8
394.7	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	9.8	223.3
385.0	CARBONDALE	LAWSON	MOTTLED SHALE	3.5	233.0
381.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	4.2	236.5
377.3	CARBONDALE	ANNA	MOTTLED SHALE	3.3	240.7
374.0	CARBONDALE	HERRIN	COAL	8.6	244.0

MAPID: 11790251000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 9 QUARTERS/FOOTAGES: 47' N line, 89' E line of NE SW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.878686 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.325237 DATE COLLECTED: 2 / 25 / 1975
 SURFACE ELEVATION (FT.): 637.9 LOGGED (FT.): 277.5 LOG TYPE: Drillers Log
 SOURCE: AMAX M51 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
637.9	PLEISTOCENE		UNCONSOLIDATED	109.0	0.0
528.9			ROCK	168.5	109.0

MAPID: 11790296000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 9 QUARTERS/FOOTAGES: 75' S line, 100' E line of SE NW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.878844 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.325565 DATE COLLECTED: 8 / 3 / 1977
 SURFACE ELEVATION (FT.): 636.1 LOGGED (FT.): 345.0 LOG TYPE: Drillers Log
 SOURCE: AMAX G320PA WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
636.1	PLEISTOCENE		UNCONSOLIDATED	108.0	0.0
528.1	MODESTO		ROCK	182.0	108.0
346.1	CARBONDALE	DANVILLE	COAL	2.0	290.0
344.1	CARBONDALE		ROCK	26.0	292.0
318.1	CARBONDALE	HERRIN	COAL	7.0	318.0
311.1	CARBONDALE		ROCK	20.0	325.0

MAPID: 11790297000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 9 QUARTERS/FOOTAGES: 274' N line, 270' E line of NE NE
 QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.87013 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.333224 DATE COLLECTED: 8 / 2 / 1977
 SURFACE ELEVATION (FT.): 637.8 LOGGED (FT.): 328.0 LOG TYPE: Drillers Log
 SOURCE: AMAX G399AK WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
637.8	PLEISTOCENE		UNCONSOLIDATED	180.0	0.0
457.8	MODESTO		ROCK	100.0	180.0
357.8	CARBONDALE	DANVILLE	COAL	1.0	280.0
356.8	CARBONDALE		ROCK	23.0	281.0
333.8	CARBONDALE	HERRIN	COAL	8.0	304.0
325.8	CARBONDALE		ROCK	16.0	312.0

MAPID: 11723774000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 10 QUARTERS/FOOTAGES: 22' S line, 40' E line of SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.86014 GEOLOGIST: E. PRUSSEN

CONFIDENTIAL: N LATITUDE: 39.318983 DATE COLLECTED: 8 / 6 / 1975

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 332.0 LOG TYPE: Other Core Study

SOURCE: CARTER OIL 18-935 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
327.6	CARBONDALE	HERRIN	COAL	5.7	307.4	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.3		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723775000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 11 QUARTERS/FOOTAGES: 78' S line, 422' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.833847 GEOLOGIST: E. PRUSSEN

CONFIDENTIAL: N LATITUDE: 39.320394 DATE COLLECTED: 10 / 7 / 1970

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 357.7 LOG TYPE: Other Core Study

SOURCE: CARTER OIL J-94 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
287.0	CARBONDALE	HERRIN	COAL	8.0	338.0	CLEAN COAL, SEE LOG, COAL ANALYZED
-	CARBONDALE	HERRIN	ROCK	0.2		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723776000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 11 QUARTERS/FOOTAGES: 80' N line, 15' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.85072 GEOLOGIST: E. PRUSSEN

CONFIDENTIAL: N LATITUDE: 39.333734 DATE COLLECTED: 10 / 15 / 1970

SURFACE ELEVATION (FT.): 638.0 LOGGED (FT.): 348.0 LOG TYPE: Other Core Study

SOURCE: CARTER OIL J-97 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
312.4	CARBONDALE	HERRIN	COAL	6.8	325.6	CLEAN COAL, SEE LOG, COAL ANALYZED
-	CARBONDALE	HERRIN	ROCK	0.4		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723777000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 11 **QUARTERS/FOOTAGES:** NE SE NE NW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.841732 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.331864 **DATE COLLECTED:** 8 / 18 / 1981
SURFACE ELEVATION (FT.): 635.0 **LOGGED (FT.):** 361.4 **LOG TYPE:** Other Core Study
SOURCE: EXXON COAL RESOURCES 18-711 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
300.2	CARBONDALE	HERRIN	ROCK	7.2	334.8	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.1		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723778000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 11 **QUARTERS/FOOTAGES:** SE SE SE NE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.83327 **GEOLOGIST:** . PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.327637 **DATE COLLECTED:** 8 / 21 / 1981
SURFACE ELEVATION (FT.): 630.0 **LOGGED (FT.):** 376.7 **LOG TYPE:** Other Core Study
SOURCE: EXXON COAL RESOURCES 18-713 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
273.5	CARBONDALE	HERRIN	COAL	7.6	356.5	CLEAN COAL, SEE LGO
-	CARBONDALE	HERRIN	ROCK	0.1		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723779000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 11 **QUARTERS/FOOTAGES:** 63' N line, 49' E line of NW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.841711 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.334125 **DATE COLLECTED:** 7 / 7 / 1975
SURFACE ELEVATION (FT.): 640.0 **LOGGED (FT.):** 340.0 **LOG TYPE:** Other Core Study
SOURCE: CARTER OIL 18-924 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
323.2	CARBONDALE	HERRIN	COAL	6.9	316.8	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.3		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 1172378000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 11 QUARTERS/FOOTAGES: 60' S line, 44' W line of NW SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.841397 GEOLOGIST: E. PRUSSEN

CONFIDENTIAL: N LATITUDE: 39.323572 DATE COLLECTED: 7 / 31 / 1975

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 390.0 LOG TYPE: Other Core Study

SOURCE: CARTER OIL 18-934 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
285.6	CARBONDALE	HERRIN	COAL	11.2	346.4	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.4		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11700068000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 12 QUARTERS/FOOTAGES: SE SE NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.824201 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.329576 DATE COLLECTED: 1 / 10 / 1913

SURFACE ELEVATION (FT.): 614.0 LOGGED (FT.): 352.0 LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R R WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
614.0			UNCONSOLIDATED	136.0	0.0	
478.0			ROCK	43.0	136.0	
435.0			COAL	0.2	179.0	
434.8			ROCK	78.8	179.2	
356.0			COAL	0.3	258.0	
355.7			ROCK	28.7	258.3	
327.0			COAL	1.0	287.0	
326.0			ROCK	28.2	288.0	
297.8			COAL	0.5	316.2	
297.8			SHALE	10.5	316.2	
287.3			LIMESTONE	5.0	326.7	
282.3			SHALE	2.3	331.7	
280.0			LIMESTONE	1.7	334.0	
278.3			BLACK SHALE	5.0	335.7	
273.3	CARBONDALE	HERRIN	COAL	7.8	340.7	
265.5			ROCK	3.5	348.5	

MAPID: 11700068000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 12 QUARTERS/FOOTAGES: SE SE NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.824201

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.329576

DATE COLLECTED:

SURFACE ELEVATION (FT.): 614.0

LOGGED (FT.): 348.8

LOG TYPE: Survey Core Study

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
305.7	MODESTO	PIASA	LIMESTONE	6.0	308.3
299.7	MODESTO		DARK GRAY SHALE	2.2	314.3
297.5	CARBONDALE	DANVILLE	COAL	0.5	316.5
297.0	CARBONDALE		GRAY SHALE	10.0	317.0
287.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	5.0	327.0
282.0	CARBONDALE	LAWSON	GRAY SHALE	2.3	332.0
279.7	CARBONDALE	BRERETON	LIMESTONE	1.7	334.3
278.0	CARBONDALE	ANNA	BLACK SHALE	5.0	336.0
273.0	CARBONDALE	HERRIN	COAL	7.8	341.0

MAPID: 11700068000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 12 QUARTERS/FOOTAGES: SE SE NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.824201

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.329576

DATE COLLECTED: 1 / 0 / 1913

SURFACE ELEVATION (FT.): 614.0

LOGGED (FT.): 347.8

LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R R CO

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
306.8	MODESTO	PIASA	LIMESTONE	6.0	307.2
300.8	MODESTO		UNCLASSIFIED	2.2	313.2
298.6	CARBONDALE	DANVILLE	COAL	0.5	315.4
298.1	CARBONDALE		UNCLASSIFIED	10.0	315.9
288.1	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	325.9
283.1	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.2	330.9
281.9	CARBONDALE		UNCLASSIFIED	1.2	332.1
280.7	CARBONDALE	BRERETON	LIMESTONE	1.7	333.3
279.0	CARBONDALE	ANNA	BLACK SHALE	5.0	335.0
274.0	CARBONDALE	HERRIN	COAL	7.8	340.0

MAPID: 11700068000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 12 QUARTERS/FOOTAGES: SE SE NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.824201

GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.329576

DATE COLLECTED: 1 / 10 / 1913

SURFACE ELEVATION (FT.): 614.4 LOGGED (FT.): 352.0

LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R.R. CO., HOLE #17

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
614.4			SOIL	13.0	0.0
601.4			HARD PAN	30.0	13.0
571.4			CLAY	77.0	43.0
494.4			SAND	16.0	120.0
478.4	MODESTO	CARLINVILLE	LIMESTONE	4.3	136.0
474.1	MODESTO		BLACK SHALE	0.7	140.3
473.4	MODESTO		LIMESTONE	1.0	141.0
472.4	MODESTO		SANDY SHALE	3.0	142.0
469.4	MODESTO		SANDSTONE	4.0	145.0
465.4	MODESTO		SANDY SHALE	19.0	149.0
446.4	MODESTO		SHALE	11.0	168.0
435.4	MODESTO	CHAPEL	COAL	0.2	179.0
435.2	MODESTO		CALCAREOUS SHALE	9.8	179.2
425.4	MODESTO		SANDY SHALE	21.0	189.0
404.4	MODESTO		SHALE	45.0	210.0
359.4	MODESTO		LIMESTONE	1.0	255.0
358.4	MODESTO		SHALE	2.0	256.0
356.4	MODESTO		COAL	0.3	258.0
356.1	MODESTO		SHALE	28.7	258.3
327.4	MODESTO		COAL	1.0	287.0
326.4	MODESTO		SHALE	20.0	288.0
306.4	MODESTO	PIASA	LIMESTONE	6.0	308.0
300.4	MODESTO		BLACK SHALE	2.2	314.0
298.2	CARBONDALE	DANVILLE	COAL	0.5	316.2
297.7	CARBONDALE		SHALE	10.0	316.7
287.7	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	326.7
282.7	CARBONDALE		SHALE	2.3	331.7
280.4	CARBONDALE	BRERETON	LIMESTONE	1.7	334.0
278.7	CARBONDALE	ANNA	BLACK SHALE	5.0	335.7
273.7	CARBONDALE	HERRIN	COAL	7.8	340.7
265.9	CARBONDALE		UNDERCLAY	0.7	348.5
265.2	CARBONDALE		SHALY LIMESTONE	2.8	349.2

MAPID: 11723781000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 12 QUARTERS/FOOTAGES: NE NE SE SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.823313 GEOLOGIST: E. PRUSSEN

CONFIDENTIAL: N LATITUDE: 39.325029 DATE COLLECTED: 8 / 18 / 1981

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 393.5 LOG TYPE: Other Core Study

SOURCE: EXXON COAL RESOURCES 18-703-C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
261.5	CARBONDALE	HERRIN	COAL	7.9	368.5	CLEAN COAL, SEE LOG

MAPID: 11700069000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 13 QUARTERS/FOOTAGES: NE NW SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.828881 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.31258 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 598.0 LOGGED (FT.): 322.5 LOG TYPE: Drillers Log

SOURCE: A. W. CRAWFORD WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
598.0			UNCONSOLIDATED	49.0	0.0	
549.0			ROCK	182.0	49.0	
367.0			COAL	0.5	231.0	
366.5			ROCK	50.5	231.5	
316.0			SHALE	11.0	282.0	
305.0			LIMESTONE	14.5	293.0	
290.5			BLACK SHALE	4.3	307.5	
286.2	CARBONDALE	HERRIN	COAL	7.6	311.8	
278.6			ROCK	3.1	319.4	

MAPID: 11700069000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 13 QUARTERS/FOOTAGES: NE NW SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.828881

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.31258

DATE COLLECTED:

SURFACE ELEVATION (FT.): 598.0 LOGGED (FT.): 319.6

LOG TYPE: Survey Core Study

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
320.0	MODESTO	PIASA	LIMESTONE	4.0	278.0
316.0	CARBONDALE		GRAY SHALE	11.0	282.0
305.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	10.5	293.0
294.5	CARBONDALE	BRERETON	LIMESTONE	4.0	303.5
290.5	CARBONDALE	ANNA	BLACK SHALE	4.3	307.5
286.0	CARBONDALE	HERRIN	COAL	7.6	312.0

MAPID: 11700069000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 13 QUARTERS/FOOTAGES: NE NW SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.828881

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.31258

DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 598.0 LOGGED (FT.): 319.6

LOG TYPE: Drillers Log

SOURCE: CRAWFORD A W

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
319.9	MODESTO	PIASA	LIMESTONE	4.0	278.1
315.9	MODESTO		UNCLASSIFIED	3.0	282.1
312.9	CARBONDALE		UNCLASSIFIED	8.0	285.1
304.9	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	293.1
298.9	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.3	299.1
297.6	CARBONDALE		UNCLASSIFIED	1.3	300.4
296.3	CARBONDALE	BRERETON	LIMESTONE	6.0	301.7
290.3	CARBONDALE	ANNA	BLACK SHALE	4.3	307.7
286.0	CARBONDALE	HERRIN	COAL	7.6	312.0

MAPID: 11700069000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 13 QUARTERS/FOOTAGES: NE NW SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.828881 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.31258 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 597.5 LOGGED (FT.): 322.5 LOG TYPE: Drillers Log

SOURCE: A.W. CRAWFORD WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
597.5			UNCONSOLIDATED	17.0	0.0
580.5			HARD PAN	32.0	17.0
548.5	MODESTO	MACOUPIN	LIMESTONE	3.0	49.0
545.5	MODESTO		SHALE	4.0	52.0
541.5	MODESTO		BLACK SHALE	4.0	56.0
537.5	MODESTO		SHALE	56.0	60.0
481.5	MODESTO	CARLINVILLE	LIMESTONE	7.0	116.0
474.5	MODESTO		SANDSTONE	23.0	123.0
451.5	MODESTO		SANDSTONE	6.0	146.0
445.5	MODESTO		SANDY SHALE	8.0	152.0
437.5	MODESTO		SANDSTONE	40.0	160.0
397.5	MODESTO		SHALE	31.0	200.0
366.5	MODESTO		COAL	0.5	231.0
366.0	MODESTO		SHALE	46.5	231.5
319.5	MODESTO	PIASA	LIMESTONE	4.0	278.0
315.5			SHALE	11.0	282.0
304.5	CARBONDALE		LIMESTONE	14.5	293.0
290.0	CARBONDALE	ANNA	BLACK SHALE	4.3	307.5
285.7	CARBONDALE	HERRIN	COAL	7.6	311.8
278.1	CARBONDALE		UNDERCLAY	2.9	319.4
275.2	CARBONDALE		LIMESTONE	0.2	322.3

MAPID: 11723782000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 13 QUARTERS/FOOTAGES: 541' S line, 124' W line of SE SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.817986 GEOLOGIST: E. PRUSSEN

CONFIDENTIAL: N LATITUDE: 39.308789 DATE COLLECTED: 10 / 8 / 1970

SURFACE ELEVATION (FT.): 580.0 LOGGED (FT.): 327.9 LOG TYPE: Other Core Study

SOURCE: CARTER OIL J-95 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
274.2	CARBONDALE	HERRIN	COAL	7.7	305.8
-	CARBONDALE	HERRIN	ROCK	0.1	CLEAN COAL, SEE LOG; COAL ANALYZED TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723783000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 13 **QUARTERS/FOOTAGES:** 45' S line, 10' W line of NW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.832331 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.313202 **DATE COLLECTED:** 5 / 23 / 1972
SURFACE ELEVATION (FT.): 625.0 **LOGGED (FT.):** 359.1 **LOG TYPE:** Other Core Study
SOURCE: CARTER OIL 18-597 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
283.3	CARBONDALE	HERRIN	COAL	8.1	341.7	CLEAN COAL, SEE LOG; COAL ANALYZED
-	CARBONDALE	HERRIN	ROCK	0.2		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723784000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 13 **QUARTERS/FOOTAGES:** 147' N line, 47' E line of SE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.813934 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.314851 **DATE COLLECTED:** 9 / 16 / 1975
SURFACE ELEVATION (FT.): 625.0 **LOGGED (FT.):** 381.0 **LOG TYPE:** Other Core Study
SOURCE: CARTER OIL 18-941 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
269.2	CARBONDALE	HERRIN	COAL	7.6	355.8	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.3		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723785000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 14 **QUARTERS/FOOTAGES:** 1195' N line, 450' W line of NW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.849204 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.316054 **DATE COLLECTED:** 12 / 15 / 1972
SURFACE ELEVATION (FT.): 625.0 **LOGGED (FT.):** 375.2 **LOG TYPE:** Other Core Study
SOURCE: CARTER OIL 18-678 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
296.3	CARBONDALE	HERRIN	COAL	7.1	328.7	CLEAN COAL, SEE LOG; COAL ANALYZED
-	CARBONDALE	HERRIN	ROCK	0.2		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723786000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 14 **QUARTERS/FOOTAGES:** SE SE SE SE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.832557 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.306054 **DATE COLLECTED:** 7 / 17 / 1981
SURFACE ELEVATION (FT.): 616.0 **LOGGED (FT.):** 382.0 **LOG TYPE:** Other Core Study
SOURCE: EXXON COAL RESOURCES 18-706 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
263.2	CARBONDALE	HERRIN	COAL	9.7	352.8	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.2		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723787000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 14 **QUARTERS/FOOTAGES:** SE SE NE SW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.841743 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.306933 **DATE COLLECTED:** 7 / 21 / 1981
SURFACE ELEVATION (FT.): 625.0 **LOGGED (FT.):** 343.0 **LOG TYPE:** Other Core Study
SOURCE: EXXON COAL RESOURCES 18-707 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
309.3	CARBONDALE	HERRIN	COAL	7.3	315.7	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.1		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723788000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 14 **QUARTERS/FOOTAGES:** SW NW NW NE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.841444 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.31794 **DATE COLLECTED:** 7 / 29 / 1981
SURFACE ELEVATION (FT.): 625.0 **LOGGED (FT.):** 359.9 **LOG TYPE:** Other Core Study
SOURCE: EXXON COAL RESOURCES 18-708 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
295.6	CARBONDALE	HERRIN	COAL	7.2	329.4	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.1		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723789000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 15 QUARTERS/FOOTAGES: 30' S line, 87' W line of SE SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.855213 GEOLOGIST: E. PRUSSEN

CONFIDENTIAL: N LATITUDE: 39.304767 DATE COLLECTED: 5 / 19 / 1976

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 343.0 LOG TYPE: Other Core Study

SOURCE: CARTER OIL 18-956 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
321.6	CARBONDALE	HERRIN	COAL	4.8	303.4	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.1		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11701036000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 16 QUARTERS/FOOTAGES: 649' S line, 397' E line of NE SW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.879871 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.309001 DATE COLLECTED: 8 / 0 / 1950

SURFACE ELEVATION (FT.): 602.0 LOGGED (FT.): 262.0 LOG TYPE: Electric Log

SOURCE: BOURGEOIS, LOUIS WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
377.0	MODESTO	PIASA	LIMESTONE	3.0	225.0	
374.0	MODESTO		UNCLASSIFIED	3.0	228.0	
371.0	CARBONDALE		UNCLASSIFIED	9.0	231.0	
362.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	240.0	
355.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	0.5	247.0	
354.5	CARBONDALE		UNCLASSIFIED	0.5	247.5	
354.0	CARBONDALE	BRERETON	LIMESTONE	6.0	248.0	
348.0	CARBONDALE	ANNA	BLACK SHALE	1.0	254.0	
347.0	CARBONDALE	HERRIN	COAL	7.0	255.0	

MAPID: 11790235000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 16 QUARTERS/FOOTAGES: 60' S line, 425' W line of SW SW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.886095 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.303501 DATE COLLECTED: 1 / 22 / 1975

SURFACE ELEVATION (FT.): 610.9 LOGGED (FT.): 255.0 LOG TYPE: Drillers Log

SOURCE: AMAX M35 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
610.9	PLEISTOCENE		UNCONSOLIDATED	146.0	0.0	
464.9			ROCK	92.5	146.0	
372.4	CARBONDALE	HERRIN	COAL	6.5	238.5	
365.9	CARBONDALE		ROCK	10.0	245.0	

MAPID: 11700070000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 17 QUARTERS/FOOTAGES: NW NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.894595 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.315677 DATE COLLECTED: 1 / 13 / 1913

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 301.0 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MACHY. CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
642.0			UNCONSOLIDATED	146.0	0.0	
496.0			ROCK	62.0	146.0	
434.0			COAL	0.3	208.0	
433.7			ROCK	56.7	208.3	
377.0			COAL	1.0	265.0	
376.0			SHALE	8.0	266.0	
368.0			LIMESTONE	3.6	274.0	
364.4			SHALE	3.3	277.6	
361.1			LIMESTONE	5.5	280.9	
355.6			BLACK SHALE	2.9	286.4	
352.7	CARBONDALE	HERRIN	COAL	6.1	289.3	
346.6			ROCK	5.6	295.4	

MAPID: 11700070000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 17 QUARTERS/FOOTAGES: NW NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.894595 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.315677 DATE COLLECTED:

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 295.1 LOG TYPE: Survey Core Study

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
382.3	MODESTO	PIASA	LIMESTONE	3.0	259.7	
379.3	MODESTO		GRAY SHALE	2.0	262.7	
377.3	CARBONDALE	DANVILLE	COAL	1.0	264.7	
376.3	CARBONDALE		GRAY SHALE	8.0	265.7	
368.3	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	3.6	273.7	
364.7	CARBONDALE	LAWSON	GRAY SHALE	3.3	277.3	
361.4	CARBONDALE	BRERETON	LIMESTONE	5.5	280.6	
355.9	CARBONDALE	ANNA	BLACK SHALE	2.9	286.1	
353.0	CARBONDALE	HERRIN	COAL	6.1	289.0	

MAPID: 11700070000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 17 QUARTERS/FOOTAGES: NW NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.894595 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.315677 DATE COLLECTED: 1 / 0 / 1913

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 295.9 LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R R CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
382.7	MODESTO	PIASA	LIMESTONE	3.0	259.3
379.7	MODESTO		UNCLASSIFIED	2.3	262.3
377.4	CARBONDALE	DANVILLE	COAL	1.0	264.6
376.4	CARBONDALE		UNCLASSIFIED	8.0	265.6
368.4	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.6	273.6
364.8	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.7	277.2
363.1	CARBONDALE		UNCLASSIFIED	1.7	278.9
361.4	CARBONDALE	BRERETON	LIMESTONE	5.5	280.6
355.9	CARBONDALE	ANNA	BLACK SHALE	2.9	286.1
353.0	CARBONDALE	HERRIN	COAL	6.9	289.0

MAPID: 11700070000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 17 QUARTERS/FOOTAGES: NW NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.894595 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.315677 DATE COLLECTED: 1 / 13 / 1913

SURFACE ELEVATION (FT.): 642.3 LOGGED (FT.): 301.0 LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R.R. CO., HOLE #18 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
642.3			SOIL	21.0	0.0	
621.3			BOULDERS & GRAVEL	15.0	21.0	
606.3			HARD PAN	27.0	36.0	
579.3			SANDY CLAY	57.0	63.0	
522.3			GRAVEL	4.0	120.0	
518.3			CLAY	12.0	124.0	
506.3			UNCONSOLIDATED	10.0	136.0	SAND, GRAVEL, BOULDERS
496.3	MODESTO		SHALE	58.0	146.0	
438.3	MODESTO		LIMESTONE	1.5	204.0	
436.8	MODESTO		SHALE	2.5	205.5	
434.3	MODESTO		COAL	0.3	208.0	
434.0	MODESTO		SHALE	19.7	208.3	
414.3	MODESTO		LIMESTONE	1.0	228.0	
413.3	MODESTO		SHALE	30.7	229.0	
382.6	MODESTO	PIASA	LIMESTONE	3.0	259.7	
379.6	MODESTO		SHALE	2.3	262.7	
377.3	CARBONDALE	DANVILLE	COAL	1.0	265.0	
376.3	CARBONDALE		SHALE	8.0	266.0	
368.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.6	274.0	
364.7	CARBONDALE		SHALE	3.3	277.6	
361.4	CARBONDALE	BRERETON	LIMESTONE	5.5	280.9	
355.9	CARBONDALE	ANNA	BLACK SHALE	2.9	286.4	
353.0	CARBONDALE	HERRIN	COAL	6.1	289.3	
346.9	CARBONDALE		SHALE	4.3	295.4	
342.6	CARBONDALE		LIMESTONE W/ SHALE	1.3	299.7	

MAPID: 11700541000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 17 QUARTERS/FOOTAGES: 990' S line, 330' E line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.888773 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.305966 DATE COLLECTED: 10 / 0 / 1942

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 272.0 LOG TYPE: Electric Log

SOURCE: GOODMAN GLENN WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
398.0	MODESTO	PIASA	LIMESTONE	4.0	242.0
394.0	MODESTO		UNCLASSIFIED	2.5	246.0
391.5	CARBONDALE	DANVILLE	COAL	0.5	248.5
391.0	CARBONDALE		UNCLASSIFIED	8.0	249.0
383.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	257.0
379.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	261.0
378.0	CARBONDALE		UNCLASSIFIED	1.0	262.0
377.0	CARBONDALE	BRERETON	LIMESTONE	3.0	263.0
374.0	CARBONDALE	HERRIN	COAL	6.0	266.0

MAPID: 11700904000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 17 QUARTERS/FOOTAGES: 330' S line, 330' E line of SW SW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.902821 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.303665 DATE COLLECTED: 9 / 0 / 1961

SURFACE ELEVATION (FT.): 626.0 LOGGED (FT.): 265.5 LOG TYPE: Electric Log

SOURCE: WELL TYPE: Structure Test

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
395.5	MODESTO	PIASA	LIMESTONE	3.0	230.5
392.5	MODESTO		UNCLASSIFIED	3.5	233.5
389.0	CARBONDALE	DANVILLE	COAL	1.0	237.0
388.0	CARBONDALE		UNCLASSIFIED	10.5	238.0
377.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	248.5
373.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.5	252.5
372.0	CARBONDALE		UNCLASSIFIED	1.5	254.0
370.5	CARBONDALE	BRERETON	LIMESTONE	2.0	255.5
368.5	CARBONDALE	ANNA	BLACK SHALE	3.5	257.5
365.0	CARBONDALE	HERRIN	COAL	4.5	261.0

MAPID: 11790295000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 17 QUARTERS/FOOTAGES: 15' S line, 18' E line of SW NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.892333 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.310373 DATE COLLECTED: 7 / 27 / 1977

SURFACE ELEVATION (FT.): 632.2 LOGGED (FT.): 283.0 LOG TYPE: Drillers Log

SOURCE: AMAX G115 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
632.2	PLEISTOCENE		UNCONSOLIDATED	176.0	0.0
456.2			ROCK	90.0	176.0
366.2	CARBONDALE	HERRIN	COAL	7.0	266.0
359.2	CARBONDALE		ROCK	10.0	273.0

MAPID: 11701037000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 18 QUARTERS/FOOTAGES: 330' N line, 330' E line of SW SW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.920706 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.3053 DATE COLLECTED: 8 / 0 / 1942

SURFACE ELEVATION (FT.): 631.0 LOGGED (FT.): 240.0 LOG TYPE: Electric Log

SOURCE: SCROGGIN A M WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
422.0	MODESTO	PIASA	LIMESTONE	6.0	209.0
416.0	MODESTO		UNCLASSIFIED	2.5	215.0
413.5	CARBONDALE		UNCLASSIFIED	7.5	217.5
406.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	225.0
402.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	229.0
400.0	CARBONDALE		UNCLASSIFIED	2.0	231.0
398.0	CARBONDALE	BRERETON	LIMESTONE	2.0	233.0
396.0	CARBONDALE	HERRIN	COAL	5.0	235.0

MAPID: 11790226000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 18 QUARTERS/FOOTAGES: 284' N line, 62' W line of NW NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.923768 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.316328 DATE COLLECTED: 11 / 22 / 1974

SURFACE ELEVATION (FT.): 632.8 LOGGED (FT.): 261.1 LOG TYPE: Drillers Log

SOURCE: AMAX M4 WELL TYPE: Coal Test

COMMENT: MEADOW LARK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
632.8	PLEISTOCENE		UNCONSOLIDATED	139.0	0.0
493.8			ROCK	103.7	139.0
390.1	CARBONDALE	HERRIN	COAL	6.2	242.7
383.9	CARBONDALE		ROCK	12.2	248.9

MAPID: 11790294000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 18 QUARTERS/FOOTAGES: 41' S line, 513' E line of SE NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.917518 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.309966 DATE COLLECTED: 8 / 4 / 1977

SURFACE ELEVATION (FT.): 631.6 LOGGED (FT.): 258.0 LOG TYPE: Drillers Log

SOURCE: AMAX G104NJ WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
631.6	PLEISTOCENE		UNCONSOLIDATED	153.0	0.0
478.6			ROCK	7.0	153.0
471.6			COAL	0.5	160.0
471.1			ROCK	80.5	160.5
390.6	CARBONDALE	HERRIN	COAL	6.0	241.0
384.6	CARBONDALE		ROCK	11.0	247.0

MAPID: 11721613000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 19 QUARTERS/FOOTAGES: 33' N line, 61' W line of NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.923706 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.302476 DATE COLLECTED:

SURFACE ELEVATION (FT.): 627.7 LOGGED (FT.): 237.5 LOG TYPE: Survey Core Study

SOURCE: AMAX M-9 WELL TYPE: Coal Test

COMMENT: DLOG;237.5 DOES NOT AGREE W/THICK TALLY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
399.2	CARBONDALE	HERRIN	COAL	4.5	228.5

MAPID: 11721628000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 19 **QUARTERS/FOOTAGES:** 17' S line, 50' E line of SE
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.90658 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.288317 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 624.0 **LOGGED (FT.):** 259.0 **LOG TYPE:** Survey Core Study
SOURCE: AMAX M-36 **WELL TYPE:** Coal Test
COMMENT: DRILLERS LOG; BOX #2 IS MISSING

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
375.0	CARBONDALE	HERRIN	COAL	7.1	249.0

MAPID: 11790231000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 19 **QUARTERS/FOOTAGES:** 33' N line, 61' W line of NW NW
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.923706 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.302476 **DATE COLLECTED:** 12 / 6 / 1974
SURFACE ELEVATION (FT.): 627.7 **LOGGED (FT.):** 237.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX M9 **WELL TYPE:** Coal Test
COMMENT: MEADOW LARK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
627.7	PLEISTOCENE		UNCONSOLIDATED	55.0	0.0
572.7			ROCK	172.0	55.0
400.7	CARBONDALE	HERRIN	COAL	4.0	227.0
396.7	CARBONDALE		ROCK	6.0	231.0

MAPID: 11790236000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 19 **QUARTERS/FOOTAGES:** 17' S line, 50' E line of SE SE
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.90658 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.288317 **DATE COLLECTED:** 1 / 24 / 1975
SURFACE ELEVATION (FT.): 624.0 **LOGGED (FT.):** 269.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX M36 **WELL TYPE:** Coal Test
COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
624.0	PLEISTOCENE		UNCONSOLIDATED	66.0	0.0
558.0			ROCK	186.0	66.0
372.0	CARBONDALE	HERRIN	COAL	7.0	252.0
365.0	CARBONDALE		ROCK	10.0	259.0

MAPID: 11790284000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 19 QUARTERS/FOOTAGES: 80' N line, 47' E line of NE NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.906498 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.302413 DATE COLLECTED: 2 / 4 / 1975

SURFACE ELEVATION (FT.): 627.7 LOGGED (FT.): 273.0 LOG TYPE: Drillers Log

SOURCE: AMAX M34 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
627.7	PLEISTOCENE		UNCONSOLIDATED	162.0	0.0
465.7			ROCK	93.5	162.0
372.2	CARBONDALE	HERRIN	COAL	6.0	255.5
366.2	CARBONDALE		ROCK	11.5	261.5

MAPID: 11700071000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 20 QUARTERS/FOOTAGES: 660' N line, 200' W line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.905629 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.300837 DATE COLLECTED: 12 / 0 / 1913

SURFACE ELEVATION (FT.): 628.0 LOGGED (FT.): 233.0 LOG TYPE: Drillers Log

SOURCE: OHIO OIL CO., THE WELL TYPE: Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
434.0	MODESTO	PIASA	LIMESTONE	7.0	194.0
427.0	MODESTO		UNCLASSIFIED	3.0	201.0
424.0	CARBONDALE		UNCLASSIFIED	9.0	204.0
415.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	213.0
411.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.5	217.0
409.5	CARBONDALE		UNCLASSIFIED	1.5	218.5
408.0	CARBONDALE	BRERETON	LIMESTONE	4.0	220.0
404.0	CARBONDALE	ANNA	BLACK SHALE	3.0	224.0
401.0	CARBONDALE	HERRIN	COAL	6.0	227.0

MAPID: 11700554000C VERSION: 1

PROJECT: IDMM-GWQX

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 20 QUARTERS/FOOTAGES: 330' S line, 330' W line of NW SE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.895879 GEOLOGIST: C TREWORGY

CONFIDENTIAL: N LATITUDE: 39.29313 DATE COLLECTED: 6 / 0 / 1955

SURFACE ELEVATION (FT.): 611.0 LOGGED (FT.): 358.0 LOG TYPE: Electric Log

SOURCE: CALVERT DRILLING, INC. WELL TYPE: Producer-Oil

COMMENT: ELEV. IS SURF,NOT LOG DATUM: DEPTHS OFF

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
374.0	CARBONDALE	HERRIN	UNCLASSIFIED	-	237.0	
364.0	CARBONDALE	SPRINGFIELD	UNCLASSIFIED	0.0	247.0	THIN OR ABSENT
353.0	CARBONDALE	HOUCHIN CREEK	UNCLASSIFIED	-	258.0	
294.0	CARBONDALE	SURVANT	UNCLASSIFIED	-	317.0	
253.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	3.5	358.0	

MAPID: 11700554000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 20 QUARTERS/FOOTAGES: 330' S line, 330' W line of NW SE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.895879 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.29313 DATE COLLECTED: 6 / 0 / 1955

SURFACE ELEVATION (FT.): 611.0 LOGGED (FT.): 237.0 LOG TYPE: Electric Log

SOURCE: CALVERT DRILLING, INC. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
407.0	MODESTO	PIASA	LIMESTONE	3.0	204.0	
404.0	MODESTO		UNCLASSIFIED	2.0	207.0	
402.0	CARBONDALE		UNCLASSIFIED	7.0	209.0	
395.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	216.0	
392.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.5	219.0	
390.5	CARBONDALE		UNCLASSIFIED	1.5	220.5	
389.0	CARBONDALE	BRERETON	LIMESTONE	4.0	222.0	
385.0	CARBONDALE	ANNA	BLACK SHALE	4.0	226.0	
381.0	CARBONDALE	HERRIN	COAL	7.0	230.0	

MAPID: 11700903000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 20 QUARTERS/FOOTAGES: 330' S line, 990' W line of NW NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.902825 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.300077 DATE COLLECTED: 8 / 0 / 1961

SURFACE ELEVATION (FT.): 622.0 LOGGED (FT.): 255.0 LOG TYPE: Electric Log

SOURCE: WELL TYPE: Structure Test

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
418.0	MODESTO	PIASA	LIMESTONE	5.0	204.0
413.0	MODESTO		UNCLASSIFIED	3.0	209.0
410.0	CARBONDALE		UNCLASSIFIED	8.0	212.0
402.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	220.0
395.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	4.0	227.0
391.0	CARBONDALE		UNCLASSIFIED	4.0	231.0
387.0	CARBONDALE	BRERETON	LIMESTONE	11.0	235.0
376.0	CARBONDALE	ANNA	BLACK SHALE	3.0	246.0
373.0	CARBONDALE	HERRIN	COAL	6.0	249.0

MAPID: 11701076000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 20 QUARTERS/FOOTAGES: 495' N line, 825' E line of SW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.899975 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.294303 DATE COLLECTED: 12 / 0 / 1965

SURFACE ELEVATION (FT.): 617.0 LOGGED (FT.): 250.0 LOG TYPE: Electric Log

SOURCE: GULF OIL CORPORATION WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
416.0	MODESTO	PIASA	LIMESTONE	6.0	201.0
410.0	MODESTO		UNCLASSIFIED	2.5	207.0
407.5	CARBONDALE	DANVILLE	COAL	1.0	209.5
406.5	CARBONDALE		UNCLASSIFIED	6.5	210.5
400.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	217.0
394.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.5	223.0
391.5	CARBONDALE		UNCLASSIFIED	2.5	225.5
389.0	CARBONDALE	BRERETON	LIMESTONE	11.0	228.0
378.0	CARBONDALE	ANNA	BLACK SHALE	5.0	239.0
373.0	CARBONDALE	HERRIN	COAL	6.0	244.0

MAPID: 11700018702M **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 21 **QUARTERS/FOOTAGES:**
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.878531 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.296442 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 6.7 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-STND. OIL CO # 1 **WELL TYPE:** Underground mine
COMMENT: RM. 14, 1ST E OFF 4TH SE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	COAL	6.7		

MAPID: 11700018701M **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 21 **QUARTERS/FOOTAGES:** SW NE NE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.872808 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.30117 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 630.0 **LOGGED (FT.):** 6.5 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-STND. OIL CO # 1 **WELL TYPE:** Underground mine
COMMENT: A FEW MEASURED SECTIONS IN THIS MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
630.0			UNKNOWN	294.0	0.0	
336.0	CARBONDALE	HERRIN	COAL	6.5	294.0	

MAPID: 11700247000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 21 **QUARTERS/FOOTAGES:** 1250' N line, 800' E line
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.872221 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.300446 **DATE COLLECTED:** 0 / 0 / 1900
SURFACE ELEVATION (FT.): 630.0 **LOGGED (FT.):** 300.5 **LOG TYPE:** Drillers Log
SOURCE: STANDARD OIL CO **WELL TYPE:** Plugged and/or Abandoned
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
336.0	CARBONDALE	HERRIN	COAL	6.5	294.0	

MAPID: 11700291201M **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 21 **QUARTERS/FOOTAGES:** NE SE SW
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.8797 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.291897 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 626.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-OLD CALAMITY **WELL TYPE:** Underground mine
COMMENT: NOT IN MICROFILM INDEX MI:OPER BEFORE 83

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

MAPID: 11700901000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 22 **QUARTERS/FOOTAGES:** 330' N line, 360' W line of NE SE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.854245 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.296621 **DATE COLLECTED:** 7 / 0 / 1961
SURFACE ELEVATION (FT.): 615.0 **LOGGED (FT.):** 295.0 **LOG TYPE:** Electric Log
SOURCE: K & W DEVELOPMENT CO **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
326.0	CARBONDALE	HERRIN	COAL	6.0	289.0	

MAPID: 11723792000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 22 **QUARTERS/FOOTAGES:** NE NE NW SE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.855467 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.296565 **DATE COLLECTED:** 7 / 14 / 1981
SURFACE ELEVATION (FT.): 620.0 **LOGGED (FT.):** 332.0 **LOG TYPE:** Other Core Study
SOURCE: EXXON COAL RESOURCES 18-705 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
315.2	CARBONDALE	HERRIN	COAL	6.9	304.8	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.1		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723793000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 22 QUARTERS/FOOTAGES:

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.860139

GEOLOGIST: E. PRUSSEN

CONFIDENTIAL: N LATITUDE: 39.297246

DATE COLLECTED: 5 / 12 / 1976

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 332.0

LOG TYPE: Other Core Study

SOURCE: CARTER OIL 18-955

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
317.1	CARBONDALE	HERRIN	COAL	8.0	307.9	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.3		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723794000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 23 QUARTERS/FOOTAGES: 67' S line, 45' E line of SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.841801

GEOLOGIST: E. PRUSSEN

CONFIDENTIAL: N LATITUDE: 39.29107

DATE COLLECTED: 10 / 13 / 1970

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 326.3

LOG TYPE: Other Core Study

SOURCE: CARTER OIL J-96

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
318.7	CARBONDALE	HERRIN	COAL	6.7	306.3	CLEAN COAL, SEE LOG; COAL ANALYZED
-	CARBONDALE	HERRIN	ROCK	0.2		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723795000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 23 QUARTERS/FOOTAGES: NE NE SW NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.8463

GEOLOGIST: E. PRUSSEN

CONFIDENTIAL: N LATITUDE: 39.299477

DATE COLLECTED: 7 / 10 / 1981

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 324.8

LOG TYPE: Other Core Study

SOURCE: EXXON COAL RESOURCES 18-704

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
320.8	CARBONDALE	HERRIN	COAL	6.9	299.2	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.2		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723796000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 23 QUARTERS/FOOTAGES: 58' N line, 63' E line of SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.841866 GEOLOGIST: E. PRUSSEN

CONFIDENTIAL: N LATITUDE: 39.297969 DATE COLLECTED: 5 / 6 / 1976

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 366.0 LOG TYPE: Other Core Study

SOURCE: CARTER OIL 18-954 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
297.2	CARBONDALE	HERRIN	COAL	9.6	327.8	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.3		TOTAL IN-SEAM PARTINGS-SEE LOG
269.7	CARBONDALE	SPRINGFIELD	COAL	1.5	355.3	

MAPID: 11700072000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 24 QUARTERS/FOOTAGES: N2 NE SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.816091 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.29914 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 575.0 LOGGED (FT.): 282.0 LOG TYPE: Drillers Log

SOURCE: IMPROMPTU OIL & GAS WELL TYPE: Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
297.0	CARBONDALE	HERRIN	COAL	4.0	278.0	

MAPID: 11700073000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 24 QUARTERS/FOOTAGES: SE SW NW NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.821335 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.303742 DATE COLLECTED: 12 / 23 / 1912

SURFACE ELEVATION (FT.): 618.0 LOGGED (FT.): 351.0 LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R R WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
618.0			UNCONSOLIDATED	60.0	0.0
558.0			ROCK	47.5	60.0
510.5			COAL	0.8	107.5
509.7			ROCK	67.4	108.3
442.3			COAL	0.1	175.7
442.3			ROCK	134.4	175.7
307.8			COAL	1.3	310.2
306.6			SHALE	4.6	311.4
302.0			LIMESTONE	6.0	316.0
296.0			SHALE	3.0	322.0
293.0			LIMESTONE	2.0	325.0
291.0			SHALE	8.0	327.0
283.0			LIMESTONE	6.6	335.0
276.4			SHALE	0.2	341.6
276.2	CARBONDALE	HERRIN	COAL	6.5	341.8
269.7			ROCK	2.8	348.3

MAPID: 11700073000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 24 QUARTERS/FOOTAGES: SE SW NW NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.821335

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.303742

DATE COLLECTED:

SURFACE ELEVATION (FT.): 618.0

LOGGED (FT.): 348.5

LOG TYPE: Survey Core Study

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
313.3	MODESTO	PIASA	LIMESTONE	4.5	304.7
308.8	MODESTO		DARK GRAY SHALE	1.2	309.2
307.6	CARBONDALE	DANVILLE	COAL	1.3	310.4
306.4	CARBONDALE		GRAY SHALE	4.6	311.6
301.8	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	6.0	316.2
295.8	CARBONDALE	BANKSTON FORK	GRAY SHALE	3.0	322.2
292.8	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	2.0	325.2
290.8	CARBONDALE	LAWSON	GRAY SHALE	8.0	327.2
282.8	CARBONDALE	BRERETON	LIMESTONE	6.6	335.2
276.2	CARBONDALE	ANNA	BLACK SHALE	0.2	341.8
276.0	CARBONDALE	HERRIN	COAL	6.5	342.0

MAPID: 11700073000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 24 QUARTERS/FOOTAGES: SE SW NW NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.821335

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.303742

DATE COLLECTED: 12 / 0 / 1912

SURFACE ELEVATION (FT.): 618.0

LOGGED (FT.): 348.5

LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC RY

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
313.4	MODESTO	PIASA	LIMESTONE	4.5	304.6
308.9	MODESTO		UNCLASSIFIED	1.2	309.1
307.7	CARBONDALE	DANVILLE	COAL	1.3	310.3
306.4	CARBONDALE		UNCLASSIFIED	13.6	311.6
292.8	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	2.0	325.2
290.8	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	4.0	327.2
286.8	CARBONDALE		UNCLASSIFIED	4.0	331.2
282.8	CARBONDALE	BRERETON	LIMESTONE	6.6	335.2
276.2	CARBONDALE	ANNA	BLACK SHALE	0.2	341.8
276.0	CARBONDALE	HERRIN	COAL	6.5	342.0

MAPID: 11700073000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 24 QUARTERS/FOOTAGES: SE SW NW NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.821335 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.303742 DATE COLLECTED: 12 / 23 / 1912

SURFACE ELEVATION (FT.): 618.0 LOGGED (FT.): 351.0 LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R.R. CO., HOLE #12 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
618.0			SOIL	16.0	0.0	
602.0			BOULDERS & GRAVEL	14.0	16.0	
588.0			HARD PAN	30.0	30.0	
558.0	BOND		SHALE	13.0	60.0	
545.0	BOND	CARTHAGE	LIMESTONE	4.3	73.0	
540.7	MODESTO		SHALE	15.7	77.3	
525.0	MODESTO		LIMESTONE	1.0	93.0	
524.0	MODESTO		SHALE	12.0	94.0	
512.0	MODESTO	MACOUPIN	LIMESTONE	1.5	106.0	
510.5	MODESTO	WOMAC	COAL	0.8	107.5	
509.7	MODESTO		SHALE	31.0	108.3	W/ SS PARTINGS
478.7	MODESTO	CARLINVILLE	LIMESTONE	3.6	139.3	
475.2	MODESTO		BLACK SHALE	0.4	142.8	
474.7	MODESTO		LIMESTONE	0.6	143.3	
474.2	MODESTO		SHALE	31.8	143.8	
442.3	MODESTO	CHAPEL	COAL	0.1	175.7	
442.2	MODESTO		SHALE	1.3	175.8	
441.0	MODESTO		LIMESTONE	4.0	177.0	
437.0	MODESTO		SHALE	68.0	181.0	
369.0	MODESTO		LIMESTONE	1.5	249.0	
367.5	MODESTO		SHALE	5.5	250.5	
362.0	MODESTO		LIMESTONE	3.0	256.0	
359.0	MODESTO		SHALE	11.0	259.0	
348.0	MODESTO		LIMESTONE	1.0	270.0	
347.0	MODESTO		SHALE	33.5	271.0	
313.5	MODESTO	PIASA	LIMESTONE	4.5	304.5	
309.0	MODESTO		BLACK SHALE	1.2	309.0	
307.8	CARBONDALE	DANVILLE	COAL	1.3	310.2	
306.6	CARBONDALE		SHALE	4.6	311.4	
302.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	316.0	
296.0	CARBONDALE		SHALE	3.0	322.0	
293.0	CARBONDALE	CONANT	LIMESTONE	2.0	325.0	
291.0	CARBONDALE		SHALE	8.0	327.0	
283.0	CARBONDALE	BRERETON	LIMESTONE	6.7	335.0	
276.3	CARBONDALE		SHALE	0.1	341.7	
276.2	CARBONDALE	HERRIN	COAL	6.5	341.8	
269.7	CARBONDALE		SHALE	2.5	348.3	
267.2	CARBONDALE		LIMESTONE	0.3	350.8	

MAPID: 117191D0003F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 24 **QUARTERS/FOOTAGES:** SE NE SE NE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.814351 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.302546 **DATE COLLECTED:** 0 / 0 / 1929
SURFACE ELEVATION (FT.): 555.0 **LOGGED (FT.):** 6.0 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-BALL **WELL TYPE:** Outcrop
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
555.0			ROCK	1.1	0.0	
553.9			COAL	0.5	1.1	
553.4			ROCK	4.4	1.6	

MAPID: 117191D0004F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 24 **QUARTERS/FOOTAGES:** SE NW SE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.819578 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.296978 **DATE COLLECTED:** 7 / 25 / 1929
SURFACE ELEVATION (FT.): 561.0 **LOGGED (FT.):** 7.3 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-NEEDHAM **WELL TYPE:** Outcrop
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
561.0			ROCK	4.1	0.0	
556.9			COAL	0.8	4.1	
556.2			ROCK	2.4	4.8	

MAPID: 11723790000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 24 **QUARTERS/FOOTAGES:** 114' S line, 30' W line of SW SE SW
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.827602 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.291997 **DATE COLLECTED:** 9 / 25 / 1969
SURFACE ELEVATION (FT.): 595.0 **LOGGED (FT.):** 325.5 **LOG TYPE:** Other Core Study
SOURCE: CARTER OIL J-88 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
285.1	CARBONDALE	HERRIN	COAL	7.8	309.9	CLEAN COAL, SEE LOG; COAL ANALYZED
-	CARBONDALE	HERRIN	ROCK	0.2		TOTAL IN=SEAM PARTINGS-SEE LOG

MAPID: 11723797000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 24 QUARTERS/FOOTAGES: 40' N line, 1050' W line of NE SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.823994 GEOLOGIST: E. PRUSSEN

CONFIDENTIAL: N LATITUDE: 39.299237 DATE COLLECTED: 12 / 7 / 1972

SURFACE ELEVATION (FT.): 615.0 LOGGED (FT.): 395.7 LOG TYPE: Other Core Study

SOURCE: CARTER OIL 18-677 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
264.8	CARBONDALE	HERRIN	COAL	7.6	350.2	CLEAN COAL, SEE LOG; COAL ANALYZED
-	CARBONDALE	HERRIN	ROCK	0.4		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723798000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 24 QUARTERS/FOOTAGES: SW SW SW NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.832135 GEOLOGIST: E. PRUSSEN

CONFIDENTIAL: N LATITUDE: 39.298751 DATE COLLECTED: 9 / 10 / 1981

SURFACE ELEVATION (FT.): 623.0 LOGGED (FT.): 441.0 LOG TYPE: Other Core Study

SOURCE: EXXON COAL RESOURCES 18-715 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
253.3	CARBONDALE	HERRIN	COAL	10.0	369.7	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.2		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11700074000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 25 QUARTERS/FOOTAGES: NW SE NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.826564 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.287258 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 576.0 LOGGED (FT.): 269.0 LOG TYPE: Drillers Log

SOURCE: IBBETSON SCHELL OIL WELL TYPE: Unsuccessful or Unknown Results

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
319.0	CARBONDALE	BRERETON	LIMESTONE	5.0	257.0	
314.0	CARBONDALE	HERRIN	COAL	7.0	262.0	

MAPID: 11700074000C **VERSION:** 2 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 25 **QUARTERS/FOOTAGES:** NW SE NW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.826564 **GEOLOGIST:** TREWORYG,J
CONFIDENTIAL: N **LATITUDE:** 39.287258 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 576.0 **LOGGED (FT.):** 791.0 **LOG TYPE:** Drillers Log
SOURCE: PEABODY C C **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
576.0			UNCONSOLIDATED	30.0	0.0	
546.0			ROCK	202.0	30.0	
344.0			LIMESTONE	25.0	232.0	
319.0			LIMESTONE	5.0	257.0	
314.0	CARBONDALE	HERRIN	COAL	7.0	262.0	
307.0			ROCK	522.0	269.0	

MAPID: 117191D0008F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 25 **QUARTERS/FOOTAGES:** NW NE NE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.817241 **GEOLOGIST:** TREWORYG,J
CONFIDENTIAL: N **LATITUDE:** 39.291634 **DATE COLLECTED:** 0 / 0 / 1930
SURFACE ELEVATION (FT.): 570.0 **LOGGED (FT.):** 7.4 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-EKBLAW ETAL. **WELL TYPE:** Outcrop
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.0			UNCONSOLIDATED	1.0	0.0	
569.0			ROCK	0.9	1.0	
568.1			COAL	0.3	1.9	
567.8			ROCK	5.2	2.2	

MAPID: 117191D0007F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 25 **QUARTERS/FOOTAGES:** NW SW NW NE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.82248 **GEOLOGIST:** TREWORYG,J
CONFIDENTIAL: N **LATITUDE:** 39.289836 **DATE COLLECTED:** 0 / 0 / 1930
SURFACE ELEVATION (FT.): 560.0 **LOGGED (FT.):** 10.7 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-BALL **WELL TYPE:** Outcrop
COMMENT: SEVERAL OTHER MEASURED SECTS. IN AREA

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.0			ROCK	4.7	0.0	
555.3			COAL	0.7	4.7	
554.7			ROCK	5.4	5.3	

MAPID: 117191D0006F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 25 **QUARTERS/FOOTAGES:** SE NW NW SE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.821325 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.283537 **DATE COLLECTED:** 7 / 22 / 1929
SURFACE ELEVATION (FT.): 580.0 **LOGGED (FT.):** 21.9 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-BALL **WELL TYPE:** Outcrop
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
580.0			ROCK	20.8	0.0	
559.2			COAL	0.3	20.8	
558.9			ROCK	0.8	21.1	

MAPID: 117191D0005F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 25 **QUARTERS/FOOTAGES:** NW SW NE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.821901 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.287605 **DATE COLLECTED:** 7 / 23 / 1929
SURFACE ELEVATION (FT.): 640.0 **LOGGED (FT.):** 16.6 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-NEEDHAM **WELL TYPE:** Outcrop
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
640.0			UNCONSOLIDATED	6.0	0.0	
634.0			ROCK	4.3	6.0	
629.7			COAL	0.4	10.3	
629.3			ROCK	5.9	10.7	

MAPID: 11723799000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 25 **QUARTERS/FOOTAGES:** 110' N line, 54' E line of SE NE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.813935 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.288819 **DATE COLLECTED:** 5 / 24 / 1972
SURFACE ELEVATION (FT.): 635.0 **LOGGED (FT.):** 363.4 **LOG TYPE:** Other Core Study
SOURCE: CARTER OIL 18-599 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
288.9	CARBONDALE	HERRIN	COAL	7.7	346.1	CLEAN COAL. SEE LOG; COAL ANALYZED
-	CARBONDALE	HERRIN	ROCK	0.2		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 1172380000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 25 **QUARTERS/FOOTAGES:** SE NW NW NW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.830442 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.290068 **DATE COLLECTED:** 8 / 27 / 1981
SURFACE ELEVATION (FT.): 605.0 **LOGGED (FT.):** 375.0 **LOG TYPE:** Other Core Study
SOURCE: EXXON COAL RESOURCES 18-701B **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
291.7	CARBONDALE	HERRIN	COAL	7.6	313.3	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.1		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723801000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 25 **QUARTERS/FOOTAGES:** NE SW SW SW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.829191 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.278615 **DATE COLLECTED:** 6 / 30 / 1981
SURFACE ELEVATION (FT.): 622.0 **LOGGED (FT.):** 336.1 **LOG TYPE:** Other Core Study
SOURCE: EXXON COAL RESOURCES 18-702 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
312.3	CARBONDALE	HERRIN	COAL	7.4	309.7	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.1		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723802000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 25 **QUARTERS/FOOTAGES:** 1850' S line, 2650' E line
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.823146 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.282615 **DATE COLLECTED:** 6 / 23 / 1976
SURFACE ELEVATION (FT.): 630.0 **LOGGED (FT.):** 388.8 **LOG TYPE:** Other Core Study
SOURCE: CARTER OIL 18-962 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
275.8	CARBONDALE	HERRIN	COAL	8.9	354.2	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.3		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 117191D0010F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 26 **QUARTERS/FOOTAGES:** SE NE SE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.833588 **GEOLOGIST:** TREWORYG,J
CONFIDENTIAL: N **LATITUDE:** 39.281416 **DATE COLLECTED:** 0 / 0 / 1931
SURFACE ELEVATION (FT.): 570.0 **LOGGED (FT.):** 18.2 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-EKBLAW **WELL TYPE:** Outcrop
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.0			UNCONSOLIDATED	10.0	0.0	
560.0			ROCK	6.2	10.0	
553.8			COAL	0.7	16.2	
553.2			ROCK	1.3	16.8	

MAPID: 117191D0009F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 26 **QUARTERS/FOOTAGES:** NE SE SE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.833597 **GEOLOGIST:** TREWORYG,J
CONFIDENTIAL: N **LATITUDE:** 39.279629 **DATE COLLECTED:** 0 / 0 / 1929
SURFACE ELEVATION (FT.): 570.0 **LOGGED (FT.):** 10.0 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-BALL **WELL TYPE:** Outcrop
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.0			ROCK	8.2	0.0	
561.8			COAL	0.6	8.2	
561.3			ROCK	1.3	8.7	

MAPID: 11723803000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 26 **QUARTERS/FOOTAGES:** SW SE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.839381 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.278439 **DATE COLLECTED:** 9 / 18 / 1969
SURFACE ELEVATION (FT.): 580.0 **LOGGED (FT.):** 271.8 **LOG TYPE:** Other Core Study
SOURCE: CARTER OIL J-83 **WELL TYPE:** Coal Test
COMMENT: "NEAR SE/C SWSE"-SEE LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
323.8	CARBONDALE	HERRIN	COAL	7.1	256.2	CLEAN COAL. SEE LOG; COAL ANALYZED
-	CARBONDALE	HERRIN	ROCK	0.3		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723804000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 26 QUARTERS/FOOTAGES: 25' S line, 88' E line of SW NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.846609 GEOLOGIST: E. PRUSSEN

CONFIDENTIAL: N LATITUDE: 39.283545 DATE COLLECTED: 5 / 23 / 1972

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 297.5 LOG TYPE: Other Core Study

SOURCE: CARTER OIL 18-598 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
340.0	CARBONDALE	HERRIN	COAL	6.6	285.0	CLEAN COAL, SEE LOG; COAL ANALYZED
-	CARBONDALE	HERRIN	ROCK	0.3		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723805000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 26 QUARTERS/FOOTAGES: SW SW NW NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.841481 GEOLOGIST: E. PRUSSEN

CONFIDENTIAL: N LATITUDE: 39.287328 DATE COLLECTED: 6 / 22 / 1981

SURFACE ELEVATION (FT.): 624.0 LOGGED (FT.): 330.0 LOG TYPE: Other Core Study

SOURCE: EXXON COAL RESOURCES 18-700-2 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
326.4	CARBONDALE	HERRIN	COAL	7.4	297.6	TOTAL COAL, SEE LOG

MAPID: 11701042000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 27 QUARTERS/FOOTAGES: 330' N line, 330' W line of NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.858961 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.289191 DATE COLLECTED: 12 / 0 / 1953

SURFACE ELEVATION (FT.): 622.0 LOGGED (FT.): 250.0 LOG TYPE: Electric Log

SOURCE: WHITE EDGAR WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
424.0	MODESTO	PIASA	LIMESTONE	7.0	198.0	
417.0	MODESTO		UNCLASSIFIED	6.0	205.0	
411.0	CARBONDALE		UNCLASSIFIED	17.0	211.0	
394.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	228.0	
386.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	236.0	
383.0	CARBONDALE		UNCLASSIFIED	3.0	239.0	
380.0	CARBONDALE	BRERETON	LIMESTONE	4.0	242.0	
376.0	CARBONDALE	HERRIN	COAL	4.0	246.0	

MAPID: 11723806000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 27 QUARTERS/FOOTAGES: 38' N line, 43' E line of SE SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.860312 GEOLOGIST: E. PRUSSEN

CONFIDENTIAL: N LATITUDE: 39.279103 DATE COLLECTED: 6 / 2 / 1976

SURFACE ELEVATION (FT.): 622.0 LOGGED (FT.): 298.0 LOG TYPE: Other Core Study

SOURCE: CARTER OIL 18-958 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
357.2	CARBONDALE	HERRIN	COAL	6.8	264.8	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.2		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11700003000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 28 QUARTERS/FOOTAGES: SE NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.8809 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.283763 DATE COLLECTED:

SURFACE ELEVATION (FT.): 621.0 LOGGED (FT.): 270.0 LOG TYPE: Drillers Log

SOURCE: ILL. REPTS. VOL. V, P. 289 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
621.0			UNCONSOLIDATED	103.5	0.0	
517.5			COAL	0.5	103.5	
517.0			ROCK	75.0	104.0	
442.0			SHALE	21.0	179.0	
421.0			COAL	5.0	200.0	
416.0			ROCK	22.0	205.0	
394.0			COAL	1.5	227.0	
392.5			SHALE	6.5	228.5	
386.0			COAL	0.5	235.0	
385.5			UNDERCLAY	2.5	235.5	
383.0			LIMESTONE AND SANDSTONE	12.0	238.0	
371.0			SHALE	5.0	250.0	
366.0			LIMESTONE	5.0	255.0	
361.0			BLACK SHALE	4.0	260.0	
357.0	CARBONDALE	HERRIN	COAL	6.0	264.0	

MAPID: 11700003000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 28 QUARTERS/FOOTAGES: SE NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.8809 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.283763 DATE COLLECTED:

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 270.0 LOG TYPE: Survey Core Study

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
397.5	MODESTO	PIASA	LIMESTONE	1.5	227.5
396.0	CARBONDALE	DANVILLE	COAL	1.5	229.0
394.5	CARBONDALE		GRAY SHALE	6.5	230.5
388.0	CARBONDALE	ALLENBY	COAL	0.5	237.0
387.5	CARBONDALE		CLAYSTONE	2.5	237.5
385.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	12.0	240.0
373.0	CARBONDALE	LAWSON	GRAY SHALE	5.0	252.0
368.0	CARBONDALE	BRERETON	LIMESTONE	5.0	257.0
363.0	CARBONDALE	ANNA	BLACK SHALE	2.0	262.0
361.0	CARBONDALE	HERRIN	COAL	6.0	264.0

MAPID: 11700006902M VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 28 QUARTERS/FOOTAGES:

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.878607 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.282048 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 6.4 LOG TYPE: Measured section

SOURCE: MINE NOTES-STANDARD OIL CO # 1A WELL TYPE: Underground mine

COMMENT: 1ST STUB ENTRY OFF 16TH N OFF MAIN W

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			UNKNOWN	265.0	0.0
-	CARBONDALE	HERRIN	COAL	6.4	265.0

MAPID: 11700006901M VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 28 QUARTERS/FOOTAGES: NE SW NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.884357 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.284536 DATE COLLECTED:

SURFACE ELEVATION (FT.): 629.0 LOGGED (FT.): 7.0 LOG TYPE: Measured section

SOURCE: MINE NOTES-STANDARD OIL CO # 1A WELL TYPE: Underground mine

COMMENT: SEVERAL MEASURED SECTIONS IN THIS MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
629.0			UNKNOWN	258.0	0.0
371.0	CARBONDALE	HERRIN	COAL	7.0	258.0

MAPID: 11700248000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 28 QUARTERS/FOOTAGES: 1350' N line, 850' W line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.884787 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.285283 DATE COLLECTED: 0 / 0 / 1908

SURFACE ELEVATION (FT.): 629.0 LOGGED (FT.): 265.0 LOG TYPE: Drillers Log

SOURCE: STANDARD OIL CO WELL TYPE: Plugged and/or Abandoned

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
411.5	MODESTO	PIASA	LIMESTONE	3.0	217.5
408.5	MODESTO		UNCLASSIFIED	2.5	220.5
406.0	CARBONDALE	DANVILLE	COAL	1.5	223.0
404.5	CARBONDALE		UNCLASSIFIED	12.5	224.5
392.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	237.0
383.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.5	246.0
380.5	CARBONDALE		UNCLASSIFIED	2.5	248.5
378.0	CARBONDALE	BRERETON	LIMESTONE	5.0	251.0
373.0	CARBONDALE	ANNA	BLACK SHALE	2.0	256.0
371.0	CARBONDALE	HERRIN	COAL	7.0	258.0

MAPID: 11701043000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 29 QUARTERS/FOOTAGES: 356' S line, 330' W line of NW NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.895938 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.286013 DATE COLLECTED: 1 / 0 / 1942

SURFACE ELEVATION (FT.): 610.0 LOGGED (FT.): 245.0 LOG TYPE: Electric Log

SOURCE: HORN J F & HUNT C T WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
396.0	MODESTO	PIASA	LIMESTONE	6.0	214.0
390.0	MODESTO		UNCLASSIFIED	2.0	220.0
388.0	CARBONDALE		UNCLASSIFIED	6.0	222.0
382.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	228.0
375.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	235.0
374.0	CARBONDALE		UNCLASSIFIED	1.0	236.0
373.0	CARBONDALE	ANNA	BLACK SHALE	1.0	237.0
372.0	CARBONDALE	HERRIN	COAL	7.0	238.0

MAPID: 11701046000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 29 QUARTERS/FOOTAGES: 100' S line, 330' W line of NW SE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.896 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.278117 DATE COLLECTED: 3 / 0 / 1953

SURFACE ELEVATION (FT.): 624.0 LOGGED (FT.): 241.0 LOG TYPE: Electric Log

SOURCE: LAMBERT DALE E WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
418.0	MODESTO	PIASA	LIMESTONE	4.0	206.0
414.0	MODESTO		UNCLASSIFIED	3.5	210.0
410.5	CARBONDALE		UNCLASSIFIED	10.5	213.5
400.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	224.0
395.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	229.0
393.0	CARBONDALE		UNCLASSIFIED	2.0	231.0
391.0	CARBONDALE	BRERETON	LIMESTONE	3.0	233.0
388.0	CARBONDALE	ANNA	BLACK SHALE	1.0	236.0
387.0	CARBONDALE	HERRIN	COAL	4.0	237.0

MAPID: 11701048000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 29 QUARTERS/FOOTAGES: 330' N line, 330' E line of SE SW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.898355 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.276848 DATE COLLECTED: 9 / 0 / 1950

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 255.0 LOG TYPE: Electric Log

SOURCE: LAMBERT DALE E WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
401.0	MODESTO	PIASA	LIMESTONE	5.0	219.0
396.0	MODESTO		UNCLASSIFIED	4.0	224.0
392.0	CARBONDALE		UNCLASSIFIED	10.0	228.0
382.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	238.0
378.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	242.0
376.0	CARBONDALE		UNCLASSIFIED	2.0	244.0
374.0	CARBONDALE	BRERETON	LIMESTONE	1.0	246.0
373.0	CARBONDALE	HERRIN	COAL	8.0	247.0

MAPID: 11700446000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 30 QUARTERS/FOOTAGES: 250' N line, 160' E line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.906977 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.287579 DATE COLLECTED: 12 / 0 / 1940

SURFACE ELEVATION (FT.): 619.0 LOGGED (FT.): 261.0 LOG TYPE: Electric Log

SOURCE: MUDGETT FRED 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
389.0	MODESTO	PIASA	LIMESTONE	7.0	230.0
382.0	MODESTO		UNCLASSIFIED	3.0	237.0
379.0	CARBONDALE		UNCLASSIFIED	5.0	240.0
374.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	245.0
366.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	253.0
365.0	CARBONDALE		UNCLASSIFIED	1.0	254.0
364.0	CARBONDALE	BRERETON	LIMESTONE	4.0	255.0
360.0	CARBONDALE	HERRIN	COAL	2.0	259.0

MAPID: 11790219000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 30 QUARTERS/FOOTAGES: 83' S line, 660' E line of SW NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.913334 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.281251 DATE COLLECTED: 4 / 20 / 1977

SURFACE ELEVATION (FT.): 616.5 LOGGED (FT.): 321.0 LOG TYPE: Drillers Log

SOURCE: AMAX K306Z WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
616.5	PLEISTOCENE		UNCONSOLIDATED	14.0	0.0
602.5	MODESTO		ROCK	196.0	14.0
406.5	CARBONDALE	DANVILLE	COAL	0.5	210.0
406.0	CARBONDALE		ROCK	52.5	210.5
353.5	CARBONDALE	HERRIN	COAL	7.0	263.0
346.5	CARBONDALE		ROCK	51.0	270.0

MAPID: 11790263000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 30 QUARTERS/FOOTAGES: 527' S line, 45' E line of NW SW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.919714 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.278901 DATE COLLECTED: 12 / 12 / 1974

SURFACE ELEVATION (FT.): 622.5 LOGGED (FT.): 240.0 LOG TYPE: Drillers Log

SOURCE: AMAX M13 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
622.5	PLEISTOCENE		UNCONSOLIDATED	15.0	0.0
607.5			ROCK	207.0	15.0
400.5	CARBONDALE	HERRIN	COAL	4.0	222.0
396.5	CARBONDALE		ROCK	14.0	226.0

MAPID: 11701050000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 31 QUARTERS/FOOTAGES: 2940' S line, 2310' E line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.914629 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.267054 DATE COLLECTED: 5 / 0 / 1955

SURFACE ELEVATION (FT.): 624.0 LOGGED (FT.): 277.0 LOG TYPE: Electric Log

SOURCE: CALVERT DRILLING, INC. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
392.0	MODESTO	PIASA	LIMESTONE	5.0	232.0
387.0	MODESTO		UNCLASSIFIED	4.0	237.0
383.0	CARBONDALE	DANVILLE	COAL	2.0	241.0
381.0	CARBONDALE		UNCLASSIFIED	7.0	243.0
374.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	250.0
369.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	255.0
366.0	CARBONDALE		UNCLASSIFIED	3.0	258.0
363.0	CARBONDALE	BRERETON	LIMESTONE	5.0	261.0
358.0	CARBONDALE	ANNA	BLACK SHALE	4.0	266.0
354.0	CARBONDALE	HERRIN	COAL	7.0	270.0

MAPID: 1170105000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 31 QUARTERS/FOOTAGES: 2940' S line, 2310' E line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.914629

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.267054

DATE COLLECTED:

SURFACE ELEVATION (FT.): 624.0 LOGGED (FT.): 298.0

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
370.0	MODESTO	PIASA	LIMESTONE	4.0	254.0
366.0	MODESTO		SHALE	5.0	258.0
361.0	CARBONDALE	DANVILLE	COAL	2.0	263.0
359.0	CARBONDALE		SHALE	9.0	265.0
350.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	274.0
346.0	CARBONDALE	LAWSON	SHALE	5.0	278.0
341.0	CARBONDALE	BRERETON	LIMESTONE	5.0	283.0
336.0	CARBONDALE	ANNA	SHALE	4.0	288.0
333.0	CARBONDALE	HERRIN	COAL	7.0	291.0

MAPID: 11721631000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 31 QUARTERS/FOOTAGES: 55' S line, 23' E line of SE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.906403

GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.259431

DATE COLLECTED:

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 265.0

LOG TYPE: Survey Core Study

SOURCE: AMAX M-48

WELL TYPE: Coal Test

COMMENT: DRILLER'S LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
393.0	CARBONDALE	DANVILLE	COAL	1.0	227.0
370.4	CARBONDALE	HERRIN	COAL	5.9	249.6

MAPID: 11790218000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 31 QUARTERS/FOOTAGES: 240' N line, 165' W line of NW NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.923345 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.273168 DATE COLLECTED: 4 / 20 / 1977

SURFACE ELEVATION (FT.): 603.2 LOGGED (FT.): 290.0 LOG TYPE: Drillers Log

SOURCE: AMAX K176HC WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
603.2	PLEISTOCENE		UNCONSOLIDATED	29.0	0.0
574.2			ROCK	189.0	29.0
385.2	CARBONDALE	JAMESTOWN	COAL	2.0	218.0
383.2	CARBONDALE		ROCK	12.0	220.0
371.2	CARBONDALE	HERRIN	COAL	5.0	232.0
366.2	CARBONDALE		ROCK	53.0	237.0

MAPID: 11790248000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 31 QUARTERS/FOOTAGES: 55' S line, 23' E line of SE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.906403 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.259431 DATE COLLECTED: 2 / 20 / 1975

SURFACE ELEVATION (FT.): 619.7 LOGGED (FT.): 265.0 LOG TYPE: Drillers Log

SOURCE: AMAX M48 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
619.7	PLEISTOCENE		UNCONSOLIDATED	23.0	0.0
596.7	MODESTO		ROCK	203.8	23.0
392.9	CARBONDALE	DANVILLE	COAL	1.0	226.8
391.9	CARBONDALE		ROCK	3.5	227.8
388.4	CARBONDALE	JAMESTOWN	COAL	1.7	231.3
386.7	CARBONDALE		ROCK	17.0	233.0
369.7	CARBONDALE	HERRIN	COAL	5.5	250.0
364.2	CARBONDALE		ROCK	9.5	255.5

MAPID: 11701049000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 32 QUARTERS/FOOTAGES: 330' S line, 330' E line of NW NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.902987 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.271275 DATE COLLECTED: 3 / 0 / 1953

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

SOURCE: LIVERMORE, H. E. WELL TYPE: Dry Hole

COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	MODESTO	PIASA	LIMESTONE	4.0	
-	MODESTO		UNCLASSIFIED	2.5	
-	CARBONDALE		UNCLASSIFIED	7.5	
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0	
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.5	
-	CARBONDALE		UNCLASSIFIED	1.5	
-	CARBONDALE	BRERETON	LIMESTONE	1.0	
-	CARBONDALE	ANNA	BLACK SHALE	1.0	
-	CARBONDALE	HERRIN	COAL	5.0	

MAPID: 11790217000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 32 QUARTERS/FOOTAGES: 46' S line, 13' E line of SE NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.897107 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.267099 DATE COLLECTED: 5 / 24 / 1977

SURFACE ELEVATION (FT.): 619.9 LOGGED (FT.): 271.0 LOG TYPE: Drillers Log

SOURCE: AMAX K113ZZ WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
619.9	PLEISTOCENE		UNCONSOLIDATED	109.0	0.0
510.9	MODESTO		ROCK	122.0	109.0
388.9	CARBONDALE	DANVILLE	COAL	1.0	231.0
387.9	CARBONDALE		ROCK	24.0	232.0
363.9	CARBONDALE	HERRIN	COAL	3.0	256.0
360.9	CARBONDALE	HERRIN	COAL	2.0	259.0
358.9	CARBONDALE		ROCK	10.0	261.0

MAPID: 11700291501M **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 33 **QUARTERS/FOOTAGES:** 1750' S line, 1250' W line
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.883204 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.265185 **DATE COLLECTED:** 7 / 27 / 1929
SURFACE ELEVATION (FT.): 606.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-CARLINVILLE MNG CO **WELL TYPE:** Underground mine
COMMENT: ALSO COAL REPORT 1929-SOUTH MNG CO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
606.0			UNKNOWN	250.0	0.0	
356.0	CARBONDALE	HERRIN	COAL	6.0	250.0	

MAPID: 11723808000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 33 **QUARTERS/FOOTAGES:** SE NE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.871693 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.269725 **DATE COLLECTED:** 9 / 23 / 1969
SURFACE ELEVATION (FT.): 615.0 **LOGGED (FT.):** 279.8 **LOG TYPE:** Other Core Study
SOURCE: CARTER OIL J-87 **WELL TYPE:** Coal Test
COMMENT: "SW/C SENW"-SEE LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
347.2	CARBONDALE	HERRIN	COAL	7.5	267.8	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.1		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11700076000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 34 **QUARTERS/FOOTAGES:** SW SW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.86705 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.262742 **DATE COLLECTED:** 0 / 0 / 1900
SURFACE ELEVATION (FT.): 623.0 **LOGGED (FT.):** 272.0 **LOG TYPE:** Drillers Log
SOURCE: NO COMPANY **WELL TYPE:** Unsuccessful or Unknown Results
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
401.0	MODESTO	PIASA	LIMESTONE	8.0	222.0	
393.0	MODESTO		UNCLASSIFIED	6.5	230.0	
386.5	CARBONDALE		UNCLASSIFIED	18.5	236.5	
368.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	255.0	
363.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	260.0	
362.0	CARBONDALE		UNCLASSIFIED	1.0	261.0	
361.0	CARBONDALE	BRERETON	LIMESTONE	3.0	262.0	
358.0	CARBONDALE	HERRIN	COAL	7.0	265.0	

MAPID: 11700078000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 35 QUARTERS/FOOTAGES: NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.84625 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.272661 DATE COLLECTED: 12 / 0 / 1909

SURFACE ELEVATION (FT.): 561.0 LOGGED (FT.): 225.0 LOG TYPE: Drillers Log

SOURCE: IMPROMPTU OIL & GAS WELL TYPE: Unsuccessful or Unknown Results

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
371.0	MODESTO	PIASA	LIMESTONE	5.0	190.0
366.0	MODESTO		UNCLASSIFIED	2.5	195.0
363.5	CARBONDALE		UNCLASSIFIED	7.5	197.5
356.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	205.0
349.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	212.0
348.0	CARBONDALE		UNCLASSIFIED	1.0	213.0
347.0	CARBONDALE	BRERETON	LIMESTONE	6.0	214.0
341.0	CARBONDALE	HERRIN	COAL	5.0	220.0

MAPID: 11700079000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 35 QUARTERS/FOOTAGES: SW NW NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.849735 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.273393 DATE COLLECTED: 1 / 1 / 1913

SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 228.0 LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R R WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
560.0			UNCONSOLIDATED	13.0	0.0
547.0			ROCK	42.4	13.0
504.6			COAL	0.1	55.4
504.5			ROCK	78.5	55.5
426.0			COAL	0.2	134.0
425.8			ROCK	54.5	134.2
371.3			COAL	1.0	188.7
370.3			SHALE	8.8	189.7
361.5			LIMESTONE	3.5	198.5
358.0			SHALE	6.7	202.0
351.3			LIMESTONE	6.8	208.7
344.5			BLACK SHALE	0.7	215.5
343.8	CARBONDALE	HERRIN	COAL	6.8	216.2
337.1			ROCK	5.1	222.9

MAPID: 11700079000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 35 QUARTERS/FOOTAGES: SW NW NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.849735

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.273393

DATE COLLECTED:

SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 222.8

LOG TYPE: Survey Core Study

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
391.2	MODESTO	PIASA	LIMESTONE	3.0	168.8
388.2	MODESTO		GRAY SHALE	16.7	171.8
371.5	CARBONDALE	DANVILLE	COAL	1.0	188.5
370.5	CARBONDALE		GRAY SHALE	8.8	189.5
361.7	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	3.5	198.3
358.2	CARBONDALE	LAWSON	CALCAREOUS SHALE	6.7	201.8
351.5	CARBONDALE	BRERETON	LIMESTONE	6.8	208.5
344.7	CARBONDALE	ANNA	BLACK SHALE	0.7	215.3
344.0	CARBONDALE	HERRIN	COAL	6.8	216.0

MAPID: 11700079000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 35 QUARTERS/FOOTAGES: SW NW NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.849735

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.273393

DATE COLLECTED: 1 / 0 / 1913

SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 222.8

LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R R CO

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
371.5	CARBONDALE	DANVILLE	COAL	1.0	188.5
370.5	CARBONDALE		UNCLASSIFIED	8.8	189.5
361.7	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.5	198.3
358.2	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	201.8
355.2	CARBONDALE	CONANT	UNCLASSIFIED	0.7	204.8
354.5	CARBONDALE		UNCLASSIFIED	3.0	205.5
351.5	CARBONDALE	BRERETON	LIMESTONE	6.8	208.5
344.7	CARBONDALE	ANNA	BLACK SHALE	0.7	215.3
344.0	CARBONDALE	HERRIN	COAL	6.8	216.0

MAPID: 11700079000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 35 QUARTERS/FOOTAGES: SW NW NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.849735 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.273393 DATE COLLECTED: 1 / 1 / 1913

SURFACE ELEVATION (FT.): 560.4 LOGGED (FT.): 228.0 LOG TYPE: Drillers Log

SOURCE: UNION PACIFIC R.R. CO., HOLE #16 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
560.4			SOIL	11.0	0.0
549.4			GRAVEL	2.0	11.0
547.4	MODESTO	CARLINVILLE	LIMESTONE	4.0	13.0
543.4	MODESTO		SHALE	38.4	17.0
505.0	MODESTO	CHAPEL	COAL	0.1	55.4
504.9	MODESTO		SHALE	4.5	55.5
500.4	MODESTO		SANDSTONE	1.0	60.0
499.4	MODESTO		SANDY SHALE	73.0	61.0
426.4	MODESTO		COAL	0.2	134.0
426.2	MODESTO		SHALE	34.8	134.2
391.4	MODESTO	PIASA	LIMESTONE	3.0	169.0
388.4	MODESTO		SHALE	16.7	172.0
371.7	CARBONDALE	DANVILLE	COAL	1.0	188.7
370.7	CARBONDALE		SHALE	8.8	189.7
361.9	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	198.5
358.4	CARBONDALE		CALCAREOUS SHALE	6.7	202.0
351.7	CARBONDALE	BRERETON	LIMESTONE	6.8	208.7
344.9	CARBONDALE	ANNA	BLACK SHALE	0.7	215.5
344.2	CARBONDALE	HERRIN	COAL	6.8	216.2
337.4	CARBONDALE		SHALE	1.3	223.0
336.2	CARBONDALE		LIMESTONE W/ SHALE	1.5	224.2
334.7	CARBONDALE		SHALE	1.5	225.7
333.2	CARBONDALE		LIMESTONE	0.5	227.2
332.7	CARBONDALE		SHALE	0.3	227.7

MAPID: 117191D0011F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 35 **QUARTERS/FOOTAGES:** NW SE NE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.835835 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.272263 **DATE COLLECTED:** 7 / 22 / 1929
SURFACE ELEVATION (FT.): 560.0 **LOGGED (FT.):** 11.2 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-BALL **WELL TYPE:** Outcrop
COMMENT: SEVERAL OTHER MEASURED SECTIONS IN AREA

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.0			ROCK	5.1	0.0	
554.9			COAL	0.6	5.1	
554.3			ROCK	5.5	5.7	

MAPID: 117191D0012F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 35 **QUARTERS/FOOTAGES:** SW NW NW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.849735 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.273393 **DATE COLLECTED:** 0 / 0 / 1930
SURFACE ELEVATION (FT.): 570.0 **LOGGED (FT.):** 9.1 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-WANLESS, EKBLAW **WELL TYPE:** Outcrop
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.0			ROCK	0.8	0.0	
569.2			COAL	0.5	0.8	
568.7			ROCK	7.8	1.3	

MAPID: 117191D0014F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 10N 7W **SECTION:** 35 **QUARTERS/FOOTAGES:** NW SE SW SW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.847819 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.263107 **DATE COLLECTED:** 0 / 0 / 1946
SURFACE ELEVATION (FT.): 590.0 **LOGGED (FT.):** 17.0 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-CADY **WELL TYPE:** Outcrop
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
590.0			ROCK	6.6	0.0	
583.4			COAL	0.4	6.6	
583.0			ROCK	10.0	7.0	

MAPID: 117191D0013F VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 35 QUARTERS/FOOTAGES: SW SE SW SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.838545 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.262596 DATE COLLECTED: 0 / 0 / 1930

SURFACE ELEVATION (FT.): 570.0 LOGGED (FT.): 84.8 LOG TYPE: Measured section

SOURCE: FLD NOTES-WANLESS, EKBLAW WELL TYPE: Outcrop

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
570.0			UNCONSOLIDATED	15.0	0.0
555.0			ROCK	55.0	15.0
500.0			COAL	0.6	70.0
499.4			ROCK	14.2	70.6

MAPID: 11723754000C VERSION: 1

PROJECT: LUMP

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 35 QUARTERS/FOOTAGES:

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.836164 GEOLOGIST: J. MCBETH

CONFIDENTIAL: N LATITUDE: 39.268339 DATE COLLECTED: 9 / 12 / 1979

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 319.0 LOG TYPE: Drillers Log

SOURCE: MONTEREY COAL CO. 1M-31 WELL TYPE: Coal Test

COMMENT: PERMIT 56; MINE #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
630.0	PLEISTOCENE		SOIL	19.0	0.0	
611.0	BOND		GRAY SHALE	11.0	19.0	
600.0	BOND		BLACK SHALE	3.0	30.0	
597.0	BOND		SHALE	20.0	33.0	
577.0	BOND		CALCAREOUS SHALE	4.0	53.0	
573.0	BOND		BLACK SHALE	3.0	57.0	
570.0	BOND		COAL	1.5	60.0	
568.5	BOND		GRAY SHALE	27.5	61.5	
541.0	BOND	CARTHAGE	LIMESTONE	6.0	89.0	
535.0	MODESTO		SHALE	25.0	95.0	
510.0	MODESTO		CALCAREOUS SHALE	13.0	120.0	
497.0	MODESTO		SHALE	87.0	133.0	OCC. CALCAREOUS
410.0	MODESTO		CALCAREOUS SHALE	33.0	220.0	
377.0	MODESTO		LIMESTONE	1.0	253.0	
376.0	MODESTO		SHALE	2.0	254.0	
374.0	MODESTO		LIMESTONE	2.3	256.0	
371.7			SHALE	10.7	258.3	
361.0			LIMESTONE	4.0	269.0	LIGHT GRAY DOLOMITIC
357.0			SHALE	1.4	273.0	
355.6			GRAY SHALE	0.8	274.4	
354.8	CARBONDALE		LIMESTONE	0.2	275.2	
354.6	CARBONDALE		CALCAREOUS SHALE	3.5	275.4	GREEN GRAY
351.1	CARBONDALE		CALCAREOUS SHALE	2.7	278.9	WITH LIMESTONE NODULES; LIGHT GRAY
348.4	CARBONDALE	BRERETON	LIMESTONE	5.1	281.6	GRAY
343.3	CARBONDALE	ANNA	BLACK SHALE	1.0	286.7	
342.3	CARBONDALE	HERRIN	COAL	7.6	287.7	
334.7	CARBONDALE		CLAYSTONE	1.0	295.3	
333.7	CARBONDALE	HIGGINSVILLE	LIMESTONE	3.8	296.3	
329.9	CARBONDALE		SILTY SHALE	1.6	300.1	
328.3	CARBONDALE		CLAYSTONE	8.5	301.7	
319.8	CARBONDALE		GRAY SHALE	1.0	310.2	
318.8	CARBONDALE		CLAYSTONE	5.2	311.2	
313.6	CARBONDALE		CLAYSTONE	2.6	316.4	WITH LIMESTONE NODULES

MAPID: 11700081000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 36 QUARTERS/FOOTAGES: SE SE NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.814841 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.271458 DATE COLLECTED: 6 / 17 / 1903

SURFACE ELEVATION (FT.): 605.0 LOGGED (FT.): 319.0 LOG TYPE: Drillers Log

SOURCE: WILMINGTON STAR COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
605.0			UNCONSOLIDATED	23.0	0.0
582.0			ROCK	220.3	23.0
361.7			COAL	0.3	243.3
361.5			ROCK	38.3	243.5
323.2			COAL	0.3	281.8
323.0			UNDERCLAY	6.5	282.0
316.5			LIMESTONE	1.5	288.5
315.0			UNDERCLAY	1.0	290.0
314.0			LIMESTONE	12.0	291.0
302.0			BLACK SHALE	7.5	303.0
294.5	CARBONDALE	HERRIN	COAL	7.2	310.5
287.3			ROCK	1.3	317.7

MAPID: 11700081000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 36 QUARTERS/FOOTAGES: SE SE NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.814841 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.271458 DATE COLLECTED:

SURFACE ELEVATION (FT.): 604.0 LOGGED (FT.): 318.2 LOG TYPE: Survey Core Study

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
332.5	MODESTO	PIASA	LIMESTONE	8.0	271.5
324.5	MODESTO		DARK GRAY SHALE	2.8	279.5
321.7	CARBONDALE	DANVILLE	COAL	0.3	282.3
321.5	CARBONDALE		CLAYSTONE	6.5	282.5
315.0	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	8.5	289.0
306.5	CARBONDALE	BRERETON	LIMESTONE	6.0	297.5
300.5	CARBONDALE	ENERGY	DARK GRAY SHALE	7.5	303.5
293.0	CARBONDALE	HERRIN	COAL	7.2	311.0

MAPID: 11700081000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 36 QUARTERS/FOOTAGES: SE SE NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.814841 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.271458 DATE COLLECTED: 6 / 0 / 1903

SURFACE ELEVATION (FT.): 605.0 LOGGED (FT.): 318.2 LOG TYPE: Drillers Log

SOURCE: WILMINGTON STAR MINING CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
333.6	MODESTO	PIASA	LIMESTONE	8.0	271.4
325.6	MODESTO		UNCLASSIFIED	2.8	279.4
322.8	CARBONDALE	DANVILLE	COAL	0.3	282.2
322.5	CARBONDALE		UNCLASSIFIED	12.0	282.5
310.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	294.5
301.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	303.5
300.5	CARBONDALE		UNCLASSIFIED	1.0	304.5
299.5	CARBONDALE	BRERETON	LIMESTONE	4.0	305.5
295.5	CARBONDALE	ANNA	BLACK SHALE	1.5	309.5
294.0	CARBONDALE	HERRIN	COAL	7.2	311.0

MAPID: 11700081000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 10N 7W SECTION: 36 QUARTERS/FOOTAGES: SE SE NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.814841 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.271458 DATE COLLECTED: 6 / 17 / 1903

SURFACE ELEVATION (FT.): 604.6 LOGGED (FT.): 319.0 LOG TYPE: Drillers Log

SOURCE: WILMINGTON STAR COAL CO. WELL TYPE: Coal Test

COMMENT: MCLURE OPTIONS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
604.6			UNCONSOLIDATED	23.0	0.0	
581.6	BOND	CARTHAGE	LIMESTONE	6.0	23.0	
575.6	MODESTO		BLACK SHALE	3.0	29.0	
572.6	MODESTO		UNDERCLAY	9.0	32.0	
563.6	MODESTO		LIMESTONE	0.7	41.0	
562.9	MODESTO		SHALE	7.8	41.7	
555.1	MODESTO		LIMESTONE	2.0	49.5	
553.1	MODESTO		UNDERCLAY	6.5	51.5	
546.6	MODESTO	MACOUPIN	LIMESTONE	1.5	58.0	
545.1	MODESTO		UNDERCLAY	8.0	59.5	
537.1	MODESTO		BLACK SHALE	2.0	67.5	WOMAC COAL HORIZON
535.1	MODESTO		UNDERCLAY	4.5	69.5	
530.6	MODESTO		SHALE	24.5	74.0	
506.1	MODESTO	CARLINVILLE	LIMESTONE	7.0	98.5	
499.1	MODESTO		SHALE	108.5	105.5	
390.6	MODESTO		LIMESTONE	1.0	214.0	
389.6	MODESTO		UNDERCLAY	3.0	215.0	
386.6	MODESTO		SHALE	18.0	218.0	
368.6	MODESTO		LIMESTONE	0.5	236.0	
368.1	MODESTO		SHALE	6.8	236.5	
361.3	MODESTO		COAL	0.3	243.3	
361.1	MODESTO		UNDERCLAY	7.5	243.5	
353.6	MODESTO		SHALE	20.0	251.0	
333.6	MODESTO	PIASA	LIMESTONE	8.0	271.0	
325.6	CARBONDALE		SHALE	2.8	279.0	
322.8	CARBONDALE	DANVILLE	COAL	0.3	281.8	
322.6	CARBONDALE		UNDERCLAY	6.5	282.0	
316.1	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	288.5	
314.6	CARBONDALE		UNDERCLAY	1.0	290.0	
313.6	CARBONDALE	BRERETON	LIMESTONE	12.0	291.0	
301.6	CARBONDALE	ANNA	BLACK SHALE	7.5	303.0	
294.1	CARBONDALE	HERRIN	COAL	7.2	310.5	
286.9	CARBONDALE		UNDERCLAY	1.3	317.7	

MAPID: 11790243000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 1 **QUARTERS/FOOTAGES:** 54' N line, 35' W line of NW
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.943193 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.347252 **DATE COLLECTED:** 2 / 21 / 1975
SURFACE ELEVATION (FT.): 641.5 **LOGGED (FT.):** 237.5 **LOG TYPE:** Drillers Log
SOURCE: AMAX M43 **WELL TYPE:** Coal Test
COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
641.5	PLEISTOCENE		UNCONSOLIDATED	137.0	0.0	
504.5			ROCK	84.5	137.0	
420.0	CARBONDALE	HERRIN	COAL	6.0	221.5	
414.0	CARBONDALE		ROCK	10.0	227.5	

MAPID: 11700877000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 2 **QUARTERS/FOOTAGES:** 1210' S line, 1110' W line of SW
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.957626 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.335563 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 622.9 **LOGGED (FT.):** 210.5 **LOG TYPE:** Drillers Log
SOURCE: TRUAX-TRAER COAL CO 14 **WELL TYPE:** Coal Test
COMMENT: SEE COAL SECTION MAP 6-117 A & B

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
419.7	CARBONDALE	HERRIN	COAL	5.2	203.2	

MAPID: 11701110000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 2 **QUARTERS/FOOTAGES:** 2640' N line, 2070' W line
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.954254 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.340107 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 618.0 **LOGGED (FT.):** 216.4 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES CORP. A67-4 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
402.3	CARBONDALE	HERRIN	COAL	6.5	215.7	

MAPID: 11701110000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 2 QUARTERS/FOOTAGES: 2640' N line, 2070' W line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.954254

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.340107

DATE COLLECTED:

SURFACE ELEVATION (FT.): 618.0 LOGGED (FT.): 215.5

LOG TYPE: Survey Core Study

SOURCE: AYRSHIRE COLLIERIES CORP. A67-4

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
433.5	MODESTO	PIASA	LIMESTONE/UNDERCLAY	2.9	184.5	
430.7	CARBONDALE		GRAY SHALE	3.7	187.3	
427.0	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.2	191.0	UPPER BENCH
423.8	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	1.4	194.2	SHALE PARTING
422.4	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	4.6	195.6	
417.8	CARBONDALE	LAWSON	GRAY SHALE	3.4	200.2	
414.4	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	4.9	203.6	
409.5	CARBONDALE	ANNA	DARK GRAY SHALE	0.5	208.5	
409.0	CARBONDALE	HERRIN	COAL	6.5	209.0	

MAPID: 11790094000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 2 QUARTERS/FOOTAGES: 1' S line, 760' W line of SE NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.954298

GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.339789

DATE COLLECTED: 10 / 23 / 1967

SURFACE ELEVATION (FT.): 618.0 LOGGED (FT.): 216.4

LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A67-4

WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
618.0	PLEISTOCENE		UNCONSOLIDATED	159.0	0.0	
459.0	PLEISTOCENE		ROCK	49.9	159.0	
409.1	CARBONDALE	HERRIN	COAL	6.5	208.9	
402.6	CARBONDALE		ROCK	1.0	215.4	

MAPID: 11790227000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 2 QUARTERS/FOOTAGES: 187' N line, 41' W line of NW NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.961529 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.34685 DATE COLLECTED: 11 / 23 / 1974

SURFACE ELEVATION (FT.): 625.7 LOGGED (FT.): 232.0 LOG TYPE: Drillers Log

SOURCE: AMAX M5 WELL TYPE: Coal Test

COMMENT: MEADOW LARK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
625.7	PLEISTOCENE		UNCONSOLIDATED	160.0	0.0
465.7			ROCK	60.0	160.0
405.7	CARBONDALE	HERRIN	COAL	5.0	220.0
400.7	CARBONDALE		ROCK	7.0	225.0

MAPID: 11790272000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 2 QUARTERS/FOOTAGES: 27' S line, 50' E line of SE SE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.943243 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.332102 DATE COLLECTED: 1 / 15 / 1975

SURFACE ELEVATION (FT.): 636.7 LOGGED (FT.): 237.5 LOG TYPE: Drillers Log

SOURCE: AMAX M22 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
636.7	PLEISTOCENE		UNCONSOLIDATED	100.0	0.0
536.7			ROCK	123.0	100.0
413.7	CARBONDALE	HERRIN	COAL	4.5	223.0
409.2	CARBONDALE		ROCK	10.0	227.5

MAPID: 11790229000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 4 QUARTERS/FOOTAGES: 108' N line, 1191' W line of NW NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.994911 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.346903 DATE COLLECTED: 12 / 3 / 1974

SURFACE ELEVATION (FT.): 611.3 LOGGED (FT.): 176.5 LOG TYPE: Drillers Log

SOURCE: AMAX M7 WELL TYPE: Coal Test

COMMENT: MEADOW LARK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
611.3	PLEISTOCENE		UNCONSOLIDATED	95.0	0.0
516.3	MODESTO		ROCK	17.5	95.0
498.8	CARBONDALE	DANVILLE	COAL	1.0	112.5
497.8	CARBONDALE		ROCK	48.5	113.5
449.3	CARBONDALE	HERRIN	COAL	5.5	162.0
443.8	CARBONDALE		ROCK	9.0	167.5

MAPID: 11790241000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 4 QUARTERS/FOOTAGES: 45' N line, 38' E line of NE
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.980619 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.347082 DATE COLLECTED: 1 / 31 / 1975
 SURFACE ELEVATION (FT.): 617.0 LOGGED (FT.): 180.0 LOG TYPE: Drillers Log
 SOURCE: AMAX M41 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
617.0	PLEISTOCENE		UNCONSOLIDATED	146.0	0.0
471.0			ROCK	19.0	146.0
452.0	CARBONDALE	HERRIN	COAL	6.0	165.0
446.0	CARBONDALE		ROCK	9.0	171.0

MAPID: 11790288000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 4 QUARTERS/FOOTAGES: 1022' S line, 125' W line of SE SW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.993996 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.336163 DATE COLLECTED: 6 / 22 / 1977
 SURFACE ELEVATION (FT.): 603.3 LOGGED (FT.): 189.0 LOG TYPE: Drillers Log
 SOURCE: AMAX E444CM WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
603.3	PLEISTOCENE		UNCONSOLIDATED	151.0	0.0
452.3			ROCK	11.0	151.0
441.3	CARBONDALE	HERRIN	COAL	4.0	162.0
437.3	CARBONDALE		ROCK	23.0	166.0

MAPID: 11701124000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 5 QUARTERS/FOOTAGES: 2665' S line, 1345' W line
 QUADRANGLE: HETTICK LONGITUDE: -90.013334 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.340999 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 610.0 LOGGED (FT.): 160.5 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES CORP. A-67-19 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
456.9	CARBONDALE	HERRIN	COAL	5.8	153.1

MAPID: 11701124000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 5 **QUARTERS/FOOTAGES:** 2665' S line, 1345' W line
QUADRANGLE: HETTICK **LONGITUDE:** -90.013334 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.340999 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 610.0 **LOGGED (FT.):** 158.8 **LOG TYPE:** Survey Core Study
SOURCE: AYRSHIRE COLLIERIES CORP. A-67-19 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
463.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.7	146.5
461.8	CARBONDALE	LAWSON	GRAY SHALE	2.3	148.2
459.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.3	150.5
459.2	CARBONDALE	ANNA	MOTTLED SHALE	2.2	150.8
457.0	CARBONDALE	HERRIN	COAL	5.8	153.0

MAPID: 11790109000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 5 **QUARTERS/FOOTAGES:** 25' S line, 25' W line of SE NW
QUADRANGLE: HETTICK **LONGITUDE:** -90.013334 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.340999 **DATE COLLECTED:** 11 / 16 / 1967
SURFACE ELEVATION (FT.): 591.8 **LOGGED (FT.):** 160.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES A67-19 **WELL TYPE:** Coal Test
COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
591.8	PLEISTOCENE		UNCONSOLIDATED	146.0	0.0
445.8			ROCK	7.1	146.0
438.7	CARBONDALE	HERRIN	COAL	5.8	153.1
432.9	CARBONDALE		ROCK	1.2	158.9

MAPID: 11790366000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 6 **QUARTERS/FOOTAGES:** 40' N line, 135' W line of NW SW
QUADRANGLE: HETTICK **LONGITUDE:** -90.036319 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.340214 **DATE COLLECTED:** 11 / 16 / 1978
SURFACE ELEVATION (FT.): 519.9 **LOGGED (FT.):** 96.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX 6-009 **WELL TYPE:** Coal Test
COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
519.9	PLEISTOCENE		UNCONSOLIDATED	52.8	0.0
467.1			ROCK	27.2	52.8
439.9	CARBONDALE	HERRIN	COAL	5.5	80.0
434.4	CARBONDALE		ROCK	10.5	85.5

MAPID: 11790392000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 6 **QUARTERS/FOOTAGES:** 87' N line, 307' W line of NE NW
QUADRANGLE: HETTICK **LONGITUDE:** -90.031055 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.346946 **DATE COLLECTED:** 1 / 11 / 1979
SURFACE ELEVATION (FT.): 587.4 **LOGGED (FT.):** 157.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX 6-035 **WELL TYPE:** Coal Test
COMMENT: BARR-GREENFIELD BOX #44 CORE GR

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
587.4	PLEISTOCENE		UNCONSOLIDATED	73.0	0.0
514.4	MODESTO		ROCK	19.0	73.0
495.4	CARBONDALE	DANVILLE	COAL	0.7	92.0
494.7	CARBONDALE		ROCK	47.4	92.7
447.3	CARBONDALE	HERRIN	COAL	6.1	140.1
441.2	CARBONDALE		ROCK	10.8	146.2

MAPID: 11790417000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 6 **QUARTERS/FOOTAGES:** 50' S line, 65' W line of NW SW
QUADRANGLE: HETTICK **LONGITUDE:** -90.036415 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.3384 **DATE COLLECTED:** 1 / 21 / 1980
SURFACE ELEVATION (FT.): 519.3 **LOGGED (FT.):** 105.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX 7-024 **WELL TYPE:** Coal Test
COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
519.3	PLEISTOCENE		UNCONSOLIDATED	59.0	0.0
460.3			ROCK	24.6	59.0
435.7	CARBONDALE	HERRIN	COAL	6.7	83.6
429.0	CARBONDALE		ROCK	14.7	90.3

MAPID: 11790373000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 7 **QUARTERS/FOOTAGES:** 25' N line, 350' W line of SW NW
QUADRANGLE: HETTICK **LONGITUDE:** -90.035318 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.33012 **DATE COLLECTED:** 11 / 27 / 1978
SURFACE ELEVATION (FT.): 576.8 **LOGGED (FT.):** 160.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX 6-016 **WELL TYPE:** Coal Test
COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
576.8	PLEISTOCENE		UNCONSOLIDATED	138.4	0.0
438.4			ROCK	1.8	138.4
436.6	CARBONDALE	HERRIN	COAL	6.3	140.2
430.3	CARBONDALE		ROCK	13.5	146.5

MAPID: 11790287000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 8 **QUARTERS/FOOTAGES:** 148' N line, 37' W line of NE NW
QUADRANGLE: HETTICK **LONGITUDE:** -90.013072 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.333276 **DATE COLLECTED:** 6 / 24 / 1977
SURFACE ELEVATION (FT.): 589.7 **LOGGED (FT.):** 151.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX E386DN **WELL TYPE:** Coal Test
COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
589.7	PLEISTOCENE		UNCONSOLIDATED	151.0	0.0	

MAPID: 11701120000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 9 **QUARTERS/FOOTAGES:** SE SE NW
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.990793 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.325915 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 583.4 **LOGGED (FT.):** 168.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES CORP. A-67-14 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
425.4	CARBONDALE	HERRIN	COAL	6.3	158.0	

MAPID: 11790104000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 9 **QUARTERS/FOOTAGES:** 10' S line, 275' E line of SE NW
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.990793 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.325915 **DATE COLLECTED:** 11 / 9 / 1967
SURFACE ELEVATION (FT.): 583.4 **LOGGED (FT.):** 168.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES A67-14 **WELL TYPE:** Coal Test
COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
583.4	PLEISTOCENE		UNCONSOLIDATED	134.0	0.0	
449.4			ROCK	24.0	134.0	
425.4	CARBONDALE	HERRIN	COAL	6.3	158.0	
419.1	CARBONDALE		ROCK	3.8	164.3	

MAPID: 11790267000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 9 QUARTERS/FOOTAGES: 38' N line, 11' E line of NE NE
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.98038 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.332891 DATE COLLECTED: 12 / 20 / 1974
 SURFACE ELEVATION (FT.): 615.7 LOGGED (FT.): 207.0 LOG TYPE: Drillers Log
 SOURCE: AMAX M17 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
615.7	PLEISTOCENE		UNCONSOLIDATED	174.0	0.0
441.7			ROCK	13.0	174.0
428.7	CARBONDALE	HERRIN	COAL	5.0	187.0
423.7			ROCK	15.0	192.0

MAPID: 11790286000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 9 QUARTERS/FOOTAGES: 96' N line, 236' W line of NW SE
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.989072 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.32574 DATE COLLECTED: 6 / 1 / 1977
 SURFACE ELEVATION (FT.): 590.2 LOGGED (FT.): 185.0 LOG TYPE: Drillers Log
 SOURCE: AMAX E296EA WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
590.2	PLEISTOCENE		UNCONSOLIDATED	146.0	0.0
444.2			ROCK	24.0	146.0
420.2	CARBONDALE	HERRIN	COAL	4.0	170.0
416.2	CARBONDALE		ROCK	11.0	174.0

MAPID: 11790292000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 10 QUARTERS/FOOTAGES: 43' N line, 33' W line of NW SE
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.970788 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.325222 DATE COLLECTED: 5 / 26 / 1977
 SURFACE ELEVATION (FT.): 622.0 LOGGED (FT.): 240.0 LOG TYPE: Drillers Log
 SOURCE: AMAX F280DE WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
622.0	PLEISTOCENE		UNCONSOLIDATED	179.0	0.0
443.0			ROCK	41.0	179.0
402.0	CARBONDALE	HERRIN	COAL	6.5	220.0
395.5	CARBONDALE		ROCK	13.5	226.5

MAPID: 11701439000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 11 **QUARTERS/FOOTAGES:** 2660' N line, 50' W line
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.961399 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.324934 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 629.9 **LOGGED (FT.):** 223.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES CORP. A68-32 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
414.6	CARBONDALE	HERRIN	COAL	6.8	215.3	

MAPID: 11701439000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 11 **QUARTERS/FOOTAGES:** 2660' N line, 50' W line
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.961399 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.324934 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 630.0 **LOGGED (FT.):** 221.8 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES CORP. A68-32 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
446.2	MODESTO	PIASA	LIMESTONE/UNDERCLAY	8.0	183.8	
438.2	CARBONDALE		GRAY SHALE	10.0	191.8	
428.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.7	201.8	
423.6	CARBONDALE	LAWSON	GRAY SHALE	2.3	206.4	
421.2	CARBONDALE	BRERETON	LIMESTONE	3.6	208.8	
417.7	CARBONDALE	ANNA	BLACK SHALE	2.7	212.3	
415.0	CARBONDALE	HERRIN	COAL	6.8	215.0	

MAPID: 11721665000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 11 **QUARTERS/FOOTAGES:** SE SE SE SE
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.943477 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.31792 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 610.0 **LOGGED (FT.):** 195.5 **LOG TYPE:** Drillers Log
SOURCE: TRUAX-TRAER COAL CO CA-14 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
421.5	CARBONDALE	HERRIN	COAL	5.7	188.5	

MAPID: 11790122000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 11 QUARTERS/FOOTAGES: 25' N line, 50' W line of NW SW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.961399 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.324862 DATE COLLECTED: 10 / 1 / 1968

SURFACE ELEVATION (FT.): 629.9 LOGGED (FT.): 223.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A68-32 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
629.9	PLEISTOCENE		UNCONSOLIDATED	127.0	0.0
502.9	MODESTO		ROCK	40.8	127.0
462.1	CARBONDALE	DANVILLE	COAL	0.9	167.8
461.2	CARBONDALE		ROCK	46.6	168.7
414.6	CARBONDALE	HERRIN	COAL	6.8	215.3
407.8	CARBONDALE		ROCK	0.9	222.1

MAPID: 11790230000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 11 QUARTERS/FOOTAGES: 41' N line, 162' E line of NW NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.957497 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.33211 DATE COLLECTED: 12 / 5 / 1974

SURFACE ELEVATION (FT.): 623.7 LOGGED (FT.): 100.0 LOG TYPE: Drillers Log

SOURCE: AMAX M8 WELL TYPE: Coal Test

COMMENT: MEADOW LARK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
623.7	PLEISTOCENE		UNCONSOLIDATED	100.0	0.0

MAPID: 11790093000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 12 QUARTERS/FOOTAGES: 70' S line, 360' W line of SE NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.927454 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.32397 DATE COLLECTED: 10 / 0 / 1967

SURFACE ELEVATION (FT.): 610.0 LOGGED (FT.): 156.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A67-3 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
610.0	PLEISTOCENE		UNCONSOLIDATED	146.0	0.0
464.0	PLEISTOCENE		ROCK	10.0	146.0

MAPID: 11790293000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 12 QUARTERS/FOOTAGES: 45' N line, 41' E line of NE SW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.933624 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.324036 DATE COLLECTED: 5 / 27 / 1977

SURFACE ELEVATION (FT.): 631.4 LOGGED (FT.): 257.0 LOG TYPE: Drillers Log

SOURCE: AMAX F295GG WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
631.4	PLEISTOCENE		UNCONSOLIDATED	166.0	0.0	
465.4			ROCK	72.0	166.0	
393.4	CARBONDALE	HERRIN	COAL	3.5	238.0	
389.9	CARBONDALE		ROCK	15.5	241.5	

MAPID: 11701114000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 13 QUARTERS/FOOTAGES: 232' N line, 645' W line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.940587 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.316694 DATE COLLECTED:

SURFACE ELEVATION (FT.): 622.9 LOGGED (FT.): 252.3 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES CORP. A-67-7 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
382.2	CARBONDALE	HERRIN	COAL	10.5	240.7	

MAPID: 11701114000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 13 QUARTERS/FOOTAGES: 232' N line, 645' W line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.940587 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.316694 DATE COLLECTED:

SURFACE ELEVATION (FT.): 623.0 LOGGED (FT.): 251.5 LOG TYPE: Survey Core Study

SOURCE: AYRSHIRE COLLIERIES CORP. A-67-7 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
416.3	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.5	206.7
411.8	MODESTO		CLAYSTONE	4.4	211.2
407.4	CARBONDALE	DANVILLE	BONE COAL	0.8	215.6
406.6	CARBONDALE		CLAYSTONE	4.6	216.4
402.0	CARBONDALE	GALUM	LIMESTONE W/ SHALE	2.5	221.0
399.5	CARBONDALE		GRAY SHALE	2.8	223.5
396.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.8	226.3
391.9	CARBONDALE	LAWSON	GRAY SHALE	0.4	231.1
391.5	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.8	231.5
390.7	CARBONDALE		CLAYSTONE	3.8	232.3
386.9	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.5	236.1
386.4	CARBONDALE	ANNA	CARBONACEOUS SHALE	4.4	236.6
382.0	CARBONDALE	HERRIN	COAL	10.5	241.0

MAPID: 11790097000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 13 QUARTERS/FOOTAGES: 232' N line, 675' E line of NW NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.940555 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.316691 DATE COLLECTED: 10 / 19 / 1967

SURFACE ELEVATION (FT.): 622.9 LOGGED (FT.): 252.3 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A67-7 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
622.9	PLEISTOCENE		UNCONSOLIDATED	141.0	0.0
481.9	MODESTO		ROCK	43.4	141.0
438.5	CARBONDALE	DANVILLE	COAL	0.8	184.4
437.7	CARBONDALE		ROCK	55.5	185.2
382.2	CARBONDALE	HERRIN	COAL	10.5	240.7
371.7	CARBONDALE		ROCK	1.1	251.2

MAPID: 11790290000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 13 QUARTERS/FOOTAGES: 11' N line, 15' E line of NE SW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.933436 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.309659 DATE COLLECTED: 1 / 25 / 1978
 SURFACE ELEVATION (FT.): 628.3 LOGGED (FT.): 245.0 LOG TYPE: Drillers Log
 SOURCE: AMAX F121 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
628.3	PLEISTOCENE		UNCONSOLIDATED	22.0	0.0
606.3	MODESTO		ROCK	157.8	22.0
448.5	CARBONDALE	DANVILLE	COAL	0.5	179.8
448.0	CARBONDALE		ROCK	50.9	180.3
397.1	CARBONDALE	HERRIN	COAL	6.2	231.2
390.9	CARBONDALE		ROCK	7.6	237.4

MAPID: 11700878000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 14 QUARTERS/FOOTAGES: 125' N line, 1390' E line
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.947822 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.31715 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 628.1 LOGGED (FT.): 228.9 LOG TYPE: Drillers Log
 SOURCE: TRUAX-TRAER COAL CO 15 WELL TYPE: Coal Test
 COMMENT: SEE COAL SECTION MAP 6-117 A & B

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
406.4	CARBONDALE	HERRIN	COAL	7.3	221.7

MAPID: 11700878000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 14 QUARTERS/FOOTAGES: 125' N line, 1390' E line
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.947822 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 39.31715 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 628.0 LOGGED (FT.): 228.3 LOG TYPE: Survey Core Study
 SOURCE: TRUAX-TRAER COAL CO 15 WELL TYPE: Coal Test
 COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
424.5	MODESTO	PIASA	LIMESTONE/UNDERCLAY	2.4	203.5
422.1	CARBONDALE		CLAYSTONE	3.6	205.9
418.5	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.8	209.5
414.7	CARBONDALE	LAWSON	GRAY SHALE	1.8	213.3
412.9	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	3.2	215.1
409.7	CARBONDALE	ANNA	BLACK SHALE	2.8	218.3
407.0	CARBONDALE	HERRIN	COAL	7.3	221.0

MAPID: 11721617000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 14 QUARTERS/FOOTAGES: 114' N line, 255' W line of NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.960809 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.317267 DATE COLLECTED:

SURFACE ELEVATION (FT.): 621.0 LOGGED (FT.): 229.0 LOG TYPE: Survey Core Study

SOURCE: AMAX M-15 WELL TYPE: Coal Test

COMMENT: DRILLER'S LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
446.0	CARBONDALE	DANVILLE	COAL	1.2	175.0
404.7	CARBONDALE	HERRIN	COAL	4.6	216.3

MAPID: 11790265000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 14 QUARTERS/FOOTAGES: 114' N line, 225' W line of NW NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.960809 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.317267 DATE COLLECTED: 1 / 8 / 1975

SURFACE ELEVATION (FT.): 620.5 LOGGED (FT.): 229.0 LOG TYPE: Drillers Log

SOURCE: AMAX M15 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.5	PLEISTOCENE		UNCONSOLIDATED	70.0	0.0
550.5	MODESTO		ROCK	105.0	70.0
445.5	CARBONDALE	DANVILLE	COAL	1.0	175.0
444.5	CARBONDALE		ROCK	40.5	176.0
404.0	CARBONDALE	HERRIN	COAL	5.5	216.5
398.5	CARBONDALE		ROCK	7.0	222.0

MAPID: 11701119000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 15 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.975833 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.304384 DATE COLLECTED:

SURFACE ELEVATION (FT.): 575.5 LOGGED (FT.): 205.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES CORP. A-67-13 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
380.0	CARBONDALE	HERRIN	COAL	6.9	195.5

MAPID: 11790103000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 15 QUARTERS/FOOTAGES: 250' S line, 85' E line of SW SW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.975833 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.304384 DATE COLLECTED: 11 / 7 / 1967

SURFACE ELEVATION (FT.): 575.5 LOGGED (FT.): 205.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A67-13 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
575.5	PLEISTOCENE		UNCONSOLIDATED	48.0	0.0
527.5			ROCK	147.5	48.0
380.0	CARBONDALE	HERRIN	COAL	6.9	195.5
373.1	CARBONDALE		ROCK	2.6	202.4

MAPID: 11790228000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 15 QUARTERS/FOOTAGES: 75' N line, 40' E line of NE NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.961752 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.317388 DATE COLLECTED: 12 / 4 / 1974

SURFACE ELEVATION (FT.): 624.7 LOGGED (FT.): 196.5 LOG TYPE: Drillers Log

SOURCE: AMAX M6 WELL TYPE: Coal Test

COMMENT: MEADOW LARK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
624.7	PLEISTOCENE		UNCONSOLIDATED	142.0	0.0
482.7	MODESTO		ROCK	3.0	142.0
479.7	CARBONDALE	DANVILLE	COAL	2.0	145.0
477.7	CARBONDALE		ROCK	39.0	147.0
438.7	CARBONDALE	HERRIN	COAL	5.0	186.0
433.7	CARBONDALE		ROCK	5.5	191.0

MAPID: 11790255000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 15 QUARTERS/FOOTAGES: 44' N line, 344' E line of NE NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.962833 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.317516 DATE COLLECTED: 2 / 21 / 1975

SURFACE ELEVATION (FT.): 600.6 LOGGED (FT.): 198.0 LOG TYPE: Drillers Log

SOURCE: AMAX M55 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
600.6	PLEISTOCENE		UNCONSOLIDATED	97.0	0.0
503.6			ROCK	87.0	97.0
416.6	CARBONDALE	HERRIN	COAL	5.0	184.0
411.6	CARBONDALE		ROCK	9.0	189.0

MAPID: 11790289000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 15 QUARTERS/FOOTAGES: 32' N line, 654' E line of NE SW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.973172 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.31075 DATE COLLECTED: 6 / 2 / 1977

SURFACE ELEVATION (FT.): 620.2 LOGGED (FT.): 236.0 LOG TYPE: Drillers Log

SOURCE: AMAX F79DD WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.2	PLEISTOCENE		UNCONSOLIDATED	130.0	0.0
490.2			ROCK	88.0	130.0
402.2	CARBONDALE	HERRIN	COAL	5.0	218.0
397.2	CARBONDALE		ROCK	13.0	223.0

MAPID: 11790291000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 15 QUARTERS/FOOTAGES: 28' N line, 30' W line of NW NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.980164 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.318305 DATE COLLECTED: 6 / 27 / 1977

SURFACE ELEVATION (FT.): 619.0 LOGGED (FT.): 206.0 LOG TYPE: Drillers Log

SOURCE: AMAX F176DE WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
619.0	PLEISTOCENE		UNCONSOLIDATED	150.0	0.0
469.0			ROCK	38.0	150.0
431.0	CARBONDALE	HERRIN	COAL	6.0	188.0
425.0	CARBONDALE		ROCK	12.0	194.0

MAPID: 11790223000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 16 QUARTERS/FOOTAGES: 37' N line, 124' W line of NW NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.99896 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.318712 DATE COLLECTED: 11 / 4 / 1974

SURFACE ELEVATION (FT.): 608.5 LOGGED (FT.): 217.0 LOG TYPE: Drillers Log

SOURCE: AMAX M1 WELL TYPE: Coal Test

COMMENT: MEADOW LARK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
608.5	PLEISTOCENE		UNCONSOLIDATED	134.0	0.0
474.5	MODESTO		ROCK	20.0	134.0
454.5	CARBONDALE	DANVILLE	COAL	1.0	154.0
453.5	CARBONDALE		ROCK	36.0	155.0
417.5	CARBONDALE	HERRIN	COAL	8.0	191.0
409.5	CARBONDALE		ROCK	18.0	199.0

MAPID: 11790271000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 16 QUARTERS/FOOTAGES: 61' S line, 6' W line of SW SW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.999393 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.304551 DATE COLLECTED: 1 / 21 / 1975
 SURFACE ELEVATION (FT.): 622.7 LOGGED (FT.): 202.5 LOG TYPE: Drillers Log
 SOURCE: AMAX M21 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
622.7	PLEISTOCENE		UNCONSOLIDATED	108.0	0.0
514.7			ROCK	85.0	108.0
429.7	CARBONDALE	HERRIN	COAL	5.5	193.0
424.2	CARBONDALE		ROCK	4.0	198.5

MAPID: 11790285000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 16 QUARTERS/FOOTAGES: 645' S line, 539' W line of SE SW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.991386 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.305863 DATE COLLECTED: 7 / 6 / 1977
 SURFACE ELEVATION (FT.): 618.8 LOGGED (FT.): 227.0 LOG TYPE: Drillers Log
 SOURCE: AMAX E44PN WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
618.8	PLEISTOCENE		UNCONSOLIDATED	125.0	0.0
493.8			ROCK	84.0	125.0
409.8	CARBONDALE	HERRIN	COAL	7.0	209.0
402.8	CARBONDALE		ROCK	11.0	216.0

MAPID: 11700892000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 17 QUARTERS/FOOTAGES: 20' N line, 3315' E line
 QUADRANGLE: HETTICK LONGITUDE: -90.011182 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.319255 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 569.6 LOGGED (FT.): 159.6 LOG TYPE: Drillers Log
 SOURCE: TRUAX-TRAEER COAL CO 17 WELL TYPE: Coal Test
 COMMENT: SEE COAL SECTION MAP 6-117 A & B

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
448.5	CARBONDALE	DANVILLE	COAL	0.8	121.1
416.3	CARBONDALE	HERRIN	COAL	3.6	153.3

MAPID: 11700892000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 17 QUARTERS/FOOTAGES: 20' N line, 3315' E line

QUADRANGLE: HETTICK LONGITUDE: -90.011182

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.319255

DATE COLLECTED:

SURFACE ELEVATION (FT.): 570.0 LOGGED (FT.): 158.2

LOG TYPE: Survey Core Study

SOURCE: TRUAX-TRAER COAL CO 17

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
430.0	MODESTO	PIASA	LIMESTONE	1.3	140.0
428.7	CARBONDALE		GRAY SHALE	3.5	141.3
425.2	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.7	144.8
421.6	CARBONDALE	BRERETON	LIMESTONE	3.1	148.4
418.5	CARBONDALE	ANNA	BLACK SHALE	1.3	151.5
417.0	CARBONDALE	HERRIN	COAL	5.2	153.0

MAPID: 11701123000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 17 QUARTERS/FOOTAGES: 128' N line, 132' W line of SW NE

QUADRANGLE: HETTICK LONGITUDE: -90.008196

GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.315185

DATE COLLECTED:

SURFACE ELEVATION (FT.): 564.3 LOGGED (FT.): 135.5

LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES CORP. A67-18

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
434.5	CARBONDALE	HERRIN	COAL	5.1	129.8

MAPID: 11701359000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 17 QUARTERS/FOOTAGES: NW NW NE

QUADRANGLE: HETTICK LONGITUDE: -90.007511

GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.318247

DATE COLLECTED:

SURFACE ELEVATION (FT.): 599.0 LOGGED (FT.): 191.0

LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO CA-3

WELL TYPE: Coal Test

COMMENT: CORE C-8751

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
417.2	CARBONDALE	HERRIN	COAL	7.3	181.8

MAPID: 11790108000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 17 QUARTERS/FOOTAGES: 128' N line, 132' W line of SW NE
 QUADRANGLE: HETTICK LONGITUDE: -90.008196 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.315185 DATE COLLECTED: 11 / 14 / 1967
 SURFACE ELEVATION (FT.): 564.3 LOGGED (FT.): 135.5 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES A67-18 WELL TYPE: Coal Test
 COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
564.3	PLEISTOCENE		UNCONSOLIDATED	92.0	0.0
472.3			ROCK	37.8	92.0
434.5	CARBONDALE	HERRIN	COAL	5.1	129.8
429.4	CARBONDALE		ROCK	0.6	134.9

MAPID: 11790303000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 20 QUARTERS/FOOTAGES: 4' S line, 36' E line of SE NW
 QUADRANGLE: HETTICK LONGITUDE: -90.008597 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.297419 DATE COLLECTED: 5 / 31 / 1977
 SURFACE ELEVATION (FT.): 615.7 LOGGED (FT.): 197.0 LOG TYPE: Drillers Log
 SOURCE: AMAX H512PP WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
615.7	PLEISTOCENE		UNCONSOLIDATED	100.0	0.0
515.7			ROCK	74.0	100.0
441.7	CARBONDALE	HERRIN	COAL	5.0	174.0
436.7	CARBONDALE		ROCK	18.0	179.0

MAPID: 11701122000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 22 QUARTERS/FOOTAGES: 5' S line, 632' E line of SE SW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.973253 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.292621 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 618.4 LOGGED (FT.): 226.3 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES CORP. A-67-17 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
399.7	CARBONDALE	HERRIN	COAL	6.6	218.7

MAPID: 1170136000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 22 **QUARTERS/FOOTAGES:** NW NW NE
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.969653 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.302598 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 629.0 **LOGGED (FT.):** 239.0 **LOG TYPE:** Drillers Log
SOURCE: TRUAX-TRAER COAL CO CA-8 **WELL TYPE:** Coal Test
COMMENT: CORE C-8756

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
425.7	CARBONDALE	HERRIN	COAL	6.9	203.3

MAPID: 1170136000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 22 **QUARTERS/FOOTAGES:** NW NW NE
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.969653 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.302598 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 629.0 **LOGGED (FT.):** 236.9 **LOG TYPE:** Survey Core Study
SOURCE: TRUAX-TRAER COAL CO CA-8 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
418.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	2.8	211.0
415.2	CARBONDALE		GRAY SHALE	3.0	213.8
412.2	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	7.3	216.8
404.9	CARBONDALE	BRERETON	LIMESTONE	5.0	224.1
399.9	CARBONDALE	ANNA	DARK GRAY SHALE	0.4	229.1
399.0	CARBONDALE	HERRIN	COAL	6.9	230.0

MAPID: 11790107000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 22 **QUARTERS/FOOTAGES:** 54' N line, 632' W line of SE SW
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.973253 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.292621 **DATE COLLECTED:** 11 / 14 / 1967
SURFACE ELEVATION (FT.): 618.4 **LOGGED (FT.):** 226.5 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES A67-17 **WELL TYPE:** Coal Test
COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
618.4	PLEISTOCENE		UNCONSOLIDATED	37.0	0.0
581.4	MODESTO		ROCK	127.0	37.0
454.4	MODESTO	ROCK BRANCH	COAL	0.3	164.0
454.1	MODESTO		ROCK	11.7	164.3
442.4	CARBONDALE	DANVILLE	COAL	0.7	176.0
441.7	CARBONDALE		ROCK	42.1	176.7
399.6	CARBONDALE	HERRIN	COAL	6.6	218.8
393.0	CARBONDALE		ROCK	1.1	225.4

MAPID: 11790308000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 22 QUARTERS/FOOTAGES: 866' S line, 1114' E line of SE NW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.974765 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.298826 DATE COLLECTED: 6 / 2 / 1977
 SURFACE ELEVATION (FT.): 612.9 LOGGED (FT.): 236.0 LOG TYPE: Drillers Log
 SOURCE: AMAX J528KK WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
612.9	PLEISTOCENE		UNCONSOLIDATED	99.0	0.0
513.9	MODESTO		ROCK	41.0	99.0
472.9	MODESTO	ROCK BRANCH	COAL	0.5	140.0
472.4			ROCK	78.5	140.5
393.9	CARBONDALE	HERRIN	COAL	6.0	219.0
387.9	CARBONDALE		ROCK	11.0	225.0

MAPID: 11790309000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 22 QUARTERS/FOOTAGES: 739' S line, 260' W line of NE NE
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.965199 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.301777 DATE COLLECTED: 7 / 27 / 1977
 SURFACE ELEVATION (FT.): 622.3 LOGGED (FT.): 281.0 LOG TYPE: Drillers Log
 SOURCE: AMAX J582NA WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
622.3	PLEISTOCENE		UNCONSOLIDATED	90.0	0.0
532.3			ROCK	127.0	90.0
405.3	CARBONDALE	HERRIN	COAL	6.0	217.0
399.3	CARBONDALE		ROCK	58.0	223.0

MAPID: 11790266000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 23 QUARTERS/FOOTAGES: 30' N line, 71' E line of NE NE
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.942985 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.302915 DATE COLLECTED: 1 / 7 / 1975
 SURFACE ELEVATION (FT.): 618.9 LOGGED (FT.): 232.0 LOG TYPE: Drillers Log
 SOURCE: AMAX M16 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
618.9	PLEISTOCENE		UNCONSOLIDATED	65.0	0.0
553.9			ROCK	149.8	65.0
404.1	CARBONDALE	HERRIN	COAL	7.7	214.8
396.4	CARBONDALE		ROCK	9.5	222.5

MAPID: 11790269000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 23 QUARTERS/FOOTAGES: 82' S line, 45' W line of SW SW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.961157 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.288926 DATE COLLECTED: 1 / 6 / 1975
 SURFACE ELEVATION (FT.): 624.5 LOGGED (FT.): 253.0 LOG TYPE: Drillers Log
 SOURCE: AMAX M19 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
624.5	PLEISTOCENE		UNCONSOLIDATED	50.0	0.0
574.5			ROCK	189.5	50.0
385.0	CARBONDALE	HERRIN	COAL	5.0	239.5
380.0	CARBONDALE		ROCK	8.5	244.5

MAPID: 11790307000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 23 QUARTERS/FOOTAGES: 5' N line, 675' E line of NE SW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.95447 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.295884 DATE COLLECTED: 12 / 8 / 1977
 SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 252.0 LOG TYPE: Drillers Log
 SOURCE: AMAX J512 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
632.0	PLEISTOCENE		UNCONSOLIDATED	100.0	0.0
532.0			ROCK	129.5	100.0
402.5	CARBONDALE	HERRIN	COAL	7.2	229.5
395.3	CARBONDALE		ROCK	15.3	236.7

MAPID: 11700890000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 24 QUARTERS/FOOTAGES: 300' S line, 1320' W line
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.938116 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.289111 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 631.8 LOGGED (FT.): 265.0 LOG TYPE: Drillers Log
 SOURCE: TRUAX-TRAER COAL CO 21 WELL TYPE: Coal Test
 COMMENT: SEE COAL SECTION MAP 6-117 A & B

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
410.6	CARBONDALE	HERRIN	COAL	3.4	221.2

MAPID: 11700890000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 24 QUARTERS/FOOTAGES: 300' S line, 1320' W line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.938116

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.289111

DATE COLLECTED:

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 224.4

LOG TYPE: Survey Core Study

SOURCE: TRUAX-TRAER COAL CO 21

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
417.1	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.6	214.9
414.5	CARBONDALE	BRERETON	LIMESTONE	2.6	217.5
411.9	CARBONDALE	ANNA	DARK GRAY SHALE	0.9	220.1
411.0	CARBONDALE	HERRIN	COAL	3.4	221.0

MAPID: 11721666000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 24 QUARTERS/FOOTAGES: NW NW NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.941562

GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.302023

DATE COLLECTED:

SURFACE ELEVATION (FT.): 625.0 LOGGED (FT.): 245.0

LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO CA-13

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
386.8	CARBONDALE	HERRIN	COAL	5.3	238.2

MAPID: 11790234000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 24 QUARTERS/FOOTAGES: 144' S line, 52' E line of SE SE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.924091

GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.287924

DATE COLLECTED: 12 / 12 / 1974

SURFACE ELEVATION (FT.): 629.0 LOGGED (FT.): 247.5

LOG TYPE: Drillers Log

SOURCE: AMAX M12

WELL TYPE: Coal Test

COMMENT: MEADOW LARK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
629.0	PLEISTOCENE		UNCONSOLIDATED	70.0	0.0
559.0			ROCK	161.5	70.0
397.5	CARBONDALE	HERRIN	COAL	6.0	231.5
391.5	CARBONDALE		ROCK	10.0	237.5

MAPID: 11701109000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 25 **QUARTERS/FOOTAGES:** 2630' N line, 2610' W line
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.933546 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.280777 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 627.9 **LOGGED (FT.):** 258.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES CORP. A67-2 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
392.6	CARBONDALE	HERRIN	COAL	4.5	235.3

MAPID: 11701109000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 25 **QUARTERS/FOOTAGES:** 2630' N line, 2610' W line
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.933546 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.280777 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 628.0 **LOGGED (FT.):** 235.5 **LOG TYPE:** Survey Core Study
SOURCE: AYRSHIRE COLLIERIES CORP. A67-2 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
423.8	MODESTO	PIASA	LIMESTONE	4.5	204.2
419.3	CARBONDALE		GRAY SHALE	10.5	208.7
408.8	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.0	219.2
404.8	CARBONDALE	LAWSON	DARK GRAY SHALE	2.0	223.2
402.8	CARBONDALE	BRERETON	LIMESTONE	2.3	225.2
400.5	CARBONDALE	ANNA	DARK GRAY SHALE	3.5	227.5
397.0	CARBONDALE	HERRIN	COAL	4.5	231.0

MAPID: 11721619000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 25 **QUARTERS/FOOTAGES:** 110' S line, 53' W line of SW
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.942634 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.274275 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 626.0 **LOGGED (FT.):** 420.0 **LOG TYPE:** Survey Core Study
SOURCE: AMAX M-20 **WELL TYPE:** Coal Test
COMMENT: DRILLERS LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
404.1	CARBONDALE	HERRIN	COAL	4.0	221.9

MAPID: 11790092000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 25 QUARTERS/FOOTAGES: 10' S line, 30' E line of SE NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.933475 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.280786 DATE COLLECTED: 10 / 10 / 1967

SURFACE ELEVATION (FT.): 627.9 LOGGED (FT.): 258.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A67-2 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
627.9	PLEISTOCENE		UNCONSOLIDATED	32.5	0.0	
595.4			ROCK	198.3	32.5	
397.1	CARBONDALE	HERRIN	COAL	4.5	230.8	
392.6	CARBONDALE		ROCK	22.7	235.3	

MAPID: 11790225000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 25 QUARTERS/FOOTAGES: 60' N line, 38' W line of NW NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.942673 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.288362 DATE COLLECTED: 11 / 19 / 1974

SURFACE ELEVATION (FT.): 627.4 LOGGED (FT.): 247.0 LOG TYPE: Drillers Log

SOURCE: AMAX M3 WELL TYPE: Coal Test

COMMENT: MEADOW LARK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
627.4	PLEISTOCENE		UNCONSOLIDATED	51.0	0.0	
576.4			ROCK	15.0	51.0	
561.4			COAL	1.0	66.0	
560.4			ROCK	155.0	67.0	
405.4	CARBONDALE	HERRIN	COAL	6.0	222.0	
399.4	CARBONDALE		ROCK	19.0	228.0	

MAPID: 11790270000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 25 QUARTERS/FOOTAGES: 110' S line, 52' W line of SW SW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.942634 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.274275 DATE COLLECTED: 2 / 18 / 1975

SURFACE ELEVATION (FT.): 624.5 LOGGED (FT.): 425.0 LOG TYPE: Drillers Log

SOURCE: AMAX M20 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
624.5	PLEISTOCENE		UNCONSOLIDATED	95.0	0.0
529.5			ROCK	127.2	95.0
402.3	CARBONDALE	HERRIN	COAL	2.8	222.2
399.5	CARBONDALE		ROCK	72.1	225.0
327.4	CARBONDALE	SURVANT	COAL	1.7	297.1
325.7	CARBONDALE		ROCK	43.7	298.8
282.0	CARBONDALE	COLCHESTER	COAL	2.7	342.5
279.3	CARBONDALE		ROCK	54.5	345.2
224.8			COAL	0.8	399.7
224.0			ROCK	24.5	400.5

MAPID: 11701442000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 26 QUARTERS/FOOTAGES: 57' N line, 1834' E line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.949327 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.288436 DATE COLLECTED:

SURFACE ELEVATION (FT.): 629.7 LOGGED (FT.): 241.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES CORP. A68-31 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
397.2	CARBONDALE	HERRIN	COAL	7.5	232.5

MAPID: 11701442000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 26 QUARTERS/FOOTAGES: 57' N line, 1834' E line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.949327

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.288436

DATE COLLECTED:

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 240.5

LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES CORP. A68-31

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
422.5	MODESTO	PIASA	LIMESTONE	3.0	207.5
419.5	CARBONDALE		SHALE	9.0	210.5
410.5	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	5.0	219.5
405.5	CARBONDALE	LAWSON	GRAY SHALE	2.0	224.5
403.5	CARBONDALE	BRERETON	LIMESTONE	4.0	226.5
399.5	CARBONDALE	ANNA	DARK GRAY SHALE	2.5	230.5
397.0	CARBONDALE	HERRIN	COAL	7.5	233.0

MAPID: 11790121000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 26 QUARTERS/FOOTAGES: 57' N line, 514' E line of NW NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.949263

GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.288437

DATE COLLECTED: 10 / 1 / 1968

SURFACE ELEVATION (FT.): 629.7 LOGGED (FT.): 241.0

LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A68-31

WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
629.7	PLEISTOCENE		UNCONSOLIDATED	52.0	0.0
577.7	MODESTO		ROCK	107.0	52.0
470.7	MODESTO	ROCK BRANCH	COAL	0.8	159.0
469.9	MODESTO		ROCK	27.2	159.8
442.7	CARBONDALE	DANVILLE	COAL	0.5	187.0
442.2	CARBONDALE		ROCK	45.0	187.5
397.2	CARBONDALE	HERRIN	COAL	7.5	232.5
389.7	CARBONDALE		ROCK	1.0	240.0

MAPID: 1170128000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 28 **QUARTERS/FOOTAGES:** 1' N line, 2640' E line of NE
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.989592 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.289671 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 615.0 **LOGGED (FT.):** 209.0 **LOG TYPE:** Survey Core Study
SOURCE: ATLANTIC RICHFIELD P-9 **WELL TYPE:** Coal Test
COMMENT: LOC. IS C OF N LINE; DRILLERS LOG INCL.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
413.3	CARBONDALE	HERRIN	COAL	5.2	201.7	

MAPID: 11721614000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 28 **QUARTERS/FOOTAGES:** 75' N line, 33' E line of NE
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.980331 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.289216 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 619.9 **LOGGED (FT.):** 222.5 **LOG TYPE:** Survey Core Study
SOURCE: AMAX M-10 **WELL TYPE:** Coal Test
COMMENT: DRILLERS LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
412.5	CARBONDALE	HERRIN	COAL	4.8	207.4	

MAPID: 11790232000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 28 **QUARTERS/FOOTAGES:** 75' N line, 33' E line of NE NE
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.980331 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.289216 **DATE COLLECTED:** 12 / 10 / 1974
SURFACE ELEVATION (FT.): 619.9 **LOGGED (FT.):** 222.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX M10 **WELL TYPE:** Coal Test
COMMENT: MEADOW LARK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
619.9	PLEISTOCENE		UNCONSOLIDATED	55.0	0.0	
564.9			ROCK	154.5	55.0	
410.4	CARBONDALE	HERRIN	COAL	5.0	209.5	
405.4	CARBONDALE		ROCK	7.5	214.5	

MAPID: 11790233000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 28 QUARTERS/FOOTAGES: 71' N line, 78' W line of NW NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.999003 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.289731 DATE COLLECTED: 12 / 11 / 1974

SURFACE ELEVATION (FT.): 597.2 LOGGED (FT.): 187.5 LOG TYPE: Drillers Log

SOURCE: AMAX M11 WELL TYPE: Coal Test

COMMENT: MEADOW LARK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
597.2	PLEISTOCENE		UNCONSOLIDATED	30.0	0.0
567.2			ROCK	145.3	30.0
421.9	CARBONDALE	HERRIN	COAL	5.0	175.3
416.9	CARBONDALE		ROCK	7.2	180.3

MAPID: 11790302000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 28 QUARTERS/FOOTAGES: 15' S line, 10' W line of SW NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.98966 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.282513 DATE COLLECTED: 12 / 13 / 1977

SURFACE ELEVATION (FT.): 610.6 LOGGED (FT.): 218.0 LOG TYPE: Drillers Log

SOURCE: AMAX H321 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
610.6	PLEISTOCENE		UNCONSOLIDATED	95.0	0.0
515.6	MODESTO		ROCK	59.0	95.0
456.6	CARBONDALE	DANVILLE	COAL	0.7	154.0
455.9	CARBONDALE	DANVILLE	ROCK	45.3	154.7
410.6	CARBONDALE	HERRIN	COAL	4.5	200.0
406.1	CARBONDALE		ROCK	13.5	204.5

MAPID: 11701443000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 29 QUARTERS/FOOTAGES: 3140' N line, 44' E line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.999313 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.281268 DATE COLLECTED:

SURFACE ELEVATION (FT.): 568.8 LOGGED (FT.): 160.3 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES CORP. A67-16 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
416.0	CARBONDALE	HERRIN	COAL	6.3	152.8

MAPID: 11701443000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 29 QUARTERS/FOOTAGES: 3140' N line, 44' E line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.999313

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.281268

DATE COLLECTED:

SURFACE ELEVATION (FT.): 569.0 LOGGED (FT.): 159.3

LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES CORP. A67-16

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
440.7	MODESTO	PIASA	LIMESTONE	5.5	128.3
435.2	CARBONDALE		GRAY SHALE	10.5	133.8
424.7	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.0	144.3
420.7	CARBONDALE	LAWSON	GRAY SHALE	4.0	148.3
416.7	CARBONDALE	BRERETON	LIMESTONE	0.8	152.3
416.0	CARBONDALE	HERRIN	COAL	6.3	153.0

MAPID: 11790106000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 29 QUARTERS/FOOTAGES: 500' S line, 44' E line of NE SE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.999305

GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.280589

DATE COLLECTED: 11 / 4 / 1967

SURFACE ELEVATION (FT.): 568.8 LOGGED (FT.): 160.3

LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A67-16

WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
568.8	PLEISTOCENE		UNCONSOLIDATED	50.0	0.0
518.8			ROCK	102.8	50.0
416.0	CARBONDALE	HERRIN	COAL	6.3	152.8
409.7	CARBONDALE		ROCK	1.3	159.1

MAPID: 11701128000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 30 QUARTERS/FOOTAGES: SW SW NE

QUADRANGLE: HETTICK LONGITUDE: -90.026855

GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.286426

DATE COLLECTED:

SURFACE ELEVATION (FT.): 544.2 LOGGED (FT.): 138.0

LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A-67-22

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
468.2	CARBONDALE	DANVILLE	COAL	1.3	76.0
424.3	CARBONDALE	HERRIN	COAL	4.2	119.9

MAPID: 11701361000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 30 **QUARTERS/FOOTAGES:** SE NE NW
QUADRANGLE: HETTICK **LONGITUDE:** -90.0284 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.287313 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 550.0 **LOGGED (FT.):** 125.0 **LOG TYPE:** Drillers Log
SOURCE: TRUAX-TRAER COAL CO CA-10 **WELL TYPE:** Coal Test
COMMENT: CORE C-8758

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
432.0	CARBONDALE	HERRIN	COAL	5.0	118.0

MAPID: 11790112000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 30 **QUARTERS/FOOTAGES:** 1' S line, 108' W line of NW NE
QUADRANGLE: HETTICK **LONGITUDE:** -90.026855 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.286426 **DATE COLLECTED:** 11 / 17 / 1967
SURFACE ELEVATION (FT.): 544.2 **LOGGED (FT.):** 138.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES A67-22 **WELL TYPE:** Coal Test
COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
544.2	PLEISTOCENE		UNCONSOLIDATED	24.0	0.0
520.2	MODESTO		ROCK	52.0	24.0
468.2	CARBONDALE	DANVILLE	COAL	1.3	76.0
466.9	CARBONDALE		ROCK	42.6	77.3
424.3	CARBONDALE	HERRIN	COAL	4.2	119.9
420.2	CARBONDALE		ROCK	14.0	124.0

MAPID: 11790300000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 32 **QUARTERS/FOOTAGES:** 25' N line, 38' E line of NE SW
QUADRANGLE: HETTICK **LONGITUDE:** -90.008683 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.268438 **DATE COLLECTED:** 4 / 27 / 1977
SURFACE ELEVATION (FT.): 606.2 **LOGGED (FT.):** 215.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX H87GG **WELL TYPE:** Coal Test
COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
606.2	PLEISTOCENE		UNCONSOLIDATED	14.0	0.0
592.2	MODESTO		ROCK	143.0	14.0
449.2	CARBONDALE	DANVILLE	COAL	1.0	157.0
448.2	CARBONDALE		ROCK	38.0	158.0
410.2	CARBONDALE	HERRIN	COAL	6.0	196.0
404.2	CARBONDALE		ROCK	13.0	202.0

MAPID: 11724078000C VERSION: 1

PROJECT: NCRDS 2013

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 33 QUARTERS/FOOTAGES: 330' N line, 330' W line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.997913 GEOLOGIST: LOUCHIOS

CONFIDENTIAL: N LATITUDE: 39.274682 DATE COLLECTED: 2 / 7 / 2008

SURFACE ELEVATION (FT.): 615.0 LOGGED (FT.): 393.0 LOG TYPE: Other Core Study

SOURCE: BPI INDUSTRIES 1 WELL TYPE: Coal Test

COMMENT: LOGGED AT ISGS ANNEX

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
615.0			UNCLASSIFIED	158.5	0.0	
456.5	SHELBURN	ATTILA	BLACK SHALE	0.6	158.5	
455.9	SHELBURN	ROCK BRANCH	COAL	0.9	159.1	BRIGHT- BANDED
455.0	SHELBURN		CLAYSTONE & SILTSTONE	2.0	160.0	
453.0	SHELBURN		MUDSTONE	2.2	162.0	
450.8	SHELBURN		LIMESTONE/MUDSTONE	2.1	164.2	
448.7	SHELBURN		SILTSTONE	3.2	166.3	
445.5	SHELBURN		MUDSTONE	0.9	169.5	MUDSTONE CONGLAMERATE
444.6	SHELBURN		MUDSTONE	1.0	170.4	
443.6	SHELBURN		SILTSTONE	1.8	171.4	
441.8	SHELBURN		MUDSTONE	4.8	173.2	
437.0	SHELBURN	PIASA	LIMESTONE	3.2	178.0	
433.8	SHELBURN		FOSSILIFEROUS SHALE	0.4	181.2	CRINOIDS & BRACHIOPODS
433.4	SHELBURN		LIMESTONE	0.8	181.6	LOWER PIASA
432.6	SHELBURN		MUDSTONE	2.0	182.4	
430.6	SHELBURN	DANVILLE	COAL	0.1	184.4	
430.5	SHELBURN		CLAYSTONE & SILTSTONE	4.2	184.5	
426.3	SHELBURN	BANKSTON FORK	LIMESTONE	0.4	188.7	
425.9	SHELBURN	BANKSTON FORK	SHALY LIMESTONE	0.4	189.1	
425.5	SHELBURN	BANKSTON FORK	LIMESTONE/SILTSTONE	3.8	189.5	
421.7	SHELBURN	LAWSON	SILTSTONE	1.8	193.3	
419.9	SHELBURN	BRERETON	LIMESTONE	1.9	195.1	
418.0	SHELBURN	BRERETON	FOSSILIFEROUS LIMESTONE	6.1	197.0	
411.9	CARBONDALE	ANNA	BLACK SHALE	0.7	203.1	
411.2	CARBONDALE	HERRIN	COAL	4.9	203.8	
406.3	CARBONDALE		GREEN SHALE	1.3	208.7	
405.0	CARBONDALE		UNCLASSIFIED	110.0	210.0	
295.0	CARBONDALE		DARK SHALE	1.8	320.0	
293.2	CARBONDALE		LIMESTONE	0.3	321.8	
292.9	CARBONDALE	MECCA QUARRY	BLACK SHALE	1.9	322.1	
291.0	CARBONDALE	COLCHESTER	COAL	3.0	324.0	COAL REMOVED
288.0	CARBONDALE		CLAYSTONE & SILTSTONE	3.8	327.0	
284.2	CARBONDALE		COAL	0.3	330.8	DULL
283.9	CARBONDALE		CLAYSTONE & SILTSTONE	1.0	331.1	
282.9	CARBONDALE		LIMESTONE	2.9	332.1	
280.0	CARBONDALE		UNCLASSIFIED	44.5	335.0	
235.5			COAL	2.0	379.5	COAL REMOVED
233.5			CLAYSTONE & SILTSTONE	1.2	381.5	

MAPID: 11790224000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 33 **QUARTERS/FOOTAGES:** 59' N line, 81' W line of NW NW
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.998789 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.275459 **DATE COLLECTED:** 11 / 15 / 1974
SURFACE ELEVATION (FT.): 617.3 **LOGGED (FT.):** 237.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX M2 **WELL TYPE:** Coal Test
COMMENT: MEADOW LARK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
617.3	PLEISTOCENE		UNCONSOLIDATED	94.0	0.0
523.3	MODESTO		ROCK	63.0	94.0
460.3	CARBONDALE	DANVILLE	COAL	1.0	157.0
459.3	CARBONDALE		ROCK	41.5	158.0
417.8	CARBONDALE	HERRIN	COAL	6.2	199.5
411.6	CARBONDALE		ROCK	31.3	205.7

MAPID: 11790264000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 8W **SECTION:** 33 **QUARTERS/FOOTAGES:** 40' N line, 20' E line of NE NE
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.980272 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.274794 **DATE COLLECTED:** 12 / 17 / 1974
SURFACE ELEVATION (FT.): 621.0 **LOGGED (FT.):** 237.5 **LOG TYPE:** Drillers Log
SOURCE: AMAX M14 **WELL TYPE:** Coal Test
COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
621.0	PLEISTOCENE		UNCONSOLIDATED	70.0	0.0
551.0			ROCK	156.5	70.0
394.5	CARBONDALE	HERRIN	COAL	4.5	226.5
390.0	CARBONDALE		ROCK	6.5	231.0

MAPID: 11790301000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 33 QUARTERS/FOOTAGES: 15' S line, 15' W line of SW NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.989591 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.268036 DATE COLLECTED: 1 / 16 / 1978

SURFACE ELEVATION (FT.): 620.4 LOGGED (FT.): 237.5 LOG TYPE: Drillers Log

SOURCE: AMAX H121 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.4	PLEISTOCENE		UNCONSOLIDATED	104.0	0.0
516.4	MODESTO		ROCK	32.6	104.0
483.8	MODESTO	ROCK BRANCH	COAL	0.6	136.6
483.2			ROCK	75.6	137.2
407.6	CARBONDALE	HERRIN	COAL	5.6	212.8
402.0	CARBONDALE		ROCK	19.1	218.4

MAPID: 11790305000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 34 QUARTERS/FOOTAGES: 20' S line, 19' W line of SW NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.970626 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.267347 DATE COLLECTED: 1 / 12 / 1978

SURFACE ELEVATION (FT.): 622.6 LOGGED (FT.): 258.0 LOG TYPE: Drillers Log

SOURCE: AMAX J105 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
622.6	PLEISTOCENE		UNCONSOLIDATED	49.0	0.0
573.6	MODESTO		ROCK	34.0	49.0
539.6	MODESTO	CHAPEL	COAL	0.5	83.0
539.1	MODESTO		ROCK	78.5	83.5
460.6	MODESTO	ROCK BRANCH	COAL	0.3	162.0
460.3	MODESTO		ROCK	24.7	162.3
435.6	CARBONDALE	DANVILLE	COAL	0.5	187.0
435.1	CARBONDALE		ROCK	53.5	187.5
381.6	CARBONDALE	HERRIN	COAL	6.2	241.0
375.4	CARBONDALE		ROCK	10.8	247.2

MAPID: 11790306000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 34 QUARTERS/FOOTAGES: 41' N line, 30' E line of NE NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.961354 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.274087 DATE COLLECTED: 4 / 27 / 1977

SURFACE ELEVATION (FT.): 621.2 LOGGED (FT.): 259.0 LOG TYPE: Drillers Log

SOURCE: AMAX J183GG WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
621.2	PLEISTOCENE		UNCONSOLIDATED	20.0	0.0
601.2	MODESTO		ROCK	148.0	20.0
453.2	MODESTO	ROCK BRANCH	COAL	1.0	168.0
452.2	MODESTO		ROCK	21.0	169.0
431.2	CARBONDALE	DANVILLE	COAL	1.0	190.0
430.2	CARBONDALE		ROCK	51.0	191.0
379.2	CARBONDALE	HERRIN	COAL	7.0	242.0
372.2	CARBONDALE		ROCK	10.0	249.0

MAPID: 11701108000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 35 QUARTERS/FOOTAGES: 2880' S line, 1395' W line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.95625 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.26747 DATE COLLECTED:

SURFACE ELEVATION (FT.): 612.3 LOGGED (FT.): 223.4 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES CORP. A-67-1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
396.1	CARBONDALE	HERRIN	COAL	5.3	216.2

MAPID: 11701108000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 35 QUARTERS/FOOTAGES: 2880' S line, 1395' W line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.95625 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.26747 DATE COLLECTED:

SURFACE ELEVATION (FT.): 612.0 LOGGED (FT.): 221.3 LOG TYPE: Survey Core Study

SOURCE: AYRSHIRE COLLIERIES CORP. A-67-1 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
420.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	8.3	192.0
411.7	MODESTO		GRAY SHALE	3.2	200.3
408.6	CARBONDALE		GRAY SHALE	4.6	203.4
404.0	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.3	208.0
400.7	CARBONDALE	ANNA	DARK GRAY SHALE	4.7	211.3
396.0	CARBONDALE	HERRIN	COAL	5.3	216.0

MAPID: 11790091000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 35 QUARTERS/FOOTAGES: 240' S line, 75' W line of SE NW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.956378 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.267495 DATE COLLECTED: 10 / 12 / 1967
 SURFACE ELEVATION (FT.): 612.3 LOGGED (FT.): 223.4 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES A67-1 WELL TYPE: Coal Test
 COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
612.3	PLEISTOCENE		UNCONSOLIDATED	94.0	0.0
518.3			ROCK	43.5	94.0
474.8			COAL	0.5	137.5
474.3			ROCK	77.9	138.0
396.4	CARBONDALE	HERRIN	COAL	0.3	215.9
396.1	CARBONDALE	HERRIN	COAL	5.3	216.2
390.9	CARBONDALE		ROCK	2.0	221.4

MAPID: 11701362000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 36 QUARTERS/FOOTAGES: SW SW SW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.94192 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.259959 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 626.0 LOGGED (FT.): 232.0 LOG TYPE: Drillers Log
 SOURCE: TRUAX-TRAER COAL CO CA-2 WELL TYPE: Coal Test
 COMMENT: CORE C-8750

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
400.0	CARBONDALE	HERRIN	COAL	5.5	226.0

MAPID: 11701362000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 36 QUARTERS/FOOTAGES: SW SW SW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.94192 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 39.259959 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 626.0 LOGGED (FT.): 231.5 LOG TYPE: Survey Core Study
 SOURCE: TRUAX-TRAER COAL CO CA-2 WELL TYPE: Coal Test
 COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
429.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	8.0	197.0
421.0	CARBONDALE		GRAY SHALE	12.0	205.0
409.0	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.0	217.0
405.0	CARBONDALE	LAWSON	MOTTLED SHALE	3.0	221.0
402.0	CARBONDALE	ANNA	GRAY SHALE	2.0	224.0
400.0	CARBONDALE	HERRIN	COAL	5.5	226.0

MAPID: 11790304000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 8W SECTION: 36 QUARTERS/FOOTAGES: 557' N line, 38' W line of NE SE
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.928581 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.264409 DATE COLLECTED: 8 / 11 / 1977
 SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 251.0 LOG TYPE: Drillers Log
 SOURCE: AMAX J98ZB WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.0	PLEISTOCENE		UNCONSOLIDATED	90.0	0.0
530.0			ROCK	142.0	90.0
388.0	CARBONDALE	HERRIN	COAL	4.6	232.0
383.4	CARBONDALE		ROCK	14.4	236.6

MAPID: 11790420000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 1 QUARTERS/FOOTAGES: 200' S line, 50' E line of NW SE
 QUADRANGLE: HETTICK LONGITUDE: -90.041606 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.338843 DATE COLLECTED: 1 / 22 / 1980
 SURFACE ELEVATION (FT.): 520.0 LOGGED (FT.): 86.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-027 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
520.0	PLEISTOCENE		UNCONSOLIDATED	44.0	0.0
476.0			ROCK	24.8	44.0
451.2	CARBONDALE	HERRIN	COAL	5.1	68.8
446.1	CARBONDALE		ROCK	12.1	73.9

MAPID: 11790176000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 2 QUARTERS/FOOTAGES: 48' S line, 39' E line of SW SE
 QUADRANGLE: HETTICK LONGITUDE: -90.05999 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.334623 DATE COLLECTED: 9 / 6 / 1968
 SURFACE ELEVATION (FT.): 562.1 LOGGED (FT.): 158.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 22 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
562.1	PLEISTOCENE		UNCONSOLIDATED	139.0	0.0
423.1			ROCK	19.0	139.0

MAPID: 11790422000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 2 QUARTERS/FOOTAGES: 40' S line, 90' W line of SW SW

QUADRANGLE: HETTICK LONGITUDE: -90.074294 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.334573 DATE COLLECTED: 1 / 22 / 1980

SURFACE ELEVATION (FT.): 518.2 LOGGED (FT.): 77.0 LOG TYPE: Drillers Log

SOURCE: AMAX 7-029 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
518.2	PLEISTOCENE		UNCONSOLIDATED	36.2	0.0	
482.0			ROCK	23.8	36.2	
458.2	CARBONDALE	HERRIN	COAL	7.7	60.0	
450.5	CARBONDALE		ROCK	9.3	67.7	

MAPID: 11723595000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 3 QUARTERS/FOOTAGES: 660' S line, 2630' W line

QUADRANGLE: HETTICK LONGITUDE: -90.083225 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 39.336365 DATE COLLECTED:

SURFACE ELEVATION (FT.): 572.0 LOGGED (FT.): 103.0 LOG TYPE: Drillers Log

SOURCE: PAUL FARMER 21 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
572.0	PLEISTOCENE		CLAY	20.0	0.0	TAN
552.0	PLEISTOCENE		CLAY	17.0	20.0	GRAY
535.0	PLEISTOCENE		GRAVEL	7.0	37.0	
528.0	PLEISTOCENE		CLAY	16.0	44.0	GRAY
512.0	PLEISTOCENE		SAND	3.0	60.0	BR
509.0	PLEISTOCENE		CLAY	15.0	63.0	GRAY
494.0			LIMESTONE	3.0	78.0	
491.0			SHALE WITH LIMESTONE	12.4	81.0	
478.6	CARBONDALE	BRERETON	LIMESTONE	1.4	93.4	
477.2	CARBONDALE	HERRIN	COAL	6.0	94.8	
471.2	CARBONDALE		UNDERCLAY	2.0	100.8	

MAPID: 11723596000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 3 QUARTERS/FOOTAGES: 1830' S line, 25' E line

QUADRANGLE: HETTICK LONGITUDE: -90.074289 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 39.339589 DATE COLLECTED:

SURFACE ELEVATION (FT.): 573.0 LOGGED (FT.): 93.0 LOG TYPE: Drillers Log

SOURCE: PAUL FARMER 22 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
573.0	PLEISTOCENE		CLAY	19.0	0.0	TAN
554.0	PLEISTOCENE		CLAY & GRAVEL	42.0	19.0	GRAY
512.0	PLEISTOCENE		GRAVEL	10.0	61.0	
502.0	PLEISTOCENE		CLAY	13.0	71.0	GRAY
489.0	CARBONDALE	BRERETON	LIMESTONE	2.0	84.0	
487.0	CARBONDALE	ENERGY	GRAY SHALE	0.4	86.0	
486.6	CARBONDALE	HERRIN	COAL	4.3	86.4	
482.3	CARBONDALE		UNDERCLAY	2.2	90.7	

MAPID: 11790182000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 3 QUARTERS/FOOTAGES: 31' S line, 690' W line of SW SE

QUADRANGLE: HETTICK LONGITUDE: -90.080892 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.334626 DATE COLLECTED: 9 / 11 / 1968

SURFACE ELEVATION (FT.): 557.8 LOGGED (FT.): 95.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE 29 WELL TYPE: Coal Test

COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
557.8	PLEISTOCENE		UNCONSOLIDATED	80.0	0.0	
477.8			ROCK	9.0	80.0	
468.8	CARBONDALE	HERRIN	COAL	5.0	89.0	
463.8	CARBONDALE		ROCK	1.0	94.0	

MAPID: 1179038000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 3 QUARTERS/FOOTAGES: 596' N line, 15' E line of SE NW
 QUADRANGLE: HETTICK LONGITUDE: -90.083861 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.341993 DATE COLLECTED: 12 / 5 / 1978
 SURFACE ELEVATION (FT.): 578.2 LOGGED (FT.): 150.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-023 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
578.2	PLEISTOCENE		UNCONSOLIDATED	73.5	0.0
504.7			ROCK	45.5	73.5
459.2	CARBONDALE	HERRIN	COAL	7.3	119.0
451.9	CARBONDALE		ROCK	23.7	126.3

MAPID: 11790387000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 3 QUARTERS/FOOTAGES: 560' N line, 20' W line of NW SW
 QUADRANGLE: HETTICK LONGITUDE: -90.09314 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.340246 DATE COLLECTED: 12 / 12 / 1978
 SURFACE ELEVATION (FT.): 537.0 LOGGED (FT.): 100.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-030 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
537.0	PLEISTOCENE		UNCONSOLIDATED	43.5	0.0
493.5			ROCK	30.2	43.5
463.3	CARBONDALE	HERRIN	COAL	7.3	73.7
456.0	CARBONDALE		ROCK	19.0	81.0

MAPID: 11790453000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 3 QUARTERS/FOOTAGES: 35' N line, 20' E line of NE NW
 QUADRANGLE: HETTICK LONGITUDE: -90.083825 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.34664 DATE COLLECTED: 2 / 25 / 1980
 SURFACE ELEVATION (FT.): 580.6 LOGGED (FT.): 136.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-060 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
580.6	PLEISTOCENE		UNCONSOLIDATED	72.1	0.0
508.5			ROCK	45.5	72.1
463.0	CARBONDALE	HERRIN	COAL	7.1	117.6
455.9	CARBONDALE		ROCK	11.3	124.7

MAPID: 11723594000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 4 QUARTERS/FOOTAGES: 1278' S line, 1310' W line

QUADRANGLE: HETTICK LONGITUDE: -90.106588 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 39.338173 DATE COLLECTED:

SURFACE ELEVATION (FT.): 565.0 LOGGED (FT.): 89.0 LOG TYPE: Drillers Log

SOURCE: PAUL FARMER 20 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
565.0	PLEISTOCENE		CLAY	14.0	0.0	TAN
551.0	PLEISTOCENE		CLAY	6.0	14.0	GRAY
545.0	PLEISTOCENE		GRAVEL	17.0	20.0	
528.0	PLEISTOCENE		CLAY	25.0	37.0	3; GY
503.0			LIMESTONE	3.0	62.0	GRAY
500.0	CARBONDALE	ENERGY	GRAY SHALE	17.8	65.0	GY SH
482.2	CARBONDALE	HERRIN	COAL	5.0	82.8	

MAPID: 11790177000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 4 QUARTERS/FOOTAGES: 30' S line, 670' W line of SE SW

QUADRANGLE: HETTICK LONGITUDE: -90.104184 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.334713 DATE COLLECTED: 9 / 6 / 1968

SURFACE ELEVATION (FT.): 562.6 LOGGED (FT.): 96.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE 23 WELL TYPE: Coal Test

COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
562.6	PLEISTOCENE		UNCONSOLIDATED	87.0	0.0	
475.6	CARBONDALE		ROCK	0.5	87.0	
475.1	CARBONDALE	HERRIN	COAL	5.9	87.5	
469.2	CARBONDALE		ROCK	2.6	93.4	

MAPID: 11790183000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 4 QUARTERS/FOOTAGES: 25' S line, 25' E line of SE SE

QUADRANGLE: HETTICK LONGITUDE: -90.092666 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.33462 DATE COLLECTED: 9 / 11 / 1968

SURFACE ELEVATION (FT.): 573.6 LOGGED (FT.): 98.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE 30 WELL TYPE: Coal Test

COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
573.6	PLEISTOCENE		UNCONSOLIDATED	84.0	0.0	
489.6			ROCK	9.0	84.0	
480.6	CARBONDALE	HERRIN	COAL	2.3	93.0	
478.3	CARBONDALE	HERRIN	CLAYSTONE	0.3	95.3	CLAY BAND
478.0	CARBONDALE	HERRIN	COAL	1.2	95.6	
476.8	CARBONDALE		ROCK	1.2	96.8	

MAPID: 11790382000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 4 QUARTERS/FOOTAGES: 20' N line, 220' W line of NW NE

QUADRANGLE: HETTICK LONGITUDE: -90.101055 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.34669 DATE COLLECTED: 12 / 5 / 1978

SURFACE ELEVATION (FT.): 545.4 LOGGED (FT.): 110.0 LOG TYPE: Drillers Log

SOURCE: AMAX 6-025 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.4	PLEISTOCENE		UNCONSOLIDATED	27.0	0.0	
518.4	MODESTO		ROCK	8.2	27.0	
510.2	CARBONDALE	DANVILLE	COAL	1.2	35.2	
509.0	CARBONDALE		ROCK	48.6	36.4	
460.4	CARBONDALE	HERRIN	COAL	5.5	85.0	
454.9	CARBONDALE		ROCK	19.5	90.5	

MAPID: 11790388000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 4 QUARTERS/FOOTAGES: 12' S line, 705' W line of SE SW
 QUADRANGLE: HETTICK LONGITUDE: -90.104624 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.335006 DATE COLLECTED: 12 / 12 / 1978
 SURFACE ELEVATION (FT.): 563.9 LOGGED (FT.): 150.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-031 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
563.9	PLEISTOCENE		UNCONSOLIDATED	93.0	0.0
470.9	CARBONDALE		ROCK	30.8	93.0
440.1	CARBONDALE	SPRINGFIELD	COAL	1.4	123.8
438.7	CARBONDALE		ROCK	24.8	125.2

MAPID: 11790443000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 4 QUARTERS/FOOTAGES: 556' S line, 20' W line of SE SW
 QUADRANGLE: HETTICK LONGITUDE: -90.107065 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.33652 DATE COLLECTED: 2 / 5 / 1980
 SURFACE ELEVATION (FT.): 571.3 LOGGED (FT.): 105.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-050 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
571.3	PLEISTOCENE		UNCONSOLIDATED	73.0	0.0
498.3			ROCK	13.9	73.0
484.4	CARBONDALE	HERRIN	COAL	4.3	86.9
480.1	CARBONDALE		ROCK	13.8	91.2

MAPID: 11790454000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 4 QUARTERS/FOOTAGES: 500' S line, 647' E line of NE SW
 QUADRANGLE: HETTICK LONGITUDE: -90.104767 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.339734 DATE COLLECTED: 2 / 20 / 1980
 SURFACE ELEVATION (FT.): 575.0 LOGGED (FT.): 117.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-061 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
575.0	PLEISTOCENE		UNCONSOLIDATED	74.6	0.0
500.4			ROCK	24.9	74.6
475.5	CARBONDALE	HERRIN	COAL	4.9	99.5
470.6	CARBONDALE		ROCK	12.6	104.4

MAPID: 11790455000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 4 QUARTERS/FOOTAGES: 380' S line, 25' E line of SE SE
 QUADRANGLE: HETTICK LONGITUDE: -90.093178 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.335476 DATE COLLECTED: 2 / 21 / 1980
 SURFACE ELEVATION (FT.): 573.2 LOGGED (FT.): 99.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-062 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
573.2	PLEISTOCENE		UNCONSOLIDATED	87.5	0.0
485.7			ROCK	4.9	87.5
480.8	CARBONDALE	HERRIN	COAL	3.0	92.4
477.8	CARBONDALE		ROCK	3.6	95.4

MAPID: 11790180000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 8 QUARTERS/FOOTAGES: 30' N line, 340' W line of NE NE
 QUADRANGLE: HETTICK LONGITUDE: -90.114791 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.334611 DATE COLLECTED: 9 / 10 / 1968
 SURFACE ELEVATION (FT.): 533.0 LOGGED (FT.): 98.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 27 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
533.0	PLEISTOCENE		UNCONSOLIDATED	44.0	0.0
489.0			ROCK	54.0	44.0

MAPID: 11790189000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 8 QUARTERS/FOOTAGES: 54' S line, 270' E line of SE SE
 QUADRANGLE: HETTICK LONGITUDE: -90.112009 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.320516 DATE COLLECTED: 9 / 19 / 1968
 SURFACE ELEVATION (FT.): 560.6 LOGGED (FT.): 128.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 46 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
560.6	PLEISTOCENE		UNCONSOLIDATED	128.0	0.0

MAPID: 11723593000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 9 QUARTERS/FOOTAGES: 35' N line, 900' E line

QUADRANGLE: HETTICK LONGITUDE: -90.095775 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 39.334474 DATE COLLECTED:

SURFACE ELEVATION (FT.): 565.0 LOGGED (FT.): 143.0 LOG TYPE: Drillers Log

SOURCE: PAUL FARMER 19 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
565.0	PLEISTOCENE		CLAY	24.0	0.0	TAN
541.0	PLEISTOCENE		CLAY, SAND & GRAVEL	16.0	24.0	GRAY
525.0	PLEISTOCENE		SAND	3.0	40.0	
522.0	PLEISTOCENE		CLAY	5.0	43.0	GRAY
517.0	PLEISTOCENE		GRAVEL	15.0	48.0	
502.0	PLEISTOCENE		CLAY	17.0	63.0	GRAY
485.0	CARBONDALE	HERRIN	COAL	2.4	80.0	
482.6	CARBONDALE		UNDERCLAY	12.4	82.4	
470.2			LIMESTONE	1.0	94.8	
469.2			GRAY SHALE	22.0	95.8	
447.2			SHALE/SANDSTONE/LIMESTONE	10.0	117.8	
437.2			SANDY LIMESTONE	7.4	127.8	
429.7			SHALE WITH LIMESTONE	7.4	135.3	

MAPID: 11790181000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 9 QUARTERS/FOOTAGES: 28' S line, 35' E line of SE NE

QUADRANGLE: HETTICK LONGITUDE: -90.092634 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.327412 DATE COLLECTED: 9 / 10 / 1968

SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 128.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE 28 WELL TYPE: Coal Test

COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
560.0	PLEISTOCENE		UNCONSOLIDATED	95.0	0.0	
465.0			ROCK	33.0	95.0	

MAPID: 11790445000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 10 QUARTERS/FOOTAGES: 35' N line, 70' W line of NE NW
 QUADRANGLE: HETTICK LONGITUDE: -90.088167 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.334372 DATE COLLECTED: 2 / 6 / 1980
 SURFACE ELEVATION (FT.): 572.4 LOGGED (FT.): 105.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-052 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
572.4	PLEISTOCENE		UNCONSOLIDATED	85.2	0.0
487.2			ROCK	6.3	85.2
480.9	CARBONDALE	HERRIN	COAL	3.5	91.5
477.4	CARBONDALE		ROCK	10.0	95.0

MAPID: 11790446000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 10 QUARTERS/FOOTAGES: 20' S line, 25' W line of NW NW
 QUADRANGLE: HETTICK LONGITUDE: -90.092947 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.330856 DATE COLLECTED: 2 / 6 / 1980
 SURFACE ELEVATION (FT.): 564.9 LOGGED (FT.): 135.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-053 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
564.9	PLEISTOCENE		UNCONSOLIDATED	110.0	0.0
454.9			ROCK	25.0	110.0

MAPID: 11790447000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 10 QUARTERS/FOOTAGES: 15' N line, 3' W line of NE SW
 QUADRANGLE: HETTICK LONGITUDE: -90.088422 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.326997 DATE COLLECTED: 2 / 7 / 1980
 SURFACE ELEVATION (FT.): 560.5 LOGGED (FT.): 135.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-054 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
560.5	PLEISTOCENE		UNCONSOLIDATED	110.0	0.0
450.5			ROCK	25.0	110.0

MAPID: 11790368000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 12 **QUARTERS/FOOTAGES:** 330' S line, 150' W line of SE NE
QUADRANGLE: HETTICK **LONGITUDE:** -90.040392 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.328413 **DATE COLLECTED:** 11 / 17 / 1978
SURFACE ELEVATION (FT.): 576.7 **LOGGED (FT.):** 157.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX 6-011 **WELL TYPE:** Coal Test
COMMENT: BARR-GREENFIELD BOX #44 GR

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
576.7	PLEISTOCENE		UNCONSOLIDATED	137.0	0.0	
439.7	CARBONDALE	HERRIN	COAL	5.2	137.0	TOP ERODED
434.5	CARBONDALE		ROCK	14.8	142.2	

MAPID: 11790371000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 12 **QUARTERS/FOOTAGES:** 455' S line, 460' W line of NE SW
QUADRANGLE: HETTICK **LONGITUDE:** -90.048569 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.323657 **DATE COLLECTED:** 11 / 19 / 1978
SURFACE ELEVATION (FT.): 570.3 **LOGGED (FT.):** 177.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX 6-014 **WELL TYPE:** Coal Test
COMMENT: BARR-GREENFIELD BOX #44 GR

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
570.3	PLEISTOCENE		UNCONSOLIDATED	141.2	0.0	
429.1			ROCK	35.8	141.2	

MAPID: 11790419000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 12 **QUARTERS/FOOTAGES:** 500' S line, 55' E line of NE NE
QUADRANGLE: HETTICK **LONGITUDE:** -90.036748 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.332585 **DATE COLLECTED:** 1 / 22 / 1980
SURFACE ELEVATION (FT.): 527.8 **LOGGED (FT.):** 105.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX 7-026 **WELL TYPE:** Coal Test
COMMENT: BARR-GREENFIELD BOX #44 CORE EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
527.8	PLEISTOCENE		UNCONSOLIDATED	74.5	0.0	
453.3			ROCK	8.6	74.5	
444.7	CARBONDALE	HERRIN	COAL	5.5	83.1	
439.2	CARBONDALE		ROCK	16.4	88.6	

MAPID: 11790421000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 12 QUARTERS/FOOTAGES: 100' S line, 60' E line of NW SE
 QUADRANGLE: HETTICK LONGITUDE: -90.041524 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.324043 DATE COLLECTED: 1 / 22 / 1980
 SURFACE ELEVATION (FT.): 559.1 LOGGED (FT.): 145.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-028 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
559.1	PLEISTOCENE		UNCONSOLIDATED	122.5	0.0
436.6			ROCK	3.3	122.5
433.3	CARBONDALE	HERRIN	COAL	5.9	125.8
427.4	CARBONDALE		ROCK	13.3	131.7

MAPID: 11790423000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 12 QUARTERS/FOOTAGES: 675' N line, 365' E line of SW SE
 QUADRANGLE: HETTICK LONGITUDE: -90.042671 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.322037 DATE COLLECTED: 1 / 23 / 1980
 SURFACE ELEVATION (FT.): 572.0 LOGGED (FT.): 165.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-030 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
572.0	PLEISTOCENE		UNCONSOLIDATED	138.0	0.0
434.0			ROCK	6.5	138.0
427.5	CARBONDALE	HERRIN	COAL	5.6	144.5
421.9	CARBONDALE		ROCK	14.9	150.1

MAPID: 11790310000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 13 QUARTERS/FOOTAGES: 4' N line, 397' W line of NE SW
 QUADRANGLE: HETTICK LONGITUDE: -90.049287 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.312675 DATE COLLECTED: 12 / 2 / 1980
 SURFACE ELEVATION (FT.): 573.7 LOGGED (FT.): 188.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 10-001 WELL TYPE: Coal Test
 COMMENT: CHESTERFIELD BOX #43 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
573.7	PLEISTOCENE		UNCONSOLIDATED	104.0	0.0
469.7	MODESTO		ROCK	13.0	104.0
456.7	CARBONDALE	DANVILLE	COAL	1.0	117.0
455.7	CARBONDALE		ROCK	50.4	118.0
405.3	CARBONDALE	HERRIN	COAL	5.6	168.4
399.7	CARBONDALE		ROCK	14.0	174.0

MAPID: 11790311000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 13 QUARTERS/FOOTAGES: 22' N line, 116' E line of NW SE

QUADRANGLE: HETTICK LONGITUDE: -90.041709 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.312589 DATE COLLECTED: 12 / 2 / 1980

SURFACE ELEVATION (FT.): 569.4 LOGGED (FT.): 178.0 LOG TYPE: Drillers Log

SOURCE: AMAX 10-002 WELL TYPE: Coal Test

COMMENT: CHESTERFIELD BOX #43 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
569.4	PLEISTOCENE		UNCONSOLIDATED	79.0	0.0
490.4	MODESTO		ROCK	19.7	79.0
470.7	CARBONDALE	DANVILLE	COAL	1.1	98.7
469.6	CARBONDALE		ROCK	51.7	99.8
417.9	CARBONDALE	HERRIN	COAL	8.5	151.5
409.4	CARBONDALE		ROCK	18.0	160.0

MAPID: 11790313000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 13 QUARTERS/FOOTAGES: 688' S line, 69' W line of SE SE

QUADRANGLE: HETTICK LONGITUDE: -90.04099 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.307273 DATE COLLECTED: 12 / 4 / 1980

SURFACE ELEVATION (FT.): 582.0 LOGGED (FT.): 168.0 LOG TYPE: Drillers Log

SOURCE: AMAX 10-004 WELL TYPE: Coal Test

COMMENT: CHESTERFIELD BOX #43 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
582.0	PLEISTOCENE		UNCONSOLIDATED	76.0	0.0
506.0	MODESTO		ROCK	15.6	76.0
490.4	CARBONDALE	DANVILLE	COAL	1.4	91.6
489.0	CARBONDALE		ROCK	56.1	93.0
432.9	CARBONDALE	HERRIN	COAL	5.6	149.1
427.3	CARBONDALE		ROCK	13.3	154.7

MAPID: 11790326000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 13 QUARTERS/FOOTAGES: 387' N line, 67' W line of NE NE
 QUADRANGLE: HETTICK LONGITUDE: -90.041121 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.318861 DATE COLLECTED: 12 / 11 / 1980
 SURFACE ELEVATION (FT.): 567.7 LOGGED (FT.): 178.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 10-017 WELL TYPE: Coal Test
 COMMENT: CHESTERFIELD BOX #43 EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
567.7	PLEISTOCENE		UNCONSOLIDATED	111.3	0.0
456.4			ROCK	24.0	111.3
432.4	CARBONDALE	HERRIN	COAL	4.9	135.3
427.5	CARBONDALE		ROCK	37.8	140.2

MAPID: 11790369000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 13 QUARTERS/FOOTAGES: 415' S line, 63' E line of NW NE
 QUADRANGLE: HETTICK LONGITUDE: -90.041569 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.31744 DATE COLLECTED: 11 / 18 / 1978
 SURFACE ELEVATION (FT.): 572.7 LOGGED (FT.): 156.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-012 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
572.7	PLEISTOCENE		UNCONSOLIDATED	108.7	0.0
464.0			ROCK	27.3	108.7
436.7	CARBONDALE	HERRIN	COAL	6.1	136.0
430.6	CARBONDALE		ROCK	13.9	142.1

MAPID: 11790318000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 14 QUARTERS/FOOTAGES: 76' S line, 332' W line of SW SE
 QUADRANGLE: HETTICK LONGITUDE: -90.063491 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.305642 DATE COLLECTED: 12 / 9 / 1980
 SURFACE ELEVATION (FT.): 566.3 LOGGED (FT.): 135.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 10-009 WELL TYPE: Coal Test
 COMMENT: CHESTERFIELD BOX #43 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
566.3	PLEISTOCENE		UNCONSOLIDATED	71.0	0.0
495.3			ROCK	39.6	71.0
455.7	CARBONDALE	HERRIN	COAL	5.6	110.6
450.1	CARBONDALE		ROCK	18.8	116.2

MAPID: 11790188000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 17 **QUARTERS/FOOTAGES:** 250' S line, 50' W line of SW SW
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.129671 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.30636 **DATE COLLECTED:** 9 / 19 / 1968
SURFACE ELEVATION (FT.): 548.2 **LOGGED (FT.):** 128.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE 45 **WELL TYPE:** Coal Test
COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
548.2	PLEISTOCENE		UNCONSOLIDATED	128.0	0.0	

MAPID: 11700573000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 18 **QUARTERS/FOOTAGES:** SE SE SE
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.131012 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.306559 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 542.0 **LOGGED (FT.):** 155.0 **LOG TYPE:** Drillers Log
SOURCE: ALUMINUM CO. OF AMERICA M.BOWMAN **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
392.0	CARBONDALE		COAL	2.0	150.0	BELOW HERRIN; PROBABLY #4

MAPID: 11700574000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 19 **QUARTERS/FOOTAGES:** NE SE NE
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.130942 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.301127 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 543.0 **LOGGED (FT.):** 145.0 **LOG TYPE:** Drillers Log
SOURCE: ALUMINUM CO. OF AMERICA M.BOWMAN **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
408.0	CARBONDALE		COAL	1.5	135.0	BELOW HERRIN; PROBABLY #4

MAPID: 11700576000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 20 **QUARTERS/FOOTAGES:** NW SE SW
QUADRANGLE: HETTICK **LONGITUDE:** -90.1238 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.293811 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 487.0 **LOGGED (FT.):** 104.0 **LOG TYPE:** Drillers Log
SOURCE: ALUMINUM CO. OF AMERICA M.BOWMAN **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
390.0	CARBONDALE		COAL	3.0	97.0	BELOW HERRIN; PROBABLY #4

MAPID: 1170058000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 21 **QUARTERS/FOOTAGES:** NW NW SE
QUADRANGLE: HETTICK **LONGITUDE:** -90.100624 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.297336 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 560.0 **LOGGED (FT.):** 165.0 **LOG TYPE:** Drillers Log
SOURCE: ALUMINUM CO. OF AMERICA J.PARKER **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
476.5	CARBONDALE	HERRIN	COAL	1.5	83.5	

MAPID: 11700581000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 21 **QUARTERS/FOOTAGES:** NW SE SE
QUADRANGLE: HETTICK **LONGITUDE:** -90.096123 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.29369 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 552.0 **LOGGED (FT.):** 100.0 **LOG TYPE:** Drillers Log
SOURCE: ALUMINUM CO. OF AMERICA J.PARKER **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
466.0	CARBONDALE	HERRIN	COAL	4.0	86.0	

MAPID: 11700582000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 21 **QUARTERS/FOOTAGES:** SE SE NE
QUADRANGLE: HETTICK **LONGITUDE:** -90.093778 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.299149 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 552.0 **LOGGED (FT.):** 100.0 **LOG TYPE:** Drillers Log
SOURCE: ALUMINUM CO. OF AMERICA J.PARKER **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
463.5	CARBONDALE	HERRIN	COAL	4.3	88.5	

MAPID: 11790316000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 22 QUARTERS/FOOTAGES: 1407' S line, 13' W line of SE

QUADRANGLE: HETTICK LONGITUDE: -90.083236 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.29476 DATE COLLECTED: 12 / 9 / 1980

SURFACE ELEVATION (FT.): 568.1 LOGGED (FT.): 125.0 LOG TYPE: Drillers Log

SOURCE: AMAX 10-007 WELL TYPE: Coal Test

COMMENT: CHESTERFIELD BOX #43 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
568.1	PLEISTOCENE		UNCONSOLIDATED	80.0	0.0	
488.1			ROCK	23.2	80.0	
464.9	CARBONDALE	HERRIN	COAL	4.3	103.2	
460.6	CARBONDALE		ROCK	17.5	107.5	

MAPID: 11790312000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 24 QUARTERS/FOOTAGES: 334' N line, 14' W line of NE NW

QUADRANGLE: HETTICK LONGITUDE: -90.050509 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.304484 DATE COLLECTED: 12 / 3 / 1980

SURFACE ELEVATION (FT.): 576.8 LOGGED (FT.): 178.0 LOG TYPE: Drillers Log

SOURCE: AMAX 10-003 WELL TYPE: Coal Test

COMMENT: CHESTERFIELD BOX #43 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
576.8	PLEISTOCENE		UNCONSOLIDATED	98.5	0.0	
478.3	MODESTO		ROCK	19.3	98.5	
459.0	CARBONDALE	DANVILLE	COAL	1.1	117.8	
457.9	CARBONDALE		ROCK	42.5	118.9	
415.4	CARBONDALE	HERRIN	COAL	5.5	161.4	
409.9	CARBONDALE		ROCK	11.1	166.9	

MAPID: 11790315000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 24 QUARTERS/FOOTAGES: 3450' N line, 640' W line

QUADRANGLE: HETTICK LONGITUDE: -90.052936 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.295934 DATE COLLECTED: 12 / 8 / 1980

SURFACE ELEVATION (FT.): 583.7 LOGGED (FT.): 149.0 LOG TYPE: Drillers Log

SOURCE: AMAX 10-006 WELL TYPE: Coal Test

COMMENT: CHESTERFIELD BOX #43 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
583.7	PLEISTOCENE		UNCONSOLIDATED	54.6	0.0
529.1	MODESTO		ROCK	43.1	54.6
486.0	CARBONDALE	DANVILLE	COAL	1.6	97.7
484.4	CARBONDALE		ROCK	39.7	99.3
444.7	CARBONDALE	HERRIN	COAL	5.6	139.0
439.1	CARBONDALE		ROCK	4.4	144.6

MAPID: 11790317000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 24 QUARTERS/FOOTAGES: 1735' N line, 88' E line of NE

QUADRANGLE: HETTICK LONGITUDE: -90.0415 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.30062 DATE COLLECTED: 12 / 9 / 1980

SURFACE ELEVATION (FT.): 545.1 LOGGED (FT.): 138.0 LOG TYPE: Drillers Log

SOURCE: AMAX 10-008 WELL TYPE: Coal Test

COMMENT: CHESTERFIELD BOX #43 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
545.1	PLEISTOCENE		UNCONSOLIDATED	40.0	0.0
505.1	MODESTO		ROCK	38.7	40.0
466.4	CARBONDALE	DANVILLE	COAL	0.9	78.7
465.5	CARBONDALE		ROCK	42.4	79.6
423.1	CARBONDALE	HERRIN	COAL	5.0	122.0
418.1	CARBONDALE		ROCK	11.0	127.0

MAPID: 11790325000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 25 QUARTERS/FOOTAGES: 326' N line, 46' W line of NW SE
 QUADRANGLE: HETTICK LONGITUDE: -90.045561 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.282641 DATE COLLECTED: 12 / 11 / 1980
 SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 176.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 10-016 WELL TYPE: Coal Test
 COMMENT: CHESTERFIELD BOX #43 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
600.0	PLEISTOCENE		UNCONSOLIDATED	83.0	0.0
517.0	MODESTO		ROCK	41.0	83.0
476.0	CARBONDALE	DANVILLE	COAL	1.5	124.0
474.5	CARBONDALE		ROCK	39.5	125.5
435.0	CARBONDALE	HERRIN	COAL	4.2	165.0
430.8	CARBONDALE		ROCK	6.8	169.2

MAPID: 11700601000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 26 QUARTERS/FOOTAGES: SE NW NE
 QUADRANGLE: HETTICK LONGITUDE: -90.060828 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.287996 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 520.0 LOGGED (FT.): 91.0 LOG TYPE: Drillers Log
 SOURCE: ALUMINUM CO. OF AMERICA T.STEVENS WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
478.0	CARBONDALE	DANVILLE	COAL	1.5	42.0
433.0	CARBONDALE	HERRIN	COAL	4.0	87.0

MAPID: 11790319000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 26 QUARTERS/FOOTAGES: 79' N line, 198' W line of NW NE
 QUADRANGLE: HETTICK LONGITUDE: -90.063858 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.290692 DATE COLLECTED: 12 / 9 / 1980
 SURFACE ELEVATION (FT.): 585.4 LOGGED (FT.): 160.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 10-010 WELL TYPE: Coal Test
 COMMENT: CHESTERFIELD BOX #43 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
585.4	PLEISTOCENE		UNCONSOLIDATED	54.6	0.0
530.8	MODESTO		ROCK	49.5	54.6
481.3	CARBONDALE	DANVILLE	COAL	0.9	104.1
480.4	CARBONDALE		ROCK	41.0	105.0
439.4	CARBONDALE	HERRIN	COAL	5.0	146.0
434.4	CARBONDALE		ROCK	9.0	151.0

MAPID: 11790328000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 26 QUARTERS/FOOTAGES: 524' N line, 292' W line of NW SE

QUADRANGLE: HETTICK LONGITUDE: -90.063382 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.282203 DATE COLLECTED: 12 / 15 / 1980

SURFACE ELEVATION (FT.): 578.3 LOGGED (FT.): 145.0 LOG TYPE: Drillers Log

SOURCE: AMAX 10-019 WELL TYPE: Coal Test

COMMENT: CHESTERFIELD BOX #43 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
578.3	PLEISTOCENE		UNCONSOLIDATED	59.5	0.0	
518.8	MODESTO		ROCK	26.8	59.5	
492.0	CARBONDALE	DANVILLE	COAL	1.2	86.3	
490.8	CARBONDALE		ROCK	45.0	87.5	
445.8	CARBONDALE	HERRIN	COAL	3.3	132.5	
442.5	CARBONDALE		ROCK	9.2	135.8	

MAPID: 11700586000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 27 QUARTERS/FOOTAGES: SE NE SW

QUADRANGLE: HETTICK LONGITUDE: -90.084123 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.280928 DATE COLLECTED:

SURFACE ELEVATION (FT.): 520.0 LOGGED (FT.): 64.0 LOG TYPE: Drillers Log

SOURCE: ALUMINUM CO. OF AMERICA A.REDDINGTN WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
463.0	CARBONDALE	HERRIN	COAL	4.5	57.0	

MAPID: 11700589000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 27 QUARTERS/FOOTAGES: NE NE NW

QUADRANGLE: HETTICK LONGITUDE: -90.084397 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.289962 DATE COLLECTED:

SURFACE ELEVATION (FT.): 565.0 LOGGED (FT.): 119.0 LOG TYPE: Drillers Log

SOURCE: ALUMINUM CO. OF AMERICA C.ROBINSON WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
488.0	CARBONDALE	DANVILLE	COAL	1.0	77.0	
452.0	CARBONDALE	HERRIN	COAL	4.5	113.0	

MAPID: 11790314000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 27 QUARTERS/FOOTAGES: 200' N line, 1' W line of NW SE
 QUADRANGLE: HETTICK LONGITUDE: -90.0832 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.283135 DATE COLLECTED: 12 / 4 / 1980
 SURFACE ELEVATION (FT.): 528.7 LOGGED (FT.): 98.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 10-005 WELL TYPE: Coal Test
 COMMENT: CHESTERFIELD BOX #43 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
528.7	PLEISTOCENE		UNCONSOLIDATED	23.0	0.0
505.7	MODESTO		ROCK	12.6	23.0
493.1	CARBONDALE	DANVILLE	COAL	0.8	35.6
492.3	CARBONDALE		ROCK	40.6	36.4
451.7	CARBONDALE	HERRIN	COAL	5.2	77.0
446.5	CARBONDALE		ROCK	15.8	82.2

MAPID: 11790327000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 27 QUARTERS/FOOTAGES: 25' N line, 1426' E line of NE NW
 QUADRANGLE: HETTICK LONGITUDE: -90.087673 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.290881 DATE COLLECTED: 12 / 15 / 1980
 SURFACE ELEVATION (FT.): 562.7 LOGGED (FT.): 115.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 10-018 WELL TYPE: Coal Test
 COMMENT: CHESTERFIELD BOX #43 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
562.7	PLEISTOCENE		UNCONSOLIDATED	81.0	0.0
481.7			ROCK	24.9	81.0
456.8	CARBONDALE	HERRIN	COAL	4.2	105.9
452.6	CARBONDALE		ROCK	4.9	110.1

MAPID: 11700590000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 28 QUARTERS/FOOTAGES: NE NE NE
 QUADRANGLE: HETTICK LONGITUDE: -90.093865 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.290047 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 565.0 LOGGED (FT.): 166.0 LOG TYPE: Drillers Log
 SOURCE: ALUMINUM CO. OF AMERICA C.TENDICK WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
461.0	CARBONDALE	HERRIN	COAL	3.0	104.0

MAPID: 11700595000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 28 **QUARTERS/FOOTAGES:** NW NW SW
QUADRANGLE: HETTICK **LONGITUDE:** -90.109607 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.282769 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 515.0 **LOGGED (FT.):** 66.0 **LOG TYPE:** Drillers Log
SOURCE: ALUMINUM CO. OF AMERICA M.V.DAMS **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
455.5	CARBONDALE	HERRIN	COAL	2.8	59.5	

MAPID: 11700664000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 28 **QUARTERS/FOOTAGES:** SE NW NW
QUADRANGLE: HETTICK **LONGITUDE:** -90.107406 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.288238 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 544.0 **LOGGED (FT.):** 86.0 **LOG TYPE:** Drillers Log
SOURCE: PEABODY C.C.,NORTHERN ILL.C.C.29 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
463.7	CARBONDALE	HERRIN	COAL	4.0	80.3	

MAPID: 11700664000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 28 **QUARTERS/FOOTAGES:** SE NW NW
QUADRANGLE: HETTICK **LONGITUDE:** -90.107406 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.288238 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 544.0 **LOGGED (FT.):** 84.0 **LOG TYPE:** Drillers Log
SOURCE: PEABODY C.C.,NORTHERN ILL.C.C.29 **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
476.0	MODESTO	PIASA	LIMESTONE	2.4	68.0	
473.6	CARBONDALE		GRAY SHALE	6.2	70.4	
467.4	CARBONDALE	BANKSTON FORK	LIMESTONE	3.1	76.6	
464.3	CARBONDALE	ANNA	CONGLOMERATE	1.2	79.7	
464.0	CARBONDALE	HERRIN	COAL	4.0	80.0	

MAPID: 11790322000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 28 QUARTERS/FOOTAGES: 56' S line, 13' W line of SW SE
 QUADRANGLE: HETTICK LONGITUDE: -90.101548 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.27664 DATE COLLECTED: 12 / 10 / 1980
 SURFACE ELEVATION (FT.): 566.1 LOGGED (FT.): 138.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 10-013 WELL TYPE: Coal Test
 COMMENT: CHESTERFIELD BOX #43 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
566.1	PLEISTOCENE		UNCONSOLIDATED	63.0	0.0	
503.1	MODESTO		ROCK	11.1	63.0	
492.0	CARBONDALE	DANVILLE	COAL	1.1	74.1	
490.9	CARBONDALE		ROCK	46.6	75.2	
444.3	CARBONDALE	HERRIN	COAL	4.5	121.8	
439.8	CARBONDALE		ROCK	11.7	126.3	

MAPID: 11700429000C VERSION: 1

PROJECT: CIRC 71

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 29 QUARTERS/FOOTAGES: NW SE NE
 QUADRANGLE: HETTICK LONGITUDE: -90.114314 GEOLOGIST: J.N. PAYNE
 CONFIDENTIAL: N LATITUDE: 39.286438 DATE COLLECTED: 0 / 0 / 1916
 SURFACE ELEVATION (FT.): 610.0 LOGGED (FT.): 500.0 LOG TYPE:
 SOURCE: MILLER OC WELL TYPE: Oil and Gas Test
 COMMENT: DATA SUSPECT, NOT USED IN CALCULATIONS

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

MAPID: 11700596000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 29 QUARTERS/FOOTAGES: NW NW SE
 QUADRANGLE: HETTICK LONGITUDE: -90.118964 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.282802 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 552.0 LOGGED (FT.): 92.0 LOG TYPE: Drillers Log
 SOURCE: ALUMINUM CO. OF AMERICA L.SARGINSN WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
466.0	CARBONDALE	HERRIN	COAL	6.0	86.0	

MAPID: 11700665000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 29 **QUARTERS/FOOTAGES:** NW NE SE
QUADRANGLE: HETTICK **LONGITUDE:** -90.114271 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.282783 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 530.0 **LOGGED (FT.):** 65.0 **LOG TYPE:** Drillers Log
SOURCE: PEABODY C.C.,NORTHERN ILL.C.C.65C **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
470.8	CARBONDALE	HERRIN	COAL	5.3	59.2	

MAPID: 11700665000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 29 **QUARTERS/FOOTAGES:** NW NE SE
QUADRANGLE: HETTICK **LONGITUDE:** -90.114271 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.282783 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 530.0 **LOGGED (FT.):** 62.3 **LOG TYPE:** Drillers Log
SOURCE: PEABODY C.C.,NORTHERN ILL.C.C.65C **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
482.0	MODESTO	PIASA	LIMESTONE	0.9	48.0	
481.1	CARBONDALE		SILTY SHALE	1.2	48.9	
479.8	CARBONDALE	BANKSTON FORK	LIMESTONE	8.7	50.2	
471.2	CARBONDALE	ANNA	SILTY SHALE	0.3	58.8	
471.0	CARBONDALE	HERRIN	COAL	3.3	59.0	

MAPID: 11700666000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 29 **QUARTERS/FOOTAGES:** SW SE NW
QUADRANGLE: HETTICK **LONGITUDE:** -90.12368 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.28466 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 547.0 **LOGGED (FT.):** 90.0 **LOG TYPE:** Drillers Log
SOURCE: PEABODY C.C.,NORTHERN ILL.C.C.73 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
467.3	CARBONDALE	HERRIN	COAL	5.3	79.7	

MAPID: 11790001000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 29 **QUARTERS/FOOTAGES:**
QUADRANGLE: HETTICK **LONGITUDE:** -90.120148 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.283724 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 0.0 **LOG TYPE:** Company map
SOURCE: NORTHERN ILLINOIS COAL CORP. **WELL TYPE:** Coal Test
COMMENT: LOCS OF HOLES FOR SECS.20,21,28-31

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	-		LOCS SHOWN ON MAPS IN MAP CASE #6

MAPID: 11790033000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 29 **QUARTERS/FOOTAGES:** 1073' N line, 322' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.12846 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.288163 **DATE COLLECTED:** 10 / 22 / 1955
SURFACE ELEVATION (FT.): 547.9 **LOGGED (FT.):** 75.9 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 332 **WELL TYPE:** Coal Test
COMMENT: CURTIS RANDS PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
547.9	PLEISTOCENE		UNCONSOLIDATED	67.1	0.0	
480.8	CARBONDALE	ANNA	BLACK SHALE	1.3	67.1	
479.5	CARBONDALE	HERRIN	COAL	5.6	68.4	
473.9	CARBONDALE		UNDERCLAY	1.9	74.0	

MAPID: 11790037000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 29 **QUARTERS/FOOTAGES:** 951' N line, 1470' W line
QUADRANGLE: HETTICK **LONGITUDE:** -90.124388 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.288466 **DATE COLLECTED:** 10 / 27 / 1955
SURFACE ELEVATION (FT.): 544.7 **LOGGED (FT.):** 29.9 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 336 **WELL TYPE:** Coal Test
COMMENT: SAWTELL PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
544.7	PLEISTOCENE		UNCONSOLIDATED	23.8	0.0	
520.9	CARBONDALE	ANNA	BLACK SHALE	0.7	23.8	
520.3	CARBONDALE	HERRIN	COAL	3.4	24.4	
516.9	CARBONDALE		UNDERCLAY	2.1	27.8	

MAPID: 11790038000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 29 QUARTERS/FOOTAGES: 1081' N line, 1545' W line
 QUADRANGLE: HETTICK LONGITUDE: -90.124115 GEOLOGIST: MCBETH
 CONFIDENTIAL: N LATITUDE: 39.288103 DATE COLLECTED: 10 / 27 / 1955
 SURFACE ELEVATION (FT.): 518.9 LOGGED (FT.): 21.3 LOG TYPE: Drillers Log
 SOURCE: NORTHERN ILLINOIS COAL CORP. 337 WELL TYPE: Coal Test
 COMMENT: SAWTELL PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
518.9	PLEISTOCENE		UNCONSOLIDATED	13.6	0.0	
505.3	CARBONDALE	ANNA	BLACK SHALE	1.3	13.6	
504.0	CARBONDALE	HERRIN	MINE OPENING	4.8	14.9	OLD WORKS
499.2	CARBONDALE		UNDERCLAY	1.6	19.7	

MAPID: 11790039000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 29 QUARTERS/FOOTAGES:
 QUADRANGLE: HETTICK LONGITUDE: -90.120148 GEOLOGIST: MCBETH
 CONFIDENTIAL: N LATITUDE: 39.283724 DATE COLLECTED: 10 / 27 / 1955
 SURFACE ELEVATION (FT.): 514.6 LOGGED (FT.): 30.1 LOG TYPE: Drillers Log
 SOURCE: NORTHERN ILLINOIS COAL CORP. 338 WELL TYPE: Coal Test
 COMMENT: SAWTELL PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
514.6	PLEISTOCENE		UNCONSOLIDATED	19.1	0.0	
495.5	CARBONDALE	HERRIN	COAL	4.6	19.1	TOP ERODED
490.9	CARBONDALE		UNDERCLAY	2.2	23.7	
488.8	CARBONDALE		LIMESTONE	4.3	25.8	

MAPID: 11790040000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 29 QUARTERS/FOOTAGES: 610' N line, 1814' W line
 QUADRANGLE: HETTICK LONGITUDE: -90.123182 GEOLOGIST: MCBETH
 CONFIDENTIAL: N LATITUDE: 39.289397 DATE COLLECTED: 10 / 27 / 1955
 SURFACE ELEVATION (FT.): 533.6 LOGGED (FT.): 42.1 LOG TYPE: Drillers Log
 SOURCE: NORTHERN ILLINOIS COAL CORP. 339 WELL TYPE: Coal Test
 COMMENT: SAWTELL PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
533.6	PLEISTOCENE		UNCONSOLIDATED	34.6	0.0	
499.0	CARBONDALE	ANNA	BLACK SHALE	0.8	34.6	
498.2	CARBONDALE	HERRIN	COAL	4.8	35.4	
493.4	CARBONDALE		UNDERCLAY	1.9	40.2	

MAPID: 11790041000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 29 **QUARTERS/FOOTAGES:** 1460' N line, 1302' W line
QUADRANGLE: HETTICK **LONGITUDE:** -90.124962 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.287063 **DATE COLLECTED:** 10 / 27 / 1955
SURFACE ELEVATION (FT.): 542.5 **LOGGED (FT.):** 54.6 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 340 **WELL TYPE:** Coal Test
COMMENT: JOHNSON PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
542.5	PLEISTOCENE		UNCONSOLIDATED	39.1	0.0	
503.4	CARBONDALE	BRERETON	LIMESTONE	6.8	39.1	
496.7	CARBONDALE	ANNA	BLACK SHALE	0.8	45.8	
495.9	CARBONDALE	HERRIN	COAL	6.1	46.6	
489.8	CARBONDALE		UNDERCLAY	1.9	52.7	

MAPID: 11790042000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 29 **QUARTERS/FOOTAGES:** 725' N line, 1998' E line
QUADRANGLE: HETTICK **LONGITUDE:** -90.117914 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.289036 **DATE COLLECTED:** 10 / 24 / 1955
SURFACE ELEVATION (FT.): 501.0 **LOGGED (FT.):** 7.1 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 341 **WELL TYPE:** Coal Test
COMMENT: O. WAGNER PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
501.0	PLEISTOCENE		UNCONSOLIDATED	5.3	0.0	
495.7	CARBONDALE		LIMESTONE	1.8	5.3	

MAPID: 11790043000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 29 **QUARTERS/FOOTAGES:** 492' N line, 1689' E line
QUADRANGLE: HETTICK **LONGITUDE:** -90.116822 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.289668 **DATE COLLECTED:** 10 / 24 / 1955
SURFACE ELEVATION (FT.): 522.5 **LOGGED (FT.):** 29.2 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 342 **WELL TYPE:** Coal Test
COMMENT: O. WAGNER PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
522.5	PLEISTOCENE		UNCONSOLIDATED	24.1	0.0	
498.4	CARBONDALE		GRAY SHALE	1.7	24.1	
496.7	CARBONDALE	HERRIN	MINE OPENING	3.4	25.8	OLD WORKS

MAPID: 11790044000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 29 QUARTERS/FOOTAGES: 732' N line, 1580' E line

QUADRANGLE: HETTICK LONGITUDE: -90.116429 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.289002 DATE COLLECTED: 10 / 24 / 1955

SURFACE ELEVATION (FT.): 525.8 LOGGED (FT.): 37.8 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 343 WELL TYPE: Coal Test

COMMENT: O. WAGNER PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
525.8	PLEISTOCENE		UNCONSOLIDATED	24.4	0.0
501.4	CARBONDALE	BRERETON	LIMESTONE	6.2	24.4
495.2	CARBONDALE	ANNA	BLACK SHALE	0.3	30.6
494.9	CARBONDALE	HERRIN	COAL	4.8	30.9
490.1	CARBONDALE		UNDERCLAY	2.2	35.7

MAPID: 11790045000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 29 QUARTERS/FOOTAGES:

QUADRANGLE: HETTICK LONGITUDE: -90.120148 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.283724 DATE COLLECTED: 10 / 24 / 1955

SURFACE ELEVATION (FT.): 550.6 LOGGED (FT.): 70.7 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 344 WELL TYPE: Coal Test

COMMENT: O. WAGNER PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
550.6	PLEISTOCENE		UNCONSOLIDATED	46.4	0.0
504.2	CARBONDALE		LIMESTONE	0.8	46.4
503.4	CARBONDALE		GRAY SHALE	0.6	47.2
502.8	CARBONDALE		LIMESTONE	11.1	47.8
491.8	CARBONDALE		DARK SHALE	1.8	58.8
490.0	CARBONDALE	ANNA	BLACK SHALE	2.3	60.6
487.7	CARBONDALE	HERRIN	COAL	6.3	62.9
481.4	CARBONDALE		UNDERCLAY	1.4	69.2

MAPID: 11790046000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 29 **QUARTERS/FOOTAGES:** 937' N line, 1356' E line
QUADRANGLE: HETTICK **LONGITUDE:** -90.115628 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.28843 **DATE COLLECTED:** 10 / 24 / 1955
SURFACE ELEVATION (FT.): 521.4 **LOGGED (FT.):** 34.6 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 345 **WELL TYPE:** Coal Test
COMMENT: O. WAGNER PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
521.4	PLEISTOCENE		UNCONSOLIDATED	24.8	0.0
496.6	CARBONDALE	BRERETON	LIMESTONE	4.5	24.8
492.1	CARBONDALE	HERRIN	MINE OPENING	5.3	29.3

MAPID: 11790047000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 29 **QUARTERS/FOOTAGES:** 1699' S line, 1268' W line
QUADRANGLE: HETTICK **LONGITUDE:** -90.124987 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.281089 **DATE COLLECTED:** 10 / 25 / 1955
SURFACE ELEVATION (FT.): 547.6 **LOGGED (FT.):** 82.2 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 346 **WELL TYPE:** Coal Test
COMMENT: CURTIS RAND PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
547.6	PLEISTOCENE		UNCONSOLIDATED	72.8	0.0
474.8	CARBONDALE	ANNA	BLACK SHALE	1.3	72.8
473.5	CARBONDALE	HERRIN	COAL	6.2	74.1
467.3	CARBONDALE		UNDERCLAY	1.9	80.3

MAPID: 11790052000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 29 **QUARTERS/FOOTAGES:** 1234' S line, 753' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.126795 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.279807 **DATE COLLECTED:** 10 / 26 / 1955
SURFACE ELEVATION (FT.): 543.4 **LOGGED (FT.):** 73.4 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 351 **WELL TYPE:** Coal Test
COMMENT: CURTIS RAND PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
543.4	PLEISTOCENE		UNCONSOLIDATED	69.4	0.0
474.0	CARBONDALE	ANNA	BLACK SHALE	0.4	69.4
473.6	CARBONDALE	HERRIN	COAL	1.4	69.8 SOFT
472.1	CARBONDALE		UNDERCLAY	2.2	71.3

MAPID: 11790067000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 29 QUARTERS/FOOTAGES: 2515' N line, 1680' W line

QUADRANGLE: HETTICK LONGITUDE: -90.123572 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.284142 DATE COLLECTED: 11 / 3 / 1955

SURFACE ELEVATION (FT.): 550.3 LOGGED (FT.): 85.5 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 368 WELL TYPE: Coal Test

COMMENT: JOHNSON PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
550.3	PLEISTOCENE		UNCONSOLIDATED	46.8	0.0
503.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.3	46.8
497.2	CARBONDALE		DARK SHALE	22.1	53.1
475.1	CARBONDALE	ANNA	BLACK SHALE	1.7	75.2
473.5	CARBONDALE	HERRIN	COAL	6.8	76.8
466.7	CARBONDALE		UNDERCLAY	1.9	83.6

MAPID: 11790068000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 29 QUARTERS/FOOTAGES: 2213' N line, 1297' W line

QUADRANGLE: HETTICK LONGITUDE: -90.124947 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.284987 DATE COLLECTED: 11 / 3 / 1955

SURFACE ELEVATION (FT.): 543.8 LOGGED (FT.): 81.1 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CROP. 369 WELL TYPE: Coal Test

COMMENT: JOHNSON PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
543.8	PLEISTOCENE		UNCONSOLIDATED	33.7	0.0
510.1			LIMESTONE	1.6	33.7
508.5			GRAY SHALE	10.1	35.3
498.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.8	45.3
493.6	CARBONDALE		GRAY SHALE	19.5	50.2
474.1	CARBONDALE	ANNA	BLACK SHALE	2.6	69.7
471.6	CARBONDALE	HERRIN	COAL	7.1	72.2
464.5	CARBONDALE		UNDERCLAY	1.8	79.3

MAPID: 11790069000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 29 QUARTERS/FOOTAGES: 1979' N line, 1653' W line

QUADRANGLE: HETTICK LONGITUDE: -90.123692 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.285621 DATE COLLECTED: 11 / 4 / 1955

SURFACE ELEVATION (FT.): 542.0 LOGGED (FT.): 82.8 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 370 WELL TYPE: Coal Test

COMMENT: JOHNSON PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
542.0	PLEISTOCENE		UNCONSOLIDATED	31.8	0.0
510.2	CARBONDALE		GRAY SHALE	9.9	31.8
500.3	CARBONDALE		LIMESTONE	7.9	41.7
492.4	CARBONDALE		GRAY SHALE	22.2	49.6
470.2	CARBONDALE	ANNA	BLACK SHALE	2.1	71.8
468.2	CARBONDALE	HERRIN	COAL	7.3	73.8
460.9			UNDERCLAY	1.7	81.1

MAPID: 11790070000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 29 QUARTERS/FOOTAGES: 1291' N line, 2260' W line

QUADRANGLE: HETTICK LONGITUDE: -90.121566 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.287504 DATE COLLECTED: 11 / 4 / 1955

SURFACE ELEVATION (FT.): 544.7 LOGGED (FT.): 70.7 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CROP. 371 WELL TYPE: Coal Test

COMMENT: SAWTELL PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
544.7	PLEISTOCENE		UNCONSOLIDATED	40.7	0.0
504.0	CARBONDALE		LIMESTONE	2.1	40.7
501.9	CARBONDALE		GRAY SHALE	18.2	42.8
483.8	CARBONDALE	ANNA	BLACK SHALE	1.3	60.9
482.5	CARBONDALE	HERRIN	COAL	6.7	62.2
475.9	CARBONDALE		UNDERCLAY	1.8	68.8

MAPID: 11790071000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 29 QUARTERS/FOOTAGES: 1101' N line, 2453' E line

QUADRANGLE: HETTICK LONGITUDE: -90.119518 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.288011 DATE COLLECTED: 11 / 4 / 1955

SURFACE ELEVATION (FT.): 547.0 LOGGED (FT.): 70.3 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 372 WELL TYPE: Coal Test

COMMENT: O. WAGNER PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
547.0	PLEISTOCENE		UNCONSOLIDATED	45.8	0.0
501.2	CARBONDALE		GRAY SHALE	16.3	45.8
484.9	CARBONDALE	ANNA	BLACK SHALE	1.3	62.1
483.7	CARBONDALE	HERRIN	COAL	5.1	63.3
478.6	CARBONDALE		UNDERCLAY	1.9	68.4

MAPID: 11790072000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 29 QUARTERS/FOOTAGES: 2245' S line, 1256' W line

QUADRANGLE: HETTICK LONGITUDE: -90.125054 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.282596 DATE COLLECTED: 11 / 5 / 1955

SURFACE ELEVATION (FT.): 550.8 LOGGED (FT.): 88.8 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 374 WELL TYPE: Coal Test

COMMENT: CURTIS RAND PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
550.8	PLEISTOCENE		UNCONSOLIDATED	51.7	0.0
499.1	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	51.7
495.9	CARBONDALE		GRAY SHALE	24.8	54.9
471.1	CARBONDALE	ANNA	BLACK SHALE	0.6	79.7
470.5	CARBONDALE	HERRIN	COAL	6.7	80.3
463.9	CARBONDALE		UNDERCLAY	1.8	86.9

MAPID: 11790073000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 29 QUARTERS/FOOTAGES: 2345' S line, 566' W line

QUADRANGLE: GREENFIELD LONGITUDE: -90.127511 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.282876 DATE COLLECTED: 11 / 5 / 1955

SURFACE ELEVATION (FT.): 540.3 LOGGED (FT.): 75.0 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 376 WELL TYPE: Coal Test

COMMENT: CURTIS RAND PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
540.3	PLEISTOCENE		UNCONSOLIDATED	37.2	0.0
503.1	CARBONDALE	BANKSTON FORK	LIMESTONE	3.6	37.2
499.5	CARBONDALE		GRAY SHALE	25.3	40.8
474.2	CARBONDALE	ANNA	BLACK SHALE	0.8	66.1
473.5	CARBONDALE	HERRIN	COAL	6.4	66.8
467.0	CARBONDALE		UNDERCLAY	1.8	73.3

MAPID: 11790074000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 29 QUARTERS/FOOTAGES: 1845' S line, 922' W line

QUADRANGLE: GREENFIELD LONGITUDE: -90.126224 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.281494 DATE COLLECTED: 11 / 5 / 1955

SURFACE ELEVATION (FT.): 547.9 LOGGED (FT.): 87.5 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 377 WELL TYPE: Coal Test

COMMENT: CURTIS RAND PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
547.9	PLEISTOCENE		UNCONSOLIDATED	49.7	0.0
498.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	49.7
493.7	CARBONDALE		GRAY SHALE	23.3	54.2
470.5	CARBONDALE	ANNA	BLACK SHALE	1.7	77.4
468.8	CARBONDALE	HERRIN	COAL	6.6	79.1
462.2	CARBONDALE		UNDERCLAY	1.8	85.7

MAPID: 11790075000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 29 QUARTERS/FOOTAGES: 1517' S line, 1242' W line

QUADRANGLE: HETTICK LONGITUDE: -90.125072 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.280586 DATE COLLECTED: 11 / 8 / 1955

SURFACE ELEVATION (FT.): 545.5 LOGGED (FT.): 74.2 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 378 WELL TYPE: Coal Test

COMMENT: CURTIS RAND PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
545.5	PLEISTOCENE		UNCONSOLIDATED	42.1	0.0
503.4	CARBONDALE	BANKSTON FORK	LIMESTONE	1.1	42.1
502.3	CARBONDALE		GRAY SHALE	23.5	43.2
478.8	CARBONDALE	ANNA	BLACK SHALE	0.8	66.7
478.0	CARBONDALE	HERRIN	COAL	5.7	67.5
472.3	CARBONDALE		UNDERCLAY	1.1	73.2

MAPID: 11790076000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 29 QUARTERS/FOOTAGES: 1381' S line, 1210' W line

QUADRANGLE: GREENFIELD LONGITUDE: -90.125179 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.28021 DATE COLLECTED: 11 / 8 / 1955

SURFACE ELEVATION (FT.): 548.4 LOGGED (FT.): 73.4 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 379 WELL TYPE: Coal Test

COMMENT: CURTIS RAND PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
548.4	PLEISTOCENE		UNCONSOLIDATED	40.6	0.0
507.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.7	40.6
506.1	CARBONDALE		GRAY SHALE	22.6	42.3
483.6	CARBONDALE	ANNA	BLACK SHALE	1.8	64.8
481.8	CARBONDALE	HERRIN	COAL	5.1	66.6
476.7	CARBONDALE		UNDERCLAY	1.8	71.7

MAPID: 11790080000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 29 **QUARTERS/FOOTAGES:** 745' N line, 2268' E line
QUADRANGLE: HETTICK **LONGITUDE:** -90.118873 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.288987 **DATE COLLECTED:** 11 / 7 / 1955
SURFACE ELEVATION (FT.): 512.8 **LOGGED (FT.):** 27.8 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 383 **WELL TYPE:** Coal Test
COMMENT: O. WAGNER PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
512.8	PLEISTOCENE		UNCONSOLIDATED	17.6	0.0	
495.2	CARBONDALE		LIMESTONE	1.8	17.6	
493.5	CARBONDALE		GRAY SHALE	4.8	19.3	
488.7	CARBONDALE	ANNA	BLACK SHALE	0.7	24.1	
488.0	CARBONDALE	HERRIN	COAL	1.3	24.8	
486.8	CARBONDALE		MINE OPENING	1.8	26.0	OLD WORKS

MAPID: 11790081000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 29 **QUARTERS/FOOTAGES:** 836' N line, 2315' E line
QUADRANGLE: HETTICK **LONGITUDE:** -90.119037 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.288737 **DATE COLLECTED:** 11 / 7 / 1955
SURFACE ELEVATION (FT.): 518.3 **LOGGED (FT.):** 35.4 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 384 **WELL TYPE:** Coal Test
COMMENT: O. WAGNER PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
518.3	PLEISTOCENE		UNCONSOLIDATED	22.5	0.0	
495.8	CARBONDALE	BRERETON	LIMESTONE	2.3	22.5	
493.5	CARBONDALE	ANNA	GRAY SHALE	4.3	24.8	
489.2	CARBONDALE	HERRIN	MINE OPENING	6.3	29.1	OLD WORKS

MAPID: 11700598000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 30 **QUARTERS/FOOTAGES:** SE SW SE
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.135237 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.277393 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 520.0 **LOGGED (FT.):** 41.2 **LOG TYPE:** Drillers Log
SOURCE: ALUMINUM CO. OF AMERICA O.WATSON **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
487.5	CARBONDALE	HERRIN	COAL	6.3	32.5	

MAPID: 11700667000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 30 **QUARTERS/FOOTAGES:** NW SE SW
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.142245 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.279301 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 544.0 **LOGGED (FT.):** 72.0 **LOG TYPE:** Drillers Log
SOURCE: PEABODY C.C.,NORTHERN ILL.C.C.54 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
483.9	CARBONDALE	HERRIN	COAL	8.1	60.1	

MAPID: 11700667000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 30 **QUARTERS/FOOTAGES:** NW SE SW
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.142245 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.279301 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 544.0 **LOGGED (FT.):** 68.1 **LOG TYPE:** Drillers Log
SOURCE: PEABODY C.C.,NORTHERN ILL.C.C.54 **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
498.1	CARBONDALE	ANNA	SILTY SHALE	14.1	45.9	
484.0	CARBONDALE	HERRIN	COAL	8.1	60.0	

MAPID: 11790011000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 30 **QUARTERS/FOOTAGES:** 32' S line, 539' E line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.131333 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.276517 **DATE COLLECTED:** 10 / 12 / 1955
SURFACE ELEVATION (FT.): 543.5 **LOGGED (FT.):** 54.0 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 309 **WELL TYPE:** Coal Test
COMMENT: CURTIS RAND PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
543.5	PLEISTOCENE		UNCONSOLIDATED	39.3	0.0	
504.2	CARBONDALE		LIMESTONE	1.6	39.3	
502.7	CARBONDALE		GRAY SHALE	4.6	40.8	
498.1	CARBONDALE	ANNA	BLACK SHALE	0.8	45.4	
497.3	CARBONDALE	HERRIN	COAL	5.9	46.2	
491.4	CARBONDALE		UNDERCLAY	1.9	52.1	

MAPID: 11790012000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 30 **QUARTERS/FOOTAGES:** 210' S line, 432' E line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.130961 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.277002 **DATE COLLECTED:** 10 / 12 / 1955
SURFACE ELEVATION (FT.): 545.4 **LOGGED (FT.):** 57.8 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 310 **WELL TYPE:** Coal Test
COMMENT: CURTIS RAND PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.4	PLEISTOCENE		UNCONSOLIDATED	50.1	0.0	
495.3	CARBONDALE	ANNA	BLACK SHALE	0.8	50.1	
494.6	CARBONDALE	HERRIN	COAL	4.8	50.8	
489.7	CARBONDALE		UNDERCLAY	2.2	55.7	

MAPID: 11790019000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 30 **QUARTERS/FOOTAGES:**
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.138848 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.283841 **DATE COLLECTED:** 10 / 18 / 1955
SURFACE ELEVATION (FT.): 490.4 **LOGGED (FT.):** 14.8 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 318 **WELL TYPE:** Coal Test
COMMENT: LLOYD STONE PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
490.4	PLEISTOCENE		UNCONSOLIDATED	9.9	0.0	
480.5	CARBONDALE	ANNA	BLACK SHALE	0.4	9.9	
480.1	CARBONDALE	HERRIN	COAL	2.4	10.3	
477.6	CARBONDALE		UNDERCLAY	2.0	12.8	

MAPID: 11790020000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 30 **QUARTERS/FOOTAGES:** 157' S line, 722' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.145435 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.27703 **DATE COLLECTED:** 10 / 18 / 1955
SURFACE ELEVATION (FT.): 504.7 **LOGGED (FT.):** 34.4 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 319 **WELL TYPE:** Coal Test
COMMENT: LLOYD STONE PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
504.7	PLEISTOCENE		UNCONSOLIDATED	26.6	0.0	
478.1			SHALE WITH LIMESTONE	7.8	26.6	

MAPID: 11790021000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 30 **QUARTERS/FOOTAGES:** 374' S line, 1012' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.144418 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.277618 **DATE COLLECTED:** 10 / 18 / 1955
SURFACE ELEVATION (FT.): 529.3 **LOGGED (FT.):** 64.8 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 320 **WELL TYPE:** Coal Test
COMMENT: LLOYD STONE PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
529.3	PLEISTOCENE		UNCONSOLIDATED	54.2	0.0	
475.1			SHALE WITH LIMESTONE	10.6	54.2	

MAPID: 11790024000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 30 **QUARTERS/FOOTAGES:** 548' S line, 1402' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.143044 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.278082 **DATE COLLECTED:** 10 / 19 / 1955
SURFACE ELEVATION (FT.): 536.3 **LOGGED (FT.):** 57.3 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 323 **WELL TYPE:** Coal Test
COMMENT: LLOYD STONE PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
536.3	PLEISTOCENE		UNCONSOLIDATED	50.3	0.0	
486.0	CARBONDALE	HERRIN	COAL	5.1	50.3	SOFT, TOP ERODED
480.9	CARBONDALE		UNDERCLAY	1.9	55.4	

MAPID: 11790025000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 30 **QUARTERS/FOOTAGES:** 462' N line, 1735' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.142135 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.289902 **DATE COLLECTED:** 10 / 19 / 1955
SURFACE ELEVATION (FT.): 540.9 **LOGGED (FT.):** 68.1 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 324 **WELL TYPE:** Coal Test
COMMENT: LLOYD STONE PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.9	PLEISTOCENE		UNCONSOLIDATED	56.2	0.0	
484.7	CARBONDALE	ANNA	BLACK SHALE	3.4	56.2	
481.3	CARBONDALE	HERRIN	COAL	6.4	59.6	
474.9	CARBONDALE		UNDERCLAY	2.1	66.0	

MAPID: 11790026000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 30 QUARTERS/FOOTAGES: 287' S line, 1890' W line

QUADRANGLE: GREENFIELD LONGITUDE: -90.141293 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.27734 DATE COLLECTED: 10 / 19 / 1955

SURFACE ELEVATION (FT.): 539.9 LOGGED (FT.): 65.8 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 325 WELL TYPE: Coal Test

COMMENT: LLOYD STONE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
539.9	PLEISTOCENE		UNCONSOLIDATED	47.3	0.0
492.6	CARBONDALE	BANKSTON FORK	LIMESTONE	3.6	47.3
489.1	CARBONDALE		GRAY SHALE	6.4	50.8
482.6	CARBONDALE	ANNA	BLACK SHALE	2.3	57.3
480.4	CARBONDALE	HERRIN	COAL	4.1	59.5
476.3	CARBONDALE		UNDERCLAY	2.3	63.6

MAPID: 11790029000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 30 QUARTERS/FOOTAGES: 1618' S line, 1610' E line

QUADRANGLE: GREENFIELD LONGITUDE: -90.135209 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.28094 DATE COLLECTED: 10 / 20 / 1955

SURFACE ELEVATION (FT.): 539.8 LOGGED (FT.): 66.8 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 328 WELL TYPE: Coal Test

COMMENT: P.BOWMAN PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
539.8	PLEISTOCENE		UNCONSOLIDATED	61.8	0.0
478.0	CARBONDALE	ANNA	BLACK SHALE	1.3	61.8
476.7	CARBONDALE	HERRIN	COAL	2.1	63.1
474.6	CARBONDALE		UNDERCLAY	1.7	65.2

MAPID: 11790030000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 30 QUARTERS/FOOTAGES: 1011' S line, 1064' E line

QUADRANGLE: GREENFIELD LONGITUDE: -90.13324 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.279242 DATE COLLECTED: 10 / 20 / 1955

SURFACE ELEVATION (FT.): 543.9 LOGGED (FT.): 67.8 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 329 WELL TYPE: Coal Test

COMMENT: CURTIS RANDS PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
543.9	PLEISTOCENE		UNCONSOLIDATED	30.8	0.0
513.1	CARBONDALE		LIMESTONE	3.7	30.8
509.5	CARBONDALE		DARK SHALE	24.2	34.4
485.3	CARBONDALE	ANNA	BLACK SHALE	0.7	58.6
484.6	CARBONDALE	HERRIN	COAL	6.6	59.3
478.1	CARBONDALE		UNDERCLAY	1.9	65.8

MAPID: 11790031000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 30 QUARTERS/FOOTAGES: 1683' S line, 0' line

QUADRANGLE: GREENFIELD LONGITUDE: -90.138848 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.283841 DATE COLLECTED: 10 / 20 / 1955

SURFACE ELEVATION (FT.): 543.1 LOGGED (FT.): 70.2 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 330 WELL TYPE: Coal Test

COMMENT: NO EW FOOTAGE, IMPRECISE LOCATION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
543.1	PLEISTOCENE		UNCONSOLIDATED	52.4	0.0
490.7	CARBONDALE		GRAY SHALE	6.9	52.4
483.8	CARBONDALE	ANNA	BLACK SHALE	2.3	59.3
481.5	CARBONDALE	HERRIN	COAL	6.8	61.6
474.7	CARBONDALE		UNDERCLAY	1.8	68.4

MAPID: 11790032000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 30 QUARTERS/FOOTAGES: 1922' S line, 1061' E line

QUADRANGLE: GREENFIELD LONGITUDE: -90.13327 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.281757 DATE COLLECTED: 10 / 22 / 1955

SURFACE ELEVATION (FT.): 543.7 LOGGED (FT.): 71.3 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 331 WELL TYPE: Coal Test

COMMENT: O. BAKER PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
543.7	PLEISTOCENE		UNCONSOLIDATED	36.3	0.0
507.4	CARBONDALE		LIMESTONE	2.1	36.3
505.4	CARBONDALE		GRAY SHALE	23.5	38.3
481.9	CARBONDALE	ANNA	BLACK SHALE	1.3	61.8
480.5	CARBONDALE	HERRIN	COAL	6.3	63.2
474.2	CARBONDALE		UNDERCLAY	1.8	69.5

MAPID: 11790036000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 30 QUARTERS/FOOTAGES: 2291' S line, 1152' E line

QUADRANGLE: GREENFIELD LONGITUDE: -90.133613 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.282779 DATE COLLECTED: 10 / 22 / 1955

SURFACE ELEVATION (FT.): 544.7 LOGGED (FT.): 71.0 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 335 WELL TYPE: Coal Test

COMMENT: O. BAKER PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
544.7	PLEISTOCENE		UNCONSOLIDATED	44.7	0.0
500.0	CARBONDALE		LIMESTONE	1.1	44.7
498.9	CARBONDALE		GRAY SHALE	9.8	45.8
489.2	CARBONDALE	BRERETON	LIMESTONE	3.3	55.5
485.9	CARBONDALE		DARK SHALE	3.6	58.8
482.3	CARBONDALE	ANNA	BLACK SHALE	0.7	62.4
481.6	CARBONDALE	HERRIN	COAL	6.6	63.1
475.0	CARBONDALE		UNDERCLAY	1.3	69.7

MAPID: 11790048000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 30 QUARTERS/FOOTAGES: 2226' S line, 1585' E line

QUADRANGLE: GREENFIELD LONGITUDE: -90.135146 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.282619 DATE COLLECTED: 10 / 25 / 1955

SURFACE ELEVATION (FT.): 541.3 LOGGED (FT.): 62.4 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 347 WELL TYPE: Coal Test

COMMENT: F. LONG PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
541.3	PLEISTOCENE		UNCONSOLIDATED	54.3	0.0
487.0	CARBONDALE	ANNA	BLACK SHALE	1.3	54.3
485.7	CARBONDALE	HERRIN	COAL	5.1	55.6
480.6	CARBONDALE		UNDERCLAY	1.8	60.7

MAPID: 11790049000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 30 QUARTERS/FOOTAGES: 2003' S line, 1779' E line

QUADRANGLE: GREENFIELD LONGITUDE: -90.135826 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.282011 DATE COLLECTED: 10 / 25 / 1955

SURFACE ELEVATION (FT.): 538.2 LOGGED (FT.): 65.1 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 348 WELL TYPE: Coal Test

COMMENT: F. LONG PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
538.2	PLEISTOCENE		UNCONSOLIDATED	60.3	0.0
477.9	CARBONDALE	ANNA	BLACK SHALE	0.8	60.3
477.1	CARBONDALE	HERRIN	COAL	2.1	61.1
475.0	CARBONDALE		UNDERCLAY	1.9	63.2

MAPID: 11790050000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 30 QUARTERS/FOOTAGES: 568' S line, 1545' E line

QUADRANGLE: GREENFIELD LONGITUDE: -90.134931 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.278038 DATE COLLECTED: 10 / 25 / 1955

SURFACE ELEVATION (FT.): 542.4 LOGGED (FT.): 66.7 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 349 WELL TYPE: Coal Test

COMMENT: P. BOWMAN PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
542.4	PLEISTOCENE		UNCONSOLIDATED	59.9	0.0
482.5	CARBONDALE	ANNA	BLACK SHALE	0.6	59.9
481.9	CARBONDALE	HERRIN	COAL	4.3	60.5
477.6	CARBONDALE		UNDERCLAY	1.9	64.8

MAPID: 11790051000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 30 QUARTERS/FOOTAGES: 977' S line, 1533' E line

QUADRANGLE: GREENFIELD LONGITUDE: -90.134905 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.279167 DATE COLLECTED: 10 / 26 / 1955

SURFACE ELEVATION (FT.): 544.6 LOGGED (FT.): 71.4 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 350 WELL TYPE: Coal Test

COMMENT: P. BOWMAN PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
544.6	PLEISTOCENE		UNCONSOLIDATED	61.6	0.0	
483.0	CARBONDALE	ANNA	BLACK SHALE	0.9	61.6	
482.1	CARBONDALE	HERRIN	COAL	6.8	62.5	
475.3	CARBONDALE		UNDERCLAY	2.1	69.3	

MAPID: 11790053000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 30 QUARTERS/FOOTAGES: 582' S line, 219' E line

QUADRANGLE: GREENFIELD LONGITUDE: -90.130221 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.278022 DATE COLLECTED: 10 / 26 / 1955

SURFACE ELEVATION (FT.): 545.4 LOGGED (FT.): 61.0 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 352 WELL TYPE: Coal Test

COMMENT: CURTIS RAND PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.4	PLEISTOCENE		UNCONSOLIDATED	55.2	0.0	
490.2	CARBONDALE	ANNA	BLACK SHALE	1.7	55.2	
488.6	CARBONDALE	HERRIN	COAL	1.8	56.8	
486.7	CARBONDALE		UNDERCLAY	2.3	58.7	

MAPID: 11790054000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 30 QUARTERS/FOOTAGES: 202' S line, 334' E line

QUADRANGLE: GREENFIELD LONGITUDE: -90.130613 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.276976 DATE COLLECTED: 10 / 26 / 1955

SURFACE ELEVATION (FT.): 545.9 LOGGED (FT.): 57.3 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 353 WELL TYPE: Coal Test

COMMENT: CURTIS RAND PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.9	PLEISTOCENE		UNCONSOLIDATED	51.7	0.0	
494.2	CARBONDALE	ANNA	BLACK SHALE	1.3	51.7	
492.9	CARBONDALE	HERRIN	COAL	2.6	53.0	SOFT
490.3	CARBONDALE		UNDERCLAY	1.8	55.6	

MAPID: 11790057000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 30 **QUARTERS/FOOTAGES:** 187' S line, 1059' E line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.133188 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.276965 **DATE COLLECTED:** 10 / 31 / 1955
SURFACE ELEVATION (FT.): 541.9 **LOGGED (FT.):** 64.4 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 357 **WELL TYPE:** Coal Test
COMMENT: CURTIS RANDS PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
541.9	PLEISTOCENE		UNCONSOLIDATED	42.7	0.0
499.2	CARBONDALE		GRAY SHALE	11.3	42.7
488.0	CARBONDALE	ANNA	BLACK SHALE	1.8	53.9
486.2	CARBONDALE	HERRIN	COAL	7.1	55.7
479.1	CARBONDALE		UNDERCLAY	1.7	62.8

MAPID: 11790058000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 30 **QUARTERS/FOOTAGES:** 179' S line, 1456' E line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.134598 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.27696 **DATE COLLECTED:** 11 / 1 / 1955
SURFACE ELEVATION (FT.): 540.9 **LOGGED (FT.):** 69.5 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 358 **WELL TYPE:** Coal Test
COMMENT: LLOYD STONE PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
540.9	PLEISTOCENE		UNCONSOLIDATED	60.3	0.0
480.6	CARBONDALE	ANNA	BLACK SHALE	1.1	60.3
479.6	CARBONDALE	HERRIN	COAL	6.3	61.3
473.2	CARBONDALE		UNDERCLAY	1.8	67.7

MAPID: 11700668000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** SE NW NW
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.144457 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.273778 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 525.0 **LOGGED (FT.):** 125.0 **LOG TYPE:** Drillers Log
SOURCE: PEABODY C.C.,NORTHERN ILL.C.C.90 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
461.6	CARBONDALE	HERRIN	COAL	6.2	63.4

MAPID: 11700668000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 31 QUARTERS/FOOTAGES: SE NW NW

QUADRANGLE: GREENFIELD LONGITUDE: -90.144457 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.273778 DATE COLLECTED:

SURFACE ELEVATION (FT.): 525.0 LOGGED (FT.): 70.2 LOG TYPE: Drillers Log

SOURCE: PEABODY C.C.,NORTHERN ILL.C.C.90 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
487.2	CARBONDALE		GRAY SHALE	24.8	37.8
462.4	CARBONDALE	ANNA	BLACK SHALE	1.4	62.6
461.0	CARBONDALE	HERRIN	COAL	6.2	64.0

MAPID: 11770065000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 31 QUARTERS/FOOTAGES:

QUADRANGLE: GREENFIELD LONGITUDE: -90.138586 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.269079 DATE COLLECTED: 11 / 2 / 1955

SURFACE ELEVATION (FT.): 539.0 LOGGED (FT.): 46.3 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 365 WELL TYPE: Coal Test

COMMENT: CURTIS RANDS PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
539.0	PLEISTOCENE		UNCONSOLIDATED	32.3	0.0
506.7	CARBONDALE		GRAY SHALE	6.3	32.3
500.4	CARBONDALE	ANNA	BLACK SHALE	0.9	38.6
499.5	CARBONDALE	HERRIN	COAL	5.1	39.5
494.4	CARBONDALE		UNDERCLAY	1.8	44.6

MAPID: 11790002000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 31 QUARTERS/FOOTAGES: 1289' N line, 1127' W line

QUADRANGLE: GREENFIELD LONGITUDE: -90.143917 GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.273022 DATE COLLECTED: 10 / 10 / 1955

SURFACE ELEVATION (FT.): 537.3 LOGGED (FT.): 55.7 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 300 WELL TYPE: Coal Test

COMMENT: TRILL HEIRS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
537.3	PLEISTOCENE		UNCONSOLIDATED	50.3	0.0
487.0	CARBONDALE	ANNA	BLACK SHALE	2.1	50.3
485.0	CARBONDALE	HERRIN	COAL	1.4	52.3 SOFT
483.5	CARBONDALE		UNDERCLAY	1.9	53.8

MAPID: 11790003000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 484' N line, 871' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.144868 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.275256 **DATE COLLECTED:** 10 / 10 / 1955
SURFACE ELEVATION (FT.): 535.6 **LOGGED (FT.):** 67.5 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 301 **WELL TYPE:** Coal Test
COMMENT: TRILL HEIRS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
535.6	PLEISTOCENE		UNCONSOLIDATED	59.3	0.0
476.3	CARBONDALE	ANNA	BLACK SHALE	1.3	59.3
475.0	CARBONDALE	HERRIN	COAL	4.7	60.6
470.3	CARBONDALE		UNDERCLAY	2.3	65.3

MAPID: 11790004000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 596' N line, 883' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.144819 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.274944 **DATE COLLECTED:** 10 / 11 / 1955
SURFACE ELEVATION (FT.): 537.3 **LOGGED (FT.):** 66.8 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 302 **WELL TYPE:** Coal Test
COMMENT: TRILL HEIRS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
537.3	PLEISTOCENE		UNCONSOLIDATED	61.1	0.0
476.2	CARBONDALE	ANNA	BLACK SHALE	1.6	61.1
474.6	CARBONDALE	HERRIN	COAL	2.3	62.7
472.3	CARBONDALE		UNDERCLAY	1.8	65.0

MAPID: 11790013000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 279' N line, 1192' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.14374 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.275808 **DATE COLLECTED:** 10 / 17 / 1955
SURFACE ELEVATION (FT.): 537.1 **LOGGED (FT.):** 72.3 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 311 **WELL TYPE:** Coal Test
COMMENT: TRILL HEIRS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
537.1	PLEISTOCENE		UNCONSOLIDATED	72.3	0.0

MAPID: 11790014000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 255' N line, 1097' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.144078 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.275878 **DATE COLLECTED:** 10 / 17 / 1955
SURFACE ELEVATION (FT.): 534.1 **LOGGED (FT.):** 74.8 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 312 **WELL TYPE:** Coal Test
COMMENT: TRILL HEIRS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
534.1	PLEISTOCENE		UNCONSOLIDATED	74.8	0.0

MAPID: 11790015000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 150' N line, 1119' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.144006 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.276166 **DATE COLLECTED:** 10 / 18 / 1955
SURFACE ELEVATION (FT.): 536.5 **LOGGED (FT.):** 72.1 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 313 **WELL TYPE:** Coal Test
COMMENT: TRILL HEIRS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
536.5	PLEISTOCENE		UNCONSOLIDATED	72.1	0.0

MAPID: 11790016000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 85' N line, 1059' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.144225 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.27635 **DATE COLLECTED:** 10 / 18 / 1955
SURFACE ELEVATION (FT.): 528.8 **LOGGED (FT.):** 73.0 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 315 **WELL TYPE:** Coal Test
COMMENT: TRILL HEIRS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
528.8	PLEISTOCENE		UNCONSOLIDATED	66.1	0.0
462.7	CARBONDALE	ANNA	BLACK SHALE	0.6	66.1
462.1	CARBONDALE	HERRIN	COAL	4.4	66.7
457.7	CARBONDALE		UNDERCLAY	1.9	71.1

MAPID: 11790017000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 88' N line, 908' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.144761 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.276347 **DATE COLLECTED:** 10 / 18 / 1955
SURFACE ELEVATION (FT.): 537.3 **LOGGED (FT.):** 70.8 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 316 **WELL TYPE:** Coal Test
COMMENT: TRILL HEIRS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
537.3	PLEISTOCENE		UNCONSOLIDATED	64.3	0.0	
473.0	CARBONDALE	HERRIN	COAL	4.2	64.3	
468.8	CARBONDALE		UNDERCLAY	2.3	68.5	

MAPID: 11790018000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 5' N line, 718' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.145438 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.276583 **DATE COLLECTED:** 10 / 18 / 1955
SURFACE ELEVATION (FT.): 501.7 **LOGGED (FT.):** 32.3 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 317 **WELL TYPE:** Coal Test
COMMENT: TRILL HEIRS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
501.7	PLEISTOCENE		UNCONSOLIDATED	22.9	0.0	
478.8	CARBONDALE	HERRIN	COAL	7.3	22.9	
471.5	CARBONDALE		UNDERCLAY	2.1	30.2	

MAPID: 11790022000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 77' N line, 600' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.145855 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.27639 **DATE COLLECTED:** 10 / 19 / 1955
SURFACE ELEVATION (FT.): 492.2 **LOGGED (FT.):** 20.8 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 321 **WELL TYPE:** Coal Test
COMMENT: TRILL HEIRS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
492.2	PLEISTOCENE		UNCONSOLIDATED	10.8	0.0	
481.4	CARBONDALE	ANNA	BLACK SHALE	1.8	10.8	
479.7	CARBONDALE	HERRIN	COAL	2.4	12.5	
477.3	CARBONDALE		MINE OPENING	5.9	14.9	OLD WORKS

MAPID: 11790023000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 101' N line, 460' E line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.131046 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.276145 **DATE COLLECTED:** 10 / 19 / 1955
SURFACE ELEVATION (FT.): 488.4 **LOGGED (FT.):** 13.8 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 322 **WELL TYPE:** Coal Test
COMMENT: TRILL HEIRS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
488.4	PLEISTOCENE		UNCONSOLIDATED	8.3	0.0	
480.1	CARBONDALE	ANNA	BLACK SHALE	0.8	8.3	
479.3	CARBONDALE	HERRIN	COAL	1.7	9.1	BROKEN
477.6	CARBONDALE	HERRIN	COAL	0.9	10.8	
476.7	CARBONDALE		UNDERCLAY	1.8	11.7	

MAPID: 11790027000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 61' N line, 1852' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.141408 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.276382 **DATE COLLECTED:** 10 / 20 / 1955
SURFACE ELEVATION (FT.): 537.5 **LOGGED (FT.):** 62.5 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 326 **WELL TYPE:** Coal Test
COMMENT: JOHN SHAW PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
537.5	PLEISTOCENE		UNCONSOLIDATED	54.8	0.0	
482.7	CARBONDALE	ANNA	BLACK SHALE	2.2	54.8	
480.6	CARBONDALE	HERRIN	COAL	3.2	56.9	
477.4	CARBONDALE		UNDERCLAY	2.4	60.1	

MAPID: 11790035000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 150' N line, 280' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.146987 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.276202 **DATE COLLECTED:** 10 / 22 / 1955
SURFACE ELEVATION (FT.): 493.6 **LOGGED (FT.):** 15.4 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 334 **WELL TYPE:** Coal Test
COMMENT: TRILL HEIRS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
493.6	PLEISTOCENE		UNCONSOLIDATED	6.7	0.0	
486.9	CARBONDALE	ANNA	BLACK SHALE	1.8	6.7	
485.1	CARBONDALE	HERRIN	COAL	1.1	8.5	SOFT
484.0	CARBONDALE		UNDERCLAY	3.3	9.6	
480.8	CARBONDALE		LIMESTONE	2.6	12.8	

MAPID: 11790055000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 283' N line, 552' E line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.131368 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.275647 **DATE COLLECTED:** 10 / 31 / 1955
SURFACE ELEVATION (FT.): 547.0 **LOGGED (FT.):** 51.0 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 355 **WELL TYPE:** Coal Test
COMMENT: CURTIS RAND PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
547.0	PLEISTOCENE		UNCONSOLIDATED	44.4	0.0	
502.6	CARBONDALE		BLACK SHALE	1.2	44.4	
501.4	CARBONDALE	HERRIN	COAL	3.7	45.6	SOFT
497.7	CARBONDALE		UNDERCLAY	1.8	49.3	

MAPID: 11790056000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 204' N line, 1402' E line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.134389 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.275901 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 538.2 **LOGGED (FT.):** 75.3 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 356 **WELL TYPE:** Coal Test
COMMENT: T. CHISM PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
538.2	PLEISTOCENE		UNCONSOLIDATED	75.3	0.0	

MAPID: 11790059000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 1620' N line, 859' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.14485 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.27212 **DATE COLLECTED:** 11 / 1 / 1955
SURFACE ELEVATION (FT.): 536.7 **LOGGED (FT.):** 56.7 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 359 **WELL TYPE:** Coal Test
COMMENT: TRILL HEIRS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
536.7	PLEISTOCENE		UNCONSOLIDATED	49.9	0.0	
486.8	CARBONDALE	ANNA	BLACK SHALE	0.8	49.9	
486.0	CARBONDALE	HERRIN	COAL	3.9	50.7	VERY SOFT
482.1	CARBONDALE		UNDERCLAY	2.1	54.6	

MAPID: 11790060000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 1535' N line, 858' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.14486 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.272354 **DATE COLLECTED:** 11 / 1 / 1955
SURFACE ELEVATION (FT.): 537.0 **LOGGED (FT.):** 56.7 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 360 **WELL TYPE:** Coal Test
COMMENT: TRILL HEIRS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
537.0	PLEISTOCENE		UNCONSOLIDATED	50.3	0.0	
486.7	CARBONDALE	ANNA	BLACK SHALE	0.9	50.3	
485.8	CARBONDALE	HERRIN	COAL	3.6	51.2	BROKEN
482.2	CARBONDALE		UNDERCLAY	1.9	54.8	

MAPID: 11790061000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 1457' N line, 802' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.14506 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.272571 **DATE COLLECTED:** 11 / 1 / 1955
SURFACE ELEVATION (FT.): 536.7 **LOGGED (FT.):** 55.3 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 361 **WELL TYPE:** Coal Test
COMMENT: TRILL HEIRS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
536.7	PLEISTOCENE		UNCONSOLIDATED	47.1	0.0	
489.6	CARBONDALE	ANNA	BLACK SHALE	0.4	47.1	
489.2	CARBONDALE	HERRIN	COAL	6.2	47.5	
483.0	CARBONDALE		UNDERCLAY	1.7	53.7	

MAPID: 11790062000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 1645' N line, 347' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.146668 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.272071 **DATE COLLECTED:** 11 / 1 / 1955
SURFACE ELEVATION (FT.): 532.2 **LOGGED (FT.):** 55.3 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 362 **WELL TYPE:** Coal Test
COMMENT: TRILL HEIRS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
532.2	PLEISTOCENE		UNCONSOLIDATED	47.1	0.0	
485.1	CARBONDALE	ANNA	BLACK SHALE	0.4	47.1	
484.7	CARBONDALE	HERRIN	COAL	6.2	47.5	
478.5	CARBONDALE		UNDERCLAY	1.7	53.7	

MAPID: 11790063000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 1718' N line, 388' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.146517 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.271868 **DATE COLLECTED:** 11 / 1 / 1955
SURFACE ELEVATION (FT.): 532.3 **LOGGED (FT.):** 49.8 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 363 **WELL TYPE:** Coal Test
COMMENT: TRILL HEIRS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
532.3	PLEISTOCENE		UNCONSOLIDATED	42.5	0.0	
489.8	CARBONDALE	ANNA	BLACK SHALE	1.6	42.5	
488.2	CARBONDALE	HERRIN	COAL	3.4	44.1	BROKEN
484.8	CARBONDALE		UNDERCLAY	2.3	47.5	

MAPID: 11790064000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 95' N line, 1049' E line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.133138 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.276187 **DATE COLLECTED:** 11 / 2 / 1955
SURFACE ELEVATION (FT.): 536.6 **LOGGED (FT.):** 49.9 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 364 **WELL TYPE:** Coal Test
COMMENT: CURTIS RANDS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
536.6	PLEISTOCENE		UNCONSOLIDATED	42.4	0.0	
494.2	CARBONDALE	ANNA	BLACK SHALE	1.4	42.4	
492.8	CARBONDALE	HERRIN	COAL	4.2	43.8	
488.6	CARBONDALE		UNDERCLAY	1.9	48.0	

MAPID: 11790066000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 314' N line, 893' E line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.132578 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.275577 **DATE COLLECTED:** 11 / 2 / 1955
SURFACE ELEVATION (FT.): 540.9 **LOGGED (FT.):** 44.8 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 366 **WELL TYPE:** Coal Test
COMMENT: CURTIS RANDS PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.9	PLEISTOCENE		UNCONSOLIDATED	36.3	0.0	
504.6	CARBONDALE		GRAY SHALE	3.3	36.3	
501.4	CARBONDALE	ANNA	BLACK SHALE	1.3	39.5	
500.1	CARBONDALE	HERRIN	COAL	1.9	40.8	
498.1	CARBONDALE		UNDERCLAY	2.1	42.8	

MAPID: 11790077000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 31 QUARTERS/FOOTAGES:

QUADRANGLE: GREENFIELD LONGITUDE: -90.138586

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.269079

DATE COLLECTED: 11 / 7 / 1955

SURFACE ELEVATION (FT.): 516.2 LOGGED (FT.): 45.2

LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 380

WELL TYPE: Coal Test

COMMENT: T. CHISM PROPERTY;NO COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
516.2	PLEISTOCENE		UNCONSOLIDATED	38.3	0.0	
477.9	CARBONDALE		CALCAREOUS SHALE	6.8	38.3	

MAPID: 11790078000C VERSION: 1

PROJECT: NCRDS98

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 31 QUARTERS/FOOTAGES: 46' N line, 1723' E line

QUADRANGLE: GREENFIELD LONGITUDE: -90.135533

GEOLOGIST: MCBETH

CONFIDENTIAL: N LATITUDE: 39.27635

DATE COLLECTED: 11 / 7 / 1955

SURFACE ELEVATION (FT.): 531.8 LOGGED (FT.): 59.5

LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 381

WELL TYPE: Coal Test

COMMENT: T. CHISM PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
531.8	PLEISTOCENE		UNCONSOLIDATED	28.7	0.0	
503.1	CARBONDALE	BANKSTON FORK	LIMESTONE	4.6	28.7	
498.5	CARBONDALE		GRAY SHALE	11.6	33.3	LOGS SAYS "GRAY CLAY"
487.0	CARBONDALE		LIMESTONE	1.3	44.8	
485.6	CARBONDALE		GRAY SHALE	4.5	46.2	
481.1	CARBONDALE	ANNA	BLACK SHALE	1.2	50.7	
480.0	CARBONDALE	HERRIN	COAL	5.9	51.8	SOFT
474.0	CARBONDALE		UNDERCLAY	1.8	57.8	

MAPID: 11790079000C **VERSION:** 1 **PROJECT:** NCRDS98
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 31 **QUARTERS/FOOTAGES:** 485' N line, 1773' E line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.1357 **GEOLOGIST:** MCBETH
CONFIDENTIAL: N **LATITUDE:** 39.27514 **DATE COLLECTED:** 11 / 7 / 1955
SURFACE ELEVATION (FT.): 536.3 **LOGGED (FT.):** 56.5 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS COAL CORP. 382 **WELL TYPE:** Coal Test
COMMENT: T. CHISM PROPERTY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
536.3	PLEISTOCENE		UNCONSOLIDATED	34.8	0.0	
501.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.1	34.8	
500.5	CARBONDALE		GRAY SHALE	15.8	35.8	
484.7	CARBONDALE	ANNA	BLACK SHALE	2.2	51.6	
482.5	CARBONDALE	HERRIN	COAL	0.9	53.8	VERY SOFT
481.6	CARBONDALE		UNDERCLAY	1.8	54.7	

MAPID: 11790321000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 33 **QUARTERS/FOOTAGES:** 340' S line, 11' W line of SW NE
QUADRANGLE: HETTICK **LONGITUDE:** -90.101568 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.270172 **DATE COLLECTED:** 12 / 10 / 1980
SURFACE ELEVATION (FT.): 564.9 **LOGGED (FT.):** 148.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX 10-012 **WELL TYPE:** Coal Test
COMMENT: CHESTERFIELD BOX #43 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
564.9	PLEISTOCENE		UNCONSOLIDATED	92.0	0.0	
472.9			ROCK	30.2	92.0	
442.7	CARBONDALE	HERRIN	COAL	6.0	122.2	
436.7	CARBONDALE		ROCK	19.8	128.2	

MAPID: 11790323000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 10N 9W **SECTION:** 33 **QUARTERS/FOOTAGES:** 1' N line, 11' W line of NW NW
QUADRANGLE: HETTICK **LONGITUDE:** -90.111006 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.276556 **DATE COLLECTED:** 12 / 11 / 1980
SURFACE ELEVATION (FT.): 557.0 **LOGGED (FT.):** 140.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX 10-014 **WELL TYPE:** Coal Test
COMMENT: CHESTERFIELD BOX #43 CORE GR

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
557.0	PLEISTOCENE		UNCONSOLIDATED	74.0	0.0	
483.0			ROCK	6.2	74.0	
476.8	CARBONDALE	HERRIN	COAL	2.8	80.2	
474.0	CARBONDALE		ROCK	57.0	83.0	

MAPID: 11790324000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 34 QUARTERS/FOOTAGES: 20' S line, 488' W line of SW NW

QUADRANGLE: HETTICK LONGITUDE: -90.090622 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.269306 DATE COLLECTED: 12 / 11 / 1980

SURFACE ELEVATION (FT.): 571.4 LOGGED (FT.): 128.0 LOG TYPE: Drillers Log

SOURCE: AMAX 10-015 WELL TYPE: Coal Test

COMMENT: CHESTERFIELD BOX #43 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
571.4	PLEISTOCENE		UNCONSOLIDATED	85.6	0.0
485.8			ROCK	23.4	85.6
462.4	CARBONDALE	HERRIN	COAL	5.3	109.0
457.1	CARBONDALE		ROCK	13.7	114.3

MAPID: 11700602000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 35 QUARTERS/FOOTAGES: SE NW SW

QUADRANGLE: HETTICK LONGITUDE: -90.069966 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.266239 DATE COLLECTED:

SURFACE ELEVATION (FT.): 515.0 LOGGED (FT.): 83.0 LOG TYPE: Drillers Log

SOURCE: ALUMINUM CO. OF AMERICA F.KANLLAKN WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
476.5	CARBONDALE	DANVILLE	COAL	1.0	38.5
436.0	CARBONDALE	HERRIN	COAL	2.0	79.0

MAPID: 11790320000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 35 QUARTERS/FOOTAGES: 48' N line, 27' E line of NW SW

QUADRANGLE: HETTICK LONGITUDE: -90.069037 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.268977 DATE COLLECTED: 12 / 10 / 1980

SURFACE ELEVATION (FT.): 521.3 LOGGED (FT.): 86.6 LOG TYPE: Drillers Log

SOURCE: AMAX 10-011 WELL TYPE: Coal Test

COMMENT: CHESTERFIELD BOX #43 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
521.3	PLEISTOCENE		UNCONSOLIDATED	27.7	0.0
493.6	MODESTO		ROCK	11.8	27.7
481.8	CARBONDALE	DANVILLE	COAL	1.8	39.5
480.0	CARBONDALE		ROCK	20.1	41.3
459.9	CARBONDALE	JAMESTOWN	COAL	0.4	61.4
459.5	CARBONDALE		ROCK	17.6	61.8
441.9	CARBONDALE	HERRIN	COAL	2.6	79.4
439.3	CARBONDALE		ROCK	4.6	82.0

MAPID: 11790329000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 10N 9W SECTION: 36 QUARTERS/FOOTAGES: 2234' S line, 58' W line of SE

QUADRANGLE: HETTICK LONGITUDE: -90.045476 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.267935 DATE COLLECTED: 12 / 16 / 1980

SURFACE ELEVATION (FT.): 600.6 LOGGED (FT.): 215.0 LOG TYPE: Drillers Log

SOURCE: AMAX 10-020 WELL TYPE: Coal Test

COMMENT: CHESTERFIELD BOX #43 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
600.6	PLEISTOCENE		UNCONSOLIDATED	127.0	0.0
473.6	MODESTO		ROCK	30.5	127.0
443.1	CARBONDALE	DANVILLE	COAL	0.9	157.5
442.2	CARBONDALE		ROCK	42.7	158.4
399.5	CARBONDALE	HERRIN	COAL	5.8	201.1
393.7	CARBONDALE		ROCK	8.1	206.9

MAPID: 11701094000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: 2640' N line, 330' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.717838 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.428432 DATE COLLECTED:

SURFACE ELEVATION (FT.): 659.0 LOGGED (FT.): 355.6 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED C-8-66 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
343.6	MODESTO	PIASA	LIMESTONE	3.0	315.4
340.6	MODESTO		CALCAREOUS SHALE	4.0	318.4
336.6	CARBONDALE	LAWSON	SANDSTONE	0.6	322.4
336.0	CARBONDALE	LAWSON	SILTSTONE	3.2	323.0
332.8	CARBONDALE	LAWSON	CLAYSTONE	9.5	326.2
323.3	CARBONDALE	LAWSON	LIMESTONE/UNDERCLAY	1.5	335.7
321.8	CARBONDALE	LAWSON	SILTSTONE	3.2	337.2
318.7	CARBONDALE	BRERETON	LIMESTONE	6.1	340.3
312.6	CARBONDALE	ANNA	BLACK SHALE	1.6	346.4
311.0	CARBONDALE	HERRIN	COAL	7.6	348.0

MAPID: 11701094000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: 2640' N line, 330' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.717838 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.428432 DATE COLLECTED:

SURFACE ELEVATION (FT.): 659.0 LOGGED (FT.): 354.6 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED C-8-66 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
349.7	MODESTO	PIASA	LIMESTONE	3.0	309.3
346.7	MODESTO		UNCLASSIFIED	4.0	312.3
342.7	CARBONDALE		UNCLASSIFIED	15.0	316.3
327.7	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	331.3
322.7	CARBONDALE	ANVIL ROCK	SANDSTONE	1.5	336.3
321.2	CARBONDALE		SHALE	1.5	337.8
319.7	CARBONDALE	BRERETON	LIMESTONE	6.1	339.3
313.6	CARBONDALE	ANNA	BLACK SHALE	1.6	345.4
312.0	CARBONDALE	HERRIN	COAL	7.6	347.0

MAPID: 11701094000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: 2640' N line, 330' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.717838 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.428432 DATE COLLECTED:

SURFACE ELEVATION (FT.): 659.0 LOGGED (FT.): 355.8 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED C-8-66 WELL TYPE: Coal Test

COMMENT: DRILL LOG INC;SEE COAL SEC. MAP#6-168

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
311.5	CARBONDALE	HERRIN	COAL	7.6	347.5

MAPID: 11701094000C VERSION: 4

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: 2640' N line, 330' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.717838

GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.428432

DATE COLLECTED: 1 / 11 / 1966

SURFACE ELEVATION (FT.): 659.0 LOGGED (FT.): 355.8

LOG TYPE: Drillers Log

SOURCE: FREEMAN COAL MINING CO. C866

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
659.0	PLEISTOCENE		UNCONSOLIDATED	12.0	0.0
647.0	PLEISTOCENE		UNCONSOLIDATED	34.0	12.0
613.0			LIMESTONE	2.0	46.0
611.0			SANDSTONE	66.0	48.0
545.0			BLACK SHALE	3.0	114.0
542.0			SANDSTONE	23.0	117.0
519.0			SHALE	30.0	140.0
489.0			SANDSTONE	30.0	170.0
459.0			SHALE	10.0	200.0
449.0			FOSSILIFEROUS LIMESTONE	51.0	210.0
398.0			SHALE	14.0	261.0
384.0			DARK SHALE	20.0	275.0
364.0			SHALE	2.0	295.0
362.0			BLACK SHALE	3.0	297.0
359.0			SHALE WITH LIMESTONE	10.0	300.0
349.0	MODESTO	PIASA	LIMESTONE	3.0	310.0
346.0			CALCAREOUS SHALE	4.0	313.0
342.0			SHALE	7.5	317.0
334.5			SHALE	2.5	324.5
332.0			SHALE WITH LIMESTONE	5.0	327.0
327.0			SHALE	1.3	332.0
325.7	CARBONDALE	BANKSTON FORK	LIMESTONE	0.8	333.3
325.0	CARBONDALE	BANKSTON FORK	SHALE	1.5	334.0
323.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	335.5
322.0	CARBONDALE		SHALE	3.0	337.0
319.0	CARBONDALE	BRERETON	LIMESTONE	5.8	340.0
313.2	CARBONDALE	ANNA	BLACK SHALE	1.7	345.8
311.5	CARBONDALE	HERRIN	COAL	7.4	347.5
304.1	CARBONDALE		LIMESTONE	1.1	354.9

MAPID: 11701942000C VERSION: 1

PROJECT: NCRDS99

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: 100' S line, 2300' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.710673 GEOLOGIST: J MCBETH

CONFIDENTIAL: N LATITUDE: 39.421296 DATE COLLECTED: 12 / 8 / 1977

SURFACE ELEVATION (FT.): 653.0 LOGGED (FT.): 389.1 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL MINING CO C-3-77 WELL TYPE: Coal Test

COMMENT: PERMIT 5;CROWN III MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
653.0	PLEISTOCENE		UNCONSOLIDATED	9.0	0.0	
644.0	PLEISTOCENE		GLACIAL DRIFT	17.0	9.0	WITH LOESS
627.0	PLEISTOCENE		CLAY	24.0	26.0	BROWN
603.0	PLEISTOCENE		GLACIAL DRIFT	15.0	50.0	WITH LOESS
588.0	PLEISTOCENE		SAND & GRAVEL	9.0	65.0	
579.0	PLEISTOCENE		GLACIAL DRIFT	39.0	74.0	
540.0	BOND		GRAY SHALE	2.0	113.0	
538.0	BOND	CARTHAGE	LIMESTONE	2.5	115.0	
535.5	MODESTO		GRAY SHALE	3.5	117.5	
532.0	MODESTO		SHALE	6.0	121.0	BLACK
526.0	MODESTO		GRAY SHALE	3.0	127.0	WITH SANDSTONE
523.0	MODESTO		SHALE	2.0	130.0	BLACK
521.0	MODESTO		SHALE	58.0	132.0	GRAY, WITH SANDSTONE
463.0	MODESTO		GRAY SHALE	10.0	190.0	
453.0	MODESTO		SANDSTONE	3.0	200.0	
450.0	MODESTO		GRAY SHALE	2.0	203.0	
448.0	MODESTO		SHALE	3.0	205.0	BLACK
445.0	MODESTO		GRAY SHALE	4.5	208.0	
440.5	MODESTO	CHAPEL	COAL	1.0	212.5	
439.5	MODESTO		GRAY SHALE	14.5	213.5	
425.0	MODESTO		GRAY SHALE	9.0	228.0	WITH SANDSTONE
416.0	MODESTO		GRAY SHALE	13.0	237.0	
403.0	MODESTO		GRAY SHALE	5.0	250.0	WITH SANDSTONE
398.0	MODESTO		GRAY SHALE	46.0	255.0	
352.0	MODESTO		SANDSTONE	5.0	301.0	
347.0	MODESTO		GRAY SHALE	27.0	306.0	
320.0	CARBONDALE		SANDSTONE	5.0	333.0	
315.0	CARBONDALE		GRAY SHALE	8.6	338.0	WITH SANDSTONE
306.4	CARBONDALE		SANDSTONE	4.4	346.6	
302.0	CARBONDALE		GRAY SHALE	4.3	351.0	WITH SANDSTONE
297.7	CARBONDALE		GRAY SHALE	3.3	355.3	
294.4	CARBONDALE	BANKSTON FORK	LIMESTONE	3.4	358.6	ARGILLACEOUS
291.0	CARBONDALE		GRAY SHALE	2.6	362.0	
288.4	CARBONDALE	BRERETON	LIMESTONE	1.8	364.6	
286.6	CARBONDALE		GRAY SHALE	0.4	366.4	SOFT
286.2	CARBONDALE	HERRIN	COAL	6.9	366.8	
279.3	CARBONDALE		CLAYSTONE	0.6	373.7	
278.7	CARBONDALE		LIMESTONE	2.8	374.3	WITH GREEN CLAYSTONE

275.9	CARBONDALE	SHALE	0.4	377.1	DARK GRAY
275.5	CARBONDALE	LIMESTONE	0.3	377.5	
275.2	CARBONDALE	SHALE	3.8	377.8	DARK GRAY
271.4	CARBONDALE	LIMESTONE	7.5	381.6	WITH GREEN SHALE

MAPID: 11721732000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.70375 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.422067 DATE COLLECTED: 3 / 16 / 1976

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 382.1 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CII1876 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
650.0	PLEISTOCENE		UNCONSOLIDATED	2.0	0.0	
648.0	PLEISTOCENE		UNCONSOLIDATED	18.0	2.0	BROWN
630.0	PLEISTOCENE		GLACIAL DRIFT	65.0	20.0	GRAY
565.0			SANDSTONE	16.0	85.0	
549.0			SANDSTONE	3.5	101.0	
545.5			GREEN SHALE	1.5	104.5	
544.0			BLACK SHALE	7.0	106.0	
537.0			GRAY SHALE	3.0	113.0	
534.0	BOND	CARTHAGE	SHALY LIMESTONE	1.5	116.0	
532.5	MODESTO		GRAY SHALE	6.5	117.5	
526.0	MODESTO		CALCAREOUS SANDSTONE	5.0	124.0	
521.0	MODESTO		BLACK SHALE	2.0	129.0	
519.0	MODESTO		GRAY SHALE	67.5	131.0	
451.5	MODESTO		DARK SHALE	7.0	198.5	
444.5	MODESTO	CHAPEL	BONE COAL	1.0	205.5	
443.5	MODESTO		SANDY SHALE	17.5	206.5	
426.0	MODESTO		GRAY SHALE	14.5	224.0	
411.5	MODESTO		SANDY SHALE	50.5	238.5	
361.0	MODESTO		GRAY SHALE	11.0	289.0	
350.0	MODESTO		DARK SHALE	6.0	300.0	
344.0	MODESTO		GRAY SHALE	13.5	306.0	
330.5	MODESTO		BLACK SHALE	5.0	319.5	
325.5	MODESTO		BONE COAL	0.5	324.5	
325.0	MODESTO		GRAY SHALE	6.0	325.0	
319.0	MODESTO		LIMESTONE	1.5	331.0	
317.5	MODESTO		LIMESTONE	0.8	332.5	
316.7	MODESTO		GRAY SHALE	3.6	333.3	
313.2	MODESTO		DARK SHALE	1.7	336.8	
311.5	MODESTO		GRAY SHALE	4.5	338.5	
307.0	MODESTO		SANDSTONE	5.3	343.0	
301.7	MODESTO		GRAY SHALE	2.2	348.3	
299.5	MODESTO	PIASA	LIMESTONE	1.5	350.5	
298.0			CALCAREOUS SHALE	2.9	352.0	
295.1			GRAY SHALE	2.1	354.9	
293.0	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	1.5	357.0	
291.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.9	358.5	
288.6	CARBONDALE		GREEN SHALE	3.6	361.4	
285.0	CARBONDALE	BRERETON	LIMESTONE	2.8	365.0	

282.2	CARBONDALE	ANNA	BLACK SHALE	3.0	367.8
279.2	CARBONDALE	HERRIN	COAL	8.2	370.8
271.0	CARBONDALE		SHALE	0.6	379.0
270.4	CARBONDALE		SHALE WITH LIMESTONE	2.5	379.6

MAPID: 11721732000C **VERSION:** 2 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 1 **QUARTERS/FOOTAGES:** SW SE SE
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.70375 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.422067 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 650.0 **LOGGED (FT.):** 382.1 **LOG TYPE:** Survey Core Study
SOURCE: FREEMAN UNITED CII-18-76 **WELL TYPE:** Coal Test
COMMENT: DRILLERS LOG INC; CORE NO. C-11202

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN COMMENT
279.1	CARBONDALE	HERRIN	COAL	8.2	370.9

MAPID: 11721937000C **VERSION:** 1 **PROJECT:** AVAIL
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 1 **QUARTERS/FOOTAGES:** 80' S line, 2040' E line of SE
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.707513 **GEOLOGIST:** UITEMP
CONFIDENTIAL: N **LATITUDE:** 39.421301 **DATE COLLECTED:** 1 / 11 / 1978
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 170.0 **LOG TYPE:** Drillers Log
SOURCE: FREEMAN UNITED CIII878 **WELL TYPE:**
COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		GLACIAL DRIFT	8.0	0.0
-	PLEISTOCENE		GLACIAL DRIFT	36.0	8.0
-	PLEISTOCENE		UNCONSOLIDATED	3.0	44.0
-	PLEISTOCENE		GLACIAL DRIFT	18.0	47.0
-	PLEISTOCENE		SAND & GRAVEL	7.0	65.0
-	PLEISTOCENE		GLACIAL DRIFT	8.0	72.0
-	PLEISTOCENE		GLACIAL DRIFT	11.0	80.0
-	PLEISTOCENE		GLACIAL DRIFT	4.0	91.0
-	PLEISTOCENE		GLACIAL DRIFT	35.0	95.0
-			GRAY SHALE	0.8	130.0
-			BLACK SHALE	1.2	130.8
-			GRAY SHALE	3.0	132.0
-			SANDY SHALE	35.0	135.0

MAPID: 11721938000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: 2440' S line, 2040' E line of SE

QUADRANGLE: FARMERSVILLE

LONGITUDE: -89.707593

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 39.427816

DATE COLLECTED: 1 / 11 / 1978

SURFACE ELEVATION (FT.):

LOGGED (FT.): 140.0

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED

CIII1078

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	10.0	0.0
-	PLEISTOCENE		GLACIAL DRIFT	72.7	10.0
-			SANDSTONE	3.3	82.7
-			GRAY SHALE	32.0	86.0
-			SANDSTONE	5.2	118.0
-			GRAY SHALE	1.7	123.2
-			BLACK SHALE	1.9	124.8
-			SANDY SHALE	4.3	126.8
-			SANDSTONE	1.9	131.0
-			SANDY SHALE	7.1	132.9

MAPID: 11721939000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: 2000' N line, 2010' E line of NE

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.707518

GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.430262

DATE COLLECTED: 11 / 8 / 1977

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 379.4

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CIII177

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
660.0	PLEISTOCENE		UNCONSOLIDATED	8.0	0.0	
652.0	PLEISTOCENE		GLACIAL DRIFT	34.0	8.0	
618.0			GRAY SHALE	42.0	42.0	
576.0			ROCK	12.0	84.0	
564.0			GRAY SHALE	19.0	96.0	
545.0			LIMESTONE	2.7	115.0	
542.3			GREEN SHALE	4.0	117.7	
537.3			LIMESTONE	3.3	122.7	GREEN
534.0			GRAY SHALE	3.6	126.0	
530.4			BLACK SHALE	1.1	129.6	
529.3			GREEN SHALE	4.5	130.7	
524.8			LIMESTONE	2.4	135.2	
522.4			GREEN SHALE	4.8	137.6	
517.7			LIMESTONE	2.8	142.3	
514.8			SHALE & SILTSTONE	2.8	145.2	
512.0			GREEN SHALE	47.2	148.0	
464.8			GREEN SHALE	2.3	195.2	
462.5			BLACK SHALE	1.5	197.5	
461.0			GRAY SHALE	4.5	199.0	
456.5			SHALE W/ COAL STREAKS	0.5	203.5	
456.0			CLAYSTONE & SILTSTONE	0.5	204.0	GRAY
455.5			CLAYSTONE & SILTSTONE	2.0	204.5	
453.5			LIMESTONE	0.5	206.5	
453.0			GREEN SHALE	19.0	207.0	
434.0			BLACK SHALE	84.0	226.0	
350.0			GRAY SHALE	1.5	310.0	
348.5			GRAY SHALE	10.5	311.5	
338.0			LIMESTONE	4.0	322.0	
334.0			SHALE WITH LIMESTONE	2.3	326.0	
331.7			SHALE	4.7	328.3	GRY
327.0			SANDSTONE	4.5	333.0	
322.5			GRAY SHALE	4.3	337.5	
318.2			SANDSTONE	2.8	341.8	
315.4			GRAY SHALE	2.9	344.6	
312.5			SHALE	0.2	347.5	
312.3			SHALE	0.1	347.7	
312.2			SHALE	0.5	347.8	
311.7			COAL	0.5	348.3	
311.2			SHALE	0.9	348.8	

310.3	LIMESTONE	0.4	349.7
309.9	SHALE	0.0	350.1
309.9	LIMESTONE	2.9	350.1
307.0	SHALE	0.1	353.0
306.9	LIMESTONE	0.7	353.1
306.2	SHALE	0.0	353.8
306.2	LIMESTONE	1.0	353.8
305.2	SHALE	0.7	354.8
304.6	SHALE	0.3	355.4
304.3	LIMESTONE	0.8	355.7
303.6	SHALE	0.2	356.4
303.4	LIMESTONE	3.5	356.6
299.9	SHALE	0.1	360.1
299.8	LIMESTONE	1.0	360.2
298.9	SHALE	0.8	361.1
298.1	SHALE	1.3	361.9
296.8	LIMESTONE	1.6	363.2
295.3	SHALE	1.7	364.7
293.6	LIMESTONE	1.2	366.4
292.4	COAL	7.8	367.6
284.6	UNDERCLAY	0.4	375.4
284.3	SANDSTONE	3.0	375.7

MAPID: 11721939000C **VERSION:** 2 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 1 **QUARTERS/FOOTAGES:** 2000' N line, 2010' E line of NE
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.707518 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.430262 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 660.0 **LOGGED (FT.):** 379.5 **LOG TYPE:** Drillers Log
SOURCE: FREEMAN UNITED CIII-1-77 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
292.0	CARBONDALE	HERRIN	COAL	7.8	368.0

MAPID: 11721940000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: 2620' S line, 20' E line of SE

QUADRANGLE: FARMERSVILLE

LONGITUDE: -89.700412

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 39.428447

DATE COLLECTED: 1 / 12 / 1978

SURFACE ELEVATION (FT.):

LOGGED (FT.): 80.0

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED

CIII1A78

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	9.0	0.0
-	PLEISTOCENE		GLACIAL DRIFT	45.0	9.0
-	PLEISTOCENE		GLACIAL DRIFT	9.0	54.0
-	PLEISTOCENE		GLACIAL DRIFT	9.3	63.0
-			GRAY SHALE	7.7	72.3

MAPID: 11721941000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: 1340' S line, 1350' E line of SE

QUADRANGLE: FARMERSVILLE

LONGITUDE: -89.7051

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 39.424825

DATE COLLECTED: 11 / 14 / 1977

SURFACE ELEVATION (FT.): 660.0

LOGGED (FT.): 418.0

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED

CIII277

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
660.0	PLEISTOCENE		UNCONSOLIDATED	8.0	0.0
652.0	PLEISTOCENE		GLACIAL DRIFT	15.0	8.0
637.0			GRAY SHALE	52.0	23.0
585.0			BROWN SHALE	20.0	75.0
565.0			LIMESTONE	4.0	95.0
561.0			GRAY SHALE	14.0	99.0
547.0			SANDSTONE	2.0	113.0
545.0			GRAY SHALE	5.0	115.0
540.0			SANDSTONE	3.5	120.0
536.5			GRAY SHALE	9.5	123.5
527.0			SANDSTONE	4.0	133.0
523.0			SANDY SHALE	58.0	137.0
465.0			SANDY SHALE	4.0	195.0
461.0			SANDY SHALE	101.0	199.0
360.0			GRAY SHALE	4.0	300.0
356.0			SANDY SHALE	11.0	304.0
345.0			SANDSTONE	23.0	315.0
322.0			SANDY SHALE	12.0	338.0
310.0			NO RECORD	28.0	350.0
282.0			SANDSTONE	5.0	378.0
277.0			GRAY SHALE	3.8	383.0
273.2			LIMESTONE	3.7	386.8
269.5			GRAY SHALE	2.5	390.5
267.0			SANDSTONE	4.0	393.0
263.0			SHALE	3.6	397.0
259.4	CARBONDALE	HOUCHIN CREEK	COAL	4.4	400.6
255.0			UNDERCLAY	6.0	405.0
249.0			SANDSTONE	7.0	411.0

MAPID: 11721941000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: 1340' S line, 1350' E line of SE

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.7051 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.424825 DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 418.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CIII-2-77 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
296.0	CARBONDALE	HERRIN	COAL	6.5	364.0

MAPID: 11721942000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: 30' S line, 2610' E line of SE

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.709538

GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.421124

DATE COLLECTED: 12 / 8 / 1977

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 355.0

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CIII377

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
655.0	PLEISTOCENE		UNCONSOLIDATED	9.0	0.0	
646.0	PLEISTOCENE		GLACIAL DRIFT	17.0	9.0	
629.0	PLEISTOCENE		UNCONSOLIDATED	24.0	26.0	BROWN
605.0	PLEISTOCENE		GLACIAL DRIFT	15.0	50.0	
590.0	PLEISTOCENE		SAND & GRAVEL	9.0	65.0	
581.0	PLEISTOCENE		GLACIAL DRIFT	39.0	74.0	
542.0			GRAY SHALE	2.0	113.0	
540.0			LIMESTONE	2.5	115.0	
537.5			GRAY SHALE	3.5	117.5	
534.0			BLACK SHALE	6.0	121.0	
528.0			SANDY SHALE	3.0	127.0	
525.0			BLACK SHALE	2.0	130.0	
523.0			SANDY SHALE	58.0	132.0	
465.0			GRAY SHALE	10.0	190.0	
455.0			SANDSTONE	3.0	200.0	
452.0			GRAY SHALE	2.0	203.0	
450.0			BLACK SHALE	3.0	205.0	
447.0			GRAY SHALE	4.5	208.0	
442.5			COAL	1.0	212.5	
441.5			GRAY SHALE	14.5	213.5	
427.0			SANDY SHALE	9.0	228.0	
418.0			GRAY SHALE	13.0	237.0	
405.0			SANDY SHALE	5.0	250.0	
400.0			GRAY SHALE	46.0	255.0	
354.0			SANDSTONE	5.0	301.0	
349.0			GRAY SHALE	27.0	306.0	
322.0			SANDSTONE	5.0	333.0	
317.0			SANDY SHALE	8.7	338.0	
308.3			SANDSTONE	4.3	346.7	
304.0			SANDY SHALE	4.0	351.0	

MAPID: 11721942000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: 30' S line, 2610' E line of SE

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.709538 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.421124 DATE COLLECTED:

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 389.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CIII-3-77 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
388.0	CARBONDALE	HERRIN	COAL	6.9	267.0	

MAPID: 11721943000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: 1840' S line, 30' W line of SW

QUADRANGLE: FARMERSVILLE

LONGITUDE: -89.718852

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 39.425946

DATE COLLECTED: 1 / 18 / 1978

SURFACE ELEVATION (FT.): 659.0

LOGGED (FT.): 383.3

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CIII478

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
659.0	PLEISTOCENE		UNCONSOLIDATED	7.0	0.0
652.0	PLEISTOCENE		GLACIAL DRIFT	36.0	7.0
616.0	PLEISTOCENE		GLACIAL DRIFT	8.0	43.0
608.0			SANDY SHALE	27.0	51.0
581.0			SANDY SHALE	41.0	78.0
540.0			LIMESTONE	4.0	119.0
536.0			SANDY SHALE	7.0	123.0
529.0			SANDSTONE	8.0	130.0
521.0			SANDY SHALE	3.0	138.0
518.0			SANDSTONE	4.0	141.0
514.0			SANDY SHALE	40.0	145.0
474.0			LIMESTONE	5.5	185.0
468.5			SANDY SHALE	5.0	190.5
463.5			LIMESTONE	2.5	195.5
461.0			GRAY SHALE	4.5	198.0
456.5			LIMESTONE	2.5	202.5
454.0			GRAY SHALE	31.0	205.0
423.0			SANDSTONE	3.0	236.0
420.0			SANDY SHALE	36.0	239.0
384.0			LIMESTONE	5.0	275.0
379.0			SANDY SHALE	40.0	280.0
339.0			LIMESTONE	6.5	320.0
332.5			SANDY SHALE	13.5	326.5
319.0			NO RECORD	1.0	340.0
318.0			SHALE	3.4	341.0
314.6			LIMESTONE	2.3	344.4
312.3			SHALE	2.7	346.7
309.6			SHALE	6.2	349.4
303.4			LIMESTONE	1.3	355.6
302.2			LIMESTONE	3.6	356.8
298.6			SHALE	0.3	360.4
298.3			COAL	7.8	360.7
290.5			UNDERCLAY	0.5	368.5
290.0			LIMESTONE	1.1	369.0
288.9			LIMESTONE	1.4	370.1
287.5			LIMESTONE	0.6	371.5
286.9			SHALE	4.8	372.1
282.1			MUDSTONE	3.2	376.9
278.9			MUDSTONE	1.0	380.1

277.9	MUDSTONE	0.6	381.1
277.3	MUDSTONE	1.6	381.7
275.8	MUDSTONE	0.1	383.2

MAPID: 11721943000C **VERSION:** 2 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 1 **QUARTERS/FOOTAGES:** 1840' S line, 30' W line of SW
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.718852 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.425946 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 659.0 **LOGGED (FT.):** 383.3 **LOG TYPE:** Drillers Log
SOURCE: FREEMAN UNITED CIII-4-78 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN COMMENT
299.0	CARBONDALE	HERRIN	COAL	7.8	360.0

MAPID: 11721944000C **VERSION:** 1 **PROJECT:** AVAIL
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 1 **QUARTERS/FOOTAGES:** 1350' S line, 20' E line of SE
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.70037 **GEOLOGIST:** UITEMP
CONFIDENTIAL: N **LATITUDE:** 39.424941 **DATE COLLECTED:** 1 / 12 / 1978
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 110.0 **LOG TYPE:** Drillers Log
SOURCE: FREEMAN UNITED CIII2A78 **WELL TYPE:**
COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	8.0	0.0
-	PLEISTOCENE		GLACIAL DRIFT	67.0	8.0
-			BROWN SHALE	21.0	75.0
-			LIMESTONE	3.5	96.0
-			SHALE	5.5	99.5
-			GRAY SHALE	1.5	105.0
-			GRAY SHALE	3.8	106.5

MAPID: 11721945000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: 350' S line, 1390' E line of SE

QUADRANGLE: FARMERSVILLE

LONGITUDE: -89.705209

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 39.422089

DATE COLLECTED: 1 / 6 / 1978

SURFACE ELEVATION (FT.): 652.0

LOGGED (FT.): 390.4

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CIII778

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
652.0	PLEISTOCENE		UNCONSOLIDATED	10.0	0.0
642.0	PLEISTOCENE		GLACIAL DRIFT	110.0	10.0
532.0			SANDSTONE	4.0	120.0
528.0			GRAY SHALE	4.0	124.0
524.0			SANDSTONE	5.0	128.0
519.0			GRAY SHALE	2.0	133.0
517.0			BLACK SHALE	5.0	135.0
512.0			GRAY SHALE	15.0	140.0
497.0			SHALE	15.0	155.0
482.0			GRAY SHALE	28.0	170.0
454.0			SANDSTONE	3.0	198.0
451.0			GRAY SHALE	3.0	201.0
448.0			BLACK SHALE	3.0	204.0
445.0			GRAY SHALE	3.0	207.0
442.0			GRAY SHALE	13.0	210.0
429.0			GRAY SHALE	104.0	223.0
325.0			GRAY SHALE	6.0	327.0
319.0			SANDSTONE	2.0	333.0
317.0			GRAY SHALE	10.0	335.0
307.0			SANDSTONE	2.0	345.0
305.0			SANDY SHALE	3.0	347.0
302.0			NO RECORD	1.0	350.0
301.0			SHALE	0.6	351.0
300.4			LIMESTONE	0.9	351.6
299.5			SHALE	2.3	352.5
297.2			SHALE	0.9	354.8
296.2			LIMESTONE	2.5	355.8
293.7			SHALE	2.6	358.3
291.2			LIMESTONE	0.6	360.8
290.5			SHALE	0.3	361.5
290.2			LIMESTONE	0.7	361.8
289.5			SHALE	2.9	362.5
286.6			LIMESTONE	4.4	365.4
282.2			SHALE	2.0	369.8
280.2	CARBONDALE	HERRIN	COAL	7.9	371.8
272.3			UNDERCLAY	2.8	379.7
269.4			SHALE	0.8	382.6
268.6			SHALE	2.3	383.4
266.3			SHALE	3.3	385.7

263.0

SHALE

1.3

389.0

MAPID: 11721945000C **VERSION:** 2 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 1 **QUARTERS/FOOTAGES:** 350' S line, 1390' E line of SE
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.705209 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.422089 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 652.0 **LOGGED (FT.):** 390.5 **LOG TYPE:** Drillers Log
SOURCE: FREEMAN UNITED CIII-7-78 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
280.0	CARBONDALE	HERRIN	COAL	7.9	372.0

MAPID: 11721972000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: NW NW NW

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.717979 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.434792 DATE COLLECTED: 7 / 6 / 1978

SURFACE ELEVATION (FT.): LOGGED (FT.): 361.1 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. 6C78 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	15.0	0.0	
-	PLEISTOCENE		GLACIAL DRIFT	40.0	15.0	
-			SANDSTONE	2.0	55.0	
-			SHALY SANDSTONE	12.0	57.0	GRAY
-			GRAY SHALE	32.2	69.0	
-			COAL	0.8	101.2	
-			GRAY SHALE	1.0	102.0	
-			SANDSTONE	5.0	103.0	
-			GRAY SHALE	27.0	108.0	
-			GRAY SHALE	16.0	135.0	
-			GRAY SHALE	14.0	151.0	
-			GRAY SHALE	9.0	165.0	
-			SHALY SANDSTONE	3.0	174.0	
-			SANDSTONE	2.0	177.0	
-			GRAY SHALE	9.0	179.0	
-			SHALY SANDSTONE	5.0	188.0	GRAY
-			SANDSTONE	3.0	193.0	
-			GRAY SHALE	10.0	196.0	
-			SHALY SANDSTONE	30.0	206.0	GRAY
-			SANDSTONE	6.0	236.0	
-			GRAY SHALE	46.0	242.0	
-			SANDSTONE	1.5	288.0	
-			GRAY SHALE	0.5	289.5	
-			SANDSTONE	5.0	290.0	
-			GRAY SHALE	22.0	295.0	
-	MODESTO	PIASA	LIMESTONE	3.0	317.0	
-			SHALY SANDSTONE	18.0	320.0	GRAY
-	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	338.0	
-	CARBONDALE	BRERETON	LIMESTONE	2.6	345.0	
-	CARBONDALE		GRAY SHALE	0.4	347.6	
-	CARBONDALE		GRAY SHALE	0.6	348.0	
-	CARBONDALE	HERRIN	COAL	6.2	348.6	
-	CARBONDALE		UNDERCLAY	2.5	354.8	
-	CARBONDALE		UNDERCLAY	1.8	357.3	
-	CARBONDALE		GRAY SHALE	2.0	359.1	

MAPID: 11721972000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: NW NW NW

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.717979 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.434792 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 361.1 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED 6-C-78 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	COAL	6.2	348.6

MAPID: 11721973000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: 2065' S line, 2122' E line of SE

QUADRANGLE: FARMERSVILLE

LONGITUDE: -89.707875

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 39.426775

DATE COLLECTED: 3 / 0 / 1978

SURFACE ELEVATION (FT.): 656.4

LOGGED (FT.): 416.0

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. CIII678

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
558.4			GRAY SHALE	13.1	98.0	
545.3			LIMESTONE	1.0	111.1	
544.3			SHALE WITH LIMESTONE	6.2	112.1	
538.1			LIMESTONE	5.6	118.3	
532.5			BLACK SHALE	1.6	123.9	
530.9			CLAYSTONE & SILTSTONE	8.5	125.5	GRAY
522.4			LIMESTONE	1.2	134.0	
521.2			GREEN SHALE	2.6	135.2	
518.6			GREEN SHALE	3.7	137.8	
514.9			GRAY SHALE	10.5	141.5	
504.4			GRAY SHALE	14.0	152.0	
490.4			GRAY SHALE	16.0	166.0	
474.4			GRAY SHALE	4.0	182.0	
470.4			SHALY LIMESTONE	1.1	186.0	GRAY
469.3			CALCAREOUS SHALE	1.6	187.1	
467.7			SLATY SHALE	2.3	188.7	
465.4			GRAY SHALE	4.5	191.0	
460.9	MODESTO	CHAPEL	COAL	1.0	195.5	
459.9			UNDERCLAY	3.0	196.5	GREEN
456.9			UNDERCLAY	5.5	199.5	GREEN
451.4			GRAY SHALE	14.0	205.0	
437.4			GRAY SHALE	20.0	219.0	
417.4			SILTY SHALE	18.5	239.0	12.6' CORE LOSS - LOWER PART
398.9			GRAY SHALE	11.5	257.5	
387.4			LIMESTONE	0.4	269.0	
387.0			GRAY SHALE	5.0	269.4	
382.0			SHALY LIMESTONE	0.5	274.4	GRAY
381.5			GRAY SHALE	3.4	274.9	
378.1			CLAY	3.3	278.3	GRAY
374.8			GRAY SHALE	4.9	281.6	
369.9			SILTSTONE	3.5	286.5	GREEN
366.4			GREEN SHALE	12.0	290.0	
354.4			CLAYSTONE & SILTSTONE	2.5	302.0	GREEN
351.9			CLAYSTONE & SILTSTONE	7.7	304.5	GREEN
344.2			LIMESTONE	1.2	312.2	TAN
343.0			SHALE WITH LIMESTONE	4.3	313.4	
338.7			SANDY SILTSTONE	11.2	317.7	GREEN
327.5			SANDSTONE	4.9	328.9	GRAY
322.6			CLAY	2.2	333.8	GRAY

320.4			CLAYSTONE & SILTSTONE	6.3	336.0	GREEN
314.1			LIMESTONE	0.8	342.3	
313.3			GRAY SHALE	1.3	343.1	
312.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.8	344.4	GRAY
309.2	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	1.0	347.2	
308.2	CARBONDALE		CLAYSTONE & SILTSTONE	2.0	348.2	GREEN
306.2	CARBONDALE	BRERETON	NODULAR LIMESTONE	3.8	350.2	
302.4	CARBONDALE	BRERETON	LIMESTONE	2.4	354.0	
300.0	CARBONDALE		GRAY SHALE	0.9	356.4	
299.1	CARBONDALE	HERRIN	COAL	8.0	357.3	#6
291.1	CARBONDALE		UNDERCLAY	0.7	365.3	GRAY
290.4	CARBONDALE		UNDERCLAY	3.3	366.0	GRAY
287.1	CARBONDALE		LIMESTONE	0.7	369.3	
286.4	CARBONDALE		CLAY	8.0	370.0	GREEN
278.4	CARBONDALE		LIMESTONE/MUDSTONE	2.4	378.0	
276.0	CARBONDALE		SHALE WITH LIMESTONE	5.6	380.4	
270.4	CARBONDALE		SILTSTONE	2.0	386.0	GREEN
268.4	CARBONDALE		GREEN SHALE	2.1	388.0	
266.3	CARBONDALE		SLATY SHALE	5.2	390.1	
261.1	CARBONDALE	HOUCHIN CREEK	COAL	2.9	395.3	#4 COAL #5 NOT FOUND
258.2	CARBONDALE		UNDERCLAY	1.3	398.2	GRAY
256.9	CARBONDALE		LIMESTONE	3.0	399.5	GREEN
253.9	CARBONDALE		SILTY SHALE	13.5	402.5	

MAPID: 11721973000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: 2065' S line, 2122' E line of SE

QUADRANGLE: FARMERSVILLE

LONGITUDE: -89.707875

GEOLOGIST: JACOBSON

CONFIDENTIAL: N

LATITUDE: 39.426775

DATE COLLECTED:

SURFACE ELEVATION (FT.): 656.4

LOGGED (FT.): 416.0

LOG TYPE: Multiple log types

SOURCE: FREEMAN UNITED CIII-6-78

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
299.1	CARBONDALE	HERRIN	COAL	8.0	357.3	
261.1	CARBONDALE	HOUCHIN CREEK	COAL	2.9	395.3	

MAPID: 11721974000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: 1540' N line, 2040' E line of NE

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.707639 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.431529 DATE COLLECTED: 1 / 11 / 1978

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

SOURCE: FREEMAN UNITED CIII978 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	9.0	0.0	
-	PLEISTOCENE		GLACIAL DRIFT	88.0	9.0	
-			GRAY SHALE	8.0	97.0	
-			SANDSTONE	2.3	105.0	
-			GRAY SHALE	1.3	107.3	
-			SANDSTONE	3.8	108.5	
-			GRAY SHALE	2.9	112.3	
-			SANDSTONE	6.0	115.3	
-			GRAY SHALE	2.0	121.3	
-			BLACK SHALE	1.8	123.3	
-			DARK SHALE	10.0	125.0	
-			SANDSTONE	2.2	135.0	
-			GRAY SHALE	2.8	137.2	

MAPID: 11721975000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: 2490' S line, 2484' E line of SE

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.709177

GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.427924

DATE COLLECTED: 4 / 5 / 1978

SURFACE ELEVATION (FT.): 655.3 LOGGED (FT.): 369.7

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CIII1178

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
655.3	PLEISTOCENE		UNCONSOLIDATED	8.0	0.0	
647.3	PLEISTOCENE		GLACIAL DRIFT	70.0	8.0	
577.3	PLEISTOCENE		GLACIAL DRIFT	31.7	78.0	
545.6			GRAVEL	3.3	109.7	GRAY
542.3			GRAY SHALE	4.0	113.0	
538.3			SANDY SHALE	5.7	117.0	
532.6			BLACK SHALE	4.7	122.7	
528.0			GRAY SHALE	7.7	127.3	
520.3			SANDSTONE	1.7	135.0	
518.6			SANDY SHALE	30.3	136.7	
488.3			GRAY SHALE	19.0	167.0	
469.3			SANDSTONE	6.8	186.0	
462.5			BLACK SHALE	1.2	192.8	
461.3			GRAY SHALE	4.5	194.0	
456.8			BLACK SHALE	3.2	198.5	
453.6			GRAY SHALE	4.3	201.7	
449.3			SANDSTONE	4.0	206.0	
445.3			SANDY SHALE	74.0	210.0	
371.3			GRAY SHALE	2.0	284.0	
369.3			SANDY SHALE	22.0	286.0	
347.3			BLACK SHALE	2.0	308.0	
345.3			SANDY SHALE	7.5	310.0	
337.8			GRAVEL	7.5	317.5	
330.3			CALCAREOUS SHALE	23.0	325.0	
307.3			LIMESTONE	2.0	348.0	
305.3			LIMESTONE	0.8	350.0	
304.5			SHALE	1.8	350.8	
302.7			LIMESTONE	0.5	352.6	
302.3			LIMESTONE	1.6	353.0	
300.7			NO RECORD	0.4	354.6	
300.3			NO RECORD	3.5	355.0	
296.8			LIMESTONE	2.1	358.5	
294.7			SHALE	1.8	360.6	
292.9			COAL	2.4	362.4	

MAPID: 11721976000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: SE

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.704954 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.424795 DATE COLLECTED: 4 / 20 / 1978

SURFACE ELEVATION (FT.): LOGGED (FT.): 370.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED 11B WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	8.0	0.0
-	PLEISTOCENE		GLACIAL DRIFT	11.0	8.0
-	PLEISTOCENE		GLACIAL DRIFT	89.0	19.0
-			GRAY SHALE	14.0	108.0
-			BLACK SHALE	5.0	122.0
-			SANDY SHALE	25.0	127.0
-			SHALE & SANDSTONE	29.0	152.0
-			SANDY SHALE	8.0	181.0
-			BLACK SHALE	5.0	189.0
-	MODESTO	CHAPEL	COAL	2.0	194.0
-	MODESTO		SANDY SHALE	9.0	196.0
-	MODESTO		SANDSTONE	15.0	205.0
-	MODESTO		SANDY SHALE	4.0	220.0
-	MODESTO		SANDY SHALE	48.0	224.0
-	MODESTO		GRAY SHALE	5.0	272.0
-	MODESTO		SANDY SHALE	26.0	277.0
-	MODESTO		BLACK SHALE	4.0	303.0
-	MODESTO		GRAY SHALE	8.0	307.0
-	MODESTO		GRAY SHALE	3.0	315.0
-	MODESTO	PIASA	LIMESTONE	6.0	318.0
-			SANDY SHALE	13.3	324.0
-	CARBONDALE	BANKSTON FORK	LIMESTONE	11.4	337.3
-	CARBONDALE		GRAY SHALE	1.6	348.8
-	CARBONDALE	BRERETON	LIMESTONE	2.9	350.3
-	CARBONDALE		GRAY SHALE	2.3	353.3
-	CARBONDALE	ANNA	BLACK SHALE	0.8	355.6
-	CARBONDALE	HERRIN	COAL	7.3	356.4
-	CARBONDALE		UNDERCLAY	0.7	363.8
-	CARBONDALE		LIMESTONE	5.6	364.4

MAPID: 11721976000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: SE

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.704954 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.424795 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 370.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED 11B WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	7.3	356.4	

MAPID: 11721977000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 1 QUARTERS/FOOTAGES: 2490' S line, 1575' E line of SE

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.705942 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.427984 DATE COLLECTED: 4 / 6 / 1978

SURFACE ELEVATION (FT.): 660.5 LOGGED (FT.): 117.5 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. 1414A WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
592.5			SANDSTONE	10.0	68.0	GRAY
582.5			NO RECORD	2.5	78.0	LOSS
580.0			SANDSTONE	3.0	80.5	RUSTY
577.0			SANDSTONE	3.5	83.5	GRAY
573.5			SANDSTONE	3.0	87.0	GRAY
570.5			ARGILLACEOUS SANDSTONE	3.0	90.0	
567.5			GRAY SHALE	1.3	93.0	
566.2			GRAY SHALE	1.0	94.3	
565.2			SHALE	6.2	95.3	
559.0			GRAY SHALE	4.3	101.5	
554.7			NO RECORD	2.6	105.8	LOSS
552.1			SHALE	1.9	108.4	
550.2			GRAY SHALE	1.0	110.3	
549.2			GRAY SHALE	5.7	111.3	

MAPID: 11721746000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 2 QUARTERS/FOOTAGES: SE SE SW

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.729335 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.421835 DATE COLLECTED: 3 / 16 / 1976

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 373.8 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CII1776 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
660.0	PLEISTOCENE		UNCONSOLIDATED	14.0	0.0	
646.0	PLEISTOCENE		CLAY & SHALE	8.5	14.0	BROWN
637.5			SHALE	45.5	22.5	
592.0			SANDSTONE	16.5	68.0	
575.5			COAL	0.5	84.5	
575.0			GREEN SHALE	2.5	85.0	
572.5			SHALE	16.5	87.5	
556.0			SANDSTONE	15.0	104.0	
541.0			GREEN SHALE	2.5	119.0	
538.5			CALCAREOUS SANDSTONE	4.0	121.5	
534.5			GREEN SHALE	1.5	125.5	
533.0			BLACK SHALE	3.0	127.0	
530.0			GREEN SHALE	4.5	130.0	
525.5			SHALE	31.5	134.5	
494.0			GREEN SHALE	16.0	166.0	
478.0			SHALE	6.0	182.0	
472.0			CALCAREOUS SHALE	1.5	188.0	
470.5			BLACK SHALE	3.0	189.5	
467.5			DARK SHALE	8.0	192.5	
459.5			SHALE	46.5	200.5	
413.0			GREEN SHALE	33.0	247.0	
380.0			DARK SHALE	2.0	280.0	
378.0			GREEN SHALE	6.5	282.0	
371.5			SHALE	21.0	288.5	
350.5			BLACK SHALE	1.5	309.5	
349.0			COAL	1.0	311.0	
348.0			GREEN SHALE	2.0	312.0	
346.0			CALCAREOUS SHALE	3.5	314.0	
342.5			GREEN SHALE	6.0	317.5	
336.5	MODESTO	PIASA	SHALY LIMESTONE	7.6	323.5	
328.9			GREEN SHALE	1.1	331.1	
327.8			SHALE	5.9	332.2	
321.9			DARK SHALE	2.2	338.1	
319.7			GREEN SHALE	1.9	340.3	
317.8			SHALE	3.5	342.2	
314.3	CARBONDALE	BANKSTON FORK	LIMESTONE	8.2	345.7	
306.1	CARBONDALE		SHALE	1.8	353.9	
304.4	CARBONDALE	BRERETON	LIMESTONE	3.6	355.6	

300.8	CARBONDALE		DARK SHALE	0.4	359.2
300.4	CARBONDALE	ANNA	BLACK SHALE	0.5	359.6
299.9	CARBONDALE	HERRIN	COAL	8.3	360.1 #6
291.6	CARBONDALE		SHALE W/ COAL STREAKS	0.3	368.4
291.4	CARBONDALE		GREEN SHALE	1.1	368.6
290.3	CARBONDALE		CALCAREOUS SHALE	3.1	369.7
287.2	CARBONDALE		UNCLASSIFIED	1.0	372.8

MAPID: 11721746000C **VERSION:** 2 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 2 **QUARTERS/FOOTAGES:** SE SE SW
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.729335 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.421835 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 660.0 **LOGGED (FT.):** 373.8 **LOG TYPE:** Multiple log types
SOURCE: FREEMAN UNITED CII-17-76 **WELL TYPE:** Coal Test
COMMENT: CORE NO. C-11201

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN COMMENT
299.9	CARBONDALE	HERRIN	COAL	8.3	360.1

MAPID: 11721953000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 2 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.736347 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.427361 DATE COLLECTED: 7 / 13 / 1978

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 356.6 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. 7C78 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
660.0	PLEISTOCENE		UNCONSOLIDATED	17.0	0.0	
643.0	PLEISTOCENE		SAND	8.0	17.0	
635.0	PLEISTOCENE		GLACIAL DRIFT	21.0	25.0	
614.0	PLEISTOCENE		BOULDER	1.0	46.0	BROWN
613.0	PLEISTOCENE		GLACIAL DRIFT	17.0	47.0	
596.0			GRAY SHALE	9.0	64.0	
587.0			LIMESTONE	1.0	73.0	
586.0			SANDSTONE	7.0	74.0	
579.0			GRAY SHALE	3.0	81.0	
576.0			COAL	1.0	84.0	
575.0			GRAY SHALE	13.0	85.0	
562.0	BOND	CARTHAGE	LIMESTONE	4.0	98.0	
558.0	MODESTO		SANDSTONE	1.0	102.0	
557.0	MODESTO		LIMESTONE	1.0	103.0	
556.0	MODESTO		BLACK SHALE	2.0	104.0	
554.0	MODESTO		GRAY SHALE	8.0	106.0	
546.0	MODESTO		LIMESTONE	4.0	114.0	
542.0	MODESTO		GRAY SHALE	1.0	118.0	
541.0	MODESTO		BLACK SHALE	2.0	119.0	
539.0	MODESTO		GRAY SHALE	3.0	121.0	
536.0	MODESTO		GRAY SHALE	3.0	124.0	
533.0	MODESTO		GRAY SHALE	56.0	127.0	
477.0	MODESTO		BLACK SHALE	3.0	183.0	
474.0	MODESTO		GRAY SHALE	3.0	186.0	
471.0	MODESTO	CHAPEL	COAL	2.0	189.0	
469.0			GRAY SHALE	108.0	191.0	
361.0			SHALE WITH LIMESTONE	5.0	299.0	
356.0			GRAY SHALE	4.0	304.0	
352.0			SHALE WITH LIMESTONE	10.0	308.0	
342.0			GRAY SHALE	2.0	318.0	
340.0			SILTY SHALE	5.0	320.0	
335.0			GRAY SHALE	1.5	325.0	
333.5			SILTY BLACK SHALE	4.8	326.5	
328.7			SILTY BLACK SHALE	3.8	331.3	
324.9	CARBONDALE	BANKSTON FORK	LIMESTONE	3.8	335.1	GRAY
321.1	CARBONDALE		GRAY SHALE	2.6	338.9	
318.5	CARBONDALE	BRERETON	LIMESTONE	3.7	341.5	GRAY
314.8	CARBONDALE		CALCAREOUS SHALE	0.3	345.2	
314.5	CARBONDALE		GRAY SHALE	3.8	345.5	

310.7	CARBONDALE	HERRIN	COAL	4.2	349.3	
306.5	CARBONDALE		UNDERCLAY	0.9	353.5	GRAY
305.6	CARBONDALE		UNDERCLAY	1.0	354.4	GREEN
304.6	CARBONDALE		NO RECORD	1.2	355.4	CORE LOSS

MAPID: 11701095000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 3 **QUARTERS/FOOTAGES:** SW SW SW NW
QUADRANGLE: VIRDEN SOUTH **LONGITUDE:** -89.755454 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.428682 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 665.0 **LOGGED (FT.):** 347.2 **LOG TYPE:** Survey Core Study
SOURCE: FREEMAN UNITED C-7-66 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
355.8	MODESTO	PIASA	LIMESTONE	4.0	309.2	
351.8	CARBONDALE		GRAY SHALE	10.0	313.2	
341.8	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	10.4	323.2	
331.4	CARBONDALE	LAWSON	CLAYSTONE	2.5	333.6	
328.9	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	3.3	336.1	
325.7	CARBONDALE	ANNA	BLACK SHALE	1.7	339.3	
324.0	CARBONDALE	HERRIN	COAL	6.2	341.0	

MAPID: 11701095000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 3 **QUARTERS/FOOTAGES:** SW SW SW NW
QUADRANGLE: VIRDEN SOUTH **LONGITUDE:** -89.755454 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.428682 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 665.0 **LOGGED (FT.):** 347.2 **LOG TYPE:** Drillers Log
SOURCE: FREEMAN UNITED C-7-66 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
357.4	MODESTO	PIASA	LIMESTONE	4.0	307.6	
353.4	MODESTO		UNCLASSIFIED	2.5	311.6	
350.9	CARBONDALE		UNCLASSIFIED	7.5	314.1	
343.4	CARBONDALE	BANKSTON FORK	LIMESTONE	9.2	321.6	
334.2	CARBONDALE	ANVIL ROCK	SANDSTONE	1.1	330.8	
333.1	CARBONDALE		SHALE	1.1	331.9	
332.0	CARBONDALE	BRERETON	LIMESTONE	6.3	333.0	
325.7	CARBONDALE	ANNA	BLACK SHALE	1.7	339.3	
324.0	CARBONDALE	HERRIN	COAL	6.2	341.0	

MAPID: 11701095000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 3 QUARTERS/FOOTAGES: SW SW SW NW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.755454 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.428682 DATE COLLECTED:

SURFACE ELEVATION (FT.): 665.0 LOGGED (FT.): 350.2 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED C-7-66 WELL TYPE: Coal Test

COMMENT: DRILL LOG INC;SEE COAL SEC. MAP#6-168

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
324.3	CARBONDALE	HERRIN	COAL	6.2	340.7	

MAPID: 11701095000C VERSION: 4

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 3 QUARTERS/FOOTAGES: SW SW SW NW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.755454 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.428682 DATE COLLECTED: 1 / 6 / 1966

SURFACE ELEVATION (FT.): 665.0 LOGGED (FT.): 350.2 LOG TYPE: Drillers Log

SOURCE: FREEMAN COAL MINING CO. C766 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
665.0	PLEISTOCENE		UNCONSOLIDATED	12.0	0.0
653.0	PLEISTOCENE		UNCONSOLIDATED	64.0	12.0
589.0			LIMESTONE	3.0	76.0
586.0			DARK SHALE	8.0	79.0
578.0			LIMESTONE	9.0	87.0
569.0			BLACK SHALE	5.0	96.0
564.0			SANDY SHALE	8.0	101.0
556.0			LIMESTONE	3.0	109.0
553.0			BLACK SHALE	3.0	112.0
550.0			SANDY SHALE	5.0	115.0
545.0			LIMESTONE	2.0	120.0
543.0			SANDY SHALE	51.0	122.0
492.0			BLACK SHALE	9.0	173.0
483.0			SANDY SHALE	8.0	182.0
475.0			SANDSTONE	35.0	190.0
440.0			SANDY SHALE	64.0	225.0
376.0	MODESTO	PIASA	LIMESTONE	1.0	289.0
375.0			SHALE	8.0	290.0
367.0			BLACK SHALE	10.0	298.0
357.0			SHALE	2.0	308.0
355.0			LIMESTONE	2.0	310.0
353.0			SHALE	10.0	312.0
343.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	322.0
340.0	CARBONDALE		SHALE	2.0	325.0
338.0	CARBONDALE		LIMESTONE	4.2	327.0
333.8	CARBONDALE		SHALE	1.8	331.2
332.0	CARBONDALE	BRERETON	LIMESTONE	6.0	333.0
326.0	CARBONDALE	ANNA	BLACK SHALE	1.7	339.0
324.3	CARBONDALE	HERRIN	COAL	6.1	340.7
318.2	CARBONDALE		UNDERCLAY	1.3	346.8
317.0	CARBONDALE		LIMESTONE	2.0	348.0

MAPID: 11700033000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 4 QUARTERS/FOOTAGES: 2640' S line, 1320' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.760731 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.42822 DATE COLLECTED: 10 / 0 / 1902

SURFACE ELEVATION (FT.): 649.0 LOGGED (FT.): 330.2 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
351.6	MODESTO	PIASA	LIMESTONE	1.0	297.4
350.6	CARBONDALE	DANVILLE	COAL	1.0	298.4
349.6	CARBONDALE		UNCLASSIFIED	9.8	299.4
339.8	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	309.2
330.8	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	318.2
329.8	CARBONDALE		UNCLASSIFIED	1.0	319.2
328.8	CARBONDALE	BRERETON	LIMESTONE	3.5	320.2
325.3	CARBONDALE	ANNA	BLACK SHALE	0.3	323.7
325.0	CARBONDALE	HERRIN	COAL	6.2	324.0

MAPID: 11700033000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 4 QUARTERS/FOOTAGES: 2640' S line, 1320' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.760731 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.42822 DATE COLLECTED:

SURFACE ELEVATION (FT.): 649.0 LOGGED (FT.): 329.2 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
352.8	MODESTO	PIASA	LIMESTONE	1.0	296.2
351.8	CARBONDALE	DANVILLE	COAL	1.0	297.2
350.8	CARBONDALE		SILTY SHALE	5.3	298.2
345.5	CARBONDALE		GRAY SHALE	0.5	303.5
345.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	13.0	304.0
332.0	CARBONDALE	LAWSON	CONGLOMERATE	2.0	317.0
330.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	4.0	319.0
326.0	CARBONDALE	HERRIN	COAL	6.2	323.0

MAPID: 11700033000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 4 QUARTERS/FOOTAGES: 2640' S line, 1320' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.760731 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.42822 DATE COLLECTED: 10 / 31 / 1902

SURFACE ELEVATION (FT.): 648.7 LOGGED (FT.): 332.0 LOG TYPE: Drillers Log

SOURCE: A.W. CRAWFORD OPTIONS WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
648.7			SOIL	5.0	0.0	
643.7			CLAY & GRAVEL	10.0	5.0	
633.7			SAND	4.0	15.0	
629.7			UNCONSOLIDATED	41.0	19.0	CLAY, GRAVEL, SAND
588.7			CLAY	5.0	60.0	
583.7	MODESTO		SANDSTONE	2.0	65.0	
581.7	MODESTO		SHALE	4.0	67.0	
577.7	MODESTO		LIMESTONE	1.5	71.0	
576.2	MODESTO		SHALE	12.5	72.5	
563.7	MODESTO	CARLINVILLE	LIMESTONE	11.0	85.0	
552.7	MODESTO	CARLINVILLE	CALCAREOUS SHALE	1.0	96.0	
551.7	MODESTO	CARLINVILLE	LIMESTONE	3.0	97.0	
548.7	MODESTO		SHALE	2.0	100.0	
546.7	MODESTO		BLACK SHALE	3.5	102.0	
543.2	MODESTO		SHALE	0.5	105.5	
542.7	MODESTO		SHALE	6.0	106.0	W/ LS BANDS
536.7	MODESTO		SHALE	5.0	112.0	
531.7	MODESTO		BLACK SHALE	5.2	117.0	
526.5	MODESTO		CLAYSTONE & SHALE	4.3	122.2	
522.3	MODESTO		SANDY SHALE	12.6	126.4	
509.7	MODESTO		CLAYSTONE & SHALE	4.3	139.0	
505.4	MODESTO		SHALE	2.8	143.3	
502.7	MODESTO		CALCAREOUS SHALE	2.0	146.0	
500.7	MODESTO		LIMESTONE	2.0	148.0	
498.7	MODESTO		SANDY SHALE	10.0	150.0	
488.7	MODESTO		BLACK SHALE	7.0	160.0	
481.7	MODESTO		LIMESTONE	2.0	167.0	
479.7	MODESTO	CHAPEL	COAL	0.7	169.0	
479.0	MODESTO		CLAYSTONE & SHALE	3.3	169.7	
475.7	MODESTO		LIMESTONE	4.0	173.0	
471.7	MODESTO		CALCAREOUS SHALE	6.0	177.0	
465.7	MODESTO		SANDSTONE	5.0	183.0	
460.7	MODESTO		SHALE	28.0	188.0	W/ SS PARTINGS
432.7	MODESTO		SANDY SHALE	37.0	216.0	W/ SS & LS BANDS
395.7	MODESTO		SANDY SHALE	6.5	253.0	
389.2	MODESTO		SHALE	8.5	259.5	
380.7	MODESTO		SANDSTONE	9.0	268.0	
371.7	MODESTO		SHALE	4.0	277.0	W/ LS BANDS
367.7	MODESTO		SANDY SHALE	14.0	281.0	

353.7	MODESTO		BLACK SHALE	1.7	295.0
352.0	MODESTO		LIMESTONE	1.0	296.7
351.0	CARBONDALE	DANVILLE	COAL	1.0	297.7
350.0	CARBONDALE		SANDY SHALE	5.3	298.7
344.7	CARBONDALE		SHALE	0.5	304.0
344.2	CARBONDALE		LIMESTONE	13.0	304.5
331.2	CARBONDALE		CONGLOMERATE	2.0	317.5
329.2	CARBONDALE		LIMESTONE	3.8	319.5
325.4	CARBONDALE	HERRIN	COAL	6.2	323.3
319.2	CARBONDALE		SHALE	2.5	329.5

MAPID: 11721954000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 4 QUARTERS/FOOTAGES: SW SW SE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.764164 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.421844 DATE COLLECTED: 8 / 11 / 1978

SURFACE ELEVATION (FT.): LOGGED (FT.): 327.5 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. 12C78 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	12.0	0.0	
-	PLEISTOCENE		GLACIAL DRIFT	5.0	12.0	
-	PLEISTOCENE		GLACIAL DRIFT	3.0	17.0	
-	PLEISTOCENE		GLACIAL DRIFT	8.0	20.0	
-	PLEISTOCENE		GLACIAL DRIFT	11.0	28.0	
-	PLEISTOCENE		UNKNOWN	4.0	39.0	GRAY
-	PLEISTOCENE		GLACIAL DRIFT	12.0	43.0	
-	PLEISTOCENE		GLACIAL DRIFT	5.0	55.0	GRAY
-	PLEISTOCENE		UNKNOWN	2.0	60.0	GRAY
-	PLEISTOCENE		GLACIAL DRIFT	6.0	62.0	
-			GRAY SHALE	3.0	68.0	
-			SHALE	9.0	71.0	
-			SHALE WITH LIMESTONE	4.0	80.0	
-			SANDSTONE	7.0	84.0	
-			SLATY SHALE	3.0	91.0	
-			GRAY SHALE	5.0	94.0	
-			GRAY SHALE	1.0	99.0	
-			SANDSTONE	2.0	100.0	
-			GRAY SHALE	7.0	102.0	
-			SANDSTONE	3.0	109.0	
-			GRAY SHALE	17.0	112.0	
-			SANDSTONE	13.0	129.0	
-			SHALY SANDSTONE	18.0	142.0	GRAY
-			BLACK SHALE	4.0	160.0	
-			GRAY SHALE	8.0	164.0	
-			BLACK SHALE	1.0	172.0	
-	MODESTO	CHAPEL	COAL	1.6	173.0	
-			SANDSTONE	4.4	174.6	
-			GRAY SHALE	10.0	179.0	
-			SANDSTONE	4.0	189.0	
-			GRAY SHALE	74.5	193.0	
-			BROWN SHALE	1.5	267.5	
-			GRAY SHALE	22.0	269.0	
-			CORE LOSS	2.0	291.0	CORE LOSS
-			GRAY SHALE	6.7	293.0	
-			GRAY SHALE	0.8	299.7	
-			NO RECORD	2.5	300.5	CORE LOSS
-			GRAY SHALE	0.5	303.0	
-			SANDY SHALE	1.0	303.5	

-	SANDSTONE	1.8	304.5	BROWN
-	SANDSTONE	1.0	306.3	GRAY
-	SANDSTONE/SHALE	0.5	307.3	
-	NO RECORD	2.7	307.8	CORE LOSS
-	SANDSTONE/SHALE	1.5	310.5	GRAY
-	CLAYSTONE & SILTSTONE	5.0	312.0	GRAY
-	SANDSTONE	2.0	317.0	
-	SILTY SHALE	0.3	319.0	
-	SHALY SANDSTONE	2.8	319.3	COAL FRAGMENTS
-	GRAY SHALE	0.3	322.1	
-	NO RECORD	5.1	322.4	CORE LOSS

MAPID: 11700034000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 5 QUARTERS/FOOTAGES: 2000' S line, 4300' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.790004 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.426539 DATE COLLECTED: 9 / 0 / 1939

SURFACE ELEVATION (FT.): 673.0 LOGGED (FT.): 357.8 LOG TYPE: Drillers Log

SOURCE: BUTLER, MILLARD M. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN COMMENT
357.0	MODESTO	PIASA	LIMESTONE	4.0	316.0
353.0	MODESTO		UNCLASSIFIED	3.0	320.0
350.0	CARBONDALE	DANVILLE	COAL	1.0	323.0
349.0	CARBONDALE		UNCLASSIFIED	10.0	324.0
339.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	334.0
330.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	343.0
329.0	CARBONDALE		UNCLASSIFIED	1.0	344.0
328.0	CARBONDALE	BRERETON	LIMESTONE	4.0	345.0
324.0	CARBONDALE	ANNA	BLACK SHALE	2.0	349.0
322.0	CARBONDALE	HERRIN	COAL	6.8	351.0

MAPID: 11700034000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 5 QUARTERS/FOOTAGES: 2000' S line, 4300' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.790004

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.426539

DATE COLLECTED:

SURFACE ELEVATION (FT.): 674.0

LOGGED (FT.): 357.8

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
362.0	CARBONDALE	DANVILLE	COAL	1.0	312.0
361.0	CARBONDALE		GRAY SHALE	10.0	313.0
351.0	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	15.0	323.0
336.0	CARBONDALE	LAWSON	GRAY SHALE	2.0	338.0
334.0	CARBONDALE	BRERETON	LIMESTONE W/ SHALE	5.5	340.0
328.5	CARBONDALE	ANNA	LIMESTONE W/ SHALE	5.5	345.5
323.0	CARBONDALE	HERRIN	COAL	6.8	351.0

MAPID: 11700034000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 5 QUARTERS/FOOTAGES: 2000' S line, 4300' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.790004 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.426539 DATE COLLECTED: 0 / 0 / 1894

SURFACE ELEVATION (FT.): 673.5 LOGGED (FT.): 358.0 LOG TYPE: Drillers Log

SOURCE: GREEN RIDGE COAL CO., SHAFT WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
673.5			SOIL	3.0	0.0	
670.5			CLAY	13.0	3.0	
657.5			HARD PAN	21.0	16.0	
636.5	MODESTO		SHALE	33.0	37.0	
603.5	MODESTO		FOSSILIFEROUS SHALE	3.5	70.0	
600.0	MODESTO		COAL WITH SHALE	12.0	73.5	
588.0	MODESTO		SHALE	13.0	85.5	W/ SS BANDS
575.0	MODESTO		SHALE	3.0	98.5	
572.0	MODESTO	MACOUPIN	LIMESTONE	8.0	101.5	
564.0	MODESTO		SHALE	5.0	109.5	
559.0	MODESTO		LIMESTONE	2.0	114.5	
557.0	MODESTO		SHALE	7.0	116.5	
550.0	MODESTO	CARLINVILLE	LIMESTONE	17.0	123.5	W/ PARTINGS
533.0	MODESTO		SANDSTONE	30.0	140.5	
503.0	MODESTO		SANDY SHALE	11.0	170.5	
492.0	MODESTO		SHALE	2.0	181.5	
490.0	MODESTO	CHAPEL	COAL	1.0	183.5	
489.0	MODESTO		SHALE	3.8	184.5	
485.2	MODESTO		SHALY SANDSTONE	15.0	188.3	W/ LS PARTINGS
470.2	MODESTO		SANDY SHALE	10.0	203.3	
460.2	MODESTO		SHALE	14.0	213.3	
446.2	MODESTO		SHALE	8.0	227.3	
438.2	MODESTO		SHALE	23.0	235.3	
415.2	MODESTO		SHALE	4.0	258.3	
411.2	MODESTO		COAL	1.0	262.3	
410.2	MODESTO		SHALE	3.0	263.3	
407.2	MODESTO		SANDY SHALE	12.0	266.3	
395.2	MODESTO		SHALE	6.0	278.3	
389.2	MODESTO		SHALY SANDSTONE	12.0	284.3	
377.2	MODESTO		SANDY SHALE	6.0	296.3	
371.2	MODESTO		SHALE	10.0	302.3	W/ LS
361.2	CARBONDALE	DANVILLE	COAL	1.0	312.3	
360.2	CARBONDALE		SHALE	10.0	313.3	
350.2	CARBONDALE		CALCAREOUS SHALE	15.0	323.3	
335.2	CARBONDALE		SHALE	2.0	338.3	
333.2	CARBONDALE		SHALE	11.0	340.3	W/ LS BANDS
322.2	CARBONDALE	HERRIN	COAL	6.8	351.3	

MAPID: 11721720000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 8 QUARTERS/FOOTAGES: SE SE SE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.775798 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.407253 DATE COLLECTED: 3 / 9 / 1976

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 337.5 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CII1576 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
660.0			UNCONSOLIDATED	2.0	0.0	
658.0			UNCONSOLIDATED	8.0	2.0	BROWN
650.0			UNCONSOLIDATED	2.0	10.0	GRAY
648.0			UNCONSOLIDATED	5.0	12.0	GRAY
643.0			UNCONSOLIDATED	67.5	17.0	GRAY
575.5	BOND	CARTHAGE	LIMESTONE	5.0	84.5	
570.5	MODESTO		BONE COAL	1.0	89.5	
569.5	MODESTO		UNDERCLAY	1.5	90.5	
568.0	MODESTO		GRAY SHALE	8.0	92.0	
560.0	MODESTO		SHALY LIMESTONE	2.5	100.0	
557.5	MODESTO		GREEN SHALE	2.5	102.5	
555.0	MODESTO		DARK SHALE	1.0	105.0	
554.0	MODESTO		GREEN SHALE	17.0	106.0	
537.0	MODESTO		SILTY SHALE	25.0	123.0	
512.0	MODESTO		GRAY SHALE	5.5	148.0	
506.5	MODESTO		LIMESTONE	1.0	153.5	
505.5	MODESTO		SHALE	4.0	154.5	D
501.5	MODESTO		LIMESTONE	1.0	158.5	
500.5	MODESTO		GRAY SHALE	10.0	159.5	
490.5	MODESTO	CHAPEL	COAL	1.0	169.5	
489.5	MODESTO		UNDERCLAY	1.5	170.5	
488.0			SHALE WITH LIMESTONE	18.0	172.0	
470.0			SHALE	69.0	190.0	
401.0			SHALE WITH LIMESTONE	15.0	259.0	
386.0			BLACK SHALE	1.0	274.0	
385.0			SHALE	14.0	275.0	
371.0			SHALE WITH LIMESTONE	10.0	289.0	
361.0			GRAY SHALE	10.0	299.0	
351.0			SILTY SHALE	8.0	309.0	
343.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	317.0	
340.5	CARBONDALE		GREEN SHALE	0.2	319.5	
340.3	CARBONDALE		LIMESTONE	1.0	319.7	
339.3	CARBONDALE		GREEN SHALE	2.8	320.7	
336.5	CARBONDALE	BRERETON	LIMESTONE	2.6	323.5	
333.9	CARBONDALE		GRAY SHALE	2.2	326.1	
331.7	CARBONDALE	HERRIN	COAL	6.0	328.3	#6
325.7	CARBONDALE		UNDERCLAY	0.4	334.3	GRAY
325.3	CARBONDALE		NODULAR LIMESTONE	2.7	334.7	
322.6	CARBONDALE		UNCLASSIFIED	0.1	337.4	

MAPID: 11721720000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 8 QUARTERS/FOOTAGES: SE SE SE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.775798 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.407253 DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 337.5 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED CII-15-76 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC; CORE NO. C-11199

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
331.7	CARBONDALE	HERRIN	COAL	6.0	328.3

MAPID: 11721734000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 10 QUARTERS/FOOTAGES: SW SE SW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.750135 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.407184 DATE COLLECTED: 3 / 8 / 1976

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 337.3 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CII876A WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
660.0	PLEISTOCENE		UNCONSOLIDATED	2.0	0.0	
658.0	PLEISTOCENE		GLACIAL DRIFT	30.0	2.0	BROWN
628.0	PLEISTOCENE		GLACIAL DRIFT	35.5	32.0	GRAY
592.5	PLEISTOCENE		GLACIAL DRIFT	13.5	67.5	BROWN
579.0			GRAY SHALE	2.0	81.0	
577.0			BONE COAL	0.5	83.0	
576.5			GRAY SHALE	11.5	83.5	
565.0			LIMESTONE	1.0	95.0	
564.0			GRAY SHALE	3.0	96.0	
561.0			CALCAREOUS SANDSTONE	6.0	99.0	
555.0			DARK SHALE	3.0	105.0	
552.0			GRAY SHALE	4.0	108.0	
548.0			SHALE	11.0	112.0	
537.0			SHALE	4.0	123.0	
533.0			SHALE	10.0	127.0	
523.0			SHALE	16.0	137.0	
507.0			GRAY SHALE	7.0	153.0	
500.0			BLACK SHALE	8.0	160.0	
492.0			SILTY SHALE	4.0	168.0	
488.0	MODESTO	CHAPEL	BONE COAL	1.0	172.0	
487.0	MODESTO		UNDERCLAY	3.0	173.0	
484.0	MODESTO		SHALE WITH LIMESTONE	4.0	176.0	
480.0	MODESTO		SHALE	5.0	180.0	
475.0	MODESTO		SILTY SHALE	63.0	185.0	
412.0	MODESTO		SILTY SHALE	9.0	248.0	
403.0	MODESTO		SHALE	30.0	257.0	
373.0	MODESTO		BLACK SHALE	2.0	287.0	
371.0	CARBONDALE	DANVILLE	BONE COAL	0.5	289.0	
370.5	CARBONDALE		UNDERCLAY	1.5	289.5	
369.0	CARBONDALE		SHALE	6.0	291.0	
363.0	CARBONDALE		SANDSTONE	6.0	297.0	
357.0	CARBONDALE		SILTY SHALE	15.5	303.0	
341.5	CARBONDALE	BRERETON	LIMESTONE	1.8	318.5	
339.7	CARBONDALE		GRAY SHALE	6.3	320.3	
333.4	CARBONDALE	HERRIN	COAL	7.1	326.6	
326.3	CARBONDALE		SILTY SHALE	3.7	333.7	

MAPID: 11721734000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 10 QUARTERS/FOOTAGES: SW SE SW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.750135 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.407184 DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 337.3 LOG TYPE: Multiple log types

SOURCE: FREEMAN UNITED CII-8-76A WELL TYPE: Coal Test

COMMENT: CORE NO. C-11041;STRIP LOG MISSING

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
333.5	CARBONDALE	HERRIN	COAL	7.2	326.5	

MAPID: 11721749000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 10 QUARTERS/FOOTAGES: NE NW NE

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.743258

GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.42001

DATE COLLECTED: 3 / 11 / 1976

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 373.3

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CII1676

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
660.0	PLEISTOCENE		UNCONSOLIDATED	2.0	0.0	
658.0	PLEISTOCENE		GLACIAL DRIFT	20.0	2.0	
638.0	PLEISTOCENE		UNCONSOLIDATED	15.0	22.0	GRAY
623.0			LIMESTONE	1.0	37.0	
622.0			BROWN SHALE	14.0	38.0	
608.0			SANDSTONE	27.0	52.0	
581.0			LIMESTONE	1.0	79.0	
580.0			GRAY SHALE	9.0	80.0	
571.0			GRAY SHALE	3.5	89.0	
567.5	BOND	CARTHAGE	LIMESTONE	5.5	92.5	
562.0	MODESTO		DARK SHALE	2.0	98.0	
560.0	MODESTO		SHALE WITH LIMESTONE	6.0	100.0	
554.0	MODESTO		CALCAREOUS SHALE	3.0	106.0	
551.0	MODESTO		BLACK SHALE	3.0	109.0	
548.0	MODESTO		GRAY SHALE	6.0	112.0	
542.0	MODESTO		SILTY SHALE	5.0	118.0	
537.0	MODESTO		SHALE	15.0	123.0	
522.0	MODESTO		GRAY SHALE	15.0	138.0	
507.0	MODESTO		SHALE	15.0	153.0	
492.0	MODESTO		BLACK SHALE	7.5	168.0	
484.5	MODESTO		FOSSILIFEROUS LIMESTONE	2.5	175.5	
482.0	MODESTO		BLACK SHALE	2.5	178.0	
479.5	MODESTO	CHAPEL	COAL	1.0	180.5	
478.5	MODESTO		UNDERCLAY	2.5	181.5	
476.0	MODESTO		SHALE WITH LIMESTONE	6.0	184.0	
470.0	MODESTO		SANDY SHALE	28.0	190.0	
442.0	MODESTO		SILTY SHALE	26.0	218.0	
416.0	MODESTO		SILTY SHALE	26.0	244.0	
390.0	MODESTO		SANDY SHALE	18.5	270.0	
371.5	MODESTO		BLACK SHALE	1.5	288.5	
370.0	MODESTO		BONE COAL	0.5	290.0	
369.5	MODESTO		UNDERCLAY	1.5	290.5	
368.0	MODESTO		SHALE WITH LIMESTONE	7.0	292.0	
361.0	MODESTO	PIASA	SHALY LIMESTONE	8.0	299.0	GREEN
353.0	MODESTO	PIASA	LIMESTONE	0.9	307.0	
352.1	MODESTO		GREEN SHALE	1.9	307.9	
350.2	MODESTO		SILTY SHALE	4.6	309.8	
345.6	MODESTO		DARK SHALE	3.0	314.4	

342.6	MODESTO		SANDY SHALE	3.6	317.4
339.0	MODESTO		CALCAREOUS SHALE	1.5	321.0
337.5	MODESTO		SILTY SHALE	2.8	322.5
334.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	325.3
330.7	CARBONDALE		DARK SHALE	3.8	329.3
326.9	CARBONDALE	BRERETON	LIMESTONE	2.1	333.1
324.8	CARBONDALE	HERRIN	COAL	7.5	335.2 #6
317.3	CARBONDALE		UNDERCLAY	3.8	342.7
313.5	CARBONDALE		LIMESTONE	1.8	346.5
311.7	CARBONDALE		LIMESTONE	2.2	348.3
309.5	CARBONDALE		GRAY SHALE	1.5	350.5
308.0	CARBONDALE		SILTY SHALE	2.0	352.0
306.0	CARBONDALE		LIMESTONE	1.7	354.0
304.3	CARBONDALE		SHALY LIMESTONE	1.6	355.7
302.7	CARBONDALE		SHALE WITH LIMESTONE	1.7	357.3
301.0	CARBONDALE		SILTY SHALE	5.5	359.0
295.5	CARBONDALE		SHALE	0.5	364.5
295.0	CARBONDALE	EXCELLO	BLACK SHALE	2.1	365.0
292.9	CARBONDALE	HOUCHIN CREEK	COAL	1.7	367.1 #5
291.2	CARBONDALE		UNDERCLAY	1.7	368.8
289.5	CARBONDALE		SHALE WITH LIMESTONE	2.0	370.5
287.5	CARBONDALE		LIMESTONE	0.5	372.5
287.0	CARBONDALE		UNCLASSIFIED	0.3	373.0
286.7	CARBONDALE		UNCLASSIFIED	1.2	373.3

MAPID: 11721749000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 10 QUARTERS/FOOTAGES: NE NW NE

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.743258 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.42001 DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 373.3 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED CII-16-76 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC; CORE NO. C-11200

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN COMMENT
324.8	CARBONDALE	HERRIN	COAL	7.5	335.2

MAPID: 11701096000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 11 QUARTERS/FOOTAGES: NW NW NW SW

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.736858

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.413163

DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 348.3

LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED C-6-66

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
335.6	CARBONDALE	DANVILLE	COAL	0.3	324.4	
335.3	CARBONDALE		GRAY SHALE	8.8	324.7	
326.5	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.8	333.5	UPPER BENCH
323.8	CARBONDALE	BANKSTON FORK	GRAY SHALE	2.0	336.2	SHALE PARTING
321.8	CARBONDALE	BANKSTON FORK	LIMESTONE	0.4	338.2	LOWER BENCH
321.3	CARBONDALE	LAWSON	GRAY SHALE	0.2	338.7	
321.2	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	2.3	338.8	
318.9	CARBONDALE	ANNA	CLAYSTONE	0.9	341.1	
318.0	CARBONDALE	HERRIN	COAL	6.3	342.0	

MAPID: 11701096000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 11 QUARTERS/FOOTAGES: NW NW NW SW

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.736858

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.413163

DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 349.2

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED C-6-66

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
341.7	MODESTO		UNCLASSIFIED	1.9	318.3	
339.8	CARBONDALE	DANVILLE	COAL	0.3	320.2	
339.5	CARBONDALE		UNCLASSIFIED	8.8	320.5	
330.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	329.3	
327.4	CARBONDALE	ANVIL ROCK	SANDSTONE	2.0	332.6	
325.4	CARBONDALE	CONANT	LIMESTONE	0.4	334.6	
325.0	CARBONDALE		SHALE	0.2	335.0	
324.8	CARBONDALE	BRERETON	LIMESTONE	2.3	335.2	
322.5	CARBONDALE	ANNA	BLACK SHALE	4.5	337.5	
318.0	CARBONDALE	HERRIN	COAL	7.2	342.0	

MAPID: 11701096000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 11 QUARTERS/FOOTAGES: NW NW NW SW
QUADRANGLE: FARMERSVILLE LONGITUDE: -89.736858 GEOLOGIST: JACOBSON
CONFIDENTIAL: N LATITUDE: 39.413163 DATE COLLECTED:
SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 352.0 LOG TYPE: Survey Core Study
SOURCE: FREEMAN UNITED C-6-66 WELL TYPE: Coal Test
COMMENT: DRILL LOG INC;SEE COAL SEC. MAP #6-168

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
340.1	CARBONDALE	DANVILLE	COAL	2.5	319.9	
317.5	CARBONDALE	HERRIN	COAL	6.3	342.5	

MAPID: 1170109600C VERSION: 4

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 11 QUARTERS/FOOTAGES: NW NW NW SW

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.736858 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.413163 DATE COLLECTED: 1 / 5 / 1966

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 352.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN COAL MINING CO. C666 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
660.0	PLEISTOCENE		UNCLASSIFIED	10.0	0.0	NO RECORD
650.0	PLEISTOCENE		UNCONSOLIDATED	48.0	10.0	
602.0	PLEISTOCENE		GLACIAL DRIFT	13.0	58.0	
589.0			SANDY SHALE	14.0	71.0	
575.0			SANDSTONE	25.0	85.0	
550.0			LIMESTONE	5.0	110.0	
545.0			BLACK SHALE	10.0	115.0	
535.0			SHALE	4.0	125.0	
531.0			LIMESTONE	21.0	129.0	
510.0			SANDSTONE	3.0	150.0	
507.0			SHALE	20.0	153.0	
487.0			SANDY SHALE	5.0	173.0	
482.0			BLACK SHALE	10.0	178.0	
472.0			SANDY SHALE	37.0	188.0	
435.0			SANDSTONE	38.0	225.0	
397.0			SANDY SHALE	4.0	263.0	
393.0			GRAY SHALE	22.0	267.0	
371.0			SANDY SHALE	3.0	289.0	
368.0			SHALE W/ COAL STREAKS	8.0	292.0	
360.0			SANDY SHALE	3.0	300.0	
357.0	MODESTO		LIMESTONE	3.0	303.0	
354.0	MODESTO		SANDY SHALE	3.0	306.0	
351.0	MODESTO		LIMESTONE	6.0	309.0	
345.0	MODESTO		SHALE	3.0	315.0	
342.0	MODESTO		SANDSTONE	1.9	318.0	
340.1	MODESTO		DARK SHALE	0.3	319.9	
339.8	CARBONDALE	DANVILLE	COAL	1.8	320.2	
338.0	CARBONDALE		UNDERCLAY	7.0	322.0	
331.0	CARBONDALE		SHALE	3.3	329.0	
327.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	332.3	
326.0	CARBONDALE		SHALE	3.0	334.0	
323.0	CARBONDALE	BRERETON	LIMESTONE	2.5	337.0	
320.5	CARBONDALE		SHALE	2.0	339.5	
318.5	CARBONDALE	ANNA	BLACK SHALE	7.2	341.5	
311.3	CARBONDALE	HERRIN	COAL	0.5	348.7	
310.8	CARBONDALE		UNDERCLAY	2.8	349.2	

MAPID: 11722469000C VERSION: 1

PROJECT: LUMP

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 11 QUARTERS/FOOTAGES: 2800' S line, 2600' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.728078 GEOLOGIST: J. MCBETH

CONFIDENTIAL: N LATITUDE: 39.414058 DATE COLLECTED: 7 / 18 / 1980

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 379.1 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL MINING CO C-2-80 WELL TYPE: Coal Test

COMMENT: PERMIT 5; CROWN III MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
660.0	PLEISTOCENE		UNCONSOLIDATED	2.0	0.0	
658.0	PLEISTOCENE		GLACIAL DRIFT	4.0	2.0	
654.0	PLEISTOCENE		SAND & GRAVEL	29.0	6.0	
625.0	PLEISTOCENE		SANDY CLAY	4.0	35.0	
621.0	PLEISTOCENE		CLAY	12.0	39.0	
609.0	PLEISTOCENE		SAND	3.0	51.0	
606.0	PLEISTOCENE		CLAY	2.0	54.0	
604.0	PLEISTOCENE		GLACIAL DRIFT	1.0	56.0	WITH SANDSTONE
603.0	BOND		SANDSTONE	1.0	57.0	
602.0	BOND		GRAY SHALE	15.5	58.0	WITH SANDSTONE
586.5	BOND		COAL	0.5	73.5	WEATHERED
586.0	BOND		GRAY SHALE	31.0	74.0	WITH SANDSTONE BEDS
555.0	BOND		LIMESTONE	3.5	105.0	
551.5	BOND		GRAY SHALE	9.5	108.5	WITH SANDSTONE BEDS
542.0	BOND		SANDSTONE	1.0	118.0	
541.0	BOND		GRAY SHALE	6.0	119.0	
535.0	BOND	CARTHAGE	LIMESTONE	4.0	125.0	
531.0	MODESTO		GRAY SHALE	5.0	129.0	
526.0	MODESTO		BLACK SHALE	2.0	134.0	
524.0	MODESTO		GRAY SHALE	8.0	136.0	
516.0	MODESTO		LIMESTONE	1.0	144.0	
515.0	MODESTO		GRAY SHALE	48.0	145.0	WITH SANDSTONE BEDS
467.0	MODESTO		BLACK SHALE	2.0	193.0	SLATY
465.0	MODESTO	CHAPEL	COAL	2.0	195.0	
463.0	MODESTO		GRAY SHALE	108.0	197.0	WITH SANDSTONE BEDS
355.0	MODESTO		LIMESTONE	1.0	305.0	
354.0	MODESTO		GRAY SHALE	15.0	306.0	WITH SANDSTONE BEDS
339.0	MODESTO		LIMESTONE	1.0	321.0	
338.0	MODESTO		GRAY SHALE	3.0	322.0	
335.0	MODESTO	PIASA	LIMESTONE	2.0	325.0	UNCERTAIN CORRELATION
333.0			GRAY SHALE	10.0	327.0	WITH SANDSTONE
323.0			SANDSTONE	7.0	337.0	
316.0			GRAY SHALE	4.5	344.0	
311.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	348.5	
310.5	CARBONDALE	BANKSTON FORK	SHALE	3.1	349.5	
307.4	CARBONDALE	BANKSTON FORK	LIMESTONE	1.7	352.6	
305.7	CARBONDALE		SHALE	3.0	354.3	GREEN GRAY
302.7	CARBONDALE		CALCAREOUS SHALE	2.5	357.3	

300.2	CARBONDALE	BRERETON	LIMESTONE	6.8	359.8	
293.4	CARBONDALE		CALCAREOUS SHALE	0.6	366.6	DARK GRAY; SHELLS
292.9	CARBONDALE	HERRIN	COAL	7.2	367.1	
285.7	CARBONDALE		CALCAREOUS CLAYSTONE	0.6	374.3	
285.2	CARBONDALE		LIMESTONE	2.4	374.8	
282.8	CARBONDALE		CORE LOSS	1.9	377.2	

MAPID: 11701084000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 12 **QUARTERS/FOOTAGES:** 2640' N line, 0' E line
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.700193 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.41393 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 647.0 **LOGGED (FT.):** 359.5 **LOG TYPE:** Survey Core Study
SOURCE: FREEMAN UNITED C-4-66 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
330.0	MODESTO	PIASA	LIMESTONE	3.5	317.0	
326.5	CARBONDALE		SHALE	5.5	320.5	
321.0	CARBONDALE	GALUM	LIMESTONE	2.0	326.0	
319.0	CARBONDALE		SILTY SHALE	9.0	328.0	
310.0	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	5.1	337.0	
304.9	CARBONDALE	LAWSON	MOTTLED SHALE	2.3	342.1	
302.6	CARBONDALE	BRERETON	LIMESTONE W/ SHALE	3.1	344.4	
299.5	CARBONDALE	ANNA	GRAY SHALE	3.9	347.5	
296.0	CARBONDALE	HERRIN	COAL	8.5	351.0	

MAPID: 11701084000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 12 QUARTERS/FOOTAGES: 2640' N line, 0' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.700193 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.41393 DATE COLLECTED:

SURFACE ELEVATION (FT.): 647.0 LOGGED (FT.): 359.5 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED C-4-66 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
330.2	MODESTO	PIASA	LIMESTONE	3.5	316.8
326.7	MODESTO		UNCLASSIFIED	2.8	320.3
323.9	CARBONDALE		UNCLASSIFIED	13.8	323.1
310.1	CARBONDALE	BANKSTON FORK	LIMESTONE	3.2	336.9
306.9	CARBONDALE	ANVIL ROCK	SANDSTONE	1.0	340.1
305.9	CARBONDALE		SHALE	0.6	341.1
305.3	CARBONDALE	BRERETON	LIMESTONE	6.3	341.7
299.0	CARBONDALE	ANNA	BLACK SHALE	3.0	348.0
296.0	CARBONDALE	HERRIN	COAL	8.5	351.0

MAPID: 11701084000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 12 QUARTERS/FOOTAGES: 2640' N line, 0' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.700193 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.41393 DATE COLLECTED:

SURFACE ELEVATION (FT.): 647.0 LOGGED (FT.): 361.0 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED C-4-66 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
295.8	CARBONDALE	HERRIN	COAL	8.5	351.2

MAPID: 11701084000C VERSION: 4

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 12 QUARTERS/FOOTAGES: 2640' N line, 0' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.700193

GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.41393

DATE COLLECTED: 1 / 25 / 1966

SURFACE ELEVATION (FT.): 647.0 LOGGED (FT.): 361.0

LOG TYPE: Drillers Log

SOURCE: FREEMAN COAL MINING CO. C466

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
647.0	PLEISTOCENE		UNCLASSIFIED	16.0	0.0	NO RECORD
631.0	PLEISTOCENE		UNCONSOLIDATED	20.0	16.0	
611.0			SANDSTONE	40.0	36.0	
571.0			SHALE	14.0	76.0	
557.0			LIMESTONE	4.0	90.0	
553.0			BLACK SHALE	12.0	94.0	
541.0			SANDY SHALE	6.0	106.0	
535.0			LIMESTONE	4.0	112.0	
531.0			BLACK SHALE	36.0	116.0	
495.0			SANDY SHALE	3.0	152.0	
492.0			SHALY COAL	20.0	155.0	
472.0			SANDSTONE	5.0	175.0	
467.0			BLACK SHALE	15.0	180.0	
452.0			SANDY SHALE	40.0	195.0	
412.0			SANDSTONE	17.0	235.0	
395.0			SANDY SHALE	5.0	252.0	
390.0			BLACK SHALE	28.0	257.0	
362.0			SANDSTONE	15.0	285.0	
347.0			SHALE	5.0	300.0	
342.0			BLACK SHALE	12.0	305.0	
330.0			SANDY SHALE	3.5	317.0	
326.5	MODESTO	PIASA	LIMESTONE	5.5	320.5	
321.0			SHALE	2.0	326.0	
319.0			LIMESTONE	4.0	328.0	
315.0			SHALE	5.0	332.0	
310.0			CLAYSTONE & SILTSTONE	0.5	337.0	
309.5			LIMESTONE	2.3	337.5	
307.2			SHALE	0.6	339.8	
306.7			LIMESTONE	1.2	340.3	
305.5			SHALE	4.0	341.5	
301.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	345.5	
300.0	CARBONDALE		SHALE	1.4	347.0	
298.6	CARBONDALE	BRERETON	LIMESTONE	2.8	348.4	SH
295.7	CARBONDALE	ANNA	DARK SHALE	8.6	351.3	
287.2	CARBONDALE	HERRIN	COAL	0.9	359.8	
286.2	CARBONDALE		UNDERCLAY	0.3	360.8	

MAPID: 11701097000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 12 QUARTERS/FOOTAGES: 82' S line, 247' W line of SW SW NW

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.717946

GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.41384

DATE COLLECTED:

SURFACE ELEVATION (FT.): 645.0 LOGGED (FT.): 384.2

LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED C-5-66

WELL TYPE: Coal Test

COMMENT: DRILL LOG INC;SEE COAL SEC. MAP #6-168

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
300.0	CARBONDALE	HERRIN	COAL	6.2	345.0	
264.8	CARBONDALE	HOUCHIN CREEK	COAL	2.5	380.2	

MAPID: 11701097000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 12 QUARTERS/FOOTAGES: 82' S line, 247' W line of SW SW NW

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.717946

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.41384

DATE COLLECTED:

SURFACE ELEVATION (FT.): 645.0 LOGGED (FT.): 351.2

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED C-5-66

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
300.0	CARBONDALE	HERRIN	COAL	6.2	345.0	

MAPID: 11701097000C VERSION: 3

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 12 QUARTERS/FOOTAGES: 82' S line, 247' W line of SW SW NW

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.717946

GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.41384

DATE COLLECTED: 1 / 3 / 1966

SURFACE ELEVATION (FT.): 645.0 LOGGED (FT.): 384.2

LOG TYPE: Drillers Log

SOURCE: FREEMAN COAL MINING CO. C566

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
645.0	PLEISTOCENE		UNCONSOLIDATED	15.0	0.0	NO RECORD
630.0	PLEISTOCENE		GLACIAL DRIFT	13.0	15.0	
617.0	PLEISTOCENE		SANDSTONE	18.0	28.0	
599.0			SHALE	15.0	46.0	
584.0			SANDSTONE	46.0	61.0	
538.0			LIMESTONE	1.0	107.0	
537.0			SHALE	6.0	108.0	
531.0			SANDSTONE	5.0	114.0	BLACK
526.0			SHALE	51.0	119.0	
475.0			LIMESTONE	2.0	170.0	
473.0			SHALE	6.0	172.0	
467.0			BLACK SHALE	7.0	178.0	
460.0			SANDSTONE	35.0	185.0	
425.0			SHALE	48.0	220.0	
377.0			SHALE	4.0	268.0	
373.0			BLACK SHALE	73.0	272.0	
300.0			COAL	6.2	345.0	
293.8	CARBONDALE	HERRIN	UNDERCLAY	4.2	351.2	
289.7	CARBONDALE		LIMESTONE	4.2	355.3	
285.5	CARBONDALE		SHALE	6.5	359.5	
279.0	CARBONDALE		LIMESTONE	2.3	366.0	
276.7	CARBONDALE		SHALE	1.5	368.3	
275.2	CARBONDALE		LIMESTONE	1.3	369.8	
274.0	CARBONDALE		SHALE	6.0	371.0	
268.0	CARBONDALE		SHALE	1.9	377.0	
266.1	CARBONDALE		LIMESTONE	0.9	378.9	BLACK
265.2	CARBONDALE		SHALE	0.3	379.8	
264.8	CARBONDALE	EXCELLO	COAL	2.5	380.2	BLACK
262.3	CARBONDALE	HOUCHIN CREEK	BLACK CLAYSTONE	2.3	382.7	

MAPID: 11721736000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 12 QUARTERS/FOOTAGES: NE SW SE

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.705983

GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.409207

DATE COLLECTED: 4 / 20 / 1976

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 404.0

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CII2976A

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
640.0	PLEISTOCENE		UNCONSOLIDATED	7.5	0.0	
632.5	PLEISTOCENE		CLAY	18.0	7.5	
614.5	PLEISTOCENE		GLACIAL DRIFT	13.5	25.5	
601.0	PLEISTOCENE		CLAY & GRAVEL	18.5	39.0	
582.5			SHALE	13.5	57.5	
569.0			GREEN SHALE	5.0	71.0	
564.0			CALCAREOUS SHALE	6.5	76.0	
557.5			GRAY SHALE	7.0	82.5	
550.5			BLACK SHALE	5.0	89.5	
545.5			SANDSTONE	6.5	94.5	
539.0			BLACK SHALE	2.0	101.0	
537.0			COAL	0.5	103.0	
536.5			UNDERCLAY	2.0	103.5	
534.5			SHALE	15.5	105.5	
519.0			BLACK SHALE	2.0	121.0	
517.0			CLAYSTONE & SILTSTONE	2.5	123.0	GRAY
514.5			SHALE	8.5	125.5	
506.0			SILTY SHALE	40.0	134.0	
466.0			SILTY SHALE	5.5	174.0	
460.5			BLACK SHALE	4.5	179.5	
456.0			GRAY SHALE	2.0	184.0	
454.0			SILTY SHALE	87.0	186.0	
367.0			SHALE	6.5	273.0	
360.5			DARK SHALE	3.5	279.5	
357.0			CLAYSTONE & SILTSTONE	2.5	283.0	
354.5			GREEN SHALE	3.5	285.5	
351.0			SHALE	23.0	289.0	
328.0			GRAY SHALE	2.5	312.0	
325.5			COAL	1.0	314.5	
324.5			UNDERCLAY	1.5	315.5	
323.0			SHALE	5.5	317.0	
317.5			GREEN SHALE	3.0	322.5	
314.5	MODESTO	PIASA	LIMESTONE	4.5	325.5	
310.0			SHALE	10.0	330.0	
300.0			LIMESTONE	1.5	340.0	BROWN
298.5			GREEN SHALE	2.5	341.5	
296.0			CALCAREOUS SHALE	4.5	344.0	
291.5			GREEN SHALE	1.0	348.5	
290.5			CALCAREOUS SHALE	1.7	349.5	

288.8			LIMESTONE	3.9	351.2
284.9			GREEN SHALE	2.2	355.1
282.7	CARBONDALE	BRERETON	FOSSILIFEROUS LIMESTONE	1.1	357.3
281.6	CARBONDALE		GREEN SHALE	0.5	358.4
281.1	CARBONDALE	ANNA	BLACK SHALE	1.3	358.9
279.8	CARBONDALE	HERRIN	COAL	7.9	360.2 #6
271.9	CARBONDALE		ARGILACEOUS SHALE	0.5	368.1
271.5	CARBONDALE		GREEN SHALE	0.2	368.5
271.3	CARBONDALE		FOSSILIFEROUS LIMESTONE	3.8	368.7
267.5	CARBONDALE		SILTSTONE/LIMESTONE	6.5	372.5
261.0	CARBONDALE		LIMESTONE	1.5	379.0
259.5	CARBONDALE		SILTSTONE	10.0	380.5
249.5	CARBONDALE		LIMESTONE	1.0	390.5
248.5	CARBONDALE	EXCELLO	BLACK SHALE	4.5	391.5
244.0	CARBONDALE	HOUCHIN CREEK	COAL	3.0	396.0 #5
241.0	CARBONDALE		DARK SHALE	0.1	399.0
241.0	CARBONDALE		UNCLASSIFIED	5.0	399.0

MAPID: 11721736000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 12 QUARTERS/FOOTAGES: NE SW SE

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.705983 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.409207 DATE COLLECTED:

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 404.0 LOG TYPE: Multiple log types

SOURCE: FREEMAN UNITED CII-2976A WELL TYPE: Coal Test

COMMENT: CORE NOS. C-11236 & C-11235

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
279.8	CARBONDALE	HERRIN	COAL	7.9	360.2
244.0	CARBONDALE	HOUCHIN CREEK	COAL	3.0	396.0

MAPID: 11721946000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 12 QUARTERS/FOOTAGES: 2610' N line, 30' W line of NW

QUADRANGLE: FARMERSVILLE

LONGITUDE: -89.718718

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 39.413662

DATE COLLECTED: 11 / 17 / 1977

SURFACE ELEVATION (FT.): 650.0

LOGGED (FT.): 364.6

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CIII577

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
650.0	PLEISTOCENE		UNCONSOLIDATED	7.0	0.0
643.0	PLEISTOCENE		GLACIAL DRIFT	29.0	7.0
614.0			SHALE & SANDSTONE	24.0	36.0
590.0			GRAY SHALE	14.0	60.0
576.0			SHALE & SANDSTONE	21.0	74.0
555.0			SANDSTONE	15.0	95.0
540.0			LIMESTONE	5.0	110.0
535.0			GRAY SHALE	1.5	115.0
533.5			BLACK SHALE	1.2	116.5
532.3			GRAY SHALE	4.3	117.7
528.0			SANDSTONE	3.0	122.0
525.0			LIMESTONE	4.0	125.0
521.0			SHALE & SANDSTONE	41.0	129.0
480.0			GRAY SHALE	8.0	170.0
472.0			SANDSTONE	1.0	178.0
471.0			BLACK SHALE	2.6	179.0
468.4			BLACK SHALE	1.7	181.6
466.7			GRAY SHALE	7.2	183.3
459.6			COAL	0.5	190.4
459.1			SANDY SHALE	114.1	190.9
345.0			LIMESTONE	7.4	305.0
337.6			GRAY SHALE	10.3	312.4
327.2			LIMESTONE	4.9	322.8
322.3			GRAY SHALE	7.3	327.7
315.0			LIMESTONE	8.0	335.0
307.0			SANDY SHALE	2.0	343.0
305.0			LIMESTONE	0.8	345.0
304.2			LIMESTONE	1.7	345.8
302.6			SHALE	0.2	347.4
302.4			SHALE	1.4	347.6
301.0			SHALE	1.2	349.0
299.8	CARBONDALE	HERRIN	COAL	5.3	350.2
294.6			UNDERCLAY	0.3	355.4
294.3			UNDERCLAY	1.9	355.7
292.4			SHALE	2.0	357.6
290.4			SHALE	5.1	359.6

MAPID: 11721946000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 12 QUARTERS/FOOTAGES: 2610' N line, 30' W line of NW

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.718718 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.413662 DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 364.7 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CIII-5-77 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
299.8	CARBONDALE	HERRIN	COAL	5.3	350.2

MAPID: 11721733000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 13 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.71745 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.392651 DATE COLLECTED: 2 / 23 / 1976

SURFACE ELEVATION (FT.): 638.0 LOGGED (FT.): 360.3 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED C2676 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
638.0	PLEISTOCENE		UNCONSOLIDATED	1.0	0.0	
637.0	PLEISTOCENE		UNCONSOLIDATED	16.0	1.0	BROWN
621.0	PLEISTOCENE		GLACIAL DRIFT	19.0	17.0	GRAY
602.0	PLEISTOCENE		GLACIAL DRIFT	44.0	36.0	GREEN
558.0			SANDSTONE	4.0	80.0	
554.0			GRAY SHALE	3.0	84.0	
551.0			GRAY SHALE	10.0	87.0	
541.0			COAL	1.0	97.0	
540.0			GRAY SHALE	6.0	98.0	
534.0			SANDSTONE	2.0	104.0	
532.0			GRAY SHALE	3.0	106.0	
529.0			SHALY LIMESTONE	7.0	109.0	
522.0			GRAY SHALE	3.0	116.0	
519.0			GREEN SHALE	2.0	119.0	
517.0			SHALE WITH LIMESTONE	17.0	121.0	
500.0			SANDY SHALE	29.5	138.0	
470.5			GRAY SHALE	32.5	167.5	
468.0			DARK SHALE	7.0	170.0	
461.0			LIMESTONE	1.0	177.0	GRAY
460.0			GRAY SHALE	7.5	178.0	
452.5	MODESTO	CHAPEL	COAL	1.0	185.5	
451.5	MODESTO		GRAY SHALE	6.5	186.5	
445.0	MODESTO		GRAY SHALE	15.0	193.0	
430.0	MODESTO		SHALE	28.0	208.0	
402.0	MODESTO		SHALE	24.0	236.0	
378.0	MODESTO		SANDY SHALE	44.0	260.0	
334.0	MODESTO		DARK SHALE	3.0	304.0	
331.0	MODESTO		GRAY SHALE	13.5	307.0	
317.5	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	5.5	320.5	BROWN
312.0	CARBONDALE		GREEN SHALE	2.0	326.0	
310.0	CARBONDALE		GRAY SHALE	12.0	328.0	
298.0	CARBONDALE	BRERETON	LIMESTONE	5.7	340.0	
292.3	CARBONDALE		GRAY SHALE	3.0	345.7	
289.3	CARBONDALE	ANNA	BLACK SHALE	0.7	348.7	
288.6	CARBONDALE	HERRIN	COAL	7.0	349.4	#6
281.6	CARBONDALE		UNDERCLAY	1.6	356.4	
280.0	CARBONDALE		SHALY LIMESTONE	2.3	358.0	

MAPID: 11721733000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 13 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.71745 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.392651 DATE COLLECTED:

SURFACE ELEVATION (FT.): 638.0 LOGGED (FT.): 360.3 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED C2-6-76 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
288.5	CARBONDALE	HERRIN	COAL	6.8	349.5

MAPID: 11722453000C VERSION: 1

PROJECT: LUMP

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 13 QUARTERS/FOOTAGES: 1400' N line, 100' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.700413 GEOLOGIST: J. MCBETH

CONFIDENTIAL: N LATITUDE: 39.40265 DATE COLLECTED: 7 / 25 / 1980

SURFACE ELEVATION (FT.): 633.0 LOGGED (FT.): 336.6 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL MINING CO C-7 WELL TYPE: Coal Test

COMMENT: PERMIT 5; CROWN III MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
633.0	PLEISTOCENE		UNCONSOLIDATED	1.0	0.0	
632.0	PLEISTOCENE		SANDY CLAY	5.0	1.0	
627.0	PLEISTOCENE		GLACIAL DRIFT	5.0	6.0	
622.0	PLEISTOCENE		GLACIAL DRIFT	27.0	11.0	SANDY
595.0	BOND		GRAY SHALE	32.0	38.0	WITH SANDSTONE BEDS
563.0	BOND		SANDSTONE	3.0	70.0	
560.0	BOND		GRAY SHALE	1.0	73.0	
559.0	BOND		BLACK SHALE	1.0	74.0	
558.0	BOND		COAL	1.0	75.0	
557.0	BOND	CARTHAGE	LIMESTONE	5.0	76.0	
552.0	MODESTO		SHALE	2.0	81.0	WITH SANDSTONE BEDS
550.0	MODESTO		GRAY SHALE	2.0	83.0	WITH SANDSTONE
548.0	MODESTO		CALCAREOUS SANDSTONE	5.0	85.0	
543.0	MODESTO		SHALE	2.0	90.0	GREEN GRAY
541.0	MODESTO		GRAY SHALE	1.0	92.0	
540.0	MODESTO		SHALE	3.0	93.0	DARK GRAY
537.0	MODESTO		GRAY SHALE	4.0	96.0	
533.0	MODESTO		CALCAREOUS SANDSTONE	2.0	100.0	
531.0	MODESTO		GRAY SHALE	47.0	102.0	WITH SANDSTONE BEDS
484.0	MODESTO		SHALE	2.0	149.0	DARK GRAY
482.0	MODESTO		BLACK SHALE	3.0	151.0	
479.0	MODESTO		SHALE	2.5	154.0	DARK GRAY
476.5	MODESTO		SHALE	1.0	156.5	CALC
475.5	MODESTO		GRAY SHALE	2.5	157.5	
473.0	MODESTO		BLACK SHALE	1.0	160.0	
472.0	MODESTO	CHAPEL	COAL	1.0	161.0	
471.0	MODESTO		GRAY SHALE	11.0	162.0	WITH SANDSTONE
460.0	MODESTO		SANDSTONE	16.0	173.0	
444.0	MODESTO		BLACK SHALE	1.0	189.0	
443.0	MODESTO		COAL	0.5	190.0	
442.5	MODESTO		GRAY SHALE	106.5	190.5	WITH SANDSTONE
336.0	MODESTO	PIASA	LIMESTONE	3.0	297.0	LIGHT BROWN TO GRAY
333.0	MODESTO		SHALE	4.0	300.0	GREEN GRAY
329.0	CARBONDALE		BLACK SHALE	0.5	304.0	
328.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	304.5	LIGHT BROWN DENSE
326.0	CARBONDALE		GRAY SHALE	14.5	307.0	
311.5	CARBONDALE	BRERETON	LIMESTONE	0.7	321.5	LIGHT GRAY

310.8	CARBONDALE		UNCLASSIFIED	7.1	322.2	LOG DOES NOT LIST
303.7	CARBONDALE	HERRIN	COAL	0.4	329.3	
303.3	CARBONDALE	HERRIN	PYRITE	0.0	329.7	
303.3	CARBONDALE	HERRIN	COAL	1.1	329.7	
302.2	CARBONDALE	HERRIN	BONE COAL	0.0	330.8	
302.2	CARBONDALE	HERRIN	COAL	0.6	330.8	
301.6	CARBONDALE	HERRIN	SHALE	0.0	331.4	
301.5	CARBONDALE	HERRIN	COAL	0.6	331.5	
300.9	CARBONDALE	HERRIN	PYRITE	0.0	332.1	
300.9	CARBONDALE	HERRIN	COAL	1.2	332.1	
299.8	CARBONDALE	HERRIN	BONE COAL	0.0	333.2	
299.7	CARBONDALE	HERRIN	COAL	0.6	333.3	
299.1	CARBONDALE	HERRIN	PYRITE	0.0	333.9	
299.1	CARBONDALE	HERRIN	COAL	0.5	333.9	
298.5	CARBONDALE	HERRIN	SHALE	0.1	334.5	
298.5	CARBONDALE	HERRIN	COAL	1.4	334.5	
297.1	CARBONDALE	HERRIN	PYRITE	0.0	335.9	
297.1	CARBONDALE	HERRIN	COAL	0.6	335.9	

MAPID: 11721735000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 14 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.736098 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.392585 DATE COLLECTED: 2 / 25 / 1976

SURFACE ELEVATION (FT.): 648.0 LOGGED (FT.): 381.2 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CII776 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
648.0	PLEISTOCENE		UNCONSOLIDATED	1.0	0.0	
647.0	PLEISTOCENE		CLAY	11.0	1.0	BROWN
636.0	PLEISTOCENE		UNCONSOLIDATED	18.0	12.0	GRAY
618.0	PLEISTOCENE		UNCONSOLIDATED	17.0	30.0	BROWN
601.0	PLEISTOCENE		GLACIAL DRIFT	30.0	47.0	GRAY
571.0			LIMESTONE	4.0	77.0	
567.0			CALCAREOUS SHALE	2.0	81.0	
565.0			GREEN SHALE	4.0	83.0	
561.0			DARK SHALE	6.0	87.0	
555.0			GREEN SHALE	4.0	93.0	
551.0			GRAY SHALE	7.0	97.0	
544.0			SANDY LIMESTONE	5.0	104.0	
539.0			DARK SHALE	3.0	109.0	
536.0			SHALE WITH LIMESTONE	13.0	112.0	
523.0			LIMESTONE	1.0	125.0	BROWN
522.0			GRAY SHALE	37.0	126.0	
485.0			DARK SHALE	4.5	163.0	
480.5			CALCAREOUS SHALE	0.5	167.5	
480.0			GRAY SHALE	12.0	168.0	
468.0			DARK SHALE	3.0	180.0	
465.0			CALCAREOUS SHALE	4.0	183.0	
461.0			SHALE	20.0	187.0	
441.0			SANDY SHALE	27.0	207.0	
414.0			SHALE	27.0	234.0	
387.0			GRAY SHALE	13.5	261.0	
373.5			SANDY SHALE	5.5	274.5	
368.0			SANDY SHALE	20.0	280.0	
348.0			DARK SHALE	4.5	300.0	
343.5	CARBONDALE	DANVILLE	BONE COAL	1.0	304.5	
342.5	CARBONDALE		UNDERCLAY	1.5	305.5	
341.0	CARBONDALE		SHALE	8.5	307.0	
332.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	315.5	TN
330.5	CARBONDALE	BANKSTON FORK	GREEN SHALE	3.0	317.5	
327.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	320.5	
326.5	CARBONDALE		SHALE	3.5	321.5	
323.0	CARBONDALE	BRERETON	LIMESTONE	0.5	325.0	
322.5	CARBONDALE	BRERETON	LIMESTONE & SHALE	6.7	325.5	
315.8	CARBONDALE	HERRIN	COAL	7.0	332.2	#6
308.8	CARBONDALE		UNDERCLAY	1.8	339.2	GREEN

307.0	CARBONDALE		SHALE WITH LIMESTONE	1.3	341.0
305.7	CARBONDALE		SHALY LIMESTONE	2.2	342.3
303.5	CARBONDALE		SHALE	3.5	344.5
300.0	CARBONDALE		SHALE WITH LIMESTONE	4.0	348.0
296.0	CARBONDALE		SANDY SHALE	4.0	352.0 SH
292.0	CARBONDALE		SILTY SHALE	3.0	356.0
289.0	CARBONDALE		GRAY SHALE	2.8	359.0
286.2	CARBONDALE	EXCELLO	BLACK SHALE	0.4	361.8
285.8	CARBONDALE	HOUCHIN CREEK	COAL	0.5	362.2
285.3	CARBONDALE		SHALE	4.3	362.7
281.0	CARBONDALE		GRAY SHALE	4.0	367.0
277.0	CARBONDALE		SILTY SHALE	10.2	371.0

MAPID: 11721735000C **VERSION:** 2 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 14 **QUARTERS/FOOTAGES:** SW SW SW
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.736098 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.392585 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 648.0 **LOGGED (FT.):** 381.2 **LOG TYPE:** Survey Core Study
SOURCE: FREEMAN UNITED CII-7-76 **WELL TYPE:** Coal Test
COMMENT: DRILLERS LOG INC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
315.8	CARBONDALE	HERRIN	COAL	7.3	332.2

MAPID: 11721955000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 14 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.73618 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.399911 DATE COLLECTED: 7 / 13 / 1978

SURFACE ELEVATION (FT.): LOGGED (FT.): 312.7 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. 14C78 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	9.0	0.0	
-	PLEISTOCENE		GLACIAL DRIFT	27.0	9.0	
-	PLEISTOCENE		GLACIAL DRIFT	3.0	36.0	
-			GRAY SHALE	7.0	39.0	
-			GRAY SHALE	8.0	46.0	
-			GRAY SHALE	6.5	54.0	
-			SANDSTONE	1.5	60.5	
-			BLACK SHALE	1.0	62.0	
-			GRAY SHALE	4.0	63.0	
-			SANDSTONE	1.0	67.0	
-			GRAY SHALE	8.0	68.0	
-			SANDSTONE	6.0	76.0	
-			GRAY SHALE	29.0	82.0	
-			GRAY SHALE	17.0	111.0	
-			SHALY SANDSTONE	5.0	128.0	
-			GRAY SHALE	1.5	133.0	
-			GRAY SHALE	23.5	134.5	
-			BLACK SHALE	7.0	158.0	
-			GRAY SHALE	21.0	165.0	
-			GRAY SHALE	63.0	186.0	
-			GRAY SHALE	13.0	249.0	
-			SANDSTONE	2.0	262.0	
-			GRAY SHALE	10.0	264.0	
-	MODESTO	PIASA	LIMESTONE	2.3	274.0	
-			GRAY SHALE	9.7	276.3	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	3.2	286.0	
-	CARBONDALE		GRAY SHALE	3.8	289.2	
-	CARBONDALE		LIMESTONE	2.0	293.0	
-	CARBONDALE		GRAY SHALE	3.0	295.0	
-	CARBONDALE	BRERETON	LIMESTONE	2.0	298.0	
-	CARBONDALE	BRERETON	LIMESTONE	4.1	300.0	GRAY
-	CARBONDALE		GRAY SHALE	0.5	304.1	
-	CARBONDALE	HERRIN	COAL	0.8	304.6	#6
-	CARBONDALE	HERRIN	CORE LOSS	1.4	305.4	CORE LOSS
-	CARBONDALE	HERRIN	COAL	5.2	306.8	#6
-	CARBONDALE		CLAYSTONE & SILTSTONE	0.2	312.0	GRAY
-	CARBONDALE		CLAYSTONE & SILTSTONE	0.2	312.2	GRAY

MAPID: 11721955000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 14 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.73618 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.399911 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 312.7 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED 14-C-78 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	COAL	7.4	304.6

MAPID: 11721956000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 14 QUARTERS/FOOTAGES: SE SE NE

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.719885 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.399943 DATE COLLECTED: 7 / 25 / 1978

SURFACE ELEVATION (FT.): LOGGED (FT.): 332.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. 15C78 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	9.0	0.0	
-	PLEISTOCENE		GLACIAL DRIFT	29.0	9.0	
-	PLEISTOCENE		GLACIAL DRIFT	20.0	38.0	
-	PLEISTOCENE		GRAVEL	5.0	58.0	
-	PLEISTOCENE		GLACIAL DRIFT	4.0	63.0	
-			SANDSTONE	6.0	67.0	
-			GRAY SHALE	13.0	73.0	
-			SANDSTONE	3.0	86.0	
-			GRAY SHALE	3.0	89.0	
-			SANDSTONE	6.0	92.0	
-			GRAY SHALE	13.0	98.0	
-			SHALY SANDSTONE	48.5	111.0	GRAY
-			SLATY SHALE	3.5	159.5	
-			GRAY SHALE	14.0	163.0	
-			SHALY SANDSTONE	16.0	177.0	GRAY
-			GRAY SHALE	4.0	193.0	
-			SHALY SANDSTONE	59.0	197.0	GRAY
-			SANDSTONE	2.0	256.0	
-			SHALY SANDSTONE	8.0	258.0	GRAY
-			GRAY SHALE	5.0	266.0	
-			SHALY SANDSTONE	3.0	271.0	GRAY
-			GRAY SHALE	8.0	274.0	
-			SANDSTONE	2.0	282.0	
-			SHALY SANDSTONE	5.0	284.0	
-			GRAY SHALE	5.0	289.0	
-			SHALY SANDSTONE	8.0	294.0	GRAY
-			SANDSTONE	2.0	302.0	
-			GRAY SHALE	1.0	304.0	
-			CORE LOSS	3.0	305.0	CORE LOSS
-			GRAY SHALE	0.7	308.0	
-			CLAYSTONE & SILTSTONE	1.7	308.7	GRAY
-	CARBONDALE	BANKSTON FORK	LIMESTONE	3.8	310.4	GRAY
-	CARBONDALE		GRAY SHALE	2.9	314.2	
-	CARBONDALE		MUDSTONE	2.6	317.1	GRAY
-	CARBONDALE		CLAY	1.0	319.7	GRAY
-	CARBONDALE	BRERETON	LIMESTONE	3.0	320.7	GRAY
-	CARBONDALE	BRERETON	LIMESTONE	0.4	323.7	GRAY
-	CARBONDALE	ANNA	BLACK SHALE	2.1	324.1	
-	CARBONDALE	HERRIN	COAL	5.8	326.2	#6

- CARBONDALE

UNDERCLAY

0.4 332.0

MAPID: 11721956000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 14 QUARTERS/FOOTAGES: SE SE NE

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.719885 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.399943 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 332.0 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED 15-C-78 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	COAL	5.8	326.2

MAPID: 11721957000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 15 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.754695 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.398012 DATE COLLECTED: 8 / 3 / 1978

SURFACE ELEVATION (FT.): LOGGED (FT.): 336.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. 13C78 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	14.0	0.0	
-	PLEISTOCENE		GLACIAL DRIFT	75.0	14.0	
-	PLEISTOCENE		GLACIAL DRIFT	21.0	89.0	
-			SANDSTONE	12.0	110.0	
-			GRAY SHALE	11.0	122.0	
-			SANDSTONE	28.0	133.0	
-			GRAY SHALE	7.0	161.0	
-			BLACK SHALE	2.0	168.0	
-			GRAY SHALE	6.0	170.0	
-			SANDSTONE	6.0	176.0	
-			BLACK SHALE	1.7	182.0	
-	MODESTO	CHAPEL	COAL	2.3	183.7	
-			GRAY SHALE	4.0	186.0	
-			SANDSTONE	6.0	190.0	
-			GRAY SHALE	45.0	196.0	
-			SANDSTONE	6.0	241.0	
-			GRAY SHALE	6.0	247.0	
-			SHALY SANDSTONE	19.0	253.0	GRAY
-			GRAY SHALE	21.0	272.0	
-			GRAY SHALE	10.0	293.0	
-			SANDSTONE	2.0	303.0	
-			GRAY SHALE	1.0	305.0	
-			MUDSTONE	4.9	306.0	GRAY
-			GRAY SHALE	0.4	310.9	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	1.7	311.3	GRAY
-	CARBONDALE		MUDSTONE	1.4	313.0	GRAY
-	CARBONDALE		CORE LOSS	0.1	314.4	CORE LOSS
-	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	5.8	314.5	GRAY
-	CARBONDALE		SHALE WITH LIMESTONE	2.9	320.3	
-	CARBONDALE	BRERETON	LIMESTONE	0.3	323.2	GRAY
-	CARBONDALE		GRAY SHALE	0.5	323.5	
-	CARBONDALE	ANNA	BLACK SHALE	0.8	324.0	
-	CARBONDALE	HERRIN	COAL	1.6	324.8	
-	CARBONDALE	HERRIN	CORE LOSS	0.1	326.4	
-	CARBONDALE	HERRIN	COAL	5.1	326.5	#6
-	CARBONDALE		CORE LOSS	4.4	331.6	CORE LOSS MOSTLY LS

MAPID: 11721957000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 15 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.754695 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.398012 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 336.0 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED 13-C-78 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	COAL	7.8	324.8

MAPID: 11721745000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 16 QUARTERS/FOOTAGES: SE SE SE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.756984 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.392513 DATE COLLECTED: 3 / 17 / 1976

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 326.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CII1176 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
650.0	PLEISTOCENE		UNCONSOLIDATED	7.5	0.0	
642.5	PLEISTOCENE		CLAY	15.5	7.5	BROWN
627.0	PLEISTOCENE		UNCONSOLIDATED	59.0	23.0	
568.0			GREEN SHALE	6.0	82.0	
562.0			DARK SHALE	3.5	88.0	
558.5			GREEN SHALE	9.0	91.5	
549.5			SANDSTONE	4.0	100.5	
545.5			SHALE	31.5	104.5	
514.0			GREEN SHALE	6.5	136.0	
507.5			DARK SHALE	2.5	142.5	
505.0			GREEN SHALE	4.0	145.0	
501.0			SHALE	6.0	149.0	
495.0	MODESTO		SHALE	9.0	155.0	
486.0	MODESTO	CHAPEL	COAL	1.0	164.0	
485.0	MODESTO		UNDERCLAY	2.0	165.0	GREEN
483.0	MODESTO		SHALE	41.0	167.0	
442.0	MODESTO		SHALE	25.5	208.0	
416.5	MODESTO		GREEN SHALE	5.5	233.5	
411.0	MODESTO		SHALE	45.0	239.0	
366.0	MODESTO		GREEN SHALE	2.5	284.0	
363.5	MODESTO	PIASA	LIMESTONE	4.0	286.5	
359.5			GREEN SHALE	10.0	290.5	
349.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	300.5	
348.5	CARBONDALE		CALCAREOUS SHALE	3.5	301.5	
345.0	CARBONDALE		LIMESTONE	1.0	305.0	
344.0	CARBONDALE		CALCAREOUS SHALE	1.9	306.0	
342.1	CARBONDALE	BRERETON	LIMESTONE	2.6	307.9	
339.5	CARBONDALE	BRERETON	GREEN SHALE	2.4	310.5	
337.1	CARBONDALE		LIMESTONE	0.2	312.9	
337.0	CARBONDALE		SHALE	0.5	313.0	
336.5	CARBONDALE		GREEN SHALE	0.1	313.5	
336.4	CARBONDALE		DARK SHALE	0.2	313.6	
336.2	CARBONDALE		DARK SHALE	1.7	313.8	
334.5	CARBONDALE	ANNA	BLACK SHALE	1.2	315.5	
333.3	CARBONDALE	HERRIN	COAL	6.4	316.7	
327.0	CARBONDALE		UNDERCLAY/SHALE	1.5	323.0	GREEN
325.5	CARBONDALE		LIMESTONE	0.3	324.5	
325.2	CARBONDALE		CALCAREOUS SHALE	1.2	324.8	

MAPID: 11721745000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 16 QUARTERS/FOOTAGES: SE SE SE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.756984 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.392513 DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 326.0 LOG TYPE: Multiple log types

SOURCE: FREEMAN UNITED CII-11-76 WELL TYPE: Coal Test

COMMENT: CORE NO. C11196; STRIP LOG MISSING

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
333.3	CARBONDALE	HERRIN	COAL	6.4	316.7

MAPID: 11700245000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 18 QUARTERS/FOOTAGES: 1950' S line, 900' W line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.809128 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.397063 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 670.0 LOGGED (FT.): 332.0 LOG TYPE: Drillers Log

SOURCE: UNION FUEL WELL TYPE: Plugged and/or Abandoned

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
344.0	CARBONDALE	HERRIN	COAL	6.0	326.0

MAPID: 11700035000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 19 QUARTERS/FOOTAGES: SW SE SE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.796829 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.37797 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 653.0 LOGGED (FT.): 339.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
336.0	CARBONDALE		UNCLASSIFIED	8.0	317.0
328.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	325.0
324.0	CARBONDALE	BRERETON	LIMESTONE	4.0	329.0
320.0	CARBONDALE	ANNA	BLACK SHALE	1.0	333.0
319.0	CARBONDALE	HERRIN	COAL	5.5	334.0

MAPID: 11721876000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 19 QUARTERS/FOOTAGES: 1700' N line, 42' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.793506 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.387041 DATE COLLECTED: 10 / 9 / 1978

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 350.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-16 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
660.0			UNCONSOLIDATED	108.0	0.0
552.0	MODESTO		GRAY SHALE	20.0	108.0
532.0	MODESTO	CARLINVILLE	LIMESTONE	2.3	128.0
529.7	MODESTO		GRAY SHALE	5.7	130.3
524.0	MODESTO		SANDY SHALE	24.3	136.0
499.7	MODESTO	CHAPEL	COAL	1.2	160.3
498.5	MODESTO		GRAY SHALE	2.5	161.5
496.0	MODESTO		SANDY SHALE	5.5	164.0
490.5	MODESTO		SANDSTONE	1.0	169.5
489.5	MODESTO		SANDY SHALE	43.5	170.5
446.0	MODESTO		CALCAREOUS SHALE	13.0	214.0
433.0	MODESTO		LIMESTONE	2.0	227.0
431.0	MODESTO		SANDY SHALE	6.0	229.0
425.0	MODESTO		SANDY SHALE	16.0	235.0
409.0	MODESTO		SHALE	6.0	251.0
403.0	MODESTO		SANDY SHALE	15.0	257.0
388.0	MODESTO		GRAY SHALE	4.0	272.0
384.0	MODESTO		SHALE	11.0	276.0
373.0	MODESTO	PIASA	LIMESTONE	1.5	287.0
371.5	MODESTO		BLACK SHALE	1.5	288.5
370.0	CARBONDALE		GRAY SHALE	2.0	290.0
368.0	CARBONDALE		SANDSTONE	10.0	292.0
358.0	CARBONDALE		GRAY SHALE	10.8	302.0
347.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.2	312.8
344.0	CARBONDALE		GRAY SHALE	3.5	316.0
340.5	CARBONDALE	BRERETON	LIMESTONE	2.7	319.5
337.8	CARBONDALE	ANNA	BLACK SHALE	2.7	322.2
335.1	CARBONDALE	HERRIN	COAL	7.5	324.9
327.7	CARBONDALE		SHALE	0.3	332.3
327.4	CARBONDALE		CORE LOSS	1.0	332.6
326.5	CARBONDALE		LIMESTONE	1.5	333.5
325.0	CARBONDALE		GRAY SHALE	2.5	335.0
322.5	CARBONDALE		SHALE	3.5	337.5
319.0	CARBONDALE		CALCAREOUS SHALE	9.0	341.0

MAPID: 11700036000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 20 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.792102 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.377984 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 652.7 LOGGED (FT.): 333.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
652.7			SOIL	1.0	0.0	
651.7			CLAY	14.0	1.0	
637.7			HARD PAN	13.0	15.0	
624.7			SAND	16.0	28.0	
608.7			CLAY	32.0	44.0	
576.7			HARD PAN	4.0	76.0	
572.7			SAND	37.0	80.0	
535.7	MODESTO		SHALE	25.0	117.0	
510.7	MODESTO		LIMESTONE	0.3	142.0	
510.4	MODESTO		SHALE	12.7	142.3	
497.7	MODESTO	CARLINVILLE	LIMESTONE	4.0	155.0	
493.7	MODESTO		SANDY SHALE	24.0	159.0	
469.7	MODESTO		SHALE	12.5	183.0	
457.2	MODESTO	CHAPEL	COAL	1.3	195.5	
455.9	MODESTO		UNDERCLAY	2.3	196.8	
453.7	MODESTO		CALCAREOUS SHALE	4.0	199.0	
449.7	MODESTO		SANDY SHALE	12.0	203.0	
437.7	MODESTO		SHALE	46.3	215.0	
391.4	MODESTO		LIMESTONE	2.3	261.3	
389.0	MODESTO		SHALE	1.8	263.7	
387.2	MODESTO		SANDSTONE	1.2	265.5	
386.0	MODESTO		CALCAREOUS SHALE	2.8	266.7	
383.2	MODESTO		SANDY SHALE	11.5	269.5	
371.7	MODESTO		SHALE	4.8	281.0	
366.9	MODESTO		SANDY SHALE	30.2	285.8	
336.7	MODESTO		SHALE	1.0	316.0	
335.7	MODESTO		COAL/SANDSTONE	0.5	317.0	SAND & COAL
335.2	CARBONDALE	DANVILLE	COAL	1.0	317.5	
334.2	CARBONDALE		SHALE	2.0	318.5	
332.2	CARBONDALE		LIMESTONE	4.5	320.5	
327.7	CARBONDALE		SHALE	1.3	325.0	
326.4	CARBONDALE	ANNA	BLACK SHALE	1.8	326.3	
324.7	CARBONDALE	HERRIN	COAL	3.0	328.0	
321.7	CARBONDALE		UNDERCLAY	1.0	331.0	
320.7	CARBONDALE		SHALE	1.0	332.0	

MAPID: 11700036000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 20 QUARTERS/FOOTAGES: SW SW SW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.792102 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.377984 DATE COLLECTED: 0 / 0 / 1912

SURFACE ELEVATION (FT.): 653.0 LOGGED (FT.): 331.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
335.6	CARBONDALE		UNCLASSIFIED	3.0	317.4
332.6	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.5	320.4
328.1	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	0.6	324.9
327.5	CARBONDALE		UNCLASSIFIED	0.7	325.5
326.8	CARBONDALE	ANNA	BLACK SHALE	1.8	326.2
325.0	CARBONDALE	HERRIN	COAL	3.0	328.0

MAPID: 11721877000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 20 QUARTERS/FOOTAGES: 1932' S line, 102' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.774903 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.382208 DATE COLLECTED: 3 / 26 / 1978

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 354.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-30 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
650.0			UNCONSOLIDATED	106.0	0.0	
544.0	MODESTO	MACOUPIN	LIMESTONE	3.5	106.0	
540.5	MODESTO		BLACK SHALE	3.5	109.5	
537.0	MODESTO		GRAY SHALE	67.0	113.0	
470.0	MODESTO	CHAPEL	COAL	1.5	180.0	
468.5	MODESTO		GRAY SHALE	2.5	181.5	
466.0	MODESTO		LIMESTONE	3.0	184.0	
463.0	MODESTO		GRAY SHALE	87.0	187.0	
376.0	MODESTO		BLACK SHALE	2.0	274.0	
374.0	MODESTO		SANDY SHALE	27.0	276.0	
347.0	MODESTO	PIASA	LIMESTONE	4.0	303.0	
343.0	MODESTO		BLACK SHALE	2.0	307.0	
341.0	CARBONDALE		GRAY SHALE	5.0	309.0	
336.0	CARBONDALE		SILTY BLACK SHALE	4.0	314.0	
332.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.4	318.0	
326.6	CARBONDALE	BANKSTON FORK	SHALE	0.5	323.4	
326.1	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	0.4	323.9	
325.8	CARBONDALE	LAWSON	SHALE	2.9	324.2	UNCERTAIN CORRELATION
322.9	CARBONDALE	BRERETON	SHALY LIMESTONE	0.5	327.1	
322.4	CARBONDALE		CALCAREOUS SHALE	0.5	327.6	
321.9	CARBONDALE		SHALE	0.3	328.1	
321.6	CARBONDALE	ENERGY	SHALE	3.5	328.4	
318.1	CARBONDALE	HERRIN	COAL	7.7	331.9	
310.5	CARBONDALE		CLAYSTONE	0.6	339.5	
309.9	CARBONDALE		SHALE	6.8	340.1	
303.1	CARBONDALE		CLAYSTONE	6.4	346.9	
296.7	CARBONDALE		CORE LOSS	0.8	353.3	

MAPID: 11721878000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 20 QUARTERS/FOOTAGES: 45' N line, 45' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.774662 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.391479 DATE COLLECTED: 10 / 6 / 1978

SURFACE ELEVATION (FT.): 654.0 LOGGED (FT.): 360.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-17 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
654.0			UNCONSOLIDATED	106.5	0.0
547.5	MODESTO	MACOUPIN	LIMESTONE	3.5	106.5
544.0	MODESTO		BLACK SHALE	3.0	110.0
541.0	MODESTO	WOMAC	COAL	1.0	113.0
540.0	MODESTO		GRAY SHALE	40.0	114.0
500.0	MODESTO	CARLINVILLE	LIMESTONE	1.0	154.0
499.0	MODESTO		BLACK SHALE	2.0	155.0
497.0	MODESTO		GRAY SHALE	24.5	157.0
472.5	MODESTO	CHAPEL	COAL	1.2	181.5
471.3	MODESTO		GRAY SHALE	97.3	182.7
374.0	MODESTO		BLACK SHALE	3.0	280.0
371.0	MODESTO		GRAY SHALE	9.0	283.0
362.0	MODESTO		SHALY LIMESTONE	4.0	292.0
358.0	MODESTO		GRAY SHALE	9.5	296.0
348.5	MODESTO	PIASA	LIMESTONE	3.5	305.5
345.0	MODESTO		BLACK SHALE	1.0	309.0
344.0	CARBONDALE		GRAY SHALE	16.5	310.0
327.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	326.5
323.0	CARBONDALE		SHALE	3.5	331.0
319.5	CARBONDALE	BRERETON	LIMESTONE	2.5	334.5
317.0	CARBONDALE		SHALE	1.5	337.0
315.5	CARBONDALE	HERRIN	COAL	5.2	338.5
310.3	CARBONDALE		CORE LOSS	0.9	343.7
309.5	CARBONDALE		LIMESTONE	1.5	344.5
308.0	CARBONDALE		CALCAREOUS SHALE	7.0	346.0
301.0	CARBONDALE		LIMESTONE	1.0	353.0
300.0	CARBONDALE		GRAY SHALE	6.0	354.0

MAPID: 11721737000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 21 QUARTERS/FOOTAGES: NE NW NW

QUADRANGLE: VIRIDEN SOUTH LONGITUDE: -89.770969 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.390682 DATE COLLECTED: 4 / 21 / 1976

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 391.3 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CII3076 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
642.0	PLEISTOCENE		UNCONSOLIDATED	9.0	0.0	
633.0	PLEISTOCENE		CLAY	5.5	9.0	BRN
627.5	PLEISTOCENE		GLACIAL DRIFT	47.5	14.5	
580.0	PLEISTOCENE		SAND & GRAVEL	25.5	62.0	
554.5	PLEISTOCENE		GLACIAL DRIFT	28.0	87.5	
526.5			GREEN SHALE	1.5	115.5	
525.0			LIMESTONE	2.5	117.0	
522.5			GRAY SHALE	1.5	119.5	
521.0			SANDY SHALE	13.5	121.0	
507.5			SILTY SHALE	16.5	134.5	
491.0			FOSSILIFEROUS LIMESTONE	1.0	151.0	
490.0			DARK SHALE	4.5	152.0	
485.5			SANDY SHALE	12.5	156.5	
473.0			COAL	1.0	169.0	
472.0			GRAY SHALE	3.0	170.0	
469.0			SHALE	16.0	173.0	
453.0			SILTY SHALE	64.0	189.0	
389.0			DARK SHALE	4.5	253.0	
384.5			SILTY SHALE	24.0	257.5	
360.5			BLACK SHALE	2.5	281.5	
358.0			GREEN SHALE	3.0	284.0	
355.0			SILTSTONE	4.5	287.0	
350.5			GREEN SHALE	8.5	291.5	
342.0	MODESTO	PIASA	LIMESTONE	2.5	300.0	TAN
339.5			SHALE	5.5	302.5	
334.0			SILTSTONE	13.0	308.0	
321.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.3	321.0	
315.7	CARBONDALE		GRAY SHALE	3.1	326.3	
312.7	CARBONDALE	BRERETON	FOSSILIFEROUS LIMESTONE	1.7	329.3	
311.0	CARBONDALE		SHALE	0.3	331.0	
310.7	CARBONDALE	ANNA	BLACK SHALE	2.8	331.3	
307.9	CARBONDALE	HERRIN	COAL	6.3	334.1	#6
301.6	CARBONDALE		ARGILACEOUS SHALE	1.8	340.4	
299.8	CARBONDALE		LIMESTONE W/ SHALE	1.9	342.2	
298.0	CARBONDALE		GREEN SHALE	5.0	344.0	
293.0	CARBONDALE		LIMESTONE	3.5	349.0	
289.5	CARBONDALE		SILTSTONE	8.5	352.5	
281.0	CARBONDALE		BLACK SHALE	1.5	361.0	

279.5	CARBONDALE	GREEN SHALE	2.0	362.5
277.5	CARBONDALE	SHALE	11.6	364.5
265.9	CARBONDALE	SHALE	2.0	376.1
263.9	CARBONDALE	SANDY SHALE	8.6	378.1
255.3	CARBONDALE	SHALE & SANDSTONE	2.8	386.7
252.5	CARBONDALE	UNCLASSIFIED	1.8	389.5

MAPID: 11721737000C **VERSION:** 2 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 21 **QUARTERS/FOOTAGES:** NE NW NW
QUADRANGLE: VIRDEN SOUTH **LONGITUDE:** -89.770969 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.390682 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 642.0 **LOGGED (FT.):** 391.3 **LOG TYPE:** Multiple log types
SOURCE: FREEMAN UNITED 391.3 **WELL TYPE:** Coal Test
COMMENT: CORE NO. C-11237; STRIP LOG MISSING

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN COMMENT
307.9	CARBONDALE	HERRIN	COAL	6.3	334.1

MAPID: 11701239000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 23 **QUARTERS/FOOTAGES:** 330' S line, 0' W line of SE SE SW
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.730091 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.377941 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 632.0 **LOGGED (FT.):** 349.0 **LOG TYPE:** Survey Core Study
SOURCE: FREEMAN UNITED F-3-68 **WELL TYPE:** Coal Test
COMMENT: DRILLERS LOG INC; CORE NO. C-7465

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN COMMENT
333.0	CARBONDALE	DANVILLE	COAL	1.0	299.0
296.4	CARBONDALE	HERRIN	COAL	6.7	335.6

MAPID: 11701239000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 23 QUARTERS/FOOTAGES: 330' S line, 0' W line of SE SE SW

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.730091 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.377941 DATE COLLECTED:

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 342.7 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED F-3-68 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
335.6	MODESTO		UNCLASSIFIED	3.0	296.4
332.6	CARBONDALE	DANVILLE	COAL	1.0	299.4
331.6	CARBONDALE		UNCLASSIFIED	12.7	300.4
318.9	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	313.1
312.9	CARBONDALE	ANVIL ROCK	SANDSTONE	2.5	319.1
310.4	CARBONDALE		SHALE	1.5	321.6
308.9	CARBONDALE	BRERETON	LIMESTONE	6.8	323.1
302.1	CARBONDALE	ANNA	BLACK SHALE	6.1	329.9
296.0	CARBONDALE	HERRIN	COAL	6.7	336.0

MAPID: 11701239000C VERSION: 3

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 23 QUARTERS/FOOTAGES: 330' S line, 0' W line of SE SE SW

QUADRANGLE: FARMERSVILLE

LONGITUDE: -89.730091

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 39.377941

DATE COLLECTED: 7 / 17 / 1968

SURFACE ELEVATION (FT.): 632.0

LOGGED (FT.): 349.0

LOG TYPE: Drillers Log

SOURCE: FREEMAN COAL MINING CO. F368

WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
632.0	PLEISTOCENE		UNCONSOLIDATED	6.0	0.0
626.0	PLEISTOCENE		UNCONSOLIDATED	59.0	6.0
567.0			SANDSTONE	13.5	65.0
553.5			CALCAREOUS SHALE	12.1	78.5
541.4			DARK SHALE	8.8	90.6
532.7			GREEN SHALE	1.2	99.3
531.5			CALCAREOUS SHALE	4.5	100.5
527.0			CALCAREOUS SHALE	6.0	105.0
521.0			LIMESTONE	0.8	111.0
520.2			SHALE WITH LIMESTONE	2.2	111.8
518.0			DARK SHALE	0.4	114.0
517.6			GREEN SHALE	10.6	114.4
507.0			CALCAREOUS SHALE	6.0	125.0
501.0			SHALE	5.0	131.0
496.0			SHALY SANDSTONE	5.0	136.0
491.0			SHALE	24.6	141.0
466.4			DARK SHALE	0.9	165.6
465.5			CALCAREOUS SHALE	1.5	166.5
464.0			LIMESTONE	0.5	168.0
463.5			CALCAREOUS SHALE	18.5	168.5
445.0			COAL	0.5	187.0
444.5			CALCAREOUS SHALE	5.5	187.5
439.0			SANDSTONE	14.8	193.0
424.2			SHALE	32.3	207.8
392.0			SHALE	37.2	240.0
354.8			COAL	0.3	277.2
354.6			GREEN SHALE	0.6	277.4
354.0			CALCAREOUS SHALE	21.0	278.0
333.0	CARBONDALE	DANVILLE	SHALY COAL	1.0	299.0
332.0	CARBONDALE		SHALE	3.5	300.0
328.5	CARBONDALE		LIMESTONE	0.2	303.5
328.2	CARBONDALE		CALCAREOUS SHALE	23.1	303.8
305.2	CARBONDALE	BRERETON	LIMESTONE	2.7	326.8
302.5	CARBONDALE		SANDY SHALE	5.3	329.5
297.2	CARBONDALE	ANNA	DARK SHALE	0.8	334.8
296.4	CARBONDALE	HERRIN	COAL	0.8	335.6
295.7	CARBONDALE	HERRIN	COAL	5.9	336.3
289.7	CARBONDALE		DARK SHALE	0.5	342.3
289.2	CARBONDALE		UNDERCLAY	1.8	342.8

287.5 CARBONDALE

CALCAREOUS SHALE

4.5 344.5

MAPID: 11700037000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 24 **QUARTERS/FOOTAGES:** NE NE NE
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.701013 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.39093 **DATE COLLECTED:** 0 / 0 / 1900
SURFACE ELEVATION (FT.): 603.0 **LOGGED (FT.):** 327.5 **LOG TYPE:** Drillers Log
SOURCE: NO COMPANY **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
282.0	CARBONDALE	HERRIN	COAL	6.5	321.0	

MAPID: 11700614000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 24 **QUARTERS/FOOTAGES:** 900' S line, 330' W line of SE
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.707831 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.379678 **DATE COLLECTED:** 8 / 0 / 1956
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 0.0 **LOG TYPE:** Electric Log
SOURCE: DEFRATIS & ASSC **WELL TYPE:** Dry Hole
COMMENT: NO DEPTH VALUES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT OVERBURDEN	COMMENT
-	MODESTO	PIASA	LIMESTONE	3.0		
-	MODESTO		UNCLASSIFIED	4.0		
-	CARBONDALE		UNCLASSIFIED	11.0		
-	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	8.0		
-	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0		
-	CARBONDALE		UNCLASSIFIED	2.0		
-	CARBONDALE	BRERETON	LIMESTONE	3.0		
-	CARBONDALE	ANNA	BLACK SHALE	1.0		
-	CARBONDALE	HERRIN	COAL	6.0		

MAPID: 11700038000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 25 QUARTERS/FOOTAGES: NE SE SE

QUADRANGLE: ATWATER LONGITUDE: -89.700588 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.365404 DATE COLLECTED: 0 / 0 / 1902

SURFACE ELEVATION (FT.): 610.0 LOGGED (FT.): 333.3 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
318.4	MODESTO	PIASA	LIMESTONE	4.5	291.6
313.9	MODESTO		UNCLASSIFIED	2.5	296.1
311.4	CARBONDALE		UNCLASSIFIED	7.5	298.6
303.9	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	306.1
297.9	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.3	312.1
296.6	CARBONDALE		UNCLASSIFIED	1.3	313.4
295.3	CARBONDALE	BRERETON	LIMESTONE	8.0	314.7
287.3	CARBONDALE	ANNA	BLACK SHALE	2.3	322.7
285.0	CARBONDALE	HERRIN	COAL	8.3	325.0

MAPID: 11700038000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 25 QUARTERS/FOOTAGES: NE SE SE

QUADRANGLE: ATWATER LONGITUDE: -89.700588 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.365404 DATE COLLECTED:

SURFACE ELEVATION (FT.): 610.0 LOGGED (FT.): 332.3 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
351.2	CARBONDALE	DANVILLE	COAL	0.6	258.8
350.7	CARBONDALE		CLAYSTONE	3.2	259.3
347.5	CARBONDALE		CALCAREOUS SHALE	7.5	262.5
340.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	4.5	270.0
335.5	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	16.0	274.5
319.5	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	20.5	290.5
299.0	CARBONDALE	LAWSON	GRAY SHALE	2.7	311.0
296.3	CARBONDALE	BRERETON	LIMESTONE & SHALE	8.0	313.7
288.3	CARBONDALE	ANNA	BLACK SHALE	2.3	321.7
286.0	CARBONDALE	HERRIN	COAL	8.3	324.0

MAPID: 11700038000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 25 QUARTERS/FOOTAGES: NE SE SE

QUADRANGLE: ATWATER LONGITUDE: -89.700588 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.365404 DATE COLLECTED: 0 / 0 / 1902

SURFACE ELEVATION (FT.): 609.5 LOGGED (FT.): 334.0 LOG TYPE: Drillers Log

SOURCE: A.W. CRAWFORD OPTIONS, HOLE #9 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
609.5			CLAY	15.0	0.0
594.5			SANDY CLAY	10.0	15.0
584.5			CLAY	25.0	25.0
559.5			SANDY CLAY	65.0	50.0
494.5			CLAY & GRAVEL	8.0	115.0
486.5	MODESTO		SHALE	21.0	123.0
465.5	MODESTO		LIMESTONE	2.0	144.0
463.5	MODESTO		SHALE	6.0	146.0
457.5	MODESTO		LIMESTONE	2.0	152.0
455.5	MODESTO		SHALE	11.5	154.0
444.0	MODESTO	CHAPEL	COAL	1.2	165.5
442.8	MODESTO		UNDERCLAY	3.3	166.7
439.5	MODESTO		CALCAREOUS SHALE	6.0	170.0
433.5	MODESTO		SANDY SHALE	31.0	176.0
402.5	MODESTO		SHALE	30.0	207.0
372.5	MODESTO		SANDY SHALE	23.0	237.0
349.5	MODESTO		SHALE	15.0	260.0
334.5	MODESTO		SHALE	4.3	275.0
330.2	CARBONDALE	DANVILLE	COAL	0.6	279.3
329.7	CARBONDALE		UNDERCLAY	3.2	279.8
326.5	CARBONDALE		CALCAREOUS SHALE	7.5	283.0
319.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	290.5
314.5	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	16.0	295.0
298.5	CARBONDALE		SHALE	2.7	311.0
295.8	CARBONDALE	BRERETON	LIMESTONE	8.0	313.7
287.8	CARBONDALE	ANNA	BLACK SHALE	2.3	321.7
285.5	CARBONDALE	HERRIN	COAL	8.3	324.0
277.2	CARBONDALE		UNDERCLAY	1.2	332.3
276.0	CARBONDALE		LIMESTONE	0.5	333.5

MAPID: 11700811000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 25 QUARTERS/FOOTAGES: 240' N line, 380' W line of SW NW NE

QUADRANGLE: ATWATER LONGITUDE: -89.707582 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.374709 DATE COLLECTED: 11 / 0 / 1959

SURFACE ELEVATION (FT.): 610.0 LOGGED (FT.): 328.0 LOG TYPE: Electric Log

SOURCE: STRIBLING, W. C. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
310.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	300.0
304.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	306.0
302.0	CARBONDALE		UNCLASSIFIED	2.0	308.0
300.0	CARBONDALE	BRERETON	LIMESTONE	8.0	310.0
292.0	CARBONDALE	ANNA	BLACK SHALE	4.0	318.0
288.0	CARBONDALE	HERRIN	COAL	6.0	322.0

MAPID: 11701071000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 25 QUARTERS/FOOTAGES: 660' S line, 330' W line of NW NW

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.717151 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.375296 DATE COLLECTED: 4 / 0 / 1965

SURFACE ELEVATION (FT.): 599.0 LOGGED (FT.): 376.0 LOG TYPE: Electric Log

SOURCE: STRIBLING, W. C. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
243.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	356.0
239.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	360.0
238.0	CARBONDALE		UNCLASSIFIED	1.0	361.0
237.0	CARBONDALE	BRERETON	LIMESTONE	6.0	362.0
231.0	CARBONDALE	HERRIN	COAL	8.0	368.0

MAPID: 11721959000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 26 QUARTERS/FOOTAGES: SE SE NE

QUADRANGLE: ATWATER LONGITUDE: -89.71948 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.370715 DATE COLLECTED: 11 / 3 / 1978

SURFACE ELEVATION (FT.): LOGGED (FT.): 320.6 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED G8378 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	10.0	0.0	
-	PLEISTOCENE		CLAY	10.0	10.0	YELLOW
-	PLEISTOCENE		GLACIAL DRIFT	18.0	20.0	
-			GRAY SHALE	5.0	38.0	
-			GRAY SHALE	30.0	43.0	
-			GRAY SHALE	22.0	73.0	
-			SANDSTONE	1.5	95.0	
-			GRAY SHALE	21.5	96.5	
-			GRAY SHALE	2.5	118.0	
-			BLACK SHALE	1.5	120.5	
-			BLACK SHALE	1.3	122.0	
-			SANDSTONE	3.7	123.3	
-			GRAY SHALE	15.0	127.0	
-	MODESTO	CHAPEL	COAL	1.6	142.0	
-			GRAY SHALE	84.4	143.6	
-			SHALY SANDSTONE	39.0	228.0	GRAY
-			BLACK SHALE	1.0	267.0	
-			GRAY SHALE	10.7	268.0	
-			LIMESTONE	8.3	278.7	
-			GRAY SHALE	5.5	287.0	
-			LIMESTONE	2.5	292.5	
-			GRAY SHALE	1.0	295.0	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	296.0	
-	CARBONDALE		GRAY SHALE	2.3	299.0	
-	CARBONDALE	BRERETON	LIMESTONE	8.5	301.3	
-	CARBONDALE	ANNA	BLACK SHALE	0.6	309.8	
-	CARBONDALE	ANNA	BLACK SHALE	0.7	310.4	
-	CARBONDALE	HERRIN	COAL	1.3	311.1	
-	CARBONDALE	HERRIN	PYRITE	0.0	312.4	
-	CARBONDALE	HERRIN	COAL	0.7	312.4	
-	CARBONDALE	HERRIN	PYRITE	0.0	313.1	
-	CARBONDALE	HERRIN	COAL	0.1	313.2	
-	CARBONDALE	HERRIN	COAL	0.1	313.2	
-	CARBONDALE	HERRIN	COAL	2.4	313.4	
-	CARBONDALE	HERRIN	PYRITE	0.0	315.7	
-	CARBONDALE	HERRIN	COAL	0.5	315.7	
-	CARBONDALE	HERRIN	SHALE	0.0	316.2	
-	CARBONDALE	HERRIN	COAL	1.5	316.3	
-	CARBONDALE	HERRIN	COAL	0.1	317.8	

- CARBONDALE SHALE WITH LIMESTONE 1.0 317.9
 - CARBONDALE LIMESTONE 1.5 318.9

MAPID: 11721959000C **VERSION:** 2 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 26 **QUARTERS/FOOTAGES:** SE SE NE
QUADRANGLE: ATWATER **LONGITUDE:** -89.71948 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.370715 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 320.6 **LOG TYPE:** Survey Core Study
SOURCE: FREEMAN UNITED GB-3-78 **WELL TYPE:** Coal Test
COMMENT: DRILLERS LOG INC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN COMMENT
-	CARBONDALE	HERRIN	COAL	6.8	311.1

MAPID: 11700039000C **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 29 **QUARTERS/FOOTAGES:** SE SE SE NW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.78443 **GEOLOGIST:** TREWORY,J
CONFIDENTIAL: N **LATITUDE:** 39.370144 **DATE COLLECTED:** 0 / 0 / 1902
SURFACE ELEVATION (FT.): 644.0 **LOGGED (FT.):** 328.0 **LOG TYPE:** Drillers Log
SOURCE: SULLIVAN MACHINE CO **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN COMMENT
644.0			UNCONSOLIDATED	160.0	0.0
484.0			ROCK	3.4	160.0
480.6			COAL	0.6	163.4
480.0			ROCK	127.5	164.0
352.5			COAL	2.2	291.5
350.3			UNDERCLAY	5.3	293.7
345.0			LIMESTONE	1.0	299.0
344.0			SHALE	4.5	300.0
339.5			LIMESTONE	6.3	304.5
333.2			SHALE	3.5	310.8
329.7			BLACK SHALE	2.0	314.3
327.7	CARBONDALE	HERRIN	COAL	6.5	316.3
321.2			ROCK	5.2	322.8

MAPID: 11700039000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 29 QUARTERS/FOOTAGES: SE SE SE NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.78443 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.370144 DATE COLLECTED:

SURFACE ELEVATION (FT.): 644.0 LOGGED (FT.): 322.5 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
357.0	MODESTO	PIASA	LIMESTONE	3.0	287.0
354.0	MODESTO		DARK GRAY SHALE	1.5	290.0
352.5	CARBONDALE	DANVILLE	COAL	2.2	291.5
350.3	CARBONDALE		CLAYSTONE	5.3	293.7
345.0	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	7.5	299.0
337.5	CARBONDALE	BRERETON	LIMESTONE & SHALE	4.3	306.5
333.2	CARBONDALE	ANNA	GRAY SHALE	5.5	310.8
328.0	CARBONDALE	HERRIN	COAL	6.5	316.0

MAPID: 11700039000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 29 QUARTERS/FOOTAGES: SE SE SE NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.78443 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.370144 DATE COLLECTED: 0 / 0 / 1902

SURFACE ELEVATION (FT.): 644.0 LOGGED (FT.): 322.5 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
357.4	MODESTO	PIASA	LIMESTONE	3.0	286.6
354.4	MODESTO		UNCLASSIFIED	1.5	289.6
352.9	CARBONDALE	DANVILLE	COAL	2.2	291.1
350.7	CARBONDALE		UNCLASSIFIED	10.8	293.3
339.9	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.3	304.1
333.6	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.8	310.4
331.8	CARBONDALE		UNCLASSIFIED	1.8	312.2
330.0	CARBONDALE	ANNA	BLACK SHALE	2.0	314.0
328.0	CARBONDALE	HERRIN	COAL	6.5	316.0

MAPID: 11700039000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 29 QUARTERS/FOOTAGES: SE SE SE NW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.78443 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.370144 DATE COLLECTED: 0 / 0 / 1902

SURFACE ELEVATION (FT.): 644.2 LOGGED (FT.): 328.0 LOG TYPE: Drillers Log

SOURCE: A.W. CRAWFORD'S OPTIONS, HOLE #8 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
644.2			CLAY	15.0	0.0
629.2			CLAY	35.0	15.0
594.2			SANDY CLAY	110.0	50.0
484.2			SANDY SHALE	3.4	160.0
480.8	MODESTO	CHAPEL	COAL	0.6	163.4
480.2	MODESTO		UNDERCLAY	5.0	164.0
475.2	MODESTO		SHALE	2.0	169.0
473.2	MODESTO		CALCAREOUS SHALE	4.0	171.0
469.2	MODESTO		SHALE	5.0	175.0
464.2	MODESTO		SANDY SHALE	4.0	180.0
460.2	MODESTO		SANDY SHALE	14.0	184.0
446.2	MODESTO		SHALE	27.0	198.0
419.2	MODESTO		SHALE	22.0	225.0
397.2	MODESTO		UNDERCLAY	6.0	247.0
391.2	MODESTO		LIMESTONE	4.0	253.0
387.2	MODESTO		CALCAREOUS SHALE	8.0	257.0
379.2	MODESTO		SANDY SHALE	15.0	265.0
364.2	MODESTO		SHALE	7.0	280.0
357.2	MODESTO	PIASA	LIMESTONE	3.0	287.0
354.2	MODESTO		SHALE	1.5	290.0
352.7	CARBONDALE	DANVILLE	COAL	2.2	291.5
350.5	CARBONDALE		UNDERCLAY	5.3	293.7
345.2	CARBONDALE		LIMESTONE	1.0	299.0
344.2	CARBONDALE		CALCAREOUS SHALE	4.5	300.0
339.7	CARBONDALE		LIMESTONE	6.3	304.5
333.4	CARBONDALE		SHALE	3.5	310.8
329.9	CARBONDALE	ANNA	BLACK SHALE	2.0	314.3
327.9	CARBONDALE	HERRIN	COAL	6.5	316.3
321.4	CARBONDALE		UNDERCLAY	4.2	322.8
317.2	CARBONDALE		LIMESTONE	1.0	327.0

MAPID: 11700040000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 29 QUARTERS/FOOTAGES: SE SW SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.789673 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.363326 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 647.0 LOGGED (FT.): 335.9 LOG TYPE: Drillers Log

SOURCE: STANDARD OIL CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
348.8	MODESTO	PIASA	LIMESTONE	2.8	298.2
346.0	MODESTO		UNCLASSIFIED	2.9	301.0
343.1	CARBONDALE	DANVILLE	COAL	0.7	303.9
342.4	CARBONDALE		UNCLASSIFIED	10.9	304.6
331.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.5	315.5
325.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.2	322.0
323.8	CARBONDALE		UNCLASSIFIED	1.0	323.2
322.8	CARBONDALE	BRERETON	LIMESTONE	0.5	324.2
322.3	CARBONDALE	ANNA	BLACK SHALE	4.3	324.7
318.0	CARBONDALE	HERRIN	COAL	6.9	329.0

MAPID: 11700040000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 29 QUARTERS/FOOTAGES: SE SW SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.789673 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.363326 DATE COLLECTED:

SURFACE ELEVATION (FT.): 647.0 LOGGED (FT.): 400.0 LOG TYPE: Drillers Log

SOURCE: STANDARD OIL CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
647.0			UNCONSOLIDATED	173.5	0.0
473.5			ROCK	120.9	173.5
352.6			COAL	0.7	294.4
351.9			UNDERCLAY	1.6	295.1
350.3			LIMESTONE	0.3	296.7
350.0			SHALE	2.5	297.0
347.5			LIMESTONE	2.5	299.5
345.0			SHALE	9.5	302.0
335.5			LIMESTONE	1.0	311.5
334.5			SHALE	2.2	312.5
332.3			LIMESTONE	0.5	314.7
331.8			BLACK SHALE	4.3	315.2
327.5	CARBONDALE	HERRIN	COAL	6.9	319.5
320.6			ROCK	30.1	326.4
290.5			COAL	0.5	356.5
290.0			ROCK	43.0	357.0

MAPID: 11700040000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 29 QUARTERS/FOOTAGES: SE SW SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.789673 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.363326 DATE COLLECTED:

SURFACE ELEVATION (FT.): 647.0 LOGGED (FT.): 400.0 LOG TYPE: Drillers Log

SOURCE: STANDARD OIL CO., HOLE #2 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
647.0			SOIL	2.5	0.0	
644.5			CLAY	15.5	2.5	
629.0			HARD PAN	12.4	18.0	
616.6			SAND	13.3	30.4	
603.3			SANDY CLAY	15.3	43.7	
588.0			CLAY & GRAVEL	11.0	59.0	
577.0			SANDY CLAY	40.0	70.0	
537.0			CLAY & GRAVEL	3.0	110.0	
534.0			SAND	15.5	113.0	W/ CLAY STREAKS
518.5			CLAY & GRAVEL	10.5	128.5	W/ BOULDERS
508.0			SANDY CLAY	13.8	139.0	
494.2			SAND	20.0	152.8	W/ WOOD
474.2			GRAVEL	0.8	172.8	
473.5	MODESTO		SHALE	27.5	173.5	
446.0	MODESTO		SHALE	11.0	201.0	
435.0	MODESTO		SHALE	45.0	212.0	
390.0	MODESTO		SHALE	5.0	257.0	
385.0	MODESTO		UNDERCLAY	3.0	262.0	
382.0	MODESTO		SHALE	3.5	265.0	
378.5	MODESTO		SHALE	3.0	268.5	
375.5	MODESTO		SHALE	1.5	271.5	
374.0	MODESTO		LIMESTONE	2.0	273.0	
372.0	MODESTO		SANDY SHALE	9.3	275.0	
362.7	MODESTO		CALCAREOUS SHALE	4.5	284.3	W/ PEBBLES
358.2	MODESTO	PIASA	LIMESTONE	2.8	288.8	
355.5	MODESTO		CLAYSTONE & SHALE	2.9	291.5	
352.6	CARBONDALE	DANVILLE	COAL	0.7	294.4	
351.9	CARBONDALE		UNDERCLAY	1.6	295.1	
350.3	CARBONDALE		LIMESTONE	0.3	296.7	
350.0	CARBONDALE		SHALE	2.5	297.0	
347.5	CARBONDALE		LIMESTONE	2.5	299.5	
345.0	CARBONDALE		SHALE	4.0	302.0	
341.0	CARBONDALE		SHALE	5.5	306.0	
335.5	CARBONDALE		LIMESTONE	1.0	311.5	
334.5	CARBONDALE		CLAYSTONE & SHALE	1.2	312.5	
333.3	CARBONDALE		SHALE	1.0	313.7	
332.3	CARBONDALE		LIMESTONE	0.5	314.7	
331.8	CARBONDALE	ANNA	BLACK SHALE	4.3	315.2	
327.5	CARBONDALE	HERRIN	COAL	6.9	319.5	

320.6	CARBONDALE		UNDERCLAY	2.4	326.4
318.2	CARBONDALE		LIMESTONE	5.9	328.8
312.2	CARBONDALE		LIMESTONE W/ SHALE	1.3	334.8
311.0	CARBONDALE		CALCAREOUS SHALE	4.5	336.0
306.5	CARBONDALE		SHALE	2.8	340.5
303.7	CARBONDALE		LIMESTONE	1.8	343.3
302.0	CARBONDALE		SHALE	3.3	345.0
298.7	CARBONDALE		SHALY LIMESTONE	2.0	348.3
296.7	CARBONDALE		LIMESTONE	3.2	350.3
293.5	CARBONDALE	EXCELLO	BLACK SHALE	3.0	353.5
290.5	CARBONDALE	HOUCHIN CREEK	COAL	0.5	356.5
290.0	CARBONDALE		UNDERCLAY	5.0	357.0
285.0	CARBONDALE		SANDSTONE	12.0	362.0
273.0	CARBONDALE		SANDY SHALE	1.0	374.0
272.0	CARBONDALE		SANDSTONE	6.0	375.0
266.0	CARBONDALE		SHALY SANDSTONE	19.0	381.0

MAPID: 11700293301M **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 29 **QUARTERS/FOOTAGES:** SE SW SW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.789673 **GEOLOGIST:** TREWORYG,J
CONFIDENTIAL: N **LATITUDE:** 39.363326 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 651.0 **LOGGED (FT.):** 7.0 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-STND. OIL CO. # 2 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
651.0			UNKNOWN	320.0	0.0
331.0	CARBONDALE	HERRIN	COAL	7.0	320.0

MAPID: 11701051000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 29 QUARTERS/FOOTAGES: 330' N line, 330' E line of SE NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.775661

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.372343

DATE COLLECTED: 7 / 0 / 1950

SURFACE ELEVATION (FT.): 645.0

LOGGED (FT.): 335.0

LOG TYPE: Electric Log

SOURCE: WHITE EDGAR

WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
341.0	MODESTO	PIASA	LIMESTONE	4.0	304.0
337.0	MODESTO		UNCLASSIFIED	2.5	308.0
334.5	CARBONDALE		UNCLASSIFIED	6.5	310.5
328.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	317.0
321.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	324.0
320.0	CARBONDALE		UNCLASSIFIED	1.0	325.0
319.0	CARBONDALE	BRERETON	LIMESTONE	2.0	326.0
317.0	CARBONDALE	ANNA	BLACK SHALE	2.0	328.0
315.0	CARBONDALE	HERRIN	COAL	5.0	330.0

MAPID: 11721879000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 29 QUARTERS/FOOTAGES: 2303' N line, 21' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.77453 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.370513 DATE COLLECTED: 9 / 20 / 1978

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 335.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-19 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
640.0			UNCONSOLIDATED	101.0	0.0
539.0	MODESTO	CARLINVILLE	LIMESTONE	2.2	101.0
536.8	MODESTO		GRAY SHALE	21.3	103.2
515.5	MODESTO		LIMESTONE	3.0	124.5
512.5	MODESTO		GRAY SHALE	30.0	127.5
482.5	MODESTO	CHAPEL	COAL	1.3	157.5
481.2	MODESTO		GRAY SHALE	3.2	158.8
478.0	MODESTO		LIMESTONE	1.5	162.0
476.5	MODESTO		SANDY SHALE	22.5	163.5
454.0	MODESTO		GRAY SHALE	27.0	186.0
427.0	MODESTO		GRAY SHALE	27.0	213.0
400.0	MODESTO		GRAY SHALE	13.0	240.0
387.0	MODESTO		BLACK SHALE	2.0	253.0
385.0	MODESTO		GRAY SHALE	4.5	255.0
380.5	MODESTO		CALCAREOUS SHALE	13.0	259.5
367.5	MODESTO		SANDSTONE	1.5	272.5
366.0	MODESTO		GRAY SHALE	6.2	274.0
359.8	MODESTO	PIASA	LIMESTONE	6.8	280.2
353.0	MODESTO		GRAY SHALE	0.6	287.0
352.4	CARBONDALE	DANVILLE	COAL	0.9	287.6
351.5	CARBONDALE		GRAY SHALE	13.2	288.5
338.3	CARBONDALE	BANKSTON FORK	LIMESTONE	4.8	301.7
333.5	CARBONDALE		GRAY SHALE	3.3	306.5
330.2	CARBONDALE	BRERETON	LIMESTONE	0.4	309.8
329.8	CARBONDALE	ANNA	BLACK SHALE	2.0	310.2
327.8	CARBONDALE	HERRIN	COAL	5.7	312.2
322.1	CARBONDALE		SHALE	0.2	317.9
321.9	CARBONDALE		GRAY SHALE	2.1	318.1
319.8	CARBONDALE		LIMESTONE	2.8	320.2
317.0	CARBONDALE		CALCAREOUS SHALE	3.0	323.0
314.0	CARBONDALE		GRAY SHALE	8.0	326.0
306.0	CARBONDALE		LIMESTONE	1.0	334.0

MAPID: 1172188000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 29 QUARTERS/FOOTAGES: 2610' N line, 70' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.792986 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.369872 DATE COLLECTED: 10 / 11 / 1978

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 364.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-18 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
650.0			UNCONSOLIDATED	141.0	0.0
509.0	MODESTO		GRAY SHALE	9.0	141.0
500.0	MODESTO	CARLINVILLE	LIMESTONE	4.5	150.0
495.5	MODESTO		BLACK SHALE	0.5	154.5
495.0	MODESTO		GRAY SHALE	34.0	155.0
461.0	MODESTO	CHAPEL	COAL	1.3	189.0
459.7	MODESTO		GRAY SHALE	3.7	190.3
456.0	MODESTO		LIMESTONE	2.5	194.0
453.5	MODESTO		GRAY SHALE	9.5	196.5
444.0	MODESTO		SANDY SHALE	40.0	206.0
404.0	MODESTO		GRAY SHALE	14.0	246.0
390.0	MODESTO		GRAY SHALE	4.5	260.0
385.5	MODESTO		LIMESTONE	1.0	264.5
384.5	MODESTO		SHALE	10.5	265.5
374.0	MODESTO		SHALE	10.0	276.0
364.0	MODESTO		SHALE	26.0	286.0
338.0	MODESTO		BLACK SHALE	3.5	312.0
334.5	MODESTO		GRAY SHALE	2.0	315.5
332.5	MODESTO		COAL	1.0	317.5
331.5	MODESTO		GRAY SHALE	3.5	318.5
328.0	MODESTO	PIASA	LIMESTONE	2.3	322.0
325.7			GRAY SHALE	2.7	324.3
323.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	327.0
321.0	CARBONDALE		CALCAREOUS SHALE	4.0	329.0
317.0	CARBONDALE	BRERETON	LIMESTONE	7.5	333.0
309.5	CARBONDALE		BLACK SHALE	0.5	340.5
309.0	CARBONDALE	HERRIN	COAL	7.8	341.0
301.2	CARBONDALE		SHALE	5.2	348.8
296.0	CARBONDALE		LIMESTONE	8.0	354.0
288.0	CARBONDALE		GRAY SHALE	2.0	362.0

MAPID: 11700041000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 30 QUARTERS/FOOTAGES: SE SE SE SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.793803 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.362883 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 645.0 LOGGED (FT.): 349.3 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
335.2	MODESTO	PIASA	LIMESTONE	4.0	309.8
331.2	MODESTO		UNCLASSIFIED	1.5	313.8
329.7	CARBONDALE	DANVILLE	COAL	2.4	315.3
327.3	CARBONDALE		UNCLASSIFIED	9.1	317.7
318.2	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.7	326.8
311.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	0.5	333.5
311.0	CARBONDALE		UNCLASSIFIED	0.5	334.0
310.5	CARBONDALE	BRERETON	LIMESTONE	4.0	334.5
306.5	CARBONDALE	ANNA	BLACK SHALE	3.5	338.5
303.0	CARBONDALE	HERRIN	COAL	7.3	342.0

MAPID: 11700041000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 30 QUARTERS/FOOTAGES: SE SE SE SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.793803 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.362883 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 645.0 LOGGED (FT.): 352.0 LOG TYPE: Drillers Log

SOURCE: PEABODY C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
645.0			UNCONSOLIDATED	172.0	0.0
473.0			ROCK	143.5	172.0
329.5			COAL	2.4	315.5
327.1			SHALE	4.5	317.9
322.6			LIMESTONE	0.6	322.4
322.0			SHALE	4.0	323.0
318.0			LIMESTONE	6.7	327.0
311.3			SHALE	1.0	333.7
310.3			LIMESTONE	0.5	334.7
309.8			SHALE	0.8	335.2
309.0			BLACK SHALE	0.7	336.0
308.3			SHALE	2.0	336.7
306.3			BLACK SHALE	3.5	338.7
302.8	CARBONDALE	HERRIN	COAL	7.3	342.2
295.5			ROCK	2.5	349.5

MAPID: 11700041000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 30 QUARTERS/FOOTAGES: SE SE SE SE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.793803 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.362883 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 645.4 LOGGED (FT.): 352.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. WELL TYPE: Coal Test

COMMENT: ANDERSON FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
645.4			SOIL	2.0	0.0	
643.4			CLAY	9.0	2.0	
634.4			HARD PAN	5.0	11.0	
629.4			SAND	2.0	16.0	
627.4			CLAY	10.0	18.0	
617.4			HARD PAN	12.0	28.0	
605.4			CLAY	23.0	40.0	
582.4			SAND	7.0	63.0	
575.4			CLAY	20.0	70.0	
555.4			SAND & GRAVEL	5.0	90.0	
550.4			CLAY	7.0	95.0	
543.4			SAND	61.0	102.0	
482.4			HARD PAN	2.0	163.0	
480.4			SAND	7.0	165.0	
473.4			SHALE	1.0	172.0	
472.4			SANDY CONGLOMERATE	1.0	173.0	
471.4	MODESTO		SHALE	15.0	174.0	
456.4	MODESTO		SANDY SHALE	11.0	189.0	
445.4	MODESTO		SHALE	10.0	200.0	
435.4	MODESTO		SANDY SHALE	3.0	210.0	
432.4	MODESTO		SHALE	20.0	213.0	
412.4	MODESTO		SHALE	9.0	233.0	W/ DARK LS BANDS
403.4	MODESTO		SHALE	12.0	242.0	
391.4	MODESTO		LIMESTONE	1.7	254.0	
389.7	MODESTO		SHALE	4.3	255.7	
385.4	MODESTO		SANDY SHALE	9.0	260.0	
376.4	MODESTO		SHALE	8.5	269.0	
367.9	MODESTO		BLACK SHALE	0.5	277.5	
367.4	MODESTO		SHALE	7.0	278.0	
360.4	MODESTO		SANDY SHALE	10.0	285.0	
350.4	MODESTO		SANDSTONE	1.0	295.0	
349.4	MODESTO		SANDY SHALE	4.0	296.0	
345.4	MODESTO		SANDSTONE	1.7	300.0	
343.7	MODESTO		SANDY SHALE	2.3	301.7	
341.4	MODESTO		SHALE	5.0	304.0	
336.4	MODESTO		CALCAREOUS SHALE	1.0	309.0	
335.4	MODESTO	PIASA	LIMESTONE	4.0	310.0	
331.4	MODESTO		SHALE	0.5	314.0	
330.9	MODESTO		BLACK SHALE	1.0	314.5	

329.9	CARBONDALE	DANVILLE	COAL	2.4	315.5
327.5	CARBONDALE		SHALE	0.5	317.9
327.0	CARBONDALE		SHALE	4.0	318.4
323.0	CARBONDALE		LIMESTONE	0.6	322.4
322.4	CARBONDALE		SHALE	0.5	323.0
321.9	CARBONDALE		CALCAREOUS SHALE	1.0	323.5
320.9	CARBONDALE		SHALE	2.5	324.5
318.4	CARBONDALE		LIMESTONE	6.7	327.0
311.7	CARBONDALE		SHALE	1.0	333.7
310.7	CARBONDALE		LIMESTONE	0.5	334.7
310.2	CARBONDALE		SHALE	0.8	335.2
309.4	CARBONDALE		BLACK SHALE	0.7	336.0
308.7	CARBONDALE		SHALE	2.0	336.7
306.7	CARBONDALE		BLACK SHALE	3.5	338.7
303.2	CARBONDALE	HERRIN	COAL	7.3	342.2
295.9	CARBONDALE		UNDERCLAY	2.5	349.5

MAPID: 11700525000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 30 **QUARTERS/FOOTAGES:** NW NW NW SW
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.811594 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.369216 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 655.0 **LOGGED (FT.):** 323.0 **LOG TYPE:** Survey Core Study
SOURCE: CONSOLIDATED COAL CO. 5 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
361.8	MODESTO		DARK GRAY SHALE	2.0	293.2
359.8	CARBONDALE	DANVILLE	COAL	0.6	295.2
359.3	CARBONDALE		CLAYSTONE	2.6	295.7
356.7	CARBONDALE	BANKSTON FORK	LIMESTONE	5.8	298.3
350.9	CARBONDALE	LAWSON	MOTTLED SHALE	0.9	304.1
350.0	CARBONDALE	BRERETON	LIMESTONE W/ SHALE	10.7	305.0
339.3	CARBONDALE	ANNA	DARK GRAY SHALE	0.4	315.7
339.0	CARBONDALE	HERRIN	COAL	7.0	316.0

MAPID: 11700525000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 30 QUARTERS/FOOTAGES: NW NW NW SW
 QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.811594 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.369216 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 322.7 LOG TYPE: Drillers Log
 SOURCE: CONSOLIDATED COAL CO. 5 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
370.3	CARBONDALE		UNCLASSIFIED	12.3	284.7
358.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.8	297.0
352.2	CARBONDALE	ANVIL ROCK	SANDSTONE	0.9	302.8
351.3	CARBONDALE	CONANT	LIMESTONE	0.4	303.7
350.9	CARBONDALE		SHALE	3.0	304.1
347.9	CARBONDALE	BRERETON	LIMESTONE	7.9	307.1
340.0	CARBONDALE	ANNA	BLACK SHALE	1.0	315.0
339.0	CARBONDALE	HERRIN	COAL	6.7	316.0

MAPID: 11700525000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 30 QUARTERS/FOOTAGES: NW NW NW SW
 QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.811594 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.369216 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 326.1 LOG TYPE: Drillers Log
 SOURCE: CONSOLIDATED COAL CO. 5 WELL TYPE: Coal Test
 COMMENT: CORE SURVEY STUDY; C-3062;X&C-3696

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
339.7	CARBONDALE	HERRIN	COAL	6.7	315.3

MAPID: 11700525000C VERSION: 4

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 30 QUARTERS/FOOTAGES: NW NW NW SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.811594 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.369216 DATE COLLECTED: 0 / 0 / 1948

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 326.6 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATED COAL CO. 5 WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
655.0	PLEISTOCENE		UNCONSOLIDATED	112.0	0.0	
543.0			SHALY LIMESTONE	0.3	112.0	GREEN
542.7			SHALE WITH LIMESTONE	0.1	112.3	
542.7			SHALE WITH LIMESTONE	0.3	112.3	
542.3			SHALE WITH LIMESTONE	0.3	112.7	
542.1			SHALE WITH LIMESTONE	0.8	112.9	
541.2			BLUE SHALE	1.3	113.8	
540.0			BLUE SHALE	1.2	115.0	
538.8			LIMESTONE	0.1	116.2	
538.7			SHALE & SILTSTONE	5.7	116.3	
533.0			SHALE & SILTSTONE	1.1	122.0	
531.9			SHALE & SILTSTONE	1.1	123.1	
530.8			SHALE & SILTSTONE	0.8	124.2	
530.0			GRAY SHALE	0.6	125.0	
529.4			SHALE & SILTSTONE	5.3	125.6	
524.2			SHALE & SILTSTONE	6.5	130.8	
517.7			SHALE	0.7	137.3	
517.0			UNKNOWN	4.0	138.0	
513.0			SHALE & SILTSTONE	10.0	142.0	
503.0			SHALE & SILTSTONE	4.6	152.0	
498.4			SHALE	0.7	156.6	
497.7			SHALE & SILTSTONE	4.3	157.3	
493.5			SHALE	0.5	161.5	
493.0			SHALE & SILTSTONE	9.4	162.0	
483.6	MODESTO	CHAPEL	COAL	1.8	171.4	#8
481.7	MODESTO		UNDERCLAY	0.8	173.3	GRAY
481.0	MODESTO		UNDERCLAY	1.0	174.0	GREEN
480.0	MODESTO		SILTSTONE/LIMESTONE	1.0	175.0	GRAY
479.0	MODESTO		SHALE WITH LIMESTONE	2.0	176.0	
477.0	MODESTO		SHALE WITH LIMESTONE	3.0	178.0	
474.0	MODESTO		SILTSTONE	1.0	181.0	GRAY
473.0	MODESTO		SHALE & SILTSTONE	3.0	182.0	
470.0	MODESTO		SHALE & SILTSTONE	3.3	185.0	
466.7	MODESTO		GREEN SHALE	3.7	188.3	
463.0	MODESTO		GREEN SHALE	1.7	192.0	
461.3	MODESTO		NO RECORD	1.3	193.7	NO CORE
460.0	MODESTO		SHALE	8.0	195.0	
452.0	MODESTO		SHALE	6.5	203.0	
445.5	MODESTO		SHALE & SILTSTONE	2.5	209.5	

443.0	MODESTO		NO RECORD	0.7	212.0	NO CORE
442.3	MODESTO		GRAY SHALE	9.3	212.7	
433.0	MODESTO		GRAY SHALE	10.0	222.0	
423.0	MODESTO		SHALE	10.0	232.0	
413.0	MODESTO		GRAY SHALE	1.8	242.0	
411.2	MODESTO		UNCLASSIFIED	0.1	243.8	
411.1	MODESTO		GRAY SHALE	0.5	243.9	
410.6	MODESTO		LIMESTONE	1.0	244.4	GRAY
409.6	MODESTO		LIMESTONE	0.2	245.4	
409.4	MODESTO		GRAY SHALE	5.4	245.6	
404.0	MODESTO		GRAY SHALE	0.2	251.0	
403.8	MODESTO		GREEN SHALE	0.8	251.2	
403.0	MODESTO		SHALE & SILTSTONE	0.9	252.0	
402.1	MODESTO		SANDSTONE	2.9	252.9	
399.2	MODESTO		SHALE	6.2	255.8	
393.0	MODESTO		SHALE	2.3	262.0	
390.7	MODESTO		GREEN SHALE	5.2	264.3	
385.5	MODESTO		GREEN SHALE	2.5	269.5	
383.0	MODESTO		SILTSTONE	0.7	272.0	GRAY
382.3	MODESTO		SHALE & SILTSTONE	0.9	272.7	
381.4	MODESTO		SILTSTONE	1.8	273.6	GRAY
379.7	MODESTO		GRAY SHALE	0.6	275.3	
379.1	MODESTO		SILTSTONE	1.1	275.9	GRAY
378.0	MODESTO		SILTSTONE	6.0	277.0	GRAY
372.0	MODESTO		SILTSTONE	0.3	283.0	GRAY
371.7	MODESTO		GRAY SHALE	0.3	283.3	
371.5	MODESTO		LIMESTONE	0.1	283.5	
371.4	MODESTO		BLACK SHALE	2.1	283.6	
369.3	MODESTO		BLACK SHALE	6.3	285.7	
363.0	MODESTO		BLACK SHALE	1.8	292.0	
361.2	CARBONDALE	DANVILLE	COAL	0.6	293.8	
360.7	CARBONDALE	DANVILLE	NO RECORD	0.7	294.3	NO CORE
360.0	CARBONDALE	DANVILLE	COAL	0.0	295.0	
360.0	CARBONDALE	DANVILLE	UNDERCLAY	0.9	295.0	
359.1	CARBONDALE		GREEN SHALE	0.3	295.9	
358.7	CARBONDALE		GREEN SHALE	0.7	296.3	
358.1	CARBONDALE	BANKSTON FORK	LIMESTONE	5.8	296.9	BROWN
352.3	CARBONDALE		GREEN SHALE	0.3	302.7	
352.1	CARBONDALE		GREEN SHALE	0.4	302.9	
351.7	CARBONDALE		GREEN SHALE	0.3	303.3	
351.4	CARBONDALE		LIMESTONE	0.4	303.6	GRAY
351.0	CARBONDALE		GREEN SHALE	2.1	304.0	
348.9	CARBONDALE		GREEN SHALE	0.9	306.1	
348.0	CARBONDALE	BRERETON	LIMESTONE	0.8	307.0	GRAY
347.2	CARBONDALE	BRERETON	GREEN SHALE	0.3	307.8	
346.9	CARBONDALE	BRERETON	LIMESTONE	0.9	308.1	GRAY
346.0	CARBONDALE	BRERETON	GREEN SHALE	0.8	309.0	
345.2	CARBONDALE	BRERETON	LIMESTONE	0.1	309.8	GRAY

345.1	CARBONDALE	BRERETON	LIMESTONE	0.1	309.9	GRAY
345.0	CARBONDALE	BRERETON	NO RECORD	0.7	310.0	
344.3	CARBONDALE	BRERETON	LIMESTONE	4.3	310.7	
340.1	CARBONDALE		GRAY SHALE	0.4	314.9	
339.7	CARBONDALE	HERRIN	SHALY COAL	0.6	315.3	BLACK
339.1	CARBONDALE	HERRIN	COAL	6.4	315.9	
332.7	CARBONDALE	HERRIN	COAL	0.1	322.3	
332.7	CARBONDALE	HERRIN	COAL/CLAYSTONE	0.3	322.3	GRAY
332.4	CARBONDALE		UNDERCLAY	0.9	322.6	GRAY
331.5	CARBONDALE		NO RECORD	0.3	323.5	NO CORE
331.2	CARBONDALE		GRAY SHALE	0.3	323.8	
330.9	CARBONDALE		SHALY LIMESTONE	2.5	324.1	GRAY

MAPID: 11721881000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 31 QUARTERS/FOOTAGES: 2500' N line, 2450' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.801926 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.355513 DATE COLLECTED: 9 / 19 / 1978

SURFACE ELEVATION (FT.): 644.0 LOGGED (FT.): 380.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-21 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
644.0			UNCONSOLIDATED	156.0	0.0
488.0	MODESTO	CARLINVILLE	LIMESTONE	1.0	156.0
487.0	MODESTO		GRAY SHALE	23.0	157.0
464.0	MODESTO		SANDY SHALE	14.0	180.0
450.0	MODESTO	CHAPEL	COAL	1.0	194.0
449.0	MODESTO		GRAY SHALE	52.0	195.0
397.0	MODESTO		GRAY SHALE	14.5	247.0
382.5	MODESTO		LIMESTONE	2.5	261.5
380.0	MODESTO		GRAY SHALE	29.0	264.0
351.0	MODESTO		BLACK SHALE	2.0	293.0
349.0	MODESTO		COAL	1.0	295.0
348.0	MODESTO		GRAY SHALE	29.0	296.0
319.0	MODESTO	PIASA	LIMESTONE	4.5	325.0
314.5	MODESTO		BLACK SHALE	1.3	329.5
313.2	CARBONDALE	DANVILLE	COAL	1.0	330.8
312.2	CARBONDALE		GRAY SHALE	12.7	331.8
299.5	CARBONDALE	BANKSTON FORK	LIMESTONE	5.3	344.5
294.2	CARBONDALE		SHALE	3.2	349.8
291.0	CARBONDALE	BRERETON	SHALY LIMESTONE	0.5	353.0
290.5	CARBONDALE		SHALE	0.4	353.5
290.1	CARBONDALE	ANNA	BLACK SHALE	4.5	353.9
285.6	CARBONDALE	HERRIN	COAL	7.9	358.4
277.7	CARBONDALE		SHALE	0.2	366.3
277.5	CARBONDALE		CORE LOSS	0.5	366.5
277.0	CARBONDALE		GRAY SHALE	3.5	367.0
273.5	CARBONDALE		LIMESTONE	2.5	370.5
271.0	CARBONDALE		CALCAREOUS SHALE	7.0	373.0

MAPID: 11721882000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 31 QUARTERS/FOOTAGES: 9' N line, 87' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.811813 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.36238 DATE COLLECTED: 11 / 16 / 1977

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 378.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-18 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
650.0			UNCONSOLIDATED	138.0	0.0
512.0	MODESTO		GRAY SHALE	10.0	138.0
502.0	MODESTO		LIMESTONE	1.0	148.0
501.0	MODESTO		BLACK SHALE	1.0	149.0
500.0	MODESTO		SILTY SHALE	17.0	150.0
483.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	167.0
479.0	MODESTO		BLACK SHALE	1.0	171.0
478.0	MODESTO		LIMESTONE	1.0	172.0
477.0	MODESTO		GRAY SHALE	32.5	173.0
444.5	MODESTO	CHAPEL	COAL	1.0	205.5
443.5	MODESTO		GRAY SHALE	40.5	206.5
403.0	MODESTO		GRAY SHALE	19.0	247.0
384.0	MODESTO		LIMESTONE	2.0	266.0
382.0	MODESTO		GRAY SHALE	5.0	268.0
377.0	MODESTO		GRAY SHALE	25.0	273.0
352.0	MODESTO		BLACK SHALE	2.0	298.0
350.0	MODESTO		COAL	0.8	300.0
349.2	MODESTO		GRAY SHALE	6.7	300.8
342.5	MODESTO		CALCAREOUS SANDSTONE	7.5	307.5
335.0	MODESTO		SHALE	9.0	315.0
326.0	MODESTO	PIASA	LIMESTONE	4.0	324.0
322.0	MODESTO		BLACK SHALE	1.5	328.0
320.5	CARBONDALE	DANVILLE	COAL	0.5	329.5
320.0	CARBONDALE		GRAY SHALE	12.0	330.0
308.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	342.0
303.0	CARBONDALE		SHALE	2.0	347.0
301.0	CARBONDALE	BRERETON	LIMESTONE	1.0	349.0
300.0	CARBONDALE	ANNA	BLACK SHALE	4.9	350.0
295.1	CARBONDALE	HERRIN	COAL	6.8	354.9
288.3	CARBONDALE		UNDERCLAY	0.8	361.7
287.5	CARBONDALE		UNDERCLAY	0.4	362.5
287.1	CARBONDALE		CORE LOSS	0.3	362.9
286.8	CARBONDALE		LIMESTONE	3.2	363.2
283.6	CARBONDALE		GRAY SHALE	5.6	366.4
278.0	CARBONDALE		LIMESTONE	6.0	372.0

MAPID: 11700608000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 32 QUARTERS/FOOTAGES: 330' N line, 330' W line of NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.782592 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.361478 DATE COLLECTED: 7 / 0 / 1976

SURFACE ELEVATION (FT.): 645.0 LOGGED (FT.): 328.0 LOG TYPE: Electric Log

SOURCE: ENGLE, GEORGE S. WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
356.0	MODESTO	PIASA	LIMESTONE	3.0	289.0
353.0	MODESTO		UNCLASSIFIED	4.0	292.0
349.0	CARBONDALE	DANVILLE	COAL	1.0	296.0
348.0	CARBONDALE		UNCLASSIFIED	10.0	297.0
338.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	307.0
332.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.5	313.0
329.5	CARBONDALE		UNCLASSIFIED	2.5	315.5
327.0	CARBONDALE	BRERETON	LIMESTONE	4.0	318.0
323.0	CARBONDALE	ANNA	BLACK SHALE	1.0	322.0
322.0	CARBONDALE	HERRIN	COAL	5.0	323.0

MAPID: 11700866000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 32 QUARTERS/FOOTAGES: 2830' N line, 2930' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.784733 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.354585 DATE COLLECTED:

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 330.9 LOG TYPE: Survey Core Study

SOURCE: WILCON, CARL Thode 3 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
343.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	6.2	292.0
336.8	CARBONDALE	DANVILLE	COAL	1.1	298.2
335.7	CARBONDALE		CLAYSTONE	7.0	299.3
328.7	CARBONDALE	GALUM	LIMESTONE/UNDERCLAY	0.4	306.3
328.3	CARBONDALE		GRAY SHALE	1.5	306.7
326.8	CARBONDALE	BANKSTON FORK	LIMESTONE	6.7	308.2
320.2	CARBONDALE	LAWSON	MOTTLED SHALE	2.3	314.8
317.8	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.7	317.2
317.2	CARBONDALE	ANNA	BLACK SHALE	2.8	317.8
312.0	CARBONDALE	HERRIN	COAL	7.9	323.0

MAPID: 11700886000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 32 QUARTERS/FOOTAGES: 190' N line, 290' E line of NE NE SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.784797 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.354521 DATE COLLECTED:

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 337.1 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO 12 WELL TYPE: Coal Test

COMMENT: CORE C-4322 ; SEE COAL SEC MAP 6-117A&B

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
335.7	CARBONDALE	DANVILLE	COAL	1.1	299.3
311.8	CARBONDALE	HERRIN	COAL	7.9	323.2

MAPID: 11700886000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 32 QUARTERS/FOOTAGES: 190' N line, 290' E line of NE NE SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.784797 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.354521 DATE COLLECTED:

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 330.9 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO 12 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
342.6	MODESTO	PIASA	LIMESTONE	4.0	292.4
338.6	MODESTO		UNCLASSIFIED	2.2	296.4
336.4	CARBONDALE	DANVILLE	COAL	1.1	298.6
335.3	CARBONDALE		UNCLASSIFIED	10.7	299.7
324.6	CARBONDALE	BANKSTON FORK	LIMESTONE	6.7	310.4
317.9	CARBONDALE	ANVIL ROCK	SANDSTONE	1.2	317.1
316.7	CARBONDALE		SHALE	1.2	318.3
315.5	CARBONDALE	BRERETON	LIMESTONE	0.7	319.5
314.8	CARBONDALE	ANNA	BLACK SHALE	2.8	320.2
312.0	CARBONDALE	HERRIN	COAL	7.9	323.0

MAPID: 11700886000C VERSION: 3

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 32 QUARTERS/FOOTAGES: 190' N line, 290' E line of NE NE SW

QUADRANGLE: CARLINVILLE EAST

LONGITUDE: -89.784797

GEOLOGIST: UITEMP

CONFIDENTIAL: N

LATITUDE: 39.354521

DATE COLLECTED: 12 / 0 / 1960

SURFACE ELEVATION (FT.): 635.0

LOGGED (FT.): 337.1

LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO 12

WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
635.0	PLEISTOCENE		UNCONSOLIDATED	12.0	0.0	GREEN
623.0	PLEISTOCENE		CLAY & SHALE	193.3	12.0	GRAY
429.7			BLACK SHALE	0.3	205.3	
429.5			GRAY SHALE	34.5	205.5	
395.0			GRAY SHALE	11.6	240.0	
383.4			BLACK SHALE	0.1	251.6	
383.3			SHALE WITH LIMESTONE	7.6	251.7	
375.7			SHALY SANDSTONE	9.9	259.3	
365.7			LIMESTONE	0.5	269.3	WHITE
365.2			SHALY SANDSTONE	17.9	269.8	
347.3			SHALE WITH LIMESTONE	5.5	287.7	
341.8	MODESTO	PIASA	LIMESTONE	6.0	293.2	WHITE
335.8	MODESTO		GRAY SHALE	0.2	299.2	
335.7	CARBONDALE	DANVILLE	COAL	1.1	299.3	#7
334.6	CARBONDALE		GRAY SHALE	1.4	300.4	
333.2	CARBONDALE		UNDERCLAY	1.5	301.8	GRAY
331.7	CARBONDALE		CALCAREOUS SHALE	7.6	303.3	
324.1	CARBONDALE		LIMESTONE	6.7	310.9	WHITE
317.4	CARBONDALE		GREEN SHALE	2.5	317.6	
314.9	CARBONDALE		GRAY SHALE	3.1	320.1	
311.8	CARBONDALE	HERRIN	COAL	7.9	323.2	#6
303.9	CARBONDALE		UNDERCLAY	6.0	331.1	

MAPID: 11700888000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 32 QUARTERS/FOOTAGES: 190' N line, 290' E line of NE SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.784797 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.354521 DATE COLLECTED: 12 / 29 / 1960

SURFACE ELEVATION (FT.): 640.8 LOGGED (FT.): 332.8 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO 12C WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
640.8	PLEISTOCENE		SOIL	4.0	0.0	
636.8	PLEISTOCENE		CLAY	8.2	4.0	YELLOW
628.6	PLEISTOCENE		CLAY	3.3	12.2	GRAY
625.4	PLEISTOCENE		HARD PAN	4.0	15.4	
621.4	PLEISTOCENE		SAND & GRAVEL	5.6	19.4	
615.8	PLEISTOCENE		GLACIAL DRIFT	8.1	25.0	GRAY
607.7	PLEISTOCENE		SANDY CLAY	47.0	33.1	GRAY
560.7	PLEISTOCENE		BOULDER	22.4	80.1	GRAY
538.3	PLEISTOCENE		BOULDERS & CLAY	10.0	102.5	GRAY
528.3	PLEISTOCENE		CLAY & GRAVEL	37.2	112.5	
491.1	PLEISTOCENE		CLAY & GRAVEL	10.3	149.7	YELLOW
480.8	PLEISTOCENE		CLAY & GRAVEL	12.0	160.0	YELLOW
468.8			SANDSTONE	14.3	172.0	
454.5			SHALY SANDSTONE	6.7	186.3	
447.8			GRAY SHALE	22.2	193.0	
425.6			SHALE WITH LIMESTONE	37.8	215.2	
387.8			SHALE WITH LIMESTONE	3.3	253.0	
384.5			SANDY SHALE	17.2	256.3	
367.3			SANDY SHALE	16.5	273.5	
350.8			GRAY SHALE	2.0	290.0	
348.8			GRAY SHALE	3.7	292.0	
345.1	MODESTO	PIASA	LIMESTONE	4.3	295.7	GRAY
340.8	MODESTO	PIASA	LIMESTONE	0.8	300.0	GRAY
340.0	CARBONDALE	DANVILLE	COAL	1.3	300.8	#7
338.7	CARBONDALE		GRAY SHALE	6.3	302.1	
332.5	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	2.5	308.3	
330.0	CARBONDALE		GRAY SHALE	3.4	310.8	
326.5	CARBONDALE	BRERETON	LIMESTONE	6.6	314.3	GRAY
320.0	CARBONDALE		GRAY SHALE	5.4	320.8	
314.5	CARBONDALE	HERRIN	COAL	6.6	326.3	#6

MAPID: 11700888000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 32 QUARTERS/FOOTAGES: 190' N line, 290' E line of NE SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.784797 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.354521 DATE COLLECTED:

SURFACE ELEVATION (FT.): 640.8 LOGGED (FT.): 332.8 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO 12-C WELL TYPE: Coal Test

COMMENT: SEE COAL SECTION MAP 6-117 A & B

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
340.0	CARBONDALE	DANVILLE	COAL	1.3	300.8
314.5	CARBONDALE	HERRIN	COAL	6.6	326.3

MAPID: 11721883000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 32 QUARTERS/FOOTAGES: 70' N line, 30' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.774426 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.362168 DATE COLLECTED: 10 / 6 / 1978

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 340.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-20 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
642.0			UNCONSOLIDATED	186.0	0.0
456.0	MODESTO		GRAY SHALE	3.0	186.0
453.0	MODESTO		SANDY SHALE	11.5	189.0
441.5	MODESTO		GRAY SHALE	27.5	200.5
414.0	MODESTO		GRAY SHALE	13.0	228.0
401.0	MODESTO		GRAY SHALE	12.0	241.0
389.0	MODESTO		BLACK SHALE	1.5	253.0
387.5	MODESTO		GRAY SHALE	22.5	254.5
365.0	MODESTO		LIMESTONE	5.0	277.0
360.0	MODESTO		CALCAREOUS SHALE	7.0	282.0
353.0	MODESTO	PIASA	LIMESTONE	5.5	289.0
347.5	MODESTO		BLACK SHALE	1.5	294.5
346.0	CARBONDALE	DANVILLE	COAL	2.0	296.0
344.0	CARBONDALE		GRAY SHALE	6.0	298.0
338.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	304.0
330.0	CARBONDALE		GRAY SHALE	2.5	312.0
327.5	CARBONDALE	BRERETON	LIMESTONE	1.0	314.5
326.5	CARBONDALE	ENERGY	SHALE	3.8	315.5
322.7	CARBONDALE	HERRIN	COAL	6.8	319.3
315.9	CARBONDALE		SHALE	0.2	326.1
315.8	CARBONDALE		SHALE	0.5	326.2
315.3	CARBONDALE		CORE LOSS	0.1	326.7
315.2	CARBONDALE		LIMESTONE	7.2	326.8
308.0	CARBONDALE		CALCAREOUS SHALE	6.0	334.0

MAPID: 11721884000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 32 QUARTERS/FOOTAGES: 2598' N line, 2487' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.783161 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.355218 DATE COLLECTED: 11 / 17 / 1977

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 347.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-17 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
635.0			UNCONSOLIDATED	164.0	0.0
471.0	MODESTO		SANDY SHALE	14.0	164.0
457.0	MODESTO		GRAY SHALE	42.0	178.0
415.0	MODESTO		GRAY SHALE	17.0	220.0
398.0	MODESTO		GRAY SHALE	17.0	237.0
381.0	MODESTO		SHALE	1.5	254.0
379.5	MODESTO		GRAY SHALE	24.5	255.5
355.0	MODESTO		SANDSTONE	9.0	280.0
346.0	MODESTO		GRAY SHALE	10.0	289.0
336.0	MODESTO	PIASA	LIMESTONE	2.0	299.0
334.0	MODESTO		BLACK SHALE	1.0	301.0
333.0	CARBONDALE	DANVILLE	COAL	1.0	302.0
332.0	CARBONDALE		SHALE	3.0	303.0
329.0	CARBONDALE		CLAYSTONE & SILTSTONE	6.3	306.0
322.7	CARBONDALE	BANKSTON FORK	LIMESTONE	6.2	312.3
316.5	CARBONDALE		SHALE	1.3	318.5
315.3	CARBONDALE		CLAYSTONE	2.9	319.7
312.4	CARBONDALE	BRERETON	LIMESTONE	1.1	322.6
311.3	CARBONDALE		SHALE	0.7	323.7
310.6	CARBONDALE	HERRIN	COAL	7.0	324.4
303.6	CARBONDALE		CLAYSTONE	1.6	331.4
302.0	CARBONDALE		CLAYSTONE	3.5	333.0
298.5	CARBONDALE		CLAYSTONE & SILTSTONE	0.7	336.5
297.8	CARBONDALE		SHALE	5.3	337.2
292.5	CARBONDALE		CORE LOSS	0.5	342.5
292.0	CARBONDALE		CLAYSTONE	3.8	343.0
288.2	CARBONDALE		CORE LOSS	0.2	346.8

MAPID: 11700042000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 33 QUARTERS/FOOTAGES: SE SE SW NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.760899 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.35551 DATE COLLECTED: 2 / 0 / 1913

SURFACE ELEVATION (FT.): 623.0 LOGGED (FT.): 318.2 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
338.0	MODESTO	PIASA	LIMESTONE	5.0	285.0
333.0	MODESTO		UNCLASSIFIED	1.5	290.0
331.5	CARBONDALE		UNCLASSIFIED	7.8	291.5
323.7	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.5	299.3
316.2	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	0.8	306.8
315.4	CARBONDALE		UNCLASSIFIED	0.8	307.6
314.6	CARBONDALE	BRERETON	LIMESTONE	2.3	308.4
312.3	CARBONDALE	ANNA	BLACK SHALE	1.3	310.7
311.0	CARBONDALE	HERRIN	COAL	6.2	312.0

MAPID: 11700042000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 33 QUARTERS/FOOTAGES: SE SE SW NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.760899 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.35551 DATE COLLECTED: 2 / 1 / 1913

SURFACE ELEVATION (FT.): 623.0 LOGGED (FT.): 320.0 LOG TYPE: Drillers Log

SOURCE: PEABODY C C WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
623.0			UNCONSOLIDATED	127.5	0.0
495.5			ROCK	26.0	127.5
469.5			COAL	1.3	153.5
468.2			ROCK	135.8	154.8
332.5			SHALE	7.8	290.5
324.7			LIMESTONE	7.5	298.3
317.2			SHALE	5.0	305.8
312.2			BLACK SHALE	0.2	310.8
312.0	CARBONDALE	HERRIN	COAL	6.2	311.0
305.8			SHALE	2.8	317.2

MAPID: 11700042000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 33 QUARTERS/FOOTAGES: SE SE SW NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.760899 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.35551 DATE COLLECTED: 2 / 1 / 1912

SURFACE ELEVATION (FT.): 622.5 LOGGED (FT.): 320.0 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO., HOLE #4 WELL TYPE: Coal Test

COMMENT: G.BLOOM FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
622.5			SOIL	1.0	0.0	
621.5			CLAY	16.0	1.0	
605.5			BOULDER	6.0	17.0	
599.5			CLAY	27.0	23.0	
572.5			HARD PAN	9.0	50.0	
563.5			SAND	5.0	59.0	
558.5			HARD PAN	14.0	64.0	
544.5			SAND	3.0	78.0	
541.5			CLAY	39.0	81.0	
502.5			HARD PAN	7.5	120.0	
495.0	MODESTO		LIMESTONE	2.5	127.5	
492.5	MODESTO		BLACK SHALE	0.9	130.0	
491.6	MODESTO		LIMESTONE	1.1	130.9	
490.5	MODESTO		SHALE	21.5	132.0	
469.0	MODESTO	CHAPEL	COAL	1.3	153.5	
467.7	MODESTO		UNDERCLAY	2.0	154.8	
465.7	MODESTO		CALCAREOUS SHALE	13.3	156.8	
452.5	MODESTO		SANDY SHALE	32.0	170.0	
420.5	MODESTO		SHALE	16.0	202.0	
404.5	MODESTO		SHALE	10.5	218.0	
394.0	MODESTO		LIMESTONE	0.7	228.5	
393.3	MODESTO		BLACK SHALE	1.3	229.2	
392.0	MODESTO		CALCAREOUS SHALE	4.0	230.5	
388.0	MODESTO		SANDSTONE	1.3	234.5	
386.7	MODESTO		SANDY SHALE	14.3	235.8	
372.5	MODESTO		BLACK SHALE	1.4	250.0	
371.1	MODESTO		SHALE	3.5	251.4	"ROTTEN"
367.6	MODESTO		CALCARIOUS SANDY SHALE	25.7	254.9	
342.0	MODESTO		LIMESTONE	3.0	280.5	
339.0	MODESTO		SANDY SHALE	0.5	283.5	
338.5	MODESTO	PIASA	LIMESTONE	5.0	284.0	
333.5	MODESTO		BLACK SHALE	1.5	289.0	
332.0	CARBONDALE		CALCAREOUS SHALE	3.5	290.5	
328.5	CARBONDALE		SHALE	1.0	294.0	
327.5	CARBONDALE		CALCAREOUS SHALE	3.3	295.0	
324.2	CARBONDALE		LIMESTONE	7.5	298.3	
316.7	CARBONDALE		SHALE	1.5	305.8	
315.2	CARBONDALE		CALCAREOUS SHALE	2.3	307.3	

312.8	CARBONDALE		SHALE	1.2	309.7
311.7	CARBONDALE	ANNA	BLACK SHALE	0.2	310.8
311.5	CARBONDALE	HERRIN	COAL	6.2	311.0
305.3	CARBONDALE		UNDERCLAY	2.8	317.2

MAPID: 11700526000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 33 **QUARTERS/FOOTAGES:** 1046' N line, 1406' E line
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.760672 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.3595 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 631.0 **LOGGED (FT.):** 325.3 **LOG TYPE:** Survey Core Study
SOURCE: CONSOLIDATED COAL CO. 1 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
344.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	6.3	287.0
337.7	MODESTO		GRAY SHALE	0.2	293.3
337.5	CARBONDALE		DARK GRAY SHALE	0.5	293.5
337.0	CARBONDALE	GALUM	LIMESTONE/UNDERCLAY	0.2	294.0
336.8	CARBONDALE		CLAYSTONE	6.8	294.2
330.0	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	10.7	301.0
319.3	CARBONDALE	LAWSON	MOTTLED SHALE	2.8	311.7
316.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	5.1	314.5
311.5	CARBONDALE	ANNA	GRAY SHALE	0.5	319.5
311.0	CARBONDALE	HERRIN	COAL	5.3	320.0

MAPID: 11700526000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 11N 6W **SECTION:** 33 **QUARTERS/FOOTAGES:** 1046' N line, 1406' E line
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.760672 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.3595 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 631.0 **LOGGED (FT.):** 326.3 **LOG TYPE:** Drillers Log
SOURCE: CONSOLIDATED COAL CO. 1 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
342.1	MODESTO	PIASA	LIMESTONE	3.7	288.9
338.4	MODESTO		UNCLASSIFIED	2.6	292.6
335.8	CARBONDALE		UNCLASSIFIED	7.7	295.2
328.1	CARBONDALE	BANKSTON FORK	LIMESTONE	6.1	302.9
322.0	CARBONDALE	ANVIL ROCK	SANDSTONE	2.8	309.0
319.2	CARBONDALE	CONANT	LIMESTONE	0.8	311.8
318.4	CARBONDALE		SHALE	2.8	312.6
315.6	CARBONDALE	BRERETON	LIMESTONE	5.1	315.4
310.5	CARBONDALE	ANNA	BLACK SHALE	0.5	320.5
310.0	CARBONDALE	HERRIN	COAL	5.3	321.0

MAPID: 11700526000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 33 QUARTERS/FOOTAGES: 1046' N line, 1406' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.760672 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.3595 DATE COLLECTED:

SURFACE ELEVATION (FT.): 630.9 LOGGED (FT.): 0.0 LOG TYPE: Drillers Log

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

COMMENT: CORE SURVEY STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
310.1	CARBONDALE	HERRIN	COAL	5.3	320.8	

MAPID: 11700526000C VERSION: 4

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 33 QUARTERS/FOOTAGES: 1046' N line, 1406' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.760672 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.3595 DATE COLLECTED: 0 / 0 / 1948

SURFACE ELEVATION (FT.): 630.9 LOGGED (FT.): 401.2 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATED COAL CO. 1 WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
630.9	PLEISTOCENE		UNCONSOLIDATED	160.0	0.0	
470.9	PLEISTOCENE		GLACIAL DRIFT	0.1	160.0	RED
470.8			SHALE WITH LIMESTONE	0.9	160.1	
469.9			SHALY LIMESTONE	3.2	161.0	GREEN
466.7			UNCLASSIFIED	3.8	164.2	
462.9			GREEN SHALE	1.3	168.0	
461.6			SHALE WITH LIMESTONE	0.8	169.3	
460.9			SHALE WITH LIMESTONE	1.6	170.0	
459.3			GREEN SHALE	0.3	171.6	
459.1			SILTSTONE	7.8	171.8	
451.2			SHALE & SILTSTONE	0.3	179.7	
450.9			GRAY SHALE	1.4	180.0	
449.5			SHALE & SILTSTONE	2.1	181.4	
447.4			SHALE & SILTSTONE	1.1	183.5	
446.3			SHALE & SILTSTONE	5.4	184.6	
440.9			SHALE & SILTSTONE	6.0	190.0	
434.9			SHALE & SILTSTONE	3.0	196.0	
431.9			GRAY SHALE	1.0	199.0	
430.9			SHALE & SILTSTONE	3.0	200.0	
427.9			GRAY SHALE	7.0	203.0	
420.9			SHALE	10.0	210.0	
410.9			GRAY SHALE	3.0	220.0	
407.9			SHALE	1.2	223.0	
406.7			GRAY SHALE	1.3	224.2	
405.5			SHALE	10.6	225.4	
394.9			SHALE	0.3	236.0	
394.6			LIMESTONE	0.5	236.3	GRAY
394.1			GRAY SHALE	1.9	236.8	
392.2			CLAYSTONE & LIMESTONE	1.3	238.7	GRAY
390.9			SHALE WITH LIMESTONE	1.5	240.0	
389.4			SHALE WITH LIMESTONE	3.8	241.5	
385.6			GREEN SHALE	7.2	245.3	
378.4			GRAY SHALE	8.5	252.5	
369.9			SHALE WITH LIMESTONE	0.8	261.0	
369.1			GRAY SHALE	0.2	261.8	
368.9			CARBONACEOUS SHALE	0.2	262.0	
368.8			COAL	0.3	262.1	
368.5			UNDERCLAY	3.3	262.4	GRAY

365.2			GREEN SHALE	1.5	265.7	
363.7			SHALE & SILTSTONE	3.8	267.2	
359.9			SHALE & SILTSTONE	2.8	271.0	
357.1			SHALE WITH LIMESTONE	1.0	273.8	
356.1			GREEN SHALE	5.2	274.8	
350.9			SHALE & SILTSTONE	2.8	280.0	
348.1			SHALE & SILTSTONE	0.8	282.8	
347.3			BROWN SHALE	0.6	283.6	
346.7			GRAY SHALE	0.6	284.2	
346.1			SHALE WITH LIMESTONE	1.8	284.8	
344.3			GRAY SHALE	1.2	286.6	
343.1			SHALE WITH LIMESTONE	1.1	287.8	
342.1			SHALY LIMESTONE	3.7	288.8	BROWN
338.4			SHALY LIMESTONE	2.6	292.5	
335.8			GREEN SHALE	0.2	295.1	
335.6			BLACK SHALE	0.5	295.3	
335.1			LIMESTONE	0.2	295.8	GRAY
334.9			GREEN SHALE	0.9	296.0	
334.0			GREEN SHALE	3.1	296.9	
330.9			SHALE WITH LIMESTONE	2.8	300.0	
328.1	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	5.3	302.8	PK
322.8	CARBONDALE		SHALY LIMESTONE	0.8	308.1	
322.0	CARBONDALE		GREEN SHALE	1.1	308.9	
320.9	CARBONDALE		GREEN SHALE	1.7	310.0	
319.2	CARBONDALE		SHALY LIMESTONE	0.8	311.7	WHITE
318.4	CARBONDALE		SHALE WITH LIMESTONE	2.8	312.5	
315.6	CARBONDALE	BRERETON	LIMESTONE	4.8	315.3	GRAY
310.9	CARBONDALE	BRERETON	LIMESTONE	0.3	320.0	GRAY
310.6	CARBONDALE		GRAY SHALE	0.5	320.3	
310.1	CARBONDALE	HERRIN	SHALY COAL	5.3	320.8	
304.8	CARBONDALE		UNDERCLAY	1.0	326.1	GRAY
303.7			GREEN SHALE	2.8	327.2	
300.9			SHALE WITH LIMESTONE	0.3	330.0	
300.6			GREEN SHALE	0.4	330.3	
300.1			SHALE WITH LIMESTONE	0.3	330.8	
299.9			SHALE WITH LIMESTONE	0.1	331.0	
299.8			BLACK SHALE	0.0	331.1	
299.7			SHALE WITH LIMESTONE	1.5	331.2	
298.2			SHALE WITH LIMESTONE	1.2	332.7	
297.1			GREEN SHALE	3.4	333.8	
293.6			LIMESTONE	0.3	337.3	GREEN
293.4			SHALY LIMESTONE	0.3	337.5	GRAY
293.1			SHALE WITH LIMESTONE	0.4	337.8	
292.6			SHALE WITH LIMESTONE	0.2	338.3	
292.4			GRAY SHALE	0.5	338.5	
292.0			GREEN SHALE	0.1	338.9	
291.9			NO RECORD	5.8	339.0	
286.1			SHALE WITH LIMESTONE	0.3	344.8	

285.8	GREEN SHALE	0.6	345.1	
285.2	BLACK SHALE	0.7	345.7	
284.5	SHALE	0.2	346.4	OLIVE
284.3	BLACK SHALE	0.0	346.6	
284.2	BROWN SHALE	3.4	346.7	
280.9	GREEN SHALE	1.2	350.0	
279.7	SHALE & SILTSTONE	1.8	351.2	
277.9	SHALE & SILTSTONE	4.3	353.0	
273.6	GREEN SHALE	12.8	357.3	
260.9	GREEN SHALE	0.8	370.0	
260.1	SILTSTONE	2.8	370.8	GREEN
257.4	SHALE & SILTSTONE	6.5	373.5	
250.9	GRAY SHALE	5.7	380.0	
245.2	NO RECORD	4.3	385.7	
240.9	SHALE & SILTSTONE	0.4	390.0	
240.5	SILTSTONE	10.8	390.4	GRAY

MAPID: 11721885000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 33 QUARTERS/FOOTAGES: 1524' S line, 1374' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.760512 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.351925 DATE COLLECTED: 12 / 5 / 1977

SURFACE ELEVATION (FT.): 615.0 LOGGED (FT.): 340.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-15 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
615.0			UNCONSOLIDATED	122.0	0.0	
493.0	MODESTO	CARLINVILLE	LIMESTONE	6.0	122.0	
487.0	MODESTO		GRAY SHALE	22.0	128.0	
465.0	MODESTO	CHAPEL	COAL	1.0	150.0	
464.0	MODESTO		GRAY SHALE	2.0	151.0	
462.0	MODESTO		CALCAREOUS SHALE	4.0	153.0	
458.0	MODESTO		SANDY SHALE	8.0	157.0	
450.0	MODESTO		GRAY SHALE	79.5	165.0	
370.5	MODESTO		BLACK SHALE	1.0	244.5	
369.5	MODESTO		GRAY SHALE	12.9	245.5	
336.6	MODESTO	PIASA	LIMESTONE	2.6	278.4	
334.0	MODESTO		BLACK SHALE	2.2	281.0	
331.8	CARBONDALE	DANVILLE	COAL	2.1	283.2	
329.6	CARBONDALE		GRAY SHALE	4.1	285.4	
325.5	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	289.5	
320.0	CARBONDALE		GRAY SHALE	2.5	295.0	
317.5	CARBONDALE	BRERETON	SHALY LIMESTONE	9.5	297.5	
308.0	CARBONDALE	ANNA	BLACK SHALE	2.0	307.0	
306.0	CARBONDALE	HERRIN	COAL	5.8	309.0	
300.2	CARBONDALE		UNDERCLAY	0.9	314.8	
299.3	CARBONDALE		LIMESTONE	0.8	315.7	
298.6	CARBONDALE		CORE LOSS	0.6	316.4	
298.0	CARBONDALE		LIMESTONE	14.6	317.0	
283.4	CARBONDALE		GRAY SHALE	8.4	331.6	

MAPID: 1172188600C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 33 QUARTERS/FOOTAGES: 636' S line, 8' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.774284 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.349456 DATE COLLECTED: 10 / 4 / 1978

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 320.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-23 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
630.0			UNCONSOLIDATED	107.0	0.0
523.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	107.0
519.0	MODESTO		BLACK SHALE	1.0	111.0
518.0	MODESTO		LIMESTONE	0.5	112.0
517.5	MODESTO		GRAY SHALE	26.5	112.5
491.0	MODESTO	CHAPEL	COAL	1.0	139.0
490.0	MODESTO		GRAY SHALE	2.0	140.0
488.0	MODESTO		SANDSTONE	5.0	142.0
483.0	MODESTO		GRAY SHALE	14.0	147.0
469.0	MODESTO		SANDY SHALE	15.0	161.0
454.0	MODESTO		GRAY SHALE	6.0	176.0
448.0	MODESTO		CALCAREOUS SHALE	55.0	182.0
393.0	MODESTO		BLACK SHALE	3.0	237.0
390.0	MODESTO		GRAY SHALE	5.0	240.0
385.0	MODESTO		SANDY SHALE	20.5	245.0
364.5	MODESTO		GRAY SHALE	6.5	265.5
358.0	MODESTO	PIASA	LIMESTONE	6.0	272.0
352.0	MODESTO		BLACK SHALE	1.0	278.0
351.0	CARBONDALE		GRAY SHALE	9.0	279.0
342.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	288.0
336.5	CARBONDALE		GRAY SHALE	1.0	293.5
335.5	CARBONDALE	BRERETON	LIMESTONE	1.0	294.5
334.5	CARBONDALE		GRAY SHALE	3.5	295.5
331.0	CARBONDALE	HERRIN	COAL	6.6	299.0
324.4	CARBONDALE		GRAY SHALE	0.9	305.6
323.5	CARBONDALE		LIMESTONE	0.2	306.5
323.3	CARBONDALE		CORE LOSS	0.3	306.7
323.0	CARBONDALE		CALCAREOUS SHALE	3.0	307.0
320.0	CARBONDALE		LIMESTONE	2.0	310.0
318.0	CARBONDALE		CALCAREOUS SHALE	2.0	312.0
316.0	CARBONDALE		LIMESTONE	0.5	314.0
315.5	CARBONDALE		CALCAREOUS SHALE	0.5	314.5
315.0	CARBONDALE		LIMESTONE	0.5	315.0
314.5	CARBONDALE		GRAY SHALE	4.5	315.5

MAPID: 11700043000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 34 QUARTERS/FOOTAGES: 2680' S line, 90' E line

QUADRANGLE: ATWATER LONGITUDE: -89.737192 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.355257 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 608.4 LOGGED (FT.): 331.9 LOG TYPE: Drillers Log

SOURCE: MONTOUR COAL CO. WELL TYPE: Coal Test

COMMENT: A.W. CRAWFORDS OPTIONS #10

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
608.4			UNCONSOLIDATED	95.0	0.0	
513.4			CLAY	45.0	95.0	
468.4	MODESTO	CARLINVILLE	LIMESTONE	2.5	140.0	
465.9	MODESTO		UNDERCLAY	0.5	142.5	
465.4	MODESTO		BLACK SHALE	1.8	143.0	
463.6	MODESTO		UNDERCLAY	1.3	144.8	LOG HAS W/ BOULDERS
462.4	MODESTO		UNKNOWN	4.0	146.0	LOG HAS "SAND HOLES"
458.4	MODESTO		SHALE	16.0	150.0	
442.4	MODESTO		BLACK SHALE & COAL	1.0	166.0	
441.4	MODESTO		UNDERCLAY	3.0	167.0	
438.4	MODESTO		SHALE	67.0	170.0	
371.4	MODESTO		BLACK SHALE	1.0	237.0	
370.4	MODESTO		UNDERCLAY	2.0	238.0	
368.4	MODESTO		BLACK SHALE	2.0	240.0	
366.4	MODESTO		SHALE	31.0	242.0	
335.4	MODESTO		LIMESTONE	1.0	273.0	
334.4	MODESTO		BLACK SHALE	2.0	274.0	
332.4	MODESTO		COAL	0.5	276.0	
331.9	MODESTO		UNDERCLAY	3.5	276.5	
328.4	MODESTO		SHALE	10.0	280.0	
318.4	MODESTO	PIASA	LIMESTONE	3.5	290.0	
314.9	MODESTO		UNDERCLAY	1.0	293.5	
313.9	MODESTO		SHALE	2.0	294.5	
311.9	CARBONDALE		LIMESTONE	1.8	296.5	
310.1	CARBONDALE		UNDERCLAY	7.0	298.3	
303.1	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	305.3	
296.6	CARBONDALE		UNDERCLAY	2.0	311.8	
294.6	CARBONDALE		LIMESTONE	0.8	313.8	
293.7	CARBONDALE		UNDERCLAY	4.0	314.7	
289.7	CARBONDALE		LIMESTONE	1.5	318.7	
288.2	CARBONDALE		SHALE	1.0	320.2	
287.2	CARBONDALE	BRERETON	LIMESTONE	3.5	321.2	
283.7	CARBONDALE	ANNA	BLACK SHALE	0.5	324.7	
283.2	CARBONDALE	HERRIN	COAL	6.3	325.2	
277.0	CARBONDALE		UNDERCLAY	0.5	331.4	

MAPID: 11700043000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 34 QUARTERS/FOOTAGES: 2680' S line, 90' E line

QUADRANGLE: ATWATER LONGITUDE: -89.737192 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.355257 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 608.0 LOGGED (FT.): 331.3 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
318.1	MODESTO	PIASA	LIMESTONE	3.5	289.9
314.6	MODESTO		UNCLASSIFIED	1.0	293.4
313.6	CARBONDALE		UNCLASSIFIED	10.8	294.4
302.8	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.5	305.2
296.3	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	311.7
294.3	CARBONDALE	CONANT	UNCLASSIFIED	0.8	313.7
293.5	CARBONDALE		UNCLASSIFIED	4.0	314.5
289.5	CARBONDALE	BRERETON	LIMESTONE	6.0	318.5
283.5	CARBONDALE	ANNA	BLACK SHALE	0.5	324.5
283.0	CARBONDALE	HERRIN	COAL	6.3	325.0

MAPID: 11700527000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 34 QUARTERS/FOOTAGES: SE SE SE SE

QUADRANGLE: ATWATER LONGITUDE: -89.737482 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.348314 DATE COLLECTED:

SURFACE ELEVATION (FT.): 592.0 LOGGED (FT.): 302.3 LOG TYPE: Survey Core Study

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

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
323.5	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.2	268.5
319.3	MODESTO		MOTTLED SHALE	0.3	272.7
319.0	CARBONDALE	DANVILLE	COAL	0.6	273.0
318.4	CARBONDALE		CLAYSTONE	6.5	273.6
311.9	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	6.5	280.1
305.4	CARBONDALE	LAWSON	GRAY SHALE	2.8	286.6
302.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	5.9	289.3
296.7	CARBONDALE	ANNA	GRAY SHALE	0.8	295.3
296.0	CARBONDALE	HERRIN	COAL	6.3	296.0

MAPID: 11700527000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 34 QUARTERS/FOOTAGES: SE SE SE SE

QUADRANGLE: ATWATER LONGITUDE: -89.737482 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.348314 DATE COLLECTED:

SURFACE ELEVATION (FT.): 592.0 LOGGED (FT.): 303.3 LOG TYPE: Drillers Log

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

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
326.0	MODESTO	PIASA	LIMESTONE	5.4	266.0
320.6	MODESTO		UNCLASSIFIED	2.3	271.4
318.3	CARBONDALE	DANVILLE	COAL	0.6	273.7
317.7	CARBONDALE		UNCLASSIFIED	6.5	274.3
311.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	280.8
307.9	CARBONDALE	ANVIL ROCK	SANDSTONE	2.1	284.1
305.8	CARBONDALE	CONANT	LIMESTONE	1.3	286.2
304.5	CARBONDALE		SHALE	2.8	287.5
301.7	CARBONDALE	BRERETON	LIMESTONE	5.9	290.3
295.8	CARBONDALE	ANNA	BLACK SHALE	0.8	296.2
295.0	CARBONDALE	HERRIN	COAL	6.3	297.0

MAPID: 11700527000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 34 QUARTERS/FOOTAGES: SE SE SE SE

QUADRANGLE: ATWATER LONGITUDE: -89.737482 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.348314 DATE COLLECTED:

SURFACE ELEVATION (FT.): 592.0 LOGGED (FT.): 311.1 LOG TYPE: Drillers Log

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

COMMENT: CORE SURVEY STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
295.3	CARBONDALE	HERRIN	COAL	6.3	296.7

MAPID: 11700527000C VERSION: 4

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 34 QUARTERS/FOOTAGES: SE SE SE SE

QUADRANGLE: ATWATER LONGITUDE: -89.737482 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.348314 DATE COLLECTED: 0 / 0 / 1948

SURFACE ELEVATION (FT.): 592.0 LOGGED (FT.): 314.8 LOG TYPE: Drillers Log

SOURCE: CONSOLIDATED COAL CO. 3 WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
592.0			NO RECORD	32.0	0.0	NO CORE
560.0			GLACIAL DRIFT	2.0	32.0	
558.0			LIMESTONE	1.0	34.0	GRAY
557.0			NO RECORD	9.0	35.0	NO CORE
548.0			SHALE WITH LIMESTONE	2.3	44.0	
545.7			GREEN SHALE	0.6	46.3	
545.2			SHALE WITH LIMESTONE	0.4	46.8	
544.7			LIMESTONE	3.9	47.3	GREEN
540.8			GRAY SHALE	2.2	51.2	
538.7			NO RECORD	7.5	53.3	NO CORE
531.2			GREEN SHALE	6.3	60.8	
524.8	BOND	CARTHAGE	LIMESTONE	2.1	67.2	GREEN
522.7	MODESTO		GREEN SHALE	0.7	69.3	
522.0	MODESTO		BLACK SHALE	1.5	70.0	
520.5	MODESTO		SHALY LIMESTONE	0.4	71.5	GRAY
520.1	MODESTO		NO RECORD	3.1	71.9	NO CORE
517.0	MODESTO		SHALY LIMESTONE	0.7	75.0	GRAY
516.3	MODESTO		UNCLASSIFIED	5.3	75.7	
511.0	MODESTO		GRAY SHALE	3.4	81.0	NO CORE
507.6	MODESTO		LIMESTONE	0.3	84.4	GRAY
507.3	MODESTO		NO RECORD	8.3	84.7	NO CORE
499.0	MODESTO		GRAY SHALE	14.8	93.0	
484.2	MODESTO		GRAY SHALE	0.3	107.8	
483.9	MODESTO		LIMESTONE	3.5	108.1	GRAY
480.4	MODESTO		NO RECORD	0.4	111.6	NO CORE
480.0	MODESTO		LIMESTONE	0.2	112.0	GRAY
479.8	MODESTO		GRAY SHALE	0.2	112.2	
479.7	MODESTO		GRAY SHALE	0.1	112.3	
479.6	MODESTO		BLACK SHALE	1.1	112.4	
478.5	MODESTO		LIMESTONE	1.1	113.5	GRAY
477.4	MODESTO		GRAY SHALE	0.4	114.6	
477.0	MODESTO		GRAY SHALE	14.0	115.0	
463.0	MODESTO		NO RECORD	0.6	129.0	NO CORE
462.4	MODESTO		GRAY SHALE	6.4	129.6	
456.0	MODESTO	CHAPEL	COAL	1.0	136.0	
455.0	MODESTO		UNDERCLAY	1.0	137.0	GRAY
453.9	MODESTO		SHALE WITH LIMESTONE	1.3	138.1	
452.6	MODESTO		SILTSTONE/LIMESTONE	3.6	139.4	GREEN
449.0	MODESTO		SHALE WITH LIMESTONE	1.9	143.0	

447.1	MODESTO		UNDERCLAY	0.5	144.9	GRAY
446.6	MODESTO		SHALE WITH LIMESTONE	0.6	145.4	
446.0	MODESTO		SHALE	1.0	146.0	GGR
445.0	MODESTO		SANDY SILTSTONE	2.8	147.0	GRAY
442.2	MODESTO		LIMESTONE/SILTSTONE	0.9	149.8	
441.3	MODESTO		NO RECORD	1.3	150.7	NO CLORE
440.0	MODESTO		LIMESTONE/SILTSTONE	1.1	152.0	
438.9	MODESTO		GRAY SHALE	3.9	153.1	
435.0	MODESTO		SHALE & SILTSTONE	12.4	157.0	
422.6	MODESTO		SHALE & SILTSTONE	22.6	169.4	
400.0	MODESTO		SHALE	9.4	192.0	
390.6	MODESTO		NO RECORD	6.6	201.4	NO CORE
384.0	MODESTO		GRAY SHALE	2.0	208.0	
382.0	MODESTO		GRAY SHALE	3.6	210.0	
378.4	MODESTO		SHALY LIMESTONE	0.5	213.6	213
377.9	MODESTO		BLACK SHALE	1.0	214.1	
376.9	MODESTO		COAL	0.1	215.1	
376.8	MODESTO		GRAY SHALE	0.7	215.2	
376.2	MODESTO		SHALE	1.2	215.8	
375.0	MODESTO		SHALE WITH LIMESTONE	0.9	217.0	
374.1	MODESTO		GREEN SHALE	2.0	217.9	
372.1	MODESTO		SILTSTONE	5.1	219.9	GRAY
367.0	MODESTO		GRAY SHALE	7.0	225.0	
360.0	MODESTO		SHALE	2.5	232.0	
357.5	MODESTO		NO RECORD	1.5	234.5	NO CORE
356.0	MODESTO		GRAY SHALE	4.2	236.0	
351.8	MODESTO		SHALE WITH LIMESTONE	1.4	240.2	
350.4	MODESTO		BLACK SHALE	0.1	241.6	
350.2	MODESTO		COAL	0.3	241.8	
350.0	MODESTO		COAL	0.1	242.0	
349.9	MODESTO		SHALE/COAL	0.0	242.1	
349.8	MODESTO		GRAY SHALE	0.9	242.2	
348.9	MODESTO		GRAY SHALE	3.3	243.1	
345.6	MODESTO		GREEN SHALE	1.2	246.4	
344.4	MODESTO		SHALE & SILTSTONE	4.4	247.6	
340.0	MODESTO		SILTSTONE & SHALE	0.6	252.0	GRAY
339.4	MODESTO		GREEN SHALE	1.9	252.6	
337.5	MODESTO		SHALE & SILTSTONE	1.5	254.5	
336.0	MODESTO		SHALE	0.4	256.0	
335.6	MODESTO		GREEN SHALE	2.8	256.4	
332.7	MODESTO		GREEN SHALE	1.3	259.3	
331.4	MODESTO		GREEN SHALE	0.8	260.6	
330.6	MODESTO		BLACK SHALE	0.2	261.4	
330.4	MODESTO		GREEN SHALE	0.4	261.6	
330.0	MODESTO		GREEN SHALE	0.3	262.0	
329.7	MODESTO		GREEN SHALE	1.8	262.3	
327.8	MODESTO	PIASA	LIMESTONE	3.4	264.2	
324.4	MODESTO	PIASA	SHALY LIMESTONE	2.8	267.6	CREAM

321.7	MODESTO	PIASA	GREEN SHALE	0.5	270.3	
321.2	MODESTO	PIASA	LIMESTONE	1.4	270.8	GREEN
319.8	MODESTO	PIASA	LIMESTONE	0.8	272.2	GRAY
319.0	MODESTO	PIASA	LIMESTONE	2.0	273.0	GREEN
317.0			GREEN SHALE	0.3	275.0	
316.7	CARBONDALE	DANVILLE	COAL	0.6	275.3	
316.2	CARBONDALE		UNDERCLAY	2.1	275.8	GRAY
314.1	CARBONDALE		NO RECORD	2.8	277.9	NO CORE
311.3	CARBONDALE		GREEN SHALE	1.7	280.7	
309.6	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	0.6	282.4	GREEN
309.1	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	2.7	282.9	GREEN
306.4	CARBONDALE		GREEN SHALE	0.6	285.6	
305.7	CARBONDALE		GREEN SHALE	0.5	286.3	
305.2	CARBONDALE		GREEN SHALE	1.0	286.8	
304.2	CARBONDALE		SHALY LIMESTONE	1.3	287.8	WHITE
303.0	CARBONDALE		GRAY SHALE	1.4	289.0	
301.5	CARBONDALE		GRAY SHALE	0.4	290.5	
301.2	CARBONDALE		SHALE WITH LIMESTONE	1.0	290.8	
300.2	CARBONDALE	BRERETON	LIMESTONE	3.2	291.8	GRAY
297.0	CARBONDALE	BRERETON	LIMESTONE	2.8	295.0	GRAY
294.3	CARBONDALE		GREEN SHALE	0.8	297.7	
293.5	CARBONDALE		UNCLASSIFIED	1.2	298.5	CORRECTION IN DRILLING DEPTH - NO LOSS
292.4	CARBONDALE	HERRIN	COAL	6.3	299.6	#6
286.0			UNDERCLAY	0.3	306.0	
285.7			SHALE	0.4	306.3	
285.3			LIMESTONE	0.8	306.7	
284.5			SHALE	2.5	307.5	
281.9			SHALE	1.4	310.1	
280.5			SHALE	0.3	311.5	
280.3			SHALE	0.8	311.7	
279.5			SHALE	2.2	312.5	

MAPID: 11721887000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 34 QUARTERS/FOOTAGES: 2621' N line, 1682' W line

QUADRANGLE: ATWATER LONGITUDE: -89.749665 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.355176 DATE COLLECTED: 10 / 4 / 1978

SURFACE ELEVATION (FT.): 610.0 LOGGED (FT.): 340.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-24 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
610.0			UNCONSOLIDATED	106.4	0.0
503.5	MODESTO		GRAY SHALE	29.0	106.5
474.5	MODESTO	CARLINVILLE	LIMESTONE	3.5	135.5
471.0	MODESTO		BLACK SHALE	1.5	139.0
469.5	MODESTO		LIMESTONE	1.5	140.5
468.0	MODESTO		GRAY SHALE	20.5	142.0
447.5	MODESTO		COAL	1.5	162.5
446.0	MODESTO		GRAY SHALE	3.5	164.0
442.5	MODESTO		SHALY LIMESTONE	5.0	167.5
437.5	MODESTO		GRAY SHALE	16.5	172.5
421.0	MODESTO		LIMESTONE	1.0	189.0
420.0	MODESTO		GRAY SHALE	27.0	190.0
393.0	MODESTO		GRAY SHALE	40.0	217.0
353.0	MODESTO		GRAY SHALE	8.5	257.0
344.5	MODESTO		BLACK SHALE	3.0	265.5
341.5	MODESTO		GRAY SHALE	9.0	268.5
332.5	MODESTO		SANDSTONE	2.5	277.5
330.0	MODESTO		GRAY SHALE	4.0	280.0
326.0	MODESTO		GRAY SHALE	3.0	284.0
323.0	MODESTO	PIASA	LIMESTONE	7.0	287.0
316.0	MODESTO		BLACK SHALE	2.0	294.0
314.0	CARBONDALE		GRAY SHALE	3.5	296.0
310.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	299.5
304.0	CARBONDALE		GRAY SHALE	6.5	306.0
297.5	CARBONDALE	BRERETON	LIMESTONE	3.5	312.5
294.0	CARBONDALE	ANNA	BLACK SHALE	0.7	316.0
293.3	CARBONDALE	HERRIN	COAL	7.1	316.7
286.1	CARBONDALE		SHALE	0.1	323.9
286.0	CARBONDALE		SHALE	0.2	324.0
285.8	CARBONDALE		LIMESTONE	1.1	324.2
284.7	CARBONDALE		CORE LOSS	0.2	325.3
284.5	CARBONDALE		LIMESTONE	6.5	325.5
278.0	CARBONDALE		GRAY SHALE	5.5	332.0
272.5	CARBONDALE		LIMESTONE	2.5	337.5

MAPID: 11721888000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 34 QUARTERS/FOOTAGES: 48' N line, 69' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.755444

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.362266

DATE COLLECTED: 12 / 20 / 1977

SURFACE ELEVATION (FT.): 620.0

LOGGED (FT.): 350.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-16

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.0			UNCONSOLIDATED	155.0	0.0
465.0	MODESTO		GRAY SHALE	8.5	155.0
456.5	MODESTO	CHAPEL	COAL	1.0	163.5
455.5	MODESTO		GRAY SHALE	2.5	164.5
453.0	MODESTO		GRAY SHALE	5.0	167.0
448.0	MODESTO		SANDY SHALE	8.0	172.0
440.0	MODESTO		GRAY SHALE	67.0	180.0
373.0	MODESTO		SANDY SHALE	14.0	247.0
359.0	MODESTO		GRAY SHALE	8.0	261.0
351.0	MODESTO		BLACK SHALE	2.0	269.0
349.0	MODESTO		GRAY SHALE	9.0	271.0
340.0	MODESTO		SANDY SHALE	4.0	280.0
336.0	MODESTO		CALCAREOUS SHALE	9.0	284.0
327.0	MODESTO	PIASA	LIMESTONE	3.1	293.0
323.9	MODESTO		CALCAREOUS SHALE	1.9	296.1
322.0	MODESTO		SHALY LIMESTONE	0.6	298.0
321.4	MODESTO		BLACK SHALE	0.6	298.6
320.8	CARBONDALE		CLAYSTONE & SILTSTONE	8.5	299.2
312.3	CARBONDALE	BANKSTON FORK	LIMESTONE	6.8	307.7
305.5	CARBONDALE		CALCAREOUS SHALE	5.9	314.5
299.6	CARBONDALE	HERRIN	COAL	6.5	320.4
293.2	CARBONDALE		CLAYSTONE	0.7	326.8
292.5	CARBONDALE		LIMESTONE	6.8	327.5
285.7	CARBONDALE		CALCAREOUS SHALE	1.5	334.3
284.2	CARBONDALE		CLAYSTONE & SILTSTONE	1.0	335.8
283.2	CARBONDALE		GRAY SHALE	2.7	336.8
280.5	CARBONDALE		LIMESTONE	2.7	339.5
277.8	CARBONDALE		SANDY SHALE	7.8	342.2

MAPID: 11700442000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 35 QUARTERS/FOOTAGES: 300' S line, 2440' E line

QUADRANGLE: ATWATER LONGITUDE: -89.726895 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.348724 DATE COLLECTED: 9 / 0 / 1940

SURFACE ELEVATION (FT.): 629.0 LOGGED (FT.): 350.0 LOG TYPE: Electric Log

SOURCE: ADAMS & LAGERS WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
284.0	CARBONDALE	HERRIN	COAL	5.0	345.0	

MAPID: 11700467000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 35 QUARTERS/FOOTAGES: 223' N line, 214' E line of SE NE NW

QUADRANGLE: ATWATER LONGITUDE: -89.728326 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.360031 DATE COLLECTED: 8 / 0 / 1949

SURFACE ELEVATION (FT.): 615.0 LOGGED (FT.): 343.0 LOG TYPE: Electric Log

SOURCE: PEYTON & MCGRAW WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
277.0	CARBONDALE	HERRIN	COAL	5.0	338.0	

MAPID: 11722147000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 35 QUARTERS/FOOTAGES: NW SE SE

QUADRANGLE: ATWATER LONGITUDE: -89.721729 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.350647 DATE COLLECTED: 5 / 11 / 1979

SURFACE ELEVATION (FT.): LOGGED (FT.): 337.5 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED GB279 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	10.0	0.0	
-	PLEISTOCENE		GLACIAL DRIFT	5.0	10.0	
-	PLEISTOCENE		SAND & GRAVEL	2.0	15.0	
-	PLEISTOCENE		GLACIAL DRIFT	24.0	17.0	
-	PLEISTOCENE		SAND & GRAVEL	9.0	41.0	
-	PLEISTOCENE		GLACIAL DRIFT	35.0	50.0	
-			SANDSTONE	1.0	85.0	
-			GRAY SHALE	13.0	86.0	
-			SANDSTONE	1.5	99.0	
-			GRAY SHALE	3.5	100.5	
-			BLACK SHALE	2.0	104.0	
-			GRAY SHALE	30.0	106.0	
-			SHALE	51.5	136.0	
-			LIMESTONE	1.5	187.5	
-			GRAY SHALE	77.0	189.0	
-			GRAY SHALE	3.0	266.0	
-			GRAY SHALE	3.4	269.0	
-			LIMESTONE	1.0	272.4	
-			SHALY SANDSTONE	4.6	273.4	GRAY
-			SHALE	7.0	278.0	
-			BLACK SHALE	0.2	285.0	
-			BLACK SHALE	1.1	285.2	
-			COAL	0.6	286.3	
-			GRAY SHALE	4.9	286.9	
-			GRAY SHALE	6.1	291.8	
-			LIMESTONE	3.0	297.9	GRAY
-			BLACK SHALE	0.1	300.9	
-	MODESTO	PIASA	LIMESTONE	4.0	301.0	GRAY
-			LIMESTONE	0.7	305.0	
-			GRAY SHALE	8.4	305.7	
-			GRAY SHALE	1.4	314.1	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	3.9	315.5	
-	CARBONDALE		GRAY SHALE	2.3	319.4	
-	CARBONDALE	BRERETON	LIMESTONE	5.6	321.7	
-	CARBONDALE	ANNA	BLACK SHALE	0.5	327.3	
-	CARBONDALE	ANNA	BLACK SHALE	2.4	327.8	
-	CARBONDALE	HERRIN	COAL	7.0	330.2	#6
-	CARBONDALE		CLAYSTONE & SILTSTONE	0.4	337.1	

MAPID: 11722147000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 35 QUARTERS/FOOTAGES: NW SE SE

QUADRANGLE: ATWATER LONGITUDE: -89.721729 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.350647 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 337.5 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED GB-2-79 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	COAL	7.0 330.2	

MAPID: 11722148000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 35 QUARTERS/FOOTAGES: SW NE

QUADRANGLE: ATWATER LONGITUDE: -89.725237 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.357012 DATE COLLECTED: 5 / 22 / 1979

SURFACE ELEVATION (FT.): LOGGED (FT.): 365.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED GB179 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	10.0	0.0
-	PLEISTOCENE		GLACIAL DRIFT	15.0	10.0
-	PLEISTOCENE		GLACIAL DRIFT	32.0	25.0
-	PLEISTOCENE		GLACIAL DRIFT	46.0	57.0
-			GRAY SHALE	4.0	103.0
-			GRAY SHALE	2.0	107.0
-			GRAY SHALE	17.5	109.0
-			BLACK SHALE	2.5	126.5
-			GRAY SHALE	39.4	129.0
-			SANDSTONE	1.6	168.4
-			GRAY SHALE	9.7	170.0
-			SANDSTONE	1.8	179.7
-			GRAY SHALE	1.2	181.5
-			BLACK SHALE	1.8	182.7
-			GRAY SHALE	1.5	184.5
-			LIMESTONE	2.0	186.0
-			GRAY SHALE	117.0	188.0
-			SANDSTONE	0.9	305.0
-			SHALE/SANDSTONE/LIMESTONE	15.2	305.9
-			LIMESTONE	0.8	321.1
-			GRAY SHALE	3.1	321.9
-	MODESTO	PIASA	LIMESTONE	3.2	325.0
-			GRAY SHALE	8.7	328.2
-	CARBONDALE	BANKSTON FORK	LIMESTONE	5.9	336.9
-	CARBONDALE		GRAY SHALE	1.0	342.8
-	CARBONDALE		LIMESTONE	2.2	343.8
-	CARBONDALE		GRAY SHALE	1.5	346.0
-	CARBONDALE	BRERETON	LIMESTONE	5.0	347.5
-	CARBONDALE		GRAY SHALE	1.7	352.5
-	CARBONDALE	ANNA	BLACK SHALE	1.3	354.2
-	CARBONDALE	ANNA	BLACK SHALE	0.4	355.5
-	CARBONDALE	HERRIN	COAL	8.2	355.9 #6
-	CARBONDALE		CORE LOSS	0.9	364.1 CORE LOSS

MAPID: 11722148000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 35 QUARTERS/FOOTAGES: SW NE

QUADRANGLE: ATWATER LONGITUDE: -89.725237 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.357012 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 365.0 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED GB-1-79 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	8.2	355.9	

MAPID: 11722266000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 35 QUARTERS/FOOTAGES: SE SE NE

QUADRANGLE: ATWATER LONGITUDE: -89.71942 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.356117 DATE COLLECTED: 6 / 7 / 1979

SURFACE ELEVATION (FT.): LOGGED (FT.): 341.2 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED GB979 WELL TYPE:

COMMENT: CONFIDENTIAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	10.0	0.0	
-	PLEISTOCENE		GLACIAL DRIFT	4.0	10.0	
-	PLEISTOCENE		GLACIAL DRIFT	70.0	14.0	
-			GRAY SHALE	31.0	84.0	
-			COAL	1.0	115.0	
-			GRAY SHALE	36.0	116.0	
-			SANDSTONE	2.5	152.0	
-			GRAY SHALE	2.0	154.5	
-			BLACK SHALE	1.7	156.5	
-			GRAY SHALE	16.8	158.2	
-			GRAY SHALE	118.0	175.0	
-			SHALE	2.0	293.0	BL
-			GRAY SHALE	9.6	295.0	
-	MODESTO	PIASA	LIMESTONE	2.3	304.6	
-			GRAY SHALE	8.7	306.9	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	6.4	315.6	
-	CARBONDALE		SHALE WITH LIMESTONE	1.6	322.0	
-	CARBONDALE	BRERETON	LIMESTONE	2.5	323.6	
-	CARBONDALE	ANNA	BLACK SHALE	2.4	326.1	
-	CARBONDALE	ANNA	BLACK SHALE	2.0	328.5	
-	CARBONDALE	HERRIN	COAL	7.8	330.5	#6
-	CARBONDALE		UNDERCLAY	0.8	338.3	GRAY
-	CARBONDALE		LIMESTONE	2.0	339.0	
-	CARBONDALE		CLAYSTONE & SILTSTONE	0.2	341.0	GRAY

MAPID: 11722266000C VERSION: 2

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 35 QUARTERS/FOOTAGES: SE SE NE

QUADRANGLE: ATWATER LONGITUDE: -89.71942 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.356117 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 341.2 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED GB-9-79 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	7.7	330.5	

MAPID: 11700044000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 36 QUARTERS/FOOTAGES: 1180' S line, 2520' E line

QUADRANGLE: ATWATER LONGITUDE: -89.708174 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.351254 DATE COLLECTED: 6 / 0 / 1903

SURFACE ELEVATION (FT.): 634.0 LOGGED (FT.): 361.0 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
310.3	CARBONDALE	DANVILLE	COAL	0.3	323.7	
310.0	CARBONDALE		UNCLASSIFIED	14.0	324.0	
296.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	338.0	
290.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	0.6	344.0	
289.4	CARBONDALE		UNCLASSIFIED	0.6	344.6	
288.8	CARBONDALE	BRERETON	LIMESTONE	7.0	345.2	
281.8	CARBONDALE	ANNA	BLACK SHALE	1.8	352.2	
280.0	CARBONDALE	HERRIN	COAL	7.0	354.0	

MAPID: 11700044000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 36 QUARTERS/FOOTAGES: 1180' S line, 2520' E line

QUADRANGLE: ATWATER LONGITUDE: -89.708174

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.351254

DATE COLLECTED:

SURFACE ELEVATION (FT.): 634.0

LOGGED (FT.): 361.0

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
331.8	MODESTO	PIASA	LIMESTONE	2.0	302.2
329.8	MODESTO		GRAY SHALE	19.5	304.2
310.3	CARBONDALE	DANVILLE	COAL	0.3	323.7
310.0	CARBONDALE		CLAYSTONE	14.0	324.0
296.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	6.0	338.0
290.0	CARBONDALE	LAWSON	GRAY SHALE	1.2	344.0
288.8	CARBONDALE	BRERETON	LIMESTONE & SHALE	7.0	345.2
281.8	CARBONDALE	ANNA	DARK GRAY SHALE	1.8	352.2
280.0	CARBONDALE	HERRIN	COAL	7.0	354.0

MAPID: 11700044000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 36 QUARTERS/FOOTAGES: 1180' S line, 2520' E line

QUADRANGLE: ATWATER LONGITUDE: -89.708174 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.351254 DATE COLLECTED:

SURFACE ELEVATION (FT.): 634.2 LOGGED (FT.): 361.3 LOG TYPE: Drillers Log

SOURCE: A.W. CRAWFORDS OPTIONS #11 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
634.2			UNCONSOLIDATED	20.0	0.0	
614.2			SAND	8.0	20.0	
606.2			SAND & GRAVEL	35.0	28.0	
571.2			UNCONSOLIDATED	2.5	63.0	LOG HAS "WOOD DRIFT"
568.7			CLAY	42.0	65.5	
526.7	MODESTO		LIMESTONE	4.5	107.5	
522.2	MODESTO		SHALE	12.0	112.0	
510.2	MODESTO		LIMESTONE	3.0	124.0	
507.2	MODESTO		SHALE	37.0	127.0	
470.2	MODESTO		LIMESTONE	2.0	164.0	
468.2	MODESTO		SHALE	20.0	166.0	
448.2	MODESTO		SANDSTONE/LIMESTONE	86.0	186.0	
362.2	MODESTO		SHALE	6.0	272.0	
356.2	MODESTO		SANDY SHALE	10.0	278.0	
346.2	MODESTO		LIMESTONE	6.0	288.0	
340.2	MODESTO		SHALE	8.0	294.0	
332.2	MODESTO	PIASA	LIMESTONE	2.0	302.0	
330.2	MODESTO		SHALE	19.0	304.0	
311.2	MODESTO		BLACK SHALE	0.5	323.0	
310.7	CARBONDALE	DANVILLE	COAL	0.3	323.5	
310.4	CARBONDALE		UNDERCLAY	14.0	323.8	
296.4	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	337.8	
290.4	CARBONDALE		UNDERCLAY	1.2	343.8	
289.2	CARBONDALE	BRERETON	LIMESTONE	7.0	345.0	
282.2	CARBONDALE		SHALE	1.8	352.0	LOG HAS "CLOD"
280.4	CARBONDALE	HERRIN	COAL	7.0	353.8	
273.4	CARBONDALE		SANDY LIMESTONE	0.5	360.8	

MAPID: 11700631000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 6W SECTION: 36 QUARTERS/FOOTAGES: 330' S line, 330' E line of NE NW

QUADRANGLE: ATWATER LONGITUDE: -89.709973 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.359842 DATE COLLECTED: 6 / 0 / 1957

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 376.0 LOG TYPE: Electric Log

SOURCE: WARNICK & BENNETT WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
290.0	MODESTO	PIASA	LIMESTONE	5.0	342.0
285.0	MODESTO		UNCLASSIFIED	2.0	347.0
283.0	CARBONDALE		UNCLASSIFIED	5.0	349.0
278.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	354.0
274.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	358.0
271.0	CARBONDALE		UNCLASSIFIED	3.0	361.0
268.0	CARBONDALE	BRERETON	LIMESTONE	5.0	364.0
263.0	CARBONDALE	ANNA	BLACK SHALE	1.0	369.0
262.0	CARBONDALE	HERRIN	COAL	6.0	370.0

MAPID: 11701425000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 1 QUARTERS/FOOTAGES: 60' S line, 60' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.812717 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.420887 DATE COLLECTED:

SURFACE ELEVATION (FT.): 670.0 LOGGED (FT.): 334.5 LOG TYPE: Drillers Log

SOURCE: SANGAMON COUNTY LAND COMPANY ES-425 WELL TYPE: Coal Test

COMMENT: CORE STUDY INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
346.4	CARBONDALE	HERRIN	COAL	7.1	323.6

MAPID: 11701425000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 1 QUARTERS/FOOTAGES: 60' S line, 60' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.812717

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.420887

DATE COLLECTED:

SURFACE ELEVATION (FT.): 670.0 LOGGED (FT.): 331.1

LOG TYPE: Survey Core Study

SOURCE: SANGAMON COUNTY LAND COMPANY ES-425

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
377.4	MODESTO	PIASA	LIMESTONE	5.0	292.6
372.4	MODESTO		DARK GRAY SHALE	5.0	297.6
367.4	CARBONDALE	DANVILLE	COAL	0.5	302.6
366.9	CARBONDALE		SHALE	11.5	303.1
355.4	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.3	314.6
351.1	CARBONDALE	LAWSON	MOTTLED SHALE	3.8	318.9
347.3	CARBONDALE	ANNA	BLACK SHALE	1.3	322.7
346.0	CARBONDALE	HERRIN	COAL	7.1	324.0

MAPID: 11701425000C VERSION: 3

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 1 QUARTERS/FOOTAGES: 60' S line, 60' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.812717

GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.420887

DATE COLLECTED: 1 / 14 / 1973

SURFACE ELEVATION (FT.): 610.0 LOGGED (FT.): 334.5

LOG TYPE: Drillers Log

SOURCE: SANGAMON COUNTY LAND COMPANY ES425

WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
610.0	PLEISTOCENE		CLAY	24.0	0.0	TN
586.0	PLEISTOCENE		CLAY	31.0	24.0	GRAY
555.0			CALCAREOUS SHALE	18.0	55.0	
537.0			LIMESTONE	12.0	73.0	
525.0			DARK SHALE	10.0	85.0	
515.0			CALCAREOUS SHALE	30.0	95.0	
485.0			SANDY SHALE	25.0	125.0	
460.0			CALCAREOUS SHALE	20.0	150.0	
440.0			LIMESTONE	5.0	170.0	
435.0			CALCAREOUS SHALE	10.0	175.0	
425.0			COAL	0.5	185.0	
424.5			SHALE	49.5	185.5	
375.0			CALCAREOUS SHALE	57.0	235.0	
318.0	MODESTO	PIASA	LIMESTONE	5.0	292.0	
313.0	MODESTO		DARK SHALE	5.0	297.0	
308.0	CARBONDALE	DANVILLE	COAL	0.5	302.0	
307.5	CARBONDALE		SHALE	11.5	302.5	
296.0	CARBONDALE	BRERETON	LIMESTONE	0.9	314.0	GRAY
295.1	CARBONDALE	BRERETON	LIMESTONE	2.1	314.9	GRAY
293.0	CARBONDALE	BRERETON	LIMESTONE	1.3	317.0	GRAY
291.7	CARBONDALE		GRAY SHALE	3.6	318.3	
288.1	CARBONDALE	ANNA	BLACK SHALE	1.7	321.9	
286.4	CARBONDALE	HERRIN	COAL	7.1	323.6	#6
279.3	CARBONDALE		GRAY SHALE	0.9	330.7	
278.4	CARBONDALE		LIMESTONE	1.9	331.6	GRAY
276.5	CARBONDALE		GRAY SHALE	0.4	333.5	

MAPID: 11721654000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 7W **SECTION:** 4 **QUARTERS/FOOTAGES:** 50' N line, 60' E line of NE NE
QUADRANGLE: VIRDEN SOUTH **LONGITUDE:** -89.869377 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.434955 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 660.0 **LOGGED (FT.):** 287.0 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS GAS CO. B-10 **WELL TYPE:** Coal Test
COMMENT: SURVEY CORE STUDY; C-11312

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
384.5	CARBONDALE	HERRIN	COAL	7.1	275.5

MAPID: 11700372000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 11N 7W **SECTION:** 7 **QUARTERS/FOOTAGES:** 239' S line, 143' W line of SE SE NE
QUADRANGLE: PALMYRA **LONGITUDE:** -89.908234 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.413782 **DATE COLLECTED:** 0 / 0 / 1941
SURFACE ELEVATION (FT.): 639.0 **LOGGED (FT.):** 244.5 **LOG TYPE:** Electric Log
SOURCE: ADAMS & LAGERS **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
451.0	MODESTO	PIASA	LIMESTONE	4.0	188.0
447.0	MODESTO		UNCLASSIFIED	6.5	192.0
440.5	CARBONDALE	DANVILLE	COAL	1.0	198.5
439.5	CARBONDALE		UNCLASSIFIED	17.5	199.5
422.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	217.0
416.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	223.0
414.0	CARBONDALE		UNCLASSIFIED	2.0	225.0
412.0	CARBONDALE	BRERETON	LIMESTONE	7.0	227.0
405.0	CARBONDALE	ANNA	BLACK SHALE	5.0	234.0
400.0	CARBONDALE	HERRIN	COAL	5.5	239.0

MAPID: 11721655000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 7W **SECTION:** 7 **QUARTERS/FOOTAGES:** 2640' N line, 800' W line of NW
QUADRANGLE: PALMYRA **LONGITUDE:** -89.922329 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.413066 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 642.0 **LOGGED (FT.):** 229.0 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS GAS CO. B-20 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
417.6	CARBONDALE	HERRIN	COAL	4.7	224.4

MAPID: 11700066000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 8 QUARTERS/FOOTAGES: NW NE NE NW

QUADRANGLE: PALMYRA LONGITUDE: -89.898913 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.419989 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 581.0 LOGGED (FT.): 178.5 LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
431.4	MODESTO		UNCLASSIFIED	3.0	149.6
428.4	CARBONDALE		UNCLASSIFIED	9.0	152.6
419.4	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	161.6
414.4	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.2	166.6
411.2	CARBONDALE		UNCLASSIFIED	3.2	169.8
408.0	CARBONDALE	BRERETON	LIMESTONE	1.0	173.0
407.0	CARBONDALE	ANNA	BLACK SHALE	1.0	174.0
406.0	CARBONDALE	HERRIN	COAL	3.5	175.0

MAPID: 11700066000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 8 QUARTERS/FOOTAGES: NW NE NE NW

QUADRANGLE: PALMYRA LONGITUDE: -89.898913 GEOLOGIST: TREWORYG,J

CONFIDENTIAL: N LATITUDE: 39.419989 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 581.0 LOGGED (FT.): 179.0 LOG TYPE: Drillers Log

SOURCE: R. W. HUNT & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
581.0			UNCONSOLIDATED	106.0	0.0
475.0			ROCK	32.8	106.0
442.2			COAL	1.2	138.8
441.0			SHALE	21.0	140.0
420.0			LIMESTONE	5.0	161.0
415.0			SHALE	6.3	166.0
408.7			LIMESTONE	1.0	172.3
407.7			SHALE	1.0	173.3
406.7	CARBONDALE	HERRIN	COAL	3.5	174.3
403.2			ROCK	1.2	177.8

MAPID: 1170066000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 8 QUARTERS/FOOTAGES: NW NE NE NW

QUADRANGLE: PALMYRA LONGITUDE: -89.898913 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.419989 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 580.6 LOGGED (FT.): 179.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE #B-5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
580.6			SOIL	3.0	0.0
577.6			CLAY	17.0	3.0
560.6			SAND	10.0	20.0
550.6			GRAVEL	9.0	30.0
541.6			SAND/CLAY	64.0	39.0
477.6			GRAVEL	3.0	103.0
474.6	MODESTO		SHALE	4.0	106.0
470.6	MODESTO		SANDY SHALE	19.0	110.0
451.6	MODESTO		SHALE	6.0	129.0
445.6	MODESTO		BLACK SHALE	3.8	135.0
441.8	MODESTO		COAL	1.2	138.8
440.6			SHALE	21.0	140.0
419.6	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	161.0
414.6	CARBONDALE		SHALE	6.3	166.0
408.3	CARBONDALE	BRERETON	LIMESTONE	1.0	172.3
407.3	CARBONDALE		SHALE	1.0	173.3
406.3	CARBONDALE	HERRIN	COAL	3.5	174.3
402.8	CARBONDALE		UNDERCLAY	0.5	177.8
402.3	CARBONDALE		LIMESTONE	0.7	178.3

MAPID: 11721656000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 9 QUARTERS/FOOTAGES: 35' N line, 20' W line of NW NW

QUADRANGLE: PALMYRA LONGITUDE: -89.887836 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.420443 DATE COLLECTED:

SURFACE ELEVATION (FT.): 644.0 LOGGED (FT.): 260.0 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS GAS CO. B-11 WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY; C-11313

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
395.3	CARBONDALE	HERRIN	COAL	5.8	248.7

MAPID: 11700022000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 10 QUARTERS/FOOTAGES: NW NW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.866686 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.418718 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 639.8 LOGGED (FT.): 275.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT CO., HOLE #B-4 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
639.8			SOIL	1.0	0.0
638.8			CLAY	11.0	1.0
627.8			CLAY	9.0	12.0
618.8			GRAVEL	9.0	21.0
609.8			CLAY & GRAVEL	5.0	30.0
604.8			HARD PAN	15.0	35.0
589.8			GRAVEL	4.0	50.0
585.8	MODESTO		CALCAREOUS SHALE	3.0	54.0
582.8	MODESTO		SHALE	2.0	57.0
580.8	MODESTO		SHALE	10.0	59.0
570.8	MODESTO		SHALE	18.0	69.0
552.8	MODESTO	CARLINVILLE	LIMESTONE	3.0	87.0
549.8	MODESTO		SANDY SHALE	12.0	90.0
537.8	MODESTO		SHALE	19.7	102.0
518.1	MODESTO	CHAPEL	COAL	1.1	121.7
517.0	MODESTO		UNDERCLAY	1.3	122.8
515.8	MODESTO		SHALE	11.0	124.0
504.8	MODESTO		SANDY SHALE	43.0	135.0
461.8	MODESTO		SHALE	3.0	178.0
458.8	MODESTO		LIMESTONE	7.0	181.0
451.8	MODESTO		SHALE	4.0	188.0
447.8	MODESTO		SHALE	4.0	192.0
443.8	MODESTO		SANDY SHALE	8.0	196.0
435.8	MODESTO		SHALE	18.0	204.0
417.8	MODESTO		BLACK SHALE	3.0	222.0
414.8	MODESTO		COAL	1.0	225.0
413.8	MODESTO		UNDERCLAY	2.0	226.0
411.8	MODESTO		SHALE	10.0	228.0
401.8	MODESTO	PIASA	LIMESTONE	3.0	238.0
398.8	CARBONDALE		SHALE	12.0	241.0
386.8	CARBONDALE	BRERETON	LIMESTONE	6.3	253.0
380.5	CARBONDALE		SHALE	0.7	259.3
379.8	CARBONDALE		SHALE	5.9	260.0
373.9	CARBONDALE	HERRIN	COAL	4.8	265.9
369.1	CARBONDALE		UNDERCLAY	3.3	270.7
365.8	CARBONDALE		CALCAREOUS SHALE	1.0	274.0

MAPID: 11700022000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 10 QUARTERS/FOOTAGES: NW NW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.866686 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.418718 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 270.8 LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
402.0	MODESTO	PIASA	LIMESTONE	3.0	238.0
399.0	MODESTO		UNCLASSIFIED	3.0	241.0
396.0	CARBONDALE		UNCLASSIFIED	9.0	244.0
387.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.3	253.0
380.7	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	259.3
378.7	CARBONDALE		UNCLASSIFIED	1.7	261.3
377.0	CARBONDALE	BRERETON	LIMESTONE	2.0	263.0
375.0	CARBONDALE	ANNA	BLACK SHALE	1.0	265.0
374.0	CARBONDALE	HERRIN	COAL	4.8	266.0

MAPID: 11701426000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 10 QUARTERS/FOOTAGES: 97' N line, 409' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.851676 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.420393 DATE COLLECTED:

SURFACE ELEVATION (FT.): 613.0 LOGGED (FT.): 254.0 LOG TYPE: Drillers Log

SOURCE: SANGAMON COUNTY LAND COMPANY ES-408 WELL TYPE: Coal Test

COMMENT: GEOPHYSICAL LOGS INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
369.7	CARBONDALE	HERRIN	COAL	6.4	243.3

MAPID: 11701426000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 10 QUARTERS/FOOTAGES: 97' N line, 409' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.851676

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.420393

DATE COLLECTED:

SURFACE ELEVATION (FT.): 613.0 LOGGED (FT.): 249.4

LOG TYPE: Survey Core Study

SOURCE: SANGAMON COUNTY LAND COMPANY ES-408

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
392.7	MODESTO	PIASA	LIMESTONE/UNDERCLAY	2.8	220.3
389.9	MODESTO		DARK GRAY SHALE	2.5	223.1
387.4	CARBONDALE	DANVILLE	BONE COAL	0.1	225.6
387.3	CARBONDALE		CLAYSTONE	2.3	225.7
385.0	CARBONDALE	GALUM	NODULAR LIMESTONE	0.5	228.0
384.5	CARBONDALE		CLAYSTONE	1.2	228.5
383.3	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	6.4	229.7
376.9	CARBONDALE	LAWSON	DARK GRAY SHALE	4.4	236.1
372.5	CARBONDALE	BRERETON	NODULAR LIMESTONE	0.7	240.5
371.8	CARBONDALE	ANNA	BLACK SHALE	1.8	241.2
370.0	CARBONDALE	HERRIN	COAL	6.4	243.0

MAPID: 11700023000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 14 QUARTERS/FOOTAGES: SW SE SW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.844064 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.392363 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 666.4 LOGGED (FT.): 336.5 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE #B-1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
666.4			SOIL	3.0	0.0	
663.4			CLAY	15.0	3.0	
648.4			SAND	10.0	18.0	
638.4			HARD PAN	4.0	28.0	
634.4			CLAY & GRAVEL	58.0	32.0	
576.4			GRAVEL	4.0	90.0	
572.4	MODESTO		LIMESTONE	2.0	94.0	
570.4	MODESTO		SHALE	1.0	96.0	
569.4	MODESTO		SHALE	6.0	97.0	
563.4	MODESTO		SHALE	4.0	103.0	
559.4	MODESTO		LIMESTONE	4.0	107.0	
555.4	MODESTO		SHALE	2.0	111.0	
553.4	MODESTO		SHALE	4.0	113.0	
549.4	MODESTO		LIMESTONE	2.0	117.0	
547.4	MODESTO		SANDY SHALE	16.0	119.0	
531.4	MODESTO		SHALE	10.0	135.0	
521.4	MODESTO		SHALE	5.0	145.0	
516.4	MODESTO		SHALE	11.0	150.0	
505.4	MODESTO		SANDY SHALE	25.0	161.0	
480.4	MODESTO		SHALE	0.6	186.0	
479.8	MODESTO	CHAPEL	COAL	1.3	186.6	
478.6	MODESTO		UNDERCLAY	1.2	187.8	
477.4	MODESTO		SANDY SHALE	13.0	189.0	
464.4	MODESTO		SANDY SHALE	38.0	202.0	W/ A FEW LS BANDS
426.4	MODESTO		SANDY SHALE	7.0	240.0	
419.4	MODESTO		LIMESTONE	2.0	247.0	
417.4	MODESTO		SHALE	4.0	249.0	
413.4	MODESTO		SANDY SHALE	28.0	253.0	
385.4	MODESTO		SHALE	2.7	281.0	
382.7	MODESTO		COAL	0.7	283.7	
382.1	MODESTO		UNDERCLAY	2.7	284.3	
379.4	MODESTO		SHALE	11.0	287.0	
368.4	MODESTO		SHALE	3.0	298.0	
365.4	MODESTO		CALCAREOUS SHALE	4.0	301.0	
361.4	MODESTO	PIASA	LIMESTONE	4.0	305.0	
357.4			SHALE	3.0	309.0	
354.4	CARBONDALE		SANDY SHALE	4.0	312.0	
350.4	CARBONDALE		SHALE	6.0	316.0	W/ LS BANDS
344.4	CARBONDALE		SHALE	2.0	322.0	

342.4	CARBONDALE	BRERETON	LIMESTONE	6.6	324.0
335.8	CARBONDALE		SHALE	4.4	330.6
331.4	CARBONDALE	ANNA	BLACK SHALE	1.5	335.0
329.9	CARBONDALE	HERRIN	COAL	0.0	336.5 T.D.

MAPID: 1172189000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 14 QUARTERS/FOOTAGES: 1066' N line, 1275' W line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.845459 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.403136 DATE COLLECTED: 11 / 23 / 1977

SURFACE ELEVATION (FT.): 667.0 LOGGED (FT.): 370.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-27 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
667.0			UNCONSOLIDATED	88.0	0.0
579.0	BOND	CARTHAGE	SHALY LIMESTONE	12.0	88.0
567.0	MODESTO		BLACK SHALE	2.0	100.0
565.0	MODESTO		GRAY SHALE	11.0	102.0
554.0	MODESTO	MACOUPIN	LIMESTONE	2.0	113.0
552.0	MODESTO		BLACK SHALE	2.0	115.0
550.0	MODESTO		GRAY SHALE	5.0	117.0
545.0	MODESTO		SHALY LIMESTONE	5.0	122.0
540.0	MODESTO		SANDY SHALE	31.0	127.0
509.0	MODESTO	CARLINVILLE	LIMESTONE	3.0	158.0
506.0	MODESTO		BLACK SHALE	0.5	161.0
505.5	MODESTO		LIMESTONE	0.5	161.5
505.0	MODESTO		GRAY SHALE	30.5	162.0
474.5	MODESTO	CHAPEL	COAL	1.5	192.5
473.0	MODESTO		SANDY SHALE	21.0	194.0
452.0	MODESTO		GRAY SHALE	43.5	215.0
408.5	MODESTO		LIMESTONE	3.0	258.5
405.5	MODESTO		GRAY SHALE	35.5	261.5
370.0	MODESTO		BLACK SHALE	2.0	297.0
368.0	MODESTO		COAL	0.5	299.0
367.5	MODESTO		GRAY SHALE	1.5	299.5
366.0	MODESTO		SANDSTONE	9.0	301.0
357.0	MODESTO		GRAY SHALE	6.5	310.0
350.5	MODESTO	PIASA	LIMESTONE	2.5	316.5
348.0	MODESTO		BLACK SHALE	2.5	319.0
345.5	CARBONDALE		GRAY SHALE	7.5	321.5
338.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	329.0
331.5	CARBONDALE		GRAY SHALE	5.0	335.5
326.5	CARBONDALE	BRERETON	LIMESTONE	4.3	340.5
322.2	CARBONDALE	HERRIN	COAL	5.7	344.8
316.5	CARBONDALE		UNDERCLAY	1.1	350.5
315.4	CARBONDALE		UNDERCLAY	0.3	351.6
315.2	CARBONDALE		LIMESTONE	6.2	351.8
309.0	CARBONDALE		GRAY SHALE	7.0	358.0
302.0	CARBONDALE		LIMESTONE	1.0	365.0
301.0	CARBONDALE		GRAY SHALE	4.0	366.0

MAPID: 11721891000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 14 QUARTERS/FOOTAGES: 2570' N line, 83' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.831516 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.399085 DATE COLLECTED: 10 / 4 / 1978

SURFACE ELEVATION (FT.): 667.0 LOGGED (FT.): 341.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-11 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
667.0			UNCONSOLIDATED	81.5	0.0
585.5	BOND	CARTHAGE	LIMESTONE	2.5	81.5
583.0	MODESTO		BLACK SHALE	5.0	84.0
578.0	MODESTO		GRAY SHALE	4.0	89.0
574.0	MODESTO	MACOUPIN	LIMESTONE	2.0	93.0
572.0	MODESTO		BLACK SHALE	2.0	95.0
570.0	MODESTO		GRAY SHALE	6.0	97.0
564.0	MODESTO		LIMESTONE	3.0	103.0
561.0	MODESTO		SANDY SHALE	28.5	106.0
532.5	MODESTO	CARLINVILLE	LIMESTONE	2.5	134.5
530.0	MODESTO		SANDY SHALE	30.0	137.0
500.0	MODESTO	CHAPEL	COAL	1.0	167.0
499.0	MODESTO		SANDY SHALE	12.0	168.0
487.0	MODESTO		GRAY SHALE	56.5	180.0
430.5	MODESTO		LIMESTONE	3.0	236.5
427.5	MODESTO		GRAY SHALE	30.5	239.5
397.0	MODESTO		BLACK SHALE	2.5	270.0
394.5	MODESTO		COAL	0.5	272.5
394.0	MODESTO		GRAY SHALE	18.0	273.0
376.0	MODESTO	PIASA	LIMESTONE	2.3	291.0
373.7	MODESTO		BLACK SHALE	2.7	293.3
371.0	CARBONDALE		GRAY SHALE	3.3	296.0
367.7	CARBONDALE		CLAYSTONE & SILTY SHALES	2.4	299.3
365.3	CARBONDALE		SHALY LIMESTONE	1.3	301.7
364.0	CARBONDALE		GRAY SHALE	1.9	303.0
362.1	CARBONDALE	BANKSTON FORK	LIMESTONE	7.4	304.9
354.7	CARBONDALE		SHALE	3.0	312.3
351.7	CARBONDALE	BRERETON	SILTY LIMESTONE	0.7	315.3
351.0	CARBONDALE		SHALE	0.5	316.0
350.5	CARBONDALE	ANNA	BLACK SHALE	2.2	316.5
348.2	CARBONDALE	HERRIN	COAL	7.0	318.8
341.2	CARBONDALE		CLAYSTONE & SILTSTONE	1.6	325.8
339.6	CARBONDALE		LIMESTONE	2.4	327.4
337.2	CARBONDALE		CLAYSTONE	2.0	329.8
335.2	CARBONDALE		CLAYSTONE	1.8	331.8
333.4	CARBONDALE		SHALE	1.4	333.6
332.0	CARBONDALE		CLAYSTONE	5.8	335.0
326.2	CARBONDALE		CORE LOSS	0.2	340.8

MAPID: 11700024000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 15 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.867679

GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.399609

DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 632.2 LOGGED (FT.): 279.0

LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE #B-2

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
632.2			SOIL	2.0	0.0	
630.2			CLAY	16.0	2.0	W/ BOULDERS
614.2			CLAY & GRAVEL	8.0	18.0	
606.2			CLAY & GRAVEL	4.0	26.0	
602.2			BOULDERS & CLAY	7.0	30.0	
595.2	MODESTO		SHALE	4.0	37.0	
591.2	MODESTO	MACOUPIN	LIMESTONE	3.0	41.0	
588.2	MODESTO		SHALE	4.0	44.0	
584.2	MODESTO		CALCAREOUS SHALE	8.0	48.0	
576.2	MODESTO		SHALE	27.0	56.0	
549.2	MODESTO	CARLINVILLE	LIMESTONE	4.0	83.0	
545.2	MODESTO		SANDY SHALE	29.0	87.0	
516.2	MODESTO		SHALE	1.2	116.0	
515.0	MODESTO	CHAPEL	COAL	0.7	117.2	
514.4	MODESTO		UNDERCLAY	1.2	117.8	
513.2	MODESTO		SANDY SHALE	35.0	119.0	
478.2	MODESTO		SHALE	26.0	154.0	
452.2	MODESTO		LIMESTONE	5.0	180.0	
447.2	MODESTO		SANDY SHALE	30.0	185.0	
417.2	MODESTO		BLACK SHALE	1.0	215.0	
416.2	MODESTO		SANDY SHALE	4.0	216.0	
412.2			SHALE	30.0	220.0	W/ LS BANDS
382.2	CARBONDALE		LIMESTONE	18.3	250.0	
363.9	CARBONDALE	ANNA	BLACK SHALE	0.3	268.3	
363.5	CARBONDALE	HERRIN	COAL	5.7	268.7	
357.9	CARBONDALE		UNDERCLAY	4.2	274.3	
353.7	CARBONDALE		CALCAREOUS SHALE	0.5	278.5	

MAPID: 11700024000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 15 QUARTERS/FOOTAGES: SW SW NW

QUADRANGLE: VIRIDEN SOUTH LONGITUDE: -89.867679 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.399609 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 632.0 LOGGED (FT.): 273.7 LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
364.3	CARBONDALE	ANNA	BLACK SHALE	0.3	267.7
364.0	CARBONDALE	HERRIN	COAL	5.7	268.0

MAPID: 11721892000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 15 QUARTERS/FOOTAGES: 40' N line, 1380' W line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.864032 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.405859 DATE COLLECTED: 10 / 2 / 1978

SURFACE ELEVATION (FT.): 658.0 LOGGED (FT.): 300.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-6 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
658.0			UNCONSOLIDATED	41.5	0.0
616.5	BOND	CARTHAGE	LIMESTONE	4.5	41.5
612.0	MODESTO		BLACK SHALE	2.5	46.0
609.5	MODESTO		GRAY SHALE	10.5	48.5
599.0	MODESTO	MACOUPIN	SANDY LIMESTONE	4.0	59.0
595.0	MODESTO		BLACK SHALE	1.0	63.0
594.0	MODESTO		GRAY SHALE	6.0	64.0
588.0	MODESTO		GRAY SHALE	6.0	70.0
582.0	MODESTO		GRAY SHALE	29.5	76.0
552.5	MODESTO	CARLINVILLE	LIMESTONE	2.0	105.5
550.5	MODESTO		BLACK SHALE	0.5	107.5
550.0	MODESTO		LIMESTONE	0.5	108.0
549.5	MODESTO		GRAY SHALE	27.0	108.5
522.5	MODESTO	CHAPEL	COAL	1.0	135.5
521.5	MODESTO		GRAY SHALE	59.5	136.5
462.0	MODESTO		LIMESTONE	4.0	196.0
458.0	MODESTO		GRAY SHALE	30.5	200.0
427.5	MODESTO		BLACK SHALE	2.5	230.5
425.0	MODESTO		COAL	1.0	233.0
424.0	MODESTO		SANDY SHALE	20.0	234.0
404.0	MODESTO	PIASA	LIMESTONE	1.5	254.0
402.5	MODESTO		BLACK SHALE	3.5	255.5
399.0	CARBONDALE		SHALE	7.7	259.0
391.3	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	266.7
389.0	CARBONDALE		CALCAREOUS SHALE	10.8	269.0
378.2	CARBONDALE	BRERETON	LIMESTONE	1.4	279.8
376.8	CARBONDALE		SHALE	0.8	281.2
376.0	CARBONDALE	HERRIN	COAL	6.0	282.0
370.0	CARBONDALE		CLAYSTONE	1.4	288.0
368.6	CARBONDALE		SHALY LIMESTONE	3.6	289.4
365.0	CARBONDALE		GRAY SHALE	6.5	293.0
358.5	CARBONDALE		LIMESTONE	0.5	299.5

MAPID: 11700025000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 16 QUARTERS/FOOTAGES: 2000' N line, 1050' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.883762 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.400476 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 652.0 LOGGED (FT.): 271.0 LOG TYPE: Drillers Log

SOURCE: R. W. HUNT & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
652.0			UNCONSOLIDATED	74.0	0.0	
578.0			ROCK	38.6	74.0	
539.4			COAL	0.4	112.6	
539.0			ROCK	102.5	113.0	
436.5			COAL	0.5	215.5	
436.0			ROCK	22.0	216.0	
414.0			SHALE	9.0	238.0	
405.0			LIMESTONE	4.0	247.0	
401.0			SHALE	3.0	251.0	
398.0			LIMESTONE	3.0	254.0	
395.0			SHALE	1.0	257.0	
394.0			LIMESTONE	4.8	258.0	
389.2			SHALE	0.7	262.8	
388.5	CARBONDALE	HERRIN	COAL	5.5	263.5	
383.0			ROCK	2.0	269.0	

MAPID: 11700025000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 16 QUARTERS/FOOTAGES: 2000' N line, 1050' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.883762 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.400476 DATE COLLECTED:

SURFACE ELEVATION (FT.): 652.0 LOGGED (FT.): 269.5 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
416.5	MODESTO	PIASA	LIMESTONE	3.0	235.5	
413.5	CARBONDALE		VARRIGATED SHALE	9.0	238.5	
404.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	247.5	
400.5	CARBONDALE	BANKSTON FORK	DARK GRAY SHALE	3.0	251.5	
397.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	254.5	
394.5	CARBONDALE	LAWSON	DARK GRAY SHALE	1.0	257.5	
393.5	CARBONDALE	BRERETON	LIMESTONE & SHALE	4.8	258.5	
388.7	CARBONDALE	ANNA	BLACK SHALE	0.7	263.3	
388.0	CARBONDALE	HERRIN	COAL	5.5	264.0	

MAPID: 11700025000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 16 QUARTERS/FOOTAGES: 2000' N line, 1050' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.883762 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.400476 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 652.0 LOGGED (FT.): 269.5 LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
416.5	MODESTO	PIASA	LIMESTONE	3.0	235.5
413.5	MODESTO		UNCLASSIFIED	4.5	238.5
409.0	CARBONDALE		UNCLASSIFIED	11.5	243.0
397.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.0	254.5
394.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	257.5
393.5	CARBONDALE		UNCLASSIFIED	1.0	258.5
392.5	CARBONDALE	BRERETON	LIMESTONE	3.8	259.5
388.7	CARBONDALE	ANNA	BLACK SHALE	0.7	263.3
388.0	CARBONDALE	HERRIN	COAL	5.5	264.0

MAPID: 11700025000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 16 QUARTERS/FOOTAGES: 2000' N line, 1050' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.883762 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.400476 DATE COLLECTED:

SURFACE ELEVATION (FT.): 651.6 LOGGED (FT.): 271.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE #B-3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
651.6			CLAY	18.0	0.0	
633.6			HARD PAN	17.0	18.0	
616.6			GRAVEL	9.0	35.0	
607.6	MODESTO		SHALE	30.0	44.0	W/ PEBBLES
577.6	MODESTO		LIMESTONE	1.0	74.0	
576.6	MODESTO		SHALE	4.0	75.0	
572.6	MODESTO	CARLINVILLE	LIMESTONE	5.0	79.0	
567.6	MODESTO		SHALE	20.0	84.0	
547.6	MODESTO		SHALE	8.6	104.0	
539.0	MODESTO	CHAPEL	COAL	0.4	112.6	
538.6	MODESTO		UNDERCLAY	2.0	113.0	
536.6	MODESTO		SHALE	3.0	115.0	
533.6	MODESTO		SHALE	58.0	118.0	
475.6	MODESTO		LIMESTONE	3.0	176.0	
472.6	MODESTO		SHALE	6.0	179.0	
466.6	MODESTO		SHALE	4.0	185.0	
462.6	MODESTO		SANDSTONE	18.0	189.0	
444.6	MODESTO		SHALE	7.0	207.0	
437.6	MODESTO		SHALE	1.5	214.0	
436.1	MODESTO		COAL	0.5	215.5	
435.6	MODESTO		UNDERCLAY	2.0	216.0	
433.6	MODESTO		SHALE	17.0	218.0	
416.6	MODESTO	PIASA	LIMESTONE	3.0	235.0	
413.6	MODESTO		SHALE	8.0	238.0	W/ LS BANDS
405.6	MODESTO		SHALE	1.0	246.0	
404.6	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	247.0	
400.6	CARBONDALE		SHALE	3.0	251.0	
397.6	CARBONDALE		LIMESTONE	3.0	254.0	
394.6	CARBONDALE		SHALE	1.0	257.0	
393.6	CARBONDALE	BRERETON	LIMESTONE	4.8	258.0	
388.8	CARBONDALE		SHALE	0.7	262.8	
388.1	CARBONDALE	HERRIN	COAL	5.5	263.5	
382.6	CARBONDALE		UNDERCLAY	1.2	269.0	
381.4	CARBONDALE		LIMESTONE	0.8	270.2	

MAPID: 11721893000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 16 QUARTERS/FOOTAGES: 50' N line, 2250' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.879479 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.405846 DATE COLLECTED: 9 / 29 / 1978

SURFACE ELEVATION (FT.): 645.0 LOGGED (FT.): 300.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL NOM-78-5 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
645.0			UNCONSOLIDATED	55.5	0.0
589.5	MODESTO	MACOUPIN	LIMESTONE	1.0	55.5
588.5	MODESTO		BLACK SHALE	2.0	56.5
586.5	MODESTO		SHALE	4.5	58.5
582.0	MODESTO		SANDSTONE	3.0	63.0
579.0	MODESTO		SANDY SHALE	17.0	66.0
562.0	MODESTO		SHALE	13.0	83.0
549.0	MODESTO	CARLINVILLE	LIMESTONE	5.0	96.0
544.0	MODESTO		BLACK SHALE	1.0	101.0
543.0	MODESTO		SANDY SHALE	30.5	102.0
512.5	MODESTO	CHAPEL	COAL	0.5	132.5
512.0	MODESTO		GRAY SHALE	63.0	133.0
449.0	MODESTO		LIMESTONE	3.0	196.0
446.0	MODESTO		SHALE	7.0	199.0
439.0	MODESTO		GRAY SHALE	26.0	206.0
413.0	MODESTO		BLACK SHALE	2.5	232.0
410.5	MODESTO		COAL	0.5	234.5
410.0	MODESTO		GRAY SHALE	19.5	235.0
390.5	MODESTO	PIASA	LIMESTONE	2.0	254.5
388.5	MODESTO		SHALE	6.0	256.5
382.5	CARBONDALE		GRAY SHALE	2.5	262.5
380.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	265.0
374.0	CARBONDALE		SHALE	1.0	271.0
373.0	CARBONDALE	BRERETON	LIMESTONE	0.5	272.0
372.5	CARBONDALE		SHALE	7.0	272.5
365.5	CARBONDALE	HERRIN	COAL	5.3	279.5
360.2	CARBONDALE		CLAYSTONE	3.2	284.8
357.0	CARBONDALE		LIMESTONE	1.5	288.0
355.5	CARBONDALE		BLACK SHALE	1.5	289.5
354.0	CARBONDALE		GRAY SHALE	4.8	291.0
349.2	CARBONDALE		LIMESTONE	0.7	295.8
348.5	CARBONDALE		GRAY SHALE	2.0	296.5
346.5	CARBONDALE		LIMESTONE	0.5	298.5
346.0	CARBONDALE		GRAY SHALE	1.0	299.0

MAPID: 11721894000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 17 QUARTERS/FOOTAGES: 281' S line, 68' E line

QUADRANGLE: PALMYRA LONGITUDE: -89.887756 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.392248 DATE COLLECTED: 9 / 29 / 1978

SURFACE ELEVATION (FT.): 651.0 LOGGED (FT.): 300.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
651.0			UNCONSOLIDATED	110.0	0.0
541.0	MODESTO		GRAY SHALE	14.5	110.0
526.5	MODESTO	CHAPEL	COAL	0.5	124.5
526.0	MODESTO		GRAY SHALE	2.5	125.0
523.5	MODESTO		LIMESTONE	1.5	127.5
522.0	MODESTO		GRAY SHALE	40.0	129.0
482.0	MODESTO		GRAY SHALE	19.0	169.0
463.0	MODESTO		LIMESTONE	4.0	188.0
459.0	MODESTO		SHALE	4.5	192.0
454.5	MODESTO		SANDY SHALE	24.5	196.5
430.0	MODESTO		BLACK SHALE	2.5	221.0
427.5	MODESTO		COAL	0.5	223.5
427.0	MODESTO		GRAY SHALE	3.0	224.0
424.0	MODESTO		GRAY SHALE	20.0	227.0
404.0	MODESTO		SHALY LIMESTONE	1.5	247.0
402.5	MODESTO		GRAY SHALE	6.5	248.5
396.0	MODESTO		SANDY SHALE	5.0	255.0
391.0	MODESTO		SHALE	4.0	260.0
387.0	MODESTO	PIASA	LIMESTONE	4.0	264.0
383.0	MODESTO		SHALE	3.5	268.0
379.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	271.5
377.0	CARBONDALE		GRAY SHALE	3.0	274.0
374.0	CARBONDALE	BRERETON	LIMESTONE	2.5	277.0
371.5	CARBONDALE		GRAY SHALE	1.0	279.5
370.5	CARBONDALE	HERRIN	COAL	5.6	280.5
364.9	CARBONDALE		SHALE	1.4	286.1
363.5	CARBONDALE		LIMESTONE	6.5	287.5
357.0	CARBONDALE		GRAY SHALE	0.7	294.0
356.3	CARBONDALE		LIMESTONE	1.3	294.7
355.0	CARBONDALE		GRAY SHALE	4.0	296.0

MAPID: 11721895000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 17 QUARTERS/FOOTAGES: 2300' S line, 2075' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.898936

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.397709

DATE COLLECTED: 9 / 28 / 1978

SURFACE ELEVATION (FT.): 635.0

LOGGED (FT.): 320.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-3

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
635.0			UNCONSOLIDATED	160.0	0.0
475.0	MODESTO		GRAY SHALE	8.0	160.0
467.0	MODESTO		LIMESTONE	5.0	168.0
462.0	MODESTO		GRAY SHALE	14.0	173.0
448.0	MODESTO		CALCAREOUS SHALE	19.0	187.0
429.0	MODESTO		GRAY SHALE	15.0	206.0
414.0	MODESTO		BLACK SHALE	3.0	221.0
411.0	MODESTO		COAL	1.0	224.0
410.0	MODESTO		GRAY SHALE	31.5	225.0
378.5	MODESTO	PIASA	LIMESTONE	2.5	256.5
376.0	MODESTO		BLACK SHALE	1.0	259.0
375.0	CARBONDALE		GRAY SHALE	8.0	260.0
367.0	CARBONDALE		BLACK SHALE	3.0	268.0
364.0	CARBONDALE	HERRIN	COAL	0.0	271.0
364.0	CARBONDALE		SHALE	5.0	271.0
359.0	CARBONDALE		BLACK SHALE	2.0	276.0
357.0	CARBONDALE		GRAY SHALE	8.5	278.0
348.5	CARBONDALE		SANDY SHALE	17.0	286.5
331.5	CARBONDALE		GRAY SHALE	3.5	303.5
328.0	CARBONDALE		SANDY SHALE	13.0	307.0

MAPID: 1172189600C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 17 QUARTERS/FOOTAGES: 20' S line, 30' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.906204 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.39134 DATE COLLECTED: 10 / 19 / 1978

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 280.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-51 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
640.0			UNCONSOLIDATED	148.0	0.0
492.0	MODESTO		GRAY SHALE	16.0	148.0
476.0	MODESTO		LIMESTONE	5.5	164.0
470.5	MODESTO		SHALE	7.5	169.5
463.0	MODESTO		GRAY SHALE	21.0	177.0
442.0	MODESTO		BLACK SHALE	3.0	198.0
439.0	MODESTO		GRAY SHALE	13.0	201.0
426.0	MODESTO		BLACK SHALE	4.0	214.0
422.0	MODESTO		COAL	1.0	218.0
421.0	MODESTO		GRAY SHALE	7.0	219.0
414.0	MODESTO	PIASA	SHALY LIMESTONE	4.0	226.0
410.0			GRAY SHALE	6.8	230.0
403.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.9	236.8
398.3	CARBONDALE		GRAY SHALE	5.1	241.7
393.2	CARBONDALE	BRERETON	LIMESTONE	2.2	246.8
391.0	CARBONDALE	ANNA	BLACK SHALE	1.2	249.0
389.8	CARBONDALE	HERRIN	COAL	4.8	250.2
385.0	CARBONDALE		CLAYSTONE	0.4	255.0
384.6	CARBONDALE		CORE LOSS	0.8	255.4
383.8	CARBONDALE		GRAY SHALE	2.8	256.2
381.0	CARBONDALE		LIMESTONE	3.0	259.0
378.0	CARBONDALE		GRAY SHALE	6.5	262.0
371.5	CARBONDALE		BLACK SHALE	2.0	268.5
369.5	CARBONDALE		GRAY SHALE	9.5	270.5

MAPID: 11700057000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 18 QUARTERS/FOOTAGES: 50' N line, 1600' E line
 QUADRANGLE: PALMYRA LONGITUDE: -89.912023 GEOLOGIST: TREWORGY,J
 CONFIDENTIAL: N LATITUDE: 39.405724 DATE COLLECTED: 0 / 0 / 1917
 SURFACE ELEVATION (FT.): 573.0 LOGGED (FT.): 174.0 LOG TYPE: Drillers Log
 SOURCE: R. W. HUNT & CO WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
573.0			UNCONSOLIDATED	78.0	0.0	
495.0			ROCK	36.0	78.0	
459.0			COAL	1.5	114.0	
457.5			ROCK	25.5	115.5	
432.0			LIMESTONE	3.0	141.0	
429.0			SHALE	11.0	144.0	
418.0			LIMESTONE	4.0	155.0	
414.0			SHALE	5.0	159.0	
409.0			LIMESTONE	3.8	164.0	
405.2			BLACK SHALE	0.8	167.8	
404.4	CARBONDALE	HERRIN	COAL	4.5	168.6	
399.9			ROCK	0.9	173.1	

MAPID: 11700057000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 18 QUARTERS/FOOTAGES: 50' N line, 1600' E line
 QUADRANGLE: PALMYRA LONGITUDE: -89.912023 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 39.405724 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 573.0 LOGGED (FT.): 173.5 LOG TYPE: Drillers Log
 SOURCE: WELL TYPE: Coal Test
 COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
431.6	MODESTO	PIASA	LIMESTONE	3.0	141.4	
428.6	CARBONDALE		GRAY SHALE	11.0	144.4	
417.6	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	155.4	
413.6	CARBONDALE	LAWSON	GRAY SHALE	5.0	159.4	
408.6	CARBONDALE	BRERETON	LIMESTONE & SHALE	3.8	164.4	
404.8	CARBONDALE	ANNA	BLACK SHALE	0.8	168.2	
404.0	CARBONDALE	HERRIN	COAL	4.5	169.0	

MAPID: 11700057000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 18 QUARTERS/FOOTAGES: 50' N line, 1600' E line

QUADRANGLE: PALMYRA LONGITUDE: -89.912023 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.405724 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 573.0 LOGGED (FT.): 173.5 LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
431.6	MODESTO	PIASA	LIMESTONE	3.0	141.4
428.6	MODESTO		UNCLASSIFIED	3.0	144.4
425.6	CARBONDALE		UNCLASSIFIED	8.0	147.4
417.6	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	155.4
413.6	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.5	159.4
411.1	CARBONDALE		UNCLASSIFIED	2.5	161.9
408.6	CARBONDALE	BRERETON	LIMESTONE	3.8	164.4
404.8	CARBONDALE	ANNA	BLACK SHALE	0.8	168.2
404.0	CARBONDALE	HERRIN	COAL	4.5	169.0

MAPID: 11700057000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 18 QUARTERS/FOOTAGES: 50' N line, 1600' E line

QUADRANGLE: PALMYRA LONGITUDE: -89.912023 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.405724 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 572.6 LOGGED (FT.): 174.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE #B-6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
572.6			SOIL	3.0	0.0
569.6			CLAY	15.0	3.0
554.6			GRAVEL	2.0	18.0
552.6			SAND/CLAY	48.3	20.0
504.3			SAND & GRAVEL	9.8	68.3
494.6	MODESTO		LIMESTONE	4.0	78.0
490.6	MODESTO		SHALE	4.0	82.0
486.6	MODESTO		SHALE	12.0	86.0
474.6	MODESTO		SANDY SHALE	15.0	98.0
459.6	MODESTO		BLACK SHALE	1.0	113.0
458.6	MODESTO		COAL	1.5	114.0
457.1	MODESTO		UNDERCLAY	1.0	115.5
456.1	MODESTO		SANDY SHALE	19.5	116.5
436.6	MODESTO		SHALE	5.0	136.0
431.6	MODESTO	PIASA	LIMESTONE	3.0	141.0
428.6			SHALE	11.0	144.0
417.6	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	155.0
413.6	CARBONDALE		SHALE	5.0	159.0
408.6	CARBONDALE	BRERETON	LIMESTONE	3.8	164.0
404.8	CARBONDALE	ANNA	BLACK SHALE	0.8	167.8
404.0	CARBONDALE	HERRIN	COAL	4.5	168.6
399.5	CARBONDALE		UNDERCLAY	0.9	173.1

MAPID: 11721897000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 18 QUARTERS/FOOTAGES: 1404' S line, 2520' E line

QUADRANGLE: PALMYRA LONGITUDE: -89.915281 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.395173 DATE COLLECTED: 11 / 29 / 1977

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 280.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-23 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
635.0			UNCONSOLIDATED	170.0	0.0
465.0	MODESTO		GRAY SHALE	19.0	170.0
446.0	MODESTO		BLACK SHALE	3.0	189.0
443.0	MODESTO		GRAY SHALE	3.5	192.0
439.5	MODESTO		LIMESTONE	1.5	195.5
438.0	MODESTO		CALCAREOUS SHALE	6.0	197.0
432.0	MODESTO		GRAY SHALE	8.0	203.0
424.0	MODESTO	PIASA	LIMESTONE	4.0	211.0
420.0	MODESTO		SHALE	3.0	215.0
417.0	CARBONDALE		CALCAREOUS SHALE	8.0	218.0
409.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	226.0
405.0	CARBONDALE		GRAY SHALE	4.0	230.0
401.0	CARBONDALE	ANNA	BLACK SHALE	2.5	234.0
398.5	CARBONDALE	HERRIN	COAL	5.5	236.5
393.0	CARBONDALE		UNDERCLAY	3.0	242.0
390.0	CARBONDALE		LIMESTONE	4.0	245.0
386.0	CARBONDALE		GRAY SHALE	7.0	249.0
379.0	CARBONDALE		LIMESTONE	1.0	256.0
378.0	CARBONDALE		BLACK SHALE	1.0	257.0
377.0	CARBONDALE		GRAY SHALE	22.0	258.0

MAPID: 11700026000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 19 QUARTERS/FOOTAGES: 2600' N line, 2300' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.916699 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.38412 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 634.0 LOGGED (FT.): 239.0 LOG TYPE: Drillers Log

SOURCE: R. W. HUNT & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
634.0			UNCONSOLIDATED	122.0	0.0
512.0			ROCK	65.3	122.0
446.7			COAL	0.8	187.3
445.9			ROCK	16.9	188.1
429.0			LIMESTONE	2.0	205.0
427.0			SHALE	9.0	207.0
418.0			LIMESTONE	5.0	216.0
413.0			SHALE	5.5	221.0
407.5			LIMESTONE	1.0	226.5
406.5			SHALE	0.5	227.5
406.0			LIMESTONE	2.7	228.0
403.3			SHALE	0.4	230.7
402.9	CARBONDALE	HERRIN	COAL	6.2	231.1
396.8			ROCK	1.8	237.2

MAPID: 11700026000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 19 QUARTERS/FOOTAGES: 2600' N line, 2300' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.916699 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.38412 DATE COLLECTED:

SURFACE ELEVATION (FT.): 634.0 LOGGED (FT.): 237.2 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
429.1	MODESTO	PIASA	LIMESTONE	2.0	204.9
427.1	CARBONDALE		GRAY SHALE	9.0	206.9
418.1	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	215.9
413.1	CARBONDALE	LAWSON	SHALE	1.0	220.9
412.1	CARBONDALE	LAWSON	DARK GRAY SHALE	3.5	221.9
408.6	CARBONDALE	LAWSON	CALCAREOUS SHALE	1.0	225.4
407.6	CARBONDALE	BRERETON	LIMESTONE & SHALE	4.2	226.4
403.4	CARBONDALE	ANNA	BLACK SHALE	0.4	230.6
403.0	CARBONDALE	HERRIN	COAL	6.2	231.0

MAPID: 11700026000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 19 QUARTERS/FOOTAGES: 2600' N line, 2300' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.916699 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.38412 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 634.0 LOGGED (FT.): 237.2 LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
429.1	MODESTO	PIASA	LIMESTONE	2.0	204.9
427.1	MODESTO		UNCLASSIFIED	2.5	206.9
424.6	CARBONDALE		UNCLASSIFIED	6.5	209.4
418.1	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	215.9
413.1	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	220.9
410.1	CARBONDALE		UNCLASSIFIED	2.5	223.9
407.6	CARBONDALE	BRERETON	LIMESTONE	4.2	226.4
403.4	CARBONDALE	ANNA	BLACK SHALE	0.4	230.6
403.0	CARBONDALE	HERRIN	COAL	6.2	231.0

MAPID: 11700026000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 19 QUARTERS/FOOTAGES: 2600' N line, 2300' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.916699 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.38412 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 634.0 LOGGED (FT.): 239.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE #A-4 WELL TYPE: Coal Test

COMMENT: M. HENYER FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
634.0			SANDY CLAY	6.0	0.0	
628.0			HARD PAN	14.0	6.0	
614.0			SAND & GRAVEL	15.0	20.0	
599.0			CLAY	15.0	35.0	
584.0			HARD PAN	5.0	50.0	
579.0			CLAY	10.0	55.0	
569.0			SAND & GRAVEL	50.0	65.0	
519.0			SAND	7.0	115.0	W/ SH STREAKS
512.0	MODESTO		LIMESTONE	0.2	122.0	
511.8	MODESTO		SHALE	22.8	122.2	
489.0	MODESTO		SHALE	27.0	145.0	W/ LS
462.0	MODESTO		SANDY SHALE	13.0	172.0	
449.0	MODESTO		BLACK SHALE	2.3	185.0	
446.7	MODESTO		COAL	0.8	187.3	
445.9	MODESTO		SHALE	3.9	188.1	
442.0	MODESTO		SANDY SHALE	3.0	192.0	
439.0	MODESTO		SHALE	10.0	195.0	
429.0	MODESTO	PIASA	LIMESTONE	2.0	205.0	
427.0	MODESTO		SHALE	5.0	207.0	
422.0	CARBONDALE		SHALE	4.0	212.0	W/ LS
418.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	216.0	
413.0	CARBONDALE		SHALE	1.0	221.0	
412.0	CARBONDALE		SHALE	3.5	222.0	
408.5	CARBONDALE		CALCAREOUS SHALE	1.0	225.5	
407.5	CARBONDALE	BRERETON	LIMESTONE	1.0	226.5	
406.5	CARBONDALE	BRERETON	CALCAREOUS SHALE	0.5	227.5	
406.0	CARBONDALE	BRERETON	LIMESTONE	2.7	228.0	
403.3	CARBONDALE		SHALE	0.4	230.7	
402.9	CARBONDALE	HERRIN	COAL	6.1	231.1	
396.8	CARBONDALE		SHALE	1.8	237.2	

MAPID: 11721898000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 19 QUARTERS/FOOTAGES: 2565' S line, 10' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.924843 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.383732 DATE COLLECTED: 9 / 28 / 1978

SURFACE ELEVATION (FT.): 638.0 LOGGED (FT.): 240.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-1 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
638.0			UNCONSOLIDATED	135.0	0.0
503.0	MODESTO		GRAY SHALE	54.5	135.0
448.5	MODESTO	PIASA	LIMESTONE	2.5	189.5
446.0	MODESTO		SHALE	3.0	192.0
443.0	CARBONDALE		GRAY SHALE	7.0	195.0
436.0	CARBONDALE		GRAY SHALE	6.0	202.0
430.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	208.0
426.7	CARBONDALE		GRAY SHALE	1.2	211.3
425.5	CARBONDALE	BRERETON	LIMESTONE	0.8	212.5
424.7	CARBONDALE	ENERGY	SHALE	4.7	213.3
420.0	CARBONDALE	HERRIN	COAL	6.8	218.0
413.2	CARBONDALE		CLAYSTONE	0.5	224.8
412.7	CARBONDALE		CORE LOSS	0.7	225.3
412.0	CARBONDALE		SHALE	5.0	226.0
407.0	CARBONDALE		LIMESTONE	2.0	231.0
405.0	CARBONDALE		GRAY SHALE	7.0	233.0

MAPID: 11700027000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 20 QUARTERS/FOOTAGES: SE NE SW NE

QUADRANGLE: PALMYRA LONGITUDE: -89.892732 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.386384 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 657.0 LOGGED (FT.): 289.7 LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
400.7	MODESTO	PIASA	LIMESTONE	3.0	256.3
397.7	MODESTO		UNCLASSIFIED	3.0	259.3
394.7	CARBONDALE		UNCLASSIFIED	9.0	262.3
385.7	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	271.3
379.7	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.5	277.3
377.2	CARBONDALE		UNCLASSIFIED	2.5	279.8
374.7	CARBONDALE	BRERETON	LIMESTONE	1.3	282.3
373.4	CARBONDALE	ANNA	BLACK SHALE	0.4	283.6
373.0	CARBONDALE	HERRIN	COAL	5.7	284.0

MAPID: 11700027000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 20 QUARTERS/FOOTAGES: SE NE SW NE

QUADRANGLE: PALMYRA LONGITUDE: -89.892732 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.386384 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 657.0 LOGGED (FT.): 295.0 LOG TYPE: Drillers Log

SOURCE: R. W. HUNT & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
657.0			UNCONSOLIDATED	65.0	0.0
592.0			ROCK	66.5	65.0
525.5			COAL	0.5	131.5
525.0			ROCK	105.0	132.0
420.0			COAL	0.7	237.0
419.3			ROCK	13.3	237.7
406.0			SHALE	21.0	251.0
385.0			LIMESTONE	6.0	272.0
379.0			SHALE	5.0	278.0
374.0			LIMESTONE	1.3	283.0
372.7			SHALE	0.4	284.3
372.2	CARBONDALE	HERRIN	COAL	5.7	284.8
366.6			ROCK	4.6	290.4

MAPID: 11700027000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 20 QUARTERS/FOOTAGES: SE NE SW NE

QUADRANGLE: PALMYRA LONGITUDE: -89.892732 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.386384 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 657.4 LOGGED (FT.): 295.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE #A-3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
657.4			CLAY	17.0	0.0	
640.4			HARD PAN	13.0	17.0	
627.4			SANDY CLAY	20.0	30.0	
607.4			SAND/CLAY	15.0	50.0	YELLOW CLAY
592.4	MODESTO		CALCAREOUS SHALE	28.0	65.0	
564.4	MODESTO	CARLINVILLE	LIMESTONE	5.0	93.0	
559.4	MODESTO		SANDY SHALE	12.0	98.0	
547.4	MODESTO		SANDSTONE	2.0	110.0	
545.4	MODESTO		SANDY SHALE	5.0	112.0	
540.4	MODESTO		SHALE	14.5	117.0	
525.9	MODESTO	CHAPEL	COAL	0.5	131.5	
525.4	MODESTO		UNDERCLAY	2.0	132.0	
523.4	MODESTO		SHALE	10.0	134.0	W/LS
513.4	MODESTO		SHALE	49.0	144.0	
464.4	MODESTO		LIMESTONE	4.5	193.0	
459.9	MODESTO		BLACK SHALE	3.5	197.5	
456.4	MODESTO		SHALE	4.0	201.0	W/LS
452.4	MODESTO		SANDSTONE	4.0	205.0	
448.4	MODESTO		SANDY SHALE	3.0	209.0	
445.4	MODESTO		SANDSTONE	14.0	212.0	
431.4	MODESTO		SHALE	9.0	226.0	
422.4	MODESTO		BLACK SHALE	2.0	235.0	
420.4	MODESTO		COAL	0.7	237.0	
419.7	MODESTO		SHALE	3.3	237.7	
416.4	MODESTO		CALCAREOUS SHALE	8.0	241.0	
408.4	MODESTO		SANDY SHALE	2.0	249.0	
406.4			SHALE	21.0	251.0	W/LS
385.4	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	272.0	
379.4	CARBONDALE		SHALE	5.0	278.0	
374.4	CARBONDALE	BRERETON	LIMESTONE	1.3	283.0	
373.1	CARBONDALE		SHALE	0.4	284.3	
372.6	CARBONDALE	HERRIN	COAL	5.7	284.8	
367.0	CARBONDALE		SHALE	2.6	290.4	
364.4	CARBONDALE		LIMESTONE	1.0	293.0	
363.4	CARBONDALE		SHALE	1.0	294.0	

MAPID: 11721899000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 20 QUARTERS/FOOTAGES: 2595' N line, 405' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.904828 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.384134 DATE COLLECTED: 11 / 29 / 1977

SURFACE ELEVATION (FT.): 646.0 LOGGED (FT.): 290.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-24 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
646.0			UNCONSOLIDATED	142.5	0.0	
503.5	MODESTO		GRAY SHALE	31.5	142.5	
472.0	MODESTO	CARLINVILLE	LIMESTONE	4.5	174.0	
467.5	MODESTO		GRAY SHALE	8.0	178.5	
459.5	MODESTO		SANDY SHALE	25.5	186.5	
434.0	MODESTO		BLACK SHALE	2.0	212.0	
432.0	MODESTO		SANDY SHALE	7.0	214.0	
425.0	MODESTO		SANDSTONE	10.0	221.0	
415.0	MODESTO		GRAY SHALE	9.0	231.0	
406.0	MODESTO	PIASA	LIMESTONE	2.0	240.0	
404.0			GRAY SHALE	9.0	242.0	
395.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	251.0	
389.5	CARBONDALE	ENERGY	GRAY SHALE	6.5	256.5	
383.0	CARBONDALE	HERRIN	COAL	4.7	263.0	
378.3	CARBONDALE		UNDERCLAY	1.3	267.7	
377.0	CARBONDALE		GRAY SHALE	10.5	269.0	
366.5	CARBONDALE		LIMESTONE	2.0	279.5	
364.5	CARBONDALE		GRAY SHALE	8.5	281.5	

MAPID: 11721900000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 20 QUARTERS/FOOTAGES: 55' S line, 2600' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.896976 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.376918 DATE COLLECTED: 9 / 26 / 1978

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 300.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-7 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
650.0			UNCONSOLIDATED	69.0	0.0
581.0	MODESTO		GRAY SHALE	18.0	69.0
563.0	MODESTO		LIMESTONE	4.0	87.0
559.0	MODESTO		BLACK SHALE	1.0	91.0
558.0	MODESTO		SANDY SHALE	98.0	92.0
460.0	MODESTO	CARLINVILLE	LIMESTONE	3.5	190.0
456.5	MODESTO		GRAY SHALE	32.5	193.5
424.0	MODESTO		BLACK SHALE	2.0	226.0
422.0	MODESTO	CHAPEL	COAL	0.5	228.0
421.5	MODESTO		GRAY SHALE	20.5	228.5
401.0	MODESTO	PIASA	LIMESTONE	4.5	249.0
396.5	MODESTO		BLACK SHALE	1.5	253.5
395.0	CARBONDALE		GRAY SHALE	6.0	255.0
389.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	261.0
387.0	CARBONDALE		SHALE	2.5	263.0
384.5	CARBONDALE		GRAY SHALE	9.7	265.5
374.8	CARBONDALE	BRERETON	LIMESTONE	1.8	275.2
373.0	CARBONDALE	ENERGY	GRAY SHALE	1.5	277.0
371.5	CARBONDALE	HERRIN	COAL	4.0	278.5
367.5	CARBONDALE		UNCLASSIFIED	0.8	282.5
366.7	CARBONDALE		CORE LOSS	1.2	283.3
365.5	CARBONDALE		LIMESTONE W/ SHALE	1.0	284.5
364.5	CARBONDALE		GRAY SHALE	14.5	285.5

MAPID: 11700028000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 21 QUARTERS/FOOTAGES: NE SE SE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.86983 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.379577 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 661.0 LOGGED (FT.): 327.2 LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
367.5	MODESTO	PIASA	LIMESTONE	4.0	293.5
363.5	MODESTO		UNCLASSIFIED	1.5	297.5
362.0	CARBONDALE	DANVILLE	COAL	0.3	299.0
361.7	CARBONDALE		UNCLASSIFIED	8.8	299.3
352.9	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	308.1
347.9	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.5	313.1
346.4	CARBONDALE		UNCLASSIFIED	1.5	314.6
344.9	CARBONDALE	BRERETON	LIMESTONE	3.7	316.1
341.2	CARBONDALE	ANNA	BLACK SHALE	1.2	319.8
340.0	CARBONDALE	HERRIN	COAL	6.2	321.0

MAPID: 11700028000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 21 QUARTERS/FOOTAGES: NE SE SE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.86983 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.379577 DATE COLLECTED:

SURFACE ELEVATION (FT.): 661.0 LOGGED (FT.): 327.2 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
367.3	MODESTO	PIASA	LIMESTONE	4.0	293.7
363.3	CARBONDALE		CALCAREOUS SHALE	10.5	297.7
352.8	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	308.2
347.8	CARBONDALE	LAWSON	GRAY SHALE	3.0	313.2
344.8	CARBONDALE	BRERETON	LIMESTONE & SHALE	3.7	316.2
341.2	CARBONDALE	ANNA	DARK GRAY SHALE	1.2	319.8
340.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	6.2	321.0

MAPID: 11700028000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 21 QUARTERS/FOOTAGES: NE SE SE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.86983 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.379577 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 661.2 LOGGED (FT.): 343.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE #A-2 WELL TYPE: Coal Test

COMMENT: T.WIESE FARM

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
661.2			SOIL	5.0	0.0	
656.2			CLAY	11.0	5.0	
645.2			HARD PAN	14.0	16.0	
631.2			SANDY CLAY	30.0	30.0	
601.2			HARD PAN	6.0	60.0	
595.2			SANDY CLAY	20.0	66.0	
575.2			CLAYSTONE & SHALE	12.0	86.0	
563.2	MODESTO		SHALE	5.0	98.0	W/LS
558.2	MODESTO		SHALE	13.0	103.0	
545.2	MODESTO		SHALE	13.0	116.0	
532.2	MODESTO		CALCAREOUS SHALE	4.5	129.0	
527.7	MODESTO		SANDY SHALE	36.5	133.5	
491.2	MODESTO	CHAPEL	COAL	0.3	170.0	
490.9	MODESTO		SHALE	3.7	170.3	
487.2	MODESTO		SHALE	2.0	174.0	
485.2	MODESTO		SANDY SHALE	10.0	176.0	W/LS
475.2	MODESTO		SANDY SHALE	14.0	186.0	
461.2	MODESTO		SHALE	34.0	200.0	
427.2	MODESTO	PIASA	LIMESTONE	3.0	234.0	
424.2	MODESTO		SHALE	15.0	237.0	
409.2	MODESTO		SANDY SHALE	16.0	252.0	
393.2	MODESTO		BLACK SHALE	1.8	268.0	
391.4	CARBONDALE	DANVILLE	COAL	0.8	269.8	
390.5	CARBONDALE		UNDERCLAY	3.3	270.7	
387.2	CARBONDALE		SANDY SHALE	11.0	274.0	
376.2	CARBONDALE		SHALE	7.0	285.0	W/LS
369.2	CARBONDALE		SHALE	1.5	292.0	
367.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	293.5	
363.7	CARBONDALE		SHALE	1.5	297.5	
362.2	CARBONDALE		SHALE	0.3	299.0	
361.9	CARBONDALE		SHALE	8.8	299.3	W/LS
353.2	CARBONDALE		LIMESTONE	5.0	308.0	
348.2	CARBONDALE		SHALE	3.0	313.0	
345.2	CARBONDALE	BRERETON	LIMESTONE	3.7	316.0	
341.5	CARBONDALE	ANNA	BLACK SHALE	1.2	319.7	
340.4	CARBONDALE	HERRIN	COAL	2.0	320.8	
338.4	CARBONDALE	HERRIN	SHALE	0.1	322.8	
338.3	CARBONDALE	HERRIN	COAL	4.1	322.9	
334.2	CARBONDALE		SHALE	4.0	327.0	

330.2	CARBONDALE	LIMESTONE	0.5	331.0
329.7	CARBONDALE	SHALE	8.5	331.5
321.2	CARBONDALE	LIMESTONE	1.4	340.0
319.7	CARBONDALE	SHALE	1.5	341.5

MAPID: 11721901000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 21 QUARTERS/FOOTAGES: 33' N line, 45' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.868913 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.39137 DATE COLLECTED: 12 / 12 / 1977

SURFACE ELEVATION (FT.): 665.0 LOGGED (FT.): 346.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-25 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
665.0			UNCONSOLIDATED	96.5	0.0
568.5	MODESTO	MACOUPIN	LIMESTONE	4.0	96.5
564.5	MODESTO		BLACK SHALE	1.0	100.5
563.5	MODESTO		GRAY SHALE	2.5	101.5
561.0	MODESTO		SHALY LIMESTONE	4.0	104.0
557.0	MODESTO		GRAY SHALE	30.0	108.0
527.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	138.0
523.0	MODESTO		BLACK SHALE	0.5	142.0
522.5	MODESTO		LIMESTONE	0.5	142.5
522.0	MODESTO		GRAY SHALE	33.5	143.0
488.5	MODESTO	CHAPEL	COAL	0.5	176.5
488.0	MODESTO		GRAY SHALE	41.0	177.0
447.0	MODESTO		GRAY SHALE	19.0	218.0
428.0	MODESTO		LIMESTONE	4.0	237.0
424.0	MODESTO		GRAY SHALE	26.0	241.0
398.0	MODESTO		SHALY LIMESTONE	1.5	267.0
396.5	MODESTO		GRAY SHALE	5.0	268.5
391.5	MODESTO		BLACK SHALE	2.5	273.5
389.0	MODESTO		COAL	1.0	276.0
388.0	MODESTO		GRAY SHALE	3.0	277.0
385.0	MODESTO		SILTY CLAYSTONE	0.4	280.0
384.6	MODESTO		SILTSTONE	3.2	280.4
381.4	MODESTO		SANDSTONE	2.9	283.6
378.5	MODESTO		CLAYSTONE	3.5	286.5
375.0	MODESTO		CLAYSTONE	2.0	290.0
373.0	MODESTO	PIASA	SHALY LIMESTONE	3.5	292.0
369.5	MODESTO	PIASA	SHALE	2.5	295.5
367.0	MODESTO	PIASA	LIMESTONE	1.6	298.0
365.4	MODESTO		CLAYSTONE	1.0	299.6
364.4	MODESTO		SILTSTONE	2.6	300.6
361.8	MODESTO		CALCAREOUS SANDSTONE	2.4	303.2
359.4	MODESTO		SILTSTONE	2.9	305.6
356.5	MODESTO		SHALE	2.4	308.5
354.1	MODESTO		CLAYSTONE	1.9	310.9
352.2	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	4.0	312.8
348.2	CARBONDALE	BANKSTON FORK	LIMESTONE	5.2	316.8
343.0	CARBONDALE		CALCAREOUS SHALE	1.0	322.0
342.0	CARBONDALE		SHALE	3.0	323.0

339.0	CARBONDALE		SHALE	1.5	326.0
337.5	CARBONDALE	HERRIN	COAL	5.7	327.5
331.7	CARBONDALE		CLAYSTONE	1.4	333.3
330.2	CARBONDALE		SHALY LIMESTONE	5.0	334.8
325.2	CARBONDALE		CLAYSTONE & SILTY SHALES	3.2	339.8
322.0	CARBONDALE		LIMESTONE	1.0	343.0
321.0	CARBONDALE		CLAYSTONE	2.0	344.0

MAPID: 11721902000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 22 QUARTERS/FOOTAGES: 63' N line, 165' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.850516 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.391237 DATE COLLECTED: 11 / 22 / 1977

SURFACE ELEVATION (FT.): 661.0 LOGGED (FT.): 350.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-26 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
661.0			UNCONSOLIDATED	90.0	0.0
571.0	MODESTO		GRAY SHALE	5.0	90.0
566.0	MODESTO		LIMESTONE	2.0	95.0
564.0	MODESTO		SANDY SHALE	25.0	97.0
539.0	MODESTO		GRAY SHALE	6.0	122.0
533.0	MODESTO	CARLINVILLE	LIMESTONE	4.5	128.0
528.5	MODESTO		BLACK SHALE	0.5	132.5
528.0	MODESTO		LIMESTONE	0.5	133.0
527.5	MODESTO		SANDY SHALE	29.5	133.5
498.0	MODESTO	CHAPEL	COAL	1.0	163.0
497.0	MODESTO		GRAY SHALE	3.0	164.0
494.0	MODESTO		SANDY SHALE	14.0	167.0
480.0	MODESTO		SANDY SHALE	25.0	181.0
455.0	MODESTO		SANDY SHALE	18.5	206.0
436.5	MODESTO		LIMESTONE	3.5	224.5
433.0	MODESTO		SHALE	5.0	228.0
428.0	MODESTO		SANDY SHALE	27.5	233.0
400.5	MODESTO		BLACK SHALE	2.0	260.5
398.5	MODESTO		COAL	0.5	262.5
398.0	MODESTO		GRAY SHALE	17.0	263.0
381.0	MODESTO	PIASA	LIMESTONE	5.5	280.0
375.5	MODESTO		SHALE	3.5	285.5
372.0	CARBONDALE		CALCAREOUS SHALE	14.0	289.0
358.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.5	303.0
350.5	CARBONDALE		GRAY SHALE	1.5	310.5
349.0	CARBONDALE	BRERETON	LIMESTONE	1.4	312.0
347.6	CARBONDALE	ANNA	BLACK SHALE	0.7	313.4
346.9	CARBONDALE	HERRIN	COAL	5.9	314.1
341.0	CARBONDALE		UNDERCLAY	2.5	320.0
338.5	CARBONDALE		LIMESTONE	5.5	322.5
333.0	CARBONDALE		BLACK SHALE	2.0	328.0
331.0	CARBONDALE		SANDY SHALE	20.0	330.0

MAPID: 11700029000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 23 QUARTERS/FOOTAGES: SE SW SW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.846248 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.377748 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 659.2 LOGGED (FT.): 334.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE A-1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
659.2			SOIL	3.0	0.0	
656.2			CLAY	17.0	3.0	
639.2			HARD PAN	18.0	20.0	
621.2			SANDY CLAY	32.0	38.0	
589.2			CLAY & GRAVEL	16.0	70.0	
573.2	MODESTO		LIMESTONE	6.0	86.0	
567.2	MODESTO		SHALE	8.0	92.0	
559.2	MODESTO		UNKNOWN	4.0	100.0	LOG HAS "BLUE"
555.2	MODESTO	MACOUPIN	LIMESTONE	5.0	104.0	CORRELATION UNCERTAIN
550.2	MODESTO		CALCAREOUS SHALE	9.0	109.0	
541.2	MODESTO	BURROUGHS	LIMESTONE	4.0	118.0	CORRELATION UNCERTAIN
537.2	MODESTO		SANDY SHALE	11.0	122.0	
526.2	MODESTO		SHALE	8.0	133.0	
518.2	MODESTO	CARLINVILLE	LIMESTONE	4.0	141.0	
514.2	MODESTO		SHALE	8.0	145.0	
506.2	MODESTO		SANDY SHALE	21.0	153.0	
485.2	MODESTO		SHALE	12.2	174.0	
473.0	MODESTO	CHAPEL	COAL	0.5	186.2	
472.5	MODESTO		UNDERCLAY	4.3	186.7	
468.2	MODESTO		SHALE	17.0	191.0	
451.2	MODESTO		SANDY SHALE	2.0	208.0	
449.2	MODESTO		SHALE	18.0	210.0	
431.2	MODESTO		SHALE	8.0	228.0	
423.2	MODESTO		LIMESTONE	2.0	236.0	
421.2	MODESTO		SHALE	7.0	238.0	
414.2	MODESTO		CALCAREOUS SHALE	2.0	245.0	
412.2	MODESTO		SANDY SHALE	15.0	247.0	
397.2	MODESTO		SHALE	11.5	262.0	
385.7	MODESTO		BLACK SHALE	2.5	273.5	
383.2	CARBONDALE	DANVILLE	COAL	1.0	276.0	
382.2	CARBONDALE		UNDERCLAY	4.0	277.0	
378.2	CARBONDALE		SHALE	2.0	281.0	
376.2	CARBONDALE		SANDSTONE	4.0	283.0	
372.2	CARBONDALE		SANDY SHALE	2.0	287.0	
370.2	CARBONDALE		CALCAREOUS SHALE	17.0	289.0	W/LS STREAKS
353.2	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	306.0	
346.2	CARBONDALE		CALCAREOUS SHALE	4.0	313.0	
342.2	CARBONDALE	BRERETON	LIMESTONE	6.0	317.0	
336.2	CARBONDALE	ANNA	BLACK SHALE	1.0	323.0	

335.2	CARBONDALE	HERRIN	COAL	7.5	324.0
327.7	CARBONDALE		UNDERCLAY	2.0	331.5
325.7	CARBONDALE		LIMESTONE	0.5	333.5

MAPID: 11700029000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 11N 7W **SECTION:** 23 **QUARTERS/FOOTAGES:** SE SW SW
QUADRANGLE: VIRDEN SOUTH **LONGITUDE:** -89.846248 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.377748 **DATE COLLECTED:** 0 / 0 / 1917
SURFACE ELEVATION (FT.): 659.0 **LOGGED (FT.):** 331.5 **LOG TYPE:** Drillers Log
SOURCE: HUNT R W & CO **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
366.0	MODESTO	PIASA	LIMESTONE	3.0	293.0
363.0	MODESTO		UNCLASSIFIED	2.5	296.0
360.5	CARBONDALE		UNCLASSIFIED	7.5	298.5
353.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	7.0	306.0
346.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	313.0
344.0	CARBONDALE		UNCLASSIFIED	2.0	315.0
342.0	CARBONDALE	BRERETON	LIMESTONE	6.0	317.0
336.0	CARBONDALE	ANNA	BLACK SHALE	1.0	323.0
335.0	CARBONDALE	HERRIN	COAL	7.5	324.0

MAPID: 11700876000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 11N 7W **SECTION:** 23 **QUARTERS/FOOTAGES:** 2930' S line, 2915' W line
QUADRANGLE: VIRDEN SOUTH **LONGITUDE:** -89.839478 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.384953 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 655.0 **LOGGED (FT.):** 335.8 **LOG TYPE:** Survey Core Study
SOURCE: TRUAX-TRAER COAL CO 5 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
362.5	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.3	292.5
358.2	MODESTO		CLAYSTONE	1.1	296.8
357.1	CARBONDALE		SANDSTONE/SILTSTONE	12.6	297.9
344.5	CARBONDALE		SILTY SHALE	0.2	310.5
344.3	CARBONDALE		GRAY SHALE	4.4	310.7
339.9	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	315.1
333.4	CARBONDALE	LAWSON	MOTTLED SHALE	3.5	321.6
329.9	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	1.0	325.1
328.9	CARBONDALE	ANNA	BLACK SHALE	3.9	326.1
325.0	CARBONDALE	HERRIN	COAL	5.8	330.0

MAPID: 11700876000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 23 QUARTERS/FOOTAGES: 2930' S line, 2915' W line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.839478 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.384953 DATE COLLECTED:

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 334.8 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO 5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
362.4	MODESTO	PIASA	LIMESTONE	4.3	292.6
358.1	MODESTO		UNCLASSIFIED	4.7	296.9
353.4	CARBONDALE		UNCLASSIFIED	13.7	301.6
339.7	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	315.3
333.2	CARBONDALE	ANVIL ROCK	SANDSTONE	0.6	321.8
332.6	CARBONDALE		SHALE	2.9	322.4
329.7	CARBONDALE	BRERETON	LIMESTONE	1.0	325.3
328.7	CARBONDALE	ANNA	BLACK SHALE	2.7	326.3
326.0	CARBONDALE	HERRIN	COAL	5.8	329.0

MAPID: 11700876000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 23 QUARTERS/FOOTAGES: 2930' S line, 2915' W line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.839478 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.384953 DATE COLLECTED:

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 336.0 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO 5 WELL TYPE: Coal Test

COMMENT: CORE C-4318; SEE COAL SEC MAP 6-117A&B

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
325.2	CARBONDALE	HERRIN	COAL	5.8	329.8

MAPID: 11721903000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 23 QUARTERS/FOOTAGES: 600' N line, 40' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.831267 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.389874 DATE COLLECTED: 11 / 21 / 1977

SURFACE ELEVATION (FT.): 658.0 LOGGED (FT.): 350.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-28 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
658.0			UNCONSOLIDATED	82.0	0.0
576.0	MODESTO		BLACK SHALE	2.0	82.0
574.0	MODESTO		CALCAREOUS SHALE	7.5	84.0
566.5	MODESTO	MACOUPIN	LIMESTONE	5.0	91.5
561.5	MODESTO		BLACK SHALE	2.0	96.5
559.5	MODESTO		GRAY SHALE	4.5	98.5
555.0	MODESTO		LIMESTONE	5.5	103.0
549.5	MODESTO		SANDY SHALE	23.0	108.5
526.5	MODESTO	CARLINVILLE	LIMESTONE	3.5	131.5
523.0	MODESTO		GRAY SHALE	34.0	135.0
489.0	MODESTO	CHAPEL	COAL	1.0	169.0
488.0	MODESTO		SANDY SHALE	15.0	170.0
473.0	MODESTO		GRAY SHALE	32.0	185.0
441.0	MODESTO		GRAY SHALE	18.0	217.0
423.0	MODESTO		LIMESTONE	2.0	235.0
421.0	MODESTO		SHALE	10.0	237.0
411.0	MODESTO		CALCAREOUS SHALE	23.0	247.0
388.0	MODESTO		BLACK SHALE	2.0	270.0
386.0	MODESTO		GRAY SHALE	3.5	272.0
382.5	MODESTO		LIMESTONE	3.5	275.5
379.0	MODESTO		SANDSTONE	4.0	279.0
375.0	MODESTO		GRAY SHALE	8.5	283.0
366.5	MODESTO	PIASA	LIMESTONE	2.5	291.5
364.0			SANDY SHALE	14.0	294.0
350.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	308.0
343.5	CARBONDALE		GRAY SHALE	4.5	314.5
339.0	CARBONDALE	BRERETON	LIMESTONE	4.0	319.0
335.0	CARBONDALE	ANNA	BLACK SHALE	1.0	323.0
334.0	CARBONDALE	HERRIN	COAL	6.9	324.0
327.1	CARBONDALE		UNDERCLAY	1.1	330.9
326.0	CARBONDALE		UNDERCLAY	0.8	332.0
325.2	CARBONDALE		SHALY LIMESTONE	6.2	332.8
319.0	CARBONDALE		GRAY SHALE	5.0	339.0
314.0	CARBONDALE		LIMESTONE	3.0	344.0
311.0	CARBONDALE		GRAY SHALE	3.0	347.0

MAPID: 11700030000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 24 QUARTERS/FOOTAGES: SW SW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.828714 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.378734 DATE COLLECTED: 0 / 0 / 1913

SURFACE ELEVATION (FT.): 663.0 LOGGED (FT.): 329.5 LOG TYPE: Drillers Log

SOURCE: PEABODY COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
348.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	315.0	
346.0	CARBONDALE		UNCLASSIFIED	2.0	317.0	
344.0	CARBONDALE	BRERETON	LIMESTONE	3.0	319.0	
341.0	CARBONDALE	ANNA	BLACK SHALE	1.0	322.0	
340.0	CARBONDALE	HERRIN	COAL	6.5	323.0	

MAPID: 11700883000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 24 QUARTERS/FOOTAGES: 2030' N line, 155' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.812842 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.385903 DATE COLLECTED:

SURFACE ELEVATION (FT.): 661.0 LOGGED (FT.): 325.6 LOG TYPE: Survey Core Study

SOURCE: TRUAX-TRAER COAL CO 6 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
381.7	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.6	279.3	
377.1	CARBONDALE		CLAYSTONE	3.8	283.9	
373.3	CARBONDALE		SANDSTONE	7.8	287.7	
365.6	CARBONDALE	ALLENBY	CARBONACEOUS SHALE	1.5	295.4	
364.1	CARBONDALE		GRAY SHALE	5.5	296.9	
358.6	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	6.3	302.4	
352.2	CARBONDALE	LAWSON	CALCAREOUS SHALE	0.8	308.8	
351.4	CARBONDALE	LAWSON	GRAY SHALE	1.8	309.6	
349.7	CARBONDALE	LAWSON	MOTTLED SHALE	1.5	311.3	
348.2	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	7.8	312.8	
340.4	CARBONDALE	ANNA	BLACK SHALE	0.4	320.6	
340.0	CARBONDALE	HERRIN	COAL	4.6	321.0	

MAPID: 11700883000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 24 QUARTERS/FOOTAGES: 2030' N line, 155' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.812842 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.385903 DATE COLLECTED:

SURFACE ELEVATION (FT.): 661.0 LOGGED (FT.): 325.6 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO 6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
382.2	MODESTO	PIASA	LIMESTONE	3.0	278.8
379.2	MODESTO		UNCLASSIFIED	1.7	281.8
377.5	CARBONDALE	DANVILLE	COAL	0.1	283.5
377.4	CARBONDALE		UNCLASSIFIED	18.5	283.6
358.9	CARBONDALE	BANKSTON FORK	LIMESTONE	6.3	302.1
352.6	CARBONDALE	ANVIL ROCK	SANDSTONE	2.6	308.4
350.0	CARBONDALE		SHALE	1.5	311.0
348.5	CARBONDALE	BRERETON	LIMESTONE	7.8	312.5
340.7	CARBONDALE	ANNA	BLACK SHALE	0.7	320.3
340.0	CARBONDALE	HERRIN	COAL	4.6	321.0

MAPID: 11700883000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 24 QUARTERS/FOOTAGES: 2030' N line, 155' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.812842 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.385903 DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.7 LOGGED (FT.): 330.8 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO 6 WELL TYPE: Coal Test

COMMENT: CORE C-4319; SEE COAL SEC MAP 6-117 A&B

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
339.7	CARBONDALE	HERRIN	COAL	4.6	321.0

MAPID: 11700883000C VERSION: 4

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 24 QUARTERS/FOOTAGES: 2030' N line, 155' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.812842 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.385903 DATE COLLECTED: 1 / 18 / 1961

SURFACE ELEVATION (FT.): 660.7 LOGGED (FT.): 330.8 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO 6 WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
660.7	PLEISTOCENE		UNCONSOLIDATED	10.0	0.0	
650.7	PLEISTOCENE		SANDY CLAY	33.5	10.0	GRAY
617.2	PLEISTOCENE		SAND/CLAY	54.5	43.5	SD
562.7	PLEISTOCENE		SAND/CLAY	37.0	98.0	
525.7			SANDY CLAY	45.0	135.0	GRAY
480.7			LIMESTONE	27.0	180.0	GRAY
453.7			GRAY SHALE	17.6	207.0	
436.1			SANDY SHALE	26.4	224.6	
409.7			UNCLASSIFIED	14.0	251.0	
395.7			SHALE	11.4	265.0	
384.3			SHALE	10.0	276.4	
374.3			SHALY SANDSTONE	12.9	286.4	
361.4			LIMESTONE W/ SHALE	10.0	299.3	
351.4			SHALE/COAL	16.4	309.3	
335.0			SHALE WITH LIMESTONE	5.2	325.7	

MAPID: 11721904000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 24 QUARTERS/FOOTAGES: 24' S line, 1301' W line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.826425 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.376977 DATE COLLECTED: 9 / 22 / 1978

SURFACE ELEVATION (FT.): 659.0 LOGGED (FT.): 347.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-14 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
659.0			UNCONSOLIDATED	110.0	0.0
549.0	MODESTO		GRAY SHALE	23.0	110.0
526.0	MODESTO	CARLINVILLE	LIMESTONE	3.0	133.0
523.0	MODESTO		BLACK SHALE	1.0	136.0
522.0	MODESTO		SANDY SHALE	8.0	137.0
514.0	MODESTO		GRAY SHALE	26.8	145.0
487.2	MODESTO	CHAPEL	COAL	1.2	171.8
486.0	MODESTO		GRAY SHALE	1.5	173.0
484.5	MODESTO		LIMESTONE	2.5	174.5
482.0	MODESTO		GRAY SHALE	15.0	177.0
467.0	MODESTO		LIMESTONE	3.0	192.0
464.0	MODESTO		GRAY SHALE	33.0	195.0
431.0	MODESTO		GRAY SHALE	12.0	228.0
419.0	MODESTO		LIMESTONE	1.0	240.0
418.0	MODESTO		SHALE	6.0	241.0
412.0	MODESTO		SANDY SHALE	10.0	247.0
402.0	MODESTO		GRAY SHALE	18.0	257.0
384.0	MODESTO		BLACK SHALE	2.0	275.0
382.0	MODESTO		COAL	1.0	277.0
381.0	MODESTO		GRAY SHALE	11.0	278.0
370.0	MODESTO		SANDSTONE	2.0	289.0
368.0	MODESTO		GRAY SHALE	7.0	291.0
361.0	MODESTO	PIASA	LIMESTONE	2.5	298.0
358.5	MODESTO		BLACK SHALE	2.0	300.5
356.5	CARBONDALE		GRAY SHALE	5.5	302.5
351.0	CARBONDALE		LIMESTONE	1.0	308.0
350.0	CARBONDALE		SHALE	3.0	309.0
347.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.3	312.0
341.7	CARBONDALE		SHALE	4.2	317.3
337.5	CARBONDALE	BRERETON	LIMESTONE	0.5	321.5
337.0	CARBONDALE		SHALE	3.7	322.0
333.3	CARBONDALE	HERRIN	COAL	6.4	325.7
326.9	CARBONDALE		UNDERCLAY	0.1	332.1
326.7	CARBONDALE		UNDERCLAY	1.0	332.3
325.8	CARBONDALE		CORE LOSS	0.3	333.2
325.5	CARBONDALE		LIMESTONE	9.5	333.5
316.0	CARBONDALE		GRAY SHALE	1.0	343.0
315.0	CARBONDALE		LIMESTONE	3.0	344.0

MAPID: 11721905000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 24 QUARTERS/FOOTAGES: 1983' N line, 30' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.812398 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.386034 DATE COLLECTED: 11 / 17 / 1977

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 340.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-29 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
660.0			UNCONSOLIDATED	89.0	0.0
571.0	MODESTO	MACOUPIN	LIMESTONE	1.5	89.0
569.5	MODESTO		BLACK SHALE	3.0	90.5
566.5	MODESTO		GRAY SHALE	7.0	93.5
559.5	MODESTO		CALCAREOUS SHALE	8.0	100.5
551.5	MODESTO		GRAY SHALE	20.5	108.5
531.0	MODESTO		SANDSTONE/SHALE	20.5	129.0
510.5	MODESTO		GRAY SHALE	8.0	149.5
502.5	MODESTO	CHAPEL	COAL	1.0	157.5
501.5	MODESTO		GRAY SHALE	3.0	158.5
498.5	MODESTO		SHALY LIMESTONE	1.5	161.5
497.0	MODESTO		GRAY SHALE	45.5	163.0
451.5	MODESTO		GRAY SHALE	17.5	208.5
434.0	MODESTO		LIMESTONE	2.0	226.0
432.0	MODESTO		SHALE	8.0	228.0
424.0	MODESTO		GRAY SHALE	14.0	236.0
410.0	MODESTO		BLACK SHALE	2.0	250.0
408.0	MODESTO		SHALE	4.5	252.0
403.5	MODESTO		GRAY SHALE	13.5	256.5
390.0	MODESTO		GRAY SHALE	5.5	270.0
384.5	MODESTO		CALCAREOUS SHALE	5.0	275.5
379.5	MODESTO		LIMESTONE	1.5	280.5
378.0	MODESTO		SHALE	2.0	282.0
376.0	MODESTO	PIASA	LIMESTONE	4.0	284.0
372.0	MODESTO	PIASA	SHALE	3.0	288.0
369.0	MODESTO	PIASA	LIMESTONE	4.0	291.0
365.0	MODESTO		SHALE	1.0	295.0
364.0	CARBONDALE		SHALE	6.5	296.0
357.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	302.5
351.5	CARBONDALE		GRAY SHALE	3.0	308.5
348.5	CARBONDALE	BRERETON	LIMESTONE	5.5	311.5
343.0	CARBONDALE	ANNA	BLACK SHALE	2.1	317.0
340.9	CARBONDALE	HERRIN	COAL	5.6	319.1
335.3	CARBONDALE		UNDERCLAY	1.3	324.7
334.1	CARBONDALE		LIMESTONE	0.9	325.9
333.2	CARBONDALE		CORE LOSS	0.3	326.8
332.9	CARBONDALE		LIMESTONE	8.9	327.1
324.0	CARBONDALE		GRAY SHALE	2.0	336.0
322.0	CARBONDALE		LIMESTONE	1.0	338.0

321.0 CARBONDALE

GRAY SHALE

1.0 339.0

MAPID: 11701176000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 25 QUARTERS/FOOTAGES: 1650' N line, 330' W line of NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.820439

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.372364

DATE COLLECTED: 8 / 0 / 1968

SURFACE ELEVATION (FT.): 665.0

LOGGED (FT.): 354.5

LOG TYPE: Electric Log

SOURCE: DESCH O G

WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
350.0	MODESTO	PIASA	LIMESTONE	3.5	315.0
346.5	MODESTO		UNCLASSIFIED	3.5	318.5
343.0	CARBONDALE		UNCLASSIFIED	10.0	322.0
333.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.5	332.0
326.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.5	338.5
324.0	CARBONDALE	CONANT	UNCLASSIFIED	0.5	341.0
323.5	CARBONDALE		UNCLASSIFIED	2.5	341.5
321.0	CARBONDALE	BRERETON	LIMESTONE	2.0	344.0
319.0	CARBONDALE	ANNA	BLACK SHALE	2.0	346.0
317.0	CARBONDALE	HERRIN	COAL	6.5	348.0

MAPID: 11721906000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 25 QUARTERS/FOOTAGES: 36' N line, 42' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.812407 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.376833 DATE COLLECTED: 10 / 6 / 1978

SURFACE ELEVATION (FT.): 661.0 LOGGED (FT.): 370.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-15 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
661.0			UNCONSOLIDATED	98.5	0.0
562.5	MODESTO		LIMESTONE	1.5	98.5
561.0	MODESTO		GRAY SHALE	4.0	100.0
557.0	MODESTO	MACOUPIN	LIMESTONE	4.0	104.0
553.0	MODESTO		GRAY SHALE	1.0	108.0
552.0	MODESTO		BLACK SHALE	3.0	109.0
549.0	MODESTO		GRAY SHALE	7.0	112.0
542.0	MODESTO		LIMESTONE	1.0	119.0
541.0	MODESTO		SANDY SHALE	37.5	120.0
503.5	MODESTO		SANDSTONE	16.5	157.5
487.0	MODESTO		GRAY SHALE	7.5	174.0
479.5	MODESTO	CHAPEL	COAL	1.0	181.5
478.5	MODESTO		GRAY SHALE	52.0	182.5
426.5	MODESTO		GRAY SHALE	17.5	234.5
409.0	MODESTO		LIMESTONE	1.0	252.0
408.0	MODESTO		SHALE	7.5	253.0
400.5	MODESTO		GRAY SHALE	21.5	260.5
379.0	MODESTO		BLACK SHALE	2.5	282.0
376.5	MODESTO		COAL	0.5	284.5
376.0	MODESTO		GRAY SHALE	13.0	285.0
363.0	MODESTO		LIMESTONE	3.0	298.0
360.0	MODESTO		GRAY SHALE	7.0	301.0
353.0	MODESTO	PIASA	LIMESTONE	3.0	308.0
350.0	MODESTO		BLACK SHALE	2.0	311.0
348.0	CARBONDALE		GRAY SHALE	10.8	313.0
337.2	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	323.8
331.2	CARBONDALE		SHALE	3.1	329.8
328.1	CARBONDALE	BRERETON	SHALY LIMESTONE	3.1	332.9
325.0	CARBONDALE	ANNA	BLACK SHALE	3.5	336.0
321.5	CARBONDALE	HERRIN	COAL	6.8	339.5
314.7	CARBONDALE		CLAYSTONE	0.2	346.3
314.5	CARBONDALE		CORE LOSS	0.6	346.5
314.0	CARBONDALE		SHALE	3.0	347.0
311.0	CARBONDALE		LIMESTONE	6.0	350.0
305.0	CARBONDALE		BLACK SHALE	1.5	356.0
303.5	CARBONDALE		GRAY SHALE	1.5	357.5
302.0	CARBONDALE		LIMESTONE	4.0	359.0
298.0	CARBONDALE		SHALE	6.0	363.0
292.0	CARBONDALE		LIMESTONE W/ SHALE	1.0	369.0

MAPID: 11721908000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 25 QUARTERS/FOOTAGES: 2634' N line, 1353' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.826178

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.369637

DATE COLLECTED: 9 / 26 / 1978

SURFACE ELEVATION (FT.): 659.0 LOGGED (FT.): 340.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-12

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
659.0			UNCONSOLIDATED	111.0	0.0
548.0	MODESTO		GRAY SHALE	9.0	111.0
539.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	120.0
535.0	MODESTO		BLACK SHALE	0.5	124.0
534.5	MODESTO		LIMESTONE	0.5	124.5
534.0	MODESTO		SANDY SHALE	28.0	125.0
506.0	MODESTO		GRAY SHALE	13.5	153.0
492.5	MODESTO	CHAPEL	COAL	0.5	166.5
492.0	MODESTO		GRAY SHALE	43.0	167.0
449.0	MODESTO		GRAY SHALE	15.0	210.0
434.0	MODESTO		LIMESTONE	3.0	225.0
431.0	MODESTO		SHALE	5.0	228.0
426.0	MODESTO		GRAY SHALE	24.0	233.0
402.0	MODESTO		BLACK SHALE	2.5	257.0
399.5	MODESTO		COAL	0.5	259.5
399.0	MODESTO		SANDY SHALE	13.0	260.0
386.0	MODESTO		GRAY SHALE	10.5	273.0
375.5	MODESTO	PIASA	LIMESTONE	2.5	283.5
373.0	MODESTO		BLACK SHALE	2.0	286.0
371.0	CARBONDALE		GRAY SHALE	12.0	288.0
359.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.7	300.0
353.3	CARBONDALE		GRAY SHALE	3.3	305.7
350.0	CARBONDALE	BRERETON	LIMESTONE	4.5	309.0
345.5	CARBONDALE	ANNA	BLACK SHALE	1.5	313.5
344.0	CARBONDALE	HERRIN	COAL	6.5	315.0
337.5	CARBONDALE		CLAYSTONE	0.9	321.5
336.6	CARBONDALE		SHALY LIMESTONE	0.6	322.4
336.0	CARBONDALE		CALCAREOUS SHALE	3.0	323.0
333.0	CARBONDALE		BLACK SHALE	1.5	326.0
331.5	CARBONDALE		CALCAREOUS SHALE	6.5	327.5
325.0	CARBONDALE		GRAY SHALE	6.0	334.0

MAPID: 11700887000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 26 QUARTERS/FOOTAGES: 2620' S line, 1380' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.835894

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.369513

DATE COLLECTED:

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 352.6

LOG TYPE: Survey Core Study

SOURCE: TRUAX-TRAER COAL CO 10

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
339.1	MODESTO	PIASA	NODULAR LIMESTONE	1.0	316.9
338.1	MODESTO		GRAY SHALE	4.6	317.9
333.5	CARBONDALE		CLAYSTONE	0.8	322.5
332.7	CARBONDALE	GALUM	CALCAREOUS SHALE	1.6	323.3
331.2	CARBONDALE		MOTTLED SHALE	3.2	324.8
328.0	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	6.3	328.0
321.7	CARBONDALE	LAWSON	CLAYSTONE	3.5	334.3
318.2	CARBONDALE	LAWSON	NODULAR LIMESTONE	0.2	337.8
318.0	CARBONDALE	LAWSON	MOTTLED SHALE	0.3	338.0
317.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	4.8	338.3
312.9	CARBONDALE	ANNA	BLACK SHALE	1.9	343.1
311.0	CARBONDALE	HERRIN	COAL	7.6	345.0

MAPID: 11700887000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 26 QUARTERS/FOOTAGES: 2620' S line, 1380' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.835894

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.369513

DATE COLLECTED:

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 352.6

LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO 10

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
354.0	MODESTO	PIASA	LIMESTONE	3.8	302.0
350.2	MODESTO		UNCLASSIFIED	3.1	305.8
347.1	CARBONDALE	DANVILLE	COAL	0.2	308.9
346.9	CARBONDALE		UNCLASSIFIED	18.0	309.1
328.9	CARBONDALE	BANKSTON FORK	LIMESTONE	7.1	327.1
321.8	CARBONDALE	ANVIL ROCK	SANDSTONE	3.5	334.2
318.3	CARBONDALE	CONANT	LIMESTONE	0.3	337.7
318.0	CARBONDALE		SHALE	0.2	338.0
317.8	CARBONDALE	BRERETON	LIMESTONE	4.8	338.2
313.0	CARBONDALE	ANNA	BLACK SHALE	2.0	343.0
311.0	CARBONDALE	HERRIN	COAL	7.6	345.0

MAPID: 11700887000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 26 QUARTERS/FOOTAGES: 2620' S line, 1380' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.835894 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.369513 DATE COLLECTED:

SURFACE ELEVATION (FT.): 656.3 LOGGED (FT.): 352.8 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO 10 WELL TYPE: Coal Test

COMMENT: CORE C-4321 ;SEE COAL SEC MAP 6-117 A&B

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
361.2	CARBONDALE	DANVILLE	COAL	0.8	295.1	
311.3	CARBONDALE	HERRIN	COAL	7.6	345.0	

MAPID: 11700887000C VERSION: 4

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 26 QUARTERS/FOOTAGES: 2620' S line, 1380' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.835894 GEOLOGIST: UITEMP

CONFIDENTIAL: N LATITUDE: 39.369513 DATE COLLECTED: 2 / 13 / 1961

SURFACE ELEVATION (FT.): 656.3 LOGGED (FT.): 352.8 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO 10 WELL TYPE:

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
656.3	PLEISTOCENE		SOIL	63.0	0.0	
593.3	PLEISTOCENE		CLAY	60.0	63.0	
533.3	PLEISTOCENE		SANDY CLAY	38.0	123.0	
495.3	PLEISTOCENE		SAND	44.0	161.0	
451.3	PLEISTOCENE		SANDY CLAY	45.7	205.0	GRAY
405.6	PLEISTOCENE		SANDY CLAY	9.3	250.7	GRAY
396.3	PLEISTOCENE		SANDY CLAY	14.7	260.0	GRAY
381.6			SANDY SHALE	23.4	274.7	
358.2			SANDY SHALE	20.0	298.1	
338.2			SHALE WITH LIMESTONE	16.0	318.1	
322.2			SHALE WITH LIMESTONE	3.9	334.1	
318.3	CARBONDALE	HERRIN	COAL W/SHALE & LIMESTONE	14.9	338.0	

MAPID: 11721907000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 26 QUARTERS/FOOTAGES: 34' N line, 1989' W line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.842669 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.376756 DATE COLLECTED: 11 / 21 / 1979

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 335.1 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-19 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
660.0			UNCONSOLIDATED	110.0	0.0
550.0	MODESTO		SHALE	4.0	110.0
546.0	MODESTO		SANDY SHALE	19.0	114.0
527.0	MODESTO	CARLINVILLE	LIMESTONE	4.0	133.0
523.0	MODESTO		SANDY SHALE	34.5	137.0
488.5	MODESTO	CHAPEL	COAL	1.0	171.5
487.5	MODESTO		GRAY SHALE	38.0	172.5
449.5	MODESTO		GRAY SHALE	17.5	210.5
432.0	MODESTO		LIMESTONE	3.0	228.0
429.0	MODESTO		GRAY SHALE	6.5	231.0
422.5	MODESTO		SANDY SHALE	27.5	237.5
395.0	MODESTO		BLACK SHALE	3.0	265.0
392.0	MODESTO		COAL	0.5	268.0
391.5	MODESTO		GRAY SHALE	2.5	268.5
389.0	MODESTO		GRAY SHALE	10.0	271.0
379.0	MODESTO		GRAY SHALE	10.0	281.0
369.0	MODESTO	PIASA	LIMESTONE	2.0	291.0
367.0	MODESTO		BLACK SHALE	2.0	293.0
365.0	CARBONDALE		CALCAREOUS SHALE	8.0	295.0
357.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.8	303.0
351.2	CARBONDALE		SHALE	1.2	308.8
350.0	CARBONDALE		SHALE	3.5	310.0
346.5	CARBONDALE	HERRIN	COAL	6.6	313.5
340.0	CARBONDALE		CLAYSTONE & SILTSTONE	1.0	320.0
339.0	CARBONDALE		CLAYSTONE	10.5	321.0
328.5	CARBONDALE		LIMESTONE	2.5	331.5
326.0	CARBONDALE		CLAYSTONE & SILTSTONE	1.1	334.0

MAPID: 11721909000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 26 QUARTERS/FOOTAGES: 580' S line, 35' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.831063

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.36392

DATE COLLECTED: 9 / 20 / 1978

SURFACE ELEVATION (FT.): 654.0

LOGGED (FT.): 363.5

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-13

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
654.0			UNCONSOLIDATED	146.0	0.0
508.0	MODESTO	CARLINVILLE	LIMESTONE	2.8	146.0
505.2	MODESTO		BLACK SHALE	0.7	148.8
504.5	MODESTO		LIMESTONE	0.5	149.5
504.0	MODESTO		SANDY SHALE	33.5	150.0
470.5	MODESTO	CHAPEL	COAL	0.9	183.5
469.6	MODESTO		SANDY SHALE	21.6	184.4
448.0	MODESTO		GRAY SHALE	46.0	206.0
402.0	MODESTO		LIMESTONE	2.0	252.0
400.0	MODESTO		GRAY SHALE	5.0	254.0
395.0	MODESTO		SANDY SHALE	25.5	259.0
369.5	MODESTO		BLACK SHALE	3.0	284.5
366.5	MODESTO		COAL	0.7	287.5
365.8	MODESTO		GRAY SHALE	21.8	288.2
344.0	MODESTO	PIASA	SHALY LIMESTONE	8.3	310.0
335.7	MODESTO		CLAYSTONE	0.2	318.3
335.5	CARBONDALE	DANVILLE	COAL	0.2	318.5
335.3	CARBONDALE		CLAYSTONE	7.7	318.7
327.6	CARBONDALE		CORE LOSS	1.0	326.4
326.7	CARBONDALE	BANKSTON FORK	SHALY LIMESTONE	7.3	327.3
319.4	CARBONDALE		SHALE	1.0	334.6
318.4	CARBONDALE		SHALY LIMESTONE	1.6	335.6
316.8	CARBONDALE		SHALE	1.7	337.2
315.1	CARBONDALE	BRERETON	SHALY LIMESTONE	0.7	338.9
314.4	CARBONDALE	ANNA	BLACK SHALE	1.5	339.6
312.9	CARBONDALE	HERRIN	COAL	7.4	341.1
305.5	CARBONDALE		UNDERCLAY	1.5	348.5
304.0	CARBONDALE		LIMESTONE	4.8	350.0
299.2	CARBONDALE		SHALE	3.8	354.8
295.4	CARBONDALE		SHALE	4.6	358.6
290.8	CARBONDALE		CORE LOSS	0.3	363.2

MAPID: 11722516000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 26 QUARTERS/FOOTAGES: NW SE SW

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.843778 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.364963 DATE COLLECTED: 12 / 25 / 1981

SURFACE ELEVATION (FT.): LOGGED (FT.): 113.5 LOG TYPE: Drillers Log

SOURCE: MOBIL OIL CORP.-MINING & COAL IV., #S-4 WELL TYPE: Coal Test

COMMENT: NO ELEV. GIVEN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			SOIL	5.0	0.0	
-			SILTY CLAY	10.0	5.0	W/ REDDISH MOTTLING
-			SILTY CLAY	15.0	15.0	W/ SAND & GRAVEL
-			SAND/CLAY	5.0	30.0	W/ CARBONACEOUS MATERIAL
-			SILTY CLAY	10.0	35.0	W/ SAND & GRAVEL
-			SILTY CLAY	20.0	45.0	W/ SAND
-			SILTY CLAY	38.0	65.0	W/ SAND & GRAVEL
-	MODESTO		LIMESTONE	0.5	103.0	
-	MODESTO		SILTSTONE	10.0	103.5	W/ SS

MAPID: 11722518000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 26 QUARTERS/FOOTAGES: 1250' N line, 3250' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.838146

GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.373421

DATE COLLECTED: 8 / 8 / 1981

SURFACE ELEVATION (FT.): 655.8 LOGGED (FT.): 359.5

LOG TYPE: Company Sample Study

SOURCE: MOBIL OIL CORP.-MINING & COAL DIV., #D-1

WELL TYPE: Observation Well

COMMENT: HYDROLOGIC OBS. WELL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
655.8			SOIL	5.0	0.0	
650.8			SILTY CLAY	10.0	5.0	W/ ORANGE MOTTLES
640.8			CLAY & GRAVEL	5.0	15.0	SILTY GRAY-GREEN CLAY
635.8			SAND/CLAY	15.0	20.0	DARK GRAY SILTY CLAY
620.8			SAND	2.0	35.0	
618.8			CLAY	3.0	37.0	W/ WOOD CHIPS
615.8			CLAY	5.0	40.0	W/ DARK BRN ORGANIC MOTTLES
610.8			SILTY CLAY	5.0	45.0	W/ SAND
605.8			CLAY	5.0	50.0	W/ ORANGE MOTTLES
600.8			CLAY & GRAVEL	5.0	55.0	
595.8			SILTY CLAY	15.0	60.0	W/ SOME SAND & GRAVEL
580.8			SAND & GRAVEL	5.0	75.0	
575.8			SILTY CLAY	15.0	80.0	W/ SOME SAND & GRAVEL
560.8			CORE LOSS	5.0	95.0	
555.8			SILTY CLAY	25.0	100.0	W/ SOME SAND & GRAVEL
530.8				5.0	125.0	
525.8			CLAY	5.0	130.0	
520.8	MODESTO		CLAYSTONE & SILTSTONE	6.5	135.0	
514.3	MODESTO	CARLINVILLE	LIMESTONE	4.0	141.5	FOSSILIFEROUS AT BASE
510.3	MODESTO		BLACK SHALE	0.5	145.5	
509.8	MODESTO		FOSSILIFEROUS LIMESTONE	0.8	146.0	
509.0	MODESTO		CLAYSTONE & SILTSTONE	3.7	146.8	
505.3	MODESTO		CLAYSTONE & SANDSTONE	19.5	150.5	RIPPLE LAMS AND X-BDDING
485.8	MODESTO		SILTY CLAYSTONE	11.2	170.0	CLYST & SLST; CHERTY SS LENSES NEAR BASE
474.6	MODESTO	CHAPEL	COAL	1.0	181.2	W/ PYRITE CLEAT & VEIN FILLS.
473.6	MODESTO		CLAYSTONE & SILTSTONE	3.8	182.2	W/ LS NODS. AT BASE
469.8	MODESTO		SANDSTONE	4.5	186.0	W/ LS NODS.
465.3	MODESTO		CLAYSTONE & SANDSTONE	8.0	190.5	X-BDDED NEAR BASE
457.3	MODESTO		SANDSTONE	3.9	198.5	
453.4	MODESTO		CLAYSTONE & SANDSTONE	7.6	202.4	
445.8	MODESTO		CLAYSTONE & SILTSTONE	36.5	210.0	W/ SLTST LENSES FROM 220
409.3	MODESTO	PIASA	LIMESTONE	2.2	246.5	
407.1	MODESTO		CLAYSTONE & SILTSTONE	7.3	248.7	W/ SOME SLTST & SS BANDS
399.8	MODESTO		SANDSTONE	27.6	256.0	W/ CLYST PARTINGS
372.2	MODESTO		CLAYSTONE & SILTSTONE	2.0	283.6	

370.2	CARBONDALE	DANVILLE	COAL	0.6	285.6	
369.6	CARBONDALE		SILTY CLAYSTONE	6.8	286.2	W/ CALCITE CONCRETS IN LOWER 1/2
362.8	CARBONDALE	ANVIL ROCK	SANDSTONE	7.0	293.0	W/ SILTY LAMS
355.8	CARBONDALE		SILTSTONE	9.0	300.0	W/ CLYST & SS
346.8	CARBONDALE		SILTY CLAYSTONE	3.3	309.0	
343.5	CARBONDALE		CLAYSTONE & SILTSTONE	1.4	312.3	
342.1	CARBONDALE		CLAYSTONE & SILTSTONE	6.3	313.7	W/ SOME CALC. CONCRETS.
335.8	CARBONDALE		LIMESTONE	1.7	320.0	
334.1	CARBONDALE		CLAYSTONE & SILTSTONE	1.0	321.7	W/ LS NODS.
333.1	CARBONDALE	BRERETON	LIMESTONE	6.3	322.7	
326.8	CARBONDALE		CLAYSTONE & SILTSTONE	1.0	329.0	
325.8	CARBONDALE		CLAYSTONE & SILTSTONE	3.0	330.0	
322.8	CARBONDALE		CALCAREOUS CLAYSTONE	0.4	333.0	
322.4	CARBONDALE	ANNA	CLAYSTONE & SILTSTONE	2.4	333.4	
320.0	CARBONDALE	HERRIN	COAL	7.4	335.8	
312.6	CARBONDALE		CLAYSTONE & SILTSTONE	5.4	343.2	W/ LS NODS.
307.2	CARBONDALE		CLAYSTONE & SILTSTONE	1.4	348.6	
305.8	CARBONDALE		CLAYSTONE & SILTSTONE	3.0	350.0	
302.8	CARBONDALE		LIMESTONE & CLAY	6.5	353.0	CLYST W/ LS NODS.

MAPID: 11722519000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 26 QUARTERS/FOOTAGES: 950' N line, 5100' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.831574

GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.374276

DATE COLLECTED: 7 / 25 / 1981

SURFACE ELEVATION (FT.): 658.0 LOGGED (FT.): 98.3

LOG TYPE: Drillers Log

SOURCE: MOBIL OIL CORP.-MINING & COAL DIV., #S-5

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	UNIT	OVERBURDEN	COMMENT
658.0			SOIL	2.5	0.0		
655.5			SILTY CLAY	10.5	2.5		W/ ORANGE MOTTLES
645.0			CLAY, SAND & GRAVEL	13.0	13.0		
632.0			CLAY, SAND & SILTSTONE	14.0	26.0		SOME GRAVEL
618.0			SILTY CLAY	5.0	40.0		SOME GRAVEL & WOOD CHIPS
613.0			CLAY	5.0	45.0		SOME SAND
608.0			SANDY CLAY	10.0	50.0		W/ SOME SAND & GRAVEL
598.0			SAND/CLAY	5.0	60.0		
593.0			SILTY CLAY	28.0	65.0		W/ SOME SAND & GRAVEL
565.0	MODESTO		CLAYSTONE & SILTSTONE	0.8	93.0		
564.2	MODESTO		LIMESTONE	3.5	93.8		
560.7	MODESTO		CLAYSTONE & SILTSTONE	1.0	97.3		

MAPID: 11722520000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 26 QUARTERS/FOOTAGES: 250' N line, 3100' W line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.838711 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.376177 DATE COLLECTED: 7 / 12 / 1981

SURFACE ELEVATION (FT.): 659.4 LOGGED (FT.): 370.0 LOG TYPE: Company Sample Study

SOURCE: MOBIL OIL CORP.-MINING & COAL DIV., #D-3 WELL TYPE: Observation Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
659.4			SOIL	1.5	0.0	
657.9			SILTY CLAY	4.5	1.5	W/ ORANGE MOTTLES
653.4			CLAY & GRAVEL	10.4	6.0	
643.0			UNCONSOLIDATED	33.6	16.4	SNDY CL, SND, GRV, DRK GRAY CL
609.4			SILTY CLAY	10.0	50.0	
599.4			SAND/CLAY	11.1	60.0	
588.3			SILTY CLAY	45.8	71.1	FOR THE MOST PART DRK GRAY
542.5			SAND	3.1	116.9	W/ SOME GRV & CL
539.4			SILTY CLAY	20.0	120.0	DARK GREEN GRAY
519.4	MODESTO		CLAYSTONE & SILTSTONE	2.5	140.0	DARK GREEN & GRAY
516.9	MODESTO		LIMESTONE	0.4	142.5	
516.5	MODESTO		CLAYSTONE & SILTSTONE	10.1	142.9	
506.4	MODESTO		LIMESTONE & CLAY	4.7	153.0	INTERLAMINATED
501.7	MODESTO		LIMESTONE	2.3	157.7	
499.4	MODESTO		CLAYSTONE & SILTSTONE	8.0	160.0	W/ COALY PARTINGS
491.4	MODESTO		SANDY LIMESTONE	1.1	168.0	X-BDDED
490.3	MODESTO		CLAYSTONE & SILTSTONE	1.0	169.1	W/ PLANT FRAGS
489.3	MODESTO		SANDSTONE	8.5	170.1	W/ CLYST LAMS
480.8	MODESTO		CLAYSTONE & SILTSTONE	12.9	178.6	COALY IN PARTS
467.9	MODESTO	CHAPEL	COAL	0.8	191.5	
467.1	MODESTO		CLAYSTONE & SILTSTONE	3.7	192.3	W/ LS NODS
463.4			SANDSTONE	4.0	196.0	INTERLAM OF DRK GRAY CLYST
459.4			CLAYSTONE & SANDSTONE	0.6	200.0	
458.8			SANDSTONE	1.2	200.6	
457.6			CLAYSTONE & SILTSTONE	4.7	201.8	DARK GRAY & WHITE MICROLAMS
452.9			SANDSTONE	1.6	206.5	
451.3			CLAYSTONE & SILTSTONE	29.8	208.1	SILTSTONE & CLAYSTONE
421.5			SANDSTONE	0.3	237.9	
421.2			CLAYSTONE & SILTSTONE	2.7	238.2	DARK GRAY TO BLACK
418.5			SANDSTONE	0.2	240.9	
418.3			CLAYSTONE & SILTSTONE	7.5	241.1	DARK GRAY TO BLACK
410.8			SANDSTONE	0.6	248.6	
410.2	MODESTO		CLAYSTONE & SILTSTONE	1.6	249.2	DARK GRAY TO BLACK
408.6	MODESTO		SANDSTONE	4.4	250.8	
404.2	MODESTO		FOSSILIFEROUS LIMESTONE	2.5	255.2	MICRITIC
401.7	MODESTO		CLAYSTONE & SILTSTONE	3.5	257.7	

398.2	MODESTO		CLAYSTONE & SILTSTONE	3.0	261.2	NODULAR
395.2	MODESTO		SANDSTONE	5.1	264.2	X-BEDDED, RIPPLE LAM.
390.1	MODESTO		UNKNOWN	0.7	269.3	CORE LOGS
389.4	MODESTO		SANDSTONE	20.6	270.0	GRAY TO DARK GRAY
368.8	MODESTO		SANDSTONE/CLAYSTONE	3.1	290.6	
365.7	MODESTO		BLACK SHALE	2.9	293.7	
362.8	MODESTO		CLAYSTONE & SILTSTONE	19.1	296.6	GRAY-GRN TO DRK GRN; W/ LS NODS & BEDS
343.7	MODESTO		LIMESTONE	0.3	315.7	
343.4	MODESTO		UNKNOWN	4.0	316.0	NO LITHOLOGIES GIVEN
339.4	MODESTO		CLAYSTONE & SILTSTONE	0.5	320.0	
338.9	MODESTO		LIMESTONE	0.9	320.5	
338.0	MODESTO		CLAYSTONE & SILTSTONE	1.9	321.4	W/ LS NODS
336.1	MODESTO		LIMESTONE	3.0	323.3	W/ COAL PART AT 323.9
333.1	CARBONDALE		CLAYSTONE & SILTSTONE	2.2	326.3	
330.9	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	328.5	
328.6	CARBONDALE	BANKSTON FORK	CLAYSTONE & SILTSTONE	0.2	330.8	
328.4	CARBONDALE	BANKSTON FORK	LIMESTONE	6.1	331.0	
322.3	CARBONDALE		CLAYSTONE & SILTSTONE	3.4	337.1	
318.9	CARBONDALE	BRERETON	LIMESTONE	2.5	340.5	
316.4	CARBONDALE	ANNA	BLACK SHALE	2.5	343.0	
313.9	CARBONDALE	HERRIN	COAL	7.0	345.5	
306.9	CARBONDALE		CLAYSTONE & SILTSTONE	2.0	352.5	W/ LS NODS
304.9	CARBONDALE		LIMESTONE	1.5	354.5	
303.4	CARBONDALE		CLAYSTONE & SILTSTONE	10.0	356.0	GRN TO DARK GRN; W/ LS NODS & BEDS
293.4	CARBONDALE		LIMESTONE	1.0	366.0	
292.4	CARBONDALE		CLAYSTONE & SILTSTONE	2.3	367.0	
290.1	CARBONDALE		BLACK SHALE	0.7	369.3	

MAPID: 11722521000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 26 QUARTERS/FOOTAGES: SW NW NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.839202 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.374127 DATE COLLECTED: 8 / 10 / 1981

SURFACE ELEVATION (FT.): 657.3 LOGGED (FT.): 401.0 LOG TYPE: Company Sample Study

SOURCE: MOBIL OIL CORP.-MINING & COAL DIV., #D-4 WELL TYPE: Observation Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
657.3			UNCLASSIFIED	145.0	0.0	
512.3	MODESTO		SHALE & CLAYSTONE	5.0	145.0	
507.3	MODESTO		CALCAREOUS SHALE	35.0	150.0	
472.3	MODESTO		SANDSTONE	68.5	185.0	W/ SOME CLYST/SH
403.8	MODESTO		CLAYSTONE & SILTSTONE	0.4	253.5	
403.4	MODESTO		SILTY CLAYSTONE	7.3	253.9	THIN CARB. SH AT BASE
396.1	MODESTO		SANDSTONE	3.8	261.2	W/ CLYST LAMINATIONS
392.3	MODESTO		CLAYSTONE & SANDSTONE	2.0	265.0	X-BEDDING, RIPPLE MARKS
390.3	MODESTO		SANDSTONE	22.4	267.0	
367.9	MODESTO		CARBONACEOUS SHALE	2.3	289.4	
365.6	MODESTO		COAL	0.5	291.7	
365.1	MODESTO		CLAYSTONE & SILTSTONE	3.8	292.2	
361.3	MODESTO		CLAYSTONE & SILTSTONE	2.3	296.0	W/ LS NODS.
359.0	MODESTO		CLAYSTONE & SILTSTONE	8.2	298.3	W/ DRK GRAY CLYST/LS LAMS, LS NODS.
350.8	MODESTO		SILTY CLAYSTONE	2.2	306.5	
348.6	MODESTO	PIASA	LIMESTONE	4.6	308.7	
344.0	MODESTO		SILTY CLAYSTONE	2.7	313.3	
341.3	CARBONDALE		CARBONACEOUS SHALE	1.6	316.0	
339.7	CARBONDALE		NODULAR CLAYSTONE	3.2	317.6	
336.5	CARBONDALE		CALCAREOUS SHALE	1.1	320.8	
335.4	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	321.9	WHITE GRAY
331.9	CARBONDALE	BANKSTON FORK	SHALE	1.2	325.4	
330.7	CARBONDALE	BANKSTON FORK	LIMESTONE	6.4	326.6	
324.3	CARBONDALE		SHALE	3.6	333.0	MOTTLED GREEN, BLACK
320.7	CARBONDALE	BRERETON	FOSSILIFEROUS LIMESTONE	2.3	336.6	
318.4	CARBONDALE	ANNA	CARBONACEOUS SHALE	1.7	338.9	
316.7	CARBONDALE	HERRIN	COAL	7.4	340.6	
309.3	CARBONDALE		SILTY CLAYSTONE	0.9	348.0	
308.4	CARBONDALE		LIMESTONE	4.3	348.9	
304.1	CARBONDALE		CLAYSTONE & SILTSTONE	7.0	353.2	
297.1	CARBONDALE		LIMESTONE	1.4	360.2	
295.7	CARBONDALE		CLAYSTONE & SILTSTONE	1.6	361.6	
294.1	CARBONDALE		CARBONACEOUS SHALE	1.8	363.2	
292.3	CARBONDALE		CLAYSTONE & SILTSTONE	2.6	365.0	
289.7	CARBONDALE		CLAYSTONE & SILTSTONE	4.7	367.6	
285.0	CARBONDALE		SANDSTONE	28.7	372.3	SHALEY

MAPID: 11721910000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 27 QUARTERS/FOOTAGES: 2620' S line, 1320' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.863891

GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.369501

DATE COLLECTED: 9 / 25 / 1978

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 337.0

LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-10

WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
655.0			UNCONSOLIDATED	140.0	0.0
515.0	MODESTO		GRAY SHALE	22.5	140.0
492.5	MODESTO	CHAPEL	COAL	0.7	162.5
491.8	MODESTO		SANDY SHALE	22.8	163.2
469.0	MODESTO		GRAY SHALE	23.0	186.0
446.0	MODESTO		GRAY SHALE	17.5	209.0
428.5	MODESTO		LIMESTONE	3.5	226.5
425.0	MODESTO		SHALE	4.5	230.0
420.5	MODESTO		GRAY SHALE	28.5	234.5
392.0	MODESTO		BLACK SHALE	2.5	263.0
389.5	MODESTO		COAL	0.5	265.5
389.0	MODESTO		SANDY SHALE	15.0	266.0
374.0	MODESTO		GRAY SHALE	10.0	281.0
364.0	MODESTO	PIASA	SHALY LIMESTONE	2.7	291.0
361.3	MODESTO		CLAYSTONE & SILTSTONE	1.8	293.7
359.5	CARBONDALE	DANVILLE	COAL	0.1	295.5
359.4	CARBONDALE		CLAYSTONE & SILTSTONE	6.9	295.6
352.5	CARBONDALE	BANKSTON FORK	LIMESTONE	7.7	302.5
344.9	CARBONDALE		SHALE	0.9	310.1
344.0	CARBONDALE		LIMESTONE	0.3	311.0
343.7	CARBONDALE		SHALE	3.7	311.3
340.0	CARBONDALE		CLAYSTONE & SILTSTONE	0.9	315.0
339.1	CARBONDALE	HERRIN	COAL	5.7	315.9
333.4	CARBONDALE		CLAYSTONE	1.5	321.6
331.9	CARBONDALE		SHALY LIMESTONE	4.7	323.1
327.2	CARBONDALE		CORE LOSS	1.2	327.8
326.0	CARBONDALE		CALCAREOUS SHALE	1.8	329.0
324.2	CARBONDALE		CLAYSTONE & SILTSTONE	5.8	330.8
318.4	CARBONDALE		CORE LOSS	0.4	336.6

MAPID: 11721911000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 27 QUARTERS/FOOTAGES: 1608' N line, 81' W line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.868319 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.372402 DATE COLLECTED: 11 / 22 / 1977

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 352.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-20 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
660.0			UNCONSOLIDATED	102.0	0.0
558.0	MODESTO		GRAY SHALE	5.0	102.0
553.0	MODESTO		LIMESTONE	3.0	107.0
550.0	MODESTO		GRAY SHALE	20.5	110.0
528.5	MODESTO	CARLINVILLE	LIMESTONE	4.0	131.5
524.5	MODESTO		BLACK SHALE	0.5	135.5
524.0	MODESTO		LIMESTONE	2.0	136.0
522.0	MODESTO		GRAY SHALE	41.5	138.0
480.5	MODESTO	CHAPEL	COAL	1.0	179.5
479.5	MODESTO		GRAY SHALE	19.5	180.5
460.0	MODESTO		GRAY SHALE	39.5	200.0
420.5	MODESTO		LIMESTONE	3.5	239.5
417.0	MODESTO		GRAY SHALE	8.5	243.0
408.5	MODESTO		SANDY SHALE	33.5	251.5
375.0	MODESTO		BLACK SHALE	2.5	285.0
372.5	MODESTO		COAL	1.5	287.5
371.0	MODESTO		CALCAREOUS SHALE	9.0	289.0
362.0	MODESTO	PIASA	LIMESTONE	1.5	298.0
360.5	MODESTO		SHALE	2.5	299.5
358.0	CARBONDALE		GRAY SHALE	8.0	302.0
350.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	310.0
344.0	CARBONDALE		GRAY SHALE	3.1	316.0
340.9	CARBONDALE	ANNA	BLACK SHALE	2.2	319.1
338.7	CARBONDALE	HERRIN	COAL	6.5	321.3
332.2	CARBONDALE		UNDERCLAY	1.1	327.8
331.2	CARBONDALE		CORE LOSS	0.2	328.8
331.0	CARBONDALE		LIMESTONE	7.5	329.0
323.5	CARBONDALE		GRAY SHALE	4.5	336.5
319.0	CARBONDALE		LIMESTONE	5.0	341.0
314.0	CARBONDALE		GRAY SHALE	6.0	346.0

MAPID: 11700880000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 28 QUARTERS/FOOTAGES: 2795' S line, 1115' W line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.88324 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.369955 DATE COLLECTED:

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 300.9 LOG TYPE: Survey Core Study

SOURCE: TRUAX-TRAER COAL CO 8 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
388.3	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.7	267.7
383.6	MODESTO		GRAY SHALE	6.0	272.4
377.6	CARBONDALE	DANVILLE	BONE COAL	0.1	278.4
377.5	CARBONDALE		DARK GRAY SHALE	0.3	278.5
377.2	CARBONDALE		CLAYSTONE	4.5	278.8
372.7	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	6.0	283.3
366.7	CARBONDALE	LAWSON	MOTTLED SHALE	0.7	289.3
366.0	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.3	290.0
365.8	CARBONDALE	ANNA	DARK GRAY SHALE	4.8	290.2
361.0	CARBONDALE	HERRIN	COAL	5.9	295.0

MAPID: 11700880000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 28 QUARTERS/FOOTAGES: 2795' S line, 1115' W line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.88324 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.369955 DATE COLLECTED:

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 300.9 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO 8 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
389.3	MODESTO	PIASA	LIMESTONE	4.7	266.7
384.6	MODESTO		UNCLASSIFIED	2.0	271.4
382.6	CARBONDALE		UNCLASSIFIED	9.0	273.4
373.6	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	282.4
367.6	CARBONDALE	ANVIL ROCK	SANDSTONE	0.7	288.4
366.9	CARBONDALE	CONANT	LIMESTONE	0.3	289.1
366.6	CARBONDALE		SHALE	0.9	289.4
365.7	CARBONDALE	BRERETON	LIMESTONE	1.6	290.3
364.1	CARBONDALE	ANNA	BLACK SHALE	3.1	291.9
361.0	CARBONDALE	HERRIN	COAL	5.9	295.0

MAPID: 11700880000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 28 QUARTERS/FOOTAGES: 2795' S line, 1115' W line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.88324 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.369955 DATE COLLECTED:

SURFACE ELEVATION (FT.): 656.2 LOGGED (FT.): 301.0 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO 8 WELL TYPE: Coal Test

COMMENT: SEE COAL SECTION MAP 6-117 A & B

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
361.4	CARBONDALE	HERRIN	COAL	5.9	294.8

MAPID: 11721912000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 28 QUARTERS/FOOTAGES: 2590' N line, 1270' W line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.882684 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.369645 DATE COLLECTED: 9 / 27 / 1978

SURFACE ELEVATION (FT.): 657.0 LOGGED (FT.): 315.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-8 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
657.0			UNCONSOLIDATED	117.0	0.0
540.0	MODESTO		SILTY SHALE	17.0	117.0
523.0	MODESTO		GRAY SHALE	9.0	134.0
514.0	MODESTO	CHAPEL	COAL	0.5	143.0
513.5	MODESTO		GRAY SHALE	2.5	143.5
511.0	MODESTO		SANDSTONE	1.5	146.0
509.5	MODESTO		SANDSTONE	9.5	147.5
500.0	MODESTO		GRAY SHALE	39.0	157.0
461.0	MODESTO		GRAY SHALE	17.0	196.0
444.0	MODESTO		LIMESTONE	2.0	213.0
442.0	MODESTO		SHALE	5.0	215.0
437.0	MODESTO		GRAY SHALE	11.0	220.0
426.0	MODESTO		GRAY SHALE	16.0	231.0
410.0	MODESTO		BLACK SHALE	2.5	247.0
407.5	MODESTO		COAL	0.5	249.5
407.0	MODESTO		GRAY SHALE	5.0	250.0
402.0	MODESTO		SANDY SHALE	13.3	255.0
388.7	MODESTO	PIASA	LIMESTONE	3.1	268.3
385.6	MODESTO		SHALE	2.6	271.4
383.0	MODESTO		BLACK SHALE	1.1	274.0
381.9	CARBONDALE		SHALE	8.3	275.1
373.6	CARBONDALE	BANKSTON FORK	LIMESTONE	4.6	283.4
369.0	CARBONDALE		GRAY SHALE	6.4	288.0
362.6	CARBONDALE	HERRIN	COAL	5.9	294.4
356.7	CARBONDALE		CORE LOSS	0.8	300.3
356.0	CARBONDALE		GRAY SHALE	2.0	301.0
354.0	CARBONDALE		GRAY SHALE	4.0	303.0
350.0	CARBONDALE		GRAY SHALE	8.0	307.0

MAPID: 11721913000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 28 QUARTERS/FOOTAGES: 36' N line, 1347' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.882473 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.376696 DATE COLLECTED: 11 / 30 / 1977

SURFACE ELEVATION (FT.): 662.0 LOGGED (FT.): 305.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-21 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
662.0			UNCONSOLIDATED	103.5	0.0
558.5	MODESTO	CARLINVILLE	LIMESTONE	4.0	103.5
554.5	MODESTO		BLACK SHALE	0.5	107.5
554.0	MODESTO		LIMESTONE	1.0	108.0
553.0	MODESTO		SANDY SHALE	33.5	109.0
519.5	MODESTO	CHAPEL	COAL	0.5	142.5
519.0	MODESTO		GRAY SHALE	4.0	143.0
515.0	MODESTO		SANDY SHALE	21.0	147.0
494.0	MODESTO		GRAY SHALE	21.0	168.0
473.0	MODESTO		GRAY SHALE	18.5	189.0
454.5	MODESTO		LIMESTONE	3.5	207.5
451.0	MODESTO		GRAY SHALE	48.0	211.0
403.0	MODESTO		BLACK SHALE	3.0	259.0
400.0	CARBONDALE	DANVILLE	COAL	3.0	262.0
397.0	CARBONDALE		GRAY SHALE	3.0	265.0
394.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	268.0
387.0	CARBONDALE		GRAY SHALE	5.0	275.0
382.0	CARBONDALE	HERRIN	COAL	5.4	280.0
376.6	CARBONDALE		UNDERCLAY	1.3	285.4
375.3	CARBONDALE		CORE LOSS	0.4	286.7
375.0	CARBONDALE		GRAY SHALE	7.0	287.0
368.0	CARBONDALE		SHALE	4.0	294.0
364.0	CARBONDALE		GRAY SHALE	2.0	298.0
362.0	CARBONDALE		LIMESTONE	2.0	300.0
360.0	CARBONDALE		GRAY SHALE	3.0	302.0

MAPID: 11700031000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 29 QUARTERS/FOOTAGES: NW NW NW SW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.905485 GEOLOGIST: TREWORGY,J
 CONFIDENTIAL: N LATITUDE: 39.369026 DATE COLLECTED: 0 / 0 / 1917
 SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 280.0 LOG TYPE: Drillers Log
 SOURCE: R. W. HUNT & CO WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
656.0			UNCONSOLIDATED	67.0	0.0	
589.0			UNCONSOLIDATED	170.3	67.0	
418.7			COAL	0.7	237.3	
418.0			ROCK	9.0	238.0	
409.0			SHALE	18.0	247.0	
391.0			LIMESTONE	5.4	265.0	
385.6			SHALE	0.3	270.4	
385.2	CARBONDALE	HERRIN	COAL	5.4	270.8	
379.8			ROCK	3.8	276.2	

MAPID: 11700031000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 29 QUARTERS/FOOTAGES: NW NW NW SW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.905485 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 39.369026 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 651.0 LOGGED (FT.): 276.4 LOG TYPE: Drillers Log
 SOURCE: WELL TYPE: Coal Test
 COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
408.2	MODESTO	PIASA	LIMESTONE	4.5	242.8	
403.7	CARBONDALE		LIMESTONE W/ SHALE	6.0	247.3	
397.7	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	5.0	253.3	
392.7	CARBONDALE	LAWSON	CALCAREOUS SHALE	7.0	258.3	
385.7	CARBONDALE	BRERETON	LIMESTONE & SHALE	5.4	265.3	
380.3	CARBONDALE	ANNA	DARK GRAY SHALE	0.3	270.7	
380.0	CARBONDALE	HERRIN	COAL	5.4	271.0	

MAPID: 11700031000C VERSION: 3

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 29 QUARTERS/FOOTAGES: NW NW NW SW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.905485 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.369026 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 651.0 LOGGED (FT.): 276.4 LOG TYPE: Drillers Log

SOURCE: HUNT R W & CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
407.7	MODESTO	PIASA	LIMESTONE	4.0	243.3
403.7	MODESTO		UNCLASSIFIED	3.0	247.3
400.7	CARBONDALE		UNCLASSIFIED	8.0	250.3
392.7	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	258.3
387.7	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	263.3
386.7	CARBONDALE		UNCLASSIFIED	1.0	264.3
385.7	CARBONDALE	BRERETON	LIMESTONE	5.4	265.3
380.3	CARBONDALE	ANNA	BLACK SHALE	0.3	270.7
380.0	CARBONDALE	HERRIN	COAL	5.4	271.0

MAPID: 11700031000C VERSION: 4

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 29 QUARTERS/FOOTAGES: NW NW NW SW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.905485 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.369026 DATE COLLECTED: 0 / 0 / 1917

SURFACE ELEVATION (FT.): 651.2 LOGGED (FT.): 280.0 LOG TYPE: Drillers Log

SOURCE: R.W. HUNT & CO., HOLE #A-5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
651.2			SOIL	2.0	0.0	
649.2			CLAY	9.0	2.0	
640.2			HARD PAN	8.0	11.0	
632.2			SAND	1.0	19.0	
631.2			HARD PAN	11.0	20.0	
620.2			CLAY	4.0	31.0	
616.2			HARD PAN	9.0	35.0	
607.2			CLAY	18.0	44.0	
589.2			GRAVEL	5.0	62.0	
584.2	MODESTO		SHALE	43.0	67.0	
541.2	MODESTO		SHALE	30.0	110.0	W/LS
511.2	MODESTO		SANDY SHALE	30.0	140.0	
481.2	MODESTO		SHALE	18.0	170.0	
463.2	MODESTO		LIMESTONE	4.0	188.0	
459.2	MODESTO		BLACK SHALE	4.0	192.0	
455.2	MODESTO		CALCAREOUS SHALE	19.0	196.0	W/LS
436.2	MODESTO		SANDY SHALE	9.0	215.0	
427.2	MODESTO		SHALE	10.0	224.0	
417.2	MODESTO		BLACK SHALE	3.3	234.0	
413.9	CARBONDALE	DANVILLE	COAL	0.7	237.3	
413.2	CARBONDALE		SHALE	4.5	238.0	
408.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	242.5	
404.2	CARBONDALE		SHALE	6.0	247.0	W/LS
398.2	CARBONDALE		LIMESTONE W/ SHALE	12.0	253.0	
386.2	CARBONDALE	BRERETON	LIMESTONE	5.4	265.0	
380.8	CARBONDALE		SHALE	0.3	270.4	
380.4	CARBONDALE	HERRIN	COAL	5.4	270.8	
375.0	CARBONDALE		SHALE	3.3	276.2	
371.7	CARBONDALE		LIMESTONE	0.5	279.5	

MAPID: 11700879000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 30 QUARTERS/FOOTAGES: 2800' S line, 1485' W line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.919445

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.369855

DATE COLLECTED:

SURFACE ELEVATION (FT.): 648.0 LOGGED (FT.): 251.8

LOG TYPE: Survey Core Study

SOURCE: TRUAX-TRAER COAL CO 7 & 7A

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
419.4	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.1	228.6
415.3	CARBONDALE		GRAY SHALE	3.6	232.7
411.8	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.0	236.2
409.8	CARBONDALE	LAWSON	MOTTLED SHALE	0.9	238.2
408.8	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	5.7	239.2
403.2	CARBONDALE	ANNA	MOTTLED SHALE	1.2	244.8
402.0	CARBONDALE	HERRIN	COAL	5.8	246.0

MAPID: 11700879000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 30 QUARTERS/FOOTAGES: 2800' S line, 1485' W line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.919445

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.369855

DATE COLLECTED:

SURFACE ELEVATION (FT.): 648.0 LOGGED (FT.): 252.8

LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO 7 & 7A

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
429.1	MODESTO	PIASA	LIMESTONE	1.8	218.9
427.3	MODESTO		UNCLASSIFIED	2.9	220.7
424.4	CARBONDALE	DANVILLE	COAL	0.3	223.6
424.1	CARBONDALE		UNCLASSIFIED	5.0	223.9
419.1	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	228.9
414.6	CARBONDALE	ANVIL ROCK	SANDSTONE	2.0	233.4
412.6	CARBONDALE		SHALE	1.6	235.4
411.0	CARBONDALE	BRERETON	LIMESTONE	8.8	237.0
402.2	CARBONDALE	ANNA	BLACK SHALE	1.2	245.8
401.0	CARBONDALE	HERRIN	COAL	5.8	247.0

MAPID: 11700879000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 30 QUARTERS/FOOTAGES: 2800' S line, 1485' W line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.919445 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.369855 DATE COLLECTED:

SURFACE ELEVATION (FT.): 647.6 LOGGED (FT.): 256.0 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO 7 & 7A WELL TYPE: Coal Test

COMMENT: CORE C-4320; SEE COAL SEC MAP 6-117 A&B

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
401.3	CARBONDALE	HERRIN	COAL	5.8	246.3

MAPID: 11721914000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 30 QUARTERS/FOOTAGES: 2595' N line, 1356' W line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.919899 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.369517 DATE COLLECTED: 9 / 27 / 1978

SURFACE ELEVATION (FT.): 645.0 LOGGED (FT.): 265.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-2 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
645.0			UNCONSOLIDATED	165.5	0.0
479.5	MODESTO		LIMESTONE	2.5	165.5
477.0	MODESTO		SHALE	7.0	168.0
470.0	MODESTO		GRAY SHALE	36.5	175.0
433.5	MODESTO		BLACK SHALE	3.0	211.5
430.5	MODESTO		GRAY SHALE	1.0	214.5
429.5	MODESTO		COAL	1.0	215.5
428.5	MODESTO		GRAY SHALE	5.5	216.5
423.0	MODESTO		SHALE	1.0	222.0
422.0	MODESTO		GRAY SHALE	3.5	223.0
418.5	MODESTO	PIASA	LIMESTONE	5.5	226.5
413.0			GRAY SHALE	4.5	232.0
408.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	236.5
407.0	CARBONDALE		GRAY SHALE	1.5	238.0
405.5	CARBONDALE	BRERETON	LIMESTONE	4.3	239.5
401.2	CARBONDALE	HERRIN	COAL	6.1	243.8
395.1	CARBONDALE		CLAYSTONE & SILTSTONE	1.9	249.9
393.2	CARBONDALE		GRAY SHALE	13.2	251.8

MAPID: 11721915000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 30 QUARTERS/FOOTAGES: 658' N line, 1377' E line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.911085 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.374912 DATE COLLECTED: 12 / 2 / 1977

SURFACE ELEVATION (FT.): 646.0 LOGGED (FT.): 265.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-77-22 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
646.0			UNCONSOLIDATED	121.0	0.0
525.0	MODESTO		GRAY SHALE	26.0	121.0
499.0	MODESTO		GRAY SHALE	12.0	147.0
487.0	MODESTO		LIMESTONE	4.5	159.0
482.5	MODESTO		GRAY SHALE	7.5	163.5
475.0	MODESTO		SANDY SHALE	13.0	171.0
462.0	MODESTO		GRAY SHALE	10.0	184.0
452.0	MODESTO		BLACK SHALE	1.5	194.0
450.5	MODESTO		COAL	0.5	195.5
450.0	MODESTO		GRAY SHALE	6.0	196.0
444.0	MODESTO		SANDY SHALE	12.5	202.0
431.5	MODESTO		SHALE	4.3	214.5
427.2	MODESTO	PIASA	LIMESTONE	2.6	218.8
424.6	MODESTO		SHALE	1.6	221.4
423.0	MODESTO		SHALE	1.0	223.0
422.0	MODESTO		SHALE	2.0	224.0
420.0	MODESTO		CARBONACEOUS CLAYSTONE	2.0	226.0
418.0	CARBONDALE		CALCAREOUS SHALE	2.0	228.0
416.0	CARBONDALE		SHALY LIMESTONE	1.6	230.0
414.4	CARBONDALE		CALCAREOUS SHALE	5.0	231.6
409.4	CARBONDALE	BANKSTON FORK	SILTY LIMESTONE	4.6	236.6
404.8	CARBONDALE		CALCAREOUS SHALE	0.3	241.2
404.5	CARBONDALE		SHALE & CLAYSTONE	4.0	241.5
400.5	CARBONDALE	HERRIN	COAL	4.8	245.5
395.7	CARBONDALE		CLAYSTONE	2.5	250.3
393.3	CARBONDALE		LIMESTONE	2.1	252.7
391.2	CARBONDALE		SHALE	1.9	254.8
389.3	CARBONDALE		CLAYSTONE	1.8	256.7
387.5	CARBONDALE		SHALY LIMESTONE	2.0	258.5
385.5	CARBONDALE		ARGILLACEOUS LIMESTONE	4.2	260.5
381.3	CARBONDALE		CORE LOSS	0.3	264.7

MAPID: 11790141000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 30 QUARTERS/FOOTAGES: 27' S line, 55' W line of SE SE
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.910513 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.362259 DATE COLLECTED: 7 / 26 / 1977
 SURFACE ELEVATION (FT.): 648.9 LOGGED (FT.): 267.0 LOG TYPE: Drillers Log
 SOURCE: AMAX D207XX WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP #43 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
648.9	PLEISTOCENE		UNCONSOLIDATED	166.0	0.0
482.9			ROCK	85.5	166.0
397.4	CARBONDALE	HERRIN	COAL	5.5	251.5
391.9	CARBONDALE		ROCK	10.0	257.0

MAPID: 11790142000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 30 QUARTERS/FOOTAGES: 40' N line, 322' E line of NW SE
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.911885 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.369335 DATE COLLECTED: 6 / 8 / 1977
 SURFACE ELEVATION (FT.): 651.0 LOGGED (FT.): 250.0 LOG TYPE: Drillers Log
 SOURCE: AMAX D281FD WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP #43 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
651.0	PLEISTOCENE		UNCONSOLIDATED	136.0	0.0
515.0			ROCK	102.0	136.0
413.0	CARBONDALE	HERRIN	COAL	2.0	238.0
411.0	CARBONDALE		ROCK	10.0	240.0

MAPID: 11790143000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 30 QUARTERS/FOOTAGES: 140' N line, 322' E line of NW SE
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.911919 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.369054 DATE COLLECTED: 8 / 1 / 1977
 SURFACE ELEVATION (FT.): 651.0 LOGGED (FT.): 283.0 LOG TYPE: Drillers Log
 SOURCE: AMAX D281FJ WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP #43 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
651.0	PLEISTOCENE		UNCONSOLIDATED	153.0	0.0
498.0			ROCK	115.0	153.0
383.0	CARBONDALE	HERRIN	COAL	3.0	268.0
380.0	CARBONDALE		ROCK	12.0	271.0

MAPID: 11721657000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 31 QUARTERS/FOOTAGES: 6' N line, 85' W line of NW NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.924296 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.36208 DATE COLLECTED:

SURFACE ELEVATION (FT.): 631.0 LOGGED (FT.): 233.0 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS GAS CO. B-19 WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
405.6	CARBONDALE	HERRIN	COAL	4.9	225.4	

MAPID: 11700797000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 33 QUARTERS/FOOTAGES: NE SE NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.869647 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.357709 DATE COLLECTED:

SURFACE ELEVATION (FT.): 643.0 LOGGED (FT.): 298.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES CORP. A9-1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
372.9	MODESTO		UNCLASSIFIED	2.5	270.1	INTERVAL ABOVE DANVILLE, BELOW PIASA
370.4	CARBONDALE		UNCLASSIFIED	7.5	272.6	INTERVAL ABOVE BANKSTON, BELOW DANVILLE
362.9	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.7	280.1	
358.2	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	284.8	
355.2	CARBONDALE	CONANT	UNCLASSIFIED	0.3	287.8	
354.9	CARBONDALE		UNCLASSIFIED	1.7	288.1	SHALE ABOVE BRERETON LIMESTONE
353.2	CARBONDALE	BRERETON	LIMESTONE	3.5	289.8	
349.7	CARBONDALE	ANNA	BLACK SHALE	0.7	293.3	
349.0	CARBONDALE	HERRIN	COAL	4.0	294.0	

MAPID: 11700797000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 33 QUARTERS/FOOTAGES: NE SE NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.869647 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.357709 DATE COLLECTED:

SURFACE ELEVATION (FT.): 643.0 LOGGED (FT.): 298.0 LOG TYPE: Survey Core Study

SOURCE: AYRSHIRE COLLIERIES CORP. A9-1 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
380.8	CARBONDALE		SANDSTONE	8.0	262.2
372.8	CARBONDALE		GRAY SHALE	10.0	270.2
362.8	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	4.7	280.2
358.2	CARBONDALE	LAWSON	DARK GRAY SHALE	3.0	284.8
355.2	CARBONDALE	LAWSON	GRAY SHALE	0.3	287.8
354.8	CARBONDALE	LAWSON	CALCAREOUS SHALE	1.7	288.2
353.2	CARBONDALE	BRERETON	LIMESTONE & SHALE	3.5	289.8
349.7	CARBONDALE	ANNA	DARK GRAY SHALE	0.7	293.3
349.0	CARBONDALE	HERRIN	COAL	4.0	294.0

MAPID: 11700797000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 33 QUARTERS/FOOTAGES: NE SE NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.869647 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.357709 DATE COLLECTED:

SURFACE ELEVATION (FT.): 643.0 LOGGED (FT.): 320.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES CORP. A9-1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
348.8	CARBONDALE	HERRIN	COAL	4.0	294.2

MAPID: 11723807000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 33 QUARTERS/FOOTAGES: 900' S line, 150' E line of SE NE

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.869013 GEOLOGIST: E. PRUSSEN

CONFIDENTIAL: N LATITUDE: 39.357443 DATE COLLECTED: 12 / 24 / 1959

SURFACE ELEVATION (FT.): 639.0 LOGGED (FT.): 298.2 LOG TYPE: Other Core Study

SOURCE: CARTER OIL A-9-1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
344.8	CARBONDALE	HERRIN	COAL	3.9	294.2	CLEAN COAL, SEE LOG; COAL ANALYZED
-	CARBONDALE	HERRIN	ROCK	0.2		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11790082000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 33 QUARTERS/FOOTAGES: 900' S line, 150' E line of SE NE
 QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.869013 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.357443 DATE COLLECTED: 11 / 23 / 1959
 SURFACE ELEVATION (FT.): 643.0 LOGGED (FT.): 326.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES A9-1 WELL TYPE: Coal Test
 COMMENT: MACOUPIN COUNTY BOX #43; ISGS CORE DESC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
643.0	PLEISTOCENE		UNCONSOLIDATED	99.0	0.0	
544.0			ROCK	195.2	99.0	
348.8	CARBONDALE	HERRIN	COAL	4.0	294.2	
344.8	CARBONDALE		ROCK	27.8	298.2	

MAPID: 11723809000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 35 QUARTERS/FOOTAGES: 50' S line, 2200' W line
 QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.841664 GEOLOGIST: E. PRUSSEN
 CONFIDENTIAL: N LATITUDE: 39.347787 DATE COLLECTED: 8 / 19 / 1975
 SURFACE ELEVATION (FT.): 641.0 LOGGED (FT.): 373.6 LOG TYPE: Other Core Study
 SOURCE: CARTER OIL 18-937 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
291.1	CARBONDALE	HERRIN	COAL	8.3	349.9	CLEAN COAL. SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.2		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723810000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 35 QUARTERS/FOOTAGES: 43' N line, 293' E line
 QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.831965 GEOLOGIST: E. PRUSSEN
 CONFIDENTIAL: N LATITUDE: 39.362192 DATE COLLECTED: 9 / 2 / 1975
 SURFACE ELEVATION (FT.): 654.0 LOGGED (FT.): 377.0 LOG TYPE: Other Core Study
 SOURCE: CARTER OIL 18-939 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
311.7	CARBONDALE	HERRIN	COAL	6.8	342.3	CLEAN COAL. SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.3		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11723812000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 35 QUARTERS/FOOTAGES: 62' N line, 10' W line
 QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.849542 GEOLOGIST: E. PRUSSEN
 CONFIDENTIAL: N LATITUDE: 39.362003 DATE COLLECTED: 8 / 25 / 1975
 SURFACE ELEVATION (FT.): 661.0 LOGGED (FT.): 327.2 LOG TYPE: Other Core Study
 SOURCE: CARTER OIL COMPANY 18-938 WELL TYPE: Coal Test
 COMMENT: FAULTED?--SEE LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
352.1	CARBONDALE	HERRIN	COAL	4.5	308.9	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.3		TOTAL IN-SEAM PARTINGS--SEE LOG

MAPID: 11700032000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 36 QUARTERS/FOOTAGES: SW SE SE NW
 QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.82326 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.355461 DATE COLLECTED: 0 / 0 / 1912
 SURFACE ELEVATION (FT.): 646.0 LOGGED (FT.): 321.3 LOG TYPE: Drillers Log
 SOURCE: PEABODY COAL CO. WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
338.0	CARBONDALE	BRERETON	LIMESTONE	5.0	308.0	
333.0	CARBONDALE	ANNA	BLACK SHALE	1.0	313.0	
332.0	CARBONDALE	HERRIN	COAL	7.3	314.0	

MAPID: 11700032000C VERSION: 2

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 36 QUARTERS/FOOTAGES: SW SE SE NW
 QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.82326 GEOLOGIST: TREWORGY,J
 CONFIDENTIAL: N LATITUDE: 39.355461 DATE COLLECTED: 0 / 0 / 1912
 SURFACE ELEVATION (FT.): 646.0 LOGGED (FT.): 321.3 LOG TYPE: Drillers Log
 SOURCE: PEABODY C C WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
646.0			UNCONSOLIDATED	170.0	0.0	
476.0			ROCK	125.0	170.0	
351.0			SHALE	13.0	295.0	
338.0			LIMESTONE	5.0	308.0	
333.0			SHALE	1.0	313.0	
332.0	CARBONDALE	HERRIN	COAL	7.3	314.0	

MAPID: 11721916000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 36 QUARTERS/FOOTAGES: 93' S line, 2181' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.81987 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.347943 DATE COLLECTED: 10 / 12 / 1978

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 340.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-22A WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG, CORE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
642.0			UNCONSOLIDATED	180.0	0.0
462.0	MODESTO		GRAY SHALE	42.5	180.0
419.5	MODESTO		LIMESTONE	1.0	222.5
418.5	MODESTO		GRAY SHALE	15.5	223.5
403.0	MODESTO		LIMESTONE	3.0	239.0
400.0	MODESTO		GRAY SHALE	19.0	242.0
381.0	MODESTO		SANDSTONE	8.5	261.0
372.5	MODESTO		SANDY SHALE	7.5	269.5
365.0	MODESTO		GRAY SHALE	3.5	277.0
361.5	MODESTO		LIMESTONE	3.5	280.5
358.0	MODESTO		GRAY SHALE	2.0	284.0
356.0	MODESTO		COAL	2.5	286.0
353.5	MODESTO		GRAY SHALE	5.5	288.5
348.0	MODESTO	PIASA	LIMESTONE	6.0	294.0
342.0	MODESTO		GRAY SHALE	4.0	300.0
338.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	304.0
336.5	CARBONDALE		GRAY SHALE	2.0	305.5
334.5	CARBONDALE	BRERETON	LIMESTONE	5.0	307.5
329.5	CARBONDALE	ANNA	BLACK SHALE	2.1	312.5
327.4	CARBONDALE	HERRIN	COAL	7.6	314.6
319.8	CARBONDALE		SHALE	0.3	322.2
319.5	CARBONDALE		CORE LOSS	0.5	322.5
319.0	CARBONDALE		LIMESTONE	3.0	323.0
316.0	CARBONDALE		GRAY SHALE	2.0	326.0
314.0	CARBONDALE		BLACK SHALE	2.0	328.0
312.0	CARBONDALE		GRAY SHALE	2.0	330.0
310.0	CARBONDALE		LIMESTONE	1.5	332.0
308.5	CARBONDALE		CALCAREOUS SHALE	3.0	333.5
305.5	CARBONDALE		BLACK SHALE	2.5	336.5
303.0	CARBONDALE		SHALE	1.0	339.0

MAPID: 11723337000C VERSION: 1

PROJECT: NCRDS89

COUNTY: MACOUPIN TWP/RNG: 11N 7W SECTION: 36 QUARTERS/FOOTAGES: 88' S line, 2180' E line

QUADRANGLE: CARLINVILLE EAST LONGITUDE: -89.819866 GEOLOGIST: SROKA

CONFIDENTIAL: N LATITUDE: 39.347929 DATE COLLECTED: 10 / 10 / 1978

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 358.0 LOG TYPE: Multiple log types

SOURCE: MOBIL OIL MOS-78-22 WELL TYPE: Coal Test

COMMENT: GAMMA, RESIST, DENSITY, DRILL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
642.0			UNCONSOLIDATED	178.0	0.0	
464.0	MODESTO		GRAY SHALE	44.0	178.0	
420.0	MODESTO		LIMESTONE	1.0	222.0	
419.0	MODESTO		GRAY SHALE	15.5	223.0	
403.5	MODESTO		LIMESTONE	1.5	238.5	
402.0	MODESTO		GRAY SHALE	21.0	240.0	
381.0	MODESTO		SANDSTONE	11.0	261.0	
370.0	MODESTO		SANDY SHALE	3.0	272.0	
367.0	MODESTO		GRAY SHALE	4.0	275.0	
363.0	MODESTO		SHALY LIMESTONE	5.0	279.0	
358.0	MODESTO		GRAY SHALE	2.0	284.0	
356.0	MODESTO		COAL	2.0	286.0	
354.0	MODESTO		GRAY SHALE	6.0	288.0	
348.0	MODESTO	PIASA	LIMESTONE	5.5	294.0	
342.5	MODESTO		GRAY SHALE	3.5	299.5	
339.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	303.0	
337.0	CARBONDALE		GRAY SHALE	3.0	305.0	
334.0	CARBONDALE	BRERETON	LIMESTONE	4.5	308.0	
329.5	CARBONDALE	ANNA	BLACK SHALE	1.5	312.5	
328.0	CARBONDALE	HERRIN	COAL	7.4	314.0	
320.6	CARBONDALE		UNDERCLAY	1.6	321.4	
319.0	CARBONDALE		LIMESTONE	2.0	323.0	
317.0	CARBONDALE		GRAY SHALE	3.0	325.0	
314.0	CARBONDALE		BLACK SHALE	1.5	328.0	
312.5	CARBONDALE		GRAY SHALE	2.0	329.5	
310.5	CARBONDALE		LIMESTONE	1.5	331.5	
309.0	CARBONDALE		CALCAREOUS SHALE	3.0	333.0	
306.0	CARBONDALE		BLACK SHALE	2.5	336.0	
303.5	CARBONDALE		SHALE	1.5	338.5	
302.0	CARBONDALE		SANDSTONE	6.0	340.0	
296.0	CARBONDALE		GRAY SHALE	9.0	346.0	
287.0	CARBONDALE		SANDSTONE	3.0	355.0	

MAPID: 11723811000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 7W **SECTION:** 36 **QUARTERS/FOOTAGES:** 60' S line, 410' E line of NE
QUADRANGLE: CARLINVILLE EAST **LONGITUDE:** -89.813577 **GEOLOGIST:** E. PRUSSEN
CONFIDENTIAL: N **LATITUDE:** 39.355162 **DATE COLLECTED:** 9 / 9 / 1975
SURFACE ELEVATION (FT.): 645.0 **LOGGED (FT.):** 351.1 **LOG TYPE:** Other Core Study
SOURCE: CARTER OIL 18-940 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
321.2	CARBONDALE	HERRIN	COAL	7.1	323.8	CLEAN COAL, SEE LOG
-	CARBONDALE	HERRIN	ROCK	0.3		TOTAL IN-SEAM PARTINGS-SEE LOG

MAPID: 11701113000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 2 **QUARTERS/FOOTAGES:** NW SE NW
QUADRANGLE: PALMYRA **LONGITUDE:** -89.958092 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.428467 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 656.2 **LOGGED (FT.):** 248.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES CORP. A-67-8 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
453.1	CARBONDALE	HERRIN	COAL	4.3	203.1	

MAPID: 11701113000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 2 **QUARTERS/FOOTAGES:** NW SE NW
QUADRANGLE: PALMYRA **LONGITUDE:** -89.958092 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.428467 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 656.0 **LOGGED (FT.):** 207.4 **LOG TYPE:** Survey Core Study
SOURCE: AYRSHIRE COLLIERIES CORP. A-67-8 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
492.5	MODESTO	PIASA	LIMESTONE	6.0	163.5	
486.5	CARBONDALE		SHALE	13.0	169.5	
473.5	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	182.5	UPPER BENCH
468.5	CARBONDALE	BANKSTON FORK	DARK GRAY SHALE	5.0	187.5	SHALE PARTING
463.5	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	5.1	192.5	LOWER BENCH
458.5	CARBONDALE	LAWSON	GRAY SHALE	2.8	197.5	
455.7	CARBONDALE	LAWSON	DARK GRAY SHALE	2.5	200.3	
453.2	CARBONDALE	ANNA	BLACK SHALE	0.2	202.8	
453.0	CARBONDALE	HERRIN	COAL	4.4	203.0	

MAPID: 11790098000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 2 QUARTERS/FOOTAGES: 360' S line, 42' W line of SE NW

QUADRANGLE: PALMYRA LONGITUDE: -89.958092 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.428467 DATE COLLECTED: 10 / 26 / 1967

SURFACE ELEVATION (FT.): 656.2 LOGGED (FT.): 248.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A67-8 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
656.2	PLEISTOCENE		UNCONSOLIDATED	57.0	0.0
599.2			ROCK	146.2	57.0
453.0	CARBONDALE	HERRIN	COAL	4.4	203.2
448.6	CARBONDALE		ROCK	40.4	207.6

MAPID: 11700019000C VERSION: 1

PROJECT: NCRDS87

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 4 QUARTERS/FOOTAGES: SW SW SW NE

QUADRANGLE: PALMYRA LONGITUDE: -89.990471 GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 39.427704 DATE COLLECTED: 0 / 0 / 1904

SURFACE ELEVATION (FT.): 659.3 LOGGED (FT.): 521.0 LOG TYPE: Drillers Log

SOURCE: MACOUPIN COAL CO. WELL TYPE: Coal Test

COMMENT: LOCATION IMPRECISE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
659.3			UNCONSOLIDATED	47.0	0.0	
612.3	MODESTO	CARLINVILLE	LIMESTONE	2.5	47.0	
609.8	MODESTO		SHALE	34.0	49.5	
575.8	MODESTO	CHAPEL	COAL	0.3	83.5	UNCERTAIN CORRELATION
575.5	MODESTO		SHALE	58.5	83.8	
517.0	MODESTO		LIMESTONE	4.8	142.3	
512.1	MODESTO		SHALE	30.1	147.2	
482.0	MODESTO		BLACK SHALE	2.7	177.3	
479.4	MODESTO		SHALE	0.3	179.9	
479.1	MODESTO		COAL	0.4	180.2	
478.7	MODESTO		SHALE	28.4	180.6	
450.3	MODESTO	PIASA	LIMESTONE	3.0	209.0	
447.3	MODESTO		SHALE	5.0	212.0	
442.3	CARBONDALE		SANDSTONE	5.4	217.0	
436.9	CARBONDALE	BANKSTON FORK	LIMESTONE	0.8	222.4	
436.0	CARBONDALE		SHALE	9.8	223.3	
426.3	CARBONDALE	BRERETON	LIMESTONE	2.7	233.0	
423.6	CARBONDALE		SHALE	4.3	235.7	
419.3	CARBONDALE	ANNA	BLACK SHALE	1.0	240.0	
418.3	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	5.4	241.0	
412.9	CARBONDALE		UNDERCLAY	1.6	246.4	
411.3	CARBONDALE		SHALE	16.3	248.0	
395.0	CARBONDALE	TURNER MINE	BLACK SHALE	0.5	264.3	
394.5	CARBONDALE		SHALE	25.2	264.8	
369.3	CARBONDALE		SANDSTONE	32.0	290.0	
337.3	CARBONDALE	HOUCHIN CREEK	COAL	1.5	322.0	UNCERTAIN CORRELATION
335.8	CARBONDALE		SHALE	40.3	323.5	
295.5	CARBONDALE	MECCA QUARRY	BLACK SHALE	2.3	363.8	
293.3	CARBONDALE	FRANCIS CREEK	SHALE	0.1	366.0	
293.2	CARBONDALE	COLCHESTER	COAL WITH SHALE PARTINGS	2.8	366.1	
290.5			SHALE	3.2	368.8	
287.3			LIMESTONE	8.0	372.0	
279.3			SHALE	24.0	380.0	
255.3			BLACK SHALE	0.3	404.0	
255.0			BONE COAL	1.7	404.3	
253.3			UNDERCLAY	2.0	406.0	
251.3			SHALE	18.0	408.0	

233.3	BLACK SHALE	7.0	426.0
226.3	SHALE	9.0	433.0
217.3	SANDSTONE	3.0	442.0
214.3	SHALE	2.0	445.0
212.3	BLACK SHALE	24.0	447.0
188.3	SHALE	46.0	471.0
142.3	CONGLOMERATE	4.0	517.0

MAPID: 11700019000C **VERSION:** 2 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 4 **QUARTERS/FOOTAGES:** SW SW SW NE
QUADRANGLE: PALMYRA **LONGITUDE:** -89.990471 **GEOLOGIST:** TREWORY,J
CONFIDENTIAL: N **LATITUDE:** 39.427704 **DATE COLLECTED:** 0 / 0 / 1904
SURFACE ELEVATION (FT.): 666.0 **LOGGED (FT.):** 875.0 **LOG TYPE:** Drillers Log
SOURCE: MACOUPIN C C **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
666.0			UNCONSOLIDATED	47.0	0.0	
619.0			ROCK	36.5	47.0	
582.5			COAL	0.3	83.5	
582.2			ROCK	96.3	83.8	
485.8			COAL	0.4	180.2	
485.4			ROCK	32.4	180.6	
453.0			SHALE	4.0	213.0	
449.0			SANDSTONE	5.4	217.0	
443.6			LIMESTONE	0.8	222.4	
442.7			SHALE	9.8	223.3	
433.0			LIMESTONE	2.7	233.0	
430.3			SHALE	4.3	235.7	
426.0			BLACK SHALE	1.0	240.0	
425.0	CARBONDALE	HERRIN	COAL	5.5	241.0	
419.5			ROCK	75.5	246.5	
344.0			COAL	1.5	322.0	
342.5			ROCK	42.6	323.5	
299.9			COAL	2.8	366.1	
297.2			ROCK	35.5	368.8	
261.7			COAL	1.7	404.3	
260.0			ROCK	469.0	406.0	

MAPID: 11700019000C VERSION: 3

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 4 QUARTERS/FOOTAGES: SW SW SW NE

QUADRANGLE: PALMYRA LONGITUDE: -89.990471 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.427704 DATE COLLECTED: 0 / 0 / 1904

SURFACE ELEVATION (FT.): 659.3 LOGGED (FT.): 875.0 LOG TYPE: Drillers Log

SOURCE: NORTHWESTERN-MACOUPIN COAL CO., CNTRCT 1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
659.3			SOIL	2.0	0.0	
657.3			CLAY	16.0	2.0	
641.3			SANDY CLAY	17.0	18.0	
624.3			CLAY & GRAVEL	3.0	35.0	
621.3			CLAY	2.0	38.0	
619.3			SANDY CLAY	6.0	40.0	
613.3			GRAVEL	1.0	46.0	
612.3	MODESTO	CARLINVILLE	LIMESTONE	2.5	47.0	
609.8	MODESTO		SHALE	7.5	49.5	
602.3	MODESTO		SANDSTONE	10.0	57.0	W/ SH PARTINGS
592.3	MODESTO		SANDY SHALE	10.0	67.0	
582.3	MODESTO		SHALE	6.5	77.0	
575.8	MODESTO	CHAPEL	COAL	0.3	83.5	
575.5	MODESTO		CLAYSTONE & SHALE	9.0	83.8	
566.5	MODESTO		SHALE	5.2	92.8	
561.3	MODESTO		SANDY SHALE	25.0	98.0	
536.3	MODESTO		SHALE	19.3	123.0	
517.0	MODESTO		LIMESTONE	4.8	142.3	
512.1	MODESTO		SHALE	5.5	147.2	
506.6	MODESTO		CALCAREOUS SHALE	5.3	152.7	
501.3	MODESTO		SANDY SHALE	19.3	158.0	W/ LS BANDS
482.0	MODESTO		BLACK SHALE	2.7	177.3	
479.4	MODESTO		FOSSILIFEROUS SHALE	0.3	179.9	
479.1	MODESTO		COAL	0.4	180.2	
478.7	MODESTO		SHALE	2.4	180.6	
476.3	MODESTO		CLAYSTONE & SHALE	8.0	183.0	
468.3	MODESTO		SANDY SHALE	9.0	191.0	
459.3	MODESTO		SHALE	9.0	200.0	W/ LS BANDS
450.3	MODESTO		LIMESTONE	3.0	209.0	
447.3	CARBONDALE		SHALE	5.0	212.0	
442.3	CARBONDALE		SANDSTONE	5.4	217.0	
436.9	CARBONDALE		LIMESTONE	0.8	222.4	
436.0	CARBONDALE		SHALE	3.8	223.3	
432.3	CARBONDALE		CALCAREOUS SHALE	6.0	227.0	
426.3	CARBONDALE	BRERETON	LIMESTONE	2.7	233.0	
423.6	CARBONDALE		SHALE	4.3	235.7	
419.3	CARBONDALE	ANNA	BLACK SHALE	1.0	240.0	
418.3	CARBONDALE	HERRIN	COAL	5.4	241.0	W/ SH & PYRITE
412.9	CARBONDALE		UNDERCLAY	1.6	246.4	

411.3	CARBONDALE		SHALE	8.0	248.0	W/ LS PEBBLES
403.3	CARBONDALE		SHALE	8.3	256.0	
395.0	CARBONDALE	TURNER MINE	BLACK SHALE	0.5	264.3	
394.5	CARBONDALE		SHALE	9.2	264.8	
385.3	CARBONDALE		SHALE	10.5	274.0	
374.8	CARBONDALE		SANDY SHALE	5.5	284.5	
369.3	CARBONDALE		SANDSTONE	32.0	290.0	
337.3	CARBONDALE	SURVANT	COAL	1.5	322.0	
335.8	CARBONDALE		SANDY SHALE	24.5	323.5	
311.3	CARBONDALE		SHALE	15.8	348.0	
295.5	CARBONDALE	MECCA QUARRY	BLACK SHALE	2.3	363.8	
293.3	CARBONDALE	COLCHESTER	COAL	2.8	366.0	
290.5	SPOON		CLAYSTONE & SHALE	3.2	368.8	
287.3	SPOON		LIMESTONE	8.0	372.0	
279.3	SPOON		SHALE	24.0	380.0	
255.3	SPOON		BLACK SHALE	0.3	404.0	
255.0	SPOON		COAL	1.7	404.3	
253.3	SPOON		UNDERCLAY	2.0	406.0	
251.3	SPOON		SHALE	12.0	408.0	
239.3	SPOON		SHALE	6.0	420.0	
233.3	SPOON		BLACK SHALE	7.0	426.0	
226.3	SPOON		CLAYSTONE & SHALE	4.0	433.0	
222.3	SPOON		SHALE	2.0	437.0	
220.3	SPOON		SHALE	3.0	439.0	
217.3	SPOON		CONGLOMERATE & SANDSTONE	3.0	442.0	
214.3	SPOON		SANDY SHALE	2.0	445.0	
212.3	SPOON		BLACK SHALE	24.0	447.0	
188.3	SPOON		SHALE	6.0	471.0	
182.3	SPOON		SANDY SHALE	40.0	477.0	
142.3	SPOON		CONGLOMERATE	4.0	517.0	
138.3	MISSISSIPPIAN		LIMESTONE W/ SHALE	354.0	521.0	

MAPID: 11700020000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 9 QUARTERS/FOOTAGES: NW SW NE

QUADRANGLE: PALMYRA LONGITUDE: -89.989777 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.415491 DATE COLLECTED: 0 / 0 / 1904

SURFACE ELEVATION (FT.): 655.8 LOGGED (FT.): 217.0 LOG TYPE: Drillers Log

SOURCE: NORTHWESTERN MACOUPIN COAL CO. WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
655.8			SAND/CLAY	30.0	0.0	W/BOULDER BANDS
625.8			GRAVEL	2.0	30.0	
623.8	MODESTO		LIMESTONE	1.0	32.0	
622.8	MODESTO		SANDSTONE	5.0	33.0	
617.8	MODESTO		SANDY SHALE	8.0	38.0	
609.8	MODESTO		SHALE	7.0	46.0	
602.8	MODESTO		BLACK SHALE	1.0	53.0	
601.8	MODESTO		CLAYSTONE & SHALE	4.0	54.0	
597.8	MODESTO		SHALE	4.0	58.0	
593.8	MODESTO		SANDY SHALE	44.0	62.0	
549.8	MODESTO		SHALE	6.0	106.0	
543.8	MODESTO		LIMESTONE	4.0	112.0	
539.8	MODESTO		SHALE	3.0	116.0	
536.8	MODESTO		SHALE	6.0	119.0	
530.8	MODESTO		SANDY SHALE	20.0	125.0	
510.8	MODESTO		BLACK SHALE	2.0	145.0	
508.8	MODESTO		CLAYSTONE & SHALE	4.0	147.0	
504.8	MODESTO		CALCAREOUS SHALE	2.0	151.0	
502.8	MODESTO		SANDY SHALE	23.0	153.0	
479.8	MODESTO	PIASA	LIMESTONE	2.5	176.0	
477.3	MODESTO		CALCAREOUS SHALE	1.5	178.5	
475.8	MODESTO		SHALE	3.0	180.0	
472.8	MODESTO		CALCAREOUS SHALE	3.0	183.0	
469.8	MODESTO		SANDY SHALE	6.0	186.0	
463.8	MODESTO		LIMESTONE	1.0	192.0	
462.8	CARBONDALE	DANVILLE	COAL	0.6	193.0	
462.2	CARBONDALE		SHALE	1.4	193.6	
460.8	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	195.0	
458.8	CARBONDALE		CALCAREOUS SHALE	6.0	197.0	
452.8	CARBONDALE	BRERETON	LIMESTONE	7.0	203.0	
445.8	CARBONDALE		SHALE	1.5	210.0	
444.3	CARBONDALE	HERRIN	COAL	4.2	211.5	
440.1	CARBONDALE		CLAYSTONE & SHALE	1.3	215.7	

MAPID: 11700020000C **VERSION:** 2 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 9 **QUARTERS/FOOTAGES:** NW SW NE
QUADRANGLE: PALMYRA **LONGITUDE:** -89.989777 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.415491 **DATE COLLECTED:** 0 / 0 / 1904
SURFACE ELEVATION (FT.): 656.0 **LOGGED (FT.):** 217.0 **LOG TYPE:** Drillers Log
SOURCE: NORTHWESTERN MACOUPIN C C **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
656.0			UNCONSOLIDATED	32.0	0.0
624.0			ROCK	161.0	32.0
463.0			COAL	0.6	193.0
462.4			SHALE	1.4	193.6
461.0			LIMESTONE	2.0	195.0
459.0			SHALE	6.0	197.0
453.0			LIMESTONE	7.5	203.0
445.5			SHALE	1.0	210.5
444.5	CARBONDALE	HERRIN	COAL	4.2	211.5
440.3			ROCK	1.3	215.7

MAPID: 117191B0004F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 10 **QUARTERS/FOOTAGES:** SE SW SW NW
QUADRANGLE: PALMYRA **LONGITUDE:** -89.979836 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.413258 **DATE COLLECTED:** 0 / 0 / 1946
SURFACE ELEVATION (FT.): 600.0 **LOGGED (FT.):** 34.4 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-CADY & SIMON **WELL TYPE:** Outcrop
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
600.0			UNCONSOLIDATED	20.0	0.0
580.0			SHALE	14.0	20.0
566.0			COAL	0.4	34.0

MAPID: 117191B0001F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 10 **QUARTERS/FOOTAGES:**
QUADRANGLE: PALMYRA **LONGITUDE:** -89.972221 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.412872 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 22.8 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-CADY ETAL. **WELL TYPE:** Outcrop
COMMENT: LOCATION UNKNOWN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			ROCK	22.4	0.0
-	MODESTO	CHAPEL	COAL	0.4	22.4

MAPID: 117191B0002F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 10 **QUARTERS/FOOTAGES:** NE NW SW
QUADRANGLE: PALMYRA **LONGITUDE:** -89.978062 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.411915 **DATE COLLECTED:** 0 / 0 / 1929
SURFACE ELEVATION (FT.): 590.0 **LOGGED (FT.):** 17.3 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-BALL **WELL TYPE:** Outcrop
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
590.0			SHALE	13.2	0.0	
576.8			COAL	0.5	13.2	
576.3			ROCK	3.7	13.7	

MAPID: 117191B0003F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 10 **QUARTERS/FOOTAGES:** SW SW SE NW
QUADRANGLE: PALMYRA **LONGITUDE:** -89.976324 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.413289 **DATE COLLECTED:** 0 / 0 / 1930
SURFACE ELEVATION (FT.): 590.0 **LOGGED (FT.):** 15.5 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-WANLESS **WELL TYPE:** Outcrop
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
590.0			SHALE	13.2	0.0	
576.8			COAL	0.4	13.2	
576.4			ROCK	1.9	13.6	

MAPID: 11701117000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 11 **QUARTERS/FOOTAGES:** 1320' S line, 2670' W line
QUADRANGLE: PALMYRA **LONGITUDE:** -89.953331 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.409414 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 641.8 **LOGGED (FT.):** 216.2 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES CORP. A-67-11 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
431.9	CARBONDALE	HERRIN	COAL	4.8	209.9	

MAPID: 11701117000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 11 QUARTERS/FOOTAGES: 1320' S line, 2670' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.953331

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.409414

DATE COLLECTED:

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 213.7

LOG TYPE: Survey Core Study

SOURCE: AYRSHIRE COLLIERIES CORP. A67-11

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
461.3	MODESTO	PIASA	LIMESTONE	4.7	180.7
456.7	MODESTO		SHALE	8.4	185.3
448.2	CARBONDALE	GALUM	NODULAR LIMESTONE	0.2	193.8
448.1	CARBONDALE		MOTTLED SHALE	2.1	193.9
446.0	CARBONDALE		CLAYSTONE	2.4	196.0
443.6	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	4.0	198.4
439.6	CARBONDALE	LAWSON	GRAY SHALE	1.3	202.4
438.3	CARBONDALE	LAWSON	MOTTLED SHALE	2.3	203.7
436.0	CARBONDALE	LAWSON	LIMESTONE/UNDERCLAY	0.2	206.0
435.8	CARBONDALE	LAWSON	DARK GRAY SHALE	2.0	206.2
433.8	CARBONDALE	ANNA	GRAY SHALE	0.8	208.2
433.0	CARBONDALE	HERRIN	COAL	4.7	209.0

MAPID: 11790101000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 11 QUARTERS/FOOTAGES: 1' S line, 30' W line of NW SE

QUADRANGLE: PALMYRA LONGITUDE: -89.953263

GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.4094

DATE COLLECTED: 11 / 7 / 1967

SURFACE ELEVATION (FT.): 641.8 LOGGED (FT.): 216.0

LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A67-11

WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
641.8	PLEISTOCENE		UNCONSOLIDATED	81.0	0.0
560.8	MODESTO		ROCK	76.0	81.0
484.8	CARBONDALE	DANVILLE	COAL	0.4	157.0
484.4	CARBONDALE		ROCK	52.5	157.4
431.9	CARBONDALE	HERRIN	COAL	4.8	209.9
427.2	CARBONDALE		ROCK	1.4	214.6

MAPID: 11701118000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 13 QUARTERS/FOOTAGES: 2682' N line, 2979' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.933218 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.398409 DATE COLLECTED:

SURFACE ELEVATION (FT.): 634.1 LOGGED (FT.): 222.8 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES CORP. A-67-12 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
416.8	CARBONDALE	HERRIN	COAL	5.3	217.3

MAPID: 11701118000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 13 QUARTERS/FOOTAGES: 2682' N line, 2979' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.933218 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.398409 DATE COLLECTED:

SURFACE ELEVATION (FT.): 634.0 LOGGED (FT.): 222.3 LOG TYPE: Survey Core Study

SOURCE: AYRSHIRE COLLIERIES CORP. A-67-12 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
448.9	MODESTO	PIASA	LIMESTONE	2.8	185.1
446.1	MODESTO		SHALE	10.3	187.9
435.9	CARBONDALE	DANVILLE	BONE COAL	1.6	198.1
434.3	CARBONDALE		CLAYSTONE	2.7	199.7
431.6	CARBONDALE	GALUM	NODULAR LIMESTONE	1.3	202.4
430.3	CARBONDALE		GRAY SHALE	2.9	203.7
427.4	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	5.1	206.6
422.3	CARBONDALE	LAWSON	DARK GRAY SHALE	2.3	211.7
420.0	CARBONDALE	LAWSON	GRAY SHALE	0.6	214.0
419.4	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	2.1	214.6
417.3	CARBONDALE	ANNA	BLACK SHALE	0.3	216.7
417.0	CARBONDALE	HERRIN	COAL	5.3	217.0

MAPID: 11790102000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 13 QUARTERS/FOOTAGES: 42' N line, 339' W line of NW SE
 QUADRANGLE: PALMYRA LONGITUDE: -89.933214 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.398415 DATE COLLECTED: 11 / 0 / 1967
 SURFACE ELEVATION (FT.): 634.7 LOGGED (FT.): 222.8 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES A67-12 WELL TYPE: Coal Test
 COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
634.7	PLEISTOCENE		UNCONSOLIDATED	119.6	0.0
515.2			ROCK	97.8	119.5
417.4	CARBONDALE	HERRIN	COAL	5.3	217.3
412.1	CARBONDALE		ROCK	0.2	222.6

MAPID: 11701116000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 16 QUARTERS/FOOTAGES: 1320' N line, 100' E line
 QUADRANGLE: PALMYRA LONGITUDE: -89.98183 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.401898 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 638.5 LOGGED (FT.): 358.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES CORP. A-67-10 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
442.5	CARBONDALE	HERRIN	COAL	5.8	196.0

MAPID: 11701116000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 16 QUARTERS/FOOTAGES: 1320' N line, 100' E line
 QUADRANGLE: PALMYRA LONGITUDE: -89.98183 GEOLOGIST:
 CONFIDENTIAL: N LATITUDE: 39.401898 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 639.0 LOGGED (FT.): 201.1 LOG TYPE: Survey Core Study
 SOURCE: AYRSHIRE COLLIERIES CORP. A-67-10 WELL TYPE: Coal Test
 COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
470.7	MODESTO	PIASA	LIMESTONE	5.0	168.3
465.7	MODESTO		DARK GRAY SHALE	2.0	173.3
463.7	CARBONDALE	DANVILLE	BONE COAL	0.5	175.3
463.2	CARBONDALE		SHALE	12.2	175.8
451.0	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.0	188.0
448.0	CARBONDALE	LAWSON	MOTTLED SHALE	3.6	191.0
444.4	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.8	194.6
443.7	CARBONDALE	ANNA	DARK GRAY SHALE	0.7	195.3
443.0	CARBONDALE	HERRIN	COAL	5.1	196.0

MAPID: 11701444000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 16 QUARTERS/FOOTAGES: 270' N line, 61' W line of SW NW

QUADRANGLE: PALMYRA LONGITUDE: -89.995245 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.40105 DATE COLLECTED:

SURFACE ELEVATION (FT.): 641.4 LOGGED (FT.): 211.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES CORP. A68-39 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
442.4	CARBONDALE	HERRIN	COAL	3.8	199.0

MAPID: 11790100000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 16 QUARTERS/FOOTAGES: 1' N line, 100' E line of NE NE

QUADRANGLE: PALMYRA LONGITUDE: -89.981844 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.405539 DATE COLLECTED: 11 / 2 / 1967

SURFACE ELEVATION (FT.): 638.5 LOGGED (FT.): 358.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A67-10 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
638.5	PLEISTOCENE		UNCONSOLIDATED	64.0	0.0
574.5	MODESTO		ROCK	110.0	64.0
464.5	CARBONDALE	DANVILLE	COAL	0.5	174.0
464.0	CARBONDALE		ROCK	21.5	174.5
442.5	CARBONDALE	HERRIN	COAL	5.1	196.0
437.4	CARBONDALE		ROCK	38.9	201.1
398.5	CARBONDALE	SPRINGFIELD	COAL	1.0	240.0
397.5	CARBONDALE		ROCK	25.5	241.0
372.0	CARBONDALE	ROODHOUSE	COAL	1.3	266.5
370.7	CARBONDALE		ROCK	39.4	267.8
331.3	CARBONDALE	COLCHESTER	COAL	3.0	307.2
328.3	CARBONDALE		ROCK	47.8	310.2

MAPID: 11790129000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 16 QUARTERS/FOOTAGES: 270' N line, 61' W line of SE NW

QUADRANGLE: PALMYRA LONGITUDE: -89.995245 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.40105 DATE COLLECTED: 10 / 10 / 1968

SURFACE ELEVATION (FT.): 641.4 LOGGED (FT.): 211.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A68-39 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
641.4	PLEISTOCENE		UNCONSOLIDATED	48.0	0.0	
593.4			ROCK	151.0	48.0	
442.4	CARBONDALE	HERRIN	COAL	3.8	199.0	
438.6	CARBONDALE		ROCK	8.2	202.8	

MAPID: 11701132000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 17 QUARTERS/FOOTAGES: NE SW NW

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.014462 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.401033 DATE COLLECTED:

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 215.2 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES CORP. A-67-26 WELL TYPE: Coal Test

COMMENT: ELEVATION IS APPROXIMATE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
450.2	CARBONDALE	DANVILLE	COAL	1.3	189.8	
430.8	CARBONDALE	HERRIN	COAL	4.5	209.2	

MAPID: 11701132000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 17 QUARTERS/FOOTAGES: NE SW NW

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.014462 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.401033 DATE COLLECTED:

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 213.5 LOG TYPE: Survey Core Study

SOURCE: AYRSHIRE COLLIERIES CORP. A-67-26 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
459.8	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.3	180.2	
455.5	MODESTO		DARK GRAY SHALE	4.3	184.5	
451.2	CARBONDALE	DANVILLE	COAL	1.3	188.8	
450.0	CARBONDALE		CLAYSTONE	1.2	190.0	
448.8	CARBONDALE	GALUM	LIMESTONE/UNDERCLAY	0.7	191.2	
448.1	CARBONDALE		SHALE	2.5	191.9	
445.6	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.9	194.4	UPPER BENCH
440.7	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	2.0	199.3	SHALE PARTING
438.7	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.7	201.3	LOWER BENCH
435.0	CARBONDALE	LAWSON	GRAY SHALE	0.3	205.0	
434.8	CARBONDALE	LAWSON	MOTTLED SHALE	3.6	205.2	
431.2	CARBONDALE	ANNA	DARK GRAY SHALE	0.3	208.8	
431.0	CARBONDALE	HERRIN	COAL	4.5	209.0	

MAPID: 11790116000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 17 QUARTERS/FOOTAGES: 220' N line, 50' E line of SW NW

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.014462 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.401033 DATE COLLECTED: 12 / 15 / 1967

SURFACE ELEVATION (FT.): 644.2 LOGGED (FT.): 216.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A67-26 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
644.2	PLEISTOCENE		UNCONSOLIDATED	70.0	0.0	
574.2	MODESTO		ROCK	118.8	70.0	
455.4	CARBONDALE	DANVILLE	COAL	1.3	188.8	
454.1	CARBONDALE		ROCK	20.0	190.1	
434.2	CARBONDALE	HERRIN	COAL	4.5	210.0	
429.7	CARBONDALE		ROCK	1.5	214.5	

MAPID: 11790128000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 19 QUARTERS/FOOTAGES: 655' N line, 30' W line of SW SW
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.037285 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.377894 DATE COLLECTED: 10 / 9 / 1968
 SURFACE ELEVATION (FT.): 617.2 LOGGED (FT.): 188.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES A68-38 WELL TYPE: Coal Test
 COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
617.2	PLEISTOCENE		UNCONSOLIDATED	144.0	0.0
473.2			ROCK	44.0	144.0

MAPID: 11790364000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 19 QUARTERS/FOOTAGES: 114' N line, 106' W line of NE SW
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.032202 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.383024 DATE COLLECTED: 11 / 15 / 1978
 SURFACE ELEVATION (FT.): 621.6 LOGGED (FT.): 176.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-007 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
621.6	PLEISTOCENE		UNCONSOLIDATED	157.0	0.0
464.6			ROCK	7.7	157.0
456.9	CARBONDALE	HERRIN	COAL	3.1	164.7
453.8	CARBONDALE		ROCK	8.2	167.8

MAPID: 11701131000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 20 QUARTERS/FOOTAGES: NE SW NW
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.014393 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.388197 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 198.5 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES CORP. A-67-25 WELL TYPE: Coal Test
 COMMENT: ELEVATION IS APPROXIMATE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
408.2	CARBONDALE	HERRIN	COAL	4.7	191.8

MAPID: 11701131000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 20 QUARTERS/FOOTAGES: NE SW NW

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.014393

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.388197

DATE COLLECTED:

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 196.7

LOG TYPE: Survey Core Study

SOURCE: AYRSHIRE COLLIERIES CORP. A-67-25

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
437.8	MODESTO	PIASA	LIMESTONE/UNDERCLAY	3.5	162.2
434.3	MODESTO		MOTTLED SHALE	2.1	165.7
432.2	CARBONDALE	DANVILLE	BONE COAL	0.8	167.8
431.4	CARBONDALE		SANDSTONE/SILTSTONE	5.5	168.6
425.9	CARBONDALE	GALUM	NODULAR LIMESTONE	0.5	174.1
425.4	CARBONDALE		DARK GRAY SHALE	4.0	174.6
421.4	CARBONDALE		CLAYSTONE	2.7	178.6
418.7	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	5.2	181.3
413.6	CARBONDALE	LAWSON	MOTTLED SHALE	5.1	186.4
408.5	CARBONDALE	ANNA	DARK GRAY SHALE	0.5	191.5
408.0	CARBONDALE	HERRIN	COAL	4.7	192.0

MAPID: 11790115000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 20 QUARTERS/FOOTAGES: 920' N line, 50' E line of NW NW

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.014393

GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.388197

DATE COLLECTED: 12 / 12 / 1967

SURFACE ELEVATION (FT.): 622.4 LOGGED (FT.): 198.5

LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A67-25

WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
622.4	PLEISTOCENE		UNCONSOLIDATED	96.0	0.0
526.4			ROCK	95.8	96.0
430.6	CARBONDALE	HERRIN	COAL	4.7	191.8
425.9	CARBONDALE		ROCK	2.0	196.5

MAPID: 11790256000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 20 QUARTERS/FOOTAGES: 45' N line, 350' E line of SW SE
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.006001 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.379775 DATE COLLECTED: 2 / 26 / 1975
 SURFACE ELEVATION (FT.): 618.6 LOGGED (FT.): 180.0 LOG TYPE: Drillers Log
 SOURCE: AMAX M56 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
618.6	PLEISTOCENE		UNCONSOLIDATED	83.0	0.0
535.6			ROCK	81.0	83.0
454.6	CARBONDALE	HERRIN	COAL	7.0	164.0
447.6	CARBONDALE		ROCK	9.0	171.0

MAPID: 11721629000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 21 QUARTERS/FOOTAGES: 64' N line, 30' W line of NW
 QUADRANGLE: PALMYRA LONGITUDE: -89.981533 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.390833 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 147.5 LOG TYPE: Survey Core Study
 SOURCE: AMAX M-45 WELL TYPE: Coal Test
 COMMENT: DRILLERS LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
523.3	CARBONDALE	DANVILLE	COAL	2.2	106.7
500.7	CARBONDALE	HERRIN	COAL	9.7	129.3

MAPID: 11721632000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 21 QUARTERS/FOOTAGES: 94' N line, 2233' W line of NW
 QUADRANGLE: PALMYRA LONGITUDE: -89.994005 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.390645 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 610.0 LOGGED (FT.): 218.0 LOG TYPE: Survey Core Study
 SOURCE: AMAX M-49 WELL TYPE: Coal Test
 COMMENT: DRILLERS LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
408.2	CARBONDALE	HERRIN	COAL	7.0	201.8

MAPID: 11790136000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 21 QUARTERS/FOOTAGES: 380' S line, 1' W line of NW SE

QUADRANGLE: PALMYRA LONGITUDE: -89.990697 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.381064 DATE COLLECTED: 6 / 16 / 1977

SURFACE ELEVATION (FT.): 618.2 LOGGED (FT.): 190.0 LOG TYPE: Drillers Log

SOURCE: AMAX B471CJ WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX #43 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
618.2	PLEISTOCENE		UNCONSOLIDATED	112.0	0.0	
506.2	MODESTO		ROCK	39.0	112.0	
467.2	CARBONDALE	DANVILLE	COAL	1.0	151.0	
466.2	CARBONDALE		ROCK	38.0	152.0	

MAPID: 11790137000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 21 QUARTERS/FOOTAGES: 380' S line, 1' W line of NW SE

QUADRANGLE: PALMYRA LONGITUDE: -89.990644 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.381075 DATE COLLECTED: 8 / 8 / 1977

SURFACE ELEVATION (FT.): 618.2 LOGGED (FT.): 229.0 LOG TYPE: Drillers Log

SOURCE: AMAX B471CJ-1 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX #43 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
618.2	PLEISTOCENE		UNCONSOLIDATED	79.0	0.0	
539.2	MODESTO		ROCK	73.0	79.0	
466.2	CARBONDALE	DANVILLE	COAL	2.0	152.0	
464.2	CARBONDALE		ROCK	51.0	154.0	
413.2	CARBONDALE	HERRIN	COAL	6.5	205.0	
406.7	CARBONDALE		ROCK	17.5	211.5	

MAPID: 11790245000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 21 QUARTERS/FOOTAGES: 64' N line, 30' E line of NE
 QUADRANGLE: PALMYRA LONGITUDE: -89.981533 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.390833 DATE COLLECTED: 2 / 26 / 1975
 SURFACE ELEVATION (FT.): 563.0 LOGGED (FT.): 147.5 LOG TYPE: Drillers Log
 SOURCE: AMAX M45 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
563.0	PLEISTOCENE		UNCONSOLIDATED	28.0	0.0
535.0	MODESTO		ROCK	79.5	28.0
455.5	CARBONDALE	DANVILLE	COAL	3.0	107.5
452.5	CARBONDALE		ROCK	19.5	110.5
433.0	CARBONDALE	HERRIN	COAL	7.5	130.0
425.5	CARBONDALE		ROCK	10.0	137.5

MAPID: 11790249000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 21 QUARTERS/FOOTAGES: 94' N line, 913' E line of NW
 QUADRANGLE: PALMYRA LONGITUDE: -89.994005 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.390645 DATE COLLECTED: 2 / 26 / 1975
 SURFACE ELEVATION (FT.): 630.9 LOGGED (FT.): 218.0 LOG TYPE: Drillers Log
 SOURCE: AMAX M49 WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
630.9	PLEISTOCENE		UNCONSOLIDATED	82.0	0.0
548.9			ROCK	121.0	82.0
427.9	CARBONDALE	HERRIN	COAL	5.2	203.0
422.7	CARBONDALE		ROCK	9.8	208.2

MAPID: 11701446000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 22 QUARTERS/FOOTAGES: 940' S line, 95' W line of NW NW
 QUADRANGLE: PALMYRA LONGITUDE: -89.981079 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.389962 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 572.1 LOGGED (FT.): 134.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES CORP. A68-35 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
470.1	CARBONDALE	DANVILLE	COAL	1.2	102.0
446.1	CARBONDALE	HERRIN	COAL	7.0	126.0

MAPID: 11701447000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 22 QUARTERS/FOOTAGES: 20' S line, 40' E line of NW SE

QUADRANGLE: PALMYRA LONGITUDE: -89.967296 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.380169 DATE COLLECTED:

SURFACE ELEVATION (FT.): 618.5 LOGGED (FT.): 190.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES CORP. A68-36 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
435.5	CARBONDALE	HERRIN	COAL	6.3	183.0

MAPID: 11790125000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 22 QUARTERS/FOOTAGES: 940' S line, 95' W line of NW NW

QUADRANGLE: PALMYRA LONGITUDE: -89.981079 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.389962 DATE COLLECTED: 10 / 3 / 1968

SURFACE ELEVATION (FT.): 572.1 LOGGED (FT.): 134.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A68-35 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
572.1	PLEISTOCENE		UNCONSOLIDATED	29.0	0.0
543.1	MODESTO		ROCK	34.7	29.0
508.4	MODESTO	ROCK BRANCH	COAL	1.0	63.7
507.4	MODESTO		ROCK	37.3	64.7
470.1	CARBONDALE	DANVILLE	COAL	1.2	102.0
468.9	CARBONDALE		ROCK	22.8	103.2
446.1	CARBONDALE	HERRIN	COAL	7.0	126.0
439.1	CARBONDALE		ROCK	1.0	133.0

MAPID: 11790126000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 22 QUARTERS/FOOTAGES: 20' S line, 40' E line of NW SE

QUADRANGLE: PALMYRA LONGITUDE: -89.967296 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.380169 DATE COLLECTED: 10 / 9 / 1968

SURFACE ELEVATION (FT.): 618.5 LOGGED (FT.): 190.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A68-36 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
618.5	PLEISTOCENE		ROCK	94.0	0.0
524.5			ROCK	89.0	94.0
435.5	CARBONDALE	HERRIN	COAL	6.3	183.0
429.2	CARBONDALE		ROCK	0.8	189.3

MAPID: 11701112000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 23 **QUARTERS/FOOTAGES:** 2790' N line, 2420' E line
QUADRANGLE: PALMYRA **LONGITUDE:** -89.952292 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.383433 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 613.3 **LOGGED (FT.):** 200.2 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES CORP. A-67-6 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
420.5	CARBONDALE	HERRIN	COAL	4.9	192.8

MAPID: 11701112000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 23 **QUARTERS/FOOTAGES:** 2790' N line, 2420' E line
QUADRANGLE: PALMYRA **LONGITUDE:** -89.952292 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.383433 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 613.0 **LOGGED (FT.):** 197.9 **LOG TYPE:** Survey Core Study
SOURCE: AYRSHIRE COLLIERIES CORP. A-67-6 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
443.3	CARBONDALE		GRAY SHALE	8.0	169.7
435.3	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	6.0	177.7
429.3	CARBONDALE	LAWSON	MOTTLED SHALE	5.4	183.7
423.9	CARBONDALE	BRERETON	LIMESTONE W/ SHALE	3.7	189.1
420.2	CARBONDALE	ANNA	DARK GRAY SHALE	0.3	192.8
420.0	CARBONDALE	HERRIN	COAL	4.9	193.0

MAPID: 11790096000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 23 **QUARTERS/FOOTAGES:** 150' N line, 220' W line of NW SE
QUADRANGLE: PALMYRA **LONGITUDE:** -89.952295 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.383416 **DATE COLLECTED:** 10 / 13 / 1967
SURFACE ELEVATION (FT.): 613.3 **LOGGED (FT.):** 200.2 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES A67-6 **WELL TYPE:** Coal Test
COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
613.3	PLEISTOCENE		UNCONSOLIDATED	134.0	0.0
479.3			ROCK	58.8	134.0
420.5	CARBONDALE	HERRIN	COAL	4.9	192.8
415.6	CARBONDALE		ROCK	2.5	197.7

MAPID: 11701448000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 24 **QUARTERS/FOOTAGES:** 600' N line, 600' E line of SE SE
QUADRANGLE: PALMYRA **LONGITUDE:** -89.926985 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.37865 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 593.5 **LOGGED (FT.):** 186.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES CORP. A68-34 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
445.5	CARBONDALE	HERRIN	COAL	2.5	148.0

MAPID: 11790124000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 24 **QUARTERS/FOOTAGES:** 600' N line, 600' E line of SE SE
QUADRANGLE: PALMYRA **LONGITUDE:** -89.926985 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.37865 **DATE COLLECTED:** 10 / 3 / 1968
SURFACE ELEVATION (FT.): 593.5 **LOGGED (FT.):** 186.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES A68-34 **WELL TYPE:** Coal Test
COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
593.5	PLEISTOCENE		UNCONSOLIDATED	137.0	0.0
456.5			ROCK	11.0	137.0
445.5	CARBONDALE	HERRIN	COAL	2.5	148.0
443.0	CARBONDALE		ROCK	35.5	150.5

MAPID: 11701111000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 25 **QUARTERS/FOOTAGES:** 1290' S line, 2718' E line
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.934321 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.365585 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 635.0 **LOGGED (FT.):** 233.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES A-67-5 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
409.2	CARBONDALE	HERRIN	COAL	5.3	225.8

MAPID: 11701111000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 25 QUARTERS/FOOTAGES: 1290' S line, 2718' E line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.934321

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.365585

DATE COLLECTED:

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 230.3

LOG TYPE: Survey Core Study

SOURCE: AYRSHIRE COLLIERIES A-67-5

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
439.2	MODESTO	PIASA	LIMESTONE	1.5	195.8	
437.7	CARBONDALE		GRAY SHALE	11.5	197.3	
426.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.6	208.8	UPPER BENCH
422.7	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	0.4	212.3	SHALE PARTING
422.2	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	0.6	212.8	LOWER BENCH
421.7	CARBONDALE	LAWSON	MOTTLED SHALE	3.7	213.3	
418.0	CARBONDALE	LAWSON	DARK GRAY SHALE	0.1	217.0	
417.9	CARBONDALE	LAWSON	MOTTLED SHALE	0.3	217.1	
417.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	7.3	217.3	
410.4	CARBONDALE	ANNA	MOTTLED SHALE	0.4	224.6	
410.0	CARBONDALE	HERRIN	COAL	5.3	225.0	

MAPID: 11790095000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 25 QUARTERS/FOOTAGES: 30' N line, 78' E line of SE SW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.934389

GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.365588

DATE COLLECTED: 10 / 18 / 1967

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 233.0

LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A67-5

WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
635.0	PLEISTOCENE		UNCONSOLIDATED	168.0	0.0	
467.0			ROCK	57.8	168.0	
409.2	CARBONDALE	HERRIN	COAL	1.5	225.8	
407.7	CARBONDALE	HERRIN	CLAYSTONE	0.1	227.3	BAND
407.6	CARBONDALE	HERRIN	COAL	3.7	227.4	
403.9	CARBONDALE		ROCK	2.0	231.1	

MAPID: 11790139000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 25 QUARTERS/FOOTAGES: 755' N line, 55' E line of SE SE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.924945 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.363624 DATE COLLECTED: 6 / 7 / 1977

SURFACE ELEVATION (FT.): 645.7 LOGGED (FT.): 295.0 LOG TYPE: Drillers Log

SOURCE: AMAX C224GI WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP #43 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
645.7	PLEISTOCENE		UNCONSOLIDATED	175.0	0.0
470.7			ROCK	120.0	175.0

MAPID: 11790140000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 25 QUARTERS/FOOTAGES: 468' S line, 603' W line of SE NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.92735 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.370701 DATE COLLECTED: 7 / 27 / 1977

SURFACE ELEVATION (FT.): 637.9 LOGGED (FT.): 251.0 LOG TYPE: Drillers Log

SOURCE: AMAX C323IG WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP #43 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
637.9	PLEISTOCENE		UNCONSOLIDATED	165.0	0.0
472.9			ROCK	68.0	165.0
404.9	CARBONDALE	HERRIN	COAL	3.5	233.0
401.4	CARBONDALE		ROCK	14.5	236.5

MAPID: 1179024000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 25 QUARTERS/FOOTAGES: 768' N line, 65' E line of SE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.924914 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.367251 DATE COLLECTED: 2 / 29 / 1975

SURFACE ELEVATION (FT.): 647.5 LOGGED (FT.): 437.5 LOG TYPE: Drillers Log

SOURCE: AMAX M40 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
647.5	PLEISTOCENE		UNCONSOLIDATED	173.0	0.0	
474.5			ROCK	67.7	173.0	
406.8	CARBONDALE	HERRIN	COAL	1.0	240.7	
405.8	CARBONDALE		ROCK	89.3	241.7	#5 MISSING
316.5	CARBONDALE	ROODHOUSE	COAL	2.5	331.0	
314.0	CARBONDALE		ROCK	39.5	333.5	
274.5	CARBONDALE	COLCHESTER	COAL	2.5	373.0	
272.0	CARBONDALE		ROCK	24.0	375.5	
248.0	CARBONDALE		COAL	0.1	399.5	
247.9			ROCK	19.9	399.6	
228.0			COAL	1.5	419.5	
226.5			ROCK	16.5	421.0	

MAPID: 11790244000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 25 QUARTERS/FOOTAGES: 207' N line, 57' W line of NW

QUADRANGLE: PALMYRA LONGITUDE: -89.943427 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.376002 DATE COLLECTED: 2 / 5 / 1975

SURFACE ELEVATION (FT.): 630.9 LOGGED (FT.): 244.0 LOG TYPE: Drillers Log

SOURCE: AMAX M44 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
630.9	PLEISTOCENE		UNCONSOLIDATED	133.0	0.0	
497.9			ROCK	91.0	133.0	
406.9	CARBONDALE	HERRIN	COAL	7.0	224.0	
399.9	CARBONDALE		ROCK	13.0	231.0	

MAPID: 11700893000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 26 **QUARTERS/FOOTAGES:** 221' N line, 354' E line
QUADRANGLE: PALMYRA **LONGITUDE:** -89.944888 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.375955 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 630.9 **LOGGED (FT.):** 228.0 **LOG TYPE:** Drillers Log
SOURCE: TRUAX-TRAER COAL CO 18 **WELL TYPE:** Coal Test
COMMENT: SEE COAL SEC MAP 6-117 A & B

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
403.6	CARBONDALE	HERRIN	COAL	3.9	227.3

MAPID: 11700893000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 26 **QUARTERS/FOOTAGES:** 221' N line, 354' E line
QUADRANGLE: PALMYRA **LONGITUDE:** -89.944888 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.375955 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 631.0 **LOGGED (FT.):** 225.9 **LOG TYPE:** Survey Core Study
SOURCE: TRUAX-TRAER COAL CO 18 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
446.4	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.7	184.6
441.7	MODESTO		CLAYSTONE	2.5	189.3
439.2	CARBONDALE		SANDSTONE	9.5	191.8
429.7	CARBONDALE		DARK GRAY SHALE	3.2	201.3
426.6	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.7	204.4
421.9	CARBONDALE	LAWSON	MOTTLED SHALE	4.6	209.1
417.3	CARBONDALE	BRERETON	LIMESTONE W/ SHALE	7.8	213.7
409.5	CARBONDALE	ANNA	DARK GRAY SHALE	0.5	221.5
409.0	CARBONDALE	HERRIN	COAL	3.9	222.0

MAPID: 11790242000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 26 **QUARTERS/FOOTAGES:** 4' S line, 41' W line of SW
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.962083 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.361915 **DATE COLLECTED:** 2 / 7 / 1975
SURFACE ELEVATION (FT.): 618.6 **LOGGED (FT.):** 216.5 **LOG TYPE:** Drillers Log
SOURCE: AMAX M42 **WELL TYPE:** Coal Test
COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
618.6	PLEISTOCENE		UNCONSOLIDATED	160.0	0.0
458.6			ROCK	39.5	160.0
419.1	CARBONDALE	HERRIN	COAL	8.0	199.5
411.1	CARBONDALE		ROCK	9.0	207.5

MAPID: 1179025000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 27 QUARTERS/FOOTAGES: 2075' N line, 42' W line of NW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.981079 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.370707 DATE COLLECTED: 2 / 12 / 1975

SURFACE ELEVATION (FT.): 541.8 LOGGED (FT.): 150.0 LOG TYPE: Drillers Log

SOURCE: AMAX M50 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
541.8	PLEISTOCENE		UNCONSOLIDATED	80.0	0.0
461.8	MODESTO		ROCK	12.0	80.0
449.8	CARBONDALE	DANVILLE	COAL	2.0	92.0
447.8	CARBONDALE		ROCK	44.0	94.0
403.8	CARBONDALE	HERRIN	COAL	6.0	138.0
397.8	CARBONDALE		ROCK	6.0	144.0

MAPID: 11701115000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 28 QUARTERS/FOOTAGES: 600' N line, 80' E line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.981537 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.374777 DATE COLLECTED:

SURFACE ELEVATION (FT.): 563.9 LOGGED (FT.): 178.8 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A-67-9 WELL TYPE: Coal Test

COMMENT: APPROXIMATE FOOTAGE LOCATIONS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
393.3	CARBONDALE	HERRIN	COAL	7.8	170.6

MAPID: 11701115000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 28 QUARTERS/FOOTAGES: 600' N line, 80' E line

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.981537

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.374777

DATE COLLECTED:

SURFACE ELEVATION (FT.): 564.0 LOGGED (FT.): 177.8

LOG TYPE: Survey Core Study

SOURCE: AYRSHIRE COLLIERIES A-67-9

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
433.6	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.8	130.4
428.9	MODESTO		MOTTLED SHALE	1.8	135.1
427.1	CARBONDALE	DANVILLE	BONE COAL	0.4	136.9
426.7	CARBONDALE		SHALE & SANDSTONE	13.1	137.3
413.6	CARBONDALE	GALUM	CARBONACEOUS LIMESTONE	0.2	150.4
413.4	CARBONDALE		GRAY SHALE	1.0	150.6
412.4	CARBONDALE	ALLENBY	BONE COAL	0.3	151.6
412.2	CARBONDALE		GRAY SHALE	7.1	151.8
405.1	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	5.5	158.9
399.6	CARBONDALE	LAWSON	MOTTLED SHALE	3.6	164.4
396.0	CARBONDALE	LAWSON	DARK GRAY SHALE	0.2	168.0
395.8	CARBONDALE	BRERETON	LIMESTONE W/ SHALE	0.5	168.2
395.3	CARBONDALE	ANNA	DARK GRAY SHALE	1.3	168.7
394.0	CARBONDALE	HERRIN	COAL	7.8	170.0

MAPID: 11790099000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 28 QUARTERS/FOOTAGES: 660' N line, 50' E line of NE NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.981429

GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.374612

DATE COLLECTED: 10 / 27 / 1967

SURFACE ELEVATION (FT.): 563.9 LOGGED (FT.): 178.8

LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A67-9

WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
563.9	PLEISTOCENE		UNCONSOLIDATED	65.0	0.0
498.9			ROCK	104.0	65.0
394.9	CARBONDALE	HERRIN	COAL	7.8	169.0
387.1	CARBONDALE		ROCK	2.0	176.8

MAPID: 11790131000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 28 QUARTERS/FOOTAGES: 25' N line, 156' E line of NE NW
 QUADRANGLE: PALMYRA LONGITUDE: -89.991226 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.376302 DATE COLLECTED: 10 / 10 / 1968
 SURFACE ELEVATION (FT.): 625.2 LOGGED (FT.): 128.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES A-68-41 WELL TYPE: Coal Test
 COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
625.2	PLEISTOCENE		UNCONSOLIDATED	83.0	0.0
542.2			ROCK	45.0	83.0

MAPID: 11790133000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 28 QUARTERS/FOOTAGES: 247' S line, 220' E line of SE SE
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.981863 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.362547 DATE COLLECTED: 6 / 14 / 1977
 SURFACE ELEVATION (FT.): 547.0 LOGGED (FT.): 127.0 LOG TYPE: Drillers Log
 SOURCE: AMAX B224LI WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX #43 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
547.0	PLEISTOCENE		UNCONSOLIDATED	86.0	0.0
461.0			ROCK	27.0	86.0
434.0	CARBONDALE	HERRIN	COAL	6.0	113.0
428.0	CARBONDALE		ROCK	8.0	119.0

MAPID: 11790134000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 28 QUARTERS/FOOTAGES: 18' N line, 376' E line of NW NW
 QUADRANGLE: PALMYRA LONGITUDE: -89.996714 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.376287 DATE COLLECTED: 6 / 21 / 1977
 SURFACE ELEVATION (FT.): 614.8 LOGGED (FT.): 160.0 LOG TYPE: Drillers Log
 SOURCE: AMAX B418NP WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX #43 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
614.8	PLEISTOCENE		UNCONSOLIDATED	102.0	0.0
512.8	MODESTO		ROCK	38.0	102.0
474.8	CARBONDALE	DANVILLE	COAL	0.7	140.0
474.1	CARBONDALE		ROCK	19.3	140.7

MAPID: 11790135000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 28 QUARTERS/FOOTAGES: 18' N line, 376' E line of NW NW

QUADRANGLE: PALMYRA LONGITUDE: -89.996501

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.376321

DATE COLLECTED: 8 / 16 / 1977

SURFACE ELEVATION (FT.): 614.8 LOGGED (FT.): 218.0

LOG TYPE: Drillers Log

SOURCE: AMAX B418NP-1

WELL TYPE: Coal Test

COMMENT: MACOUPIN BOX #43 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
614.8	PLEISTOCENE		UNCONSOLIDATED	74.0	0.0
540.8	MODESTO		ROCK	6.0	74.0
534.8	MODESTO		COAL	2.0	80.0
532.8	MODESTO		ROCK	95.0	82.0
437.8	CARBONDALE	DANVILLE	COAL	2.0	177.0
435.8	CARBONDALE		ROCK	23.0	179.0
412.8	CARBONDALE	HERRIN	COAL	7.0	202.0
405.8	CARBONDALE		ROCK	9.0	209.0

MAPID: 11701121000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 32 QUARTERS/FOOTAGES: 468' N line, 175' W line of SW NW

QUADRANGLE: HETTICK LONGITUDE: -90.017941

GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.356866

DATE COLLECTED:

SURFACE ELEVATION (FT.): 539.1 LOGGED (FT.): 268.0

LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES CORP. A-67-15

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
449.1	CARBONDALE	HERRIN	COAL	2.3	90.0

MAPID: 11790105000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 32 QUARTERS/FOOTAGES: 468' N line, 175' W line of SW NW
 QUADRANGLE: HETTICK LONGITUDE: -90.017941 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.356866 DATE COLLECTED: 11 / 9 / 1967
 SURFACE ELEVATION (FT.): 539.1 LOGGED (FT.): 268.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES A67-15 WELL TYPE: Coal Test
 COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
539.1	PLEISTOCENE		UNCONSOLIDATED	14.0	0.0	
525.1			ROCK	76.0	14.0	
449.1	CARBONDALE	HERRIN	COAL	2.3	90.0	
446.8	CARBONDALE		ROCK	85.5	92.3	#5 MISSING
361.3	CARBONDALE	ROODHOUSE	COAL	1.3	177.8	
360.1	CARBONDALE		ROCK	27.7	179.0	
332.4	CARBONDALE	COLCHESTER	COAL	1.5	206.7	
330.9	CARBONDALE		ROCK	59.8	208.2	

MAPID: 11790132000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 32 QUARTERS/FOOTAGES: 245' S line, 45' W line of SW SW
 QUADRANGLE: HETTICK LONGITUDE: -90.018074 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.347811 DATE COLLECTED: 6 / 15 / 1977
 SURFACE ELEVATION (FT.): 525.7 LOGGED (FT.): 109.0 LOG TYPE: Drillers Log
 SOURCE: AMAX B9JH WELL TYPE: Coal Test
 COMMENT: MACOUPIN DEEP BOX #43 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
525.7	PLEISTOCENE		UNCONSOLIDATED	38.0	0.0	
487.7	CARBONDALE	DANVILLE	COAL	2.0	38.0	TOP ERODED
485.7	CARBONDALE		ROCK	52.0	40.0	
433.7	CARBONDALE	HERRIN	COAL	6.0	92.0	
427.7	CARBONDALE		ROCK	11.0	98.0	

MAPID: 11701456000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 33 QUARTERS/FOOTAGES: 60' S line, 855' E line of SW SW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.997982 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.347365 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 603.8 LOGGED (FT.): 164.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES A68-37 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
447.2	CARBONDALE	HERRIN	COAL	6.0	156.6	

MAPID: 11790127000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 33 QUARTERS/FOOTAGES: 60' S line, 855' E line of SW SW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.997982 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.347365 DATE COLLECTED: 10 / 7 / 1968
 SURFACE ELEVATION (FT.): 603.8 LOGGED (FT.): 164.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES A68-37 WELL TYPE: Coal Test
 COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
603.8	PLEISTOCENE		UNCONSOLIDATED	94.0	0.0
509.8	MODESTO		ROCK	18.0	94.0
491.8	CARBONDALE	DANVILLE	COAL	0.7	112.0
491.1	CARBONDALE		ROCK	43.9	112.7
447.3	CARBONDALE	HERRIN	COAL	6.0	156.5
441.2	CARBONDALE		ROCK	1.4	162.6

MAPID: 11700891000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 34 QUARTERS/FOOTAGES: 30' S line, 120' W line of SW
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.980688 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.347286 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 616.3 LOGGED (FT.): 224.0 LOG TYPE: Drillers Log
 SOURCE: TRUAX-TRAER COAL CO 16 WELL TYPE: Coal Test
 COMMENT: CORE C-4325; SEE COAL SEC MAP 6-117 A&B

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
450.0	CARBONDALE	HERRIN	COAL	4.3	166.3

MAPID: 11701450000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 34 QUARTERS/FOOTAGES: 45' N line, 45' E line of NE NE
 QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.962388 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.361778 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 617.9 LOGGED (FT.): 208.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES A68-33 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
417.9	CARBONDALE	HERRIN	COAL	6.3	200.0

MAPID: 11790123000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 34 QUARTERS/FOOTAGES: 45' N line, 45' E line of NE NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.962388 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.361778 DATE COLLECTED: 10 / 3 / 1968

SURFACE ELEVATION (FT.): 617.9 LOGGED (FT.): 208.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A68-33 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
617.9	PLEISTOCENE		UNCONSOLIDATED	168.0	0.0	
449.9			ROCK	32.0	168.0	
417.9	CARBONDALE	HERRIN	COAL	6.3	200.0	
411.6	CARBONDALE		ROCK	1.8	206.3	

MAPID: 11701363000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 35 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.961062 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.353722 DATE COLLECTED:

SURFACE ELEVATION (FT.): 626.0 LOGGED (FT.): 214.0 LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO CA-9 WELL TYPE: Coal Test

COMMENT: CORE C-8757

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
422.7	CARBONDALE	HERRIN	COAL	8.0	203.3	

MAPID: 11701363000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 35 QUARTERS/FOOTAGES: NW NW SW

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.961062 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.353722 DATE COLLECTED:

SURFACE ELEVATION (FT.): 626.0 LOGGED (FT.): 211.0 LOG TYPE: Survey Core Study

SOURCE: TRUAX-TRAER COAL CO CA-9 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
444.4	CARBONDALE		GRAY SHALE	9.0	181.6	
435.4	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	5.9	190.6	
429.5	CARBONDALE	LAWSON	GRAY SHALE	4.0	196.5	
425.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	1.7	200.5	
423.8	CARBONDALE	ANNA	BLACK SHALE	0.8	202.2	
423.0	CARBONDALE	HERRIN	COAL	8.0	203.0	

MAPID: 11700889000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 36 **QUARTERS/FOOTAGES:** 20' S line, 60' E line
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.924951 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.347491 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 647.6 **LOGGED (FT.):** 249.8 **LOG TYPE:** Drillers Log
SOURCE: TRUAX-TRAER COAL CO 13 **WELL TYPE:** Coal Test
COMMENT: CORE C-4323; SEE COAL SEC MAP 6-117 A&B

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
427.9	CARBONDALE	DANVILLE	COAL	1.3	219.7	
401.8	CARBONDALE	HERRIN	COAL	4.0	245.8	

MAPID: 11700889000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 36 **QUARTERS/FOOTAGES:** 20' S line, 60' E line
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.924951 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.347491 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 648.0 **LOGGED (FT.):** 250.0 **LOG TYPE:** Survey Core Study
SOURCE: TRUAX-TRAER COAL CO 13 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
418.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	3.8	230.0	
414.2	CARBONDALE		GRAY SHALE	4.0	233.8	
410.2	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.0	237.8	UPPER BENCH
407.2	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	1.6	240.8	SHALE PARTING
405.7	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	1.3	242.3	LOWER BENCH
404.3	CARBONDALE	BRERETON	LIMESTONE	2.2	243.7	
402.2	CARBONDALE	ANNA	BLACK SHALE	0.3	245.8	
402.0	CARBONDALE	HERRIN	COAL	4.0	246.0	

MAPID: 11721618000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 8W **SECTION:** 36 **QUARTERS/FOOTAGES:** 75' S line, 63' E line of SE
QUADRANGLE: CARLINVILLE WEST **LONGITUDE:** -89.924963 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.347643 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 641.0 **LOGGED (FT.):** 257.5 **LOG TYPE:** Survey Core Study
SOURCE: AMAX M-18 **WELL TYPE:** Coal Test
COMMENT: DRILLERS LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
395.3	CARBONDALE	HERRIN	COAL	4.1	245.7	

MAPID: 11790138000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 36 QUARTERS/FOOTAGES: 39' S line, 41' W line of SW NE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.934002 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.354815 DATE COLLECTED: 5 / 23 / 1977

SURFACE ELEVATION (FT.): 640.9 LOGGED (FT.): 248.0 LOG TYPE: Drillers Log

SOURCE: AMAX C121XX WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP BOX #43 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
640.9	PLEISTOCENE		UNCONSOLIDATED	200.0	0.0
440.9			ROCK	31.0	200.0
409.9	CARBONDALE	HERRIN	COAL	6.0	231.0
403.9	CARBONDALE		ROCK	11.0	237.0

MAPID: 11790268000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 8W SECTION: 36 QUARTERS/FOOTAGES: 75' S line, 63' E line of SE SE

QUADRANGLE: CARLINVILLE WEST LONGITUDE: -89.924963 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.347643 DATE COLLECTED: 1 / 9 / 1975

SURFACE ELEVATION (FT.): 647.9 LOGGED (FT.): 257.5 LOG TYPE: Drillers Log

SOURCE: AMAX M18 WELL TYPE: Coal Test

COMMENT: MACOUPIN DEEP

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
647.9	PLEISTOCENE		UNCONSOLIDATED	146.0	0.0
501.9	MODESTO		ROCK	74.0	146.0
427.9	CARBONDALE	DANVILLE	COAL	0.5	220.0
427.4	CARBONDALE		ROCK	25.0	220.5
402.4	CARBONDALE	HERRIN	COAL	3.6	245.5
398.8	CARBONDALE		ROCK	8.4	249.1

MAPID: 11790175000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 5 QUARTERS/FOOTAGES: 1' S line, 200' E line of SE NW

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.124363 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.426754 DATE COLLECTED: 9 / 5 / 1968

SURFACE ELEVATION (FT.): 669.0 LOGGED (FT.): 88.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE 21 WELL TYPE: Coal Test

COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
669.0	PLEISTOCENE		UNCONSOLIDATED	51.0	0.0
618.0			ROCK	37.0	51.0

MAPID: 11701451000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 11N 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** 2660' S line, 2040' W line
QUADRANGLE: SCOTTVILLE **LONGITUDE:** -90.048933 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.397782 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 635.0 **LOGGED (FT.):** 174.5 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES A68-27 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
467.5	CARBONDALE	HERRIN	COAL	4.3	167.5

MAPID: 11701451000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 11N 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** 2660' S line, 2040' W line
QUADRANGLE: SCOTTVILLE **LONGITUDE:** -90.048933 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.397782 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 635.0 **LOGGED (FT.):** 172.3 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES A68-27 **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
500.0	MODESTO	PIASA	LIMESTONE	2.6	135.0
497.4	CARBONDALE		DARK GRAY SHALE	18.4	137.6
479.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	156.0
475.5	CARBONDALE	LAWSON	DARK GRAY SHALE	4.5	159.5
471.0	CARBONDALE	BRERETON	LIMESTONE	3.0	164.0
468.0	CARBONDALE	ANNA	GRAY SHALE	0.5	167.0
467.0	CARBONDALE	HERRIN	COAL	4.3	168.0

MAPID: 11790117000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 11N 9W **SECTION:** 13 **QUARTERS/FOOTAGES:** 20' S line, 600' E line of SE NW
QUADRANGLE: SCOTTVILLE **LONGITUDE:** -90.048933 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.397782 **DATE COLLECTED:** 1 / 2 / 1968
SURFACE ELEVATION (FT.): 635.0 **LOGGED (FT.):** 174.5 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES A68-27 **WELL TYPE:** Coal Test
COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
635.0	PLEISTOCENE		UNCONSOLIDATED	120.0	0.0
515.0			ROCK	47.5	120.0
467.5	CARBONDALE	HERRIN	COAL	4.3	167.5
463.2	CARBONDALE		ROCK	2.7	171.8

MAPID: 11790130000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 13 QUARTERS/FOOTAGES: 10' N line, 63' E line of SE SE
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.037634 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.394193 DATE COLLECTED: 10 / 10 / 1968
 SURFACE ELEVATION (FT.): 636.1 LOGGED (FT.): 185.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES A68-40 WELL TYPE: Coal Test
 COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
636.1	PLEISTOCENE		UNCONSOLIDATED	148.0	0.0
488.1			ROCK	32.6	148.0
455.5	CARBONDALE	HERRIN	COAL	2.4	180.6
453.1	CARBONDALE		ROCK	2.0	183.0

MAPID: 11790399000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 13 QUARTERS/FOOTAGES: 35' S line, 45' W line of SE NW
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.051363 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.397732 DATE COLLECTED: 12 / 20 / 1979
 SURFACE ELEVATION (FT.): 639.4 LOGGED (FT.): 178.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-005 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
639.4	PLEISTOCENE		UNCONSOLIDATED	102.0	0.0
537.4	MODESTO		ROCK	4.0	102.0
533.4	CARBONDALE	DANVILLE	COAL	1.0	106.0
532.4	CARBONDALE		ROCK	56.5	107.0
475.9	CARBONDALE	HERRIN	COAL	1.3	163.5
474.6	CARBONDALE	HERRIN	ROCK	0.2	164.8
474.4	CARBONDALE	HERRIN	COAL	2.0	165.0
472.4	CARBONDALE		ROCK	11.0	167.0

MAPID: 11790171000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 14 QUARTERS/FOOTAGES: 120' S line, 48' W line of SW SW
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.074561 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.390846 DATE COLLECTED: 9 / 4 / 1968
 SURFACE ELEVATION (FT.): 621.4 LOGGED (FT.): 133.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 17-1 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
621.4	PLEISTOCENE		UNCONSOLIDATED	112.0	0.0
509.4			ROCK	21.0	112.0

MAPID: 11790362000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 14 QUARTERS/FOOTAGES: 315' N line, 850' W line of NE SE
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.057805 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.396691 DATE COLLECTED: 11 / 14 / 1978
 SURFACE ELEVATION (FT.): 639.9 LOGGED (FT.): 166.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-005 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
639.9	PLEISTOCENE		UNCONSOLIDATED	55.5	0.0
584.4			ROCK	64.2	55.5
520.2	CARBONDALE		COAL	2.3	119.7
517.9	CARBONDALE		ROCK	44.0	122.0

MAPID: 11790393000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 14 QUARTERS/FOOTAGES: 485' N line, 273' W line of SW NW
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.073962 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.399818 DATE COLLECTED: 1 / 12 / 1979
 SURFACE ELEVATION (FT.): 650.5 LOGGED (FT.): 197.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-036 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
650.5	PLEISTOCENE		UNCONSOLIDATED	84.5	0.0
566.0			ROCK	97.9	84.5
468.1	CARBONDALE	HERRIN	COAL	3.6	182.4
464.5	CARBONDALE		ROCK	11.0	186.0

MAPID: 11790401000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 14 QUARTERS/FOOTAGES: 545' N line, 55' W line of NE SE
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.060607 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.396057 DATE COLLECTED: 1 / 6 / 1980
 SURFACE ELEVATION (FT.): 641.2 LOGGED (FT.): 195.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-008 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
641.2	PLEISTOCENE		UNCONSOLIDATED	52.0	0.0
589.2	MODESTO		ROCK	73.0	52.0
516.2	CARBONDALE	DANVILLE	COAL	0.8	125.0
515.4	CARBONDALE		ROCK	54.4	125.8
461.0	CARBONDALE	HERRIN	COAL	4.1	180.2
456.9	CARBONDALE		ROCK	10.7	184.3

MAPID: 11790410000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 14 QUARTERS/FOOTAGES: 690' N line, 40' W line of SW SW

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.07467 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.391928 DATE COLLECTED: 1 / 15 / 1980

SURFACE ELEVATION (FT.): 619.7 LOGGED (FT.): 155.0 LOG TYPE: Drillers Log

SOURCE: AMAX 7-017 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
619.7	PLEISTOCENE		UNCONSOLIDATED	90.0	0.0	
529.7			ROCK	48.7	90.0	
481.0	CARBONDALE	HERRIN	COAL	4.1	138.7	
476.9			ROCK	12.2	142.8	

MAPID: 11790412000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 14 QUARTERS/FOOTAGES: 1046' S line, 25' W line of NW SW

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.074751 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.3967 DATE COLLECTED: 1 / 16 / 1980

SURFACE ELEVATION (FT.): 644.3 LOGGED (FT.): 184.0 LOG TYPE: Drillers Log

SOURCE: AMAX 7-019 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
644.3	PLEISTOCENE		UNCONSOLIDATED	89.0	0.0	
555.3	MODESTO		ROCK	32.8	89.0	
522.5	CARBONDALE	DANVILLE	COAL	0.9	121.8	
521.6	CARBONDALE		ROCK	53.3	122.7	
468.3	CARBONDALE	HERRIN	COAL	4.3	176.0	
464.0	CARBONDALE		ROCK	3.7	180.3	

MAPID: 11723583000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 15 QUARTERS/FOOTAGES: 1290' S line, 186' E line

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.075537 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 39.394074 DATE COLLECTED: 5 / 3 / 1972

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 157.0 LOG TYPE: Drillers Log

SOURCE: PAUL FARMER 9 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
635.0	PLEISTOCENE		CLAY	19.0	0.0	TAN
616.0	PLEISTOCENE		CLAY	56.0	19.0	GRAY
560.0	PLEISTOCENE		CLAY	25.0	75.0	GRAY
535.0	PLEISTOCENE		UNCONSOLIDATED	13.0	100.0	GRAY
522.0			SHALE WITH LIMESTONE	7.0	113.0	
515.0			LIMESTONE	3.5	120.0	
511.5			GRAY SHALE	6.5	123.5	
505.0			GRAY SHALE	9.0	130.0	
496.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	139.0	
493.5	CARBONDALE		GRAY SHALE	1.0	141.5	
492.5	CARBONDALE	BRERETON	LIMESTONE	3.0	142.5	
489.5	CARBONDALE	ENERGY	MOTTLED SHALE	4.5	145.5	
485.0	CARBONDALE	ENERGY	BLACK SHALE	0.5	150.0	
484.5	CARBONDALE	HERRIN	COAL	4.0	150.5	
480.5	CARBONDALE		UNDERCLAY	1.5	154.5	

MAPID: 11790199000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 15 QUARTERS/FOOTAGES: 577' S line, 65' W line of NW SW

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.094613 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.395629 DATE COLLECTED: 9 / 25 / 1968

SURFACE ELEVATION (FT.): 648.0 LOGGED (FT.): 159.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE 56 WELL TYPE: Coal Test

COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
648.0	PLEISTOCENE		UNCONSOLIDATED	108.0	0.0	
540.0			ROCK	47.0	108.0	
493.0	CARBONDALE	HERRIN	COAL	2.8	155.0	
490.2	CARBONDALE		ROCK	1.2	157.8	

MAPID: 11790363000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 15 QUARTERS/FOOTAGES: 45' N line, 181' E line of SE SE
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.075463 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.393713 DATE COLLECTED: 11 / 13 / 1978
 SURFACE ELEVATION (FT.): 639.8 LOGGED (FT.): 150.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-006 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
639.8	PLEISTOCENE		UNCONSOLIDATED	125.5	0.0
514.3			ROCK	24.5	125.5

MAPID: 11790174000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 16 QUARTERS/FOOTAGES: 35' N line, 768' W line of NW NE
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.101763 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.404614 DATE COLLECTED: 9 / 5 / 1968
 SURFACE ELEVATION (FT.): 665.0 LOGGED (FT.): 174.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 20 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
665.0	PLEISTOCENE		UNCONSOLIDATED	55.0	0.0
610.0			ROCK	113.0	55.0
497.0	CARBONDALE	HERRIN	COAL	2.5	168.0
494.5	CARBONDALE		ROCK	3.5	170.5

MAPID: 11790194000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 16 QUARTERS/FOOTAGES: 1' N line, 30' E line of SW SW
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.109059 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.39404 DATE COLLECTED: 9 / 23 / 1968
 SURFACE ELEVATION (FT.): 657.8 LOGGED (FT.): 168.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 51 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
657.8	PLEISTOCENE		UNCONSOLIDATED	47.0	0.0
610.8	MODESTO		ROCK	32.5	47.0
578.3	MODESTO	ROCK BRANCH	COAL	0.5	79.5
577.8	MODESTO		ROCK	29.7	80.0
548.1	CARBONDALE	DANVILLE	COAL	1.2	109.7
546.9	CARBONDALE		ROCK	57.1	110.9

MAPID: 11790184000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 18 QUARTERS/FOOTAGES: 100' N line, 180' W line of SW SE

QUADRANGLE: ATHENSVILLE LONGITUDE: -90.141023

GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.393391

DATE COLLECTED: 9 / 12 / 1968

SURFACE ELEVATION (FT.): 655.9

LOGGED (FT.): 149.0

LOG TYPE: Drillers Log

SOURCE: AYRSHIRE 31

WELL TYPE: Coal Test

COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
655.9	PLEISTOCENE		UNCONSOLIDATED	84.0	0.0	
571.9	MODESTO		ROCK	35.0	84.0	
536.9	CARBONDALE	DANVILLE	COAL	0.5	119.0	
536.4	CARBONDALE		ROCK	25.5	119.5	
510.9	CARBONDALE	HERRIN	COAL	2.9	145.0	
508.0	CARBONDALE		ROCK	1.1	147.9	

MAPID: 11723578000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 19 QUARTERS/FOOTAGES: 620' N line, 30' W line

QUADRANGLE: ATHENSVILLE LONGITUDE: -90.150782

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 39.388352

DATE COLLECTED:

SURFACE ELEVATION (FT.): 640.0

LOGGED (FT.): 130.0

LOG TYPE: Drillers Log

SOURCE: PAUL FARMER 4

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
640.0	PLEISTOCENE		CLAY	5.0	0.0	BLACK
635.0	PLEISTOCENE		CLAY	7.0	5.0	TAN
628.0	PLEISTOCENE		CLAY	5.0	12.0	GRAY
623.0	PLEISTOCENE		CLAY & GRAVEL	33.0	17.0	GRAY
590.0	PLEISTOCENE		CLAY	28.0	50.0	TAN
562.0	PLEISTOCENE		CLAY	15.0	78.0	TAN
547.0	PLEISTOCENE		CLAY	5.0	93.0	GRAY
542.0			GRAY SHALE	17.0	98.0	
525.0	CARBONDALE	BRERETON	LIMESTONE	2.0	115.0	
523.0	CARBONDALE	ENERGY	GRAY SHALE	5.4	117.0	
517.6	CARBONDALE	ENERGY	BLACK SHALE	1.0	122.4	
516.6	CARBONDALE	HERRIN	COAL	3.0	123.4	#6
513.6	CARBONDALE		UNDERCLAY	3.4	126.4	

MAPID: 11790162000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 19 QUARTERS/FOOTAGES: 660' S line, 140' W line of NE SE
 QUADRANGLE: ATHENSVILLE LONGITUDE: -90.136239 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.380987 DATE COLLECTED: 8 / 26 / 1968
 SURFACE ELEVATION (FT.): 643.4 LOGGED (FT.): 148.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 7 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
643.4	PLEISTOCENE		UNCONSOLIDATED	93.0	0.0
550.4			ROCK	44.0	93.0
506.4	CARBONDALE	HERRIN	COAL	2.7	137.0
503.7	CARBONDALE		ROCK	8.3	139.7

MAPID: 11790187000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 19 QUARTERS/FOOTAGES: 750' S line, 30' W line of SW SW
 QUADRANGLE: ATHENSVILLE LONGITUDE: -90.150587 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.377355 DATE COLLECTED: 9 / 13 / 1968
 SURFACE ELEVATION (FT.): 643.2 LOGGED (FT.): 120.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 34 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
643.2	PLEISTOCENE		UNCONSOLIDATED	107.0	0.0
536.2			ROCK	9.0	107.0
527.2	CARBONDALE	HERRIN	COAL	2.5	116.0
524.7	CARBONDALE		ROCK	1.5	118.5

MAPID: 11790192000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 19 QUARTERS/FOOTAGES: 27' N line, 1' W line of SE SW
 QUADRANGLE: ATHENSVILLE LONGITUDE: -90.146046 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.378965 DATE COLLECTED: 9 / 20 / 1968
 SURFACE ELEVATION (FT.): 646.1 LOGGED (FT.): 128.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 49 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
646.1	PLEISTOCENE		UNCONSOLIDATED	105.0	0.0
541.1			ROCK	23.0	105.0

MAPID: 11790374000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 19 QUARTERS/FOOTAGES: 18' N line, 530' E line of SW SE
 QUADRANGLE: ATHENSVILLE LONGITUDE: -90.138784 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.379187 DATE COLLECTED: 11 / 29 / 1978
 SURFACE ELEVATION (FT.): 598.6 LOGGED (FT.): 120.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-017 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
598.6	PLEISTOCENE		UNCONSOLIDATED	59.5	0.0
539.1			ROCK	40.5	59.5
498.6	CARBONDALE	HERRIN	COAL	3.6	100.0
495.0	CARBONDALE		ROCK	16.4	103.6

MAPID: 11790389000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 19 QUARTERS/FOOTAGES: 890' S line, 18' W line of SW NW
 QUADRANGLE: ATHENSVILLE LONGITUDE: -90.15125 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.38512 DATE COLLECTED: 12 / 15 / 1978
 SURFACE ELEVATION (FT.): 651.5 LOGGED (FT.): 157.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-032 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
651.5	PLEISTOCENE		UNCONSOLIDATED	127.0	0.0
524.5			ROCK	8.7	127.0
515.8	CARBONDALE	HERRIN	COAL	2.0	135.7
513.8	CARBONDALE		ROCK	19.3	137.7

MAPID: 11790437000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 19 QUARTERS/FOOTAGES: 20' N line, 975' W line of SE SW
 QUADRANGLE: ATHENSVILLE LONGITUDE: -90.143045 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.379111 DATE COLLECTED: 1 / 31 / 1980
 SURFACE ELEVATION (FT.): 644.1 LOGGED (FT.): 155.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-044 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
644.1	PLEISTOCENE		UNCONSOLIDATED	111.5	0.0
532.6			ROCK	24.0	111.5
508.6	CARBONDALE	HERRIN	COAL	3.5	135.5
505.1	CARBONDALE		ROCK	16.0	139.0

MAPID: 11790452000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 19 QUARTERS/FOOTAGES: 575' N line, 35' E line of NE SE
 QUADRANGLE: ATHENSVILLE LONGITUDE: -90.132381 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.381137 DATE COLLECTED: 2 / 14 / 1980
 SURFACE ELEVATION (FT.): 642.6 LOGGED (FT.): 147.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-059 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
642.6	PLEISTOCENE		UNCONSOLIDATED	127.1	0.0
515.5			ROCK	10.0	127.1
505.5	CARBONDALE	HERRIN	COAL	3.6	137.1
501.9	CARBONDALE		ROCK	6.3	140.7

MAPID: 11790186000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 20 QUARTERS/FOOTAGES: 40' S line, 550' E line of SW NE
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.120074 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.383183 DATE COLLECTED: 9 / 16 / 1968
 SURFACE ELEVATION (FT.): 656.7 LOGGED (FT.): 150.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 33 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
656.7	PLEISTOCENE		UNCONSOLIDATED	91.0	0.0
565.7			ROCK	53.5	91.0
512.2	CARBONDALE	HERRIN	COAL	3.8	144.5
508.4	CARBONDALE		ROCK	1.7	148.3

MAPID: 11790191000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 20 QUARTERS/FOOTAGES: 30' N line, 360' E line of NW SW
 QUADRANGLE: ATHENSVILLE LONGITUDE: -90.128711 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.382824 DATE COLLECTED: 9 / 20 / 1968
 SURFACE ELEVATION (FT.): 643.5 LOGGED (FT.): 142.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 48 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
643.5	PLEISTOCENE		UNCONSOLIDATED	77.0	0.0
566.5	MODESTO		ROCK	5.0	77.0
561.5	CARBONDALE	DANVILLE	COAL	0.5	82.0
561.0	CARBONDALE		ROCK	54.0	82.5
507.0	CARBONDALE	HERRIN	COAL	4.3	136.5
502.7	CARBONDALE		ROCK	1.2	140.8

MAPID: 11790370000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 20 QUARTERS/FOOTAGES: 12' S line, 60' E line of SW NW
 QUADRANGLE: ATHENSVILLE LONGITUDE: -90.126399 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.382818 DATE COLLECTED: 11 / 19 / 1978
 SURFACE ELEVATION (FT.): 647.9 LOGGED (FT.): 167.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-013 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
647.9	PLEISTOCENE		UNCONSOLIDATED	93.5	0.0
554.4			ROCK	51.5	93.5
502.9	CARBONDALE	HERRIN	COAL	3.2	145.0
499.7	CARBONDALE		ROCK	18.8	148.2

MAPID: 11790431000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 20 QUARTERS/FOOTAGES: 120' S line, 280' W line of NE NW
 QUADRANGLE: ATHENSVILLE LONGITUDE: -90.126397 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.386953 DATE COLLECTED: 1 / 28 / 1980
 SURFACE ELEVATION (FT.): 648.4 LOGGED (FT.): 159.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-038 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
648.4	PLEISTOCENE		UNCONSOLIDATED	40.0	0.0
608.4			ROCK	105.1	40.0
503.3	CARBONDALE	HERRIN	COAL	3.9	145.1
499.4	CARBONDALE		ROCK	10.0	149.0

MAPID: 11790433000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 20 QUARTERS/FOOTAGES: 36' N line, 28' W line of SE SE
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.118103 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.379077 DATE COLLECTED: 1 / 29 / 1980
 SURFACE ELEVATION (FT.): 642.9 LOGGED (FT.): 147.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-040 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
642.9	PLEISTOCENE		UNCONSOLIDATED	116.0	0.0
526.9			ROCK	16.5	116.0
510.4	CARBONDALE	HERRIN	COAL	4.5	132.5
505.9	CARBONDALE		ROCK	10.0	137.0

MAPID: 11723599000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 21 QUARTERS/FOOTAGES: 2555' N line, 1320' E line

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.099259 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 39.383426 DATE COLLECTED:

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 103.0 LOG TYPE: Drillers Log

SOURCE: PAUL FARMER 25 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
620.0	PLEISTOCENE		CLAY	8.0	0.0	TAN
612.0	PLEISTOCENE		CLAY	33.0	8.0	GRAY
579.0	CARBONDALE	DANVILLE	COAL	1.0	41.0	
578.0	CARBONDALE		UNDERCLAY	11.4	42.0	
566.6	CARBONDALE		LIMESTONE	0.4	53.4	
566.2	CARBONDALE		GRAY SHALE	9.0	53.8	
557.2	CARBONDALE		LIMESTONE	11.0	62.8	
546.2	CARBONDALE		GRAY SHALE	9.0	73.8	
537.2	CARBONDALE		LIMESTONE	3.0	82.8	
534.2	CARBONDALE		GRAY SHALE	4.0	85.8	
530.2	CARBONDALE		LIMESTONE	2.0	89.8	
528.2	CARBONDALE		SANDSTONE	2.0	91.8	
526.2	CARBONDALE	BRERETON	LIMESTONE	1.0	93.8	
525.2	CARBONDALE	HERRIN	COAL	5.4	94.8	
519.7	CARBONDALE		UNDERCLAY	2.4	100.3	

MAPID: 11790156000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 21 QUARTERS/FOOTAGES: 1' S line, 30' E line of NE SE

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.094577 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.379583 DATE COLLECTED: 8 / 21 / 1968

SURFACE ELEVATION (FT.): 627.8 LOGGED (FT.): 126.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE 1 WELL TYPE: Coal Test

COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
627.8	PLEISTOCENE		UNCONSOLIDATED	72.0	0.0	
555.8			ROCK	46.5	72.0	
509.3	CARBONDALE	HERRIN	COAL	4.9	118.5	
504.4	CARBONDALE		ROCK	2.6	123.4	

MAPID: 11790166000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 21 QUARTERS/FOOTAGES: 170' S line, 200' E line of SW NW
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.109453 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.383672 DATE COLLECTED: 8 / 30 / 1968
 SURFACE ELEVATION (FT.): 632.2 LOGGED (FT.): 131.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 12 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
632.2	PLEISTOCENE		UNCONSOLIDATED	78.0	0.0
554.2			ROCK	46.0	78.0
508.2	CARBONDALE	HERRIN	COAL	4.8	124.0
503.4	CARBONDALE		ROCK	2.2	128.8

MAPID: 11790365000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 21 QUARTERS/FOOTAGES: 24' S line, 64' W line of SE SW
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.108653 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.375565 DATE COLLECTED: 11 / 16 / 1978
 SURFACE ELEVATION (FT.): 632.5 LOGGED (FT.): 150.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-008 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
632.5	PLEISTOCENE		UNCONSOLIDATED	84.0	0.0
548.5			ROCK	42.0	84.0
506.5	CARBONDALE	HERRIN	COAL	3.5	126.0
503.0	CARBONDALE		ROCK	20.5	129.5

MAPID: 11790426000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 21 QUARTERS/FOOTAGES: 30' N line, 25' E line of NE SE
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.094846 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.382728 DATE COLLECTED: 1 / 24 / 1980
 SURFACE ELEVATION (FT.): 635.9 LOGGED (FT.): 147.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-033 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
635.9	PLEISTOCENE		UNCONSOLIDATED	86.3	0.0
549.6			ROCK	46.7	86.3
502.9	CARBONDALE	HERRIN	COAL	5.6	133.0
497.3	CARBONDALE		ROCK	8.4	138.6

MAPID: 11790428000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 21 QUARTERS/FOOTAGES: 41' N line, 30' E line of SW SW
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.108975 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.379061 DATE COLLECTED: 1 / 25 / 1980
 SURFACE ELEVATION (FT.): 636.2 LOGGED (FT.): 141.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-035 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
636.2	PLEISTOCENE		UNCONSOLIDATED	104.0	0.0
532.2			ROCK	27.8	104.0
504.4	CARBONDALE	HERRIN	COAL	3.8	131.8
500.6	CARBONDALE		ROCK	5.4	135.6

MAPID: 11790429000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 21 QUARTERS/FOOTAGES: 452' N line, 35' W line of NE NW
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.108786 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.388876 DATE COLLECTED: 1 / 25 / 1980
 SURFACE ELEVATION (FT.): 655.3 LOGGED (FT.): 167.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-036 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
655.3	PLEISTOCENE		UNCONSOLIDATED	48.0	0.0
607.3			ROCK	106.7	48.0
500.6	CARBONDALE	HERRIN	COAL	5.1	154.7
495.5	CARBONDALE		ROCK	7.2	159.8

MAPID: 11790178000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 22 QUARTERS/FOOTAGES: 330' N line, 660' W line of SW NW
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.092272 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.385938 DATE COLLECTED: 9 / 9 / 1968
 SURFACE ELEVATION (FT.): 635.2 LOGGED (FT.): 150.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 24 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
635.2	PLEISTOCENE		UNCONSOLIDATED	84.0	0.0
551.2	MODESTO		ROCK	8.0	84.0
543.2	CARBONDALE	DANVILLE	COAL	0.5	92.0
542.7	CARBONDALE		ROCK	50.5	92.5
492.2	CARBONDALE	HERRIN	COAL	6.1	143.0
486.1	CARBONDALE		ROCK	0.9	149.1

MAPID: 11790195000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 22 QUARTERS/FOOTAGES: 700' N line, 400' E line of NE SW
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.086016 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.38131 DATE COLLECTED: 9 / 24 / 1968
 SURFACE ELEVATION (FT.): 626.1 LOGGED (FT.): 126.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 52 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
626.1	PLEISTOCENE		UNCONSOLIDATED	77.0	0.0
549.1			ROCK	42.0	77.0
507.1	CARBONDALE	HERRIN	COAL	5.3	119.0
501.8	CARBONDALE		ROCK	1.7	124.3

MAPID: 11790381000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 22 QUARTERS/FOOTAGES: 15' N line, 610' E line of SE SE
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.076769 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.379379 DATE COLLECTED: 12 / 5 / 1978
 SURFACE ELEVATION (FT.): 576.6 LOGGED (FT.): 117.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-024 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
576.6	PLEISTOCENE		UNCONSOLIDATED	42.5	0.0
534.1	MODESTO		ROCK	1.2	42.5
532.9	CARBONDALE	DANVILLE	COAL	1.2	43.7
531.6	CARBONDALE		ROCK	54.8	45.0
476.8	CARBONDALE	HERRIN	COAL	2.8	99.8
474.0	CARBONDALE		ROCK	14.4	102.6

MAPID: 11790407000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 22 QUARTERS/FOOTAGES: 280' N line, 730' E line of NE SW
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.087338 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.382104 DATE COLLECTED: 1 / 15 / 1980
 SURFACE ELEVATION (FT.): 620.6 LOGGED (FT.): 134.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-014 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.6	PLEISTOCENE		UNCONSOLIDATED	78.0	0.0
542.6			ROCK	40.5	78.0
502.1	CARBONDALE	HERRIN	COAL	4.6	118.5
497.5	CARBONDALE		ROCK	10.9	123.1

MAPID: 11790408000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 22 QUARTERS/FOOTAGES: 590' N line, 45' E line of NE SE
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.075024 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.381325 DATE COLLECTED: 1 / 15 / 1980
 SURFACE ELEVATION (FT.): 620.5 LOGGED (FT.): 145.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-015 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.5	PLEISTOCENE		UNCONSOLIDATED	135.0	0.0
485.5			ROCK	0.7	135.0
484.8	CARBONDALE	HERRIN	COAL	6.3	135.7
478.5	CARBONDALE		ROCK	3.0	142.0

MAPID: 11790411000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 22 QUARTERS/FOOTAGES: 50' S line, 880' E line of SW SE
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.08255 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.376087 DATE COLLECTED: 1 / 15 / 1980
 SURFACE ELEVATION (FT.): 617.7 LOGGED (FT.): 137.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-018 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
617.7	PLEISTOCENE		UNCONSOLIDATED	77.8	0.0
539.9			ROCK	43.2	77.8
496.7	CARBONDALE	HERRIN	COAL	4.5	121.0
492.2	CARBONDALE		ROCK	11.5	125.5

MAPID: 11790425000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 22 QUARTERS/FOOTAGES: 12' S line, 30' E line of SW SW
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.090034 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.375699 DATE COLLECTED: 1 / 23 / 1980
 SURFACE ELEVATION (FT.): 621.1 LOGGED (FT.): 125.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-032 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
621.1	PLEISTOCENE		UNCONSOLIDATED	89.0	0.0
532.1			ROCK	26.5	89.0
505.6	CARBONDALE	HERRIN	COAL	3.9	115.5
501.7	CARBONDALE		ROCK	5.6	119.4

MAPID: 1172358000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 23 QUARTERS/FOOTAGES: 1320' S line, 1280' E line

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.060462 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 39.379671 DATE COLLECTED:

SURFACE ELEVATION (FT.): 610.0 LOGGED (FT.): 155.0 LOG TYPE: Drillers Log

SOURCE: PAUL FARMER 6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
610.0	PLEISTOCENE		CLAY	20.0	0.0	TAN
590.0	PLEISTOCENE		CLAY & GRAVEL	3.0	20.0	GRAY
587.0	PLEISTOCENE		CLAY	92.4	23.0	GRAY
494.6			SHALY LIMESTONE	2.4	115.4	GRAY
492.2			LIMESTONE	4.4	117.8	
487.7			GRAY SHALE	11.0	122.3	
476.7			BLACK SHALE	1.0	133.3	
475.7			LIMESTONE	5.0	134.3	
470.7			GRAY SHALE	3.4	139.3	
467.3	CARBONDALE	BRERETON	LIMESTONE	1.0	142.7	
466.3	CARBONDALE	ANNA	BLACK SHALE	3.0	143.7	
463.3	CARBONDALE	HERRIN	COAL	7.0	146.7	#6
456.3	CARBONDALE		UNDERCLAY	1.0	153.7	

MAPID: 11770361000C VERSION: 1

PROJECT: AVAIL

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 23 QUARTERS/FOOTAGES: NW NW

QUADRANGLE: ATHENSVILLE LONGITUDE: -90.154623 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.375281 DATE COLLECTED: 10 / 27 / 1978

SURFACE ELEVATION (FT.): 631.8 LOGGED (FT.): 180.0 LOG TYPE: Drillers Log

SOURCE: AMAX 6-004 WELL TYPE: Coal Test

COMMENT: XY INCORRECT BARR-GREENFLD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
631.8	PLEISTOCENE		UNCONSOLIDATED	131.5	0.0	
500.3			ROCK	25.0	131.5	
475.3	CARBONDALE	HERRIN	COAL	2.9	156.5	
472.4	CARBONDALE		ROCK	20.6	159.4	

MAPID: 11790170000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 23 QUARTERS/FOOTAGES: 120' N line, 48' W line of NW NW
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.074545 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.390184 DATE COLLECTED: 9 / 12 / 1968
 SURFACE ELEVATION (FT.): 621.4 LOGGED (FT.): 150.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 17 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
621.4	PLEISTOCENE		UNCONSOLIDATED	98.0	0.0
523.4			ROCK	48.0	98.0
475.4	CARBONDALE	HERRIN	COAL	2.8	146.0
472.6	CARBONDALE		ROCK	1.2	148.8

MAPID: 11790172000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 23 QUARTERS/FOOTAGES: 600' S line, 20' W line of SE SE
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.060511 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.377683 DATE COLLECTED: 9 / 5 / 1968
 SURFACE ELEVATION (FT.): 614.4 LOGGED (FT.): 156.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 18 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
614.4	PLEISTOCENE		UNCONSOLIDATED	115.0	0.0
499.4			ROCK	32.5	115.0
466.9	CARBONDALE	HERRIN	COAL	6.5	147.5
460.4	CARBONDALE		ROCK	2.0	154.0

MAPID: 11790361000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 23 QUARTERS/FOOTAGES: 251' S line, 28' W line of NW NW
 QUADRANGLE: SCOTTVILLE LONGITUDE: -90.074643 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.387307 DATE COLLECTED: 10 / 27 / 1978
 SURFACE ELEVATION (FT.): 631.8 LOGGED (FT.): 180.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-004 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
631.8	PLEISTOCENE		UNCONSOLIDATED	131.5	0.0
500.3			ROCK	25.0	131.5
475.3	CARBONDALE	HERRIN	COAL	2.9	156.5
472.4	CARBONDALE		ROCK	20.6	159.4

MAPID: 11790395000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 23 QUARTERS/FOOTAGES: 165' N line, 10' E line of SE SW

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.065376 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.378907 DATE COLLECTED: 12 / 17 / 1979

SURFACE ELEVATION (FT.): 620.4 LOGGED (FT.): 157.0 LOG TYPE: Drillers Log

SOURCE: AMAX 7-001 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
620.4	PLEISTOCENE		UNCONSOLIDATED	136.5	0.0
483.9			ROCK	13.3	136.5
470.6	CARBONDALE	HERRIN	COAL	3.5	149.8
467.1	CARBONDALE		ROCK	3.7	153.3

MAPID: 11790402000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 23 QUARTERS/FOOTAGES: 45' N line, 35' W line of NE SE

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.060595 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.382872 DATE COLLECTED: 1 / 7 / 1980

SURFACE ELEVATION (FT.): 622.0 LOGGED (FT.): 180.0 LOG TYPE: Drillers Log

SOURCE: AMAX 7-009 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
622.0	PLEISTOCENE		UNCONSOLIDATED	92.0	0.0
530.0	MODESTO		ROCK	10.4	92.0
519.6	CARBONDALE	DANVILLE	COAL	0.9	102.4
518.7	CARBONDALE		ROCK	58.7	103.3
460.0	CARBONDALE	HERRIN	COAL	4.1	162.0
455.9	CARBONDALE		ROCK	13.9	166.1

MAPID: 11790403000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 23 QUARTERS/FOOTAGES: 512' S line, 148' W line of SE SW

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.06942 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.377104 DATE COLLECTED: 1 / 9 / 1980

SURFACE ELEVATION (FT.): 619.2 LOGGED (FT.): 175.0 LOG TYPE: Drillers Log

SOURCE: AMAX 7-010 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
619.2	PLEISTOCENE		UNCONSOLIDATED	137.7	0.0
481.5			ROCK	23.7	137.7
457.8	CARBONDALE	HERRIN	COAL	3.7	161.4
454.1	CARBONDALE		ROCK	9.9	165.1

MAPID: 11790404000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 23 QUARTERS/FOOTAGES: 345' S line, 407' E line of SE SE

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.057444 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.376765 DATE COLLECTED: 1 / 10 / 1980

SURFACE ELEVATION (FT.): 607.1 LOGGED (FT.): 165.0 LOG TYPE: Drillers Log

SOURCE: AMAX 7-011 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
607.1	PLEISTOCENE		UNCONSOLIDATED	109.0	0.0
498.1			ROCK	34.7	109.0
463.4	CARBONDALE	HERRIN	COAL	2.3	143.7
461.1	CARBONDALE	HERRIN	ROCK	0.4	146.0
460.7	CARBONDALE	HERRIN	COAL	5.1	146.4
455.6	CARBONDALE		ROCK	13.5	151.5

MAPID: 11790406000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 23 QUARTERS/FOOTAGES: 40' S line, 600' E line of NE NW

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.067612 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.386781 DATE COLLECTED: 1 / 14 / 1980

SURFACE ELEVATION (FT.): 624.2 LOGGED (FT.): 185.0 LOG TYPE: Drillers Log

SOURCE: AMAX 7-013 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
624.2	PLEISTOCENE		UNCONSOLIDATED	105.0	0.0
519.2	MODESTO		ROCK	3.0	105.0
516.2	CARBONDALE	DANVILLE	COAL	0.5	108.0
515.7	CARBONDALE		ROCK	57.5	108.5
458.2	CARBONDALE	HERRIN	COAL	4.8	166.0
453.4	CARBONDALE		ROCK	14.2	170.8

MAPID: 1179036000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 24 QUARTERS/FOOTAGES: 25' S line, 553' W line of SW NW

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.054083 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.383138 DATE COLLECTED: 10 / 26 / 1978

SURFACE ELEVATION (FT.): 617.6 LOGGED (FT.): 166.6 LOG TYPE: Drillers Log

SOURCE: AMAX 6-003 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
617.6	PLEISTOCENE		UNCONSOLIDATED	22.8	0.0
594.8	MODESTO		ROCK	69.3	22.8
525.5	CARBONDALE	DANVILLE	COAL	0.4	92.1
525.1	CARBONDALE		ROCK	60.0	92.5
465.1	CARBONDALE	HERRIN	COAL	2.8	152.5
462.3	CARBONDALE		ROCK	11.3	155.3

MAPID: 11790198000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 26 QUARTERS/FOOTAGES: 1' S line, 423' E line of SW NE

QUADRANGLE: HETTICK LONGITUDE: -90.061944 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.368713 DATE COLLECTED: 9 / 26 / 1968

SURFACE ELEVATION (FT.): 592.1 LOGGED (FT.): 138.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE 55 WELL TYPE: Coal Test

COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
592.1	PLEISTOCENE		UNCONSOLIDATED	131.0	0.0
461.1			ROCK	7.0	131.0

MAPID: 11790391000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 26 QUARTERS/FOOTAGES: 49' S line, 104' E line of NW SE

QUADRANGLE: HETTICK LONGITUDE: -90.060748 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.365091 DATE COLLECTED: 1 / 10 / 1979

SURFACE ELEVATION (FT.): 602.8 LOGGED (FT.): 145.0 LOG TYPE: Drillers Log

SOURCE: AMAX 6-034 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
602.8	PLEISTOCENE		UNCONSOLIDATED	124.6	0.0
478.2			ROCK	2.3	124.6
475.9	CARBONDALE	HERRIN	COAL	3.4	126.9
472.5	CARBONDALE		ROCK	14.7	130.3

MAPID: 1179040000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 26 QUARTERS/FOOTAGES: 40' S line, 10' W line of SW NE
 QUADRANGLE: HETTICK LONGITUDE: -90.065137 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.368703 DATE COLLECTED: 12 / 20 / 1979
 SURFACE ELEVATION (FT.): 605.5 LOGGED (FT.): 155.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-006 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
605.5	PLEISTOCENE		UNCONSOLIDATED	129.5	0.0
476.0			ROCK	5.5	129.5
470.5	CARBONDALE	HERRIN	COAL	4.3	135.0
466.2	CARBONDALE		ROCK	15.7	139.3

MAPID: 11790405000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 26 QUARTERS/FOOTAGES: 872' N line, 25' E line of NW NE
 QUADRANGLE: HETTICK LONGITUDE: -90.060672 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.373365 DATE COLLECTED: 1 / 11 / 1980
 SURFACE ELEVATION (FT.): 609.6 LOGGED (FT.): 163.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-012 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
609.6	PLEISTOCENE		UNCONSOLIDATED	137.5	0.0
472.1			ROCK	7.7	137.5
464.4	CARBONDALE	HERRIN	COAL	5.3	145.2
459.1	CARBONDALE		ROCK	12.5	150.5

MAPID: 11701453000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 27 QUARTERS/FOOTAGES: 2640' S line, 0' E line
 QUADRANGLE: HETTICK LONGITUDE: -90.074598 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.368704 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 138.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES 1453 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
467.8	CARBONDALE	HERRIN	COAL	4.3	132.2

MAPID: 11701453000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 27 QUARTERS/FOOTAGES: 2640' S line, 0' E line

QUADRANGLE: HETTICK LONGITUDE: -90.074598

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.368704

DATE COLLECTED:

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 136.3

LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES 1453

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
494.0	MODESTO	PIASA	LIMESTONE	4.0	106.0	
490.0	CARBONDALE		DARK GRAY SHALE	12.0	110.0	
478.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	122.0	
476.0	CARBONDALE	LAWSON	DARK GRAY SHALE	2.0	124.0	
474.0	CARBONDALE	BRERETON	LIMESTONE	5.8	126.0	
468.2	CARBONDALE	ANNA	DARK GRAY SHALE	0.4	131.8	
468.0	CARBONDALE	HERRIN	COAL	4.3	132.0	

MAPID: 11723582000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 27 QUARTERS/FOOTAGES: 620' N line, 195' E line

QUADRANGLE: HETTICK LONGITUDE: -90.075337

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 39.374334

DATE COLLECTED: 5 / 2 / 1972

SURFACE ELEVATION (FT.): 612.0 LOGGED (FT.): 143.0

LOG TYPE: Drillers Log

SOURCE: PAUL FARMER 8

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
612.0	PLEISTOCENE		CLAY	24.0	0.0	TAN
588.0	PLEISTOCENE		CLAY	51.0	24.0	GRAY
537.0	PLEISTOCENE		CLAY	23.0	75.0	TAN
514.0	CARBONDALE	ENERGY	GRAY SHALE	6.0	98.0	
508.0	CARBONDALE	ENERGY	BLACK SHALE	1.0	104.0	
507.0	CARBONDALE	HERRIN	COAL	2.0	105.0	
505.0	CARBONDALE		UNDERCLAY/SHALE	13.0	107.0	GRAY
492.0			GRAY SHALE	7.0	120.0	
485.0			SHALE WITH LIMESTONE	15.0	127.0	
470.0			LIMESTONE	1.0	142.0	GRAY

MAPID: 11723598000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 27 QUARTERS/FOOTAGES: 1730' N line, 1395' W line

QUADRANGLE: HETTICK LONGITUDE: -90.089385 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 39.3712 DATE COLLECTED:

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 111.0 LOG TYPE: Drillers Log

SOURCE: PAUL FARMER 24 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
620.0	PLEISTOCENE		CLAY	25.0	0.0	TAN
595.0	PLEISTOCENE		CLAY	59.0	25.0	GRAY
536.0			LIMESTONE	2.0	84.0	
534.0			GRAY SHALE	3.0	86.0	
531.0			BLACK SHALE	0.8	89.0	
530.2			GRAY SHALE	3.5	89.8	
526.7			SHALY LIMESTONE	5.0	93.3	GRAY
521.7			LIMESTONE	3.4	98.3	
518.3			GRAY SHALE	3.5	101.7	
514.8	CARBONDALE	HERRIN	COAL	4.1	105.2	
510.7	CARBONDALE		UNDERCLAY	1.3	109.3	

MAPID: 11790120000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 27 QUARTERS/FOOTAGES: 1' S line, 1' E line of SE NE

QUADRANGLE: HETTICK LONGITUDE: -90.074601 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.368737 DATE COLLECTED: 1 / 5 / 1968

SURFACE ELEVATION (FT.): 606.0 LOGGED (FT.): 138.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A68-30 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
606.0	PLEISTOCENE		UNKNOWN	106.0	0.0	
500.0			ROCK	26.2	106.0	
473.8	CARBONDALE	HERRIN	COAL	4.3	132.2	
469.5	CARBONDALE		ROCK	1.5	136.5	

MAPID: 11790157000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 27 QUARTERS/FOOTAGES: 20' S line, 1' E line of NW NW
 QUADRANGLE: HETTICK LONGITUDE: -90.089427 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.372379 DATE COLLECTED: 8 / 22 / 1968
 SURFACE ELEVATION (FT.): 613.1 LOGGED (FT.): 117.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 2 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
613.1	PLEISTOCENE		UNCONSOLIDATED	83.0	0.0
530.1			ROCK	27.8	83.0
502.3	CARBONDALE	HERRIN	COAL	4.8	110.8
497.5	CARBONDALE		ROCK	1.4	115.6

MAPID: 11790158000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 27 QUARTERS/FOOTAGES: 1' N line, 1' E line of SW SW
 QUADRANGLE: HETTICK LONGITUDE: -90.089365 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.365019 DATE COLLECTED: 8 / 22 / 1968
 SURFACE ELEVATION (FT.): 572.5 LOGGED (FT.): 88.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 3 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
572.5	PLEISTOCENE		UNCONSOLIDATED	45.5	0.0
527.0			ROCK	29.5	45.5
497.5	CARBONDALE	HERRIN	COAL	2.3	75.0
495.2	CARBONDALE		ROCK	10.7	77.3

MAPID: 11790169000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 27 QUARTERS/FOOTAGES: 183' N line, 20' E line of SW SE
 QUADRANGLE: HETTICK LONGITUDE: -90.079567 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.364552 DATE COLLECTED: 9 / 3 / 1968
 SURFACE ELEVATION (FT.): 601.1 LOGGED (FT.): 127.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 16 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
601.1	PLEISTOCENE		UNCONSOLIDATED	74.0	0.0
527.1	MODESTO		ROCK	1.0	74.0
526.1	CARBONDALE	DANVILLE	COAL	0.5	75.0
525.6	CARBONDALE		ROCK	45.5	75.5
480.1	CARBONDALE	HERRIN	COAL	4.9	121.0
475.2	CARBONDALE		ROCK	1.1	125.9

MAPID: 11790409000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 11N 9W **SECTION:** 27 **QUARTERS/FOOTAGES:** 550' N line, 480' W line of NE NE
QUADRANGLE: HETTICK **LONGITUDE:** -90.077701 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.374566 **DATE COLLECTED:** 1 / 15 / 1980
SURFACE ELEVATION (FT.): 559.2 **LOGGED (FT.):** 93.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX 7-016 **WELL TYPE:** Coal Test
COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
559.2	PLEISTOCENE		UNCONSOLIDATED	26.0	0.0
533.2	MODESTO		ROCK	3.2	26.0
530.0	CARBONDALE	DANVILLE	COAL	0.8	29.2
529.2	CARBONDALE		ROCK	48.0	30.0
481.2	CARBONDALE	HERRIN	COAL	5.2	78.0
476.0	CARBONDALE		ROCK	9.8	83.2

MAPID: 11790427000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 11N 9W **SECTION:** 27 **QUARTERS/FOOTAGES:** 150' N line, 35' E line of NW SW
QUADRANGLE: HETTICK **LONGITUDE:** -90.090338 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.368186 **DATE COLLECTED:** 1 / 24 / 1980
SURFACE ELEVATION (FT.): 613.1 **LOGGED (FT.):** 135.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX 7-034 **WELL TYPE:** Coal Test
COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
613.1	PLEISTOCENE		UNCONSOLIDATED	89.5	0.0
523.6			ROCK	27.0	89.5
496.6	CARBONDALE	HERRIN	COAL	4.2	116.5
492.4	CARBONDALE		ROCK	14.3	120.7

MAPID: 11790434000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 11N 9W **SECTION:** 27 **QUARTERS/FOOTAGES:** 10' S line, 710' E line of NE SW
QUADRANGLE: HETTICK **LONGITUDE:** -90.086743 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.364859 **DATE COLLECTED:** 1 / 29 / 1980
SURFACE ELEVATION (FT.): 596.0 **LOGGED (FT.):** 113.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX 7-041 **WELL TYPE:** Coal Test
COMMENT: BARR-GREENFIELD BOX #44 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
596.0	PLEISTOCENE		UNCONSOLIDATED	70.5	0.0
525.5			ROCK	32.6	70.5
492.9	CARBONDALE	HERRIN	COAL	3.4	103.1
489.5	CARBONDALE		ROCK	6.5	106.5

MAPID: 11723584000C **VERSION:** 1 **PROJECT:** NCRDS94
COUNTY: MACOUPIN **TWP/RNG:** 11N 9W **SECTION:** 28 **QUARTERS/FOOTAGES:** 20' S line, 369' W line
QUADRANGLE: HETTICK **LONGITUDE:** -90.111704 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 39.361137 **DATE COLLECTED:** 5 / 3 / 1972
SURFACE ELEVATION (FT.): 580.0 **LOGGED (FT.):** 63.0 **LOG TYPE:** Drillers Log
SOURCE: PAUL FARMER 10 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
580.0	PLEISTOCENE		CLAY	3.0	0.0	BLACK
577.0	PLEISTOCENE		CLAY	16.0	3.0	TAN
561.0	PLEISTOCENE		GRAVEL	4.0	19.0	
557.0	PLEISTOCENE		CLAY	31.0	23.0	GRAY
526.0	CARBONDALE	BRERETON	LIMESTONE	3.0	54.0	GRAY
523.0	CARBONDALE	HERRIN	COAL	5.7	57.0	
517.3	CARBONDALE		UNDERCLAY	0.3	62.7	

MAPID: 11790165000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 11N 9W **SECTION:** 28 **QUARTERS/FOOTAGES:** 40' N line, 15' W line of NE SW
QUADRANGLE: HETTICK **LONGITUDE:** -90.108407 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.368417 **DATE COLLECTED:** 8 / 28 / 1968
SURFACE ELEVATION (FT.): 616.6 **LOGGED (FT.):** 112.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE 13 **WELL TYPE:** Coal Test
COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
616.6	PLEISTOCENE		UNCONSOLIDATED	81.0	0.0	
535.6			ROCK	25.0	81.0	
510.6	CARBONDALE	HERRIN	COAL	4.4	106.0	
506.2	CARBONDALE		ROCK	1.6	110.4	

MAPID: 11790367000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 11N 9W **SECTION:** 28 **QUARTERS/FOOTAGES:** 47' S line, 192' W line of SW NW
QUADRANGLE: HETTICK **LONGITUDE:** -90.112664 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.368419 **DATE COLLECTED:** 11 / 18 / 1978
SURFACE ELEVATION (FT.): 623.2 **LOGGED (FT.):** 137.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX 6-010 **WELL TYPE:** Coal Test
COMMENT: BARR-GREENFIELD BOX #44 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN	COMMENT
623.2	PLEISTOCENE		UNCONSOLIDATED	88.5	0.0	
534.7			ROCK	26.7	88.5	
508.0	CARBONDALE	HERRIN	COAL	5.2	115.2	
502.8	CARBONDALE		ROCK	16.6	120.4	

MAPID: 11790372000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 28 QUARTERS/FOOTAGES: 23' S line, 29' W line of NW NE
 QUADRANGLE: HETTICK LONGITUDE: -90.103814 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.371969 DATE COLLECTED: 11 / 28 / 1978
 SURFACE ELEVATION (FT.): 627.9 LOGGED (FT.): 140.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-015 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
627.9	PLEISTOCENE		UNCONSOLIDATED	76.0	0.0	
551.9			ROCK	42.5	76.0	
509.4	CARBONDALE	HERRIN	COAL	4.5	118.5	
504.9	CARBONDALE		ROCK	17.0	123.0	

MAPID: 11790430000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 28 QUARTERS/FOOTAGES: 38' N line, 37' W line of SE NW
 QUADRANGLE: HETTICK LONGITUDE: -90.108639 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.371794 DATE COLLECTED: 1 / 28 / 1980
 SURFACE ELEVATION (FT.): 622.8 LOGGED (FT.): 135.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-037 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
622.8	PLEISTOCENE		UNCONSOLIDATED	71.3	0.0	
551.5	CARBONDALE	DANVILLE	COAL	0.2	71.3	TOP ERODED
551.3	CARBONDALE		ROCK	45.8	71.5	
505.5	CARBONDALE	HERRIN	COAL	5.3	117.3	
500.2	CARBONDALE		ROCK	12.4	122.6	

MAPID: 11790432000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 28 QUARTERS/FOOTAGES: 10' N line, 25' W line of SW SW
 QUADRANGLE: HETTICK LONGITUDE: -90.113186 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.364651 DATE COLLECTED: 1 / 28 / 1980
 SURFACE ELEVATION (FT.): 611.0 LOGGED (FT.): 165.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-039 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
611.0	PLEISTOCENE		UNCONSOLIDATED	118.5	0.0	
492.5			ROCK	46.5	118.5	

MAPID: 11790450000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 28 QUARTERS/FOOTAGES: 300' S line, 685' W line of NW SE
 QUADRANGLE: HETTICK LONGITUDE: -90.101287 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.36635 DATE COLLECTED: 2 / 11 / 1980
 SURFACE ELEVATION (FT.): 615.2 LOGGED (FT.): 125.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-057 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
615.2	PLEISTOCENE		UNCONSOLIDATED	62.0	0.0
553.2			ROCK	45.5	62.0
507.7	CARBONDALE	HERRIN	COAL	4.5	107.5
503.2	CARBONDALE		ROCK	13.0	112.0

MAPID: 11790185000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 29 QUARTERS/FOOTAGES: 20' S line, 283' W line of NW NE
 QUADRANGLE: HETTICK LONGITUDE: -90.121592 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.372168 DATE COLLECTED: 9 / 12 / 1968
 SURFACE ELEVATION (FT.): 633.5 LOGGED (FT.): 127.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 32 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
633.5	PLEISTOCENE		UNCONSOLIDATED	90.0	0.0
543.5			ROCK	32.0	90.0
511.5	CARBONDALE	HERRIN	COAL	2.3	122.0
509.2	CARBONDALE		ROCK	2.7	124.3

MAPID: 11790200000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 29 QUARTERS/FOOTAGES: 33' N line, 30' E line of SW NW
 QUADRANGLE: GREENFIELD LONGITUDE: -90.127373 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.371969 DATE COLLECTED: 9 / 25 / 1968
 SURFACE ELEVATION (FT.): 638.0 LOGGED (FT.): 128.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 57 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
638.0	PLEISTOCENE		UNCONSOLIDATED	105.0	0.0
533.0			ROCK	18.7	105.0
514.3	CARBONDALE	HERRIN	COAL	3.6	123.7
510.7	CARBONDALE		ROCK	0.7	127.3

MAPID: 11790435000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 29 QUARTERS/FOOTAGES: 60' S line, 100' W line of NW NW
 QUADRANGLE: GREENFIELD LONGITUDE: -90.131895 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.372138 DATE COLLECTED: 1 / 30 / 1980
 SURFACE ELEVATION (FT.): 639.5 LOGGED (FT.): 165.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-042 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
639.5	PLEISTOCENE		UNCONSOLIDATED	143.0	0.0
496.5			ROCK	22.0	143.0

MAPID: 11790436000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 29 QUARTERS/FOOTAGES: 75' N line, 50' E line of NE SW
 QUADRANGLE: HETTICK LONGITUDE: -90.122918 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.368081 DATE COLLECTED: 1 / 30 / 1980
 SURFACE ELEVATION (FT.): 625.5 LOGGED (FT.): 148.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-043 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
625.5	PLEISTOCENE		UNCONSOLIDATED	141.0	0.0
484.5			ROCK	7.0	141.0

MAPID: 11790438000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 29 QUARTERS/FOOTAGES: 8' S line, 34' E line of NE SW
 QUADRANGLE: HETTICK LONGITUDE: -90.122756 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.364689 DATE COLLECTED: 1 / 31 / 1980
 SURFACE ELEVATION (FT.): 625.3 LOGGED (FT.): 80.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-045 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
625.3	PLEISTOCENE		UNCONSOLIDATED	80.0	0.0

MAPID: 1179044000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 11N 9W **SECTION:** 29 **QUARTERS/FOOTAGES:** 14' S line, 38' E line of NE SW
QUADRANGLE: HETTICK **LONGITUDE:** -90.12277 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.364706 **DATE COLLECTED:** 2 / 1 / 1980
SURFACE ELEVATION (FT.): 625.4 **LOGGED (FT.):** 148.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX 7-047 **WELL TYPE:** Coal Test
COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
625.4	PLEISTOCENE		UNCONSOLIDATED	148.0	0.0	

MAPID: 11723585000C **VERSION:** 1 **PROJECT:** NCRDS94
COUNTY: MACOUPIN **TWP/RNG:** 11N 9W **SECTION:** 30 **QUARTERS/FOOTAGES:** 420' S line, 2580' W line
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.141244 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 39.362237 **DATE COLLECTED:** 5 / 5 / 1972
SURFACE ELEVATION (FT.): 625.0 **LOGGED (FT.):** 123.0 **LOG TYPE:** Drillers Log
SOURCE: PAUL FARMER 11 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
625.0	PLEISTOCENE		CLAY	3.0	0.0	BLACK
622.0	PLEISTOCENE		CLAY	16.0	3.0	TAN
606.0	PLEISTOCENE		CLAY & GRAVEL	41.0	19.0	GRAY
565.0	PLEISTOCENE		CLAY	49.5	60.0	GRAY
515.5			SHALE	0.5	109.5	PROB WEATH COAL - RR; BK
515.0	CARBONDALE	HERRIN	COAL	1.5	110.0	
513.5	CARBONDALE		UNDERCLAY/SHALE	11.5	111.5	

MAPID: 11790161000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 11N 9W **SECTION:** 30 **QUARTERS/FOOTAGES:** 736' S line, 400' W line of SE NE
QUADRANGLE: GREENFIELD **LONGITUDE:** -90.135159 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.370406 **DATE COLLECTED:** 8 / 23 / 1968
SURFACE ELEVATION (FT.): 641.2 **LOGGED (FT.):** 138.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE 6 **WELL TYPE:** Coal Test
COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
641.2	PLEISTOCENE		UNCONSOLIDATED	118.0	0.0	
523.2			ROCK	14.9	118.0	
508.3	CARBONDALE	HERRIN	COAL	3.3	132.9	
505.0	CARBONDALE		ROCK	1.8	136.2	

MAPID: 11790193000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 30 QUARTERS/FOOTAGES: 28' S line, 18' E line of SE SE
 QUADRANGLE: GREENFIELD LONGITUDE: -90.13188 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.36135 DATE COLLECTED: 9 / 23 / 1968
 SURFACE ELEVATION (FT.): 623.5 LOGGED (FT.): 128.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 50 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
623.5	PLEISTOCENE		UNCONSOLIDATED	99.0	0.0
524.5			ROCK	16.0	99.0
508.5	CARBONDALE	HERRIN	COAL	3.0	115.0
505.5	CARBONDALE		ROCK	10.0	118.0

MAPID: 11790197000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 30 QUARTERS/FOOTAGES: 234' S line, 1' E line of SE NW
 QUADRANGLE: GREENFIELD LONGITUDE: -90.141227 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.368907 DATE COLLECTED: 9 / 25 / 1968
 SURFACE ELEVATION (FT.): 635.5 LOGGED (FT.): 128.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 54 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
635.5	PLEISTOCENE		UNCONSOLIDATED	86.0	0.0
549.5			ROCK	37.5	86.0
512.0	CARBONDALE	HERRIN	COAL	3.3	123.5
508.7	CARBONDALE		ROCK	1.2	126.8

MAPID: 11790384000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 30 QUARTERS/FOOTAGES: 18' S line, 154' E line of SW SE
 QUADRANGLE: GREENFIELD LONGITUDE: -90.137158 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.361028 DATE COLLECTED: 12 / 6 / 1978
 SURFACE ELEVATION (FT.): 629.1 LOGGED (FT.): 148.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-27 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
629.1	PLEISTOCENE		UNCONSOLIDATED	142.2	0.0
486.9			ROCK	5.8	142.2

MAPID: 11790439000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 30 QUARTERS/FOOTAGES: 70' N line, 12' W line of NW NW
 QUADRANGLE: ATHENSVILLE LONGITUDE: -90.151066 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.375229 DATE COLLECTED: 2 / 4 / 1980
 SURFACE ELEVATION (FT.): 640.4 LOGGED (FT.): 135.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-046 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
640.4	PLEISTOCENE		UNCONSOLIDATED	113.5	0.0
526.9			ROCK	6.0	113.5
520.9	CARBONDALE	HERRIN	COAL	3.5	119.5
517.4	CARBONDALE		ROCK	12.0	123.0

MAPID: 11790441000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 30 QUARTERS/FOOTAGES: 65' N line, 11' W line of NW NW
 QUADRANGLE: ATHENSVILLE LONGITUDE: -90.151069 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.375243 DATE COLLECTED: 2 / 5 / 1980
 SURFACE ELEVATION (FT.): 640.3 LOGGED (FT.): 125.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-048 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
640.3	PLEISTOCENE		UNCONSOLIDATED	113.5	0.0
526.8			ROCK	6.0	113.5
520.8	CARBONDALE	HERRIN	COAL	3.5	119.5
517.3	CARBONDALE		ROCK	2.0	123.0

MAPID: 11790196000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 31 QUARTERS/FOOTAGES: 660' S line, 1' W line of SE NW
 QUADRANGLE: GREENFIELD LONGITUDE: -90.145703 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.355576 DATE COLLECTED: 9 / 24 / 1968
 SURFACE ELEVATION (FT.): 614.9 LOGGED (FT.): 138.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 53 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
614.9	PLEISTOCENE		UNCONSOLIDATED	130.0	0.0
484.9			ROCK	8.0	130.0

MAPID: 11723597000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 32 QUARTERS/FOOTAGES: 45' S line, 10' E line

QUADRANGLE: HETTICK LONGITUDE: -90.11253 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 39.346885 DATE COLLECTED:

SURFACE ELEVATION (FT.): 579.0 LOGGED (FT.): 93.0 LOG TYPE: Drillers Log

SOURCE: PAUL FARMER 23 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
579.0	PLEISTOCENE		CLAY	15.0	0.0	TAN
564.0	PLEISTOCENE		CLAY	9.0	15.0	GRAY
555.0	PLEISTOCENE		GRAVEL	2.0	24.0	
553.0	PLEISTOCENE		CLAY	34.0	26.0	GRAY
519.0	PLEISTOCENE		GRAVEL	22.4	60.0	
496.6	CARBONDALE	BRERETON	LIMESTONE	0.4	82.4	
496.2	CARBONDALE	ENERGY	GRAY SHALE	2.0	82.8	
494.2	CARBONDALE	HERRIN	COAL	5.3	84.8	
488.8	CARBONDALE		UNDERCLAY	2.5	90.2	

MAPID: 11790159000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 32 QUARTERS/FOOTAGES: 1' N line, 1' E line of NE NW

QUADRANGLE: HETTICK LONGITUDE: -90.122416 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.361166 DATE COLLECTED: 8 / 23 / 1968

SURFACE ELEVATION (FT.): 615.4 LOGGED (FT.): 158.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE 4 WELL TYPE: Coal Test

COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
615.4	PLEISTOCENE		UNCONSOLIDATED	138.0	0.0	
477.4			ROCK	20.0	138.0	

MAPID: 11790160000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 32 QUARTERS/FOOTAGES: 40' S line, 30' W line of SW SE

QUADRANGLE: HETTICK LONGITUDE: -90.122011 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.346793 DATE COLLECTED: 8 / 26 / 1968

SURFACE ELEVATION (FT.): 587.0 LOGGED (FT.): 148.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE 5 WELL TYPE: Coal Test

COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
587.0	PLEISTOCENE		UNCONSOLIDATED	119.0	0.0	
468.0			ROCK	29.0	119.0	

MAPID: 11790163000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 32 QUARTERS/FOOTAGES: 1' S line, 75' E line of SE NE
 QUADRANGLE: HETTICK LONGITUDE: -90.113018 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.353914 DATE COLLECTED: 8 / 28 / 1968
 SURFACE ELEVATION (FT.): 597.2 LOGGED (FT.): 109.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 10 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
597.2	PLEISTOCENE		ROCK	95.0	0.0
502.2			ROCK	8.0	95.0
494.2	CARBONDALE	HERRIN	COAL	4.7	103.0
489.5	CARBONDALE		ROCK	1.3	107.7

MAPID: 11790179000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 32 QUARTERS/FOOTAGES: 30' N line, 532' W line of NE NE
 QUADRANGLE: HETTICK LONGITUDE: -90.115818 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.36101 DATE COLLECTED: 9 / 9 / 1968
 SURFACE ELEVATION (FT.): 613.4 LOGGED (FT.): 138.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 25 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
613.4	PLEISTOCENE		UNCONSOLIDATED	115.0	0.0
498.4			ROCK	23.0	115.0

MAPID: 11701454000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 33 QUARTERS/FOOTAGES: 0' N line, 1320' W line
 QUADRANGLE: HETTICK LONGITUDE: -90.108322 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.361132 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 118.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES A68-29 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
508.0	CARBONDALE	HERRIN	COAL	4.3	92.0

MAPID: 11701454000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 33 QUARTERS/FOOTAGES: 0' N line, 1320' W line

QUADRANGLE: HETTICK LONGITUDE: -90.108322

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.361132

DATE COLLECTED:

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 96.3

LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A68-29

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
533.0	MODESTO	PIASA	LIMESTONE	1.0	67.0	
532.0	CARBONDALE		DARK GRAY SHALE	14.0	68.0	
518.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	82.0	
514.0	CARBONDALE	LAWSON	GRAY SHALE	2.0	86.0	
512.0	CARBONDALE	BRERETON	LIMESTONE	3.0	88.0	
509.0	CARBONDALE	ANNA	GRAY SHALE	1.0	91.0	
508.0	CARBONDALE	HERRIN	COAL	4.3	92.0	

MAPID: 11723589000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 33 QUARTERS/FOOTAGES: 2620' N line, 10' W line

QUADRANGLE: HETTICK LONGITUDE: -90.112715

GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 39.353832

DATE COLLECTED:

SURFACE ELEVATION (FT.): 590.0 LOGGED (FT.): 106.0

LOG TYPE: Drillers Log

SOURCE: PAUL FARMER 15

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
590.0	PLEISTOCENE		CLAY	20.0	0.0	TAN
570.0	PLEISTOCENE		CLAY & GRAVEL	28.0	20.0	GRAY
542.0	PLEISTOCENE		GRAVEL	16.0	48.0	
526.0			SANDSTONE	3.0	64.0	
523.0			SHALY LIMESTONE	5.0	67.0	GRAY
518.0			LIMESTONE	10.0	72.0	
508.0			GRAY SHALE	5.0	82.0	
503.0	CARBONDALE	BRERETON	LIMESTONE	4.5	87.0	GRAY
498.5	CARBONDALE	ENERGY	SHALE/COAL	6.1	91.5	
492.4	CARBONDALE	HERRIN	COAL	6.9	97.6	
485.5	CARBONDALE		UNDERCLAY & LIMESTONE	1.5	104.5	

MAPID: 1172359000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 33 QUARTERS/FOOTAGES: 12' S line, 140' E line

QUADRANGLE: HETTICK LONGITUDE: -90.094347 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 39.346788 DATE COLLECTED:

SURFACE ELEVATION (FT.): 540.0 LOGGED (FT.): 92.0 LOG TYPE: Drillers Log

SOURCE: PAUL FARMER 16 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
540.0	PLEISTOCENE		CLAY	12.0	0.0	TAN
528.0	PLEISTOCENE		GRAVEL	21.0	12.0	
507.0			BLACK SHALE	2.0	33.0	
505.0	CARBONDALE	DANVILLE	COAL	2.3	35.0	
502.7	CARBONDALE		UNDERCLAY	6.1	37.3	
496.6	CARBONDALE		SHALE WITH LIMESTONE	14.0	43.4	
482.6	CARBONDALE	BANKSTON FORK	LIMESTONE	4.4	57.4	
478.2	CARBONDALE		GRAY SHALE	10.0	61.8	
468.2	CARBONDALE		LIMESTONE	2.0	71.8	
466.2	CARBONDALE		NODULAR CLAYSTONE	6.0	73.8	
460.2	CARBONDALE	BRERETON	LIMESTONE	4.8	79.8	
455.4	CARBONDALE	HERRIN	COAL	6.0	84.6	
449.4	CARBONDALE		UNDERCLAY	1.1	90.6	

MAPID: 11790119000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 33 QUARTERS/FOOTAGES: 1' N line, 1' W line of NE NW

QUADRANGLE: HETTICK LONGITUDE: -90.108322 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.361132 DATE COLLECTED: 1 / 3 / 1968

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 118.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A68-29 WELL TYPE: Coal Test

COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
600.0	PLEISTOCENE		UNCONSOLIDATED	67.0	0.0	
533.0	PLEISTOCENE		ROCK	25.0	67.0	
508.0	CARBONDALE	HERRIN	COAL	4.3	92.0	
503.7	CARBONDALE		ROCK	21.7	96.3	

MAPID: 11790190000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 33 QUARTERS/FOOTAGES: 25' N line, 810' E line of SW NE
 QUADRANGLE: HETTICK LONGITUDE: -90.10172 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.357547 DATE COLLECTED: 9 / 20 / 1968
 SURFACE ELEVATION (FT.): 596.7 LOGGED (FT.): 103.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 47 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
596.7	PLEISTOCENE		UNCONSOLIDATED	57.0	0.0
539.7			ROCK	40.0	57.0
499.7	CARBONDALE	HERRIN	COAL	4.3	97.0
495.4	CARBONDALE		ROCK	1.7	101.3

MAPID: 11790385000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 33 QUARTERS/FOOTAGES: 35' S line, 900' W line of SW SW
 QUADRANGLE: HETTICK LONGITUDE: -90.109961 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.346708 DATE COLLECTED: 12 / 12 / 1978
 SURFACE ELEVATION (FT.): 590.3 LOGGED (FT.): 105.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-028 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 CORE EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
590.3	PLEISTOCENE		UNCONSOLIDATED	76.3	0.0
514.0			ROCK	20.1	76.3
493.9	CARBONDALE	HERRIN	COAL	3.7	96.4
490.2	CARBONDALE		ROCK	4.9	100.1

MAPID: 11790386000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 33 QUARTERS/FOOTAGES: 358' S line, 1016' E line of NE NW
 QUADRANGLE: HETTICK LONGITUDE: -90.107008 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.358436 DATE COLLECTED: 12 / 11 / 1978
 SURFACE ELEVATION (FT.): 567.0 LOGGED (FT.): 97.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-029 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
567.0	PLEISTOCENE		UNCONSOLIDATED	17.0	0.0
550.0			ROCK	44.1	17.0
505.9	CARBONDALE	HERRIN	COAL	3.4	61.1
502.5	CARBONDALE		ROCK	32.5	64.5

MAPID: 11790390000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 33 QUARTERS/FOOTAGES: 360' N line, 55' E line of NW SW
 QUADRANGLE: HETTICK LONGITUDE: -90.108539 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.352838 DATE COLLECTED: 1 / 10 / 1978
 SURFACE ELEVATION (FT.): 596.1 LOGGED (FT.): 128.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-033 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
596.1	PLEISTOCENE		UNCONSOLIDATED	55.0	0.0
541.1			ROCK	50.8	55.0
490.3	CARBONDALE	HERRIN	COAL	5.5	105.8
484.8	CARBONDALE		ROCK	16.2	111.3

MAPID: 11790442000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 33 QUARTERS/FOOTAGES: 75' S line, 100' W line of NW SW
 QUADRANGLE: HETTICK LONGITUDE: -90.112724 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.350445 DATE COLLECTED: 1 / 5 / 1980
 SURFACE ELEVATION (FT.): 586.6 LOGGED (FT.): 137.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-049 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
586.6	PLEISTOCENE		UNCONSOLIDATED	79.0	0.0
507.6			ROCK	41.0	79.0
466.6	CARBONDALE	HERRIN	COAL	5.5	120.0
461.1	CARBONDALE		ROCK	11.5	125.5

MAPID: 11790444000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 33 QUARTERS/FOOTAGES: 795' S line, 25' W line of SE SW
 QUADRANGLE: HETTICK LONGITUDE: -90.108226 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.348787 DATE COLLECTED: 2 / 6 / 1980
 SURFACE ELEVATION (FT.): 586.7 LOGGED (FT.): 118.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-051 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
586.7	PLEISTOCENE		UNCONSOLIDATED	82.0	0.0
504.7			ROCK	19.7	82.0
485.0	CARBONDALE	HERRIN	COAL	7.3	101.7
477.7	CARBONDALE		ROCK	9.0	109.0

MAPID: 11790449000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 33 QUARTERS/FOOTAGES: 35' S line, 20' W line of NE NE
 QUADRANGLE: HETTICK LONGITUDE: -90.098798 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.357598 DATE COLLECTED: 2 / 11 / 1980
 SURFACE ELEVATION (FT.): 599.1 LOGGED (FT.): 115.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-056 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
599.1	PLEISTOCENE		UNCONSOLIDATED	58.0	0.0
541.1			ROCK	42.6	58.0
498.5	CARBONDALE	HERRIN	COAL	4.0	100.6
494.5	CARBONDALE		ROCK	10.4	104.6

MAPID: 11790451000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 33 QUARTERS/FOOTAGES: 20' N line, 690' W line of NW NE
 QUADRANGLE: HETTICK LONGITUDE: -90.101304 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.361268 DATE COLLECTED: 2 / 14 / 1980
 SURFACE ELEVATION (FT.): 605.5 LOGGED (FT.): 118.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 7-058 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
605.5	PLEISTOCENE		UNCONSOLIDATED	55.0	0.0
550.5	MODESTO		ROCK	2.7	55.0
547.8	CARBONDALE	DANVILLE	COAL	0.6	57.7
547.2	CARBONDALE		ROCK	47.9	58.3
499.3	CARBONDALE	HERRIN	COAL	3.3	106.2
496.0	CARBONDALE		ROCK	8.5	109.5

MAPID: 11701455000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 34 QUARTERS/FOOTAGES: 1350' N line, 30' W line
 QUADRANGLE: HETTICK LONGITUDE: -90.094051 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.357622 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 590.1 LOGGED (FT.): 97.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES A68-28 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
498.2	CARBONDALE	HERRIN	COAL	4.3	91.9

MAPID: 11701455000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 34 QUARTERS/FOOTAGES: 1350' N line, 30' W line

QUADRANGLE: HETTICK LONGITUDE: -90.094051 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.357622 DATE COLLECTED:

SURFACE ELEVATION (FT.): 590.0 LOGGED (FT.): 96.3 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES A68-28 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
524.9	MODESTO	PIASA	LIMESTONE	6.7	65.1	
518.3	CARBONDALE		DARK GRAY SHALE	7.7	71.7	
510.6	CARBONDALE	BANKSTON FORK	LIMESTONE	4.7	79.4	
505.9	CARBONDALE	LAWSON	GRAY SHALE	2.0	84.1	
503.9	CARBONDALE	LAWSON	DARK GRAY SHALE	2.0	86.1	
501.9	CARBONDALE	BRERETON	LIMESTONE	0.8	88.1	
501.2	CARBONDALE	ANNA	BLACK SHALE	3.2	88.8	
498.0	CARBONDALE	HERRIN	COAL	4.3	92.0	

MAPID: 11723579000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 34 QUARTERS/FOOTAGES: 1355' N line, 1980' E line

QUADRANGLE: HETTICK LONGITUDE: -90.081527 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 39.357652 DATE COLLECTED:

SURFACE ELEVATION (FT.): 590.0 LOGGED (FT.): 109.0 LOG TYPE: Drillers Log

SOURCE: PAUL FARMER 5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
590.0			CLAY & GRAVEL	24.0	0.0	TAN
566.0			CLAY	3.0	24.0	GRAY
563.0			GRAVEL	2.0	27.0	
561.0			CLAY	22.0	29.0	GRAY
539.0			GRAVEL	9.0	51.0	GRAY
530.0			CLAY	16.0	60.0	TAN
514.0			LIMESTONE	6.0	76.0	
508.0			GRAY SHALE	2.0	82.0	
506.0			GRAY SHALE	6.0	84.0	
500.0	CARBONDALE	BRERETON	LIMESTONE	11.4	90.0	
488.6	CARBONDALE	HERRIN	COAL	5.0	101.4	#6
483.6	CARBONDALE		UNDERCLAY	2.4	106.4	

MAPID: 11790118000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 34 QUARTERS/FOOTAGES: 30' N line, 30' W line of SW NW
 QUADRANGLE: HETTICK LONGITUDE: -90.094051 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.357622 DATE COLLECTED: 1 / 4 / 1968
 SURFACE ELEVATION (FT.): 590.1 LOGGED (FT.): 97.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE COLLIERIES A68-28 WELL TYPE: Coal Test
 COMMENT: MACOUPIN COUNTY BOX #43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
590.1	PLEISTOCENE		UNCONSOLIDATED	63.0	0.0
527.1			ROCK	28.9	63.0
498.2	CARBONDALE	HERRIN	COAL	4.3	91.9
493.9	CARBONDALE		ROCK	0.9	96.2

MAPID: 11790164000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 34 QUARTERS/FOOTAGES: 100' N line, 800' E line of NE SW
 QUADRANGLE: HETTICK LONGITUDE: -90.087085 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.35382 DATE COLLECTED: 8 / 28 / 1968
 SURFACE ELEVATION (FT.): 543.4 LOGGED (FT.): 108.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 11 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
543.4	PLEISTOCENE		UNCONSOLIDATED	40.0	0.0
503.4			ROCK	38.3	40.0
465.1	CARBONDALE	HERRIN	COAL	5.6	78.3
459.5	CARBONDALE		ROCK	24.1	83.9

MAPID: 11790167000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 34 QUARTERS/FOOTAGES: 440' N line, 310' W line of NW SE
 QUADRANGLE: HETTICK LONGITUDE: -90.083116 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.352907 DATE COLLECTED: 8 / 29 / 1968
 SURFACE ELEVATION (FT.): 581.8 LOGGED (FT.): 198.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE 14 WELL TYPE: Coal Test
 COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
581.8	PLEISTOCENE		UNCONSOLIDATED	64.0	0.0
517.8			ROCK	49.5	64.0
468.3	CARBONDALE	HERRIN	COAL	4.5	113.5
463.8	CARBONDALE		ROCK	80.0	118.0

MAPID: 11790377000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 34 QUARTERS/FOOTAGES: 27' N line, 366' E line of NW SE
 QUADRANGLE: HETTICK LONGITUDE: -90.080664 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.353888 DATE COLLECTED: 11 / 30 / 1978
 SURFACE ELEVATION (FT.): 586.2 LOGGED (FT.): 137.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-020 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
586.2	PLEISTOCENE		UNCONSOLIDATED	69.5	0.0
516.7			ROCK	54.3	69.5
462.4	CARBONDALE	HERRIN	COAL	4.4	123.8
458.0	CARBONDALE		ROCK	8.8	128.2

MAPID: 11790379000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 34 QUARTERS/FOOTAGES: 10' S line, 475' E line of NE NE
 QUADRANGLE: HETTICK LONGITUDE: -90.076054 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.357602 DATE COLLECTED: 12 / 4 / 1978
 SURFACE ELEVATION (FT.): 595.7 LOGGED (FT.): 130.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-022 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
595.7	PLEISTOCENE		UNCONSOLIDATED	71.3	0.0
524.4			ROCK	41.1	71.3
483.3	CARBONDALE	HERRIN	COAL	5.2	112.4
478.1	CARBONDALE		ROCK	12.4	117.6

MAPID: 11790383000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 34 QUARTERS/FOOTAGES: 35' S line, 462' W line of SW SW
 QUADRANGLE: HETTICK LONGITUDE: -90.092573 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.34688 DATE COLLECTED: 12 / 6 / 1978
 SURFACE ELEVATION (FT.): 539.2 LOGGED (FT.): 107.0 LOG TYPE: Drillers Log
 SOURCE: AMAX 6-026 WELL TYPE: Coal Test
 COMMENT: BARR-GREENFIELD BOX #44 CORE EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
539.2	PLEISTOCENE		UNCONSOLIDATED	47.5	0.0
491.7			ROCK	37.2	47.5
454.5	CARBONDALE	HERRIN	COAL	7.0	84.7
447.5	CARBONDALE		ROCK	15.3	91.7

MAPID: 11790396000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 34 QUARTERS/FOOTAGES: 48' S line, 623' E line of NE NW

QUADRANGLE: HETTICK LONGITUDE: -90.086609 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.357745 DATE COLLECTED: 12 / 19 / 1979

SURFACE ELEVATION (FT.): 549.7 LOGGED (FT.): 72.0 LOG TYPE: Drillers Log

SOURCE: AMAX 7-002 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
549.7	PLEISTOCENE		UNCONSOLIDATED	39.0	0.0
510.7			ROCK	26.0	39.0
484.7	CARBONDALE	HERRIN	COAL	4.1	65.0
480.6	CARBONDALE		ROCK	2.9	69.1

MAPID: 11790397000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 34 QUARTERS/FOOTAGES: 1087' S line, 100' W line of NE NW

QUADRANGLE: HETTICK LONGITUDE: -90.089428 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.360624 DATE COLLECTED: 12 / 19 / 1979

SURFACE ELEVATION (FT.): 552.2 LOGGED (FT.): 74.0 LOG TYPE: Drillers Log

SOURCE: AMAX 7-003 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
552.2	PLEISTOCENE		UNCONSOLIDATED	32.5	0.0
519.7			ROCK	27.0	32.5
492.7	CARBONDALE	HERRIN	COAL	0.8	59.5
491.9	CARBONDALE	HERRIN	ROCK	0.2	60.3
491.7	CARBONDALE	HERRIN	COAL	3.5	60.5
488.2	CARBONDALE		ROCK	10.0	64.0

MAPID: 11790416000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 34 QUARTERS/FOOTAGES: 35' N line, 700' E line of NE SE

QUADRANGLE: HETTICK LONGITUDE: -90.077108 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.353908 DATE COLLECTED: 1 / 18 / 1980

SURFACE ELEVATION (FT.): 589.4 LOGGED (FT.): 125.0 LOG TYPE: Drillers Log

SOURCE: AMAX 7-023 WELL TYPE: Coal Test

COMMENT: BARR GREENFIELD BOX #44 CORE GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
589.4	PLEISTOCENE		UNCONSOLIDATED	84.0	0.0
505.4			ROCK	34.4	84.0
471.0	CARBONDALE	HERRIN	COAL	4.2	118.4
466.8	CARBONDALE		ROCK	2.4	122.6

MAPID: 11790448000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 34 QUARTERS/FOOTAGES: 395' N line, 69' W line of SW SW

QUADRANGLE: HETTICK LONGITUDE: -90.094087 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.349271 DATE COLLECTED: 2 / 7 / 1980

SURFACE ELEVATION (FT.): 539.8 LOGGED (FT.): 85.0 LOG TYPE: Drillers Log

SOURCE: AMAX 7-055 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
539.8	PLEISTOCENE		UNCONSOLIDATED	34.0	0.0	
505.8			ROCK	36.0	34.0	
469.8	CARBONDALE	HERRIN	COAL	5.4	70.0	
464.4	CARBONDALE		ROCK	9.6	75.4	

MAPID: 11723591000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 35 QUARTERS/FOOTAGES: 60' S line, 2400' E line

QUADRANGLE: HETTICK LONGITUDE: -90.063915 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 39.347088 DATE COLLECTED:

SURFACE ELEVATION (FT.): 545.0 LOGGED (FT.): 63.0 LOG TYPE: Drillers Log

SOURCE: PAUL FARMER 17 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.0	PLEISTOCENE		CLAY	25.0	0.0	TAN
520.0	PLEISTOCENE		CLAY, SAND & GRAVEL	23.0	25.0	GRAY
497.0			LIMESTONE	3.0	48.0	
494.0			GRAY SHALE	2.0	51.0	
492.0	CARBONDALE	BRERETON	LIMESTONE	3.0	53.0	
489.0	CARBONDALE	HERRIN	COAL	4.5	56.0	
484.5	CARBONDALE		UNDERCLAY	2.3	60.5	

MAPID: 11723592000C **VERSION:** 1 **PROJECT:** NCRDS94
COUNTY: MACOUPIN **TWP/RNG:** 11N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 2600' S line, 2565' W line
QUADRANGLE: HETTICK **LONGITUDE:** -90.065312 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 39.354101 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 590.0 **LOGGED (FT.):** 103.0 **LOG TYPE:** Drillers Log
SOURCE: PAUL FARMER 18 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
590.0	PLEISTOCENE		CLAY	24.0	0.0	TAN
566.0	PLEISTOCENE		CLAY, SAND & GRAVEL	61.0	24.0	GRAY
505.0			LIMESTONE	0.4	85.0	
504.6			GRAY SHALE	4.4	85.4	
500.2	CARBONDALE	BRERETON	LIMESTONE	2.0	89.8	
498.2	CARBONDALE	ENERGY	GRAY SHALE	6.4	91.8	
491.7	CARBONDALE	HERRIN	COAL	4.1	98.3	
487.7	CARBONDALE		UNDERCLAY	0.3	102.3	

MAPID: 11790168000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 11N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 1' N line, 1' E line of NW SW
QUADRANGLE: HETTICK **LONGITUDE:** -90.069696 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.354163 **DATE COLLECTED:** 9 / 3 / 1968
SURFACE ELEVATION (FT.): 589.3 **LOGGED (FT.):** 128.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE 15 **WELL TYPE:** Coal Test
COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
589.3	PLEISTOCENE		UNCONSOLIDATED	74.0	0.0	
515.3			ROCK	41.0	74.0	
474.3	CARBONDALE	HERRIN	COAL	3.8	115.0	
470.5	CARBONDALE		ROCK	9.2	118.8	

MAPID: 11790173000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 11N 9W **SECTION:** 35 **QUARTERS/FOOTAGES:** 150' N line, 165' W line of NE NE
QUADRANGLE: HETTICK **LONGITUDE:** -90.05972 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.360974 **DATE COLLECTED:** 9 / 4 / 1968
SURFACE ELEVATION (FT.): 587.1 **LOGGED (FT.):** 158.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE 19 **WELL TYPE:** Coal Test
COMMENT: WEST HETTICK BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
587.1	PLEISTOCENE		UNCONSOLIDATED	126.0	0.0	
461.1			ROCK	32.0	126.0	

MAPID: 11790376000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 35 QUARTERS/FOOTAGES: 19' S line, 362' W line of SW SW

QUADRANGLE: HETTICK LONGITUDE: -90.073179 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.346863 DATE COLLECTED: 11 / 30 / 1978

SURFACE ELEVATION (FT.): 548.9 LOGGED (FT.): 100.0 LOG TYPE: Drillers Log

SOURCE: AMAX 6-019 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
548.9	PLEISTOCENE		UNCONSOLIDATED	43.0	0.0
505.9			ROCK	28.8	43.0
477.1	CARBONDALE	HERRIN	COAL	5.7	71.8
471.4	CARBONDALE		ROCK	22.5	77.5

MAPID: 11790378000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 35 QUARTERS/FOOTAGES: 30' N line, 285' E line of SE SW

QUADRANGLE: HETTICK LONGITUDE: -90.066071 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.350379 DATE COLLECTED: 11 / 31 / 1978

SURFACE ELEVATION (FT.): 583.3 LOGGED (FT.): 150.0 LOG TYPE: Drillers Log

SOURCE: AMAX 6-021 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
583.3	PLEISTOCENE		UNCONSOLIDATED	110.5	0.0
472.8			ROCK	39.5	110.5

MAPID: 11790398000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 35 QUARTERS/FOOTAGES: 17' N line, 30' W line of SW NW

QUADRANGLE: HETTICK LONGITUDE: -90.07425 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.357889 DATE COLLECTED: 12 / 20 / 1979

SURFACE ELEVATION (FT.): 595.7 LOGGED (FT.): 135.0 LOG TYPE: Drillers Log

SOURCE: AMAX 7-004 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
595.7	PLEISTOCENE		UNCONSOLIDATED	78.0	0.0
517.7			ROCK	39.0	78.0
478.7	CARBONDALE	HERRIN	COAL	4.2	117.0
474.5	CARBONDALE		ROCK	13.8	121.2

MAPID: 11790414000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 35 QUARTERS/FOOTAGES: 245' N line, 215' E line of SW NE

QUADRANGLE: HETTICK LONGITUDE: -90.060803 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.356803 DATE COLLECTED: 1 / 17 / 1980

SURFACE ELEVATION (FT.): 587.3 LOGGED (FT.): 147.0 LOG TYPE: Drillers Log

SOURCE: AMAX 7-021 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
587.3	PLEISTOCENE		UNCONSOLIDATED	100.0	0.0	
487.3			ROCK	8.2	100.0	
479.1	CARBONDALE	HERRIN	COAL	3.0	108.2	
476.1	CARBONDALE		ROCK	35.8	111.2	

MAPID: 11790415000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 35 QUARTERS/FOOTAGES: 350' N line, 212' E line of SW NE

QUADRANGLE: HETTICK LONGITUDE: -90.06079 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.356511 DATE COLLECTED: 1 / 17 / 1980

SURFACE ELEVATION (FT.): 586.9 LOGGED (FT.): 121.0 LOG TYPE: Drillers Log

SOURCE: AMAX 7-022 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 GR

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
586.9	PLEISTOCENE		UNCONSOLIDATED	101.5	0.0	
485.4			ROCK	6.4	101.5	
479.0	CARBONDALE	HERRIN	COAL	3.3	107.9	
475.7	CARBONDALE		ROCK	9.8	111.2	

MAPID: 11723581000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 36 QUARTERS/FOOTAGES: 1410' N line, 560' W line

QUADRANGLE: HETTICK LONGITUDE: -90.053526 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 39.357501 DATE COLLECTED:

SURFACE ELEVATION (FT.): 590.0 LOGGED (FT.): 163.0 LOG TYPE: Drillers Log

SOURCE: PAUL FARMER 7 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
590.0	PLEISTOCENE		CLAY	15.0	0.0	TAN
575.0	PLEISTOCENE		CLAY & GRAVEL	22.0	15.0	GRAY
553.0	PLEISTOCENE		CLAY	66.0	37.0	GRAY
487.0	PLEISTOCENE		GRAVEL	10.0	103.0	FLOAT COAL
477.0	PLEISTOCENE		CLAY	22.5	113.0	GRAY
454.5			LIMESTONE	1.0	135.5	
453.5			GRAY SHALE	3.5	136.5	
450.0			SHALY SANDSTONE	7.0	140.0	GRAY
443.0			GRAY SHALE	16.0	147.0	

MAPID: 11790358000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 36 QUARTERS/FOOTAGES: 65' S line, 213' E line of SE SE

QUADRANGLE: HETTICK LONGITUDE: -90.037631 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.347162 DATE COLLECTED: 10 / 25 / 1978

SURFACE ELEVATION (FT.): 587.0 LOGGED (FT.): 156.0 LOG TYPE: Drillers Log

SOURCE: AMAX 6-001 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
587.0	PLEISTOCENE		UNCONSOLIDATED	35.0	0.0	
552.0	MODESTO		ROCK	51.0	35.0	
501.0	CARBONDALE	DANVILLE	COAL	0.7	86.0	
500.3	CARBONDALE		ROCK	48.4	86.7	
451.9	CARBONDALE	HERRIN	COAL	5.1	135.1	
446.8	CARBONDALE		ROCK	15.8	140.2	

MAPID: 11790375000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 36 QUARTERS/FOOTAGES: 36' S line, 346' E line of SW NE

QUADRANGLE: HETTICK LONGITUDE: -90.043072 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.35432 DATE COLLECTED: 11 / 29 / 1978

SURFACE ELEVATION (FT.): 594.9 LOGGED (FT.): 135.0 LOG TYPE: Drillers Log

SOURCE: AMAX 6-018 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
594.9	PLEISTOCENE		UNCONSOLIDATED	92.6	0.0
502.3			ROCK	24.9	92.6
477.4	CARBONDALE	HERRIN	COAL	2.1	117.5
475.3	CARBONDALE		ROCK	15.4	119.6

MAPID: 11790394000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 36 QUARTERS/FOOTAGES: 44' S line, 150' W line of SE SW

QUADRANGLE: HETTICK LONGITUDE: -90.05019 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.346993 DATE COLLECTED: 1 / 17 / 1979

SURFACE ELEVATION (FT.): 587.1 LOGGED (FT.): 150.0 LOG TYPE: Drillers Log

SOURCE: AMAX 6-037 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 GR

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
587.1	PLEISTOCENE		UNCONSOLIDATED	148.0	0.0
439.1			ROCK	2.0	148.0

MAPID: 11790413000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 11N 9W SECTION: 36 QUARTERS/FOOTAGES: 65' N line, 200' E line of NE SW

QUADRANGLE: HETTICK LONGITUDE: -90.046946 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.354039 DATE COLLECTED: 1 / 16 / 1980

SURFACE ELEVATION (FT.): 574.8 LOGGED (FT.): 157.0 LOG TYPE: Drillers Log

SOURCE: AMAX 7-020 WELL TYPE: Coal Test

COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
574.8	PLEISTOCENE		UNCONSOLIDATED	114.4	0.0
460.4			ROCK	25.2	114.4
435.2	CARBONDALE	HERRIN	COAL	5.7	139.6
429.5	CARBONDALE		ROCK	11.7	145.3

MAPID: 11790418000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 11N 9W **SECTION:** 36 **QUARTERS/FOOTAGES:** 50' S line, 50' E line of SE SW
QUADRANGLE: HETTICK **LONGITUDE:** -90.046582 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.347076 **DATE COLLECTED:** 1 / 21 / 1980
SURFACE ELEVATION (FT.): 584.7 **LOGGED (FT.):** 168.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX 7-025 **WELL TYPE:** Coal Test
COMMENT: BARR-GREENFIELD BOX #44 GR

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
584.7	PLEISTOCENE		UNCONSOLIDATED	124.0	0.0
460.7			ROCK	27.7	124.0
433.0	CARBONDALE	HERRIN	COAL	4.1	151.7
428.9	CARBONDALE		ROCK	12.2	155.8

MAPID: 11790424000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 11N 9W **SECTION:** 36 **QUARTERS/FOOTAGES:** 990' S line, 50' E line of SE SE
QUADRANGLE: HETTICK **LONGITUDE:** -90.037081 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.349704 **DATE COLLECTED:** 1 / 23 / 1980
SURFACE ELEVATION (FT.): 587.0 **LOGGED (FT.):** 142.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX 7-031 **WELL TYPE:** Coal Test
COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
587.0	PLEISTOCENE		UNCONSOLIDATED	76.5	0.0
510.5	MODESTO		ROCK	2.3	76.5
508.2	CARBONDALE	DANVILLE	COAL	1.4	78.8
506.8	CARBONDALE		ROCK	45.9	80.2
460.9	CARBONDALE	HERRIN	COAL	5.4	126.1
455.5	CARBONDALE		ROCK	10.5	131.5

MAPID: 11790359000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 11N 10W **SECTION:** 25 **QUARTERS/FOOTAGES:** 75' S line, 20' E line of SE NE
QUADRANGLE: HETTICK **LONGITUDE:** -90.037178 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.369011 **DATE COLLECTED:** 10 / 26 / 1978
SURFACE ELEVATION (FT.): 602.0 **LOGGED (FT.):** 157.0 **LOG TYPE:** Drillers Log
SOURCE: AMAX 6-002 **WELL TYPE:** Coal Test
COMMENT: BARR-GREENFIELD BOX #44 GR EL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
602.0	PLEISTOCENE		UNCONSOLIDATED	137.0	0.0
465.0			ROCK	20.0	137.0

MAPID: 11701290000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 1 QUARTERS/FOOTAGES: 2600' N line, 0' E line

QUADRANGLE: DIVERNON LONGITUDE: -89.701607

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.516131

DATE COLLECTED:

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 339.7

LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED CM-04-69

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
348.1	MODESTO	PIASA	LIMESTONE	3.3	291.9	
344.8	MODESTO		VARRIGATED SHALE	8.8	295.2	
336.0	CARBONDALE	DANVILLE	COAL	0.4	304.0	
335.6	CARBONDALE		GRAY SHALE	6.5	304.4	
329.1	CARBONDALE		SHALE	1.8	310.9	
327.3	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	5.2	312.7	UPPER BENCH
322.1	CARBONDALE	BANKSTON FORK	MOTTLED SHALE	3.0	317.9	SHALE PARTING
319.1	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	1.8	320.9	LOWER BENCH
317.3	CARBONDALE	LAWSON	MOTTLED SHALE	0.8	322.7	
316.5	CARBONDALE	LAWSON	SANDSTONE	2.5	323.5	
314.0	CARBONDALE	LAWSON	SANDSTONE/SILTSTONE	1.5	326.0	
312.5	CARBONDALE	LAWSON	SHALE & SILTSTONE	1.4	327.5	
311.1	CARBONDALE	LAWSON	MOTTLED SHALE	0.5	328.9	
310.6	CARBONDALE	BRERETON	LIMESTONE	0.8	329.4	
309.8	CARBONDALE	ANNA	BLACK SHALE	1.8	330.2	
308.0	CARBONDALE	HERRIN	COAL	7.7	332.0	

MAPID: 11701290000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 1 QUARTERS/FOOTAGES: 2600' N line, 0' E line

QUADRANGLE: DIVERNON LONGITUDE: -89.701607

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.516131

DATE COLLECTED:

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 339.7

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CM-04-69

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
348.2	MODESTO	PIASA	LIMESTONE	3.3	291.8	
344.9	MODESTO		UNCLASSIFIED	5.3	295.1	
339.6	CARBONDALE		UNCLASSIFIED	12.2	300.4	
327.4	CARBONDALE	BANKSTON FORK	LIMESTONE	5.2	312.6	
322.2	CARBONDALE	ANVIL ROCK	SANDSTONE	3.0	317.8	
319.2	CARBONDALE	CONANT	LIMESTONE	1.8	320.8	
317.4	CARBONDALE		SHALE	6.8	322.6	
310.6	CARBONDALE	BRERETON	LIMESTONE	0.8	329.4	
309.8	CARBONDALE	ANNA	BLACK SHALE	1.8	330.2	
308.0	CARBONDALE	HERRIN	COAL	7.7	332.0	

MAPID: 11701290000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 1 QUARTERS/FOOTAGES: 2600' N line, 0' E line

QUADRANGLE: DIVERNON LONGITUDE: -89.701607 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.516131 DATE COLLECTED:

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 345.0 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED CM-04-69 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
307.8	CARBONDALE	HERRIN	COAL	7.8	332.2

MAPID: 11701290000C VERSION: 4

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 1 QUARTERS/FOOTAGES: 2600' N line, 0' E line

QUADRANGLE: DIVERNON LONGITUDE: -89.701607 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.516131 DATE COLLECTED: 6 / 24 / 1969

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 345.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-4-69 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
635.0	PLEISTOCENE		UNCONSOLIDATED	10.0	0.0	
625.0	PLEISTOCENE		UNCONSOLIDATED	40.3	10.0	
584.7			SANDY LIMESTONE	6.3	50.3	GRAY
578.4			SHALE	1.9	56.6	
576.5			CALCAREOUS SHALE	7.8	58.5	
568.7			LIMESTONE	6.3	66.3	
562.5			SHALE	1.8	72.5	
560.7			SANDY SHALE	29.3	74.3	SDY SH W/ NODS
531.5			SANDY SHALE	34.6	103.5	
496.9			SILTY SHALE	14.2	138.1	
482.7			LIMESTONE	1.0	152.3	
481.7			SHALE	1.5	153.3	
480.2			COAL	0.7	154.8	
479.6			SANDY SHALE	18.8	155.4	SDY SH W/ NODS
460.7			CALCAREOUS SANDSTONE	9.1	174.3	
451.7			SANDY SHALE	60.3	183.3	SDY SH W/ SS
391.3			SILTY SHALE	10.9	243.7	
380.4			SHALE	1.7	254.6	
378.7			LIMESTONE	0.5	256.3	DARK
378.2			SHALE	2.0	256.8	
376.2			COAL	0.3	258.8	
376.0			CALCAREOUS SHALE	19.8	259.0	
356.2			SHALE	1.0	278.8	
355.2			SANDY SHALE	12.2	279.8	SDY SH W/ LIME
343.0			LIMESTONE	3.3	292.0	
339.7			LAMINATED SHALE	5.3	295.3	
334.5			SANDY SHALE	3.6	300.5	
330.9	CARBONDALE	DANVILLE	COAL	0.4	304.1	
330.5	CARBONDALE		CALCAREOUS SHALE	6.5	304.5	
324.0	CARBONDALE		SHALE	1.8	311.0	SH W/ PYRITE
322.2	CARBONDALE		LIMESTONE	4.4	312.8	
317.8	CARBONDALE		CALCAREOUS SHALE	0.8	317.2	
317.0	CARBONDALE		SHALE	3.0	318.0	SH W/ PYRITE
314.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	321.0	
312.5	CARBONDALE	LAWSON	LAMINATED SHALE	1.0	322.5	
311.5	CARBONDALE	LAWSON	SANDY SHALE	5.5	323.5	
306.0	CARBONDALE	LAWSON	SHALE	0.3	329.0	
305.7	CARBONDALE	BRERETON	LIMESTONE	1.0	329.3	

304.7	CARBONDALE		SHALE	1.8	330.3	
302.8	CARBONDALE	HERRIN	COAL	7.7	332.2	
295.2			CLAYSTONE & SHALE	1.7	339.8	GRAY
293.5			SANDSTONE	3.5	341.5	

MAPID: 11700001000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 2 QUARTERS/FOOTAGES: 2620' S line, 2670' W line

QUADRANGLE: DIVERNON LONGITUDE: -89.729625 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.51588 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 639.9 LOGGED (FT.): 342.0 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MACHINERY CO., #1 WELL TYPE: Coal Test

COMMENT: NOTE IN LOG SAYS THIS MAY BE WRONG LOCAT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
639.9			SANDY CLAY	45.0	0.0
594.9			GRAVEL	2.0	45.0
592.9			BOULDERS & GRAVEL	3.0	47.0
589.9	MODESTO		SANDSTONE/SHALE	16.0	50.0
573.9	MODESTO		SANDY SHALE	32.0	66.0
541.9	MODESTO		CLAYSTONE & SHALE	10.0	98.0
531.9	MODESTO	CHAPEL	COAL	0.5	108.0
531.4	MODESTO		CLAYSTONE & SHALE	1.5	108.5
529.9	MODESTO		SANDSTONE	16.0	110.0
513.9	MODESTO		SANDY SHALE	12.0	126.0
501.9	MODESTO		BLACK SHALE	5.0	138.0
496.9	MODESTO		SANDY SHALE	13.0	143.0
483.9	MODESTO		CLAYSTONE & SHALE	31.0	156.0
452.9	MODESTO		BLACK SHALE	0.8	187.0
452.1	MODESTO		UNDERCLAY	3.3	187.8
448.9	MODESTO		CLAYSTONE & SHALE	22.0	191.0
426.9	MODESTO		CLAYSTONE & SHALE	11.0	213.0
415.9	CARBONDALE	ANVIL ROCK	SANDSTONE	4.0	224.0
411.9	CARBONDALE		CLAYSTONE & SHALE	6.0	228.0
405.9	CARBONDALE		LIMESTONE	0.5	234.0
405.4	CARBONDALE		BLACK SHALE	1.5	234.5
403.9	CARBONDALE		CLAYSTONE & SHALE	4.0	236.0
399.9	MODESTO		LIMESTONE	8.0	240.0
391.9	MODESTO		SHALE	1.0	248.0
390.9	MODESTO		CLAYSTONE & SHALE	2.0	249.0
388.9	CARBONDALE	ANNA	BLACK SHALE	1.5	251.0
387.4	CARBONDALE	HERRIN	COAL	4.5	252.5
382.9	CARBONDALE	HERRIN	CLAYSTONE & SHALE	0.2	257.0
382.7	CARBONDALE	HERRIN	COAL	2.8	257.2
379.9	MODESTO		UNDERCLAY	5.0	260.0
374.9	MODESTO		CLAYSTONE & SHALE	8.0	265.0
366.9	CARBONDALE		LIMESTONE	1.0	273.0
365.9	CARBONDALE	TURNER MINE	BLACK SHALE	1.0	274.0
364.9	CARBONDALE		CLAYSTONE & SHALE	15.0	275.0
349.9	CARBONDALE		SANDY SHALE	38.0	290.0
311.9	CARBONDALE		CLAYSTONE & SHALE	14.0	328.0

W/COAL

W/LS

MAPID: 11700001000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 2 QUARTERS/FOOTAGES: 2620' S line, 2670' W line

QUADRANGLE: DIVERNON LONGITUDE: -89.729625 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.51588 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 260.5 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MACHINE CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
415.5	MODESTO	PIASA	LIMESTONE	4.0	224.5
411.5	MODESTO		UNCLASSIFIED	3.0	228.5
408.5	CARBONDALE		UNCLASSIFIED	9.0	231.5
399.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	2.0	240.5
397.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	242.5
396.5	CARBONDALE		UNCLASSIFIED	1.0	243.5
395.5	CARBONDALE	BRERETON	LIMESTONE	4.0	244.5
391.5	CARBONDALE	ANNA	BLACK SHALE	4.5	248.5
387.0	CARBONDALE	HERRIN	COAL	7.5	253.0

MAPID: 11700002000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 2 QUARTERS/FOOTAGES: 2460' S line, 1540' W line

QUADRANGLE: DIVERNON LONGITUDE: -89.733647 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.515412 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 635.9 LOGGED (FT.): 253.8 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MACHINERY CO., #2 WELL TYPE: Coal Test

COMMENT: NOTE IN LOG SAYS THIS MAY BE WRONG LOCAT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
635.9			SAND/CLAY	25.0	0.0	
610.9			SAND & GRAVEL	10.0	25.0	
600.9			BOULDERS & GRAVEL	3.0	35.0	
597.9			CLAY	24.0	38.0	
573.9			UNKNOWN	4.0	62.0	LOG HAS ROCK, SHALEY OR LOOSE ROCK
569.9	MODESTO		CLAYSTONE & SHALE	22.0	66.0	
547.9	MODESTO		BLACK SHALE	5.0	88.0	
542.9	MODESTO		SHALE	5.5	93.0	
537.4	MODESTO		LIMESTONE	1.5	98.5	
535.9	MODESTO		SANDY SHALE	10.0	100.0	
525.9	MODESTO	CHAPEL	BONE COAL	2.0	110.0	
523.9	MODESTO		SANDSTONE	13.0	112.0	
510.9	MODESTO		SANDY SHALE	33.0	125.0	
477.9	MODESTO		LIMESTONE	2.0	158.0	
475.9	MODESTO		BLACK SHALE	3.0	160.0	
472.9	MODESTO		CLAYSTONE & SHALE	47.0	163.0	
425.9	MODESTO		LIMESTONE	1.5	210.0	
424.4	CARBONDALE		CLAYSTONE & SHALE	7.0	211.5	
417.4	CARBONDALE		LIMESTONE	1.5	218.5	
415.9	CARBONDALE		CLAYSTONE & SHALE	15.0	220.0	
400.9	CARBONDALE		BLACK SHALE	1.5	235.0	
399.4	CARBONDALE		LIMESTONE	3.5	236.5	
395.9	CARBONDALE		CLAYSTONE & SHALE	2.5	240.0	
393.4	CARBONDALE	ANNA	BLACK SHALE	3.2	242.5	
390.2	CARBONDALE	HERRIN	COAL	5.3	245.7	
384.9	CARBONDALE	HERRIN	CLAYSTONE & SHALE	0.5	251.0	
384.4	CARBONDALE	HERRIN	COAL	1.9	251.5	
382.5	CARBONDALE		UNDERCLAY	0.3	253.4	

MAPID: 11700002000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 2 QUARTERS/FOOTAGES: 2460' S line, 1540' W line

QUADRANGLE: DIVERNON LONGITUDE: -89.733647 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.515412 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 636.0 LOGGED (FT.): 253.8 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MACHINE CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
425.7	MODESTO	PIASA	LIMESTONE	1.5	210.3
424.2	MODESTO		UNCLASSIFIED	3.5	211.8
420.7	CARBONDALE		UNCLASSIFIED	12.5	215.3
408.2	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	227.8
403.2	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.5	232.8
400.7	CARBONDALE		UNCLASSIFIED	1.5	235.3
399.2	CARBONDALE	BRERETON	LIMESTONE	3.5	236.8
395.7	CARBONDALE	ANNA	BLACK SHALE	5.7	240.3
390.0	CARBONDALE	HERRIN	COAL	7.8	246.0

MAPID: 11722455000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 2 QUARTERS/FOOTAGES: 350' N line, 100' E line

QUADRANGLE: DIVERNON LONGITUDE: -89.720895 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.522119 DATE COLLECTED: 8 / 21 / 1980

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 342.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C2-6-80 WELL TYPE: Coal Test

COMMENT: PERMIT FILES #4 - CROWN II - 8/21/80

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
635.0	PLEISTOCENE		UNCONSOLIDATED	4.0	0.0	
631.0	PLEISTOCENE		UNCONSOLIDATED	7.0	4.0	
624.0	PLEISTOCENE		CLAY	3.0	11.0	GRAY
621.0	PLEISTOCENE		UNCONSOLIDATED	5.0	14.0	
616.0			GRAY SHALE	4.0	19.0	GY SH W/ SS
612.0			GRAY SHALE	10.0	23.0	GY SH W/ SS
602.0			SANDY SHALE	16.5	33.0	
585.5			LIMESTONE	6.5	49.5	
579.0			GRAY SHALE	1.0	56.0	GY SH W/ SS BANDS
578.0			SANDSTONE	1.5	57.0	
576.5			SHALE	2.0	58.5	
574.5			COAL	1.0	60.5	SLATEY COAL
573.5			GRAY SHALE	7.5	61.5	
566.0			LIMESTONE	4.5	69.0	
561.5			GRAY SHALE	1.5	73.5	
560.0			GRAY SHALE	23.0	75.0	GY SH W/ SS
537.0			GRAY SHALE	7.0	98.0	SH W/ SS BANDS
530.0			SHALE	46.0	105.0	
484.0			SANDSTONE	1.5	151.0	
482.5			SHALE	5.0	152.5	
477.5			SHALE	0.5	157.5	
477.0			COAL	1.0	158.0	
476.0			SHALE	2.0	159.0	
474.0			GRAY SHALE	1.0	161.0	GY SH W/ SS BANDS
473.0			LIMESTONE	3.0	162.0	
470.0			SANDSTONE	5.0	165.0	
465.0			GRAY SHALE	60.0	170.0	LGY SH W/ SS BANDS
405.0			DARK GRAY SHALE	5.0	230.0	DGY SH W/ SS BANDS
400.0			DARK GRAY SHALE	19.0	235.0	DGY SH W/ SS
381.0			LIMESTONE	0.5	254.0	
380.5			SHALE	2.0	254.5	DK GRAY
378.5			DARK GRAY SHALE	2.5	256.5	DGY SH W/ SS BANDS
376.0			GRAY SHALE	17.0	259.0	LGY SH W/ SS BANDS
359.0			BLACK SHALE	3.0	276.0	BK SH W/ COAL TRACE
356.0			SHALE	4.0	279.0	
352.0			GRAY SHALE	9.8	283.0	SH W/ SS BANDS
342.2			SANDSTONE	0.7	292.8	
341.5			LIMESTONE	2.5	293.5	LT BRN

339.0			SHALE	4.0	296.0	
335.0			BLACK SHALE	1.0	300.0	BK SH W/ COAL TRACE
334.0			GRAY SHALE	5.0	301.0	GY SH W/SS BANDS
329.0			BLACK SHALE	1.3	306.0	BK SH W/ COAL TRACE
327.7			SHALE	6.7	307.3	
321.0			LIMESTONE	5.5	314.0	LT BRN
315.5			SHALE	2.5	319.5	LT GRAY
313.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	322.0	LT BRN
312.0	CARBONDALE	BANKSTON FORK	LIMESTONE	0.7	323.0	GRY/TAN
311.3	CARBONDALE	LAWSON	GRAY SHALE	0.1	323.7	
311.2	CARBONDALE	LAWSON	GRAY SHALE	0.2	323.8	GY SH W/ COAL LAMIN
310.9	CARBONDALE	LAWSON	GRAY SHALE	0.7	324.1	
310.2	CARBONDALE	BRERETON	LIMESTONE	3.3	324.8	BRERETON?; GRAY
307.0	CARBONDALE		GRAY SHALE	0.4	328.0	
306.6	CARBONDALE		HARD SHALE	1.9	328.4	
304.8	CARBONDALE		UNCLASSIFIED	0.8	330.2	LOST CORE
304.0	CARBONDALE	ANNA	BLACK SHALE	0.6	331.0	ANNA?
303.4	CARBONDALE	HERRIN	COAL	7.9	331.6	
295.6			UNDERCLAY	1.3	339.4	UCLY W/ SM CO BNDS; GRAY
294.3			CLAYSTONE & SILTSTONE	0.6	340.7	GRN/GRY
293.7			CALCAREOUS SHALE	0.3	341.3	
293.3			CALCAREOUS SHALE	0.4	341.7	

MAPID: 11700241000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 8 QUARTERS/FOOTAGES: SE SW SW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.79185 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.494613 DATE COLLECTED:

SURFACE ELEVATION (FT.): 677.2 LOGGED (FT.): 320.1 LOG TYPE: Drillers Log

SOURCE: ROYAL COLLIERY CO., NORTH SHAFT WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
677.2			SAND/CLAY	25.0	0.0	
652.2	MODESTO		CARBONACEOUS SHALE	0.4	25.0	PROB. BKSH
651.8	MODESTO		COAL	0.2	25.4	
651.6	MODESTO		UNDERCLAY	5.0	25.6	
646.6	MODESTO		CARBONACEOUS SHALE	4.5	30.6	PROB. BKSH
642.1	MODESTO		COAL	0.5	35.1	
641.6	MODESTO		UNDERCLAY	6.0	35.6	
635.6	MODESTO		LIMESTONE	7.8	41.6	
627.9	MODESTO		CARBONACEOUS SHALE	1.3	49.3	PROB. BKSH
626.5	MODESTO		SHALE	5.5	50.7	
621.0	MODESTO		LIMESTONE	7.0	56.2	
614.0	MODESTO		SHALE/COAL	1.3	63.2	BITUMINOUS SH
612.8	MODESTO		CLAYSTONE & SHALE	6.0	64.4	
606.8	MODESTO		LIMESTONE	0.8	70.4	
606.0	MODESTO		SHALE & SANDSTONE	63.0	71.2	
543.0	MODESTO		LIMESTONE	1.3	134.2	
541.7	MODESTO		CARBONACEOUS SHALE	3.8	135.5	
537.9	MODESTO	CHAPEL	COAL	0.8	139.3	
537.0	MODESTO		SANDSTONE/SHALE	72.0	140.2	
465.0	MODESTO		SHALE	3.0	212.2	
462.0	MODESTO		SANDSTONE	8.0	215.2	
454.0	MODESTO		CLAYSTONE & SHALE	4.0	223.2	
450.0	MODESTO		SHALE	22.5	227.2	
427.5	MODESTO		SANDY SHALE	26.0	249.7	
401.5	MODESTO		CARBONACEOUS SHALE	1.5	275.7	PROB. BKSH
400.0	MODESTO	PIASA	LIMESTONE	3.0	277.2	
397.0	MODESTO		CARBONACEOUS SHALE	2.5	280.2	PROB. BKSH
394.5	CARBONDALE	DANVILLE	COAL	2.8	282.7	
391.8	CARBONDALE		UNDERCLAY	2.0	285.4	
389.8	CARBONDALE		SANDSTONE	4.0	287.4	
385.8	CARBONDALE		COAL	1.0	291.4	
384.8	CARBONDALE		UNDERCLAY	2.5	292.4	
382.3			SANDSTONE/SHALE	10.0	294.9	
372.3	CARBONDALE	BRERETON	LIMESTONE	7.0	304.9	
365.3	CARBONDALE	ANNA	CARBONACEOUS SHALE	0.5	311.9	PROB. BKSH
364.8	CARBONDALE	HERRIN	COAL	7.7	312.4	

MAPID: 11700241000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 8 QUARTERS/FOOTAGES: SE SW SW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.79185 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.494613 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 677.0 LOGGED (FT.): 319.7 LOG TYPE: Drillers Log

SOURCE: ROYAL COLLIERY CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
400.3	MODESTO	PIASA	LIMESTONE	3.0	276.7
397.3	MODESTO		UNCLASSIFIED	2.5	279.7
394.8	CARBONDALE	DANVILLE	COAL	2.8	282.2
392.0	CARBONDALE		UNCLASSIFIED	10.5	285.0
381.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	295.5
376.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	300.5
374.5	CARBONDALE		UNCLASSIFIED	2.0	302.5
372.5	CARBONDALE	BRERETON	LIMESTONE	7.0	304.5
365.5	CARBONDALE	ANNA	BLACK SHALE	0.5	311.5
365.0	CARBONDALE	HERRIN	COAL	7.7	312.0

MAPID: 11700242000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 9 QUARTERS/FOOTAGES: 330' N line, 1595' E line

QUADRANGLE: VIRDEN NORTH LONGITUDE: -89.763917 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.507814 DATE COLLECTED: 0 / 0 / 1893

SURFACE ELEVATION (FT.): 665.0 LOGGED (FT.): 329.5 LOG TYPE: Drillers Log

SOURCE: VIRDEN COAL WELL TYPE: Mine Shaft

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
342.0	CARBONDALE	HERRIN	COAL	6.5	323.0

MAPID: 11701291000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 11 QUARTERS/FOOTAGES: 2600' N line, 1400' W line

QUADRANGLE: DIVERNON LONGITUDE: -89.733896 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.501441 DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 350.5 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED CM-01-69 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
322.4	CARBONDALE	HERRIN	COAL	7.8	337.6

MAPID: 11701291000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 11 QUARTERS/FOOTAGES: 2600' N line, 1400' W line

QUADRANGLE: DIVERNON LONGITUDE: -89.733896 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.501441 DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 335.8 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CM-01-69 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
371.8	MODESTO	PIASA	LIMESTONE	2.3	288.2
369.5	MODESTO		UNCLASSIFIED	4.0	290.5
365.5	CARBONDALE		UNCLASSIFIED	15.1	294.5
350.4	CARBONDALE	BANKSTON FORK	LIMESTONE	4.4	309.6
346.0	CARBONDALE	ANVIL ROCK	SANDSTONE	3.3	314.0
342.7	CARBONDALE	CONANT	LIMESTONE	2.5	317.3
340.2	CARBONDALE	JAMESTOWN	COAL	0.2	319.8
340.0	CARBONDALE		SHALE	2.5	320.0
337.5	CARBONDALE	BRERETON	LIMESTONE	5.3	322.5
332.2	CARBONDALE	ANNA	BLACK SHALE	0.2	327.8
332.0	CARBONDALE	HERRIN	COAL	7.8	328.0

MAPID: 11701291000C VERSION: 3

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 11 QUARTERS/FOOTAGES: 2600' N line, 1400' W line

QUADRANGLE: DIVERNON LONGITUDE: -89.733896 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.501441 DATE COLLECTED: 6 / 23 / 1969

SURFACE ELEVATION (FT.): 667.0 LOGGED (FT.): 350.5 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-1-69 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
667.0	PLEISTOCENE		UNCONSOLIDATED	17.0	0.0	
650.0			SANDSTONE	27.5	17.0	
622.5			UNCLASSIFIED	3.5	44.5	
619.0			SANDY SHALE	3.4	48.0	SDY SH W/SS
615.6			SANDSTONE	7.2	51.4	
608.4			CALCAREOUS SANDSTONE	1.0	58.6	
607.4			SANDSTONE	3.1	59.6	SS W/ SH SEAMS
604.3			LIMESTONE	0.5	62.7	
603.8			CALCAREOUS SHALE	9.2	63.2	
594.7			CALCAREOUS SANDSTONE	0.5	72.3	
594.2			LIMESTONE	3.3	72.8	GRAY
590.8			SHALE	2.6	76.2	LT-DK
588.2			CALCAREOUS SHALE	4.8	78.8	
583.5			SANDY SHALE	54.2	83.5	
529.3			SILTY SHALE	7.4	137.7	
521.9			CALCAREOUS SHALE	0.7	145.1	
521.2			BLACK SHALE	0.5	145.8	
520.7			COAL	0.7	146.3	
520.1			SANDY SHALE	18.3	146.9	SDY SH W/NODS
501.7			SANDSTONE	11.4	165.3	
490.3			CALCAREOUS SANDSTONE	6.3	176.7	
484.0			SANDSTONE	30.5	183.0	
453.5			SANDSTONE	37.2	213.5	SS W/SDY SH SEAMS
416.3			CALCAREOUS SANDSTONE	2.0	250.7	
414.3			CALCAREOUS SHALE	4.3	252.7	
410.0			SANDY SHALE	2.6	257.0	
407.4			COAL	0.4	259.6	
407.0			SANDY SHALE	18.0	260.0	SDY SH W/NODS
389.0			SHALE	1.3	278.0	
387.7			SANDY SHALE	15.4	279.3	SDY SH W/NODS
372.3			SHALY LIMESTONE	3.3	294.7	
369.0			LIMESTONE	2.3	298.0	
366.7			SANDY SHALE	2.8	300.3	
364.0			CALCAREOUS SANDSTONE	5.3	303.0	
358.7			SANDY SHALE	4.8	308.3	

353.9			COAL	0.8	313.1	SLATEY CO
353.2			UNDERCLAY	0.4	313.8	
352.7			UNDERCLAY	4.3	314.3	
348.5			SHALE	0.8	318.5	
347.7			LIMESTONE	3.4	319.3	GRAY
344.2			SHALE	0.5	322.8	GRN/GRY
343.7			LIMESTONE	0.5	323.3	
343.2			LAMINATED SHALE	3.3	323.8	
340.0			LIMESTONE	0.5	327.0	GRAY
339.5			CALCAREOUS SHALE	0.4	327.5	
339.1	CARBONDALE	BANKSTON FORK	SANDY LIMESTONE	0.8	327.9	
338.3	CARBONDALE	ANVIL ROCK	SANDSTONE	3.5	328.7	SS W/SDY SH SEAMS
334.8	CARBONDALE	BRERETON	LIMESTONE	1.8	332.2	
333.1	CARBONDALE	BRERETON	LIMESTONE	3.4	333.9	
329.7	CARBONDALE		SHALE	0.3	337.3	
329.4	CARBONDALE	HERRIN	COAL	7.8	337.6	
321.7			UNDERCLAY	0.4	345.3	
321.2			CALCAREOUS SHALE	4.8	345.8	

MAPID: 11701292000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 12N 6W **SECTION:** 11 **QUARTERS/FOOTAGES:** 0' N line, 1400' E line
QUADRANGLE: DIVERNON **LONGITUDE:** -89.725236 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.508679 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 650.0 **LOGGED (FT.):** 336.6 **LOG TYPE:** Survey Core Study
SOURCE: FREEMAN UNITED CM-2-69 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
364.6	MODESTO	PIASA	LIMESTONE	2.3	285.4	
362.3	MODESTO		SHALE & SANDSTONE	13.3	287.7	
349.1	CARBONDALE	DANVILLE	COAL	0.5	300.9	
348.6	CARBONDALE		CLAYSTONE	3.5	301.4	
345.1	CARBONDALE		GRAY SHALE	5.0	304.9	
340.1	CARBONDALE		CLAYSTONE	1.2	309.9	
338.9	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.7	311.1	UPPER BENCH
334.3	CARBONDALE	BANKSTON FORK	MOTTLED SHALE	2.4	315.7	SHALE PARTING
331.8	CARBONDALE	BANKSTON FORK	LIMESTONE	0.4	318.2	LOWER BENCH
331.4	CARBONDALE	LAWSON	SANDSTONE	1.2	318.6	
330.3	CARBONDALE	LAWSON	SHALE & SILTSTONE	1.4	319.7	
328.8	CARBONDALE	LAWSON	MOTTLED SHALE	0.4	321.2	
328.4	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	2.7	321.6	
325.7	CARBONDALE	ANNA	BLACK SHALE	4.8	324.3	
321.0	CARBONDALE	HERRIN	COAL	7.6	329.0	

MAPID: 11701292000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 11 QUARTERS/FOOTAGES: 0' N line, 1400' E line

QUADRANGLE: DIVERNON LONGITUDE: -89.725236 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.508679 DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 336.6 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CM-2-69 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
361.0	MODESTO	PIASA	LIMESTONE	2.3	289.0
358.7	MODESTO		UNCLASSIFIED	5.3	291.3
353.4	CARBONDALE		UNCLASSIFIED	14.7	296.6
338.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.7	311.3
334.0	CARBONDALE	ANVIL ROCK	SANDSTONE	2.4	316.0
331.6	CARBONDALE	CONANT	LIMESTONE	0.4	318.4
331.2	CARBONDALE		SHALE	2.9	318.8
328.3	CARBONDALE	BRERETON	LIMESTONE	2.7	321.7
325.6	CARBONDALE	ANNA	BLACK SHALE	4.6	324.4
321.0	CARBONDALE	HERRIN	COAL	7.6	329.0

MAPID: 11701292000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 11 QUARTERS/FOOTAGES: 0' N line, 1400' E line

QUADRANGLE: DIVERNON LONGITUDE: -89.725236 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.508679 DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 341.5 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED CM-2-69 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
321.2	CARBONDALE	HERRIN	COAL	7.6	328.8

MAPID: 11701292000C VERSION: 4

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 11 QUARTERS/FOOTAGES: 0' N line, 1400' E line

QUADRANGLE: DIVERNON LONGITUDE: -89.725236 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.508679 DATE COLLECTED: 6 / 26 / 1969

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 341.5 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-2-69 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
650.0	PLEISTOCENE		UNCONSOLIDATED	15.0	0.0	
635.0			SANDSTONE	4.0	15.0	
631.0			SANDY SHALE	8.5	19.0	
622.5			SANDSTONE	41.2	27.5	
581.3			SANDY LIMESTONE	4.3	68.7	
577.0			SHALE	1.5	73.0	
575.5			SANDY SHALE	17.8	74.5	SDY SH W/ LIME
557.7			SANDY SHALE	41.3	92.3	
516.5			SILTY SHALE	16.0	133.5	
500.5			CALCAREOUS SHALE	1.8	149.5	
498.7			SHALE	1.9	151.3	
496.8			COAL	0.7	153.2	
496.2			SANDY SHALE	44.2	153.8	SDY SH W/ SS
452.0			SANDSTONE	30.6	198.0	
421.4			SHALE	20.0	228.6	SH W/ SIDERITE BANDS
401.4			SHALE	6.9	248.6	
394.5			COAL	0.3	255.5	
394.2			SANDY SHALE	18.1	255.8	SDY SH W/ NODS
376.2			SHALE	0.7	273.8	
375.5			SANDY SHALE	10.6	274.5	SDY SH W/ NODS
364.9			SHALY LIMESTONE	0.9	285.1	
364.0			SHALE	3.0	286.0	
361.0			LIMESTONE	2.3	289.0	GRAY
358.7			SANDSTONE	10.8	291.3	SS W/ SDY SH
347.9			SANDY SHALE	2.4	302.1	
345.5	CARBONDALE	DANVILLE	COAL	0.5	304.5	SLATEY CO
345.0	CARBONDALE		CLAYSTONE & SILTSTONE	3.5	305.0	
341.5	CARBONDALE		CALCAREOUS SHALE	5.6	308.5	
335.9	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	314.1	GRAY
334.2	CARBONDALE	LAWSON	LAMINATED SHALE	2.5	315.8	
331.7	CARBONDALE	LAWSON	CALCAREOUS SHALE	0.3	318.3	
331.3	CARBONDALE	LAWSON	SANDY SHALE	2.9	318.7	
328.4	CARBONDALE	BRERETON	LIMESTONE	2.7	321.6	GRAY
325.7	CARBONDALE		SHALE	4.6	324.3	
321.2	CARBONDALE	HERRIN	COAL	7.6	328.8	
313.6			UNDERCLAY	1.2	336.4	
312.4			LIMESTONE	3.9	337.6	LS W/ SHELLS

MAPID: 11722470000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 11 QUARTERS/FOOTAGES: 50' S line, 2600' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.729436 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.494253 DATE COLLECTED: 8 / 8 / 1980

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 331.7 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C2-6-80 WELL TYPE: Coal Test

COMMENT: PERMIT FILES #4 - CROWN II - 2/6/80

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
660.0	PLEISTOCENE		UNCONSOLIDATED	2.0	0.0	
658.0	PLEISTOCENE		CLAY	3.0	2.0	ORANGE
655.0	PLEISTOCENE		UNCONSOLIDATED	17.0	5.0	GRAY
638.0			SHALE	3.0	22.0	LT GRY
635.0			GRAY SHALE	6.0	25.0	LGY SH W/ SS
629.0			SANDSTONE	7.0	31.0	
622.0			SHALE	5.0	38.0	
617.0			GRAY SHALE	14.0	43.0	GY SH W/ SS
603.0			SANDSTONE	11.0	57.0	
592.0			LIMESTONE	6.0	68.0	LT BRN
586.0			SHALE	0.3	74.0	LT GRY
585.7			LIMESTONE	1.7	74.3	LT BRN
584.0			BLACK SHALE	3.5	76.0	
580.5			COAL	0.5	79.5	
580.0			SHALE	8.0	80.0	GRN/GRY
572.0			LIMESTONE	4.0	88.0	
568.0			SHALE	2.0	92.0	
566.0			SHALE	6.0	94.0	DK GRAY
560.0			CALCAREOUS SHALE	3.0	100.0	
557.0			GRAY SHALE	9.0	103.0	GY SH W/ SS
548.0			LIMESTONE	2.0	112.0	
546.0			GRAY SHALE	37.0	114.0	GY SH W/ SS
509.0			SHALE	18.0	151.0	
491.0			SHALE	1.5	169.0	
489.5			SHALE	5.5	170.5	LT GRAY
484.0			SANDSTONE	23.5	176.0	
460.5			SHALE	1.5	199.5	
459.0			COAL	2.0	201.0	
457.0			SHALE	1.0	203.0	DK GRY
456.0			SANDSTONE	15.0	204.0	
441.0			SANDY SHALE	35.0	219.0	
406.0			SHALE	17.0	254.0	
389.0			GRAY SHALE	12.0	271.0	GY SH W/ SS
377.0			LIMESTONE	3.5	283.0	LT GRY
373.5			SHALE	3.5	286.5	GRN/GRY
370.0			SHALE	1.0	290.0	
369.0	CARBONDALE	DANVILLE	COAL	1.0	291.0	
368.0	CARBONDALE		SHALE	5.0	292.0	GRN/GRY
363.0	CARBONDALE		SANDSTONE	2.0	297.0	

361.0	CARBONDALE		CALCAREOUS SHALE	2.0	299.0	
359.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	301.0	LT BRN
354.0	CARBONDALE		SHALE	3.0	306.0	GRN/GRY
351.0	CARBONDALE		LIMESTONE	0.5	309.0	LT GRY
350.5	CARBONDALE		SHALE	4.2	309.5	LT GRY
346.3	CARBONDALE	BRERETON	LIMESTONE	3.3	313.7	LT BRN
343.0	CARBONDALE		SHALE	0.5	317.0	
342.5	CARBONDALE	ANNA	BLACK SHALE	2.7	317.5	
339.8	CARBONDALE	HERRIN	COAL	7.8	320.2	
332.1			CLAYSTONE	0.3	327.9	DK GRY
331.8			CLAYSTONE & SILTSTONE	0.8	328.2	GRAY
331.0			LIMESTONE	1.6	329.0	LT BRN
329.4			SANDSTONE	1.1	330.6	GRAY

MAPID: 11701092000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 6W **SECTION:** 12 **QUARTERS/FOOTAGES:** 2600' N line, 50' E line
QUADRANGLE: DIVERNON **LONGITUDE:** -89.701433 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.50144 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 650.0 **LOGGED (FT.):** 355.1 **LOG TYPE:** Survey Core Study
SOURCE: FREEMAN UNITED C-29-66 **WELL TYPE:** Coal Test
COMMENT: SEE COAL SECTION MAP #6-168

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
305.2	CARBONDALE	HERRIN	COAL	8.4	344.8	

MAPID: 11701092000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 12N 6W **SECTION:** 12 **QUARTERS/FOOTAGES:** 2600' N line, 50' E line
QUADRANGLE: DIVERNON **LONGITUDE:** -89.701433 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.50144 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 650.0 **LOGGED (FT.):** 353.3 **LOG TYPE:** Drillers Log
SOURCE: FREEMAN UNITED C-29-66 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
340.9	MODESTO	PIASA	LIMESTONE	2.3	309.1	
338.6	MODESTO		UNCLASSIFIED	2.3	311.4	
336.3	CARBONDALE		UNCLASSIFIED	14.6	313.7	
321.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.3	328.3	
317.4	CARBONDALE	ANVIL ROCK	SANDSTONE	2.5	332.6	
314.9	CARBONDALE	CONANT	LIMESTONE	0.4	335.1	
314.5	CARBONDALE		SHALE	5.3	335.5	
309.2	CARBONDALE	BRERETON	LIMESTONE	2.0	340.8	
307.2	CARBONDALE	ANNA	BLACK SHALE	2.2	342.8	
305.0	CARBONDALE	HERRIN	COAL	8.3	345.0	

MAPID: 11701092000C VERSION: 3

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 12 QUARTERS/FOOTAGES: 2600' N line, 50' E line

QUADRANGLE: DIVERNON LONGITUDE: -89.701433

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.50144

DATE COLLECTED: 3 / 4 / 1966

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 355.0

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-29-66

WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
650.0	PLEISTOCENE		UNCONSOLIDATED	15.0	0.0	
635.0	PLEISTOCENE		UNCONSOLIDATED	22.0	15.0	
613.0			SANDY SHALE	26.0	37.0	
587.0			LIMESTONE	10.5	63.0	
576.5			SHALE	5.0	73.5	
571.5			SANDY SHALE	4.5	78.5	
567.0			LIMESTONE	6.0	83.0	
561.0			SHALE	3.0	89.0	
558.0			SANDY SHALE	17.0	92.0	
541.0			LIMESTONE	11.0	109.0	LIMESTONE W/ SH SEAMS
530.0			SANDY SHALE	24.0	120.0	
506.0			SHALE	2.0	144.0	
504.0			SANDY SHALE	8.0	146.0	
496.0			DARK SHALE	2.0	154.0	SH W/ SLTY COAL
494.0			SANDSTONE	94.0	156.0	
400.0			SANDY SHALE	13.0	250.0	
387.0			SHALE	3.0	263.0	
384.0			SANDSTONE	12.0	266.0	
372.0			SILTY SHALE	10.0	278.0	
362.0			SHALE	3.0	288.0	
359.0			SANDY SHALE	2.0	291.0	
357.0			LIMESTONE	2.0	293.0	
355.0			SANDSTONE	9.0	295.0	SS W/ SH SEAMS
346.0			SHALE	1.0	304.0	
345.0			CLAYSTONE & SILTSTONE	2.0	305.0	
343.0			LIMESTONE	2.5	307.0	
340.5			CALCAREOUS SHALE	0.5	309.5	SH W/ LS CHUNKS
340.0			LIMESTONE	1.0	310.0	
339.0			LAMINATED SHALE	2.1	311.0	
336.9			SANDY SHALE	5.4	313.1	SDY SH W/ SS
331.5			CALCAREOUS SHALE	0.7	318.5	SH W/ LS CHUNKS
330.8			SHALE	0.8	319.2	
330.0			SHALE	7.8	320.0	
322.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.6	327.8	
317.7	CARBONDALE		LAMINATED SHALE	2.4	332.3	
315.2	CARBONDALE		LIMESTONE	0.5	334.8	
314.7	CARBONDALE	ANVIL ROCK	SANDSTONE	5.3	335.3	
309.4	CARBONDALE	BRERETON	LIMESTONE	2.0	340.6	
307.4	CARBONDALE		SHALE	2.1	342.6	

305.3	CARBONDALE	HERRIN	COAL	8.4	344.7
296.9			UNDERCLAY	1.4	353.1
295.5			LIMESTONE	0.5	354.5

MAPID: 11722471000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 12 QUARTERS/FOOTAGES: 2600' N line, 2650' E line

QUADRANGLE: DIVERNON LONGITUDE: -89.710701 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.501487 DATE COLLECTED: 9 / 2 / 1980

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 346.5 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C2-11-80 WELL TYPE: Coal Test

COMMENT: PERMIT FILES #4 - CROWN II - 2/11/80

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
656.0	PLEISTOCENE		UNCONSOLIDATED	2.0	0.0	
654.0	PLEISTOCENE		CLAY	3.0	2.0	ORANGE
651.0	PLEISTOCENE		GLACIAL DRIFT	16.0	5.0	ORANGE
635.0			SHALE	13.0	21.0	
622.0			GRAY SHALE	22.0	34.0	GY SH W/ SS
600.0			SANDSTONE	2.0	56.0	
598.0			BLACK SHALE	1.0	58.0	BK SH W/ COAL TRACE
597.0			CLAYSTONE & SILTSTONE	1.0	59.0	
596.0			LIMESTONE	7.5	60.0	LT BRN
588.5			SHALE	0.5	67.5	
588.0			LIMESTONE	0.5	68.0	BRN/GRY
587.5			SHALE	1.5	68.5	
586.0			SHALE	3.0	70.0	
583.0			SANDY SHALE	9.0	73.0	
574.0			LIMESTONE	3.5	82.0	BRN/GRY
570.5			GRAY SHALE	68.5	85.5	GY SH W/ SS
502.0			SHALE	1.0	154.0	
501.0			COAL	1.0	155.0	
500.0			GRAY SHALE	5.0	156.0	LGY SH W/ SS BANDS
495.0			SANDSTONE	8.0	161.0	LT GRY
487.0			SANDY SHALE	49.0	169.0	SDY SH W/ SS
438.0			SANDSTONE	23.0	218.0	SS W/ GY SH
415.0			GRAY SHALE	28.0	241.0	GY SH W/ SS BANDS
387.0			SHALE	10.0	269.0	
377.0			SHALE	1.0	279.0	DK GRAY
376.0			BLACK SHALE	1.0	280.0	
375.0			CALCAREOUS SHALE	19.5	281.0	
355.5			LIMESTONE	2.5	300.5	LT GRY
353.0			SHALE	2.0	303.0	
351.0			BLACK SHALE	1.0	305.0	BK SH W/ COAL TRACE
350.0			SHALE	7.0	306.0	
343.0			BLACK SHALE	1.0	313.0	BK SH W/ CO TRACE
342.0			SHALE	6.2	314.0	
335.8	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	320.2	BRN/GRY
329.3	CARBONDALE	LAWSON	SHALE	3.3	326.7	GRN/GRY
326.0	CARBONDALE	BRERETON	LIMESTONE	1.5	330.0	LT BRN
324.5	CARBONDALE		SHALE	0.5	331.5	DK GRY
324.0	CARBONDALE		CALCAREOUS SHALE	0.3	332.0	
323.7	CARBONDALE		SHALE	3.7	332.3	DK GRY

320.0	CARBONDALE	HERRIN	COAL	8.3	336.0	
311.7			UNDERCLAY	0.3	344.3	DK GRY
311.4			UNDERCLAY	1.1	344.6	GRN/GRY
310.3			UNDERCLAY	0.8	345.7	GRN/GRY

MAPID: 11701101000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 6W **SECTION:** 13 **QUARTERS/FOOTAGES:** 2650' N line, 50' W line
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.719634 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.486857 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 670.0 **LOGGED (FT.):** 335.0 **LOG TYPE:** Survey Core Study
SOURCE: FREEMAN UNITED C-25-66 **WELL TYPE:** Coal Test
COMMENT: SEE COAL SECTION MAP #6-168

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
372.8	CARBONDALE	DANVILLE	COAL	0.8	297.2	
345.8	CARBONDALE	HERRIN	COAL	7.8	324.2	

MAPID: 11701101000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 12N 6W **SECTION:** 13 **QUARTERS/FOOTAGES:** 2650' N line, 50' W line
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.719634 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.486857 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 670.0 **LOGGED (FT.):** 331.8 **LOG TYPE:** Drillers Log
SOURCE: FREEMAN UNITED C-25-66 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
373.1	CARBONDALE		UNCLASSIFIED	6.1	296.9	
367.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.3	303.0	
361.7	CARBONDALE	ANVIL ROCK	SANDSTONE	2.5	308.3	
359.2	CARBONDALE	CONANT	LIMESTONE	1.0	310.8	
358.2	CARBONDALE		SHALE	3.0	311.8	
355.2	CARBONDALE	BRERETON	LIMESTONE	8.3	314.8	
346.9	CARBONDALE	ANNA	BLACK SHALE	0.9	323.1	
346.0	CARBONDALE	HERRIN	COAL	7.8	324.0	

MAPID: 11701101000C VERSION: 3

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 13 QUARTERS/FOOTAGES: 2650' N line, 50' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.719634 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.486857 DATE COLLECTED: 3 / 3 / 1966

SURFACE ELEVATION (FT.): 671.0 LOGGED (FT.): 335.5 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-25-66 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
671.0	PLEISTOCENE		UNCONSOLIDATED	12.0	0.0	
659.0			SANDSTONE	49.0	12.0	
610.0			SANDY SHALE	14.0	61.0	
596.0			LIMESTONE	2.0	75.0	
594.0			SHALE	5.0	77.0	
589.0			SANDSTONE	13.0	82.0	
576.0			SANDY SHALE	25.0	95.0	
551.0			SANDSTONE	30.0	120.0	
521.0			SHALE	4.0	150.0	
517.0			SANDY SHALE	21.0	154.0	
496.0			COAL	2.0	175.0	SLATEY COAL
494.0			SANDSTONE	55.0	177.0	
439.0			SANDY SHALE	20.0	232.0	
419.0			SHALE	4.0	252.0	
415.0			SANDSTONE	19.0	256.0	
396.0			SANDY SHALE	7.0	275.0	
389.0			LIMESTONE	2.0	282.0	
387.0			SHALE	1.0	284.0	
386.0			SANDY SHALE	5.0	285.0	
381.0			SHALE	3.0	290.0	
378.0			SANDSTONE	2.0	293.0	
376.0			SHALE	5.0	295.0	
371.0			CLAYSTONE & SILTSTONE	3.3	300.0	
367.7			LIMESTONE	1.2	303.3	
366.5			SANDY SHALE	6.5	304.5	SDY SH W/SS
360.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	311.0	
359.0	CARBONDALE	LAWSON	SHALE	3.5	312.0	LT DK
355.5	CARBONDALE	BRERETON	LIMESTONE	8.0	315.5	LS W/ SH SEAMS
347.5	CARBONDALE		SHALE	0.7	323.5	
346.8	CARBONDALE	HERRIN	COAL	7.8	324.2	
339.0			UNDERCLAY	1.1	332.0	
337.9			LIMESTONE	2.4	333.1	

MAPID: 11701295000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 13 QUARTERS/FOOTAGES: 1500' S line, 0' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.700973

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.483691

DATE COLLECTED:

SURFACE ELEVATION (FT.): 680.0 LOGGED (FT.): 361.0

LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED CM-10-69

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
376.4	MODESTO	PIASA	LIMESTONE	2.0	303.6
374.4	MODESTO		SHALE & SANDSTONE	20.8	305.6
353.6	CARBONDALE	DANVILLE	COAL	0.8	326.4
352.9	CARBONDALE	GALUM	NODULAR LIMESTONE	0.6	327.1
352.3	CARBONDALE		GRAY SHALE	1.6	327.7
350.7	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	7.0	329.3
343.7	CARBONDALE	LAWSON	ROCK	8.1	336.3
335.6	CARBONDALE	ANNA	BLACK SHALE	0.5	344.4
335.1	CARBONDALE	ENERGY	SILTSTONE	6.3	344.9
328.7	CARBONDALE	ENERGY	SANDSTONE	1.3	351.3
327.5	CARBONDALE	ENERGY	MOTTLED SHALE	0.2	352.5
327.3	CARBONDALE	ENERGY	DARK GRAY SHALE	0.3	352.7
327.0	CARBONDALE	HERRIN	COAL	8.0	353.0

MAPID: 11701295000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 13 QUARTERS/FOOTAGES: 1500' S line, 0' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.700973

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.483691

DATE COLLECTED:

SURFACE ELEVATION (FT.): 680.0 LOGGED (FT.): 361.0

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CM-10-69

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
374.7	MODESTO	PIASA	LIMESTONE	5.7	305.3
369.0	MODESTO		UNCLASSIFIED	6.1	311.0
362.9	CARBONDALE		UNCLASSIFIED	18.3	317.1
344.6	CARBONDALE	BANKSTON FORK	LIMESTONE	3.2	335.4
341.4	CARBONDALE	ANVIL ROCK	SANDSTONE	2.8	338.6
338.6	CARBONDALE	CONANT	LIMESTONE	3.0	341.4
335.6	CARBONDALE	JAMESTOWN	COAL	0.3	344.4
335.3	CARBONDALE		SHALE	4.8	344.7
330.5	CARBONDALE	BRERETON	LIMESTONE	3.0	349.5
327.5	CARBONDALE	ANNA	BLACK SHALE	0.5	352.5
327.0	CARBONDALE	HERRIN	COAL	8.0	353.0

MAPID: 11701295000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 13 QUARTERS/FOOTAGES: 1500' S line, 0' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.700973 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.483691 DATE COLLECTED:

SURFACE ELEVATION (FT.): 680.0 LOGGED (FT.): 368.0 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED CM-10-69 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC; CORE NO. C-7630

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
327.2	CARBONDALE	HERRIN	COAL	8.8	352.8

MAPID: 11701295000C VERSION: 4

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 13 QUARTERS/FOOTAGES: 1500' S line, 0' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.700973 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.483691 DATE COLLECTED: 6 / 10 / 1969

SURFACE ELEVATION (FT.): 678.0 LOGGED (FT.): 368.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-10-69 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
678.0	PLEISTOCENE		UNCONSOLIDATED	14.0	0.0	
664.0			SANDSTONE	54.7	14.0	BROWN
609.3			SANDSTONE	4.3	68.7	
605.0			SANDSTONE	0.5	73.0	FINE/HARD SS
604.5			CALCAREOUS SHALE	3.5	73.5	
601.0			SANDY SHALE	11.3	77.0	SDY SH W/NODS
589.7			CALCAREOUS SANDSTONE	2.0	88.3	
587.7			LIMESTONE	3.5	90.3	
584.2			SHALE	2.0	93.8	LT-DK
582.2			SHALE	5.6	95.8	
576.7			LIMESTONE	3.5	101.3	
573.2			CALCAREOUS SHALE	5.6	104.8	
567.6			SANDY SHALE	42.8	110.4	SDY SH W/SS
524.8			LIMESTONE	0.5	153.2	
524.3			SHALE	12.0	153.7	
512.3			COAL	1.0	165.7	
511.3			SANDY SHALE	16.3	166.7	SDY SH W/NODS
495.0			SANDY SHALE	19.3	183.0	SDY SH W/SS
475.7			SANDSTONE	54.4	202.3	
421.3			SANDY SHALE	12.1	256.7	
409.2			LIMESTONE	0.5	268.8	DARK
408.7			SHALE	0.8	269.3	
408.0			SANDY SHALE	15.8	270.0	
392.2			SHALE	0.5	285.8	
391.7			SHALE	7.7	286.3	MULTI
384.0			SANDY SHALE	4.0	294.0	
380.0			CALCAREOUS SANDSTONE	2.0	298.0	
378.0			SANDY SHALE	7.5	300.0	SDY SH W/NODS
370.5			LIMESTONE	1.0	307.5	
369.5			SHALY LIMESTONE	2.5	308.5	
367.0			SANDSTONE	14.1	311.0	
352.9			SANDY SHALE	3.0	325.1	
349.9	CARBONDALE	DANVILLE	COAL	0.8	328.1	
349.2	CARBONDALE		CALCAREOUS CLAYSTONE	4.8	328.8	
344.4	CARBONDALE		CALCAREOUS SHALE	1.8	333.6	
342.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	335.3	
340.4	CARBONDALE		CALCAREOUS SHALE	0.3	337.6	

340.2	CARBONDALE		LIMESTONE	0.7	337.8	
339.5	CARBONDALE		SOFT SHALE	2.7	338.5	
336.8	CARBONDALE	BRERETON	LIMESTONE	2.4	341.2	
334.4	CARBONDALE		CALCAREOUS SHALE	0.9	343.6	W/DARK SHALE, SULPHUR
333.5	CARBONDALE		SILTY SHALE	0.5	344.5	
333.0	CARBONDALE		SANDY SHALE	4.2	345.0	
328.8	CARBONDALE		SANDY SHALE	1.7	349.2	SDY SH W/ SULPHUR
327.2	CARBONDALE		SANDY SHALE	0.9	350.8	
326.2	CARBONDALE		SANDSTONE	0.7	351.8	GREEN
325.6	CARBONDALE		LAMINATED SHALE	0.4	352.4	
325.2	CARBONDALE	HERRIN	COAL	8.0	352.8	
317.2			UNDERCLAY	0.6	360.8	
316.6			CALCAREOUS SHALE	6.3	361.4	
310.3			SILTY SHALE	0.3	367.7	

MAPID: 11701296000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 6W **SECTION:** 13 **QUARTERS/FOOTAGES:** 14' N line, 17' W line of NW NW NE
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.710451 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.494151 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 660.0 **LOGGED (FT.):** 359.0 **LOG TYPE:** Survey Core Study
SOURCE: FREEMAN UNITED CM-13-69 **WELL TYPE:** Coal Test
COMMENT: DRILLERS LOG INC; CORE NO. C-7631

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT OVERBURDEN	COMMENT
312.9	CARBONDALE	HERRIN	COAL	8.8	347.1

MAPID: 11701296000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 13 QUARTERS/FOOTAGES: 14' N line, 17' W line of NW NW NE

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.710451

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.494151

DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.0

LOGGED (FT.): 355.0

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CM-13-69

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
351.2	MODESTO	PIASA	LIMESTONE	3.3	308.8
347.9	MODESTO		UNCLASSIFIED	2.7	312.1
345.2	CARBONDALE		UNCLASSIFIED	11.7	314.8
333.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.2	326.5
327.3	CARBONDALE	ANVIL ROCK	SANDSTONE	0.2	332.7
327.1	CARBONDALE	CONANT	LIMESTONE	1.7	332.9
325.4	CARBONDALE	JAMESTOWN	COAL	0.2	334.6
325.2	CARBONDALE		SHALE	5.4	334.8
319.8	CARBONDALE	BRERETON	LIMESTONE	4.8	340.2
315.0	CARBONDALE	ANNA	BLACK SHALE	2.0	345.0
313.0	CARBONDALE	HERRIN	COAL	8.0	347.0

MAPID: 11723674000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 13 QUARTERS/FOOTAGES: 0' N line, 2650' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.710518 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.494189 DATE COLLECTED: 6 / 18 / 1969

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 359.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-13-69 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
660.0	PLEISTOCENE		UNCONSOLIDATED	17.0	0.0	
643.0			SANDSTONE	11.0	17.0	
632.0			SANDSTONE	45.2	28.0	GRAY
586.8			LIMESTONE	5.8	73.2	
581.0			SHALE	2.8	79.0	LT-DK
578.2			CALCAREOUS SHALE	9.8	81.8	
568.5			CALCAREOUS SANDSTONE	3.5	91.5	
565.0			SHALE	3.8	95.0	
561.2			SANDY SHALE	24.2	98.8	SDY SH W/ NODS
537.0			SANDY SHALE	22.3	123.0	SDY SH W/ SS
514.7			SHALE	0.8	145.3	
514.0			SANDY SHALE	14.5	146.0	
499.5			SHALE	2.2	160.5	
497.3			COAL	0.3	162.7	
497.0			SANDY SHALE	15.5	163.0	SDY SH W/ LIME
481.5			SANDSTONE	50.0	178.5	SS W/ SDY SH
431.5			SANDSTONE	25.0	228.5	
406.5			GRAY SHALE	12.3	253.5	GY SH W/ SIDERITE
394.2			LIMESTONE	2.3	265.8	DARK
392.0			SANDY SHALE	22.5	268.0	SDY SH W/ NODS
369.5			SHALE	1.0	290.5	
368.5			SANDY SHALE	17.5	291.5	SDY SH W/ NODS
351.0			LIMESTONE	3.3	309.0	GRAY
347.7			LAMINATED SHALE	2.7	312.3	
345.0			SANDY SHALE	7.8	315.0	
337.2			SHALE	0.2	322.8	
337.0	CARBONDALE	DANVILLE	COAL	0.4	323.0	
336.6	CARBONDALE		SHALE	1.8	323.4	
334.8	CARBONDALE		CLAYSTONE & SILTSTONE	2.0	325.2	
332.8	CARBONDALE		CALCAREOUS SHALE	1.0	327.2	
331.8	CARBONDALE		SOFT SHALE	2.8	328.2	
329.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.7	331.0	GRAY
325.3	CARBONDALE		SANDSTONE	4.1	334.7	SS W/ SDY SH
321.2	CARBONDALE		SANDY SHALE	1.5	338.8	
319.7	CARBONDALE	BRERETON	LIMESTONE	4.8	340.3	GRAY
314.9	CARBONDALE		DARK SHALE	2.0	345.1	
312.9	CARBONDALE	HERRIN	COAL	8.0	347.1	
304.9			CLAYSTONE & SHALE	1.3	355.1	

303.7

LIMESTONE

2.7

356.3

MAPID: 11701090000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 6W **SECTION:** 14 **QUARTERS/FOOTAGES:** 2650' S line, 250' W line
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.737708 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.486855 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 665.0 **LOGGED (FT.):** 342.0 **LOG TYPE:** Survey Core Study
SOURCE: FREEMAN UNITED C-24-66 **WELL TYPE:** Coal Test
COMMENT: DRILL LOG INC;SEE COAL SEC. MAP#6-168

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
334.2	CARBONDALE	HERRIN	COAL	7.6	330.8

MAPID: 11701090000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 12N 6W **SECTION:** 14 **QUARTERS/FOOTAGES:** 2650' S line, 250' W line
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.737708 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.486855 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 665.0 **LOGGED (FT.):** 338.6 **LOG TYPE:** Drillers Log
SOURCE: FREEMAN UNITED C-24-66 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
372.0	MODESTO	PIASA	LIMESTONE	4.0	293.0
368.0	MODESTO		UNCLASSIFIED	2.5	297.0
365.5	CARBONDALE		UNCLASSIFIED	16.8	299.5
348.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	316.3
345.7	CARBONDALE	ANVIL ROCK	SANDSTONE	2.8	319.3
342.9	CARBONDALE	CONANT	LIMESTONE	0.3	322.1
342.6	CARBONDALE		SHALE	2.8	322.4
339.8	CARBONDALE	BRERETON	LIMESTONE	3.3	325.2
336.5	CARBONDALE	ANNA	BLACK SHALE	2.5	328.5
334.0	CARBONDALE	HERRIN	COAL	7.6	331.0

MAPID: 11701090000C VERSION: 3

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 14 QUARTERS/FOOTAGES: 2650' S line, 250' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.737708 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.486855 DATE COLLECTED: 2 / 23 / 1966

SURFACE ELEVATION (FT.): 665.0 LOGGED (FT.): 342.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-24-66 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
665.0	PLEISTOCENE		UNCONSOLIDATED	15.0	0.0	
650.0			SANDY SHALE	46.0	15.0	
604.0			COAL	0.5	61.0	
603.5			SHALE	9.5	61.5	
594.0			LIMESTONE	10.0	71.0	
584.0			SHALE	5.0	81.0	
579.0			LIMESTONE	8.0	86.0	
571.0			SHALE	15.0	94.0	LT GRAY
556.0			LIMESTONE	5.0	109.0	
551.0			SANDY SHALE	31.0	114.0	
520.0			LIMESTONE	2.0	145.0	
518.0			COAL	1.0	147.0	
517.0			SANDY SHALE	32.0	148.0	
485.0			SANDSTONE	66.0	180.0	
419.0			SILTY SHALE	24.0	246.0	
395.0			SHALE	3.0	270.0	
392.0			SANDSTONE	20.0	273.0	
372.0			LIMESTONE	6.0	293.0	
366.0			SHALE	0.5	299.0	
365.5			SANDY SHALE	4.5	299.5	
361.0			SANDSTONE	5.0	304.0	
356.0			SHALE	1.5	309.0	
354.5			CLAYSTONE & SILTSTONE	5.8	310.5	
348.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	316.3	
345.7	CARBONDALE	LAWSON	LAMINATED SHALE	2.8	319.3	
342.8	CARBONDALE	LAWSON	SANDY SHALE	3.0	322.2	
339.8	CARBONDALE	BRERETON	LIMESTONE	3.1	325.2	
336.7	CARBONDALE	ANNA	SHALE	3.5	328.3	
333.2	CARBONDALE	HERRIN	COAL	7.6	331.8	
325.7			UNDERCLAY	1.0	339.3	
324.7			CALCAREOUS SHALE	1.7	340.3	

MAPID: 11701289000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 14 QUARTERS/FOOTAGES: 0' S line, 2550' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.728765

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.479541

DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 336.8

LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED CM-14-69

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
370.8	MODESTO	PIASA	LIMESTONE	1.0	289.2
369.8	MODESTO		SILTY SHALE	15.0	290.2
354.8	CARBONDALE	DANVILLE	COAL	0.8	305.2
354.0	CARBONDALE		CLAYSTONE	0.3	306.0
353.8	CARBONDALE	GALUM	CALCAREOUS SHALE	1.2	306.2
352.6	CARBONDALE		CLAYSTONE	6.7	307.4
345.9	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	1.3	314.1
344.7	CARBONDALE	LAWSON	CLAYSTONE	0.8	315.3
343.9	CARBONDALE	LAWSON	SANDSTONE	4.9	316.1
339.0	CARBONDALE	LAWSON	SILTSTONE	0.4	321.0
338.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	3.0	321.3
335.7	CARBONDALE	ANNA	BLACK SHALE	4.7	324.3
331.0	CARBONDALE	HERRIN	COAL	7.8	329.0

MAPID: 11701289000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 14 QUARTERS/FOOTAGES: 0' S line, 2550' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.728765

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.479541

DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 336.8

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CM-14-69

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
372.2	MODESTO	PIASA	LIMESTONE	4.1	287.8
368.1	MODESTO		UNCLASSIFIED	3.5	291.9
364.6	CARBONDALE		UNCLASSIFIED	10.9	295.4
353.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	306.3
349.2	CARBONDALE	ANVIL ROCK	SANDSTONE	3.2	310.8
346.0	CARBONDALE	CONANT	LIMESTONE	1.3	314.0
344.7	CARBONDALE		SHALE	6.0	315.3
338.7	CARBONDALE	BRERETON	LIMESTONE	3.0	321.3
335.7	CARBONDALE	ANNA	BLACK SHALE	4.7	324.3
331.0	CARBONDALE	HERRIN	COAL	7.8	329.0

MAPID: 11701289000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 14 QUARTERS/FOOTAGES: 0' S line, 2550' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.728765 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.479541 DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 341.5 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED CM-14-69 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC; CORE NO. C-7632

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
331.1	CARBONDALE	HERRIN	COAL	7.8	328.9	

MAPID: 11701289000C VERSION: 4

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 14 QUARTERS/FOOTAGES: 0' S line, 2550' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.728765 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.479541 DATE COLLECTED: 6 / 17 / 1969

SURFACE ELEVATION (FT.): 666.0 LOGGED (FT.): 341.5 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-14-69 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
666.0	PLEISTOCENE		UNCONSOLIDATED	18.0	0.0	
648.0			SANDY SHALE	25.5	18.0	
622.5			COAL	0.5	43.5	
622.0			CALCAREOUS SHALE	2.0	44.0	
620.0			LIMESTONE	9.3	46.0	
610.7			SHALE	5.9	55.3	LT-DK
604.7			CALCAREOUS SHALE	7.8	61.3	
597.0			LIMESTONE	2.3	69.0	
594.7			SANDY SHALE	1.0	71.3	
593.7			SHALE	2.3	72.3	
591.5			SHALE	4.0	74.5	
587.5			SANDY SHALE	1.1	78.5	
586.4			LIMESTONE	2.0	79.6	
584.4			SANDY SHALE	10.9	81.6	SDY SH W/ LIME
573.5			SANDY SHALE	31.5	92.5	
542.0			SANDY SHALE	12.0	124.0	
530.0			SHALE	4.0	136.0	SH W/ SIDERITE
526.0			SHALE	1.5	140.0	
524.5			COAL	0.7	141.5	
523.8			SANDY SHALE	8.8	142.2	SDY SH W/ NODS
515.0			SANDY SHALE	17.3	151.0	
497.7			SANDY SHALE	28.9	168.3	SDY SH W/ SS
468.8			CALCAREOUS SANDSTONE	9.3	197.2	
459.6			SANDSTONE	30.1	206.4	SS W/ SDY SH STREAKS
429.5			SILTY SHALE	5.8	236.5	
423.7			SHALE	2.8	242.3	
421.0			SHALE	2.5	245.0	
418.5			SANDY SHALE	16.3	247.5	SDY SH W/ LIME
402.2			SHALE	0.3	263.8	
402.0			SHALE	5.0	264.0	
397.0			SANDY SHALE	19.0	269.0	SDY SH W/ SS
378.0			LIMESTONE	1.0	288.0	
377.0			CALCAREOUS SHALE	5.1	289.0	
371.9			SHALE	1.5	294.1	DK GN/GY
370.4			SANDY SHALE	7.3	295.6	
363.1			SHALE	1.3	302.9	
361.8			DARK SHALE	0.8	304.2	
361.0			CLAYSTONE & SILTSTONE	5.8	305.0	

355.2			CALCAREOUS SHALE	3.3	310.8	
351.9	CARBONDALE	BANKSTON FORK	LIMESTONE	0.8	314.1	
351.1	CARBONDALE		SANDSTONE	5.9	314.9	
345.2	CARBONDALE		SHALE	0.4	320.8	
344.7	CARBONDALE	BRERETON	LIMESTONE	2.7	321.3	GRAY
342.1	CARBONDALE		SHALE	0.6	323.9	GRN/GRY
341.5	CARBONDALE		BLACK SHALE	4.4	324.5	
337.1	CARBONDALE	HERRIN	COAL	7.8	328.9	
329.2			UNDERCLAY	0.3	336.8	
328.9			LIMESTONE	4.4	337.1	

MAPID: 11721748000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 6W **SECTION:** 15 **QUARTERS/FOOTAGES:** 50' N line, 2225' E line
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.746621 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.493901 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 660.0 **LOGGED (FT.):** 330.0 **LOG TYPE:** Survey Core Study
SOURCE: FREEMAN UNITED CII-10-76 **WELL TYPE:** Coal Test
COMMENT: CORE NO. C11195; STRIP LOG MISSING

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
338.7	CARBONDALE	HERRIN	COAL	8.3	321.3	

MAPID: 11721748000C VERSION: 2

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 15 QUARTERS/FOOTAGES: 50' N line, 2225' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.746621 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.493901 DATE COLLECTED: 3 / 4 / 1976

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 333.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-10-76 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
660.0	PLEISTOCENE		UNCONSOLIDATED	10.5	0.0	
649.5	PLEISTOCENE		CLAY	2.5	10.5	LT BRN
647.0	PLEISTOCENE		CLAY	4.5	13.0	DARK
642.5			SANDY SHALE	1.5	17.5	
641.0			SANDSTONE	5.5	19.0	
635.5			SANDY SHALE	11.5	24.5	SDY SH W/SS
624.0			SILTY SHALE	11.5	36.0	
612.5			SHALE	1.5	47.5	
611.0			COAL	0.5	49.0	
610.5			CALCAREOUS SHALE	3.0	49.5	
607.5			CALCAREOUS SHALE	1.5	52.5	
606.0			LIMESTONE	9.0	54.0	LS W/ SH SEAMS
597.0			SHALE	1.5	63.0	
595.5			SHALE	9.5	64.5	GRN/GRY
586.0			LIMESTONE	3.5	74.0	
582.5			SHALE	2.0	77.5	GRN/GRY
580.5			SHALE	1.5	79.5	
579.0			SHALE	6.0	81.0	
573.0			SANDY SHALE	43.0	87.0	W/HARD BROWN SEAMS
530.0			SHALE	16.0	130.0	
514.0			SILTY SHALE	10.0	146.0	SILTY SH W/ SID
504.0			SHALE	2.0	156.0	
502.0			SHALE	3.0	158.0	
499.0			COAL	1.0	161.0	
498.0			SHALE	4.0	162.0	
494.0			SANDY SHALE	12.0	166.0	
482.0			SANDY SHALE	8.0	178.0	
474.0			SHALE	1.5	186.0	
472.5			COAL	1.5	187.5	
471.0			SHALE	3.0	189.0	
468.0			SANDY SHALE	46.5	192.0	SDY SH W/SS
421.5			SILTY SHALE	8.5	238.5	SILTY SH W/ SID
413.0			SOFT SHALE	4.0	247.0	
409.0			CALCAREOUS SHALE	8.0	251.0	
401.0			SILTY SHALE	4.5	259.0	
396.5			SHALE	2.0	263.5	
394.5			SHALE	3.5	265.5	
391.0			CALCAREOUS SANDSTONE	1.5	269.0	

389.5			SANDY SHALE	5.0	270.5	SDY SH W/ SS
384.5			SANDY SHALE	6.5	275.5	
378.0			SHALE	3.0	282.0	GRN/GRY
375.0			LIMESTONE	2.5	285.0	PIASA?
372.5			CALCAREOUS SHALE	10.5	287.5	
362.0			SHALE	3.0	298.0	GRN/GRY
359.0			LIMESTONE	2.0	301.0	BANKSTON FORK?
357.0			LIMESTONE	2.7	303.0	LS W/ SH SEAMS
354.3			SHALE	3.1	305.7	GRN/GRY
351.2			LIMESTONE	0.7	308.8	
350.5			CALCAREOUS SHALE	0.2	309.5	
350.3	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	309.7	
348.7	CARBONDALE	LAWSON	SANDY SHALE	2.9	311.3	SDY SH W/ SS
345.8	CARBONDALE	LAWSON	CALCAREOUS SHALE	1.7	314.2	
344.2	CARBONDALE	BRERETON	LIMESTONE	4.5	315.8	
339.7	CARBONDALE		SHALE	0.4	320.3	
339.3	CARBONDALE	ANNA	SHALE	0.6	320.7	
338.7	CARBONDALE	HERRIN	COAL	8.3	321.3	
330.5			SHALE	0.4	329.5	
330.1			CALCAREOUS SHALE	1.1	329.9	
329.0			LIMESTONE	1.8	331.0	LS W/ SH SEAMS
327.2			SANDY SHALE	0.2	332.8	
327.0			UNCLASSIFIED	0.1	333.0	LEFT IN HOLE

MAPID: 11723098000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 15 QUARTERS/FOOTAGES: 150' S line, 0' W line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.7573 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.479736 DATE COLLECTED: 9 / 19 / 1986

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 311.2 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C2-8-86 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
656.0	PLEISTOCENE		UNCONSOLIDATED	7.0	0.0	
649.0	PLEISTOCENE		GLACIAL DRIFT	8.0	7.0	
641.0			SANDSTONE/SHALE	24.8	15.0	
616.2			LIMESTONE	4.7	39.8	
611.5			SHALE	1.5	44.5	
610.0			BLACK SHALE	2.3	46.0	
607.7			SHALE	18.7	48.3	
589.0			SANDSTONE	30.0	67.0	GRAY
559.0			SHALE	18.0	97.0	
541.0			SANDSTONE	2.5	115.0	GRAY
538.5			BLACK SHALE	2.1	117.5	
536.4			COAL	1.8	119.6	
534.6			SHALE	1.6	121.4	
533.0			SANDSTONE	9.0	123.0	SS W/ SH BANDS
524.0			SANDSTONE	75.0	132.0	GRAY
449.0			SHALE & SANDSTONE	25.0	207.0	
424.0			BLACK SHALE	1.0	232.0	
423.0			SHALE & SANDSTONE	32.0	233.0	
391.0			LIMESTONE	1.0	265.0	
390.0			SHALE	2.0	266.0	
388.0			BLACK SHALE	1.2	268.0	
386.8	CARBONDALE	DANVILLE	COAL	0.7	269.2	
386.1	CARBONDALE		SHALE	16.1	269.9	
370.0	CARBONDALE	BANKSTON FORK	LIMESTONE	0.4	286.0	LS W/ SHELLS
369.6	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	286.4	
367.5	CARBONDALE	BANKSTON FORK	LIMESTONE	0.9	288.5	
366.6	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	289.4	
365.0	CARBONDALE	LAWSON	GRAY SHALE	3.0	291.0	MOTTLED GY/GRN SH
362.0	CARBONDALE	BRERETON	LIMESTONE	0.7	294.0	
361.3	CARBONDALE		SHALE	0.2	294.7	
361.1	CARBONDALE		SANDSTONE	2.5	294.9	
358.7	CARBONDALE		SANDSTONE	1.8	297.3	LOST
356.9	CARBONDALE		SANDSTONE	0.7	299.1	
356.2	CARBONDALE		BLACK SHALE	0.1	299.8	
356.2	CARBONDALE		SHALE	0.2	299.8	
356.0	CARBONDALE	HERRIN	COAL	7.6	300.0	
348.4			SHALE	1.0	307.6	
347.4			UNDERCLAY	1.9	308.6	
345.5			LIMESTONE	0.8	310.5	



MAPID: 11700004000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 18 QUARTERS/FOOTAGES: 2740' S line, 25' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.79539 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.486685 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 665.7 LOGGED (FT.): 293.0 LOG TYPE: Drillers Log

SOURCE: ROYAL COLLIERY CO., #3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
665.7			SAND/CLAY	18.0	0.0	
647.7			BOULDERS & CLAY	8.0	18.0	
639.7			BOULDER	1.0	26.0	
638.7	MODESTO	MACOUPIN	LIMESTONE	1.3	27.0	
637.4	MODESTO		CLAYSTONE & SHALE	17.7	28.3	
619.7	MODESTO		SHALY SANDSTONE	4.0	46.0	
615.7	MODESTO		SANDSTONE	6.0	50.0	
609.7	MODESTO		CLAYSTONE & SHALE	8.0	56.0	
601.7	MODESTO		SANDY SHALE	16.0	64.0	
585.7	MODESTO		CLAYSTONE & SHALE	19.5	80.0	
566.2	MODESTO		LIMESTONE	0.5	99.5	
565.7	MODESTO		BLACK SHALE	4.0	100.0	
561.7	MODESTO	CHAPEL	BONE COAL	0.5	104.0	
561.2	MODESTO		SHALE	7.5	104.5	
553.7	MODESTO		SANDY SHALE	43.0	112.0	
510.7	MODESTO		SANDSTONE	30.0	155.0	
480.7	MODESTO		CLAYSTONE & SHALE	20.0	185.0	
460.7	MODESTO		SHALE	3.0	205.0	
457.7	MODESTO		CLAYSTONE & SHALE	7.0	208.0	
450.7	MODESTO		SANDY SHALE	15.0	215.0	
435.7	MODESTO		CLAYSTONE & SHALE	3.0	230.0	
432.7	MODESTO		SANDSTONE	5.0	233.0	W/ SH BANDS
427.7	MODESTO		LIMESTONE	1.5	238.0	
426.2	MODESTO		CLAYSTONE & SHALE	0.5	239.5	
425.7	MODESTO		SHALE	5.0	240.0	W/ LS
420.7	MODESTO	PIASA	LIMESTONE	2.7	245.0	
418.0	MODESTO		CLAYSTONE & SHALE	1.3	247.7	
416.7	MODESTO		SANDY SHALE	11.0	249.0	
405.7	MODESTO		BLACK SHALE	4.0	260.0	
401.7	CARBONDALE		CLAYSTONE & SHALE	3.5	264.0	
398.2	CARBONDALE		LIMESTONE	3.3	267.5	
394.9	CARBONDALE		CLAYSTONE & SHALE	0.7	270.8	
394.2			LIMESTONE	1.0	271.5	
393.2			CLAYSTONE & SHALE	4.5	272.5	
388.7	CARBONDALE	ANNA	BLACK SHALE	1.5	277.0	
387.2	CARBONDALE	HERRIN	COAL	8.3	278.5	
378.9			UNDERCLAY	0.3	286.8	
378.7			UNDERCLAY	6.0	287.0	W/ LS

MAPID: 11700004000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 18 QUARTERS/FOOTAGES: 2740' S line, 25' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.79539 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.486685 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 666.0 LOGGED (FT.): 287.3 LOG TYPE: Drillers Log

SOURCE: SULLIVAN MACHINE CO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
420.4	MODESTO	PIASA	LIMESTONE	2.7	245.6
417.7	MODESTO		UNCLASSIFIED	5.3	248.3
412.4	CARBONDALE		UNCLASSIFIED	14.5	253.6
397.9	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	3.3	268.1
394.6	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	0.3	271.4
394.3	CARBONDALE		UNCLASSIFIED	0.3	271.7
394.0	CARBONDALE	BRERETON	LIMESTONE	1.0	272.0
393.0	CARBONDALE	ANNA	BLACK SHALE	6.0	273.0
387.0	CARBONDALE	HERRIN	COAL	8.3	279.0

MAPID: 11700920000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 19 QUARTERS/FOOTAGES: 330' N line, 330' W line of NE SE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.798625 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.470911 DATE COLLECTED: 5 / 0 / 1962

SURFACE ELEVATION (FT.): 657.0 LOGGED (FT.): 285.5 LOG TYPE: Electric Log

SOURCE: WRIGHT LACY A SR WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
414.5	MODESTO	PIASA	LIMESTONE	3.0	242.5
411.5	MODESTO		UNCLASSIFIED	6.0	245.5
405.5	CARBONDALE	DANVILLE	COAL	1.0	251.5
404.5	CARBONDALE		UNCLASSIFIED	7.5	252.5
397.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	260.0
393.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.5	264.0
390.5	CARBONDALE		UNCLASSIFIED	2.5	266.5
388.0	CARBONDALE	BRERETON	LIMESTONE	6.0	269.0
382.0	CARBONDALE	ANNA	BLACK SHALE	2.0	275.0
380.0	CARBONDALE	HERRIN	COAL	8.5	277.0

MAPID: 11723102000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 20 QUARTERS/FOOTAGES: 1600' N line, 1000' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.779739 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.474817 DATE COLLECTED: 6 / 11 / 1986

SURFACE ELEVATION (FT.): 670.0 LOGGED (FT.): 296.7 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C2-2-86 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
670.0	PLEISTOCENE		UNCONSOLIDATED	15.0	0.0	
655.0	PLEISTOCENE		SAND & GRAVEL	27.0	15.0	
628.0			SANDSTONE	29.0	42.0	
599.0			SANDSTONE	40.6	71.0	SS W/ GY SH
558.4			SHALE	2.2	111.6	
556.2			COAL	1.6	113.8	
554.6			CLAYSTONE & SILTSTONE	0.6	115.4	
554.0			SANDSTONE	133.0	116.0	SS W/ GRAY SH
421.0			LIMESTONE	1.0	249.0	
420.0			SHALE	4.0	250.0	
416.0			LIMESTONE	1.0	254.0	
415.0			GRAY SHALE	1.0	255.0	
414.0	CARBONDALE	DANVILLE	COAL	0.6	256.0	NO.??
413.4	CARBONDALE		CLAYSTONE & SILTSTONE	1.5	256.6	GRAY
411.9	CARBONDALE		SILTY SHALE	0.7	258.1	
411.2	CARBONDALE		GRAY SILTSTONE	1.7	258.8	W/25% SS LAMIN & LENSES; GRAY
409.5	CARBONDALE		GRAY SHALE	0.7	260.5	
408.8	CARBONDALE		GRAY SHALE	1.7	261.2	
407.2	CARBONDALE		LIMESTONE	0.1	262.8	GRY/TAN
407.1	CARBONDALE		GRAY SHALE	3.0	262.9	
404.1	CARBONDALE		CALCAREOUS SHALE	0.9	265.9	
403.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	266.8	GRAY
400.2	CARBONDALE	BANKSTON FORK	LIMESTONE	5.3	269.8	BANKSTON FORK?; GRAY
394.9	CARBONDALE		SHALE	1.3	275.1	GRN/GRY
393.6	CARBONDALE		LIMESTONE	0.4	276.4	GRAY
393.2	CARBONDALE		SANDSTONE	0.7	276.8	ANVIL ROCK?; GRAY
392.5	CARBONDALE	BRERETON	LIMESTONE	2.6	277.5	BRERETON?; GRAY
390.0	CARBONDALE	ANNA	BLACK SHALE	3.2	280.0	ANNA?
386.8	CARBONDALE	HERRIN	COAL	7.7	283.2	
379.1			CLAYSTONE	3.0	290.9	GRAY
376.1			SANDSTONE	0.8	293.9	SS W/ SH BANDS; GRAY
375.3			SHALE	2.1	294.7	

MAPID: 11723838000C VERSION: 1

PROJECT: LUMP

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 20 QUARTERS/FOOTAGES: 1750' S line, 275' W line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.794103 GEOLOGIST: J. MCBETH

CONFIDENTIAL: N LATITUDE: 39.469391 DATE COLLECTED: 6 / 5 / 1986

SURFACE ELEVATION (FT.): 645.0 LOGGED (FT.): 288.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL MINING CO C-1-86 WELL TYPE: Coal Test

COMMENT: PERMIT 4; CROWN II MINE; ELEV. ESTIMATED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
645.0	PLEISTOCENE		UNCONSOLIDATED	4.0	0.0	
641.0	PLEISTOCENE		SAND & GRAVEL	21.0	4.0	
620.0	MODESTO		SANDSTONE	13.0	25.0	
607.0	MODESTO		SHALE & SANDSTONE	60.0	38.0	
547.0	MODESTO		BLACK SHALE	2.0	98.0	
545.0	MODESTO		GRAY SHALE	7.0	100.0	
538.0	MODESTO	TRIVOLI	SANDSTONE	87.0	107.0	
451.0	MODESTO		LIMESTONE	1.0	194.0	
450.0	MODESTO		SHALE	35.0	195.0	
415.0	MODESTO		SANDSTONE	16.0	230.0	
399.0	MODESTO	PIASA	LIMESTONE	2.0	246.0	
397.0			GRAY SHALE	12.0	248.0	WITH SANDSTONE
385.0			CALCAREOUS CLAYSTONE	0.9	260.0	CORING BEGAN
384.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	260.9	
381.8	CARBONDALE		SHALE	3.4	263.2	MOTTLED
378.4	CARBONDALE		LIMESTONE	0.6	266.6	SHELL FRAGS
377.9	CARBONDALE		SHALE	0.4	267.1	
377.5	CARBONDALE	ANVIL ROCK	SILTSTONE	3.4	267.5	WITH FINE SS LAMS
374.1	CARBONDALE	ANNA	BLACK SHALE	4.1	270.9	
370.0	CARBONDALE	HERRIN	COAL	7.2	275.0	
362.8	CARBONDALE		CLAYSTONE	0.4	282.2	
362.4	CARBONDALE		SILTSTONE	1.3	282.6	WITH LIMESTONE INCLUSIONS
361.1	CARBONDALE		ARGILLACEOUS SANDSTONE	0.3	283.9	FINE
360.8	CARBONDALE		GRAY SHALE	1.2	284.2	
359.6	CARBONDALE		SANDSTONE	1.3	285.4	
358.4	CARBONDALE		GRAY SHALE	0.7	286.6	
357.6	CARBONDALE		SANDSTONE	0.6	287.4	WITH SHALE
357.1	CARBONDALE		CORE LOSS	0.1	287.9	

MAPID: 11721681000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 21 QUARTERS/FOOTAGES: 50' S line, 2625' W line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.766665 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.464797 DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 313.6 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED CII-F12-76 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC; CORE NO. C-11042

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
357.9	CARBONDALE	HERRIN	COAL	7.5	302.1	

MAPID: 11721681000C VERSION: 2

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 21 QUARTERS/FOOTAGES: 50' S line, 2625' W line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.766665 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.464797 DATE COLLECTED: 3 / 8 / 1976

SURFACE ELEVATION (FT.): 664.0 LOGGED (FT.): 315.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-12-76 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
664.0	PLEISTOCENE		UNCONSOLIDATED	12.5	0.0	
651.5	PLEISTOCENE		UNCONSOLIDATED	30.5	12.5	UNCONS W/ GRAVEL
621.0			SHALE	4.5	43.0	
616.5			LIMESTONE	6.0	47.5	
610.5			SHALE	1.0	53.5	
609.5			SHALE	2.5	54.5	
607.0			SHALE	9.0	57.0	
598.0			CALCAREOUS SANDSTONE	2.0	66.0	
596.0			SHALE	1.5	68.0	
594.5			SHALE	1.0	69.5	
593.5			SHALE	28.0	70.5	GRN/GRY
565.5			SANDY SHALE	39.5	98.5	SDY SH W/ SS
526.0			SHALE	4.5	138.0	
521.5			COAL	1.0	142.5	
520.5			SHALE	3.5	143.5	
517.0			SANDSTONE	4.0	147.0	SS W/ SDY SH
513.0			SANDY SHALE	32.5	151.0	W/BROWN HARD SEAMS
480.5			SANDY SHALE	36.5	183.5	
444.0			SHALE	8.5	220.0	SH W/ SIDERITE
435.5			SHALE	1.5	228.5	
434.0			SANDY SHALE	21.0	230.0	
413.0			SHALE	3.5	251.0	M.C.S. MULTI-COLORED SHALE
409.5			SANDY SHALE	9.5	254.5	W/HARD SEAMS
400.0			CALCAREOUS SHALE	6.0	264.0	
394.0			LIMESTONE	2.5	270.0	
391.5			SHALE	1.5	272.5	GRN/GRY
390.0			LIMESTONE	2.0	274.0	
388.0			SHALE	1.5	276.0	GRN/GRY
386.5			SHALE	0.6	277.5	
385.9			COAL	0.1	278.1	
385.8			DARK SHALE	0.2	278.2	DK SH W/ COAL PARTINGS
385.7			SOFT SHALE	1.1	278.3	
384.6			SANDSTONE	0.7	279.4	
383.9			SANDY SHALE	1.7	280.1	
382.2			SHALE	1.7	281.8	GRN/GRY
380.5			LIMESTONE	0.2	283.5	
380.3			SHALE	1.1	283.7	
379.2			SHALE	1.2	284.8	

378.0			SANDY SHALE	3.9	286.0	
374.1			SILTY SHALE	3.1	289.9	
371.0			SILTY SHALE	1.9	293.0	
369.1			LIMESTONE	0.7	294.9	
368.4			CALCAREOUS SHALE	0.4	295.6	
368.0			SANDSTONE	3.0	296.0	
365.0			SANDY SHALE	3.1	299.0	W/SS SEAMS
361.9	CARBONDALE	HERRIN	COAL	7.6	302.1	
354.3			SILTY SHALE	2.1	309.7	
352.2			SHALE	1.8	311.8	
350.4			UNCLASSIFIED	1.4	313.6	LEFT IN HOLE

MAPID: 11722473000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 21 QUARTERS/FOOTAGES: 1325' N line, 2600' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.7665 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.475633 DATE COLLECTED: 9 / 13 / 1980

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 302.6 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C2-8-80 WELL TYPE: Coal Test

COMMENT: PERMIT FILES #4 - CROWN II - 2/8/80

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
660.0	PLEISTOCENE		UNCONSOLIDATED	2.0	0.0	
658.0	PLEISTOCENE		UNCONSOLIDATED	19.0	2.0	
639.0			SANDY SHALE	5.0	21.0	
634.0			SHALE	3.0	26.0	MULTI
631.0			GRAY SHALE	12.0	29.0	LGY SH W/ SS
619.0			LIMESTONE	4.0	41.0	BRN/GRY
615.0			SHALE	2.0	45.0	
613.0			SHALE	0.3	47.0	
612.7			BONE COAL	0.7	47.3	
612.0			SHALE	12.5	48.0	LT GRY
599.5			SANDSTONE	3.0	60.5	
596.5			SHALE	1.0	63.5	
595.5			SHALE	5.5	64.5	
590.0			SANDSTONE	30.0	70.0	
560.0			SHALE	5.3	100.0	DK GRY
554.7			COAL	0.2	105.3	
554.5			SHALE	19.5	105.5	
535.0			SANDSTONE	5.0	125.0	
530.0			GRAY SHALE	13.0	130.0	GY SH W/ SS BANDS
517.0			GRAY SHALE	61.5	143.0	GY SH W/ SS
455.5			COAL	0.2	204.5	
455.3			GRAY SHALE	53.3	204.7	GY SH W/ SS
402.0			SHALE	4.0	258.0	LT GRY
398.0			COAL	2.5	262.0	
395.5			CLAYSTONE & SILTSTONE	2.5	264.5	
393.0			SANDSTONE	1.0	267.0	
392.0			SHALE	4.0	268.0	LT GRY
388.0			LIMESTONE	1.0	272.0	
387.0			SHALE	0.5	273.0	
386.5			CALCAREOUS SHALE	3.5	273.5	
383.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	277.0	BRN/GRY
382.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.7	278.0	LS W/ SH BAND; LT TAN
378.3	CARBONDALE		SHALE	3.1	281.7	GRN/GRY
375.2	CARBONDALE		SHALE	0.1	284.8	SH W/ PYRITIC
375.2	CARBONDALE		LIMESTONE	0.1	284.8	LS W/ PYRITE; GRAY
375.1	CARBONDALE		SANDSTONE	2.7	284.9	SS W/ SH LAMINS; GRAY
372.3	CARBONDALE		SANDY SHALE	0.2	287.7	
372.1	CARBONDALE	BRERETON	LIMESTONE	1.9	287.9	LT GRAY
370.3	CARBONDALE		SHALE	0.5	289.7	

369.8	CARBONDALE		DARK GRAY SHALE	1.8	290.2	SH W/ PYRZD
368.0	CARBONDALE	HERRIN	COAL	7.9	292.0	
360.1			CLAYSTONE & SILTSTONE	0.3	299.9	DK GRAY
359.8			NODULAR LIMESTONE	2.0	300.2	GRAY
357.8			UNCLASSIFIED	0.4	302.2	CORE LOST

MAPID: 11701098000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 12N 6W **SECTION:** 22 **QUARTERS/FOOTAGES:** 2300' N line, 2500' E line
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.747335 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.473088 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 675.0 **LOGGED (FT.):** 340.7 **LOG TYPE:** Survey Core Study
SOURCE: FREEMAN UNITED C-23-66 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
388.4	MODESTO	PIASA	LIMESTONE	2.0	286.6
386.4	MODESTO		ROCK	22.0	288.6
364.4	CARBONDALE	DANVILLE	COAL	0.5	310.6
364.0	CARBONDALE		CLAYSTONE	6.7	311.0
357.3	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	1.9	317.7
355.3	CARBONDALE	LAWSON	GRAY SHALE	1.2	319.7
354.2	CARBONDALE	LAWSON	SANDSTONE	4.8	320.8
349.3	CARBONDALE	LAWSON	MOTTLED SHALE	0.5	325.7
348.8	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	4.7	326.2
344.2	CARBONDALE	ANNA	BLACK SHALE	2.2	330.8
342.0	CARBONDALE	HERRIN	COAL	7.7	333.0

MAPID: 11701098000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 22 QUARTERS/FOOTAGES: 2300' N line, 2500' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.747335 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.473088 DATE COLLECTED:

SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 340.7 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED C-23-66 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
384.4	MODESTO	PIASA	LIMESTONE	6.0	290.6
378.4	MODESTO		UNCLASSIFIED	5.8	296.6
372.6	CARBONDALE		UNCLASSIFIED	15.2	302.4
357.4	CARBONDALE	BANKSTON FORK	LIMESTONE	1.9	317.6
355.5	CARBONDALE	ANVIL ROCK	SANDSTONE	3.3	319.5
352.2	CARBONDALE		SHALE	3.3	322.8
348.9	CARBONDALE	BRERETON	LIMESTONE	4.7	326.1
344.2	CARBONDALE	ANNA	BLACK SHALE	2.2	330.8
342.0	CARBONDALE	HERRIN	COAL	7.7	333.0

MAPID: 11701098000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 22 QUARTERS/FOOTAGES: 2300' N line, 2500' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.747335 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.473088 DATE COLLECTED:

SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 343.0 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED C-23-66 WELL TYPE: Coal Test

COMMENT: DRILL LOG INC;SEE COAL MAP #6-168

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
364.2	CARBONDALE	DANVILLE	COAL	0.5	310.8
343.9	CARBONDALE	HERRIN	COAL	7.7	331.1

MAPID: 11701098000C VERSION: 4

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 22 QUARTERS/FOOTAGES: 2300' N line, 2500' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.747335 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.473088 DATE COLLECTED: 2 / 9 / 1966

SURFACE ELEVATION (FT.): 679.0 LOGGED (FT.): 343.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-23-66 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
679.0	PLEISTOCENE		UNCONSOLIDATED	17.0	0.0	
662.0			SANDSTONE	23.0	17.0	
639.0			LIMESTONE	2.0	40.0	
637.0			SANDY SHALE	13.0	42.0	
624.0			LIMESTONE	9.0	55.0	
615.0			SHALE	5.0	64.0	
610.0			SHALE	5.0	69.0	
605.0			LIMESTONE	6.0	74.0	
599.0			SHALE	5.0	80.0	
594.0			SANDSTONE	13.0	85.0	SS W/ CONGLOMERATE
581.0			SANDSTONE	22.0	98.0	
559.0			SANDY SHALE	35.0	120.0	
524.0			SHALE	5.0	155.0	
519.0			SANDY SHALE	35.0	160.0	
484.0			SANDSTONE	40.0	195.0	
444.0			SANDY SHALE	30.0	235.0	
414.0			SANDSTONE	20.0	265.0	
394.0			LIMESTONE	2.0	285.0	
392.0			SHALE	2.0	287.0	
390.0			LIMESTONE	8.0	289.0	
382.0			SANDSTONE	12.0	297.0	
370.0			SHALE	1.8	309.0	
368.2	CARBONDALE	DANVILLE	COAL	0.5	310.8	
367.7	CARBONDALE		CLAYSTONE & SILTSTONE	4.8	311.3	
363.0	CARBONDALE		LAMINATED SHALE	2.0	316.0	
361.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	318.0	
359.0	CARBONDALE	ANVIL ROCK	SANDSTONE	6.0	320.0	
353.0	CARBONDALE	BRERETON	LIMESTONE	5.0	326.0	
348.0	CARBONDALE	ANNA	SHALE	2.1	331.0	
345.9	CARBONDALE	HERRIN	COAL	7.7	333.1	
338.2			UNDERCLAY	2.3	340.8	
336.0			LIMESTONE	1.0	343.0	LS W/ CONGLOMERATE

MAPID: 11701288000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 23 QUARTERS/FOOTAGES: 100' S line, 50' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.719751 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.465193 DATE COLLECTED:

SURFACE ELEVATION (FT.): 670.0 LOGGED (FT.): 356.0 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED CM-15-69 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
326.4	CARBONDALE	HERRIN	COAL	8.0	343.6

MAPID: 11701288000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 23 QUARTERS/FOOTAGES: 100' S line, 50' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.719751 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.465193 DATE COLLECTED:

SURFACE ELEVATION (FT.): 670.0 LOGGED (FT.): 351.8 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED CM-15-69 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
362.1	MODESTO	PIASA	LIMESTONE	2.6	307.9
359.5	MODESTO		UNCLASSIFIED	4.9	310.5
354.6	CARBONDALE		UNCLASSIFIED	10.5	315.4
344.1	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	325.9
340.1	CARBONDALE	ANVIL ROCK	SANDSTONE	4.5	329.9
335.6	CARBONDALE	CONANT	LIMESTONE	1.1	334.4
334.5	CARBONDALE		SHALE	1.8	335.5
332.7	CARBONDALE	BRERETON	LIMESTONE	1.8	337.3
330.9	CARBONDALE	ANNA	BLACK SHALE	4.9	339.1
326.0	CARBONDALE	HERRIN	COAL	7.8	344.0

MAPID: 11701288000C VERSION: 3

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 23 QUARTERS/FOOTAGES: 100' S line, 50' E line
 QUADRANGLE: FARMERSVILLE LONGITUDE: -89.719751 GEOLOGIST: HOKE
 CONFIDENTIAL: N LATITUDE: 39.465193 DATE COLLECTED: 6 / 16 / 1969
 SURFACE ELEVATION (FT.): 669.0 LOGGED (FT.): 356.0 LOG TYPE: Drillers Log
 SOURCE: FREEMAN UNITED COAL CO. C-15-69 WELL TYPE: Coal Test
 COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
669.0	PLEISTOCENE		UNCONSOLIDATED	14.0	0.0	
655.0	PLEISTOCENE		UNCONSOLIDATED	17.0	14.0	
638.0			SANDSTONE	31.7	31.0	
606.3			SANDY SHALE	13.8	62.7	SDY SH W/SS
592.5			LIMESTONE	10.3	76.5	
582.2			SHALE	1.0	86.8	
581.2			LIMESTONE	0.8	87.8	
580.5			SHALE	5.5	88.5	LT-DK
575.0			CALCAREOUS SHALE	14.0	94.0	
561.0			LIMESTONE	1.8	108.0	
559.2			CALCAREOUS SHALE	13.2	109.8	
546.0			SILTY SHALE	38.5	123.0	
507.5			SHALE	2.7	161.5	
504.8			COAL	1.1	164.2	
503.7			SANDY SHALE	1.3	165.3	SDY SH W/NODS
502.5			SANDY SHALE	46.5	166.5	SDY SH W/SS
456.0			SANDSTONE	46.5	213.0	SS W/SDY SH STREAKS
409.5			SHALE	4.3	259.5	SH W/SIDERITE
405.2			LIMESTONE	0.5	263.8	DARK
404.7			SHALE	3.5	264.3	
401.2			COAL	0.3	267.8	
401.0			SANDY SHALE	20.1	268.0	SDY SH W/NODS
380.9			SHALE	0.9	288.1	
380.0			SANDY SHALE	18.0	289.0	
362.0			LIMESTONE	2.6	307.0	GRAY
359.4			CALCAREOUS SHALE	4.9	309.6	
354.5			LAMINATED SHALE	4.0	314.5	
350.5			SANDY SHALE	4.0	318.5	SDY SH W/NODS
346.5	CARBONDALE	DANVILLE	COAL	0.4	322.5	SLATEY CO
346.1	CARBONDALE		SHALE	1.3	322.9	DK GRY
344.8	CARBONDALE		CALCAREOUS CLAYSTONE	5.2	324.2	
339.7	CARBONDALE		CALCAREOUS SHALE	4.7	329.3	
335.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.1	334.0	GRAY
333.9	CARBONDALE	ANVIL ROCK	SANDSTONE	2.6	335.1	SS W/SDY SH
331.3	CARBONDALE	BRERETON	LIMESTONE	1.0	337.7	
330.3	CARBONDALE		LAMINATED SHALE	0.7	338.7	
329.7	CARBONDALE		DARK SHALE	4.3	339.3	
325.4	CARBONDALE	HERRIN	COAL	7.8	343.6	

317.7	UNDERCLAY	0.8	351.3
316.9	LIMESTONE	3.9	352.1

MAPID: 11721495000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 6W **SECTION:** 23 **QUARTERS/FOOTAGES:** SE NW
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.731389 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.474037 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 675.0 **LOGGED (FT.):** 435.0 **LOG TYPE:** Survey Core Study
SOURCE: FREEMAN UNITED C-1-74 **WELL TYPE:** Coal Test
COMMENT: DRILLERS LOG INC; CORE NO. C10215

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
352.4	CARBONDALE	HERRIN	COAL	8.0	322.6
315.5	CARBONDALE	HOUCHIN CREEK	COAL	3.5	359.5

MAPID: 11721495000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 12N 6W **SECTION:** 23 **QUARTERS/FOOTAGES:** SE NW
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.731389 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.474037 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 675.0 **LOGGED (FT.):** 331.0 **LOG TYPE:** Survey Core Study
SOURCE: FREEMAN UNITED C-1-74 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN COMMENT	
388.2	MODESTO	PIASA	LIMESTONE	1.8	286.8	
386.4	MODESTO		GRAY SHALE	0.7	288.6	
385.7	CARBONDALE	DANVILLE	BONE COAL	1.0	289.3	
384.7	CARBONDALE		SHALE & SILTSTONE	7.8	290.3	
376.9	CARBONDALE	GALUM	LIMESTONE	0.4	298.1	
376.5	CARBONDALE	ALLENBY	BONE COAL	0.7	298.5	
375.8	CARBONDALE		CLAYSTONE	7.3	299.2	
368.5	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	0.4	306.5	UPPER BENCH
368.1	CARBONDALE	BANKSTON FORK	MOTTLED SHALE	1.3	306.9	SHALE PARTING
366.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	308.2	LOWER BENCH
365.0	CARBONDALE	LAWSON	CLAYSTONE	0.5	310.0	
364.5	CARBONDALE	LAWSON	SANDSTONE	4.0	310.5	
360.5	CARBONDALE	LAWSON	MOTTLED SHALE	0.4	314.5	
360.1	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	4.0	314.9	
356.1	CARBONDALE	ANNA	BLACK SHALE	4.1	318.9	
352.0	CARBONDALE	HERRIN	COAL	8.0	323.0	

MAPID: 11721964000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 23 QUARTERS/FOOTAGES: 265' S line, 162' E line of SW

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.729542 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.465605 DATE COLLECTED: 8 / 3 / 1978

SURFACE ELEVATION (FT.): 670.0 LOGGED (FT.): 326.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN COAL CO., #1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
670.0			UNCONSOLIDATED	29.0	0.0	
641.0	BOND		SHALE	18.0	29.0	
623.0	BOND		SANDSTONE	2.0	47.0	
621.0	BOND		SHALE	3.0	49.0	W/SS
618.0	BOND		COAL	1.0	52.0	
617.0	BOND		SHALE	3.0	53.0	W/SS
614.0	BOND		SANDSTONE	1.0	56.0	W/LS
613.0	BOND	CARTHAGE	LIMESTONE	5.0	57.0	
608.0	MODESTO		BLACK SHALE	7.0	62.0	
601.0	MODESTO		SHALE	6.0	69.0	
595.0	MODESTO		SHALE	4.0	75.0	W/LS
591.0	MODESTO		SHALE	7.0	79.0	W/SS
584.0	MODESTO		SHALE	6.0	86.0	W/SS & LS
578.0	MODESTO	WOMAC	COAL	2.0	92.0	
576.0	MODESTO		SANDSTONE	5.0	94.0	
571.0	MODESTO		SHALE	58.0	99.0	W/SS
513.0	MODESTO	CHAPEL	COAL	3.0	157.0	
510.0	MODESTO		SHALE	73.0	160.0	W/SS
437.0	MODESTO		SANDSTONE	6.0	233.0	
431.0	MODESTO		SHALE & SANDSTONE	38.0	239.0	GRAY & GRN SH W/LS
393.0	MODESTO		UNKNOWN	2.0	277.0	GRAY SH W/LS & SS
391.0	MODESTO		SHALE & SANDSTONE	12.0	279.0	GRAY SH W/SS
379.0	MODESTO		CALCAREOUS SHALE	1.0	291.0	GRAY SH W/LS
378.0	MODESTO		LIMESTONE	1.0	292.0	
377.0	MODESTO		SHALE	4.0	293.0	W/LS
373.0	MODESTO		LIMESTONE	1.0	297.0	
372.0	MODESTO		SANDSTONE	1.2	298.0	CORED TO T.D.
370.8	MODESTO		SANDSTONE	0.9	299.2	W/SH LAMINAE
369.9	MODESTO		SHALE	0.7	300.1	
369.2	MODESTO		BLACK SHALE	0.8	300.8	
368.4	CARBONDALE	DANVILLE	COAL	0.5	301.6	
367.9	CARBONDALE		SHALE	0.6	302.1	
367.3	CARBONDALE		SHALE	7.1	302.7	
360.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	309.8	
358.6	CARBONDALE	BANKSTON FORK	SANDY SHALE	0.4	311.4	
358.2	CARBONDALE	BANKSTON FORK	CORE LOSS	0.2	311.8	
358.0	CARBONDALE	BANKSTON FORK	LIMESTONE	0.5	312.0	
357.5	CARBONDALE		SHALE	0.1	312.5	
357.4	CARBONDALE	ANVIL ROCK	SANDSTONE	3.3	312.6	

354.1	CARBONDALE	BRERETON	LIMESTONE	4.3	315.9
349.8	CARBONDALE	ANNA	BLACK SHALE	2.0	320.2
347.8	CARBONDALE	HERRIN	COAL	2.4	322.2
345.4	CARBONDALE		CORE LOSS	1.4	324.6

MAPID: 11701083000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 12N 6W **SECTION:** 24 **QUARTERS/FOOTAGES:** 2650' S line, 50' E line
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.700997 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.472227 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 675.0 **LOGGED (FT.):** 370.0 **LOG TYPE:** Survey Core Study
SOURCE: FREEMAN UNITED C-21-66 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
357.3	MODESTO	PIASA	LIMESTONE	3.0	317.7
354.3	MODESTO		ROCK	12.0	320.7
342.3	CARBONDALE	DANVILLE	BONE COAL	0.7	332.7
341.6	CARBONDALE		SHALE & SILTSTONE	3.8	333.4
337.8	CARBONDALE		SHALE & SILTSTONE	5.6	337.2
332.2	CARBONDALE		DARK GRAY SHALE	4.4	342.8
327.8	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.4	347.2
323.4	CARBONDALE	LAWSON	DARK GRAY SHALE	0.6	351.6
322.8	CARBONDALE	LAWSON	SANDSTONE	6.1	352.2
316.7	CARBONDALE	LAWSON	SILTSTONE	0.9	358.3
315.8	CARBONDALE	LAWSON	MOTTLED SHALE	0.4	359.2
315.4	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	2.1	359.6
313.3	CARBONDALE	ANNA	DARK GRAY SHALE	1.3	361.7
312.0	CARBONDALE	HERRIN	COAL	7.0	363.0

MAPID: 11701083000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 24 QUARTERS/FOOTAGES: 2650' S line, 50' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.700997 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.472227 DATE COLLECTED:

SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 370.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED C-21-66 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
353.2	MODESTO	PIASA	LIMESTONE	3.0	321.8
350.2	MODESTO		UNCLASSIFIED	2.0	324.8
348.2	CARBONDALE	DANVILLE	COAL	0.2	326.8
348.0	CARBONDALE		UNCLASSIFIED	22.9	327.0
325.1	CARBONDALE	BANKSTON FORK	LIMESTONE	5.3	349.9
319.8	CARBONDALE	ANVIL ROCK	SANDSTONE	2.2	355.2
317.6	CARBONDALE		SHALE	2.2	357.4
315.4	CARBONDALE	BRERETON	LIMESTONE	2.1	359.6
313.3	CARBONDALE	ANNA	BLACK SHALE	1.3	361.7
312.0	CARBONDALE	HERRIN	COAL	7.0	363.0

MAPID: 11701083000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 24 QUARTERS/FOOTAGES: 2650' S line, 50' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.700997 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.472227 DATE COLLECTED:

SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 373.2 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED C-21-66 WELL TYPE: Coal Test

COMMENT: SEE COAL SECTION MAP #6-168

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
311.9	CARBONDALE	HERRIN	COAL	7.0	363.1

MAPID: 11701083000C VERSION: 4

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 24 QUARTERS/FOOTAGES: 2650' S line, 50' E line
 QUADRANGLE: FARMERSVILLE LONGITUDE: -89.700997 GEOLOGIST: HOKE
 CONFIDENTIAL: N LATITUDE: 39.472227 DATE COLLECTED: 2 / 16 / 1966
 SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 373.0 LOG TYPE: Drillers Log
 SOURCE: FREEMAN UNITED COAL CO. C-21-66 WELL TYPE: Coal Test
 COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
675.0	PLEISTOCENE		UNCONSOLIDATED	15.0	0.0
660.0			SANDSTONE	120.0	15.0
540.0			SANDY SHALE	35.0	135.0
505.0			SANDSTONE	92.0	170.0
413.0			SHALE	4.0	262.0
409.0			SILTY SHALE	17.0	266.0
392.0			SHALE	5.0	283.0
387.0			SANDSTONE	12.0	288.0
375.0			SILTY SHALE	15.0	300.0
360.0			SANDSTONE	7.0	315.0
353.0			LIMESTONE	3.0	322.0
350.0			SHALE	2.0	325.0
348.0			SHALE	1.0	327.0
347.0			SANDY SHALE	7.5	328.0
339.5			LIMESTONE	0.8	335.5
338.7			SHALE	0.5	336.3
338.2	CARBONDALE	DANVILLE	COAL	0.5	336.8
337.7	CARBONDALE		CLAYSTONE & SILTSTONE	13.2	337.3
324.5	CARBONDALE	BANKSTON FORK	LIMESTONE	5.3	350.5
319.2	CARBONDALE	ANVIL ROCK	SANDSTONE	3.8	355.8
315.3	CARBONDALE	BRERETON	LIMESTONE	2.1	359.7
313.2	CARBONDALE	ANNA	SHALE	1.3	361.8
312.0	CARBONDALE	HERRIN	COAL	6.8	363.0
305.2			LIMESTONE	3.2	369.8

MAPID: 11701091000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 24 QUARTERS/FOOTAGES: 2650' N line, 50' E line
 QUADRANGLE: FARMERSVILLE LONGITUDE: -89.700997 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.472235 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 670.0 LOGGED (FT.): 363.0 LOG TYPE: Multiple log types
 SOURCE: FREEMAN UNITED C-22-66 WELL TYPE: Coal Test
 COMMENT: CORE NO. C-6375;SEE COAL SEC. MAP# 6-168

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
317.0	CARBONDALE	HERRIN	COAL	8.4	353.0

MAPID: 11701091000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 24 QUARTERS/FOOTAGES: 2650' N line, 50' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.700997 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.472235 DATE COLLECTED:

SURFACE ELEVATION (FT.): 670.0 LOGGED (FT.): 361.4 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED C-22-66 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
357.0	MODESTO	PIASA	LIMESTONE	5.0	313.0
352.0	MODESTO		UNCLASSIFIED	5.5	318.0
346.5	CARBONDALE		UNCLASSIFIED	15.2	323.5
331.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	338.7
328.0	CARBONDALE	ANVIL ROCK	SANDSTONE	3.4	342.0
324.6	CARBONDALE		SHALE	4.0	345.4
320.6	CARBONDALE	BRERETON	LIMESTONE	0.7	349.4
319.9	CARBONDALE	ANNA	BLACK SHALE	2.9	350.1
317.0	CARBONDALE	HERRIN	COAL	8.4	353.0

MAPID: 11701091000C VERSION: 3

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 24 QUARTERS/FOOTAGES: 2650' N line, 50' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.700997 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.472235 DATE COLLECTED: 3 / 1 / 1966

SURFACE ELEVATION (FT.): 671.0 LOGGED (FT.): 363.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-22-66 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
671.0	PLEISTOCENE		UNCONSOLIDATED	15.0	0.0
656.0	PLEISTOCENE		UNCONSOLIDATED	30.0	15.0
626.0			SANDSTONE	16.0	45.0
610.0			SANDY SHALE	14.0	61.0
596.0			LIMESTONE	12.0	75.0
584.0			SHALE	5.0	87.0
579.0			SHALE	14.0	92.0
565.0			LIMESTONE	6.0	106.0
559.0			SANDSTONE	38.0	112.0
521.0			SHALE	5.0	150.0
516.0			SANDSTONE	15.0	155.0
501.0			SILTY SHALE	65.0	170.0
436.0			SANDSTONE	35.0	235.0
401.0			SHALE	3.0	270.0
398.0			SANDY SHALE	12.0	273.0
386.0			SANDSTONE	28.0	285.0
358.0			LIMESTONE	5.0	313.0
353.0			SANDY SHALE	7.0	318.0
346.0			SANDSTONE	3.0	325.0
343.0			SHALE	1.5	328.0
341.5			SHALE	4.3	329.5
337.2			LIMESTONE	0.7	333.8
336.5			CLAYSTONE & SILTSTONE	2.5	334.5
334.0			LAMINATED SHALE	1.8	337.0
332.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.6	338.8
327.7	CARBONDALE	ANVIL ROCK	SANDSTONE	1.7	343.3
326.0	CARBONDALE	BRERETON	LIMESTONE	0.5	345.0
325.5	CARBONDALE		SANDSTONE	2.5	345.5
323.0	CARBONDALE		LAMINATED SHALE	1.5	348.0
321.5	CARBONDALE		SHALE	3.5	349.5
318.0	CARBONDALE	HERRIN	COAL	8.4	353.0
309.6			UNDERCLAY	1.6	361.4

MAPID: 11721965000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 24 QUARTERS/FOOTAGES: NE NE NE

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.702087 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.478635 DATE COLLECTED:

SURFACE ELEVATION (FT.): LOGGED (FT.): 367.8 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED 2-C-78 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	8.5	358.8	

MAPID: 11701085000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 25 QUARTERS/FOOTAGES: 2650' S line, 2550' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.710409 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.45769 DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 344.8 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED C-17-66 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
357.6	MODESTO	PIASA	LIMESTONE	3.0	302.4	
354.6	MODESTO		SANDSTONE	11.0	305.4	
343.6	CARBONDALE	DANVILLE	DARK GRAY SHALE	2.3	316.4	
341.4	CARBONDALE		CLAYSTONE	8.7	318.6	
332.7	CARBONDALE	BANKSTON FORK	MOTTLED SHALE	3.0	327.3	SHALE PARTING
329.7	CARBONDALE	BANKSTON FORK	LIMESTONE	0.7	330.3	LOWER BENCH
329.0	CARBONDALE	LAWSON	CLAYSTONE	2.3	331.0	
326.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	3.4	333.3	
323.2	CARBONDALE	ANNA	DARK GRAY SHALE	1.3	336.8	
322.0	CARBONDALE	HERRIN	COAL	6.8	338.0	

MAPID: 11701085000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 25 QUARTERS/FOOTAGES: 2650' S line, 2550' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.710409 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.45769 DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 344.8 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED C-17-66 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
363.0	MODESTO	PIASA	LIMESTONE	3.0	297.0
360.0	MODESTO		UNCLASSIFIED	5.5	300.0
354.5	CARBONDALE		UNCLASSIFIED	18.2	305.5
336.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.6	323.7
332.7	CARBONDALE	ANVIL ROCK	SANDSTONE	3.0	327.3
329.7	CARBONDALE	CONANT	LIMESTONE	0.7	330.3
329.0	CARBONDALE		SHALE	2.3	331.0
326.7	CARBONDALE	BRERETON	LIMESTONE	3.4	333.3
323.3	CARBONDALE	ANNA	BLACK SHALE	1.3	336.7
322.0	CARBONDALE	HERRIN	COAL	6.8	338.0

MAPID: 11701085000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 25 QUARTERS/FOOTAGES: 2650' S line, 2550' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.710409 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.45769 DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 348.3 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED C-17-66 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
322.2	CARBONDALE	HERRIN	COAL	6.8	337.8

MAPID: 11701085000C VERSION: 4

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 25 QUARTERS/FOOTAGES: 2650' S line, 2550' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.710409 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.45769 DATE COLLECTED: 2 / 2 / 1966

SURFACE ELEVATION (FT.): 665.0 LOGGED (FT.): 348.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-17-66 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
665.0	PLEISTOCENE		UNCONSOLIDATED	16.0	0.0
649.0	PLEISTOCENE		UNCONSOLIDATED	68.0	16.0
581.0			SANDY SHALE	8.0	84.0
573.0			LIMESTONE	6.0	92.0
567.0			SHALE	5.0	98.0
562.0			SANDSTONE	22.0	103.0
540.0			SANDY SHALE	25.0	125.0
515.0			SHALE	5.0	150.0
510.0			SANDSTONE	25.0	155.0
485.0			SANDY SHALE	31.0	180.0
454.0			SANDSTONE	29.0	211.0
425.0			SHALE	15.0	240.0
410.0			SHALE	7.0	255.0
403.0			SHALE	13.0	262.0
390.0			SANDSTONE	22.0	275.0
368.0			LIMESTONE	3.0	297.0
365.0			SANDSTONE	11.0	300.0
354.0			SHALE	4.0	311.0
350.0			CLAYSTONE & SILTSTONE	8.7	315.0
341.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	323.7
337.8	CARBONDALE	LAWSON	LAMINATED SHALE	3.3	327.2
334.5	CARBONDALE	BRERETON	LIMESTONE	6.1	330.5
328.4	CARBONDALE	ANNA	SHALE	1.1	336.6
327.3	CARBONDALE	HERRIN	COAL	6.8	337.7
320.6			UNDERCLAY	0.6	344.4
320.0			LIMESTONE	3.0	345.0

MAPID: 11722474000C VERSION: 1

PROJECT: NCRDS99

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 25 QUARTERS/FOOTAGES: 450' S line, 50' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.719274 GEOLOGIST: J MCBETH

CONFIDENTIAL: N LATITUDE: 39.451596 DATE COLLECTED: 8 / 28 / 1980

SURFACE ELEVATION (FT.): LOGGED (FT.): 341.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL MINING CO C-10-80 WELL TYPE: Coal Test

COMMENT: PERMIT 4; CROWN II MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	PLEISTOCENE		UNCONSOLIDATED	2.0	0.0	
-	PLEISTOCENE		GLACIAL DRIFT	24.0	2.0	WITH SAND AND GRAVEL
-	BOND		SANDY SHALE	23.0	26.0	
-	BOND		GRAY SHALE	10.5	49.0	WITH SANDSTONE
-	BOND	CARTHAGE	LIMESTONE	7.5	59.5	LIGHT GRAY TO TAN
-	MODESTO		GRAY SHALE	1.0	67.0	
-	MODESTO		SHALE	3.0	68.0	BLACK
-	MODESTO		GRAY SHALE	10.0	71.0	
-	MODESTO		SANDSTONE	3.0	81.0	CALCAREOUS
-	MODESTO		SHALE	2.0	84.0	BLACK
-	MODESTO		GRAY SHALE	7.0	86.0	
-	MODESTO		LIMESTONE	3.0	93.0	
-	MODESTO		SANDSTONE	6.0	96.0	
-	MODESTO		GRAY SHALE	54.0	102.0	WITH SANDSTONE BANDS
-	MODESTO		SHALE	3.0	156.0	BLACK
-	MODESTO	CHAPEL	COAL	2.0	159.0	
-	MODESTO		SANDY SHALE	22.0	161.0	
-	MODESTO		SHALE	2.0	183.0	BLACK
-	MODESTO		GRAY SHALE	22.0	185.0	
-	MODESTO		SANDSTONE	5.0	207.0	
-	MODESTO		GRAY SHALE	23.0	212.0	WITH SANDSTONE
-	MODESTO		SANDSTONE	14.5	235.0	
-	MODESTO		LIMESTONE	0.5	249.5	LIGHT BROWN; SIDERITE
-	MODESTO		SHALE	12.0	250.0	
-	MODESTO		SANDY SHALE	17.0	262.0	
-	MODESTO		GRAY SHALE	12.0	279.0	WITH SANDSTONE BANDS
-	MODESTO		LIMESTONE	2.0	291.0	LIGHT GRAY HARD
-	MODESTO		SHALE	1.0	293.0	GREEN GRAY
-	MODESTO	PIASA	LIMESTONE	2.3	294.0	LIGHT, TAN, HARD
-	MODESTO		GRAY SHALE	11.7	296.3	
-	MODESTO		SHALE	1.0	308.0	DARK GRAY
-	CARBONDALE		SHALE	1.0	309.0	BLACK
-	CARBONDALE		GRAY SHALE	6.0	310.0	
-	CARBONDALE		SANDSTONE	2.0	316.0	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	3.4	318.0	LIGHT BROWN WITH SHALE PARTINGS
-	CARBONDALE		GRAY SHALE	3.0	321.4	
-	CARBONDALE		LIMESTONE	0.4	324.4	FOSSILIFEROUS
-	CARBONDALE		SHALE	1.7	324.7	CALCAREOUS

-	CARBONDALE	BRERETON	LIMESTONE	3.9	326.4	
-	CARBONDALE	ANNA	SHALE	1.2	330.3	BLACK
-	CARBONDALE	HERRIN	COAL	7.0	331.5	
-	CARBONDALE		CLAYSTONE	2.6	338.4	WITH LIMESTONE NODULES AT BASE

MAPID: 11700562000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 12N 6W **SECTION:** 26 **QUARTERS/FOOTAGES:** 330' N line, 330' W line
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.737164 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.463928 **DATE COLLECTED:** 4 / 0 / 1955
SURFACE ELEVATION (FT.): 671.0 **LOGGED (FT.):** 335.0 **LOG TYPE:** Electric Log
SOURCE: BERGSCHNEIDER, PAUL F. **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
354.0	CARBONDALE	BRERETON	LIMESTONE	8.0	317.0
346.0	CARBONDALE	ANNA	BLACK SHALE	4.0	325.0
342.0	CARBONDALE	HERRIN	COAL	6.0	329.0

MAPID: 11701099000C **VERSION:** 1 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 12N 6W **SECTION:** 26 **QUARTERS/FOOTAGES:** 2650' N line, 2650' E line
QUADRANGLE: FARMERSVILLE **LONGITUDE:** -89.728925 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.457559 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 675.0 **LOGGED (FT.):** 360.5 **LOG TYPE:** Survey Core Study
SOURCE: FREEMAN UNITED C-16-66 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
358.4	MODESTO	PIASA	LIMESTONE	4.8	316.6
353.7	MODESTO		SILTY SHALE	10.3	321.3
343.4	CARBONDALE	DANVILLE	BONE COAL	2.0	331.6
341.4	CARBONDALE		CLAYSTONE	11.0	333.6
330.4	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	1.0	344.6
329.4	CARBONDALE	LAWSON	CLAYSTONE	0.4	345.6
329.0	CARBONDALE	LAWSON	SANDSTONE	0.9	346.0
328.1	CARBONDALE	LAWSON	CLAYSTONE	0.4	346.9
327.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	2.8	347.3
324.9	CARBONDALE	ANNA	BLACK SHALE	2.9	350.1
322.0	CARBONDALE	HERRIN	COAL	7.5	353.0

MAPID: 11701099000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 26 QUARTERS/FOOTAGES: 2650' N line, 2650' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.728925 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.457559 DATE COLLECTED:

SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 360.5 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED C-16-66 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
359.2	MODESTO	PIASA	LIMESTONE	4.8	315.8
354.4	MODESTO		UNCLASSIFIED	4.2	320.6
350.2	CARBONDALE		UNCLASSIFIED	12.8	324.8
337.4	CARBONDALE	BANKSTON FORK	LIMESTONE	5.3	337.6
332.1	CARBONDALE	ANVIL ROCK	SANDSTONE	1.6	342.9
330.5	CARBONDALE	CONANT	LIMESTONE	1.0	344.5
329.5	CARBONDALE		SHALE	1.8	345.5
327.7	CARBONDALE	BRERETON	LIMESTONE	2.8	347.3
324.9	CARBONDALE	ANNA	BLACK SHALE	2.9	350.1
322.0	CARBONDALE	HERRIN	COAL	7.5	353.0

MAPID: 11701099000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 26 QUARTERS/FOOTAGES: 2650' N line, 2650' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.728925 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.457559 DATE COLLECTED:

SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 361.8 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED C-16-66 WELL TYPE: Coal Test

COMMENT: DRILL LOG INC;SEE COAL SEC. MAP #6-168

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
322.2	CARBONDALE	HERRIN	COAL	7.5	352.8

MAPID: 11701099000C VERSION: 4

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 26 QUARTERS/FOOTAGES: 2650' N line, 2650' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.728925 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.457559 DATE COLLECTED: 2 / 7 / 1966

SURFACE ELEVATION (FT.): 678.0 LOGGED (FT.): 362.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-16-66 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
678.0	PLEISTOCENE		UNCONSOLIDATED	15.0	0.0
663.0			SANDSTONE	62.0	15.0
601.0			LIMESTONE	6.0	77.0
595.0			SHALE	4.0	83.0
591.0			SHALE	4.0	87.0
587.0			LIMESTONE	6.0	91.0
581.0			SHALE	4.0	97.0
577.0			SHALE	5.0	101.0
572.0			SANDSTONE	39.0	106.0
533.0			SHALE	5.0	145.0
528.0			SANDY SHALE	40.0	150.0
488.0			COAL	3.0	190.0
485.0			SANDSTONE	52.0	193.0
433.0			SHALE	4.0	245.0
429.0			SANDY SHALE	21.0	249.0
408.0			SANDSTONE	46.0	270.0
362.0			LIMESTONE	4.8	316.0
357.2			SANDY SHALE	10.3	320.8
347.0			SHALE	2.0	331.0
345.0			CLAYSTONE & SILTSTONE	10.0	333.0
335.0			SANDY SHALE	1.0	343.0
334.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.7	344.0
332.3	CARBONDALE	LAWSON	SANDY SHALE	1.5	345.7
330.8	CARBONDALE	BRERETON	LIMESTONE	2.8	347.2
328.0	CARBONDALE	ANNA	BLACK SHALE	2.8	350.0
325.2	CARBONDALE	HERRIN	COAL	7.4	352.8
317.7			UNDERCLAY	1.8	360.3

MAPID: 11701100000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 27 QUARTERS/FOOTAGES: 2550' S line, 2650' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.747731

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.457256

DATE COLLECTED:

SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 326.0

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED C-15-66

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
391.0	MODESTO	PIASA	LIMESTONE	1.5	284.0
389.5	CARBONDALE		SANDSTONE	13.0	285.5
376.5	CARBONDALE		DARK GRAY SHALE	3.0	298.5
373.5	CARBONDALE	LAWSON	SILTY SHALE	11.0	301.5
362.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	5.0	312.5
357.5	CARBONDALE	ANNA	DARK GRAY SHALE	3.0	317.5
355.0	CARBONDALE	HERRIN	COAL	6.0	320.0

MAPID: 11701100000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 27 QUARTERS/FOOTAGES: 2550' S line, 2650' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.747731

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.457256

DATE COLLECTED:

SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 327.3

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED C-15-66

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
391.0	MODESTO	PIASA	LIMESTONE	2.5	284.0
388.5	MODESTO		UNCLASSIFIED	6.0	286.5
382.5	CARBONDALE		UNCLASSIFIED	12.5	292.5
370.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	305.0
366.5	CARBONDALE	ANVIL ROCK	SANDSTONE	2.0	308.5
364.5	CARBONDALE		SHALE	2.0	310.5
362.5	CARBONDALE	BRERETON	LIMESTONE	5.0	312.5
357.5	CARBONDALE	ANNA	BLACK SHALE	3.5	317.5
354.0	CARBONDALE	HERRIN	COAL	6.3	321.0

MAPID: 11701100000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 27 QUARTERS/FOOTAGES: 2550' S line, 2650' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.747731 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.457256 DATE COLLECTED:

SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 358.0 LOG TYPE: Multiple log types

SOURCE: FREEMAN UNITED C-15-66 WELL TYPE: Coal Test

COMMENT: CORE NO. C-9932;SEE COAL SEC. MAP#6-168

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
354.0	CARBONDALE	HERRIN	COAL	6.3	321.0
324.2	CARBONDALE	HOUCHIN CREEK	COAL	1.8	350.8

MAPID: 11701100000C VERSION: 4

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 27 QUARTERS/FOOTAGES: 2550' S line, 2650' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.747731 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.457256 DATE COLLECTED: 2 / 8 / 1966

SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 358.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-15-66 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
675.0	PLEISTOCENE		UNCONSOLIDATED	14.0	0.0	
661.0			SANDSTONE	31.0	14.0	
630.0			SANDY SHALE	14.0	45.0	
616.0			LIMESTONE	7.0	59.0	
609.0			SHALE	5.0	66.0	
604.0			SANDY SHALE	8.0	71.0	
596.0			LIMESTONE	9.0	79.0	
587.0			SANDSTONE	53.0	88.0	
534.0			SHALE	4.0	141.0	
530.0			SANDY SHALE	25.0	145.0	
505.0			SANDSTONE	80.0	170.0	
425.0			SANDY SHALE	9.0	250.0	
416.0			SHALE	3.0	259.0	
413.0			SANDY SHALE	3.0	262.0	
410.0			SHALE	3.0	265.0	MULTI
407.0			SANDSTONE	15.5	268.0	
391.5			LIMESTONE AND SANDSTONE	1.5	283.5	
390.0			SANDSTONE	13.0	285.0	
377.0			SHALE	3.0	298.0	
374.0			SANDY SHALE	11.0	301.0	
363.0	CARBONDALE	BRERETON	LIMESTONE	5.0	312.0	
358.0	CARBONDALE		SHALE	3.5	317.0	
354.5	CARBONDALE	HERRIN	COAL	6.3	320.5	
348.2	CARBONDALE		UNDERCLAY	1.9	326.8	
346.3	CARBONDALE		SHALY LIMESTONE	4.5	328.7	
341.8	CARBONDALE		SHALE	6.0	333.2	
335.8	CARBONDALE		LIMESTONE	3.0	339.2	
332.8	CARBONDALE		LAMINATED SHALE	1.3	342.2	
331.6	CARBONDALE		LIMESTONE	0.5	343.4	
331.1	CARBONDALE		LAMINATED SHALE	2.9	343.9	
328.2	CARBONDALE	ST. DAVID	LIMESTONE	0.7	346.8	
327.5	CARBONDALE	TURNER MINE	BLACK SHALE	3.3	347.5	
324.2	CARBONDALE	SPRINGFIELD	COAL	1.7	350.8	
322.5	CARBONDALE		SANDY SHALE	5.5	352.5	

MAPID: 11700005000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 30 QUARTERS/FOOTAGES: NE NW NW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.810296 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.463613 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 641.1 LOGGED (FT.): 282.5 LOG TYPE: Drillers Log

SOURCE: A.W. CRAWFORD (OPTION) WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
641.1			UNCONSOLIDATED	24.0	0.0	
617.1			UNDERCLAY	48.0	24.0	
569.1			CLAYSTONE	29.0	72.0	
540.1	MODESTO		BLACK SHALE	6.0	101.0	
534.1	MODESTO		UNDERCLAY	3.0	107.0	
531.1	MODESTO		LIMESTONE	4.0	110.0	
527.1	MODESTO		SHALE	53.0	114.0	
474.1	MODESTO		SHALY SANDSTONE	16.0	167.0	
458.1	MODESTO		UNDERCLAY	5.0	183.0	
453.1	MODESTO		LIMESTONE	5.0	188.0	
448.1	MODESTO		BLACK SHALE	4.0	193.0	
444.1	MODESTO		COAL	3.0	197.0	
441.1	MODESTO		UNDERCLAY	7.0	200.0	
434.1	MODESTO		SANDSTONE	5.0	207.0	
429.1	MODESTO		UNDERCLAY	7.0	212.0	
422.1	MODESTO		LIMESTONE	4.0	219.0	
418.1	MODESTO		SHALE	14.0	223.0	
404.1	MODESTO		UNDERCLAY	5.0	237.0	
399.1	MODESTO		LIMESTONE	1.0	242.0	
398.1	MODESTO		SHALE	2.0	243.0	
396.1	MODESTO	PIASA	LIMESTONE	6.0	245.0	
390.1	CARBONDALE		UNDERCLAY	4.0	251.0	
386.1	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	255.0	
382.1	CARBONDALE		SHALE	3.0	259.0	
379.1	CARBONDALE	BRERETON	LIMESTONE	9.0	262.0	
370.1	CARBONDALE	ANNA	BLACK SHALE	3.5	271.0	
366.6	CARBONDALE		CLOD	0.5	274.5	PROB. CLYSH
366.1	CARBONDALE	HERRIN	COAL	7.1	275.0	
359.0	CARBONDALE		SANDY LIMESTONE	0.4	282.1	

MAPID: 11700005000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 30 QUARTERS/FOOTAGES: NE NW NW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.810296 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.463613 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 641.0 LOGGED (FT.): 282.1 LOG TYPE: Drillers Log

SOURCE: CRAWFORD A W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
396.0	MODESTO	PIASA	LIMESTONE	6.0	245.0
390.0	MODESTO		UNCLASSIFIED	2.0	251.0
388.0	CARBONDALE		UNCLASSIFIED	9.0	253.0
379.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	262.0
374.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.0	267.0
373.0	CARBONDALE		UNCLASSIFIED	1.0	268.0
372.0	CARBONDALE	BRERETON	LIMESTONE	2.0	269.0
370.0	CARBONDALE	ANNA	BLACK SHALE	4.0	271.0
366.0	CARBONDALE	HERRIN	COAL	7.1	275.0

MAPID: 11700007000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 30 QUARTERS/FOOTAGES: NE NE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.797358 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.462719 DATE COLLECTED: 7 / 0 / 1903

SURFACE ELEVATION (FT.): 657.5 LOGGED (FT.): 314.0 LOG TYPE: Drillers Log

SOURCE: A.W. CRAWFORD (OPTIONS), #5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
657.5			UNCONSOLIDATED	8.0	0.0	
649.5			SAND	16.0	8.0	QUICK SAND
633.5			SAND & GRAVEL	20.0	24.0	
613.5			CLAY	36.0	44.0	
577.5	MODESTO	CARLINVILLE	LIMESTONE	8.0	80.0	
569.5	MODESTO		UNDERCLAY	5.0	88.0	
564.5	MODESTO		LIMESTONE	2.0	93.0	
562.5	MODESTO		SHALE	40.0	95.0	
522.5	MODESTO		LIMESTONE	2.0	135.0	
520.5	MODESTO		UNDERCLAY	1.0	137.0	
519.5	MODESTO		BLACK SHALE	7.0	138.0	
512.5	MODESTO	CHAPEL	COAL	2.0	145.0	
510.5	MODESTO		UNDERCLAY	5.0	147.0	
505.5	MODESTO		SHALE	60.0	152.0	
445.5	MODESTO		LIMESTONE	2.0	212.0	
443.5	MODESTO		UNDERCLAY	5.0	214.0	
438.5	MODESTO		LIMESTONE	2.0	219.0	
436.5	MODESTO		BLACK SHALE	8.0	221.0	
428.5	MODESTO		SHALE	11.0	229.0	
417.5	MODESTO		SHALE	20.0	240.0	
397.5	MODESTO		LIMESTONE	3.0	260.0	
394.5	MODESTO		UNDERCLAY	8.0	263.0	
386.5	MODESTO	PIASA	LIMESTONE	5.5	271.0	
381.0	MODESTO		CLOD	1.0	276.5	PROB. CLYSH
380.0	CARBONDALE	DANVILLE	COAL	0.3	277.5	
379.7	CARBONDALE		UNDERCLAY	2.3	277.8	
377.5	CARBONDALE		LIMESTONE	1.0	280.0	
376.5	CARBONDALE		SHALE	6.0	281.0	
370.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	287.0	
367.5	CARBONDALE		SHALE	2.0	290.0	
365.5	CARBONDALE		LIMESTONE	1.5	292.0	
364.0	CARBONDALE		SHALE	0.5	293.5	
363.5	CARBONDALE		LIMESTONE	2.0	294.0	
361.5	CARBONDALE		SHALE	5.5	296.0	
356.0	CARBONDALE	BRERETON	LIMESTONE	3.0	301.5	
353.0	CARBONDALE	ANNA	BLACK SHALE	1.5	304.5	
351.5	CARBONDALE	HERRIN	COAL	6.8	306.0	
344.7	CARBONDALE		UNDERCLAY	1.2	312.8	

MAPID: 11700007000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 30 QUARTERS/FOOTAGES: NE NE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.797358 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.462719 DATE COLLECTED: 7 / 0 / 1903

SURFACE ELEVATION (FT.): 658.0 LOGGED (FT.): 313.8 LOG TYPE: Drillers Log

SOURCE: CRAWFORD A W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
386.2	MODESTO	PIASA	LIMESTONE	5.5	271.8
380.7	MODESTO		UNCLASSIFIED	1.0	277.3
379.7	CARBONDALE	DANVILLE	COAL	0.3	278.3
379.4	CARBONDALE		UNCLASSIFIED	9.3	278.6
370.1	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	9.0	287.9
361.1	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.8	296.9
358.3	CARBONDALE		UNCLASSIFIED	2.8	299.7
355.5	CARBONDALE	BRERETON	LIMESTONE	3.0	302.5
352.5	CARBONDALE	ANNA	BLACK SHALE	1.5	305.5
351.0	CARBONDALE	HERRIN	COAL	6.8	307.0

MAPID: 11700008000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 30 QUARTERS/FOOTAGES: SW SE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.801916 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.451731 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 656.4 LOGGED (FT.): 302.0 LOG TYPE: Drillers Log

SOURCE: A.W. CRAWFORDS OPTION, HOLE #7 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
656.4			UNCONSOLIDATED	10.0	0.0	
646.4			SAND & GRAVEL	30.0	10.0	
616.4			CLAY	88.0	40.0	
528.4	MODESTO		LIMESTONE	3.0	128.0	
525.4	MODESTO		BLACK SHALE	6.0	131.0	
519.4	MODESTO		LIMESTONE	2.0	137.0	
517.4	MODESTO	CHAPEL	COAL	2.0	139.0	
515.4	MODESTO		UNDERCLAY	7.0	141.0	
508.4	MODESTO		SHALE	2.0	148.0	
506.4	MODESTO		LIMESTONE	2.0	150.0	
504.4	MODESTO		SHALE	54.0	152.0	
450.4	MODESTO		UNKNOWN	3.0	206.0	LOG HAS "FLINT BOULDER"
447.4	MODESTO		UNDERCLAY	34.0	209.0	
413.4	MODESTO		SHALE	20.0	243.0	
393.4	MODESTO	PIASA	LIMESTONE	5.0	263.0	
388.4	MODESTO		BLACK SHALE	1.0	268.0	
387.4	MODESTO		CLOD	1.0	269.0	PROB. CLYSH
386.4	CARBONDALE	DANVILLE	COAL	0.5	270.0	
385.9	CARBONDALE		UNDERCLAY	5.5	270.5	
380.4	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	276.0	
374.4	CARBONDALE		SHALE	2.0	282.0	
372.4	CARBONDALE		LIMESTONE	2.3	284.0	
370.1	CARBONDALE		SHALE	4.7	286.3	
365.4	CARBONDALE	BRERETON	LIMESTONE	2.0	291.0	
363.4	CARBONDALE	ANNA	BLACK SHALE	0.5	293.0	
362.9	CARBONDALE	HERRIN	COAL	7.8	293.5	
355.1	CARBONDALE		UNDERCLAY	0.8	301.3	

MAPID: 11700008000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 30 QUARTERS/FOOTAGES: SW SE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.801916 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.451731 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 300.8 LOG TYPE: Drillers Log

SOURCE: CRAWFORD A W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
393.4	MODESTO	PIASA	LIMESTONE	5.0	262.6
388.4	MODESTO		UNCLASSIFIED	2.0	267.6
386.4	CARBONDALE	DANVILLE	COAL	0.5	269.6
385.9	CARBONDALE		UNCLASSIFIED	13.5	270.1
372.4	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	2.3	283.6
370.1	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.3	285.9
367.8	CARBONDALE		UNCLASSIFIED	2.3	288.2
365.5	CARBONDALE	BRERETON	LIMESTONE	2.0	290.5
363.5	CARBONDALE	ANNA	BLACK SHALE	0.5	292.5
363.0	CARBONDALE	HERRIN	COAL	7.8	293.0

MAPID: 11700006000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 31 QUARTERS/FOOTAGES: NE SE SW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.805207 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.438102 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 662.0 LOGGED (FT.): 322.3 LOG TYPE: Drillers Log

SOURCE: CRAWFORD A W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
370.2	MODESTO	PIASA	LIMESTONE	3.0	291.8
367.2	MODESTO		UNCLASSIFIED	2.0	294.8
365.2	CARBONDALE		UNCLASSIFIED	10.0	296.8
355.2	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	306.8
349.2	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.5	312.8
347.7	CARBONDALE		UNCLASSIFIED	1.5	314.3
346.2	CARBONDALE	BRERETON	LIMESTONE	3.0	315.8
343.2	CARBONDALE	ANNA	BLACK SHALE	3.2	318.8
340.0	CARBONDALE	HERRIN	COAL	0.3	322.0

MAPID: 11700009000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 31 QUARTERS/FOOTAGES: N2 SW NE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.80181 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.445366 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 634.0 LOGGED (FT.): 304.5 LOG TYPE: Drillers Log

SOURCE: CRAWFORD A W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
342.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	291.5
339.5	CARBONDALE		UNCLASSIFIED	3.0	294.5
336.5	CARBONDALE	BRERETON	LIMESTONE	2.0	297.5
334.5	CARBONDALE	ANNA	BLACK SHALE	4.5	299.5
330.0	CARBONDALE	HERRIN	COAL	0.5	304.0

MAPID: 11700010000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 31 QUARTERS/FOOTAGES: NW SE NE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.798285 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.445361 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 638.8 LOGGED (FT.): 372.0 LOG TYPE: Drillers Log

SOURCE: A.W. CRAWFORD (OPTIONS), HOLE #4 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
638.8			UNCONSOLIDATED	38.0	0.0	
600.8			SAND & GRAVEL	5.0	38.0	
595.8	MODESTO		SANDSTONE	8.0	43.0	
587.8	MODESTO		LIMESTONE	14.0	51.0	
573.8	MODESTO		UNDERCLAY	6.0	65.0	
567.8	MODESTO		LIMESTONE	5.0	71.0	
562.8	MODESTO		SHALE	49.0	76.0	
513.8	MODESTO		SANDSTONE	1.0	125.0	
512.8	MODESTO		SHALE	7.0	126.0	
505.8	MODESTO		UNDERCLAY	10.0	133.0	
495.8	MODESTO		LIMESTONE	8.0	143.0	
487.8			CLAYSTONE & SILTSTONE	42.0	151.0	
445.8			SANDSTONE	6.0	193.0	
439.8			CLAYSTONE & SILTSTONE	6.0	199.0	
433.8			UNDERCLAY	2.0	205.0	
431.8			SANDY LIMESTONE	4.0	207.0	
427.8			SHALE	14.0	211.0	
413.8			SANDY LIMESTONE	20.0	225.0	
393.8			SHALE	4.0	245.0	
389.8			BLACK SHALE	3.0	249.0	
386.8			LIMESTONE	1.0	252.0	
385.8			BLACK SHALE	1.0	253.0	
384.8	CARBONDALE	DANVILLE	COAL	0.7	254.0	
384.1	CARBONDALE		UNDERCLAY	1.3	254.7	
382.8	CARBONDALE		SANDY LIMESTONE	9.0	256.0	
373.8	CARBONDALE		UNDERCLAY	2.0	265.0	
371.8	CARBONDALE		SHALE	2.0	267.0	
369.8	CARBONDALE	BANKSTON FORK	SANDY LIMESTONE	2.0	269.0	
367.8	CARBONDALE	BANKSTON FORK	SHALE	2.0	271.0	
365.8	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	273.0	
360.8	CARBONDALE		UNDERCLAY	3.0	278.0	
357.8	CARBONDALE		SANDY SHALE	3.0	281.0	
354.8	CARBONDALE	BRERETON	LIMESTONE	2.0	284.0	
352.8	CARBONDALE	ANNA	BLACK SHALE	0.5	286.0	
352.3	CARBONDALE	HERRIN	COAL	0.5	286.5	
351.8	CARBONDALE	HERRIN	SHALE	2.2	287.0	
349.6	CARBONDALE	HERRIN	COAL	0.3	289.2	
349.3	CARBONDALE	HERRIN	UNDERCLAY	4.5	289.5	W/ COAL
344.8	CARBONDALE		LIMESTONE	2.0	294.0	

342.8	CARBONDALE	SHALE	3.0	296.0
339.8	CARBONDALE	SANDSTONE	3.0	299.0
336.8	CARBONDALE	UNDERCLAY	1.0	302.0
335.8	CARBONDALE	LIMESTONE	2.0	303.0
333.8	CARBONDALE	SANDY SHALE	14.0	305.0
319.8	CARBONDALE	SANDY LIMESTONE	17.0	319.0
302.8	CARBONDALE	SHALE	2.0	336.0
300.8	CARBONDALE	SANDY LIMESTONE	6.0	338.0
294.8	CARBONDALE	SANDY SHALE	28.0	344.0

MAPID: 11700010000C **VERSION:** 2 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 12N 6W **SECTION:** 31 **QUARTERS/FOOTAGES:** NW SE NE
QUADRANGLE: VIRDEN SOUTH **LONGITUDE:** -89.798285 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.445361 **DATE COLLECTED:** 0 / 0 / 1903
SURFACE ELEVATION (FT.): 639.0 **LOGGED (FT.):** 294.5 **LOG TYPE:** Drillers Log
SOURCE: CRAWFORD A W **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN COMMENT
382.5	MODESTO	PIASA	LIMESTONE	5.5	256.5
377.0	MODESTO		UNCLASSIFIED	3.5	262.0
373.5	CARBONDALE		UNCLASSIFIED	8.0	265.5
365.5	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	273.5
360.5	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	3.0	278.5
357.5	CARBONDALE		UNCLASSIFIED	3.0	281.5
354.5	CARBONDALE	BRERETON	LIMESTONE	2.0	284.5
352.5	CARBONDALE	ANNA	BLACK SHALE	0.5	286.5
352.0	CARBONDALE	HERRIN	COAL	7.5	287.0

MAPID: 11700011000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 31 QUARTERS/FOOTAGES: E2 NE NE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.795982 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.448072 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 641.7 LOGGED (FT.): 307.0 LOG TYPE: Drillers Log

SOURCE: A.W. CRAWFORD (OPTION), HOLE #6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
641.7			UNCONSOLIDATED	44.0	0.0
597.7	MODESTO		LIMESTONE	11.0	44.0
586.7	MODESTO		SANDY SHALE	5.0	55.0
581.7	MODESTO		UNDERCLAY	5.0	60.0
576.7	MODESTO		SANDY LIMESTONE	4.0	65.0
572.7	MODESTO		BLACK SHALE	2.0	69.0
570.7	MODESTO		UNDERCLAY	4.0	71.0
566.7	MODESTO		SANDY SHALE	43.0	75.0
523.7	MODESTO		CLAYSTONE & SILTSTONE	16.0	118.0
507.7	MODESTO		BLACK SHALE	6.0	134.0
501.7	MODESTO		UNDERCLAY	7.0	140.0
494.7	MODESTO		SANDSTONE	7.0	147.0
487.7	MODESTO		SHALE	42.0	154.0
445.7	MODESTO		SANDSTONE	8.0	196.0
437.7	MODESTO		CLAYSTONE & SILTSTONE	14.0	204.0
423.7	MODESTO		LIMESTONE	2.0	218.0
421.7	MODESTO		SHALE	12.0	220.0
409.7	MODESTO		SHALE	17.0	232.0
392.7	MODESTO		SANDY SHALE	2.0	249.0
390.7	MODESTO		BLACK SHALE	10.0	251.0
380.7	MODESTO		UNDERCLAY	5.0	261.0
375.7	MODESTO	PIASA	LIMESTONE	6.0	266.0
369.7	MODESTO		SHALE	7.0	272.0
362.7	CARBONDALE		SANDSTONE	3.0	279.0
359.7	CARBONDALE		SHALE	1.0	282.0
358.7	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	283.0
352.7	CARBONDALE		SHALE	4.0	289.0
348.7	CARBONDALE	BRERETON	LIMESTONE	3.0	293.0
345.7	CARBONDALE	ANNA	BLACK SHALE	2.2	296.0
343.5	CARBONDALE	HERRIN	COAL	7.8	298.2
335.7	CARBONDALE		UNDERCLAY	1.0	306.0

MAPID: 11700011000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 31 QUARTERS/FOOTAGES: E2 NE NE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.795982 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.448072 DATE COLLECTED: 0 / 0 / 1903

SURFACE ELEVATION (FT.): 642.0 LOGGED (FT.): 305.8 LOG TYPE: Drillers Log

SOURCE: CRAWFORD A W WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
376.2	MODESTO	PIASA	LIMESTONE	6.0	265.8
370.2	MODESTO		UNCLASSIFIED	3.5	271.8
366.7	CARBONDALE		UNCLASSIFIED	7.5	275.3
359.2	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	282.8
353.2	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	288.8
351.2	CARBONDALE		UNCLASSIFIED	2.0	290.8
349.2	CARBONDALE	BRERETON	LIMESTONE	3.0	292.8
346.2	CARBONDALE	ANNA	BLACK SHALE	2.2	295.8
344.0	CARBONDALE	HERRIN	COAL	7.8	298.0

MAPID: 11700012000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 32 QUARTERS/FOOTAGES: SE NE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.778159 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.444539 DATE COLLECTED:

SURFACE ELEVATION (FT.): 672.0 LOGGED (FT.): 351.8 LOG TYPE: Drillers Log

SOURCE: GIRARD COLLIERIES CO., HOLE #5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
672.0			UNCONSOLIDATED	190.0	0.0	
482.0	MODESTO	CHAPEL	COAL	1.3	190.0	
480.7	MODESTO		SHALE	71.0	191.3	W/ IRON BANDS AT BASE
409.7	MODESTO		FOSSILIFEROUS LIMESTONE	0.8	262.3	
408.8	MODESTO		BLACK SHALE	8.2	263.2	
400.7	MODESTO		COAL	1.0	271.3	
399.7	MODESTO		UNDERCLAY	2.8	272.3	
396.9	MODESTO		SHALE	19.0	275.1	
377.9	MODESTO		BLACK SHALE	1.7	294.1	
376.2	MODESTO		COAL	0.5	295.8	
375.7	MODESTO		UNDERCLAY	3.3	296.3	
372.5	MODESTO		LIMESTONE	1.3	299.5	
371.2	MODESTO		SANDSTONE	10.2	300.8	
361.1	MODESTO		SHALE	2.0	310.9	
359.1	MODESTO		SHALE	1.1	312.9	
358.0	MODESTO	PIASA	LIMESTONE	3.3	314.0	
354.7	MODESTO		SHALE	3.3	317.3	
351.4	MODESTO		LIMESTONE	1.3	320.6	
350.2	MODESTO		BLACK SHALE	1.0	321.8	
349.2	CARBONDALE		SHALE	2.8	322.8	
346.3	CARBONDALE		SHALE	6.0	325.7	
340.3	CARBONDALE	BANKSTON FORK	FOSSILIFEROUS LIMESTONE	2.0	331.7	
338.3	CARBONDALE		SANDSTONE	1.4	333.7	
336.9	CARBONDALE		CALCAREOUS SHALE	5.3	335.1	
331.7	CARBONDALE	BRERETON	LIMESTONE	4.0	340.3	
327.7	CARBONDALE	ANNA	BLACK SHALE	0.5	344.3	
327.2	CARBONDALE	HERRIN	COAL	7.0	344.8	

MAPID: 11700012000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 32 QUARTERS/FOOTAGES: SE NE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.778159 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.444539 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 672.0 LOGGED (FT.): 352.0 LOG TYPE: Drillers Log

SOURCE: NO COMPANY WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
357.8	MODESTO	PIASA	LIMESTONE	3.3	314.2
354.5	MODESTO		UNCLASSIFIED	4.5	317.5
350.0	CARBONDALE		UNCLASSIFIED	9.8	322.0
340.2	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	2.0	331.8
338.2	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.4	333.8
336.8	CARBONDALE	CONANT	UNCLASSIFIED	1.0	335.2
335.8	CARBONDALE		UNCLASSIFIED	4.3	336.2
331.5	CARBONDALE	BRERETON	LIMESTONE	4.0	340.5
327.5	CARBONDALE	ANNA	BLACK SHALE	0.5	344.5
327.0	CARBONDALE	HERRIN	COAL	7.0	345.0

MAPID: 11700634000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 33 QUARTERS/FOOTAGES: 330' N line, 238' W line of SE NE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.760792 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.445592 DATE COLLECTED: 9 / 0 / 1954

SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 345.0 LOG TYPE: Electric Log

SOURCE: KRYSL CHARLES H WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
333.0	CARBONDALE	HERRIN	COAL	3.0	342.0

MAPID: 11701086000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 34 QUARTERS/FOOTAGES: 2650' N line, 2650' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.747592

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.442907

DATE COLLECTED:

SURFACE ELEVATION (FT.): 677.0 LOGGED (FT.): 354.8

LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED C-14-66

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
372.6	MODESTO	PIASA	LIMESTONE	6.0	304.4	
366.6	CARBONDALE		SANDSTONE	8.0	310.4	
358.6	CARBONDALE		DARK GRAY SHALE	6.5	318.4	
352.1	CARBONDALE		CLAYSTONE	7.3	324.9	
344.9	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.9	332.1	UPPER BENCH
341.0	CARBONDALE	BANKSTON FORK	SHALE	3.2	336.0	SHALE PARTING
337.8	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	0.5	339.2	LOWER BENCH
337.3	CARBONDALE	LAWSON	MOTTLED SHALE	2.5	339.7	
334.8	CARBONDALE	LAWSON	MOTTLED SHALE	1.8	342.2	
333.0	CARBONDALE	LAWSON	SILTSTONE	0.2	344.0	
332.9	CARBONDALE	LAWSON	SILTSTONE	0.9	344.1	
332.0	CARBONDALE	ANNA	DARK GRAY SHALE	2.0	345.0	
330.0	CARBONDALE	HERRIN	COAL	7.8	347.0	

MAPID: 11701086000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 34 QUARTERS/FOOTAGES: 2650' N line, 2650' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.747592

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.442907

DATE COLLECTED:

SURFACE ELEVATION (FT.): 677.0 LOGGED (FT.): 354.8

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED C-14-66

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
369.2	MODESTO	PIASA	LIMESTONE	6.0	307.8	
363.2	MODESTO		UNCLASSIFIED	5.0	313.8	
358.2	CARBONDALE		UNCLASSIFIED	16.8	318.8	
341.4	CARBONDALE	BANKSTON FORK	LIMESTONE	4.1	335.6	
337.3	CARBONDALE	ANVIL ROCK	SANDSTONE	2.5	339.7	
334.8	CARBONDALE		SHALE	0.8	342.2	
334.0	CARBONDALE	BRERETON	LIMESTONE	2.0	343.0	
332.0	CARBONDALE	ANNA	BLACK SHALE	2.0	345.0	
330.0	CARBONDALE	HERRIN	COAL	7.8	347.0	

MAPID: 11701086000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 34 QUARTERS/FOOTAGES: 2650' N line, 2650' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.747592 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.442907 DATE COLLECTED:

SURFACE ELEVATION (FT.): 677.0 LOGGED (FT.): 356.0 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED C-14-66 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
330.2	CARBONDALE	HERRIN	COAL	7.8	346.8

MAPID: 11701086000C VERSION: 4

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 34 QUARTERS/FOOTAGES: 2650' N line, 2650' E line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.747592 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.442907 DATE COLLECTED: 1 / 13 / 1966

SURFACE ELEVATION (FT.): 677.0 LOGGED (FT.): 356.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-14-66 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
677.0	PLEISTOCENE		UNCONSOLIDATED	10.0	0.0
667.0	PLEISTOCENE		UNCONSOLIDATED	5.0	10.0
662.0			SANDSTONE	72.0	15.0
590.0			SANDSTONE	15.0	87.0
575.0			SANDSTONE	24.0	102.0
551.0			SHALE	2.5	126.0
548.5			SANDSTONE	32.5	128.5
516.0			SHALE	3.0	161.0
513.0			SANDY SHALE	14.0	164.0
499.0			LIMESTONE	2.0	178.0
497.0			SHALE	3.0	180.0
494.0			SANDY SHALE	12.0	183.0
482.0			SANDSTONE	35.0	195.0
447.0			SANDY SHALE	57.0	230.0
390.0			SHALE	3.0	287.0
387.0			SHALE	18.0	290.0
369.0			LIMESTONE	6.0	308.0
363.0			SANDSTONE	8.0	314.0
355.0			SHALE	6.5	322.0
348.5			CLAYSTONE & SILTSTONE	7.3	328.5
341.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.9	335.8
337.3	CARBONDALE	LAWSON	LAMINATED SHALE	3.2	339.7
334.2	CARBONDALE	BRERETON	LIMESTONE	0.5	342.8
333.7	CARBONDALE		SHALE	0.5	343.3
333.2	CARBONDALE		SANDY SHALE	1.0	343.8
332.2	CARBONDALE	ANNA	SHALE	2.0	344.8
330.2	CARBONDALE	HERRIN	COAL	7.8	346.8
322.4			UNDERCLAY	0.9	354.6
321.5			LIMESTONE	0.5	355.5

MAPID: 11701087000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 35 QUARTERS/FOOTAGES: 2600' S line, 2600' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.728901

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.442835

DATE COLLECTED:

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 329.2

LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED C-13-66

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
375.0	MODESTO	PIASA	LIMESTONE	8.0	280.0	
367.0	MODESTO		VARRIGATED SHALE	4.0	288.0	
363.0	CARBONDALE		SANDSTONE	8.1	292.0	
354.9	CARBONDALE		CLAYSTONE	8.4	300.1	
346.5	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	4.6	308.5	SHALE PARTING
341.9	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.8	313.1	LOWER BENCH
338.1	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	1.8	316.9	
336.3	CARBONDALE	ANNA	DARK GRAY SHALE	0.3	318.7	
333.0	CARBONDALE	HERRIN	COAL	7.2	322.0	

MAPID: 11701087000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 35 QUARTERS/FOOTAGES: 2600' S line, 2600' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.728901

GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.442835

DATE COLLECTED:

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 329.2

LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED C-13-66

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
374.8	MODESTO	PIASA	LIMESTONE	8.0	280.2	
366.8	MODESTO		UNCLASSIFIED	4.0	288.2	
362.8	CARBONDALE		UNCLASSIFIED	18.6	292.2	
344.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	310.8	
341.5	CARBONDALE	ANVIL ROCK	SANDSTONE	1.3	313.5	
340.2	CARBONDALE	CONANT	LIMESTONE	0.3	314.8	
339.9	CARBONDALE		SHALE	0.9	315.1	
339.0	CARBONDALE	BRERETON	LIMESTONE	5.7	316.0	
333.3	CARBONDALE	ANNA	BLACK SHALE	0.3	321.7	
333.0	CARBONDALE	HERRIN	COAL	7.2	322.0	

MAPID: 11701087000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 35 QUARTERS/FOOTAGES: 2600' S line, 2600' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.728901 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.442835 DATE COLLECTED:

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 331.0 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED C-13-66 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
333.5	CARBONDALE	HERRIN	COAL	7.2	321.5

MAPID: 11701087000C VERSION: 4

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 35 QUARTERS/FOOTAGES: 2600' S line, 2600' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.728901 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.442835 DATE COLLECTED: 1 / 18 / 1966

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 331.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-13-66 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
650.0	PLEISTOCENE		UNCONSOLIDATED	10.0	0.0	
640.0	PLEISTOCENE		UNCONSOLIDATED	15.0	10.0	
625.0			SANDSTONE	17.0	25.0	
608.0			SANDY SHALE	12.0	42.0	
596.0			LIMESTONE	4.0	54.0	
592.0			BLACK SHALE	2.0	58.0	
590.0			SANDY SHALE	15.0	60.0	
575.0			LIMESTONE	5.0	75.0	
570.0			SHALE	4.0	80.0	
566.0			SANDSTONE	36.0	84.0	
530.0			SHALE	3.0	120.0	
527.0			SANDY SHALE	27.0	123.0	
500.0			SANDSTONE	75.0	150.0	
425.0			SANDY SHALE	20.0	225.0	
405.0			SANDSTONE	35.0	245.0	
370.0			LIMESTONE	8.0	280.0	
362.0			SHALE	4.0	288.0	MULTI
358.0			SANDSTONE	10.7	292.0	
347.3			CLAYSTONE & SILTSTONE	5.8	302.7	
341.5			SHALE	2.3	308.5	
339.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.7	310.8	
336.5	CARBONDALE		LAMINATED SHALE	0.8	313.5	
335.7	CARBONDALE		LIMESTONE	0.3	314.3	
335.4	CARBONDALE		SHALE	0.9	314.6	
334.5	CARBONDALE	BRERETON	LIMESTONE	5.5	315.5	
329.0	CARBONDALE		SHALE	0.5	321.0	
328.5	CARBONDALE	HERRIN	COAL	7.3	321.5	
321.2			UNDERCLAY	1.3	328.8	
320.0			LIMESTONE	1.0	330.0	

MAPID: 11700013000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 36 QUARTERS/FOOTAGES: NE NE SE

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.701669 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.442195 DATE COLLECTED: 0 / 0 / 1900

SURFACE ELEVATION (FT.): 666.0 LOGGED (FT.): 347.6 LOG TYPE: Drillers Log

SOURCE: NO COMPANY WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
327.0	CARBONDALE	HERRIN	COAL	8.6	339.0

MAPID: 11701088000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 36 QUARTERS/FOOTAGES: 2600' S line, 2500' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.710404 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.442941 DATE COLLECTED:

SURFACE ELEVATION (FT.): 665.0 LOGGED (FT.): 364.5 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED C-12-66 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
348.2	MODESTO	PIASA	LIMESTONE	3.8	316.8
344.5	MODESTO		VARRIGATED SHALE	12.0	320.5
332.5	CARBONDALE	DANVILLE	DARK GRAY SHALE	2.3	332.5
330.2	CARBONDALE		CLAYSTONE	7.3	334.8
322.9	CARBONDALE		SILTY SHALE	0.9	342.1
322.0	CARBONDALE		CLAYSTONE	3.8	343.0
318.1	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	5.0	346.9
313.1	CARBONDALE	LAWSON	CALCAREOUS SHALE	0.2	351.9
313.0	CARBONDALE	LAWSON	CLAYSTONE	2.8	352.0
310.2	CARBONDALE	BRERETON	LIMESTONE	1.9	354.8
308.3	CARBONDALE	ANNA	BLACK SHALE	1.3	356.7
307.0	CARBONDALE	HERRIN	COAL	6.5	358.0

MAPID: 11701088000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 36 QUARTERS/FOOTAGES: 2600' S line, 2500' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.710404 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.442941 DATE COLLECTED:

SURFACE ELEVATION (FT.): 668.0 LOGGED (FT.): 364.5 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED C-12-66 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
352.1	MODESTO	PIASA	LIMESTONE	3.8	315.9
348.3	MODESTO		UNCLASSIFIED	6.2	319.7
342.1	CARBONDALE		UNCLASSIFIED	21.0	325.9
321.1	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	346.9
317.1	CARBONDALE	ANVIL ROCK	SANDSTONE	0.2	350.9
316.9	CARBONDALE	CONANT	LIMESTONE	0.8	351.1
316.1	CARBONDALE		SHALE	2.9	351.9
313.2	CARBONDALE	BRERETON	LIMESTONE	1.9	354.8
311.3	CARBONDALE	ANNA	BLACK SHALE	1.3	356.7
310.0	CARBONDALE	HERRIN	COAL	6.5	358.0

MAPID: 11701088000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 36 QUARTERS/FOOTAGES: 2600' S line, 2500' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.710404 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.442941 DATE COLLECTED:

SURFACE ELEVATION (FT.): 665.0 LOGGED (FT.): 366.5 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED C-12-66 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INC.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
307.1	CARBONDALE	HERRIN	COAL	6.5	357.9

MAPID: 11701088000C VERSION: 4

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 36 QUARTERS/FOOTAGES: 2600' S line, 2500' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.710404 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.442941 DATE COLLECTED: 1 / 19 / 1966

SURFACE ELEVATION (FT.): 665.0 LOGGED (FT.): 366.5 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-12-66 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
665.0	PLEISTOCENE		UNCONSOLIDATED	15.0	0.0	
650.0	PLEISTOCENE		UNCONSOLIDATED	70.0	15.0	
580.0			SANDSTONE	16.0	85.0	
564.0			LIMESTONE	6.0	101.0	
558.0			SHALE	9.0	107.0	
549.0			LIMESTONE	6.0	116.0	
543.0			SHALE	4.0	122.0	
539.0			SHALE	4.0	126.0	
535.0			SANDY SHALE	13.0	130.0	
522.0			SANDSTONE	27.0	143.0	
495.0			SHALE	5.0	170.0	
490.0			SANDY SHALE	40.0	175.0	
450.0			SANDSTONE	22.0	215.0	
428.0			SHALE	5.0	237.0	
423.0			COAL	5.5	242.0	
417.5			UNDERCLAY	2.5	247.5	
415.0			SANDY SHALE	52.0	250.0	
363.0			SHALE	3.0	302.0	
360.0			SANDSTONE	11.0	305.0	
349.0			LIMESTONE	3.8	316.0	
345.2			LAMINATED SHALE	12.3	319.8	
333.0			SHALE	1.7	332.0	
331.3			LIMESTONE	1.0	333.7	DARK
330.3			CALCAREOUS SHALE	3.1	334.7	
327.2			CLAYSTONE & SILTSTONE	4.3	337.8	
323.0			LAMINATED SHALE	5.0	342.0	
318.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.8	347.0	
314.2	CARBONDALE	LAWSON	LAMINATED SHALE	3.7	350.8	
310.5	CARBONDALE	BRERETON	LIMESTONE	1.8	354.5	
308.7	CARBONDALE		LAMINATED SHALE	1.3	356.3	
307.5	CARBONDALE	HERRIN	COAL	6.4	357.5	
301.1			UNDERCLAY	0.5	363.9	
300.6			LIMESTONE	2.1	364.4	

MAPID: 11701300000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 36 QUARTERS/FOOTAGES: 50' N line, 0' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.719441 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.450215 DATE COLLECTED:

SURFACE ELEVATION (FT.): 680.0 LOGGED (FT.): 341.0 LOG TYPE: Survey Core Study

SOURCE: FREEMAN UNITED CM-11-69 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
351.7	CARBONDALE	HERRIN	COAL	7.3	328.3	

MAPID: 11701300000C VERSION: 2

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 6W SECTION: 36 QUARTERS/FOOTAGES: 50' N line, 0' W line

QUADRANGLE: FARMERSVILLE LONGITUDE: -89.719441 GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 39.450215 DATE COLLECTED: 6 / 11 / 1969

SURFACE ELEVATION (FT.): 667.0 LOGGED (FT.): 341.0 LOG TYPE: Drillers Log

SOURCE: FREEMAN UNITED COAL CO. C-11-69 WELL TYPE: Coal Test

COMMENT: PERMIT FILES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
667.0	PLEISTOCENE		UNCONSOLIDATED	7.0	0.0	
660.0	PLEISTOCENE		UNCONSOLIDATED	36.0	7.0	
624.0	PLEISTOCENE		SAND	1.5	43.0	SS W/ BOULDERS
622.5	PLEISTOCENE		UNCONSOLIDATED	18.0	44.5	
604.5			SHALE	2.5	62.5	
602.0			SANDY SHALE	8.1	65.0	
593.9			BLACK SHALE	1.0	73.1	
592.9			CALCAREOUS SHALE	10.2	74.1	
582.7			CALCAREOUS SHALE	3.5	84.3	
579.2			SHALE	1.5	87.8	
577.7			SHALE	2.4	89.3	
575.3			CALCAREOUS SHALE	4.2	91.7	
571.2			LIMESTONE	4.2	95.8	
567.0			SANDSTONE	13.1	100.0	SS W/ SDY SH SEAMS
553.9			SANDY SHALE	31.4	113.1	SDY SH W/ SS
522.5			SILTY SHALE	12.7	144.5	
509.8			SHALE	3.1	157.2	SH W/ SIDERITE
506.7			CALCAREOUS SHALE	1.0	160.3	
505.7			SHALE	7.5	161.3	
498.2			LIMESTONE	0.3	168.8	
498.0			COAL	0.7	169.0	
497.3			SANDY SHALE	20.7	169.7	SDY SH W/ SS
476.7			COAL	1.2	190.3	
475.5			SILTY SHALE	3.8	191.5	
471.7			SILTY SHALE	25.3	195.3	
446.5			SANDY SHALE	8.0	220.5	SDY SH W/ SS
438.5			CALCAREOUS SANDSTONE	1.5	228.5	
437.0			SANDSTONE	14.7	230.0	
422.3			SILTY SHALE	9.1	244.7	
413.2			COAL	0.3	253.8	
413.0			CALCAREOUS SHALE	22.8	254.0	
390.2			SHALE	1.2	276.8	
389.0			SANDY SHALE	10.7	278.0	SDY SH W/ NODS
378.3			LIMESTONE	4.3	288.7	GRAY
374.0			CALCAREOUS SHALE	2.2	293.0	
371.8			SANDY SHALE	5.8	295.2	
366.1			CALCAREOUS SANDSTONE	2.1	300.9	
364.0			SILTY SHALE	4.8	303.0	

359.2			SHALE	2.0	307.8	
357.2			CALCAREOUS SHALE	0.3	309.8	
356.9			COAL	0.1	310.1	SLATEY CO
356.8			UNDERCLAY	0.4	310.2	UCLY W/ COAL PARTINGS
356.4			UNDERCLAY	3.4	310.6	
353.0			SHALE	1.6	314.0	
351.4			CALCAREOUS SHALE	2.3	315.6	
349.2			CALCAREOUS SHALE	3.6	317.8	
345.6	CARBONDALE	BRERETON	LIMESTONE	6.2	321.4	
339.4	CARBONDALE	ANNA	BLACK SHALE	0.7	327.6	
338.7	CARBONDALE	HERRIN	COAL	7.3	328.3	
331.5	CARBONDALE		CLAYSTONE	0.3	335.5	
331.2	CARBONDALE		SANDY SHALE	2.9	335.8	
328.2	CARBONDALE		NODULAR LIMESTONE	2.3	338.8	

MAPID: 11701405000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 7W **SECTION:** 1 **QUARTERS/FOOTAGES:** 40' N line, 2590' W line
QUADRANGLE: VIRDEN NORTH **LONGITUDE:** -89.822545 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.522796 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 670.0 **LOGGED (FT.):** 276.0 **LOG TYPE:** Drillers Log
SOURCE: SANGAMON COUNTY LAND COMPANY B-621 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	OVERBURDEN	COMMENT
431.5	CARBONDALE	DANVILLE	COAL	1.0	238.5	
404.3	CARBONDALE	HERRIN	COAL	5.5	265.7	

MAPID: 11701405000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 1 QUARTERS/FOOTAGES: 40' N line, 2590' W line

QUADRANGLE: VIRDEN NORTH LONGITUDE: -89.822545 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.522796 DATE COLLECTED:

SURFACE ELEVATION (FT.): 668.0 LOGGED (FT.): 271.5 LOG TYPE: Survey Core Study

SOURCE: SANGAMON COUNTY LAND COMPANY B-621 WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
437.6	MODESTO	PIASA	LIMESTONE	3.5	230.4
434.1	MODESTO		GRAY SHALE	5.0	233.9
429.1	CARBONDALE	DANVILLE	COAL	1.0	238.9
428.1	CARBONDALE		CALCAREOUS SHALE	13.5	239.9
414.6	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.3	253.4
411.3	CARBONDALE	LAWSON	MOTTLED SHALE	3.0	256.7
408.3	CARBONDALE	LAWSON	DARK GRAY SHALE	0.1	259.7
408.2	CARBONDALE	LAWSON	NODULAR LIMESTONE	0.5	259.8
407.7	CARBONDALE	LAWSON	SILTSTONE	0.3	260.3
407.4	CARBONDALE	LAWSON	MOTTLED SHALE	0.5	260.6
406.9	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	3.4	261.1
403.5	CARBONDALE	ANNA	BLACK SHALE	1.5	264.5
402.0	CARBONDALE	HERRIN	COAL	5.5	266.0

MAPID: 11722411000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 1 QUARTERS/FOOTAGES: 50' S line, 1620' W line of SW

QUADRANGLE: VIRDEN NORTH LONGITUDE: -89.825992 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.508419 DATE COLLECTED:

SURFACE ELEVATION (FT.): 653.0 LOGGED (FT.): 251.0 LOG TYPE: Drillers Log

SOURCE: NICOR 78-43 WELL TYPE: Coal Test

COMMENT: CORE SURVEY STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
413.5	CARBONDALE	HERRIN	COAL	4.0	239.5

MAPID: 11721658000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 2 QUARTERS/FOOTAGES: 22' N line, 1320' W line of NW

QUADRANGLE: VIRDEN NORTH LONGITUDE: -89.845886 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.522652 DATE COLLECTED:

SURFACE ELEVATION (FT.): 690.0 LOGGED (FT.): 278.0 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS GAS CO. B-6 WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY; C-11310

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
423.2	CARBONDALE	HERRIN	COAL	6.2	266.8

MAPID: 11722414000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 7W **SECTION:** 2 **QUARTERS/FOOTAGES:** 40' N line, 40' E line of NE NE
QUADRANGLE: VIRDEN NORTH **LONGITUDE:** -89.831918 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.522684 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 675.0 **LOGGED (FT.):** 280.0 **LOG TYPE:** Drillers Log
SOURCE: NICOR 78-35 **WELL TYPE:** Coal Test
COMMENT: CORE SURVEY STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
409.3	CARBONDALE	HERRIN	COAL	3.9	265.7	

MAPID: 11722415000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 7W **SECTION:** 2 **QUARTERS/FOOTAGES:** 1520' S line, 1960' E line of SE
QUADRANGLE: VIRDEN NORTH **LONGITUDE:** -89.838755 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.512462 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 670.0 **LOGGED (FT.):** 258.0 **LOG TYPE:** Drillers Log
SOURCE: NICOR 78-42 **WELL TYPE:** Coal Test
COMMENT: CORE SURVEY STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
427.2	CARBONDALE	HERRIN	COAL	5.3	242.8	

MAPID: 11701364000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** SE SW NE
QUADRANGLE: VIRDEN NORTH **LONGITUDE:** -89.856383 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.516384 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 681.0 **LOGGED (FT.):** 275.0 **LOG TYPE:** Drillers Log
SOURCE: TRUAX-TRAER COAL CO CA-11 **WELL TYPE:** Coal Test
COMMENT: CORE C-8759

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
410.3	CARBONDALE	HERRIN	COAL	4.0	270.7	

MAPID: 11722416000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 7W **SECTION:** 3 **QUARTERS/FOOTAGES:** 1620' S line, 2610' E line of SE
QUADRANGLE: VIRDEN NORTH **LONGITUDE:** -89.859854 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.512719 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 672.0 **LOGGED (FT.):** 274.0 **LOG TYPE:** Drillers Log
SOURCE: NICOR 78-41 **WELL TYPE:** Coal Test
COMMENT: CORE SURVEY STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
413.2	CARBONDALE	HERRIN	COAL	4.3	258.8	

MAPID: 11722418000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 7W **SECTION:** 4 **QUARTERS/FOOTAGES:** 1120' S line, 2600' E line of SE
QUADRANGLE: WAVERLY **LONGITUDE:** -89.878481 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.511266 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 687.0 **LOGGED (FT.):** 270.0 **LOG TYPE:** Drillers Log
SOURCE: NICOR 78-40 **WELL TYPE:** Coal Test
COMMENT: CORE SURVEY STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
430.2	CARBONDALE	HERRIN	COAL	3.3	256.8

MAPID: 11700612000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 12N 7W **SECTION:** 8 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of SE SW
QUADRANGLE: PALMYRA **LONGITUDE:** -89.900998 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.494159 **DATE COLLECTED:** 9 / 0 / 1956
SURFACE ELEVATION (FT.): 682.0 **LOGGED (FT.):** 281.0 **LOG TYPE:** Electric Log
SOURCE: V S & S DRILLING CO. **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
452.0	MODESTO	PIASA	LIMESTONE	5.0	230.0
447.0	MODESTO		UNCLASSIFIED	6.0	235.0
441.0	CARBONDALE		UNCLASSIFIED	13.0	241.0
428.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	254.0
423.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	4.0	259.0
419.0	CARBONDALE		UNCLASSIFIED	4.0	263.0
415.0	CARBONDALE	BRERETON	LIMESTONE	4.0	267.0
411.0	CARBONDALE	ANNA	BLACK SHALE	6.0	271.0
405.0	CARBONDALE	HERRIN	COAL	4.0	277.0

MAPID: 11721659000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 7W **SECTION:** 8 **QUARTERS/FOOTAGES:** 22' N line, 65' W line of NW NW
QUADRANGLE: WAVERLY **LONGITUDE:** -89.906249 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.508191 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 687.0 **LOGGED (FT.):** 229.0 **LOG TYPE:** Drillers Log
SOURCE: NORTHERN ILLINOIS GAS CO. B-18 **WELL TYPE:** Coal Test
COMMENT: SURVEY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
463.4	CARBONDALE	HERRIN	COAL	3.0	223.6

MAPID: 1172166000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 9 QUARTERS/FOOTAGES: 65' S line, 180' W line of SW SW

QUADRANGLE: PALMYRA LONGITUDE: -89.88753 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.493451 DATE COLLECTED:

SURFACE ELEVATION (FT.): 665.0 LOGGED (FT.): 255.2 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS GAS CO. B-8 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
418.7	CARBONDALE	HERRIN	COAL	5.9	246.3	

MAPID: 11700936000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 10 QUARTERS/FOOTAGES: 330' N line, 330' W line of SW SE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.858946 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.496212 DATE COLLECTED: 7 / 0 / 1962

SURFACE ELEVATION (FT.): 665.0 LOGGED (FT.): 243.0 LOG TYPE: Electric Log

SOURCE: HOPKINS, DALE WELL TYPE: Dry Hole

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
460.5	MODESTO	PIASA	LIMESTONE	3.5	204.5	
457.0	MODESTO		UNCLASSIFIED	5.0	208.0	
452.0	CARBONDALE		UNCLASSIFIED	14.0	213.0	
438.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	227.0	
434.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	231.0	
432.0	CARBONDALE		UNCLASSIFIED	2.0	233.0	
430.0	CARBONDALE	BRERETON	LIMESTONE	2.0	235.0	
428.0	CARBONDALE	ANNA	BLACK SHALE	3.0	237.0	
425.0	CARBONDALE	HERRIN	COAL	3.0	240.0	

MAPID: 11700949000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 10 QUARTERS/FOOTAGES: 330' N line, 330' W line of NE

QUADRANGLE: VIRIDEN NORTH LONGITUDE: -89.858725 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.507337 DATE COLLECTED: 10 / 0 / 1962

SURFACE ELEVATION (FT.): 666.0 LOGGED (FT.): 258.0 LOG TYPE: Electric Log

SOURCE: HOPKINS, DALE WELL TYPE: Plugged and/or Abandoned

COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
451.1	MODESTO	PIASA	LIMESTONE	3.5	214.9
447.6	MODESTO		UNCLASSIFIED	4.5	218.4
443.1	CARBONDALE		UNCLASSIFIED	11.0	222.9
432.1	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.5	233.9
427.6	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.3	238.4
425.3	CARBONDALE		UNCLASSIFIED	2.3	240.7
423.0	CARBONDALE	BRERETON	LIMESTONE	5.0	243.0
418.0	CARBONDALE	ANNA	BLACK SHALE	6.0	248.0
412.0	CARBONDALE	HERRIN	COAL	4.0	254.0

MAPID: 11722419000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 10 QUARTERS/FOOTAGES: 2580' N line, 2590' E line of NE

QUADRANGLE: VIRIDEN NORTH LONGITUDE: -89.859865 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.501125 DATE COLLECTED:

SURFACE ELEVATION (FT.): 661.0 LOGGED (FT.): 253.0 LOG TYPE: Drillers Log

SOURCE: NICOR 78-45 WELL TYPE: Coal Test

COMMENT: CORE SURVEY STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
422.1	CARBONDALE	HERRIN	COAL	4.5	238.9

MAPID: 11700613000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 12N 7W **SECTION:** 11 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of SW SE
QUADRANGLE: VIRDEN SOUTH **LONGITUDE:** -89.840074 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.496324 **DATE COLLECTED:** 9 / 0 / 1956
SURFACE ELEVATION (FT.): 679.0 **LOGGED (FT.):** 235.0 **LOG TYPE:** Electric Log
SOURCE: V S & S DRILLING CO. **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
489.0	MODESTO	PIASA	LIMESTONE	4.0	190.0
485.0	MODESTO		UNCLASSIFIED	6.0	194.0
479.0	CARBONDALE		UNCLASSIFIED	14.0	200.0
465.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	4.0	214.0
461.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	1.5	218.0
459.5	CARBONDALE		UNCLASSIFIED	1.5	219.5
458.0	CARBONDALE	BRERETON	LIMESTONE	4.0	221.0
454.0	CARBONDALE	ANNA	BLACK SHALE	5.0	225.0
449.0	CARBONDALE	HERRIN	COAL	5.0	230.0

MAPID: 11722413000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 7W **SECTION:** 12 **QUARTERS/FOOTAGES:** 2590' N line, 2490' E line of NE
QUADRANGLE: VIRDEN NORTH **LONGITUDE:** -89.821832 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.50114 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 645.0 **LOGGED (FT.):** 243.0 **LOG TYPE:** Drillers Log
SOURCE: NICOR 78-46 **WELL TYPE:** Coal Test
COMMENT: CORE SURVEY STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
424.2	CARBONDALE	HERRIN	COAL	5.1	220.8

MAPID: 11722420000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 7W **SECTION:** 13 **QUARTERS/FOOTAGES:** 1370' S line, 2590' W line of SW
QUADRANGLE: VIRDEN SOUTH **LONGITUDE:** -89.822539 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.482734 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 660.0 **LOGGED (FT.):** 268.0 **LOG TYPE:** Drillers Log
SOURCE: NICOR 78-51 **WELL TYPE:** Coal Test
COMMENT: I.G.S & COMPANY CORE STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
407.2	CARBONDALE	HERRIN	COAL	5.4	252.8

MAPID: 11700852000C VERSION: 1

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 14 QUARTERS/FOOTAGES: 330' N line, 330' W line of SE NE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.835336 GEOLOGIST: D. JOHNSON

CONFIDENTIAL: N LATITUDE: 39.489011 DATE COLLECTED: 6 / 0 / 1960

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 247.0 LOG TYPE: Electric Log

SOURCE: STEWART 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
444.5	MODESTO	PIASA	LIMESTONE	3.5	205.5
441.0	MODESTO		UNCLASSIFIED	4.0	209.0
437.0	CARBONDALE		UNCLASSIFIED	15.0	213.0
422.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	6.0	228.0
416.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	234.0
414.0	CARBONDALE		UNCLASSIFIED	2.0	236.0
412.0	CARBONDALE	BRERETON	LIMESTONE	3.0	238.0
409.0	CARBONDALE	ANNA	BLACK SHALE	2.0	241.0
407.0	CARBONDALE	HERRIN	COAL	4.0	243.0

MAPID: 11722421000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 14 QUARTERS/FOOTAGES: 2590' S line, 2540' W line of SW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.841595 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.486064 DATE COLLECTED:

SURFACE ELEVATION (FT.): 660.0 LOGGED (FT.): 243.0 LOG TYPE: Drillers Log

SOURCE: NICOR 78-50 WELL TYPE: Coal Test

COMMENT: CORE SURVEY STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
428.6	CARBONDALE	HERRIN	COAL	4.1	231.4

MAPID: 11721661000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 16 QUARTERS/FOOTAGES: 530' S line, 67' E line of SE SE

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.869647 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.480275 DATE COLLECTED:

SURFACE ELEVATION (FT.): 645.0 LOGGED (FT.): 230.9 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS GAS CO. B-9 WELL TYPE: Coal Test

COMMENT: SURVEY CORE STUDY; C-11311

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
420.1	CARBONDALE	HERRIN	COAL	4.9	224.9

MAPID: 11700305000C **VERSION:** 1 **PROJECT:** D JOHNSON
COUNTY: MACOUPIN **TWP/RNG:** 12N 7W **SECTION:** 17 **QUARTERS/FOOTAGES:** SE SE NE
QUADRANGLE: PALMYRA **LONGITUDE:** -89.889265 **GEOLOGIST:** D. JOHNSON
CONFIDENTIAL: N **LATITUDE:** 39.486941 **DATE COLLECTED:** 6 / 0 / 1941
SURFACE ELEVATION (FT.): 665.0 **LOGGED (FT.):** 244.0 **LOG TYPE:** Electric Log
SOURCE: HAYES O G **WELL TYPE:** Dry Hole
COMMENT: LOG TYPE UNCERTAIN, PROBABLY AN E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
465.0	MODESTO	PIASA	LIMESTONE	3.5	200.0
461.5	MODESTO		UNCLASSIFIED	3.5	203.5
458.0	CARBONDALE		UNCLASSIFIED	18.0	207.0
440.0	CARBONDALE	BANKSTON FORK	UNCLASSIFIED	5.0	225.0
435.0	CARBONDALE	ANVIL ROCK	UNCLASSIFIED	2.0	230.0
433.0	CARBONDALE		UNCLASSIFIED	2.0	232.0
431.0	CARBONDALE	BRERETON	LIMESTONE	5.0	234.0
426.0	CARBONDALE	ANNA	BLACK SHALE	1.0	239.0
425.0	CARBONDALE	HERRIN	COAL	4.0	240.0

MAPID: 11722422000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 7W **SECTION:** 22 **QUARTERS/FOOTAGES:** 1420' N line, 2540' W line of NW
QUADRANGLE: VIRDEN SOUTH **LONGITUDE:** -89.860262 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.474933 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 670.0 **LOGGED (FT.):** 275.0 **LOG TYPE:** Drillers Log
SOURCE: NICOR 78-52 **WELL TYPE:** Coal Test
COMMENT: CORE SURVEY STUDY

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
409.2	CARBONDALE	HERRIN	COAL	4.4	260.8

MAPID: 11701427000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 7W **SECTION:** 23 **QUARTERS/FOOTAGES:** 2610' N line, 795' W line
QUADRANGLE: VIRDEN SOUTH **LONGITUDE:** -89.847612 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.471697 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 667.0 **LOGGED (FT.):** 275.0 **LOG TYPE:** Drillers Log
SOURCE: SANGAMON COUNTY LAND COMPANY BS-510 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
403.1	CARBONDALE	HERRIN	COAL	5.8	263.9

MAPID: 11701427000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 23 QUARTERS/FOOTAGES: 2610' N line, 795' W line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.847612

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.471697

DATE COLLECTED:

SURFACE ELEVATION (FT.): 661.0 LOGGED (FT.): 269.8

LOG TYPE: Survey Core Study

SOURCE: SANGAMON COUNTY LAND COMPANY BS-510

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
430.5	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.4	230.5
426.1	MODESTO		GRAY SHALE	0.6	234.9
425.5	CARBONDALE	DANVILLE	BONE COAL	0.7	235.5
424.8	CARBONDALE		GRAY SHALE	7.9	236.2
416.9	CARBONDALE	GALUM	NODULAR LIMESTONE	1.0	244.1
415.9	CARBONDALE		GRAY SHALE	2.0	245.1
413.9	CARBONDALE		CLAYSTONE	5.3	247.1
408.6	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.9	252.4
404.7	CARBONDALE	LAWSON	MOTTLED SHALE	4.6	256.3
400.1	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	1.6	260.9
398.5	CARBONDALE	ANNA	BLACK SHALE	1.5	262.5
397.0	CARBONDALE	HERRIN	COAL	5.8	264.0

MAPID: 11701428000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 24 QUARTERS/FOOTAGES: 2600' N line, 1320' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.817581

GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.471783

DATE COLLECTED:

SURFACE ELEVATION (FT.): 666.0 LOGGED (FT.): 286.0

LOG TYPE: Drillers Log

SOURCE: SANGAMON COUNTY LAND COMPANY BS-523

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
391.7	CARBONDALE	HERRIN	COAL	7.1	274.3

MAPID: 11701428000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 24 QUARTERS/FOOTAGES: 2600' N line, 1320' E line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.817581

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.471783

DATE COLLECTED:

SURFACE ELEVATION (FT.): 666.0 LOGGED (FT.): 281.1

LOG TYPE: Survey Core Study

SOURCE: SANGAMON COUNTY LAND COMPANY BS-523

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
430.7	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.0	235.3	
426.7	MODESTO		LIMESTONE W/ SHALE	10.0	239.3	
416.7	CARBONDALE	DANVILLE	COAL	0.5	249.3	
416.2	CARBONDALE		CALCAREOUS SHALE	12.5	249.8	
403.7	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	5.9	262.3	
397.8	CARBONDALE	LAWSON	GRAY SHALE	0.4	268.2	
397.4	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	4.2	268.6	
393.3	CARBONDALE	ANNA	BLACK SHALE	1.3	272.7	
392.0	CARBONDALE	HERRIN	COAL	7.1	274.0	

MAPID: 11701429000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 27 QUARTERS/FOOTAGES: 36' N line, 500' W line of NW NW NW

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.867311

GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.464131

DATE COLLECTED:

SURFACE ELEVATION (FT.): 664.0 LOGGED (FT.): 259.3

LOG TYPE: Drillers Log

SOURCE: SANGAMON COUNTY LAND COMPANY BS-402

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
415.7	CARBONDALE	HERRIN	COAL	6.0	248.3	

MAPID: 11701365000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 29 QUARTERS/FOOTAGES: NE SW NW

QUADRANGLE: PALMYRA LONGITUDE: -89.903065

GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.459563

DATE COLLECTED:

SURFACE ELEVATION (FT.): 666.0 LOGGED (FT.): 239.0

LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAEER COAL CO CA-7

WELL TYPE: Coal Test

COMMENT: CORE C-8755

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
433.0	CARBONDALE	HERRIN	COAL	4.5	233.0	

MAPID: 11701365000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 29 QUARTERS/FOOTAGES: NE SW NW

QUADRANGLE: PALMYRA LONGITUDE: -89.903065 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.459563 DATE COLLECTED:

SURFACE ELEVATION (FT.): 666.0 LOGGED (FT.): 237.5 LOG TYPE: Survey Core Study

SOURCE: TRUAX-TRAER COAL CO CA-7 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
471.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	3.2	195.0
467.8	MODESTO		SILTY SHALE	12.3	198.2
455.5	CARBONDALE	DANVILLE	COAL	0.2	210.5
455.3	CARBONDALE		GRAY SHALE	1.4	210.7
453.9	CARBONDALE	GALUM	NODULAR LIMESTONE	0.8	212.1
453.2	CARBONDALE		DARK GRAY SHALE	4.5	212.8
448.7	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.0	217.3
444.7	CARBONDALE	LAWSON	MOTTLED SHALE	5.6	221.3
439.1	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	4.4	226.9
434.7	CARBONDALE	ANNA	GRAY SHALE	3.7	231.3
431.0	CARBONDALE	HERRIN	COAL	2.5	235.0

MAPID: 11701283000C VERSION: 1

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 31 QUARTERS/FOOTAGES: 0' S line, 660' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.922894 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.434792 DATE COLLECTED:

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 222.1 LOG TYPE: Survey Core Study

SOURCE: ATLANTIC RICHFIELD P-2 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
462.2	MODESTO	PIASA	LIMESTONE/UNDERCLAY	2.0	187.8
460.2	MODESTO		CALCAREOUS SHALE	8.0	189.8
452.2	CARBONDALE		SANDSTONE	5.0	197.8
447.2	CARBONDALE	GALUM	LIMESTONE	2.0	202.8
445.2	CARBONDALE		SHALE	4.5	204.8
440.7	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.8	209.3
437.8	CARBONDALE	LAWSON	CALCAREOUS SHALE	1.0	212.2
436.8	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.6	213.2
436.2	CARBONDALE	ANNA	CLAYSTONE	4.3	213.8
432.0	CARBONDALE	HERRIN	COAL	4.1	218.0

MAPID: 11701283000C VERSION: 2

PROJECT: D JOHNSON

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 31 QUARTERS/FOOTAGES: 0' S line, 660' W line
 QUADRANGLE: PALMYRA LONGITUDE: -89.922894 GEOLOGIST: D. JOHNSON
 CONFIDENTIAL: N LATITUDE: 39.434792 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 221.5 LOG TYPE: Drillers Log
 SOURCE: ATLANTIC RICHFIELD P-2 WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
468.8	MODESTO	PIASA	LIMESTONE	3.0	181.2
465.8	MODESTO		UNCLASSIFIED	5.0	184.2
460.8	CARBONDALE		UNCLASSIFIED	13.0	189.2
447.8	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	202.2
445.8	CARBONDALE	ANVIL ROCK	SANDSTONE	2.3	204.2
443.5	CARBONDALE		SHALE	2.3	206.5
441.2	CARBONDALE	BRERETON	LIMESTONE	4.4	208.8
436.8	CARBONDALE	ANNA	BLACK SHALE	3.8	213.2
433.0	CARBONDALE	HERRIN	COAL	4.5	217.0

MAPID: 11701283000C VERSION: 3

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 31 QUARTERS/FOOTAGES: 0' S line, 660' W line
 QUADRANGLE: PALMYRA LONGITUDE: -89.922894 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.434792 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 650.0 LOG TYPE: Survey Core Study
 SOURCE: ATLANTIC RICHFIELD P-2 WELL TYPE: Coal Test
 COMMENT: DRILLERS LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
433.3	CARBONDALE	HERRIN	COAL	4.5	216.7

MAPID: 11701423000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 35 QUARTERS/FOOTAGES: 2610' N line, 2320' W line
 QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.841836 GEOLOGIST: JACOBSON
 CONFIDENTIAL: N LATITUDE: 39.442544 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 664.0 LOGGED (FT.): 292.5 LOG TYPE: Drillers Log
 SOURCE: SANGAMON COUNTY LAND COMPANY BS-113 WELL TYPE: Coal Test
 COMMENT: GEOPHYSICAL LOGS INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
381.2	CARBONDALE	HERRIN	COAL	6.5	282.8

MAPID: 11701423000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 12N 7W SECTION: 35 QUARTERS/FOOTAGES: 2610' N line, 2320' W line

QUADRANGLE: VIRDEN SOUTH LONGITUDE: -89.841836

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.442544

DATE COLLECTED:

SURFACE ELEVATION (FT.): 664.0 LOGGED (FT.): 289.5

LOG TYPE: Survey Core Study

SOURCE: SANGAMON COUNTY LAND COMPANY BS-113

WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
410.7	MODESTO	PIASA	LIMESTONE/UNDERCLAY	3.5	253.3
407.2	CARBONDALE	DANVILLE	COAL	0.5	256.8
406.7	CARBONDALE		CALCAREOUS SHALE	7.5	257.3
399.2	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	5.9	264.8
393.3	CARBONDALE	LAWSON	GRAY SHALE	1.1	270.7
392.2	CARBONDALE	LAWSON	SILTSTONE	1.4	271.8
390.8	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	9.3	273.2
381.5	CARBONDALE	ANNA	BLACK SHALE	0.5	282.5
381.0	CARBONDALE	HERRIN	COAL	6.5	283.0

MAPID: 11701366000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 8W SECTION: 7 QUARTERS/FOOTAGES: SE SE SE

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.020551

GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.493543

DATE COLLECTED:

SURFACE ELEVATION (FT.): 691.0 LOGGED (FT.): 221.0

LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO CA-4

WELL TYPE: Coal Test

COMMENT: CORE C-8752

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
475.4	CARBONDALE	HERRIN	COAL	3.7	215.6

MAPID: 11701366000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 12N 8W SECTION: 7 QUARTERS/FOOTAGES: SE SE SE

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.020551

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.493543

DATE COLLECTED:

SURFACE ELEVATION (FT.): 691.0 LOGGED (FT.): 219.7

LOG TYPE: Survey Core Study

SOURCE: TRUAX-TRAER COAL CO CA-4

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
507.0	MODESTO	PIASA	LIMESTONE	5.3	184.0	
501.7	CARBONDALE		VARRIGATED SHALE	10.2	189.3	
491.5	CARBONDALE	GALUM	LIMESTONE/UNDERCLAY	0.6	199.5	
490.9	CARBONDALE		GRAY SHALE	1.5	200.1	
489.4	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	7.8	201.6	
481.6	CARBONDALE	LAWSON	MOTTLED SHALE	3.7	209.4	
478.0	CARBONDALE	ANNA	BLACK SHALE	1.9	213.0	
474.0	CARBONDALE	HERRIN	COAL	2.7	217.0	

MAPID: 11701367000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 8W SECTION: 12 QUARTERS/FOOTAGES: SE NW NE

QUADRANGLE: WAVERLY LONGITUDE: -89.931431

GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.505169

DATE COLLECTED:

SURFACE ELEVATION (FT.): 673.0 LOGGED (FT.): 225.0

LOG TYPE: Drillers Log

SOURCE: TRUAX-TRAER COAL CO CA-5

WELL TYPE: Coal Test

COMMENT: CORE C-8753

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
454.5	CARBONDALE	HERRIN	COAL	5.3	218.5	

MAPID: 11701367000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 12N 8W SECTION: 12 QUARTERS/FOOTAGES: SE NW NE

QUADRANGLE: WAVERLY LONGITUDE: -89.931431

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.505169

DATE COLLECTED:

SURFACE ELEVATION (FT.): 673.0 LOGGED (FT.): 224.3

LOG TYPE: Survey Core Study

SOURCE: TRUAX-TRAER COAL CO CA-5

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
488.0	MODESTO	PIASA	LIMESTONE	3.3	185.0
484.7	MODESTO		SILTY SHALE	14.4	188.3
470.2	CARBONDALE	DANVILLE	BONE COAL	0.7	202.8
469.6	CARBONDALE	GALUM	NODULAR LIMESTONE	0.6	203.4
469.0	CARBONDALE		GRAY SHALE	2.1	204.0
466.9	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	7.3	206.1
459.6	CARBONDALE	LAWSON	GRAY SHALE	2.8	213.4
456.8	CARBONDALE	BRERETON	LIMESTONE	0.3	216.2
456.5	CARBONDALE	ANNA	BLACK SHALE	1.4	216.5
454.0	CARBONDALE	HERRIN	COAL	5.3	219.0

MAPID: 11700015000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 12N 8W SECTION: 15 QUARTERS/FOOTAGES: NE SW SW

QUADRANGLE: PALMYRA LONGITUDE: -89.978457 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.480984 DATE COLLECTED: 0 / 0 / 1904

SURFACE ELEVATION (FT.): 685.0 LOGGED (FT.): 350.0 LOG TYPE: Drillers Log

SOURCE: MODESTO WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
685.0			UNCONSOLIDATED	37.0	0.0
648.0			ROCK	10.0	37.0
638.0			COAL	1.0	47.0
637.0			ROCK	82.0	48.0
555.0			COAL	1.0	130.0
554.0			ROCK	23.0	131.0
531.0			COAL	2.5	154.0
528.5			SHALE	1.0	156.5
527.5			COAL	1.0	157.5
526.5			ROCK	20.5	158.5
506.0			SHALE	10.0	179.0
496.0			LIMESTONE	1.0	189.0
495.0			SHALE	1.0	190.0
494.0			LIMESTONE	14.0	191.0
480.0			BLACK SHALE	2.0	205.0
478.0	CARBONDALE	HERRIN	COAL	3.0	207.0
475.0			ROCK	83.0	210.0
392.0			COAL	1.4	293.0
390.6			ROCK	16.6	294.4
374.0			SANDSTONE	5.0	311.0
369.0			SHALE	21.0	316.0
348.0			COAL	5.9	337.0
342.1			ROCK	7.1	342.9

MAPID: 11700660000C VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 12N 8W SECTION: 22 QUARTERS/FOOTAGES: 1600' N line, 600' W line

QUADRANGLE: PALMYRA LONGITUDE: -89.979769 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.473823 DATE COLLECTED:

SURFACE ELEVATION (FT.): 683.0 LOGGED (FT.): 130.0 LOG TYPE: Drillers Log

SOURCE: STATE WATER SURVEY WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
683.0			UNCONSOLIDATED	60.0	0.0
623.0			COAL WITH SHALE	20.0	60.0
603.0			ROCK	50.0	80.0

MAPID: 11700661000C **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 12N 8W **SECTION:** 22 **QUARTERS/FOOTAGES:** 1700' N line, 600' W line
QUADRANGLE: PALMYRA **LONGITUDE:** -89.979767 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.473547 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 683.0 **LOGGED (FT.):** 135.0 **LOG TYPE:** Drillers Log
SOURCE: STATE WATER SURVEY **WELL TYPE:** Water Well
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
683.0			UNCONSOLIDATED	64.0	0.0
619.0			COAL	1.0	64.0
618.0			ROCK	70.0	65.0

MAPID: 117191B0005F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 12N 8W **SECTION:** 26 **QUARTERS/FOOTAGES:** NW SE NW NW
QUADRANGLE: PALMYRA **LONGITUDE:** -89.960109 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.461533 **DATE COLLECTED:** 8 / 20 / 1930
SURFACE ELEVATION (FT.): 630.0 **LOGGED (FT.):** 22.5 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-WANLESS **WELL TYPE:** Outcrop
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
630.0			ROCK	6.2	0.0
623.8			COAL	0.1	6.2
623.8			ROCK	16.3	6.2

MAPID: 117191B0006F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 12N 8W **SECTION:** 27 **QUARTERS/FOOTAGES:** SW NE NE NE
QUADRANGLE: PALMYRA **LONGITUDE:** -89.964769 **GEOLOGIST:** TREWORGY,J
CONFIDENTIAL: N **LATITUDE:** 39.462447 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 650.0 **LOGGED (FT.):** 23.6 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-BALL **WELL TYPE:** Outcrop
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
650.0			ROCK	7.0	0.0
643.0			COAL	0.1	7.0
642.9			ROCK	16.5	7.1

MAPID: 11700014000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 12N 8W SECTION: 29 QUARTERS/FOOTAGES: NE NW SW

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.015669 GEOLOGIST: S.SROKA

CONFIDENTIAL: N LATITUDE: 39.455504 DATE COLLECTED: 0 / 0 / 1904

SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 173.0 LOG TYPE: Drillers Log

SOURCE: NORTHWESTERN MACOUPIN COAL CO., HOLE #3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
640.0			UNCONSOLIDATED	55.0	0.0	CLAY, SAND, BOULDERS
585.0			SAND & GRAVEL	15.0	55.0	
570.0			LIMESTONE	35.0	70.0	SOFT
535.0			CONGLOMERATE	2.0	105.0	
533.0			SANDSTONE	13.0	107.0	QICK SAND
520.0			BOULDER	4.0	120.0	
516.0			GRAVEL	1.0	124.0	
515.0	MODESTO		SHALE	2.0	125.0	
513.0	MODESTO	PIASA	LIMESTONE	3.0	127.0	
510.0	CARBONDALE	ANVIL ROCK	SANDSTONE	22.0	130.0	
488.0	CARBONDALE		LIMESTONE	1.0	152.0	
487.0	CARBONDALE		BLACK SHALE	1.0	153.0	
486.0	CARBONDALE		CALCAREOUS SHALE	4.0	154.0	
482.0	CARBONDALE	BRERETON	LIMESTONE	4.0	158.0	
478.0	CARBONDALE	ENERGY	SHALE	3.5	162.0	
474.5	CARBONDALE	HERRIN	COAL	5.5	165.5	
469.0	CARBONDALE		UNDERCLAY	2.0	171.0	

MAPID: 11701282000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 8W SECTION: 31 QUARTERS/FOOTAGES: 0' S line, 0' W line

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.037846 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.434504 DATE COLLECTED:

SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 223.0 LOG TYPE: Survey Core Study

SOURCE: ATLANTIC RICHFIELD P-4 WELL TYPE: Coal Test

COMMENT: DRILLERS LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
457.1	CARBONDALE	HERRIN	COAL	4.0	217.9	

MAPID: 11701282000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 12N 8W SECTION: 31 QUARTERS/FOOTAGES: 0' S line, 0' W line

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.037846

GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.434504

DATE COLLECTED:

SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 221.7

LOG TYPE: Survey Core Study

SOURCE: ATLANTIC RICHFIELD P-4

WELL TYPE: Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
483.7	MODESTO	PIASA	LIMESTONE	4.4	191.3	
479.2	MODESTO		MOTTLED SHALE	1.3	195.8	
478.0	CARBONDALE	DANVILLE	BONE COAL	0.8	197.0	
477.2	CARBONDALE		CLAYSTONE	1.5	197.8	
475.7	CARBONDALE	GALUM	LIMESTONE/UNDERCLAY	0.4	199.3	
475.3	CARBONDALE		GRAY SHALE	7.0	199.7	
468.3	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.3	206.7	UPPER BENCH
465.1	CARBONDALE	BANKSTON FORK	GRAY SHALE	0.3	209.9	SHALE PARTING
464.8	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	0.8	210.2	LOWER BENCH
464.1	CARBONDALE	LAWSON	MOTTLED SHALE	4.5	210.9	
459.6	CARBONDALE	BRERETON	LIMESTONE	2.3	215.4	
457.2	CARBONDALE	ANNA	GRAY SHALE	0.3	217.8	
457.0	CARBONDALE	HERRIN	COAL	3.7	218.0	

MAPID: 11723576000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 8W SECTION: 31 QUARTERS/FOOTAGES: 45' N line, 720' W line

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.035465 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 39.44906 DATE COLLECTED:

SURFACE ELEVATION (FT.): 677.0 LOGGED (FT.): 203.0 LOG TYPE: Drillers Log

SOURCE: PAUL FARMER 2 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
677.0	PLEISTOCENE		CLAY	20.0	0.0	TAN
657.0	PLEISTOCENE		CLAY	15.0	20.0	GRAY
642.0	PLEISTOCENE		CLAY & GRAVEL	5.0	35.0	GRAY
637.0	PLEISTOCENE		CLAY	67.0	40.0	GRAY
570.0	PLEISTOCENE		CLAY	5.0	107.0	TAN
565.0			SANDSTONE	7.0	112.0	
558.0			LIMESTONE	6.0	119.0	
552.0			GRAY SHALE	8.4	125.0	
543.6			GRAY SHALE	6.4	133.4	
537.2			GRAY SHALE	34.0	139.8	
503.2			BLACK SHALE	4.4	173.8	
498.7	CARBONDALE	HERRIN	COAL	1.4	178.3	#6
497.3	CARBONDALE		UNDERCLAY/SHALE	13.0	179.7	
484.3	CARBONDALE		LIMESTONE	5.4	192.7	
478.9	CARBONDALE		GRAY SHALE	4.4	198.1	

MAPID: 11723575000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 8W SECTION: 32 QUARTERS/FOOTAGES: 2220' N line, 2550' E line

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.00965 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 39.443025 DATE COLLECTED: 0 / 0 / 1972

SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 213.0 LOG TYPE: Drillers Log

SOURCE: PAUL FARMER 1 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
675.0	PLEISTOCENE		CLAY	22.0	0.0	TAN
653.0	PLEISTOCENE		CLAY & GRAVEL	16.0	22.0	GRAY
637.0	PLEISTOCENE		CLAY	9.0	38.0	GRAY
628.0	PLEISTOCENE		CLAY	18.0	47.0	TAN
610.0	PLEISTOCENE		CLAY	93.0	65.0	GRAY
517.0	PLEISTOCENE		CLAY & GRAVEL	3.4	158.0	GRAY
513.6	PLEISTOCENE		CLAY	5.4	161.4	GRAY
508.2			LIMESTONE	3.0	166.8	
505.2			GRAY SHALE	7.0	169.8	
498.2			SHALY LIMESTONE	11.0	176.8	GRAY
487.2			LIMESTONE	9.0	187.8	
478.2			GRAY SHALE	1.1	196.8	
477.1			BLACK SHALE	4.0	197.9	
473.1	CARBONDALE	BRERETON	LIMESTONE	10.5	201.9	
462.6	CARBONDALE	ENERGY	GRAY SHALE	1.5	212.4	
461.1	CARBONDALE	HERRIN	COAL	4.3	213.9	#6
456.8	CARBONDALE		UNDERCLAY	1.4	218.2	

MAPID: 117191B0007F VERSION: 1

PROJECT: BLM

COUNTY: MACOUPIN TWP/RNG: 12N 8W SECTION: 34 QUARTERS/FOOTAGES: SE NW SE NE

QUADRANGLE: PALMYRA LONGITUDE: -89.96581 GEOLOGIST: TREWORGY,J

CONFIDENTIAL: N LATITUDE: 39.444216 DATE COLLECTED: 8 / 20 / 1930

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 15.2 LOG TYPE: Measured section

SOURCE: FLD NOTES-WANLESS WELL TYPE: Outcrop

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
650.0			ROCK	4.6	0.0	
645.4			COAL	0.1	4.6	
645.3			ROCK	10.5	4.7	

MAPID: 117191B0008F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 12N 8W **SECTION:** 35 **QUARTERS/FOOTAGES:** SW SE SW
QUADRANGLE: PALMYRA **LONGITUDE:** -89.956946 **GEOLOGIST:** TREWORY,J
CONFIDENTIAL: N **LATITUDE:** 39.435633 **DATE COLLECTED:** 0 / 0 / 1929
SURFACE ELEVATION (FT.): 610.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section
SOURCE: FLD NOTES-BALL **WELL TYPE:** Outcrop
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-			COAL	-		

MAPID: 117191B0009F **VERSION:** 1 **PROJECT:** BLM
COUNTY: MACOUPIN **TWP/RNG:** 12N 8W **SECTION:** 36 **QUARTERS/FOOTAGES:**
QUADRANGLE: PALMYRA **LONGITUDE:** -89.934775 **GEOLOGIST:** TREWORY,J
CONFIDENTIAL: N **LATITUDE:** 39.442066 **DATE COLLECTED:** 0 / 0 / 1946
SURFACE ELEVATION (FT.):
SOURCE: FLD NOTES-CADY & SIMON **LOG TYPE:** Measured section
COMMENT: **WELL TYPE:** Outcrop

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-			COAL	-		

MAPID: 11790349000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 12N 9W **SECTION:** 1 **QUARTERS/FOOTAGES:** 330' S line, 660' W line of SE SW
QUADRANGLE: FRANKLIN **LONGITUDE:** -90.050313 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.508286 **DATE COLLECTED:** 5 / 9 / 1956
SURFACE ELEVATION (FT.): 653.0 **LOGGED (FT.):** 97.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE G420C **WELL TYPE:** Coal Test
COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
653.0	PLEISTOCENE		UNCONSOLIDATED	45.0	0.0	
608.0			ROCK	52.0	45.0	

MAPID: 11700639000C VERSION: 1

PROJECT: EIA-DOE

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 3 QUARTERS/FOOTAGES: 1320' S line, 1' E line of SE

QUADRANGLE: FRANKLIN LONGITUDE: -90.07648 GEOLOGIST: JACOBSON

CONFIDENTIAL: N LATITUDE: 39.510904 DATE COLLECTED:

SURFACE ELEVATION (FT.): 616.0 LOGGED (FT.): 97.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE COLLIERIES G459 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
559.0	CARBONDALE	HERRIN	COAL	1.0	57.0	

MAPID: 11700807000C VERSION: 1

PROJECT: NCRDS99

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 3 QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: FRANKLIN LONGITUDE: -90.08472 GEOLOGIST: MCCracken

CONFIDENTIAL: N LATITUDE: 39.513544 DATE COLLECTED: 2 / 21 / 1957

SURFACE ELEVATION (FT.): 610.0 LOGGED (FT.): 157.0 LOG TYPE: Drillers Log

SOURCE: DONAN GS-6 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
610.0	PLEISTOCENE		UNCONSOLIDATED	41.3	0.0	
568.7			LIMESTONE	2.4	41.3	
566.2			CLAYSTONE & SILTSTONE	9.3	43.8	
557.0			SANDSTONE	10.8	53.0	
546.2			CLAYSTONE & SILTSTONE	2.0	63.8	
544.2			SHALE	4.2	65.8	
540.0			CLAYSTONE & SILTSTONE	4.3	70.0	
535.7			LIMESTONE	8.1	74.3	
527.6			BLACK SHALE	0.6	82.4	WITH COAL
527.0			UNDERCLAY	1.3	83.0	
525.7			LIMESTONE	1.3	84.3	
524.3			CLAYSTONE & SILTSTONE	13.3	85.7	
511.0			COAL	0.1	99.0	VERY SOFT
510.9			UNDERCLAY	3.0	99.1	
507.9			SHALE	54.9	102.1	

MAPID: 11700807000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 3 QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: FRANKLIN LONGITUDE: -90.08472 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.513544 DATE COLLECTED:

SURFACE ELEVATION (FT.): 610.0 LOGGED (FT.): 82.6 LOG TYPE: Drillers Log

SOURCE: DONAN GS-6 WELL TYPE: Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
557.4	CARBONDALE		SANDSTONE	10.8	52.6
546.6	CARBONDALE		CLAYSTONE	10.5	63.4
536.1	CARBONDALE	BANKSTON FORK	LIMESTONE	4.1	73.9
532.0	CARBONDALE	BRERETON	LIMESTONE	4.0	78.0
528.0	CARBONDALE	HERRIN	BONE COAL	0.6	82.0

MAPID: 11790348000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 3 QUARTERS/FOOTAGES: 1' S line, 1' E line of SE SW

QUADRANGLE: FRANKLIN LONGITUDE: -90.085832 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.507156 DATE COLLECTED: 5 / 2 / 1956

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 97.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE G405 WELL TYPE: Coal Test

COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
600.0	PLEISTOCENE		UNCONSOLIDATED	42.0	0.0
558.0			ROCK	12.0	42.0
546.0	CARBONDALE	HERRIN	COAL	0.9	54.0
545.1	CARBONDALE		ROCK	42.1	54.9

MAPID: 11790350000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 3 QUARTERS/FOOTAGES: 1' N line, 1' E line of SE SE

QUADRANGLE: FRANKLIN LONGITUDE: -90.07648 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.510899 DATE COLLECTED: 5 / 2 / 1956

SURFACE ELEVATION (FT.): 571.0 LOGGED (FT.): 97.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE G459 WELL TYPE: Coal Test

COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
571.0	PLEISTOCENE		UNCONSOLIDATED	4.0	0.0
567.0	MODESTO		ROCK	3.6	4.0
563.4	CARBONDALE	DANVILLE	COAL	1.6	7.6
561.8	CARBONDALE		ROCK	47.8	9.2
514.0	CARBONDALE	HERRIN	COAL	1.0	57.0
513.0	CARBONDALE		ROCK	39.0	58.0

MAPID: 11790351000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 3 QUARTERS/FOOTAGES: 1' N line, 1' E line of NE SW
 QUADRANGLE: FRANKLIN LONGITUDE: -90.085914 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.514438 DATE COLLECTED: 5 / 7 / 1956
 SURFACE ELEVATION (FT.): 604.0 LOGGED (FT.): 56.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE G505 WELL TYPE: Coal Test
 COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
604.0	PLEISTOCENE		UNCONSOLIDATED	22.0	0.0
582.0			ROCK	34.0	22.0

MAPID: 11790352000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 3 QUARTERS/FOOTAGES: 1' N line, 1' E line of SE NE
 QUADRANGLE: FRANKLIN LONGITUDE: -90.076454 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.518187 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 614.0 LOGGED (FT.): 63.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE G559 WELL TYPE: Coal Test
 COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
614.0	PLEISTOCENE		UNCONSOLIDATED	16.0	0.0
598.0			ROCK	47.0	16.0

MAPID: 11700017000C VERSION: 1

PROJECT: NCRDS90

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 4 QUARTERS/FOOTAGES: NE
 QUADRANGLE: FRANKLIN LONGITUDE: -90.100076 GEOLOGIST: S.SROKA
 CONFIDENTIAL: N LATITUDE: 39.517267 DATE COLLECTED:
 SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 42.0 LOG TYPE: Drillers Log
 SOURCE: MUSTARD MINE SHAFT WELL TYPE: Coal Test
 COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
560.0			SOIL	11.0	0.0
549.0	CARBONDALE		SHALE	4.0	11.0
545.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	15.0
543.0	CARBONDALE		SHALE	7.0	17.0
536.0	CARBONDALE	ANVIL ROCK	SANDSTONE	2.0	24.0
534.0	CARBONDALE		SHALE	5.0	26.0
529.0	CARBONDALE	BRERETON	LIMESTONE	5.0	31.0
524.0	CARBONDALE	ENERGY	SHALE	3.3	36.0
520.7	CARBONDALE	HERRIN	COAL	2.7	39.3

MAPID: 11700017000C VERSION: 2

PROJECT: ROOF STUDY

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 4 QUARTERS/FOOTAGES: NE

QUADRANGLE: FRANKLIN LONGITUDE: -90.100076 GEOLOGIST:

CONFIDENTIAL: N LATITUDE: 39.517267 DATE COLLECTED:

SURFACE ELEVATION (FT.): 560.0 LOGGED (FT.): 41.7 LOG TYPE: Drillers Log

SOURCE: WELL TYPE: Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
549.3	CARBONDALE		GRAY SHALE	4.0	10.7
545.3	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	14.7
543.3	CARBONDALE	LAWSON	SILTY SHALE	7.0	16.7
536.3	CARBONDALE	LAWSON	SANDSTONE	2.0	23.7
534.3	CARBONDALE	LAWSON	GRAY SHALE	5.0	25.7
529.3	CARBONDALE	BRERETON	LIMESTONE	5.0	30.7
524.3	CARBONDALE	ANNA	DARK GRAY SHALE	3.3	35.7
521.0	CARBONDALE	HERRIN	COAL	2.7	39.0

MAPID: 11790334000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 4 QUARTERS/FOOTAGES: 1' N line, 1' E line of SE SW

QUADRANGLE: FRANKLIN LONGITUDE: -90.104495 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.5106 DATE COLLECTED: 4 / 27 / 1956

SURFACE ELEVATION (FT.): 531.0 LOGGED (FT.): 66.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE F471 WELL TYPE: Coal Test

COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
531.0	PLEISTOCENE		UNCONSOLIDATED	23.0	0.0
508.0			ROCK	43.0	23.0

MAPID: 11790341000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 4 QUARTERS/FOOTAGES: 1' N line, 1' E line of NE NW

QUADRANGLE: FRANKLIN LONGITUDE: -90.104845 GEOLOGIST: LAWSON

CONFIDENTIAL: N LATITUDE: 39.520619 DATE COLLECTED: 4 / 30 / 1956

SURFACE ELEVATION (FT.): 605.0 LOGGED (FT.): 71.3 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE F621 WELL TYPE: Coal Test

COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
605.0	PLEISTOCENE		UNCONSOLIDATED	35.0	0.0
570.0			ROCK	32.0	35.0
538.0	CARBONDALE	HERRIN	COAL	2.4	67.0
535.6	CARBONDALE		ROCK	2.0	69.4

MAPID: 11700645000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 9W **SECTION:** 5 **QUARTERS/FOOTAGES:** 0' N line, 0' E line
QUADRANGLE: FRANKLIN **LONGITUDE:** -90.114168 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.520482 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 87.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES F617 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-	CARBONDALE	HERRIN	COAL	0.8	82.5	

MAPID: 11700645000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 12N 9W **SECTION:** 5 **QUARTERS/FOOTAGES:** 0' N line, 0' E line
QUADRANGLE: FRANKLIN **LONGITUDE:** -90.114168 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.520482 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 600.0 **LOGGED (FT.):** 82.8 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES F617 **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
523.6	CARBONDALE	BRERETON	LIMESTONE	5.6	76.4	
518.0	CARBONDALE	HERRIN	BONE COAL	0.8	82.0	

MAPID: 11790338000C **VERSION:** 1 **PROJECT:** AMAX DATA
COUNTY: MACOUPIN **TWP/RNG:** 12N 9W **SECTION:** 5 **QUARTERS/FOOTAGES:** 1' N line, 1' W line of NW NW
QUADRANGLE: NORTONVILLE **LONGITUDE:** -90.133353 **GEOLOGIST:** LAWSON
CONFIDENTIAL: N **LATITUDE:** 39.520457 **DATE COLLECTED:** 5 / 1 / 1956
SURFACE ELEVATION (FT.): 532.0 **LOGGED (FT.):** 107.0 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE F609 **WELL TYPE:** Coal Test
COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
532.0	PLEISTOCENE		UNCONSOLIDATED	54.0	0.0	
478.0			ROCK	53.0	54.0	

MAPID: 11790339000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 5 QUARTERS/FOOTAGES: 1' N line, 1' E line of NE NW
 QUADRANGLE: FRANKLIN LONGITUDE: -90.123766 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.52047 DATE COLLECTED: 5 / 1 / 1956
 SURFACE ELEVATION (FT.): 607.0 LOGGED (FT.): 106.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE F613 WELL TYPE: Coal Test
 COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
607.0	PLEISTOCENE		UNCONSOLIDATED	90.0	0.0
517.0			ROCK	16.0	90.0

MAPID: 11790340000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 5 QUARTERS/FOOTAGES: 1' N line, 1' E line of NE NE
 QUADRANGLE: FRANKLIN LONGITUDE: -90.114171 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.520479 DATE COLLECTED: 4 / 30 / 1956
 SURFACE ELEVATION (FT.): 581.0 LOGGED (FT.): 87.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE F617 WELL TYPE: Coal Test
 COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
581.0	PLEISTOCENE		UNCONSOLIDATED	37.0	0.0
544.0			ROCK	45.5	37.0
498.5	CARBONDALE	HERRIN	COAL	0.8	82.5
497.7	CARBONDALE		ROCK	3.7	83.3

MAPID: 11790332000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 6 QUARTERS/FOOTAGES: 1' S line, 1' W line of SW SW
 QUADRANGLE: NORTONVILLE LONGITUDE: -90.153359 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.506623 DATE COLLECTED: 5 / 2 / 1956
 SURFACE ELEVATION (FT.): 541.0 LOGGED (FT.): 90.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE F401 WELL TYPE: Coal Test
 COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
541.0	PLEISTOCENE		UNCONSOLIDATED	35.0	0.0
506.0			ROCK	55.0	35.0

MAPID: 11790335000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 6 QUARTERS/FOOTAGES: 1' N line, 1' W line of NW SW
 QUADRANGLE: NORTONVILLE LONGITUDE: -90.153452 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.513904 DATE COLLECTED: 5 / 2 / 1956
 SURFACE ELEVATION (FT.): 599.0 LOGGED (FT.): 96.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE F501 WELL TYPE: Coal Test
 COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
599.0	PLEISTOCENE		UNCONSOLIDATED	96.0	0.0

MAPID: 11790336000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 6 QUARTERS/FOOTAGES: 1' N line, 1' W line of NW NW
 QUADRANGLE: NORTONVILLE LONGITUDE: -90.153531 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.520521 DATE COLLECTED: 5 / 2 / 1956
 SURFACE ELEVATION (FT.): 605.0 LOGGED (FT.): 100.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE F601 WELL TYPE: Coal Test
 COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
605.0	PLEISTOCENE		UNCONSOLIDATED	67.0	0.0
538.0			ROCK	33.0	67.0

MAPID: 11790337000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 6 QUARTERS/FOOTAGES: 1' N line, 1' E line of NE NW
 QUADRANGLE: NORTONVILLE LONGITUDE: -90.143451 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.520491 DATE COLLECTED: 5 / 2 / 1956
 SURFACE ELEVATION (FT.): 581.0 LOGGED (FT.): 106.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE F605 WELL TYPE: Coal Test
 COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
581.0	PLEISTOCENE		UNCONSOLIDATED	60.5	0.0
520.5			ROCK	45.5	60.5

MAPID: 11700651000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 9W **SECTION:** 9 **QUARTERS/FOOTAGES:** 0' N line, 2640' E line
QUADRANGLE: FRANKLIN **LONGITUDE:** -90.104578 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.506959 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 605.0 **LOGGED (FT.):** 77.9 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES F423 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
539.5	CARBONDALE	HERRIN	COAL	0.9	65.5

MAPID: 11700651000C **VERSION:** 2 **PROJECT:** ROOF STUDY
COUNTY: MACOUPIN **TWP/RNG:** 12N 9W **SECTION:** 9 **QUARTERS/FOOTAGES:** 0' N line, 2640' E line
QUADRANGLE: FRANKLIN **LONGITUDE:** -90.104578 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 39.506959 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 605.0 **LOGGED (FT.):** 66.9 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES F423 **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
552.0	CARBONDALE		SANDSTONE	2.8	53.0
549.2	CARBONDALE	BANKSTON FORK	LIMESTONE	5.3	55.8
544.0	CARBONDALE	BRERETON	LIMESTONE	5.0	61.0
539.0	CARBONDALE	HERRIN	BONE COAL	0.9	66.0

MAPID: 11700652000C **VERSION:** 1 **PROJECT:** EIA-DOE
COUNTY: MACOUPIN **TWP/RNG:** 12N 9W **SECTION:** 9 **QUARTERS/FOOTAGES:** 1' S line, 1' W line of NE
QUADRANGLE: SCOTTVILLE **LONGITUDE:** -90.104148 **GEOLOGIST:** JACOBSON
CONFIDENTIAL: N **LATITUDE:** 39.499632 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 577.0 **LOGGED (FT.):** 96.3 **LOG TYPE:** Drillers Log
SOURCE: AYRSHIRE COLLIERIES F321 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
540.4	CARBONDALE	HERRIN	COAL	1.8	36.6

MAPID: 11790330000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 9 QUARTERS/FOOTAGES: 1' N line, 1' E line of NE SW
 QUADRANGLE: SCOTTSVILLE LONGITUDE: -90.104155 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.499627 DATE COLLECTED: 4 / 27 / 1956
 SURFACE ELEVATION (FT.): 583.0 LOGGED (FT.): 96.3 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE F321 WELL TYPE: Coal Test
 COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
583.0	PLEISTOCENE		UNCONSOLIDATED	3.0	0.0
580.0			ROCK	33.6	3.0
546.4	CARBONDALE	HERRIN	COAL	1.8	36.6
544.6	CARBONDALE		ROCK	58.0	38.4

MAPID: 11790331000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 9 QUARTERS/FOOTAGES: 1' N line, 1' E line of SE NW
 QUADRANGLE: FRANKLIN LONGITUDE: -90.104261 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.503292 DATE COLLECTED: 4 / 26 / 1956
 SURFACE ELEVATION (FT.): 606.0 LOGGED (FT.): 95.4 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE F371 WELL TYPE: Coal Test
 COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
606.0	PLEISTOCENE		UNCONSOLIDATED	9.0	0.0
597.0			ROCK	63.0	9.0
534.0	CARBONDALE	HERRIN	COAL	1.4	72.0
532.6	CARBONDALE		ROCK	22.0	73.4

MAPID: 11790333000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 9 QUARTERS/FOOTAGES: 1' N line, 1' E line of NW NE
 QUADRANGLE: FRANKLIN LONGITUDE: -90.099771 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.507 DATE COLLECTED: 4 / 27 / 1956
 SURFACE ELEVATION (FT.): 598.0 LOGGED (FT.): 77.9 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE F423 WELL TYPE: Coal Test
 COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
598.0	PLEISTOCENE		UNCONSOLIDATED	23.5	0.0
574.5			ROCK	51.5	23.5
523.0	CARBONDALE	HERRIN	COAL	0.9	75.0
522.1	CARBONDALE		ROCK	2.0	75.9

MAPID: 11790344000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 10 QUARTERS/FOOTAGES: 1' N line, 1' E line of NW SW
 QUADRANGLE: SCOTTSVILLE LONGITUDE: -90.090213 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.499753 DATE COLLECTED: 5 / 4 / 1956
 SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 97.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE G303 WELL TYPE: Coal Test
 COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
640.0	PLEISTOCENE		UNCONSOLIDATED	15.0	0.0
625.0			ROCK	47.5	15.0
577.5	CARBONDALE	HERRIN	COAL	0.5	62.5
577.0	CARBONDALE		ROCK	34.0	63.0

MAPID: 11790345000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 10 QUARTERS/FOOTAGES: 1' N line, 1' E line of NE SW
 QUADRANGLE: SCOTTSVILLE LONGITUDE: -90.08551 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.499752 DATE COLLECTED: 5 / 8 / 1956
 SURFACE ELEVATION (FT.): 643.0 LOGGED (FT.): 87.3 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE G305 WELL TYPE: Coal Test
 COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
643.0	PLEISTOCENE		UNCONSOLIDATED	34.0	0.0
609.0			ROCK	50.0	34.0
559.0	CARBONDALE	HERRIN	COAL	0.4	84.0
558.6	CARBONDALE		ROCK	3.0	84.4

MAPID: 11790346000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 10 QUARTERS/FOOTAGES: 1' N line, 1' E line of NW SE
 QUADRANGLE: SCOTTSVILLE LONGITUDE: -90.080807 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.49975 DATE COLLECTED: 5 / 3 / 1956
 SURFACE ELEVATION (FT.): 648.0 LOGGED (FT.): 96.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE G307 WELL TYPE: Coal Test
 COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
648.0	PLEISTOCENE		UNCONSOLIDATED	36.0	0.0
612.0			ROCK	52.0	36.0
560.0	CARBONDALE	HERRIN	COAL	1.5	88.0
558.5	CARBONDALE		ROCK	6.5	89.5

MAPID: 11790343000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 11 QUARTERS/FOOTAGES: 1' S line, 1' E line of SW SW
 QUADRANGLE: SCOTTSVILLE LONGITUDE: -90.071054 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.492298 DATE COLLECTED: 5 / 8 / 1956
 SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 97.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE G211 WELL TYPE: Coal Test
 COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
650.0	PLEISTOCENE		UNCONSOLIDATED	14.0	0.0
636.0			ROCK	83.0	14.0

MAPID: 11790347000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 11 QUARTERS/FOOTAGES: 660' S line, 660' E line of NW NW
 QUADRANGLE: FRANKLIN LONGITUDE: -90.073972 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.505343 DATE COLLECTED: 5 / 9 / 1956
 SURFACE ELEVATION (FT.): 640.0 LOGGED (FT.): 90.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE G385 WELL TYPE: Coal Test
 COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
640.0	PLEISTOCENE		UNCONSOLIDATED	31.0	0.0
609.0			ROCK	45.5	31.0
563.5	CARBONDALE	HERRIN	COAL	0.3	76.5
563.2	CARBONDALE		ROCK	13.2	76.8

MAPID: 11790342000C VERSION: 1

PROJECT: AMAX DATA

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 15 QUARTERS/FOOTAGES: 1' N line, 1' E line of NW NE
 QUADRANGLE: SCOTTSVILLE LONGITUDE: -90.080449 GEOLOGIST: LAWSON
 CONFIDENTIAL: N LATITUDE: 39.492299 DATE COLLECTED: 5 / 7 / 1956
 SURFACE ELEVATION (FT.): 659.0 LOGGED (FT.): 70.0 LOG TYPE: Drillers Log
 SOURCE: AYRSHIRE G207 WELL TYPE: Coal Test
 COMMENT: SCOTTSVILLE BOX43

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
659.0	PLEISTOCENE		UNCONSOLIDATED	25.0	0.0
634.0			ROCK	45.0	25.0

MAPID: 11700806000C VERSION: 1

PROJECT: NCRDS99

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 18 QUARTERS/FOOTAGES: NE SE NE

QUADRANGLE: ATHENSVILLE LONGITUDE: -90.133517 GEOLOGIST: MCCRACKEN

CONFIDENTIAL: N LATITUDE: 39.487596 DATE COLLECTED: 2 / 23 / 1957

SURFACE ELEVATION (FT.): 610.0 LOGGED (FT.): 100.0 LOG TYPE: Drillers Log

SOURCE: DONAN GS-5 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
610.0	PLEISTOCENE		UNCONSOLIDATED	49.5	0.0
560.5			LIMESTONE	0.5	49.5
560.0			CLAYSTONE & SILTSTONE	3.3	50.0
556.7			LIMESTONE	1.0	53.3
555.7			CLAYSTONE & SILTSTONE	0.3	54.3
555.3			LIMESTONE	2.2	54.7
553.2			CLAYSTONE & SILTSTONE	17.8	56.8
535.3			BLACK SHALE	0.5	74.7
534.8			LIMESTONE	0.8	75.2
534.0			BLACK SHALE	0.3	76.0 COAL STREAKS
533.7			UNDERCLAY	1.5	76.3
532.2			LIMESTONE	6.3	77.8
525.8			CLAYSTONE & SILTSTONE	10.2	84.2
515.7			SANDY SHALE	5.7	94.3

MAPID: 11723577000C VERSION: 1

PROJECT: NCRDS94

COUNTY: MACOUPIN TWP/RNG: 12N 9W SECTION: 25 QUARTERS/FOOTAGES: 280' N line, 1345' W line

QUADRANGLE: SCOTTVILLE LONGITUDE: -90.052036 GEOLOGIST: HINES

CONFIDENTIAL: N LATITUDE: 39.462703 DATE COLLECTED:

SURFACE ELEVATION (FT.): 680.0 LOGGED (FT.): 150.0 LOG TYPE: Drillers Log

SOURCE: PAUL FARMER 3 WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
680.0	PLEISTOCENE		CLAY & GRAVEL	19.0	0.0	TAN
661.0	PLEISTOCENE		CLAY & GRAVEL	16.0	19.0	GRAY
645.0	PLEISTOCENE		CLAY	11.0	35.0	GRAY
634.0	PLEISTOCENE		CLAY & GRAVEL	10.0	46.0	GRAY
624.0	PLEISTOCENE		CLAY	11.0	56.0	GRAY
613.0			SANDSTONE	15.0	67.0	
598.0			GRAY SHALE	13.0	82.0	
585.0			GRAY SHALE	6.4	95.0	
578.6			SANDSTONE	4.4	101.4	
574.2			GRAY SHALE	3.0	105.8	
571.2			LIMESTONE	2.0	108.8	
569.2			BLACK SHALE	5.0	110.8	
564.2			GRAY SHALE	8.0	115.8	
556.2			SANDSTONE	9.0	123.8	
547.2	CARBONDALE	ENERGY	GRAY SHALE	8.0	132.8	
539.2	CARBONDALE	ENERGY	BLACK SHALE	0.7	140.8	
538.5	CARBONDALE	HERRIN	COAL	1.4	141.5	#6
537.1	CARBONDALE		UNDERCLAY	7.6	142.9	