PDF file generated on January 31, 2025

Status Report

ILLINOIS STATE GEOLOGICAL SURVEY
PRAIRIE RESEARCH INSTITUTE

Total Records: 1316

Top 3 County Records		Top 3 Log Type Records		Top 3 Coal Records		Top 3 Member Records	
Franklin	1316	Drillers Log	488	HERRIN	1223	HERRIN COAL	1223
		Electric Log	427	DANVILLE	572	DANVILLE COAL	572
		Survey Core Study	122	SPRINGFIELD	431	BANKSTON FORK LIMESTONE	485

Data Summary

Cross-tabulation of all selected logs, individual logs will vary.
Tabulation of logged intervals only, invidual logs will vary.

Depth and Thickness measurements in feet

Member	Lithology	Avg. Depth	Min. Depth	Max. Depth	Avg. Thk	Min. Thk	Max. Thk
ATTILA		**230.0**	230.0	230.0	**3.0**	3.0	3.0
FLANNIGAN	COAL	**80.8**	65.3	98.8	**0.4**	0.1	0.8
MT. CARMEL	SANDSTONE	**33.0**	14.5	51.6	**40.0**	26.4	51.5
CARTHAGE	LIMESTONE	**131.8**	22.0	380.0	**5.8**	0.5	36.0
NEW HAVEN	COAL	**107.8**	61.2	223.0	**0.5**	0.2	0.8
MACOUPIN	LIMESTONE	**192.8**	175.6	210.0	**3.3**	2.5	4.0
WOMAC	COAL	**221.9**	168.7	271.0	**1.0**	0.4	2.0
INGLEFIELD	SANDSTONE	**117.0**	117.0	117.0	**8.0**	8.0	8.0
CARLINVILLE	LIMESTONE	**168.0**	168.0	168.0	**16.0**	16.0	16.0
CRAMER	LIMESTONE	**124.9**	117.2	140.3	**0.7**	0.7	0.8
CHAPEL	COAL	**269.5**	62.4	476.3	**1.1**	0.3	5.4
TRIVOLI	SANDSTONE	**284.4**	170.0	363.0	**78.3**	8.0	167.0
SCOTTVILLE	LIMESTONE	**275.7**	275.7	275.7	**2.5**	2.5	2.5
LAKE CREEK	COAL	**409.0**	409.0	409.0	**0.1**	0.1	0.1
POND CREEK	COAL	**478.0**	415.1	522.0	**0.7**	0.2	1.5
DEGRAFF	COAL	**470.2**	128.5	741.0	**0.8**	0.2	2.0
PIASA	LIMESTONE	**477.6**	120.3	839.0	**4.5**	0.3	13.0
FARMINGTON	SHALE	**350.0**	269.0	431.0	**17.0**	5.0	29.0
DANVILLE	COAL	**498.4**	129.8	857.0	**2.0**	0.5	12.0
GALUM	LIMESTONE	**439.3**	198.3	595.9	**3.0**	1.0	5.0
ALLENBY	COAL	**461.2**	100.9	858.0	**0.8**	0.1	30.0
SS BELOW NO. 7	SANDSTONE	**644.6**	430.0	840.0	**10.2**	3.0	59.0
BANKSTON FORK	LIMESTONE	**511.5**	42.8	876.0	**5.9**	0.3	18.0
ANVIL ROCK	SANDSTONE	**634.0**	128.0	876.0	**21.4**	2.6	130.0
LAWSON	SHALE	**531.0**	47.5	878.0	**31.2**	1.2	90.0
CONANT	LIMESTONE	**620.5**	453.8	918.0	**1.1**	0.2	8.0
JAMESTOWN	COAL	**627.0**	356.0	923.5	**0.6**	0.1	3.9
BRERETON	LIMESTONE	**557.9**	81.5	933.0	**6.2**	0.3	27.0
ANNA	SHALE	**611.7**	84.5	938.0	**2.9**	0.1	35.1
ENERGY	SHALE	**507.6**	87.5	928.7	**48.2**	0.3	310.0

HERRIN	COAL	**577.7**	50.0	944.0	**7.8**	0.1	28.2
HIGGINSVILLE	LIMESTONE	**366.7**	208.1	477.9	**8.7**	3.2	12.0
VERMILIONVILLE	SANDSTONE	**760.0**	599.0	926.0	**10.1**	2.7	26.0
BRIAR HILL	COAL	**733.8**	464.0	991.0	**1.1**	0.1	2.0
CANTON	SHALE	**720.6**	529.5	963.0	**11.4**	2.0	49.0
ST. DAVID	LIMESTONE	**662.6**	224.0	1023.5	**1.4**	0.5	3.0
TURNER MINE	SHALE	**637.8**	226.0	1025.0	**3.8**	0.1	9.0
DYKERSBURG	SHALE	**668.0**	230.0	987.0	**13.0**	1.5	68.9
SPRINGFIELD	COAL	**673.4**	197.6	1029.8	**4.4**	0.1	10.0
SS BELOW NO. 5	SANDSTONE	**846.1**	677.0	1030.0	**19.1**	2.0	64.0
HANOVER	LIMESTONE	**666.8**	666.8	666.8	**2.0**	2.0	2.0
EXCELLO	SHALE	**630.7**	531.0	758.7	**5.6**	2.5	10.0
HOUCHIN CREEK	COAL	**800.0**	278.1	1176.0	**1.5**	0.1	4.0
SURVANT	COAL	**633.3**	302.6	789.0	**2.1**	0.5	4.9
OAK GROVE	LIMESTONE	**772.5**	772.5	772.5	**1.0**	1.0	1.0
MECCA QUARRY	SHALE	**763.7**	674.5	868.5	**4.3**	1.7	10.5
COLCHESTER	COAL	**771.2**	370.0	1032.0	**0.9**	0.5	2.0
DEKOVEN	COAL	**818.9**	684.8	968.0	**1.8**	0.4	3.0
LOWER DEKOVEN	COAL	**826.1**	738.8	952.8	**0.9**	0.6	1.3
DAVIS	COAL	**822.9**	440.0	1100.0	**3.0**	2.0	4.0
STONEFORT	LIMESTONE	**879.1**	801.8	1001.0	**2.6**	0.3	5.0
WISE RIDGE	COAL	**885.2**	797.2	1023.5	**1.1**	0.7	2.3
MT. RORAH	COAL	**903.7**	811.9	1049.8	**2.1**	1.2	3.1
CREAL SPRING	LIMESTONE	**907.7**	852.3	963.0	**1.2**	0.7	1.6
MURPHYSBORO	COAL	**891.4**	857.1	952.2	**3.2**	1.5	4.2
BEECH CREEK	LIMESTONE	**2427.5**	2336.0	2526.0	**-**	-	-
UPPER DEVONIAN S		**4379.8**	4284.0	4462.0	**-**	-	-
BASE UPPER DEVON		**4468.2**	4351.0	4557.0	**-**	-	-
GRASSY CREEK	SHALE	**4395.9**	4302.0	4475.0	**-**	-	-
				Net Coal	**38.0**		

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: 05500013402M **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 1 **QUARTERS/FOOTAGES:** 1500' S line, 400' W line

QUADRANGLE: SESSER **LONGITUDE:** -89.058237 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.115447 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 440.0 **LOGGED (FT.):** 10.0 **LOG TYPE:** Measured section

SOURCE: MINE NOTES-OLD BEN C C **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	COAL	10.0		BLUE BAND .16' 3'58' COAL ROOF.

MAPID: 05501302000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 1 **QUARTERS/FOOTAGES:** 2596' N line, 1432' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.045374 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.117725 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 472.0 **LOGGED (FT.):** 700.8 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 121 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-94.0	MODESTO	PIASA	LIMESTONE	3.0	566.0	
-97.0	MODESTO		GRAY SHALE	3.0	569.0	
-100.0	CARBONDALE	DANVILLE	COAL	2.3	572.0	
-102.3	CARBONDALE		CLAYSTONE	4.0	574.3	
-106.3	CARBONDALE		DARK GRAY SHALE	5.2	578.3	
-111.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.7	583.5	
-116.2	CARBONDALE	ENERGY	DARK GRAY SHALE	41.8	588.2	
-157.9	CARBONDALE	ENERGY	SILTSTONE	60.9	629.9	
-218.8	CARBONDALE	ENERGY	SHALE & SILTSTONE	1.2	690.8	
-220.0	CARBONDALE	HERRIN	COAL	8.8	692.0	

MAPID: 05501307000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 2 **QUARTERS/FOOTAGES:** 2632' N line, 1282' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.064228 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.117441 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 444.0 **LOGGED (FT.):** 692.0 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 122 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-86.0	MODESTO	PIASA	LIMESTONE	5.5	530.0	
-91.5	MODESTO		GRAY SHALE	2.8	535.5	
-94.3	CARBONDALE	DANVILLE	COAL	2.5	538.3	
-96.8	CARBONDALE		CLAYSTONE	3.6	540.8	
-100.4	CARBONDALE		GRAY SHALE	2.1	544.4	
-102.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	546.5	
-106.0	CARBONDALE	ENERGY	SILTY SHALE	55.4	550.0	
-161.4	CARBONDALE	ENERGY	SANDSTONE/SILTSTONE	41.7	605.4	
-203.1	CARBONDALE	ENERGY	COAL	0.4	647.1	
-203.5	CARBONDALE	ENERGY	SILTSTONE	32.5	647.5	
-236.0	CARBONDALE	ENERGY	DARK GRAY SHALE	0.9	680.0	
-237.0	CARBONDALE	HERRIN	COAL	11.0	681.0	

MAPID: 05500837000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 3 **QUARTERS/FOOTAGES:** 2310' S line, 1650' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.083996 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.118186 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 477.0 **LOGGED (FT.):** 2436.0 **LOG TYPE:** Electric Log

SOURCE: SKELLY OIL CO **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-203.0	CARBONDALE	SPRINGFIELD	COAL	-	680.0	
-399.0	CARBONDALE	COLCHESTER	COAL	-	876.0	
-1959.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2436.0	

MAPID: 05500837000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 3 **QUARTERS/FOOTAGES:** 2310' S line, 1650' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.083996 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.118186 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 477.0 **LOGGED (FT.):** 666.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-65.0	MODESTO	PIASA	LIMESTONE	6.0	542.0	
-71.0	MODESTO		GRAY SHALE	4.0	548.0	
-75.0	CARBONDALE	DANVILLE	COAL	2.0	552.0	
-77.0	CARBONDALE		SHALE	6.0	554.0	
-83.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SANDSTONE	10.0	560.0	
-93.0	CARBONDALE	ENERGY	SHALE	5.0	570.0	
-98.0	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	35.0	575.0	
-133.0	CARBONDALE	ENERGY	SILTY SHALE	51.0	610.0	
-184.0	CARBONDALE	HERRIN	COAL	5.0	661.0	

MAPID: 05523637000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 3 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of NE NW

QUADRANGLE: SESSER **LONGITUDE:** -89.088654 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.12363 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 463.0 **LOGGED (FT.):** 4394.0 **LOG TYPE:** Electric Log

SOURCE: CABOT OIL & GAS CORP. **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1951.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2414.0	
-3859.0	DEVONIAN	UPPER DEVONIAN S	UNCLASSIFIED	-	4322.0	TOP OF NEW ALBANY
-3880.0	DEVONIAN	GRASSY CREEK	UNCLASSIFIED	-	4343.0	
-3931.0	DEVONIAN	BASE UPPER DEVON	UNCLASSIFIED	-	4394.0	BASE OF NEW ALBANY

MAPID: 05500351000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 4 **QUARTERS/FOOTAGES:** SW SE NE

QUADRANGLE: SESSER **LONGITUDE:** -89.099982 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.120247 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 435.0 **LOGGED (FT.):** 2365.0 **LOG TYPE:** Electric Log

SOURCE: BUELL, J. GARFIELD **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1930.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2365.0	

MAPID: 05500799000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 4 **QUARTERS/FOOTAGES:** 2640' N line, 2640' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.105632 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.117243 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 446.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Survey Core Study

SOURCE: BELL & ZOLLER COAL CO 32 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	CARBONDALE	ENERGY	SANDSTONE/SILTSTONE	30.0		
-	CARBONDALE	ENERGY	SANDSTONE	40.0		
-	CARBONDALE	ENERGY	SANDSTONE/SILTSTONE	32.0		
-	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	30.0		
-	CARBONDALE	ENERGY	CONGLOMERATE	3.8		

MAPID: 05500043000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 5 **QUARTERS/FOOTAGES:** 2640' N line, 1320' W line

QUADRANGLE: DU QUOIN **LONGITUDE:** -89.129152 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.117451 **DATE COLLECTED:** 0 / 0 / 1920

SURFACE ELEVATION (FT.): 427.7 **LOGGED (FT.):** 604.0 **LOG TYPE:**

SOURCE: SOUTHERN GEM COAL CORP. 0009 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-166.3	CARBONDALE	HERRIN	COAL	8.2	594.0	

MAPID: 05500043000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 5 **QUARTERS/FOOTAGES:** 2640' N line, 1320' W line

QUADRANGLE: DU QUOIN **LONGITUDE:** -89.129152 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.117451 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 428.0 **LOGGED (FT.):** 603.2 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-88.0	MODESTO	PIASA	LIMESTONE	4.0	516.0	
-92.0	MODESTO		DARK GRAY SHALE	5.5	520.0	
-97.5	CARBONDALE	DANVILLE	COAL	1.5	525.5	
-99.0	CARBONDALE		GRAY SHALE	11.0	527.0	
-110.0	CARBONDALE		LIMESTONE W/ SHALE	4.0	538.0	
-114.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	542.0	
-117.5	CARBONDALE	LAWSON	GRAY SHALE	1.5	545.5	
-119.0	CARBONDALE	BRERETON	LIMESTONE	26.0	547.0	
-145.0	CARBONDALE	ANNA	BLACK SHALE	10.0	573.0	
-155.0	CARBONDALE	ENERGY	GRAY SHALE	12.0	583.0	
-167.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	8.2	595.0	

MAPID: 05500043000C **VERSION:** 3 **PROJECT:** NCRDS87

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 5 **QUARTERS/FOOTAGES:** 2640' N line, 1320' W line

QUADRANGLE: DU QUOIN **LONGITUDE:** -89.129152 **GEOLOGIST:** WEIBEL

CONFIDENTIAL: N **LATITUDE:** 38.117451 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 427.7 **LOGGED (FT.):** 604.0 **LOG TYPE:** Drillers Log

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

COMMENT: LOCATION IMPRECISE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
427.7			UNCONSOLIDATED	65.0	0.0	
362.7	BOND		SANDSTONE	41.0	65.0	
321.7	BOND		SHALE	41.0	106.0	
280.7	BOND	CARTHAGE	LIMESTONE	4.0	147.0	
276.7	MODESTO		DARK SHALE	5.0	151.0	
271.7			SHALE	22.0	156.0	
249.7	MODESTO		COAL	1.8	178.0	
247.9	MODESTO		UNDERCLAY	1.0	179.8	
246.9	MODESTO		SHALE	157.2	180.8	
89.7	MODESTO		COAL	1.0	338.0	
88.7	MODESTO		SHALE	13.0	339.0	
75.7	MODESTO		COAL	0.3	352.0	
75.4	MODESTO		UNCLASSIFIED	19.8	352.3	
55.7	MODESTO		SHALE	130.0	372.0	
-74.3	MODESTO		BLACK SHALE	3.0	502.0	
-77.3	MODESTO		COAL	1.0	505.0	
-78.3	MODESTO		SHALE	10.0	506.0	
-88.3	MODESTO		LIMESTONE	4.0	516.0	
-92.3	MODESTO		DARK SHALE	5.5	520.0	
-97.8	CARBONDALE	DANVILLE	COAL	1.5	525.5	UNCERTAIN CORRELATION
-99.3	CARBONDALE		GRAY SHALE	11.0	527.0	
-110.3	CARBONDALE		SHALE	4.0	538.0	
-114.3	CARBONDALE		LIMESTONE	3.5	542.0	
-117.8	CARBONDALE		SHALE	1.5	545.5	
-119.3	CARBONDALE	BRERETON	LIMESTONE	26.0	547.0	
-145.3	CARBONDALE	ANNA	BLACK SHALE	12.0	573.0	
-157.3	CARBONDALE	ENERGY	GRAY SHALE	10.0	585.0	
-167.3	CARBONDALE	HERRIN	COAL	5.5	595.0	
-172.8	CARBONDALE		SHALE	2.5	600.5	
-175.3	CARBONDALE		UNDERCLAY	1.0	603.0	

MAPID: 05522696000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 9 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of NW NW

QUADRANGLE: SESSER **LONGITUDE:** -89.111606 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.111193 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 463.0 **LOGGED (FT.):** 4400.0 **LOG TYPE:** Electric Log

SOURCE: JUNIPER PETROLEUM CORP. **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-237.0	CARBONDALE	SPRINGFIELD	COAL	-	700.0	
-412.0	CARBONDALE	COLCHESTER	COAL	-	875.0	
-1946.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2409.0	
-3866.0	DEVONIAN	UPPER DEVONIAN S	UNCLASSIFIED	-	4329.0	TOP OF NEW ALBANY
-3887.0	DEVONIAN	GRASSY CREEK	UNCLASSIFIED	-	4350.0	
-3937.0	DEVONIAN	BASE UPPER DEVON	UNCLASSIFIED	-	4400.0	BASE OF NEW ALBANY

MAPID: 05523364000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 10 **QUARTERS/FOOTAGES:** 330' S line, 505' E line of NW

QUADRANGLE: SESSER **LONGITUDE:** -89.088791 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.105291 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 467.0 **LOGGED (FT.):** 4432.0 **LOG TYPE:** Electric Log

SOURCE: BREHM, DWIGHT RESOURCES **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-378.0	CARBONDALE	COLCHESTER	COAL	-	845.0	
-1950.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2417.0	
-3893.0	DEVONIAN	UPPER DEVONIAN S	UNCLASSIFIED	-	4360.0	TOP OF NEW ALBANY
-3915.0	DEVONIAN	GRASSY CREEK	UNCLASSIFIED	-	4382.0	
-3965.0	DEVONIAN	BASE UPPER DEVON	UNCLASSIFIED	-	4432.0	BASE OF NEW ALBANY

MAPID: 05500016000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 11 **QUARTERS/FOOTAGES:** SW NE

QUADRANGLE: SESSER **LONGITUDE:** -89.06629 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.105865 **DATE COLLECTED:** 0 / 0 / 1917

SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 678.0 **LOG TYPE:**

SOURCE: SOUTHERN GEM COAL CORP. 0003 **WELL TYPE:** Coal Test

COMMENT: EXACT LOCATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-172.0	CARBONDALE	HERRIN	COAL	9.0	632.0	
-214.0	CARBONDALE	SPRINGFIELD	COAL	3.5	674.0	

MAPID: 05500016000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 11 **QUARTERS/FOOTAGES:** SW NE

QUADRANGLE: SESSER **LONGITUDE:** -89.06629 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.105865 **DATE COLLECTED:** 5 / 30 / 1917

SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 678.0 **LOG TYPE:** Drillers Log

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

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
460.0			UNCONSOLIDATED	17.0	0.0	
443.0			ROCK	64.7	17.0	
378.3			COAL	0.3	81.7	
378.0			ROCK	91.0	82.0	
287.0			COAL	0.5	173.0	
286.0			ROCK	14.0	174.0	
272.0			COAL	0.3	188.0	
271.7			ROCK	151.2	188.3	
120.5			COAL	0.7	339.5	
119.8			ROCK	145.5	340.2	
-25.7			COAL	0.3	485.7	
-26.0			ROCK	33.0	486.0	
-59.0			COAL	2.2	519.0	
-61.2			ROCK	5.1	521.2	
-66.3			COAL	0.3	526.3	
-66.7			ROCK	73.3	526.7	
-140.0			SHALE	32.0	600.0	SANDY
-172.0	CARBONDALE	HERRIN	COAL	7.0	632.0	
-179.0	CARBONDALE		SHALE	1.2	639.0	PARTINGS
-180.2	CARBONDALE	HERRIN	COAL	1.5	640.2	LOWER BENCH
-181.7	CARBONDALE		SANDSTONE	10.3	641.7	
-192.0	CARBONDALE		LIMESTONE W/ SHALE	1.0	652.0	
-193.0	CARBONDALE		SHALE	2.0	653.0	
-195.0	CARBONDALE		LIMESTONE	8.0	655.0	
-203.0	CARBONDALE		SHALE	7.0	663.0	
-210.0	CARBONDALE		LIMESTONE	1.0	670.0	
-211.0	CARBONDALE		BLACK SHALE	2.6	671.0	
-213.6	CARBONDALE	SPRINGFIELD	COAL	3.5	673.6	
-217.0	CARBONDALE		UNDERCLAY	0.9	677.0	

MAPID: 05500016000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 11 **QUARTERS/FOOTAGES:** SW NE

QUADRANGLE: SESSER **LONGITUDE:** -89.06629 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.105865 **DATE COLLECTED:** 5 / 30 / 1917

SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 678.0 **LOG TYPE:** Drillers Log

SOURCE: SOUTHERN GEM COAL CORP. 3 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
460.0	PLEISTOCENE		CLAY	17.0	0.0	
443.0	BOND		SANDSTONE	22.0	17.0	
421.0	BOND		LIMESTONE	4.0	39.0	
417.0	BOND		SANDSTONE	38.7	43.0	
378.3	BOND		COAL	0.3	81.7	
378.0	BOND		SANDSTONE	3.0	82.0	
375.0	BOND		SHALE	0.3	85.0	
374.7	BOND		SANDY SHALE	1.7	85.3	
373.0	BOND		SHALE	9.0	87.0	SANDSTONE PARTINGS
364.0	BOND		SANDY SHALE	55.0	96.0	
309.0	BOND	CARTHAGE	SANDY LIMESTONE	2.0	151.0	
307.0	BOND	CARTHAGE	LIMESTONE	3.5	153.0	
303.5	MODESTO		SHALE	0.5	156.5	
303.0	MODESTO		SHALE	3.0	157.0	
300.0	MODESTO		SHALE	4.0	160.0	
296.0	MODESTO		SANDSTONE	5.0	164.0	WITH SHALE
291.0	MODESTO		SANDSTONE	4.0	169.0	SHALE PARTINGS
287.0	MODESTO		SHALE	0.5	173.0	
286.5	MODESTO		COAL	0.5	173.5	
286.0	MODESTO		SHALE	3.5	174.0	
282.5	MODESTO		SHALE	10.5	177.5	BROWN PARTINGS
272.0	MODESTO		COAL	0.3	188.0	
271.7	MODESTO		CLAYSTONE	1.8	188.3	
270.0	MODESTO		SHALE	25.0	190.0	
245.0	MODESTO		SHALE	7.0	215.0	HARD PARTINGS
238.0	MODESTO		SHALE	1.0	222.0	DARK GRAY
237.0	MODESTO		SHALE WITH LIMESTONE	1.0	223.0	
236.0	MODESTO		SHALE	1.0	224.0	
235.0	MODESTO		SHALE	3.0	225.0	
232.0	MODESTO		LIMESTONE	0.5	228.0	
231.5	MODESTO		SHALE	20.5	228.5	LIMESTONE PARTINGS
211.0	MODESTO		SANDSTONE	3.0	249.0	SHALE PARTINGS
208.0	MODESTO		SANDY SHALE	9.0	252.0	
199.0	MODESTO		SANDY LIMESTONE	11.0	261.0	
188.0	MODESTO		SANDY SHALE	19.0	272.0	
169.0	MODESTO		SHALE	24.0	291.0	WITH SANDSTONE PARTINGS
145.0	MODESTO		SHALE	21.0	315.0	HARD PARTINGS
124.0	MODESTO		SHALE	0.8	336.0	
123.2	MODESTO		SHALE	0.5	336.8	

122.7	MODESTO		SHALE	0.7	337.3	
122.0	MODESTO		SHALE	1.5	338.0	
120.5	MODESTO	CHAPEL	COAL	0.7	339.5	
119.8	MODESTO		SOFT SHALE	128.8	340.2	
-9.0	MODESTO		SHALE	5.0	469.0	WITH LIMESTONE 127' MISSING FROM RECORD
-14.0	MODESTO		SANDY SHALE	9.0	474.0	WITH LIMESTONE
-23.0	MODESTO		SANDSTONE	2.0	483.0	
-25.0	MODESTO		SHALE	0.7	485.0	
-25.7	MODESTO		COAL	0.3	485.7	
-26.0	MODESTO		SHALE	6.0	486.0	
-32.0	MODESTO		SHALE	2.0	492.0	GRAY AND RED MIXED
-34.0	MODESTO		SANDY SHALE	10.0	494.0	
-44.0	MODESTO		SHALE	8.0	504.0	
-52.0	MODESTO	PIASA	LIMESTONE	4.5	512.0	
-56.5	MODESTO		SHALE	2.5	516.5	
-59.0	CARBONDALE	DANVILLE	COAL	2.2	519.0	
-61.2	CARBONDALE		SHALE	5.2	521.2	
-66.3	CARBONDALE	ALLENBY	COAL	0.3	526.3	
-66.7	CARBONDALE		SANDSTONE	1.3	526.7	
-68.0	CARBONDALE		SHALE WITH LIMESTONE	2.0	528.0	WITH LIMESTONE
-70.0	CARBONDALE		SHALE	2.0	530.0	
-72.0	CARBONDALE		LIMESTONE	3.0	532.0	
-75.0	CARBONDALE		SHALY LIMESTONE	1.5	535.0	
-76.5	CARBONDALE		LIMESTONE	10.5	536.5	
-87.0	CARBONDALE	ENERGY	SHALE	2.0	547.0	LIMESTONE PARTINGS
-89.0	CARBONDALE	ENERGY	SANDY SHALE	18.0	549.0	LIMESTONE PARTINGS
-107.0	CARBONDALE	ENERGY	SANDY SHALE	65.0	567.0	
-172.0	CARBONDALE	HERRIN	COAL	7.0	632.0	
-179.0	CARBONDALE	HERRIN	ROCK	1.2	639.0	
-180.2	CARBONDALE	HERRIN	COAL	1.5	640.2	
-181.7	CARBONDALE		SANDSTONE	10.3	641.7	
-192.0	CARBONDALE		LIMESTONE & SHALE	1.0	652.0	
-193.0	CARBONDALE		SHALE	2.0	653.0	
-195.0	CARBONDALE		LIMESTONE	4.0	655.0	
-199.0	CARBONDALE		LIMESTONE	4.0	659.0	
-203.0	CARBONDALE		SHALE	7.0	663.0	
-210.0	CARBONDALE	ST. DAVID	LIMESTONE	1.0	670.0	
-211.0	CARBONDALE		SHALE	2.6	671.0	
-213.6	CARBONDALE	SPRINGFIELD	COAL	3.5	673.6	
-217.0	CARBONDALE		CLAYSTONE	0.9	677.0	

MAPID: 05502249000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 11 **QUARTERS/FOOTAGES:** 2620' N line, 2638' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.06848 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.104264 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 461.0 **LOGGED (FT.):** 655.6 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 178 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-60.2	CARBONDALE		GRAY SHALE	36.0	521.2	
-96.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	557.2	
-100.7	CARBONDALE	ENERGY	SANDSTONE	11.5	561.7	
-112.2	CARBONDALE	ENERGY	GRAY SHALE	15.0	573.2	
-127.2	CARBONDALE	ENERGY	SANDSTONE	18.4	588.2	
-145.6	CARBONDALE	ENERGY	SHALE & SANDSTONE	20.8	606.6	
-166.3	CARBONDALE	ENERGY	SILTY SHALE	15.7	627.3	
-182.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	12.6	643.0	

MAPID: 05500013401M **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:**

QUADRANGLE: SESSER **LONGITUDE:** -89.04971 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.103952 **DATE COLLECTED:** 0 / 0 / 1921

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 8.1 **LOG TYPE:** Measured section

SOURCE: MINE NOTES-SOUTHERN GEM C C **WELL TYPE:** Underground mine

COMMENT: 3RD. S. OFF 4 W. OTHER NOTES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-			SHALE	-		WHITE-GREY
-	CARBONDALE	HERRIN	COAL	8.1		CLAY PTGS .06', .04', BLUE BAND .54'.

MAPID: 05500013400M **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** NW NW SE

QUADRANGLE: SESSER **LONGITUDE:** -89.048507 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.10303 **DATE COLLECTED:** 6 / 0 / 1921

SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 700.0 **LOG TYPE:** Measured section

SOURCE: MINE NOTES-SOUTHERN GEM C C **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
460.0			UNKNOWN	660.0	0.0	
-200.0			SHALE	30.0	660.0	"WHITE TOP". SOFT SHALE ROOF
-	CARBONDALE	HERRIN	COAL	10.0		9' AVERAGE THICKNESS

MAPID: 05500015000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** NE SW

QUADRANGLE: SESSER **LONGITUDE:** -89.052069 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.102089 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 470.0 **LOGGED (FT.):** 679.0 **LOG TYPE:**

SOURCE: SOUTHERN GEM COAL CORP. 1 **WELL TYPE:** Coal Test

COMMENT: EXACT LOCATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-198.0	CARBONDALE	HERRIN	COAL	10.0	668.0	

MAPID: 05500015000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** NE SW

QUADRANGLE: SESSER **LONGITUDE:** -89.052069 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.102089 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 470.0 **LOGGED (FT.):** 679.0 **LOG TYPE:** Drillers Log

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

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
470.0			UNCONSOLIDATED	18.0	0.0	
452.0			ROCK	165.0	18.0	
287.0			COAL	0.5	183.0	
286.5			ROCK	12.5	183.5	
274.0			COAL	0.5	196.0	
273.5			ROCK	151.0	196.5	
122.5			COAL	1.0	347.5	
121.5			ROCK	191.2	348.5	
-69.7			COAL	2.1	539.7	
-71.7			ROCK	5.3	541.7	
-77.0			COAL	0.1	547.0	
-77.1			ROCK	59.9	547.1	
-137.0			SHALE	60.7	607.0	SANDY
-197.7	CARBONDALE	HERRIN	COAL	10.0	667.7	SH PTG .16'
-207.6	CARBONDALE		SHALE	1.7	677.6	

MAPID: 05500015000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** NE SW

QUADRANGLE: SESSER **LONGITUDE:** -89.052069 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.102089 **DATE COLLECTED:** 4 / 10 / 1917

SURFACE ELEVATION (FT.): 470.0 **LOGGED (FT.):** 680.7 **LOG TYPE:** Drillers Log

SOURCE: SOUTHERN GEM COAL CORP. 1 **WELL TYPE:** Coal Test

COMMENT: UNIT DEPTHS ALTERED FROM ORIG.LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
470.0	PLEISTOCENE		SOIL	1.0	0.0	
469.0	PLEISTOCENE		CLAY	9.0	1.0	
460.0	PLEISTOCENE		SANDY CLAY	8.0	10.0	
452.0	BOND		SHALE	12.0	18.0	
440.0	BOND		SANDSTONE	28.0	30.0	
412.0	BOND		SANDSTONE	22.0	58.0	
390.0	BOND		SHALE	34.0	80.0	
356.0	BOND		SANDY SHALE	45.5	114.0	
310.5	BOND	CARTHAGE	LIMESTONE	5.0	159.5	
305.5	MODESTO		SHALE	4.0	164.5	
301.5	MODESTO		SHALE	3.5	168.5	
298.0	MODESTO		SHALY SANDSTONE	2.0	172.0	
296.0	MODESTO		SANDY SHALE	9.0	174.0	
287.0	MODESTO		COAL	0.5	183.0	
286.5	MODESTO		SHALE	12.5	183.5	
274.0	MODESTO		BONE COAL	0.5	196.0	
273.5	MODESTO		CLAYSTONE	2.0	196.5	
271.5	MODESTO		SHALE	1.5	198.5	
270.0	MODESTO		SHALE	21.0	200.0	WITH LIMESTONE SPOTS
249.0	MODESTO		SHALE	12.0	221.0	
237.0	MODESTO		SHALE	3.0	233.0	
234.0	MODESTO		SHALE	8.0	236.0	
226.0	MODESTO		SOFT SHALE	3.0	244.0	
223.0	MODESTO		SHALE	9.0	247.0	WITH LIMESTONE SPOTS
214.0	MODESTO		SANDY SHALE	8.0	256.0	
206.0	MODESTO		SANDSTONE	1.0	264.0	
205.0	MODESTO		SANDSTONE/SHALE	9.0	265.0	
196.0	MODESTO		SANDY SHALE	5.0	274.0	
191.0	MODESTO		SANDY SHALE	45.0	279.0	WITH SANDSTONE PARTINGS
146.0	MODESTO		SANDY SHALE	8.0	324.0	
138.0	MODESTO		SHALE	9.5	332.0	BROWN PARTINGS
128.5	MODESTO		SHALE	0.5	341.5	
128.0	MODESTO		SHALE	0.5	342.0	
127.5	MODESTO		SANDSTONE	0.5	342.5	
127.0	MODESTO		SHALE	1.0	343.0	
126.0	MODESTO		SHALE	2.5	344.0	
123.5	MODESTO	CHAPEL	COAL	1.0	346.5	
122.5	MODESTO		SOFT SHALE	2.5	347.5	
120.0	MODESTO		SANDY SHALE	137.0	350.0	

-17.0	MODESTO		LIMESTONE	1.0	487.0	
-18.0	MODESTO		SANDSTONE	7.7	488.0	
-25.7	MODESTO		SANDY SHALE	0.5	495.7	
-26.2	MODESTO		SHALE	3.5	496.2	
-29.7	MODESTO		SHALE	12.0	499.7	RED-GRAY
-41.7	MODESTO		SHALE	14.0	511.7	
-55.7	MODESTO		SHALE	8.0	525.7	WITH LIMESTONE SPOTS
-63.7	MODESTO		SHALE	4.7	533.7	
-68.3	CARBONDALE	DANVILLE	COAL	2.1	538.3	
-70.4	CARBONDALE		SHALE	5.3	540.4	
-75.7	CARBONDALE	ALLENBY	COAL	0.1	545.7	
-75.8	CARBONDALE		SANDSTONE	0.2	545.8	WITH COAL PARTINGS
-75.9	CARBONDALE		SHALE	2.6	545.9	
-78.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	548.5	
-80.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	5.0	550.0	WITH LIMESTONE SPOTS
-85.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	555.0	
-88.5	CARBONDALE		SANDY SHALE	3.0	558.5	
-91.5	CARBONDALE		SANDSTONE	13.0	561.5	
-104.5	CARBONDALE		SANDSTONE/SHALE	14.0	574.5	
-118.5	CARBONDALE	ENERGY	SANDY SHALE	17.0	588.5	
-135.5	CARBONDALE	ENERGY	SANDY SHALE	38.0	605.5	
-173.5	CARBONDALE	ENERGY	SANDY SHALE	22.7	643.5	BROWN PARTINGS
-196.2	CARBONDALE	HERRIN	COAL	7.2	666.2	
-203.3	CARBONDALE	HERRIN	SHALE	0.2	673.3	
-203.5	CARBONDALE	HERRIN	COAL	2.7	673.5	
-206.2	CARBONDALE		SANDY SHALE	1.7	676.2	

MAPID: 05500045000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** NW NW NW NW

QUADRANGLE: SESSER **LONGITUDE:** -89.058786 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.110842 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 467.0 **LOGGED (FT.):** 700.0 **LOG TYPE:**

SOURCE: BG MUDDYCS **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		COAL ABSENT OR ERODED
-229.0	CARBONDALE	SPRINGFIELD	COAL	3.9	696.0	

MAPID: 05500045000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** NW NW NW NW

QUADRANGLE: SESSER **LONGITUDE:** -89.058786 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.110842 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 467.0 **LOGGED (FT.):** 700.0 **LOG TYPE:** Drillers Log

SOURCE: L. N. WOOD **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
467.0			UNCONSOLIDATED	15.0	0.0	
452.0			ROCK	160.0	15.0	
292.0			COAL	0.5	175.0	
291.5			ROCK	162.5	175.5	
129.0			COAL	0.8	338.0	BONE
128.2			ROCK	145.7	338.8	
-17.5			COAL	0.5	484.5	
-18.0			ROCK	31.0	485.0	
-49.0			COAL	2.3	516.0	
-51.3			ROCK	77.9	518.3	
-129.2			COAL	0.5	596.2	
-129.7			ROCK	37.5	596.7	
-167.2	CARBONDALE	HERRIN	COAL	1.3	634.2	
-168.5	CARBONDALE		ROCK	6.3	635.5	
-174.8	CARBONDALE	HERRIN	COAL	0.5	641.8	LOWER BENCH
-175.3	CARBONDALE		SHALE	41.7	642.3	SANDY
-217.0	CARBONDALE		SHALE	9.0	684.0	
-226.0	CARBONDALE		LIMESTONE	1.0	693.0	
-227.0	CARBONDALE		SHALE	2.3	694.0	BITUMINOUS
-229.3	CARBONDALE	SPRINGFIELD	COAL	3.9	696.3	
-233.2	CARBONDALE		UNDERCLAY	-	700.2	

MAPID: 05500045000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** NW NW NW NW

QUADRANGLE: SESSER **LONGITUDE:** -89.058786 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.110842 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 467.0 **LOGGED (FT.):** 700.2 **LOG TYPE:** Drillers Log

SOURCE: L.N. WOOD **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
467.0	PLEISTOCENE		CLAY	15.0	0.0	RED
452.0	BOND		SHALE	10.0	15.0	
442.0	BOND		SANDY SHALE	10.0	25.0	
432.0	BOND		SANDSTONE	62.0	35.0	
370.0	BOND		SANDY SHALE	63.0	97.0	
307.0	BOND	CARTHAGE	LIMESTONE	4.0	160.0	
303.0	MODESTO		SHALE	11.0	164.0	
292.0	MODESTO		COAL	0.5	175.0	
291.5	MODESTO		SANDY SHALE	20.5	175.5	
271.0	MODESTO		SHALE	9.0	196.0	
262.0	MODESTO		SHALE	25.0	205.0	
237.0	MODESTO		SHALE	9.0	230.0	
228.0	MODESTO		SHALE	3.0	239.0	
225.0	MODESTO		SHALE	7.0	242.0	
218.0	MODESTO		SHALE	2.0	249.0	
216.0	MODESTO		SANDSTONE	30.0	251.0	WITH SHALE BAND
186.0	MODESTO		SANDY SHALE	27.0	281.0	
159.0	MODESTO		SANDY SHALE	28.0	308.0	
131.0	MODESTO		SHALE	2.0	336.0	
129.0	MODESTO	CHAPEL	BONE COAL	0.8	338.0	
128.2	MODESTO		CLAYSTONE	3.3	338.8	
125.0	MODESTO		SANDY SHALE	71.0	342.0	
54.0	MODESTO		BLACK SHALE	9.0	413.0	
45.0	MODESTO		BLACK SHALE	38.0	422.0	
7.0	MODESTO		SHALE	2.0	460.0	
5.0	MODESTO		SANDY SHALE	7.0	462.0	
-2.0	MODESTO		SANDY SHALE	15.0	469.0	
-17.0	MODESTO		SHALE	0.5	484.0	
-17.5	MODESTO	DEGRAFF	COAL	0.7	484.5	
-18.2	MODESTO		SHALE	18.8	485.2	CLAY SHALE
-37.0	MODESTO		SHALE	4.0	504.0	
-41.0	MODESTO	PIASA	LIMESTONE	4.0	508.0	
-45.0	MODESTO		SHALE	4.0	512.0	
-49.0	CARBONDALE	DANVILLE	COAL	2.3	516.0	
-51.3	CARBONDALE		SANDY SHALE	21.8	518.3	
-73.0	CARBONDALE		SANDY SHALE	47.0	540.0	
-120.0	CARBONDALE		SANDY SHALE	9.2	587.0	
-129.2	CARBONDALE		COAL	0.2	596.2	
-129.3	CARBONDALE	JAMESTOWN	COAL	0.3	596.3	

-129.7	CARBONDALE	ENERGY	SANDY SHALE	37.5	596.7	WITH GRAY ROCK BANDS
-167.2	CARBONDALE	HERRIN	COAL	1.3	634.2	
-168.5	CARBONDALE	HERRIN	SANDY SHALE	3.5	635.5	
-172.0	CARBONDALE	HERRIN	SANDY SHALE	2.8	639.0	
-174.8	CARBONDALE	HERRIN	COAL	0.2	641.8	
-175.0	CARBONDALE	HERRIN	COAL	0.3	642.0	
-175.3	CARBONDALE		SANDY SHALE	41.7	642.3	
-217.0	CARBONDALE		SHALE	9.0	684.0	WITH ROCK BANDS; DARK GRAY
-226.0	CARBONDALE	ST. DAVID	LIMESTONE	1.0	693.0	
-227.0	CARBONDALE	TURNER MINE	CARBONACEOUS SHALE	2.3	694.0	
-229.3	CARBONDALE	SPRINGFIELD	COAL	3.9	696.3	CLAY SHALE UNDER COAL

MAPID: 05500046000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** NE SW SE

QUADRANGLE: SESSER **LONGITUDE:** -89.04607 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.099338 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 468.0 **LOGGED (FT.):** 704.0 **LOG TYPE:** Drillers Log

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

COMMENT: NEAR SHAFT OF # 2 MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
468.0			UNCONSOLIDATED	19.0	0.0	
449.0			ROCK	159.8	19.0	
289.2			COAL	0.4	178.8	
288.7			ROCK	1.9	179.3	
286.8			COAL	0.3	181.2	
286.6			ROCK	13.6	181.4	
273.0			COAL	0.3	195.0	BONEY
272.7			ROCK	151.5	195.3	
121.2			COAL	0.8	346.8	
120.4			ROCK	160.7	347.6	
-40.3			COAL	0.8	508.3	
-41.1			ROCK	27.4	509.1	
-68.5			COAL	2.6	536.5	
-71.1			ROCK	4.9	539.1	
-76.0			COAL	0.2	544.0	
-76.2			ROCK	45.8	544.2	
-122.0			SHALE	68.1	590.0	SANDY,GREY
-190.1	CARBONDALE	HERRIN	COAL	8.6	658.1	
-198.7	CARBONDALE		SHALE	13.3	666.7	
-212.0	CARBONDALE		LIMESTONE	7.0	680.0	
-219.0	CARBONDALE		SHALE	7.5	687.0	
-226.5	CARBONDALE		LIMESTONE	0.5	694.5	
-227.0	CARBONDALE		BLACK SHALE	2.5	695.0	
-229.5	CARBONDALE		SHALE	1.6	697.5	
-231.1	CARBONDALE	SPRINGFIELD	COAL	3.8	699.1	
-234.8	CARBONDALE		UNDERCLAY	1.2	702.8	

MAPID: 05500046000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** NE SW SE
QUADRANGLE: SESSER **LONGITUDE:** -89.04607 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.099338 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 468.0 **LOGGED (FT.):** 666.6 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-62.4	MODESTO	PIASA	LIMESTONE	1.5	530.4	
-63.9	MODESTO		DARK GRAY SHALE	6.0	531.9	
-69.9	CARBONDALE	DANVILLE	COAL	2.6	537.9	
-72.5	CARBONDALE		SILTY SHALE	3.9	540.5	
-76.4	CARBONDALE	ALLENBY	COAL	0.2	544.4	
-76.6	CARBONDALE		GRAY SHALE	2.8	544.6	
-79.4	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	547.4	
-80.4	CARBONDALE	LAWSON	LIMESTONE W/ SHALE	3.5	548.4	
-83.9	CARBONDALE	LAWSON	GRAY SHALE	3.5	551.9	
-87.4	CARBONDALE	BRERETON	LIMESTONE	3.0	555.4	
-90.4	CARBONDALE	ENERGY	SHALE & SANDSTONE	18.5	558.4	
-108.9	CARBONDALE	ENERGY	SILTY SHALE	56.0	576.9	
-164.9	CARBONDALE	ENERGY	GRAY SHALE	25.1	632.9	
-190.0	CARBONDALE	HERRIN	COAL	8.6	658.0	

MAPID: 05500046000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** NE SW SE
QUADRANGLE: SESSER **LONGITUDE:** -89.04607 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.099338 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 468.0 **LOGGED (FT.):** 704.0 **LOG TYPE:**
SOURCE: SOUTHERN GEM COAL CORP. **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-190.0	CARBONDALE	HERRIN	COAL	8.6	658.0	
-231.0	CARBONDALE	SPRINGFIELD	COAL	3.8	699.0	

MAPID: 05500046000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** NE SW SE

QUADRANGLE: SESSER **LONGITUDE:** -89.04607 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.099338 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 468.0 **LOGGED (FT.):** 704.0 **LOG TYPE:** Drillers Log

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

COMMENT: UNIT DEPTHS ALTERED FROM ORIG.LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
468.0	PLEISTOCENE		SOIL	1.0	0.0	
467.0	PLEISTOCENE		CLAY	18.0	1.0	
449.0	BOND		SANDSTONE	17.0	19.0	
432.0	BOND		SANDSTONE	43.0	36.0	
389.0	BOND		SHALE	1.0	79.0	WITH LIMESTONE SPOTS
388.0	BOND		SANDY SHALE	7.0	80.0	
381.0	BOND		SANDSTONE	6.0	87.0	WITH SHALE PARTINGS
375.0	BOND		SANDY SHALE	7.0	93.0	BROWN PARTINGS
368.0	BOND		SANDY SHALE	2.0	100.0	BROWN PARTINGS
366.0	BOND		SANDY SHALE	55.0	102.0	BROWN PARTINGS
311.0	BOND	CARTHAGE	LIMESTONE	4.5	157.0	
306.5	MODESTO		SHALE	3.0	161.5	
303.5	MODESTO		SHALE	1.3	164.5	
302.2	MODESTO		LIMESTONE	1.6	165.8	DARK
300.6	MODESTO		SHALE	1.1	167.4	
299.5	MODESTO		SANDSTONE/SHALE	11.8	168.5	
287.7	MODESTO		COAL	0.4	180.3	
287.2	MODESTO		SHALE	1.9	180.8	
285.3	MODESTO		COAL	0.3	182.7	
285.1	MODESTO		SHALE	13.0	182.9	
272.1	MODESTO		BONE COAL	0.3	195.9	
271.8	MODESTO		CLAYSTONE	1.5	196.2	
270.3	MODESTO		SHALE	8.0	197.7	WITH LIMESTONE SPOTS
262.3	MODESTO		SHALE	21.0	205.7	
241.3	MODESTO		SHALE	2.0	226.7	WITH LIMESTONE SPOTS
239.3	MODESTO		LIMESTONE	0.5	228.7	
238.8	MODESTO		SHALE	1.0	229.2	
237.8	MODESTO		SHALE	3.0	230.2	
234.8	MODESTO		LIMESTONE	1.3	233.2	
233.6	MODESTO		SHALE	7.3	234.4	
226.3	MODESTO		SHALE	11.0	241.7	WITH LIMESTONE SPOTS
215.3	MODESTO		SHALE	14.0	252.7	
201.3	MODESTO		SANDSTONE/SHALE	7.0	266.7	
194.3	MODESTO		SANDY SHALE	26.0	273.7	WITH SANDSTONE
168.3	MODESTO		SANDY SHALE	20.0	299.7	WITH SANDSTONE PARTINGS
148.3	MODESTO		SANDY SHALE	17.0	319.7	
131.3	MODESTO		SHALE	2.0	336.7	BROWN PARTINGS; DARK GRAY
129.3	MODESTO		SHALE	2.0	338.7	

127.3	MODESTO		LIMESTONE	0.5	340.7	
126.8	MODESTO		SHALE	1.5	341.2	DARK GRAY
125.3	MODESTO		SHALE	2.8	342.7	DARK GRAY
122.6	MODESTO	CHAPEL	COAL	0.8	345.4	
121.7	MODESTO		CLAYSTONE	1.4	346.3	
120.3	MODESTO		SHALE	2.0	347.7	WITH LIMESTONE SPOTS
118.3	MODESTO		SHALE	6.0	349.7	
112.3	MODESTO		SANDY SHALE	2.0	355.7	BROWN SPOTS
110.3	MODESTO		SANDY SHALE	25.0	357.7	WITH SANDSTONE PARTINGS
85.3	MODESTO		SANDY SHALE	68.0	382.7	
17.3	MODESTO		SANDY SHALE	20.0	450.7	
-2.7	MODESTO		SHALE	6.0	470.7	DARK GRAY
-8.7	MODESTO		SHALE	1.0	476.7	
-9.7	MODESTO		SHALE	3.0	477.7	
-12.7	MODESTO		SHALE	10.0	480.7	WITH LIMESTONE SPOTS
-22.7	MODESTO		SANDSTONE/SHALE	13.0	490.7	
-35.7	MODESTO		SANDY LIMESTONE	3.0	503.7	
-38.7	MODESTO		SANDSTONE/SHALE	1.0	506.7	
-39.7	MODESTO		SHALE	1.3	507.7	
-41.0	MODESTO		COAL	0.8	509.0	
-41.8	MODESTO		CLAYSTONE	0.9	509.8	
-42.7	MODESTO		SANDY SHALE	19.0	510.7	
-61.7	MODESTO	PIASA	LIMESTONE	1.5	529.7	
-63.2	MODESTO		SHALE	2.5	531.2	
-65.7	MODESTO		SHALE	3.5	533.7	DARK GRAY
-69.2	CARBONDALE	DANVILLE	COAL	2.6	537.2	
-71.8	CARBONDALE		SANDY SHALE	3.9	539.8	
-75.7	CARBONDALE	ALLENBY	COAL	0.2	543.7	
-75.8	CARBONDALE		SHALE	2.8	543.8	
-78.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	546.7	
-79.7	CARBONDALE	BANKSTON FORK	SHALE	3.5	547.7	WITH LIMESTONE
-83.2	CARBONDALE	BANKSTON FORK	SHALE	3.5	551.2	WITH LIMESTONE
-86.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	554.7	
-89.7	CARBONDALE		SHALE	2.5	557.7	WITH SANDSTONE
-92.2	CARBONDALE		SANDSTONE/SHALE	16.0	560.2	
-108.2	CARBONDALE	ENERGY	SHALE	13.0	576.2	WITH SANDSTONE PARTINGS
-121.2	CARBONDALE	ENERGY	SANDY SHALE	43.0	589.2	
-164.2	CARBONDALE	ENERGY	SHALE	23.0	632.2	BROWN PARTINGS
-187.2	CARBONDALE	ENERGY	SHALE	2.1	655.2	
-189.3	CARBONDALE	HERRIN	COAL	8.6	657.3	
-197.8	CARBONDALE		SANDY SHALE	7.3	665.8	
-205.2	CARBONDALE		SHALE	3.0	673.2	WITH LIMESTONE SPOTS
-208.2	CARBONDALE		SHALE	2.0	676.2	DARK GRAY
-210.2	CARBONDALE		SHALE WITH LIMESTONE	1.0	678.2	WITH LIMESTONE
-211.2	CARBONDALE		LIMESTONE	7.0	679.2	
-218.2	CARBONDALE		SHALE	7.0	686.2	WITH LIMESTONE SPOTS; DARK GRAY
-225.2	CARBONDALE		SHALE	0.5	693.2	

-225.7	CARBONDALE	ST. DAVID	LIMESTONE	0.5	693.7	DARK
-226.2	CARBONDALE		SHALE	2.5	694.2	
-228.7	CARBONDALE		SHALE	1.6	696.7	DARK GRAY
-230.3	CARBONDALE	SPRINGFIELD	COAL	3.8	698.3	
-234.0	CARBONDALE		CLAYSTONE	1.2	702.0	

MAPID: 05500251000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** NW NW SE
QUADRANGLE: SESSER **LONGITUDE:** -89.048507 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.10303 **DATE COLLECTED:** 0 / 0 / 1918
SURFACE ELEVATION (FT.): 463.2 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section
SOURCE: BREWERTON 0022 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-226.8	CARBONDALE	HERRIN	COAL	10.0	690.0	

MAPID: 05522867000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** 530' N line, 330' W line of SW NW
QUADRANGLE: SESSER **LONGITUDE:** -89.058144 **GEOLOGIST:** J JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.106146 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 482.0 **LOGGED (FT.):** 4485.0 **LOG TYPE:** Electric Log
SOURCE: FARRAR, FLETCHER F. **WELL TYPE:** Oil and Gas Test
COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-1976.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2458.0	
-3923.0	DEVONIAN	UPPER DEVONIAN S	UNCLASSIFIED	-	4405.0	TOP OF NEW ALBANY
-3940.0	DEVONIAN	GRASSY CREEK	UNCLASSIFIED	-	4422.0	
-4003.0	DEVONIAN	BASE UPPER DEVON	UNCLASSIFIED	-	4485.0	BASE OF NEW ALBANY

MAPID: 05500047000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 13 **QUARTERS/FOOTAGES:** SW NE NW
QUADRANGLE: SESSER **LONGITUDE:** -89.053124 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.093764 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 475.3 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: KELLER **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-161.7	CARBONDALE	HERRIN	COAL	8.0	637.0	

MAPID: 05501317000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 13 **QUARTERS/FOOTAGES:** 2603' N line, 966' W line

QUADRANGLE: SESSER **LONGITUDE:** -89.055576 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.08934 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 462.0 **LOGGED (FT.):** 627.3 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 127 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-43.6	MODESTO	PIASA	LIMESTONE	1.4	505.6	
-45.0	MODESTO		SHALE	2.5	507.0	
-47.5	CARBONDALE	DANVILLE	COAL	2.4	509.5	
-49.9	CARBONDALE		CLAYSTONE	2.9	511.9	
-52.8	CARBONDALE		GRAY SHALE	6.5	514.8	
-59.3	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	521.3	
-61.6	CARBONDALE	LAWSON	GRAY SHALE	6.2	523.6	
-67.8	CARBONDALE	BRERETON	LIMESTONE	3.5	529.8	
-71.3	CARBONDALE	ENERGY	SILTY SHALE	24.6	533.3	
-95.8	CARBONDALE	ENERGY	SHALE & SANDSTONE	5.9	557.8	
-101.8	CARBONDALE	ENERGY	CALCAREOUS SHALE	5.8	563.8	
-107.6	CARBONDALE	ENERGY	SILTY SHALE	7.3	569.6	
-114.8	CARBONDALE	ENERGY	GRAY SHALE	41.2	576.8	
-156.0	CARBONDALE	HERRIN	COAL	9.3	618.0	

MAPID: 05500049000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 14 **QUARTERS/FOOTAGES:** NW NW NW SE

QUADRANGLE: SESSER **LONGITUDE:** -89.067697 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.088762 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 450.0 **LOGGED (FT.):** 591.0 **LOG TYPE:** Drillers Log

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

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
450.0			UNCONSOLIDATED	60.0	0.0	
390.0			ROCK	91.0	60.0	
299.0			COAL	0.5	151.0	
298.5			SHALE	10.5	151.5	
288.0			COAL	0.3	162.0	
287.7			ROCK	91.7	162.3	
196.0			COAL	1.5	254.0	
194.5			ROCK	66.5	255.5	
128.0			COAL	0.9	322.0	
127.1			ROCK	170.6	322.9	
-43.5			COAL	0.5	493.5	BANDY
-44.0			ROCK	9.6	494.0	
-53.6			COAL	2.2	503.6	
-55.8			ROCK	42.2	505.8	
-98.0			BLACK SHALE	35.3	548.0	WITH BROWN BANDS
-133.3	CARBONDALE	HERRIN	COAL	5.5	583.3	BLUE BAND AT BASE .33'
-138.8	CARBONDALE		COAL WITH SHALE	1.3	588.8	COAL AND SHALE MIXED.
-140.0	CARBONDALE		UNDERCLAY	1.0	590.0	

MAPID: 05500049000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 14 **QUARTERS/FOOTAGES:** NW NW NW SE

QUADRANGLE: SESSER **LONGITUDE:** -89.067697 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.088762 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 450.0 **LOGGED (FT.):** 589.8 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-43.8	MODESTO	PIASA	LIMESTONE	4.5	493.8	
-48.3	MODESTO		BLACK SHALE	5.1	498.3	
-53.3	CARBONDALE	DANVILLE	COAL	2.2	503.3	
-55.5	CARBONDALE		GRAY SHALE	12.3	505.5	
-67.8	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	517.8	
-72.8	CARBONDALE	ENERGY	GRAY SHALE	60.3	522.8	
-133.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	6.8	583.0	

MAPID: 05500049000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 14 **QUARTERS/FOOTAGES:** NW NW NW SE

QUADRANGLE: SESSER **LONGITUDE:** -89.067697 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.088762 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 449.5 **LOGGED (FT.):** 591.0 **LOG TYPE:**

SOURCE: SOUTHERN GEM COAL CORP. 0001 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-133.5	CARBONDALE	HERRIN	COAL	6.8	583.0	

MAPID: 05500049000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 14 **QUARTERS/FOOTAGES:** NW NW NW SE

QUADRANGLE: SESSER **LONGITUDE:** -89.067697 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.088762 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 449.5 **LOGGED (FT.):** 591.0 **LOG TYPE:** Drillers Log

SOURCE: SOUTHERN GEM COAL CORP. 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
449.5	PLEISTOCENE		SOIL	60.0	0.0	
389.5	BOND		SOFT SHALE	2.0	60.0	
387.5	BOND		SOFT SHALE	28.0	62.0	
359.5	BOND		SHALE	6.0	90.0	
353.5	BOND		SANDY SHALE	39.0	96.0	
314.5	BOND	CARTHAGE	LIMESTONE	4.5	135.0	
310.0	MODESTO		SHALE	4.5	139.5	
305.5	MODESTO		SHALE	7.0	144.0	DARK BLUE
298.5	MODESTO		COAL	0.5	151.0	
298.0	MODESTO		SHALE	10.5	151.5	DARK BLUE
287.5	MODESTO		COAL	0.3	162.0	
287.2	MODESTO		SANDY SHALE	20.7	162.3	
266.5	MODESTO		SANDY SHALE	3.0	183.0	
263.5	MODESTO		SHALE	35.0	186.0	
228.5	MODESTO		SOFT SHALE	11.0	221.0	
217.5	MODESTO		SOFT SHALE	6.0	232.0	
211.5	MODESTO		SHALE	7.0	238.0	DARK BLUE
204.5	MODESTO		SHALE	9.0	245.0	
195.5	MODESTO		COAL	1.5	254.0	
194.0	MODESTO		SOFT SHALE	5.5	255.5	
188.5	MODESTO		SHALE	21.0	261.0	SOME SAND
167.5	MODESTO		SANDY SHALE	20.0	282.0	
147.5	MODESTO		SHALE	20.0	302.0	
127.5	MODESTO	CHAPEL	COAL	0.9	322.0	
126.6	MODESTO		SHALE	2.1	322.9	
124.5	MODESTO		SANDY SHALE	17.0	325.0	
107.5	MODESTO		SANDY LIMESTONE	5.0	342.0	
102.5	MODESTO		SANDY SHALE	28.0	347.0	
74.5	MODESTO		SHALE	26.0	375.0	
48.5	MODESTO		SHALE	44.0	401.0	LOG THICKNESS 70.0 CHANGED
4.5	MODESTO		SHALE	23.5	445.0	
-19.0	MODESTO		COAL	0.5	468.5	
-19.5	MODESTO		SOFT SHALE	15.0	469.0	
-34.5	MODESTO		SOFT SHALE	9.5	484.0	
-44.0	MODESTO		COAL	0.5	493.5	
-44.5	MODESTO	PIASA	LIMESTONE	4.5	494.0	
-49.0	MODESTO		SHALE	5.1	498.5	
-54.1	CARBONDALE	DANVILLE	COAL	2.2	503.6	
-56.3	CARBONDALE		SHALE	12.3	505.8	

-68.5	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	518.0	
-73.5	CARBONDALE	ENERGY	SHALE	25.0	523.0	
-98.5	CARBONDALE	ENERGY	SHALE	22.0	548.0	WITH BROWN BANDS
-120.5	CARBONDALE	ENERGY	SHALE	13.3	570.0	WITH BROWN PARTINGS; DARK BLUE
-133.8	CARBONDALE	HERRIN	COAL	5.2	583.3	
-138.9	CARBONDALE		SHALE	0.3	588.4	BLUE BAND
-139.3	CARBONDALE		SHALE W/ COAL STREAKS	1.3	588.8	WITH COAL
-140.5	CARBONDALE		CLAYSTONE	1.0	590.0	

MAPID: 05500806000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 14 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of SW

QUADRANGLE: SESSER **LONGITUDE:** -89.069329 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.082794 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 448.0 **LOGGED (FT.):** 2417.0 **LOG TYPE:** Electric Log

SOURCE: MCBRIDE, W. C., INC. **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-207.0	CARBONDALE	SPRINGFIELD	COAL	-	655.0	
-362.0	CARBONDALE	COLCHESTER	COAL	-	810.0	
-1969.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2417.0	

MAPID: 05500048000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 15 **QUARTERS/FOOTAGES:** NE NW SW NE

QUADRANGLE: SESSER **LONGITUDE:** -89.085032 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.092605 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 415.1 **LOGGED (FT.):** 765.0 **LOG TYPE:**

SOURCE: MAYOR **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		COAL ABSENT OR ERODED
-	CARBONDALE	SPRINGFIELD	UNCLASSIFIED	-		

MAPID: 05500048000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 15 **QUARTERS/FOOTAGES:** NE NW SW NE

QUADRANGLE: SESSER **LONGITUDE:** -89.085032 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.092605 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 415.0 **LOGGED (FT.):** 765.0 **LOG TYPE:** Drillers Log

SOURCE: THOS. PENWARDEN **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
415.0			UNCONSOLIDATED	28.0	0.0	
387.0			SHALE	74.5	28.0	
312.5			COAL	0.5	102.5	
312.0			ROCK	169.5	103.0	
142.5			COAL	1.0	272.5	
141.5			ROCK	491.5	273.5	

MAPID: 05500048000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 15 **QUARTERS/FOOTAGES:** NE NW SW NE

QUADRANGLE: SESSER **LONGITUDE:** -89.085032 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.092605 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 415.1 **LOGGED (FT.):** 765.0 **LOG TYPE:** Drillers Log

SOURCE: THOMAS PENWARDEN **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
415.1	PLEISTOCENE		SOIL	28.0	0.0	
387.1	BOND		SANDY SHALE	47.0	28.0	LIGHT BLUE PARTINGS
340.1	BOND		SANDY SHALE	1.0	75.0	
339.1	BOND		SHALE	12.0	76.0	
327.1	BOND	CARTHAGE	LIMESTONE	5.0	88.0	DARK
322.1	MODESTO		SHALE	1.0	93.0	
321.1	MODESTO		BLACK SHALE	3.5	94.0	WITH LIMESTONE
317.6	MODESTO		SANDY SHALE	5.0	97.5	
312.6	MODESTO		COAL	0.5	102.5	
312.1	MODESTO		SANDY SHALE	22.0	103.0	
290.1	MODESTO		SANDY CLAYSTONE	2.0	125.0	
288.1	MODESTO		SANDY SHALE	34.0	127.0	WITH LIGHT SHALE PARTINGS
254.1	MODESTO		LIMESTONE	2.0	161.0	DARK
252.1	MODESTO		BLACK SHALE	4.0	163.0	
248.1	MODESTO		LIMESTONE	1.0	167.0	DARK
247.1	MODESTO		DARK SHALE	7.0	168.0	
240.1	MODESTO		UNDERCLAY	6.0	175.0	GREEN
234.1	MODESTO		SHALE	4.0	181.0	
230.1	MODESTO		SANDY SHALE	12.0	185.0	LIGHT SHALE PARTINGS
218.1	MODESTO		SANDSTONE	28.0	197.0	LIGHT
190.1	MODESTO		SANDY SHALE	35.0	225.0	
155.1	MODESTO		SANDY SHALE	12.5	260.0	WITH LIGHT SHALE PARTINGS
142.6	MODESTO	CHAPEL	COAL	1.0	272.5	
141.6			UNDERCLAY	4.0	273.5	DARK
137.6			SANDY SHALE	79.5	277.5	WITH LIGHT SAND PARTINGS
58.1			SHALE	36.0	357.0	
22.1			BLACK SHALE	1.0	393.0	
21.1			UNDERCLAY	1.0	394.0	DARK
20.1			SANDY LIMESTONE	16.0	395.0	WITH SHALE PARTINGS, BLUE
4.1			SANDY SHALE	4.0	411.0	WITH LIMESTONE PARTINGS
0.1			SANDY SHALE	2.5	415.0	WITH LIGHT SHALE PARTINGS
-2.4			SHALE	2.0	417.5	
-4.4			BLACK SHALE	0.5	419.5	
-4.9			UNDERCLAY	4.0	420.0	DARK
-8.9			SANDY SHALE	44.0	424.0	WITH LIGHT PARTINGS
-52.9			SANDY SHALE	35.0	468.0	WITH LIMESTONE PARTINGS
-87.9			SANDSTONE	5.0	503.0	
-92.9			SANDY SHALE	20.0	508.0	

-112.9	SANDY SHALE	2.0	528.0	WITH LIMESTONE PARTINGS
-114.9	LIMESTONE	2.0	530.0	
-116.9	SANDY SHALE	95.0	532.0	WITH SAND PARTINGS
-211.9	SANDSTONE	33.0	627.0	
-244.9	SANDY SHALE	60.0	660.0	WITH SAND PARTINGS
-304.9	SANDSTONE	42.0	720.0	
-346.9	SANDSTONE	3.0	762.0	

MAPID: 05500352000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 15 **QUARTERS/FOOTAGES:** 1650' N line, 990' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.081042 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.092091 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 437.0 **LOGGED (FT.):** 2412.0 **LOG TYPE:** Electric Log

SOURCE: SCHLAFLY H J ETAL **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-398.0	CARBONDALE	COLCHESTER	COAL	-	835.0	
-1975.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2412.0	

MAPID: 05500352000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 15 **QUARTERS/FOOTAGES:** 1650' N line, 990' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.081042 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.092091 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 437.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	CARBONDALE	ENERGY	SILTY SHALE	90.0		
-	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	10.0		
-	CARBONDALE	ENERGY	SHALE	40.0		
-	CARBONDALE	ENERGY	SILTY SHALE	65.0		
-	CARBONDALE	ENERGY	SHALE & SANDSTONE	65.0		

MAPID: 05500990000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 16 **QUARTERS/FOOTAGES:** 330' N line, 330' E line
QUADRANGLE: SESSER **LONGITUDE:** -89.097008 **GEOLOGIST:** J JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.096091 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 466.0 **LOGGED (FT.):** 2447.0 **LOG TYPE:** Electric Log
SOURCE: ILL MIDCONTNT ETAL **WELL TYPE:** Oil and Gas Test
COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-384.0	CARBONDALE	COLCHESTER	COAL	-	850.0	
-1981.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2447.0	

MAPID: 05500990000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 16 **QUARTERS/FOOTAGES:** 330' N line, 330' E line
QUADRANGLE: SESSER **LONGITUDE:** -89.097008 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.096091 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 466.0 **LOGGED (FT.):** 255.0 **LOG TYPE:** Electric Log
SOURCE: **WELL TYPE:** Oil and Gas Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	CARBONDALE	DANVILLE	COAL	3.0		
-	CARBONDALE	ALLENBY	SHALE	30.0		
-	CARBONDALE		LIMESTONE & SHALE	4.0		
-	CARBONDALE	ENERGY	SHALE	83.0		
-	CARBONDALE	ENERGY	SHALE & SANDSTONE	65.0		
-	CARBONDALE	ENERGY	SANDSTONE	70.0		

MAPID: 05500050000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 23 **QUARTERS/FOOTAGES:** SW SW SE
QUADRANGLE: SESSER **LONGITUDE:** -89.066663 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.068 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 482.5 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: BG MUDDYCS **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		COAL ABSENT OR ERODED

MAPID: 05502062000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 23 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of SE
QUADRANGLE: SESSER **LONGITUDE:** -89.066797 **GEOLOGIST:** J JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.073564 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 479.0 **LOGGED (FT.):** 2418.0 **LOG TYPE:** Electric Log
SOURCE: G & G OIL & GAS **WELL TYPE:** Oil and Gas Test
COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1939.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2418.0	

MAPID: 05502414000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 23 **QUARTERS/FOOTAGES:** 85' N line, 1289' E line
QUADRANGLE: SESSER **LONGITUDE:** -89.063269 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.081625 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 618.8 **LOG TYPE:** Drillers Log
SOURCE: OLD BEN COAL CORP. 274 **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-62.5	MODESTO	PIASA	LIMESTONE	3.8	522.5	
-66.2	MODESTO		SHALE	2.3	526.2	
-68.6	CARBONDALE	DANVILLE	COAL	2.3	528.6	
-70.8	CARBONDALE		SILTY SHALE	12.4	530.8	
-83.2	CARBONDALE	BANKSTON FORK	LIMESTONE	9.4	543.2	
-92.7	CARBONDALE	LAWSON	SHALE	1.2	552.7	
-93.8	CARBONDALE	CONANT	LIMESTONE	1.7	553.8	
-95.5	CARBONDALE	JAMESTOWN	COAL	0.7	555.5	
-96.2	CARBONDALE		SILTY SHALE	8.7	556.2	
-104.8	CARBONDALE	BRERETON	LIMESTONE	4.0	564.8	
-108.8	CARBONDALE	ENERGY	GRAY SHALE	43.2	568.8	
-152.0	CARBONDALE	HERRIN	COAL	6.8	612.0	

MAPID: 05500051000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 24 **QUARTERS/FOOTAGES:** NW SW SW
QUADRANGLE: SESSER **LONGITUDE:** -89.057498 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.069843 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 480.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: BG MUDDYCS **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		COAL ABSENT OR ERODED

MAPID: 05500052000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 24 **QUARTERS/FOOTAGES:** SW NE SW

QUADRANGLE: SESSER **LONGITUDE:** -89.052839 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.071649 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): 475.7 **LOGGED (FT.):** 650.0 **LOG TYPE:**

SOURCE: BG MUDDYCS 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-162.3	CARBONDALE	HERRIN	COAL	8.7	638.0	

MAPID: 05500052000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 24 **QUARTERS/FOOTAGES:** SW NE SW

QUADRANGLE: SESSER **LONGITUDE:** -89.052839 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.071649 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 476.0 **LOGGED (FT.):** 650.0 **LOG TYPE:** Drillers Log

SOURCE: BIG MUDDY COAL SYN **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
476.0			UNCONSOLIDATED	20.0	0.0	
456.0			ROCK	148.3	20.0	
307.7			COAL	0.7	168.3	
307.0			ROCK	179.3	169.0	
127.7			COAL	0.8	348.3	
127.0			ROCK	168.7	349.0	
-41.7			COAL	0.9	517.7	
-42.6			ROCK	26.2	518.6	
-68.8			COAL	0.8	544.8	
-69.6			ROCK	6.6	545.6	
-76.2			COAL	2.6	552.2	
-78.8			ROCK	9.0	554.8	
-87.8			COAL	0.3	563.8	
-88.0			ROCK	35.0	564.0	
-123.0			BLACK SHALE	5.4	599.0	
-128.4			BLACK SHALE	33.6	604.4	
-162.0	CARBONDALE	HERRIN	COAL	8.7	638.0	
-170.7	CARBONDALE		UNDERCLAY	2.7	646.7	
-173.4	CARBONDALE		LIMESTONE	0.6	649.4	

MAPID: 05500052000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 24 **QUARTERS/FOOTAGES:** SW NE SW

QUADRANGLE: SESSER **LONGITUDE:** -89.052839 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.071649 **DATE COLLECTED:** 10 / 0 / 1905

SURFACE ELEVATION (FT.): 475.7 **LOGGED (FT.):** 650.0 **LOG TYPE:** Drillers Log

SOURCE: BIG MUDDY COAL SYNDICATE 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
475.7	PLEISTOCENE		CLAY	12.0	0.0	
463.7	PLEISTOCENE		SANDY CLAY	7.0	12.0	
456.7	PLEISTOCENE		SAND & GRAVEL	1.0	19.0	
455.7	BOND		SANDSTONE	2.0	20.0	
453.7	BOND		SANDSTONE	38.5	22.0	
415.2	BOND		SANDSTONE	5.0	60.5	RED-BROWN
410.2	BOND		SOFT SHALE	11.5	65.5	
398.7	BOND		SHALE	1.5	77.0	
397.2	BOND		SANDSTONE/SHALE	6.5	78.5	
390.7	BOND		SANDY SHALE	44.0	85.0	
346.7	BOND		SHALE	18.5	129.0	
328.2	BOND		SHALE	1.5	147.5	
326.7	BOND	CARTHAGE	LIMESTONE	2.6	149.0	
324.1	MODESTO		SHALE	6.4	151.6	
317.7	MODESTO		SHALE	2.0	158.0	
315.7	MODESTO		SHALE	8.3	160.0	
307.4	MODESTO		COAL	0.7	168.3	
306.7	MODESTO		SHALE	3.0	169.0	
303.7	MODESTO		SANDY SHALE	22.5	172.0	
281.2	MODESTO		SHALE	0.5	194.5	
280.7	MODESTO		SHALE	7.0	195.0	
273.7	MODESTO		SOFT SHALE	21.0	202.0	
252.7	MODESTO		SHALE	3.0	223.0	
249.7	MODESTO		SHALE	2.0	226.0	
247.7	MODESTO		SHALE	3.3	228.0	
244.4	MODESTO		LIMESTONE	0.7	231.3	
243.7	MODESTO		CARBONACEOUS SHALE	7.0	232.0	
236.7	MODESTO		SHALE	1.0	239.0	
235.7	MODESTO		SHALE	13.0	240.0	
222.7	MODESTO		SHALE	6.0	253.0	
216.7	MODESTO		SANDY SHALE	7.0	259.0	
209.7	MODESTO		SANDSTONE	4.0	266.0	
205.7	MODESTO		SANDY SHALE	46.0	270.0	
159.7	MODESTO		SHALE	23.0	316.0	
136.7	MODESTO		SHALE	1.0	339.0	
135.7	MODESTO		SHALE	8.3	340.0	
127.4	MODESTO	CHAPEL	COAL	0.8	348.3	
126.7	MODESTO		SHALE	2.0	349.0	
124.7	MODESTO		SANDY SHALE	2.0	351.0	

122.7	MODESTO		SHALE	0.5	353.0	
122.2	MODESTO		LIMESTONE	1.3	353.5	
120.9	MODESTO		SHALE	16.3	354.8	WITH HARD BANDS
104.7	MODESTO		SANDY SHALE	65.0	371.0	
39.7	MODESTO		SHALE	33.0	436.0	
6.7	MODESTO		SHALE	17.0	469.0	
-10.3	MODESTO		SHALE	2.0	486.0	
-12.3	MODESTO		SANDSTONE	7.0	488.0	WITH SHALE PARTINGS
-19.3	MODESTO		SANDY SHALE	14.0	495.0	
-33.3	MODESTO		SANDSTONE	6.5	509.0	WITH SHALE PARTINGS
-39.8	MODESTO		SHALE	2.2	515.5	
-42.0	MODESTO		COAL	0.9	517.7	
-42.9	MODESTO		SHALE	4.4	518.6	
-47.3	MODESTO		SANDSTONE	5.0	523.0	
-52.3	MODESTO		SHALE	10.5	528.0	BLUE
-62.8	MODESTO		SHALE	6.3	538.5	WITH BROWN BANDS
-69.1	MODESTO	DEGRAFF	COAL	0.8	544.8	
-69.9	MODESTO		SHALE	1.0	545.6	
-70.9	MODESTO	PIASA	LIMESTONE	3.3	546.6	
-74.1	MODESTO		SHALE	2.3	549.8	
-76.5	CARBONDALE	DANVILLE	COAL	2.6	552.2	
-79.1	CARBONDALE		SHALE	3.0	554.8	
-82.1	CARBONDALE		SANDSTONE	3.0	557.8	WITH SHALE PARTINGS
-85.1	CARBONDALE		SHALE	3.0	560.8	SHALE IS PRIM. LITH.
-88.1	CARBONDALE	ALLENBY	COAL	0.3	563.8	
-88.3	CARBONDALE		SHALE	5.5	564.0	
-93.8	CARBONDALE	BANKSTON FORK	LIMESTONE	7.7	569.5	
-101.5	CARBONDALE		SHALE	4.0	577.2	
-105.5	CARBONDALE		SHALE	10.7	581.2	
-116.1	CARBONDALE	BRERETON	LIMESTONE	7.3	591.8	
-123.4	CARBONDALE	ENERGY	SHALE	5.3	599.1	
-128.7	CARBONDALE	ENERGY	SHALE	33.6	604.4	
-162.3	CARBONDALE	HERRIN	COAL	8.7	638.0	
-171.0	CARBONDALE		CLAYSTONE	2.8	646.7	
-173.7	CARBONDALE		LIMESTONE	0.6	649.4	

MAPID: 05501430000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 24 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of SW

QUADRANGLE: SESSER **LONGITUDE:** -89.050463 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.067949 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 488.0 **LOGGED (FT.):** 2424.0 **LOG TYPE:** Electric Log

SOURCE: NAT'L. ASSOC. PETRO. CO. **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-202.0	CARBONDALE	SPRINGFIELD	COAL	-	690.0	
-357.0	CARBONDALE	COLCHESTER	COAL	-	845.0	
-1936.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2424.0	

MAPID: 05502413000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 24 **QUARTERS/FOOTAGES:** 1168' S line, 1405' W line

QUADRANGLE: SESSER **LONGITUDE:** -89.053763 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.070281 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 481.0 **LOGGED (FT.):** 650.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 273 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-69.7	MODESTO	PIASA	LIMESTONE	2.5	550.7	
-72.2	MODESTO		SHALE	5.5	553.2	
-77.7	CARBONDALE	DANVILLE	COAL	2.0	558.7	
-79.7	CARBONDALE		SHALE	12.5	560.7	
-92.2	CARBONDALE	BANKSTON FORK	LIMESTONE	8.7	573.2	
-100.8	CARBONDALE	LAWSON	SANDSTONE	15.9	581.8	
-116.8	CARBONDALE	CONANT	LIMESTONE	4.6	597.8	
-121.3	CARBONDALE		SHALE	0.5	602.3	
-121.8	CARBONDALE	BRERETON	LIMESTONE	2.8	602.8	
-124.7	CARBONDALE	ENERGY	SHALE	5.5	605.7	
-130.2	CARBONDALE	ENERGY	GRAY SHALE	3.5	611.2	
-133.7	CARBONDALE	ENERGY	SILTY SHALE	20.5	614.7	
-154.2	CARBONDALE	ENERGY	GRAY SHALE	5.8	635.2	
-160.0	CARBONDALE	HERRIN	COAL	9.0	641.0	

MAPID: 05501429000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 25 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of SW SW

QUADRANGLE: SESSER **LONGITUDE:** -89.05732 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.055127 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 468.0 **LOGGED (FT.):** 2358.0 **LOG TYPE:** Electric Log

SOURCE: ARTNELL CO. **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-181.0	CARBONDALE	SPRINGFIELD	COAL	-	649.0	
-337.0	CARBONDALE	COLCHESTER	COAL	-	805.0	
-1890.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2358.0	

MAPID: 05501677000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 25 **QUARTERS/FOOTAGES:**

QUADRANGLE: SESSER **LONGITUDE:** -89.049244 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.059681 **DATE COLLECTED:**

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

SOURCE: KELLER 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	PLEISTOCENE		CLAY	18.0	0.0	YELLOW
-	BOND		SANDSTONE	10.0	18.0	YELLOW
-	BOND		SANDSTONE	29.0	28.0	YELLOW
-	BOND		SANDSTONE	3.0	57.0	
-	BOND		COAL	0.5	60.0	
-	BOND		CLAYSTONE	2.5	60.5	
-	BOND		CALCAREOUS SHALE	2.0	63.0	
-	BOND		SANDY SHALE	11.0	65.0	
-	BOND		SANDY SHALE	20.0	76.0	
-	BOND		SHALE	17.0	96.0	
-	BOND		SANDY SHALE	32.0	113.0	
-	BOND	CARTHAGE	LIMESTONE & CONGLOMERATE	2.0	145.0	
-	BOND	CARTHAGE	LIMESTONE	3.0	147.0	
-	MODESTO		BLACK SHALE	4.0	150.0	
-	MODESTO		SHALE	6.0	154.0	
-	MODESTO		SHALE	2.0	160.0	
-	MODESTO		COAL	0.5	162.0	
-	MODESTO		SHALE	13.5	162.5	
-	MODESTO		SHALE	0.8	176.0	
-	MODESTO		COAL	0.2	176.8	
-	MODESTO		SOFT SHALE	3.0	177.0	
-	MODESTO		SHALE	20.0	180.0	
-	MODESTO		SHALE	35.0	200.0	WITH HARD LIMESTONE BANDS
-	MODESTO		SHALE	3.0	235.0	
-	MODESTO		LIMESTONE	1.0	238.0	
-	MODESTO		SHALE	8.0	239.0	
-	MODESTO		SANDY SHALE	21.0	247.0	
-	MODESTO		SANDY SHALE	44.0	268.0	
-	MODESTO		SHALE	21.0	312.0	
-	MODESTO	CHAPEL	COAL	1.0	333.0	
-	MODESTO		SOFT SHALE	2.0	334.0	
-	MODESTO		SHALE	4.0	336.0	
-	MODESTO		SHALE	21.0	340.0	
-	MODESTO		SANDY SHALE	11.0	361.0	
-	MODESTO		SANDY SHALE	10.0	372.0	
-	MODESTO		LIMESTONE	1.0	382.0	
-	MODESTO		SANDY SHALE	24.0	383.0	
-	MODESTO		SHALE	31.0	407.0	

-	MODESTO		SHALE	22.0	438.0
-	MODESTO		SANDY SHALE	4.0	460.0
-	MODESTO		SANDY SHALE	16.0	464.0
-	MODESTO		SANDSTONE	3.0	480.0
-	MODESTO		BLACK SHALE	1.5	483.0
-	MODESTO		COAL	1.0	484.5
-	MODESTO		CLAYSTONE	1.5	485.5
-	MODESTO		SANDY SHALE	13.0	487.0
-	MODESTO		CARBONACEOUS SHALE	10.3	500.0
-	MODESTO	DEGRAFF	COAL	0.7	510.3
-	MODESTO		CARBONACEOUS SHALE	0.5	511.0
-	MODESTO	PIASA	LIMESTONE	2.0	511.5
-	MODESTO		SHALE	3.0	513.5
-	CARBONDALE	DANVILLE	COAL	2.5	516.5
-	CARBONDALE		SHALE	8.0	519.0
-	CARBONDALE	BRERETON	LIMESTONE	2.0	527.0
-	CARBONDALE	BRERETON	LIMESTONE	1.0	529.0
-	CARBONDALE	ENERGY	CARBONACEOUS SHALE	8.0	530.0
-	CARBONDALE	ENERGY	SANDY SHALE	19.0	538.0
-	CARBONDALE	ENERGY	SANDY SHALE	29.0	557.0
-	CARBONDALE	ENERGY	SHALE	19.0	586.0
-	CARBONDALE	ENERGY	SANDY SHALE	22.6	605.0
-	CARBONDALE	HERRIN	COAL	3.4	627.6
-	CARBONDALE	HERRIN	COAL	3.3	631.0
-	CARBONDALE	HERRIN	SHALE	0.6	634.3
-	CARBONDALE	HERRIN	COAL	1.8	634.9
-	CARBONDALE		CLAYSTONE	4.3	636.7

MAPID: 05501678000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 25 **QUARTERS/FOOTAGES:**

QUADRANGLE: SESSER **LONGITUDE:** -89.049244 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.059681 **DATE COLLECTED:**

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

SOURCE: KELLER 2 **WELL TYPE:** Coal Test

COMMENT: TWP/RNG.-5S-1E

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	PLEISTOCENE		SOIL	2.0	0.0	
-	PLEISTOCENE		CLAY	10.0	2.0	
-	PLEISTOCENE		SANDY CLAY	7.0	12.0	
-	PLEISTOCENE		SAND & GRAVEL	1.0	19.0	
-	MODESTO		SANDSTONE	2.0	20.0	
-	MODESTO		SANDSTONE	38.5	22.0	
-	MODESTO		SANDSTONE	5.0	60.5	RED-BROWN
-	MODESTO		SOFT SHALE	11.5	65.5	
-	MODESTO		SHALE	1.5	77.0	
-	MODESTO		SANDSTONE	6.5	78.5	WITH SHALE PARTINGS
-	MODESTO		SANDY SHALE	44.0	85.0	
-	MODESTO		SHALE	18.5	129.0	
-	MODESTO		SHALE	1.5	147.5	
-	MODESTO		LIMESTONE	2.6	149.0	
-	MODESTO		SHALE	6.4	151.6	
-	MODESTO		SHALE	2.0	158.0	BLUE SHALE
-	MODESTO		SHALE	8.3	160.0	
-	MODESTO		COAL	0.7	168.3	
-	MODESTO		SHALE	3.0	169.0	
-	MODESTO		SANDY SHALE	22.5	172.0	
-	MODESTO		SHALE	0.5	194.5	
-	MODESTO		SHALE	7.0	195.0	
-	MODESTO		SOFT SHALE	21.0	202.0	
-	MODESTO		SHALE	3.0	223.0	
-	MODESTO		SHALE	2.0	226.0	
-	MODESTO		SHALE	3.3	228.0	
-	MODESTO		LIMESTONE	0.7	231.3	
-	MODESTO		SHALE	7.0	232.0	
-	MODESTO		SHALE	1.0	239.0	
-	MODESTO		SHALE	13.0	240.0	
-	MODESTO		SHALE	6.0	253.0	
-	MODESTO		SANDY SHALE	7.0	259.0	
-	MODESTO		SANDSTONE	4.0	266.0	
-	MODESTO		SANDY SHALE	14.0	270.0	
-	MODESTO		SANDY SHALE	32.0	284.0	
-	MODESTO		SHALE	6.0	316.0	
-	MODESTO		SHALE	17.0	322.0	
-	MODESTO		SHALE	1.0	339.0	
-	MODESTO		SHALE	8.0	340.0	

-	MODESTO		SHALE	0.3	348.0	
-	MODESTO	CHAPEL	COAL	0.8	348.3	
-	MODESTO		SHALE	2.0	349.0	
-	MODESTO		SANDY SHALE	2.0	351.0	
-	MODESTO		SHALE	0.5	353.0	
-	MODESTO		LIMESTONE	1.3	353.5	
-	MODESTO		SHALE	16.3	354.8	WITH HARD BANDS
-	MODESTO		SHALE	37.0	371.0	SAND
-	MODESTO		SANDY SHALE	28.0	408.0	
-	MODESTO		SHALE	33.0	436.0	
-	MODESTO		SHALE	17.0	469.0	
-	MODESTO		SHALE	2.0	486.0	
-	MODESTO		SANDSTONE	7.0	488.0	WITH SHALE PARTINGS
-	MODESTO		SANDY SHALE	14.0	495.0	
-	MODESTO		SANDSTONE	6.5	509.0	WITH SHALE PARTINGS
-	MODESTO		SHALE	2.2	515.5	
-	MODESTO		COAL	0.9	517.7	
-	MODESTO		SHALE	3.4	518.6	
-	MODESTO		SHALE	1.0	522.0	
-	MODESTO		SANDSTONE	5.0	523.0	
-	MODESTO		SHALE	10.5	528.0	BLUE
-	MODESTO		SHALE	3.5	538.5	WITH BROWN BANDS
-	MODESTO		SHALE	2.8	542.0	WITH BROWN BANDS
-	MODESTO		COAL	0.8	544.8	
-	MODESTO		SHALE	1.0	545.6	
-	MODESTO		LIMESTONE	3.3	546.6	
-	MODESTO		SHALE	2.3	549.8	
-	CARBONDALE	DANVILLE	COAL	2.6	552.2	
-	CARBONDALE		SHALE	3.0	554.8	
-	CARBONDALE		SANDSTONE	3.0	557.8	WITH SHALE PARTINGS
-	CARBONDALE		SHALE	3.0	560.8	
-	CARBONDALE	ALLENBY	COAL	0.3	563.8	
-	CARBONDALE		SHALE	1.0	564.0	
-	CARBONDALE		SHALE	4.5	565.0	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	569.5	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	6.2	571.0	
-	CARBONDALE		SHALE	4.0	577.2	
-	CARBONDALE		SHALE	10.7	581.2	
-	CARBONDALE	BRERETON	LIMESTONE	5.2	591.8	
-	CARBONDALE	BRERETON	LIMESTONE	2.1	597.0	
-	CARBONDALE	ENERGY	SHALE	5.0	599.1	
-	CARBONDALE	ENERGY	SHALE	13.6	604.1	
-	CARBONDALE	ENERGY	SHALE	20.0	617.7	
-	CARBONDALE	HERRIN	COAL	6.8	637.7	
-	CARBONDALE	HERRIN	BLUE BAND	0.0	644.4	
-	CARBONDALE	HERRIN	COAL	1.9	644.5	
-	CARBONDALE		CLAYSTONE	2.8	646.3	

-	CARBONDALE	LIMESTONE	0.6	649.1

MAPID: 05501678000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 25 **QUARTERS/FOOTAGES:**

QUADRANGLE: SESSER **LONGITUDE:** -89.049244 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.059681 **DATE COLLECTED:**

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

SOURCE: KELLER **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-			UNCONSOLIDATED	20.0	0.0	
-			ROCK	148.3	20.0	
-			COAL	0.7	168.3	
-			ROCK	179.3	169.0	
-			COAL	0.8	348.3	
-			ROCK	168.7	349.0	
-			COAL	0.9	517.7	
-			ROCK	26.2	518.6	
-			COAL	0.8	544.8	
-			ROCK	6.4	545.6	
-			COAL	2.6	552.0	
-			ROCK	9.0	554.8	
-			COAL	0.3	563.8	
-			ROCK	40.0	564.0	
-			BLACK SHALE	34.0	604.0	
-	CARBONDALE	HERRIN	COAL	8.7	638.0	BLUE BAND .04'
-	CARBONDALE		UNDERCLAY	3.0	646.4	
-	CARBONDALE		LIMESTONE	0.6	649.4	

MAPID: 05501679000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 25 **QUARTERS/FOOTAGES:**

QUADRANGLE: SESSER **LONGITUDE:** -89.049244 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.059681 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 627.0 **LOG TYPE:** Drillers Log

SOURCE: KELLER 3 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	PLEISTOCENE		CLAY	18.0	0.0	YELLOW
-	PLEISTOCENE		CLAY	23.0	18.0	BLUE
-	BOND		SANDSTONE	6.0	41.0	
-	BOND		SANDSTONE	32.0	47.0	
-	BOND		SHALE	32.0	79.0	SAND
-	BOND		SANDY SHALE	4.0	111.0	
-	BOND	CARTHAGE	LIMESTONE	4.0	115.0	
-	MODESTO		SHALE	7.0	119.0	
-	MODESTO		SANDY SHALE	10.0	126.0	
-	MODESTO		SHALE	6.0	136.0	
-	MODESTO		COAL	1.0	142.0	
-	MODESTO		SANDY SHALE	26.0	143.0	
-	MODESTO		SANDY SHALE	6.0	169.0	
-	MODESTO		JACK	1.0	175.0	
-	MODESTO		SHALE	2.0	176.0	
-	MODESTO		SANDY SHALE	14.0	178.0	
-	MODESTO		BLACK SHALE	2.0	192.0	
-	MODESTO		LIMESTONE	1.0	194.0	
-	MODESTO		SHALE	9.0	195.0	
-	MODESTO		CALCAREOUS SHALE	6.0	204.0	WITH LIMESTONE BOULDERS
-	MODESTO		SHALE	8.0	210.0	
-	MODESTO		COAL	0.3	218.0	
-	MODESTO		SANDY SHALE	30.7	218.3	
-	MODESTO		SANDY SHALE	17.0	249.0	
-	MODESTO		SHALE	21.0	266.0	
-	MODESTO		SHALE	19.0	287.0	
-	MODESTO	CHAPEL	COAL	1.0	306.0	
-	MODESTO		SOFT SHALE	3.0	307.0	
-	MODESTO		SHALE	6.0	310.0	
-	MODESTO		SANDY SHALE	9.0	316.0	
-	MODESTO		SANDY SHALE	39.0	325.0	
-	MODESTO		SANDY SHALE	39.0	364.0	
-	MODESTO		SHALE	28.0	403.0	
-	MODESTO		SHALE	17.0	431.0	
-	MODESTO		SANDY SHALE	3.0	448.0	
-	MODESTO		SANDY SHALE	8.0	451.0	
-	MODESTO		SHALE	3.0	459.0	
-	MODESTO		BLACK SHALE	1.0	462.0	
-	MODESTO		COAL	0.6	463.0	

-	MODESTO		SOFT SHALE	2.4	463.6	
-	MODESTO		CALCAREOUS SHALE	13.0	466.0	WITH HARD LIMESTONE BANDS
-	MODESTO		SHALE	11.0	479.0	
-	MODESTO	DEGRAFF	COAL	1.8	490.0	
-	MODESTO	PIASA	LIMESTONE	3.3	491.8	
-	MODESTO		SHALE	4.0	495.0	
-	CARBONDALE	DANVILLE	COAL	2.0	499.0	
-	CARBONDALE		SANDY SHALE	6.0	501.0	
-	CARBONDALE		SHALE	1.0	507.0	
-	CARBONDALE		CALCAREOUS SHALE	3.0	508.0	
-	CARBONDALE	BRERETON	LIMESTONE	5.0	511.0	
-	CARBONDALE	ENERGY	CALCAREOUS SHALE	8.0	516.0	
-	CARBONDALE	ENERGY	SHALE	2.0	524.0	
-	CARBONDALE	ENERGY	CALCAREOUS SHALE	5.0	526.0	
-	CARBONDALE	ENERGY	SANDY SHALE	6.0	531.0	
-	CARBONDALE	ENERGY	SANDY SHALE	29.0	537.0	
-	CARBONDALE	ENERGY	SANDY SHALE	29.0	566.0	
-	CARBONDALE	ENERGY	SHALE	21.8	595.0	
-	CARBONDALE	HERRIN	COAL	7.0	616.8	
-	CARBONDALE	HERRIN	BLUE BAND	0.2	623.8	
-	CARBONDALE	HERRIN	COAL	1.9	624.0	
-	CARBONDALE		CLAYSTONE	1.1	625.9	

MAPID: 05501679000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 25 **QUARTERS/FOOTAGES:**

QUADRANGLE: SESSER **LONGITUDE:** -89.049244 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.059681 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 627.0 **LOG TYPE:** Drillers Log

SOURCE: KELLER **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-			UNCONSOLIDATED	41.0	0.0	
-			SANDSTONE	101.0	41.0	
-			COAL	1.0	142.0	
-			ROCK	75.0	143.0	
-			COAL	0.3	218.0	
-			ROCK	87.7	218.3	
-			COAL	1.0	306.0	
-			ROCK	156.0	307.0	
-			COAL	0.6	463.0	
-			ROCK	26.4	463.6	
-			COAL	1.8	490.0	
-			ROCK	7.2	491.8	
-			COAL	2.0	499.0	LOWER BENCH
-			ROCK	89.0	501.0	
-			SHALE	26.8	590.0	SANDY
-			COAL	9.0	616.8	BLUE BAND .16'
-			UNDERCLAY	1.1	625.8	

MAPID: 05502417000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 25 **QUARTERS/FOOTAGES:** 1268' N line, 1517' W line

QUADRANGLE: SESSER **LONGITUDE:** -89.053295 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.063554 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 479.0 **LOGGED (FT.):** 673.4 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 277 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-98.3	MODESTO	PIASA	LIMESTONE	5.3	577.3	
-103.7	MODESTO		SHALE	2.8	582.7	
-106.5	CARBONDALE	DANVILLE	COAL	2.8	585.5	
-109.3	CARBONDALE		SILTY SHALE	14.0	588.3	
-123.3	CARBONDALE	BANKSTON FORK	LIMESTONE	11.5	602.3	
-134.8	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	8.3	613.8	
-143.2	CARBONDALE	LAWSON	SILTY SHALE	19.5	622.2	
-162.7	CARBONDALE	BRERETON	LIMESTONE	3.0	641.7	
-165.7	CARBONDALE	ENERGY	SILTY SHALE	16.7	644.7	
-182.3	CARBONDALE	ENERGY	DARK GRAY SHALE	2.7	661.3	
-185.0	CARBONDALE	HERRIN	COAL	9.4	664.0	

MAPID: 05500227000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 26 **QUARTERS/FOOTAGES:** NW NW SW NE

QUADRANGLE: SESSER **LONGITUDE:** -89.067164 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.062939 **DATE COLLECTED:** 0 / 0 / 1917

SURFACE ELEVATION (FT.): 466.5 **LOGGED (FT.):** 542.0 **LOG TYPE:**

SOURCE: SOUTHERN GEM COAL CORP. 0002 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-43.5	CARBONDALE	HERRIN	COAL	20.0	510.0	

MAPID: 05500227000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 26 **QUARTERS/FOOTAGES:** NW NW SW NE
QUADRANGLE: SESSER **LONGITUDE:** -89.067164 **GEOLOGIST:** BARGH,M
CONFIDENTIAL: N **LATITUDE:** 38.062939 **DATE COLLECTED:** 2 / 27 / 1913
SURFACE ELEVATION (FT.): 467.0 **LOGGED (FT.):** 542.0 **LOG TYPE:** Drillers Log
SOURCE: SOUTHERN GEM COAL CORP. **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
467.0			UNKNOWN	499.0	0.0	
-32.0			LIMESTONE	8.0	499.0	
-40.0			SHALE	0.5	507.0	
-40.5			BLACK SHALE	2.8	507.5	
-43.3			COAL	1.4	510.3	
-44.8			SHALE	13.2	511.8	WITH COAL PTGS
-58.0	CARBONDALE	HERRIN	COAL	4.5	525.0	SPLIT
-62.5	CARBONDALE		SHALE	1.5	529.5	WITH COAL PTGS
-64.0	CARBONDALE	HERRIN	COAL	2.0	531.0	LOWER BENCH
-64.0			SHALE	533.0	531.0	
-67.3			UNDERCLAY	0.7	534.3	
-68.0			LIMESTONE	7.0	535.0	

MAPID: 05500227000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 26 **QUARTERS/FOOTAGES:** NW NW SW NE
QUADRANGLE: SESSER **LONGITUDE:** -89.067164 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.062939 **DATE COLLECTED:** 2 / 27 / 1913
SURFACE ELEVATION (FT.): 466.5 **LOGGED (FT.):** 542.0 **LOG TYPE:** Drillers Log
SOURCE: SOUTHERN GEM COAL CORP. 2 **WELL TYPE:** Coal Test
COMMENT: ORIGINAL LOCATION GIVEN AS NESENW

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-32.5	CARBONDALE	BRERETON	LIMESTONE	8.0	499.0	
-40.5	CARBONDALE		SHALE	0.5	507.0	
-41.0	CARBONDALE		SHALE	2.8	507.5	
-43.8	CARBONDALE	HERRIN	COAL	1.4	510.3	
-45.3	CARBONDALE	HERRIN	SHALE	13.3	511.8	WITH COAL PARTINGS
-58.5	CARBONDALE	HERRIN	COAL	2.0	525.0	
-60.5	CARBONDALE	HERRIN	COAL	2.5	527.0	WITH SHALE
-63.0	CARBONDALE	HERRIN	SHALE	1.5	529.5	WITH COAL PARTINGS
-64.5	CARBONDALE	HERRIN	COAL	2.0	531.0	
-66.5	CARBONDALE		SHALE	1.3	533.0	
-67.8	CARBONDALE		CLAYSTONE	0.8	534.3	
-68.5	CARBONDALE		SHALY LIMESTONE	7.0	535.0	WITH SHALE

MAPID: 05500807000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 26 **QUARTERS/FOOTAGES:** 2310' S line, 330' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.059676 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.058742 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 466.0 **LOGGED (FT.):** 622.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-62.0	MODESTO	PIASA	LIMESTONE & SHALE	8.0	528.0	
-70.0	MODESTO		BLACK SHALE	3.0	536.0	
-73.0	CARBONDALE	DANVILLE	COAL	3.0	539.0	
-76.0	CARBONDALE		CALCAREOUS SHALE	8.0	542.0	
-84.0	CARBONDALE		CLAYSTONE	6.0	550.0	
-90.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	556.0	UPPER BENCH
-96.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	2.0	562.0	SHALE PARTING
-98.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	4.0	564.0	LOWER BENCH
-102.0	CARBONDALE	LAWSON	SHALE	20.0	568.0	
-122.0	CARBONDALE	CONANT	LIMESTONE & SHALE	8.0	588.0	
-130.0	CARBONDALE		CALCAREOUS SHALE	4.0	596.0	
-134.0	CARBONDALE	BRERETON	LIMESTONE	8.0	600.0	
-142.0	CARBONDALE	ANNA	BLACK SHALE	4.0	608.0	
-146.0	CARBONDALE	HERRIN	COAL	10.0	612.0	

MAPID: 05500808000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 26 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NW

QUADRANGLE: SESSER **LONGITUDE:** -89.075719 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.060635 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 477.0 **LOGGED (FT.):** 2432.0 **LOG TYPE:** Electric Log

SOURCE: MILLER DEE DRLG CO **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-223.0	CARBONDALE	SPRINGFIELD	COAL	-	700.0	
-351.0	CARBONDALE	COLCHESTER	COAL	-	828.0	
-1955.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2432.0	

MAPID: 05501926000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 27 **QUARTERS/FOOTAGES:** 2310' S line, 1650' E line
QUADRANGLE: SESSER **LONGITUDE:** -89.082626 **GEOLOGIST:** J JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.058825 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 2445.0 **LOG TYPE:** Electric Log
SOURCE: MINOR, BURRELL G. **WELL TYPE:** Oil and Gas Test
COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-230.0	CARBONDALE	SPRINGFIELD	COAL	-	690.0	
-365.0	CARBONDALE	COLCHESTER	COAL	-	825.0	
-1985.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2445.0	

MAPID: 05501926000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 27 **QUARTERS/FOOTAGES:** 2310' S line, 1650' E line
QUADRANGLE: SESSER **LONGITUDE:** -89.082626 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.058825 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 634.0 **LOG TYPE:** Electric Log
SOURCE: **WELL TYPE:** Oil and Gas Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-67.0	CARBONDALE	ENERGY	SHALE	57.0	527.0	
-124.0	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	13.0	584.0	
-137.0	CARBONDALE	ENERGY	SHALE	20.0	597.0	
-157.0	CARBONDALE	HERRIN	COAL WITH SHALE	17.0	617.0	

MAPID: 05500340000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 28 **QUARTERS/FOOTAGES:** 2325' N line, 1635' W line
QUADRANGLE: SESSER **LONGITUDE:** -89.108227 **GEOLOGIST:** J JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.060718 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 404.0 **LOGGED (FT.):** 2372.0 **LOG TYPE:** Electric Log
SOURCE: CARTER OIL COMPANY **WELL TYPE:** Oil and Gas Test
COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-196.0	CARBONDALE	SPRINGFIELD	COAL	-	600.0	
-338.0	CARBONDALE	COLCHESTER	COAL	-	742.0	
-1968.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2372.0	

MAPID: 05500340000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 28 **QUARTERS/FOOTAGES:** 2325' N line, 1635' W line

QUADRANGLE: SESSER **LONGITUDE:** -89.108227 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.060718 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 404.0 **LOGGED (FT.):** 576.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-11.0	MODESTO	PIASA	LIMESTONE	5.0	415.0	
-16.0	MODESTO		DARK GRAY SHALE	3.0	420.0	
-19.0	CARBONDALE	DANVILLE	COAL	2.0	423.0	
-21.0	CARBONDALE		CALCAREOUS SHALE	5.0	425.0	
-26.0	CARBONDALE		CLAYSTONE	5.0	430.0	
-31.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	435.0	
-36.0	CARBONDALE	LAWSON	SHALE	14.0	440.0	
-50.0	CARBONDALE	BRERETON	LIMESTONE	1.0	454.0	
-51.0	CARBONDALE	ENERGY	SILTY SHALE	65.0	455.0	
-116.0	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	22.0	520.0	
-138.0	CARBONDALE	ENERGY	SHALE	12.0	542.0	
-150.0	CARBONDALE	ENERGY	SANDSTONE	12.0	554.0	
-162.0	CARBONDALE	ENERGY	SHALE	4.0	566.0	
-166.0	CARBONDALE	HERRIN	COAL	6.0	570.0	

MAPID: 05500228000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 32 **QUARTERS/FOOTAGES:** SW SE NE SE

QUADRANGLE: SESSER **LONGITUDE:** -89.11563 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.041721 **DATE COLLECTED:** 7 / 11 / 1917

SURFACE ELEVATION (FT.): 405.0 **LOGGED (FT.):** 513.6 **LOG TYPE:** Drillers Log

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

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
405.0			UNCONSOLIDATED	80.0	0.0	
325.0			ROCK	9.0	80.0	
316.0			COAL	0.4	89.0	
315.6			ROCK	43.9	89.4	
271.7			COAL	0.7	133.3	
271.0			ROCK	91.3	134.0	
179.7			COAL	0.7	225.3	
179.0			ROCK	167.5	226.0	
11.5			COAL	0.5	393.5	
11.0			ROCK	26.3	394.0	
-15.3			COAL	0.8	420.3	
-16.0			ROCK	12.5	421.0	
-28.5			COAL	1.5	433.5	
-30.0			ROCK	69.6	435.0	
-99.6			COAL WITH SHALE	8.0	504.6	COAL AND SHALE MIXED
-107.6			UNDERCLAY	1.0	512.6	

MAPID: 05500228000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 32 **QUARTERS/FOOTAGES:** SW SE NE SE

QUADRANGLE: SESSER **LONGITUDE:** -89.11563 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.041721 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 513.0 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-37.3	MODESTO	PIASA	LIMESTONE	6.0	432.3	
-43.3	MODESTO		BLACK SHALE	4.0	438.3	
-47.3	CARBONDALE	DANVILLE	COAL	1.5	442.3	
-48.8	CARBONDALE		SHALE & SANDSTONE	8.0	443.8	
-56.8	CARBONDALE	BANKSTON FORK	LIMESTONE	6.7	451.8	
-63.4	CARBONDALE	LAWSON	CALCAREOUS SHALE	2.0	458.4	
-65.4	CARBONDALE	LAWSON	DARK GRAY SHALE	11.0	460.4	
-76.4	CARBONDALE		BLACK SHALE	2.0	471.4	
-78.4	CARBONDALE	BRERETON	LIMESTONE	27.0	473.4	
-105.4	CARBONDALE	ANNA	BLACK SHALE	4.6	500.4	
-110.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	8.0	505.0	

MAPID: 05500228000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 32 **QUARTERS/FOOTAGES:** SW SE NE SE

QUADRANGLE: SESSER **LONGITUDE:** -89.11563 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.041721 **DATE COLLECTED:** 0 / 0 / 1917

SURFACE ELEVATION (FT.): 394.9 **LOGGED (FT.):** 514.0 **LOG TYPE:**

SOURCE: SOUTHERN GEM COAL CORP. 0005 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-110.1	CARBONDALE	HERRIN	COAL	8.0	505.0	

MAPID: 05500228000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 32 **QUARTERS/FOOTAGES:** SW SE NE SE

QUADRANGLE: SESSER **LONGITUDE:** -89.11563 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.041721 **DATE COLLECTED:** 7 / 11 / 1917

SURFACE ELEVATION (FT.): 394.9 **LOGGED (FT.):** 513.6 **LOG TYPE:** Drillers Log

SOURCE: SOUTHERN GEM COAL CORP. 5 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
394.9	PLEISTOCENE		CLAY	15.0	0.0	
379.9	PLEISTOCENE		SAND	35.0	15.0	
344.9	PLEISTOCENE		GRAVEL	14.0	50.0	
330.9	PLEISTOCENE		SAND	16.0	64.0	
314.9	MODESTO		SANDY LIMESTONE	1.0	80.0	
313.9	MODESTO		SHALE	8.0	81.0	
305.9	MODESTO		COAL	0.4	89.0	
305.5	MODESTO		SOFT SHALE	7.6	89.4	
297.9	MODESTO		SANDY SHALE	11.0	97.0	
286.9	MODESTO		SHALE	4.0	108.0	
282.9	MODESTO		SHALE	21.3	112.0	
261.6	MODESTO		COAL	0.7	133.3	
260.9	MODESTO		SHALE	9.0	134.0	
251.9	MODESTO		SHALY SANDSTONE	9.0	143.0	
242.9	MODESTO		SANDY SHALE	29.0	152.0	
213.9	MODESTO		SANDY SHALE	25.0	181.0	
188.9	MODESTO		SHALE	19.3	206.0	DARK GRAY
169.6	MODESTO	CHAPEL	COAL	0.7	225.3	
168.9	MODESTO		CLAYSTONE	2.6	226.0	
166.3	MODESTO		SHALE	6.4	228.6	
159.9	MODESTO		SHALY SANDSTONE	11.0	235.0	
148.9	MODESTO		SANDY SHALE	8.0	246.0	
140.9	MODESTO		SANDSTONE	10.0	254.0	WITH SHALE PARTINGS
130.9	MODESTO		SANDY SHALE	89.0	264.0	
41.9	MODESTO		SHALE	14.0	353.0	DARK GRAY
27.9	MODESTO		SHALE	1.0	367.0	
26.9	MODESTO		CLAYSTONE	1.0	368.0	
25.9	MODESTO		SANDSTONE/SHALE	23.0	369.0	
2.9	MODESTO		SHALE	0.8	392.0	
2.1	MODESTO		COAL	0.5	392.8	
1.6	MODESTO		CLAYSTONE	2.8	393.3	
-1.1	MODESTO		SHALE	3.0	396.0	
-4.1	MODESTO		SHALY SANDSTONE	9.0	399.0	
-13.1	MODESTO		SANDY SHALE	5.0	408.0	
-18.1	MODESTO		SHALE	4.0	413.0	DARK GRAY
-22.1	MODESTO		SHALE	3.3	417.0	
-25.4	MODESTO		COAL	0.8	420.3	
-26.1	MODESTO		SHALE	2.5	421.0	
-28.6	MODESTO	PIASA	LIMESTONE	6.0	423.5	

-34.6	MODESTO		SHALE	1.5	429.5	
-36.1	MODESTO		SHALE	2.5	431.0	
-38.6	CARBONDALE	DANVILLE	COAL	1.5	433.5	
-40.1	CARBONDALE		SANDY SHALE	1.0	435.0	
-41.1	CARBONDALE		SANDSTONE	1.0	436.0	
-42.1	CARBONDALE		SHALE	6.0	437.0	
-48.1	CARBONDALE	BANKSTON FORK	LIMESTONE	6.7	443.0	
-54.8	CARBONDALE		CALCAREOUS SHALE	10.3	449.7	DATA MISSING FROM 449'8"-458
-65.1	CARBONDALE		SHALE	11.0	460.0	DARK GRAY
-76.1	CARBONDALE		SHALE	2.0	471.0	
-78.1	CARBONDALE	BRERETON	LIMESTONE	27.0	473.0	
-105.1	CARBONDALE	HERRIN	COAL WITH SHALE	4.6	500.0	BLACK
-109.7	CARBONDALE	HERRIN	COAL WITH SHALE	8.0	504.6	
-117.7	CARBONDALE		CLAYSTONE	1.0	512.6	

MAPID: 05590004000C **VERSION:** 1 **PROJECT:** NCRDS92

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 33 **QUARTERS/FOOTAGES:** 54' N line, 26' W line of SE SE

QUADRANGLE: SESSER **LONGITUDE:** -89.099896 **GEOLOGIST:** C TREWORGY

CONFIDENTIAL: N **LATITUDE:** 38.041168 **DATE COLLECTED:** 1 / 27 / 1992

SURFACE ELEVATION (FT.): 450.0 **LOGGED (FT.):** 591.9 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. DH-490-26 **WELL TYPE:** Coal Test

COMMENT: PERMIT #26, REV 3 APPDX A

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
450.0			UNCONSOLIDATED	5.0	0.0	
445.0			SANDY CLAY	5.0	5.0	
440.0	BOND		SANDSTONE	2.0	10.0	
438.0	BOND		SHALE	6.0	12.0	
432.0	BOND		LIMESTONE	1.0	18.0	
431.0	BOND		SHALE	9.0	19.0	
422.0	BOND		SANDY SHALE	14.0	28.0	
408.0	BOND		SANDSTONE	8.0	42.0	
400.0	BOND		SHALE	36.0	50.0	
364.0	BOND		CALCAREOUS SHALE	2.0	86.0	
362.0	BOND		SANDSTONE	4.0	88.0	
358.0	BOND		SHALE	8.0	92.0	
350.0	BOND		SANDY SHALE	5.0	100.0	
345.0	BOND		SHALE	5.0	105.0	
340.0	BOND		SANDY SHALE	8.0	110.0	
332.0	BOND		SANDSTONE	5.0	118.0	
327.0	BOND	CARTHAGE	LIMESTONE	5.0	123.0	
322.0	MODESTO		SANDY SHALE	8.0	128.0	
314.0	MODESTO		SHALE	3.0	136.0	
311.0	MODESTO		LIMESTONE	3.0	139.0	
308.0	MODESTO		SHALE	4.0	142.0	
304.0	MODESTO		LIMESTONE	2.0	146.0	
302.0	MODESTO		SHALE	14.0	148.0	
288.0	MODESTO		SANDY SHALE	5.0	162.0	
283.0	MODESTO		DARK SHALE	3.0	167.0	
280.0	MODESTO		LIMESTONE	2.0	170.0	
278.0	MODESTO		SANDY SHALE	8.0	172.0	
270.0	MODESTO		SHALE	10.0	180.0	
260.0	MODESTO		SANDY SHALE	6.0	190.0	
254.0	MODESTO		SANDSTONE	34.0	196.0	
220.0	MODESTO		SANDY SHALE	10.0	230.0	
210.0	MODESTO		SHALE	15.0	240.0	
195.0	MODESTO		SANDY SHALE	35.0	255.0	
160.0	MODESTO		SHALE	21.0	290.0	
139.0	MODESTO		LIMESTONE	8.0	311.0	
131.0	MODESTO		SANDSTONE	2.0	319.0	
129.0	MODESTO		SANDY SHALE	42.0	321.0	
87.0	MODESTO		SHALE	64.0	363.0	
23.0	MODESTO		CALCAREOUS SHALE	4.0	427.0	

19.0	MODESTO		SANDSTONE	9.0	431.0	
10.0	MODESTO		SANDY SHALE	13.0	440.0	
-3.0	MODESTO		SANDSTONE	14.0	453.0	
-17.0	MODESTO		LIMESTONE	1.0	467.0	
-18.0	MODESTO		SHALE	1.0	468.0	SH W/ COAL PARTINGS
-19.0	MODESTO		DARK SHALE	4.0	469.0	
-23.0	MODESTO		SHALE	4.0	473.0	
-27.0	MODESTO		SANDY SHALE	27.0	477.0	
-54.0			SANDSTONE	6.0	504.0	
-60.0			SANDY SHALE	6.0	510.0	
-66.0			SANDSTONE	12.0	516.0	
-78.0			SANDY SHALE	9.0	528.0	
-87.0			SANDSTONE	3.0	537.0	
-90.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	540.0	
-94.0	CARBONDALE	ANVIL ROCK	SANDSTONE	6.0	544.0	
-100.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	10.0	550.0	
-110.0	CARBONDALE	BRERETON	LIMESTONE	10.0	560.0	
-120.0	CARBONDALE	ANNA	DARK SHALE	2.0	570.0	
-122.0	CARBONDALE	ANNA	BLACK SHALE	3.0	572.0	
-125.0	CARBONDALE	HERRIN	COAL	9.1	575.0	
-134.1	CARBONDALE		UNDERCLAY	1.6	584.1	
-135.7	CARBONDALE		LIMESTONE	6.2	585.7	

MAPID: 05500791000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 34 **QUARTERS/FOOTAGES:** 1320' S line, 1320' W line
QUADRANGLE: SESSER **LONGITUDE:** -89.090736 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.041296 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 484.0 **LOGGED (FT.):** 649.2 **LOG TYPE:** Survey Core Study
SOURCE: VALIER COAL CO. C-1 **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-69.4	MODESTO	PIASA	LIMESTONE	5.1	553.4	
-74.5	MODESTO		DARK GRAY SHALE	1.9	558.5	
-76.4	CARBONDALE	DANVILLE	COAL	1.8	560.4	
-78.2	CARBONDALE		SHALE & SILTSTONE	9.3	562.2	
-87.4	CARBONDALE	ALLENBY	COAL	0.5	571.4	
-87.9	CARBONDALE		CLAYSTONE & SHALE	5.7	571.9	
-93.6	CARBONDALE	BANKSTON FORK	LIMESTONE	8.5	577.6	
-102.1	CARBONDALE	LAWSON	SILTSTONE	3.2	586.1	
-105.3	CARBONDALE	LAWSON	SILTY SHALE	10.4	589.3	
-115.7	CARBONDALE	LAWSON	DARK GRAY SHALE	5.8	599.7	
-121.5	CARBONDALE	CONANT	LIMESTONE W/ SHALE	1.0	605.5	
-122.5	CARBONDALE	JAMESTOWN	BLACK SHALE	0.3	606.5	
-122.8	CARBONDALE		SANDSTONE/SILTSTONE	1.8	606.8	
-124.7	CARBONDALE	BRERETON	LIMESTONE	6.5	608.7	
-131.2	CARBONDALE	ANNA	BLACK SHALE	4.9	615.2	
-136.1	CARBONDALE	ENERGY	DARK GRAY SHALE	3.3	620.1	
-139.3	CARBONDALE	ENERGY	SILTY SHALE	7.3	623.3	
-146.7	CARBONDALE	ENERGY	GRAY SHALE	8.3	630.7	
-155.0	CARBONDALE	HERRIN	COAL	10.2	639.0	

MAPID: 05501426000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 34 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of NE NE
QUADRANGLE: SESSER **LONGITUDE:** -89.080263 **GEOLOGIST:** J JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.051475 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 463.0 **LOGGED (FT.):** 2450.0 **LOG TYPE:** Electric Log
SOURCE: RUDY, J. W., ESTATE OF **WELL TYPE:** Oil and Gas Test
COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-214.0	CARBONDALE	SPRINGFIELD	COAL	-	677.0	
-369.0	CARBONDALE	COLCHESTER	COAL	-	832.0	
-1987.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2450.0	

MAPID: 05590001000C **VERSION:** 1 **PROJECT:** NCRDS92

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 34 **QUARTERS/FOOTAGES:** 73' S line, 49' W line of NW NW

QUADRANGLE: SESSER **LONGITUDE:** -89.095098 **GEOLOGIST:** C TREWORGY

CONFIDENTIAL: N **LATITUDE:** 38.048914 **DATE COLLECTED:** 1 / 22 / 1992

SURFACE ELEVATION (FT.): 459.0 **LOGGED (FT.):** 601.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. DH-485-26 **WELL TYPE:** Coal Test

COMMENT: PERMIT #26, REV 3 APPDX A

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
459.0			UNCONSOLIDATED	3.0	0.0	
456.0			SAND	2.0	3.0	
454.0			SANDY CLAY	3.0	5.0	
451.0	BOND		SANDSTONE	8.0	8.0	
443.0	BOND		LIMESTONE	1.0	16.0	
442.0	BOND		COAL	2.0	17.0	
440.0	BOND		SHALE	9.0	19.0	
431.0	BOND		SANDSTONE	11.0	28.0	
420.0	BOND		SANDY SHALE	27.0	39.0	
393.0	BOND		SHALE	32.0	66.0	
361.0	BOND		LIMESTONE	6.0	98.0	
355.0	BOND		COAL	2.0	104.0	CO W/ SH STREAKS
353.0	BOND		LIMESTONE	1.0	106.0	
352.0	BOND		SANDY SHALE	9.0	107.0	
343.0	BOND		COAL	2.0	116.0	
341.0	BOND		SANDY SHALE	9.0	118.0	
332.0	BOND		SANDSTONE	11.0	127.0	
321.0	BOND		SANDY SHALE	21.0	138.0	
300.0	BOND	CARTHAGE	LIMESTONE	5.0	159.0	
295.0	MODESTO		LIMESTONE	9.0	164.0	
286.0	MODESTO		SANDY SHALE	7.0	173.0	
279.0	MODESTO		LIMESTONE	1.0	180.0	
278.0	MODESTO		SANDY SHALE	25.0	181.0	
253.0	MODESTO		SANDSTONE	19.0	206.0	
234.0	MODESTO		SANDY SHALE	40.0	225.0	
194.0	MODESTO		SHALE	38.0	265.0	
156.0	MODESTO		SANDY SHALE	5.0	303.0	
151.0	MODESTO		SANDSTONE	6.0	308.0	
145.0	MODESTO		SANDY SHALE	6.0	314.0	
139.0	MODESTO		SANDSTONE	4.0	320.0	
135.0	MODESTO		LIMESTONE	3.0	324.0	
132.0	MODESTO		SANDSTONE	6.0	327.0	
126.0	MODESTO		SANDY SHALE	23.0	333.0	
103.0	MODESTO		SHALE	14.0	356.0	
89.0	MODESTO		SANDY SHALE	24.0	370.0	
65.0	MODESTO		SHALE	17.0	394.0	
48.0	MODESTO		SANDY SHALE	11.0	411.0	
37.0	MODESTO		SHALE	6.0	422.0	
31.0	MODESTO		SANDY SHALE	7.0	428.0	

24.0	MODESTO		SANDSTONE	13.0	435.0
11.0	MODESTO		SANDY SHALE	12.0	448.0
-1.0	MODESTO		SHALE	25.0	460.0
-26.0	MODESTO		SANDY SHALE	18.0	485.0
-44.0	MODESTO		SHALE	11.0	503.0
-55.0			SANDY SHALE	12.0	514.0
-67.0			SANDSTONE	21.0	526.0
-88.0			SHALE	9.0	547.0
-97.0			SANDY SHALE	9.0	556.0
-106.0	CARBONDALE	BRERETON	LIMESTONE	7.0	565.0
-113.0	CARBONDALE		SHALE	10.0	572.0
-123.0	CARBONDALE	ENERGY	GRAY SHALE	4.1	582.0
-127.1	CARBONDALE	HERRIN	COAL	8.5	586.1
-135.6	CARBONDALE		GRAY SHALE	0.6	594.6
-136.2	CARBONDALE	HERRIN	COAL	1.7	595.2
-137.9	CARBONDALE		UNDERCLAY	1.7	596.9
-139.6	CARBONDALE		LIMESTONE	2.4	598.6

MAPID: 05590002000C **VERSION:** 1 **PROJECT:** NCRDS92

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 34 **QUARTERS/FOOTAGES:** 92' S line, 24' W line of SW NE

QUADRANGLE: SESSER **LONGITUDE:** -89.085993 **GEOLOGIST:** C TREWORGY

CONFIDENTIAL: N **LATITUDE:** 38.045273 **DATE COLLECTED:** 1 / 24 / 1992

SURFACE ELEVATION (FT.): 450.0 **LOGGED (FT.):** 615.1 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. DH-486-26 **WELL TYPE:** Coal Test

COMMENT: PERMIT #26, REV 3 APPDX A

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
450.0			UNCONSOLIDATED	5.0	0.0	
445.0			SANDY CLAY	18.0	5.0	
427.0	BOND		SANDSTONE	6.0	23.0	
421.0	BOND		COAL	1.0	29.0	
420.0	BOND		SANDSTONE	5.0	30.0	
415.0	BOND		COAL	1.0	35.0	
414.0	BOND		LIMESTONE	1.0	36.0	
413.0	BOND		SANDY SHALE	14.0	37.0	
399.0	BOND		LIMESTONE	6.0	51.0	
393.0	BOND		SANDY SHALE	15.0	57.0	
378.0	BOND		LIMESTONE	1.0	72.0	
377.0	BOND		SANDY SHALE	7.0	73.0	
370.0	BOND		SHALE	45.0	80.0	
325.0	BOND	CARTHAGE	LIMESTONE	5.0	125.0	
320.0	MODESTO		SANDY SHALE	6.0	130.0	
314.0	MODESTO		SHALE	20.0	136.0	
294.0	MODESTO		SANDY SHALE	8.0	156.0	
286.0	MODESTO		SANDSTONE	2.0	164.0	
284.0	MODESTO		LIMESTONE	2.0	166.0	
282.0	MODESTO		SANDY SHALE	11.0	168.0	
271.0	MODESTO		COAL	1.0	179.0	
270.0	MODESTO		SANDY SHALE	8.0	180.0	
262.0	MODESTO		SHALE	4.0	188.0	
258.0	MODESTO		LIMESTONE	1.0	192.0	
257.0	MODESTO		SHALE	7.0	193.0	
250.0	MODESTO		CALCAREOUS SHALE	6.0	200.0	
244.0	MODESTO		LIMESTONE	1.0	206.0	
243.0	MODESTO		SHALE	5.0	207.0	
238.0	MODESTO		CALCAREOUS SHALE	3.0	212.0	
235.0	MODESTO		SHALE	5.0	215.0	
230.0	MODESTO		SANDY SHALE	16.0	220.0	
214.0	MODESTO	WOMAC	COAL	1.0	236.0	
213.0	MODESTO		SANDY SHALE	8.0	237.0	
205.0	MODESTO		LIMESTONE	3.0	245.0	
202.0	MODESTO		SANDSTONE	9.0	248.0	
193.0	MODESTO		SANDY SHALE	28.0	257.0	
165.0	MODESTO		SHALE	5.0	285.0	
160.0	MODESTO		SANDY SHALE	11.0	290.0	
149.0	MODESTO		CALCAREOUS SHALE	7.0	301.0	

142.0	MODESTO		SANDY SHALE	10.0	308.0	
132.0	MODESTO	CHAPEL	COAL	2.0	318.0	
130.0	MODESTO		LIMESTONE	1.0	320.0	
129.0	MODESTO		SHALE	7.0	321.0	
122.0	MODESTO		SANDY SHALE	8.0	328.0	
114.0	MODESTO		LIMESTONE	2.0	336.0	
112.0	MODESTO		SANDSTONE	4.0	338.0	
108.0	MODESTO		CALCAREOUS SHALE	3.0	342.0	
105.0	MODESTO		SANDSTONE	5.0	345.0	
100.0	MODESTO		LIMESTONE	6.0	350.0	
94.0	MODESTO		SANDY SHALE	20.0	356.0	
74.0	MODESTO		SHALE	6.0	376.0	
68.0	MODESTO		SANDY SHALE	13.0	382.0	
55.0	MODESTO		SHALE	56.0	395.0	
-1.0	MODESTO		SANDY SHALE	6.0	451.0	
-7.0	MODESTO		LIMESTONE	2.0	457.0	
-9.0	MODESTO		SANDSTONE	21.0	459.0	
-30.0	MODESTO		LIMESTONE	6.0	480.0	
-36.0	MODESTO		SHALE	2.0	486.0	SH W/ COAL PARTINGS
-38.0	MODESTO		SANDY SHALE	7.0	488.0	
-45.0	MODESTO		SANDSTONE	16.0	495.0	
-61.0	MODESTO		SANDY SHALE	4.0	511.0	
-65.0	MODESTO	PIASA	LIMESTONE	2.0	515.0	
-67.0	MODESTO	PIASA	SHALE	1.0	517.0	
-68.0	MODESTO	PIASA	LIMESTONE	4.0	518.0	
-72.0	MODESTO		SHALE	8.0	522.0	
-80.0	CARBONDALE	DANVILLE	COAL	2.0	530.0	
-82.0	CARBONDALE		SANDY SHALE	4.0	532.0	
-86.0	CARBONDALE		LIMESTONE	1.0	536.0	
-87.0	CARBONDALE		COAL	1.0	537.0	
-88.0	CARBONDALE		SANDSTONE	4.0	538.0	
-92.0	CARBONDALE	BANKSTON FORK	LIMESTONE	9.0	542.0	
-101.0	CARBONDALE	ANVIL ROCK	SANDY SHALE	19.0	551.0	
-120.0	CARBONDALE	BRERETON	LIMESTONE	6.0	570.0	
-126.0	CARBONDALE		DARK GRAY SHALE	16.1	576.0	
-142.1	CARBONDALE		BLACK SHALE	8.4	592.1	
-150.5	CARBONDALE	ENERGY	GRAY SHALE	3.7	600.5	
-154.2	CARBONDALE	HERRIN	COAL	8.6	604.2	
-162.8	CARBONDALE		UNDERCLAY	0.4	612.8	
-163.2	CARBONDALE		LIMESTONE	1.9	613.2	

MAPID: 05590003000C **VERSION:** 1 **PROJECT:** NCRDS92

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 34 **QUARTERS/FOOTAGES:** NE SE

QUADRANGLE: SESSER **LONGITUDE:** -89.079174 **GEOLOGIST:** C TREWORGY

CONFIDENTIAL: N **LATITUDE:** 38.043172 **DATE COLLECTED:** 1 / 28 / 1992

SURFACE ELEVATION (FT.): 480.0 **LOGGED (FT.):** 649.2 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. DH-488-26 **WELL TYPE:** Coal Test

COMMENT: PERMIT #26, REV 3 APPDX A

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
480.0			UNCONSOLIDATED	3.0	0.0	
477.0			SANDY CLAY	17.0	3.0	
460.0	BOND		SANDSTONE	9.0	20.0	
451.0	BOND		SHALE	12.0	29.0	
439.0	BOND		SANDSTONE	26.0	41.0	
413.0	BOND		COAL	1.0	67.0	
412.0	BOND		SHALE	2.0	68.0	
410.0	BOND		SANDY SHALE	14.0	70.0	
396.0	BOND		SANDSTONE	3.0	84.0	
393.0	BOND		SHALE	9.0	87.0	
384.0	BOND		SANDY SHALE	4.0	96.0	
380.0	BOND		SHALE	55.0	100.0	
325.0	BOND	CARTHAGE	LIMESTONE	4.0	155.0	
321.0	MODESTO		COAL	1.0	159.0	
320.0	MODESTO		SHALE	8.0	160.0	
312.0	MODESTO		SANDY SHALE	3.0	168.0	
309.0	MODESTO		SHALE	23.0	171.0	
286.0	MODESTO		SANDSTONE	8.0	194.0	
278.0	MODESTO		SHALE	8.0	202.0	
270.0	MODESTO		SANDY SHALE	5.0	210.0	
265.0	MODESTO		SHALE	8.0	215.0	
257.0	MODESTO		COAL	1.0	223.0	
256.0	MODESTO		SHALE	16.0	224.0	
240.0	MODESTO		CALCAREOUS SHALE	5.0	240.0	
235.0	MODESTO		SHALE	8.0	245.0	
227.0	MODESTO	WOMAC	COAL	2.0	253.0	
225.0	MODESTO		SHALE	7.0	255.0	
218.0	MODESTO		SANDY SHALE	3.0	262.0	
215.0	MODESTO		LIMESTONE	4.0	265.0	
211.0	MODESTO		SANDY SHALE	12.0	269.0	
199.0	MODESTO		SANDSTONE	7.0	281.0	
192.0	MODESTO		SANDY SHALE	12.0	288.0	
180.0	MODESTO		SHALE	45.0	300.0	
135.0	MODESTO		CALCAREOUS SHALE	3.0	345.0	
132.0	MODESTO		SHALE	19.0	348.0	
113.0	MODESTO		SANDSTONE	15.0	367.0	
98.0	MODESTO		CALCAREOUS SHALE	5.0	382.0	
93.0	MODESTO		SANDY SHALE	23.0	387.0	
70.0	MODESTO		SHALE	15.0	410.0	

55.0	MODESTO		SANDY SHALE	17.0	425.0	
38.0	MODESTO		SHALE	42.0	442.0	
-4.0	MODESTO		SANDY SHALE	6.0	484.0	
-10.0	MODESTO		SANDSTONE	10.0	490.0	
-20.0	MODESTO		SANDY SHALE	11.0	500.0	
-31.0	MODESTO		SHALE	5.0	511.0	
-36.0	MODESTO		SHALE	1.0	516.0	SH W/ COAL PARTINGS
-37.0	MODESTO		SHALE	4.0	517.0	
-41.0	MODESTO		CALCAREOUS SHALE	1.0	521.0	
-42.0	MODESTO		SANDSTONE	13.0	522.0	
-55.0	MODESTO		SANDY SHALE	5.0	535.0	
-60.0	MODESTO		SHALE	3.0	540.0	
-63.0	MODESTO		COAL	1.0	543.0	
-64.0	MODESTO		SHALE	1.0	544.0	
-65.0	MODESTO	PIASA	LIMESTONE	3.0	545.0	
-68.0	MODESTO		SHALE	5.0	548.0	
-73.0	CARBONDALE	DANVILLE	COAL	2.0	553.0	
-75.0	CARBONDALE		SANDY SHALE	15.0	555.0	
-90.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	570.0	
-98.0	CARBONDALE	ANVIL ROCK	SANDY SHALE	7.0	578.0	
-105.0	CARBONDALE		SHALE	14.0	585.0	
-119.0	CARBONDALE	BRERETON	LIMESTONE	9.0	599.0	
-128.0	CARBONDALE	ENERGY	DARK SHALE	1.0	608.0	
-129.0	CARBONDALE	ENERGY	GRAY SHALE	27.2	609.0	
-156.2	CARBONDALE	HERRIN	COAL	8.8	636.2	
-165.0	CARBONDALE		UNDERCLAY	0.2	645.0	
-165.2	CARBONDALE		LIMESTONE	4.0	645.2	

MAPID: 05500229000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 35 **QUARTERS/FOOTAGES:** NW NW NW

QUADRANGLE: SESSER **LONGITUDE:** -89.075658 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.051461 **DATE COLLECTED:** 6 / 17 / 1918

SURFACE ELEVATION (FT.): 470.0 **LOGGED (FT.):** 635.5 **LOG TYPE:** Drillers Log

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

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
470.0			UNCONSOLIDATED	20.0	0.0	
450.0			ROCK	229.5	20.0	
220.5			COAL	1.2	249.5	BONEY
219.3			ROCK	91.3	250.7	
128.0			COAL	0.8	342.0	
127.2			ROCK	165.0	342.8	
-37.8			COAL	1.2	507.8	
-39.0			SHALE	23.5	509.0	SANDY
-62.5			COAL	1.2	532.5	
-63.7			ROCK	9.0	533.7	
-72.7			COAL	2.5	542.7	SPLIT, MIDDLE BENCH
-75.2			ROCK	9.3	545.2	
-84.5			COAL	0.5	554.5	LOWER BENCH
-85.0			ROCK	41.0	555.0	
-126.0			BLACK SHALE	6.0	596.0	
-132.0			SHALE	23.7	602.0	
-155.7	CARBONDALE	HERRIN	COAL	6.8	625.7	
-162.5	CARBONDALE		SHALE	0.5	632.5	BLUE BAND
-162.8	CARBONDALE	HERRIN	COAL	1.7	632.8	LOWER BENCH
-164.5	CARBONDALE		UNDERCLAY	1.0	634.5	

MAPID: 05500229000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 35 **QUARTERS/FOOTAGES:** NW NW NW

QUADRANGLE: SESSER **LONGITUDE:** -89.075658 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.051461 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 480.0 **LOGGED (FT.):** 634.8 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-54.0	MODESTO	PIASA	GRAY SHALE	5.0	534.0	
-59.0	MODESTO		DARK GRAY SHALE	4.0	539.0	
-63.0	CARBONDALE	DANVILLE	COAL	2.5	543.0	
-65.5	CARBONDALE		GRAY SHALE	9.3	545.5	
-74.8	CARBONDALE	ALLENBY	COAL	0.5	554.8	
-75.3	CARBONDALE		GRAY SHALE	1.5	555.3	
-76.8	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	8.5	556.8	
-85.3	CARBONDALE	LAWSON	GRAY SHALE	25.5	565.3	
-110.8	CARBONDALE		CALCAREOUS SHALE	0.7	590.8	
-111.5	CARBONDALE	BRERETON	LIMESTONE	5.5	591.5	
-117.0	CARBONDALE	ANNA	BLACK SHALE	5.3	597.0	
-122.3	CARBONDALE	ENERGY	GRAY SHALE	23.7	602.3	
-146.0	CARBONDALE	HERRIN	COAL	8.8	626.0	

MAPID: 05500229000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 35 **QUARTERS/FOOTAGES:** NW NW NW

QUADRANGLE: SESSER **LONGITUDE:** -89.075658 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.051461 **DATE COLLECTED:** 0 / 0 / 1917

SURFACE ELEVATION (FT.): 470.0 **LOGGED (FT.):** 636.0 **LOG TYPE:**

SOURCE: SOUTHERN GEM COAL CORP. 0001 **WELL TYPE:** Coal Test

COMMENT: SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-156.0	CARBONDALE	HERRIN	COAL	2.8	626.0	

MAPID: 05500229000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 35 **QUARTERS/FOOTAGES:** NW NW NW

QUADRANGLE: SESSER **LONGITUDE:** -89.075658 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.051461 **DATE COLLECTED:** 5 / 7 / 1918

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 635.5 **LOG TYPE:** Drillers Log

SOURCE: SOUTHERN GEM COAL CORP. 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	PLEISTOCENE		SOIL	20.0	0.0	
-	BOND		SANDSTONE	28.0	20.0	YELLOW
-	BOND		SHALE	4.0	48.0	
-	BOND		SANDY SHALE	6.0	52.0	
-	BOND		CALCAREOUS SHALE	2.0	58.0	
-	BOND		SANDY SHALE	8.0	60.0	
-	BOND		SHALE	3.0	68.0	DARK BLUE
-	BOND		LIMESTONE	1.0	71.0	
-	BOND		SHALE	78.0	72.0	
-	BOND	CARTHAGE	LIMESTONE	4.0	150.0	
-	MODESTO		SHALE	6.0	154.0	
-	MODESTO		SHALE	18.0	160.0	
-	MODESTO		SANDY SHALE	37.0	178.0	
-	MODESTO		SHALE	5.0	215.0	
-	MODESTO		BLACK SHALE	1.0	220.0	
-	MODESTO		SHALE	9.0	221.0	LIGHT BLUE
-	MODESTO		SHALE	10.0	230.0	WITH LIME PARTINGS;LIGHT
-	MODESTO		SHALE	9.0	240.0	LIGHT
-	MODESTO		SHALE	0.5	249.0	
-	MODESTO		BONE COAL	1.2	249.5	
-	MODESTO		SOFT SHALE	0.3	250.7	
-	MODESTO		SHALY SANDSTONE	9.0	251.0	
-	MODESTO		SHALE	82.0	260.0	
-	MODESTO	CHAPEL	COAL	0.8	342.0	
-	MODESTO		SHALE	5.2	342.8	LIGHT BLUE
-	MODESTO		SANDY SHALE	32.0	348.0	
-	MODESTO		SANDY SHALE	60.0	380.0	
-	MODESTO		SHALE	37.0	440.0	
-	MODESTO		SHALE	1.0	477.0	DARK BLUE
-	MODESTO		SOFT SHALE	2.0	478.0	
-	MODESTO		SANDY SHALE	25.0	480.0	
-	MODESTO		SHALE	1.0	505.0	
-	MODESTO		SHALE	1.8	506.0	
-	MODESTO		SHALY COAL	1.2	507.8	
-	MODESTO		SHALE	23.5	509.0	SANDY
-	MODESTO		COAL	1.2	532.5	
-	MODESTO		SHALE	5.0	533.7	
-	MODESTO		SHALE	4.0	538.7	
-	CARBONDALE	DANVILLE	COAL	2.5	542.7	

-	CARBONDALE		SHALE	8.8	545.2	
-	CARBONDALE		SHALE	0.5	554.0	
-	CARBONDALE	ALLENBY	COAL	0.5	554.5	
-	CARBONDALE		SHALE	1.5	555.0	
-	CARBONDALE		CALCAREOUS SHALE	8.5	556.5	
-	CARBONDALE		SHALE	25.5	565.0	
-	CARBONDALE		CALCAREOUS SHALE	0.7	590.5	
-	CARBONDALE	BRERETON	LIMESTONE	5.5	591.2	
-	CARBONDALE	ANNA	BLACK SHALE	5.3	596.7	
-	CARBONDALE	ENERGY	SHALE	23.7	602.0	WITH BROWN BANDS
-	CARBONDALE	HERRIN	COAL	6.8	625.7	
-	CARBONDALE	HERRIN	BLUE BAND	0.4	632.4	
-	CARBONDALE	HERRIN	COAL	1.7	632.8	
-	CARBONDALE		CLAYSTONE	1.0	634.5	

MAPID: 05501044000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 1E **SECTION:** 35 **QUARTERS/FOOTAGES:** 446' S line, 298' E line of NE SW

QUADRANGLE: SESSER **LONGITUDE:** -89.068691 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.04257 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 4351.0 **LOG TYPE:** Electric Log

SOURCE: MOSEBACH, PAUL **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-189.0	CARBONDALE	SPRINGFIELD	COAL	-	649.0	
-342.0	CARBONDALE	COLCHESTER	COAL	-	802.0	
-1876.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2336.0	
-3824.0	DEVONIAN	UPPER DEVONIAN S	UNCLASSIFIED	-	4284.0	TOP OF NEW ALBANY
-3842.0	DEVONIAN	GRASSY CREEK	UNCLASSIFIED	-	4302.0	
-3891.0	DEVONIAN	BASE UPPER DEVON	UNCLASSIFIED	-	4351.0	BASE OF NEW ALBANY

MAPID: 05500018000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** SW SW NW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.93985 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.122576 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 410.6 **LOGGED (FT.):** 704.0 **LOG TYPE:**

SOURCE: BG MUDDYCS **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-286.4	CARBONDALE	HERRIN	COAL	6.2	697.0	

MAPID: 05500018000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** SW SW NW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.93985 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.122576 **DATE COLLECTED:** 12 / 0 / 1909

SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 704.0 **LOG TYPE:** Drillers Log

SOURCE: L. N. WOOD **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
400.0			UNCONSOLIDATED	22.0	0.0	
378.0			ROCK	119.7	22.0	
258.3			COAL	0.8	141.7	
257.6			ROCK	100.8	142.4	
156.8			COAL	0.7	243.2	
156.2			ROCK	179.7	243.8	
-23.5			COAL	0.8	423.5	
-24.4			ROCK	164.9	424.4	
-189.3			COAL	0.7	589.3	
-190.0			ROCK	33.7	590.0	
-223.7			COAL	2.1	623.7	
-225.8			ROCK	33.2	625.8	
-259.0			SHALE	13.0	659.0	
-272.0			LIMESTONE	8.0	672.0	
-280.0			BLACK SHALE	1.0	680.0	
-281.0			LIMESTONE	1.0	681.0	
-282.0			COAL WITH SHALE	2.0	682.0	SHALE WITH COAL PARTINGS
-284.0			SHALE	13.3	684.0	
-297.3	CARBONDALE	HERRIN	COAL	6.2	697.3	
-303.5	CARBONDALE		UNDERCLAY	0.5	703.5	

MAPID: 05500018000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** SW SW NW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.93985 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.122576 **DATE COLLECTED:** 12 / 0 / 1909

SURFACE ELEVATION (FT.): 410.6 **LOGGED (FT.):** 704.0 **LOG TYPE:** Drillers Log

SOURCE: L.N. WOOD 9 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
410.6	PLEISTOCENE		CLAY	18.0	0.0	YELLOW
392.6	PLEISTOCENE		SAND & GRAVEL	4.0	18.0	
388.6	BOND		SOFT SHALE	4.0	22.0	
384.6	BOND		SANDSTONE	8.0	26.0	
376.6	BOND		SHALE	28.0	34.0	
348.6	BOND		LIMESTONE	3.0	62.0	
345.6	BOND		SANDY SHALE	2.0	65.0	
343.6	BOND		SANDY SHALE	13.0	67.0	
330.6	BOND		SANDSTONE	58.0	80.0	
272.6	BOND		SHALE	3.7	138.0	
268.9	BOND		COAL	0.8	141.7	
268.2	BOND		CLAYSTONE	4.6	142.4	
263.6	BOND		SHALE	38.0	147.0	
225.6	BOND		SANDY SHALE	31.0	185.0	
194.6	BOND	CARTHAGE	LIMESTONE	6.0	216.0	
188.6	MODESTO		SHALE	17.0	222.0	
171.6	MODESTO		SANDY SHALE	4.2	239.0	
167.4	MODESTO		COAL	0.7	243.2	
166.8	MODESTO		SHALE	10.2	243.8	
156.6	MODESTO		SOFT SHALE	3.0	254.0	
153.6	MODESTO		SHALE	10.0	257.0	
143.6	MODESTO		LIMESTONE	2.0	267.0	
141.6	MODESTO		SHALE	26.0	269.0	
115.6	MODESTO		SANDY SHALE	25.0	295.0	
90.6	MODESTO		LIMESTONE	9.0	320.0	
81.6	MODESTO		SANDY SHALE	6.0	329.0	
75.6	MODESTO		SANDY SHALE	30.0	335.0	
45.6	MODESTO		SANDSTONE	22.0	365.0	WITH SHALE PARTINGS
23.6	MODESTO		SANDY SHALE	13.0	387.0	
10.6	MODESTO		SHALE	20.0	400.0	
-9.4	MODESTO		CALCAREOUS SHALE	3.5	420.0	
-12.9	MODESTO	CHAPEL	COAL	0.9	423.5	
-13.8	MODESTO		SHALE	10.6	424.4	
-24.4	MODESTO		SANDY SHALE	118.0	435.0	
-142.4	MODESTO		SHALE	13.0	553.0	
-155.4	MODESTO		LIMESTONE	3.0	566.0	
-158.4	MODESTO		SHALE	17.0	569.0	
-175.4	MODESTO		SHALE	3.3	586.0	
-178.7	MODESTO		COAL	0.7	589.3	

-179.4	MODESTO		SOFT SHALE	10.0	590.0	
-189.4	MODESTO		SANDY SHALE	3.0	600.0	
-192.4	MODESTO		SHALE	10.0	603.0	
-202.4	MODESTO	PIASA	LIMESTONE	6.0	613.0	
-208.4	MODESTO		SHALE	4.0	619.0	
-212.4	MODESTO		SHALE	0.7	623.0	
-213.1	CARBONDALE	DANVILLE	COAL	2.1	623.7	
-215.2	CARBONDALE		SHALE	10.3	625.8	
-225.4	CARBONDALE		SANDSTONE	7.0	636.0	
-232.4	CARBONDALE		SHALE	5.0	643.0	
-237.4	CARBONDALE	BANKSTON FORK	LIMESTONE	11.0	648.0	
-248.4	CARBONDALE		SHALE	13.0	659.0	
-261.4	CARBONDALE	BRERETON	LIMESTONE	8.0	672.0	
-269.4	CARBONDALE	BRERETON	SHALE	1.0	680.0	
-270.4	CARBONDALE	BRERETON	LIMESTONE	1.0	681.0	
-271.4	CARBONDALE	ENERGY	SHALE	2.0	682.0	WITH COAL PARTINGS
-273.4	CARBONDALE	ENERGY	SHALE	13.3	684.0	
-286.7	CARBONDALE	HERRIN	COAL	6.2	697.3	
-292.9	CARBONDALE		CLAYSTONE	0.5	703.5	

MAPID: 05500781000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** 1062' S line, 1355' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.935487 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.113977 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 410.0 **LOGGED (FT.):** 697.4 **LOG TYPE:** Survey Core Study

SOURCE: FRANKLIN COUNTY COAL CO. 2 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-177.1	MODESTO	PIASA	LIMESTONE	6.1	587.1	
-183.2	MODESTO		BLACK SHALE	14.0	593.2	
-197.2	CARBONDALE	DANVILLE	COAL	2.5	607.2	
-199.7	CARBONDALE		SANDSTONE/SILTSTONE	17.0	609.7	
-216.7	CARBONDALE	ALLENBY	DARK GRAY SHALE	1.3	626.7	
-217.9	CARBONDALE		GRAY SHALE	3.3	627.9	
-221.3	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	631.3	
-226.8	CARBONDALE	LAWSON	CALCAREOUS SHALE	1.3	636.8	
-228.1	CARBONDALE	LAWSON	GRAY SHALE	5.0	638.1	
-233.1	CARBONDALE	LAWSON	DARK GRAY SHALE	8.5	643.1	
-241.6	CARBONDALE	LAWSON	CALCAREOUS SHALE	0.6	651.6	
-242.2	CARBONDALE	BRERETON	LIMESTONE	3.0	652.2	
-245.2	CARBONDALE	ANNA	BLACK SHALE	1.2	655.2	
-246.3	CARBONDALE	ENERGY	GRAY SHALE	1.8	656.3	
-248.1	CARBONDALE	ENERGY	CALCAREOUS SHALE	20.0	658.1	
-268.1	CARBONDALE	ENERGY	SILTY SHALE	11.9	678.1	
-280.0	CARBONDALE	HERRIN	COAL	7.4	690.0	

MAPID: 05500020000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 2 **QUARTERS/FOOTAGES:**

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.959609 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.118471 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 714.0 **LOG TYPE:**

SOURCE: TAYLOR COAL CO. 0002 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-269.0	CARBONDALE	HERRIN	COAL	7.0	664.0	

MAPID: 05500020000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 2 **QUARTERS/FOOTAGES:**

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.959609 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.118471 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 714.0 **LOG TYPE:** Drillers Log

SOURCE: TAYLOR COAL CO. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
395.0			UNCONSOLIDATED	50.0	0.0	
345.0			SANDSTONE	48.0	50.0	
297.0			COAL	0.6	98.0	
296.4			ROCK	11.4	98.6	
285.0			COAL	0.2	110.0	
284.8			ROCK	121.8	110.2	
163.0			COAL	0.3	232.0	BONEY
162.7			ROCK	144.2	232.3	
18.5			COAL	0.8	376.5	
17.7			ROCK	158.2	377.3	
-140.5			COAL	0.7	535.5	
-141.2			ROCK	22.0	536.2	
-163.2			COAL	0.8	558.2	
-163.9			ROCK	13.1	558.9	
-177.0			COAL	2.5	572.0	
-179.5			ROCK	63.5	574.5	
-243.0			SHALE	26.5	638.0	
-269.5	CARBONDALE	HERRIN	COAL	7.0	664.5	
-276.5	CARBONDALE		UNDERCLAY	2.1	671.5	
-278.5	CARBONDALE		ROCK	37.5	673.5	
-316.0	CARBONDALE		COAL	1.1	711.0	
-317.1	CARBONDALE		ROCK	1.9	712.1	

MAPID: 05500020000C **VERSION:** 3 **PROJECT:** NCRDS87

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 2 **QUARTERS/FOOTAGES:**

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.959609 **GEOLOGIST:** WEIBEL

CONFIDENTIAL: N **LATITUDE:** 38.118471 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 714.0 **LOG TYPE:** Drillers Log

SOURCE: TAYLOR COAL CO. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
395.0			UNCONSOLIDATED	50.0	0.0	
345.0	BOND		SANDSTONE	42.0	50.0	
303.0	BOND		SHALE	6.0	92.0	
297.0	BOND		COAL	0.6	98.0	
296.4	BOND		UNDERCLAY	2.4	98.6	
294.0	BOND		SHALE	9.0	101.0	
285.0	BOND		COAL	0.2	110.0	
284.8	BOND		SHALE	69.8	110.2	
215.0	BOND	CARTHAGE	LIMESTONE	6.0	180.0	
209.0	MODESTO		SHALE	23.0	186.0	
186.0	MODESTO		BONE COAL	0.5	209.0	
185.5	MODESTO		SHALE	21.5	209.5	
164.0	MODESTO		BLACK SHALE	1.0	231.0	
163.0	MODESTO		BONE COAL	0.3	232.0	
162.7	MODESTO		BLACK SHALE	0.7	232.3	
162.0	MODESTO		UNDERCLAY	3.0	233.0	
159.0	MODESTO		SHALE	24.0	236.0	
135.0	MODESTO		BLACK SHALE	10.0	260.0	
125.0	MODESTO		SHALE	106.5	270.0	
18.5	MODESTO		COAL	0.8	376.5	
17.7	MODESTO		UNDERCLAY	1.7	377.3	
16.0	MODESTO		SHALE	49.0	379.0	
-33.0	MODESTO		SANDSTONE	15.0	428.0	
-48.0	MODESTO		SHALE	68.0	443.0	
-116.0	MODESTO		SANDSTONE	4.0	511.0	
-120.0	MODESTO		GRAY SHALE	5.0	515.0	
-125.0	MODESTO		DARK SHALE	15.5	520.0	
-140.5	MODESTO		COAL	0.7	535.5	
-141.2	MODESTO		UNDERCLAY	2.8	536.2	
-144.0	MODESTO		SHALE	19.2	539.0	
-163.2	MODESTO		COAL	0.8	558.2	
-163.9	MODESTO		UNDERCLAY	1.1	558.9	
-165.0	MODESTO		SHALE	12.0	560.0	
-177.0	CARBONDALE	DANVILLE	COAL	2.5	572.0	
-179.5	CARBONDALE		UNDERCLAY	2.5	574.5	
-182.0	CARBONDALE		SHALE	11.0	577.0	
-193.0	CARBONDALE		LIMESTONE	3.0	588.0	
-196.0	CARBONDALE		SHALE	14.0	591.0	
-210.0	CARBONDALE		LIMESTONE	1.5	605.0	

-211.5	CARBONDALE		SHALE	57.9	606.5
-269.4	CARBONDALE	HERRIN	COAL	7.0	664.4
-276.4	CARBONDALE		UNDERCLAY	2.1	671.4
-278.5	CARBONDALE		SHALE	37.5	673.5
-316.0	CARBONDALE		COAL	1.1	711.0
-317.1	CARBONDALE		UNDERCLAY	0.2	712.1
-317.3	CARBONDALE		DARK SHALE	1.8	712.3

MAPID: 05500020000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 2 **QUARTERS/FOOTAGES:**

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.959609 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.118471 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 714.0 **LOG TYPE:** Drillers Log

SOURCE: TAYLOR COAL CO. 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
395.0	PLEISTOCENE		SANDY CLAY	25.0	0.0	
370.0	PLEISTOCENE		CLAY	3.0	25.0	
367.0	PLEISTOCENE		SAND	20.0	28.0	
347.0	PLEISTOCENE		GRAVEL	2.0	48.0	
345.0	BOND		SANDSTONE	42.0	50.0	
303.0	BOND		SANDY SHALE	6.0	92.0	
297.0	BOND		COAL	0.6	98.0	
296.4	BOND		CLAYSTONE	2.4	98.6	
294.0	BOND		SHALE	9.0	101.0	
285.0	BOND		COAL	0.2	110.0	
284.8	BOND		SHALE	52.8	110.2	
232.0	BOND		SHALE	17.0	163.0	
215.0	BOND	CARTHAGE	LIMESTONE	6.0	180.0	
209.0	MODESTO		SHALE	23.0	186.0	
186.0	MODESTO		SHALY COAL	0.5	209.0	
185.5	MODESTO		SANDY SHALE	11.5	209.5	
174.0	MODESTO		SHALE	10.0	221.0	
164.0	MODESTO		SHALE	1.0	231.0	
163.0	MODESTO		BONE COAL	0.3	232.0	
162.7	MODESTO		SHALE	0.7	232.3	
162.0	MODESTO		CLAYSTONE	3.0	233.0	
159.0	MODESTO		SHALE	24.0	236.0	
135.0	MODESTO		SHALE	10.0	260.0	
125.0	MODESTO		SHALE	2.0	270.0	
123.0	MODESTO		SHALE	11.0	272.0	WITH LIMESTONE SPOTS
112.0	MODESTO		CARBONACEOUS SHALE	2.0	283.0	
110.0	MODESTO		SHALE	1.0	285.0	WITH SANDSTONE BANDS
109.0	MODESTO		SANDY SHALE	4.0	286.0	
105.0	MODESTO		SHALE	35.0	290.0	
70.0	MODESTO		SHALE	34.0	325.0	WITH SANDY STREAKS
36.0	MODESTO		SHALE	17.5	359.0	
18.5	MODESTO	CHAPEL	COAL	0.8	376.5	
17.7	MODESTO		CLAYSTONE	1.7	377.3	
16.0	MODESTO		CALCAREOUS SHALE	5.0	379.0	
11.0	MODESTO		SHALE	4.0	384.0	
7.0	MODESTO		SANDY SHALE	40.0	388.0	
-33.0	MODESTO		SANDSTONE	15.0	428.0	
-48.0	MODESTO		SHALE	24.0	443.0	WITH SANDSTONE PARTINGS
-72.0	MODESTO		SHALE	8.0	467.0	

-80.0	MODESTO		SHALE	35.0	475.0	
-115.0	MODESTO		CALCAREOUS SHALE	1.0	510.0	
-116.0	MODESTO		SANDSTONE	4.0	511.0	
-120.0	MODESTO		SHALE	5.0	515.0	
-125.0	MODESTO		SHALE	15.5	520.0	
-140.5	MODESTO		COAL	0.7	535.5	(A)
-141.2	MODESTO		CLAYSTONE	2.8	536.2	
-144.0	MODESTO		SANDY SHALE	9.0	539.0	
-153.0	MODESTO		SHALE	10.2	548.0	
-163.2	MODESTO		COAL	0.8	558.2	(B)
-163.9	MODESTO		CLAYSTONE	1.1	558.9	
-165.0	MODESTO		SHALE	12.0	560.0	
-177.0	CARBONDALE	DANVILLE	COAL	2.5	572.0	
-179.5	CARBONDALE		CLAYSTONE	2.5	574.5	
-182.0	CARBONDALE		SHALE	8.0	577.0	
-190.0	CARBONDALE		CALCAREOUS SHALE	3.0	585.0	
-193.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	588.0	
-196.0	CARBONDALE		SHALE	14.0	591.0	
-210.0	CARBONDALE	BRERETON	LIMESTONE	1.5	605.0	
-211.5	CARBONDALE	ENERGY	SHALE	1.0	606.5	
-212.5	CARBONDALE	ENERGY	SANDY SHALE	30.5	607.5	
-243.0	CARBONDALE	ENERGY	SHALE	26.4	638.0	
-269.4	CARBONDALE	HERRIN	COAL	7.0	664.4	
-276.4	CARBONDALE		CLAYSTONE	2.1	671.4	DARK
-278.5	CARBONDALE		SANDSTONE	8.5	673.5	WITH LIMESTONE SPOTS
-287.0	CARBONDALE		SANDY SHALE	6.0	682.0	
-293.0	CARBONDALE		SHALE	17.0	688.0	
-310.0	CARBONDALE		SHALE	6.0	705.0	
-316.0	CARBONDALE	BRIAR HILL	COAL	1.1	711.0	
-317.1	CARBONDALE		CLAYSTONE	0.2	712.1	DARK
-317.3	CARBONDALE		SHALE	1.8	712.3	

MAPID: 05500651000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 2 **QUARTERS/FOOTAGES:** 990' S line, 990' E line of NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.953655 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.121613 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 2492.0 **LOG TYPE:** Electric Log

SOURCE: OMEARA ROBERT W **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-325.0	CARBONDALE	SPRINGFIELD	COAL	-	720.0	
-472.0	CARBONDALE	COLCHESTER	COAL	-	867.0	
-2097.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2492.0	

MAPID: 05500783000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 2 **QUARTERS/FOOTAGES:** 328' S line, 1838' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.962683 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.112641 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 385.0 **LOGGED (FT.):** 660.8 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COUNTY COAL CO. 4 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-174.7	MODESTO	PIASA	LIMESTONE	3.5	559.7	
-178.2	MODESTO		GRAY SHALE	4.2	563.2	
-182.3	CARBONDALE	DANVILLE	COAL	1.9	567.3	
-184.2	CARBONDALE		SHALE & SILTSTONE	18.7	569.2	
-202.9	CARBONDALE	BANKSTON FORK	LIMESTONE	4.3	587.9	
-207.2	CARBONDALE	LAWSON	SILTY SHALE	6.3	592.2	
-213.5	CARBONDALE	LAWSON	CONGLOMERATE	6.0	598.5	
-219.5	CARBONDALE	LAWSON	GRAY SHALE	5.3	604.5	
-224.8	CARBONDALE	BRERETON	LIMESTONE	6.2	609.8	
-231.0	CARBONDALE	ANNA	BLACK SHALE	3.7	616.0	
-234.7	CARBONDALE	ENERGY	SILTSTONE	11.4	619.7	
-246.1	CARBONDALE	ENERGY	SANDSTONE	4.3	631.1	
-250.4	CARBONDALE	ENERGY	SILTSTONE	8.6	635.4	
-259.0	CARBONDALE	ENERGY	SILTY SHALE	8.0	644.0	
-267.0	CARBONDALE	HERRIN	COAL	8.8	652.0	

MAPID: 05501946000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 2 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of SW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.955986 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.121649 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 2488.0 **LOG TYPE:** Electric Log

SOURCE: ROSS D O DRLG CO **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-327.0	CARBONDALE	SPRINGFIELD	COAL	-	722.0	
-487.0	CARBONDALE	COLCHESTER	COAL	-	882.0	
-2093.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2488.0	

MAPID: 05583000000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 2 **QUARTERS/FOOTAGES:** 328' S line, 1838' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.962683 **GEOLOGIST:** J MCBETH

CONFIDENTIAL: N **LATITUDE:** 38.112641 **DATE COLLECTED:** 0 / 0 / 1943

SURFACE ELEVATION (FT.): 385.3 **LOGGED (FT.):** 720.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO/FRANKLIN CO N4 **WELL TYPE:** Coal Test

COMMENT: PERMIT 13; MINE #21

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
385.3	PLEISTOCENE		UNCONSOLIDATED	67.0	0.0	
318.3	BOND		SANDSTONE	30.0	67.0	
288.3	BOND		SANDY SHALE	8.0	97.0	
280.3	BOND		COAL	0.2	105.0	BONEY
280.1	BOND		GRAY SHALE	10.8	105.2	
269.3	BOND		SANDSTONE	6.0	116.0	
263.3	BOND		GRAY SHALE	51.0	122.0	
212.3	BOND		SHALE	2.0	173.0	WITH CALCAREOUS NODULES
210.3	BOND	CARTHAGE	LIMESTONE	5.0	175.0	
205.3	MODESTO		SHALE	5.0	180.0	DARK
200.3	MODESTO		GRAY SHALE	21.0	185.0	
179.3	MODESTO		COAL	0.5	206.0	BONEY
178.8	MODESTO		UNDERCLAY	3.5	206.5	
175.3	MODESTO	MACOUPIN	LIMESTONE	4.0	210.0	
171.3	MODESTO		GRAY SHALE	17.0	214.0	
154.3	MODESTO		COAL	0.5	231.0	BONEY
153.8	MODESTO		GRAY SHALE	36.5	231.5	
117.3	MODESTO		SHALE	5.0	268.0	SOFT
112.3	MODESTO		COAL	0.7	273.0	BONEY
111.6	MODESTO		GRAY SHALE	53.3	273.7	
58.3	MODESTO		SANDY SHALE	24.0	327.0	
34.3	MODESTO		GRAY SHALE	19.0	351.0	
15.3	MODESTO	CHAPEL	COAL	1.0	370.0	
14.3	MODESTO		UNDERCLAY	4.0	371.0	
10.3	MODESTO		SHALE	33.0	375.0	DARK
-22.7	MODESTO		LIMESTONE	2.0	408.0	
-24.7	MODESTO		GRAY SHALE	99.0	410.0	
-123.7	MODESTO		LIMESTONE	3.0	509.0	
-126.7	MODESTO		GRAY SHALE	18.0	512.0	
-144.7	MODESTO		COAL	0.5	530.0	BONEY
-145.2	MODESTO		GRAY SHALE	29.5	530.5	
-174.7	MODESTO	PIASA	LIMESTONE	5.0	560.0	
-179.7	MODESTO		SHALE	5.0	565.0	DARK
-184.7	CARBONDALE	DANVILLE	COAL	2.0	570.0	BONEY
-186.7	CARBONDALE		SANDY SHALE	20.0	572.0	
-206.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	592.0	
-210.7	CARBONDALE		GRAY SHALE	6.0	596.0	
-216.7	CARBONDALE		SHALE	6.0	602.0	CONGLOMERATE
-222.7	CARBONDALE	ENERGY	GRAY SHALE	44.0	608.0	

-266.7	CARBONDALE	HERRIN	COAL	8.8	652.0	
-275.5	CARBONDALE		UNDERCLAY	2.7	660.8	
-278.2	CARBONDALE	CANTON	GRAY SHALE	46.5	663.5	
-324.7	CARBONDALE	ST. DAVID	LIMESTONE	2.0	710.0	
-326.7	CARBONDALE	TURNER MINE	SHALE	3.0	712.0	DARK
-329.7	CARBONDALE	SPRINGFIELD	COAL	4.0	715.0	
-333.7	CARBONDALE		UNDERCLAY	1.0	719.0	

MAPID: 05500767000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 3 **QUARTERS/FOOTAGES:** 70' S line, 50' W line of SW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.977839 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.119276 **DATE COLLECTED:** 9 / 23 / 1944

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 671.3 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 29 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-155.2	MODESTO	PIASA	LIMESTONE	3.5	550.2	
-158.7	MODESTO		DARK GRAY SHALE	3.6	553.7	
-162.3	CARBONDALE	DANVILLE	COAL	1.7	557.3	
-163.9	CARBONDALE		SHALE & SANDSTONE	17.3	558.9	
-181.2	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	576.2	
-183.7	CARBONDALE	LAWSON	GRAY SHALE	4.7	578.7	
-188.3	CARBONDALE	LAWSON	SILTSTONE	1.0	583.3	
-189.3	CARBONDALE	ANNA	DARK GRAY SHALE	1.3	584.3	
-190.7	CARBONDALE	ENERGY	SILTY SHALE	50.8	585.7	
-241.4	CARBONDALE	ENERGY	GRAY SHALE	27.6	636.4	
-269.0	CARBONDALE	HERRIN	COAL	7.3	664.0	

MAPID: 05500021000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 4 **QUARTERS/FOOTAGES:** 79' S line, 100' W line of NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.996403 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.119583 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 406.7 **LOGGED (FT.):** 644.0 **LOG TYPE:**

SOURCE: BG MUDDYCS **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-229.3	CARBONDALE	HERRIN	COAL	7.3	636.0	

MAPID: 05500021000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 4 **QUARTERS/FOOTAGES:** 79' S line, 100' W line of NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.996403 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.119583 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 643.3 **LOG TYPE:** Drillers Log

SOURCE: L. N. WOOD **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
407.0			UNCONSOLIDATED	7.0	0.0	
400.0			SHALE	178.6	7.0	
221.4			COAL	0.3	185.6	
221.2			ROCK	32.8	185.8	
188.4			COAL	1.5	218.6	
186.9			ROCK	125.7	220.1	
61.2			COAL	0.8	345.8	
60.2			ROCK	159.7	346.8	
-99.5			COAL	0.4	506.5	
-99.9			ROCK	26.5	506.9	
-126.4			COAL	2.3	533.4	
-128.7			ROCK	62.3	535.7	
-191.0			SHALE	29.0	598.0	SANDY
-220.0			BLACK SHALE	9.1	627.0	SANDY
-229.1	CARBONDALE	HERRIN	COAL	7.3	636.1	
-236.3	CARBONDALE		UNDERCLAY	-	643.3	

MAPID: 05500021000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 4 **QUARTERS/FOOTAGES:** 79' S line, 100' W line of NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.996403 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.119583 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 406.7 **LOGGED (FT.):** 643.3 **LOG TYPE:** Drillers Log

SOURCE: L.N. WOOD **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
406.7	PLEISTOCENE		SOIL	1.0	0.0	
405.7	PLEISTOCENE		CLAY	6.0	1.0	GRAY SHALE
399.7	PLEISTOCENE		CLAY	5.0	7.0	YELLOW
394.7	PLEISTOCENE		SANDY CLAY	1.5	12.0	WITH GRANITE, YELLOW
393.2	BOND		SANDSTONE	10.5	13.5	
382.7	BOND		SANDSTONE	59.5	24.0	
323.2	BOND		SHALE	3.0	83.5	
320.2	BOND		LIMESTONE	1.0	86.5	
319.2	BOND		SANDSTONE	20.5	87.5	WITH SHALE PARTINGS
298.7	BOND		SANDY SHALE	12.0	108.0	WITH LIGHT SANDSTONE PARTINGS
286.7	BOND		SANDY SHALE	35.5	120.0	
251.2	BOND		CALCAREOUS SHALE	1.0	155.5	
250.2	BOND	CARTHAGE	LIMESTONE	4.5	156.5	
245.7	MODESTO		SHALE	1.0	161.0	DARK BLUE
244.7	MODESTO		SHALE	4.0	162.0	
240.7	MODESTO		LIMESTONE	0.5	166.0	
240.2	MODESTO		SANDY SHALE	8.5	166.5	
231.7	MODESTO		SANDY SHALE	10.6	175.0	WITH BROWN BANDS
221.1	MODESTO		COAL	0.3	185.6	
220.9	MODESTO		SANDY SHALE	1.2	185.8	WITH COAL PARTINGS
219.7	MODESTO		SANDY SHALE	8.0	187.0	WITH BROWN BANDS
211.7	MODESTO		SANDY SHALE	9.0	195.0	WITH LIGHT SANDSTONE PARTINGS
202.7	MODESTO		SANDY SHALE	7.0	204.0	WITH LIGHT SANDSTONE PARTINGS
195.7	MODESTO		SANDY SHALE	7.6	211.0	
188.1	MODESTO		COAL	1.5	218.6	
186.6	MODESTO		SHALE	0.7	220.1	
185.9	MODESTO		SHALE	1.3	220.8	
184.7	MODESTO		SHALE	9.0	222.0	WITH HARD LIMESTONE SPOTS
175.7	MODESTO		SANDY SHALE	12.0	231.0	WITH LIMESTONE SPOTS
163.7	MODESTO		LIMESTONE	1.5	243.0	
162.2	MODESTO		SANDY SHALE	4.5	244.5	WITH LIMESTONE SPOTS
157.7	MODESTO		SANDY SHALE	21.0	249.0	
136.7	MODESTO		CALCAREOUS SANDSTONE	3.0	270.0	
133.7	MODESTO		SANDY SHALE	23.0	273.0	
110.7	MODESTO		SANDY SHALE	2.0	296.0	WITH SANDSTONE PARTINGS
108.7	MODESTO		SANDY SHALE	40.0	298.0	
68.7	MODESTO		SHALE	3.0	338.0	WITH BROWN BANDS

65.7	MODESTO		CALCAREOUS SHALE	0.5	341.0	
65.2	MODESTO		SHALE	4.4	341.5	DARK BLUE
60.8	MODESTO	CHAPEL	COAL	0.8	345.9	
59.9	MODESTO		CLAYSTONE	2.3	346.8	
57.7	MODESTO		SHALE	3.0	349.0	WITH LIMESTONE SPOTS
54.7	MODESTO		SANDY SHALE	17.0	352.0	WITH LIGHT SANDSTONE PARTINGS
37.7	MODESTO		SANDY SHALE	105.0	369.0	
-67.3	MODESTO		SANDY SHALE	10.0	474.0	
-77.3	MODESTO		SHALE	4.5	484.0	WITH LIMESTONE BANDS;DARK BLUE
-81.8	MODESTO		SHALE	1.5	488.5	DARK BLUE
-83.3	MODESTO		SHALE	1.0	490.0	
-84.3	MODESTO		CALCAREOUS SHALE	3.0	491.0	
-87.3	MODESTO		SANDY SHALE	9.0	494.0	WITH BROWN SANDY BANDS
-96.3	MODESTO		SANDY SHALE	2.0	503.0	
-98.3	MODESTO		SHALE	1.5	505.0	DARK BLUE
-99.8	MODESTO		COAL	0.4	506.5	
-100.2	MODESTO		SHALE	2.6	506.9	
-102.8	MODESTO		SANDY SHALE	4.5	509.5	
-107.3	MODESTO		SANDY SHALE	4.0	514.0	WITH LIMESTONE SPOTS
-111.3	MODESTO		LIMESTONE	0.7	518.0	
-112.0	MODESTO		SHALE	3.3	518.7	WITH LIMESTONE PARTINGS
-115.3	MODESTO		SHALE	2.3	522.0	
-117.6	MODESTO		SHALE	0.3	524.3	
-117.8	MODESTO		SHALE	1.0	524.5	
-118.8	MODESTO	PIASA	LIMESTONE	3.8	525.5	
-122.6	MODESTO		SHALE	1.7	529.3	DARK BLUE
-124.3	MODESTO		SHALE	2.4	531.0	DARK BLUE
-126.7	CARBONDALE	DANVILLE	COAL	2.3	533.4	
-129.0	CARBONDALE		SANDY SHALE	2.3	535.7	
-131.3	CARBONDALE		SANDSTONE	0.5	538.0	
-131.8	CARBONDALE		SANDY SHALE	6.5	538.5	
-138.3	CARBONDALE	BANKSTON FORK	LIMESTONE	4.3	545.0	
-142.6	CARBONDALE		SHALE	8.7	549.3	WITH LIMESTONE SPOTS
-151.3	CARBONDALE	BRERETON	LIMESTONE	2.0	558.0	
-153.3	CARBONDALE	BRERETON	SANDY LIMESTONE	3.5	560.0	
-156.8	CARBONDALE	ENERGY	CALCAREOUS SHALE	1.5	563.5	SANDY
-158.3	CARBONDALE	ENERGY	SANDY SHALE	4.0	565.0	WITH LIMESTONE PARTINGS
-162.3	CARBONDALE	ENERGY	SANDY SHALE	1.0	569.0	
-163.3	CARBONDALE	ENERGY	SHALE WITH LIMESTONE	5.5	570.0	WITH LIMEY SANDSTONE
-168.8	CARBONDALE	ENERGY	SANDY SHALE	3.5	575.5	
-172.3	CARBONDALE	ENERGY	SANDSTONE	13.0	579.0	WITH SHALE
-185.3	CARBONDALE	ENERGY	SANDSTONE	6.0	592.0	WITH SHALE PARTINGS
-191.3	CARBONDALE	ENERGY	SANDY SHALE	29.0	598.0	WITH LIGHT SANDSTONE PARTINGS
-220.3	CARBONDALE	ENERGY	SANDY SHALE	9.1	627.0	
-229.4	CARBONDALE	HERRIN	COAL	7.3	636.1	FIRE CLAY BENEATH COAL

MAPID: 05502296000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 4 **QUARTERS/FOOTAGES:** 2370' S line, 2219' E line
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.994862 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.118588 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 401.0 **LOGGED (FT.):** 655.0 **LOG TYPE:** Drillers Log
SOURCE: OLD BEN COAL CORP. 193 **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-140.3	MODESTO	PIASA	LIMESTONE	3.8	541.3	
-144.1	MODESTO		SHALE	3.2	545.1	
-147.3	CARBONDALE	DANVILLE	COAL	1.8	548.3	
-149.0	CARBONDALE		SHALE & SANDSTONE	14.8	550.0	
-163.8	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	564.8	
-167.2	CARBONDALE	ENERGY	GRAY SHALE	79.8	568.2	
-247.0	CARBONDALE	HERRIN	COAL	7.0	648.0	

MAPID: 05524041000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 4 **QUARTERS/FOOTAGES:** 200' S line, 1650' W line of SW
QUADRANGLE: SESSER **LONGITUDE:** -89.00041 **GEOLOGIST:** J JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.112721 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 435.0 **LOGGED (FT.):** 2464.0 **LOG TYPE:** Electric Log
SOURCE: GREAT PLAINS RESOURCES, INC. **WELL TYPE:** Oil and Gas Test
COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-272.0	CARBONDALE	SPRINGFIELD	COAL	-	707.0	
-453.0	CARBONDALE	COLCHESTER	COAL	-	888.0	
-2029.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2464.0	

MAPID: 05500353000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 5 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of SE
QUADRANGLE: SESSER **LONGITUDE:** -89.007346 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 38.113239 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 450.0 **LOGGED (FT.):** 2953.0 **LOG TYPE:** Electric Log
SOURCE: ADKINS, E. S. **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-220.0	CARBONDALE	HERRIN	COAL	6.0	670.0	
-259.0	CARBONDALE	SPRINGFIELD	COAL	3.0	709.0	BLACK SHALE & LIMESTONE ROOF
-342.0	CARBONDALE	HOUCHIN CREEK	COAL	-	792.0	

MAPID: 05500353000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 5 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of SE

QUADRANGLE: SESSER **LONGITUDE:** -89.007346 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.113239 **DATE COLLECTED:** 12 / 0 / 1941

SURFACE ELEVATION (FT.): 450.0 **LOGGED (FT.):** 750.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. **WELL TYPE:** Coal Test

COMMENT: COAL DIVISION CONTROL WELL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
450.0			UNCONSOLIDATED	55.0	0.0	
395.0			SHALE	124.0	55.0	
271.0			COAL	1.0	179.0	
270.0			ROCK	324.0	180.0	
-54.0			COAL WITH SHALE	4.0	504.0	COAL AND SHALE MIXED
-58.0			ROCK	27.0	508.0	
-85.0			COAL	2.0	535.0	
-87.0			ROCK	102.0	537.0	
-189.0			SHALE	30.0	639.0	
-219.0	CARBONDALE	HERRIN	COAL	6.0	669.0	
-225.0	CARBONDALE		ROCK	7.0	675.0	
-232.0	CARBONDALE		UNDERCLAY	3.0	682.0	
-235.0	CARBONDALE		LIMESTONE	6.0	685.0	
-241.0	CARBONDALE		SHALE	2.0	691.0	
-243.0	CARBONDALE		CALCAREOUS SHALE	7.0	693.0	
-250.0	CARBONDALE		SHALE	8.0	700.0	
-258.0	CARBONDALE	SPRINGFIELD	COAL	5.0	708.0	
-263.0	CARBONDALE		UNDERCLAY	7.0	713.0	
-270.0	CARBONDALE		ROCK	30.0	720.0	

MAPID: 05500353000C **VERSION:** 3 **PROJECT:** CONTROL

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 5 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of SE

QUADRANGLE: SESSER **LONGITUDE:** -89.007346 **GEOLOGIST:** HINES

CONFIDENTIAL: N **LATITUDE:** 38.113239 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 2953.0 **LOG TYPE:** Survey Sample Study

SOURCE: ADKINS, E. S. **WELL TYPE:** Oil and Gas Test

COMMENT: OILWELLS LOGGED BY COAL SECT-LOGS IN GRU

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-			NO RECORD	0.0	0.0	

MAPID: 05500353000C **VERSION:** 4 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 5 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of SE
QUADRANGLE: SESSER **LONGITUDE:** -89.007346 **GEOLOGIST:** J JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.113239 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 450.0 **LOGGED (FT.):** 2455.0 **LOG TYPE:** Electric Log
SOURCE: ADKINS, E. S. **WELL TYPE:** Oil and Gas Test
COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-260.0	CARBONDALE	SPRINGFIELD	COAL	-	710.0	
-431.0	CARBONDALE	COLCHESTER	COAL	-	881.0	
-2005.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2455.0	

MAPID: 05500766000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 5 **QUARTERS/FOOTAGES:** 2620' S line, 50' W line
QUADRANGLE: SESSER **LONGITUDE:** -89.024675 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.119979 **DATE COLLECTED:** 8 / 28 / 1944
SURFACE ELEVATION (FT.): 441.0 **LOGGED (FT.):** 695.1 **LOG TYPE:** Survey Core Study
SOURCE: OLD BEN COAL CORP. 25 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-124.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.0	565.0	
-127.9	MODESTO		DARK GRAY SHALE	2.6	568.9	
-130.5	CARBONDALE	DANVILLE	COAL	2.5	571.5	
-133.0	CARBONDALE		CLAYSTONE & SHALE	6.9	574.0	
-139.9	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	2.1	580.9	UPPER BENCH
-142.0	CARBONDALE	BANKSTON FORK	CLAYSTONE & SHALE	2.7	583.0	SHALE PARTING
-144.7	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	5.9	585.7	LOWER BENCH
-150.6	CARBONDALE	LAWSON	SILTSTONE	1.0	591.6	
-151.6	CARBONDALE	LAWSON	SILTY SHALE	2.5	592.6	
-154.1	CARBONDALE	BRERETON	LIMESTONE	0.3	595.1	
-154.3	CARBONDALE	ENERGY	DARK GRAY SHALE	12.0	595.3	
-166.3	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	15.8	607.3	
-182.1	CARBONDALE	ENERGY	SILTY SHALE	60.8	623.1	
-242.8	CARBONDALE	ENERGY	COAL	0.0	683.8	
-242.8	CARBONDALE	ENERGY	SILTY SHALE	2.2	683.8	
-245.0	CARBONDALE	HERRIN	COAL	9.1	686.0	

MAPID: 05524053000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 5 **QUARTERS/FOOTAGES:** 28' N line, 1245' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.01093 **GEOLOGIST:** J MCBETH

CONFIDENTIAL: N **LATITUDE:** 38.125112 **DATE COLLECTED:** 5 / 14 / 1949

SURFACE ELEVATION (FT.): 435.4 **LOGGED (FT.):** 657.9 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. 95 **WELL TYPE:** Coal Test

COMMENT: PERMIT 144; MINE 21

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
435.4	PLEISTOCENE		CLAY	9.0	0.0	
426.4	BOND		SANDSTONE	72.0	9.0	
354.4	BOND		SANDY SHALE	20.0	81.0	
334.4	BOND		SANDSTONE	39.0	101.0	
295.4	BOND		GRAY SHALE	14.0	140.0	
281.4	BOND	CARTHAGE	LIMESTONE	5.5	154.0	
275.9	MODESTO		SHALE	5.5	159.5	BLACK
270.4	MODESTO		GRAY SHALE	104.0	165.0	
166.4	MODESTO		SANDSTONE	6.0	269.0	
160.4	MODESTO		GRAY SHALE	15.0	275.0	
145.4	MODESTO	TRIVOLI	SANDSTONE	8.0	290.0	
137.4	MODESTO		GRAY SHALE	184.0	298.0	
-46.6	MODESTO		SANDY SHALE	21.0	482.0	
-67.6	MODESTO		SHALE	1.0	503.0	BLACK
-68.6	MODESTO		GRAY SHALE	25.0	504.0	
-93.6	MODESTO	PIASA	SANDY LIMESTONE	3.7	529.0	
-97.3	MODESTO		GRAY SHALE	3.3	532.7	
-100.6	CARBONDALE	DANVILLE	COAL	2.0	536.0	
-102.6	CARBONDALE		GRAY SHALE	9.0	538.0	
-111.6	CARBONDALE		LIMESTONE	4.5	547.0	
-116.1	CARBONDALE		UNKNOWN	6.5	551.5	LOG SAYS "?"
-122.6	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	558.0	BOULDER
-126.1	CARBONDALE	ENERGY	GRAY SHALE	16.5	561.5	
-142.6	CARBONDALE	ENERGY	SANDSTONE	18.0	578.0	
-160.6	CARBONDALE	ENERGY	SANDY SHALE	29.0	596.0	
-189.6	CARBONDALE	ENERGY	GRAY SHALE	24.9	625.0	
-214.5	CARBONDALE	HERRIN	COAL	8.0	649.9	

MAPID: 05524369000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 5 **QUARTERS/FOOTAGES:** 28' S line, 1245' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.010517 **GEOLOGIST:** J MCBETH

CONFIDENTIAL: N **LATITUDE:** 38.112482 **DATE COLLECTED:** 5 / 14 / 1949

SURFACE ELEVATION (FT.): 435.8 **LOGGED (FT.):** 657.9 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. DH 95 **WELL TYPE:** Coal Test

COMMENT: PERMIT 13; MINE 21

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
435.8	PLEISTOCENE		CLAY	9.0	0.0	
426.8	BOND		SANDSTONE	72.0	9.0	
354.8	BOND		SANDY SHALE	20.0	81.0	
334.8	BOND		SANDSTONE	39.0	101.0	
295.8	BOND		GRAY SHALE	14.0	140.0	
281.8	BOND	CARTHAGE	LIMESTONE	5.5	154.0	
276.2	MODESTO		SHALE	5.5	159.6	BLACK
270.8	MODESTO		GRAY SHALE	104.0	165.0	
166.8	MODESTO		SANDSTONE	6.0	269.0	WITH SHALE BEDS
160.8	MODESTO		GRAY SHALE	15.0	275.0	
145.8	MODESTO		SANDSTONE	8.0	290.0	
137.8	MODESTO		GRAY SHALE	184.0	298.0	
-46.2	MODESTO		SANDY SHALE	21.0	482.0	
-67.2	MODESTO		SHALE	1.0	503.0	BLACK
-68.2	MODESTO		GRAY SHALE	25.0	504.0	
-93.2	MODESTO	PIASA	SANDY LIMESTONE	3.7	529.0	
-96.9	MODESTO		GRAY SHALE	3.3	532.7	
-100.2	CARBONDALE	DANVILLE	COAL	2.0	536.0	
-102.2	CARBONDALE		GRAY SHALE	9.0	538.0	
-111.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	547.0	
-115.7	CARBONDALE		CORE LOSS	6.5	551.5	
-122.2	CARBONDALE		LIMESTONE	3.5	558.0	BOULDER
-125.7	CARBONDALE		GRAY SHALE	16.5	561.5	
-142.2	CARBONDALE	ENERGY	SANDSTONE	18.0	578.0	MAY INCLUDE ANVIL ROCK SS
-160.2	CARBONDALE	ENERGY	SANDY SHALE	29.0	596.0	
-189.2	CARBONDALE	ENERGY	GRAY SHALE	24.9	625.0	
-214.1	CARBONDALE	HERRIN	COAL	8.0	649.9	

MAPID: 05502212000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 6 **QUARTERS/FOOTAGES:** 2259' N line, 258' W line
QUADRANGLE: SESSER **LONGITUDE:** -89.039486 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.118717 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 698.8 **LOG TYPE:** Survey Core Study
SOURCE: OLD BEN COAL CORP. 172 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-113.0	MODESTO	PIASA	NODULAR LIMESTONE	3.7	573.0	
-116.7	CARBONDALE		SILTY SHALE	3.3	576.7	
-119.9	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	5.5	579.9	
-125.4	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	44.3	585.4	
-169.8	CARBONDALE	ENERGY	SILTSTONE	33.4	629.8	
-203.2	CARBONDALE	ENERGY	SANDSTONE	5.2	663.2	
-208.3	CARBONDALE	ENERGY	SILTSTONE	21.7	668.3	
-230.0	CARBONDALE	HERRIN	COAL	8.8	690.0	

MAPID: 05500013403M **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 7 **QUARTERS/FOOTAGES:** 960' N line, 500' W line
QUADRANGLE: SESSER **LONGITUDE:** -89.038493 **GEOLOGIST:** BARGH,M
CONFIDENTIAL: N **LATITUDE:** 38.110169 **DATE COLLECTED:** 11 / 16 / 1933
SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 6.7 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-INTERSTATE C C **WELL TYPE:** Underground mine
COMMENT: OTHER SECTIONS FROM THIS MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	COAL	8.4		1.75' COAL LEFT AS ROOF. BLUE BAND .22'

MAPID: 05502512000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 7 **QUARTERS/FOOTAGES:** 2440' S line, 360' W line
QUADRANGLE: SESSER **LONGITUDE:** -89.038916 **GEOLOGIST:** J JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.104748 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 442.0 **LOGGED (FT.):** 2431.0 **LOG TYPE:** Electric Log
SOURCE: LEWIS, WILL I. **WELL TYPE:** Oil and Gas Test
COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-243.0	CARBONDALE	SPRINGFIELD	COAL	-	685.0	
-418.0	CARBONDALE	COLCHESTER	COAL	-	860.0	
-1989.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2431.0	

MAPID: 05502512000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 7 **QUARTERS/FOOTAGES:** 2440' S line, 360' W line

QUADRANGLE: SESSER **LONGITUDE:** -89.038916 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.104748 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 442.0 **LOGGED (FT.):** 660.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-86.5	CARBONDALE	DANVILLE	COAL	1.5	528.5	
-88.0	CARBONDALE		SHALE	16.0	530.0	
-104.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SANDSTONE	7.0	546.0	
-111.0	CARBONDALE	ENERGY	SHALE	7.0	553.0	
-118.0	CARBONDALE	ENERGY	SANDSTONE	16.0	560.0	
-134.0	CARBONDALE	ENERGY	SHALE	10.0	576.0	
-144.0	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	11.0	586.0	
-155.0	CARBONDALE	ENERGY	GRAY SHALE	55.0	597.0	
-210.0	CARBONDALE	HERRIN	COAL	8.0	652.0	

MAPID: 05500024000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** 1300' S line, 100' W line of SW

QUADRANGLE: SESSER **LONGITUDE:** -89.023408 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.101355 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 457.6 **LOGGED (FT.):** 690.0 **LOG TYPE:**

SOURCE: BG MUDDYCS 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-220.4	CARBONDALE	HERRIN	COAL	10.5	678.0	

MAPID: 05500024000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** 1300' S line, 100' W line of SW

QUADRANGLE: SESSER **LONGITUDE:** -89.023408 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.101355 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 458.0 **LOGGED (FT.):** 690.0 **LOG TYPE:** Drillers Log

SOURCE: L. N. WOOD **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
458.0			UNCONSOLIDATED	20.0	0.0	
438.0			ROCK	153.7	20.0	
284.3			COAL	0.3	173.7	
284.1			ROCK	26.1	173.9	
258.0			COAL	0.3	200.0	
257.7			ROCK	155.2	200.3	
102.5			COAL	1.0	355.5	
101.5			ROCK	159.5	356.5	
-58.0			COAL	0.6	516.0	
-58.6			ROCK	17.7	516.6	
-76.3			COAL	0.8	534.3	
-77.0			ROCK	6.5	535.0	
-83.5			COAL	2.0	541.5	
-85.5			ROCK	65.5	543.5	
-151.0			BLACK SHALE	68.9	609.0	SANDY
-219.9	CARBONDALE	HERRIN	COAL	10.5	677.9	
-230.4	CARBONDALE		SHALE	1.6	688.4	

MAPID: 05500024000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** 1300' S line, 100' W line of SW

QUADRANGLE: SESSER **LONGITUDE:** -89.023408 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.101355 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 457.9 **LOGGED (FT.):** 690.0 **LOG TYPE:** Drillers Log

SOURCE: L.N. WOOD 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
457.9	PLEISTOCENE		CLAY	19.0	0.0	
438.9	PLEISTOCENE		CLAY & GRAVEL	1.0	19.0	WITH GRAVEL
437.9	BOND		SANDSTONE	54.0	20.0	
383.9	BOND		SANDSTONE	46.0	74.0	LIGHT
337.9	BOND		SANDSTONE	1.0	120.0	
336.9	BOND		SANDY SHALE	30.5	121.0	
306.4	BOND		SHALE	1.5	151.5	LIGHT
304.9	BOND	CARTHAGE	LIMESTONE	5.0	153.0	
299.9	MODESTO		SHALE	4.0	158.0	DARK BLUE
295.9	MODESTO		LIMESTONE	0.5	162.0	DARK
295.4	MODESTO		SANDY SHALE	11.2	162.5	
284.2	MODESTO		COAL	0.3	173.7	
284.0	MODESTO		SHALE	26.1	173.9	
257.9	MODESTO		COAL	0.3	200.0	
257.6	MODESTO		CLAYSTONE	1.7	200.3	
255.9	MODESTO		SHALE	19.0	202.0	WITH LIMESTONE
236.9	MODESTO		SHALE	11.0	221.0	WITH LIMESTONE SPACE;DARK BLUE
225.9	MODESTO		SHALE	4.0	232.0	
221.9	MODESTO		LIMESTONE	0.5	236.0	
221.4	MODESTO		SHALE	10.5	236.5	DARK BLUE
210.9	MODESTO		SHALE	6.0	247.0	WITH LIMESTONE SPACE;LIGHT GRAY
204.9	MODESTO		SHALE	6.0	253.0	
198.9	MODESTO		SANDSTONE	31.0	259.0	WITH SHALE PARTINGS
167.9	MODESTO		SANDY SHALE	48.0	290.0	WITH SANDSTONE PARTINGS
119.9	MODESTO		SHALE	5.0	338.0	DARK BLUE
114.9	MODESTO		SHALE	12.5	343.0	WITH BROWN BANDS;DARK BLUE
102.4	MODESTO	CHAPEL	COAL	1.0	355.5	
101.4	MODESTO		CLAYSTONE	1.5	356.5	
99.9	MODESTO		SHALE	2.0	358.0	
97.9	MODESTO		LIMESTONE	1.0	360.0	
96.9	MODESTO		SANDY SHALE	17.0	361.0	
79.9	MODESTO		SANDY SHALE	13.0	378.0	WITH SANDSTONE PARTINGS
66.9	MODESTO		SANDY SHALE	90.0	391.0	
-23.1	MODESTO		SHALE	2.0	481.0	DARK BLUE
-25.1	MODESTO		SHALE	1.0	483.0	WITH LIMESTONE
-26.1	MODESTO		SANDY SHALE	3.0	484.0	
-29.1	MODESTO		LIMESTONE	1.0	487.0	
-30.1	MODESTO		SANDSTONE	4.0	488.0	WITH SHALE PARTINGS

-34.1	MODESTO		SANDY SHALE	22.0	492.0	
-56.1	MODESTO		SHALE	2.0	514.0	
-58.1	MODESTO		COAL	0.6	516.0	
-58.7	MODESTO		SOFT SHALE	3.4	516.6	
-62.1	MODESTO		SANDY SHALE	14.3	520.0	
-76.4	MODESTO	DEGRAFF	COAL	0.8	534.3	
-77.2	MODESTO		CLAYSTONE	0.9	535.1	
-78.1	MODESTO	PIASA	LIMESTONE	1.5	536.0	
-79.6	MODESTO		SHALE	2.5	537.5	
-82.1	MODESTO		SHALE	1.4	540.0	DARK BLUE
-83.5	CARBONDALE	DANVILLE	COAL	2.1	541.4	
-85.6	CARBONDALE		SANDY SHALE	2.5	543.5	
-88.1	CARBONDALE		SANDSTONE	5.0	546.0	
-93.1	CARBONDALE		SHALE	2.0	551.0	
-95.1	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	553.0	
-98.1	CARBONDALE		CALCAREOUS SHALE	4.0	556.0	
-102.1	CARBONDALE		SHALE	2.5	560.0	
-104.6	CARBONDALE		CALCAREOUS SHALE	1.5	562.5	
-106.1	CARBONDALE		SANDSTONE	18.0	564.0	
-124.1	CARBONDALE	ENERGY	SANDY SHALE	8.0	582.0	
-132.1	CARBONDALE	ENERGY	SANDSTONE	19.0	590.0	WITH SHALE PARTINGS
-151.1	CARBONDALE	ENERGY	SANDY SHALE	51.0	609.0	
-202.1	CARBONDALE	ENERGY	SHALE	17.9	660.0	WITH BROWN BANDS
-220.0	CARBONDALE	HERRIN	COAL	10.5	677.9	
-230.5	CARBONDALE		SANDY SHALE	1.6	688.4	

MAPID: 05500765000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** 2290' N line, 50' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.005614 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.105963 **DATE COLLECTED:** 9 / 26 / 1944

SURFACE ELEVATION (FT.): 420.0 **LOGGED (FT.):** 660.2 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 24 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-100.8	MODESTO	PIASA	LIMESTONE	4.1	520.8	
-105.0	MODESTO		GRAY SHALE	2.5	525.0	
-107.4	CARBONDALE	DANVILLE	COAL	2.5	527.4	
-109.9	CARBONDALE		SHALE & SANDSTONE	7.4	529.9	
-117.3	CARBONDALE	ALLENBY	BONE COAL	0.3	537.3	
-117.5	CARBONDALE		CLAYSTONE	3.0	537.5	
-120.5	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	4.2	540.5	
-124.7	CARBONDALE	LAWSON	GRAY SHALE	5.8	544.7	
-130.5	CARBONDALE	JAMESTOWN	DARK GRAY SHALE	1.9	550.5	
-132.4	CARBONDALE		CALCAREOUS SHALE	0.2	552.4	
-132.6	CARBONDALE	BRERETON	LIMESTONE	2.2	552.6	
-134.8	CARBONDALE	ANNA	DARK GRAY SHALE	0.8	554.8	
-135.6	CARBONDALE	ENERGY	SANDSTONE/SILTSTONE	11.9	555.6	
-147.5	CARBONDALE	ENERGY	SILTY SHALE	16.1	567.5	
-163.6	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	23.8	583.6	
-187.4	CARBONDALE	ENERGY	SILTY SHALE	42.4	607.4	
-229.8	CARBONDALE	ENERGY	CARBONACEOUS SHALE	1.2	649.8	
-231.0	CARBONDALE	HERRIN	COAL	9.2	651.0	

MAPID: 05501181000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** 500' N line, 1178' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.010129 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.111015 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 442.0 **LOGGED (FT.):** 661.6 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 114 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-93.3	MODESTO	PIASA	LIMESTONE/UNDERCLAY	3.1	535.3	
-96.3	MODESTO		BLACK SHALE	3.4	538.3	
-99.8	CARBONDALE	DANVILLE	COAL	2.0	541.8	
-101.8	CARBONDALE		SHALE & SANDSTONE	5.7	543.8	
-107.5	CARBONDALE		CLAYSTONE	2.8	549.5	
-110.2	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.2	552.2	
-113.4	CARBONDALE	LAWSON	SILTSTONE	1.8	555.4	
-115.2	CARBONDALE	LAWSON	CLAYSTONE & SHALE	2.3	557.2	
-117.5	CARBONDALE	LAWSON	SILTY SHALE	2.3	559.5	
-119.7	CARBONDALE	LAWSON	SILTSTONE	0.3	561.7	
-120.0	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	2.7	562.0	
-122.7	CARBONDALE	ENERGY	SANDSTONE/SILTSTONE	20.0	564.7	
-142.7	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	19.8	584.7	
-162.5	CARBONDALE	ENERGY	BLACK SHALE	1.3	604.5	
-163.7	CARBONDALE	ENERGY	SHALE & SANDSTONE	20.8	605.7	
-184.6	CARBONDALE	ENERGY	SILTY SHALE	26.4	626.6	
-211.0	CARBONDALE	HERRIN	COAL	8.6	653.0	

MAPID: 05501182000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** 500' N line, 478' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.00768 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.110955 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 440.0 **LOGGED (FT.):** 664.4 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 115 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-92.6	MODESTO	PIASA	LIMESTONE	3.9	532.6	
-96.5	MODESTO		DARK GRAY SHALE	2.8	536.5	
-99.2	CARBONDALE	DANVILLE	COAL	2.2	539.2	
-101.4	CARBONDALE		SILTSTONE	6.7	541.4	
-108.1	CARBONDALE	ALLENBY	COAL	0.3	548.1	
-108.3	CARBONDALE		CLAYSTONE	1.6	548.3	
-109.9	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	2.8	549.9	
-112.7	CARBONDALE	LAWSON	CALCAREOUS SHALE	0.7	552.7	
-113.4	CARBONDALE	LAWSON	MOTTLED SHALE	6.4	553.4	
-119.8	CARBONDALE	LAWSON	DARK GRAY SHALE	0.7	559.8	
-120.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.4	560.5	
-120.9	CARBONDALE	ENERGY	SHALE & SILTSTONE	15.2	560.9	
-136.1	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	29.4	576.1	
-165.5	CARBONDALE	ENERGY	SANDSTONE/SILTSTONE	19.3	605.5	
-184.8	CARBONDALE	ENERGY	SILTSTONE	6.8	624.8	
-191.6	CARBONDALE	ENERGY	GRAY SHALE	24.4	631.6	
-216.0	CARBONDALE	HERRIN	COAL	8.4	656.0	

MAPID: 05502345000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 9 **QUARTERS/FOOTAGES:** 56' N line, 1350' E line
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.991904 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.111822 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 408.0 **LOGGED (FT.):** 669.8 **LOG TYPE:** Survey Core Study
SOURCE: OLD BEN COAL CORP. 211 **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-130.7	MODESTO	PIASA	LIMESTONE	3.5	538.7	
-134.2	MODESTO		GRAY SHALE	6.5	542.2	
-140.7	CARBONDALE	DANVILLE	COAL	0.9	548.7	
-141.6	CARBONDALE		GRAY SHALE	13.0	549.6	
-154.6	CARBONDALE	BANKSTON FORK	LIMESTONE	4.4	562.6	
-159.0	CARBONDALE	ENERGY	GRAY SHALE	77.9	567.0	
-236.9	CARBONDALE	ENERGY	SILTY SHALE	16.6	644.9	
-253.5	CARBONDALE	ENERGY	CARBONACEOUS SHALE	0.5	661.5	
-254.0	CARBONDALE	HERRIN	COAL	7.8	662.0	

MAPID: 05523986000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 9 **QUARTERS/FOOTAGES:** 330' N line, 1650' W line of SW
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.999437 **GEOLOGIST:** J JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.103874 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 428.0 **LOGGED (FT.):** 2456.0 **LOG TYPE:** Electric Log
SOURCE: GREAT PLAINS RESOURCES, INC. **WELL TYPE:** Oil and Gas Test
COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-437.0	CARBONDALE	COLCHESTER	COAL	-	865.0	
-2028.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2456.0	

MAPID: 05500025000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 10 **QUARTERS/FOOTAGES:** SW SW SW NW
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.98609 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.104947 **DATE COLLECTED:** 0 / 0 / 1909
SURFACE ELEVATION (FT.): 404.4 **LOGGED (FT.):** 697.0 **LOG TYPE:**
SOURCE: BG MUDDYCS0003 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-279.6	CARBONDALE	HERRIN	COAL	7.6	684.0	

MAPID: 05500025000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 10 **QUARTERS/FOOTAGES:** SW SW SW NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.98609 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.104947 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 404.0 **LOGGED (FT.):** 697.0 **LOG TYPE:** Survey Core Study

SOURCE: BIG MUDDY COAL SYN **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
404.0			UNCONSOLIDATED	35.0	0.0	
369.0			SANDSTONE	172.6	35.0	
196.4			COAL	0.4	207.6	
196.0			ROCK	42.3	208.0	
153.7			COAL	1.4	250.3	
152.3			ROCK	123.7	251.7	
28.6			COAL	0.9	375.4	
27.7			ROCK	157.4	376.3	
-129.7			COAL	0.7	533.7	
-130.3			ROCK	31.4	534.3	
-161.7			COAL	2.1	565.7	
-163.8			ROCK	90.2	567.8	
-254.0			SHALE	25.6	658.0	SANDY
-279.6	CARBONDALE	HERRIN	COAL	7.6	683.6	
-287.2	CARBONDALE		UNDERCLAY	1.8	691.2	
-289.0	CARBONDALE		LIMESTONE	4.0	693.0	

MAPID: 05500025000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 10 **QUARTERS/FOOTAGES:** SW SW SW NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.98609 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.104947 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 404.4 **LOGGED (FT.):** 697.0 **LOG TYPE:** Drillers Log

SOURCE: BIG MUDDY COAL SYNDICATE 3 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
404.4	PLEISTOCENE		CLAY	15.0	0.0	YELLOW
389.4	PLEISTOCENE		SAND	18.0	15.0	
371.4	PLEISTOCENE		CLAY	2.0	33.0	BLUE
369.4	BOND		SANDSTONE	93.0	35.0	
276.4	BOND		SANDY SHALE	9.0	128.0	
267.4	BOND		SHALE	9.0	137.0	
258.4	BOND		SHALE	34.0	146.0	
224.4	BOND	CARTHAGE	LIMESTONE	6.0	180.0	
218.4	MODESTO		SHALE	7.0	186.0	
211.4	MODESTO		CLAYSTONE	2.0	193.0	
209.4	MODESTO		SHALE	12.6	195.0	
196.8	MODESTO		COAL	0.4	207.6	
196.4	MODESTO		SHALE	2.0	208.0	
194.4	MODESTO		SANDY SHALE	40.3	210.0	
154.1	MODESTO		COAL	1.4	250.3	
152.7	MODESTO		SANDY SHALE	46.3	251.7	
106.4	MODESTO		LIMESTONE	5.0	298.0	
101.4	MODESTO		SANDY SHALE	51.0	303.0	
50.4	MODESTO		SHALE	10.0	354.0	
40.4	MODESTO		SHALE	11.4	364.0	
29.0	MODESTO	CHAPEL	COAL	0.9	375.4	
28.1	MODESTO		CALCAREOUS SHALE	3.7	376.3	
24.4	MODESTO		SHALE	21.0	380.0	
3.4	MODESTO		SANDY SHALE	62.0	401.0	
-58.6	MODESTO		SHALE	47.0	463.0	
-105.6	MODESTO		LIMESTONE	2.0	510.0	
-107.6	MODESTO		SHALE	21.7	512.0	WITH HARD BANDS
-129.3	MODESTO		COAL	0.7	533.7	
-129.9	MODESTO		CLAYSTONE	5.7	534.3	WITH SHALE BANDS
-135.6	MODESTO		SHALE	18.0	540.0	
-153.6	MODESTO		SHALE	1.0	558.0	
-154.6	MODESTO	PIASA	LIMESTONE	3.0	559.0	
-157.6	MODESTO		SHALE	3.7	562.0	
-161.3	CARBONDALE	DANVILLE	COAL	2.1	565.7	
-163.4	CARBONDALE		SHALE	15.3	567.8	
-178.6	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	583.0	
-182.6	CARBONDALE	ENERGY	SANDY SHALE	87.0	587.0	
-269.6	CARBONDALE	ENERGY	SHALE	9.6	674.0	
-279.2	CARBONDALE	HERRIN	COAL	0.3	683.6	

-279.4	CARBONDALE	HERRIN	COAL	7.3	683.8
-286.8	CARBONDALE		CLAYSTONE	1.8	691.2
-288.6	CARBONDALE		LIMESTONE	4.0	693.0

MAPID: 05501310000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 10 **QUARTERS/FOOTAGES:** 2600' S line, 2540' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.977728 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.104174 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 398.0 **LOGGED (FT.):** 675.3 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 124 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-156.8	MODESTO	PIASA	LIMESTONE	3.5	554.8	
-160.3	MODESTO		SHALE	3.7	558.3	
-163.9	CARBONDALE	DANVILLE	COAL	2.7	561.9	
-166.6	CARBONDALE		GRAY SHALE	23.8	564.6	
-190.4	CARBONDALE	BANKSTON FORK	LIMESTONE	2.8	588.4	
-193.2	CARBONDALE	LAWSON	GRAY SHALE	8.7	591.2	
-201.9	CARBONDALE	BRERETON	LIMESTONE	1.6	599.9	
-203.5	CARBONDALE	ENERGY	SILTY SHALE	43.9	601.5	
-247.4	CARBONDALE	ENERGY	SILTSTONE	20.2	645.4	
-267.6	CARBONDALE	ENERGY	GRAY SHALE	2.4	665.6	
-270.0	CARBONDALE	HERRIN	COAL	7.3	668.0	

MAPID: 05500026000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 11 **QUARTERS/FOOTAGES:** SE SE NW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.955587 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.108345 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 390.7 **LOGGED (FT.):** 660.0 **LOG TYPE:** Drillers Log

SOURCE: 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
390.7	PLEISTOCENE		CLAY	23.0	0.0	
367.7	PLEISTOCENE		SAND	13.0	23.0	
354.7	BOND		SANDSTONE	46.0	36.0	
308.7	BOND		SHALE	0.5	82.0	
308.2	BOND		COAL	0.3	82.5	
307.9	BOND		CLAYSTONE	1.2	82.8	
306.7	BOND		SHALE	12.0	84.0	
294.7	BOND		COAL	0.4	96.0	
294.3	BOND		SHALE	65.6	96.4	
228.7	BOND		CALCAREOUS SHALE	3.0	162.0	
225.7	BOND	CARTHAGE	LIMESTONE	5.0	165.0	
220.7	MODESTO		SHALE	4.0	170.0	
216.7	MODESTO		SHALE	38.0	174.0	WITH SANDSTONE PARTINGS
178.7	MODESTO		SHALE	6.0	212.0	
172.7	MODESTO		SHALY COAL	1.0	218.0	
171.7	MODESTO		CLAYSTONE	1.0	219.0	
170.7	MODESTO		CALCAREOUS SHALE	1.0	220.0	
169.7	MODESTO		SHALE	18.0	221.0	
151.7	MODESTO		SHALE	4.5	239.0	
147.2	MODESTO		CALCAREOUS SHALE	0.5	243.5	
146.7	MODESTO		SHALE	19.0	244.0	
127.7	MODESTO		CALCAREOUS SHALE	9.0	263.0	
118.7	MODESTO		SHALE	20.0	272.0	
98.7	MODESTO		SANDSTONE	8.0	292.0	
90.7	MODESTO		SANDSTONE	28.0	300.0	WITH SHALE BANDS
62.7	MODESTO		SANDSTONE	1.0	328.0	
61.7	MODESTO		SANDSTONE	5.0	329.0	WITH SHALE BANDS
56.7	MODESTO		SANDY SHALE	4.0	334.0	
52.7	MODESTO		SHALE	8.0	338.0	
44.7	MODESTO		SHALE	15.0	346.0	
29.7	MODESTO	CHAPEL	COAL	0.8	361.0	
28.9	MODESTO		CLAYSTONE	2.2	361.8	
26.7	MODESTO		SHALE	30.0	364.0	
-3.3	MODESTO		SANDY SHALE	21.0	394.0	
-24.3	MODESTO		SHALE	79.0	415.0	
-103.3	MODESTO		CALCAREOUS SHALE	2.0	494.0	
-105.3	MODESTO		LIMESTONE	4.0	496.0	
-109.3	MODESTO		SHALE	9.0	500.0	
-118.3	MODESTO		SHALE	9.0	509.0	WITH SANDSTONE BANDS

-127.3	MODESTO		SHALE	1.6	518.0	
-128.9	MODESTO		COAL	0.7	519.6	
-129.6	MODESTO		CLAYSTONE	3.0	520.3	
-132.6	MODESTO		SANDSTONE	6.8	523.3	
-139.3	MODESTO		SHALE	12.2	530.0	
-151.5	MODESTO	DEGRAFF	COAL	0.3	542.2	
-151.8	MODESTO		CLAYSTONE	2.5	542.5	
-154.3	MODESTO	PIASA	LIMESTONE	5.0	545.0	
-159.3			SHALE	31.0	550.0	
-190.3	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	581.0	
-195.8	CARBONDALE		SHALE	7.5	586.5	WITH LIMESTONE SPOTS
-203.3	CARBONDALE		SHALE	7.0	594.0	DARK BLUE
-210.3	CARBONDALE	BRERETON	LIMESTONE	3.5	601.0	
-213.8	CARBONDALE	ENERGY	SHALE	2.0	604.5	
-215.8	CARBONDALE	ENERGY	SHALE	41.2	606.5	
-257.0	CARBONDALE	HERRIN	COAL	6.6	647.7	
-263.6	CARBONDALE	HERRIN	BLUE BAND	0.0	654.3	
-263.6	CARBONDALE	HERRIN	COAL	1.2	654.3	
-264.8	CARBONDALE		SHALE	0.3	655.5	
-265.1	CARBONDALE		SANDY SHALE	4.3	655.8	

MAPID: 05500026000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 11 **QUARTERS/FOOTAGES:** SE SE NW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.955587 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.108345 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 391.0 **LOGGED (FT.):** 660.0 **LOG TYPE:** Drillers Log

SOURCE: TAYLOR COAL CO. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
391.0			UNCONSOLIDATED	36.0	0.0	
355.0			SANDSTONE	46.0	36.0	
309.0			COAL	0.5	82.0	
308.5			ROCK	13.5	82.5	
295.0			COAL	0.4	96.0	
294.6			ROCK	121.6	96.4	
173.0			COAL	1.0	218.0	SHALEY COAL
172.0			ROCK	142.0	219.0	
30.0			COAL	0.8	361.0	
29.2			ROCK	157.8	361.8	
-128.6			COAL	0.7	519.6	
-129.3			ROCK	21.9	520.3	
-151.2			COAL	0.3	542.2	
-151.5			ROCK	79.5	542.5	
-231.0			BLACK SHALE	25.7	622.0	
-256.7	CARBONDALE	HERRIN	COAL	7.8	647.7	BLUE BAND .02'
-264.5	CARBONDALE		SHALE	4.6	655.5	

MAPID: 05501282000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 11 **QUARTERS/FOOTAGES:** 2310' N line, 2310' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.960442 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.105306 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 648.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-149.0	MODESTO	PIASA	LIMESTONE	5.5	538.0	
-154.5	MODESTO		SHALE	6.0	543.5	
-160.5	CARBONDALE	DANVILLE	COAL	2.5	549.5	
-163.0	CARBONDALE		GRAY SHALE	20.0	552.0	
-183.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	572.0	
-187.0	CARBONDALE	LAWSON	SHALE	11.0	576.0	
-198.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	5.0	587.0	
-203.0	CARBONDALE	ANNA	BLACK SHALE	3.0	592.0	
-206.0	CARBONDALE	ENERGY	GRAY SHALE	44.0	595.0	
-250.0	CARBONDALE	HERRIN	COAL	9.0	639.0	

MAPID: 05501372000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 11 **QUARTERS/FOOTAGES:** 990' S line, 990' E line of NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.962945 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.106986 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 2434.0 **LOG TYPE:** Electric Log

SOURCE: KEWANEE OIL & GAS **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-308.0	CARBONDALE	SPRINGFIELD	COAL	-	697.0	
-455.0	CARBONDALE	COLCHESTER	COAL	-	844.0	
-2045.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2434.0	

MAPID: 05500007000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 12 **QUARTERS/FOOTAGES:** SE SE SE SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.93106 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.096692 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 408.7 **LOGGED (FT.):** 662.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0001 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-245.3	CARBONDALE	HERRIN	COAL	6.2	654.0	

MAPID: 05500007000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 12 **QUARTERS/FOOTAGES:** SE SE SE SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.93106 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.096692 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 409.0 **LOGGED (FT.):** 662.0 **LOG TYPE:** Survey Core Study

SOURCE: L. N. WOOD **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
409.0			UNCONSOLIDATED	7.9	0.0	
401.1			SHALE	96.6	7.9	
304.5			COAL	0.5	104.5	
304.0			ROCK	16.0	105.0	
288.0			COAL	0.3	121.0	
287.7			SHALE	2.0	121.3	
285.7			COAL	0.2	123.3	
285.6			ROCK	114.6	123.4	
171.0			COAL	1.0	238.0	
170.0			ROCK	2.0	239.0	
168.0			COAL	0.2	241.0	
167.8			ROCK	146.8	241.2	
21.0			COAL	0.8	388.0	
20.2			ROCK	150.2	388.8	
-130.0			COAL	1.0	539.0	
-131.0			ROCK	34.0	540.0	
-165.0			COAL	1.8	574.0	
-166.8			ROCK	49.2	575.8	
-216.0			LIMESTONE	28.5	625.0	
-244.5	CARBONDALE	HERRIN	COAL	6.1	653.5	BLUE BAND .10'
-250.6	CARBONDALE		SHALE	2.3	659.6	

MAPID: 05500007000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 12 **QUARTERS/FOOTAGES:** SE SE SE SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.93106 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.096692 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 408.7 **LOGGED (FT.):** 662.0 **LOG TYPE:** Drillers Log

SOURCE: L.N. WOOD 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
408.7	PLEISTOCENE		SANDY CLAY	7.9	0.0	
400.8	BOND		SANDSTONE	18.1	7.9	WITH SHALE PARTINGS
382.7	BOND		SOFT SHALE	4.0	26.0	
378.7	BOND		SANDSTONE	10.0	30.0	WITH SHALE PARTINGS
368.7	BOND		SANDSTONE	8.0	40.0	
360.7	BOND		SANDSTONE	53.0	48.0	
307.7	BOND		CONGLOMERATE	1.0	101.0	
306.7	BOND		SANDSTONE	2.5	102.0	
304.2	BOND		COAL	0.5	104.5	
303.7	BOND		SHALE	10.0	105.0	
293.7	BOND		SHALE	6.0	115.0	
287.7	BOND		COAL	0.3	121.0	
287.4	BOND		SOFT SHALE	2.0	121.3	
285.4	BOND		COAL	0.2	123.3	
285.3	BOND		SANDY SHALE	10.6	123.4	
274.7	BOND		SANDY SHALE	58.0	134.0	
216.7	BOND	CARTHAGE	LIMESTONE	4.0	192.0	
212.7	BOND		SHALE	6.0	196.0	
206.7	MODESTO		SANDY SHALE	36.0	202.0	WITH SOFT SHALE PARTINGS
170.7	MODESTO		COAL	1.0	238.0	
169.7	MODESTO		SHALE	2.0	239.0	
167.7	MODESTO		COAL	0.2	241.0	
167.5	MODESTO		SOFT SHALE	19.8	241.2	
147.7	MODESTO		SHALE	39.0	261.0	
108.7	MODESTO		SANDY SHALE	20.0	300.0	
88.7	MODESTO		SANDY SHALE	59.0	320.0	
29.7	MODESTO		SHALE	9.0	379.0	
20.7	MODESTO	CHAPEL	COAL	0.8	388.0	
19.9	MODESTO		SHALE	28.2	388.8	
-8.3	MODESTO		SANDY SHALE	20.0	417.0	
-28.3	MODESTO		SHALE	35.0	437.0	
-63.3	MODESTO		SANDSTONE	14.0	472.0	
-77.3	MODESTO		SANDSTONE	6.0	486.0	
-83.3	MODESTO		SHALE	34.0	492.0	
-117.3	MODESTO		SHALE	13.0	526.0	
-130.3	MODESTO	DEGRAFF	COAL	1.0	539.0	
-131.3	MODESTO		SOFT SHALE	1.0	540.0	
-132.3	MODESTO	PIASA	LIMESTONE	11.0	541.0	
-143.3	MODESTO		CALCAREOUS SHALE	11.0	552.0	

-154.3	MODESTO		SHALE	11.0	563.0	
-165.3	CARBONDALE	DANVILLE	COAL	1.8	574.0	
-167.1	CARBONDALE		SANDY SHALE	6.2	575.8	
-173.3	CARBONDALE		SHALE	10.0	582.0	
-183.3	CARBONDALE		SANDSTONE	4.0	592.0	
-187.3	CARBONDALE		SHALE	5.0	596.0	
-192.3	CARBONDALE		CALCAREOUS SHALE	30.0	601.0	WITH LIMESTONE PARTINGS
-222.3	CARBONDALE		LIMESTONE	10.0	631.0	
-232.3	CARBONDALE		LIMESTONE	12.5	641.0	
-244.8	CARBONDALE	HERRIN	COAL	0.5	653.5	
-245.3	CARBONDALE	HERRIN	COAL	4.8	654.0	
-250.1	CARBONDALE	HERRIN	BLUE BAND	0.1	658.8	
-250.2	CARBONDALE	HERRIN	COAL	0.7	658.9	
-251.0	CARBONDALE		SANDY SHALE	0.3	659.7	
-251.2	CARBONDALE		SANDY SHALE	2.1	659.9	

MAPID: 05500019000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 12 **QUARTERS/FOOTAGES:** NE NE NE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.931356 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.110448 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 389.3 **LOGGED (FT.):** 657.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0001 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-255.7	CARBONDALE	HERRIN	COAL	6.8	645.0	

MAPID: 05500019000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 12 **QUARTERS/FOOTAGES:** NE NE NE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.931356 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.110448 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 657.0 **LOG TYPE:** Drillers Log

SOURCE: L. N. WOOD **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
389.0			UNCONSOLIDATED	24.0	0.0	
365.0			ROCK	184.0	24.0	
181.0			COAL	0.8	208.0	SHALEY
180.2			ROCK	167.2	208.8	
13.0			COAL	1.5	376.0	
11.5			ROCK	186.6	377.5	
-175.1			COAL	1.4	564.1	
-176.5			ROCK	54.5	565.5	
-231.0			SHALE	25.4	620.0	DARK,SANDY
-256.4	CARBONDALE	HERRIN	COAL	6.8	645.4	BLUE BAND .16'
-263.3	CARBONDALE		SHALE	1.8	652.3	
-265.0	CARBONDALE		LIMESTONE	3.0	654.0	

MAPID: 05500019000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 12 **QUARTERS/FOOTAGES:** NE NE NE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.931356 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.110448 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 389.3 **LOGGED (FT.):** 657.0 **LOG TYPE:** Drillers Log

SOURCE: L.N. WOOD 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
389.3	PLEISTOCENE		CLAY	20.0	0.0	YELLOW
369.3	PLEISTOCENE		CLAY	4.0	20.0	WITH SAND
365.3	BOND		SANDSTONE	3.0	24.0	
362.3	BOND		SANDY SHALE	13.0	27.0	
349.3	BOND		SANDSTONE	50.0	40.0	
299.3	BOND		SANDSTONE	8.0	90.0	
291.3	BOND		SOFT SHALE	22.0	98.0	
269.3	BOND		SANDY SHALE	8.0	120.0	
261.3	BOND		SANDY SHALE	42.0	128.0	
219.3	BOND		SHALE	7.0	170.0	
212.3	BOND	CARTHAGE	LIMESTONE	6.0	177.0	
206.3	MODESTO		SHALE	5.0	183.0	
201.3	MODESTO		SHALE	2.0	188.0	LIGHT
199.3	MODESTO		SANDY SHALE	18.0	190.0	
181.3	MODESTO		SHALY COAL	0.8	208.0	
180.5	MODESTO		SANDY SHALE	18.2	208.8	
162.3	MODESTO		CALCAREOUS SHALE	2.0	227.0	
160.3	MODESTO		CALCAREOUS SHALE	9.0	229.0	WITH LIMESTONE BANDS
151.3	MODESTO		SHALE	13.0	238.0	
138.3	MODESTO		SHALE	14.0	251.0	
124.3	MODESTO		SHALE	4.0	265.0	
120.3	MODESTO		SHALE	12.0	269.0	WITH LIMESTONE BANDS
108.3	MODESTO		SHALE	25.0	281.0	WITH SANDSTONE BANDS
83.3	MODESTO		SANDY SHALE	1.0	306.0	
82.3	MODESTO		SANDSTONE	4.0	307.0	
78.3	MODESTO		LIMESTONE	4.0	311.0	
74.3	MODESTO		SANDSTONE	20.0	315.0	
54.3	MODESTO		SANDY SHALE	19.0	335.0	
35.3	MODESTO		SHALE	10.0	354.0	
25.3	MODESTO		SANDY SHALE	12.0	364.0	
13.3	MODESTO	CHAPEL	COAL	1.5	376.0	
11.8	MODESTO		SHALE	9.0	377.5	
2.8	MODESTO		SANDY SHALE	13.5	386.5	
-10.7	MODESTO		SANDY SHALE	46.0	400.0	
-56.7	MODESTO		SANDY SHALE	18.0	446.0	
-74.7	MODESTO		SHALE	18.0	464.0	
-92.7	MODESTO		SHALE	24.0	482.0	
-116.7	MODESTO		SHALE	2.0	506.0	
-118.7	MODESTO		CALCAREOUS SHALE	5.0	508.0	

-123.7	MODESTO		SHALE	23.0	513.0
-146.7	MODESTO		SANDY SHALE	7.0	536.0
-153.7	MODESTO		SHALE	12.0	543.0
-165.7	MODESTO	PIASA	LIMESTONE	4.0	555.0
-169.7	MODESTO		SHALE	5.1	559.0
-174.8	CARBONDALE	DANVILLE	COAL	1.4	564.1
-176.2	CARBONDALE		SHALE	0.5	565.5
-176.7	CARBONDALE		SHALE	9.0	566.0
-185.7	CARBONDALE		SHALE	11.0	575.0
-196.7	CARBONDALE		CALCAREOUS SHALE	4.0	586.0
-200.7	CARBONDALE	BRERETON	LIMESTONE	3.0	590.0
-203.7	CARBONDALE	BRERETON	LIMESTONE	3.0	593.0
-206.7	CARBONDALE	ENERGY	SHALE	14.0	596.0
-220.7	CARBONDALE	ENERGY	CALCAREOUS SHALE	5.0	610.0
-225.7	CARBONDALE	ENERGY	SHALE	2.0	615.0
-227.7	CARBONDALE	ENERGY	SANDY SHALE	3.0	617.0
-230.7	CARBONDALE	ENERGY	SANDY SHALE	25.0	620.0
-255.7	CARBONDALE	ENERGY	SANDY SHALE	0.4	645.0
-256.1	CARBONDALE	HERRIN	COAL	6.2	645.4
-262.3	CARBONDALE	HERRIN	BLUE BAND	0.2	651.6
-262.5	CARBONDALE	HERRIN	COAL	0.5	651.8
-263.0	CARBONDALE		BLACK SHALE	1.8	652.3
-264.7	CARBONDALE		LIMESTONE	3.0	654.0

MAPID: 05500027000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 12 **QUARTERS/FOOTAGES:** SW SW SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.94834 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.097497 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 413.9 **LOGGED (FT.):** 0.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0001 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-240.1	CARBONDALE	HERRIN	COAL	5.6	654.0	

MAPID: 05500028000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 12 **QUARTERS/FOOTAGES:** NW NE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.934452 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.110087 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 421.3 **LOGGED (FT.):** 699.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0002 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-267.7	CARBONDALE	HERRIN	COAL	7.8	689.0	

MAPID: 05500028000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 12 **QUARTERS/FOOTAGES:** NW NE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.934452 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.110087 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 421.0 **LOGGED (FT.):** 698.7 **LOG TYPE:** Survey Core Study

SOURCE: L. N. WOOD **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
421.0			UNCONSOLIDATED	15.6	0.0	
405.4			ROCK	116.8	15.6	
288.6			COAL	0.2	132.4	
288.4			ROCK	290.9	132.6	
-2.5			COAL	0.5	423.5	
-3.0			ROCK	148.2	424.0	
-151.2			COAL	0.8	572.2	
-152.0			ROCK	20.0	573.0	
-172.0			COAL	0.3	593.0	
-172.3			ROCK	14.2	593.3	
-186.5			COAL	1.6	607.5	
-188.1			ROCK	54.9	609.1	
-243.0			CALCAREOUS SHALE	5.0	664.0	
-248.0			SHALE	11.0	669.0	
-259.0			BLACK SHALE	9.4	680.0	
-268.4	CARBONDALE	HERRIN	COAL	7.8	689.4	BLUE BAND .10'
-276.3	CARBONDALE		SHALE	1.4	697.3	

MAPID: 05500028000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 12 **QUARTERS/FOOTAGES:** NW NE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.934452 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.110087 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 421.3 **LOGGED (FT.):** 697.7 **LOG TYPE:** Drillers Log

SOURCE: L.N. WOOD 22 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
421.3	PLEISTOCENE		SANDY CLAY	15.6	0.0	
405.7	BOND		SANDY SHALE	26.4	15.6	WITH SOFT SHALE PARTINGS
379.3	BOND		SANDY SHALE	3.0	42.0	
376.3	BOND		SANDSTONE	78.0	45.0	
298.3	BOND		SANDY SHALE	8.0	123.0	
290.3	BOND		CONGLOMERATE	1.2	131.0	
289.1	BOND		SHALE	0.3	132.2	
288.9	BOND		COAL	0.2	132.4	
288.7	BOND		LIMESTONE	1.4	132.6	
287.3	BOND		SOFT SHALE	22.0	134.0	
265.3	BOND		SANDY SHALE	16.0	156.0	WITH SANDSTONE PARTINGS
249.3	BOND		SHALE	40.0	172.0	
209.3	BOND	CARTHAGE	LIMESTONE	8.0	212.0	
201.3	MODESTO		SHALE	10.0	220.0	
191.3	MODESTO		SANDY SHALE	30.0	230.0	WITH SANDY SHALE PARTINGS
161.3	MODESTO		SANDY SHALE	9.0	260.0	
152.3	MODESTO		SHALE	56.0	269.0	
96.3	MODESTO		SANDY SHALE	50.0	325.0	WITH SANDSTONE PARTINGS
46.3	MODESTO		SANDY SHALE	25.0	375.0	
21.3	MODESTO		SHALE	23.5	400.0	
-2.2	MODESTO	CHAPEL	COAL	0.5	423.5	
-2.7	MODESTO		SANDY SHALE	20.0	424.0	WITH SOFT SHALE PARTINGS
-22.7	MODESTO		SHALE	16.0	444.0	
-38.7	MODESTO		SHALE	17.0	460.0	
-55.7	MODESTO		SANDY SHALE	37.0	477.0	
-92.7	MODESTO		SANDY SHALE	10.0	514.0	
-102.7	MODESTO		SHALE	19.0	524.0	
-121.7	MODESTO		SHALE	7.0	543.0	
-128.7	MODESTO		SHALE	20.0	550.0	WITH LIMESTONE BANDS
-148.7	MODESTO		SHALE	2.2	570.0	
-150.9	MODESTO		COAL	0.8	572.2	
-151.7	MODESTO		CALCAREOUS SHALE	20.0	573.0	WITH LIMESTONE PARTINGS
-171.7	MODESTO		COAL	0.3	593.0	
-172.0	MODESTO		SOFT SHALE	1.7	593.3	
-173.7	MODESTO	PIASA	LIMESTONE	7.0	595.0	WITH SHALE PARTINGS
-180.7	MODESTO		SHALE	2.0	602.0	
-182.7	MODESTO		SANDY SHALE	3.5	604.0	
-186.2	CARBONDALE	DANVILLE	COAL	1.6	607.5	

-187.8	CARBONDALE		SANDY SHALE	8.9	609.1	
-196.7	CARBONDALE		LIMESTONE	3.0	618.0	
-199.7	CARBONDALE		CALCAREOUS SHALE	9.0	621.0	
-208.7	CARBONDALE		LIMESTONE	6.0	630.0	
-214.7	CARBONDALE		SANDY SHALE	16.0	636.0	
-230.7	CARBONDALE		LIMESTONE	4.5	652.0	
-235.2	CARBONDALE	ENERGY	SHALE	1.1	656.5	
-236.3	CARBONDALE	ENERGY	SHALE	10.4	657.6	WITH LIMESTONE PARTINGS
-246.7	CARBONDALE	ENERGY	SHALE	10.0	668.0	LIGHT GRAY
-256.7	CARBONDALE	ENERGY	SHALE	1.0	678.0	
-257.7	CARBONDALE	ENERGY	SHALE	9.4	679.0	
-267.1	CARBONDALE	HERRIN	COAL	6.9	688.4	
-274.0	CARBONDALE	HERRIN	BLUE BAND	0.1	695.3	
-274.1	CARBONDALE	HERRIN	COAL	0.8	695.4	
-275.0	CARBONDALE		CARBONACEOUS SHALE	1.4	696.3	

MAPID: 05500784000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 12 **QUARTERS/FOOTAGES:** 2576' S line, 2627' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.940848 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.103534 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 425.0 **LOGGED (FT.):** 688.0 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COUNTY COAL CO. 5 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-158.7	MODESTO	PIASA	LIMESTONE	5.6	583.7	
-164.3	MODESTO		DARK GRAY SHALE	4.1	589.3	
-168.4	CARBONDALE	DANVILLE	COAL	2.3	593.4	
-170.7	CARBONDALE		SANDSTONE/SILTSTONE	23.5	595.7	
-194.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.6	619.2	
-198.8	CARBONDALE	LAWSON	GRAY SHALE	6.7	623.8	
-205.4	CARBONDALE	LAWSON	DARK GRAY SHALE	9.3	630.4	
-214.8	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	4.1	639.8	
-218.8	CARBONDALE	ANNA	BLACK SHALE	1.1	643.8	
-219.9	CARBONDALE	ENERGY	SILTY SHALE	35.1	644.9	
-255.0	CARBONDALE	HERRIN	COAL	8.0	680.0	

MAPID: 05501520000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 12 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.939506 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.110261 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 425.0 **LOGGED (FT.):** 2526.0 **LOG TYPE:** Electric Log

SOURCE: BOWERS, JOHN C. **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-330.0	CARBONDALE	SPRINGFIELD	COAL	-	755.0	
-485.0	CARBONDALE	COLCHESTER	COAL	-	910.0	
-2101.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2526.0	

MAPID: 05584000000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 12 **QUARTERS/FOOTAGES:** 2576' S line, 1307' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.945463 **GEOLOGIST:** J MCBETH

CONFIDENTIAL: N **LATITUDE:** 38.103623 **DATE COLLECTED:** 0 / 0 / 1943

SURFACE ELEVATION (FT.): 425.0 **LOGGED (FT.):** 792.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO/FRANKLIN CO N5 **WELL TYPE:** Coal Test

COMMENT: PERMIT 13; MINE 21

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
425.0	PLEISTOCENE		UNCONSOLIDATED	17.0	0.0	
408.0	BOND		SANDSTONE	4.0	17.0	SOFT
404.0	BOND		GRAY SHALE	19.0	21.0	
385.0	BOND		LIMESTONE	1.5	40.0	
383.5	BOND		SHALE	26.5	41.5	CONCRETIONARY
357.0	BOND		SANDSTONE	54.0	68.0	
303.0	BOND		SHALE	1.0	122.0	NODULAR
302.0	BOND		COAL	0.2	123.0	BONEY
301.8	BOND		SANDSTONE	0.5	123.2	WITH COAL
301.3	BOND		COAL	0.2	123.7	BONEY
301.2	BOND		UNDERCLAY	3.2	123.8	
297.9	BOND		GRAY SHALE	9.0	127.1	SOFT
289.0	BOND		LIMESTONE	3.0	136.0	
286.0	BOND		SHALE	67.0	139.0	DARK
219.0	BOND	CARTHAGE	LIMESTONE	5.0	206.0	
214.0	MODESTO		SHALE	5.0	211.0	DARK
209.0	MODESTO		GRAY SHALE	30.0	216.0	
179.0	MODESTO		SHALE	16.0	246.0	CALCAREOUS
163.0	MODESTO		SHALE	1.0	262.0	CARBONACEOUS, WITH COAL STREAKS
162.0	MODESTO		UNDERCLAY	4.0	263.0	
158.0	MODESTO		GRAY SHALE	15.0	267.0	
143.0	MODESTO		SHALE	2.0	282.0	DARK
141.0	MODESTO		GRAY SHALE	43.0	284.0	
98.0	MODESTO		LIMESTONE	1.0	327.0	
97.0	MODESTO		SANDY SHALE	67.0	328.0	
30.0	MODESTO		SHALE	10.5	395.0	DARK
19.5	MODESTO	CHAPEL	COAL	1.0	405.5	BONEY
18.5	MODESTO		UNDERCLAY	2.5	406.5	
16.0	MODESTO		GRAY SHALE	18.0	409.0	
-2.0	MODESTO		LIMESTONE	1.0	427.0	
-3.0	MODESTO		SANDY SHALE	79.0	428.0	
-82.0	MODESTO		SANDSTONE	15.0	507.0	
-97.0	MODESTO		SHALE	13.0	522.0	DARK
-110.0	MODESTO		LIMESTONE	5.0	535.0	
-115.0	MODESTO		SHALE	18.0	540.0	
-133.0	MODESTO		COAL	0.5	558.0	BONEY
-133.5	MODESTO		UNDERCLAY	2.5	558.5	
-136.0	MODESTO		GRAY SHALE	18.0	561.0	
-154.0	MODESTO	DEGRAFF	COAL	2.0	579.0	BONEY

-156.0	MODESTO		UNDERCLAY	2.0	581.0	
-158.0	MODESTO	PIASA	LIMESTONE	5.0	583.0	
-163.0	MODESTO		GRAY SHALE	4.0	588.0	
-167.0	CARBONDALE	DANVILLE	COAL	2.3	592.0	BONEY
-169.3	CARBONDALE		SANDY SHALE	23.8	594.3	
-193.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	618.0	
-198.0	CARBONDALE		GRAY SHALE	16.0	623.0	
-214.0	CARBONDALE	BRERETON	LIMESTONE	4.0	639.0	
-218.0	CARBONDALE	ENERGY	GRAY SHALE	34.7	643.0	
-252.7	CARBONDALE	HERRIN	COAL	3.0	677.7	
-255.7	CARBONDALE	HERRIN	BONE COAL	0.0	680.7	
-255.7	CARBONDALE	HERRIN	COAL	0.3	680.7	
-256.0	CARBONDALE	HERRIN	BONE COAL	0.0	681.0	
-256.1	CARBONDALE	HERRIN	COAL	0.5	681.1	
-256.6	CARBONDALE	HERRIN	BONE COAL	0.0	681.6	
-256.6	CARBONDALE	HERRIN	COAL	1.7	681.6	
-258.3	CARBONDALE	HERRIN	FUSAIN	0.0	683.3	
-258.3	CARBONDALE	HERRIN	COAL	1.3	683.3	
-259.6	CARBONDALE	HERRIN	SHALE	0.1	684.6	BLUE BAND
-259.7	CARBONDALE	HERRIN	COAL	0.9	684.7	
-260.6	CARBONDALE		GRAY SHALE	26.3	685.6	
-287.0	CARBONDALE	BRIAR HILL	COAL	0.2	712.0	BONEY
-287.1	CARBONDALE		SHALE	20.2	712.1	
-307.3	CARBONDALE	SPRINGFIELD	COAL	4.3	732.3	
-311.7	CARBONDALE		BONE COAL	0.2	736.7	
-311.8	CARBONDALE		GRAY SHALE	55.2	736.8	

MAPID: 05500029000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 13 **QUARTERS/FOOTAGES:** SW SW SW SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.939054 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.082309 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 390.0 **LOGGED (FT.):** 644.0 **LOG TYPE:** Drillers Log

SOURCE: S. B. ESPEY **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
390.0			UNCONSOLIDATED	45.0	0.0	
345.0			ROCK	1.0	45.0	
344.0			COAL	0.7	46.0	
343.3			ROCK	110.8	46.7	
232.5			COAL	0.5	157.5	
232.0			ROCK	19.0	158.0	
213.0			COAL	0.2	177.0	
212.8			ROCK	155.6	177.2	
57.2			COAL	0.9	332.8	
56.2			ROCK	163.2	333.8	
-107.0			COAL	0.7	497.0	
-107.7			ROCK	21.0	497.7	
-128.7			COAL	1.3	518.7	
-130.0			ROCK	11.5	520.0	
-141.5			COAL	0.2	531.5	
-141.7			COAL/CLAYSTONE	0.9	531.7	COAL AND FIRECLAY MIXED
-142.6			COAL	0.5	532.6	
-143.0			ROCK	43.0	533.0	
-186.0			BLACK SHALE	6.0	576.0	
-192.0			LIMESTONE	5.2	582.0	
-197.2			BLACK SHALE	14.3	587.2	
-211.5	CARBONDALE	HERRIN	COAL	6.3	601.5	
-217.8	CARBONDALE		SHALE/UNDERCLAY	1.0	607.8	
-218.8	CARBONDALE		ROCK	33.4	608.8	
-252.2	CARBONDALE		COAL	0.7	642.2	
-252.8	CARBONDALE		ROCK	1.2	642.8	

MAPID: 05500029000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 13 **QUARTERS/FOOTAGES:** SW SW SW SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.939054 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.082309 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 397.0 **LOGGED (FT.):** 608.3 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-125.5	MODESTO	PIASA	LIMESTONE	5.5	522.5	
-131.0	MODESTO		DARK GRAY SHALE	4.0	528.0	
-135.0	CARBONDALE	DANVILLE	BONE COAL	1.5	532.0	
-136.5	CARBONDALE		SHALE & SANDSTONE	20.0	533.5	
-156.5	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	5.0	553.5	
-161.5	CARBONDALE	LAWSON	CALCAREOUS SHALE	3.0	558.5	
-164.5	CARBONDALE	LAWSON	GRAY SHALE	8.0	561.5	
-172.5	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	7.0	569.5	
-179.5	CARBONDALE	LAWSON	GRAY SHALE	6.0	576.5	
-185.5	CARBONDALE	BRERETON	LIMESTONE	5.2	582.5	
-190.7	CARBONDALE	ANNA	BLACK SHALE	2.7	587.7	
-193.3	CARBONDALE	ENERGY	GRAY SHALE	11.7	590.3	
-205.0	CARBONDALE	HERRIN	COAL	6.3	602.0	

MAPID: 05500029000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 13 **QUARTERS/FOOTAGES:** SW SW SW SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.939054 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.082309 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 396.6 **LOGGED (FT.):** 644.0 **LOG TYPE:**

SOURCE: ESPEY **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-205.4	CARBONDALE	HERRIN	COAL	6.3	602.0	

MAPID: 05500029000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 13 **QUARTERS/FOOTAGES:** SW SW SW SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.939054 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.082309 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 396.6 **LOGGED (FT.):** 644.0 **LOG TYPE:** Drillers Log

SOURCE: S.B. EPSEY **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
396.6	PLEISTOCENE		CLAY	18.0	0.0	
378.6	PLEISTOCENE		SAND	6.0	18.0	
372.6	PLEISTOCENE		SANDY CLAY	14.0	24.0	BLUE
358.6	PLEISTOCENE		SAND	5.0	38.0	
353.6	PLEISTOCENE		SAND & GRAVEL	2.0	43.0	
351.6	PLEISTOCENE		SANDSTONE	1.0	45.0	
350.6	PLEISTOCENE		COAL	0.7	46.0	
349.9	PLEISTOCENE		SOFT SHALE	2.3	46.7	
347.6	PLEISTOCENE		SANDSTONE/SHALE	2.0	49.0	
345.6	BOND		SOFT SHALE	29.0	51.0	
316.6	BOND		SHALE	5.0	80.0	
311.6	BOND		SANDSTONE	10.0	85.0	WITH SHALE PARTINGS
301.6	BOND		SANDSTONE	15.0	95.0	
286.6	BOND		SHALE	20.0	110.0	
266.6	BOND	CARTHAGE	LIMESTONE	7.0	130.0	
259.6	MODESTO		SHALE	5.0	137.0	
254.6	MODESTO		SHALE	15.5	142.0	
239.1	MODESTO		COAL	0.5	157.5	
238.6	MODESTO		SHALE	5.0	158.0	
233.6	MODESTO		SANDSTONE	10.0	163.0	WITH SHALE PARTINGS
223.6	MODESTO		SHALE	4.0	173.0	
219.6	MODESTO		COAL	0.2	177.0	
219.4	MODESTO		CALCAREOUS SHALE	23.8	177.2	
195.6	MODESTO		SHALE	6.0	201.0	
189.6	MODESTO		SHALE	1.0	207.0	
188.6	MODESTO		SHALE	2.0	208.0	
186.6	MODESTO		COAL	1.5	210.0	
185.1	MODESTO		SHALE	1.5	211.5	
183.6	MODESTO		SHALE	13.0	213.0	
170.6	MODESTO		SHALE	2.0	226.0	
168.6	MODESTO		CALCAREOUS SHALE	3.0	228.0	
165.6	MODESTO		SANDY SHALE	15.0	231.0	
150.6	MODESTO		SANDSTONE	3.0	246.0	
147.6	MODESTO		SANDY SHALE	6.0	249.0	
141.6	MODESTO		SANDY SHALE	23.0	255.0	
118.6	MODESTO		SANDY SHALE	35.0	278.0	
83.6	MODESTO		SHALE	10.0	313.0	
73.6	MODESTO		SHALE	1.0	323.0	
72.6	MODESTO		SHALE	8.8	324.0	

63.8	MODESTO	CHAPEL	COAL	0.2	332.8	
63.6	MODESTO	CHAPEL	COAL	0.8	333.0	
62.8	MODESTO		CALCAREOUS SHALE	3.3	333.8	WITH SANDSTONE PARTINGS
59.6	MODESTO		SANDY SHALE	15.0	337.0	
44.6	MODESTO		SANDSTONE/SHALE	18.0	352.0	
26.6	MODESTO		SANDY SHALE	89.0	370.0	
-62.4	MODESTO		SHALE	10.0	459.0	
-72.4	MODESTO		SHALE	2.0	469.0	
-74.4	MODESTO		SHALE	2.0	471.0	
-76.4	MODESTO		SANDY SHALE	10.0	473.0	
-86.4	MODESTO		CALCAREOUS SHALE	11.0	483.0	
-97.4	MODESTO		SHALE	3.0	494.0	
-100.4	MODESTO		COAL	0.7	497.0	
-101.1	MODESTO		CLAYSTONE	2.3	497.7	
-103.4	MODESTO		SHALE & SANDSTONE	11.0	500.0	
-114.4	MODESTO		SHALE	7.7	511.0	
-122.1	MODESTO	DEGRAFF	COAL	1.3	518.7	
-123.4	MODESTO		CLAYSTONE	2.0	520.0	
-125.4	MODESTO	PIASA	LIMESTONE	5.5	522.0	
-130.9	MODESTO		SHALE	1.0	527.5	
-131.9	MODESTO		SHALE	3.0	528.5	
-134.9	CARBONDALE	DANVILLE	COAL	0.2	531.5	
-135.1	CARBONDALE	DANVILLE	COAL	0.9	531.7	
-136.0	CARBONDALE	DANVILLE	COAL	0.5	532.6	
-136.4	CARBONDALE		SANDY SHALE	9.0	533.0	
-145.4	CARBONDALE		SANDY SHALE	11.0	542.0	
-156.4	CARBONDALE		CALCAREOUS SHALE	1.0	553.0	
-157.4	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	554.0	
-161.4	CARBONDALE		CALCAREOUS SHALE	3.0	558.0	
-164.4	CARBONDALE		SHALE	8.0	561.0	
-172.4	CARBONDALE		SHALY SANDSTONE	7.0	569.0	
-179.4	CARBONDALE		SHALE	6.0	576.0	
-185.4	CARBONDALE	BRERETON	LIMESTONE	5.2	582.0	
-190.6	CARBONDALE	ENERGY	SHALE	2.7	587.2	
-193.2	CARBONDALE	ENERGY	SHALE	11.7	589.8	
-204.9	CARBONDALE	HERRIN	COAL	6.3	601.5	
-211.2	CARBONDALE		SHALE & CLAYSTONE	0.9	607.8	
-212.2	CARBONDALE		SHALE & CLAYSTONE	1.8	608.8	FIRE CLAY, BLUE
-213.9	CARBONDALE		SANDSTONE	5.5	610.5	
-219.4	CARBONDALE		SANDY SHALE	9.0	616.0	
-228.4	CARBONDALE		SHALE	12.0	625.0	
-240.4	CARBONDALE		SANDY SHALE	5.2	637.0	
-245.6	CARBONDALE	BRIAR HILL	COAL	0.7	642.2	
-246.2	CARBONDALE		SHALE	1.2	642.8	

MAPID: 05501726000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 13 **QUARTERS/FOOTAGES:**

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.939787 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.089134 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 637.0 **LOG TYPE:** Drillers Log

SOURCE: TAYLOR COAL COMP. 3 **WELL TYPE:** Coal Test

COMMENT: NOTE ON PG.-LOCATION NOT AS DESCRIBED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	PLEISTOCENE		CLAY	15.0	0.0	
-	PLEISTOCENE		CLAY	8.0	15.0	
-	PLEISTOCENE		CLAY	33.0	23.0	
-	PLEISTOCENE		SAND & GRAVEL	6.0	56.0	
-	BOND		SANDSTONE	11.0	62.0	
-	BOND		CALCAREOUS SHALE	3.0	73.0	
-	BOND		SHALE	12.0	76.0	
-	BOND		SANDY SHALE	38.0	88.0	WITH SANDSTONE BANDS
-	BOND		SHALE	28.0	126.0	
-	BOND		SHALE	1.0	154.0	
-	BOND	CARTHAGE	LIMESTONE	6.0	155.0	
-	MODESTO		SHALE	24.6	161.0	WITH BROWN BANDS
-	MODESTO		COAL	0.3	185.6	
-	MODESTO		SHALE	7.1	185.9	
-	MODESTO		SANDY SHALE	5.0	193.0	
-	MODESTO		SHALE	4.3	198.0	
-	MODESTO		COAL	0.7	202.3	
-	MODESTO		SHALE	1.0	203.0	
-	MODESTO		SHALE	2.0	204.0	
-	MODESTO		SHALE	26.0	206.0	
-	MODESTO		SHALE	8.0	232.0	
-	MODESTO		SHALE	18.0	240.0	WITH LIMESTONE SPOTS
-	MODESTO		SHALE	9.0	258.0	
-	MODESTO		SHALE	73.0	267.0	
-	MODESTO		SANDY SHALE	11.0	340.0	
-	MODESTO	CHAPEL	COAL	1.0	351.0	
-	MODESTO		CLAYSTONE	2.0	352.0	
-	MODESTO		SHALE	3.0	354.0	
-	MODESTO		SANDY SHALE	104.0	357.0	
-	MODESTO		SHALE	36.0	461.0	
-	MODESTO		CALCAREOUS SHALE	4.0	497.0	
-	MODESTO		SHALE	6.0	501.0	
-	MODESTO		SHALE	8.0	507.0	
-	MODESTO		SHALE	4.8	515.0	
-	MODESTO		COAL	0.7	519.8	
-	MODESTO		CLAYSTONE	4.0	520.5	
-	MODESTO		SANDY SHALE	5.5	524.5	
-	MODESTO		SHALE	11.9	530.0	
-	MODESTO	DEGRAFF	COAL	1.1	541.9	

-	MODESTO		CLAYSTONE	2.0	543.0	
-	MODESTO	PIASA	LIMESTONE	3.5	545.0	
-	MODESTO		SHALE	0.5	548.5	
-	MODESTO		SHALE	2.0	549.0	
-	MODESTO		SHALE	3.0	551.0	
-	CARBONDALE	DANVILLE	COAL	1.8	554.0	
-	CARBONDALE		SANDY SHALE	3.2	555.8	
-	CARBONDALE		SHALE	11.0	559.0	
-	CARBONDALE		SANDSTONE	3.0	570.0	
-	CARBONDALE		SHALE	5.0	573.0	
-	CARBONDALE		SHALE	3.5	578.0	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	581.5	
-	CARBONDALE		CALCAREOUS SHALE	5.0	587.0	
-	CARBONDALE		SANDSTONE	3.0	592.0	
-	CARBONDALE		SANDY SHALE	11.0	595.0	
-	CARBONDALE	BRERETON	SHALY LIMESTONE	21.7	606.0	BLUE
-	CARBONDALE		SHALE	0.5	627.7	
-	CARBONDALE	HERRIN	COAL	5.0	628.2	
-	CARBONDALE	HERRIN	BLUE BAND	0.1	633.1	
-	CARBONDALE	HERRIN	COAL	0.3	633.3	
-	CARBONDALE		CLAYSTONE	0.5	633.6	
-	CARBONDALE		CLAYSTONE	2.0	634.1	
-	CARBONDALE		SANDY LIMESTONE	0.9	636.1	

MAPID: 05501726000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 13 **QUARTERS/FOOTAGES:**

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.939787 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.089134 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 637.0 **LOG TYPE:** Survey Core Study

SOURCE: TAYLOR COAL CO. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-			UNCONSOLIDATED	62.0	0.0	
-			ROCK	123.6	62.0	
-			COAL	0.3	185.6	
-			ROCK	16.4	185.9	
-			COAL	0.7	202.3	
-			ROCK	148.0	203.0	
-			COAL	1.0	351.0	
-			ROCK	167.8	352.0	
-			COAL	0.7	519.8	
-			ROCK	33.5	520.5	
-			COAL	1.8	554.0	
-			ROCK	44.2	555.8	
-			SHALE	6.0	600.0	SANDY
-			LIMESTONE	21.7	606.0	
-			SHALE	0.5	627.7	
-	CARBONDALE	HERRIN	COAL	5.3	628.2	BLUE BAND .12'
-	CARBONDALE		UNDERCLAY	2.5	633.6	
-	CARBONDALE		ROCK	0.8	636.0	

MAPID: 05524054000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 13 **QUARTERS/FOOTAGES:** 300' S line, 50' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.930575 **GEOLOGIST:** J MCBETH

CONFIDENTIAL: N **LATITUDE:** 38.082554 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 710.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP 388 **WELL TYPE:** Coal Test

COMMENT: PERMIT 29; MINE 24

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	33.0	0.0	
-	BOND	MT. CARMEL	SANDSTONE	42.0	33.0	CORRELATION FROM LOG
-	BOND		SANDY SHALE	13.0	75.0	
-	BOND		COAL	1.0	88.0	
-	BOND		SANDSTONE/SHALE	26.0	89.0	
-	BOND		SILTY SHALE	40.0	115.0	
-	BOND	CARTHAGE	LIMESTONE	6.5	155.0	
-	MODESTO		SHALE	6.5	161.5	BLACK
-	MODESTO		SHALE	17.0	168.0	
-	MODESTO		COAL	1.0	185.0	
-	MODESTO		SANDSTONE/SHALE	18.0	186.0	
-	MODESTO		COAL	1.0	204.0	
-	MODESTO		SANDY SHALE	31.0	205.0	
-	MODESTO		SHALE	3.0	236.0	BLACK
-	MODESTO		LIMESTONE	1.0	239.0	
-	MODESTO		SANDSTONE/SHALE	30.5	240.0	
-	MODESTO		LIMESTONE	2.5	270.5	
-	MODESTO		SANDY SHALE	84.0	273.0	
-	MODESTO	CHAPEL	COAL	1.5	357.0	
-	MODESTO		SANDY SHALE	18.5	358.5	
-	MODESTO		LIMESTONE	6.0	377.0	
-	MODESTO		SILTY SHALE	114.0	383.0	
-	MODESTO		SHALE	23.0	497.0	
-	MODESTO		SHALE	2.0	520.0	BLACK
-	MODESTO	POND CREEK	COAL	1.0	522.0	
-	MODESTO		UNDERCLAY	3.0	523.0	
-	MODESTO		SANDY SHALE	18.0	526.0	
-	MODESTO	DEGRAFF	COAL	1.0	544.0	
-	MODESTO		SHALE	1.5	545.0	
-	MODESTO	PIASA	LIMESTONE	4.0	546.5	
-	MODESTO		SHALE	1.0	550.5	BLACK
-	MODESTO		SHALE	5.0	551.5	
-	CARBONDALE	DANVILLE	COAL	2.0	556.5	
-	CARBONDALE		UNDERCLAY	3.5	558.5	
-	CARBONDALE		SANDSTONE/SHALE	12.4	562.0	BEGAN CORING AT 572'
-	CARBONDALE		UNKNOWN	0.2	574.4	LOG SAYS "BN"
-	CARBONDALE		SHALE	0.2	574.6	SOFT SLICKS COAL STREAKS
-	CARBONDALE		SANDY SHALE	1.3	574.8	COAL STRINGERS
-	CARBONDALE		SANDY SHALE	1.9	576.0	LIMESTONE NODULES

-	CARBONDALE		GRAY SHALE	1.1	577.9	LIMESTONE NODULES
-	CARBONDALE		SHALE	3.6	579.0	GREEN-GRAY SLICKENSIDES
-	CARBONDALE	BANKSTON FORK	LIMESTONE	3.8	582.6	NODULAR WITH SHALE BEDS
-	CARBONDALE		SANDY SHALE	3.9	586.4	LIMESTONE NODULES
-	CARBONDALE		SILTY SHALE	1.9	590.3	WITH LIMESTONE NODULES
-	CARBONDALE		SILTY SHALE	1.0	592.2	
-	CARBONDALE		SHALE	4.5	593.2	SANDY, DARK GRAY, WITH FOSSILS
-	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	13.2	597.7	MICACEOUS, INTERBEDDED SS AND DARK SHALE
-	CARBONDALE		SILTY SHALE	2.1	610.9	
-	CARBONDALE		SHALE	0.6	613.0	CALCAREOUS, DARK GRAY, FOSSIL FRAGMENTS
-	CARBONDALE	JAMESTOWN	COAL	0.3	613.6	
-	CARBONDALE		UNDERCLAY	0.5	613.8	
-	CARBONDALE	BRERETON	LIMESTONE	3.3	614.3	ABUNDANT SHELL FRAGS
-	CARBONDALE	ANNA	SHALE	1.6	617.6	BLACK
-	CARBONDALE	ENERGY	SHALE	5.6	619.2	SANDY, PLANT FOSSILS, SIDERITE NODULES
-	CARBONDALE	HERRIN	COAL	6.1	624.7	
-	CARBONDALE		UNDERCLAY	1.7	630.8	
-	CARBONDALE		LIMESTONE	1.7	632.5	ARGILLACEOUS
-	CARBONDALE		GRAY SHALE	0.8	634.2	WITH LIMESTONE NODULES
-	CARBONDALE		SANDY SHALE	8.8	635.0	FINE, SOME PYRITE NODULES
-	CARBONDALE		SANDY SHALE	20.2	643.8	WITH SIDERITE BANDS; LIMESTONE NODULES
-	CARBONDALE	BRIAR HILL	COAL	1.0	664.0	
-	CARBONDALE		SANDSTONE/SHALE	5.0	665.0	
-	CARBONDALE		SHALE	10.0	670.0	
-	CARBONDALE	ST. DAVID	LIMESTONE	1.5	680.0	
-	CARBONDALE	TURNER MINE	SHALE	2.5	681.5	BLACK
-	CARBONDALE	SPRINGFIELD	COAL	4.0	684.0	
-	CARBONDALE		UNDERCLAY	3.0	688.0	
-	CARBONDALE		SHALE	19.0	691.0	

MAPID: 05500786000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 14 **QUARTERS/FOOTAGES:** 1200' N line, 610' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.95145 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.093301 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 420.0 **LOGGED (FT.):** 683.2 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COUNTY COAL CO. 7 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-175.0	MODESTO	PIASA	LIMESTONE	6.3	595.0	
-181.3	MODESTO		DARK GRAY SHALE	4.5	601.3	
-185.8	CARBONDALE	DANVILLE	COAL	1.6	605.8	
-187.3	CARBONDALE		SANDSTONE/SILTSTONE	14.8	607.3	
-202.1	CARBONDALE	ALLENBY	COAL	0.7	622.1	
-202.8	CARBONDALE		SHALE & SILTSTONE	5.8	622.8	
-208.6	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.0	628.6	
-212.6	CARBONDALE	LAWSON	CALCAREOUS SHALE	1.7	632.6	
-214.3	CARBONDALE	LAWSON	GRAY SHALE	5.0	634.3	
-219.3	CARBONDALE	LAWSON	DARK GRAY SHALE	14.3	639.3	
-233.6	CARBONDALE	BRERETON	LIMESTONE	22.6	653.6	
-256.2	CARBONDALE	ANNA	BLACK SHALE	0.8	676.2	
-257.0	CARBONDALE	HERRIN	COAL	6.2	677.0	

MAPID: 05501550000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 14 **QUARTERS/FOOTAGES:** 330' N line, 990' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.964192 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.095893 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 388.0 **LOGGED (FT.):** 2422.0 **LOG TYPE:** Electric Log

SOURCE: KEWANEE OIL & GAS **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-310.0	CARBONDALE	SPRINGFIELD	COAL	-	698.0	
-465.0	CARBONDALE	COLCHESTER	COAL	-	853.0	
-2034.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2422.0	

MAPID: 05586000000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 14 **QUARTERS/FOOTAGES:** 1200' N line, 200' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.950014 **GEOLOGIST:** J MCBETH

CONFIDENTIAL: N **LATITUDE:** 38.093278 **DATE COLLECTED:** 0 / 0 / 1944

SURFACE ELEVATION (FT.): 419.9 **LOGGED (FT.):** 755.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO./FRANKLIN CO. N7 **WELL TYPE:** Coal Test

COMMENT: PERMIT 13;MINE #21

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
419.9	PLEISTOCENE		UNCONSOLIDATED	25.0	0.0	
394.9	BOND		GRAY SHALE	12.0	25.0	
382.9	BOND		SANDSTONE	73.0	37.0	
309.9	BOND		GRAY SHALE	3.0	110.0	
306.9	BOND		SANDY SHALE	37.0	113.0	
269.9	BOND		SHALE	45.0	150.0	DARK
224.9	BOND	CARTHAGE	LIMESTONE	4.0	195.0	
220.9	MODESTO		SHALE	24.0	199.0	DARK
196.9	MODESTO	NEW HAVEN	COAL	0.8	223.0	BONEY
196.1	MODESTO		SANDY SHALE	11.3	223.8	
184.9	MODESTO		SANDSTONE	25.0	235.0	
159.9	MODESTO	WOMAC	COAL	1.5	260.0	BONEY
158.4	MODESTO		SANDSTONE	13.5	261.5	
144.9	MODESTO		SHALE	10.0	275.0	BLACK
134.9	MODESTO		SHALE	7.0	285.0	CALCAREOUS, WITH NODULES
127.9	MODESTO		GRAY SHALE	24.0	292.0	
103.9	MODESTO		SANDSTONE	5.0	316.0	
98.9	MODESTO		SANDY SHALE	74.0	321.0	
24.9	MODESTO		SHALE	4.0	395.0	BLACK
20.9	MODESTO	CHAPEL	COAL	1.0	399.0	BONEY
19.9	MODESTO		UNDERCLAY	2.0	400.0	
17.9	MODESTO		GRAY SHALE	36.0	402.0	WITH CONCRETIONS
-18.1	MODESTO		LIMESTONE	2.0	438.0	
-20.1	MODESTO		SANDY SHALE	65.0	440.0	
-85.1	MODESTO		GRAY SHALE	11.0	505.0	
-96.1	MODESTO		LIMESTONE	4.0	516.0	
-100.1	MODESTO		GRAY SHALE	43.0	520.0	
-143.1	MODESTO		SANDY SHALE	9.0	563.0	
-152.1	MODESTO		GRAY SHALE	12.3	572.0	
-164.4	MODESTO	DEGRAFF	COAL	1.5	584.3	BONEY
-165.9	MODESTO		UNDERCLAY	1.3	585.8	
-167.1	MODESTO		SANDY SHALE	1.0	587.0	
-168.1	MODESTO	PIASA	LIMESTONE	5.0	588.0	
-173.1	MODESTO		GRAY SHALE	5.0	593.0	
-178.1	CARBONDALE	DANVILLE	COAL	1.0	598.0	BONEY
-179.1	CARBONDALE		UNDERCLAY	3.0	599.0	
-182.1	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	602.0	
-186.1	CARBONDALE		GRAY SHALE	40.0	606.0	
-226.1	CARBONDALE		LIMESTONE	23.0	646.0	

-249.1	CARBONDALE		SHALE	1.5	669.0	DARK
-250.6	CARBONDALE	HERRIN	COAL	6.1	670.5	
-256.7	CARBONDALE		UNDERCLAY	2.1	676.6	
-258.8	CARBONDALE		LIMESTONE	6.5	678.7	
-265.3	CARBONDALE		SANDY SHALE	8.0	685.2	
-273.3	CARBONDALE		SHALE	22.8	693.2	DARK
-296.1	CARBONDALE	BRIAR HILL	COAL	0.7	716.0	BONEY
-296.8	CARBONDALE		SHALE	26.3	716.7	DARK
-323.1	CARBONDALE	SPRINGFIELD	COAL	5.1	743.0	
-328.2	CARBONDALE		GRAY SHALE	6.9	748.1	

MAPID: 05500030000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 15 **QUARTERS/FOOTAGES:** NW SE SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.97055 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.084998 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 385.2 **LOGGED (FT.):** 644.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0004 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-241.8	CARBONDALE	HERRIN	COAL	7.1	627.0	

MAPID: 05500030000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 15 **QUARTERS/FOOTAGES:** NW SE SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.97055 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.084998 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 385.0 **LOGGED (FT.):** 644.0 **LOG TYPE:** Survey Core Study

SOURCE: BIG MUDDY COAL SYN. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
385.0			UNCONSOLIDATED	56.0	0.0	
329.0			SHALE	110.5	56.0	
218.5			COAL	0.5	166.5	
218.0			ROCK	36.0	167.0	
182.0			COAL	1.5	203.0	
180.5			ROCK	131.5	204.5	
49.0			COAL	1.0	336.0	
48.0			ROCK	167.0	337.0	
-119.0			COAL	0.5	504.0	
-119.5			ROCK	75.5	504.5	
-195.0			COAL	0.3	580.0	
-195.3			ROCK	19.7	580.3	
-215.0			SHALE	26.7	600.0	SANDY WITH BROWN BANKS
-241.7	CARBONDALE	HERRIN	COAL	7.1	626.7	BLUE BAND .12'
-248.8	CARBONDALE		ROCK	10.3	633.8	

MAPID: 05500030000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 15 **QUARTERS/FOOTAGES:** NW SE SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.97055 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.084998 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 385.3 **LOGGED (FT.):** 644.0 **LOG TYPE:** Drillers Log

SOURCE: BIG MUDDY COAL SYNDICATE 4 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
385.3	PLEISTOCENE		CLAY	25.0	0.0	YELLOW
360.3	PLEISTOCENE		SAND & GRAVEL	31.0	25.0	
329.3	BOND		SHALE	7.0	56.0	LIGHT BLUE
322.3	BOND		SANDY SHALE	35.0	63.0	
287.3	BOND		SHALE	40.0	98.0	
247.3	BOND		SANDY SHALE	4.0	138.0	
243.3	BOND	CARTHAGE	LIMESTONE	6.0	142.0	
237.3	MODESTO		SHALE	7.0	148.0	
230.3	MODESTO		SANDY SHALE	11.5	155.0	
218.8	MODESTO		COAL	0.5	166.5	
218.3	MODESTO		SHALE W/ COAL STREAKS	8.0	167.0	WITH COAL PARTINGS
210.3	MODESTO		SANDY SHALE	3.0	175.0	
207.3	MODESTO		SANDSTONE	18.0	178.0	
189.3	MODESTO		SHALE	4.0	196.0	
185.3	MODESTO		SANDY SHALE	3.0	200.0	
182.3	MODESTO		COAL	1.5	203.0	
180.8	MODESTO		SHALE	0.5	204.5	
180.3	MODESTO		SHALE	21.0	205.0	
159.3	MODESTO		SANDY SHALE	103.0	226.0	
56.3	MODESTO		SHALE	4.0	329.0	
52.3	MODESTO		SHALE	3.0	333.0	
49.3	MODESTO		COAL	1.0	336.0	
48.3	MODESTO		SANDY SHALE	122.0	337.0	
-73.7	MODESTO		SHALE	9.0	459.0	
-82.7	MODESTO		SANDY SHALE	32.0	468.0	
-114.7	MODESTO		SHALE	4.0	500.0	
-118.7	MODESTO		COAL	0.5	504.0	
-119.2	MODESTO		SOFT SHALE	8.5	504.5	
-127.7	MODESTO		SHALE	2.5	513.0	DARK BLUE
-130.2	MODESTO		LIMESTONE	1.0	515.5	
-131.2	MODESTO		SHALE	13.5	516.5	
-144.7	MODESTO		SANDY SHALE	28.0	530.0	
-172.7	MODESTO		SANDY SHALE	22.0	558.0	LIME SPOTS
-194.7	MODESTO		COAL	0.3	580.0	
-195.0	MODESTO		SANDY SHALE	7.8	580.3	
-202.7	MODESTO		SANDY SHALE	1.0	588.0	WITH COAL PARTINGS
-203.7	MODESTO		SHALE	3.0	589.0	DARK BLUE
-206.7	CARBONDALE	BRERETON	LIMESTONE	7.0	592.0	
-213.7	CARBONDALE	ANNA	BLACK SHALE	3.0	599.0	

-216.7	CARBONDALE	ENERGY	SANDY SHALE	8.0	602.0	
-224.7	CARBONDALE	ENERGY	SANDY SHALE	16.7	610.0	WITH BROWN BANDS
-241.4	CARBONDALE	HERRIN	COAL	6.4	626.7	
-247.8	CARBONDALE	HERRIN	BLUE BAND	0.1	633.1	
-247.9	CARBONDALE	HERRIN	COAL	0.5	633.2	
-248.5	CARBONDALE		SANDY SHALE	2.3	633.8	
-250.7	CARBONDALE		CALCAREOUS SHALE	8.0	636.0	SANDY

MAPID: 05501314000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 15 **QUARTERS/FOOTAGES:** 2422' N line, 2604' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.976582 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.090294 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 396.0 **LOGGED (FT.):** 663.3 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 125 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-127.5	MODESTO		DARK GRAY SHALE	6.0	523.5	
-133.5	CARBONDALE	DANVILLE	COAL	1.0	529.5	
-134.5	CARBONDALE	LAWSON	SILTY SHALE	88.0	530.5	
-222.5	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.5	618.5	
-223.0	CARBONDALE	JAMESTOWN	COAL	0.5	619.0	
-223.5	CARBONDALE		DARK GRAY SHALE	1.0	619.5	
-224.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	5.0	620.5	
-229.5	CARBONDALE	ANNA	BLACK SHALE	2.5	625.5	
-232.0	CARBONDALE	ENERGY	CLAYSTONE & SHALE	20.0	628.0	
-252.0	CARBONDALE	ENERGY	DARK GRAY SHALE	6.0	648.0	
-258.0	CARBONDALE	ENERGY	CARBONACEOUS SHALE	2.0	654.0	
-260.0	CARBONDALE	HERRIN	COAL	7.3	656.0	

MAPID: 05502344000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 16 **QUARTERS/FOOTAGES:** 1573' S line, 1252' E line
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.989853 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.086778 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 398.0 **LOGGED (FT.):** 609.6 **LOG TYPE:** Drillers Log
SOURCE: OLD BEN COAL CORP. 210 **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-32.1	MODESTO		SANDSTONE	32.0	430.1	
-64.1	CARBONDALE	DANVILLE	COAL	1.0	462.1	
-65.1	CARBONDALE	LAWSON	SILTY SHALE	62.0	463.1	
-127.1	CARBONDALE	BRERETON	LIMESTONE	2.0	525.1	
-129.1	CARBONDALE	ENERGY	SANDSTONE	22.0	527.1	
-151.1	CARBONDALE	ENERGY	SHALE	5.0	549.1	
-156.1	CARBONDALE	ENERGY	COAL	0.7	554.1	
-156.8	CARBONDALE	ENERGY	GRAY SHALE	46.3	554.8	
-203.0	CARBONDALE	HERRIN	COAL	8.6	601.0	

MAPID: 05523934000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 16 **QUARTERS/FOOTAGES:** 932' N line, 561' W line of NE SW
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.997468 **GEOLOGIST:** J JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.087311 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 448.0 **LOGGED (FT.):** 4539.0 **LOG TYPE:** Electric Log
SOURCE: GREAT PLAINS RESOURCES, INC. **WELL TYPE:** Oil and Gas Test
COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-397.0	CARBONDALE	COLCHESTER	COAL	-	845.0	
-1967.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2415.0	
-3986.0	DEVONIAN	UPPER DEVONIAN S	UNCLASSIFIED	-	4434.0	TOP OF NEW ALBANY
-4005.0	DEVONIAN	GRASSY CREEK	UNCLASSIFIED	-	4453.0	
-4091.0	DEVONIAN	BASE UPPER DEVON	UNCLASSIFIED	-	4539.0	BASE OF NEW ALBANY

MAPID: 05500031000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 17 **QUARTERS/FOOTAGES:** SW NE NE
QUADRANGLE: SESSER **LONGITUDE:** -89.007903 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.094739 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 426.4 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: BG MUDDYCS **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-222.6	CARBONDALE	HERRIN	COAL	9.3	649.0	

MAPID: 05500812000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 17 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of SW
QUADRANGLE: SESSER **LONGITUDE:** -89.014351 **GEOLOGIST:** J JOHNSON
CONFIDENTIAL: N **LATITUDE:** 38.08348 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 442.0 **LOGGED (FT.):** 2418.0 **LOG TYPE:** Electric Log
SOURCE: LEWIS, WILL I. **WELL TYPE:** Oil and Gas Test
COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-221.0	CARBONDALE	SPRINGFIELD	COAL	-	663.0	
-400.0	CARBONDALE	COLCHESTER	COAL	-	842.0	
-1976.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2418.0	

MAPID: 05501308000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 17 **QUARTERS/FOOTAGES:** 23' S line, 84' W line
QUADRANGLE: SESSER **LONGITUDE:** -89.022148 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.082806 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 449.0 **LOGGED (FT.):** 662.2 **LOG TYPE:** Drillers Log
SOURCE: OLD BEN COAL CORP. 123 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-46.2	CARBONDALE	ENERGY	SILTY SHALE	28.2	495.2	
-74.3	CARBONDALE	ENERGY	SILTY SHALE	90.0	523.3	
-164.3	CARBONDALE	ENERGY	GRAY SHALE	39.7	613.3	
-204.0	CARBONDALE	HERRIN	COAL	9.2	653.0	

MAPID: 05500764000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 18 **QUARTERS/FOOTAGES:** 1280' N line, 60' E line
QUADRANGLE: SESSER **LONGITUDE:** -89.023396 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.094233 **DATE COLLECTED:** 8 / 13 / 1944
SURFACE ELEVATION (FT.): 445.0 **LOGGED (FT.):** 668.5 **LOG TYPE:** Survey Core Study
SOURCE: OLD BEN COAL CORP. 23 **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-104.8	CARBONDALE	ENERGY	SANDSTONE/SILTSTONE	30.0	549.8	
-134.8	CARBONDALE	ENERGY	CONGLOMERATE	2.1	579.8	
-136.9	CARBONDALE	ENERGY	SHALE & SANDSTONE	13.8	581.9	
-150.7	CARBONDALE	ENERGY	SILTSTONE	53.1	595.7	
-203.8	CARBONDALE	ENERGY	GRAY SHALE	11.3	648.8	
-215.0	CARBONDALE	HERRIN	COAL	8.5	660.0	

MAPID: 05500005000M **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 19 **QUARTERS/FOOTAGES:** SW SW NE
QUADRANGLE: SESSER **LONGITUDE:** -89.030148 **GEOLOGIST:** BARGH,M
CONFIDENTIAL: N **LATITUDE:** 38.076158 **DATE COLLECTED:** 0 / 0 / 1922
SURFACE ELEVATION (FT.): 470.0 **LOGGED (FT.):** 644.3 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-OLD BEN C C **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
470.0			UNKNOWN	635.9	0.0	
-165.9	CARBONDALE	HERRIN	COAL	8.5	635.9	AVERAGE THICKNESS

MAPID: 05500005002M **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 19 **QUARTERS/FOOTAGES:**
QUADRANGLE: SESSER **LONGITUDE:** -89.031031 **GEOLOGIST:** BARGH,M
CONFIDENTIAL: N **LATITUDE:** 38.075223 **DATE COLLECTED:** 0 / 0 / 1912
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 8.1 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-SESSER C C **WELL TYPE:** Underground mine
COMMENT: 2300' FROM SHAFT. OTHER NOTES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	CARBONDALE		SHALE	-		SANDY WITH COAL PLATES
-	CARBONDALE	HERRIN	COAL	8.1		BLUE BAND .12'

MAPID: 05500005001M **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 19 **QUARTERS/FOOTAGES:** SW SW NW NE
QUADRANGLE: SESSER **LONGITUDE:** -89.030902 **GEOLOGIST:** BARGH,M
CONFIDENTIAL: N **LATITUDE:** 38.079441 **DATE COLLECTED:** 8 / 7 / 1908
SURFACE ELEVATION (FT.): 470.0 **LOGGED (FT.):** 6.7 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-KELLER MINE **WELL TYPE:** Underground mine
COMMENT: 1220 FT NORTH OF SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	COAL	6.7		BLUE BAND .12'

MAPID: 05500250000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 19 **QUARTERS/FOOTAGES:** SW SW NE

QUADRANGLE: SESSER **LONGITUDE:** -89.030148 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.076158 **DATE COLLECTED:** 0 / 0 / 1907

SURFACE ELEVATION (FT.): 470.7 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: OLD BEN 0016 **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-165.3	CARBONDALE	HERRIN	COAL	8.5	636.0	

MAPID: 05502016000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 19 **QUARTERS/FOOTAGES:** 204' S line, 525' W line of SE NE

QUADRANGLE: SESSER **LONGITUDE:** -89.024853 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.075783 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 468.0 **LOGGED (FT.):** 2413.0 **LOG TYPE:** Electric Log

SOURCE: LEWIS, WILL I. **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-197.0	CARBONDALE	SPRINGFIELD	COAL	-	665.0	
-372.0	CARBONDALE	COLCHESTER	COAL	-	840.0	
-1945.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2413.0	

MAPID: 05502056000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 19 **QUARTERS/FOOTAGES:** 1700' N line, 1815' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.028543 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.078037 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 467.0 **LOGGED (FT.):** 639.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-58.0	MODESTO	PIASA	LIMESTONE & SHALE	2.0	525.0	
-60.0	MODESTO		GRAY SHALE	3.0	527.0	
-63.0	CARBONDALE	DANVILLE	COAL	2.0	530.0	
-65.0	CARBONDALE		SHALE	8.0	532.0	
-73.0	CARBONDALE	ALLENBY	BONE COAL	0.5	540.0	
-73.5	CARBONDALE		CLAYSTONE & SHALE	5.5	540.5	
-79.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	546.0	
-86.0	CARBONDALE	LAWSON	SHALE	16.0	553.0	
-102.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	1.0	569.0	
-103.0	CARBONDALE	ANNA	BLACK SHALE	1.0	570.0	
-104.0	CARBONDALE	ENERGY	GRAY SHALE	59.0	571.0	
-163.0	CARBONDALE	HERRIN	COAL	9.0	630.0	

MAPID: 05500033000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 20 **QUARTERS/FOOTAGES:** SW NW NE NW

QUADRANGLE: SESSER **LONGITUDE:** -89.017146 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.081217 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 430.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**

SOURCE: BG MUDDYCS **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-196.0	CARBONDALE	HERRIN	COAL	11.0	626.0	

MAPID: 05500033000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 20 **QUARTERS/FOOTAGES:** SW NW NE NW

QUADRANGLE: SESSER **LONGITUDE:** -89.017146 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.081217 **DATE COLLECTED:** 0 / 0 / 1933

SURFACE ELEVATION (FT.): 430.0 **LOGGED (FT.):** 637.0 **LOG TYPE:** Drillers Log

SOURCE: T. C. KELLER **WELL TYPE:** Coal Test

COMMENT: FROM GEN. COAL REPT 1933. NO LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
430.0			UNKNOWN	626.0	0.0	NO LOG
-	CARBONDALE	HERRIN	COAL	11.0		

MAPID: 05500033000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 20 **QUARTERS/FOOTAGES:** SW NW NE NW
QUADRANGLE: SESSER **LONGITUDE:** -89.017146 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.081217 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 430.0 **LOGGED (FT.):** 637.0 **LOG TYPE:** Drillers Log
SOURCE: T.C.KELLER **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-196.0	CARBONDALE	HERRIN	COAL	11.0	626.0	

MAPID: 05500315000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 20 **QUARTERS/FOOTAGES:** SE SE NE
QUADRANGLE: SESSER **LONGITUDE:** -89.004754 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.075718 **DATE COLLECTED:** 6 / 0 / 1942
SURFACE ELEVATION (FT.): 446.0 **LOGGED (FT.):** 895.0 **LOG TYPE:** Drillers Log
SOURCE: OLD BEN COAL CORP 1 **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
446.0	PLEISTOCENE		CLAY	80.0	0.0	
366.0	PLEISTOCENE		SAND	64.0	80.0	
302.0			LIMESTONE	11.0	144.0	
291.0			SANDY SHALE	392.0	155.0	WITH SAND
-101.0			LIMESTONE	23.0	547.0	
-124.0			SHALE	10.0	570.0	
-134.0			LIMESTONE W/ SHALE	63.0	580.0	WITH SHALE STREAKS
-197.0	CARBONDALE	HERRIN	COAL	9.0	643.0	
-206.0			LIMESTONE	18.0	652.0	
-224.0			SHALE	30.0	670.0	
-254.0			SANDSTONE	45.0	700.0	
-299.0			SANDY SHALE	150.0	745.0	WITH SAND
-449.0			SANDSTONE	0.0	895.0	

MAPID: 05502301000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 20 **QUARTERS/FOOTAGES:** 1395' N line, 360' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.004969 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.07851 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 456.0 **LOGGED (FT.):** 664.1 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 200 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-89.2	MODESTO	PIASA	LIMESTONE/UNDERCLAY	2.4	545.2	
-91.6	MODESTO		GRAY SHALE	5.6	547.6	
-97.2	CARBONDALE	DANVILLE	COAL	2.3	553.2	
-99.5	CARBONDALE		SANDSTONE/SILTSTONE	7.8	555.5	
-107.3	CARBONDALE		CLAYSTONE & SHALE	6.3	563.3	
-113.5	CARBONDALE	BANKSTON FORK	LIMESTONE	5.6	569.5	UPPER BENCH
-119.1	CARBONDALE	BANKSTON FORK	SHALE	0.0	575.1	SHALE PARTING
-119.1	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	2.4	575.1	LOWER BENCH
-121.5	CARBONDALE	LAWSON	SILTY SHALE	0.8	577.5	
-122.2	CARBONDALE	LAWSON	GRAY SHALE	4.7	578.2	
-126.9	CARBONDALE	LAWSON	SILTY SHALE	4.3	582.9	
-131.2	CARBONDALE	LAWSON	GRAY SHALE	7.5	587.2	
-138.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	1.8	594.7	
-140.4	CARBONDALE	ANNA	DARK GRAY SHALE	1.4	596.4	
-141.8	CARBONDALE	ENERGY	SILTSTONE	4.2	597.8	
-146.0	CARBONDALE	ENERGY	SILTY SHALE	44.8	602.0	
-190.8	CARBONDALE	ENERGY	SILTSTONE	3.7	646.8	
-194.5	CARBONDALE	ENERGY	SILTY SHALE	5.1	650.5	
-199.6	CARBONDALE	ENERGY	CARBONACEOUS SHALE	1.4	655.6	
-201.0	CARBONDALE	HERRIN	COAL	7.1	657.0	

MAPID: 05502324000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 20 **QUARTERS/FOOTAGES:** 970' N line, 677' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.006123 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.07971 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 451.0 **LOGGED (FT.):** 539.8 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 237 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
34.1	MODESTO	PIASA	LIMESTONE AND SANDSTONE	5.5	416.9	
28.6	MODESTO		DARK GRAY SHALE	3.3	422.4	
25.2	CARBONDALE	DANVILLE	COAL	2.3	425.8	
22.9	CARBONDALE		SANDSTONE/SILTSTONE	5.6	428.1	
17.3	CARBONDALE		CLAYSTONE & SHALE	1.8	433.7	
15.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	435.5	
9.0	CARBONDALE	LAWSON	CALCAREOUS SHALE	5.4	442.0	
3.6	CARBONDALE	LAWSON	SILTY SHALE	10.7	447.4	
-7.1	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.7	458.1	
-7.8	CARBONDALE	ENERGY	SILTSTONE	1.5	458.8	
-9.3	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	11.0	460.3	
-20.3	CARBONDALE	ENERGY	SILTY SHALE	20.0	471.3	
-40.3	CARBONDALE	ENERGY	SILTSTONE	36.1	491.3	
-76.3	CARBONDALE	ENERGY	SILTY SHALE	3.7	527.3	
-80.0	CARBONDALE	HERRIN	COAL	8.8	531.0	

MAPID: 05524000000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 20 **QUARTERS/FOOTAGES:** 970' N line, 677' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.006123 **GEOLOGIST:** J MCBETH

CONFIDENTIAL: N **LATITUDE:** 38.07971 **DATE COLLECTED:** 10 / 31 / 1966

SURFACE ELEVATION (FT.): 450.9 **LOGGED (FT.):** 757.2 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP DH.237 **WELL TYPE:** Coal Test

COMMENT: PERMIT 12;MINE #26

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
450.9	PLEISTOCENE		CLAY	12.8	0.0	
438.1	PLEISTOCENE		SAND	0.1	12.8	
438.1	PLEISTOCENE		CLAY	2.0	12.8	
436.1	PLEISTOCENE		SAND	1.2	14.8	
434.9			SANDSTONE	29.7	16.0	
405.2			SMUT	0.3	45.7	WASHED OUT
404.9			SANDSTONE	13.8	46.0	
391.1			COAL	0.3	59.8	BADLY BROKEN
390.8			UNDERCLAY	20.9	60.1	
369.9	BOND		GRAY SHALE	5.3	81.0	
364.6	BOND		SANDSTONE	1.6	86.3	
363.1	BOND		GRAY SHALE	6.2	87.8	
356.9	BOND		SILTY SHALE	35.0	94.0	
321.9	BOND		GRAY SHALE	15.2	129.0	SMOOTH
306.7	BOND	CARTHAGE	LIMESTONE	6.0	144.2	
300.7	MODESTO		SHALE	4.5	150.2	VERY DARK GRAY TO BLACK
296.2	MODESTO		GRAY SHALE	20.3	154.7	SMOOTH
276.0	MODESTO		SHALE	0.6	174.9	BLACK
275.4	MODESTO		GRAY SHALE	5.8	175.5	SMOOTH
269.6	MODESTO		GRAY SHALE	12.7	181.3	WITH SANDY LAMINATIONS
256.9	MODESTO		SHALE	5.0	194.0	DARK GRAY TO VERY DARK GRAY
251.9	MODESTO	WOMAC	COAL	0.8	199.0	
251.0	MODESTO		SHALE	0.2	199.9	BLACK
250.8	MODESTO		GRAY SHALE	19.9	200.1	
230.9	MODESTO		GRAY SHALE	1.5	220.0	WITH LIMESTONE NODULES
229.4	MODESTO		SHALE	3.2	221.5	CALCAREOUS, DARK GRAY TO BLACK
226.2	MODESTO		SHALE	13.6	224.7	CALCAREOUS
212.6	MODESTO		SILTY SHALE	8.8	238.3	
203.9	MODESTO		GRAY SHALE	0.9	247.0	
203.0	MODESTO	CHAPEL	COAL	1.1	247.9	
201.9	MODESTO		SANDY SHALE	4.5	249.0	
197.4	MODESTO		SANDSTONE	11.5	253.5	WITH SOME CARBONACEOUS LAMINATIONS
185.9	MODESTO		SILTSTONE	1.5	265.0	WITH SANDSTONE
184.4	MODESTO		SANDSTONE	12.3	266.5	WHITE TO GRAY WITH SHALE
172.1	MODESTO		SILTSTONE	4.3	278.8	CARBONACEOUS
167.9	MODESTO		SILTSTONE	6.6	283.0	
161.3	MODESTO		GRAY SHALE	11.4	289.6	
149.9	MODESTO		SILTY SHALE	18.8	301.0	DARK GRAY

131.1	MODESTO		SHALE	10.6	319.8	DARK GRAY
120.6	MODESTO		SHALE	0.8	330.3	CALCAREOUS, VERY DARK GRAY
119.7	MODESTO		LIMESTONE	0.3	331.2	ARGILLACEOUS, DARK GRAY
119.5	MODESTO		GRAY SHALE	6.9	331.4	
112.6	MODESTO		COAL	1.0	338.3	
111.6	MODESTO		UNDERCLAY	3.2	339.3	CALCAREOUS
108.4	MODESTO		GRAY SHALE	19.3	342.5	WITH THIN SANDSTONE LAMINATIONS
89.1	MODESTO		SILTSTONE	5.5	361.8	WITH SANDSTONE
83.7	MODESTO		SANDSTONE	8.5	367.2	
75.1	MODESTO		SILTY SHALE	16.8	375.8	
58.4	MODESTO		GRAY SHALE	89.3	392.5	
-30.9	MODESTO		SHALE	2.3	481.8	WITH SANDSTONE
-33.1	MODESTO		GRAY SHALE	7.1	484.0	WITH SANDSTONE LAMINATIONS
-40.2	MODESTO		GRAY SHALE	4.9	491.1	
-45.1	MODESTO		SANDSTONE	0.6	496.0	CALCAREOUS
-45.7	MODESTO		GRAY SHALE	4.0	496.6	
-49.7	MODESTO		SANDSTONE	0.3	500.6	SHALEY;WHITE
-49.9	MODESTO		SHALE	6.5	500.8	DARK GRAY TO VERY DARK GRAY
-56.4	MODESTO		SHALE	3.0	507.3	BLACK
-59.5	MODESTO		COAL	0.7	510.4	
-60.2	MODESTO		GRAY SHALE	19.8	511.1	
-80.0	MODESTO	PIASA	LIMESTONE	2.8	530.9	
-82.9	MODESTO		SANDY SHALE	2.6	533.8	
-85.4	MODESTO		SHALE	3.4	536.3	DARK GRAY
-88.8	CARBONDALE	DANVILLE	COAL	2.4	539.7	
-91.2	CARBONDALE		GRAY SHALE	5.4	542.1	
-96.6	CARBONDALE		SHALE	0.1	547.5	BLACK
-96.7	CARBONDALE		GRAY SHALE	0.8	547.6	
-97.4	CARBONDALE		SHALE	1.0	548.3	
-98.4	CARBONDALE		SHALE	4.3	549.3	DARK GRAY, CALCAREOUS AT BASE
-102.7	CARBONDALE	BANKSTON FORK	LIMESTONE	6.7	553.6	
-109.4	CARBONDALE		GRAY SHALE	4.7	560.3	WITH LIMESTONE NODULES
-114.1	CARBONDALE		GRAY SHALE	10.3	565.0	
-124.4	CARBONDALE		LIMESTONE	0.7	575.3	DARK GRAY
-125.0	CARBONDALE		SANDY SHALE	1.1	575.9	
-126.1	CARBONDALE		SANDSTONE	7.8	577.0	
-133.9	CARBONDALE	ENERGY	SILTY SHALE	63.2	584.8	WITH SIDERITE AND SANDSTONE LAMINATIONS
-197.1	CARBONDALE	ENERGY	GRAY SHALE	0.4	648.0	
-197.5	CARBONDALE	HERRIN	COAL	3.6	648.4	
-201.1	CARBONDALE	HERRIN	FUSAIN	0.0	652.0	
-201.1	CARBONDALE	HERRIN	COAL	1.8	652.0	
-202.9	CARBONDALE	HERRIN	BONE COAL	0.0	653.8	
-203.0	CARBONDALE	HERRIN	COAL	0.3	653.9	
-203.3	CARBONDALE	HERRIN	FUSAIN	0.0	654.2	
-203.3	CARBONDALE	HERRIN	COAL	0.7	654.2	
-204.0	CARBONDALE	HERRIN	FUSAIN	0.0	654.9	
-204.0	CARBONDALE	HERRIN	COAL	0.3	654.9	

-204.3	CARBONDALE	HERRIN	CLAYSTONE	0.1	655.2	BLUE BAND
-204.4	CARBONDALE	HERRIN	COAL	1.8	655.3	
-206.3	CARBONDALE		UNDERCLAY	2.2	657.2	
-208.4	CARBONDALE		LIMESTONE & SHALE	1.8	659.3	
-210.2	CARBONDALE		LIMESTONE	9.4	661.1	LIGHT BROWN
-219.6	CARBONDALE		GRAY SHALE	2.3	670.5	
-221.9	CARBONDALE		SHALE	7.5	672.8	BLACK
-229.4	CARBONDALE	ST. DAVID	LIMESTONE	2.3	680.3	ARGILLACEOUS, BLACK
-231.7	CARBONDALE	TURNER MINE	SHALE	4.3	682.6	BLACK
-235.9	CARBONDALE	SPRINGFIELD	COAL	0.9	686.8	
-236.8	CARBONDALE	SPRINGFIELD	FUSAIN	0.0	687.7	
-236.8	CARBONDALE	SPRINGFIELD	COAL	1.0	687.7	
-237.8	CARBONDALE	SPRINGFIELD	FUSAIN	0.0	688.7	
-237.9	CARBONDALE	SPRINGFIELD	COAL	0.1	688.8	
-237.9	CARBONDALE	SPRINGFIELD	FUSAIN	0.0	688.8	
-237.9	CARBONDALE	SPRINGFIELD	COAL	2.3	688.8	
-240.2			LIMESTONE & SHALE	2.2	691.1	
-242.4			UNDERCLAY	0.5	693.3	
-242.9			SANDSTONE	60.2	693.8	UNIT THICKNESS CORRECTED BASED ON DEPTH
-303.1			GRAY SHALE	3.2	754.0	

MAPID: 05500034000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 21 **QUARTERS/FOOTAGES:** NE SE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.986132 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.077723 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 390.0 **LOGGED (FT.):** 613.5 **LOG TYPE:** Survey Core Study

SOURCE: BUNSEN C C **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
390.0			UNCONSOLIDATED	59.8	0.0	
330.2			ROCK	78.7	59.8	
251.5			COAL	0.5	138.5	
251.0			ROCK	54.0	139.0	
197.0			COAL	2.0	193.0	
195.0			ROCK	117.0	195.0	
78.0			COAL	0.5	312.0	
77.5			ROCK	169.5	312.5	
-92.0			COAL	0.5	482.0	
-92.5			ROCK	27.0	482.5	
-119.5			COAL	1.3	509.5	
-120.8			ROCK	10.5	510.8	
-131.3			COAL	2.2	521.3	
-133.4			ROCK	61.6	523.4	
-195.0			SHALE	4.0	585.0	LIMEY
-199.0			BLACK SHALE	15.5	589.0	
-214.5	CARBONDALE	HERRIN	COAL	7.8	604.5	
-222.3	CARBONDALE		UNDERCLAY	1.3	612.3	

MAPID: 05500034000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 21 **QUARTERS/FOOTAGES:** NE SE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.986132 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.077723 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 390.0 **LOGGED (FT.):** 612.9 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-121.8	MODESTO	PIASA	LIMESTONE	6.2	511.8	
-128.0	MODESTO		GRAY SHALE	4.3	518.0	
-132.3	CARBONDALE	DANVILLE	COAL	2.2	522.3	
-134.4	CARBONDALE		CALCAREOUS SHALE	2.1	524.4	
-136.5	CARBONDALE		CLAYSTONE & SHALE	8.0	526.5	
-144.5	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	534.5	
-152.5	CARBONDALE	ENERGY	SILTY SHALE	11.0	542.5	
-163.5	CARBONDALE	ENERGY	GRAY SHALE	23.0	553.5	
-186.5	CARBONDALE	ENERGY	CALCAREOUS SHALE	9.0	576.5	
-195.5	CARBONDALE	ENERGY	DARK GRAY SHALE	4.0	585.5	
-199.5	CARBONDALE	ENERGY	GRAY SHALE	15.5	589.5	
-215.0	CARBONDALE	HERRIN	COAL	7.9	605.0	

MAPID: 05500034000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 21 **QUARTERS/FOOTAGES:** NE SE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.986132 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.077723 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 389.5 **LOGGED (FT.):** 614.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0013 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-214.5	CARBONDALE	HERRIN	COAL	7.8	604.0	

MAPID: 05500034000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 21 **QUARTERS/FOOTAGES:** NE SE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.986132 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.077723 **DATE COLLECTED:** 11 / 0 / 1910

SURFACE ELEVATION (FT.): 389.5 **LOGGED (FT.):** 613.5 **LOG TYPE:** Drillers Log

SOURCE: 13 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
389.5	PLEISTOCENE		SOIL	8.0	0.0	
381.5	PLEISTOCENE		SAND	35.0	8.0	
346.5	PLEISTOCENE		GRAVEL	16.8	43.0	
329.7	BOND		SANDY SHALE	38.2	59.8	
291.5	BOND		SANDY SHALE	16.0	98.0	
275.5	BOND		CALCAREOUS SHALE	1.0	114.0	
274.5	BOND	CARTHAGE	LIMESTONE	4.0	115.0	
270.5	MODESTO		SHALE	1.0	119.0	
269.5	MODESTO		SHALE	4.0	120.0	
265.5	MODESTO		SHALE	8.0	124.0	
257.5	MODESTO		SANDY SHALE	6.5	132.0	
251.0	MODESTO		COAL	0.5	138.5	
250.5	MODESTO		SANDY SHALE	20.0	139.0	
230.5	MODESTO		SANDY SHALE	34.0	159.0	
196.5	MODESTO		COAL	2.0	193.0	
194.5	MODESTO		SANDSTONE	7.0	195.0	
187.5	MODESTO		SANDY SHALE	26.0	202.0	
161.5	MODESTO		SANDY SHALE	8.0	228.0	
153.5	MODESTO		CALCAREOUS SHALE	1.0	236.0	
152.5	MODESTO		CALCAREOUS SHALE	2.0	237.0	
150.5	MODESTO		SANDY SHALE	34.0	239.0	
116.5	MODESTO		SANDY SHALE	27.0	273.0	
89.5	MODESTO		SHALE	8.0	300.0	
81.5	MODESTO		SANDY SHALE	1.0	308.0	
80.5	MODESTO		SHALE	3.0	309.0	
77.5	MODESTO	CHAPEL	COAL	0.5	312.0	
77.0	MODESTO		SANDY SHALE	40.5	312.5	
36.5	MODESTO		SANDSTONE	2.0	353.0	
34.5	MODESTO		SANDY SHALE	52.0	355.0	
-17.5	MODESTO		SANDY SHALE	36.0	407.0	
-53.5	MODESTO		SHALE	10.0	443.0	
-63.5	MODESTO		SHALE	2.0	453.0	
-65.5	MODESTO		SHALE	2.0	455.0	
-67.5	MODESTO		SANDY SHALE	15.0	457.0	
-82.5	MODESTO		SANDY SHALE	8.0	472.0	
-90.5	MODESTO		SHALE	2.0	480.0	
-92.5	MODESTO		COAL	0.5	482.0	
-93.0	MODESTO		SHALE	7.0	482.5	
-100.0	MODESTO		UNKNOWN	9.5	489.5	BLANK

-109.5	MODESTO		SANDY SHALE	10.5	499.0
-120.0	MODESTO		COAL	1.3	509.5
-121.3	MODESTO	PIASA	LIMESTONE	6.2	510.8
-127.5	MODESTO		SHALE	4.3	517.0
-131.8	CARBONDALE	DANVILLE	COAL	2.2	521.3
-133.9	CARBONDALE		CALCAREOUS SHALE	3.1	523.4
-137.0	CARBONDALE		SHALE	8.0	526.5
-145.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	534.5
-153.0	CARBONDALE		SANDY SHALE	11.0	542.5
-164.0	CARBONDALE		SHALE	23.0	553.5
-187.0	CARBONDALE		CALCAREOUS SHALE	9.0	576.5
-196.0	CARBONDALE		SHALE	4.0	585.5
-200.0	CARBONDALE		SHALE	6.0	589.5
-206.0	CARBONDALE		SHALE	9.5	595.5
-215.5	CARBONDALE	HERRIN	COAL	7.8	605.0
-223.3	CARBONDALE		CLAYSTONE	0.8	612.8

MAPID: 05502179000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 21 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.993355 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.081499 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 431.0 **LOGGED (FT.):** 2407.0 **LOG TYPE:** Electric Log

SOURCE: REHN, E. E. **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-225.0	CARBONDALE	SPRINGFIELD	COAL	-	656.0	
-384.0	CARBONDALE	COLCHESTER	COAL	-	815.0	
-1976.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2407.0	

MAPID: 05500035000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 22 **QUARTERS/FOOTAGES:** 176' S line, 408' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.982951 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.067808 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 385.6 **LOGGED (FT.):** 618.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0003 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-220.4	CARBONDALE	HERRIN	COAL	8.3	606.0	

MAPID: 05500035000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 22 **QUARTERS/FOOTAGES:** 176' S line, 408' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.982951 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.067808 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 386.0 **LOGGED (FT.):** 618.0 **LOG TYPE:** Survey Core Study

SOURCE: BUNSEN C C **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
386.0			UNCONSOLIDATED	30.0	0.0	
356.0			LIMESTONE	9.8	30.0	
346.2			COAL	0.3	39.8	
346.0			ROCK	89.5	40.0	
256.5			COAL	1.0	129.5	
255.5			ROCK	47.5	130.5	
208.0			COAL	1.5	178.0	
206.5			ROCK	23.0	179.5	
183.5			COAL	0.3	202.5	
183.2			ROCK	1.5	202.8	
181.7			COAL	0.3	204.3	
181.5			ROCK	104.5	204.5	
77.0			COAL	1.3	309.0	
75.7			ROCK	155.7	310.3	
-80.0			COAL	0.5	466.0	
-80.5			ROCK	14.8	466.5	
-95.3			COAL	1.5	481.3	
-96.8			ROCK	35.2	482.8	
-132.0			COAL	2.3	518.0	
-134.8			ROCK	15.2	520.8	
-150.0			COAL	0.3	536.0	
-150.3			ROCK	36.0	536.3	
-186.3			COAL	0.3	572.3	
-186.5			BLACK SHALE	1.5	572.5	
-188.0			LIMESTONE	5.5	574.0	
-193.5			BLACK SHALE	3.0	579.5	
-196.5			CLAYSTONE & SHALE	24.0	582.5	
-220.5	CARBONDALE	HERRIN	COAL	8.3	606.5	
-228.8	CARBONDALE		UNDERCLAY	3.1	614.8	

MAPID: 05500035000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 22 **QUARTERS/FOOTAGES:** 176' S line, 408' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.982951 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.067808 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 385.6 **LOGGED (FT.):** 618.0 **LOG TYPE:** Drillers Log

SOURCE: MAYOR 3 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
385.6	PLEISTOCENE		CLAY	12.0	0.0	LIGHT
373.6	PLEISTOCENE		CLAY	4.0	12.0	YELLOW
369.6	PLEISTOCENE		SAND	6.0	16.0	
363.6	BOND		SOFT SHALE	2.0	22.0	SANDY
361.6	BOND		SANDY SHALE	5.0	24.0	
356.6	BOND		SANDY SHALE	1.0	29.0	
355.6	BOND		LIMESTONE & CONGLOMERATE	2.0	30.0	
353.6	BOND		SANDSTONE	7.3	32.0	LIGHT
346.3	BOND		SANDY SHALE	0.5	39.3	
345.8	BOND		COAL	0.3	39.8	
345.6	BOND		SANDY SHALE	0.5	40.0	
345.1	BOND		SANDY SHALE	2.0	40.5	WITH LIGHT SAND PARTINGS
343.1	BOND		SANDSTONE	0.5	42.5	LIGHT
342.6	BOND		SANDY SHALE	30.0	43.0	WITH SAND PARTINGS
312.6	BOND		SHALE	35.0	73.0	
277.6	BOND	CARTHAGE	LIMESTONE & CONGLOMERATE	1.5	108.0	
276.1	BOND	CARTHAGE	LIMESTONE	3.8	109.5	
272.3	MODESTO		CARBONACEOUS SHALE	0.8	113.3	
271.6	MODESTO		BLACK SHALE	5.0	114.0	
266.6	MODESTO		BLUE LIMESTONE	0.5	119.0	
266.1	MODESTO		SHALE	4.0	119.5	
262.1	MODESTO		SANDY SHALE	6.0	123.5	WITH LIGHT SAND PARTINGS
256.1	MODESTO		COAL	1.0	129.5	
255.1	MODESTO		CLAYSTONE	4.5	130.5	
250.6	MODESTO		SANDY SHALE	6.0	135.0	WITH LIGHT SANDSTONE PARTINGS
244.6	MODESTO		SANDSTONE	30.0	141.0	WITH DARK SHALE PARTINGS;LIGHT
214.6	MODESTO		SHALE	7.0	171.0	
207.6	MODESTO		COAL	1.5	178.0	
206.1	MODESTO		BLACK SHALE	0.3	179.5	
205.8	MODESTO		CLAYSTONE	8.3	179.8	
197.6	MODESTO		SANDY SHALE	13.5	188.0	
184.1	MODESTO		CLAYSTONE	1.0	201.5	WITH LIMESTONE
183.1	MODESTO		COAL	0.3	202.5	
182.8	MODESTO		CLAYSTONE	1.5	202.8	WITH LIMESTONE
181.3	MODESTO		COAL	0.3	204.3	
181.1	MODESTO		CLAYSTONE	4.0	204.5	WITH LIMESTONE
177.1	MODESTO		CLAYSTONE	3.5	208.5	DARK

173.6	MODESTO		SANDY SHALE	3.0	212.0	
170.6	MODESTO		CLAYSTONE	4.0	215.0	FIRE WITH SANDSTONE
166.6	MODESTO		SANDSTONE	9.0	219.0	
157.6	MODESTO		SANDY SHALE	57.0	228.0	WITH SAND PARTINGS
100.6	MODESTO		SHALE	15.5	285.0	
85.1	MODESTO		LIMESTONE & CONGLOMERATE	0.5	300.5	
84.6	MODESTO		SHALE WITH LIMESTONE	8.0	301.0	WITH LIMESTONE PARTINGS
76.6	MODESTO	CHAPEL	COAL	1.3	309.0	
75.3	MODESTO		CLAYSTONE	0.8	310.3	BLUE
74.6	MODESTO		CLAYSTONE	2.0	311.0	WITH LIMESTONE PEBBLES
72.6	MODESTO		CLAYSTONE	2.0	313.0	WITH LIMESTONE, LIGHT
70.6	MODESTO		SANDY SHALE	19.0	315.0	WITH SAND PARTINGS
51.6	MODESTO		LIMESTONE	2.0	334.0	
49.6	MODESTO		SANDY SHALE	7.0	336.0	WITH SAND PARTINGS
42.6	MODESTO		SANDY SHALE	100.0	343.0	WITH SAND PARTINGS
-57.4	MODESTO		SHALE	17.0	443.0	WITH LIMESTONE PARTINGS; DARK BLUE
-74.4	MODESTO		FOSSILIFEROUS LIMESTONE	1.0	460.0	
-75.4	MODESTO		BLACK SHALE	1.0	461.0	
-76.4	MODESTO		SHALE	4.0	462.0	
-80.4	MODESTO		COAL	0.5	466.0	
-80.9	MODESTO		CLAYSTONE	3.5	466.5	
-84.4	MODESTO		CALCAREOUS SHALE	4.3	470.0	
-88.7	MODESTO		SANDY SHALE	4.0	474.3	WITH LIMESTONE PARTINGS
-92.7	MODESTO		BLACK SHALE	3.0	478.3	
-95.7	MODESTO		COAL	1.5	481.3	
-97.2	MODESTO		CLAYSTONE	0.3	482.8	LIGHT
-97.4	MODESTO		SANDY LIMESTONE	1.5	483.0	
-98.9	MODESTO		CLAYSTONE	8.0	484.5	
-106.9	MODESTO		CLAYSTONE	0.5	492.5	LIGHT
-107.4	MODESTO		SHALE	3.0	493.0	
-110.4	MODESTO		CALCAREOUS SHALE	4.0	496.0	
-114.4	MODESTO		SHALE	6.0	500.0	
-120.4	MODESTO		SHALE	1.0	506.0	LIGHT
-121.4	MODESTO		SHALE	1.0	507.0	
-122.4	MODESTO	PIASA	LIMESTONE	4.5	508.0	
-126.9	MODESTO		SHALE	0.5	512.5	
-127.4	MODESTO		SHALE	1.5	513.0	
-128.9	MODESTO		SANDY SHALE	4.0	514.5	
-132.9	CARBONDALE	DANVILLE	COAL	2.3	518.5	
-135.2	CARBONDALE		CLAYSTONE	1.0	520.8	
-136.2	CARBONDALE		SHALE	7.0	521.8	
-143.2	CARBONDALE		CLAYSTONE	1.3	528.8	
-144.4	CARBONDALE		SANDSTONE	4.0	530.0	
-148.4	CARBONDALE		SANDY SHALE	2.0	534.0	
-150.4	CARBONDALE	ALLENBY	COAL	0.3	536.0	

-150.7	CARBONDALE		CLAYSTONE	0.3	536.3	
-150.9	CARBONDALE		SHALE	3.0	536.5	
-153.9	CARBONDALE	BANKSTON FORK	LIMESTONE	9.5	539.5	
-163.4	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	549.0	SANDY
-165.4	CARBONDALE		SHALE	10.0	551.0	
-175.4	CARBONDALE		SHALE	9.5	561.0	WITH LIMESTONE PARTINGS
-184.9	CARBONDALE	CONANT	LIMESTONE	1.0	570.5	BLUE
-185.9	CARBONDALE		BLACK SHALE	0.8	571.5	
-186.7	CARBONDALE	JAMESTOWN	COAL	0.3	572.3	
-186.9	CARBONDALE		BLACK SHALE	1.5	572.5	
-188.4	CARBONDALE	BRERETON	LIMESTONE	5.5	574.0	
-193.9	CARBONDALE	ANNA	BLACK SHALE	3.0	579.5	WITH LIMESTONE PARTINGS
-196.9	CARBONDALE	ENERGY	SHALE	3.5	582.5	
-200.4	CARBONDALE	ENERGY	SHALE	20.5	586.0	WITH BROWN LIMESTONE PARTINGS
-220.9	CARBONDALE	HERRIN	COAL	8.3	606.5	
-229.3	CARBONDALE		CLAYSTONE	3.1	614.9	

MAPID: 05502315000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 22 **QUARTERS/FOOTAGES:** 1331' N line, 2367' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.975141 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.078642 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 385.0 **LOGGED (FT.):** 637.4 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 223 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-143.7	MODESTO	PIASA	LIMESTONE	3.1	528.7	
-146.7	MODESTO		GRAY SHALE	4.8	531.7	
-151.5	CARBONDALE	DANVILLE	COAL	2.5	536.5	
-154.0	CARBONDALE		SILTY SHALE	30.3	539.0	
-184.2	CARBONDALE	BANKSTON FORK	LIMESTONE	5.9	569.2	
-190.2	CARBONDALE	LAWSON	GRAY SHALE	4.7	575.2	
-194.8	CARBONDALE	LAWSON	COAL	0.8	579.8	
-195.6	CARBONDALE	LAWSON	SILTY SHALE	13.5	580.6	
-209.1	CARBONDALE	LAWSON	SHALE & SILTSTONE	4.3	594.1	
-213.4	CARBONDALE	LAWSON	DARK GRAY SHALE	5.9	598.4	
-219.3	CARBONDALE	CONANT	LIMESTONE W/ SHALE	2.8	604.3	
-222.1	CARBONDALE	JAMESTOWN	BONE COAL	0.2	607.1	
-222.3	CARBONDALE		CLAYSTONE	1.1	607.3	
-223.4	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	18.4	608.4	
-241.8	CARBONDALE	ANNA	DARK GRAY SHALE	3.2	626.8	
-245.0	CARBONDALE	HERRIN	COAL	7.4	630.0	

MAPID: 05500036000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 23 **QUARTERS/FOOTAGES:** NE NW SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.963326 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.073861 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 385.4 **LOGGED (FT.):** 610.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0004 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-215.6	CARBONDALE	HERRIN	COAL	6.8	601.0	

MAPID: 05500036000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 23 **QUARTERS/FOOTAGES:** NE NW SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.963326 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.073861 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 385.0 **LOGGED (FT.):** 609.6 **LOG TYPE:** Survey Core Study

SOURCE: BUNSEN C C **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
385.0			UNCONSOLIDATED	53.0	0.0	
332.0			ROCK	90.5	53.0	
241.5			COAL	0.5	143.5	
241.0			ROCK	22.0	144.0	
219.0			COAL	0.5	166.0	
218.5			ROCK	152.0	166.5	
66.5			COAL	1.0	318.5	
65.5			ROCK	150.0	319.5	
-84.5			COAL	0.5	469.5	
-85.0			ROCK	24.0	470.0	
-109.0			COAL	1.0	494.0	
-110.0			ROCK	28.0	495.0	
-138.0			COAL	2.5	523.0	
-140.5			ROCK	8.5	525.5	
-149.0			COAL	0.3	534.0	
-149.3			ROCK	46.2	534.3	
-195.5			COAL	0.5	580.5	
-196.0			BLACK SHALE	1.4	581.0	
-197.4			BLACK SHALE	4.0	582.4	LIMEY
-201.4			LIMESTONE	15.0	586.4	
-216.4	CARBONDALE	HERRIN	COAL	6.7	601.4	
-223.1	CARBONDALE		UNDERCLAY	1.5	608.1	

MAPID: 05500036000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 23 **QUARTERS/FOOTAGES:** NE NW SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.963326 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.073861 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 385.4 **LOGGED (FT.):** 609.6 **LOG TYPE:** Drillers Log

SOURCE: BUNSEN COAL CO. 4 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
385.4	PLEISTOCENE		CLAY	26.0	0.0	YELLOW
359.4	PLEISTOCENE		SAND	21.0	26.0	
338.4	PLEISTOCENE		SAND & GRAVEL	6.0	47.0	
332.4	BOND		SOFT SHALE	2.0	53.0	
330.4	BOND		SANDSTONE	5.0	55.0	LIGHT
325.4	BOND		SANDY SHALE	8.0	60.0	WITH LIGHT SAND PARTINGS
317.4	BOND		SHALE	1.0	68.0	
316.4	BOND		SANDSTONE	8.0	69.0	WITH DARK SHALE PARTINGS; LIGHT
308.4	BOND		SANDY SHALE	20.0	77.0	WITH LIGHT SAND
288.4	BOND		SANDY SHALE	17.0	97.0	
271.4	BOND		SANDY SHALE	3.0	114.0	
268.4	BOND	CARTHAGE	LIMESTONE & CONGLOMERATE	2.0	117.0	
266.4	BOND	CARTHAGE	LIMESTONE	4.0	119.0	BLUE-GRAY
262.4	MODESTO		SHALE	1.5	123.0	
260.9	MODESTO		LIMESTONE	0.5	124.5	
260.4	MODESTO		BLACK SHALE	4.0	125.0	
256.4	MODESTO		LIMESTONE	0.5	129.0	
255.9	MODESTO		SANDY SHALE	14.0	129.5	
241.9	MODESTO		COAL	0.5	143.5	
241.4	MODESTO		SHALE	5.0	144.0	
236.4	MODESTO		SANDSTONE	10.0	149.0	WITH DARK SHALE PARTINGS; LIGHT
226.4	MODESTO		SHALE	7.0	159.0	
219.4	MODESTO		COAL	0.5	166.0	
218.9	MODESTO		CLAYSTONE	8.0	166.5	
210.9	MODESTO		CLAYSTONE	0.5	174.5	
210.4	MODESTO		SHALE	13.5	175.0	WITH LIMESTONE PARTINGS
196.9	MODESTO		LIMESTONE & CONGLOMERATE	0.5	188.5	
196.4	MODESTO		BLACK SHALE	4.0	189.0	
192.4	MODESTO		LIMESTONE & CONGLOMERATE	1.0	193.0	
191.4	MODESTO		SHALE	10.0	194.0	
181.4	MODESTO		CLAYSTONE	2.0	204.0	DARK
179.4	MODESTO		CLAYSTONE	9.0	206.0	WITH LIMESTONE
170.4	MODESTO		SANDY SHALE	4.0	215.0	WITH LIGHT SHALE PARTINGS
166.4	MODESTO		SANDY SHALE	7.0	219.0	
159.4	MODESTO		SANDSTONE	14.0	226.0	
145.4	MODESTO		SANDSTONE	31.0	240.0	WITH DARK SHALE PARTINGS; LIGHT

114.4	MODESTO		SANDSTONE	7.0	271.0	LIGHT
107.4	MODESTO		SANDY SHALE	16.0	278.0	
91.4	MODESTO		SHALE	18.0	294.0	
73.4	MODESTO		LIMESTONE & CONGLOMERATE	0.5	312.0	
72.9	MODESTO		SHALE	6.0	312.5	
66.9	MODESTO	CHAPEL	COAL	1.0	318.5	
65.9	MODESTO		CLAYSTONE	2.5	319.5	DARK
63.4	MODESTO		CLAYSTONE	3.0	322.0	LIGHT
60.4	MODESTO		CLAYSTONE	3.0	325.0	SANDY
57.4	MODESTO		SANDY SHALE	16.0	328.0	WITH LIGHT SAND
41.4	MODESTO		SANDSTONE	11.5	344.0	WITH DARK SHALE PARTINGS; LIGHT
29.9	MODESTO		CALCAREOUS SANDSTONE	2.0	355.5	
27.9	MODESTO		SANDY SHALE	9.5	357.5	WITH LIGHT SAND PARTINGS
18.4	MODESTO		CALCAREOUS SANDSTONE	1.0	367.0	
17.4	MODESTO		SANDY SHALE	61.5	368.0	WITH LIGHT SAND PARTINGS
-44.1	MODESTO		SANDY SHALE	11.0	429.5	
-55.1	MODESTO		SHALE	25.0	440.5	WITH BLUE LIMESTONE PARTINGS
-80.1	MODESTO		FOSSILIFEROUS LIMESTONE	0.5	465.5	DARK
-80.6	MODESTO		ROCK	1.0	466.0	
-81.6	MODESTO		SHALE	1.0	467.0	
-82.6	MODESTO		BLACK SHALE	1.5	468.0	
-84.1	MODESTO		COAL	0.5	469.5	
-84.6	MODESTO		SHALE	4.0	470.0	
-88.6	MODESTO		CLAYSTONE	2.5	474.0	LIGHT
-91.1	MODESTO		CLAYSTONE	3.0	476.5	SANDY
-94.1	MODESTO		CLAYSTONE	1.0	479.5	WITH LIMESTONE
-95.1	MODESTO		SANDY SHALE	8.5	480.5	WITH LIGHT SAND PARTINGS
-103.6	MODESTO		BLACK SHALE	3.0	489.0	
-106.6	MODESTO		SHALE	2.0	492.0	
-108.6	MODESTO	DEGRAFF	COAL	1.0	494.0	
-109.6	MODESTO		CLAYSTONE	4.0	495.0	DARK
-113.6	MODESTO		CLAYSTONE	3.0	499.0	LIGHT
-116.6	MODESTO		CLAYSTONE	4.0	502.0	DARK
-120.6	MODESTO	PIASA	SANDY LIMESTONE	9.0	506.0	
-129.6	MODESTO	PIASA	LIMESTONE	4.0	515.0	
-133.6	MODESTO		SHALE	4.0	519.0	
-137.6	CARBONDALE	DANVILLE	COAL	2.5	523.0	
-140.1	CARBONDALE		CLAYSTONE	0.5	525.5	
-140.6	CARBONDALE		SANDY SHALE	7.0	526.0	
-147.6	CARBONDALE		SHALE	1.0	533.0	WITH LIMESTONE PARTINGS
-148.6	CARBONDALE	ALLENBY	COAL	0.3	534.0	
-148.9	CARBONDALE		SANDSTONE	0.8	534.3	WITH LIMESTONE SPOTS
-149.6	CARBONDALE		CLAYSTONE	1.0	535.0	
-150.6	CARBONDALE		SANDSTONE	2.5	536.0	

-153.1	CARBONDALE		SANDY SHALE	1.5	538.5	
-154.6	CARBONDALE		SHALE	1.0	540.0	
-155.6	CARBONDALE		SHALE	3.0	541.0	
-158.6	CARBONDALE		SHALE	2.0	544.0	
-160.6	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	546.0	
-168.6	CARBONDALE	BANKSTON FORK	SANDY LIMESTONE	3.0	554.0	
-171.6	CARBONDALE		SHALE	20.3	557.0	WITH LIMESTONE PARTINGS
-191.9	CARBONDALE	CONANT	LIMESTONE	1.8	577.3	
-193.6	CARBONDALE	CONANT	LIMESTONE & CONGLOMERATE	1.0	579.0	
-194.6	CARBONDALE		BLACK SHALE	0.5	580.0	
-195.1	CARBONDALE	JAMESTOWN	COAL	0.5	580.5	
-195.6	CARBONDALE		BLACK SHALE	1.4	581.0	
-197.0	CARBONDALE		CALCAREOUS SHALE	4.0	582.4	
-201.0	CARBONDALE	BRERETON	LIMESTONE	15.5	586.4	
-216.5	CARBONDALE	HERRIN	COAL	6.7	601.9	
-223.2	CARBONDALE		CLAYSTONE	1.5	608.6	LIGHT

MAPID: 05500037000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 23 **QUARTERS/FOOTAGES:** SE SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.950772 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.069175 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 396.3 **LOGGED (FT.):** 611.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0003 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-201.7	CARBONDALE	HERRIN	COAL	6.9	598.0	

MAPID: 05500037000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 23 **QUARTERS/FOOTAGES:** SE SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.950772 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.069175 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 396.0 **LOGGED (FT.):** 611.3 **LOG TYPE:** Survey Core Study

SOURCE: BIG MUDDY COAL SYN **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
396.0			UNCONSOLIDATED	13.0	0.0	
383.0			ROCK	168.0	13.0	
215.0			COAL	0.3	181.0	
214.7			ROCK	148.7	181.3	
66.0			COAL	0.5	330.0	
65.5			ROCK	151.5	330.5	
-86.0			COAL	0.5	482.0	
-86.5			ROCK	25.5	482.5	
-112.0			COAL	0.5	508.0	
-112.5			ROCK	9.5	508.5	
-122.0			COAL	2.0	518.0	
-124.0			ROCK	52.5	520.0	
-176.5			COAL	0.3	572.5	SHALEY
-176.8			LIMESTONE	4.2	572.8	
-181.0			BLACK SHALE	2.0	577.0	
-183.0			BLACK SHALE	19.5	579.0	
-202.5	CARBONDALE	HERRIN	COAL	6.9	598.5	BLUE BAND .08'
-209.5	CARBONDALE		SHALE	5.8	605.5	

MAPID: 05500037000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 23 **QUARTERS/FOOTAGES:** SE SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.950772 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.069175 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 396.3 **LOGGED (FT.):** 611.3 **LOG TYPE:** Drillers Log

SOURCE: BIG MUDDY COAL SYNDICATE 3 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
396.3	PLEISTOCENE		UNCONSOLIDATED	13.0	0.0	
383.3	BOND		SANDSTONE	1.0	13.0	
382.3	BOND		SANDSTONE	1.0	14.0	YELLOW
381.3	BOND		SANDSTONE	5.0	15.0	
376.3	BOND		SANDSTONE	20.0	20.0	
356.3	BOND		SANDSTONE WITH COAL	3.0	40.0	WITH COAL PARTINGS
353.3	BOND		SANDSTONE	4.0	43.0	WITH LIMESTONE SPOTS
349.3	BOND		SHALE	13.0	47.0	
336.3	BOND		SHALE	8.0	60.0	
328.3	BOND		SANDY SHALE	13.0	68.0	
315.3	BOND		SHALE	48.0	81.0	
267.3	BOND	CARTHAGE	LIMESTONE	6.0	129.0	
261.3	MODESTO		SHALE	3.0	135.0	
258.3	MODESTO		SHALE	27.0	138.0	
231.3	MODESTO		SANDSTONE	3.0	165.0	
228.3	MODESTO		SHALE	13.0	168.0	
215.3	MODESTO		COAL	0.3	181.0	
215.0	MODESTO		SHALE	28.7	181.3	
186.3	MODESTO		SANDY SHALE	25.0	210.0	
161.3	MODESTO		SANDSTONE	10.0	235.0	WITH SHALE PARTINGS
151.3	MODESTO		SANDSTONE	30.0	245.0	
121.3	MODESTO		SANDY SHALE	32.0	275.0	
89.3	MODESTO		SHALE	23.0	307.0	WITH BROWN BANDS
66.3	MODESTO	CHAPEL	COAL	0.5	330.0	
65.8	MODESTO		SHALE	1.5	330.5	
64.3	MODESTO		SHALE	8.0	332.0	
56.3	MODESTO		SANDY SHALE	15.0	340.0	
41.3	MODESTO		SHALE	21.0	355.0	
20.3	MODESTO		SANDY SHALE	24.0	376.0	
-3.7	MODESTO		SANDY SHALE	48.0	400.0	
-51.7	MODESTO		SHALE	7.0	448.0	
-58.7	MODESTO		SOFT SHALE	2.0	455.0	
-60.7	MODESTO		SANDY SHALE	23.0	457.0	
-83.7	MODESTO		SHALE	2.0	480.0	
-85.7	MODESTO		COAL	0.5	482.0	
-86.2	MODESTO		CALCAREOUS SHALE	7.5	482.5	
-93.7	MODESTO		SANDY SHALE	12.0	490.0	
-105.7	MODESTO		SHALE	6.0	502.0	
-111.7	MODESTO		COAL	0.5	508.0	

-112.2	MODESTO		CLAYSTONE	0.5	508.5
-112.7	MODESTO	PIASA	LIMESTONE	4.5	509.0
-117.2	MODESTO		SHALE	3.5	513.5
-120.7	MODESTO		SHALE	1.0	517.0
-121.7	CARBONDALE	DANVILLE	COAL	2.0	518.0
-123.7	CARBONDALE		SANDY SHALE	10.0	520.0
-133.7	CARBONDALE		SANDSTONE	12.0	530.0
-145.7	CARBONDALE		SHALE	3.0	542.0
-148.7	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	545.0
-153.7	CARBONDALE		SANDY SHALE	19.0	550.0
-172.7	CARBONDALE		SHALE	2.5	569.0
-175.2	CARBONDALE	CONANT	LIMESTONE	1.0	571.5
-176.2	CARBONDALE	JAMESTOWN	SHALY COAL	0.3	572.5
-176.5	CARBONDALE	BRERETON	LIMESTONE	4.2	572.8
-180.7	CARBONDALE	ENERGY	SHALE	2.0	577.0
-182.7	CARBONDALE	ENERGY	SHALE	19.5	579.0
-202.2	CARBONDALE	HERRIN	COAL	6.4	598.5
-208.6	CARBONDALE	HERRIN	BLUE BAND	0.1	604.9
-208.7	CARBONDALE	HERRIN	COAL	0.4	605.0
-209.1	CARBONDALE		SANDY SHALE	5.8	605.4

MAPID: 05502348000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 23 **QUARTERS/FOOTAGES:** 2015' S line, 1149' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.962673 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.072966 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 388.0 **LOGGED (FT.):** 613.8 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 214 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-130.2	MODESTO	PIASA	LIMESTONE	4.3	518.2	
-134.4	MODESTO		SILTY SHALE	6.4	522.4	
-140.9	CARBONDALE	DANVILLE	COAL	2.3	528.9	
-143.2	CARBONDALE		GRAY SHALE	21.0	531.2	
-164.2	CARBONDALE	BANKSTON FORK	LIMESTONE	5.3	552.2	
-169.5	CARBONDALE	LAWSON	SANDSTONE	22.7	557.5	
-192.2	CARBONDALE	LAWSON	DARK GRAY SHALE	1.3	580.2	
-193.5	CARBONDALE	CONANT	LIMESTONE W/ SHALE	2.9	581.5	
-196.4	CARBONDALE	JAMESTOWN	COAL	0.2	584.4	
-196.6	CARBONDALE		BLACK SHALE	1.1	584.6	
-197.6	CARBONDALE	BRERETON	LIMESTONE	5.8	585.6	
-203.4	CARBONDALE	ANNA	BLACK SHALE	2.3	591.4	
-205.7	CARBONDALE	ENERGY	GRAY SHALE	1.6	593.7	
-207.3	CARBONDALE	ENERGY	SILTY SHALE	2.3	595.3	
-209.6	CARBONDALE	ENERGY	GRAY SHALE	9.4	597.6	
-218.9	CARBONDALE	ENERGY	BLACK SHALE	0.1	606.9	
-219.0	CARBONDALE	HERRIN	COAL	6.8	607.0	

MAPID: 05500038000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 24 **QUARTERS/FOOTAGES:** NE NE NW NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.944799 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.081484 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 390.0 **LOGGED (FT.):** 615.8 **LOG TYPE:** Drillers Log

SOURCE: ROTRAMEL, DRILLER **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
390.0			UNCONSOLIDATED	47.2	0.0	
342.8			ROCK	114.8	47.2	
228.0			COAL	0.5	162.0	
227.5			ROCK	23.5	162.5	
204.0			COAL	1.0	186.0	
203.0			ROCK	148.7	187.0	
54.3			COAL	1.0	335.7	
53.3			ROCK	163.3	336.7	
-110.0			COAL	1.0	500.0	
-111.0			ROCK	33.0	501.0	
-144.0			COAL	1.0	534.0	
-145.0			ROCK	45.0	535.0	
-190.0			SHALE	10.0	580.0	
-200.0			LIMESTONE	3.0	590.0	
-203.0			COAL	0.5	593.0	
-203.5			SHALE	3.5	593.5	
-207.0			LIMESTONE	6.0	597.0	
-213.0			BLACK SHALE	1.0	603.0	
-214.0			COAL	0.2	604.0	
-214.2			BLACK SHALE	4.6	604.2	
-218.8	CARBONDALE	HERRIN	COAL	6.5	608.8	
-225.3	CARBONDALE		UNDERCLAY	0.6	615.3	

MAPID: 05500038000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 24 **QUARTERS/FOOTAGES:** NE NE NW NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.944799 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.081484 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 390.0 **LOGGED (FT.):** 615.5 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-137.3	MODESTO	PIASA	LIMESTONE	5.0	527.3	
-142.3	MODESTO		CLAYSTONE & SHALE	2.0	532.3	
-144.3	CARBONDALE	DANVILLE	COAL	1.0	534.3	
-145.3	CARBONDALE		SHALE & SANDSTONE	28.0	535.3	
-173.3	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	563.3	
-178.3	CARBONDALE	LAWSON	GRAY SHALE	9.0	568.3	
-187.3	CARBONDALE	LAWSON	SILTY SHALE	8.0	577.3	
-195.3	CARBONDALE	LAWSON	SHALE	5.0	585.3	
-200.3	CARBONDALE	CONANT	LIMESTONE	3.0	590.3	
-203.3	CARBONDALE	JAMESTOWN	COAL	0.5	593.3	
-203.8	CARBONDALE		CALCAREOUS SHALE	3.5	593.8	
-207.3	CARBONDALE	BRERETON	LIMESTONE	6.0	597.3	
-213.3	CARBONDALE	ANNA	BLACK SHALE	3.0	603.3	
-216.3	CARBONDALE	ENERGY	DARK GRAY SHALE	2.8	606.3	
-219.0	CARBONDALE	HERRIN	COAL	6.5	609.0	

MAPID: 05500038000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 24 **QUARTERS/FOOTAGES:** NE NE NW NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.944799 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.081484 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 389.7 **LOGGED (FT.):** 616.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0014 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-219.3	CARBONDALE	HERRIN	COAL	6.5	609.0	

MAPID: 05500038000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 24 **QUARTERS/FOOTAGES:** NE NE NW NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.944799 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.081484 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 389.7 **LOGGED (FT.):** 615.8 **LOG TYPE:** Drillers Log

SOURCE: ROTRAMEL 14 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
389.7	PLEISTOCENE		SOIL	1.0	0.0	
388.7	PLEISTOCENE		CLAY	37.0	1.0	
351.7	PLEISTOCENE		SAND	9.2	38.0	
342.5	BOND		SANDY SHALE	4.7	47.2	
337.9	BOND		SHALE	10.0	51.8	
327.9	BOND		SANDY SHALE	21.0	61.8	
306.9	BOND		SANDY SHALE	33.0	82.8	
273.9	BOND		SHALE	16.0	115.8	
257.9	BOND	CARTHAGE	LIMESTONE	6.0	131.8	
251.9	MODESTO		SHALE	3.0	137.8	
248.9	MODESTO		SHALE	9.0	140.8	
239.9	MODESTO		SANDY SHALE	11.0	149.8	
228.9	MODESTO		SHALE	1.0	160.8	
227.9	MODESTO		COAL	0.5	161.8	
227.4	MODESTO		CLAYSTONE	0.5	162.3	
226.9	MODESTO		SANDY SHALE	23.0	162.8	
203.9	MODESTO		COAL	1.0	185.8	
202.9	MODESTO		SHALE	10.0	186.8	
192.9	MODESTO		LIMESTONE	3.0	196.8	
189.9	MODESTO		SANDY SHALE	7.0	199.8	
182.9	MODESTO		SHALE	16.0	206.8	
166.9	MODESTO		SANDY SHALE	9.0	222.8	
157.9	MODESTO		SHALE	8.0	231.8	
149.9	MODESTO		SANDSTONE	15.0	239.8	
134.9	MODESTO		SANDY SHALE	13.0	254.8	
121.9	MODESTO		SANDY SHALE	36.0	267.8	
85.9	MODESTO		SANDY SHALE	11.0	303.8	
74.9	MODESTO		SHALE	18.0	314.8	
56.9	MODESTO		SHALE	2.7	332.8	
54.2	MODESTO	CHAPEL	COAL	1.0	335.5	
53.2	MODESTO		SANDY SHALE	18.3	336.5	
34.9	MODESTO		SHALY SANDSTONE	27.0	354.8	
7.9	MODESTO		SANDSTONE	18.0	381.8	
-10.1	MODESTO		SANDY SHALE	9.0	399.8	
-19.1	MODESTO		SANDY SHALE	18.0	408.8	
-37.1	MODESTO		SANDY SHALE	18.0	426.8	
-55.1	MODESTO		SANDY SHALE	23.0	444.8	
-78.1	MODESTO		SHALE	9.0	467.8	
-87.1	MODESTO		LIMESTONE	4.0	476.8	

-91.1	MODESTO		SANDY SHALE	8.0	480.8	
-99.1	MODESTO		SHALE	11.0	488.8	
-110.1	MODESTO		COAL	1.0	499.8	
-111.1	MODESTO		SHALE	2.0	500.8	
-113.1	MODESTO		SHALY SANDSTONE	13.0	502.8	
-126.1	MODESTO		SHALE	11.0	515.8	
-137.1	MODESTO	PIASA	LIMESTONE	5.0	526.8	
-142.1	MODESTO		SHALE	2.0	531.8	
-144.1	CARBONDALE	DANVILLE	COAL	1.0	533.8	
-145.1	CARBONDALE		SHALE	2.0	534.8	
-147.1	CARBONDALE		SANDY SHALE	6.0	536.8	
-153.1	CARBONDALE		SANDY SHALE	4.0	542.8	
-157.1	CARBONDALE		SANDSTONE	8.0	546.8	
-165.1	CARBONDALE		SHALE	2.0	554.8	
-167.1	CARBONDALE		SANDY SHALE	6.0	556.8	
-173.1	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	562.8	
-178.1	CARBONDALE		SHALE	2.0	567.8	
-180.1	CARBONDALE		SHALE	7.0	569.8	
-187.1	CARBONDALE		SANDY SHALE	8.0	576.8	
-195.1	CARBONDALE		SHALE	5.0	584.8	
-200.1	CARBONDALE	CONANT	LIMESTONE	3.0	589.8	
-203.1	CARBONDALE	JAMESTOWN	COAL	0.5	592.8	
-203.6	CARBONDALE		SHALE	1.0	593.3	
-204.6	CARBONDALE		CALCAREOUS SHALE	2.5	594.3	
-207.1	CARBONDALE	BRERETON	LIMESTONE	6.0	596.8	
-213.1	CARBONDALE		BLACK SHALE	1.0	602.8	
-214.1	CARBONDALE	HERRIN	COAL	0.2	603.8	
-214.3	CARBONDALE	HERRIN	SHALE	1.8	604.0	
-216.1	CARBONDALE	HERRIN	SHALE	2.8	605.8	WITH GRAY BANDS
-218.9	CARBONDALE	HERRIN	COAL	1.3	608.6	
-220.1	CARBONDALE	HERRIN	COAL	5.3	609.8	
-225.4	CARBONDALE		CLAYSTONE	0.6	615.1	

MAPID: 05523353000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 24 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of SE SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.931352 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.070019 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 433.0 **LOGGED (FT.):** 4557.0 **LOG TYPE:** Electric Log

SOURCE: DEMIER OIL COMPANY **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-2050.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2483.0	
-3995.0	DEVONIAN	UPPER DEVONIAN S	UNCLASSIFIED	-	4428.0	TOP OF NEW ALBANY
-4002.0	DEVONIAN	GRASSY CREEK	UNCLASSIFIED	-	4435.0	
-4124.0	DEVONIAN	BASE UPPER DEVON	UNCLASSIFIED	-	4557.0	BASE OF NEW ALBANY

MAPID: 05500316000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 25 **QUARTERS/FOOTAGES:** NE SE SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.940389 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.05531 **DATE COLLECTED:** 12 / 0 / 1941

SURFACE ELEVATION (FT.): 441.0 **LOGGED (FT.):** 955.0 **LOG TYPE:** Drillers Log

SOURCE: E.S. ADKINS 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
441.0	PLEISTOCENE		UNCONSOLIDATED	40.0	0.0	
401.0			SHALE	30.0	40.0	
371.0			SANDY SHALE	460.0	70.0	WITH SAND
-89.0			LIMESTONE	5.0	530.0	
-94.0			SHALE	25.0	535.0	
-119.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	560.0	
-126.0	CARBONDALE		SHALE	33.0	567.0	
-159.0	CARBONDALE	BRERETON	LIMESTONE	5.0	600.0	
-164.0	CARBONDALE	HERRIN	COAL	8.0	605.0	
-172.0	CARBONDALE		SHALE	32.0	613.0	
-204.0	CARBONDALE		SANDSTONE	17.0	645.0	
-221.0	CARBONDALE	SPRINGFIELD	COAL	4.0	662.0	
-225.0	CARBONDALE		SHALE	18.0	666.0	
-243.0	CARBONDALE		FOSSILIFEROUS SHALE	271.0	684.0	WITH SHELLS

MAPID: 05500666000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 25 **QUARTERS/FOOTAGES:** NE NW NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.945035 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.0664 **DATE COLLECTED:** 3 / 0 / 1943

SURFACE ELEVATION (FT.): 402.0 **LOGGED (FT.):** 905.0 **LOG TYPE:** Drillers Log

SOURCE: U.S. COAL AND COKE CO. 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
402.0	PLEISTOCENE		SHALEY CLAYSTONE	130.0	0.0	WITH SHALE AND LIMESTONE
272.0			FOSSILIFEROUS SHALE	95.0	130.0	WITH SHELLS
177.0			SANDY SHALE	435.0	225.0	WITH SAND
-258.0			COAL	3.0	660.0	
-261.0			SHALE WITH LIMESTONE	242.0	663.0	WITH LIMESTONE

MAPID: 05501156000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 25 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NE SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.942739 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.057143 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 423.0 **LOGGED (FT.):** 2458.0 **LOG TYPE:** Electric Log

SOURCE: JONES, BOND D. **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-220.0	CARBONDALE	SPRINGFIELD	COAL	-	643.0	
-389.0	CARBONDALE	COLCHESTER	COAL	-	812.0	
-2035.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2458.0	

MAPID: 05502350000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 25 **QUARTERS/FOOTAGES:** 315' N line, 2560' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.939534 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.066456 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 425.0 **LOGGED (FT.):** 609.9 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 216 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-95.1	MODESTO	PIASA	LIMESTONE	4.6	520.1	
-99.7	MODESTO		DARK GRAY SHALE	3.8	524.7	
-103.5	CARBONDALE	DANVILLE	COAL	1.9	528.5	
-105.4	CARBONDALE		SHALE & SANDSTONE	23.4	530.4	
-128.8	CARBONDALE	BANKSTON FORK	LIMESTONE	5.6	553.8	
-134.4	CARBONDALE	LAWSON	SANDSTONE	11.8	559.4	
-146.2	CARBONDALE	LAWSON	SILTY SHALE	10.5	571.2	
-156.7	CARBONDALE	CONANT	LIMESTONE	0.7	581.7	
-157.3	CARBONDALE		SHALE	0.5	582.3	
-157.8	CARBONDALE	BRERETON	LIMESTONE	3.8	582.8	
-161.7	CARBONDALE	ANNA	DARK GRAY SHALE	4.0	586.7	
-165.7	CARBONDALE	ENERGY	GRAY SHALE	12.2	590.7	
-177.9	CARBONDALE	ENERGY	CARBONACEOUS SHALE	0.1	602.9	
-178.0	CARBONDALE	HERRIN	COAL	6.9	603.0	

MAPID: 05500774000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 26 **QUARTERS/FOOTAGES:** 30' S line, 100' W line of SE SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.961639 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.052748 **DATE COLLECTED:** 10 / 21 / 1944

SURFACE ELEVATION (FT.): 384.0 **LOGGED (FT.):** 636.0 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 34 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-150.4	MODESTO	PIASA	LIMESTONE	5.0	534.4	
-155.4	MODESTO		DARK GRAY SHALE	5.8	539.4	
-161.2	CARBONDALE	DANVILLE	COAL	2.3	545.2	
-163.4	CARBONDALE		CLAYSTONE & SHALE	7.3	547.4	
-170.7	CARBONDALE		SHALE & SANDSTONE	9.9	554.7	
-180.7	CARBONDALE	BANKSTON FORK	LIMESTONE	7.5	564.7	
-188.2	CARBONDALE	LAWSON	DARK GRAY SHALE	24.7	572.2	
-212.8	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.9	596.8	
-213.8	CARBONDALE	JAMESTOWN	CARBONACEOUS SHALE	1.2	597.8	
-214.9	CARBONDALE		CALCAREOUS SHALE	0.8	598.9	
-215.8	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	5.1	599.8	
-220.8	CARBONDALE	ANNA	BLACK SHALE	3.2	604.8	
-224.0	CARBONDALE	ENERGY	GRAY SHALE	20.0	608.0	
-244.0	CARBONDALE	HERRIN	COAL	8.0	628.0	

MAPID: 05501346000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 26 **QUARTERS/FOOTAGES:** 250' S line, 330' E line of SW SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.963141 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.05337 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 384.0 **LOGGED (FT.):** 2488.0 **LOG TYPE:** Electric Log

SOURCE: NATIONAL ASSOC. PETROLEUM CO. **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-300.0	CARBONDALE	SPRINGFIELD	COAL	-	684.0	
-443.0	CARBONDALE	COLCHESTER	COAL	-	827.0	
-2104.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2488.0	

MAPID: 05500039000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 27 **QUARTERS/FOOTAGES:** NW NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.982091 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.065513 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): 391.4 **LOGGED (FT.):** 647.0 **LOG TYPE:**

SOURCE: WMS STAMPR **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-203.6	CARBONDALE	HERRIN	COAL	8.5	595.0	
-249.6	CARBONDALE	SPRINGFIELD	COAL	4.9	641.0	

MAPID: 05500039000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 27 **QUARTERS/FOOTAGES:** NW NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.982091 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.065513 **DATE COLLECTED:** 4 / 0 / 1905

SURFACE ELEVATION (FT.): 391.0 **LOGGED (FT.):** 647.0 **LOG TYPE:** Drillers Log

SOURCE: STAMPER 7.5 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
391.0			UNCONSOLIDATED	40.0	0.0	
351.0			ROCK	78.0	40.0	
273.0			COAL	0.5	118.0	SHALEY
272.5			ROCK	50.7	118.5	
221.8			COAL	1.5	169.2	
220.3			ROCK	131.3	170.7	
89.0			COAL	1.0	302.0	
88.0			ROCK	168.5	303.0	
-80.5			COAL	0.7	471.5	
-81.3			ROCK	36.3	472.3	
-117.6			COAL	2.4	508.6	
-120.0			ROCK	54.0	511.0	
-174.0			COAL	0.5	565.0	
-174.5			BLACK SHALE	8.5	565.5	
-183.0			BLACK SHALE	5.0	574.0	
-188.0			BLACK SHALE	15.8	579.0	SANDY
-203.8	CARBONDALE	HERRIN	COAL	8.5	594.8	
-212.3	CARBONDALE		ROCK	0.0	603.3	
-212.3	CARBONDALE		ROCK	12.7	603.3	
-225.0	CARBONDALE		LIMESTONE	1.0	616.0	
-226.0	CARBONDALE		BLACK SHALE	16.0	617.0	
-242.0	CARBONDALE		BLACK SHALE	4.0	633.0	
-246.0	CARBONDALE		BLACK SHALE	4.2	637.0	
-250.2	CARBONDALE	SPRINGFIELD	COAL	4.9	641.2	
-255.1	CARBONDALE		BLACK SHALE	0.9	646.1	

MAPID: 05500039000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 27 **QUARTERS/FOOTAGES:** NW NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.982091 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.065513 **DATE COLLECTED:** 4 / 0 / 1905

SURFACE ELEVATION (FT.): 391.4 **LOGGED (FT.):** 647.8 **LOG TYPE:** Drillers Log

SOURCE: STAMPER **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
391.4	PLEISTOCENE		SOIL	14.0	0.0	
377.4	PLEISTOCENE		SAND	6.0	14.0	
371.4	PLEISTOCENE		CLAY & GRAVEL	20.0	20.0	
351.4	BOND		SANDY SHALE	1.6	40.0	
349.8	BOND		SANDY SHALE	10.4	41.6	SANDY WITH SANDSTONE
339.4	BOND		SHALE	0.5	52.0	DARK BLUE
338.9	BOND		SANDY SHALE	27.5	52.5	
311.4	BOND		SHALE	17.0	80.0	
294.4	BOND		SHALE	5.0	97.0	
289.4	BOND	CARTHAGE	LIMESTONE	4.0	102.0	
285.4	MODESTO		BLACK SHALE	6.0	106.0	
279.4	MODESTO		SHALE	6.0	112.0	
273.4	MODESTO		SHALY COAL	0.5	118.0	
272.9	MODESTO		SHALE	3.5	118.5	
269.4	MODESTO		SHALY COAL	0.5	122.0	
268.9	MODESTO		SHALE	5.5	122.5	
263.4	MODESTO		SANDY SHALE	6.0	128.0	
257.4	MODESTO		SANDSTONE/SHALE	30.7	134.0	
226.7	MODESTO		SHALE	4.4	164.7	DARK BLUE
222.3	MODESTO		COAL	1.5	169.1	
220.8	MODESTO		SOFT SHALE	9.3	170.6	
211.5	MODESTO		SOFT SHALE	1.0	179.9	
210.5	MODESTO		SHALE W/ COAL STREAKS	1.0	180.9	WITH COAL PARTINGS
209.5	MODESTO		SHALE	17.0	181.9	
192.5	MODESTO		SANDY SHALE	9.0	198.9	WITH SANDSTONE BANDS
183.5	MODESTO		SANDSTONE	11.0	207.9	
172.5	MODESTO		CONGLOMERATE	2.0	218.9	
170.5	MODESTO		SANDY SHALE	3.0	220.9	
167.5	MODESTO		SANDY SHALE	49.0	223.9	
118.5	MODESTO		SHALE	29.0	272.9	
89.5	MODESTO	CHAPEL	COAL	1.0	301.9	
88.5	MODESTO		SHALE	2.0	302.9	
86.5	MODESTO		SHALE	1.5	304.9	LIGHT
85.0	MODESTO		SANDY SHALE	34.5	306.4	
50.5	MODESTO		SANDSTONE	3.0	340.9	
47.5	MODESTO		SANDY SHALE	38.0	343.9	
9.5	MODESTO		SANDY SHALE	38.0	381.9	
-28.5	MODESTO		SHALE	27.0	419.9	
-55.5	MODESTO		SANDSTONE	2.0	446.9	

-57.5	MODESTO		SANDY SHALE	21.0	448.9	
-78.5	MODESTO		BLACK SHALE	2.5	469.9	
-81.0	MODESTO		COAL	0.8	472.4	
-81.9	MODESTO		SOFT SHALE	7.7	473.3	
-89.5	MODESTO		SHALE	6.0	480.9	
-95.5	MODESTO		SANDY SHALE	10.0	486.9	
-105.5	MODESTO		SHALE	5.0	496.9	
-110.5	MODESTO	PIASA	LIMESTONE	5.0	501.9	
-115.5	MODESTO	PIASA	LIMESTONE	0.5	506.9	
-116.0	MODESTO		SHALE	2.1	507.4	
-118.1	CARBONDALE	DANVILLE	COAL	2.4	509.5	
-120.5	CARBONDALE		SANDY SHALE	7.0	511.9	
-127.5	CARBONDALE		SHALE	2.5	518.9	DARK BLUE
-130.0	CARBONDALE		SHALE W/ COAL STREAKS	0.5	521.4	WITH COAL PARTINGS
-130.5	CARBONDALE		SHALE	2.0	521.9	
-132.5	CARBONDALE		SANDY SHALE	3.0	523.9	
-135.5	CARBONDALE		SHALE	2.0	526.9	
-137.5	CARBONDALE		SHALE	3.0	528.9	
-140.5	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	531.9	
-147.5	CARBONDALE		SHALE	17.0	538.9	
-164.5	CARBONDALE		SHALE	10.0	555.9	
-174.5	CARBONDALE	JAMESTOWN	COAL	0.5	565.9	
-175.0	CARBONDALE		SHALE	1.0	566.4	
-176.0	CARBONDALE	BRERETON	LIMESTONE	7.5	567.4	
-183.5	CARBONDALE	ANNA	BLACK SHALE	5.0	574.9	
-188.5	CARBONDALE	ENERGY	SANDY SHALE	3.0	579.9	
-191.5	CARBONDALE	ENERGY	SHALE	12.8	582.9	
-204.3	CARBONDALE	HERRIN	COAL	6.3	595.7	
-210.5	CARBONDALE	HERRIN	COAL	2.3	601.9	
-212.7	CARBONDALE		SOFT SHALE	2.3	604.1	
-214.9	CARBONDALE		LIMESTONE	11.5	606.3	
-226.4	CARBONDALE		SHALE	16.0	617.8	
-242.4	CARBONDALE		BLACK SHALE	4.0	633.8	
-246.4	CARBONDALE		SHALE	4.2	637.8	
-250.6	CARBONDALE	SPRINGFIELD	COAL	4.9	642.0	
-255.5	CARBONDALE		SHALE	0.9	646.9	

MAPID: 05502354000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 27 **QUARTERS/FOOTAGES:** 31' N line, 1928' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.977616 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.067271 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 388.0 **LOGGED (FT.):** 597.3 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 220 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-110.8	MODESTO	PIASA	LIMESTONE	3.0	498.8	
-113.8	MODESTO		DARK GRAY SHALE	5.0	501.8	
-118.8	CARBONDALE	DANVILLE	COAL	2.3	506.8	
-121.2	CARBONDALE		SILTY SHALE	19.7	509.2	
-140.8	CARBONDALE	BANKSTON FORK	LIMESTONE	7.3	528.8	
-148.2	CARBONDALE	LAWSON	SILTY SHALE	23.3	536.2	
-171.4	CARBONDALE	CONANT	LIMESTONE	1.1	559.4	
-172.5	CARBONDALE	JAMESTOWN	COAL	0.8	560.5	
-173.3	CARBONDALE		LIMESTONE	0.8	561.3	
-174.2	CARBONDALE	BRERETON	LIMESTONE	5.9	562.2	
-180.1	CARBONDALE	ANNA	BLACK SHALE	3.8	568.1	
-183.9	CARBONDALE	ENERGY	GRAY SHALE	2.9	571.9	
-186.8	CARBONDALE	ENERGY	SILTY SHALE	9.6	574.8	
-196.4	CARBONDALE	ENERGY	GRAY SHALE	2.2	584.4	
-198.6	CARBONDALE	ENERGY	DARK GRAY SHALE	2.3	586.6	
-200.9	CARBONDALE	ENERGY	CARBONACEOUS SHALE	0.1	588.9	
-201.0	CARBONDALE	HERRIN	COAL	8.3	589.0	

MAPID: 05500769000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 28 **QUARTERS/FOOTAGES:** 50' S line, 20' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.9842 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.052967 **DATE COLLECTED:** 10 / 6 / 1944

SURFACE ELEVATION (FT.): 402.0 **LOGGED (FT.):** 610.7 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 30 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-109.1	MODESTO	PIASA	LIMESTONE/UNDERCLAY	5.3	511.1	
-114.3	MODESTO		DARK GRAY SHALE	4.2	516.3	
-118.5	CARBONDALE	DANVILLE	COAL	2.6	520.5	
-121.1	CARBONDALE		CLAYSTONE & SHALE	9.0	523.1	
-130.1	CARBONDALE	ALLENBY	BONE COAL	0.2	532.1	
-130.2	CARBONDALE		CLAYSTONE	2.7	532.2	
-132.9	CARBONDALE	BANKSTON FORK	LIMESTONE	5.8	534.9	UPPER BENCH
-138.7	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	0.3	540.7	SHALE PARTING
-139.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.6	541.0	LOWER BENCH
-141.6	CARBONDALE	LAWSON	GRAY SHALE	8.3	543.6	
-149.9	CARBONDALE	LAWSON	DARK GRAY SHALE	15.7	551.9	
-165.6	CARBONDALE	CONANT	CALCAREOUS SHALE	1.2	567.6	
-166.7	CARBONDALE	JAMESTOWN	BONE COAL	0.3	568.7	
-167.1	CARBONDALE		CLAYSTONE & SHALE	2.2	569.1	
-169.2	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	5.0	571.2	
-174.2	CARBONDALE	ANNA	BLACK SHALE	2.4	576.2	
-176.7	CARBONDALE	ENERGY	GRAY SHALE	23.4	578.7	
-200.0	CARBONDALE	HERRIN	COAL	8.7	602.0	

MAPID: 05500804000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 28 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of SE SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.997016 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.055602 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 411.0 **LOGGED (FT.):** 2378.0 **LOG TYPE:** Electric Log

SOURCE: JARVIS, S. D. ETAL **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-231.0	CARBONDALE	SPRINGFIELD	COAL	-	642.0	
-387.0	CARBONDALE	COLCHESTER	COAL	-	798.0	
-1967.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2378.0	

MAPID: 05500730000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 29 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of NE SE

QUADRANGLE: SESSER **LONGITUDE:** -89.004052 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.057455 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 476.0 **LOGGED (FT.):** 2426.0 **LOG TYPE:** Electric Log

SOURCE: JARVIS, S. D. ETAL **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-222.0	CARBONDALE	SPRINGFIELD	COAL	-	698.0	
-364.0	CARBONDALE	COLCHESTER	COAL	-	840.0	
-1950.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2426.0	

MAPID: 05501146000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 29 **QUARTERS/FOOTAGES:** 66' S line, 2612' W line

QUADRANGLE: SESSER **LONGITUDE:** -89.012151 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.053114 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 455.0 **LOGGED (FT.):** 634.5 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 107 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-70.8	MODESTO	PIASA	LIMESTONE	3.5	525.8	
-74.3	MODESTO		DARK GRAY SHALE	3.6	529.3	
-77.9	CARBONDALE	DANVILLE	COAL	2.3	532.9	
-80.2	CARBONDALE		GRAY SHALE	17.7	535.2	
-97.8	CARBONDALE	BANKSTON FORK	LIMESTONE	10.2	552.8	
-108.0	CARBONDALE	LAWSON	CALCAREOUS SHALE	2.5	563.0	
-110.5	CARBONDALE	LAWSON	GRAY SHALE	2.8	565.5	
-113.3	CARBONDALE	LAWSON	SILTY SHALE	16.9	568.3	
-130.2	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.3	585.2	
-130.4	CARBONDALE	JAMESTOWN	BLACK SHALE	2.5	585.4	
-132.9	CARBONDALE		LIMESTONE W/ SHALE	4.9	587.9	
-137.8	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	5.5	592.8	
-143.3	CARBONDALE	ANNA	BLACK SHALE	6.5	598.3	
-149.9	CARBONDALE	ENERGY	SILTY SHALE	21.1	604.9	
-171.0	CARBONDALE	HERRIN	COAL	8.5	626.0	

MAPID: 05500040000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 30 **QUARTERS/FOOTAGES:** 78' S line, 131' E line of NW

QUADRANGLE: SESSER **LONGITUDE:** -89.031176 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.06049 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): 440.9 **LOGGED (FT.):** 628.0 **LOG TYPE:**

SOURCE: BG MUDDYCS 6 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-142.1	CARBONDALE	HERRIN	COAL	9.3	583.0	

MAPID: 05500040000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 30 **QUARTERS/FOOTAGES:** 78' S line, 131' E line of NW

QUADRANGLE: SESSER **LONGITUDE:** -89.031176 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.06049 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 441.0 **LOGGED (FT.):** 628.0 **LOG TYPE:** Survey Core Study

SOURCE: BIG MUDDY COAL SYN **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
441.0			UNCONSOLIDATED	24.0	0.0	
417.0			ROCK	91.8	24.0	
325.2			COAL	0.3	115.8	
324.9			ROCK	75.3	116.1	
249.6			COAL	0.1	191.4	
249.5			SHALE	0.5	191.5	
249.0			COAL	0.1	192.0	
248.9			ROCK	92.6	192.1	
156.3			COAL	0.8	284.7	
155.5			ROCK	173.3	285.5	
-17.8			COAL	1.0	458.8	
-18.8			ROCK	25.4	459.8	
-44.2			COAL	1.3	485.2	
-45.4			ROCK	9.1	486.4	
-54.5			COAL	2.5	495.5	
-57.5			ROCK	6.9	498.5	
-64.4			COAL	0.3	505.4	
-64.8			ROCK	40.0	505.8	
-104.8			LIMESTONE	18.2	545.8	
-123.0			BLACK SHALE	6.0	564.0	
-129.0			BLACK SHALE	13.1	570.0	
-142.1	CARBONDALE	HERRIN	COAL	9.3	583.1	
-151.3			SHALE	45.7	592.3	

MAPID: 05500040000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 30 **QUARTERS/FOOTAGES:** 78' S line, 131' E line of NW

QUADRANGLE: SESSER **LONGITUDE:** -89.031176 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.06049 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 448.5 **LOGGED (FT.):** 592.3 **LOG TYPE:** Drillers Log

SOURCE: BIG MUDDY COAL SYNDICATE 6 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
448.5	PLEISTOCENE		SOIL	1.0	0.0	
447.5	PLEISTOCENE		CLAY	11.0	1.0	YELLOW
436.5	PLEISTOCENE		SAND	6.0	12.0	
430.5	PLEISTOCENE		CLAY	6.0	18.0	BLUE
424.5	BOND		SOFT SHALE	3.6	24.0	
420.9	BOND		SHALE	2.4	27.6	
418.5	BOND		SANDY SHALE	4.0	30.0	
414.5	BOND		SHALE	3.5	34.0	DARK BLUE
411.0	BOND		SANDSTONE	6.5	37.5	
404.5	BOND		SANDY SHALE	13.0	44.0	WITH SANDSTONE PARTINGS
391.5	BOND		SANDSTONE	10.0	57.0	WITH SHALE PARTINGS
381.5	BOND		SANDY SHALE	8.0	67.0	
373.5	BOND		SANDY SHALE	10.0	75.0	
363.5	BOND		SHALE WITH LIMESTONE	3.5	85.0	WITH LIMESTONE BANDS
360.0	BOND		CALCAREOUS SHALE	1.5	88.5	
358.5	BOND	CARTHAGE	LIMESTONE	3.0	90.0	
355.5	MODESTO		SHALE	8.0	93.0	
347.5	MODESTO		SANDSTONE	9.0	101.0	WITH SHALE PARTINGS
338.5	MODESTO		SANDY SHALE	5.0	110.0	
333.5	MODESTO		SHALE	0.8	115.0	DARK BLUE
332.7	MODESTO		COAL	0.3	115.8	
332.4	MODESTO		SHALE W/ COAL STREAKS	0.5	116.1	WITH COAL
331.9	MODESTO		SANDY SHALE	0.4	116.6	
331.5	MODESTO		SANDY SHALE	23.0	117.0	
308.5	MODESTO		SHALE WITH LIMESTONE	10.0	140.0	WITH LIMESTONE SPOTS
298.5	MODESTO		SHALE WITH LIMESTONE	17.0	150.0	WITH LIMESTONE BANDS
281.5	MODESTO		SHALE	3.0	167.0	
278.5	MODESTO		LIMESTONE	1.0	170.0	
277.5	MODESTO		SHALE	10.0	171.0	
267.5	MODESTO		CALCAREOUS SHALE	10.4	181.0	WITH LIMESTONE BANDS
257.1	MODESTO		COAL	0.1	191.4	
257.0	MODESTO		SHALE	0.5	191.5	
256.5	MODESTO		COAL	0.1	192.0	
256.4	MODESTO		SHALE	1.9	192.1	
254.5	MODESTO		SANDSTONE	11.0	194.0	WITH SHALE PARTINGS
243.5	MODESTO		SANDSTONE	2.0	205.0	
241.5	MODESTO		SANDSTONE	10.0	207.0	
231.5	MODESTO		SANDY SHALE	12.0	217.0	

219.5	MODESTO		SANDY SHALE	9.0	229.0	
210.5	MODESTO		SANDY SHALE	31.0	238.0	
179.5	MODESTO		SHALE	5.0	269.0	
174.5	MODESTO		SHALE WITH LIMESTONE	5.0	274.0	WITH LIMESTONE BANDS
169.5	MODESTO		SHALE	1.0	279.0	
168.5	MODESTO		SHALE	4.7	280.0	
163.8	MODESTO	CHAPEL	COAL	0.8	284.7	
163.0	MODESTO		SHALE	2.0	285.5	
161.0	MODESTO		SANDY SHALE	4.5	287.5	
156.5	MODESTO		LIMESTONE	0.5	292.0	
156.0	MODESTO		SANDY SHALE	4.5	292.5	
151.5	MODESTO		SANDY SHALE	27.0	297.0	
124.5	MODESTO		SANDY SHALE	38.0	324.0	
86.5	MODESTO		SANDY SHALE	34.0	362.0	
52.5	MODESTO		SANDY SHALE	17.0	396.0	
35.5	MODESTO		SHALE	3.0	413.0	DARK BLUE
32.5	MODESTO		SHALE	8.0	416.0	WITH BROWN BANDS; DARK BLUE
24.5	MODESTO		SHALE	6.0	424.0	WITH BROWN BANDS
18.5	MODESTO		SHALE	2.0	430.0	
16.5	MODESTO		SANDY SHALE	24.0	432.0	WITH SANDSTONE BANDS
-7.5	MODESTO		SHALE	1.0	456.0	DARK BLUE
-8.5	MODESTO		SHALE	1.8	457.0	
-10.3	MODESTO		COAL	1.0	458.8	
-11.3	MODESTO		SOFT SHALE	4.2	459.8	
-15.5	MODESTO		SANDSTONE	6.0	464.0	
-21.5	MODESTO		SANDY SHALE	7.0	470.0	
-28.5	MODESTO		SHALE	7.0	477.0	
-35.5	MODESTO		SHALE	1.2	484.0	BLACK-GRAY
-36.7	MODESTO		COAL	1.3	485.2	
-37.9	MODESTO		SHALE	0.5	486.4	
-38.4	MODESTO		CALCAREOUS SHALE	1.0	486.9	WITH LIMESTONE
-39.4	MODESTO	PIASA	LIMESTONE	4.0	487.9	
-43.4	MODESTO		SHALE	1.0	491.9	
-44.4	MODESTO		SHALE	1.6	492.9	
-46.0	MODESTO		SHALE	1.0	494.5	
-47.0	CARBONDALE	DANVILLE	COAL	2.5	495.5	
-49.5	CARBONDALE		SANDY SHALE	6.4	498.0	
-55.9	CARBONDALE		SHALE	1.0	504.4	
-56.9	CARBONDALE	ALLENBY	COAL	0.3	505.4	
-57.3	CARBONDALE		SHALE	1.3	505.8	
-58.5	CARBONDALE		SHALE	2.0	507.0	
-60.5	CARBONDALE		SHALE	2.5	509.0	
-63.0	CARBONDALE	BANKSTON FORK	LIMESTONE	10.5	511.5	
-73.5	CARBONDALE		SANDSTONE	2.0	522.0	
-75.5	CARBONDALE		SHALE WITH LIMESTONE	10.0	524.0	WITH LIMESTONE BANDS
-85.5	CARBONDALE		SHALE	11.2	534.0	WITH BROWN BANDS
-96.7	CARBONDALE		SHALE	0.7	545.2	

-97.3	CARBONDALE	BRERETON	LIMESTONE	18.2	545.8
-115.5	CARBONDALE	ENERGY	SHALE	6.0	564.0
-121.5	CARBONDALE	ENERGY	SHALE	13.1	570.0
-134.6	CARBONDALE	HERRIN	COAL	9.3	583.1

MAPID: 05501145000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 30 **QUARTERS/FOOTAGES:** 50' S line, 95' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.021596 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.052991 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 476.0 **LOGGED (FT.):** 627.4 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 106 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-50.3	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.7	526.3	
-55.0	MODESTO		DARK GRAY SHALE	1.9	531.0	
-56.9	CARBONDALE	DANVILLE	COAL	2.4	532.9	
-59.3	CARBONDALE		GRAY SHALE	14.8	535.3	
-74.1	CARBONDALE	BANKSTON FORK	LIMESTONE	8.6	550.1	
-82.7	CARBONDALE	LAWSON	GRAY SHALE	6.6	558.7	
-89.2	CARBONDALE	LAWSON	DARK GRAY SHALE	12.9	565.2	
-102.2	CARBONDALE	JAMESTOWN	DARK GRAY SHALE	0.4	578.2	
-102.5	CARBONDALE		BLACK SHALE	2.4	578.5	
-105.0	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	10.1	581.0	
-115.1	CARBONDALE	ANNA	DARK GRAY SHALE	1.3	591.1	
-116.4	CARBONDALE	ENERGY	BONE COAL	0.8	592.4	
-117.2	CARBONDALE	ENERGY	DARK GRAY SHALE	0.6	593.2	
-117.7	CARBONDALE	ENERGY	BONE COAL	0.1	593.7	
-117.8	CARBONDALE	ENERGY	GRAY SHALE	25.2	593.8	
-143.0	CARBONDALE	HERRIN	COAL	8.4	619.0	

MAPID: 05523259000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 30 **QUARTERS/FOOTAGES:** 330' S line, 450' W line of SE

QUADRANGLE: SESSER **LONGITUDE:** -89.029038 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.053742 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 2365.0 **LOG TYPE:** Electric Log

SOURCE: POLLACK PRODUCTION **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-1905.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2365.0	

MAPID: 05501379000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 31 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of NW

QUADRANGLE: SESSER **LONGITUDE:** -89.031751 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.046178 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 479.0 **LOGGED (FT.):** 2396.0 **LOG TYPE:** Electric Log

SOURCE: KEWANEE OIL CO. **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-337.0	CARBONDALE	COLCHESTER	COAL	-	816.0	
-1917.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2396.0	

MAPID: 05501109000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 32 **QUARTERS/FOOTAGES:** 1930' S line, 269' W line

QUADRANGLE: SESSER **LONGITUDE:** -89.020413 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.043053 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 479.0 **LOGGED (FT.):** 629.7 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 105 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-55.0	MODESTO	PIASA	LIMESTONE	3.8	534.0	
-58.9	MODESTO		BLACK SHALE	2.4	537.9	
-61.3	CARBONDALE	DANVILLE	COAL	2.1	540.3	
-63.4	CARBONDALE		CLAYSTONE & SHALE	9.7	542.4	
-73.0	CARBONDALE	ALLENBY	COAL	0.2	552.0	
-73.2	CARBONDALE		CLAYSTONE & SHALE	4.6	552.2	
-77.8	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	9.3	556.8	
-87.1	CARBONDALE	LAWSON	CALCAREOUS SHALE	2.6	566.1	
-89.7	CARBONDALE	LAWSON	DARK GRAY SHALE	21.0	568.7	
-110.7	CARBONDALE	LAWSON	BLACK SHALE	5.3	589.7	
-115.9	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.8	594.9	
-116.7	CARBONDALE	JAMESTOWN	BLACK SHALE	2.5	595.7	
-119.2	CARBONDALE		LIMESTONE W/ SHALE	1.6	598.2	
-120.8	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	8.1	599.8	
-128.8	CARBONDALE	ANNA	BLACK SHALE	3.1	607.8	
-131.9	CARBONDALE	ENERGY	GRAY SHALE	5.0	610.9	
-136.9	CARBONDALE	ENERGY	CARBONACEOUS SHALE	6.1	615.9	
-143.0	CARBONDALE	HERRIN	COAL	7.7	622.0	

MAPID: 05523233000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 32 **QUARTERS/FOOTAGES:** 510' N line, 330' E line of NE NW SW

QUADRANGLE: SESSER **LONGITUDE:** -89.017855 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.043903 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 482.0 **LOGGED (FT.):** 4542.0 **LOG TYPE:** Electric Log

SOURCE: POLLACK PETROLEUM CO. **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1943.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2425.0	
-3980.0	DEVONIAN	UPPER DEVONIAN S	UNCLASSIFIED	-	4462.0	TOP OF NEW ALBANY
-3993.0	DEVONIAN	GRASSY CREEK	UNCLASSIFIED	-	4475.0	
-4060.0	DEVONIAN	BASE UPPER DEVON	UNCLASSIFIED	-	4542.0	BASE OF NEW ALBANY

MAPID: 05502023000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 33 **QUARTERS/FOOTAGES:** 2590' N line, 1920' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.990888 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.045744 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 421.0 **LOGGED (FT.):** 593.6 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. E-150 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-70.5	MODESTO	PIASA	LIMESTONE	6.0	491.5	
-76.5	MODESTO		DARK GRAY SHALE	7.0	497.5	
-83.5	CARBONDALE	DANVILLE	COAL	2.5	504.5	
-86.0	CARBONDALE		SHALE	10.8	507.0	
-96.8	CARBONDALE	BANKSTON FORK	LIMESTONE	8.5	517.8	
-105.3	CARBONDALE	LAWSON	SHALE	26.7	526.3	
-132.0	CARBONDALE	BRERETON	LIMESTONE	8.5	553.0	
-140.5	CARBONDALE	ANNA	BLACK SHALE	3.7	561.5	
-144.2	CARBONDALE	ENERGY	DARK GRAY SHALE	4.0	565.2	
-148.2	CARBONDALE	ENERGY	GRAY SHALE	15.8	569.2	
-164.0	CARBONDALE	HERRIN	COAL	8.6	585.0	

MAPID: 05502365000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 34 **QUARTERS/FOOTAGES:** 362' S line, 2448' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.975297 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.038673 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 385.0 **LOGGED (FT.):** 569.8 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 233 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-92.9	MODESTO	PIASA	LIMESTONE	2.5	477.9	
-95.4	MODESTO		DARK GRAY SHALE	3.5	480.4	
-98.9	CARBONDALE	DANVILLE	COAL	2.1	483.9	
-101.0	CARBONDALE		SILTY SHALE	24.2	486.0	
-125.1	CARBONDALE	BANKSTON FORK	LIMESTONE	5.2	510.1	
-130.3	CARBONDALE	LAWSON	GRAY SHALE	26.0	515.3	
-156.3	CARBONDALE	LAWSON	SILTY SHALE	3.0	541.3	
-159.3	CARBONDALE	LAWSON	DARK GRAY SHALE	3.0	544.3	
-162.3	CARBONDALE	LAWSON	COAL	0.5	547.3	
-162.8	CARBONDALE	CONANT	LIMESTONE	3.5	547.8	
-166.3	CARBONDALE	JAMESTOWN	COAL	0.3	551.3	
-166.5	CARBONDALE		SHALE	1.8	551.5	
-168.3	CARBONDALE	BRERETON	LIMESTONE	5.5	553.3	
-173.8	CARBONDALE	ANNA	BLACK SHALE	2.2	558.8	
-176.0	CARBONDALE	HERRIN	COAL	8.8	561.0	

MAPID: 05500041000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 35 **QUARTERS/FOOTAGES:** SE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.950739 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.047017 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 591.0 **LOG TYPE:**

SOURCE: OLD BEN 0001 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-194.0	CARBONDALE	HERRIN	COAL	6.8	583.0	

MAPID: 05500041000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 35 **QUARTERS/FOOTAGES:** SE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.950739 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.047017 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 591.0 **LOG TYPE:** Drillers Log

SOURCE: HARRY STAMPER **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
389.0			UNCONSOLIDATED	49.0	0.0	
340.0			ROCK	79.5	49.0	
260.5			COAL	0.6	128.5	
259.9			ROCK	41.7	129.1	
218.2			COAL	1.5	170.8	
216.7			ROCK	35.7	172.3	
181.0			COAL	0.7	208.0	
180.3			ROCK	93.3	208.7	
87.0			COAL	1.0	302.0	
86.0			ROCK	166.0	303.0	
-80.0			COAL	0.8	469.0	
-80.8			ROCK	25.2	469.8	
-106.0			COAL	1.0	495.0	
-107.0			ROCK	11.3	496.0	
-118.3			COAL	2.2	507.3	
-120.8			ROCK	14.5	509.8	
-135.3			COAL	0.1	524.3	
-135.3			ROCK	33.7	524.3	
-169.0			BLACK SHALE	4.7	558.0	SANDY
-173.7			LIMESTONE	1.3	562.7	
-175.0			COAL	0.5	564.0	SHALEY
-175.5			BLACK SHALE	4.5	564.5	
-180.0			LIMESTONE	13.3	569.0	
-193.3			BLACK SHALE	1.0	582.3	
-194.3	CARBONDALE	HERRIN	COAL	6.8	583.3	
-201.1	CARBONDALE		UNDERCLAY	0.3	590.1	
-201.4	CARBONDALE		ROCK	0.6	590.4	

MAPID: 05500041000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 35 **QUARTERS/FOOTAGES:** SE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.950739 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.047017 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 591.0 **LOG TYPE:** Drillers Log

SOURCE: W.P. REND 1 **WELL TYPE:** Coal Test

COMMENT: UNIT DEPTHS ALTERED FROM ORIG.LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
389.0	PLEISTOCENE		CLAY	32.0	0.0	GRAY
357.0	PLEISTOCENE		SAND	9.0	32.0	
348.0	PLEISTOCENE		CLAY	8.0	41.0	GRAY
340.0	BOND		SHALE	1.0	49.0	
339.0	BOND		SANDSTONE	1.0	50.0	
338.0	BOND		SANDY SHALE	9.0	51.0	
329.0	BOND		SHALE	45.0	60.0	
284.0	BOND	CARTHAGE	LIMESTONE	5.5	105.0	
278.5	MODESTO		SHALE	6.0	110.5	
272.5	MODESTO		SHALE	1.5	116.5	
271.0	MODESTO		SANDY SHALE	10.5	118.0	
260.5	MODESTO		COAL	0.6	128.5	
259.9	MODESTO		SANDY SHALE	1.9	129.1	
258.0	MODESTO		COAL	0.0	131.0	
258.0	MODESTO		SANDY SHALE	2.0	131.0	
256.0	MODESTO		SANDY SHALE	7.0	133.0	WITH LIMESTONE SPOTS
249.0	MODESTO		SANDY SHALE	10.0	140.0	
239.0	MODESTO		SANDSTONE/SHALE	17.0	150.0	
222.0	MODESTO		SHALE	3.8	167.0	
218.2	MODESTO		COAL	1.5	170.8	
216.7	MODESTO		SHALE	7.0	172.3	
209.7	MODESTO		LIMESTONE	0.7	179.3	
209.0	MODESTO		SHALE	6.5	180.0	DARK BLUE
202.5	MODESTO		SHALE WITH LIMESTONE	2.0	186.5	WITH LIMESTONE
200.5	MODESTO		LIMESTONE	1.5	188.5	
199.0	MODESTO		SANDY SHALE	12.0	190.0	
187.0	MODESTO		SANDY SHALE	6.0	202.0	
181.0	MODESTO		COAL	0.7	208.0	
180.3	MODESTO		SHALE	0.8	208.7	DARK BLUE
179.5	MODESTO		SANDY SHALE	1.5	209.5	
178.0	MODESTO		SANDSTONE/SHALE	18.0	211.0	
160.0	MODESTO		SANDY SHALE	56.0	229.0	
104.0	MODESTO		SHALE	10.5	285.0	WITH BROWN BANDS
93.5	MODESTO		SHALE	0.5	295.5	
93.0	MODESTO		SHALE	5.0	296.0	DARK BLUE
88.0	MODESTO	CHAPEL	COAL	1.0	301.0	
87.0	MODESTO		SHALE	2.0	302.0	
85.0	MODESTO		SANDY SHALE	26.0	304.0	
59.0	MODESTO		SANDY LIMESTONE	2.0	330.0	

57.0	MODESTO		SANDY SHALE	7.0	332.0	
50.0	MODESTO		SANDY SHALE	80.0	339.0	
-30.0	MODESTO		CLAYSTONE	11.0	419.0	BLUE
-41.0	MODESTO		SHALE	2.5	430.0	
-43.5	MODESTO		SHALE	1.5	432.5	DARK BROWN
-45.0	MODESTO		SANDY SHALE	9.0	434.0	
-54.0	MODESTO		LIMESTONE	2.0	443.0	
-56.0	MODESTO		SANDY SHALE	10.0	445.0	
-66.0	MODESTO		BLACK SHALE	3.0	455.0	
-69.0	MODESTO		COAL	0.8	458.0	
-69.8	MODESTO		SHALE	5.2	458.8	
-75.0	MODESTO		SANDY SHALE	6.0	464.0	
-81.0	MODESTO		SANDY SHALE	3.0	470.0	
-84.0	MODESTO		SHALE	6.0	473.0	WITH BROWN BANDS
-90.0	MODESTO		SHALE	5.0	479.0	WITH BROWN BANDS; DARK BLUE
-95.0	MODESTO		COAL	1.0	484.0	
-96.0	MODESTO		SHALE	2.0	485.0	
-98.0	MODESTO	PIASA	LIMESTONE	5.8	487.0	
-103.8	MODESTO		SHALE	0.8	492.8	
-104.6	MODESTO		SHALE	2.7	493.6	LIGHT BLUE
-107.3	CARBONDALE	DANVILLE	COAL	2.2	496.3	
-109.4	CARBONDALE		SHALE	2.0	498.4	
-111.4	CARBONDALE		SANDY SHALE	2.0	500.4	
-113.4	CARBONDALE		SHALE	7.4	502.4	
-120.8	CARBONDALE		SANDY SHALE	1.5	509.8	
-122.3	CARBONDALE		SHALE	1.8	511.3	
-124.0	CARBONDALE	ALLENBY	COAL	0.1	513.0	
-124.1	CARBONDALE		SHALE	2.0	513.1	DARK BLUE
-126.1	CARBONDALE		CALCAREOUS SHALE	4.2	515.1	
-130.3	CARBONDALE	BANKSTON FORK	LIMESTONE	6.3	519.3	
-136.5	CARBONDALE		SHALE WITH LIMESTONE	2.3	525.5	WITH LIMESTONE SPOTS
-138.8	CARBONDALE		SANDY SHALE	23.7	527.8	
-162.4	CARBONDALE	CONANT	LIMESTONE	1.3	551.4	
-163.8	CARBONDALE	JAMESTOWN	SHALY COAL	0.5	552.8	
-164.3	CARBONDALE		SHALE	4.5	553.3	DARK BLUE
-168.8	CARBONDALE	BRERETON	LIMESTONE	13.3	557.8	
-182.1	CARBONDALE		SHALE	1.3	571.1	
-183.4	CARBONDALE	HERRIN	COAL	6.8	572.4	
-190.2	CARBONDALE		CLAYSTONE	0.3	579.2	
-190.5	CARBONDALE		SANDY SHALE	0.6	579.5	

MAPID: 05500773000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 35 **QUARTERS/FOOTAGES:** 30' S line, 2610' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.957417 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.037819 **DATE COLLECTED:** 10 / 9 / 1944

SURFACE ELEVATION (FT.): 409.0 **LOGGED (FT.):** 611.7 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 31 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-108.4	MODESTO	PIASA	LIMESTONE	6.1	517.4	
-114.5	MODESTO		DARK GRAY SHALE	4.1	523.5	
-118.5	CARBONDALE	DANVILLE	COAL	2.3	527.5	
-120.8	CARBONDALE		SANDSTONE/SILTSTONE	16.3	529.8	
-137.0	CARBONDALE	ALLENBY	COAL	0.3	546.0	
-137.3	CARBONDALE		CLAYSTONE & SHALE	4.5	546.3	
-141.8	CARBONDALE	BANKSTON FORK	LIMESTONE	7.4	550.8	
-149.2	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	0.8	558.2	
-150.1	CARBONDALE	LAWSON	SILTY SHALE	11.8	559.1	
-161.9	CARBONDALE	LAWSON	DARK GRAY SHALE	16.6	570.9	
-178.5	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	1.8	587.5	
-180.3	CARBONDALE	JAMESTOWN	CARBONACEOUS SHALE	1.9	589.3	
-182.2	CARBONDALE		DARK GRAY SHALE	7.8	591.2	
-190.0	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	5.3	599.0	
-195.3	CARBONDALE	ANNA	DARK GRAY SHALE	0.7	604.3	
-196.0	CARBONDALE	HERRIN	COAL	6.7	605.0	

MAPID: 05501433000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 35 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of SE SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.951797 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.040567 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 397.0 **LOGGED (FT.):** 2418.0 **LOG TYPE:** Electric Log

SOURCE: LEWIS, WILL I. **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-221.0	CARBONDALE	SPRINGFIELD	COAL	-	618.0	
-389.0	CARBONDALE	COLCHESTER	COAL	-	786.0	
-2021.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2418.0	

MAPID: 05524055000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 35 **QUARTERS/FOOTAGES:** 865' N line, 1520' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.953843 **GEOLOGIST:** J MCBETH

CONFIDENTIAL: N **LATITUDE:** 38.050193 **DATE COLLECTED:** 9 / 6 / 1962

SURFACE ELEVATION (FT.): 394.5 **LOGGED (FT.):** 643.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP 153 **WELL TYPE:** Coal Test

COMMENT: PERMIT 29; MINE #24

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
394.5	PLEISTOCENE		UNCONSOLIDATED	12.3	0.0	SOIL & CLAY
382.2	BOND		CLAY	7.5	12.3	
374.7	BOND		SHALE	30.1	19.8	GREEN
344.6	BOND		SANDSTONE	0.7	49.9	
343.9	BOND		SHALE	4.1	50.6	GREEN
339.8	BOND		LIMESTONE	1.0	54.7	
338.8	BOND		GRAY SHALE	49.5	55.7	
289.3	BOND	CARTHAGE	LIMESTONE	4.5	105.2	
284.8	BOND		SHALE	6.2	109.7	
278.7	MODESTO		BLACK SHALE	0.8	115.8	
277.8	MODESTO		SHALE	52.0	116.7	
225.8	MODESTO	WOMAC	COAL	1.5	168.7	
224.3	MODESTO		SHALE	8.5	170.2	
215.8	MODESTO		LIMESTONE	1.0	178.7	
214.8	MODESTO		SHALE	9.5	179.7	
205.3	MODESTO		LIMESTONE	1.0	189.2	
204.3	MODESTO		SHALE	15.0	190.2	
189.3	MODESTO		COAL	1.5	205.2	
187.8	MODESTO		GRAY SHALE	43.7	206.7	
144.2	MODESTO	CHAPEL	COAL	1.1	250.3	
143.1	MODESTO		GRAY SHALE	52.4	251.4	
90.7	MODESTO		LIMESTONE	1.7	303.8	
89.0	MODESTO		GRAY SHALE	21.9	305.5	
67.1	MODESTO		LIMESTONE	1.3	327.4	
65.7	MODESTO		SHALE	9.1	328.8	
56.7	MODESTO		LIMESTONE	0.6	337.8	
56.1	MODESTO		SHALE	1.4	338.4	
54.7	MODESTO		COAL	0.2	339.8	
54.5	MODESTO		SHALE	123.8	340.0	
-69.3	MODESTO	POND CREEK	COAL	0.4	463.8	
-69.8	MODESTO		SHALE	27.0	464.3	
-96.8	MODESTO	DEGRAFF	COAL	1.2	491.3	
-97.9	MODESTO		SHALE	1.4	492.4	
-99.3	MODESTO	PIASA	LIMESTONE	4.3	493.8	
-103.7	MODESTO		SHALE	4.9	498.2	
-108.6	CARBONDALE	DANVILLE	COAL	2.0	503.1	
-110.6	CARBONDALE		GRAY SHALE	12.3	505.1	
-122.8	CARBONDALE		SANDSTONE	2.2	517.3	
-125.0	CARBONDALE		GRAY SHALE	5.8	519.5	

-130.8	CARBONDALE	BANKSTON FORK	LIMESTONE	6.8	525.3	
-137.6	CARBONDALE		GRAY SHALE	24.2	532.1	
-161.8	CARBONDALE	BRERETON	LIMESTONE	3.8	556.3	CORING-BEGAN
-165.5	CARBONDALE	ANNA	SHALE	2.2	560.0	BONE COAL LAMINATIONS, BLACK
-167.7	CARBONDALE	ENERGY	SHALE	9.8	562.2	DARK GRAY WITH PYRITE STRINGERS
-177.5	CARBONDALE	ENERGY	GRAY SHALE	8.0	572.0	WITH SIDERITE BANDS
-185.5	CARBONDALE	ENERGY	SHALE	1.7	580.0	DARK GRAY
-187.2	CARBONDALE	HERRIN	COAL	6.0	581.7	
-193.2	CARBONDALE	HERRIN	UNDERCLAY	0.1	587.7	BLUE BAND
-193.2	CARBONDALE	HERRIN	COAL	0.9	587.7	
-194.2	CARBONDALE		UNDERCLAY	1.3	588.7	
-195.5	CARBONDALE		SANDSTONE	15.0	590.0	
-210.5	CARBONDALE		SANDSTONE/SHALE	10.8	605.0	
-221.3	CARBONDALE		SHALE	0.5	615.8	BLACK
-221.8	CARBONDALE	BRIAR HILL	COAL	1.1	616.3	
-222.8	CARBONDALE		SHALE	4.0	617.3	MICACEOUS, SILT LAMINATIONS, DARK GRAY
-226.8	CARBONDALE		SHALE	8.2	621.3	NEAR BLACK WITH SIDERITE BANDS
-235.0	CARBONDALE	ST. DAVID	LIMESTONE	1.3	629.5	
-236.3	CARBONDALE	TURNER MINE	SHALE	5.7	630.8	CALCAREOUS, DARK GRAY
-241.9	CARBONDALE	SPRINGFIELD	COAL	2.6	636.4	
-244.5	CARBONDALE	SPRINGFIELD	FUSAIN	0.0	639.0	
-244.5	CARBONDALE	SPRINGFIELD	COAL	1.8	639.0	
-246.3	CARBONDALE		UNDERCLAY	2.2	640.8	

MAPID: 05502317000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 36 **QUARTERS/FOOTAGES:** 1650' N line, 1650' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.942737 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.047978 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 421.0 **LOGGED (FT.):** 609.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-95.0	MODESTO	PIASA	LIMESTONE	5.0	516.0	
-100.0	MODESTO		DARK GRAY SHALE	7.0	521.0	
-107.0	CARBONDALE	DANVILLE	COAL	2.0	528.0	
-109.0	CARBONDALE		SILTY SHALE	10.0	530.0	
-119.0	CARBONDALE	ALLENBY	COAL	0.3	540.0	
-119.3	CARBONDALE		CLAYSTONE & SHALE	5.8	540.3	
-125.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	546.0	
-131.0	CARBONDALE	LAWSON	SILTY SHALE	26.0	552.0	
-157.0	CARBONDALE	CONANT	LIMESTONE & SHALE	0.5	578.0	
-157.5	CARBONDALE	JAMESTOWN	COAL	0.5	578.5	
-158.0	CARBONDALE		DARK GRAY SHALE	1.0	579.0	
-159.0	CARBONDALE	BRERETON	LIMESTONE	5.0	580.0	
-164.0	CARBONDALE	ANNA	BLACK SHALE	2.0	585.0	
-166.0	CARBONDALE	ENERGY	GRAY SHALE	15.0	587.0	
-181.0	CARBONDALE	HERRIN	COAL	7.0	602.0	

MAPID: 05523818000C **VERSION:** 1 **PROJECT:** J JOHNSON

COUNTY: FRANKLIN **TWP/RNG:** 5S 2E **SECTION:** 36 **QUARTERS/FOOTAGES:** 331' N line, 953' E line of SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.942413 **GEOLOGIST:** J JOHNSON

CONFIDENTIAL: N **LATITUDE:** 38.044282 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 417.0 **LOGGED (FT.):** 4514.0 **LOG TYPE:** Electric Log

SOURCE: H & W OIL CO., INC. **WELL TYPE:** Oil and Gas Test

COMMENT: COLLECTED FOR JOEL JOHNSONS MS THESIS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-218.0	CARBONDALE	SPRINGFIELD	COAL	-	635.0	
-387.0	CARBONDALE	COLCHESTER	COAL	-	804.0	
-2013.0	MISSISSIPPIAN	BEECH CREEK	UNCLASSIFIED	-	2430.0	
-3977.0	DEVONIAN	UPPER DEVONIAN S	UNCLASSIFIED	-	4394.0	TOP OF NEW ALBANY
-3984.0	DEVONIAN	GRASSY CREEK	UNCLASSIFIED	-	4401.0	
-4097.0	DEVONIAN	BASE UPPER DEVON	UNCLASSIFIED	-	4514.0	BASE OF NEW ALBANY

MAPID: 05501186000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 1 **QUARTERS/FOOTAGES:** 330' S line, 330' W line

QUADRANGLE: EWING **LONGITUDE:** -88.833314 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.112259 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 492.0 **LOGGED (FT.):** 3158.0 **LOG TYPE:** Electric Log

SOURCE: BAYER, KENNETH M. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-275.0	CARBONDALE	HERRIN	COAL	3.0	767.0	
-328.0	CARBONDALE	BRIAR HILL	COAL	-	820.0	
-362.0	CARBONDALE	SPRINGFIELD	COAL	5.0	854.0	BLACK SHALE & LIMESTONE ROOF
-428.0	CARBONDALE	HOUCHIN CREEK	COAL	-	920.0	

MAPID: 05501235000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 1 **QUARTERS/FOOTAGES:** 1020' S line, 990' W line

QUADRANGLE: EWING **LONGITUDE:** -88.830996 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.114228 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 494.0 **LOGGED (FT.):** 766.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-191.0	MODESTO	PIASA	LIMESTONE	4.0	685.0	
-195.0	MODESTO		SHALE	7.0	689.0	
-202.0	CARBONDALE	DANVILLE	COAL	2.0	696.0	
-204.0	CARBONDALE		SILTY SHALE	17.0	698.0	
-221.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	715.0	
-226.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	13.0	720.0	
-239.0	CARBONDALE	LAWSON	SHALE	14.0	733.0	
-253.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	7.0	747.0	
-260.0	CARBONDALE	BRERETON	LIMESTONE	6.0	754.0	
-266.0	CARBONDALE	ANNA	BLACK SHALE	1.0	760.0	
-267.0	CARBONDALE	HERRIN	COAL	5.0	761.0	

MAPID: 05522800000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 1 **QUARTERS/FOOTAGES:** 2600' S line, 1320' E line

QUADRANGLE: EWING **LONGITUDE:** -88.829436 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.118542 **DATE COLLECTED:** 9 / 21 / 1976

SURFACE ELEVATION (FT.): 495.0 **LOGGED (FT.):** 873.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY EN-23 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
495.0			UNCLASSIFIED	695.0	0.0	
-200.0	MODESTO	PIASA	LIMESTONE	3.0	695.0	
-203.0	MODESTO		SHALE	9.0	698.0	
-212.0	CARBONDALE	DANVILLE	COAL	2.0	707.0	
-214.0	CARBONDALE		SHALE	18.0	709.0	
-232.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	727.0	
-236.0	CARBONDALE		UNCLASSIFIED	27.0	731.0	LOG NOTES "SHALEY LIMESTONE"
-263.0	CARBONDALE		GRAY SHALE	1.8	758.0	BEGIN CORE
-264.8	CARBONDALE		LIMESTONE	0.3	759.8	LIGHT
-265.1	CARBONDALE		BLACK SHALE	0.3	760.1	
-265.4	CARBONDALE	JAMESTOWN	COAL	0.1	760.4	
-265.5	CARBONDALE		SHALE	3.2	760.5	DARK
-268.7	CARBONDALE	BRERETON	LIMESTONE	8.0	763.7	
-276.7	CARBONDALE	ANNA	BLACK SHALE	1.0	771.7	
-277.7	CARBONDALE	HERRIN	COAL	4.9	772.7	
-282.6	CARBONDALE		UNDERCLAY	2.1	777.6	
-284.7	CARBONDALE		SANDSTONE	1.7	779.7	
-286.3	CARBONDALE		GRAY SHALE	6.7	781.3	
-293.0	CARBONDALE		SHALE	55.0	788.0	NOT CORED
-348.0	CARBONDALE		SANDY SHALE	3.5	843.0	
-351.5	CARBONDALE		GRAY SHALE	10.1	846.5	
-361.6	CARBONDALE	ST. DAVID	LIMESTONE	0.9	856.6	
-362.5	CARBONDALE	TURNER MINE	BLACK SHALE	3.7	857.5	
-366.2	CARBONDALE	SPRINGFIELD	COAL	5.8	861.2	
-372.0	CARBONDALE		UNDERCLAY	0.8	867.0	
-372.9	CARBONDALE		SANDSTONE	0.9	867.9	
-373.8	CARBONDALE		SILTY SHALE	4.2	868.8	
-378.0				0.0	873.0	

MAPID: 05501446000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 2 **QUARTERS/FOOTAGES:** 330' S line, 1650' W line

QUADRANGLE: EWING **LONGITUDE:** -88.847237 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.112002 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 475.0 **LOGGED (FT.):** 3982.0 **LOG TYPE:** Electric Log

SOURCE: GEORGE & WRATHER OIL **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-263.0	CARBONDALE	HERRIN	COAL	4.0	738.0	
-317.0	CARBONDALE	BRIAR HILL	COAL	-	792.0	
-351.0	CARBONDALE	SPRINGFIELD	COAL	3.0	826.0	SHALE & SILTSTONE ROOF
-405.0	CARBONDALE	HOUCHIN CREEK	COAL	-	880.0	

MAPID: 05501446000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 2 **QUARTERS/FOOTAGES:** 330' S line, 1650' W line

QUADRANGLE: EWING **LONGITUDE:** -88.847237 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.112002 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 475.0 **LOGGED (FT.):** 742.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-187.0	MODESTO	PIASA	LIMESTONE	4.0	662.0	
-191.0	MODESTO		SHALE	7.0	666.0	
-198.0	CARBONDALE	DANVILLE	COAL	2.0	673.0	
-200.0	CARBONDALE		SHALE	16.0	675.0	
-216.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	5.0	691.0	
-221.0	CARBONDALE	LAWSON	SHALE	3.0	696.0	
-224.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	5.0	699.0	
-229.0	CARBONDALE	LAWSON	SHALE	21.0	704.0	
-250.0	CARBONDALE	BRERETON	LIMESTONE	11.0	725.0	
-261.0	CARBONDALE	ANNA	BLACK SHALE	2.0	736.0	
-263.0	CARBONDALE	HERRIN	COAL	4.0	738.0	

MAPID: 05523916000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 2 **QUARTERS/FOOTAGES:** NW SW SW
QUADRANGLE: EWING **LONGITUDE:** -88.851811 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.11393 **DATE COLLECTED:** 3 / 10 / 1989
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 176.0 **LOG TYPE:** Drillers Log
SOURCE: GEORGE KEEN 1 **WELL TYPE:** Water Well
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	PLEISTOCENE		CLAY	15.0	0.0	YELLOW
-			SHALE	21.0	15.0	
-			COAL	2.0	36.0	
-			SHALE	7.0	38.0	
-			SANDSTONE	3.0	45.0	WHITE
-			SHALE	25.0	48.0	
-			COAL	4.0	73.0	
-			SANDY SHALE	55.0	77.0	WITH SAND
-			SANDSTONE	44.0	132.0	GRAY

MAPID: 05524052000C **VERSION:** 1 **PROJECT:** NCRDS98

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 2 **QUARTERS/FOOTAGES:** NW SW
QUADRANGLE: EWING **LONGITUDE:** -88.850287 **GEOLOGIST:** C.KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.118203 **DATE COLLECTED:** 9 / 15 / 1981
SURFACE ELEVATION (FT.): 447.0 **LOGGED (FT.):** 808.0 **LOG TYPE:** Other Core Study
SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #91 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
447.0			UNCLASSIFIED	705.0	0.0	
-258.0	CARBONDALE	ENERGY	SHALE	5.8	705.0	
-263.8	CARBONDALE	HERRIN	COAL	6.2	710.8	
-270.0	CARBONDALE		UNDERCLAY	3.5	717.0	
-273.5	CARBONDALE		SANDSTONE	1.8	720.5	
-275.3	CARBONDALE		UNCLASSIFIED	67.7	722.3	
-343.0	CARBONDALE		SHALE	3.4	790.0	
-346.4	CARBONDALE	ST. DAVID	LIMESTONE	1.3	793.4	
-347.7	CARBONDALE	DYKERSBURG	SHALE	4.3	794.7	DARK
-352.0	CARBONDALE	SPRINGFIELD	COAL	4.7	799.0	
-356.7	CARBONDALE		UNDERCLAY	4.3	803.7	

MAPID: 05501443000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 3 **QUARTERS/FOOTAGES:** 990' S line, 330' E line

QUADRANGLE: EWING **LONGITUDE:** -88.854123 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.113706 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 436.0 **LOGGED (FT.):** 3053.0 **LOG TYPE:** Electric Log

SOURCE: STANFORD OIL & GAS **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-266.0	CARBONDALE	HERRIN	COAL	4.0	702.0	
-319.0	CARBONDALE	BRIAR HILL	COAL	-	755.0	
-344.0	CARBONDALE	SPRINGFIELD	COAL	5.0	780.0	BLACK SHALE & LIMESTONE ROOF
-411.0	CARBONDALE	HOUCHIN CREEK	COAL	-	847.0	

MAPID: 05501443000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 3 **QUARTERS/FOOTAGES:** 990' S line, 330' E line

QUADRANGLE: EWING **LONGITUDE:** -88.854123 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.113706 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 436.0 **LOGGED (FT.):** 705.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-202.3	CARBONDALE	DANVILLE	COAL	1.8	638.3	
-204.0	CARBONDALE		SHALE	18.0	640.0	
-222.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	658.0	
-225.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	17.0	661.0	
-242.0	CARBONDALE	LAWSON	SHALE	15.0	678.0	
-257.0	CARBONDALE	BRERETON	LIMESTONE	4.0	693.0	
-261.0	CARBONDALE	ANNA	SHALE	4.0	697.0	
-265.0	CARBONDALE	HERRIN	COAL	4.0	701.0	

MAPID: 05522795000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 3 **QUARTERS/FOOTAGES:** NE NE NE

QUADRANGLE: SPRING GARDEN **LONGITUDE:** -88.840926 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.126181 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 441.0 **LOGGED (FT.):** 836.7 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY EN-3 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
441.0			UNCLASSIFIED	662.0	0.0	
-221.0	MODESTO	PIASA	LIMESTONE	5.0	662.0	
-226.0	MODESTO		SHALE	6.0	667.0	
-232.0	CARBONDALE	DANVILLE	COAL	1.0	673.0	
-233.0	CARBONDALE		SHALE	11.0	674.0	
-244.0	CARBONDALE		SANDY SHALE	7.8	685.0	LIGHT BEGIN CORE
-251.8	CARBONDALE	BANKSTON FORK	LIMESTONE	2.8	692.8	LIGHT
-254.6	CARBONDALE	BANKSTON FORK	CLAYSTONE & SILTSTONE	1.7	695.6	
-256.3	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	697.3	
-258.3	CARBONDALE		SANDY SHALE	23.7	699.3	
-281.9	CARBONDALE		SANDY SHALE	1.2	722.9	
-283.1	CARBONDALE		SILTY SHALE	2.3	724.1	DARK
-285.4	CARBONDALE	BRERETON	LIMESTONE	11.4	726.4	
-296.8	CARBONDALE	ANNA	BLACK SHALE	0.4	737.8	
-297.3	CARBONDALE	HERRIN	COAL	5.0	738.3	
-302.3	CARBONDALE		UNDERCLAY	3.2	743.3	
-305.4	CARBONDALE		LIMESTONE	4.4	746.4	
-309.8	CARBONDALE		SHALE	1.9	750.8	LIGHT
-311.7	CARBONDALE		SHALE	42.3	752.7	NOT CORED
-354.0	CARBONDALE	BRIAR HILL	COAL	2.0	795.0	NOT CORED
-356.0	CARBONDALE		SHALE	4.0	797.0	NOT CORED
-360.0	CARBONDALE		SANDSTONE	2.0	801.0	BEGIN CORE
-362.0	CARBONDALE		SANDY SHALE	5.3	803.0	
-367.3	CARBONDALE		SHALE	3.3	808.3	DARK
-370.6	CARBONDALE		BLACK SHALE	3.7	811.6	
-374.3	CARBONDALE	ST. DAVID	LIMESTONE	2.0	815.3	
-376.3	CARBONDALE	TURNER MINE	BLACK SHALE	4.3	817.3	
-380.6	CARBONDALE	SPRINGFIELD	COAL	5.1	821.6	
-385.7	CARBONDALE		UNDERCLAY	2.0	826.7	
-387.7	CARBONDALE		SANDSTONE	8.0	828.7	
-395.7	CARBONDALE			0.0	836.7	

MAPID: 05501444000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 4 **QUARTERS/FOOTAGES:** 2310' N line, 990' E line

QUADRANGLE: EWING **LONGITUDE:** -88.874445 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.119823 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 423.0 **LOGGED (FT.):** 2998.0 **LOG TYPE:** Electric Log

SOURCE: FARRAR, FLETCHER F. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-253.0	CARBONDALE	HERRIN	COAL	5.0	676.0	
-290.0	CARBONDALE	BRIAR HILL	COAL	-	713.0	
-327.0	CARBONDALE	SPRINGFIELD	COAL	4.0	750.0	BLACK SHALE & LIMESTONE ROOF
-393.0	CARBONDALE	HOUCHIN CREEK	COAL	-	816.0	

MAPID: 05501444000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 4 **QUARTERS/FOOTAGES:** 2310' N line, 990' E line

QUADRANGLE: EWING **LONGITUDE:** -88.874445 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.119823 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 423.0 **LOGGED (FT.):** 672.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-167.0	MODESTO	PIASA	LIMESTONE & SHALE	5.0	590.0	
-172.0	MODESTO		SHALE	8.0	595.0	
-180.0	CARBONDALE	DANVILLE	COAL	1.0	603.0	
-181.0	CARBONDALE		SHALE & SANDSTONE	16.0	604.0	
-197.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	620.0	
-202.0	CARBONDALE	LAWSON	CLAYSTONE & SHALE	5.0	625.0	
-207.0	CARBONDALE	LAWSON	SILTY SHALE	20.0	630.0	
-227.0	CARBONDALE	ANNA	BLACK SHALE	3.0	650.0	
-230.0	CARBONDALE	ENERGY	GRAY SHALE	13.0	653.0	
-243.0	CARBONDALE	HERRIN	COAL	6.0	666.0	

MAPID: 05500704000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 5 **QUARTERS/FOOTAGES:** 2310' S line, 330' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.906544 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.117669 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 468.0 **LOGGED (FT.):** 3304.0 **LOG TYPE:** Electric Log

SOURCE: SMOKEY OIL CO. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-208.0	CARBONDALE	HERRIN	COAL	6.0	676.0	
-256.0	CARBONDALE	BRIAR HILL	COAL	-	724.0	
-282.0	CARBONDALE	SPRINGFIELD	COAL	3.0	750.0	BLACK SHALE & LIMESTONE ROOF
-348.0	CARBONDALE	HOUCHIN CREEK	COAL	-	816.0	

MAPID: 05500704000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 5 **QUARTERS/FOOTAGES:** 2310' S line, 330' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.906544 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.117669 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 411.0 **LOGGED (FT.):** 684.0 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-187.0	MODESTO	PIASA	LIMESTONE	4.0	598.0	
-191.0	MODESTO		BLACK SHALE	2.0	602.0	
-193.0	CARBONDALE	DANVILLE	COAL	2.0	604.0	
-195.0	CARBONDALE		SANDSTONE/SILTSTONE	31.0	606.0	
-226.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	637.0	
-230.0	CARBONDALE	LAWSON	GRAY SHALE	4.0	641.0	
-234.0	CARBONDALE	LAWSON	CLAYSTONE	2.0	645.0	
-236.0	CARBONDALE	LAWSON	CARBONACEOUS SANDSTONE	3.0	647.0	
-239.0	CARBONDALE	LAWSON	SILTSTONE	4.0	650.0	
-243.0	CARBONDALE	LAWSON	GRAY SHALE	13.0	654.0	
-256.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	8.0	667.0	
-264.0	CARBONDALE	ANNA	BLACK SHALE	1.0	675.0	
-265.0	CARBONDALE	HERRIN	COAL	8.0	676.0	

MAPID: 05500704000C **VERSION:** 3 **PROJECT:** CONTROL

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 5 **QUARTERS/FOOTAGES:** 2310' S line, 330' W line
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.906544 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 38.117669 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 3304.0 **LOG TYPE:** Survey Sample Study
SOURCE: SMOKEY OIL CO. **WELL TYPE:** Oil and Gas Test
COMMENT: OILWELLS LOGGED BY COAL SECT-LOGS IN GRU

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-			NO RECORD	0.0	0.0	

MAPID: 05500880000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 5 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of NE SE
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.890531 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 38.115765 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 2278.0 **LOG TYPE:** Electric Log
SOURCE: SOHIO PETROLEUM CO. **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-253.0	CARBONDALE	HERRIN	COAL	7.0	660.0	
-303.0	CARBONDALE	BRIAR HILL	COAL	-	710.0	
-327.0	CARBONDALE	SPRINGFIELD	COAL	4.0	734.0	BLACK SHALE & LIMESTONE ROOF
-391.0	CARBONDALE	HOUCHIN CREEK	COAL	-	798.0	

MAPID: 05500005000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 6 **QUARTERS/FOOTAGES:** NW NW NE
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.917774 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.124683 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 429.4 **LOGGED (FT.):** 687.0 **LOG TYPE:**
SOURCE: BG MUDDYCS0002 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-250.6	CARBONDALE	HERRIN	COAL	6.8	680.0	

MAPID: 05500005000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 6 **QUARTERS/FOOTAGES:** NW NW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.917774 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.124683 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 429.0 **LOGGED (FT.):** 687.0 **LOG TYPE:** Drillers Log

SOURCE: L. N. WOOD **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
429.0			UNCONSOLIDATED	25.0	0.0	
404.0			ROCK	18.1	25.0	
385.9			COAL	0.4	43.1	
385.5			ROCK	375.5	43.5	
10.0			COAL	0.1	419.0	DIRTY
9.9			ROCK	164.0	419.1	
-154.1			COAL	0.8	583.1	
-154.8			ROCK	30.3	583.8	
-185.1			COAL	1.2	614.1	
-186.2			ROCK	22.5	615.2	
-208.7			COAL	0.3	637.7	
-208.9			ROCK	17.1	637.9	
-226.0			SANDSTONE	5.0	655.0	
-231.0			SHALE	11.0	660.0	SANDY
-242.0			LIMESTONE	7.0	671.0	
-249.0			BLACK SHALE	2.2	678.0	
-251.2	CARBONDALE	HERRIN	COAL	6.8	680.2	

MAPID: 05500005000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 6 **QUARTERS/FOOTAGES:** NW NW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.917774 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.124683 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 429.4 **LOGGED (FT.):** 687.0 **LOG TYPE:** Drillers Log

SOURCE: L.N. WOOD 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
429.4	PLEISTOCENE		CLAY	12.0	0.0	YELLOW
417.4	PLEISTOCENE		SAND & GRAVEL	5.0	12.0	
412.4	PLEISTOCENE		SAND & GRAVEL	3.0	17.0	
409.4	BOND		SANDSTONE	5.0	20.0	
404.4	BOND		SANDSTONE	3.0	25.0	
401.4	BOND		SANDY SHALE	15.1	28.0	
386.3	BOND		COAL	0.4	43.1	
385.9	BOND		SANDY SHALE	12.5	43.5	
373.4	BOND		SANDSTONE	7.0	56.0	
366.4	BOND		SANDSTONE	47.0	63.0	
319.4	BOND		SANDSTONE	20.0	110.0	
299.4	BOND		SHALE	8.0	130.0	LIGHT
291.4	BOND		SANDY SHALE	34.0	138.0	
257.4	BOND		SHALE	26.0	172.0	
231.4	BOND	CARTHAGE	LIMESTONE	8.0	198.0	
223.4	MODESTO		SHALE	4.0	206.0	
219.4	MODESTO		SHALE	6.0	210.0	
213.4	MODESTO		SHALE	16.0	216.0	
197.4	MODESTO		SHALE	3.0	232.0	
194.4	MODESTO		LIMESTONE	2.0	235.0	
192.4	MODESTO		SHALE	10.0	237.0	
182.4	MODESTO		SHALE	21.0	247.0	
161.4	MODESTO		SHALE	33.0	268.0	
128.4	MODESTO		SHALE	10.0	301.0	
118.4	MODESTO		SOFT SHALE	12.0	311.0	
106.4	MODESTO		SANDY SHALE	20.0	323.0	
86.4	MODESTO		SANDY SHALE	40.0	343.0	WITH SANDSTONE PARTINGS
46.4	MODESTO		SANDY SHALE	17.0	383.0	
29.4	MODESTO		SHALE	17.0	400.0	
12.4	MODESTO		SHALE	2.0	417.0	
10.4	MODESTO	CHAPEL	COAL	1.0	419.0	
9.4	MODESTO		CALCAREOUS SHALE	6.0	420.0	
3.4	MODESTO		SANDY SHALE	17.0	426.0	
-13.6	MODESTO		SANDY SHALE	38.0	443.0	
-51.6	MODESTO		SANDY SHALE	28.0	481.0	
-79.6	MODESTO		SANDY SHALE	32.0	509.0	
-111.6	MODESTO		SHALE	15.0	541.0	
-126.6	MODESTO		LIMESTONE	3.0	556.0	
-129.6	MODESTO		SANDY SHALE	7.0	559.0	

-136.6	MODESTO		SANDY SHALE	2.0	566.0
-138.6	MODESTO		SHALE	15.1	568.0
-153.7	MODESTO		COAL	0.8	583.1
-154.4	MODESTO		CLAYSTONE	3.2	583.8
-157.6	MODESTO		SANDY SHALE	11.0	587.0
-168.6	MODESTO		SANDY SHALE	5.0	598.0
-173.6	MODESTO		CALCAREOUS SHALE	2.0	603.0
-175.6	MODESTO	PIASA	LIMESTONE	4.0	605.0
-179.6	MODESTO		SHALE	5.1	609.0
-184.7	CARBONDALE	DANVILLE	COAL	1.2	614.1
-185.9	CARBONDALE		CALCAREOUS SHALE	6.8	615.3
-192.6	CARBONDALE		SANDY SHALE	3.0	622.0
-195.6	CARBONDALE		SANDSTONE	2.0	625.0
-197.6	CARBONDALE		SANDY SHALE	7.0	627.0
-204.6	CARBONDALE		SHALE	3.7	634.0
-208.3	CARBONDALE	ALLENBY	COAL	0.3	637.7
-208.5	CARBONDALE		CLAYSTONE	3.1	637.9
-211.6	CARBONDALE	BANKSTON FORK	LIMESTONE	3.3	641.0
-214.9	CARBONDALE		SHALE	3.0	644.3
-217.9	CARBONDALE		SANDSTONE	13.0	647.3
-230.9	CARBONDALE		SANDY SHALE	11.0	660.3
-241.9	CARBONDALE	BRERETON	LIMESTONE	7.0	671.3
-248.9	CARBONDALE	ANNA	SHALE	2.2	678.3
-251.0	CARBONDALE	HERRIN	COAL	6.8	680.4

MAPID: 05500782000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 6 **QUARTERS/FOOTAGES:** 1554' S line, 1764' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.913875 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.11558 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 414.0 **LOGGED (FT.):** 688.3 **LOG TYPE:** Survey Core Study

SOURCE: FRANKLIN COUNTY COAL CO. 3 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-182.7	MODESTO	PIASA	NODULAR LIMESTONE	5.3	596.7	
-187.9	MODESTO		SILTY SHALE	3.8	601.9	
-191.8	CARBONDALE	DANVILLE	COAL	2.5	605.8	
-194.3	CARBONDALE		SANDSTONE/SILTSTONE	23.9	608.3	
-218.2	CARBONDALE	ALLENBY	BLACK SHALE	0.6	632.2	
-218.8	CARBONDALE		SILTY SHALE	3.6	632.8	
-222.3	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	5.3	636.3	
-227.7	CARBONDALE	LAWSON	LIMESTONE W/ SHALE	3.8	641.7	
-231.5	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	3.7	645.5	
-235.2	CARBONDALE	LAWSON	SILTSTONE	1.5	649.2	
-236.7	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	11.2	650.7	
-247.8	CARBONDALE	LAWSON	BLACK SHALE	0.2	661.8	
-248.0	CARBONDALE	CONANT	LIMESTONE	3.0	662.0	
-251.0	CARBONDALE		BLACK SHALE	4.4	665.0	
-255.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	13.5	669.5	
-269.0	CARBONDALE	HERRIN	COAL	5.3	683.0	

MAPID: 05500785000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 6 **QUARTERS/FOOTAGES:** 40' N line, 1375' W line

QUADRANGLE: INA **LONGITUDE:** -88.925985 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.12539 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 425.0 **LOGGED (FT.):** 685.7 **LOG TYPE:** Survey Core Study

SOURCE: FRANKLIN COUNTY COAL CO. 6 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-177.0	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.8	602.0	
-181.8	MODESTO		DARK GRAY SHALE	3.0	606.8	
-184.8	CARBONDALE	DANVILLE	COAL	1.5	609.8	
-186.3	CARBONDALE		SANDSTONE/SILTSTONE	23.8	611.3	
-210.1	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.7	635.1	
-214.8	CARBONDALE	LAWSON	CALCAREOUS SHALE	2.3	639.8	
-217.0	CARBONDALE	LAWSON	SILTSTONE	3.8	642.0	
-220.8	CARBONDALE	LAWSON	SILTY SHALE	4.4	645.8	
-225.2	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	5.0	650.2	
-230.2	CARBONDALE	LAWSON	CARBONACEOUS SANDSTONE	2.7	655.2	
-232.8	CARBONDALE	ANNA	BLACK SHALE	2.8	657.8	
-235.7	CARBONDALE	ENERGY	SILTY SHALE	4.0	660.7	
-239.7	CARBONDALE	ENERGY	GRAY SHALE	15.3	664.7	
-255.0	CARBONDALE	HERRIN	COAL	5.7	680.0	

MAPID: 05501579000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 6 **QUARTERS/FOOTAGES:** 3650' S line, 4250' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.922526 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.121347 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 426.0 **LOGGED (FT.):** 2800.0 **LOG TYPE:** Electric Log

SOURCE: BOWERS, JOHN C. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-267.0	CARBONDALE	HERRIN	COAL	5.0	693.0	
-306.0	CARBONDALE	BRIAR HILL	COAL	-	732.0	
-331.0	CARBONDALE	SPRINGFIELD	COAL	3.0	757.0	BLACK SHALE & LIMESTONE ROOF
-406.0	CARBONDALE	HOUCHIN CREEK	COAL	-	832.0	

MAPID: 05585000000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 6 **QUARTERS/FOOTAGES:** 40' S line, 55' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.930552 **GEOLOGIST:** J MCBETH

CONFIDENTIAL: N **LATITUDE:** 38.111366 **DATE COLLECTED:** 0 / 0 / 1944

SURFACE ELEVATION (FT.): 425.4 **LOGGED (FT.):** 766.2 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO/FRANKLIN CO N6 **WELL TYPE:** Coal Test

COMMENT: PERMIT 13; MINE #21

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
425.4	PLEISTOCENE		UNCONSOLIDATED	20.0	0.0	
405.4	BOND		SHALY SANDSTONE	6.0	20.0	
399.4	BOND		GRAY SHALE	28.0	26.0	
371.4	BOND		SANDY SHALE	28.0	54.0	
343.4	BOND		SANDSTONE	59.0	82.0	
284.4	BOND		COAL	0.5	141.0	BONEY
283.9	BOND		UNDERCLAY	2.5	141.5	
281.4	BOND		SANDY SHALE	26.0	144.0	
255.4	BOND		SHALE	36.0	170.0	DARK
219.4	BOND	CARTHAGE	LIMESTONE	6.0	206.0	
213.4	MODESTO		SHALE	3.0	212.0	DARK
210.4	MODESTO		GRAY SHALE	25.0	215.0	
185.4	MODESTO		COAL	0.3	240.0	BONEY
185.1	MODESTO		UNDERCLAY	3.7	240.3	
181.4	MODESTO		SHALE	62.0	244.0	DARK
119.4	MODESTO		GRAY SHALE	24.0	306.0	
95.4	MODESTO		SANDY SHALE	38.0	330.0	
57.4	MODESTO	CHAPEL	COAL	0.8	368.0	BONEY
56.6	MODESTO		UNDERCLAY	5.2	368.8	
51.4	MODESTO		SHALE	71.0	374.0	CALCAREOUS
-19.6	MODESTO		LIMESTONE	2.0	445.0	
-21.6	MODESTO		GRAY SHALE	120.0	447.0	
-141.6	MODESTO		COAL WITH SHALE	1.0	567.0	BONY COAL
-142.6	MODESTO		UNDERCLAY	4.0	568.0	
-146.6	MODESTO		SHALE	22.0	572.0	NODULAR
-168.6	MODESTO	PIASA	LIMESTONE	3.0	594.0	
-171.6	MODESTO		GRAY SHALE	10.0	597.0	
-181.6	CARBONDALE	DANVILLE	COAL	1.5	607.0	BONEY
-183.1	CARBONDALE		GRAY SHALE	1.5	608.5	
-184.6	CARBONDALE		SANDY SHALE	8.0	610.0	
-192.6	CARBONDALE		SANDSTONE	6.0	618.0	
-198.6	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	624.0	
-204.6	CARBONDALE		GRAY SHALE	20.0	630.0	
-224.6	CARBONDALE	ANVIL ROCK	SANDSTONE	5.0	650.0	
-229.6	CARBONDALE	ENERGY	GRAY SHALE	26.5	655.0	
-256.1	CARBONDALE	HERRIN	COAL	5.6	681.5	
-261.7	CARBONDALE		UNDERCLAY	2.9	687.1	
-264.6	CARBONDALE		SHALE	17.0	690.0	NODULAR
-281.6	CARBONDALE		SANDY SHALE	18.0	707.0	

-299.6	CARBONDALE	BRIAR HILL	COAL	1.0	725.0	BONEY
-300.6	CARBONDALE		UNDERCLAY	1.0	726.0	
-301.6	CARBONDALE		GRAY SHALE	18.2	727.0	
-319.8	CARBONDALE	SPRINGFIELD	COAL	3.0	745.2	
-322.8	CARBONDALE		GRAY SHALE	18.0	748.2	TOTAL=766.17'; LOG SAYS 767'

MAPID: 05500006000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 7 **QUARTERS/FOOTAGES:** 2640' N line, 2640' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.916915 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.103995 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 413.5 **LOGGED (FT.):** 663.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0008 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-241.5	CARBONDALE	HERRIN	COAL	7.0	655.0	

MAPID: 05500006000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 7 **QUARTERS/FOOTAGES:** 2640' N line, 2640' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.916915 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.103995 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 413.0 **LOGGED (FT.):** 662.0 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-157.3	MODESTO	PIASA	LIMESTONE	5.0	570.3	
-162.3	MODESTO		GRAY SHALE	10.0	575.3	
-172.3	CARBONDALE	DANVILLE	COAL	1.5	585.3	
-173.8	CARBONDALE		GRAY SHALE	7.5	586.8	
-181.3	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	594.3	
-186.3	CARBONDALE	LAWSON	GRAY SHALE	16.0	599.3	
-202.3	CARBONDALE	LAWSON	SILTY SHALE	10.0	615.3	
-212.3	CARBONDALE	LAWSON	GRAY SHALE	5.0	625.3	
-217.3	CARBONDALE	BRERETON	LIMESTONE	2.0	630.3	
-219.3	CARBONDALE	ENERGY	GRAY SHALE	22.7	632.3	
-242.0	CARBONDALE	HERRIN	COAL	7.0	655.0	

MAPID: 05500006000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 7 **QUARTERS/FOOTAGES:** 2640' N line, 2640' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.916915 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.103995 **DATE COLLECTED:** 11 / 0 / 1909

SURFACE ELEVATION (FT.): 413.0 **LOGGED (FT.):** 663.0 **LOG TYPE:** Drillers Log

SOURCE: L.N. WOOD 8 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
413.0	PLEISTOCENE		CLAY	12.0	0.0	YELLOW
401.0	PLEISTOCENE		CLAY & GRAVEL	14.0	12.0	WITH GRAVEL, BLUE
387.0	BOND		SOFT SHALE	38.0	26.0	
349.0	BOND		SANDSTONE	3.0	64.0	SAND WITH GRAVEL
346.0	BOND		SANDSTONE	7.0	67.0	
339.0	BOND		SANDSTONE	84.7	74.0	
254.3	BOND		COAL	0.3	158.7	
254.0	BOND		LIMESTONE	6.0	159.0	
248.0	BOND		SHALE	13.0	165.0	
235.0	BOND	CARTHAGE	LIMESTONE	6.0	178.0	
229.0	MODESTO		SHALE	4.0	184.0	
225.0	MODESTO		SHALE	49.0	188.0	
176.0	MODESTO		SHALE	18.0	237.0	
158.0	MODESTO		SHALE	15.0	255.0	
143.0	MODESTO		SOFT SHALE	10.0	270.0	
133.0	MODESTO		SHALE	11.0	280.0	
122.0	MODESTO		SANDY SHALE	58.0	291.0	
64.0	MODESTO		SANDY SHALE	19.0	349.0	
45.0	MODESTO		SHALE	15.3	368.0	
29.7	MODESTO	CHAPEL	COAL	0.9	383.3	
28.8	MODESTO		CLAYSTONE	3.8	384.2	
25.0	MODESTO		SANDY SHALE	3.0	388.0	
22.0	MODESTO		SANDY SHALE	49.0	391.0	
-27.0	MODESTO		SANDY SHALE	46.0	440.0	
-73.0	MODESTO		SANDY SHALE	40.0	486.0	
-113.0	MODESTO		SHALE	15.8	526.0	
-128.8	MODESTO		COAL	0.8	541.8	
-129.7	MODESTO		CLAYSTONE	4.3	542.7	
-134.0	MODESTO		SHALE	12.0	547.0	
-146.0	MODESTO		SHALE	6.3	559.0	
-152.3	MODESTO	DEGRAFF	COAL	0.8	565.3	
-153.2	MODESTO		SHALE	3.8	566.2	
-157.0	MODESTO	PIASA	LIMESTONE	5.0	570.0	
-162.0	MODESTO		SHALE	10.0	575.0	
-172.0	CARBONDALE	DANVILLE	COAL	1.5	585.0	
-173.5	CARBONDALE		SHALE	5.5	586.5	
-179.0	CARBONDALE		SHALE	2.0	592.0	
-181.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	594.0	
-186.0	CARBONDALE		SHALE	11.0	599.0	

-197.0	CARBONDALE		SHALE	5.0	610.0
-202.0	CARBONDALE		SANDY SHALE	10.0	615.0
-212.0	CARBONDALE		SHALE	5.0	625.0
-217.0	CARBONDALE	BRERETON	LIMESTONE	2.0	630.0
-219.0	CARBONDALE	ENERGY	SHALE	13.0	632.0
-232.0	CARBONDALE	ENERGY	SHALE	9.7	645.0
-241.7	CARBONDALE	HERRIN	COAL	7.0	654.7
-248.7	CARBONDALE		CLAYSTONE	1.3	661.7

MAPID: 05501292000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 7 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.920221 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.097463 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 398.0 **LOGGED (FT.):** 2914.0 **LOG TYPE:** Electric Log

SOURCE: JONES, BOND D. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-222.0	CARBONDALE	HERRIN	COAL	7.0	620.0	
-275.0	CARBONDALE	BRIAR HILL	COAL	-	673.0	
-298.0	CARBONDALE	SPRINGFIELD	COAL	5.0	696.0	BLACK SHALE & LIMESTONE ROOF
-367.0	CARBONDALE	HOUCHIN CREEK	COAL	-	765.0	

MAPID: 05502266000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 8 **QUARTERS/FOOTAGES:** 2563' N line, 507' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.891217 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.104094 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 420.0 **LOGGED (FT.):** 675.7 **LOG TYPE:** Survey Core Study

SOURCE: BELL & ZOLLER COAL CO 3 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-181.1	MODESTO	PIASA	LIMESTONE	4.2	601.1	
-185.2	MODESTO		GRAY SHALE	6.8	605.2	
-192.1	CARBONDALE	DANVILLE	COAL	2.2	612.1	
-194.2	CARBONDALE		CLAYSTONE & SHALE	12.8	614.2	
-207.1	CARBONDALE	BANKSTON FORK	LIMESTONE	3.8	627.1	
-210.8	CARBONDALE	LAWSON	GRAY SHALE	30.0	630.8	
-240.8	CARBONDALE	BRERETON	LIMESTONE	3.1	660.8	
-243.9	CARBONDALE	ANNA	DARK GRAY SHALE	2.4	663.9	
-246.3	CARBONDALE	ENERGY	GRAY SHALE	3.7	666.3	
-250.0	CARBONDALE	HERRIN	COAL	5.7	670.0	

MAPID: 05500548000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 9 **QUARTERS/FOOTAGES:** 660' N line, 330' E line of NW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.876716 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.109027 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 431.0 **LOGGED (FT.):** 3091.0 **LOG TYPE:** Electric Log

SOURCE: JUNGBECKER R **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-246.0	CARBONDALE	HERRIN	COAL	5.0	677.0	
-292.0	CARBONDALE	BRIAR HILL	COAL	-	723.0	
-337.0	CARBONDALE	SPRINGFIELD	COAL	4.0	768.0	SANDSTONE & BLACK SHALE ROOF
-397.0	CARBONDALE	HOUCHIN CREEK	COAL	-	828.0	

MAPID: 05500829000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 9 **QUARTERS/FOOTAGES:** 330' N line, 2310' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.879004 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.109992 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 433.0 **LOGGED (FT.):** 680.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-169.0	MODESTO	PIASA	LIMESTONE	4.0	602.0	
-173.0	MODESTO		GRAY SHALE	6.0	606.0	
-179.0	CARBONDALE	DANVILLE	COAL	2.0	612.0	
-181.0	CARBONDALE		CALCAREOUS SHALE	16.0	614.0	
-197.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	630.0	
-204.0	CARBONDALE	LAWSON	GRAY SHALE	22.0	637.0	
-226.0	CARBONDALE	ANNA	BLACK SHALE	3.0	659.0	
-229.0	CARBONDALE	ENERGY	GRAY SHALE	12.0	662.0	
-241.0	CARBONDALE	HERRIN	COAL	6.0	674.0	

MAPID: 05522780000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 10 **QUARTERS/FOOTAGES:** SW SW NW

QUADRANGLE: EWING **LONGITUDE:** -88.870343 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.103476 **DATE COLLECTED:** 8 / 18 / 1976

SURFACE ELEVATION (FT.): 446.0 **LOGGED (FT.):** 813.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY EN-2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
446.0			UNCLASSIFIED	695.0	0.0	
-249.0	CARBONDALE		SANDY SHALE	10.0	695.0	BEGIN CORE
-259.0	CARBONDALE		SHALE	0.7	705.0	DARK
-259.7	CARBONDALE	BRERETON	LIMESTONE	1.3	705.7	
-261.0	CARBONDALE	ANNA	BLACK SHALE	2.3	707.0	
-263.3	CARBONDALE	ENERGY	SHALE	5.0	709.3	LIGHT
-268.3	CARBONDALE	HERRIN	COAL	5.8	714.3	
-274.1	CARBONDALE		UNDERCLAY	2.9	720.1	
-277.0	CARBONDALE		SILTSTONE	8.0	723.0	
-285.0	CARBONDALE		SHALE	38.0	731.0	NOT CORED
-323.0	CARBONDALE	BRIAR HILL	COAL	1.0	769.0	NOT CORED
-324.0	CARBONDALE		SHALE	10.0	770.0	NOT CORED
-334.0	CARBONDALE		SILTSTONE	4.5	780.0	BEGIN CORE
-338.5	CARBONDALE		SHALE	12.8	784.5	
-351.3	CARBONDALE	ST. DAVID	LIMESTONE	1.7	797.3	
-353.0	CARBONDALE	TURNER MINE	BLACK SHALE	5.2	799.0	
-358.2	CARBONDALE	TURNER MINE	LIMESTONE	0.3	804.2	
-358.4	CARBONDALE	SPRINGFIELD	COAL	5.6	804.4	
-364.0	CARBONDALE		UNDERCLAY	0.4	810.0	
-364.4	CARBONDALE		SILTSTONE	2.6	810.4	
-367.0				0.0	813.0	

MAPID: 05523198000C **VERSION:** 1 **PROJECT:** NCRDS98

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 11 **QUARTERS/FOOTAGES:** NE SW

QUADRANGLE: EWING **LONGITUDE:** -88.84379 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.103457 **DATE COLLECTED:** 9 / 10 / 1981

SURFACE ELEVATION (FT.): 486.0 **LOGGED (FT.):** 881.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #86 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
486.0			UNCLASSIFIED	745.0	0.0	
-259.0	CARBONDALE		SHALE & SANDSTONE	1.3	745.0	
-260.3	CARBONDALE		SANDY SHALE	10.3	746.3	
-270.6	CARBONDALE		SHALE	0.4	756.6	BLACK
-271.0	CARBONDALE		SANDY SHALE	0.1	757.0	
-271.1	CARBONDALE		SHALE	0.1	757.1	BLACK
-271.2	CARBONDALE	BRERETON	LIMESTONE	2.8	757.2	
-274.0	CARBONDALE	ANNA	SHALE	1.6	760.0	BLACK
-275.6	CARBONDALE	ENERGY	SHALE	6.6	761.6	
-282.2	CARBONDALE	HERRIN	COAL	6.0	768.2	
-288.2	CARBONDALE		SHALE	2.1	774.2	
-290.3	CARBONDALE		SANDY SHALE	1.9	776.3	
-292.2	CARBONDALE		UNCLASSIFIED	68.8	778.2	
-361.0	CARBONDALE		SHALE	7.6	847.0	
-368.6	CARBONDALE	ST. DAVID	SHALY LIMESTONE	1.4	854.6	
-370.0	CARBONDALE	TURNER MINE	SHALE	2.1	856.0	BLACK
-372.1	CARBONDALE	DYKERSBURG	SILTY SHALE	1.5	858.1	
-373.6	CARBONDALE	DYKERSBURG	SHALE	6.2	859.6	DARK
-379.8	CARBONDALE	SPRINGFIELD	COAL	5.5	865.8	
-385.3	CARBONDALE		SANDSTONE	9.8	871.3	

MAPID: 05500342000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 12 **QUARTERS/FOOTAGES:** 660' N line, 330' E line of SW

QUADRANGLE: EWING **LONGITUDE:** -88.826395 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.102194 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 553.0 **LOGGED (FT.):** 3292.0 **LOG TYPE:** Electric Log

SOURCE: YINGLING & HAYES **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-283.0	CARBONDALE	HERRIN	COAL	6.0	836.0	
-337.0	CARBONDALE	BRIAR HILL	COAL	-	890.0	
-369.0	CARBONDALE	SPRINGFIELD	COAL	5.0	922.0	BLACK SHALE & LIMESTONE ROOF
-443.0	CARBONDALE	HOUCHIN CREEK	COAL	-	996.0	

MAPID: 05502513000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 12 **QUARTERS/FOOTAGES:** 330' N line, 2310' E line

QUADRANGLE: EWING **LONGITUDE:** -88.823985 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.1107 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 505.0 **LOGGED (FT.):** 790.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-200.0	MODESTO	PIASA	LIMESTONE	3.0	705.0	
-203.0	MODESTO		SHALE	9.5	708.0	
-212.5	CARBONDALE	DANVILLE	COAL	1.5	717.5	
-214.0	CARBONDALE		SHALE	17.0	719.0	
-231.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	3.0	736.0	
-234.0	CARBONDALE	LAWSON	SHALE	36.0	739.0	
-270.0	CARBONDALE	CONANT	LIMESTONE & SHALE	1.0	775.0	
-271.0	CARBONDALE	JAMESTOWN	BONE COAL	1.0	776.0	
-272.0	CARBONDALE		DARK GRAY SHALE	3.0	777.0	
-275.0	CARBONDALE	BRERETON	LIMESTONE	4.0	780.0	
-279.0	CARBONDALE	ANNA	BLACK SHALE	2.0	784.0	
-281.0	CARBONDALE	HERRIN	COAL	4.0	786.0	

MAPID: 05523199000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 12 **QUARTERS/FOOTAGES:** NE SE

QUADRANGLE: EWING **LONGITUDE:** -88.81884 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.103867 **DATE COLLECTED:** 9 / 14 / 1981

SURFACE ELEVATION (FT.): 519.0 **LOGGED (FT.):** 898.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #66 **WELL TYPE:** Coal Test

COMMENT: 523640 N, 360310 E

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
519.0			UNCLASSIFIED	800.0	0.0	
-281.0	CARBONDALE	HERRIN	COAL	4.8	800.0	TOP OF COAL LOST
-285.8	CARBONDALE		UNDERCLAY	2.3	804.8	
-288.0	CARBONDALE		SANDSTONE	4.8	807.0	
-292.8	CARBONDALE		UNCLASSIFIED	67.2	811.8	
-360.0	CARBONDALE	ST. DAVID	LIMESTONE	0.8	879.0	
-360.8	CARBONDALE		SILTY BLACK SHALE	6.7	879.8	
-367.4	CARBONDALE	SPRINGFIELD	COAL	5.6	886.4	
-373.0	CARBONDALE		UNDERCLAY	6.0	892.0	

MAPID: 05523511000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 12 **QUARTERS/FOOTAGES:** SW NW
QUADRANGLE: EWING **LONGITUDE:** -88.832158 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.105817 **DATE COLLECTED:** 10 / 29 / 1984
SURFACE ELEVATION (FT.): 520.0 **LOGGED (FT.):** 860.0 **LOG TYPE:** Drillers Log
SOURCE: DWIGHT BREHM RESOURCES B-3 **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-254.0	CARBONDALE	HERRIN	COAL	6.0	774.0	
-335.0	CARBONDALE	SPRINGFIELD	COAL	5.0	855.0	#5,#6 PROTECTED BY CEMENT

MAPID: 05500830000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 14 **QUARTERS/FOOTAGES:** 330' N line, 2310' W line
QUADRANGLE: EWING **LONGITUDE:** -88.844866 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 38.095432 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 481.0 **LOGGED (FT.):** 3222.0 **LOG TYPE:** Electric Log
SOURCE: MAGNOLIA PETROLEUM **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-291.0	CARBONDALE	HERRIN	COAL	6.0	772.0	
-343.0	CARBONDALE	BRIAR HILL	COAL	-	824.0	
-373.0	CARBONDALE	SPRINGFIELD	COAL	4.0	854.0	BLACK SHALE & LIMESTONE ROOF
-451.0	CARBONDALE	HOUCHIN CREEK	COAL	-	932.0	

MAPID: 05500830000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 14 **QUARTERS/FOOTAGES:** 330' N line, 2310' W line

QUADRANGLE: EWING **LONGITUDE:** -88.844866 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.095432 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 481.0 **LOGGED (FT.):** 778.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-217.0	MODESTO	PIASA	LIMESTONE	6.0	698.0	
-223.0	MODESTO		SHALE	7.0	704.0	
-230.0	CARBONDALE	DANVILLE	COAL	3.0	711.0	
-233.0	CARBONDALE		SILTY SHALE	14.0	714.0	
-247.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	728.0	
-253.0	CARBONDALE	LAWSON	SILTY SHALE	22.0	734.0	
-275.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	8.0	756.0	
-283.0	CARBONDALE	ANNA	BLACK SHALE	4.0	764.0	
-287.0	CARBONDALE	ENERGY	GRAY SHALE	4.0	768.0	
-291.0	CARBONDALE	HERRIN	COAL	6.0	772.0	

MAPID: 05522796000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 14 **QUARTERS/FOOTAGES:** NE NE SE

QUADRANGLE: EWING **LONGITUDE:** -88.836671 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.088908 **DATE COLLECTED:** 8 / 16 / 1976

SURFACE ELEVATION (FT.): 489.0 **LOGGED (FT.):** 871.1 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY EN-4 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
489.0			UNCLASSIFIED	696.0	0.0	
-207.0	MODESTO	PIASA	LIMESTONE	3.0	696.0	
-210.0	MODESTO		SHALE	9.0	699.0	
-219.0	CARBONDALE	DANVILLE	COAL	2.0	708.0	
-221.0	CARBONDALE		SHALE	16.0	710.0	
-237.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	726.0	
-243.0	CARBONDALE		SHALE	28.0	732.0	
-271.0	CARBONDALE		SHALE	2.5	760.0	BEGIN CORE
-273.5	CARBONDALE	BRERETON	LIMESTONE	1.7	762.5	
-275.2	CARBONDALE	ANNA	BLACK SHALE	2.1	764.2	
-277.3	CARBONDALE	ENERGY	SHALE	6.1	766.3	LIGHT
-283.3	CARBONDALE	HERRIN	COAL	6.2	772.3	
-289.5	CARBONDALE		UNDERCLAY	2.8	778.5	
-292.3	CARBONDALE		SANDSTONE	6.7	781.3	
-299.0	CARBONDALE		SHALE	44.0	788.0	NOT CORED
-343.0	CARBONDALE	BRIAR HILL	COAL	1.0	832.0	NOT CORED
-344.0	CARBONDALE		SHALE	9.0	833.0	NOT CORED
-353.0	CARBONDALE		SHALE	9.8	842.0	BEGIN CORE
-362.8	CARBONDALE	ST. DAVID	LIMESTONE	1.0	851.8	
-363.8	CARBONDALE	TURNER MINE	BLACK SHALE	3.5	852.8	
-367.2	CARBONDALE	SPRINGFIELD	COAL	4.8	856.2	
-372.0	CARBONDALE		UNDERCLAY	3.8	861.0	
-375.8	CARBONDALE		SILTSTONE	6.3	864.8	
-382.0	CARBONDALE			0.0	871.0	

MAPID: 055255C0001F **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 16 **QUARTERS/FOOTAGES:** SE SW SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.886028 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.082562 **DATE COLLECTED:** 0 / 0 / 1932

SURFACE ELEVATION (FT.): 440.0 **LOGGED (FT.):** 5.2 **LOG TYPE:** Measured section

SOURCE: FLD NOTES-WANLESS **WELL TYPE:** Outcrop

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
440.0			SHALE	1.5	0.0	
-	BOND		COAL	1.3		STRIPPED TO THE SOUTH
-	BOND		SANDSTONE	0.3		
-	BOND		SHALE	2.0		

MAPID: 05522790000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 17 **QUARTERS/FOOTAGES:** SW SE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.891642 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.0894 **DATE COLLECTED:** 7 / 17 / 1976

SURFACE ELEVATION (FT.): 433.0 **LOGGED (FT.):** 741.5 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY EN-1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
433.0			UNCLASSIFIED	586.0	0.0	
-153.0	MODESTO	PIASA	LIMESTONE	3.0	586.0	
-156.0	MODESTO		SHALE	8.0	589.0	
-164.0	CARBONDALE	DANVILLE	COAL	2.0	597.0	
-166.0	CARBONDALE		SHALE	12.0	599.0	
-178.0	CARBONDALE		LIMESTONE	4.0	611.0	LIGHT
-182.0	CARBONDALE		SHALE	5.8	615.0	BEGIN CORE
-187.8	CARBONDALE		CORE LOSS	15.6	620.8	
-203.4	CARBONDALE		SHALE	2.6	636.4	DARK
-206.0	CARBONDALE	BRERETON	LIMESTONE	1.6	639.0	
-207.6	CARBONDALE	ANNA	SHALE	1.6	640.6	BLACK
-209.2	CARBONDALE	ENERGY	SHALE	16.5	642.2	DARK
-225.7	CARBONDALE	HERRIN	COAL	6.9	658.7	
-232.6	CARBONDALE		UNDERCLAY	4.7	665.6	DARK
-237.3	CARBONDALE		LIMESTONE	9.5	670.3	
-246.8	CARBONDALE		SHALE	20.2	679.8	NOT CORED
-267.0	CARBONDALE	BRIAR HILL	COAL	1.0	700.0	NOT CORED
-268.0	CARBONDALE		SHALE	10.0	701.0	NOT CORED
-278.0	CARBONDALE		SANDY SHALE	10.0	711.0	BEGIN CORE
-288.0	CARBONDALE	ST. DAVID	LIMESTONE	0.7	721.0	
-288.7	CARBONDALE	TURNER MINE	SILTY BLACK SHALE	3.9	721.7	
-292.6	CARBONDALE	SPRINGFIELD	COAL	4.5	725.6	
-297.1	CARBONDALE		UNDERCLAY	2.5	730.1	
-299.6	CARBONDALE		SILTY SANDSTONE	8.9	732.6	
-308.5	CARBONDALE			0.0	741.5	

MAPID: 05500009000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 18 **QUARTERS/FOOTAGES:** SE SE SE SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.908571 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.082438 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 416.6 **LOGGED (FT.):** 620.0 **LOG TYPE:**

SOURCE: BG MUDDYCS **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-195.4	CARBONDALE	HERRIN	COAL	5.5	612.0	

MAPID: 05500009000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 18 **QUARTERS/FOOTAGES:** SE SE SE SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.908571 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.082438 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): 417.0 **LOGGED (FT.):** 620.0 **LOG TYPE:** Drillers Log

SOURCE: SULLIVAN MCHY C **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
417.0			UNKNOWN	300.0	0.0	
117.0			ROCK	39.0	300.0	
78.0			COAL	1.0	339.0	
77.0			ROCK	161.1	340.0	
-84.1			COAL	0.7	501.1	
-84.8			ROCK	36.5	501.8	
-121.3			COAL	1.3	538.3	
-122.7			ROCK	52.3	539.7	
-175.0			BLACK SHALE	1.7	592.0	SANDY
-176.7			LIMESTONE	18.3	593.7	
-195.0			BLACK SHALE	0.3	612.0	
-195.3	CARBONDALE	HERRIN	COAL	6.6	612.3	BLUE BAND .12'
-200.8	CARBONDALE		ROCK	2.2	617.8	

MAPID: 05500009000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 18 **QUARTERS/FOOTAGES:** SE SE SE SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.908571 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.082438 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): 416.6 **LOGGED (FT.):** 620.0 **LOG TYPE:** Drillers Log

SOURCE: H. HAFER **WELL TYPE:** Coal Test

COMMENT: NO RECORD OF FIRST 300' GIVEN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
116.6			SANDY SHALE	22.0	300.0	
94.6			SHALE WITH LIMESTONE	8.0	322.0	WITH LIMESTONE BANDS
86.6			SHALE	9.0	330.0	
77.6	MODESTO	CHAPEL	COAL	1.0	339.0	
76.6	MODESTO		CLAYSTONE	2.0	340.0	
74.6	MODESTO		SHALE WITH LIMESTONE	12.0	342.0	WITH LIMESTONE BANDS
62.6	MODESTO		SANDSTONE	27.0	354.0	WITH SHALE PARTINGS
35.6	MODESTO		SANDSTONE	27.0	381.0	WITH SHALE PARTINGS
8.6	MODESTO		SANDY SHALE	27.0	408.0	WITH SANDSTONE PARTINGS
-18.4	MODESTO		SANDY SHALE	28.0	435.0	
-46.4	MODESTO		SHALE	12.0	463.0	
-58.4	MODESTO		SANDY SHALE	1.0	475.0	
-59.4	MODESTO		SANDSTONE	3.0	476.0	
-62.4	MODESTO		SHALE WITH LIMESTONE	15.0	479.0	WITH LIMESTONE BANDS
-77.4	MODESTO		SHALE	1.0	494.0	DARK BLUE
-78.4	MODESTO		SHALE	6.1	495.0	DARK BLUE
-84.5	MODESTO		COAL	0.7	501.1	
-85.2	MODESTO		SOFT SHALE	5.3	501.8	
-90.4	MODESTO		SANDSTONE/SHALE	9.0	507.0	
-99.4	MODESTO		CALCAREOUS SHALE	7.0	516.0	
-106.4	MODESTO		SHALE	7.0	523.0	
-113.4	MODESTO	PIASA	LIMESTONE	3.5	530.0	
-116.9	MODESTO		SHALE	4.8	533.5	
-121.7	CARBONDALE	DANVILLE	COAL	1.3	538.3	
-123.1	CARBONDALE		SHALE	2.3	539.7	
-125.4	CARBONDALE		SANDSTONE	7.0	542.0	
-132.4	CARBONDALE		SHALE	2.0	549.0	
-134.4	CARBONDALE		SANDSTONE/SHALE	7.0	551.0	
-141.4	CARBONDALE		SHALE	9.0	558.0	
-150.4	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	567.0	
-152.4	CARBONDALE		SHALE	12.0	569.0	
-164.4	CARBONDALE		SANDSTONE	2.0	581.0	
-166.4	CARBONDALE		SHALE	5.0	583.0	
-171.4	CARBONDALE		SANDY SHALE	5.7	588.0	
-177.1	CARBONDALE	BRERETON	LIMESTONE	13.3	593.7	
-190.4	CARBONDALE		LIMESTONE	5.0	607.0	
-195.4	CARBONDALE	ANNA	SHALE	0.3	612.0	
-195.7	CARBONDALE	HERRIN	COAL	5.1	612.3	
-200.8	CARBONDALE	HERRIN	BLUE BAND	0.1	617.4	

-200.9	CARBONDALE	HERRIN	COAL	0.3	617.5
-201.2	CARBONDALE		CLAYSTONE	2.2	617.8

MAPID: 05501402000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 18 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.917977 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.082875 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 444.0 **LOGGED (FT.):** 2524.0 **LOG TYPE:** Electric Log

SOURCE: INLAND PRODUCERS CO **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-193.0	CARBONDALE	HERRIN	COAL	5.0	637.0	
-234.0	CARBONDALE	BRIAR HILL	COAL	-	678.0	
-256.0	CARBONDALE	SPRINGFIELD	COAL	4.0	700.0	BLACK SHALE & LIMESTONE ROOF
-334.0	CARBONDALE	HOUCHIN CREEK	COAL	-	778.0	

MAPID: 05502267000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 18 **QUARTERS/FOOTAGES:** 2408' S line, 2355' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.915999 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.088616 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 410.0 **LOGGED (FT.):** 606.3 **LOG TYPE:** Survey Core Study

SOURCE: BELL & ZOLLER COAL CO 2 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-123.0	MODESTO	PIASA	LIMESTONE	3.7	533.0	
-126.7	MODESTO		GRAY SHALE	9.0	536.7	
-135.7	CARBONDALE	DANVILLE	COAL	2.4	545.7	
-138.1	CARBONDALE		CLAYSTONE & SHALE	8.4	548.1	
-146.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.4	556.5	
-148.0	CARBONDALE	LAWSON	GRAY SHALE	26.5	558.0	
-174.5	CARBONDALE	BRERETON	LIMESTONE	15.3	584.5	
-189.8	CARBONDALE	ANNA	BLACK SHALE	0.9	599.8	
-191.0	CARBONDALE	HERRIN	COAL	5.3	601.0	

MAPID: 05524370000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 18 **QUARTERS/FOOTAGES:** 2800' N line, 3600' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.917856 **GEOLOGIST:** J MCBETH

CONFIDENTIAL: N **LATITUDE:** 38.088846 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 671.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. K-2 **WELL TYPE:** Coal Test

COMMENT: PERMIT 13; MINE #21

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	PLEISTOCENE		CLAY	12.4	0.0	SILTY
-	PLEISTOCENE		SAND	8.3	12.4	
-	BOND		SHALE	0.4	20.7	VERY SOFT,TAN
-	BOND		SANDSTONE	25.2	21.1	CALCAREOUS, COARSE
-	BOND		GRAY SHALE	1.8	46.3	
-	BOND		COAL	0.5	48.1	
-	BOND		UNDERCLAY	3.0	48.6	
-	BOND		GRAY SHALE	72.2	51.6	
-	BOND	CARTHAGE	LIMESTONE	3.3	123.8	
-	MODESTO		SANDY SHALE	48.5	127.1	
-	MODESTO	MACOUPIN	LIMESTONE	2.5	175.6	HARD,LIGHT
-	MODESTO		GRAY SHALE	91.9	178.1	
-	MODESTO	WOMAC	COAL	0.4	270.0	
-	MODESTO		SANDY SHALE	71.6	270.4	
-	MODESTO	CHAPEL	COAL	5.4	342.0	CORE ELEVATION FROM LOG
-	MODESTO		UNDERCLAY	1.6	347.4	
-	MODESTO		GRAY SHALE	177.2	349.0	
-	MODESTO	DEGRAFF	COAL	1.5	526.2	
-	MODESTO		UNDERCLAY	1.4	527.7	
-	MODESTO		GRAY SHALE	3.9	529.1	
-	MODESTO	PIASA	LIMESTONE	3.8	533.0	
-	MODESTO		GRAY SHALE	9.0	536.8	
-	CARBONDALE	DANVILLE	COAL	2.4	545.8	
-	CARBONDALE		UNDERCLAY	2.4	548.2	
-	CARBONDALE		GRAY SHALE	6.1	550.6	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	556.7	
-	CARBONDALE		GRAY SHALE	26.6	558.0	
-	CARBONDALE	BRERETON	LIMESTONE	15.4	584.6	
-	CARBONDALE	ANNA	BLACK SHALE	0.8	599.9	
-	CARBONDALE	HERRIN	COAL	5.4	600.8	
-	CARBONDALE		UNDERCLAY	3.3	606.2	
-	CARBONDALE		SANDY SHALE	7.6	609.4	CALCAREOUS
-	CARBONDALE		GRAY SHALE	27.2	617.0	
-	CARBONDALE	BRIAR HILL	COAL	1.3	644.2	
-	CARBONDALE		UNDERCLAY	1.5	645.5	
-	CARBONDALE	CANTON	SANDY SHALE	12.1	647.0	
-	CARBONDALE	ST. DAVID	LIMESTONE	1.4	659.1	
-	CARBONDALE	TURNER MINE	BLACK SHALE	1.6	660.5	WITH COAL PARTINGS
-	CARBONDALE	DYKERSBURG	GRAY SHALE	3.2	662.1	

-	CARBONDALE	SPRINGFIELD	COAL	4.2	665.3
-	CARBONDALE		UNDERCLAY	1.6	669.4

MAPID: 05500313000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 19 **QUARTERS/FOOTAGES:** NE NW SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.914867 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.073691 **DATE COLLECTED:** 0 / 0 / 1939

SURFACE ELEVATION (FT.): 454.2 **LOGGED (FT.):** 3073.0 **LOG TYPE:**

SOURCE: PHILLIPS **WELL TYPE:** Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-185.8	CARBONDALE	HERRIN	COAL	5.0	640.0	
-240.8	CARBONDALE	SPRINGFIELD	COAL	2.0	695.0	

MAPID: 05501450000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 19 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.92028 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.081051 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 451.0 **LOGGED (FT.):** 2524.0 **LOG TYPE:** Electric Log

SOURCE: LINDSAY, THEODORE R. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-192.0	CARBONDALE	HERRIN	COAL	5.0	643.0	
-232.0	CARBONDALE	BRIAR HILL	COAL	-	683.0	
-253.0	CARBONDALE	SPRINGFIELD	COAL	3.0	704.0	BLACK SHALE & LIMESTONE ROOF
-332.0	CARBONDALE	HOUCHIN CREEK	COAL	-	783.0	

MAPID: 05502375000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 19 **QUARTERS/FOOTAGES:** 330' N line, 990' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.926927 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.081037 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 448.0 **LOGGED (FT.):** 642.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-108.0	MODESTO	PIASA	LIMESTONE	6.0	556.0	
-114.0	MODESTO		GRAY SHALE	6.0	562.0	
-120.0	CARBONDALE	DANVILLE	COAL	2.0	568.0	
-122.0	CARBONDALE		SHALE & SANDSTONE	24.0	570.0	
-146.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	594.0	
-149.0	CARBONDALE	LAWSON	CLAYSTONE & SHALE	7.0	597.0	
-156.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	8.0	604.0	
-164.0	CARBONDALE	LAWSON	SHALE	11.0	612.0	
-175.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	13.5	623.0	
-188.5	CARBONDALE	ANNA	BLACK SHALE	1.5	636.5	
-190.0	CARBONDALE	HERRIN	COAL	4.0	638.0	

MAPID: 05500010000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 20 **QUARTERS/FOOTAGES:** SE SE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.890626 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.075298 **DATE COLLECTED:** 11 / 1 / 1909

SURFACE ELEVATION (FT.): 480.0 **LOGGED (FT.):** 670.0 **LOG TYPE:** Survey Core Study

SOURCE: L. N. WOOD C **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
480.0			UNCONSOLIDATED	12.0	0.0	
468.0			ROCK	554.2	12.0	
-86.2			COAL	0.8	566.2	SHALEY
-87.0			ROCK	29.3	567.0	
-116.3			COAL	2.3	596.3	
-118.6			ROCK	40.4	598.6	
-159.0			SHALE	13.5	639.0	SANDY
-172.5			LIMESTONE	11.5	652.5	
-184.0			SHALE	0.3	664.0	
-184.3	CARBONDALE	HERRIN	COAL	5.3	664.3	
-189.5	CARBONDALE		UNDERCLAY	0.5	669.5	

MAPID: 05500010000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 20 **QUARTERS/FOOTAGES:** SE SE NE
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.890626 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.075298 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 480.0 **LOGGED (FT.):** 669.3 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-106.0	MODESTO	PIASA	LIMESTONE	4.0	586.0	
-110.0	MODESTO		DARK GRAY SHALE	6.3	590.0	
-116.3	CARBONDALE	DANVILLE	COAL	2.3	596.3	
-118.6	CARBONDALE		GRAY SHALE	20.4	598.6	
-139.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	619.0	
-143.0	CARBONDALE	LAWSON	SILTY SHALE	29.0	623.0	
-172.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	11.5	652.0	
-183.5	CARBONDALE	ANNA	DARK GRAY SHALE	0.3	663.5	
-184.0	CARBONDALE	HERRIN	COAL	5.3	664.0	

MAPID: 05500010000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 20 **QUARTERS/FOOTAGES:** SE SE NE
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.890626 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.075298 **DATE COLLECTED:** 0 / 0 / 1909
SURFACE ELEVATION (FT.): 480.4 **LOGGED (FT.):** 670.0 **LOG TYPE:**
SOURCE: BG MUDDYCS0007 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-183.6	CARBONDALE	HERRIN	COAL	5.3	664.0	

MAPID: 05500010000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 20 **QUARTERS/FOOTAGES:** SE SE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.890626 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.075298 **DATE COLLECTED:** 11 / 1 / 1909

SURFACE ELEVATION (FT.): 480.4 **LOGGED (FT.):** 670.0 **LOG TYPE:** Drillers Log

SOURCE: L.N. WOOD 7 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
480.4	PLEISTOCENE		CLAY	12.0	0.0	YELLOW
468.4	BOND		SHALE	4.0	12.0	
464.4	BOND		LIMESTONE	5.0	16.0	
459.4	BOND		SANDSTONE	95.0	21.0	
364.4	BOND		SHALE	23.0	116.0	
341.4	BOND		SHALE	20.0	139.0	
321.4	BOND	CARTHAGE	LIMESTONE	5.0	159.0	
316.4	MODESTO		SHALE	9.0	164.0	
307.4	MODESTO		CALCAREOUS SHALE	32.0	173.0	
275.4	MODESTO		SHALE	65.0	205.0	
210.4	MODESTO		SHALE	5.0	270.0	
205.4	MODESTO		SHALE	15.0	275.0	
190.4	MODESTO		CLAYSTONE	5.0	290.0	
185.4	MODESTO		SHALE	59.0	295.0	
126.4	MODESTO		SANDY SHALE	10.0	354.0	
116.4	MODESTO		SHALE	31.0	364.0	
85.4	MODESTO		SHALE	2.0	395.0	
83.4	MODESTO		SHALE	0.4	397.0	
83.0	MODESTO		CALCAREOUS SHALE	8.6	397.4	
74.4	MODESTO		LIMESTONE	6.0	406.0	
68.4	MODESTO		SANDY SHALE	52.0	412.0	
16.4	MODESTO		SANDY SHALE	51.0	464.0	
-34.6	MODESTO		SANDY SHALE	3.0	515.0	
-37.6	MODESTO		SHALE	13.0	518.0	
-50.6	MODESTO		SHALE	6.0	531.0	
-56.6	MODESTO		LIMESTONE	2.0	537.0	
-58.6	MODESTO		SHALE	16.0	539.0	
-74.6	MODESTO		SHALE	10.2	555.0	
-84.8	MODESTO		SHALE	1.0	565.2	
-85.8	MODESTO		SHALY COAL	0.8	566.2	
-86.6	MODESTO		SHALE	18.0	567.0	
-104.6	MODESTO		SHALE	1.0	585.0	
-105.6	MODESTO	PIASA	LIMESTONE	4.0	586.0	
-109.6	MODESTO		SHALE	6.3	590.0	
-115.9	CARBONDALE	DANVILLE	COAL	2.3	596.3	
-118.2	CARBONDALE		SHALE	14.4	598.6	
-132.6	CARBONDALE		SOFT SHALE	6.0	613.0	
-138.6	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	619.0	
-142.6	CARBONDALE		SANDY SHALE	29.5	623.0	

-172.1	CARBONDALE	BRERETON	LIMESTONE	11.5	652.5
-183.6	CARBONDALE		SHALE	0.3	664.0
-183.9	CARBONDALE	HERRIN	COAL	5.3	664.3
-189.1	CARBONDALE		CLAYSTONE	0.5	669.5

MAPID: 05501006000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 20 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of SW SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.904433 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.068093 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 459.0 **LOGGED (FT.):** 2311.0 **LOG TYPE:** Electric Log

SOURCE: LEWIS, WILL I. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-197.0	CARBONDALE	HERRIN	COAL	4.0	656.0	
-238.0	CARBONDALE	BRIAR HILL	COAL	-	697.0	
-261.0	CARBONDALE	SPRINGFIELD	COAL	3.0	720.0	BLACK SHALE & LIMESTONE ROOF
-336.0	CARBONDALE	HOUCHIN CREEK	COAL	-	795.0	

MAPID: 05523202000C **VERSION:** 1 **PROJECT:** NCRDS98

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 20 **QUARTERS/FOOTAGES:** NW SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.894351 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.070989 **DATE COLLECTED:** 8 / 25 / 1981

SURFACE ELEVATION (FT.): 490.0 **LOGGED (FT.):** 755.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #75 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
490.0			UNCLASSIFIED	669.0	0.0	
-179.0	CARBONDALE	BRERETON	LIMESTONE	4.3	669.0	
-183.3	CARBONDALE	ANNA	SHALE	0.4	673.3	
-183.7	CARBONDALE	HERRIN	COAL	5.8	673.7	
-189.5	CARBONDALE		UNDERCLAY	2.7	679.5	
-192.2	CARBONDALE		SANDSTONE	4.3	682.2	
-196.5	CARBONDALE		UNCLASSIFIED	37.5	686.5	
-234.0	CARBONDALE		SILTSTONE	6.0	724.0	SHALY
-240.0	CARBONDALE		SHALE	6.7	730.0	
-246.7	CARBONDALE	ST. DAVID	LIMESTONE	2.6	736.7	
-249.3	CARBONDALE		SHALE	2.7	739.3	DARK
-252.0	CARBONDALE	SPRINGFIELD	COAL	4.0	742.0	
-256.0	CARBONDALE		UNDERCLAY	3.7	746.0	
-259.7	CARBONDALE		SILTY SHALE	5.3	749.7	SANDY

MAPID: 05501237000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 21 **QUARTERS/FOOTAGES:** 330' S line, 2310' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.879289 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.067761 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 500.0 **LOGGED (FT.):** 698.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-110.0	MODESTO	PIASA	LIMESTONE	5.0	610.0	
-115.0	MODESTO		DARK GRAY SHALE	7.0	615.0	
-122.0	CARBONDALE	DANVILLE	COAL	1.0	622.0	
-123.0	CARBONDALE		SHALE & SANDSTONE	22.0	623.0	
-145.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	645.0	
-150.0	CARBONDALE	LAWSON	SHALE	28.5	650.0	
-178.5	CARBONDALE	JAMESTOWN	BONE COAL	0.5	678.5	
-179.0	CARBONDALE		DARK GRAY SHALE	1.0	679.0	
-180.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	8.5	680.0	
-188.5	CARBONDALE	ANNA	BLACK SHALE	1.5	688.5	
-190.0	CARBONDALE	HERRIN	COAL	8.0	690.0	

MAPID: 05501449000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 21 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.88152 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.067801 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 491.0 **LOGGED (FT.):** 2945.0 **LOG TYPE:** Electric Log

SOURCE: COLUMBUS EXPLORATION **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-193.0	CARBONDALE	HERRIN	COAL	6.0	684.0	
-233.0	CARBONDALE	BRIAR HILL	COAL	-	724.0	
-263.0	CARBONDALE	SPRINGFIELD	COAL	3.0	754.0	SHALE & SILTSTONE ROOF
-339.0	CARBONDALE	HOUCHIN CREEK	COAL	-	830.0	

MAPID: 05523219000C **VERSION:** 1 **PROJECT:** NCRDS98

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 21 **QUARTERS/FOOTAGES:** NE SE

QUADRANGLE: EWING **LONGITUDE:** -88.87163 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.070654 **DATE COLLECTED:** 9 / 12 / 1981

SURFACE ELEVATION (FT.): 483.0 **LOGGED (FT.):** 769.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #89 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
483.0			UNCLASSIFIED	660.0	0.0	
-177.0	CARBONDALE		SHALE	12.5	660.0	
-189.5	CARBONDALE		SANDSTONE	1.8	672.5	
-191.3	CARBONDALE		SHALE	0.5	674.3	BLACK
-191.8	CARBONDALE		COAL	0.1	674.8	
-191.9	CARBONDALE		SANDY SHALE	0.1	674.9	
-192.0	CARBONDALE		SHALE	1.0	675.0	BLACK
-193.0	CARBONDALE		SHALE	2.5	676.0	
-195.5	CARBONDALE	BRERETON	LIMESTONE	12.4	678.5	
-207.9	CARBONDALE	ENERGY	SANDY SHALE	0.3	690.9	
-208.3	CARBONDALE	HERRIN	COAL	5.4	691.3	
-213.7	CARBONDALE		SHALE	3.8	696.7	
-217.5	CARBONDALE		UNCLASSIFIED	50.5	700.5	
-268.0	CARBONDALE		SHALE	4.9	751.0	
-272.9	CARBONDALE		SHALE	3.2	755.9	BLACK
-276.1	CARBONDALE		GRAY SHALE	1.7	759.1	
-277.8	CARBONDALE	SPRINGFIELD	COAL	4.4	760.8	
-282.2	CARBONDALE		SHALE	3.8	765.2	

MAPID: 055255C0002F **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 21 **QUARTERS/FOOTAGES:** NE SW NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.886047 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.077055 **DATE COLLECTED:** 0 / 0 / 1949

SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 4.3 **LOG TYPE:**

SOURCE: FLD NOTES-WILLIAMS **WELL TYPE:** Strip Mine

COMMENT: STRIPPED ABOUT 1931

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
460.0			UNCONSOLIDATED	-	0.0	
-			SHALE	1.0		
-	BOND		COAL	1.0		
-	BOND		ROCK	2.3		

MAPID: 05501009000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 22 **QUARTERS/FOOTAGES:** 1650' N line, 990' E line

QUADRANGLE: EWING **LONGITUDE:** -88.856368 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.076936 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 466.0 **LOGGED (FT.):** 3148.0 **LOG TYPE:** Electric Log

SOURCE: FORTNER W G **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-287.0	CARBONDALE	HERRIN	COAL	-	753.0	
-331.0	CARBONDALE	BRIAR HILL	COAL	-	797.0	
-360.0	CARBONDALE	SPRINGFIELD	COAL	4.0	826.0	BLACK SHALE & LIMESTONE ROOF
-436.0	CARBONDALE	HOUCHIN CREEK	COAL	-	902.0	

MAPID: 05501009000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 22 **QUARTERS/FOOTAGES:** 1650' N line, 990' E line

QUADRANGLE: EWING **LONGITUDE:** -88.856368 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.076936 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 466.0 **LOGGED (FT.):** 760.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-205.0	MODESTO	PIASA	LIMESTONE	5.0	671.0	
-210.0	MODESTO		SHALE	8.0	676.0	
-218.0	CARBONDALE	DANVILLE	COAL	2.0	684.0	
-220.0	CARBONDALE		SILTY SHALE	16.0	686.0	
-236.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	702.0	
-244.0	CARBONDALE	LAWSON	SILTY SHALE	30.0	710.0	
-274.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	3.0	740.0	
-277.0	CARBONDALE	ANNA	BLACK SHALE	1.0	743.0	
-278.0	CARBONDALE	ENERGY	GRAY SHALE	8.0	744.0	
-286.0	CARBONDALE	HERRIN	COAL	8.0	752.0	

MAPID: 05522801000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 22 **QUARTERS/FOOTAGES:** SE SW NW NW

QUADRANGLE: EWING **LONGITUDE:** -88.868623 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.077369 **DATE COLLECTED:** 9 / 17 / 1976

SURFACE ELEVATION (FT.): 475.0 **LOGGED (FT.):** 802.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY EN-35 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
475.0			UNCLASSIFIED	640.0	0.0	
-165.0	MODESTO	PIASA	LIMESTONE	4.0	640.0	
-169.0	MODESTO		SHALE	11.0	644.0	
-180.0	CARBONDALE	DANVILLE	COAL	1.0	655.0	
-181.0	CARBONDALE		SHALE	19.0	656.0	
-200.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	675.0	
-204.0	CARBONDALE		SHALE	26.0	679.0	
-230.0	CARBONDALE		GRAY SHALE	1.9	705.0	BEGIN CORE
-231.9	CARBONDALE	JAMESTOWN	BLACK SHALE	0.5	706.9	VITRAIN LENS NOTED
-232.4	CARBONDALE	JAMESTOWN	BLACK SHALE	0.4	707.4	
-232.8	CARBONDALE		LIMESTONE & SHALE	1.8	707.8	
-234.6	CARBONDALE	BRERETON	LIMESTONE	10.0	709.6	
-244.6	CARBONDALE	ANNA	BLACK SHALE	0.9	719.6	
-245.5	CARBONDALE	HERRIN	COAL	5.9	720.5	
-251.4	CARBONDALE		UNDERCLAY	1.7	726.4	
-253.1	CARBONDALE		SILTSTONE	4.7	728.1	
-257.8	CARBONDALE		SHALE	28.2	732.8	NOT CORED
-286.0	CARBONDALE	BRIAR HILL	COAL	2.0	761.0	NOT CORED
-288.0	CARBONDALE		SHALE	16.0	763.0	NOT CORED
-304.0	CARBONDALE		SHALE	8.0	779.0	BEGIN CORE
-312.0	CARBONDALE	ST. DAVID	LIMESTONE	1.7	787.0	
-313.7	CARBONDALE	TURNER MINE	BLACK SHALE	3.7	788.7	
-317.3	CARBONDALE	SPRINGFIELD	COAL	3.2	792.3	
-320.5	CARBONDALE		UNDERCLAY	3.7	795.5	
-324.2	CARBONDALE		SILTSTONE	2.8	799.2	
-327.0				0.0	802.0	

MAPID: 05523203000C **VERSION:** 1 **PROJECT:** NCRDS98

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 22 **QUARTERS/FOOTAGES:** SW SE

QUADRANGLE: EWING **LONGITUDE:** -88.857732 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.070114 **DATE COLLECTED:** 9 / 18 / 1981

SURFACE ELEVATION (FT.): 459.0 **LOGGED (FT.):** 792.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #94 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
459.0			UNCLASSIFIED	707.0	0.0	
-248.0	CARBONDALE	BRERETON	LIMESTONE	5.5	707.0	
-253.5	CARBONDALE	ENERGY	SHALE	1.5	712.5	
-254.9	CARBONDALE	HERRIN	COAL	5.7	713.9	
-260.6	CARBONDALE		UNDERCLAY	6.7	719.6	
-267.3	CARBONDALE		UNCLASSIFIED	52.8	726.3	
-320.0	CARBONDALE	DYKERSBURG	SILTY SHALE	4.0	779.0	
-324.0	CARBONDALE	SPRINGFIELD	COAL	4.0	783.0	
-328.0	CARBONDALE		UNDERCLAY	1.7	787.0	
-329.7	CARBONDALE		SHALE	3.3	788.7	

MAPID: 05500008000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 23 **QUARTERS/FOOTAGES:** NE NE SW

QUADRANGLE: EWING **LONGITUDE:** -88.84489 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.073302 **DATE COLLECTED:** 9 / 1 / 1909

SURFACE ELEVATION (FT.): 459.0 **LOGGED (FT.):** 759.0 **LOG TYPE:** Survey Core Study

SOURCE: U. S. B. M. C. S. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
459.0			UNCONSOLIDATED	19.0	0.0	
440.0			ROCK	22.0	19.0	
418.0			COAL	1.0	41.0	
417.0			ROCK	35.9	42.0	
381.1			COAL	0.5	77.9	
380.6			ROCK	568.6	78.4	
-188.0			COAL	1.0	647.0	
-189.0			ROCK	20.8	648.0	
-209.8			COAL	1.2	668.8	
-210.9			ROCK	13.7	669.9	
-224.6			COAL	2.3	683.6	
-226.8			ROCK	40.2	685.8	
-267.0			SHALE	18.0	726.0	
-285.0			LIMESTONE	6.0	744.0	
-291.0			BLACK SHALE	1.4	750.0	
-292.4	CARBONDALE	HERRIN	COAL	6.6	751.4	
-299.0	CARBONDALE		UNDERCLAY	1.0	758.0	

MAPID: 05500008000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 23 **QUARTERS/FOOTAGES:** NE NE SW

QUADRANGLE: EWING **LONGITUDE:** -88.84489 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.073302 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 455.0 **LOGGED (FT.):** 757.6 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-217.0	MODESTO	PIASA	LIMESTONE	3.0	672.0	
-220.0	MODESTO		DARK GRAY SHALE	8.6	675.0	
-228.6	CARBONDALE	DANVILLE	COAL	2.3	683.6	
-230.8	CARBONDALE		DARK GRAY SHALE	27.2	685.8	
-258.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	713.0	
-263.0	CARBONDALE	LAWSON	DARK GRAY SHALE	26.0	718.0	
-289.0	CARBONDALE	BRERETON	LIMESTONE	6.0	744.0	
-295.0	CARBONDALE	ANNA	BLACK SHALE	1.4	750.0	
-296.0	CARBONDALE	HERRIN	COAL	6.6	751.0	

MAPID: 05500008000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 23 **QUARTERS/FOOTAGES:** NE NE SW

QUADRANGLE: EWING **LONGITUDE:** -88.84489 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.073302 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 454.6 **LOGGED (FT.):** 759.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0004 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-296.4	CARBONDALE	HERRIN	COAL	6.6	751.0	

MAPID: 05500008000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 23 **QUARTERS/FOOTAGES:** NE NE SW

QUADRANGLE: EWING **LONGITUDE:** -88.84489 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.073302 **DATE COLLECTED:** 9 / 1 / 1909

SURFACE ELEVATION (FT.): 458.8 **LOGGED (FT.):** 759.0 **LOG TYPE:** Drillers Log

SOURCE: U.S.B.M.C.S. 4 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
458.8	PLEISTOCENE		CLAY	9.0	0.0	YELLOW
449.8	PLEISTOCENE		CLAY & GRAVEL	10.0	9.0	
439.8	BOND		SANDSTONE	22.0	19.0	WITH SHALE STREAKS
417.8	BOND		COAL	1.0	41.0	
416.8	BOND		CLAYSTONE	3.0	42.0	
413.8	BOND		SANDY SHALE	2.0	45.0	
411.8	BOND		SANDSTONE	20.0	47.0	
391.8	BOND		SANDY SHALE	10.9	67.0	
380.9	BOND		COAL	0.5	77.9	
380.4	BOND		SHALE	14.6	78.4	
365.8	BOND		SANDSTONE	7.0	93.0	
358.8	BOND		SHALE	6.0	100.0	
352.8	BOND		SANDSTONE	63.0	106.0	
289.8	BOND		CALCAREOUS SHALE	8.0	169.0	
281.8	BOND		CALCAREOUS SHALE	5.0	177.0	
276.8	BOND		SANDSTONE	14.0	182.0	
262.8	BOND		SANDY SHALE	10.0	196.0	
252.8	BOND		SHALE	19.0	206.0	
233.8	BOND	CARTHAGE	LIMESTONE	7.0	225.0	
226.8	MODESTO		SHALE	12.0	232.0	
214.8	MODESTO		SANDSTONE	8.0	244.0	
206.8	MODESTO		SHALE	11.0	252.0	
195.8	MODESTO		SHALE	47.0	263.0	DARK GRAY
148.8	MODESTO		SHALE	41.0	310.0	
107.8	MODESTO		SHALE	9.0	351.0	
98.8	MODESTO		LIMESTONE	2.0	360.0	
96.8	MODESTO		SHALE	17.0	362.0	
79.8	MODESTO		SHALE	5.0	379.0	
74.8	MODESTO		SANDSTONE	5.0	384.0	
69.8	MODESTO		SANDY SHALE	35.0	389.0	
34.8	MODESTO		SHALE	42.0	424.0	
-7.2	MODESTO		SHALE	10.3	466.0	
-17.5	MODESTO	CHAPEL	SHALE/COAL	1.8	476.3	
-19.4	MODESTO		CLAYSTONE	3.8	478.2	
-23.2	MODESTO		SHALE	11.0	482.0	
-34.2	MODESTO		SANDY SHALE	85.0	493.0	
-119.2	MODESTO		SHALE	36.0	578.0	
-155.2	MODESTO		SHALE	5.0	614.0	
-160.2	MODESTO		SANDY SHALE	8.0	619.0	

-168.2	MODESTO		SHALE	9.0	627.0	
-177.2	MODESTO		SHALE	11.0	636.0	
-188.2	MODESTO		COAL	1.0	647.0	
-189.2	MODESTO		CALCAREOUS SHALE	7.0	648.0	
-196.2	MODESTO		SANDY SHALE	5.0	655.0	
-201.2	MODESTO		SHALE	8.8	660.0	
-210.0	MODESTO		COAL	1.2	668.8	
-211.1	MODESTO		CLAYSTONE	2.1	669.9	
-213.2	MODESTO	PIASA	LIMESTONE	3.0	672.0	
-216.2	MODESTO		SHALE	5.0	675.0	
-221.2	MODESTO		SHALE	3.6	680.0	
-224.8	CARBONDALE	DANVILLE	COAL	2.3	683.6	
-227.0	CARBONDALE		SHALE	17.2	685.8	
-244.2	CARBONDALE		SHALE	10.0	703.0	
-254.2	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	713.0	
-259.2	CARBONDALE		SHALE	11.0	718.0	
-270.2	CARBONDALE		SHALE	15.0	729.0	WITH BANDS
-285.2	CARBONDALE	BRERETON	LIMESTONE	6.0	744.0	
-291.2	CARBONDALE	ANNA	SHALE	1.4	750.0	
-292.6	CARBONDALE	HERRIN	COAL	6.6	751.4	
-299.2	CARBONDALE		CLAYSTONE	1.0	758.0	

MAPID: 05523204000C **VERSION:** 1 **PROJECT:** NCRDS98

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 23 **QUARTERS/FOOTAGES:** SE SE

QUADRANGLE: EWING **LONGITUDE:** -88.834913 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.070517 **DATE COLLECTED:** 8 / 28 / 1981

SURFACE ELEVATION (FT.): 498.0 **LOGGED (FT.):** 895.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #76 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
498.0			UNCLASSIFIED	762.7	0.0	
-264.7	CARBONDALE		SHALE	32.1	762.7	DARK
-296.8	CARBONDALE	BRERETON	LIMESTONE	2.4	794.8	
-299.2	CARBONDALE	ANNA	SHALE	2.2	797.2	VERY DARK
-301.4	CARBONDALE	ENERGY	SHALE	8.0	799.4	
-309.4	CARBONDALE	HERRIN	COAL	6.8	807.4	
-316.3	CARBONDALE		UNDERCLAY	3.5	814.3	
-319.8	CARBONDALE		UNCLASSIFIED	63.2	817.8	
-383.0	CARBONDALE	DYKERSBURG	SILTSTONE	3.7	881.0	
-386.7	CARBONDALE	DYKERSBURG	SHALE	0.3	884.7	
-387.0	CARBONDALE	SPRINGFIELD	COAL	5.3	885.0	
-392.3	CARBONDALE		UNDERCLAY	4.7	890.3	

MAPID: 05522779000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 24 **QUARTERS/FOOTAGES:** SE SE SE

QUADRANGLE: EWING **LONGITUDE:** -88.816586 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.067215 **DATE COLLECTED:** 8 / 20 / 1976

SURFACE ELEVATION (FT.): 470.0 **LOGGED (FT.):** 862.6 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY EN-6 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
470.0			UNCLASSIFIED	676.0	0.0	
-206.0	MODESTO	PIASA	LIMESTONE	8.0	676.0	
-214.0	MODESTO		SHALE	8.0	684.0	
-222.0	CARBONDALE	DANVILLE	COAL	2.0	692.0	
-224.0	CARBONDALE		SHALE	23.0	694.0	
-247.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	717.0	
-248.0	CARBONDALE		SHALE	29.0	718.0	
-277.0	CARBONDALE		SHALE	6.8	747.0	BEGIN CORE
-283.8	CARBONDALE	JAMESTOWN	BLACK SHALE	0.5	753.8	VITRAIN LENS
-284.3	CARBONDALE	JAMESTOWN	BLACK SHALE	3.4	754.3	
-287.7	CARBONDALE	BRERETON	LIMESTONE	9.8	757.7	
-297.4	CARBONDALE	ANNA	BLACK SHALE	1.0	767.4	
-298.5	CARBONDALE	HERRIN	COAL	5.6	768.5	
-304.0	CARBONDALE		UNDERCLAY	3.0	774.0	
-307.0	CARBONDALE		SILTSTONE	6.0	777.0	
-313.0	CARBONDALE		SHALE	35.0	783.0	NOT CORED
-348.0	CARBONDALE	BRIAR HILL	COAL	2.0	818.0	NOT CORED
-350.0	CARBONDALE		SHALE	10.0	820.0	NOT CORED
-360.0	CARBONDALE		SHALE	13.9	830.0	DARK BEGIN CORE
-373.9	CARBONDALE	ST. DAVID	LIMESTONE	1.8	843.9	
-375.8	CARBONDALE		SHALE	3.3	845.8	DARK
-379.0	CARBONDALE	SPRINGFIELD	COAL	4.1	849.0	
-383.1	CARBONDALE		UNDERCLAY	3.2	853.1	
-386.3	CARBONDALE		SILTSTONE	6.3	856.3	
-392.6				0.0	862.6	

MAPID: 05500011000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 25 **QUARTERS/FOOTAGES:** SE NE NE SE

QUADRANGLE: EWING **LONGITUDE:** -88.816883 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.057998 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 484.8 **LOGGED (FT.):** 783.0 **LOG TYPE:**

SOURCE: BG MUDDYCS **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-289.2	CARBONDALE	HERRIN	COAL	7.0	774.0	

MAPID: 05500011000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 25 **QUARTERS/FOOTAGES:** SE NE NE SE
QUADRANGLE: EWING **LONGITUDE:** -88.816883 **GEOLOGIST:** BARGH,M
CONFIDENTIAL: N **LATITUDE:** 38.057998 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 485.0 **LOGGED (FT.):** 783.0 **LOG TYPE:** Drillers Log
SOURCE: B. M. C. S. **WELL TYPE:** Coal Test
COMMENT: NO LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
485.0			UNKNOWN	774.4	0.0	
-289.4	CARBONDALE	HERRIN	COAL	7.0	774.4	
-296.4	CARBONDALE		UNDERCLAY	1.6	781.4	

MAPID: 05500011000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 25 **QUARTERS/FOOTAGES:** SE NE NE SE
QUADRANGLE: EWING **LONGITUDE:** -88.816883 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.057998 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 484.8 **LOGGED (FT.):** 781.4 **LOG TYPE:** Drillers Log
SOURCE: B.M.C.S. **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-289.6	CARBONDALE	HERRIN	COAL	7.0	774.4	

MAPID: 05523205000C **VERSION:** 1 **PROJECT:** NCRDS98

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 25 **QUARTERS/FOOTAGES:** SW SW

QUADRANGLE: EWING **LONGITUDE:** -88.834498 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.055385 **DATE COLLECTED:** 8 / 27 / 1981

SURFACE ELEVATION (FT.): 459.0 **LOGGED (FT.):** 822.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #78 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
459.0			UNCLASSIFIED	720.0	0.0	
-261.0	CARBONDALE	ANNA	SHALE	2.0	720.0	VERY DARK GRAY
-263.0	CARBONDALE	ENERGY	SHALE	12.3	722.0	
-275.3	CARBONDALE	HERRIN	COAL	6.5	734.3	
-281.7	CARBONDALE		UNDERCLAY	4.1	740.7	
-285.8	CARBONDALE		SANDSTONE	1.5	744.8	
-287.3	CARBONDALE		UNCLASSIFIED	56.7	746.3	
-344.0	CARBONDALE		LIMESTONE	0.5	803.0	
-344.5	CARBONDALE		SHALE	2.7	803.5	BLACK
-347.2	CARBONDALE	ST. DAVID	LIMESTONE	0.8	806.2	
-348.0	CARBONDALE	DYKERSBURG	SHALE	6.1	807.0	
-354.1	CARBONDALE	SPRINGFIELD	COAL	5.1	813.1	
-359.3	CARBONDALE		UNDERCLAY	2.8	818.3	
-362.0	CARBONDALE		SILTSTONE	1.0	821.0	

MAPID: 05523206000C **VERSION:** 1 **PROJECT:** NCRDS98

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 25 **QUARTERS/FOOTAGES:** SW SE

QUADRANGLE: EWING **LONGITUDE:** -88.820605 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.055472 **DATE COLLECTED:** 9 / 3 / 1981

SURFACE ELEVATION (FT.): 448.0 **LOGGED (FT.):** 836.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #81 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
448.0			UNCLASSIFIED	720.0	0.0	
-272.0	CARBONDALE		SILTY SHALE	20.6	720.0	
-292.6	CARBONDALE		SHALE	1.1	740.6	
-293.7	CARBONDALE		LIMESTONE	0.5	741.7	
-294.2	CARBONDALE		SHALE	1.8	742.2	DARK
-296.0	CARBONDALE	BRERETON	LIMESTONE	2.2	744.0	LIGHT
-298.2	CARBONDALE	ANNA	SHALE	3.3	746.2	BLACK
-301.5	CARBONDALE	ENERGY	SHALE	6.1	749.5	
-307.6	CARBONDALE	HERRIN	COAL	3.1	755.6	
-310.7	CARBONDALE	HERRIN	CLAYSTONE & SILTSTONE	0.3	758.7	
-311.0	CARBONDALE	HERRIN	COAL	2.3	759.0	
-313.3	CARBONDALE		SHALE	1.9	761.3	DARK
-315.2	CARBONDALE		SHALE	1.8	763.2	
-317.0	CARBONDALE		UNCLASSIFIED	60.0	765.0	
-377.0	CARBONDALE		SHALE	2.2	825.0	
-379.2	CARBONDALE	SPRINGFIELD	COAL	5.1	827.2	
-384.3	CARBONDALE		SHALE	3.8	832.3	

MAPID: 05500012000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 26 **QUARTERS/FOOTAGES:** SE SE NW SE

QUADRANGLE: EWING **LONGITUDE:** -88.839839 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.056233 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 447.9 **LOGGED (FT.):** 0.0 **LOG TYPE:**

SOURCE: HART WMS **WELL TYPE:** Coal Test

COMMENT: SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-259.1	CARBONDALE	HERRIN	COAL	-	707.0	

MAPID: 05500012000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 26 **QUARTERS/FOOTAGES:** SE SE NW SE
QUADRANGLE: EWING **LONGITUDE:** -88.839839 **GEOLOGIST:** BARGH,M
CONFIDENTIAL: N **LATITUDE:** 38.056233 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 448.0 **LOGGED (FT.):** 713.0 **LOG TYPE:** Drillers Log
SOURCE: HART-WILLIAMS C C **WELL TYPE:** Coal Test
COMMENT: NO LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
448.0			UNKNOWN	707.0	0.0	
-259.0	CARBONDALE	HERRIN	COAL	6.0	707.0	

MAPID: 05500012000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 26 **QUARTERS/FOOTAGES:** SE SE NW SE
QUADRANGLE: EWING **LONGITUDE:** -88.839839 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.056233 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 447.9 **LOGGED (FT.):** 713.0 **LOG TYPE:** Drillers Log
SOURCE: HART-WILLIAMS COAL CO. **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-259.1	CARBONDALE	HERRIN	COAL	6.0	707.0	707' IS ASSUMED TOP OF COAL

MAPID: 05522794000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 26 **QUARTERS/FOOTAGES:** NW SW NW

QUADRANGLE: EWING **LONGITUDE:** -88.852678 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.062778 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 432.0 **LOGGED (FT.):** 772.3 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY EN-5 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
432.0			UNCLASSIFIED	589.0	0.0	
-157.0	MODESTO	PIASA	LIMESTONE	1.0	589.0	
-158.0	MODESTO		SHALE	6.0	590.0	
-164.0	CARBONDALE	DANVILLE	COAL	1.5	596.0	
-165.5	CARBONDALE		SHALE	42.5	597.5	
-208.0	CARBONDALE		SHALE	10.0	640.0	
-218.0	CARBONDALE		SHALE	0.8	650.0	DARK BEGIN CORE
-218.8	CARBONDALE		SHALE	12.2	650.8	
-231.0	CARBONDALE		SANDY SHALE	8.9	663.0	
-239.9	CARBONDALE	BRERETON	LIMESTONE	13.9	671.9	
-253.8	CARBONDALE	ANNA	BLACK SHALE	1.2	685.8	
-255.0	CARBONDALE	HERRIN	COAL	6.3	687.0	
-261.3	CARBONDALE		UNDERCLAY	1.0	693.3	DARK
-262.3	CARBONDALE		SHALE	3.2	694.3	
-265.4	CARBONDALE		SANDY SHALE	5.9	697.4	
-271.3	CARBONDALE		SHALE	25.7	703.3	NOT CORED
-297.0	CARBONDALE	BRIAR HILL	COAL	1.0	729.0	NOT CORED
-298.0	CARBONDALE		SHALE	2.0	730.0	NOT CORED
-300.0	CARBONDALE		SANDY SHALE	18.4	732.0	BEGIN CORE
-318.4	CARBONDALE	ST. DAVID	LIMESTONE	0.9	750.4	
-319.3	CARBONDALE	TURNER MINE	BLACK SHALE	2.4	751.3	
-321.8	CARBONDALE		SHALE	6.3	753.8	DARK
-328.0	CARBONDALE	SPRINGFIELD	COAL	4.8	760.0	
-332.8	CARBONDALE		UNDERCLAY	1.0	764.8	
-333.8	CARBONDALE		SHALE	6.6	765.8	LIGHT
-340.3				0.0	772.3	

MAPID: 05500961000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 27 **QUARTERS/FOOTAGES:** 990' N line, 1650' E line

QUADRANGLE: EWING **LONGITUDE:** -88.85868 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.064004 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 458.0 **LOGGED (FT.):** 3064.0 **LOG TYPE:** Electric Log

SOURCE: FORTNER W G **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-232.0	CARBONDALE	HERRIN	COAL	6.0	690.0	
-266.0	CARBONDALE	BRIAR HILL	COAL	-	724.0	
-304.0	CARBONDALE	SPRINGFIELD	COAL	4.0	762.0	SHALE & SILTSTONE ROOF
-382.0	CARBONDALE	HOUCHIN CREEK	COAL	-	840.0	

MAPID: 05500961000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 27 **QUARTERS/FOOTAGES:** 990' N line, 1650' E line

QUADRANGLE: EWING **LONGITUDE:** -88.85868 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.064004 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 458.0 **LOGGED (FT.):** 696.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-142.0	MODESTO	PIASA	LIMESTONE	6.0	600.0	
-148.0	MODESTO		SHALE	7.5	606.0	
-155.5	CARBONDALE	DANVILLE	COAL	1.5	613.5	
-157.0	CARBONDALE		SHALE & SANDSTONE	25.0	615.0	
-182.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	640.0	
-189.0	CARBONDALE	LAWSON	SHALE	31.0	647.0	
-220.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	10.0	678.0	
-230.0	CARBONDALE	ANNA	BLACK SHALE	2.0	688.0	
-232.0	CARBONDALE	HERRIN	COAL	6.0	690.0	

MAPID: 05501447000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 28 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of NE NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.883795 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.066016 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 504.0 **LOGGED (FT.):** 2559.0 **LOG TYPE:** Electric Log

SOURCE: MINERVA OIL CO **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-193.0	CARBONDALE	HERRIN	COAL	-	697.0	
-232.0	CARBONDALE	BRIAR HILL	COAL	-	736.0	
-260.0	CARBONDALE	SPRINGFIELD	COAL	4.0	764.0	BLACK SHALE & LIMESTONE ROOF
-334.0	CARBONDALE	HOUCHIN CREEK	COAL	-	838.0	

MAPID: 05501741000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 28 **QUARTERS/FOOTAGES:** 330' S line, 2310' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.881518 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.053031 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 490.0 **LOGGED (FT.):** 680.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-97.0	MODESTO	PIASA	LIMESTONE	5.0	587.0	
-102.0	MODESTO		SHALE	5.0	592.0	
-107.0	CARBONDALE	DANVILLE	COAL	2.0	597.0	
-109.0	CARBONDALE		SHALE & SANDSTONE	28.0	599.0	
-137.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	627.0	
-143.0	CARBONDALE	LAWSON	SHALE	30.0	633.0	
-173.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	3.0	663.0	
-176.0	CARBONDALE	ANNA	BLACK SHALE	2.0	666.0	
-178.0	CARBONDALE	ENERGY	GRAY SHALE	6.0	668.0	
-184.0	CARBONDALE	HERRIN	COAL	6.0	674.0	

MAPID: 05523207000C **VERSION:** 1 **PROJECT:** NCRDS98

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 28 **QUARTERS/FOOTAGES:** NW SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.875991 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.059102 **DATE COLLECTED:** 9 / 11 / 1981

SURFACE ELEVATION (FT.): 477.0 **LOGGED (FT.):** 740.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #88 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
477.0			UNCLASSIFIED	665.5	0.0	
-188.5	CARBONDALE	ANNA	SHALE	2.0	665.5	BLACK
-190.5	CARBONDALE	HERRIN	COAL	6.1	667.5	
-196.6	CARBONDALE		UNDERCLAY	5.4	673.6	
-202.0	CARBONDALE		UNCLASSIFIED	43.0	679.0	
-245.0	CARBONDALE		SILTY SHALE	0.5	722.0	
-245.5	CARBONDALE	ST. DAVID	LIMESTONE	1.5	722.5	
-247.0	CARBONDALE	DYKERSBURG	SILTY SHALE	7.5	724.0	
-254.5	CARBONDALE	SPRINGFIELD	COAL	3.8	731.5	
-258.3	CARBONDALE		UNDERCLAY	4.8	735.3	

MAPID: 05501192000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 29 **QUARTERS/FOOTAGES:** 990' S line, 1650' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.895334 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.055076 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 489.0 **LOGGED (FT.):** 673.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-95.0	MODESTO	PIASA	LIMESTONE	5.0	584.0	
-100.0	MODESTO		SHALE	7.0	589.0	
-107.0	CARBONDALE	DANVILLE	COAL	1.0	596.0	
-108.0	CARBONDALE		SILTY SHALE	14.0	597.0	
-122.0	CARBONDALE	ALLENBY	BONE COAL	1.0	611.0	
-123.0	CARBONDALE		CLAYSTONE & SHALE	8.0	612.0	
-131.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	620.0	
-136.0	CARBONDALE	LAWSON	SHALE	25.0	625.0	
-161.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	3.0	650.0	
-164.0	CARBONDALE	ANNA	BLACK SHALE	2.0	653.0	
-166.0	CARBONDALE	ENERGY	GRAY SHALE	12.0	655.0	
-178.0	CARBONDALE	HERRIN	COAL	6.0	667.0	

MAPID: 05501454000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 29 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.897558 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.058834 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 482.0 **LOGGED (FT.):** 2525.0 **LOG TYPE:** Electric Log

SOURCE: GILLIAN, J. H. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-198.0	CARBONDALE	HERRIN	COAL	6.0	680.0	
-238.0	CARBONDALE	BRIAR HILL	COAL	-	720.0	
-265.0	CARBONDALE	SPRINGFIELD	COAL	3.0	747.0	BLACK SHALE & LIMESTONE ROOF
-341.0	CARBONDALE	HOUCHIN CREEK	COAL	-	823.0	

MAPID: 05523208000C **VERSION:** 1 **PROJECT:** NCRDS98

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 29 **QUARTERS/FOOTAGES:** NW SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.898292 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.059492 **DATE COLLECTED:** 8 / 26 / 1981

SURFACE ELEVATION (FT.): 474.0 **LOGGED (FT.):** 750.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #77 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
474.0			UNCLASSIFIED	639.0	0.0	
-165.0	CARBONDALE		SANDSTONE	4.0	639.0	
-169.0	CARBONDALE		SHALE	18.9	643.0	DARK
-187.9	CARBONDALE	BRERETON	LIMESTONE	11.6	661.9	
-199.5	CARBONDALE	HERRIN	COAL	5.8	673.5	
-205.3	CARBONDALE		UNDERCLAY	3.8	679.3	
-209.0	CARBONDALE		SANDSTONE	2.3	683.0	
-211.3	CARBONDALE		UNCLASSIFIED	54.7	685.3	
-266.0	CARBONDALE	SPRINGFIELD	COAL	3.6	740.0	
-269.6	CARBONDALE		UNDERCLAY	3.7	743.6	
-273.3	CARBONDALE		SILTSTONE	2.8	747.3	

MAPID: 05501271000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 30 **QUARTERS/FOOTAGES:** 2310' N line, 330' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.928865 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.060943 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 446.0 **LOGGED (FT.):** 2947.0 **LOG TYPE:** Electric Log

SOURCE: NAT'L. ASSOC. PETRO. CO. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-188.0	CARBONDALE	HERRIN	COAL	4.0	634.0	
-222.0	CARBONDALE	BRIAR HILL	COAL	-	668.0	
-245.0	CARBONDALE	SPRINGFIELD	COAL	3.0	691.0	BLACK SHALE & LIMESTONE ROOF
-328.0	CARBONDALE	HOUCHIN CREEK	COAL	-	774.0	

MAPID: 05501271000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 30 **QUARTERS/FOOTAGES:** 2310' N line, 330' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.928865 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.060943 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 446.0 **LOGGED (FT.):** 640.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-101.0	MODESTO	PIASA	LIMESTONE	5.0	547.0	
-106.0	MODESTO		GRAY SHALE	6.0	552.0	
-112.0	CARBONDALE	DANVILLE	BONE COAL	1.0	558.0	
-113.0	CARBONDALE		SHALE & SANDSTONE	20.0	559.0	
-133.0	CARBONDALE	ALLENBY	BONE COAL	1.0	579.0	
-134.0	CARBONDALE		CLAYSTONE & SHALE	5.0	580.0	
-139.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	585.0	
-144.0	CARBONDALE	LAWSON	SILTY SHALE	25.0	590.0	
-169.0	CARBONDALE	BRERETON	LIMESTONE	7.0	615.0	
-176.0	CARBONDALE	ANNA	BLACK SHALE	2.0	622.0	
-178.0	CARBONDALE	ENERGY	GRAY SHALE	10.0	624.0	
-188.0	CARBONDALE	HERRIN	COAL	6.0	634.0	

MAPID: 05524056000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 30 **QUARTERS/FOOTAGES:** 1200' N line, 350' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.928861 **GEOLOGIST:** J MCBETH

CONFIDENTIAL: N **LATITUDE:** 38.064007 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 704.0 **LOG TYPE:** Multiple log types

SOURCE: OLD BEN COAL CORP 396 **WELL TYPE:** Coal Test

COMMENT: PERMIT 29; MINE 24; LITHS FR. GEOPH LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	14.5	0.0	
-	BOND	MT. CARMEL	SANDSTONE	51.5	14.5	
-	BOND		SANDY SHALE	78.0	66.0	
-	BOND	CARTHAGE	LIMESTONE	3.5	144.0	
-	MODESTO		SHALE	5.5	147.5	BLACK
-	MODESTO		SANDY SHALE	32.0	153.0	
-	MODESTO		COAL	1.0	185.0	
-	MODESTO		SANDY SHALE	20.0	186.0	
-	MODESTO		SHALE	19.0	206.0	
-	MODESTO		SHALE	2.0	225.0	BLACK
-	MODESTO		SANDSTONE/SHALE	22.0	227.0	
-	MODESTO	WOMAC	COAL	1.0	249.0	
-	MODESTO		SANDY SHALE	13.0	250.0	
-	MODESTO		SHALE	72.5	263.0	
-	MODESTO		SHALE	1.0	335.5	BLACK
-	MODESTO		SHALE	9.5	336.5	
-	MODESTO	CHAPEL	COAL	1.0	346.0	
-	MODESTO		SANDY SHALE	36.0	347.0	
-	MODESTO		LIMESTONE	1.0	383.0	LOG SAYS WEST FRANKLIN FOR 383-417
-	MODESTO		SANDSTONE/SHALE	31.0	384.0	
-	MODESTO		LIMESTONE	2.0	415.0	
-	MODESTO		SANDY SHALE	52.0	417.0	
-	MODESTO		SHALE	32.5	469.0	
-	MODESTO		SHALE	1.5	501.5	BLACK
-	MODESTO		SHALE	2.0	503.0	
-	MODESTO	POND CREEK	COAL	1.5	505.0	
-	MODESTO		SANDSTONE/SHALE	23.0	506.5	
-	MODESTO	PIASA	LIMESTONE	4.0	529.5	
-	MODESTO		SHALE	1.0	533.5	BLACK
-	MODESTO		SHALE	5.1	534.5	
-	CARBONDALE	DANVILLE	COAL	0.9	539.7	
-	CARBONDALE		SANDSTONE/SHALE	14.5	540.5	
-	CARBONDALE		SANDSTONE	9.0	555.0	
-	CARBONDALE		SHALE	6.0	564.0	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	570.0	
-	CARBONDALE		SANDY SHALE	2.0	572.0	
-	CARBONDALE		SILTSTONE	10.4	574.0	CORED 574-629.5
-	CARBONDALE	ANVIL ROCK	SANDSTONE	2.6	584.4	
-	CARBONDALE		SANDY SHALE	8.0	587.0	CARBONACEOUS, RIPPLES

-	CARBONDALE		SILTY SHALE	6.9	595.0	CARBONACEOUS
-	CARBONDALE	CONANT	LIMESTONE	0.6	601.8	
-	CARBONDALE		SHALE	0.5	602.4	CALCAREOUS, VERY DARK GRAY
-	CARBONDALE	JAMESTOWN	BONE COAL	0.2	603.0	
-	CARBONDALE		SHALE	1.4	603.1	CALCAREOUS, DARK GRAY, COAL STREAKS
-	CARBONDALE	BRERETON	LIMESTONE	4.8	604.5	ARGILLACEOUS, DARK GRAY, FOSSIL FRAGMENT
-	CARBONDALE	ANNA	SHALE	3.8	609.3	CARBONACEOUS, FISSILE, PYRITIC
-	CARBONDALE	HERRIN	COAL	7.1	613.1	
-	CARBONDALE		UNDERCLAY	2.5	620.2	SLICKS;COALS SPARS;PYRITE
-	CARBONDALE		SANDSTONE	2.7	622.7	FINE TO MED; NONPOROUS
-	CARBONDALE		SANDSTONE/SHALE	1.6	625.4	SS IS RIPPLED; MICACEOUS;&CALC
-	CARBONDALE		SANDSTONE	9.0	627.0	CORING ENDED AT 629.5'
-	CARBONDALE		SHALE	15.5	636.0	
-	CARBONDALE	BRIAR HILL	COAL	1.5	651.5	
-	CARBONDALE		SHALE	14.0	653.0	
-	CARBONDALE	ST. DAVID	LIMESTONE	2.0	667.0	
-	CARBONDALE	TURNER MINE	SHALE	2.5	669.0	BLACK
-	CARBONDALE	SPRINGFIELD	COAL	4.0	671.5	
-	CARBONDALE		UNDERCLAY	2.0	675.5	
-	CARBONDALE		SANDY SHALE	14.5	677.5	
-	CARBONDALE		SANDSTONE	5.0	692.0	
-	CARBONDALE		SHALE	3.0	697.0	
-	CARBONDALE		UNKNOWN	4.0	700.0	NOT LOGGED

MAPID: 05501011000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 31 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of SE NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.919988 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.048003 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 446.0 **LOGGED (FT.):** 2994.0 **LOG TYPE:** Electric Log

SOURCE: BRADLEY, J. T. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-196.0	CARBONDALE	HERRIN	COAL	5.0	642.0	
-227.0	CARBONDALE	BRIAR HILL	COAL	-	673.0	
-256.0	CARBONDALE	SPRINGFIELD	COAL	4.0	702.0	BLACK SHALE & LIMESTONE ROOF
-334.0	CARBONDALE	HOUCHIN CREEK	COAL	-	780.0	

MAPID: 05502268000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 31 **QUARTERS/FOOTAGES:** 1178' N line, 2570' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.916856 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.049345 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 455.0 **LOGGED (FT.):** 641.2 **LOG TYPE:** Survey Core Study

SOURCE: BELL & ZOLLER COAL CO 1 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-100.0	MODESTO	PIASA	LIMESTONE	6.6	555.0	
-106.6	MODESTO		GRAY SHALE	6.6	561.6	
-113.2	CARBONDALE	DANVILLE	COAL	2.0	568.2	
-115.2	CARBONDALE		GRAY SHALE	20.0	570.2	
-135.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.4	590.2	
-139.6	CARBONDALE	LAWSON	SILTY SHALE	31.1	594.6	
-170.7	CARBONDALE	CONANT	CALCAREOUS SHALE	0.5	625.7	
-171.2	CARBONDALE	JAMESTOWN	BONE COAL	0.5	626.2	
-171.7	CARBONDALE		CALCAREOUS SHALE	1.4	626.7	
-173.1	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	9.1	628.1	
-182.2	CARBONDALE	ANNA	CALCAREOUS SANDSTONE	1.1	637.2	
-180.0	CARBONDALE	HERRIN	COAL	6.2	635.0	

MAPID: 05524057000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 31 **QUARTERS/FOOTAGES:** 1000' N line, 2200' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.915561 **GEOLOGIST:** J MCBETH

CONFIDENTIAL: N **LATITUDE:** 38.04983 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 701.6 **LOG TYPE:** Drillers Log

SOURCE: ZEIGLER COAL CO. K-1 **WELL TYPE:** Coal Test

COMMENT: PERMIT 29; OLD BEN MINE #24

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	51.6	0.0	CLAY AND SAND
-	BOND	MT. CARMEL	SANDSTONE	26.4	51.6	VERY COARSE
-	BOND		GRAY SHALE	6.3	78.0	SOFT,SMOOTH
-	BOND		SANDY SHALE	61.3	84.3	FINE
-	BOND	CARTHAGE	LIMESTONE	3.5	145.6	HARD,ROCK
-	MODESTO		SHALE	6.4	149.1	DARK,HARD-ALMOST SLATE
-	MODESTO		GRAY SHALE	115.5	155.5	
-	MODESTO	WOMAC	COAL	0.6	271.0	
-	MODESTO		SANDY SHALE	89.4	271.6	
-	MODESTO		SHALE	1.4	361.0	BLACK
-	MODESTO	CHAPEL	COAL	1.2	362.4	
-	MODESTO		UNDERCLAY	2.4	363.6	
-	MODESTO		GRAY SHALE	151.3	366.0	
-	MODESTO		SHALE	4.2	517.3	BLACK
-	MODESTO	POND CREEK	COAL	0.5	521.5	
-	MODESTO		GRAY SHALE	32.7	522.0	
-	MODESTO	PIASA	LIMESTONE	2.4	554.7	HARD,TAN
-	MODESTO		GRAY SHALE	7.5	557.1	
-	CARBONDALE	DANVILLE	COAL	2.0	564.6	
-	CARBONDALE		UNDERCLAY	3.2	566.6	
-	CARBONDALE		GRAY SHALE	16.8	569.8	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	586.6	
-	CARBONDALE		GRAY SHALE	31.9	590.1	
-	CARBONDALE		SHALE	2.5	622.0	CALCAREOUS, SOME COAL PARTINGS
-	CARBONDALE	BRERETON	LIMESTONE	9.1	624.5	ARGILLACEOUS
-	CARBONDALE	ANNA	SHALE	1.0	633.6	BLACK
-	CARBONDALE	HERRIN	COAL	6.3	634.6	
-	CARBONDALE		UNDERCLAY	2.0	640.9	CALCAREOUS
-	CARBONDALE		SANDSTONE	6.2	642.9	
-	CARBONDALE		GRAY SHALE	20.3	649.1	
-	CARBONDALE	BRIAR HILL	COAL	1.4	669.4	
-	CARBONDALE		UNDERCLAY	1.2	670.8	
-	CARBONDALE		SANDSTONE/SHALE	5.0	672.0	
-	CARBONDALE		GRAY SHALE	15.1	677.0	WITH SIDERITE BANDS
-	CARBONDALE	ST. DAVID	LIMESTONE	2.2	692.1	
-	CARBONDALE	TURNER MINE	BLACK SHALE	2.5	694.3	
-	CARBONDALE	SPRINGFIELD	COAL	4.0	696.8	
-	CARBONDALE		UNDERCLAY	0.8	700.8	

MAPID: 05524058000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 31 **QUARTERS/FOOTAGES:** 1000' N line, 2340' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.916049 **GEOLOGIST:** J MCBETH

CONFIDENTIAL: N **LATITUDE:** 38.049833 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 613.0 **LOG TYPE:** Drillers Log

SOURCE: ZEIGLER COAL CO. K-4 **WELL TYPE:** Coal Test

COMMENT: PERMIT 29; OLD BEN MINE #24

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	18.4	0.0	CLAY WITH SAND
-	BOND		SANDSTONE	9.2	18.4	WHITE,COARSE
-	BOND		COAL	1.7	27.6	
-	BOND		UNDERCLAY	4.2	29.3	SOFT,GRAY
-	BOND		GRAY SHALE	81.3	33.5	
-	BOND	CARTHAGE	LIMESTONE	5.2	114.8	HARD,TAN
-	BOND		GRAY SHALE	1.2	120.0	
-	MODESTO		SHALE	6.0	121.2	BLACK
-	MODESTO		GRAY SHALE	109.8	127.2	
-	MODESTO	WOMAC	COAL	0.4	237.0	
-	MODESTO		SANDY SHALE	5.6	237.4	
-	MODESTO		LIMESTONE	1.6	243.0	
-	MODESTO		GRAY SHALE	81.8	244.6	
-	MODESTO	CHAPEL	COAL	1.8	326.4	
-	MODESTO		UNDERCLAY	2.8	328.2	
-	MODESTO		GRAY SHALE	191.0	331.0	
-	MODESTO	PIASA	LIMESTONE	3.8	522.0	
-	MODESTO		GRAY SHALE	10.2	525.8	
-	CARBONDALE	DANVILLE	COAL	2.4	536.0	
-	CARBONDALE		UNDERCLAY	2.1	538.4	
-	CARBONDALE		GRAY SHALE	17.0	540.5	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	4.2	557.5	
-	CARBONDALE		GRAY SHALE	27.6	561.7	
-	CARBONDALE	CONANT	LIMESTONE	1.0	589.3	HARD DARK
-	CARBONDALE	JAMESTOWN	SHALE	0.9	590.3	WITH COAL
-	CARBONDALE	BRERETON	LIMESTONE	11.2	591.2	HARD DARK
-	CARBONDALE	ANNA	BLACK SHALE	3.3	602.4	
-	CARBONDALE	HERRIN	COAL	6.3	605.7	
-	CARBONDALE		UNDERCLAY	1.0	612.0	

MAPID: 05500013000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 32 **QUARTERS/FOOTAGES:** SW NE NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.902163 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.04967 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 462.8 **LOGGED (FT.):** 0.0 **LOG TYPE:**

SOURCE: CBQ RR **WELL TYPE:** Coal Test

COMMENT: SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-200.2	CARBONDALE	HERRIN	COAL	6.8	663.0	

MAPID: 05500013000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 32 **QUARTERS/FOOTAGES:** SW NE NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.902163 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.04967 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 463.0 **LOGGED (FT.):** 669.5 **LOG TYPE:** Drillers Log

SOURCE: C. B. * Q. R. R. **WELL TYPE:** Coal Test

COMMENT: NO LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
463.0			UNKNOWN	662.7	0.0	
-199.7	CARBONDALE	HERRIN	COAL	6.8	662.7	

MAPID: 05500013000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 32 **QUARTERS/FOOTAGES:** SW NE NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.902163 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.04967 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 462.8 **LOGGED (FT.):** 206.8 **LOG TYPE:** Drillers Log

SOURCE: C.B.&Q. RAILROAD 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
462.8			UNKNOWN	200.0	0.0	
262.8			COAL	6.8	200.0	

MAPID: 05501157000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 32 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of NW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.895308 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.051431 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 480.0 **LOGGED (FT.):** 2955.0 **LOG TYPE:** Electric Log

SOURCE: FARRAR, FLETCHER F. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-184.0	CARBONDALE	HERRIN	COAL	6.0	664.0	
-224.0	CARBONDALE	BRIAR HILL	COAL	-	704.0	
-252.0	CARBONDALE	SPRINGFIELD	COAL	4.0	732.0	BLACK SHALE & LIMESTONE ROOF
-329.0	CARBONDALE	HOUCHIN CREEK	COAL	-	809.0	

MAPID: 05501970000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 32 **QUARTERS/FOOTAGES:** 990' N line, 1650' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.895352 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.049609 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 478.0 **LOGGED (FT.):** 670.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-105.0	MODESTO	PIASA	LIMESTONE	4.0	583.0	
-109.0	MODESTO		GRAY SHALE	5.0	587.0	
-114.0	CARBONDALE	DANVILLE	COAL	2.0	592.0	
-116.0	CARBONDALE		SILTY SHALE	18.0	594.0	
-134.0	CARBONDALE	ALLENBY	BONE COAL	1.0	612.0	
-135.0	CARBONDALE		CLAYSTONE & SHALE	4.0	613.0	
-139.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	617.0	
-143.0	CARBONDALE	LAWSON	SHALE	29.0	621.0	
-172.0	CARBONDALE	CONANT	CALCAREOUS SHALE	0.5	650.0	
-172.5	CARBONDALE	JAMESTOWN	BONE COAL	0.5	650.5	
-173.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	13.0	651.0	
-186.0	CARBONDALE	ANNA	BLACK SHALE	2.0	664.0	
-188.0	CARBONDALE	HERRIN	COAL	4.0	666.0	

MAPID: 05500014000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 33 **QUARTERS/FOOTAGES:** SW SE SW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.877553 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.045199 **DATE COLLECTED:** 7 / 0 / 1910

SURFACE ELEVATION (FT.): 454.0 **LOGGED (FT.):** 652.0 **LOG TYPE:** Survey Core Study

SOURCE: L. N. WOOD **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
454.0			UNCONSOLIDATED	8.0	0.0	
446.0			SHALE	55.3	8.0	
390.7			COAL	0.5	63.3	
390.2			ROCK	311.7	63.8	
78.5			COAL	1.0	375.5	
77.5			ROCK	161.5	376.5	
-84.0			COAL	0.8	538.0	
-84.8			ROCK	25.5	538.8	
-110.3			COAL	2.0	564.3	
-112.3			UNDERCLAY	1.0	566.3	
-113.3			SHALE	2.7	567.3	
-116.0			LIMESTONE	5.0	570.0	
-121.0			BLACK SHALE	6.5	575.0	
-127.5			LIMESTONE	0.5	581.5	
-128.0			BLACK SHALE	4.0	582.0	
-132.0			COAL	3.5	586.0	
-135.5			UNDERCLAY	1.5	589.5	
-137.0			ROCK	28.0	591.0	
-165.0			SHALE	2.0	619.0	
-167.0			SANDSTONE	2.0	621.0	
-169.0			SHALE	1.0	623.0	SANDY
-170.0			BLACK SHALE	0.5	624.0	
-170.5			LIMESTONE	2.3	624.5	
-172.8			BLACK SHALE	4.2	626.8	
-177.0			BLACK SHALE	12.5	631.0	
-189.5	CARBONDALE	HERRIN	COAL	7.0	643.5	
-196.5	CARBONDALE		UNDERCLAY	1.5	650.5	

MAPID: 05500014000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 33 **QUARTERS/FOOTAGES:** SW SE SW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.877553 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.045199 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 454.0 **LOGGED (FT.):** 651.0 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-109.6	MODESTO	PIASA	UNDERCLAY	3.4	563.6	
-113.0	MODESTO		ROCK	1.7	567.0	
-114.8	CARBONDALE	DANVILLE	COAL	2.0	568.8	
-116.8	CARBONDALE		CLAYSTONE & SHALE	3.8	570.8	
-120.5	CARBONDALE	GALUM	LIMESTONE	5.0	574.5	
-125.5	CARBONDALE		SHALE	11.0	579.5	
-136.5	CARBONDALE	ALLENBY	COAL	3.5	590.5	
-140.0	CARBONDALE		CLAYSTONE	3.0	594.0	
-143.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	597.0	
-147.0	CARBONDALE	LAWSON	SILTY SHALE	20.5	601.0	
-167.5	CARBONDALE	LAWSON	SANDSTONE	2.0	621.5	
-169.5	CARBONDALE	LAWSON	SILTY SHALE	1.0	623.5	
-170.5	CARBONDALE	JAMESTOWN	BLACK SHALE	0.5	624.5	
-171.0	CARBONDALE	BRERETON	LIMESTONE	2.3	625.0	
-173.3	CARBONDALE	ANNA	BLACK SHALE	4.3	627.3	
-177.5	CARBONDALE	ENERGY	GRAY SHALE	12.5	631.5	
-190.0	CARBONDALE	HERRIN	COAL	7.0	644.0	

MAPID: 05500014000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 33 **QUARTERS/FOOTAGES:** SW SE SW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.877553 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.045199 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 454.3 **LOGGED (FT.):** 652.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0001 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-189.7	CARBONDALE	HERRIN	COAL	7.0	644.0	

MAPID: 05500014000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 33 **QUARTERS/FOOTAGES:** SW SE SW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.877553 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.045199 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 454.3 **LOGGED (FT.):** 652.0 **LOG TYPE:** Drillers Log

SOURCE: DUQUOIN DIAMOND DRILL CO. 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
454.3	PLEISTOCENE		UNCONSOLIDATED	8.0	0.0	
446.3	BOND		SOFT SHALE	5.0	8.0	
441.3	BOND		SANDY SHALE	15.0	13.0	
426.3	BOND		CLAYSTONE	3.0	28.0	LIGHT
423.3	BOND		SANDY SHALE	18.0	31.0	
405.3	BOND		SANDSTONE	13.0	49.0	
392.3	BOND		LIMESTONE & CONGLOMERATE	1.0	62.0	
391.3	BOND		SOFT SHALE	0.3	63.0	
391.0	BOND		COAL	0.5	63.3	
390.5	BOND		CLAYSTONE	1.3	63.8	DARK
389.3	BOND		CLAYSTONE	2.0	65.0	WITH LIMESTONE, LIGHT
387.3	BOND		SANDY SHALE	10.0	67.0	
377.3	BOND		SHALE	0.5	77.0	
376.8	BOND		LIMESTONE	0.5	77.5	
376.3	BOND		SANDY SHALE	24.0	78.0	
352.3	BOND		SHALE	17.0	102.0	
335.3	BOND	CARTHAGE	LIMESTONE & CONGLOMERATE	2.0	119.0	
333.3	BOND	CARTHAGE	LIMESTONE	6.0	121.0	
327.3	MODESTO		SHALE	0.5	127.0	
326.8	MODESTO		BLACK SHALE	3.5	127.5	
323.3	MODESTO		SHALE	8.0	131.0	
315.3	MODESTO		CLAYSTONE	1.5	139.0	WITH LIMESTONE PEBBLES, DARK
313.8	MODESTO		LIMESTONE	1.5	140.5	
312.3	MODESTO		SANDSTONE	3.0	142.0	WITH LIMESTONE BOULDERS
309.3	MODESTO		SANDY SHALE	13.0	145.0	
296.3	MODESTO		SANDY SHALE	15.0	158.0	WITH LIGHT SAND PARTINGS;LIME SPOTS
281.3	MODESTO		SANDY SHALE	15.0	173.0	
266.3	MODESTO		SANDY SHALE	15.0	188.0	WITH LIGHT SAND PARTINGS
251.3	MODESTO		SANDY SHALE	12.0	203.0	
239.3	MODESTO		SHALE	25.0	215.0	
214.3	MODESTO		SHALE WITH LIMESTONE	6.0	240.0	WITH LIME PARTINGS
208.3	MODESTO		LIMESTONE	0.3	246.0	
208.0	MODESTO		BLACK SHALE	3.3	246.3	
204.8	MODESTO		LIMESTONE	1.0	249.5	
203.8	MODESTO		FOSSILIFEROUS SHALE	4.5	250.5	WITH SHELLS
199.3	MODESTO		SHALE	5.0	255.0	
194.3	MODESTO		CLAYSTONE	3.0	260.0	WITH LIMESTONE, LIGHT

191.3	MODESTO		CLAYSTONE	8.0	263.0	WITH LIMESTONE, GREEN
183.3	MODESTO		SANDY SHALE	4.0	271.0	WITH LIMESTONE PARTINGS
179.3	MODESTO		SANDSTONE	6.0	275.0	LIGHT
173.3	MODESTO		SANDY SHALE	60.0	281.0	WITH LIGHT SAND PARTINGS
113.3	MODESTO		SANDY SHALE	15.0	341.0	
98.3	MODESTO		SHALE	13.0	356.0	
85.3	MODESTO		SHALE WITH LIMESTONE	1.5	369.0	WITH LIME PARTINGS
83.8	MODESTO		BLACK SHALE	1.0	370.5	
82.8	MODESTO		SANDY SHALE	2.0	371.5	WITH BROWN LIMESTONE PARTINGS
80.8	MODESTO		FOSSILIFEROUS LIMESTONE	0.5	373.5	
80.3	MODESTO		BLACK SHALE	1.5	374.0	
78.8	MODESTO	CHAPEL	COAL	1.0	375.5	
77.8	MODESTO		CLAYSTONE	3.0	376.5	
74.8	MODESTO		SHALE	5.0	379.5	
69.8	MODESTO		SANDY SHALE	35.5	384.5	WITH LIGHT SAND PARTINGS
34.3	MODESTO		SANDY SHALE	59.0	420.0	
-24.7	MODESTO		SHALE	28.0	479.0	
-52.7	MODESTO		SHALE WITH LIMESTONE	3.0	507.0	WITH LIME PARTINGS
-55.7	MODESTO		BLACK SHALE	1.0	510.0	
-56.7	MODESTO		CLAYSTONE	2.0	511.0	LIGHT
-58.7	MODESTO		SANDY LIMESTONE	4.0	513.0	
-62.7	MODESTO		BLACK SHALE	5.0	517.0	
-67.7	MODESTO		LIMESTONE	6.0	522.0	
-73.7	MODESTO		SHALE	8.0	528.0	
-81.7	MODESTO		BLACK SHALE	2.0	536.0	
-83.7	MODESTO		COAL	0.8	538.0	
-84.5	MODESTO		CLAYSTONE	4.3	538.8	
-88.7	MODESTO		SANDY LIMESTONE	4.0	543.0	
-92.7	MODESTO		SANDSTONE	7.0	547.0	WITH DARK SHALE PARTINGS;LIGHT
-99.7	MODESTO		CALCARIOUS SANDY SHALE	5.0	554.0	WITH LIGHT SAND PARTINGS
-104.7	MODESTO		SHALE	5.0	559.0	WITH BROWN LIMESTONE PARTINGS
-109.7	MODESTO		LIMESTONE	0.3	564.0	
-110.0	MODESTO		COAL	2.0	564.3	
-112.0	MODESTO		CLAYSTONE	1.0	566.3	
-113.0	MODESTO		SANDY SHALE	2.8	567.3	
-115.7	MODESTO	PIASA	LIMESTONE	5.0	570.0	
-120.7	MODESTO		BLACK SHALE	1.5	575.0	
-122.2	MODESTO		SHALE	5.0	576.5	
-127.2	MODESTO		LIMESTONE	0.5	581.5	DARK BLUE
-127.7	MODESTO		BLACK SHALE	4.0	582.0	
-131.7	CARBONDALE	DANVILLE	COAL	3.5	586.0	
-135.2	CARBONDALE		CLAYSTONE	1.5	589.5	DARK
-136.7	CARBONDALE		CLAYSTONE	1.5	591.0	LIGHT
-138.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	592.5	
-142.2	CARBONDALE		SANDY SHALE	4.0	596.5	

-146.2	CARBONDALE		SANDY SHALE	2.5	600.5	WITH LIGHT SAND PARTINGS
-148.7	CARBONDALE		SANDY SHALE	1.0	603.0	
-149.7	CARBONDALE		SANDY SHALE	17.0	604.0	WITH BROWN LIMESTONE PARTINGS
-166.7	CARBONDALE		SANDSTONE	2.0	621.0	
-168.7	CARBONDALE		SANDY SHALE	1.0	623.0	
-169.7	CARBONDALE	JAMESTOWN	BLACK SHALE	0.5	624.0	
-170.2	CARBONDALE	BRERETON	LIMESTONE	2.3	624.5	
-172.5	CARBONDALE	ANNA	BLACK SHALE	4.3	626.8	
-176.7	CARBONDALE	ENERGY	SHALE	12.5	631.0	
-189.2	CARBONDALE	HERRIN	COAL	0.5	643.5	
-189.7	CARBONDALE	HERRIN	COAL	6.5	644.0	
-196.2	CARBONDALE		CLAYSTONE	1.5	650.5	

MAPID: 05501451000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 33 **QUARTERS/FOOTAGES:** 990' S line, 1203' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.875468 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.04015 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 461.0 **LOGGED (FT.):** 2588.0 **LOG TYPE:** Electric Log

SOURCE: DUNCAN, WALTER **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-191.0	CARBONDALE	HERRIN	COAL	7.0	652.0	
-223.0	CARBONDALE	BRIAR HILL	COAL	-	684.0	
-252.0	CARBONDALE	SPRINGFIELD	COAL	4.0	713.0	SHALE & SILTSTONE ROOF
-331.0	CARBONDALE	HOUCHIN CREEK	COAL	-	792.0	

MAPID: 05500906000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 34 **QUARTERS/FOOTAGES:** 990' S line, 990' W line

QUADRANGLE: EWING **LONGITUDE:** -88.867812 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.040138 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 3033.0 **LOG TYPE:** Electric Log

SOURCE: LEWIS, WILL I. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-186.0	CARBONDALE	HERRIN	COAL	5.0	646.0	
-223.0	CARBONDALE	BRIAR HILL	COAL	-	683.0	
-252.0	CARBONDALE	SPRINGFIELD	COAL	4.0	712.0	BLACK SHALE & LIMESTONE ROOF
-330.0	CARBONDALE	HOUCHIN CREEK	COAL	-	790.0	

MAPID: 05500906000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 34 **QUARTERS/FOOTAGES:** 990' S line, 990' W line

QUADRANGLE: EWING **LONGITUDE:** -88.867812 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.040138 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 652.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-102.0	MODESTO	PIASA	LIMESTONE	6.0	562.0	
-108.0	MODESTO		SHALE	8.0	568.0	
-116.0	CARBONDALE	DANVILLE	COAL	2.0	576.0	
-118.0	CARBONDALE		SILTY SHALE	18.0	578.0	
-136.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	596.0	
-143.0	CARBONDALE	LAWSON	SHALE	25.0	603.0	
-168.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	4.0	628.0	
-172.0	CARBONDALE	ANNA	BLACK SHALE	2.0	632.0	
-174.0	CARBONDALE	ENERGY	GRAY SHALE	12.0	634.0	
-186.0	CARBONDALE	HERRIN	COAL	6.0	646.0	

MAPID: 05501791000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 34 **QUARTERS/FOOTAGES:**

QUADRANGLE: EWING **LONGITUDE:** -88.862127 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.044723 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 667.0 **LOG TYPE:** Drillers Log

SOURCE: U.S. B.M.C.S. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	CARBONDALE		SHALE	6.4	648.0	
-	CARBONDALE	HERRIN	COAL	6.9	654.4	
-	CARBONDALE		SHALE	1.7	661.3	
-	CARBONDALE		SANDSTONE/LIMESTONE	4.0	663.0	

MAPID: 05501791000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 34 **QUARTERS/FOOTAGES:**

QUADRANGLE: EWING **LONGITUDE:** -88.862127 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.044723 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 667.0 **LOG TYPE:** Drillers Log

SOURCE: B. M. C. S. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-			UNKNOWN	648.0	0.0	
-			SHALE	6.4	648.0	
-			COAL	6.9	654.4	
-			SHALE	1.7	661.3	
-			ROCK	4.0	663.0	

MAPID: 05500017000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 36 **QUARTERS/FOOTAGES:** SE SW NE SE

QUADRANGLE: EWING **LONGITUDE:** -88.819284 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.04158 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 430.0 **LOGGED (FT.):** 697.7 **LOG TYPE:** Drillers Log

SOURCE: BIG MUDDY COAL SYN **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
430.0			UNCONSOLIDATED	63.0	0.0	
367.0			ROCK	284.0	63.0	
83.0			SHALE	43.5	347.0	SANDY
39.5			COAL	3.5	390.5	
36.0			ROCK	72.0	394.0	
-36.0			COAL	1.5	466.0	
-37.5			ROCK	100.5	467.5	
-138.0			COAL	1.5	568.0	
-139.5			ROCK	30.5	569.5	
-170.0			COAL	0.5	600.0	
-170.5			ROCK	97.2	600.5	

MAPID: 05500017000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 36 **QUARTERS/FOOTAGES:** SE SW NE SE

QUADRANGLE: EWING **LONGITUDE:** -88.819284 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.04158 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 446.0 **LOGGED (FT.):** 688.3 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-99.5	MODESTO	PIASA	LIMESTONE	2.5	545.5	
-102.0	MODESTO		SHALE	19.0	548.0	
-121.0	CARBONDALE	DANVILLE	COAL	1.5	567.0	
-122.5	CARBONDALE		SHALE & SANDSTONE	30.5	568.5	
-153.0	CARBONDALE	ALLENBY	COAL	0.5	599.0	
-153.5	CARBONDALE		CLAYSTONE	3.5	599.5	
-157.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.3	603.0	UPPER BENCH
-163.3	CARBONDALE	BANKSTON FORK	DARK GRAY SHALE	4.8	609.3	SHALE PARTING
-168.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	5.5	614.0	LOWER BENCH
-173.5	CARBONDALE	LAWSON	SANDSTONE	8.5	619.5	
-182.0	CARBONDALE	LAWSON	GRAY SHALE	23.0	628.0	
-205.0	CARBONDALE	ANNA	BLACK SHALE	7.0	651.0	
-212.0	CARBONDALE	ENERGY	GRAY SHALE	22.0	658.0	
-234.0	CARBONDALE	HERRIN	COAL	8.3	680.0	

MAPID: 05500017000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 36 **QUARTERS/FOOTAGES:** SE SW NE SE

QUADRANGLE: EWING **LONGITUDE:** -88.819284 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.04158 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 445.7 **LOGGED (FT.):** 698.0 **LOG TYPE:**

SOURCE: BG MUDDYCS **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-274.3	CARBONDALE	HERRIN	COAL	8.3	720.0	

MAPID: 05500017000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 3E **SECTION:** 36 **QUARTERS/FOOTAGES:** SE SW NE SE

QUADRANGLE: EWING **LONGITUDE:** -88.819284 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.04158 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 445.7 **LOGGED (FT.):** 680.0 **LOG TYPE:** Drillers Log

SOURCE: BIG MUDDY COAL SYNDICATE **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
445.7	PLEISTOCENE		CLAY	36.0	0.0	
409.7	PLEISTOCENE		SAND & GRAVEL	27.0	36.0	
382.7	PLEISTOCENE		BOULDER	1.5	63.0	LIMESTONE BOULDER
381.2	PLEISTOCENE		CLAY	44.5	64.5	BLUE
336.7			SANDSTONE	45.0	109.0	
291.7			SANDY SHALE	21.5	154.0	
270.2			SHALE	48.3	175.5	
221.9			BLACK SHALE	3.5	223.8	
218.4			LIMESTONE	1.5	227.3	
216.9			SHALE	34.0	228.8	
182.9			SANDY SHALE	45.8	262.8	
137.2			SANDSTONE	20.5	308.5	
116.7			SHALE	8.0	329.0	
108.7			SANDSTONE	10.0	337.0	
98.7			SANDY SHALE	41.0	347.0	
57.7			BLACK SHALE	2.5	388.0	
55.2			COAL	3.5	390.5	
51.7			SHALE	16.3	394.0	
35.4			BLACK SHALE	4.5	410.3	WITH LIMESTONE
30.9			CLAYSTONE	2.5	414.8	
28.4			LIMESTONE	10.5	417.3	
17.9			SANDSTONE	11.3	427.8	
6.7			SHALE	15.0	439.0	
-8.3			BLACK SHALE	12.0	454.0	
-20.3			COAL	1.5	466.0	
-21.8			CLAYSTONE	8.5	467.5	
-30.3			SANDSTONE/LIMESTONE	10.3	476.0	
-40.6			SANDY SHALE	22.0	486.3	
-62.6			SHALE	33.5	508.3	
-96.1			BLACK SHALE	3.8	541.8	
-99.8			CLAYSTONE	1.0	545.5	
-100.8			CHERT	2.5	546.5	WITH LIMESTONE
-103.3			SHALE	15.0	549.0	
-118.3			BLACK SHALE	1.5	564.0	
-119.8			BLACK SHALE	2.5	565.5	
-122.3			COAL	1.5	568.0	
-123.8			SHALE	6.0	569.5	
-129.8			SANDY SHALE	9.5	575.5	
-139.3			SANDSTONE	12.0	585.0	

-151.3	BLACK SHALE	3.0	597.0
-154.3	COAL	0.5	600.0
-154.8	CLAYSTONE	3.5	600.5
-158.3	LIMESTONE	6.3	604.0
-164.6	SHALE	4.8	610.3
-169.3	LIMESTONE	5.5	615.0
-174.8	SANDSTONE	8.5	620.5
-183.3	SHALE	23.0	629.0
-206.3	BLACK SHALE	7.0	652.0
-213.3	BLACK SHALE	21.0	659.0

MAPID: 05522791000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 1 **QUARTERS/FOOTAGES:** SE SE SW

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.715736 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.112044 **DATE COLLECTED:** 8 / 31 / 1976

SURFACE ELEVATION (FT.): 510.0 **LOGGED (FT.):** 1010.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY EN-12 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
510.0			UNCLASSIFIED	836.0	0.0	
-326.0	MODESTO	PIASA	LIMESTONE	3.0	836.0	
-329.0	MODESTO		SHALE	14.0	839.0	
-343.0	CARBONDALE	DANVILLE	COAL	2.0	853.0	
-345.0	CARBONDALE		SHALE	21.0	855.0	
-366.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	876.0	
-369.0	CARBONDALE		SANDY SHALE	20.0	879.0	
-389.0	CARBONDALE		SILTY SHALE	12.8	899.0	BEGIN CORE
-401.8	CARBONDALE	CONANT	LIMESTONE	0.5	911.8	
-402.3	CARBONDALE	JAMESTOWN	COAL	2.1	912.3	
-404.4	CARBONDALE		BLACK SHALE	2.2	914.4	
-406.6	CARBONDALE	BRERETON	LIMESTONE	6.2	916.6	
-412.8	CARBONDALE	HERRIN	COAL	5.8	922.8	
-418.5	CARBONDALE		UNDERCLAY	3.6	928.5	
-422.1	CARBONDALE		SANDY SILTSTONE	2.9	932.1	
-425.0	CARBONDALE		SHALE	47.0	935.0	NOT CORED
-472.0	CARBONDALE	BRIAR HILL	COAL	1.0	982.0	NOT CORED
-473.0	CARBONDALE		SHALE	9.0	983.0	NOT CORED
-482.0	CARBONDALE	ST. DAVID	LIMESTONE	1.1	992.0	BEGIN CORE
-483.1	CARBONDALE		SILTY SHALE	0.5	993.1	
-483.6	CARBONDALE	TURNER MINE	BLACK SHALE	3.1	993.6	
-486.7	CARBONDALE	SPRINGFIELD	COAL	4.3	996.7	
-491.0	CARBONDALE		UNDERCLAY	4.2	1001.0	
-495.2	CARBONDALE		SILTY SANDSTONE	4.8	1005.2	

MAPID: 05500813000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 4 **QUARTERS/FOOTAGES:** 990' S line, 330' W line

QUADRANGLE: EWING **LONGITUDE:** -88.776887 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.115841 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 472.0 **LOGGED (FT.):** 3319.0 **LOG TYPE:** Electric Log

SOURCE: CANTERBURY, J. V. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-309.0	CARBONDALE	DANVILLE	COAL	-	781.0	
-331.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	803.0	
-377.0	CARBONDALE	HERRIN	COAL	4.0	849.0	
-394.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	17.0	866.0	
-428.0	CARBONDALE	BRIAR HILL	COAL	-	900.0	
-430.0	CARBONDALE	CANTON		10.0	902.0	
-460.0	CARBONDALE	SPRINGFIELD	COAL	4.0	932.0	BLACK SHALE & LIMESTONE ROOF
-542.0	CARBONDALE	HOUCHIN CREEK	COAL	-	1014.0	

MAPID: 05500813000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 4 **QUARTERS/FOOTAGES:** 990' S line, 330' W line

QUADRANGLE: EWING **LONGITUDE:** -88.776887 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.115841 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 472.0 **LOGGED (FT.):** 854.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-296.0	MODESTO	PIASA	LIMESTONE	6.0	768.0	
-302.0	MODESTO		SHALE	10.0	774.0	
-312.0	CARBONDALE	DANVILLE	COAL	2.0	784.0	
-314.0	CARBONDALE		SHALE	18.0	786.0	
-332.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	4.0	804.0	
-336.0	CARBONDALE	LAWSON	SHALE	30.0	808.0	
-366.0	CARBONDALE	JAMESTOWN	BONE COAL	1.0	838.0	
-367.0	CARBONDALE		DARK GRAY SHALE	3.0	839.0	
-370.0	CARBONDALE	BRERETON	LIMESTONE	7.0	842.0	
-377.0	CARBONDALE	ANNA	BLACK SHALE	1.0	849.0	
-378.0	CARBONDALE	HERRIN	COAL	4.0	850.0	

MAPID: 05523209000C **VERSION:** 1 **PROJECT:** NCRDS98

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 4 **QUARTERS/FOOTAGES:** NW NE

QUADRANGLE: SPRING GARDEN **LONGITUDE:** -88.763989 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.125637 **DATE COLLECTED:** 8 / 24 / 1981

SURFACE ELEVATION (FT.): 463.0 **LOGGED (FT.):** 954.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #74 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
463.0			UNCLASSIFIED	855.0	0.0	
-392.0	CARBONDALE		SHALE	4.0	855.0	DARK
-396.0	CARBONDALE	BRERETON	LIMESTONE	3.2	859.0	
-399.2	CARBONDALE	ANNA	SHALE	0.1	862.2	DARK
-399.3	CARBONDALE	ENERGY	SHALE	1.3	862.3	
-400.6	CARBONDALE	HERRIN	COAL	5.9	863.6	
-406.5	CARBONDALE		UNDERCLAY	4.8	869.5	
-411.3	CARBONDALE		UNCLASSIFIED	66.7	874.3	
-478.0	CARBONDALE	ST. DAVID	LIMESTONE	1.7	941.0	
-479.7	CARBONDALE	DYKERSBURG	SILTY SHALE	3.2	942.7	
-482.8	CARBONDALE	DYKERSBURG	SILTY SHALE	3.2	945.8	
-486.0	CARBONDALE	SPRINGFIELD	COAL	5.0	949.0	

MAPID: 05523210000C **VERSION:** 1 **PROJECT:** NCRDS98

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 4 **QUARTERS/FOOTAGES:** SW SE

QUADRANGLE: EWING **LONGITUDE:** -88.765554 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.113494 **DATE COLLECTED:** 8 / 28 / 1981

SURFACE ELEVATION (FT.): 439.0 **LOGGED (FT.):** 907.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #79 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
439.0			UNCLASSIFIED	803.0	0.0	
-364.0	CARBONDALE	BRERETON	LIMESTONE	3.5	803.0	
-367.5	CARBONDALE	ANNA	SHALE	1.8	806.5	BLACK
-369.3	CARBONDALE	HERRIN	COAL	6.3	808.3	
-375.7	CARBONDALE		UNDERCLAY	0.2	814.7	
-375.9	CARBONDALE		UNCLASSIFIED	75.1	814.9	
-451.0	CARBONDALE	DYKERSBURG	SHALE	7.7	890.0	DARK
-458.7	CARBONDALE	SPRINGFIELD	COAL	4.3	897.7	
-463.0	CARBONDALE		UNDERCLAY	5.0	902.0	

MAPID: 05523211000C **VERSION:** 1 **PROJECT:** NCRDS98

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 5 **QUARTERS/FOOTAGES:** SW SE

QUADRANGLE: EWING **LONGITUDE:** -88.783241 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.113205 **DATE COLLECTED:** 9 / 10 / 1981

SURFACE ELEVATION (FT.): 442.0 **LOGGED (FT.):** 901.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #87 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
442.0			UNCLASSIFIED	803.0	0.0	
-361.0	CARBONDALE	BRERETON	LIMESTONE	7.0	803.0	
-368.0	CARBONDALE	ANNA	SHALE	0.2	810.0	BLACK
-368.2	CARBONDALE	HERRIN	COAL	5.7	810.2	
-373.8	CARBONDALE		UNDERCLAY	3.2	815.8	
-377.0	CARBONDALE		UNCLASSIFIED	50.0	819.0	
-427.0	CARBONDALE	DYKERSBURG	SILTY SHALE	15.7	869.0	
-442.7	CARBONDALE	DYKERSBURG	SHALE	2.3	884.7	
-445.0	CARBONDALE	DYKERSBURG	SILTY SHALE	4.4	887.0	
-449.4	CARBONDALE	SPRINGFIELD	COAL	4.8	891.4	
-454.3	CARBONDALE		UNDERCLAY	4.8	896.3	

MAPID: 05522781000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 6 **QUARTERS/FOOTAGES:** NE NE SW

QUADRANGLE: EWING **LONGITUDE:** -88.808136 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.119589 **DATE COLLECTED:** 8 / 24 / 1976

SURFACE ELEVATION (FT.): 539.0 **LOGGED (FT.):** 972.5 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY EN-7 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
539.0			UNCLASSIFIED	798.0	0.0	
-259.0	MODESTO	PIASA	LIMESTONE	4.0	798.0	
-263.0	CARBONDALE		SHALE	22.0	802.0	
-285.0	CARBONDALE		SILTSTONE	2.4	824.0	BEGIN CORE
-287.4	CARBONDALE		CLAYSTONE & SILTSTONE	2.8	826.4	SILT
-290.2	CARBONDALE		LIMESTONE	4.8	829.2	
-295.0	CARBONDALE		SHALE	3.2	834.0	
-298.2	CARBONDALE		SANDY SHALE	1.7	837.2	
-299.8	CARBONDALE		SANDSTONE	3.0	838.8	
-302.8	CARBONDALE		BLACK SHALE	9.8	841.8	BLACK
-312.6	CARBONDALE		SANDY DARK SHALE	11.4	851.6	
-324.0	CARBONDALE		SHALE	0.7	863.0	LIGHT
-324.7	CARBONDALE	ANNA	BLACK SHALE	2.4	863.7	
-327.1	CARBONDALE	ENERGY	GRAY SHALE	9.0	866.1	LIGHT
-336.1	CARBONDALE	HERRIN	COAL	5.3	875.1	
-341.4	CARBONDALE		UNDERCLAY	2.7	880.4	
-344.1	CARBONDALE		SILTSTONE	5.9	883.1	
-350.0	CARBONDALE		SHALE	45.0	889.0	NOT CORED
-395.0	CARBONDALE	BRIAR HILL	COAL	1.0	934.0	NOT CORED
-396.0	CARBONDALE		SHALE	11.0	935.0	NOT CORED
-407.0	CARBONDALE		GRAY SHALE	8.8	946.0	DARK BEGIN CORE
-415.8	CARBONDALE	ST. DAVID	LIMESTONE	2.3	954.8	
-418.1	CARBONDALE	TURNER MINE	BLACK SHALE	3.5	957.1	
-421.6	CARBONDALE	DYKERSBURG	GRAY SHALE	1.5	960.6	
-423.1	CARBONDALE	SPRINGFIELD	COAL	4.3	962.1	
-427.3	CARBONDALE		UNDERCLAY	6.2	966.3	
-433.5	CARBONDALE			0.0	972.5	

MAPID: 05501118000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 7 **QUARTERS/FOOTAGES:** 330' S line, 2310' E line

QUADRANGLE: EWING **LONGITUDE:** -88.804987 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.098061 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 482.0 **LOGGED (FT.):** 4085.0 **LOG TYPE:** Electric Log

SOURCE: COLUMBUS EXPLORATION **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-260.0	CARBONDALE	DANVILLE	COAL	-	742.0	
-283.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	765.0	
-333.0	CARBONDALE	HERRIN	COAL	5.0	815.0	
-352.0	CARBONDALE	VERMILIONVILLE	SANDSTONE/SHALE	6.0	834.0	
-388.0	CARBONDALE	BRIAR HILL	COAL	-	870.0	
-391.0	CARBONDALE	CANTON	CALCAREOUS SANDSTONE	5.0	873.0	
-421.0	CARBONDALE	SPRINGFIELD	COAL	6.0	903.0	BLACK SHALE & LIMESTONE ROOF
-453.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	25.0	935.0	
-478.0	CARBONDALE	HOUCHIN CREEK	COAL	-	960.0	

MAPID: 05501118000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 7 **QUARTERS/FOOTAGES:** 330' S line, 2310' E line

QUADRANGLE: EWING **LONGITUDE:** -88.804987 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.098061 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 482.0 **LOGGED (FT.):** 820.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-248.0	MODESTO	PIASA	LIMESTONE	4.0	730.0	
-252.0	MODESTO		SHALE	10.0	734.0	
-262.0	CARBONDALE	DANVILLE	COAL	3.0	744.0	
-265.0	CARBONDALE		SHALE	19.0	747.0	
-284.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	766.0	
-288.0	CARBONDALE	LAWSON	SHALE	33.0	770.0	
-321.0	CARBONDALE	ANNA	BLACK SHALE	3.0	803.0	
-324.0	CARBONDALE	ENERGY	GRAY SHALE	9.0	806.0	
-333.0	CARBONDALE	HERRIN	COAL	5.0	815.0	

MAPID: 05501134000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 8 **QUARTERS/FOOTAGES:** 990' S line, 2310' E line

QUADRANGLE: EWING **LONGITUDE:** -88.78618 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.100543 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 450.0 **LOGGED (FT.):** 3985.0 **LOG TYPE:** Electric Log

SOURCE: LEWIS, WILL I. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-248.0	CARBONDALE	DANVILLE	COAL	-	698.0	
-260.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	10.0	710.0	
-272.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	722.0	
-284.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	20.0	734.0	
-322.0	CARBONDALE	HERRIN	COAL	5.0	772.0	
-340.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	10.0	790.0	
-374.0	CARBONDALE	BRIAR HILL	COAL	-	824.0	
-375.0	CARBONDALE	CANTON	CALCAREOUS SANDSTONE	8.0	825.0	
-402.0	CARBONDALE	SPRINGFIELD	COAL	5.0	852.0	BLACK SHALE & LIMESTONE ROOF
-414.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	26.0	864.0	
-496.0	CARBONDALE	HOUCHIN CREEK	COAL	-	946.0	

MAPID: 05501134000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 8 **QUARTERS/FOOTAGES:** 990' S line, 2310' E line

QUADRANGLE: EWING **LONGITUDE:** -88.78618 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.100543 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 450.0 **LOGGED (FT.):** 777.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-236.0	MODESTO	PIASA	LIMESTONE	5.0	686.0	
-241.0	MODESTO		SHALE	9.0	691.0	
-250.0	CARBONDALE	DANVILLE	COAL	2.0	700.0	
-252.0	CARBONDALE		SHALE & SANDSTONE	20.0	702.0	
-272.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	6.0	722.0	
-278.0	CARBONDALE	LAWSON	SILTY SHALE	8.0	728.0	
-286.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	20.0	736.0	
-306.0	CARBONDALE	LAWSON	SHALE	4.0	756.0	
-310.0	CARBONDALE	ANNA	BLACK SHALE	3.0	760.0	
-313.0	CARBONDALE	ENERGY	GRAY SHALE	9.0	763.0	
-322.0	CARBONDALE	HERRIN	COAL	5.0	772.0	

MAPID: 05522777000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 8 **QUARTERS/FOOTAGES:** NE NE SW SE

QUADRANGLE: EWING **LONGITUDE:** -88.783095 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.100549 **DATE COLLECTED:** 7 / 25 / 1976

SURFACE ELEVATION (FT.): 441.0 **LOGGED (FT.):** 859.7 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY EN-9 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
441.0			UNCLASSIFIED	680.0	0.0	
-239.0	MODESTO	PIASA	LIMESTONE	5.0	680.0	
-244.0	MODESTO		SHALE	8.0	685.0	
-252.0	CARBONDALE	DANVILLE	COAL	2.0	693.0	
-254.0	CARBONDALE		SHALE	20.0	695.0	
-274.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	715.0	
-279.0	CARBONDALE		SHALE	30.0	720.0	
-309.0	CARBONDALE		SANDY SHALE	1.2	750.0	BEGIN CORE
-310.2	CARBONDALE	JAMESTOWN	BLACK SHALE	0.4	751.2	
-310.6	CARBONDALE		SHALE	3.1	751.6	DARK
-313.7	CARBONDALE	BRERETON	LIMESTONE	7.1	754.7	
-320.8	CARBONDALE	HERRIN	COAL	5.6	761.8	
-326.4	CARBONDALE		UNDERCLAY	2.5	767.4	
-328.9	CARBONDALE		SILTSTONE	10.1	769.9	
-339.0	CARBONDALE		SHALE	37.0	780.0	NOT CORED
-376.0	CARBONDALE	BRIAR HILL	COAL	2.0	817.0	NOT CORED
-378.0	CARBONDALE		SHALE	15.0	819.0	NOT CORED
-393.0	CARBONDALE		SHALE	4.9	834.0	DARK BEGIN CORE
-397.9	CARBONDALE	ST. DAVID	LIMESTONE	2.3	838.9	
-400.2	CARBONDALE	DYKERSBURG	SHALE	3.4	841.2	
-403.5	CARBONDALE	SPRINGFIELD	COAL	4.2	844.5	
-407.7	CARBONDALE		UNDERCLAY	3.5	848.7	
-411.3	CARBONDALE		SILTSTONE	7.4	852.3	
-418.7				0.0	859.7	

MAPID: 05501144000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 9 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of SE

QUADRANGLE: EWING **LONGITUDE:** -88.767736 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.099246 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 431.0 **LOGGED (FT.):** 3227.0 **LOG TYPE:** Electric Log

SOURCE: OBERING ERNEST A **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-266.0	CARBONDALE	DANVILLE	COAL	-	697.0	
-287.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	718.0	
-295.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	7.0	726.0	
-339.0	CARBONDALE	HERRIN	COAL	4.0	770.0	
-349.0	CARBONDALE	VERMILIONVILLE	SANDSTONE/SHALE	26.0	780.0	
-399.0	CARBONDALE	BRIAR HILL	COAL	-	830.0	
-435.0	CARBONDALE	SPRINGFIELD	COAL	4.0	866.0	SHALE & SILTSTONE ROOF
-473.0	CARBONDALE	HOUCHIN CREEK	COAL	-	904.0	

MAPID: 05501474000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 9 **QUARTERS/FOOTAGES:** 2310' S line, 2310' W line

QUADRANGLE: EWING **LONGITUDE:** -88.769952 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.104646 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 439.0 **LOGGED (FT.):** 788.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-258.0	MODESTO	PIASA	LIMESTONE	5.0	697.0	
-263.0	MODESTO		SHALE	13.0	702.0	
-276.0	CARBONDALE	DANVILLE	COAL	1.0	715.0	
-277.0	CARBONDALE		SILTY SHALE	19.0	716.0	
-296.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	3.0	735.0	
-299.0	CARBONDALE	LAWSON	SILTY SHALE	35.0	738.0	
-334.0	CARBONDALE	JAMESTOWN	BONE COAL	1.0	773.0	
-335.0	CARBONDALE		SHALE	1.0	774.0	
-336.0	CARBONDALE	BRERETON	LIMESTONE	7.5	775.0	
-343.5	CARBONDALE	ANNA	BLACK SHALE	1.5	782.5	
-344.0	CARBONDALE	HERRIN	COAL	5.0	783.0	

MAPID: 05501150000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 10 **QUARTERS/FOOTAGES:** 2310' S line, 330' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.742654 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.104607 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 539.0 **LOGGED (FT.):** 3340.0 **LOG TYPE:** Electric Log

SOURCE: JONES, BOND D. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-391.0	CARBONDALE	HERRIN	COAL	8.0	930.0	
-465.0	CARBONDALE	SPRINGFIELD	COAL	5.0	1004.0	BLACK SHALE & LIMESTONE ROOF
-637.0	CARBONDALE	HOUCHIN CREEK	COAL	-	1176.0	

MAPID: 05501150000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 10 **QUARTERS/FOOTAGES:** 2310' S line, 330' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.742654 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.104607 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 539.0 **LOGGED (FT.):** 925.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-300.0	MODESTO	PIASA	LIMESTONE	5.0	839.0	
-305.0	MODESTO		SHALE	13.0	844.0	
-318.0	CARBONDALE	DANVILLE	COAL	2.0	857.0	
-320.0	CARBONDALE		SILTY SHALE	16.0	859.0	
-336.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	3.0	875.0	
-339.0	CARBONDALE	LAWSON	SILTY SHALE	37.0	878.0	
-376.0	CARBONDALE	ANNA	BLACK SHALE	2.5	915.0	
-378.5	CARBONDALE	ENERGY	GRAY SHALE	2.5	917.5	
-381.0	CARBONDALE	HERRIN	COAL	5.0	920.0	

MAPID: 05523212000C **VERSION:** 1 **PROJECT:** NCRDS98

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 10 **QUARTERS/FOOTAGES:** NE NE

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.742575 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.11308 **DATE COLLECTED:** 9 / 8 / 1981

SURFACE ELEVATION (FT.): 493.0 **LOGGED (FT.):** 996.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #84 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
493.0			UNCLASSIFIED	885.0	0.0	
-392.0	CARBONDALE	BRERETON	LIMESTONE	5.2	885.0	
-397.2	CARBONDALE	ANNA	SHALE	1.3	890.2	BLACK
-398.5	CARBONDALE	HERRIN	COAL	5.8	891.5	
-404.3	CARBONDALE		SHALE	3.7	897.3	
-408.0	CARBONDALE		UNCLASSIFIED	61.0	901.0	
-469.0	CARBONDALE		SANDSTONE	1.6	962.0	
-470.6	CARBONDALE		SANDY SHALE	2.8	963.6	
-473.4	CARBONDALE		DARK SHALE	12.7	966.4	
-486.1	CARBONDALE		SHALE	1.5	979.1	
-487.6	CARBONDALE	ST. DAVID	LIMESTONE	1.0	980.6	
-488.6	CARBONDALE	TURNER MINE	SHALE	0.3	981.6	
-488.8	CARBONDALE	TURNER MINE	SHALE	3.8	981.8	BLACK
-492.6	CARBONDALE	SPRINGFIELD	COAL	5.3	985.6	
-497.9	CARBONDALE		SHALE	5.1	990.9	

MAPID: 05523194000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 11 **QUARTERS/FOOTAGES:** SE NE

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.726486 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.106764 **DATE COLLECTED:** 8 / 10 / 1981

SURFACE ELEVATION (FT.): 526.0 **LOGGED (FT.):** 1041.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #58 **WELL TYPE:** Coal Test

COMMENT: 524570 N, 386890 E

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
526.0			UNCLASSIFIED	933.0	0.0	
-407.0	CARBONDALE	BRERETON	LIMESTONE	5.0	933.0	
-412.0	CARBONDALE	ANNA	BLACK SHALE	1.3	938.0	
-413.3	CARBONDALE	HERRIN	COAL	5.8	939.3	
-419.2	CARBONDALE		UNDERCLAY	0.8	945.2	
-420.0	CARBONDALE		SANDSTONE	6.2	946.0	
-426.2	CARBONDALE		UNCLASSIFIED	61.8	952.2	
-488.0	CARBONDALE		SHALE	9.5	1014.0	
-497.5	CARBONDALE	ST. DAVID	LIMESTONE	1.5	1023.5	
-499.0	CARBONDALE	TURNER MINE	BLACK SHALE	1.0	1025.0	
-500.0	CARBONDALE		CORE LOSS	2.0	1026.0	
-502.0	CARBONDALE	TURNER MINE	BLACK SHALE	1.8	1028.0	
-503.8	CARBONDALE	SPRINGFIELD	COAL	5.7	1029.8	
-509.4	CARBONDALE		UNCLASSIFIED	5.6	1035.4	
-515.0				0.0	1041.0	

MAPID: 05523213000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 12 **QUARTERS/FOOTAGES:** SW SE

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.712409 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.100301 **DATE COLLECTED:** 8 / 19 / 1981

SURFACE ELEVATION (FT.): 469.0 **LOGGED (FT.):** 989.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #68 **WELL TYPE:** Coal Test

COMMENT: 522200 N, 390930 E

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
469.0			UNCLASSIFIED	887.0	0.0	
-418.0	CARBONDALE		SHALE	6.1	887.0	
-424.1	CARBONDALE	BRERETON	LIMESTONE	0.5	893.1	
-424.7	CARBONDALE	ANNA	SHALE	3.6	893.7	VERY DARK GRAY, CARBONACEOUS
-428.3	CARBONDALE	ENERGY	SHALE	6.2	897.3	
-434.4	CARBONDALE	HERRIN	COAL	5.9	903.4	
-440.3	CARBONDALE		UNDERCLAY	3.0	909.3	
-443.3	CARBONDALE		UNCLASSIFIED	61.7	912.3	
-505.0	CARBONDALE	DYKERSBURG	SHALE	6.0	974.0	DARK
-511.0	CARBONDALE	SPRINGFIELD	COAL	4.5	980.0	
-515.5	CARBONDALE		UNDERCLAY	4.5	984.5	
-520.0				0.0	989.0	

MAPID: 05501135000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 13 **QUARTERS/FOOTAGES:** 1980' N line, 2310' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.713313 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.09144 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 470.0 **LOGGED (FT.):** 3371.0 **LOG TYPE:** Electric Log

SOURCE: SKAFF ALFRED **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-352.0	CARBONDALE	DANVILLE	COAL	-	822.0	
-356.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	6.0	826.0	
-378.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	848.0	
-384.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	23.0	854.0	
-431.0	CARBONDALE	HERRIN	COAL	6.0	901.0	
-456.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	12.0	926.0	
-488.0	CARBONDALE	BRIAR HILL	COAL	-	958.0	
-493.0	CARBONDALE	CANTON	CALCAREOUS SANDSTONE	7.0	963.0	
-519.0	CARBONDALE	SPRINGFIELD	COAL	6.0	989.0	BLACK SHALE & LIMESTONE ROOF
-553.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	23.0	1023.0	
-578.0	CARBONDALE	HOUCHIN CREEK	COAL	-	1048.0	

MAPID: 05501135000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 13 **QUARTERS/FOOTAGES:** 1980' N line, 2310' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.713313 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.09144 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 470.0 **LOGGED (FT.):** 908.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-336.0	MODESTO	PIASA	LIMESTONE	4.0	806.0	
-340.0	MODESTO		SHALE	15.0	810.0	
-355.0	CARBONDALE	DANVILLE	COAL	2.0	825.0	
-357.0	CARBONDALE		SHALE	16.0	827.0	
-373.0	CARBONDALE	ALLENBY	BONE COAL	1.0	843.0	
-374.0	CARBONDALE		CLAYSTONE & SHALE	5.0	844.0	
-379.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	849.0	
-383.0	CARBONDALE	LAWSON	SILTY SHALE	11.0	853.0	
-394.0	CARBONDALE	LAWSON	SANDSTONE	22.0	864.0	
-416.0	CARBONDALE	LAWSON	SHALE	7.0	886.0	
-423.0	CARBONDALE	JAMESTOWN	BONE COAL	1.0	893.0	
-424.0	CARBONDALE	BRERETON	LIMESTONE	4.5	894.0	
-428.5	CARBONDALE	ANNA	BLACK SHALE	2.5	898.5	
-431.0	CARBONDALE	HERRIN	COAL	7.0	901.0	

MAPID: 05523214000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 13 **QUARTERS/FOOTAGES:** SE NW

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.71479 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.08997 **DATE COLLECTED:** 8 / 4 / 1981

SURFACE ELEVATION (FT.): 469.0 **LOGGED (FT.):** 1006.5 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #51 **WELL TYPE:** Coal Test

COMMENT: 518440 N, 390230 E

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
469.0			UNCLASSIFIED	889.5	0.0	
-420.5	CARBONDALE	BRERETON	LIMESTONE	2.5	889.5	
-423.0	CARBONDALE	ANNA	SHALE	6.5	892.0	DARK
-429.5	CARBONDALE	HERRIN	COAL	6.9	898.5	
-436.4	CARBONDALE		UNDERCLAY	2.9	905.4	
-439.3	CARBONDALE		UNCLASSIFIED	78.7	908.3	
-518.0	CARBONDALE	DYKERSBURG	SHALE	8.3	987.0	
-526.3	CARBONDALE	SPRINGFIELD	COAL	7.0	995.3	
-533.3	CARBONDALE		UNDERCLAY	4.3	1002.3	

MAPID: 05522792000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 14 **QUARTERS/FOOTAGES:** SW NW NE

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.732219 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.094387 **DATE COLLECTED:** 9 / 8 / 1976

SURFACE ELEVATION (FT.): 541.0 **LOGGED (FT.):** 1030.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY EN-11 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
541.0			UNCLASSIFIED	838.0	0.0	
-297.0	MODESTO	PIASA	LIMESTONE	6.0	838.0	
-303.0	MODESTO		SHALE	9.0	844.0	
-312.0	CARBONDALE	DANVILLE	COAL	1.0	853.0	
-313.0	CARBONDALE		SHALE	26.0	854.0	
-339.0	CARBONDALE		LIMESTONE	3.0	880.0	
-342.0	CARBONDALE		SHALE	27.0	883.0	
-369.0	CARBONDALE		SANDSTONE	13.5	910.0	BEGIN CORE
-382.5	CARBONDALE	JAMESTOWN	BLACK SHALE	0.7	923.5	
-383.1	CARBONDALE	BRERETON	LIMESTONE	0.9	924.1	
-384.0	CARBONDALE	ANNA	BLACK SHALE	3.7	925.0	
-387.7	CARBONDALE	ENERGY	SHALE	2.5	928.7	
-390.2	CARBONDALE	HERRIN	COAL	6.4	931.2	
-396.6	CARBONDALE		UNDERCLAY	4.1	937.6	
-400.7	CARBONDALE		SILTSTONE	1.4	941.7	
-402.0	CARBONDALE		SHALE	48.0	943.0	NOT CORED
-450.0	CARBONDALE	BRIAR HILL	COAL	1.0	991.0	NOT CORED
-451.0	CARBONDALE		SHALE	9.0	992.0	NOT CORED
-460.0	CARBONDALE		SHALE	4.8	1001.0	DARK BEGIN CORE
-464.8	CARBONDALE		BLACK SHALE	1.0	1005.8	
-465.8	CARBONDALE	ST. DAVID	LIMESTONE	1.4	1006.8	
-467.2	CARBONDALE		BLACK SHALE	0.4	1008.2	
-467.5	CARBONDALE		SHALE	5.5	1008.5	DARK
-473.0	CARBONDALE		BLACK SHALE	5.4	1014.0	
-478.4	CARBONDALE	SPRINGFIELD	COAL	7.0	1019.4	
-485.3	CARBONDALE		SILTSTONE	3.7	1026.3	
-489.0				0.0	1030.0	

MAPID: 05523191000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 14 **QUARTERS/FOOTAGES:** SW SW

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.741589 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.085761 **DATE COLLECTED:** 7 / 30 / 1981

SURFACE ELEVATION (FT.): 459.0 **LOGGED (FT.):** 950.5 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #49 **WELL TYPE:** Coal Test

COMMENT: 516940 N, 382510 E

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
459.0			UNCLASSIFIED	838.0	0.0	
-379.0	CARBONDALE		SANDY SHALE	2.7	838.0	
-381.7	CARBONDALE		BLACK SHALE	0.7	840.7	
-382.4	CARBONDALE	BRERETON	LIMESTONE	2.2	841.4	
-384.6	CARBONDALE	ANNA	BLACK SHALE	1.7	843.6	
-386.3	CARBONDALE	ENERGY	SHALE	3.4	845.3	
-389.8	CARBONDALE	HERRIN	COAL	6.6	848.8	
-396.3	CARBONDALE		BLACK SHALE	76.7	855.3	
-473.0	CARBONDALE	TURNER MINE	BLACK SHALE	3.0	932.0	
-476.0	CARBONDALE	DYKERSBURG	SHALE	7.0	935.0	
-483.0	CARBONDALE	SPRINGFIELD	COAL	6.2	942.0	
-489.2	CARBONDALE		UNDERCLAY	2.3	948.2	
-491.5				0.0	950.5	

MAPID: 05501404000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 15 **QUARTERS/FOOTAGES:** 330' S line, 330' W line

QUADRANGLE: EWING **LONGITUDE:** -88.758655 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.084503 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 440.0 **LOGGED (FT.):** 3112.0 **LOG TYPE:** Electric Log

SOURCE: GENTLES, ALBERT **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-411.0	CARBONDALE	HERRIN	COAL	4.0	851.0	
-460.0	CARBONDALE	BRIAR HILL	COAL	-	900.0	
-493.0	CARBONDALE	SPRINGFIELD	COAL	4.0	933.0	BLACK SHALE & LIMESTONE ROOF
-570.0	CARBONDALE	HOUCHIN CREEK	COAL	-	1010.0	

MAPID: 05501404000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 15 **QUARTERS/FOOTAGES:** 330' S line, 330' W line

QUADRANGLE: EWING **LONGITUDE:** -88.758655 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.084503 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 440.0 **LOGGED (FT.):** 856.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-305.0	MODESTO	PIASA	LIMESTONE & SHALE	5.0	745.0	
-310.0	MODESTO		SHALE	30.0	750.0	
-340.0	CARBONDALE	DANVILLE	COAL	2.0	780.0	
-342.0	CARBONDALE		SHALE	18.0	782.0	
-360.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	3.0	800.0	
-363.0	CARBONDALE	LAWSON	CLAYSTONE & SHALE	3.0	803.0	
-366.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	6.0	806.0	
-372.0	CARBONDALE	LAWSON	SILTY SHALE	6.0	812.0	
-378.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	6.0	818.0	
-384.0	CARBONDALE	LAWSON	SHALE	18.0	824.0	
-402.0	CARBONDALE	JAMESTOWN	BONE COAL	1.0	842.0	
-403.0	CARBONDALE		SHALE	1.0	843.0	
-404.0	CARBONDALE	BRERETON	LIMESTONE	5.0	844.0	
-409.0	CARBONDALE	ANNA	BLACK SHALE	2.0	849.0	
-411.0	CARBONDALE	HERRIN	COAL	5.0	851.0	

MAPID: 05523197000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 15 **QUARTERS/FOOTAGES:** SW NE

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.748652 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.093728 **DATE COLLECTED:** 8 / 13 / 1981

SURFACE ELEVATION (FT.): 505.0 **LOGGED (FT.):** 957.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #63 **WELL TYPE:** Coal Test

COMMENT: 519850 N,380490 E

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
505.0			UNCLASSIFIED	854.0	0.0	
-349.0	CARBONDALE		BLACK SHALE	0.5	854.0	
-349.5	CARBONDALE	BRERETON	LIMESTONE	6.0	854.5	
-355.5	CARBONDALE	ANNA	BLACK SHALE	1.2	860.5	
-356.7	CARBONDALE	HERRIN	COAL	5.3	861.7	
-362.0	CARBONDALE		UNDERCLAY	2.0	867.0	
-364.0	CARBONDALE		SANDSTONE	3.8	869.0	
-367.8	CARBONDALE		UNCLASSIFIED	66.2	872.8	
-434.0	CARBONDALE		BLACK SHALE	1.5	939.0	
-435.5	CARBONDALE	ST. DAVID	LIMESTONE	1.0	940.5	
-436.5	CARBONDALE	DYKERSBURG	SHALE	5.5	941.5	
-442.0	CARBONDALE	SPRINGFIELD	COAL	5.2	947.0	
-447.2	CARBONDALE		SANDSTONE	4.8	952.2	
-452.0				0.0	957.0	

MAPID: 05523215000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 15 **QUARTERS/FOOTAGES:** NW SW

QUADRANGLE: EWING **LONGITUDE:** -88.759041 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.087702 **DATE COLLECTED:** 8 / 13 / 1981

SURFACE ELEVATION (FT.): 503.0 **LOGGED (FT.):** 939.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #62 **WELL TYPE:** Coal Test

COMMENT: 517670 N, 377490 E

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
503.0			UNCLASSIFIED	830.0	0.0	
-327.0	CARBONDALE		SHALE	6.3	830.0	
-333.3	CARBONDALE		LIMESTONE	0.5	836.3	
-333.8	CARBONDALE		SHALE/COAL	0.3	836.8	
-334.2	CARBONDALE		CALCAREOUS SHALE	2.2	837.2	
-336.3	CARBONDALE		SHALE	3.3	839.3	DARK
-339.6	CARBONDALE	BRERETON	LIMESTONE	3.3	842.6	
-342.8	CARBONDALE	ENERGY	SHALE	0.4	845.8	
-343.2	CARBONDALE	HERRIN	COAL	5.6	846.2	
-348.8	CARBONDALE		SHALE	4.0	851.8	
-352.8	CARBONDALE		UNCLASSIFIED	64.2	855.8	
-417.0	CARBONDALE	TURNER MINE	BLACK SHALE	0.5	920.0	
-417.5	CARBONDALE	SPRINGFIELD	COAL	4.0	920.5	
-421.4	CARBONDALE		SHALE	10.1	924.4	
-431.5	CARBONDALE		SANDY SHALE	4.5	934.5	
-436.0				0.0	939.0	

MAPID: 05501117000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 16 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of SE NW

QUADRANGLE: EWING **LONGITUDE:** -88.772456 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.091634 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 449.0 **LOGGED (FT.):** 3223.0 **LOG TYPE:** Electric Log

SOURCE: ELLISON GEORGE P **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-251.0	CARBONDALE	DANVILLE	COAL	-	700.0	
-254.0	CARBONDALE	SS BELOW NO. 7	SANDSTONE/SHALE	17.0	703.0	
-279.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	728.0	
-287.0	CARBONDALE	ANVIL ROCK	SILTSTONE	6.0	736.0	
-327.0	CARBONDALE	HERRIN	COAL	4.0	776.0	
-349.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	12.0	798.0	
-375.0	CARBONDALE	BRIAR HILL	COAL	-	824.0	
-378.0	CARBONDALE	CANTON	CALCAREOUS SANDSTONE	9.0	827.0	
-407.0	CARBONDALE	SPRINGFIELD	COAL	4.0	856.0	BLACK SHALE & LIMESTONE ROOF
-426.0	CARBONDALE	SS BELOW NO. 5	SILTSTONE	5.0	875.0	
-485.0	CARBONDALE	HOUCHIN CREEK	COAL	-	934.0	

MAPID: 05501761000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 16 **QUARTERS/FOOTAGES:** 330' N line, 2310' E line

QUADRANGLE: EWING **LONGITUDE:** -88.76773 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.097423 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 432.0 **LOGGED (FT.):** 766.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-240.0	MODESTO	PIASA	LIMESTONE	4.0	672.0	
-244.0	MODESTO		SHALE	10.0	676.0	
-254.0	CARBONDALE	DANVILLE	COAL	2.0	686.0	
-256.0	CARBONDALE		SHALE & SANDSTONE	24.0	688.0	
-280.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	712.0	
-285.0	CARBONDALE	LAWSON	SHALE	37.0	717.0	
-322.0	CARBONDALE	ANNA	BLACK SHALE	2.0	754.0	
-324.0	CARBONDALE	ENERGY	GRAY SHALE	4.0	756.0	
-328.0	CARBONDALE	HERRIN	COAL	6.0	760.0	

MAPID: 05500001000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 17 **QUARTERS/FOOTAGES:** SE SE SE SE

QUADRANGLE: EWING **LONGITUDE:** -88.778924 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.083519 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 422.4 **LOGGED (FT.):** 737.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0010 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-307.6	CARBONDALE	HERRIN	COAL	5.6	730.0	

MAPID: 05500001000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 17 **QUARTERS/FOOTAGES:** SE SE SE SE

QUADRANGLE: EWING **LONGITUDE:** -88.778924 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.083519 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 422.0 **LOGGED (FT.):** 737.0 **LOG TYPE:** Drillers Log

SOURCE: L. N. WOOD **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
422.0			UNCONSOLIDATED	23.0	0.0	UNCLASSIFIED
399.0			ROCK	49.3	23.0	
349.7			COAL	0.6	72.3	
349.1			ROCK	80.2	72.9	
268.9			COAL	0.3	153.1	
268.7			ROCK	64.2	153.3	
204.5			COAL	0.1	217.5	
204.4			ROCK	146.7	217.6	
57.7			COAL	0.6	364.3	DIRTY
57.2			ROCK	86.4	364.8	
-29.2			COAL	0.8	451.2	
-30.0			ROCK	165.0	452.0	
-195.0			COAL	0.8	617.0	
-195.8			ROCK	40.5	617.8	
-236.3			COAL	2.3	658.3	
-238.6			ROCK	45.4	660.6	
-284.0			SHALE	14.8	706.0	
-298.8			COAL WITH SHALE	0.5	720.8	LIMEY SH WITH COAL PARTINGS
-299.3			COAL	0.3	721.3	BONEY
-299.7			BLACK SHALE	1.3	721.7	
-301.0			LIMESTONE	6.0	723.0	
-307.0			BLACK SHALE	1.3	729.0	
-308.3	CARBONDALE	HERRIN	COAL	5.6	730.3	
-313.8	CARBONDALE		UNDERCLAY	1.2	735.8	

MAPID: 05500001000C **VERSION:** 3 **PROJECT:** NCRDS87

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 17 **QUARTERS/FOOTAGES:** SE SE SE SE

QUADRANGLE: EWING **LONGITUDE:** -88.778924 **GEOLOGIST:** WEIBEL

CONFIDENTIAL: N **LATITUDE:** 38.083519 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 422.4 **LOGGED (FT.):** 737.0 **LOG TYPE:** Drillers Log

SOURCE: L.N. WOOD **WELL TYPE:** Coal Test

COMMENT: LOCATION IMPRECISE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
422.4			UNCONSOLIDATED	47.0	0.0	
375.4	BOND		SHALE	25.3	47.0	
350.1	BOND		COAL	0.6	72.3	
349.5	BOND		SHALE	32.1	72.9	
317.4	BOND		SANDSTONE	48.1	105.0	
269.3	BOND		COAL	0.3	153.1	
269.1	BOND		UNDERCLAY	4.3	153.3	
264.7	BOND		SHALE	40.3	157.7	
224.4	BOND	CARTHAGE	LIMESTONE	10.0	198.0	
214.4	MODESTO		BLACK SHALE	2.5	208.0	
211.9	MODESTO		SHALE	7.0	210.5	
204.9	MODESTO		COAL	0.1	217.5	
204.8	MODESTO		SHALE	4.0	217.6	
200.8	MODESTO		LIMESTONE	0.4	221.6	
200.4	MODESTO		SHALE	124.0	222.0	
76.4	MODESTO		LIMESTONE	2.0	346.0	
74.4	MODESTO		DARK SHALE	5.0	348.0	
69.4	MODESTO		SHALE	11.3	353.0	
58.1	MODESTO		BONE COAL	0.6	364.3	
57.6	MODESTO		SHALE	85.2	364.8	
-27.6	MODESTO		BLACK SHALE	1.2	450.0	
-28.8	MODESTO		COAL	0.8	451.2	
-29.6	MODESTO		SHALE	165.0	452.0	
-194.6	MODESTO		COAL	8.8	617.0	
-203.4	MODESTO		SHALE	32.4	625.8	
-235.9	CARBONDALE	DANVILLE	COAL	2.3	658.3	
-238.2	CARBONDALE		SHALE	19.4	660.6	
-257.6	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	680.0	
-259.6	CARBONDALE		SHALE	4.0	682.0	
-263.6	CARBONDALE		SANDSTONE	4.0	686.0	
-267.6	CARBONDALE		DARK SHALE	10.0	690.0	
-277.6	CARBONDALE		SANDSTONE	6.0	700.0	
-283.6	CARBONDALE		GRAY SHALE	14.8	706.0	
-298.4	CARBONDALE		SHALE	0.5	720.8	
-298.9	CARBONDALE		BONE COAL	0.3	721.3	
-299.3	CARBONDALE		BLACK SHALE	1.3	721.7	
-300.6	CARBONDALE	BRERETON	LIMESTONE	6.0	723.0	
-306.6	CARBONDALE	ANNA	BLACK SHALE	1.3	729.0	
-307.9	CARBONDALE	HERRIN	COAL	5.6	730.3	

-313.4	CARBONDALE	UNDERCLAY	1.2	735.8

MAPID: 05500001000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 17 **QUARTERS/FOOTAGES:** SE SE SE SE

QUADRANGLE: EWING **LONGITUDE:** -88.778924 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.083519 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 422.4 **LOGGED (FT.):** 737.0 **LOG TYPE:** Drillers Log

SOURCE: L.N. WOOD 5 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
422.4	PLEISTOCENE		CLAY	13.0	0.0	YELLOW
409.4	PLEISTOCENE		SAND & GRAVEL	10.0	13.0	
399.4	PLEISTOCENE		CLAY	1.0	23.0	SHALE
398.4	PLEISTOCENE		SAND	23.0	24.0	
375.4	BOND		SANDY SHALE	25.3	47.0	
350.1	BOND		COAL	0.6	72.3	
349.5	BOND		SHALE	12.1	72.9	
337.4	BOND		SANDY SHALE	20.0	85.0	
317.4	BOND		SANDSTONE	48.1	105.0	
269.3	BOND		COAL	0.3	153.1	
269.1	BOND		CLAYSTONE	3.7	153.3	
265.4	BOND		SHALE	41.0	157.0	
224.4	BOND	CARTHAGE	LIMESTONE	10.0	198.0	
214.4	MODESTO		SHALE	2.5	208.0	
211.9	MODESTO		SHALE	7.0	210.5	
204.9	MODESTO		COAL	0.1	217.5	
204.8	MODESTO		SOFT SHALE	4.0	217.6	
200.8	MODESTO		LIMESTONE	0.4	221.6	
200.4	MODESTO		SANDY SHALE	24.0	222.0	
176.4	MODESTO		SHALE	54.0	246.0	
122.4	MODESTO		SANDY SHALE	38.0	300.0	
84.4	MODESTO		SANDY SHALE	5.0	338.0	
79.4	MODESTO		SANDY SHALE	3.0	343.0	
76.4	MODESTO		LIMESTONE	2.0	346.0	
74.4	MODESTO		SHALE	5.0	348.0	
69.4	MODESTO		SOFT SHALE	11.3	353.0	
58.1	MODESTO		COAL	0.6	364.3	
57.6	MODESTO		SANDY SHALE	10.2	364.8	
47.4	MODESTO		SANDSTONE	43.0	375.0	WITH SHALE PARTINGS
4.4	MODESTO		SHALE	30.0	418.0	
-25.6	MODESTO		SHALE	2.0	448.0	
-27.6	MODESTO		SHALE	1.2	450.0	
-28.8	MODESTO		COAL	0.8	451.2	
-29.6	MODESTO		SANDY SHALE	26.0	452.0	WITH SANDY LIMESTONE
-55.6	MODESTO		SANDY SHALE	38.0	478.0	
-93.6	MODESTO		SANDY SHALE	38.0	516.0	
-131.6	MODESTO		SANDY SHALE	16.0	554.0	
-147.6	MODESTO		SHALE	20.0	570.0	
-167.6	MODESTO		SHALE	10.0	590.0	DARK BLUE

-177.6	MODESTO		SHALE WITH LIMESTONE	0.3	600.0	WITH LIMESTONE BANDS
-177.9	MODESTO		SHALE	0.7	600.3	DARK BLUE
-178.6	MODESTO		SHALE	11.0	601.0	LIGHT GRAY
-189.6	MODESTO		SHALE	5.0	612.0	DARK BLUE
-194.6	MODESTO		COAL	8.0	617.0	
-202.6	MODESTO		SANDY SHALE	4.2	625.0	
-206.8	MODESTO		SOFT SHALE	16.0	629.2	
-222.8	MODESTO		SHALE	10.0	645.2	
-232.8	MODESTO		SHALE	2.3	655.2	DARK BLUE
-235.0	CARBONDALE	DANVILLE	COAL	2.3	657.4	
-237.4	CARBONDALE		SHALE	9.4	659.8	
-246.8	CARBONDALE		SHALE WITH LIMESTONE	2.0	669.2	WITH LIMESTONE BANDS
-248.8	CARBONDALE		SHALE	8.0	671.2	
-256.8	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	679.2	
-258.8	CARBONDALE		CALCAREOUS SHALE	4.0	681.2	
-262.8	CARBONDALE		SANDSTONE	4.0	685.2	
-266.8	CARBONDALE		SHALE	6.0	689.2	
-272.8	CARBONDALE		SANDY SHALE	4.0	695.2	WITH SANDSTONE BANDS
-276.8	CARBONDALE		SANDSTONE	6.0	699.2	
-282.8	CARBONDALE		SHALE	14.8	705.2	
-297.6	CARBONDALE		CALCAREOUS SHALE	0.5	720.0	WITH COAL PARTINGS
-298.1	CARBONDALE	JAMESTOWN	BONE COAL	0.3	720.5	
-298.4	CARBONDALE		SHALE	1.3	720.8	
-299.8	CARBONDALE	BRERETON	LIMESTONE	6.0	722.2	
-305.8	CARBONDALE	ANNA	SHALE	1.3	728.2	
-307.0	CARBONDALE	HERRIN	COAL	5.6	729.4	
-312.6	CARBONDALE		CLAYSTONE	2.0	735.0	

MAPID: 05500814000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 17 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of SW SE

QUADRANGLE: EWING **LONGITUDE:** -88.784185 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.08374 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 432.0 **LOGGED (FT.):** 3253.0 **LOG TYPE:** Electric Log

SOURCE: SOHIO PETROLEUM CO. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-318.0	CARBONDALE	HERRIN	COAL	6.0	750.0	
-370.0	CARBONDALE	BRIAR HILL	COAL	-	802.0	
-406.0	CARBONDALE	SPRINGFIELD	COAL	5.0	838.0	BLACK SHALE & LIMESTONE ROOF
-468.0	CARBONDALE	HOUCHIN CREEK	COAL	-	900.0	

MAPID: 05523216000C **VERSION:** 1 **PROJECT:** NCRDS98

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 17 **QUARTERS/FOOTAGES:** NE SE

QUADRANGLE: EWING **LONGITUDE:** -88.782751 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.089537 **DATE COLLECTED:** 9 / 8 / 1981

SURFACE ELEVATION (FT.): 434.0 **LOGGED (FT.):** 859.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #85 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
434.0			UNCLASSIFIED	747.0	0.0	
-313.0	CARBONDALE	BRERETON	LIMESTONE	5.3	747.0	
-318.3	CARBONDALE	ANNA	SILTY SHALE	1.5	752.3	
-319.8	CARBONDALE	HERRIN	COAL	5.9	753.8	
-325.7	CARBONDALE		UNDERCLAY	4.3	759.7	
-330.0	CARBONDALE		UNCLASSIFIED	64.0	764.0	DRILLED THROUGH SPRINGFIELD SEAM
-394.0	CARBONDALE		UNDERCLAY	1.0	828.0	
-395.0	CARBONDALE		SANDSTONE	30.0	829.0	THICKNESS ADJUSTED

MAPID: 05500632000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 18 **QUARTERS/FOOTAGES:** 1650' S line, 1650' W line

QUADRANGLE: EWING **LONGITUDE:** -88.810371 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.08639 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 483.0 **LOGGED (FT.):** 2511.0 **LOG TYPE:** Electric Log

SOURCE: NATIONAL PETROLEUM CORP. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-253.0	CARBONDALE	DANVILLE	COAL	-	736.0	
-273.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	756.0	
-295.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	12.0	778.0	
-323.0	CARBONDALE	HERRIN	COAL	5.0	806.0	
-381.0	CARBONDALE	BRIAR HILL	COAL	-	864.0	
-383.0	CARBONDALE	CANTON	SILTSTONE	6.0	866.0	
-422.0	CARBONDALE	SPRINGFIELD	COAL	6.0	905.0	SHALE & SILTSTONE ROOF
-431.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	24.0	914.0	
-467.0	CARBONDALE	HOUCHIN CREEK	COAL	-	950.0	

MAPID: 05500632000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 18 **QUARTERS/FOOTAGES:** 1650' S line, 1650' W line

QUADRANGLE: EWING **LONGITUDE:** -88.810371 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.08639 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 483.0 **LOGGED (FT.):** 812.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-240.0	MODESTO	PIASA	LIMESTONE	6.0	723.0	
-246.0	MODESTO		SILTY SHALE	10.0	729.0	
-256.0	CARBONDALE	DANVILLE	COAL	2.0	739.0	
-258.0	CARBONDALE		SHALE	17.0	741.0	
-275.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	758.0	
-279.0	CARBONDALE	LAWSON	SILTY SHALE	16.0	762.0	
-295.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	12.0	778.0	
-307.0	CARBONDALE	LAWSON	SHALE	4.0	790.0	
-311.0	CARBONDALE	BRERETON	LIMESTONE	10.0	794.0	
-321.0	CARBONDALE	ANNA	BLACK SHALE	3.0	804.0	
-324.0	CARBONDALE	HERRIN	COAL	5.0	807.0	

MAPID: 05522802000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 18 **QUARTERS/FOOTAGES:** SE SE SE SW

QUADRANGLE: EWING **LONGITUDE:** -88.807513 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.082411 **DATE COLLECTED:** 9 / 25 / 1976

SURFACE ELEVATION (FT.): 466.0 **LOGGED (FT.):** 887.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY EN-26 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
466.0			UNCLASSIFIED	702.0	0.0	
-236.0	MODESTO	PIASA	LIMESTONE	4.0	702.0	
-240.0	MODESTO		SHALE	9.0	706.0	
-249.0	CARBONDALE	DANVILLE	COAL	1.0	715.0	
-250.0	CARBONDALE		SHALE	19.0	716.0	
-269.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	735.0	
-273.0	CARBONDALE		SHALE	26.0	739.0	
-299.0	CARBONDALE		GRAY SHALE	13.5	765.0	LIGHT BEGIN CORE
-312.5	CARBONDALE	CONANT	LIMESTONE	0.6	778.5	
-313.1	CARBONDALE	JAMESTOWN	COAL	0.2	779.1	
-313.3	CARBONDALE		GRAY SHALE	2.0	779.3	LIGHT
-315.3	CARBONDALE	BRERETON	LIMESTONE	6.3	781.3	
-321.6	CARBONDALE	ANNA	BLACK SHALE	0.8	787.6	
-322.3	CARBONDALE	HERRIN	COAL	5.4	788.3	
-327.7	CARBONDALE		UNDERCLAY	3.7	793.7	
-331.4	CARBONDALE		SILTY SANDSTONE	4.3	797.4	
-335.8	CARBONDALE		SHALE	46.3	801.8	NOT CORED
-382.0	CARBONDALE	BRIAR HILL	COAL	1.0	848.0	NOT CORED
-383.0	CARBONDALE		SHALE	12.0	849.0	NOT CORED
-395.0	CARBONDALE		BLACK SHALE	7.5	861.0	BEGIN CORE
-402.5	CARBONDALE	ST. DAVID	LIMESTONE	0.7	868.5	
-403.2	CARBONDALE	TURNER MINE	BLACK SHALE	4.3	869.2	
-407.5	CARBONDALE	SPRINGFIELD	COAL	5.4	873.5	
-412.9	CARBONDALE		UNDERCLAY	3.2	878.9	DARK
-416.1	CARBONDALE		SHALY SANDSTONE	4.9	882.1	LIGHT
-421.0				0.0	887.0	

MAPID: 05522969000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 18 **QUARTERS/FOOTAGES:** SW NE SE NW

QUADRANGLE: EWING **LONGITUDE:** -88.808348 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.091811 **DATE COLLECTED:** 4 / 20 / 1979

SURFACE ELEVATION (FT.): 469.0 **LOGGED (FT.):** 955.0 **LOG TYPE:** Drillers Log

SOURCE: C.E. BREHM DRILLING 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT: COAL PROTECTED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-334.0	CARBONDALE	HERRIN	COAL	5.0	803.0	
-421.0	CARBONDALE	SPRINGFIELD	COAL	2.0	890.0	
-482.0	CARBONDALE	HOUCHIN CREEK	COAL	4.0	951.0	

MAPID: 05523195000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 18 **QUARTERS/FOOTAGES:** SE SE

QUADRANGLE: EWING **LONGITUDE:** -88.797393 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.086184 **DATE COLLECTED:** 8 / 12 / 1981

SURFACE ELEVATION (FT.): 443.0 **LOGGED (FT.):** 864.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #61 **WELL TYPE:** Coal Test

COMMENT: 517170 N, 366459 E

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
443.0			UNCLASSIFIED	760.0	0.0	
-317.0	CARBONDALE	HERRIN	COAL	5.3	760.0	TOP OF COAL MAY HAVE BEEN LOST
-322.3	CARBONDALE		UNDERCLAY	3.7	765.3	
-326.0	CARBONDALE		SANDSTONE	4.0	769.0	
-330.0	CARBONDALE		SILTSTONE	4.0	773.0	
-334.0	CARBONDALE		UNCLASSIFIED	60.0	777.0	
-394.0	CARBONDALE		SHALE	5.7	837.0	
-399.7	CARBONDALE		LIMESTONE	1.8	842.7	
-401.5	CARBONDALE		BLACK SHALE	4.5	844.5	
-406.0	CARBONDALE	ST. DAVID	LIMESTONE	1.3	849.0	
-407.3	CARBONDALE	DYKERSBURG	SHALE	2.6	850.3	
-409.8	CARBONDALE	SPRINGFIELD	COAL	6.4	852.8	
-416.3	CARBONDALE		CORE LOSS	4.8	859.3	
-421.0				0.0	864.0	

MAPID: 05501013000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 19 **QUARTERS/FOOTAGES:** 2310' N line, 330' W line

QUADRANGLE: EWING **LONGITUDE:** -88.815059 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.075306 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 479.0 **LOGGED (FT.):** 3229.0 **LOG TYPE:** Electric Log

SOURCE: GEORGE & WRATHER OIL **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-229.0	CARBONDALE	DANVILLE	COAL	-	708.0	
-250.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	729.0	
-305.0	CARBONDALE	HERRIN	COAL	5.0	784.0	
-330.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	6.0	809.0	
-353.0	CARBONDALE	BRIAR HILL	COAL	-	832.0	
-357.0	CARBONDALE	CANTON	CALCAREOUS SANDSTONE	7.0	836.0	
-385.0	CARBONDALE	SPRINGFIELD	COAL	5.0	864.0	BLACK SHALE & LIMESTONE ROOF
-419.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	24.0	898.0	
-451.0	CARBONDALE	HOUCHIN CREEK	COAL	-	930.0	

MAPID: 05501013000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 19 **QUARTERS/FOOTAGES:** 2310' N line, 330' W line

QUADRANGLE: EWING **LONGITUDE:** -88.815059 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.075306 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 479.0 **LOGGED (FT.):** 788.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-218.0	MODESTO	PIASA	LIMESTONE	5.0	697.0	
-223.0	MODESTO		SHALE	9.0	702.0	
-232.0	CARBONDALE	DANVILLE	COAL	2.0	711.0	
-234.0	CARBONDALE		SILTY SHALE	16.0	713.0	
-250.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	5.0	729.0	
-255.0	CARBONDALE	LAWSON	SILTY SHALE	34.0	734.0	
-289.0	CARBONDALE	ANNA	BLACK SHALE	3.0	768.0	
-292.0	CARBONDALE	ENERGY	GRAY SHALE	11.0	771.0	
-303.0	CARBONDALE	HERRIN	COAL	6.0	782.0	

MAPID: 05522968000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 20 **QUARTERS/FOOTAGES:** NE NE SE SW

QUADRANGLE: EWING **LONGITUDE:** -88.788468 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.071 **DATE COLLECTED:** 5 / 22 / 1979

SURFACE ELEVATION (FT.): 435.0 **LOGGED (FT.):** 959.0 **LOG TYPE:** Drillers Log

SOURCE: C.E. BREHM DRLNG 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT: COAL PROTECTED BY CEMENT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-338.0	CARBONDALE	HERRIN	COAL	-	773.0	
-413.0	CARBONDALE	SPRINGFIELD	COAL	-	848.0	
-477.0	CARBONDALE	HOUCHIN CREEK	COAL	-	912.0	

MAPID: 05523218000C **VERSION:** 1 **PROJECT:** NCRDS98

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 20 **QUARTERS/FOOTAGES:** NW SW

QUADRANGLE: EWING **LONGITUDE:** -88.796763 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.07482 **DATE COLLECTED:** 9 / 5 / 1981

SURFACE ELEVATION (FT.): 477.0 **LOGGED (FT.):** 890.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #83 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
477.0			UNCLASSIFIED	768.0	0.0	
-291.0	CARBONDALE		SANDSTONE	7.5	768.0	
-298.5	CARBONDALE		SHALE	4.6	775.5	DARK
-303.1	CARBONDALE	BRERETON	LIMESTONE	9.3	780.1	
-312.3	CARBONDALE	ANNA	SHALE	0.9	789.3	BLACK
-313.2	CARBONDALE	HERRIN	COAL	5.5	790.2	
-318.7	CARBONDALE		SANDY SHALE	3.3	795.7	
-322.0	CARBONDALE		UNCLASSIFIED	58.0	799.0	
-380.0	CARBONDALE		SHALE	15.3	857.0	
-395.3	CARBONDALE	ST. DAVID	LIMESTONE	1.1	872.3	
-396.4	CARBONDALE	TURNER MINE	SHALE	5.0	873.4	BLACK
-401.4	CARBONDALE	DYKERSBURG	SHALE	1.7	878.4	
-403.1	CARBONDALE	SPRINGFIELD	COAL	5.3	880.1	
-408.3	CARBONDALE		SANDY SHALE	4.7	885.3	

MAPID: 05522793000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 21 **QUARTERS/FOOTAGES:** SW SW SE

QUADRANGLE: EWING **LONGITUDE:** -88.768934 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.068445 **DATE COLLECTED:** 9 / 11 / 1976

SURFACE ELEVATION (FT.): 429.0 **LOGGED (FT.):** 843.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY EN-10 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
429.0			UNCLASSIFIED	678.0	0.0	
-249.0	CARBONDALE	DANVILLE	COAL	1.0	678.0	
-250.0	CARBONDALE		SHALE	18.0	679.0	
-268.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	697.0	
-271.0	CARBONDALE		SHALE	25.0	700.0	
-296.0	CARBONDALE		SHALE	12.4	725.0	BEGIN CORE
-308.4	CARBONDALE	JAMESTOWN	SHALE	0.6	737.4	BLACK VITRAIN LENS
-308.9	CARBONDALE		BLACK SHALE	2.6	737.9	
-311.6	CARBONDALE	BRERETON	LIMESTONE	7.9	740.6	
-319.4	CARBONDALE	ANNA	BLACK SHALE	1.6	748.4	
-320.9	CARBONDALE	HERRIN	COAL	5.7	749.9	
-326.7	CARBONDALE		UNDERCLAY	4.9	755.7	
-331.6	CARBONDALE		SILTSTONE	4.5	760.6	
-336.0	CARBONDALE		SHALE	42.0	765.0	NOT CORED
-378.0	CARBONDALE	BRIAR HILL	COAL	2.0	807.0	NOT CORED
-380.0	CARBONDALE		SHALE	9.0	809.0	NOT CORED
-389.0	CARBONDALE		SHALE	1.0	818.0	BEGIN CORE
-390.0	CARBONDALE		SANDSTONE	5.0	819.0	
-395.0	CARBONDALE	TURNER MINE	BLACK SHALE	4.8	824.0	
-399.8	CARBONDALE		SHALE	3.9	828.8	
-403.6	CARBONDALE	SPRINGFIELD	COAL	4.8	832.6	
-408.4	CARBONDALE		SHALE	0.5	837.4	
-408.8	CARBONDALE		SILTSTONE	5.2	837.8	
-414.0				0.0	843.0	

MAPID: 05523053000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 21 **QUARTERS/FOOTAGES:** NW SE NE SE

QUADRANGLE: EWING **LONGITUDE:** -88.76176 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.073593 **DATE COLLECTED:** 5 / 30 / 1980

SURFACE ELEVATION (FT.): 473.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log

SOURCE: C.E. BREHM DRLNG 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT: COAL INFO FROM PLUGGING AFFADAVIT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-327.0	CARBONDALE	HERRIN	COAL	-	800.0	
-413.0	CARBONDALE	SPRINGFIELD	COAL	-	886.0	
-482.0	CARBONDALE	HOUCHIN CREEK	COAL	-	955.0	

MAPID: 05523196000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 21 **QUARTERS/FOOTAGES:** SE NW

QUADRANGLE: EWING **LONGITUDE:** -88.769346 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.079428 **DATE COLLECTED:** 8 / 11 / 1981

SURFACE ELEVATION (FT.): 446.0 **LOGGED (FT.):** 880.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #60 **WELL TYPE:** Coal Test

COMMENT: 514670 N, 374510 E

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
446.0			UNCLASSIFIED	741.0	0.0	
-295.0	CARBONDALE		SHALE	30.5	741.0	
-325.5	CARBONDALE	BRERETON	LIMESTONE	6.0	771.5	
-331.5	CARBONDALE	ANNA	BLACK SHALE	1.0	777.5	
-332.5	CARBONDALE	HERRIN	COAL	5.7	778.5	
-338.2	CARBONDALE		UNDERCLAY	2.8	784.2	
-341.0	CARBONDALE		LIMESTONE	3.0	787.0	
-344.0	CARBONDALE		UNCLASSIFIED	61.0	790.0	
-405.0	CARBONDALE	ST. DAVID	LIMESTONE	2.0	851.0	
-407.0	CARBONDALE	DYKERSBURG	SHALE	11.8	853.0	
-418.8	CARBONDALE	SPRINGFIELD	COAL	5.0	864.8	
-423.8	CARBONDALE		UNDERCLAY	1.2	869.8	
-425.0	CARBONDALE		SANDSTONE	9.0	871.0	

MAPID: 05500002000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 23 **QUARTERS/FOOTAGES:** 1600' N line, 1600' W line of NE NE SE
QUADRANGLE: MACEDONIA **LONGITUDE:** -88.724876 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.074639 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 480.6 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: BG MUDDYCS 6 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-383.4	CARBONDALE	HERRIN	COAL	6.0	864.0	
-465.4	CARBONDALE	SPRINGFIELD	COAL	5.2	946.0	

MAPID: 05500002000C **VERSION:** 2 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 23 **QUARTERS/FOOTAGES:** 1600' N line, 1600' W line of NE NE SE
QUADRANGLE: MACEDONIA **LONGITUDE:** -88.724876 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.074639 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 480.6 **LOGGED (FT.):** 953.0 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: VERY LITTLE INFO IN RECORD

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-382.4	CARBONDALE	HERRIN	COAL	-	863.0	NO THICKNESS GIVEN

MAPID: 05500546000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 23 **QUARTERS/FOOTAGES:** 1969' N line, 2310' W line
QUADRANGLE: MACEDONIA **LONGITUDE:** -88.733767 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 38.077636 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 473.0 **LOGGED (FT.):** 3395.0 **LOG TYPE:** Electric Log
SOURCE: GULF REFINING CO. **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-295.0	CARBONDALE	DANVILLE	COAL	-	768.0	
-315.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	788.0	
-337.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	8.0	810.0	
-363.0	CARBONDALE	HERRIN	COAL	5.0	836.0	
-372.0	CARBONDALE	VERMILIONVILLE	SANDSTONE/SHALE	20.0	845.0	
-414.0	CARBONDALE	BRIAR HILL	COAL	-	887.0	
-417.0	CARBONDALE	CANTON	CALCAREOUS SANDSTONE	14.0	890.0	
-447.0	CARBONDALE	SPRINGFIELD	COAL	6.0	920.0	BLACK SHALE & LIMESTONE ROOF
-497.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	20.0	970.0	
-517.0	CARBONDALE	HOUCHIN CREEK	COAL	-	990.0	

MAPID: 05500546000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 23 **QUARTERS/FOOTAGES:** 1969' N line, 2310' W line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.733767 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.077636 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 473.0 **LOGGED (FT.):** 840.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-276.0	MODESTO	PIASA	LIMESTONE	8.0	749.0	
-284.0	MODESTO		SHALE	12.0	757.0	
-296.0	CARBONDALE	DANVILLE	COAL	2.0	769.0	
-298.0	CARBONDALE		SILTY SHALE	17.0	771.0	
-315.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	4.0	788.0	
-319.0	CARBONDALE	LAWSON	SILTY SHALE	5.0	792.0	
-324.0	CARBONDALE	LAWSON	SHALE	10.0	797.0	
-334.0	CARBONDALE	LAWSON	SANDSTONE	10.0	807.0	
-344.0	CARBONDALE	LAWSON	SILTY SHALE	4.0	817.0	
-348.0	CARBONDALE	LAWSON	SHALE	4.0	821.0	
-352.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	4.0	825.0	
-356.0	CARBONDALE	ANNA	BLACK SHALE	5.0	829.0	
-361.0	CARBONDALE	HERRIN	COAL	6.0	834.0	

MAPID: 05523220000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 23 **QUARTERS/FOOTAGES:** NE NW

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.734347 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.082847 **DATE COLLECTED:** 7 / 28 / 1981

SURFACE ELEVATION (FT.): 476.0 **LOGGED (FT.):** 879.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #47 **WELL TYPE:** Coal Test

COMMENT: 515870 N, 384590 E

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
476.0			UNCLASSIFIED	863.0	0.0	
-387.0	CARBONDALE	ENERGY	SHALE	3.2	863.0	
-390.2	CARBONDALE	HERRIN	COAL	6.2	866.2	
-396.3	CARBONDALE		UNDERCLAY	3.4	872.3	
-399.7	CARBONDALE		SANDSTONE	3.3	875.7	
-403.0				0.0	879.0	

MAPID: 05523221000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 23 **QUARTERS/FOOTAGES:** SW NW

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.741603 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.075791 **DATE COLLECTED:** 8 / 11 / 1981

SURFACE ELEVATION (FT.): 444.0 **LOGGED (FT.):** 921.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #59 **WELL TYPE:** Coal Test

COMMENT: 513310 N, 382490 E

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
444.0			UNCLASSIFIED	792.0	0.0	
-348.0	CARBONDALE		SHALE	5.2	792.0	
-353.2	CARBONDALE		SANDSTONE	1.3	797.2	
-354.5	CARBONDALE		BLACK SHALE	4.1	798.5	
-358.6	CARBONDALE	BRERETON	LIMESTONE	7.9	802.6	
-366.5	CARBONDALE		SHALE	0.3	810.5	DARK
-366.8	CARBONDALE		BLACK SHALE	0.7	810.8	
-367.5	CARBONDALE	HERRIN	COAL	5.8	811.5	
-373.3	CARBONDALE		SHALE	5.8	817.3	
-379.0	CARBONDALE		UNCLASSIFIED	69.0	823.0	
-448.0	CARBONDALE		CALCAREOUS SHALE	3.0	892.0	
-451.0	CARBONDALE	DYKERSBURG	SHALE	16.3	895.0	
-467.3	CARBONDALE	SPRINGFIELD	COAL	5.7	911.3	
-473.0	CARBONDALE		SHALE	4.0	917.0	
-477.0				0.0	921.0	

MAPID: 05501421000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 24 **QUARTERS/FOOTAGES:** 1650' N line, 330' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.706579 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.077181 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 446.0 **LOGGED (FT.):** 3339.0 **LOG TYPE:** Electric Log

SOURCE: TEXACO, INC. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-412.0	CARBONDALE	HERRIN	COAL	5.0	858.0	
-465.0	CARBONDALE	BRIAR HILL	COAL	-	911.0	
-505.0	CARBONDALE	SPRINGFIELD	COAL	6.0	951.0	SHALE & SILTSTONE ROOF

MAPID: 05501421000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 24 **QUARTERS/FOOTAGES:** 1650' N line, 330' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.706579 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.077181 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 446.0 **LOGGED (FT.):** 864.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-328.0	MODESTO	PIASA	LIMESTONE	5.0	774.0	
-333.0	MODESTO		SHALE	18.5	779.0	
-351.5	CARBONDALE	DANVILLE	COAL	3.5	797.5	
-355.0	CARBONDALE		SHALE & SANDSTONE	17.0	801.0	
-372.0	CARBONDALE		CLAYSTONE & SHALE	4.0	818.0	
-376.0	CARBONDALE	LAWSON	SHALE	24.0	822.0	
-400.0	CARBONDALE	JAMESTOWN	BONE COAL	1.0	846.0	
-401.0	CARBONDALE		CALCAREOUS SHALE	2.0	847.0	
-403.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	4.0	849.0	
-407.0	CARBONDALE	ANNA	BLACK SHALE	2.0	853.0	
-409.0	CARBONDALE	ENERGY	GRAY SHALE	3.0	855.0	
-412.0	CARBONDALE	HERRIN	COAL	6.0	858.0	

MAPID: 05523192000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 24 **QUARTERS/FOOTAGES:** NE NE

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.705566 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.08036 **DATE COLLECTED:** 7 / 26 / 1981

SURFACE ELEVATION (FT.): 441.0 **LOGGED (FT.):** 960.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #44 **WELL TYPE:** Coal Test

COMMENT: 514930 N, 392870 E

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
441.0			UNCLASSIFIED	853.0	0.0	
-412.0	CARBONDALE	BRERETON	LIMESTONE	4.2	853.0	
-416.2	CARBONDALE	ANNA	SHALE	2.5	857.2	DARK
-418.7	CARBONDALE	HERRIN	COAL	6.2	859.7	
-424.8	CARBONDALE		UNDERCLAY	1.1	865.8	
-425.9	CARBONDALE		SILTY SANDSTONE	1.0	866.9	
-426.9	CARBONDALE		UNCLASSIFIED	73.1	867.9	
-500.0	CARBONDALE	DYKERSBURG	SHALE	2.2	941.0	DARK
-502.2	CARBONDALE	DYKERSBURG	SANDSTONE	0.7	943.2	
-502.9	CARBONDALE	DYKERSBURG	SHALE	1.7	943.9	
-504.6	CARBONDALE	DYKERSBURG	SHALE	3.4	945.6	
-508.0	CARBONDALE	SPRINGFIELD	COAL	6.5	949.0	
-514.5	CARBONDALE		SANDSTONE	4.5	955.5	
-519.0				0.0	960.0	

MAPID: 05523193000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 24 **QUARTERS/FOOTAGES:** NW SW

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.719284 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.072406 **DATE COLLECTED:** 7 / 27 / 1981

SURFACE ELEVATION (FT.): 436.0 **LOGGED (FT.):** 910.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #45 **WELL TYPE:** Coal Test

COMMENT: 512050 N, 388910 E

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
436.0			UNCLASSIFIED	805.0	0.0	
-369.0	CARBONDALE	BRERETON	LIMESTONE	3.3	805.0	
-372.3	CARBONDALE	ANNA	BLACK SHALE	2.1	808.3	
-374.3	CARBONDALE	ENERGY	SHALE	1.8	810.3	
-376.1	CARBONDALE	HERRIN	COAL	5.9	812.1	
-382.0	CARBONDALE		UNDERCLAY	5.0	818.0	
-387.0	CARBONDALE		UNCLASSIFIED	72.0	823.0	
-459.0	CARBONDALE	TURNER MINE	BLACK SHALE	4.0	895.0	
-463.0	CARBONDALE	SPRINGFIELD	COAL	5.8	899.0	
-468.8	CARBONDALE		UNDERCLAY	5.3	904.8	
-474.0				0.0	910.0	

MAPID: 05523222000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 24 **QUARTERS/FOOTAGES:** NW NW

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.719326 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.08081 **DATE COLLECTED:** 8 / 22 / 1981

SURFACE ELEVATION (FT.): 457.0 **LOGGED (FT.):** 949.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #71 **WELL TYPE:** Coal Test

COMMENT: 515110 N, 388910 E

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
457.0			UNCLASSIFIED	844.0	0.0	
-387.0	CARBONDALE		SANDY SILTSTONE	1.9	844.0	DARK
-388.9	CARBONDALE		SILTY SHALE	0.8	845.9	DARK
-389.7	CARBONDALE		COAL	0.3	846.7	
-390.0	CARBONDALE		SHALE	1.5	847.0	DARK CARBONACEOUS
-391.5	CARBONDALE	BRERETON	LIMESTONE	3.8	848.5	
-395.3	CARBONDALE	ANNA	BLACK SHALE	1.4	852.3	
-396.7	CARBONDALE	ENERGY	SHALE	1.7	853.7	

MAPID: 05523222000C **VERSION:** 2 **PROJECT:** NCRDS98

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 24 **QUARTERS/FOOTAGES:** NW NW

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.719326 **GEOLOGIST:** C.KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.08081 **DATE COLLECTED:** 8 / 22 / 1981

SURFACE ELEVATION (FT.): 457.0 **LOGGED (FT.):** 949.0 **LOG TYPE:** Other Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY ENCA #71 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
457.0			UNCLASSIFIED	844.0	0.0	
-387.0	CARBONDALE		SILTSTONE	1.9	844.0	SANDY; DARK
-388.9	CARBONDALE		SILTY SHALE	0.8	845.9	
-389.7	CARBONDALE		COAL	0.3	846.7	
-390.0	CARBONDALE		SHALE	1.5	847.0	CARBONACEOUS; DARK
-391.5	CARBONDALE	BRERETON	LIMESTONE	3.8	848.5	
-395.3	CARBONDALE	ANNA	SHALE	1.4	852.3	BLACK
-396.7	CARBONDALE	ENERGY	SHALE	1.7	853.7	
-398.3	CARBONDALE	HERRIN	COAL	5.9	855.3	
-404.3	CARBONDALE		UNDERCLAY	1.4	861.3	
-405.6	CARBONDALE		UNCLASSIFIED	73.4	862.6	
-479.0	CARBONDALE	DYKERSBURG	SANDSTONE	0.3	936.0	
-479.3	CARBONDALE	DYKERSBURG	SHALE	2.8	936.3	
-482.1	CARBONDALE	SPRINGFIELD	COAL	5.7	939.1	
-487.8	CARBONDALE		SILTSTONE	4.3	944.8	SANDY

MAPID: 05500547000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 25 **QUARTERS/FOOTAGES:** 2310' S line, 1650' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.711429 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.059128 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 452.0 **LOGGED (FT.):** 3358.0 **LOG TYPE:** Electric Log

SOURCE: EASON OIL CO. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-308.0	CARBONDALE	DANVILLE	COAL	-	760.0	
-322.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	8.0	774.0	
-336.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	788.0	
-344.0	CARBONDALE	ANVIL ROCK	SILTSTONE & SHALE	14.0	796.0	
-391.0	CARBONDALE	HERRIN	COAL	5.0	843.0	
-404.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	7.0	856.0	
-438.0	CARBONDALE	BRIAR HILL	COAL	-	890.0	
-441.0	CARBONDALE	CANTON	CALCAREOUS SANDSTONE	7.0	893.0	
-474.0	CARBONDALE	SPRINGFIELD	COAL	5.0	926.0	SHALE & SILTSTONE ROOF
-490.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	38.0	942.0	
-530.0	CARBONDALE	HOUCHIN CREEK	COAL	-	982.0	

MAPID: 05500547000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 25 **QUARTERS/FOOTAGES:** 2310' S line, 1650' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.711429 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.059128 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 452.0 **LOGGED (FT.):** 848.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-293.0	MODESTO	PIASA	LIMESTONE	5.0	745.0	
-298.0	MODESTO		SHALE	13.0	750.0	
-311.0	CARBONDALE	DANVILLE	COAL	1.0	763.0	
-312.0	CARBONDALE		SHALE & SANDSTONE	25.0	764.0	
-337.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	4.0	789.0	
-341.0	CARBONDALE	LAWSON	SILTY SHALE	41.0	793.0	
-382.0	CARBONDALE	BRERETON	LIMESTONE	7.0	834.0	
-389.0	CARBONDALE	ANNA	BLACK SHALE	2.0	841.0	
-391.0	CARBONDALE	HERRIN	COAL	5.0	843.0	

MAPID: 05501309000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 26 **QUARTERS/FOOTAGES:** NW NW NW NW
QUADRANGLE: MACEDONIA **LONGITUDE:** -88.741468 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.067779 **DATE COLLECTED:** 3 / 0 / 1957
SURFACE ELEVATION (FT.): 424.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: U.S. STEEL 1 **WELL TYPE:** Producer-Oil and Gas
COMMENT: COAL INFO FROM PLUGGING AFFADAVIT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-426.0	CARBONDALE	HERRIN	COAL	-	850.0	
-511.0	CARBONDALE	SPRINGFIELD	COAL	-	935.0	

MAPID: 05500003000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 28 **QUARTERS/FOOTAGES:** SW SW SW SW
QUADRANGLE: EWING **LONGITUDE:** -88.778016 **GEOLOGIST:** BARGH,M
CONFIDENTIAL: N **LATITUDE:** 38.053575 **DATE COLLECTED:** 0 / 0 / 1909
SURFACE ELEVATION (FT.): 411.0 **LOGGED (FT.):** 731.7 **LOG TYPE:** Drillers Log
SOURCE: L. N. WOOD **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
411.0			UNCONSOLIDATED	36.0	0.0	
375.0			ROCK	406.7	36.0	
-31.7			COAL	1.1	442.7	
-32.8			ROCK	162.2	443.8	
-195.0			COAL	1.0	606.0	
-196.0			ROCK	39.3	607.0	
-235.3			COAL	1.8	646.3	
-237.2			ROCK	50.8	648.2	
-288.0			SHALE	9.0	699.0	SANDY
-297.0			BLACK SHALE	4.0	708.0	
-301.0			LIMESTONE	0.5	712.0	
-301.5			COAL	0.5	712.5	
-302.0			SHALE	4.0	713.0	
-306.0			LIMESTONE	6.0	717.0	
-312.0			BLACK SHALE	1.7	723.0	
-313.7	CARBONDALE	HERRIN	COAL	6.0	724.7	
-319.7	CARBONDALE		SHALE	1.0	730.7	

MAPID: 05500003000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 28 **QUARTERS/FOOTAGES:** SW SW SW SW
QUADRANGLE: EWING **LONGITUDE:** -88.778016 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.053575 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 411.0 **LOGGED (FT.):** 731.0 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-222.3	MODESTO	PIASA	LIMESTONE	5.0	633.3	
-227.3	MODESTO		DARK GRAY SHALE	8.3	638.3	
-235.7	CARBONDALE	DANVILLE	COAL	1.8	646.7	
-237.5	CARBONDALE		ROCK	21.8	648.5	
-259.3	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	670.3	
-260.3	CARBONDALE	LAWSON	SILTY SHALE	37.0	671.3	
-297.3	CARBONDALE	LAWSON	GRAY SHALE	4.0	708.3	
-301.3	CARBONDALE	CONANT	LIMESTONE	0.5	712.3	
-301.8	CARBONDALE	JAMESTOWN	BONE COAL	0.5	712.8	
-302.3	CARBONDALE		DARK GRAY SHALE	4.0	713.3	
-306.3	CARBONDALE	BRERETON	LIMESTONE	6.0	717.3	
-312.3	CARBONDALE	ANNA	BLACK SHALE	1.7	723.3	
-314.0	CARBONDALE	HERRIN	COAL	6.0	725.0	

MAPID: 05500003000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 28 **QUARTERS/FOOTAGES:** SW SW SW SW
QUADRANGLE: EWING **LONGITUDE:** -88.778016 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.053575 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 410.8 **LOGGED (FT.):** 732.0 **LOG TYPE:**
SOURCE: BG MUDDYCS 7 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-314.2	CARBONDALE	HERRIN	COAL	6.0	725.0	

MAPID: 05500003000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 28 **QUARTERS/FOOTAGES:** SW SW SW SW

QUADRANGLE: EWING **LONGITUDE:** -88.778016 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.053575 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 410.8 **LOGGED (FT.):** 731.7 **LOG TYPE:** Drillers Log

SOURCE: L.N. WOOD 7 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
410.8	PLEISTOCENE		CLAY	1.0	0.0	
409.8	PLEISTOCENE		CLAY	19.0	1.0	YELLOW
390.8	PLEISTOCENE		SAND	5.0	20.0	
385.8	PLEISTOCENE		CLAY	11.0	25.0	
374.8	BOND		SANDY SHALE	69.0	36.0	
305.8	BOND		SANDSTONE	41.0	105.0	
264.8	BOND		SANDY SHALE	22.0	146.0	
242.8	BOND		SHALE	13.0	168.0	
229.8	BOND	CARTHAGE	LIMESTONE	8.5	181.0	
221.3	MODESTO		SHALE	2.5	189.5	
218.8	MODESTO		SHALE	7.0	192.0	
211.8	MODESTO		SOFT SHALE	4.0	199.0	
207.8	MODESTO		SANDY SHALE	106.0	203.0	
101.8	MODESTO		SHALE	11.0	309.0	
90.8	MODESTO		BLACK SHALE	3.0	320.0	
87.8	MODESTO		LIMESTONE	1.0	323.0	
86.8	MODESTO		SHALE	4.0	324.0	
82.8	MODESTO		SHALE	4.0	328.0	
78.8	MODESTO		SANDY SHALE	17.0	332.0	
61.8	MODESTO		SANDY SHALE	22.0	349.0	
39.8	MODESTO		SANDY SHALE	48.0	371.0	
-8.2	MODESTO		SHALE	23.7	419.0	
-31.9	MODESTO		COAL	1.1	442.7	
-33.0	MODESTO		SANDY SHALE	0.3	443.8	
-33.2	MODESTO		SHALE	16.0	444.0	
-49.2	MODESTO		SANDY SHALE	31.0	460.0	
-80.2	MODESTO		SHALY SANDSTONE	38.0	491.0	
-118.2	MODESTO		SANDY SHALE	33.0	529.0	
-151.2	MODESTO		SHALE	13.0	562.0	WITH BROWN BANDS
-164.2	MODESTO		SHALE	2.0	575.0	
-166.2	MODESTO		SANDY SHALE	18.0	577.0	
-184.2	MODESTO		SHALE	8.0	595.0	
-192.2	MODESTO		SHALE	3.0	603.0	
-195.2	MODESTO		COAL	1.0	606.0	
-196.2	MODESTO		SHALE	8.0	607.0	
-204.2	MODESTO		SANDY SHALE	9.0	615.0	
-213.2	MODESTO		SHALE	9.0	624.0	
-222.2	MODESTO	PIASA	LIMESTONE	5.0	633.0	
-227.2	MODESTO		SHALE	1.5	638.0	

-228.7	MODESTO		SHALE	6.8	639.5
-235.5	CARBONDALE	DANVILLE	COAL	1.8	646.3
-237.4	CARBONDALE		SANDY SHALE	16.8	648.2
-254.2	CARBONDALE		SANDY SHALE	5.0	665.0
-259.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	670.0
-260.2	CARBONDALE		SANDY SHALE	37.0	671.0
-297.2	CARBONDALE		SHALE	4.0	708.0
-301.2	CARBONDALE	CONANT	LIMESTONE	0.5	712.0
-301.7	CARBONDALE	JAMESTOWN	BONE COAL	0.5	712.5
-302.2	CARBONDALE		SHALE	4.0	713.0
-306.2	CARBONDALE	BRERETON	LIMESTONE	6.0	717.0
-312.2	CARBONDALE	ANNA	SHALE	1.7	723.0
-313.9	CARBONDALE	HERRIN	COAL	6.0	724.7
-319.9	CARBONDALE		SHALE	1.0	730.7

MAPID: 05501560000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 30 **QUARTERS/FOOTAGES:** 330' N line, 2310' E line

QUADRANGLE: EWING **LONGITUDE:** -88.805317 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.066452 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 444.0 **LOGGED (FT.):** 3203.0 **LOG TYPE:** Electric Log

SOURCE: DAVIS ALVA C PETRO **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-310.0	CARBONDALE	HERRIN	COAL	6.0	754.0	
-360.0	CARBONDALE	BRIAR HILL	COAL	-	804.0	
-393.0	CARBONDALE	SPRINGFIELD	COAL	5.0	837.0	BLACK SHALE & LIMESTONE ROOF
-460.0	CARBONDALE	HOUCHIN CREEK	COAL	-	904.0	

MAPID: 05501560000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 30 **QUARTERS/FOOTAGES:** 330' N line, 2310' E line

QUADRANGLE: EWING **LONGITUDE:** -88.805317 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.066452 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 444.0 **LOGGED (FT.):** 760.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-221.0	MODESTO	PIASA	LIMESTONE	5.0	665.0	
-226.0	MODESTO		SHALE	6.0	670.0	
-232.0	CARBONDALE	DANVILLE	COAL	2.0	676.0	
-234.0	CARBONDALE		SILTY SHALE	14.0	678.0	
-248.0	CARBONDALE	ALLENBY	BONE COAL	1.0	692.0	
-249.0	CARBONDALE		CLAYSTONE & SHALE	7.0	693.0	
-256.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	700.0	
-261.0	CARBONDALE	LAWSON	SILTY SHALE	35.0	705.0	
-296.0	CARBONDALE	CONANT	LIMESTONE	0.5	740.0	
-296.5	CARBONDALE	JAMESTOWN	BONE COAL	0.5	740.5	
-297.0	CARBONDALE		DARK GRAY SHALE	4.0	741.0	
-301.0	CARBONDALE	BRERETON	LIMESTONE	8.0	745.0	
-309.0	CARBONDALE	ANNA	BLACK SHALE	2.0	753.0	
-311.0	CARBONDALE	HERRIN	COAL	5.0	755.0	

MAPID: 05500004000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 35 **QUARTERS/FOOTAGES:** 0' S line, 0' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.724166 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.038186 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 544.6 **LOGGED (FT.):** 925.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0001 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-373.4	CARBONDALE	HERRIN	COAL	6.5	918.0	

MAPID: 05500004000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 35 **QUARTERS/FOOTAGES:** 0' S line, 0' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.724166 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.038186 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 545.0 **LOGGED (FT.):** 924.5 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-281.6	MODESTO	PIASA	LIMESTONE	3.0	826.6	
-284.6	MODESTO		SHALE & SANDSTONE	10.8	829.6	
-295.4	CARBONDALE	DANVILLE	COAL	2.2	840.4	
-297.6	CARBONDALE		SHALE & SANDSTONE	16.0	842.6	
-313.6	CARBONDALE		GRAY SHALE	3.9	858.6	
-317.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	862.5	
-319.5	CARBONDALE	LAWSON	CALCAREOUS SHALE	5.0	864.5	
-324.5	CARBONDALE	LAWSON	SILTY SHALE	14.0	869.5	
-338.5	CARBONDALE	LAWSON	SANDSTONE	3.0	883.5	
-341.5	CARBONDALE	LAWSON	SILTY SHALE	19.5	886.5	
-361.0	CARBONDALE	CONANT	LIMESTONE	0.5	906.0	
-361.5	CARBONDALE		BLACK SHALE	1.0	906.5	
-362.5	CARBONDALE	BRERETON	LIMESTONE	0.3	907.5	
-362.8	CARBONDALE	ENERGY	UNKNOWN	10.2	907.8	
-373.0	CARBONDALE	HERRIN	COAL	6.5	918.0	

MAPID: 05500004000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 35 **QUARTERS/FOOTAGES:** 0' S line, 0' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.724166 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.038186 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 544.6 **LOGGED (FT.):** 925.0 **LOG TYPE:** Drillers Log

SOURCE: L.N. WOOD 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
544.6	PLEISTOCENE		SOIL	1.0	0.0	
543.6	PLEISTOCENE		CLAY	9.0	1.0	YELLOW
534.6			SANDSTONE	27.0	10.0	
507.6			SANDSTONE	10.0	37.0	
497.6			SOFT SHALE	4.0	47.0	
493.6			LIMESTONE	1.0	51.0	
492.6			SANDY LIMESTONE	3.0	52.0	
489.6			SANDY SHALE	125.0	55.0	
364.6			SHALE	30.0	180.0	
334.6			SHALE WITH LIMESTONE	1.0	210.0	WITH LIME
333.6			COAL	1.0	211.0	
332.6			SOFT SHALE	8.0	212.0	
324.6			SANDY SHALE	3.0	220.0	SANDY WITH LIMESTONE
321.6			SANDSTONE	10.0	223.0	
311.6			SANDSTONE	12.0	233.0	WITH SHALE PARTINGS
299.6			SHALE	4.0	245.0	DARK GRAY
295.6			LIMESTONE	1.0	249.0	
294.6			SHALE	1.0	250.0	DARK BLUE
293.6			LIMESTONE	1.0	251.0	
292.6			SHALE	4.0	252.0	DARK BLUE
288.6			COAL	0.7	256.0	
287.9			SANDY SHALE	54.3	256.7	
233.6			SHALE	4.0	311.0	
229.6			SANDSTONE	12.0	315.0	
217.6			SANDSTONE WITH COAL	24.0	327.0	WITH COAL PARTINGS
193.6			SHALE	2.0	351.0	
191.6			SANDSTONE	3.0	353.0	
188.6			LIMESTONE	1.5	356.0	
187.1			SHALE	9.5	357.5	DARK BLUE
177.6			LIMESTONE	3.0	367.0	
174.6			SHALE	10.0	370.0	
164.6	BOND	CARTHAGE	LIMESTONE	10.0	380.0	
154.6	MODESTO		SOFT SHALE	4.0	390.0	
150.6	MODESTO		CALCAREOUS SHALE	17.0	394.0	
133.6	MODESTO		SHALE	36.0	411.0	
97.6	MODESTO		SANDY SHALE	45.0	447.0	
52.6	MODESTO		SHALE	22.0	492.0	
30.6	MODESTO		SHALE	2.0	514.0	
28.6	MODESTO		SHALE	2.0	516.0	

26.6	MODESTO		LIMESTONE	1.0	518.0	
25.6	MODESTO		SHALE	1.0	519.0	DARK BLUE
24.6	MODESTO		SHALE	3.0	520.0	
21.6	MODESTO		SHALE WITH LIMESTONE	2.0	523.0	WITH LIMESTONE SPOTS
19.6	MODESTO		SANDY SHALE	9.0	525.0	
10.6	MODESTO		SANDSTONE	64.0	534.0	
-53.4	MODESTO		SHALY SANDSTONE	22.0	598.0	
-75.4	MODESTO		SANDY LIMESTONE	3.0	620.0	
-78.4	MODESTO		SHALY SANDSTONE	3.0	623.0	
-81.4	MODESTO		SHALE	24.0	626.0	
-105.4	MODESTO		SHALY SANDSTONE	59.0	650.0	
-164.4	MODESTO		SANDSTONE	16.5	709.0	
-180.9	MODESTO		SANDSTONE WITH COAL	0.5	725.5	WITH COAL PARTINGS
-181.4	MODESTO		SANDSTONE	6.0	726.0	
-187.4	MODESTO		COAL	0.0	732.0	
-187.4	MODESTO		SHALE	32.0	732.0	
-219.4	MODESTO		SHALE	4.5	764.0	DARK BLUE
-223.9	MODESTO		COAL	0.1	768.5	
-224.0	MODESTO		SHALE	14.4	768.6	WITH HARD BROWN SPOTS
-238.4	MODESTO		SHALE	12.0	783.0	WITH HARD BANDS
-250.4	MODESTO		CARBONACEOUS SHALE	1.0	795.0	
-251.4	MODESTO		SHALE	1.0	796.0	
-252.4	MODESTO		CARBONACEOUS SHALE	1.0	797.0	
-253.4	MODESTO		COAL	1.0	798.0	
-254.4	MODESTO		SHALE	3.0	799.0	
-257.4	MODESTO		SANDY SHALE	9.0	802.0	
-266.4	MODESTO		SANDY SHALE	6.0	811.0	WITH LIMESTONE SPOTS
-272.4	MODESTO		SHALE	4.5	817.0	
-276.9	MODESTO		SHALE W/ COAL STREAKS	0.5	821.5	WITH COAL PARTINGS
-277.4	MODESTO		SHALE	2.0	822.0	
-279.4	MODESTO	PIASA	LIMESTONE	3.0	824.0	
-282.4	MODESTO		SANDSTONE/SHALE	10.8	827.0	
-293.2	CARBONDALE	DANVILLE	COAL	2.2	837.8	
-295.4	CARBONDALE		SHALE	11.0	840.0	LOG THICKNESS 9.0 CHANGED
-306.4	CARBONDALE		SANDY SHALE	1.0	851.0	
-307.4	CARBONDALE		SANDSTONE	4.0	852.0	
-311.4	CARBONDALE		SHALE	2.0	856.0	DARK GRAY
-313.4	CARBONDALE	ALLENBY	COAL	0.1	858.0	
-313.5	CARBONDALE		SHALE	3.9	858.1	
-317.4	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	862.0	
-319.4	CARBONDALE		SHALE WITH LIMESTONE	5.0	864.0	WITH LIMESTONE SPARS
-324.4	CARBONDALE		SANDY SHALE	14.0	869.0	
-338.4	CARBONDALE		SANDSTONE	3.0	883.0	
-341.4	CARBONDALE		SANDY SHALE	6.0	886.0	
-347.4	CARBONDALE		SANDY SHALE	11.0	892.0	
-358.4	CARBONDALE		SHALE	2.5	903.0	WITH BROWN BANDS
-360.9	CARBONDALE		LIMESTONE	0.5	905.5	

-361.4	CARBONDALE		SHALE	1.0	906.0	
-362.4	CARBONDALE		LIMESTONE	0.3	907.0	
-362.7	CARBONDALE		SHALE	3.7	907.3	
-366.4	CARBONDALE		SHALE	5.0	911.0	
-371.4	CARBONDALE		SHALE	1.5	916.0	DARK BLUE
-372.9	CARBONDALE	HERRIN	COAL	6.5	917.5	
-379.4	CARBONDALE		CLAYSTONE	1.0	924.0	

MAPID: 05501226000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 35 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of NE

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.732044 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.052305 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 431.0 **LOGGED (FT.):** 3352.0 **LOG TYPE:** Electric Log

SOURCE: DUNCAN, WALTER **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-351.0	CARBONDALE	HERRIN	COAL	5.0	782.0	
-401.0	CARBONDALE	BRIAR HILL	COAL	-	832.0	
-429.0	CARBONDALE	SPRINGFIELD	COAL	5.0	860.0	BLACK SHALE & CLAYSTONE ROOF
-501.0	CARBONDALE	HOUCHIN CREEK	COAL	-	932.0	

MAPID: 05500815000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 36 **QUARTERS/FOOTAGES:** 2310' N line, 330' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.706976 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.046254 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 510.0 **LOGGED (FT.):** 3262.0 **LOG TYPE:** Electric Log

SOURCE: HOWARD, HUBERT E. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-304.0	CARBONDALE	DANVILLE	COAL	-	814.0	
-306.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	6.0	816.0	
-330.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	840.0	
-338.0	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	26.0	848.0	
-388.0	CARBONDALE	HERRIN	COAL	5.0	898.0	
-406.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	14.0	916.0	
-438.0	CARBONDALE	BRIAR HILL	COAL	-	948.0	
-469.0	CARBONDALE	SPRINGFIELD	COAL	6.0	979.0	BLACK SHALE & LIMESTONE ROOF
-500.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	13.0	1010.0	
-518.0	CARBONDALE	HOUCHIN CREEK	COAL	-	1028.0	

MAPID: 05500815000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 5S 4E **SECTION:** 36 **QUARTERS/FOOTAGES:** 2310' N line, 330' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.706976 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.046254 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 510.0 **LOGGED (FT.):** 904.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-289.0	MODESTO	PIASA	LIMESTONE & SHALE	5.0	799.0	
-294.0	MODESTO		SHALE	11.0	804.0	
-305.0	CARBONDALE	DANVILLE	COAL	1.0	815.0	
-306.0	CARBONDALE		SHALE	24.0	816.0	
-330.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	4.0	840.0	
-334.0	CARBONDALE	LAWSON	CLAYSTONE & SHALE	4.0	844.0	
-338.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	8.0	848.0	
-346.0	CARBONDALE	LAWSON	SILTY SHALE	5.0	856.0	
-351.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	14.0	861.0	
-365.0	CARBONDALE	LAWSON	SHALE	15.0	875.0	
-380.0	CARBONDALE	JAMESTOWN	BONE COAL	0.5	890.0	
-380.5	CARBONDALE		BLACK SHALE	1.5	890.5	
-382.0	CARBONDALE	BRERETON	LIMESTONE	4.0	892.0	
-386.0	CARBONDALE	ANNA	BLACK SHALE	2.0	896.0	
-388.0	CARBONDALE	HERRIN	COAL	6.0	898.0	

MAPID: 05500013602M **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 1 **QUARTERS/FOOTAGES:** 610' S line, 110' E line of SE

QUADRANGLE: SESSER **LONGITUDE:** -89.04005 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.024843 **DATE COLLECTED:** 4 / 5 / 1918

SURFACE ELEVATION (FT.): 443.0 **LOGGED (FT.):** 631.8 **LOG TYPE:** Measured section

SOURCE: MINE NOTES-VALIER C C **WELL TYPE:** Underground mine

COMMENT: OTHER NOTES IN THIS MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
443.0			UNKNOWN	601.0	0.0	
-158.0			SHALE	-	601.0	
-	CARBONDALE	HERRIN	COAL	10.3		BLUE BAND .06', SULPHUR PTG .06', WET
-	CARBONDALE		UNDERCLAY	-		
-	CARBONDALE		ROCK	17.0		
-	CARBONDALE	SPRINGFIELD	COAL	3.5		

MAPID: 05500013600M **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 1 **QUARTERS/FOOTAGES:** 600' S line, 100' E line of NE

QUADRANGLE: SESSER **LONGITUDE:** -89.040095 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.032096 **DATE COLLECTED:** 0 / 0 / 1948

SURFACE ELEVATION (FT.): 443.0 **LOGGED (FT.):** 617.8 **LOG TYPE:** Measured section

SOURCE: MINE NOTES-OLD BEN C C **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
443.0			UNKNOWN	610.0	0.0	
-167.0	CARBONDALE	HERRIN	COAL	7.8	610.0	

MAPID: 05500013603M **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 1 **QUARTERS/FOOTAGES:**

QUADRANGLE: SESSER **LONGITUDE:** -89.048945 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.030576 **DATE COLLECTED:** 6 / 13 / 1921

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 8.4 **LOG TYPE:** Measured section

SOURCE: MINE NOTES-VALIER C C **WELL TYPE:** Underground mine

COMMENT: MANY OTHER SAMPLED SECTIONS IN THIS MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	COAL	8.4		1.66' COAL LEFT AS ROOF. PRTNG .01',.25

MAPID: 05500252000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 1 **QUARTERS/FOOTAGES:** NE NE SE

QUADRANGLE: SESSER **LONGITUDE:** -89.040872 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.029556 **DATE COLLECTED:** 0 / 0 / 1918

SURFACE ELEVATION (FT.): 440.4 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: VALIER COAL CO. **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-126.6	CARBONDALE	HERRIN	COAL	10.7	567.0	

MAPID: 05501499000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 1 **QUARTERS/FOOTAGES:** SE NE SE NE

QUADRANGLE: SESSER **LONGITUDE:** -89.040328 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.03272 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 447.0 **LOGGED (FT.):** 737.5 **LOG TYPE:** Drillers Log

SOURCE: VALIER COAL CO. **WELL TYPE:** Coal Test

COMMENT: NEAR ESCAPE SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
447.0			UNCONSOLIDATED	20.0	0.0	
427.0			ROCK	143.0	20.0	
284.0			COAL	0.5	163.0	BONY
283.5			ROCK	113.2	163.5	
170.3			COAL	2.0	276.7	BONY
168.3			ROCK	203.6	278.7	
-35.3			COAL	1.3	482.3	
-36.6			ROCK	7.2	483.6	
-43.8			COAL	2.7	490.8	LOWER BENCH
-46.4			ROCK	10.8	493.4	
-57.2			COAL	0.7	504.2	
-57.8			ROCK	54.7	504.8	
-112.5			BLACK SHALE	35.1	559.5	
-147.6			COAL	3.3	594.6	
-150.8			UNDERCLAY	2.5	597.8	
-153.3			SHALE	6.7	600.3	SANDY
-160.0			CONGLOMERATE	3.8	607.0	
-163.8			SHALE	3.9	610.8	SANDY
-167.7			COAL	3.6	614.7	
-171.3			SHALE	17.2	618.3	
-188.5			ROCK	58.6	635.5	
-247.1			COAL	0.1	694.1	
-247.2			ROCK	10.6	694.2	
-257.8			COAL	1.7	704.8	
-259.5			ROCK	31.0	706.5	

MAPID: 05501499000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 1 **QUARTERS/FOOTAGES:** SE NE SE NE

QUADRANGLE: SESSER **LONGITUDE:** -89.040328 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.03272 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 447.0 **LOGGED (FT.):** 597.7 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-38.7	MODESTO	PIASA	LIMESTONE	2.5	485.7	
-41.2	MODESTO		BLACK SHALE	2.4	488.2	
-43.6	CARBONDALE	DANVILLE	COAL	2.7	490.6	
-46.3	CARBONDALE		GRAY SHALE	10.8	493.3	
-57.0	CARBONDALE	ALLENBY	COAL	0.7	504.0	
-57.7	CARBONDALE		LIMESTONE W/ SHALE	5.3	504.7	
-63.0	CARBONDALE	BANKSTON FORK	LIMESTONE	10.3	510.0	
-73.3	CARBONDALE	LAWSON	SILTY SHALE	30.0	520.3	
-103.3	CARBONDALE	LAWSON	GRAY SHALE	2.3	550.3	
-105.6	CARBONDALE	CONANT	LIMESTONE	0.8	552.6	
-106.3	CARBONDALE		GRAY SHALE	0.5	553.3	
-106.8	CARBONDALE	BRERETON	LIMESTONE	5.5	553.8	
-112.3	CARBONDALE	ANNA	BLACK SHALE	9.0	559.3	
-121.3	CARBONDALE	ENERGY	GRAY SHALE	18.7	568.3	
-140.0	CARBONDALE	HERRIN	COAL	10.7	587.0	

MAPID: 05501499000C **VERSION:** 3 **PROJECT:** NCRDS87

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 1 **QUARTERS/FOOTAGES:** SE NE SE NE

QUADRANGLE: SESSER **LONGITUDE:** -89.040328 **GEOLOGIST:** WEIBEL

CONFIDENTIAL: N **LATITUDE:** 38.03272 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 447.3 **LOGGED (FT.):** 737.0 **LOG TYPE:** Drillers Log

SOURCE: VALIER COAL CO. **WELL TYPE:** Coal Test

COMMENT: LOCATION IMPRECISE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
447.3			UNCONSOLIDATED	20.0	0.0	
427.3	MODESTO		SANDSTONE	5.0	20.0	
422.3	MODESTO		SHALE	138.0	25.0	
284.3	MODESTO		BLACK SHALE	0.5	163.0	
283.8	MODESTO		BONE COAL	1.4	163.5	
282.4	MODESTO		UNDERCLAY	5.1	164.9	
277.3	MODESTO		SHALE	39.7	170.0	
237.6	MODESTO		SANDSTONE	6.3	209.7	
231.3	MODESTO		SHALE	60.7	216.0	
170.6	MODESTO		BONE COAL	2.0	276.7	
168.6	MODESTO		UNDERCLAY	1.3	278.7	
167.3	MODESTO		SHALE	202.3	280.0	
-35.0	MODESTO		COAL	1.3	482.3	
-36.3	MODESTO		GRAY SHALE	1.8	483.6	
-38.0	MODESTO		LIMESTONE	3.0	485.3	
-41.0	MODESTO		BLACK SHALE	2.4	488.3	
-43.5	CARBONDALE	DANVILLE	COAL	2.7	490.8	UNCERTAIN CORRELATION
-46.1	CARBONDALE		SHALE	10.8	493.4	
-56.9	CARBONDALE		COAL	0.7	504.2	
-57.5	CARBONDALE		LIMESTONE	0.5	504.8	
-58.0	CARBONDALE		BLACK SHALE	4.8	505.3	
-62.9	CARBONDALE		LIMESTONE	10.3	510.2	
-73.2	CARBONDALE		SHALE	32.3	520.5	
-105.5	CARBONDALE		LIMESTONE	0.8	552.8	
-106.2	CARBONDALE		SHALE	0.5	553.5	
-106.7	CARBONDALE	BRERETON	LIMESTONE	5.5	554.0	
-112.2	CARBONDALE	ANNA	BLACK SHALE	35.1	559.5	
-147.3	CARBONDALE	HERRIN	COAL	3.3	594.6	
-150.5	CARBONDALE		UNDERCLAY	2.5	597.8	
-153.0	CARBONDALE		SHALE	6.7	600.3	
-159.7	CARBONDALE		CONGLOMERATE	3.8	607.0	
-163.5	CARBONDALE		SHALE	3.9	610.8	
-167.4	CARBONDALE		COAL	3.6	614.7	
-171.0	CARBONDALE		SHALE	69.8	618.3	
-240.8	CARBONDALE	TURNER MINE	BLACK SHALE	6.0	688.1	
-246.8	CARBONDALE	SPRINGFIELD	COAL	0.1	694.1	
-246.9	CARBONDALE		UNDERCLAY	2.0	694.2	
-248.9	CARBONDALE		SHALE	8.7	696.2	
-257.5	CARBONDALE		BONE COAL	1.7	704.8	

-259.2	CARBONDALE	SHALE	31.0	706.5

MAPID: 05501499000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 1 **QUARTERS/FOOTAGES:** SE NE SE NE

QUADRANGLE: SESSER **LONGITUDE:** -89.040328 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.03272 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 447.3 **LOGGED (FT.):** 737.5 **LOG TYPE:** Drillers Log

SOURCE: VALIER COAL CO. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
447.3	PLEISTOCENE		SANDY CLAY	17.0	0.0	
430.3	PLEISTOCENE		SAND & GRAVEL	3.6	17.0	
426.7			SANDSTONE	4.4	20.6	
422.3			SHALE	51.0	25.0	
371.3			SHALE	12.0	76.0	
359.3			SANDY SHALE	1.6	88.0	
357.7			SHALE	2.9	89.6	
354.8			BLACK SHALE	5.5	92.5	
349.3			SHALE	18.8	98.0	
330.5			BLACK SHALE	0.8	116.8	
329.8			SHALE	15.5	117.5	
314.3			SANDY SHALE	28.0	133.0	WITH SANDSTONE
286.3			SHALE	2.0	161.0	
284.3			BLACK SHALE	0.5	163.0	
283.8			BONE COAL	1.4	163.5	
282.4			CLAYSTONE	5.1	164.9	WITH LIMESTONE PEBBLES
277.3			SHALE	10.0	170.0	
267.3			SOFT SHALE	18.0	180.0	
249.3			SHALE	5.0	198.0	
244.3			SHALE	6.7	203.0	
237.6			SANDSTONE WITH COAL	6.3	209.7	WITH COAL PARTINGS
231.3			SHALE	27.0	216.0	
204.3			SHALE	33.7	243.0	WITH BROWN BANDS
170.6	MODESTO	CHAPEL	BONE COAL	2.0	276.7	
168.6	MODESTO		CLAYSTONE	1.3	278.7	
167.3	MODESTO		SHALE	1.5	280.0	SOFT
165.8	MODESTO		SANDY SHALE	36.5	281.5	WITH SANDY STREAKS
129.3	MODESTO		SANDY SHALE	5.0	318.0	
124.3	MODESTO		SHALE	35.0	323.0	
89.3	MODESTO		SANDY SHALE	38.0	358.0	
51.3	MODESTO		SHALE	31.0	396.0	
20.3	MODESTO		SHALE	23.0	427.0	WITH BROWN BANDS
-2.7	MODESTO		SANDY SHALE	22.5	450.0	
-25.2	MODESTO		SANDY SHALE	3.5	472.5	WITH COAL PARTINGS
-28.7	MODESTO		SHALE	2.0	476.0	
-30.7	MODESTO		SHALE	4.3	478.0	
-35.0	MODESTO	DEGRAFF	COAL	1.3	482.3	
-36.3	MODESTO		SHALE	2.3	483.6	

-38.5	MODESTO	PIASA	LIMESTONE	2.5	485.8	
-41.0	MODESTO		SHALE	2.4	488.3	
-43.5	CARBONDALE	DANVILLE	COAL	2.7	490.8	
-46.1	CARBONDALE		SHALE	2.6	493.4	
-48.7	CARBONDALE		SANDY SHALE	6.2	496.0	
-54.9	CARBONDALE		SHALE	2.0	502.2	
-56.9	CARBONDALE	ALLENBY	COAL	0.7	504.2	
-57.5	CARBONDALE		LIMESTONE	0.5	504.8	
-58.0	CARBONDALE		SHALE	4.8	505.3	
-62.9	CARBONDALE	BANKSTON FORK	LIMESTONE	10.3	510.2	
-73.2	CARBONDALE		SANDY SHALE	4.0	520.5	
-77.2	CARBONDALE		SANDY SHALE	26.0	524.5	WITH SANDY STREAKS
-103.2	CARBONDALE		SHALE	2.3	550.5	
-105.5	CARBONDALE	BRERETON	LIMESTONE	0.8	552.8	
-106.2	CARBONDALE	BRERETON	SHALE	0.5	553.5	
-106.7	CARBONDALE	BRERETON	LIMESTONE	5.5	554.0	
-112.2	CARBONDALE	ENERGY	SHALE	9.0	559.5	
-121.2	CARBONDALE	ENERGY	SHALE	8.0	568.5	WITH BROWN BANDS
-129.2	CARBONDALE	ENERGY	SHALE	10.7	576.5	
-139.9	CARBONDALE		UNKNOWN	7.3	587.2	LITHO MISSING FROM LOG, #6?
-147.2	CARBONDALE		BLUE BAND	0.1	594.5	
-147.3	CARBONDALE	HERRIN	COAL	3.3	594.6	
-150.5	CARBONDALE		CLAYSTONE	2.5	597.8	
-153.0	CARBONDALE		SANDY SHALE	6.7	600.3	
-159.7	CARBONDALE		CONGLOMERATE	3.8	607.0	
-163.5	CARBONDALE		SANDY SHALE	3.9	610.8	
-167.4	CARBONDALE	SPRINGFIELD	COAL	3.6	614.7	
-171.0	CARBONDALE		SANDY SHALE	17.3	618.3	
-188.2	CARBONDALE		SHALE	20.0	635.5	
-208.2	CARBONDALE		SHALE	19.0	655.5	
-227.2	CARBONDALE		SHALE	13.6	674.5	
-240.8	CARBONDALE	EXCELLO	BLACK SHALE	6.0	688.1	
-246.8	CARBONDALE	HOUCHIN CREEK	COAL	0.1	694.1	
-246.9	CARBONDALE		CLAYSTONE	2.0	694.2	
-248.9	CARBONDALE		SANDY SHALE	8.7	696.2	
-257.5	CARBONDALE	SURVANT	BONE COAL	1.7	704.8	
-259.2	CARBONDALE		SHALE & SANDSTONE	7.0	706.5	
-266.2	CARBONDALE		SHALE	24.0	713.5	

MAPID: 05500013601M **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 2 **QUARTERS/FOOTAGES:** 100' N line, 2640' E line of SE

QUADRANGLE: SESSER **LONGITUDE:** -89.067376 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.030727 **DATE COLLECTED:** 8 / 18 / 1931

SURFACE ELEVATION (FT.): 480.0 **LOGGED (FT.):** 8.1 **LOG TYPE:** Measured section

SOURCE: MINE NOTES-VALIER C C **WELL TYPE:** Underground mine

COMMENT: 7800' WEST AND 600' SOUTH OF SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	COAL	8.1		BLUE BAND .20', 1.5' TOP COAL LEFT

MAPID: 05502473000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 2 **QUARTERS/FOOTAGES:** 1658' N line, 1725' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.064175 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.03309 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 479.0 **LOGGED (FT.):** 624.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-41.0	MODESTO	PIASA	LIMESTONE & SHALE	3.0	520.0	
-44.0	MODESTO		BLACK SHALE	6.0	523.0	
-50.0	CARBONDALE	DANVILLE	COAL	2.0	529.0	
-52.0	CARBONDALE		SILTY SHALE	10.0	531.0	
-62.0	CARBONDALE	ALLENBY	COAL	1.0	541.0	
-63.0	CARBONDALE		CLAYSTONE & SHALE	6.0	542.0	
-69.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	11.0	548.0	
-80.0	CARBONDALE	LAWSON	SILTY SHALE	28.0	559.0	
-108.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	13.0	587.0	
-121.0	CARBONDALE	ANNA	BLACK SHALE	5.0	600.0	
-126.0	CARBONDALE	ENERGY	SILTY SHALE	11.0	605.0	
-137.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	8.0	616.0	

MAPID: 05500054000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 3 **QUARTERS/FOOTAGES:** SE SE NE NE

QUADRANGLE: SESSER **LONGITUDE:** -89.077385 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.035044 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 475.4 **LOGGED (FT.):** 659.0 **LOG TYPE:**

SOURCE: VALIER CC 15 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-174.6	CARBONDALE	HERRIN	COAL	8.5	650.0	

MAPID: 05500054000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 3 **QUARTERS/FOOTAGES:** SE SE NE NE

QUADRANGLE: SESSER **LONGITUDE:** -89.077385 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.035044 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 475.0 **LOGGED (FT.):** 659.3 **LOG TYPE:** Survey Core Study

SOURCE: VALIER COAL CO. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
475.0			UNCONSOLIDATED	22.0	0.0	
453.0			ROCK	54.5	22.0	
398.5			COAL	1.0	76.5	
397.5			ROCK	146.0	77.5	
251.5			COAL	0.5	223.5	
251.0			ROCK	49.0	224.0	
202.0			COAL	2.0	273.0	DIRTY
200.0			ROCK	87.0	275.0	
113.0			COAL	0.5	362.0	DIRTY
112.5			ROCK	162.7	362.5	
-50.2			COAL/SANDSTONE	0.8	525.2	COAL AND SANDSTONE MIXED
-51.0			ROCK	31.1	526.0	
-82.1			COAL	0.9	557.1	
-83.0			ROCK	11.0	558.0	
-94.0			COAL	2.3	569.0	
-96.3			ROCK	51.7	571.3	
-148.0			SHALE	5.0	623.0	LIMEY
-153.0			LIMESTONE	18.0	628.0	
-171.0			BLACK SHALE	4.0	646.0	
-175.0	CARBONDALE	HERRIN	COAL	8.5	650.0	
-183.5	CARBONDALE		BLACK SHALE	0.8	658.5	

MAPID: 05500054000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 3 **QUARTERS/FOOTAGES:** SE SE NE NE

QUADRANGLE: SESSER **LONGITUDE:** -89.077385 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.035044 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 475.4 **LOGGED (FT.):** 659.3 **LOG TYPE:** Drillers Log

SOURCE: VALIER COAL CO. 15 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
475.4	PLEISTOCENE		CLAY	15.0	0.0	YELLOW
460.4	PLEISTOCENE		SAND & GRAVEL	5.0	15.0	
455.4	PLEISTOCENE		SAND & GRAVEL	2.0	20.0	
453.4	BOND		SANDSTONE	50.0	22.0	
403.4	BOND		SANDSTONE	4.5	72.0	
398.9	BOND		COAL	1.0	76.5	
397.9	BOND		CALCAREOUS SHALE	3.5	77.5	
394.4	BOND		SANDY SHALE	15.0	81.0	
379.4	BOND		SHALE	3.0	96.0	
376.4	BOND		SANDY SHALE	27.0	99.0	WITH SANDSTONE PARTINGS
349.4	BOND		SANDY SHALE	7.0	126.0	
342.4	BOND		SHALE	17.0	133.0	
325.4	BOND		SHALE	16.0	150.0	
309.4	BOND	CARTHAGE	LIMESTONE	4.0	166.0	
305.4	MODESTO		BLACK SHALE	5.0	170.0	
300.4	MODESTO		SHALE	24.0	175.0	
276.4	MODESTO		SANDY SHALE	4.0	199.0	
272.4	MODESTO		SANDY SHALE	16.0	203.0	
256.4	MODESTO		SHALE	4.5	219.0	
251.9	MODESTO		COAL	0.5	223.5	
251.4	MODESTO		CALCAREOUS SHALE	7.0	224.0	
244.4	MODESTO		CALCAREOUS SHALE	1.0	231.0	
243.4	MODESTO		SHALE	14.0	232.0	
229.4	MODESTO		SHALE	8.0	246.0	
221.4	MODESTO		SHALE	3.0	254.0	
218.4	MODESTO		CALCAREOUS SHALE	15.0	257.0	
203.4	MODESTO		SHALE	1.0	272.0	
202.4	MODESTO		COAL	2.0	273.0	
200.4	MODESTO		SHALE	4.0	275.0	
196.4	MODESTO		SANDY SHALE	28.0	279.0	
168.4	MODESTO		SANDY SHALE	13.0	307.0	
155.4	MODESTO		SHALE	31.0	320.0	
124.4	MODESTO		SHALE WITH LIMESTONE	5.0	351.0	WITH LIMESTONE BANDS
119.4	MODESTO		CALCAREOUS SHALE	2.0	356.0	
117.4	MODESTO		SHALE	4.0	358.0	
113.4	MODESTO	CHAPEL	COAL	0.5	362.0	
112.9	MODESTO		CALCAREOUS SHALE	4.5	362.5	
108.4	MODESTO		SANDY SHALE	3.0	367.0	
105.4	MODESTO		SANDY SHALE	95.0	370.0	

10.4	MODESTO		SANDY SHALE	14.0	465.0
-3.6	MODESTO		SHALE	23.0	479.0
-26.6	MODESTO		SANDY SHALE	18.0	502.0
-44.6	MODESTO		SANDY SHALE	3.0	520.0
-47.6	MODESTO		BLACK SHALE	2.2	523.0
-49.8	MODESTO		COAL/SANDSTONE	0.8	525.2
-50.6	MODESTO		CALCAREOUS SHALE	10.0	526.0
-60.6	MODESTO		SANDY SHALE	10.0	536.0
-70.6	MODESTO		SHALE	10.0	546.0
-80.6	MODESTO		BLACK SHALE	1.1	556.0
-81.7	MODESTO		COAL	0.9	557.1
-82.6	MODESTO		CALCAREOUS SHALE	1.0	558.0
-83.6	MODESTO		CALCAREOUS SHALE	4.0	559.0
-87.6	MODESTO		CALCAREOUS SHALE	1.0	563.0
-88.6	MODESTO		SHALE	5.8	564.0
-94.4	CARBONDALE	DANVILLE	COAL	2.3	569.8
-96.6	CARBONDALE		SANDY SHALE	3.0	572.0
-99.6	CARBONDALE		CALCAREOUS SHALE	6.0	575.0
-105.6	CARBONDALE		CALCAREOUS SHALE	1.0	581.0
-106.6	CARBONDALE		CALCAREOUS SHALE	5.0	582.0
-111.6	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	587.0
-116.6	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	592.0
-120.6	CARBONDALE		SANDY SHALE	4.0	596.0
-124.6	CARBONDALE		SHALE	23.0	600.0
-147.6	CARBONDALE		CALCAREOUS SHALE	5.0	623.0
-152.6	CARBONDALE	BRERETON	LIMESTONE	17.0	628.0
-169.6	CARBONDALE	ANNA	BLACK SHALE	1.0	645.0
-170.6	CARBONDALE	ENERGY	SHALE	4.0	646.0
-174.6	CARBONDALE	HERRIN	COAL	1.0	650.0
-175.6	CARBONDALE	HERRIN	COAL	7.5	651.0
-183.1	CARBONDALE		CALCAREOUS SHALE	0.8	658.5

MAPID: 05500792000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 3 **QUARTERS/FOOTAGES:** 2640' N line, 1320' W line

QUADRANGLE: SESSER **LONGITUDE:** -89.090816 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.030361 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 485.0 **LOGGED (FT.):** 649.0 **LOG TYPE:** Survey Core Study

SOURCE: VALIER COAL CO. C-2 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-65.2	MODESTO	PIASA	LIMESTONE	5.1	550.2	
-70.3	MODESTO		DARK GRAY SHALE	1.8	555.3	
-72.1	CARBONDALE	DANVILLE	COAL	2.3	557.1	
-74.4	CARBONDALE		SHALE & SILTSTONE	12.8	559.4	
-87.2	CARBONDALE	ALLENBY	COAL	0.6	572.2	
-87.7	CARBONDALE		CLAYSTONE & SHALE	6.7	572.7	
-94.4	CARBONDALE	BANKSTON FORK	LIMESTONE	8.4	579.4	UPPER BENCH
-102.8	CARBONDALE	BANKSTON FORK	SILTY SHALE	0.2	587.8	SHALE PARTING
-103.0	CARBONDALE	BANKSTON FORK	LIMESTONE AND SANDSTONE	0.4	588.0	LOWER BENCH
-103.4	CARBONDALE	LAWSON	SILTSTONE	2.8	588.4	
-106.2	CARBONDALE	LAWSON	DARK GRAY SHALE	6.8	591.2	
-113.0	CARBONDALE	LAWSON	BLACK SHALE	11.0	598.0	
-124.0	CARBONDALE	LAWSON	COAL WITH SHALE PARTINGS	1.5	609.0	
-125.5	CARBONDALE	CONANT	LIMESTONE AND SANDSTONE	1.8	610.5	
-127.2	CARBONDALE	JAMESTOWN	COAL	0.4	612.2	
-127.7	CARBONDALE	BRERETON	LIMESTONE	22.4	612.7	
-150.1	CARBONDALE	ANNA	BLACK SHALE	5.9	635.1	
-156.0	CARBONDALE	HERRIN	COAL	8.0	641.0	

MAPID: 05523058000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 5 **QUARTERS/FOOTAGES:** NW SE SW NW

QUADRANGLE: DU QUOIN **LONGITUDE:** -89.129485 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.032289 **DATE COLLECTED:** 7 / 1 / 1980

SURFACE ELEVATION (FT.): 408.0 **LOGGED (FT.):** 626.0 **LOG TYPE:** Drillers Log

SOURCE: BUFAY OIL CO. 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT: ONLY COAL ENTERED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-185.0	CARBONDALE	HERRIN	COAL	9.0	593.0	COAL PROTECTED BY CEMENT
-214.0	CARBONDALE	SPRINGFIELD	COAL	4.0	622.0	COAL PROTECTED BY CEMENT

MAPID: 05500226000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 6 **QUARTERS/FOOTAGES:** 1980' N line, 1980' W line

QUADRANGLE: DU QUOIN **LONGITUDE:** -89.143715 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.032174 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 628.0 **LOG TYPE:**

SOURCE: OLD BEN COAL CO. **WELL TYPE:** Coal Test

COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-188.0	CARBONDALE	HERRIN	COAL	9.3	583.0	
-227.0	CARBONDALE	SPRINGFIELD	COAL	4.3	622.0	

MAPID: 05500226000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 6 **QUARTERS/FOOTAGES:** 1980' N line, 1980' W line

QUADRANGLE: DU QUOIN **LONGITUDE:** -89.143715 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.032174 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 420.0 **LOGGED (FT.):** 592.3 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-68.0	MODESTO	PIASA	SILTY SHALE	6.4	488.0	
-74.4	MODESTO		BLACK SHALE	1.0	494.4	
-75.4	CARBONDALE	DANVILLE	COAL	2.5	495.4	
-77.9	CARBONDALE		SILTY SHALE	7.4	497.9	
-85.3	CARBONDALE	ALLENBY	COAL	0.3	505.3	
-85.7	CARBONDALE		GRAY SHALE	5.8	505.7	
-91.4	CARBONDALE	BANKSTON FORK	LIMESTONE	10.5	511.4	
-101.9	CARBONDALE	LAWSON	SILTY SHALE	2.0	521.9	
-103.9	CARBONDALE	LAWSON	LIMESTONE W/ SHALE	10.0	523.9	
-113.9	CARBONDALE	LAWSON	DARK GRAY SHALE	11.2	533.9	
-125.1	CARBONDALE	CONANT	CALCAREOUS SHALE	0.7	545.1	
-125.8	CARBONDALE	BRERETON	LIMESTONE	18.2	545.8	
-143.9	CARBONDALE	ANNA	BLACK SHALE	6.0	563.9	
-149.9	CARBONDALE	ENERGY	GRAY SHALE	13.1	569.9	
-163.0	CARBONDALE	HERRIN	COAL	9.3	583.0	

MAPID: 05500226000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 6 **QUARTERS/FOOTAGES:** 1980' N line, 1980' W line

QUADRANGLE: DU QUOIN **LONGITUDE:** -89.143715 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.032174 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 628.0 **LOG TYPE:** Drillers Log

SOURCE: WILLIAMS-CHRISTOPHER **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
395.0	PLEISTOCENE		SOIL	1.0	0.0	
394.0	PLEISTOCENE		CLAY	11.0	1.0	YELLOW
383.0	PLEISTOCENE		SAND	6.0	12.0	
377.0	PLEISTOCENE		CLAY	6.0	18.0	BLUE
371.0	BOND		SOFT SHALE	3.6	24.0	
367.4	BOND		SHALE	2.4	27.6	
365.0	BOND		SANDY SHALE	4.0	30.0	
361.0	BOND		SHALE	3.5	34.0	DARK BLUE
357.5	BOND		SANDSTONE	6.5	37.5	
351.0	BOND		SANDY SHALE	13.0	44.0	WITH SANDSTONE PARTINGS
338.0	BOND		SANDSTONE	10.0	57.0	WITH SHALE PARTINGS
328.0	BOND		SANDY SHALE	8.0	67.0	
320.0	BOND		SANDY SHALE	10.0	75.0	
310.0	BOND		SHALE WITH LIMESTONE	3.5	85.0	WITH LIMESTONE BANDS
306.5	BOND		CALCAREOUS SHALE	1.5	88.5	
305.0	BOND	CARTHAGE	LIMESTONE	3.0	90.0	
302.0	MODESTO		CARBONACEOUS SHALE	8.0	93.0	
294.0	MODESTO		SANDY SHALE	9.0	101.0	WITH SHALE PARTINGS
285.0	MODESTO		SANDY SHALE	5.0	110.0	
280.0	MODESTO		SHALE	0.8	115.0	DARK BLUE
279.2	MODESTO		COAL	0.3	115.8	
278.9	MODESTO		SHALE/COAL	0.5	116.1	
278.4	MODESTO		SANDY SHALE	0.4	116.6	
278.0	MODESTO		SANDY SHALE	23.0	117.0	
255.0	MODESTO		SHALE WITH LIMESTONE	10.0	140.0	WITH LIMESTONE SPOTS
245.0	MODESTO		SHALE WITH LIMESTONE	17.0	150.0	WITH LIMESTONE BANDS
228.0	MODESTO		SHALE	3.0	167.0	
225.0	MODESTO		LIMESTONE	1.0	170.0	
224.0	MODESTO		SHALE	10.0	171.0	
214.0	MODESTO		CALCAREOUS SHALE	10.4	181.0	WITH LIMESTONE BANDS
203.6	MODESTO		COAL	0.1	191.4	
203.5	MODESTO		SHALE	0.5	191.5	
203.0	MODESTO		COAL	0.1	192.0	
202.9	MODESTO		SHALE	1.9	192.1	
201.0	MODESTO		SANDSTONE	11.0	194.0	WITH SHALE PARTINGS
190.0	MODESTO		SANDSTONE	2.0	205.0	
188.0	MODESTO		SANDSTONE	10.0	207.0	
178.0	MODESTO		SANDY SHALE	12.0	217.0	

166.0	MODESTO		SANDY SHALE	9.0	229.0	
157.0	MODESTO		SANDY SHALE	31.0	238.0	
126.0	MODESTO		SHALE	5.0	269.0	
121.0	MODESTO		SHALE WITH LIMESTONE	5.0	274.0	WITH LIMESTONE BANDS
116.0	MODESTO		SHALE	1.0	279.0	
115.0	MODESTO		SHALE	4.7	280.0	
110.3	MODESTO	CHAPEL	COAL	0.8	284.7	
109.5	MODESTO		SHALE	2.0	285.5	
107.5	MODESTO		SANDY SHALE	4.5	287.5	
103.0	MODESTO		LIMESTONE	0.5	292.0	
102.5	MODESTO		SANDY SHALE	4.5	292.5	
98.0	MODESTO		SANDY SHALE	27.0	297.0	
71.0	MODESTO		SANDY SHALE	38.0	324.0	
33.0	MODESTO		SANDY SHALE	34.0	362.0	
-1.0	MODESTO		SANDY SHALE	17.0	396.0	
-18.0	MODESTO		SHALE	3.0	413.0	DARK BLUE
-21.0	MODESTO		SHALE	14.0	416.0	WITH BROWN BANDS; DARK BLUE
-35.0	MODESTO		SHALE	2.0	430.0	
-37.0	MODESTO		SANDY SHALE	24.0	432.0	WITH SANDSTONE BANDS
-61.0	MODESTO		SHALE	1.0	456.0	DARK BLUE
-62.0	MODESTO		SHALE	1.8	457.0	
-63.8	MODESTO		COAL	1.0	458.8	
-64.8	MODESTO		SOFT SHALE	4.2	459.8	
-69.0	MODESTO		SANDY SHALE	6.0	464.0	
-75.0	MODESTO		SANDY SHALE	7.0	470.0	
-82.0	MODESTO		SHALE	7.0	477.0	
-89.0	MODESTO		SHALE	1.2	484.0	BLACK-GRAY
-90.2	MODESTO	DEGRAFF	COAL	1.3	485.2	
-91.4	MODESTO		SHALE	0.5	486.4	
-91.9	MODESTO	PIASA	LIMESTONE	1.0	486.9	
-92.9	MODESTO	PIASA	LIMESTONE	4.0	487.9	
-96.9	MODESTO		SHALE	1.0	491.9	
-97.9	MODESTO		SHALE	1.6	492.9	
-99.5	MODESTO		SHALE	1.0	494.5	
-100.5	CARBONDALE	DANVILLE	COAL	2.5	495.5	
-103.0	CARBONDALE		SANDY SHALE	6.4	498.0	
-109.4	CARBONDALE		SHALE	1.0	504.4	
-110.4	CARBONDALE	ALLENBY	COAL	0.3	505.4	
-110.8	CARBONDALE		SHALE	1.3	505.8	
-112.0	CARBONDALE		SHALE	2.0	507.0	
-114.0	CARBONDALE		SHALE	2.5	509.0	
-116.5	CARBONDALE	BANKSTON FORK	LIMESTONE	10.5	511.5	
-127.0	CARBONDALE		SANDY SHALE	2.0	522.0	
-129.0	CARBONDALE		SHALE WITH LIMESTONE	10.0	524.0	WITH LIMESTONE BANDS
-139.0	CARBONDALE		SHALE	11.2	534.0	WITH BROWN BANDS
-150.2	CARBONDALE		SHALE	0.7	545.2	
-150.8	CARBONDALE	BRERETON	LIMESTONE	6.2	545.8	

-157.0	CARBONDALE	BRERETON	LIMESTONE	12.0	552.0
-169.0	CARBONDALE	ENERGY	SHALE	6.0	564.0
-175.0	CARBONDALE	ENERGY	SHALE	10.0	570.0
-185.0	CARBONDALE	ENERGY	SHALE	3.1	580.0
-188.1	CARBONDALE	HERRIN	COAL	9.3	583.1
-197.3	CARBONDALE		SANDSTONE	15.7	592.3
-213.0	CARBONDALE		SANDY SHALE	8.0	608.0
-221.0	CARBONDALE		CALCAREOUS SHALE	1.0	616.0
-222.0	CARBONDALE		SHALE	4.6	617.0
-226.6	CARBONDALE	SPRINGFIELD	COAL	4.3	621.6
-230.8	CARBONDALE		SANDY SHALE	2.2	625.8

MAPID: 05501374000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 8 **QUARTERS/FOOTAGES:** 1650' S line, 2310' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.122068 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.0136 **DATE COLLECTED:** 12 / 0 / 1957

SURFACE ELEVATION (FT.): 408.0 **LOGGED (FT.):** 1640.0 **LOG TYPE:** Electric Log

SOURCE: HORN RAYMOND O **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-332.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	740.0	
-402.0	SPOON	DAVIS	UNCLASSIFIED	-	810.0	
-1232.0	BASE OF PENN.		UNCLASSIFIED	-	1640.0	

MAPID: 05501374000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 8 **QUARTERS/FOOTAGES:** 1650' S line, 2310' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.122068 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.0136 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 408.0 **LOGGED (FT.):** 547.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-26.0	CARBONDALE	LAWSON	GRAY SHALE	15.0	434.0	
-41.0	CARBONDALE	LAWSON	SILTY SHALE	35.0	449.0	
-76.0	CARBONDALE	BRERETON	LIMESTONE	10.0	484.0	
-86.0	CARBONDALE	ANNA	BLACK SHALE	4.0	494.0	
-90.0	CARBONDALE	ENERGY	GRAY SHALE	39.0	498.0	
-129.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	10.0	537.0	

MAPID: 05500230000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 9 **QUARTERS/FOOTAGES:** NW NW NW NW

QUADRANGLE: SESSER **LONGITUDE:** -89.113457 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.023267 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 413.8 **LOGGED (FT.):** 585.0 **LOG TYPE:**

SOURCE: SOUTHERN GEM COAL CORP. 0004 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-159.2	CARBONDALE	HERRIN	COAL	10.8	573.0	

MAPID: 05500230000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 9 **QUARTERS/FOOTAGES:** NW NW NW NW

QUADRANGLE: SESSER **LONGITUDE:** -89.113457 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.023267 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 414.0 **LOGGED (FT.):** 584.8 **LOG TYPE:** Survey Core Study

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

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
414.0			UNCONSOLIDATED	20.0	0.0	
394.0			ROCK	43.0	20.0	
351.0			COAL	9.9	63.0	QUESTIONABLE THICKNESS
341.2			ROCK	38.9	72.8	
302.3			COAL	0.7	111.7	
301.7			ROCK	28.2	112.3	
273.5			COAL	0.1	140.5	
273.4			ROCK	8.2	140.6	
265.2			COAL	0.1	148.8	
265.1			ROCK	13.8	148.9	
251.3			COAL	0.8	162.7	
250.5			ROCK	90.0	163.5	
160.5			COAL	0.7	253.5	
159.8			ROCK	197.6	254.2	
-37.8			COAL	1.4	451.8	
-39.3			COAL WITH SHALE	1.2	453.3	SHALE WITH COAL PARTINGS
-40.5			ROCK	17.3	454.5	
-57.8			COAL	2.3	471.8	
-60.0			ROCK	9.3	474.0	
-69.3			COAL WITH SHALE	0.5	483.3	COAL AND SHALE PARTINGS
-69.8			ROCK	56.2	483.8	
-126.0			SHALE	32.7	540.0	
-158.7	CARBONDALE	HERRIN	COAL	10.8	572.7	
-169.4	CARBONDALE		ROCK	1.4	583.4	

MAPID: 05500230000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 9 **QUARTERS/FOOTAGES:** NW NW NW NW

QUADRANGLE: SESSER **LONGITUDE:** -89.113457 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.023267 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 413.8 **LOGGED (FT.):** 584.8 **LOG TYPE:** Drillers Log

SOURCE: SOUTHERN GEM COAL CORP. 4 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
413.8	PLEISTOCENE		CLAY	7.0	0.0	
406.8	PLEISTOCENE		SAND	4.0	7.0	
402.8	PLEISTOCENE		SANDSTONE	6.0	11.0	WITH CLAY
396.8	PLEISTOCENE		CLAY, SAND & GRAVEL	3.0	17.0	SANDY WITH GRAVEL
393.8	BOND		SHALE	37.0	20.0	
356.8	BOND	CARTHAGE	LIMESTONE	2.0	57.0	
354.8	MODESTO		SHALE	4.0	59.0	
350.8	MODESTO		COAL	9.8	63.0	
341.0	MODESTO		SHALE	7.3	72.8	
333.8	MODESTO		SANDSTONE	15.0	80.0	WITH SHALE PARTINGS
318.8	MODESTO		SANDY SHALE	12.0	95.0	
306.8	MODESTO		SHALE	4.7	107.0	
302.1	MODESTO		COAL	0.7	111.7	
301.5	MODESTO		SHALE WITH LIMESTONE	7.7	112.3	WITH LIMESTONE PARTINGS
293.8	MODESTO		SHALE	16.0	120.0	
277.8	MODESTO		SHALE	4.5	136.0	
273.3	MODESTO		COAL	0.1	140.5	
273.2	MODESTO		LIMESTONE	0.6	140.6	
272.6	MODESTO		SHALE	7.7	141.2	
265.0	MODESTO		COAL	0.1	148.8	
264.9	MODESTO		SHALE	13.8	148.9	
251.1	MODESTO		COAL	0.8	162.7	
250.3	MODESTO		SHALE	10.5	163.5	
239.8	MODESTO		SANDSTONE	10.0	174.0	WITH SHALE PARTINGS
229.8	MODESTO		SHALE	69.5	184.0	
160.3	MODESTO	CHAPEL	COAL	0.7	253.5	
159.6	MODESTO		SHALE	12.9	254.2	
146.8	MODESTO		SANDY LIMESTONE	9.5	267.0	
137.3	MODESTO		SANDY SHALE	16.5	276.5	WITH SANDSTONE PARTINGS
120.8	MODESTO		SHALY SANDSTONE	10.0	293.0	
110.8	MODESTO		SANDY SHALE	107.6	303.0	
3.2	MODESTO		SANDSTONE	14.3	410.6	WITH SHALE PARTINGS
-11.2	MODESTO		SANDSTONE	3.0	425.0	
-14.2	MODESTO		SANDY SHALE	7.0	428.0	
-21.2	MODESTO		SANDY SHALE	11.0	435.0	
-32.2	MODESTO		SHALY SANDSTONE	2.0	446.0	
-34.2	MODESTO		SHALE	3.8	448.0	
-38.0	MODESTO		COAL	1.4	451.8	

-39.5	MODESTO		SHALE W/ COAL STREAKS	1.3	453.3	WITH COAL PARTINGS
-40.7	MODESTO		CLAYSTONE	1.0	454.5	
-41.7	MODESTO		SHALE	11.5	455.5	
-53.2	MODESTO	PIASA	LIMESTONE	2.5	467.0	
-55.7	MODESTO		SHALE	2.3	469.5	DARK GRAY
-58.0	CARBONDALE	DANVILLE	COAL	2.3	471.8	
-60.2	CARBONDALE		SHALE	3.0	474.0	
-63.2	CARBONDALE		SHALY SANDSTONE	3.0	477.0	
-66.2	CARBONDALE		SHALE	3.3	480.0	
-69.5	CARBONDALE	ALLENBY	COAL WITH SHALE PARTINGS	0.5	483.3	WITH SHALE PARTINGS
-70.0	CARBONDALE		LIMESTONE	1.3	483.8	
-71.2	CARBONDALE	BANKSTON FORK	SHALE	4.5	485.0	
-75.7	CARBONDALE	BANKSTON FORK	LIMESTONE	10.5	489.5	
-86.2	CARBONDALE		CALCAREOUS SHALE	2.0	500.0	
-88.2	CARBONDALE		SHALE	12.0	502.0	
-100.2	CARBONDALE	BRERETON	LIMESTONE	1.0	514.0	
-101.2	CARBONDALE	BRERETON	SHALE	1.5	515.0	
-102.7	CARBONDALE	BRERETON	LIMESTONE	8.0	516.5	
-110.7	CARBONDALE	BRERETON	SHALE	4.0	524.5	
-114.7	CARBONDALE	BRERETON	LIMESTONE	1.0	528.5	
-115.7	CARBONDALE	ENERGY	SHALE	10.5	529.5	
-126.2	CARBONDALE	ENERGY	SHALE	32.7	540.0	WITH BROWN BANDS
-158.9	CARBONDALE	HERRIN	COAL	10.8	572.7	
-169.6	CARBONDALE		CLAYSTONE	1.4	583.4	

MAPID: 05500763000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 9 **QUARTERS/FOOTAGES:** 1020' S line, 20' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.095548 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.011894 **DATE COLLECTED:** 7 / 28 / 1944

SURFACE ELEVATION (FT.): 427.0 **LOGGED (FT.):** 563.5 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 22 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-20.7	MODESTO	PIASA	LIMESTONE	5.3	447.7	
-25.9	MODESTO		CLAYSTONE	1.6	452.9	
-27.5	CARBONDALE	DANVILLE	COAL	2.1	454.5	
-29.6	CARBONDALE		SANDSTONE/SILTSTONE	4.9	456.6	
-34.5	CARBONDALE	GALUM	CALCAREOUS SANDSTONE	3.1	461.5	
-37.6	CARBONDALE		GRAY SHALE	4.8	464.6	
-42.4	CARBONDALE	ALLENBY	COAL	0.4	469.4	
-42.8	CARBONDALE		CLAYSTONE	3.8	469.8	
-46.7	CARBONDALE	BANKSTON FORK	LIMESTONE	6.4	473.7	
-53.1	CARBONDALE	LAWSON	GRAY SHALE	1.4	480.1	
-54.5	CARBONDALE	LAWSON	GRAY SHALE	3.5	481.5	
-58.0	CARBONDALE	LAWSON	DARK GRAY SHALE	3.0	485.0	
-61.0	CARBONDALE	LAWSON	SILTSTONE	6.3	488.0	
-67.3	CARBONDALE	LAWSON	BLACK SHALE	2.3	494.3	
-69.6	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.7	496.6	
-70.3	CARBONDALE	JAMESTOWN	CARBONACEOUS SHALE	0.2	497.3	
-70.5	CARBONDALE	BRERETON	LIMESTONE	4.1	497.5	
-74.6	CARBONDALE	ANNA	BLACK SHALE	2.4	501.6	
-77.0	CARBONDALE	ENERGY	SANDSTONE/SILTSTONE	10.5	504.0	
-87.5	CARBONDALE	ENERGY	GRAY SHALE	19.1	514.5	
-106.6	CARBONDALE	ENERGY	SILTY SHALE	19.3	533.6	
-125.8	CARBONDALE	ENERGY	GRAY SHALE	1.8	552.8	
-127.6	CARBONDALE	ENERGY	CARBONACEOUS SHALE	0.4	554.6	
-128.0	CARBONDALE	HERRIN	COAL	8.5	555.0	

MAPID: 05500762000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 10 **QUARTERS/FOOTAGES:** 300' N line, 15' E line of SW SW

QUADRANGLE: SESSER **LONGITUDE:** -89.090893 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.011912 **DATE COLLECTED:** 7 / 19 / 1944

SURFACE ELEVATION (FT.): 453.0 **LOGGED (FT.):** 579.2 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 21 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
2.5	MODESTO	PIASA	LIMESTONE/UNDERCLAY	3.8	450.5	
-1.3	MODESTO		CARBONACEOUS SHALE	2.1	454.3	
-3.3	CARBONDALE	DANVILLE	COAL	1.6	456.3	
-4.9	CARBONDALE		SHALE & SILTSTONE	14.3	457.9	
-19.3	CARBONDALE	ALLENBY	COAL	0.2	472.3	
-19.5	CARBONDALE		CLAYSTONE	3.3	472.5	
-22.8	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.3	475.8	
-27.0	CARBONDALE	LAWSON	SILTSTONE	8.4	480.0	
-35.4	CARBONDALE	LAWSON	DARK GRAY SHALE	4.0	488.4	
-39.4	CARBONDALE		BLACK SHALE	2.0	492.4	
-41.4	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	1.8	494.4	
-43.3	CARBONDALE	ANNA	DARK GRAY SHALE	1.3	496.3	
-44.5	CARBONDALE	ENERGY	SILTSTONE	63.8	497.5	
-108.3	CARBONDALE	ENERGY	GRAY SHALE	8.0	561.3	
-116.3	CARBONDALE	ENERGY	DARK GRAY SHALE	0.8	569.3	
-117.0	CARBONDALE	HERRIN	COAL	9.2	570.0	

MAPID: 05500885000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 11 **QUARTERS/FOOTAGES:** 937' N line, 1031' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.061801 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.021165 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 459.0 **LOGGED (FT.):** 606.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-20.0	MODESTO	PIASA	LIMESTONE & SHALE	5.0	479.0	
-25.0	MODESTO		BLACK SHALE	6.0	484.0	
-31.0	CARBONDALE	DANVILLE	COAL	2.0	490.0	
-33.0	CARBONDALE		CALCAREOUS SHALE	4.0	492.0	
-37.0	CARBONDALE		CLAYSTONE & SHALE	10.0	496.0	
-47.0	CARBONDALE	BANKSTON FORK	LIMESTONE	10.0	506.0	
-57.0	CARBONDALE	LAWSON	SILTY SHALE	12.0	516.0	
-69.0	CARBONDALE	LAWSON	SANDSTONE	6.0	528.0	
-75.0	CARBONDALE	LAWSON	DARK GRAY SHALE	2.0	534.0	
-77.0	CARBONDALE	BRERETON	LIMESTONE	8.0	536.0	
-85.0	CARBONDALE	ANNA	BLACK SHALE	4.0	544.0	
-89.0	CARBONDALE	ENERGY	SILTY SHALE	15.0	548.0	
-104.0	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	6.0	563.0	
-110.0	CARBONDALE	ENERGY	GRAY SHALE	10.0	569.0	
-120.0	CARBONDALE	ENERGY	SANDSTONE	5.0	579.0	
-125.0	CARBONDALE	ENERGY	GRAY SHALE	10.0	584.0	
-135.0	CARBONDALE	HERRIN	COAL	12.0	594.0	

MAPID: 05501349000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 11 **QUARTERS/FOOTAGES:** 550' N line, 330' E line of SE

QUADRANGLE: SESSER **LONGITUDE:** -89.059394 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.014862 **DATE COLLECTED:** 7 / 0 / 1957

SURFACE ELEVATION (FT.): 470.0 **LOGGED (FT.):** 1580.0 **LOG TYPE:** Electric Log

SOURCE: NAT'L. ASSOC. PETRO. CO. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-310.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	780.0	
-385.0	SPOON	DAVIS	UNCLASSIFIED	-	855.0	
-1110.0	BASE OF PENN.		UNCLASSIFIED	-	1580.0	

MAPID: 05501762000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 11 **QUARTERS/FOOTAGES:** SW SE NE NE

QUADRANGLE: SESSER **LONGITUDE:** -89.059963 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.020534 **DATE COLLECTED:** 8 / 0 / 1951

SURFACE ELEVATION (FT.): 461.0 **LOGGED (FT.):** 1285.0 **LOG TYPE:** Drillers Log

SOURCE: BUMP OIL & C.E. 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
461.0	PLEISTOCENE		FOSSILIFEROUS SHALE	165.0	0.0	WITH SHELLS
296.0			FOSSILIFEROUS SHALE	325.0	165.0	WITH SHELLS
-29.0			LIMESTONE W/ SHALE	90.0	490.0	WITH SHALE
-119.0	CARBONDALE	HERRIN	COAL	12.0	580.0	THICKNESS QUESTIONABLE
-131.0			SHALE	11.0	592.0	
-142.0	CARBONDALE	SPRINGFIELD	COAL	7.0	603.0	THICKNESS QUESTIONABLE
-149.0			FOSSILIFEROUS SHALE	675.0	610.0	WITH SHELLS

MAPID: 05500013604M **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** SW

QUADRANGLE: SESSER **LONGITUDE:** -89.053605 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.012606 **DATE COLLECTED:** 7 / 8 / 1933

SURFACE ELEVATION (FT.): 450.0 **LOGGED (FT.):** 6.7 **LOG TYPE:** Measured section

SOURCE: MINE NOTES-VALIER C C **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	COAL	6.7		ADDTNL COAL LEFT AS ROOF. BLUE BAND .10
-	CARBONDALE		UNDERCLAY	-		

MAPID: 05500057000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** NW SW SE NW

QUADRANGLE: SESSER **LONGITUDE:** -89.053001 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.017639 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): 454.0 **LOGGED (FT.):** 581.0 **LOG TYPE:** Drillers Log

SOURCE: SULLIVAN MACHINERY CO **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
454.0			UNCONSOLIDATED	26.0	0.0	
428.0			ROCK	389.0	26.0	
39.0			COAL	0.6	415.0	
38.4			ROCK	39.0	415.6	
-0.6			COAL	1.9	454.6	
-2.5			ROCK	13.5	456.5	
-16.0			COAL	0.3	470.0	
-16.3			ROCK	63.7	470.3	
-80.0			SHALE	33.4	534.0	SANDY
-113.4	CARBONDALE	HERRIN	COAL	11.4	567.4	
-124.8	CARBONDALE		SHALE	2.2	578.8	SOFT

MAPID: 05500057000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** NW SW SE NW

QUADRANGLE: SESSER **LONGITUDE:** -89.053001 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.017639 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 454.0 **LOGGED (FT.):** 578.4 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
5.4	MODESTO	PIASA	LIMESTONE	4.0	448.6	
1.4	MODESTO		GRAY SHALE	1.6	452.6	
-0.2	CARBONDALE	DANVILLE	COAL	1.9	454.2	
-2.1	CARBONDALE		SHALE	13.5	456.1	
-15.6	CARBONDALE	ALLENBY	COAL	0.3	469.6	
-15.9	CARBONDALE		GRAY SHALE	6.7	469.9	
-22.6	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	476.6	UPPER BENCH
-28.6	CARBONDALE	BANKSTON FORK	LIMESTONE AND SANDSTONE	4.0	482.6	LOWER BENCH
-32.6	CARBONDALE	LAWSON	SILTY SHALE	9.0	486.6	
-41.6	CARBONDALE	LAWSON	GRAY SHALE	11.0	495.6	
-52.6	CARBONDALE	BRERETON	LIMESTONE	2.0	506.6	
-54.6	CARBONDALE	ANNA	BLACK SHALE	5.0	508.6	
-59.6	CARBONDALE	ENERGY	SILTY SHALE	53.4	513.6	
-113.0	CARBONDALE	HERRIN	COAL	11.4	567.0	

MAPID: 05500057000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** NW SW SE NW

QUADRANGLE: SESSER **LONGITUDE:** -89.053001 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.017639 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): 454.0 **LOGGED (FT.):** 581.0 **LOG TYPE:**

SOURCE: OLD BEN 0016 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-113.0	CARBONDALE	HERRIN	COAL	11.4	567.0	

MAPID: 05500057000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** NW SW SE NW

QUADRANGLE: SESSER **LONGITUDE:** -89.053001 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.017639 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): 454.0 **LOGGED (FT.):** 581.0 **LOG TYPE:** Drillers Log

SOURCE: FOR. H.L. WATERMAN 16 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
454.0	PLEISTOCENE		UNCONSOLIDATED	24.0	0.0	
430.0	PLEISTOCENE		CLAY	2.0	24.0	
428.0	BOND		SHALE	33.0	26.0	
395.0	BOND	CARTHAGE	LIMESTONE	4.0	59.0	
391.0	MODESTO		SHALE	7.0	63.0	
384.0	MODESTO		LIMESTONE	1.0	70.0	
383.0	MODESTO		SHALE	20.0	71.0	
363.0	MODESTO		SANDY SHALE	12.0	91.0	
351.0	MODESTO		SANDY SHALE	18.0	103.0	WITH SAND
333.0	MODESTO		SHALE	2.4	121.0	
330.6	MODESTO		SHALEY CLAYSTONE	1.1	123.4	
329.5	MODESTO		SHALE	11.5	124.5	
318.0	MODESTO		BLACK SHALE	1.5	136.0	
316.5	MODESTO		SHALE	10.5	137.5	
306.0	MODESTO		SHALE	2.0	148.0	
304.0	MODESTO		SHALE	17.0	150.0	
287.0	MODESTO		SANDSTONE	3.0	167.0	
284.0	MODESTO		SANDY SHALE	35.0	170.0	
249.0	MODESTO		SHALE	28.0	205.0	
221.0	MODESTO		SHALE	14.7	233.0	
206.3	MODESTO		SHALE W/ COAL STREAKS	0.3	247.7	WITH COAL PARTINGS
206.0	MODESTO		SHALE	4.0	248.0	
202.0	MODESTO		SANDY SHALE	135.0	252.0	
67.0	MODESTO		SHALE	3.0	387.0	DARK BLUE
64.0	MODESTO		SANDY SHALE	17.0	390.0	
47.0	MODESTO		SANDSTONE	6.0	407.0	
41.0	MODESTO		SHALE	2.0	413.0	
39.0	MODESTO		COAL	0.6	415.0	
38.4	MODESTO		SHALE	5.4	415.6	
33.0	MODESTO		SANDY SHALE	17.0	421.0	
16.0	MODESTO		SHALE	11.0	438.0	DARK BLUE
5.0	MODESTO	PIASA	LIMESTONE	4.0	449.0	
1.0	MODESTO		SHALE	1.6	453.0	
-0.6	CARBONDALE	DANVILLE	COAL	1.9	454.6	
-2.5	CARBONDALE		SANDY SHALE	2.5	456.5	
-5.0	CARBONDALE		SANDY SHALE	8.0	459.0	
-13.0	CARBONDALE		SHALE	3.0	467.0	
-16.0	CARBONDALE	ALLENBY	COAL	0.3	470.0	
-16.3	CARBONDALE		SHALE	6.7	470.3	

-23.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	477.0	
-29.0	CARBONDALE	BANKSTON FORK	SANDY LIMESTONE	4.0	483.0	
-33.0	CARBONDALE		SANDY SHALE	9.0	487.0	
-42.0	CARBONDALE		SHALE	10.0	496.0	WITH BROWN BANDS; DARK BLUE
-52.0	CARBONDALE		SHALE	1.0	506.0	
-53.0	CARBONDALE	BRERETON	LIMESTONE	2.0	507.0	
-55.0	CARBONDALE	ENERGY	BLACK SHALE	5.0	509.0	
-60.0	CARBONDALE	ENERGY	SANDY SHALE	10.0	514.0	
-70.0	CARBONDALE	ENERGY	SANDY SHALE	10.0	524.0	WITH BROWN BANDS
-80.0	CARBONDALE	ENERGY	SANDY SHALE	28.0	534.0	
-108.0	CARBONDALE	ENERGY	SANDY SHALE	5.4	562.0	
-113.4	CARBONDALE	HERRIN	COAL	0.3	567.4	
-113.8	CARBONDALE	HERRIN	COAL	11.1	567.8	
-124.8	CARBONDALE		SOFT SHALE	1.0	578.8	
-125.8	CARBONDALE		SANDY SHALE	1.2	579.8	

MAPID: 05523407000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** SE NW SE SW

QUADRANGLE: SESSER **LONGITUDE:** -89.051869 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.011205 **DATE COLLECTED:** 1 / 24 / 1985

SURFACE ELEVATION (FT.): 457.0 **LOGGED (FT.):** 560.0 **LOG TYPE:** Drillers Log

SOURCE: ELCOEX, INC. 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT: COAL PROTECTED BY CEMENT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-4.5	CARBONDALE	HERRIN	COAL	5.0	461.5	
-98.0	CARBONDALE	SPRINGFIELD	COAL	5.0	555.0	

MAPID: 05502165000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 13 **QUARTERS/FOOTAGES:** 230' S line, 1130' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.054309 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.99473 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 454.0 **LOGGED (FT.):** 575.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
41.0	MODESTO	PIASA	LIMESTONE & SHALE	4.0	413.0	
37.0	MODESTO		BLACK SHALE	3.0	417.0	
34.0	CARBONDALE	DANVILLE	COAL	1.5	420.0	
32.5	CARBONDALE		SILTY SHALE	13.0	421.5	
19.5	CARBONDALE	ALLENBY	COAL	0.5	434.5	
19.0	CARBONDALE		CLAYSTONE & SHALE	12.0	435.0	
7.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	447.0	
0.0	CARBONDALE	ENERGY	SILTY SHALE	35.0	454.0	
-35.0	CARBONDALE	ENERGY	GRAY SHALE	75.0	489.0	
-111.0	CARBONDALE	HERRIN	COAL	10.0	565.0	

MAPID: 05523142000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 13 **QUARTERS/FOOTAGES:** SW SE SW NE

QUADRANGLE: SESSER **LONGITUDE:** -89.04608 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.001892 **DATE COLLECTED:** 9 / 16 / 1981

SURFACE ELEVATION (FT.): 433.5 **LOGGED (FT.):** 544.0 **LOG TYPE:** Drillers Log

SOURCE: JOHN H. MORGAN 1-C **WELL TYPE:** Producer-Oil and Gas

COMMENT: COAL PROTECTED BY CEMENT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-79.5	CARBONDALE	HERRIN	COAL	8.0	513.0	
-105.5	CARBONDALE	SPRINGFIELD	COAL	5.0	539.0	

MAPID: 05523251000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 13 **QUARTERS/FOOTAGES:** NW SW SE SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.043794 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.995373 **DATE COLLECTED:** 6 / 20 / 1982

SURFACE ELEVATION (FT.): 438.5 **LOGGED (FT.):** 564.0 **LOG TYPE:** Drillers Log

SOURCE: JOHN H. MORGAN 2-C **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-82.5	CARBONDALE	HERRIN	COAL	9.0	521.0	
-121.5	CARBONDALE	SPRINGFIELD	COAL	4.0	560.0	

MAPID: 05500253000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 14 **QUARTERS/FOOTAGES:** NE SW SW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.073315 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.996983 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 492.7 **LOGGED (FT.):** 264.0 **LOG TYPE:** Measured section

SOURCE: OLD BEN 0011 **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-95.3	CARBONDALE	HERRIN	COAL	9.0	588.0	

MAPID: 05502157000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 14 **QUARTERS/FOOTAGES:** 960' S line, 70' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.0585 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.996786 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 467.0 **LOGGED (FT.):** 575.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
55.0	MODESTO	PIASA	LIMESTONE	4.0	412.0	
51.0	MODESTO		BLACK SHALE	2.0	416.0	
49.0	CARBONDALE	DANVILLE	COAL	2.0	418.0	
47.0	CARBONDALE		SANDSTONE/SILTSTONE	25.0	420.0	
22.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	10.0	445.0	
12.0	CARBONDALE	ENERGY	SILTY SHALE	20.0	455.0	
-8.0	CARBONDALE	ENERGY	GRAY SHALE	90.0	475.0	
-98.0	CARBONDALE	HERRIN	COAL	10.0	565.0	

MAPID: 05500759000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 16 **QUARTERS/FOOTAGES:** 1290' N line, 1480' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.100646 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.005494 **DATE COLLECTED:** 6 / 7 / 1944

SURFACE ELEVATION (FT.): 450.0 **LOGGED (FT.):** 571.6 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 19 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
0.3	MODESTO	PIASA	LIMESTONE/UNDERCLAY	3.3	449.7	
-3.0	MODESTO		BLACK SHALE	5.8	453.0	
-8.7	CARBONDALE	DANVILLE	COAL	2.6	458.7	
-11.3	CARBONDALE		DARK GRAY SHALE	4.1	461.3	
-15.5	CARBONDALE	ALLENBY	COAL	0.5	465.5	
-16.0	CARBONDALE		CALCAREOUS SHALE	3.3	466.0	
-19.3	CARBONDALE	BANKSTON FORK	LIMESTONE	4.7	469.3	
-24.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	4.2	474.0	
-28.2	CARBONDALE	LAWSON	SILTY SHALE	5.1	478.2	
-33.3	CARBONDALE	CONANT	CARBONACEOUS LIMESTONE	4.4	483.3	
-37.7	CARBONDALE	JAMESTOWN	BLACK SHALE	0.2	487.7	
-37.8	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	9.5	487.8	
-47.3	CARBONDALE	ENERGY	SILTSTONE	0.9	497.3	
-48.2	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	9.8	498.2	
-58.0	CARBONDALE	ENERGY	GRAY SHALE	10.5	508.0	
-68.5	CARBONDALE	ENERGY	SILTSTONE	42.4	518.5	
-110.8	CARBONDALE	ENERGY	GRAY SHALE	1.2	560.8	
-112.0	CARBONDALE	HERRIN	COAL	9.6	562.0	

MAPID: 05500761000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 16 **QUARTERS/FOOTAGES:** 1290' N line, 2610' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.104589 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.005471 **DATE COLLECTED:** 7 / 7 / 1944

SURFACE ELEVATION (FT.): 436.0 **LOGGED (FT.):** 545.7 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 20 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
18.7	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.6	417.3	
14.1	MODESTO		BLACK SHALE	4.9	421.9	
9.2	CARBONDALE	DANVILLE	COAL	2.8	426.8	
6.4	CARBONDALE		SANDSTONE/SILTSTONE	6.3	429.6	
0.1	CARBONDALE	ALLENBY	COAL	0.3	435.9	
-0.1	CARBONDALE		CLAYSTONE	2.6	436.1	
-2.7	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	4.9	438.7	
-7.6	CARBONDALE	LAWSON	SILTY SHALE	0.8	443.6	
-8.4	CARBONDALE	LAWSON	SILTSTONE	4.2	444.4	
-12.6	CARBONDALE	LAWSON	SHALE & SILTSTONE	3.7	448.6	
-16.2	CARBONDALE	LAWSON	DARK GRAY SHALE	1.3	452.2	
-17.6	CARBONDALE	LAWSON	SILTSTONE	2.5	453.6	
-20.1	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	4.5	456.1	
-24.6	CARBONDALE	JAMESTOWN	BONE COAL	0.4	460.6	
-25.0	CARBONDALE		CLAYSTONE	0.3	461.0	
-25.3	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	1.6	461.3	
-26.9	CARBONDALE	ENERGY	SILTSTONE	70.3	462.9	
-97.1	CARBONDALE	ENERGY	SILTY SHALE	2.0	533.1	
-99.2	CARBONDALE	ENERGY	GRAY SHALE	0.8	535.2	
-100.0	CARBONDALE	HERRIN	COAL	9.7	536.0	

MAPID: 05501511000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 17 **QUARTERS/FOOTAGES:** 2330' S line, 2290' E line

QUADRANGLE: SESSER **LONGITUDE:** -89.121987 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.000505 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 417.0 **LOGGED (FT.):** 525.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
47.0	CARBONDALE	ENERGY	SHALE	90.0	370.0	
-43.0	CARBONDALE	ENERGY	LIMESTONE	5.0	460.0	
-48.0	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	55.0	465.0	
-103.0	CARBONDALE	HERRIN	COAL	5.0	520.0	

MAPID: 05500060000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 20 **QUARTERS/FOOTAGES:** 2145' S line, 1155' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.118028 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.985295 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 660.0 **LOG TYPE:**

SOURCE: PLUMLEE CR **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		COAL ABSENT OR ERODED

MAPID: 05500060000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 20 **QUARTERS/FOOTAGES:** 2145' S line, 1155' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.118028 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.985295 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 586.5 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
90.4	CARBONDALE	ENERGY	SHALE & SANDSTONE	80.0	369.6	
10.4	CARBONDALE	ENERGY	GRAY SHALE	40.0	449.6	
-29.6	CARBONDALE	ENERGY	SHALE & SANDSTONE	30.0	489.6	
-59.6	CARBONDALE	ENERGY	SILTY SHALE	10.0	519.6	
-69.6	CARBONDALE	ENERGY	SHALE & SANDSTONE	54.4	529.6	
-124.0	CARBONDALE	HERRIN	COAL	2.5	584.0	

MAPID: 05500060000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 20 **QUARTERS/FOOTAGES:** 2145' S line, 1155' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.118028 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.985295 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 660.0 **LOG TYPE:** Drillers Log

SOURCE: PLUMLEE & CRAWFORD 7 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
460.0	PLEISTOCENE		CLAY	12.5	0.0	YELLOW
447.5			SANDSTONE	6.0	12.5	
441.5			SANDSTONE	20.0	18.5	
421.5			SANDSTONE/SILTSTONE	16.5	38.5	GRAY
405.0			BLACK SHALE	10.0	55.0	
395.0			BLACK SHALE	3.0	65.0	
392.0			CLAYSTONE	5.0	68.0	
387.0			BLACK SHALE	27.0	73.0	
360.0			SANDSTONE/SILTSTONE	70.0	100.0	
290.0			BLACK SHALE	17.0	170.0	WITH SULFUR
273.0			COAL	1.2	187.0	
271.8			CLAYSTONE	0.8	188.2	
271.0			SANDSTONE	15.0	189.0	
256.0			BLACK SHALE	20.0	204.0	
236.0			BLACK SHALE	140.5	224.0	
95.5			SANDSTONE	2.0	364.5	
93.5			BLACK SHALE	2.0	366.5	
91.5			COAL	1.5	368.5	
90.0			BLACK SHALE	30.0	370.0	
60.0			SANDSTONE	10.0	400.0	
50.0			SANDSTONE	25.0	410.0	SANDY PLIERS NOTED IN LOG
25.0			SANDSTONE	15.0	435.0	
10.0			BLACK SHALE	40.0	450.0	
-30.0			SANDSTONE/SILTSTONE	30.0	490.0	GRAY
-60.0			SANDY SHALE	10.0	520.0	
-70.0			SANDSTONE/SILTSTONE	54.4	530.0	GRAY
-124.4	CARBONDALE	HERRIN	COAL	2.5	584.4	NO.6 NOTED IN LOG
-126.9			BLACK SHALE	6.5	586.9	
-133.4			LIMESTONE	12.0	593.4	
-145.4			SANDSTONE	29.6	605.4	SANDY PLIERS NOTED IN LOG
-175.0			SANDSTONE	17.0	635.0	
-192.0			BLACK SHALE	6.0	652.0	
-198.0			CLAYSTONE	1.0	658.0	
-199.0			BLACK SHALE	1.0	659.0	

MAPID: 05501512000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 20 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of NE SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.115151 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.983921 **DATE COLLECTED:** 12 / 0 / 1958

SURFACE ELEVATION (FT.): 474.0 **LOGGED (FT.):** 1775.0 **LOG TYPE:** Electric Log

SOURCE: HORN RAYMOND O **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-296.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	770.0	
-371.0	SPOON	DAVIS	UNCLASSIFIED	-	845.0	
-1301.0	BASE OF PENN.		UNCLASSIFIED	-	1775.0	

MAPID: 05500347000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 21 **QUARTERS/FOOTAGES:** 1980' N line, 330' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.112848 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.988549 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 454.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	CARBONDALE	ENERGY	SHALE	80.0		
-	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	25.0		
-	CARBONDALE	ENERGY	GRAY SHALE	15.0		
-	CARBONDALE	ENERGY	SANDSTONE	20.0		
-	CARBONDALE	ENERGY	SANDSTONE	90.0		

MAPID: 05500061000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 22 **QUARTERS/FOOTAGES:** SW SW SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.084881 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.980401 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 487.0 **LOGGED (FT.):** 614.0 **LOG TYPE:** Drillers Log

SOURCE: HORN, DIAMOND AND BEARD N **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
487.0	PLEISTOCENE		CLAY	20.0	0.0	YELLOW
467.0			SHALE	20.0	20.0	
447.0			SHALE	28.0	40.0	
419.0			LIMESTONE	1.0	68.0	
418.0			SHALE	4.0	69.0	DARK BLUE
414.0			COAL	0.2	73.0	
413.8			SANDY SHALE	22.8	73.2	
391.0			SANDY SHALE	34.0	96.0	
357.0			COAL	1.8	130.0	
355.2			SHALE	28.2	131.8	
327.0			SANDY SHALE	56.0	160.0	
271.0			SHALE	38.0	216.0	
233.0			SHALE	1.2	254.0	
231.8	MODESTO	CHAPEL	COAL	0.8	255.2	
231.0	MODESTO		SHALE	9.0	256.0	
222.0	MODESTO		SANDY SHALE	45.0	265.0	
177.0	MODESTO		SHALE	80.0	310.0	
97.0	MODESTO		SHALE	30.0	390.0	WITH BROWN BANDS
67.0	MODESTO		SHALE	6.0	420.0	DARK BLUE
61.0	MODESTO		CALCAREOUS SHALE	2.0	426.0	
59.0	MODESTO		SHALE	6.0	428.0	
53.0	MODESTO	PIASA	LIMESTONE	0.5	434.0	
52.5	MODESTO		SHALE	2.2	434.5	
50.3	CARBONDALE	DANVILLE	COAL	0.8	436.7	
49.6	CARBONDALE		SHALE W/ COAL STREAKS	2.0	437.4	WITH COAL PARTINGS
47.6	CARBONDALE		SHALE	6.6	439.4	
41.0	CARBONDALE		SHALE	12.0	446.0	
29.0	CARBONDALE		LIMESTONE	5.0	458.0	
24.0	CARBONDALE		SANDY SHALE	13.0	463.0	
11.0	CARBONDALE		SANDY SHALE	45.0	476.0	
-34.0	CARBONDALE		SANDY SHALE	28.0	521.0	
-62.0	CARBONDALE		SANDY SHALE	2.0	549.0	
-64.0	CARBONDALE	HERRIN	COAL WITH SHALE	4.0	551.0	
-68.0	CARBONDALE	HERRIN	SHALE	3.0	555.0	
-71.0	CARBONDALE	HERRIN	COAL	0.3	558.0	
-71.3	CARBONDALE	HERRIN	SHALE	3.8	558.3	
-75.0	CARBONDALE	HERRIN	COAL WITH SHALE	1.0	562.0	
-76.0	CARBONDALE	HERRIN	COAL	4.5	563.0	
-80.5	CARBONDALE	HERRIN	SHALE	3.0	567.5	

-83.5	CARBONDALE	HERRIN	COAL	2.0	570.5	
-85.5	CARBONDALE		CLAYSTONE	1.5	572.5	
-87.0	CARBONDALE		CALCAREOUS SHALE	3.0	574.0	
-90.0	CARBONDALE		LIMESTONE	10.0	577.0	
-100.0	CARBONDALE		SANDY SHALE	5.0	587.0	
-105.0	CARBONDALE		SHALE	9.0	592.0	WITH BROWN BANDS; DARK BLUE
-114.0	CARBONDALE	ST. DAVID	LIMESTONE	1.5	601.0	
-115.5	CARBONDALE		SHALE	2.5	602.5	
-118.0	CARBONDALE	SPRINGFIELD	COAL	4.4	605.0	
-122.4	CARBONDALE		CLAYSTONE	2.0	609.4	
-124.4	CARBONDALE		SHALE	2.6	611.4	

MAPID: 05500061000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 22 **QUARTERS/FOOTAGES:** SW SW SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.084881 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.980401 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 487.0 **LOGGED (FT.):** 614.0 **LOG TYPE:**

SOURCE: HORN DIAM **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-76.0	CARBONDALE	HERRIN	COAL	9.5	563.0	
-118.0	CARBONDALE	SPRINGFIELD	COAL	4.4	605.0	

MAPID: 05500062000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 22 **QUARTERS/FOOTAGES:** 0' S line, 1320' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.081322 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.979469 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 497.0 **LOGGED (FT.):** 596.9 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 3 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
69.0	MODESTO	PIASA	LIMESTONE	12.0	428.0	
57.0	CARBONDALE	DANVILLE	COAL	1.5	440.0	
55.5	CARBONDALE		ROCK	17.5	441.5	
38.0	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.0	459.0	
34.0	CARBONDALE	ENERGY	SANDSTONE	91.0	463.0	
-57.0	CARBONDALE	ENERGY	SILTY SHALE	5.0	554.0	
-62.0	CARBONDALE	ENERGY	SANDSTONE	23.0	559.0	
-85.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	14.9	582.0	

MAPID: 05501769000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 23 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of SE
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.066351 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.980354 **DATE COLLECTED:** 11 / 0 / 1954
SURFACE ELEVATION (FT.): 440.0 **LOGGED (FT.):** 1736.0 **LOG TYPE:** Electric Log
SOURCE: SHULMAN BROS. INC. **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-250.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	690.0	
-320.0	SPOON	DAVIS	UNCLASSIFIED	-	760.0	
-1296.0	BASE OF PENN.		UNCLASSIFIED	-	1736.0	

MAPID: 05502124000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 23 **QUARTERS/FOOTAGES:** 965' N line, 1020' E line
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.061815 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.991488 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 461.0 **LOGGED (FT.):** 528.0 **LOG TYPE:** Electric Log
SOURCE: **WELL TYPE:** Oil and Gas Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
75.0	MODESTO	PIASA	LIMESTONE	4.0	386.0	
71.0	MODESTO		DARK GRAY SHALE	3.5	390.0	
67.5	CARBONDALE	DANVILLE	COAL	1.5	393.5	
66.0	CARBONDALE		SANDSTONE/SILTSTONE	21.0	395.0	
45.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	416.0	
38.0	CARBONDALE	ENERGY	GRAY SHALE	96.0	423.0	
-58.0	CARBONDALE	HERRIN	COAL	9.0	519.0	

MAPID: 05500064000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 24 **QUARTERS/FOOTAGES:** 330' S line, 2310' W line
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.050223 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.980309 **DATE COLLECTED:** 0 / 0 / 1908
SURFACE ELEVATION (FT.): 414.0 **LOGGED (FT.):** 490.0 **LOG TYPE:**
SOURCE: OLD BEN COAL CO. **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-62.0	CARBONDALE	HERRIN	COAL	10.4	476.0	

MAPID: 05500064000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 24 **QUARTERS/FOOTAGES:** 330' S line, 2310' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.050223 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.980309 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 414.0 **LOGGED (FT.):** 486.4 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
76.0	MODESTO	PIASA	GRAY SHALE	5.0	338.0	
71.0	MODESTO		CLAYSTONE & SHALE	2.0	343.0	
69.0	CARBONDALE	DANVILLE	COAL	2.0	345.0	
67.0	CARBONDALE		SILTY SHALE	10.5	347.0	
56.5	CARBONDALE	ALLENBY	BONE COAL	0.5	357.5	
56.0	CARBONDALE		CLAYSTONE & SHALE	8.0	358.0	
48.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	366.0	
41.0	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	27.0	373.0	
14.0	CARBONDALE	ENERGY	SILTY SHALE	75.0	400.0	
-61.0	CARBONDALE	ENERGY	LIMESTONE W/ SHALE	1.3	475.0	
-62.0	CARBONDALE	HERRIN	COAL	10.4	476.0	

MAPID: 05500064000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 24 **QUARTERS/FOOTAGES:** 330' S line, 2310' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.050223 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.980309 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 414.0 **LOGGED (FT.):** 488.0 **LOG TYPE:** Drillers Log

SOURCE: ZEIGLER DISTRICT COLLIERY **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
414.0	PLEISTOCENE		UNCONSOLIDATED	9.0	0.0	
405.0	MODESTO		SOFT SHALE	6.5	9.0	
398.5	MODESTO		SANDY SHALE	5.5	15.5	
393.0	MODESTO		SOFT SHALE	19.3	21.0	
373.7	MODESTO		COAL	1.3	40.3	
372.5	MODESTO		CLAYSTONE	1.0	41.5	DARK
371.5	MODESTO		CLAYSTONE	9.0	42.5	LIGHT
362.5	MODESTO		LIMESTONE	0.5	51.5	DARK
362.0	MODESTO		CLAYSTONE	3.0	52.0	LIGHT
359.0	MODESTO		SOFT SHALE	6.0	55.0	
353.0	MODESTO		SOFT SHALE	0.5	61.0	
352.5	MODESTO		COAL	1.5	61.5	
351.0	MODESTO		SANDY SHALE	6.0	63.0	
345.0	MODESTO		SHALE	81.0	69.0	LIGHT BLUE
264.0	MODESTO	CHAPEL	COAL WITH SHALE	0.5	150.0	SOFT WITH SHALE, DARK
263.5	MODESTO		SANDY SHALE	2.0	150.5	
261.5	MODESTO		LIMESTONE	0.5	152.5	DARK
261.0	MODESTO		SHALE	3.0	153.0	
258.0	MODESTO		COAL	0.5	156.0	
257.5	MODESTO		CLAYSTONE	6.5	156.5	LIGHT
251.0	MODESTO		SANDY SHALE	107.0	163.0	WITH LIGHT SAND PARTINGS
144.0	MODESTO		SHALE	14.0	270.0	
130.0	MODESTO		SHALE	0.5	284.0	
129.5	MODESTO		CLAYSTONE	2.5	284.5	DARK
127.0	MODESTO		CLAYSTONE	2.5	287.0	LIGHT
124.5	MODESTO		SANDY SHALE	13.5	289.5	WITH LIGHT SAND PARTINGS
111.0	MODESTO		BLACK SHALE	1.5	303.0	
109.5	MODESTO		COAL	0.5	304.5	
109.0	MODESTO		CLAYSTONE	6.0	305.0	WITH LIMESTONE PEBBLES, DARK
103.0	MODESTO		SANDSTONE	10.0	311.0	LIGHT
93.0	MODESTO		SANDY SHALE	6.0	321.0	WITH LIGHT SAND PARTINGS
87.0	MODESTO		SHALE	4.0	327.0	LIGHT
83.0	MODESTO		SHALE	4.3	331.0	
78.7	MODESTO		COAL	0.5	335.3	
78.2	MODESTO		CLAYSTONE	2.3	335.8	DARK
76.0	MODESTO		SHALE	5.0	338.0	LIGHT GRAY
71.0	MODESTO		SHALE	2.0	343.0	
69.0	CARBONDALE	DANVILLE	COAL	2.0	345.0	
67.0	CARBONDALE		CLAYSTONE	1.0	347.0	DARK

66.0	CARBONDALE		SANDY SHALE	9.5	348.0	
56.5	CARBONDALE		SHALE W/ COAL STREAKS	0.5	357.5	WITH COAL
56.0	CARBONDALE		CLAYSTONE	5.0	358.0	WITH LIMESTONE PARTINGS
51.0	CARBONDALE		SANDY SHALE	3.0	363.0	
48.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	366.0	
41.0	CARBONDALE		SANDSTONE	27.0	373.0	WITH SHALE PARTINGS;LIGHT
14.0	CARBONDALE	ENERGY	SANDY SHALE	75.0	400.0	
-61.0	CARBONDALE		SHALE WITH LIMESTONE	1.3	475.0	WITH LIMESTONE PARTINGS
-62.3	CARBONDALE	HERRIN	COAL	10.4	476.3	WITH PARTINGS
-72.7	CARBONDALE		CLAYSTONE	1.3	486.7	DARK

MAPID: 05500254000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 24 **QUARTERS/FOOTAGES:** NW NW SW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.057113 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.985854 **DATE COLLECTED:** 0 / 0 / 1913

SURFACE ELEVATION (FT.): 445.1 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: OLD BEN 0010 **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-59.9	CARBONDALE	HERRIN	COAL	10.0	505.0	

MAPID: 05501770000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 24 **QUARTERS/FOOTAGES:** NE NW NW SW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.056531 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.98631 **DATE COLLECTED:** 2 / 0 / 1951

SURFACE ELEVATION (FT.): 447.0 **LOGGED (FT.):** 1070.0 **LOG TYPE:** Drillers Log

SOURCE: LAGRANGE PETROL. CORP. 1-B **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
447.0	PLEISTOCENE		UNCONSOLIDATED	80.0	0.0	
367.0			SHALE	285.0	80.0	
82.0			LIMESTONE W/ COAL	162.0	365.0	SANDY WITH COAL
-80.0	CARBONDALE	HERRIN	COAL	13.0	527.0	
-93.0			SHALE	20.0	540.0	
-113.0	CARBONDALE	SPRINGFIELD	COAL	4.0	560.0	NO RECORD FOR 564-674'
-117.0			SHALE	147.0	564.0	
-264.0			SANDSTONE	94.0	711.0	WITH LIMESTONE
-358.0			SHALE	80.0	805.0	
-438.0			SANDSTONE	95.0	885.0	
-533.0			SANDY SHALE	90.0	980.0	WITH SAND

MAPID: 05500065000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 25 **QUARTERS/FOOTAGES:** 0' S line, 1980' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.046623 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.964481 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 425.0 **LOGGED (FT.):** 465.3 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 4 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
93.7	MODESTO	PIASA	LIMESTONE	3.5	331.3	
90.2	MODESTO		BLACK SHALE	5.3	334.8	
84.9	CARBONDALE	DANVILLE	COAL	2.7	340.1	
82.2	CARBONDALE		SHALE	7.3	342.8	
75.0	CARBONDALE	ALLENBY	COAL	0.3	350.0	
74.7	CARBONDALE		GRAY SHALE	7.0	350.3	
67.7	CARBONDALE	BANKSTON FORK	LIMESTONE	7.5	357.3	
60.2	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	50.5	364.8	
9.7	CARBONDALE	ENERGY	SILTY SHALE	33.7	415.3	
-24.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	16.3	449.0	

MAPID: 05502210000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 25 **QUARTERS/FOOTAGES:** SE NW SE NE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.042631 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.974236 **DATE COLLECTED:** 1 / 0 / 1965

SURFACE ELEVATION (FT.): 425.0 **LOGGED (FT.):** 539.0 **LOG TYPE:** Drillers Log

SOURCE: LOUIS KAPP 1-F **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-62.0	CARBONDALE	HERRIN	COAL	9.0	487.0	
-109.0	CARBONDALE	SPRINGFIELD	COAL	5.0	534.0	

MAPID: 05500066000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 26 **QUARTERS/FOOTAGES:** 1320' N line, 1320' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.072147 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.97581 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 465.0 **LOGGED (FT.):** 546.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 2 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
65.6	MODESTO	PIASA	LIMESTONE	5.5	399.4	
60.1	MODESTO		DARK GRAY SHALE	2.8	404.9	
57.2	CARBONDALE	DANVILLE	COAL	1.7	407.8	
55.6	CARBONDALE		ROCK	19.5	409.4	
36.1	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	428.9	
28.1	CARBONDALE	ENERGY	SANDSTONE	25.0	436.9	
3.1	CARBONDALE	ENERGY	DARK GRAY SHALE	8.0	461.9	
-4.9	CARBONDALE	ENERGY	SILTY SHALE	45.0	469.9	
-49.9	CARBONDALE	ENERGY	GRAY SHALE	12.0	514.9	
-61.9	CARBONDALE	ENERGY	DARK GRAY SHALE	4.1	526.9	
-66.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	15.0	531.0	

MAPID: 05500067000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 26 **QUARTERS/FOOTAGES:** NW SE SW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.071014 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.967477 **DATE COLLECTED:** 0 / 0 / 1914

SURFACE ELEVATION (FT.): 442.0 **LOGGED (FT.):** 2089.0 **LOG TYPE:**

SOURCE: INDIAN REF0001 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-41.0	CARBONDALE	HERRIN	COAL	4.0	483.0	
-76.0	CARBONDALE	SPRINGFIELD	COAL	2.0	518.0	

MAPID: 05500068000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 27 **QUARTERS/FOOTAGES:** 2640' N line, 1320' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.081386 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.972181 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 448.0 **LOGGED (FT.):** 537.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 1 **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
105.5	MODESTO	PIASA	LIMESTONE	7.0	342.5	
98.5	MODESTO		DARK GRAY SHALE	3.7	349.5	
94.8	CARBONDALE	DANVILLE	COAL	2.5	353.2	
92.3	CARBONDALE		DARK GRAY SHALE	7.3	355.7	
85.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	363.0	
82.5	CARBONDALE	ENERGY	SANDSTONE	13.5	365.5	
69.0	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	93.0	379.0	
-24.0	CARBONDALE	ENERGY	SANDSTONE	2.0	472.0	
-26.0	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	40.0	474.0	
-66.0	CARBONDALE	ENERGY	DARK GRAY SHALE	4.5	514.0	
-70.5	CARBONDALE	HERRIN	COAL	3.1	518.5	
-73.6	CARBONDALE		BLUE SHALE	15.4	521.6	

MAPID: 05501014000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 28 **QUARTERS/FOOTAGES:** 1650' S line, 330' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.096506 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.969278 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 463.0 **LOGGED (FT.):** 701.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
119.0	MODESTO	PIASA	LIMESTONE	6.0	344.0	
113.0	MODESTO		DARK GRAY SHALE	6.0	350.0	
107.0	CARBONDALE	DANVILLE	COAL	2.0	356.0	
105.0	CARBONDALE		SHALE & SANDSTONE	25.0	358.0	
80.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	383.0	
72.0	CARBONDALE	ENERGY	SHALE & SANDSTONE	95.0	391.0	
-23.0	CARBONDALE	ENERGY	SHALE & SANDSTONE	95.0	486.0	
-118.0	CARBONDALE	ENERGY	SANDSTONE	95.0	581.0	
-213.0	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	25.0	676.0	

MAPID: 05500069000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 29 **QUARTERS/FOOTAGES:** 1650' N line, 1650' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.119709 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.974832 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 439.0 **LOGGED (FT.):** 521.0 **LOG TYPE:**

SOURCE: HALLIDAY 0036 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-73.0	CARBONDALE	HERRIN	COAL	9.0	512.0	

MAPID: 05500069000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 29 **QUARTERS/FOOTAGES:** 1650' N line, 1650' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.119709 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.974832 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 439.0 **LOGGED (FT.):** 521.0 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
38.5	CARBONDALE	DANVILLE	BONE COAL	2.0	400.5	
36.5	CARBONDALE		SHALE & SANDSTONE	38.0	402.5	
-1.5	CARBONDALE	BANKSTON FORK	LIMESTONE	15.0	440.5	
-16.5	CARBONDALE	LAWSON	SHALE & SANDSTONE	16.0	455.5	
-32.5	CARBONDALE	BRERETON	LIMESTONE	10.0	471.5	
-42.5	CARBONDALE	ANNA	BLACK SHALE	3.0	481.5	
-45.5	CARBONDALE	ENERGY	SANDSTONE	27.5	484.5	
-73.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	9.0	512.0	

MAPID: 05500069000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 29 **QUARTERS/FOOTAGES:** 1650' N line, 1650' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.119709 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.974832 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 439.0 **LOGGED (FT.):** 521.0 **LOG TYPE:** Drillers Log

SOURCE: 36.5 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
439.0	PLEISTOCENE		UNCONSOLIDATED	27.0	0.0	
412.0			SANDY SHALE	36.0	27.0	WITH PARTINGS
376.0			LIMESTONE	1.0	63.0	
375.0			SHALE	9.8	64.0	
365.2			LIMESTONE	0.3	73.8	LIGHT
365.0			COAL	2.0	74.0	
363.0			CLAYSTONE	12.0	76.0	DARK
351.0			SHALE	15.0	88.0	
336.0			LIMESTONE	0.5	103.0	
335.5			CLAYSTONE	1.5	103.5	DARK
334.0			SANDY SHALE	8.0	105.0	
326.0			SANDSTONE	30.0	113.0	
296.0			SANDY SHALE	51.0	143.0	
245.0			SHALE	11.0	194.0	
234.0			BLACK SHALE	3.0	205.0	
231.0			SHALE	1.0	208.0	
230.0	MODESTO	CHAPEL	COAL	1.0	209.0	
229.0	MODESTO		SHALE	4.0	210.0	
225.0	MODESTO		LIMESTONE	2.0	214.0	
223.0	MODESTO		SANDY SHALE	21.0	216.0	
202.0	MODESTO		LIMESTONE	1.0	237.0	
201.0	MODESTO		SANDY SHALE	5.0	238.0	
196.0	MODESTO		SHALE	6.0	243.0	
190.0	MODESTO		LIMESTONE	1.0	249.0	
189.0	MODESTO		SANDY SHALE	56.0	250.0	
133.0	MODESTO		SHALE	53.0	306.0	
80.0	MODESTO		BLACK SHALE	1.0	359.0	
79.0	MODESTO		LIMESTONE	0.5	360.0	
78.5	MODESTO		BLACK SHALE	1.5	360.5	
77.0	MODESTO		SHALE	3.0	362.0	
74.0	MODESTO		SANDY SHALE	30.0	365.0	
44.0	MODESTO		BLACK SHALE	4.0	395.0	
40.0	MODESTO		SHALE	1.0	399.0	
39.0	CARBONDALE	DANVILLE	COAL W/ BLACK SHALE	2.0	400.0	WITH SLATE
37.0	CARBONDALE		CLAYSTONE	7.0	402.0	
30.0	CARBONDALE		SHALE	5.0	409.0	
25.0	CARBONDALE		SANDY SHALE	26.0	414.0	
-1.0	CARBONDALE	BANKSTON FORK	LIMESTONE	15.0	440.0	
-16.0	CARBONDALE		SANDSTONE/SHALE	16.0	455.0	

-32.0	CARBONDALE	BRERETON	LIMESTONE	10.0	471.0	DARK
-42.0	CARBONDALE	ANNA	BLACK SHALE	3.0	481.0	
-45.0	CARBONDALE	ENERGY	SANDSTONE	27.5	484.0	
-72.5	CARBONDALE	HERRIN	COAL WITH SHALE	9.0	511.5	WITH SHALE
-81.5	CARBONDALE		CLAYSTONE	0.5	520.5	

MAPID: 05501463000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 29 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NW NW

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.131128 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.97671 **DATE COLLECTED:** 3 / 0 / 1952

SURFACE ELEVATION (FT.): 440.0 **LOGGED (FT.):** 1735.0 **LOG TYPE:** Electric Log

SOURCE: NAT'L. ASSOC. PETRO. CO. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-290.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	730.0	
-368.0	SPOON	DAVIS	UNCLASSIFIED	-	808.0	
-1295.0	BASE OF PENN.		UNCLASSIFIED	-	1735.0	

MAPID: 05500554000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** 330' S line, 660' E line

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.134627 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.965629 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 406.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	CARBONDALE		CLAYSTONE	10.0		
-	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0		
-	CARBONDALE	LAWSON	SHALE	6.0		
-	CARBONDALE	BRERETON	LIMESTONE	10.0		
-	CARBONDALE	ANNA	BLACK SHALE	4.0		
-	CARBONDALE	ENERGY	SHALE	96.0		
-	CARBONDALE	ENERGY	SHALE & SANDSTONE	45.0		

MAPID: 05500647000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 32 **QUARTERS/FOOTAGES:** 1650' S line, 330' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.115019 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.954569 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 430.0 **LOGGED (FT.):** 468.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
88.0	MODESTO	PIASA	LIMESTONE	8.0	342.0	
80.0	MODESTO		DARK GRAY SHALE	3.0	350.0	
77.0	CARBONDALE	DANVILLE	COAL	2.0	353.0	
75.0	CARBONDALE		CALCAREOUS SHALE	5.0	355.0	
70.0	CARBONDALE		CLAYSTONE & SHALE	10.0	360.0	
60.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	370.0	
52.0	CARBONDALE	LAWSON	SHALE	8.0	378.0	
44.0	CARBONDALE	BRERETON	LIMESTONE	14.0	386.0	
30.0	CARBONDALE	ANNA	BLACK SHALE	2.0	400.0	
28.0	CARBONDALE	ENERGY	SHALE	56.0	402.0	
-28.0	CARBONDALE	HERRIN	COAL	10.0	458.0	

MAPID: 05500287000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 33 **QUARTERS/FOOTAGES:** 1980' N line, 1980' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.102229 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.959227 **DATE COLLECTED:** 0 / 0 / 1912

SURFACE ELEVATION (FT.): 448.7 **LOGGED (FT.):** 511.0 **LOG TYPE:**

SOURCE: FRAN CO CC0002 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-53.3	CARBONDALE	HERRIN	COAL	3.5	502.0	

MAPID: 05500287000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 33 **QUARTERS/FOOTAGES:** 1980' N line, 1980' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.102229 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.959227 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 449.0 **LOGGED (FT.):** 506.5 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
84.5	MODESTO	PIASA	LIMESTONE	9.0	364.5	
75.5	MODESTO		DARK GRAY SHALE	2.0	373.5	
73.5	CARBONDALE	DANVILLE	COAL	2.5	375.5	
71.0	CARBONDALE		SHALE & SANDSTONE	10.9	378.0	
60.1	CARBONDALE	ALLENBY	COAL	0.3	388.9	
59.7	CARBONDALE		CLAYSTONE	5.3	389.3	
54.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	394.5	
48.5	CARBONDALE	LAWSON	SILTY SHALE	6.0	400.5	
42.5	CARBONDALE	LAWSON	DARK GRAY SHALE	6.0	406.5	
36.5	CARBONDALE		BLACK SHALE	2.0	412.5	
34.5	CARBONDALE	BRERETON	LIMESTONE	13.0	414.5	
21.5	CARBONDALE	ANNA	BLACK SHALE	5.0	427.5	
16.5	CARBONDALE	ENERGY	DARK GRAY SHALE	4.5	432.5	
12.0	CARBONDALE	ENERGY	COAL	1.9	437.0	
10.1	CARBONDALE	ENERGY	BONE COAL	3.1	438.9	
7.0	CARBONDALE	ENERGY	GRAY SHALE	5.5	442.0	
1.5	CARBONDALE	ENERGY	SILTY SHALE	54.5	447.5	
-53.0	CARBONDALE	HERRIN	BONE COAL	4.5	502.0	

MAPID: 05500287000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 33 **QUARTERS/FOOTAGES:** 1980' N line, 1980' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.102229 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.959227 **DATE COLLECTED:** 0 / 0 / 1912

SURFACE ELEVATION (FT.): 448.7 **LOGGED (FT.):** 511.0 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COUNTY COAL CORP. 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
448.7	PLEISTOCENE		CLAY	40.0	0.0	
408.7	MODESTO		SOFT SHALE	26.0	40.0	
382.7	MODESTO		SANDY SHALE	28.0	66.0	
354.7	MODESTO		SANDSTONE	30.0	94.0	
324.7	MODESTO		SANDSTONE	18.0	124.0	WITH SHALE PARTINGS
306.7	MODESTO		SANDY SHALE	30.0	142.0	
276.7	MODESTO		SHALE	5.0	172.0	
271.7	MODESTO	CHAPEL	COAL	0.7	177.0	
271.0	MODESTO		SOFT SHALE	5.3	177.7	
265.7	MODESTO		SANDY SHALE	17.0	183.0	WITH SANDSTONE
248.7	MODESTO		SANDY SHALE	106.0	200.0	
142.7	MODESTO		SHALE	3.0	306.0	
139.7	MODESTO		LIMESTONE	0.7	309.0	
139.0	MODESTO		SHALE	4.3	309.7	
134.7	MODESTO		SANDSTONE/SHALE	14.0	314.0	
120.7	MODESTO		SHALE	2.0	328.0	
118.7	MODESTO		COAL	0.5	330.0	
118.2	MODESTO		CLAYSTONE	3.5	330.5	
114.7	MODESTO		SHALY SANDSTONE	13.0	334.0	
101.7	MODESTO		SHALY LIMESTONE	4.0	347.0	WITH SHALE PARTINGS
97.7	MODESTO		SHALE WITH LIMESTONE	11.0	351.0	WITH LIMESTONE SPOTS
86.7	MODESTO		SHALE	2.0	362.0	
84.7	MODESTO	PIASA	LIMESTONE	9.0	364.0	
75.7	MODESTO		SHALE	2.0	373.0	DARK GRAY
73.7	CARBONDALE	DANVILLE	COAL	2.5	375.0	
71.2	CARBONDALE		CLAYSTONE	1.0	377.5	
70.2	CARBONDALE		SHALE & SANDSTONE	4.5	378.5	
65.7	CARBONDALE		SHALE	5.4	383.0	
60.3	CARBONDALE	ALLENBY	COAL	0.3	388.4	
59.9	CARBONDALE		CLAYSTONE	5.3	388.8	
54.7	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	394.0	
48.7	CARBONDALE		SANDY SHALE	6.0	400.0	
42.7	CARBONDALE		SHALE	6.0	406.0	DARK GRAY
36.7	CARBONDALE		SHALE	2.0	412.0	
34.7	CARBONDALE	BRERETON	LIMESTONE	13.0	414.0	
21.7	CARBONDALE		SHALE	5.0	427.0	
16.7	CARBONDALE		SHALE	4.5	432.0	DARK GRAY
12.2	CARBONDALE	HERRIN	COAL	1.9	436.5	
10.3	CARBONDALE	HERRIN	SHALE W/ COAL STREAKS	3.1	438.4	WITH COAL PARTINGS

7.2	CARBONDALE		SHALE	5.5	441.5	
1.7	CARBONDALE		SANDY SHALE	54.5	447.0	WITH BROWN BANDS
-52.8	CARBONDALE	SPRINGFIELD	COAL	3.5	501.5	
-56.3	CARBONDALE	SPRINGFIELD	COAL WITH SHALE PARTINGS	1.0	505.0	WITH SHALE PARTINGS
-57.3	CARBONDALE		CLAYSTONE	2.0	506.0	
-59.3	CARBONDALE		SHALE WITH LIMESTONE	3.0	508.0	WITH LIMESTONE SPOTS

MAPID: 05501606000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 1E **SECTION:** 36 **QUARTERS/FOOTAGES:** 2310' S line, 990' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.043149 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.956288 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 404.0 **LOGGED (FT.):** 443.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
86.0	MODESTO	PIASA	LIMESTONE	6.0	318.0	
80.0	MODESTO		DARK GRAY SHALE	4.5	324.0	
75.5	CARBONDALE	DANVILLE	COAL	1.5	328.5	
74.0	CARBONDALE		SHALE	14.0	330.0	
60.0	CARBONDALE	BANKSTON FORK	LIMESTONE AND SANDSTONE	8.0	344.0	
52.0	CARBONDALE	ENERGY	SILTY SHALE	23.0	352.0	
29.0	CARBONDALE	ENERGY	GRAY SHALE	60.0	375.0	
-31.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	8.0	435.0	

MAPID: 05500561000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** SE SE NW SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.943897 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.027507 **DATE COLLECTED:** 9 / 25 / 1941

SURFACE ELEVATION (FT.): 413.0 **LOGGED (FT.):** 687.0 **LOG TYPE:** Drillers Log

SOURCE: OIL CARRIERS, INC. 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-220.0	CARBONDALE	HERRIN	COAL	9.0	633.0	
-272.0	CARBONDALE	SPRINGFIELD	COAL	2.0	685.0	

MAPID: 05500563000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** NW NW SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.946871 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.029757 **DATE COLLECTED:** 10 / 0 / 1941

SURFACE ELEVATION (FT.): 436.0 **LOGGED (FT.):** 696.0 **LOG TYPE:** Drillers Log

SOURCE: ASHLAND OIL AND RFNING. CO. 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-206.0	CARBONDALE	HERRIN	COAL	7.0	642.0	
-256.0	CARBONDALE	SPRINGFIELD	COAL	4.0	692.0	

MAPID: 05500735000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of SE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.933056 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.033375 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 432.0 **LOGGED (FT.):** 2862.0 **LOG TYPE:** Electric Log

SOURCE: MARKHAM E L **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-210.0	CARBONDALE	HERRIN	COAL	6.0	642.0	
-242.0	CARBONDALE	BRIAR HILL	COAL	-	674.0	
-266.0	CARBONDALE	SPRINGFIELD	COAL	4.0	698.0	BLACK SHALE & LIMESTONE ROOF
-344.0	CARBONDALE	HOUCHIN CREEK	COAL	-	776.0	

MAPID: 05500775000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** 50' N line, 336' W line of NW SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.946889 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.030517 **DATE COLLECTED:** 10 / 20 / 1944

SURFACE ELEVATION (FT.): 436.0 **LOGGED (FT.):** 643.2 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 34 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-111.5	MODESTO	PIASA	LIMESTONE/UNDERCLAY	3.9	547.5	
-115.3	MODESTO		DARK GRAY SHALE	3.7	551.3	
-119.0	CARBONDALE	DANVILLE	COAL	2.4	555.0	
-121.5	CARBONDALE		SHALE & SILTSTONE	15.5	557.5	
-137.0	CARBONDALE	ALLENBY	COAL	0.3	573.0	
-137.3	CARBONDALE		CLAYSTONE & SHALE	3.0	573.3	
-140.3	CARBONDALE	BANKSTON FORK	LIMESTONE	5.6	576.3	
-145.9	CARBONDALE	LAWSON	SILTSTONE	1.0	581.9	
-146.9	CARBONDALE	LAWSON	GRAY SHALE	11.3	582.9	
-158.2	CARBONDALE	LAWSON	DARK GRAY SHALE	13.8	594.2	
-171.9	CARBONDALE	CONANT	CALCAREOUS SHALE	0.7	607.9	
-172.6	CARBONDALE	JAMESTOWN	COAL	0.3	608.6	
-172.8	CARBONDALE		CLAYSTONE	0.7	608.8	
-173.5	CARBONDALE	BRERETON	LIMESTONE	4.8	609.5	
-178.3	CARBONDALE	ANNA	BLACK SHALE	2.1	614.3	
-180.4	CARBONDALE	ENERGY	GRAY SHALE	19.6	616.4	
-200.0	CARBONDALE	HERRIN	COAL	7.2	636.0	

MAPID: 05501166000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** NW SE NE NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.940669 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.035616 **DATE COLLECTED:** 7 / 0 / 1955

SURFACE ELEVATION (FT.): 433.0 **LOGGED (FT.):** 698.0 **LOG TYPE:** Drillers Log

SOURCE: JAMES N. HOCKMAN 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-203.0	CARBONDALE	HERRIN	COAL	7.0	636.0	
-260.0	CARBONDALE	SPRINGFIELD	COAL	5.0	693.0	

MAPID: 05501180000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** NE NE NE NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.939562 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.037427 **DATE COLLECTED:** 10 / 0 / 1955

SURFACE ELEVATION (FT.): 412.0 **LOGGED (FT.):** 669.0 **LOG TYPE:** Drillers Log

SOURCE: JAMES N. HOCKMAN 2 **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-196.0	CARBONDALE	HERRIN	COAL	8.0	608.0	
-254.0	CARBONDALE	SPRINGFIELD	COAL	3.0	666.0	

MAPID: 05501267000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** SW NE NE SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.940474 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.029298 **DATE COLLECTED:** 10 / 0 / 1956

SURFACE ELEVATION (FT.): 437.0 **LOGGED (FT.):** 707.0 **LOG TYPE:** Drillers Log

SOURCE: JAMES M. HOCKMAN 1A **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-211.0	CARBONDALE	HERRIN	COAL	8.0	648.0	
-267.0	CARBONDALE	SPRINGFIELD	COAL	3.0	704.0	

MAPID: 05501632000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** NW NE SW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.935964 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.033823 **DATE COLLECTED:** 10 / 0 / 1960

SURFACE ELEVATION (FT.): 446.0 **LOGGED (FT.):** 1140.0 **LOG TYPE:** Drillers Log

SOURCE: JAMES N. HOCKMAN 2-B **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
446.0	PLEISTOCENE		UNCONSOLIDATED	50.0	0.0	MEAS.FROM ROT.DR.BUSH. 3.5' ABOVE GRND
396.0	PLEISTOCENE		UNCONSOLIDATED	20.0	50.0	
376.0	PLEISTOCENE		SAND	20.0	70.0	
356.0			SANDSTONE/SHALE	290.0	90.0	WITH LIMESTONE
66.0			SANDSTONE/SHALE	220.0	380.0	
-154.0			SANDSTONE/SHALE	30.0	600.0	
-184.0			LIMESTONE	14.0	630.0	
-198.0	CARBONDALE	HERRIN	COAL	9.0	644.0	
-207.0			SANDSTONE/SHALE	47.0	653.0	
-254.0	CARBONDALE	SPRINGFIELD	COAL	7.0	700.0	
-261.0			SHALE	47.0	707.0	
-308.0			SHALE	386.0	754.0	

MAPID: 05501773000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** NE NW NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.944784 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.036942 **DATE COLLECTED:** 8 / 21 / 1944

SURFACE ELEVATION (FT.): 398.0 **LOGGED (FT.):** 1057.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 6-A **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
398.0	PLEISTOCENE		CLAY	45.0	0.0	
353.0			SHALE	65.0	45.0	
288.0			LIMESTONE	5.0	110.0	
283.0			COAL	3.0	115.0	
280.0			LIMESTONE	5.0	118.0	
275.0			LIMESTONE	67.0	123.0	
208.0			SHALE	310.0	190.0	
-102.0			LIMESTONE	3.0	500.0	
-105.0			SHALE	25.0	503.0	
-130.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	528.0	
-135.0	CARBONDALE	LAWSON	SHALE	12.0	533.0	
-147.0	CARBONDALE	LAWSON	SHALE	23.0	545.0	
-170.0	CARBONDALE	BRERETON	LIMESTONE	16.0	568.0	
-186.0	CARBONDALE	HERRIN	COAL	8.0	584.0	
-194.0	CARBONDALE		SHALE	50.0	592.0	
-244.0	CARBONDALE	SPRINGFIELD	COAL	5.0	642.0	
-249.0			SHALE	169.0	647.0	
-418.0			SANDY SHALE	241.0	816.0	

MAPID: 05501774000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** NW NE NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.942459 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.036958 **DATE COLLECTED:** 5 / 26 / 1944

SURFACE ELEVATION (FT.): 427.0 **LOGGED (FT.):** 1119.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 2-A **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
427.0	PLEISTOCENE		UNCONSOLIDATED	74.0	0.0	
353.0			SHALE	65.0	74.0	
288.0			LIMESTONE	2.0	139.0	
286.0			COAL	5.0	141.0	
281.0			LIMESTONE	2.0	146.0	
279.0			SHALE	390.0	148.0	
-111.0			LIMESTONE & SHALE	23.0	538.0	
-134.0			LIMESTONE	4.0	561.0	
-138.0			SHALE	29.0	565.0	
-167.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	18.0	594.0	
-185.0	CARBONDALE	HERRIN	COAL	11.0	612.0	
-196.0	CARBONDALE		SHALE	49.0	623.0	
-245.0	CARBONDALE	SPRINGFIELD	COAL	5.0	672.0	
-250.0			SANDY SHALE	43.0	677.0	
-293.0			LIMESTONE	11.0	720.0	
-304.0			SANDY SHALE	53.0	731.0	
-357.0			SHALE	335.0	784.0	

MAPID: 05501939000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** NW SW SW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.938236 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.032007 **DATE COLLECTED:** 8 / 0 / 1961

SURFACE ELEVATION (FT.): 438.0 **LOGGED (FT.):** 706.0 **LOG TYPE:** Drillers Log

SOURCE: HOCKMAN OIL COMP.INC. 1-B **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-209.0	CARBONDALE	HERRIN	COAL	5.0	647.0	
-265.0	CARBONDALE	SPRINGFIELD	COAL	3.0	703.0	

MAPID: 05501957000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** SW SW SE NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.942854 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.031102 **DATE COLLECTED:** 10 / 31 / 1961

SURFACE ELEVATION (FT.): 456.0 **LOGGED (FT.):** 713.0 **LOG TYPE:** Drillers Log

SOURCE: HOCKMAN OIL COMP.INC. 3-B **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-199.0	CARBONDALE	HERRIN	COAL	11.0	655.0	
-251.0	CARBONDALE	SPRINGFIELD	COAL	6.0	707.0	

MAPID: 05500564000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 2 **QUARTERS/FOOTAGES:** SE NE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.94936 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.035122 **DATE COLLECTED:** 10 / 0 / 1941

SURFACE ELEVATION (FT.): 422.0 **LOGGED (FT.):** 1373.0 **LOG TYPE:** Drillers Log

SOURCE: HOMER LUTTRELL 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
422.0	PLEISTOCENE		UNCONSOLIDATED	65.0	0.0	
357.0			SANDSTONE/SHALE	130.0	65.0	
227.0			COAL WITH SHALE	5.0	195.0	WITH SHALE
222.0			SANDSTONE/SHALE	83.0	200.0	
139.0			SHALE	274.0	283.0	
-135.0			SANDSTONE/SHALE	48.0	557.0	
-183.0	CARBONDALE	HERRIN	COAL	8.0	605.0	
-191.0			SHALE & SANDSTONE	36.0	613.0	
-227.0			SANDSTONE	13.0	649.0	
-240.0	CARBONDALE	SPRINGFIELD	COAL	4.0	662.0	
-244.0			SHALE & SANDSTONE	707.0	666.0	

MAPID: 05501459000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 2 **QUARTERS/FOOTAGES:** 1650' S line, 330' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.949125 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.028048 **DATE COLLECTED:** 9 / 0 / 1951

SURFACE ELEVATION (FT.): 425.0 **LOGGED (FT.):** 1705.0 **LOG TYPE:** Electric Log

SOURCE: HOCKMAN, JAMES N. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-430.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	855.0	
-490.0	SPOON	DAVIS	UNCLASSIFIED	-	915.0	
-1280.0	BASE OF PENN.		UNCLASSIFIED	-	1705.0	

MAPID: 05501459000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 2 **QUARTERS/FOOTAGES:** 1650' S line, 330' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.949125 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.028048 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 425.0 **LOGGED (FT.):** 642.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-121.0	MODESTO	PIASA	LIMESTONE	4.0	546.0	
-125.0	MODESTO		DARK GRAY SHALE	8.0	550.0	
-133.0	CARBONDALE	DANVILLE	COAL	2.0	558.0	
-135.0	CARBONDALE		SILTY SHALE	10.0	560.0	
-145.0	CARBONDALE	ALLENBY	COAL	1.0	570.0	
-146.0	CARBONDALE		CLAYSTONE & SHALE	7.0	571.0	
-153.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	578.0	
-159.0	CARBONDALE	LAWSON	SHALE	28.0	584.0	
-187.0	CARBONDALE	CONANT	LIMESTONE & SHALE	0.5	612.0	
-187.5	CARBONDALE	JAMESTOWN	COAL	0.5	612.5	
-188.0	CARBONDALE		CLAYSTONE	1.0	613.0	
-189.0	CARBONDALE	BRERETON	LIMESTONE	7.5	614.0	
-196.5	CARBONDALE	ANNA	BLACK SHALE	3.5	621.5	
-200.0	CARBONDALE	ENERGY	GRAY SHALE	11.0	625.0	
-211.0	CARBONDALE	HERRIN	COAL	6.0	636.0	

MAPID: 05523376000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 2 **QUARTERS/FOOTAGES:** SW SE NE SE
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.949687 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.027518 **DATE COLLECTED:** 6 / 29 / 1983
SURFACE ELEVATION (FT.): 430.2 **LOGGED (FT.):** 684.0 **LOG TYPE:** Drillers Log
SOURCE: BUDMARK OIL CO.,INC. 1-B **WELL TYPE:** Producer-Oil and Gas
COMMENT: COAL PROTECTED BY CEMENT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-203.3	CARBONDALE	HERRIN	COAL	8.0	633.5	
-250.8	CARBONDALE	SPRINGFIELD	COAL	3.0	681.0	

MAPID: 05500005600M **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 4 **QUARTERS/FOOTAGES:** SE SW NE
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.990623 **GEOLOGIST:** BARGH,M
CONFIDENTIAL: N **LATITUDE:** 38.031492 **DATE COLLECTED:** 0 / 0 / 1920
SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 575.8 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-OLD BEN C C **WELL TYPE:** Underground mine
COMMENT: OTHER NOTES AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
400.0			UNKNOWN	567.0	0.0	
-167.0	CARBONDALE	HERRIN	COAL	8.8	567.0	AVERAGE THICKNESS

MAPID: 05500005601M **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 4 **QUARTERS/FOOTAGES:**
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.994022 **GEOLOGIST:** BARGH,M
CONFIDENTIAL: N **LATITUDE:** 38.030615 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 22.3 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-OLD BEN C C **WELL TYPE:** Underground mine
COMMENT: MAIN EAST AIR. 1/2 MILE FROM SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-			LIMESTONE	9.0		
-			SHALE	2.0		WITH SOME COAL AND LS
-	CARBONDALE	HERRIN	COAL	8.8		AVE. THK. BLUE BAND .08'
-	CARBONDALE		UNDERCLAY	2.5		

MAPID: 05500255000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 4 **QUARTERS/FOOTAGES:** SE SW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.990623 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.031492 **DATE COLLECTED:** 0 / 0 / 1907

SURFACE ELEVATION (FT.): 413.3 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: OLD BEN 0019 **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-156.7	CARBONDALE	HERRIN	COAL	8.8	570.0	

MAPID: 05500565000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 4 **QUARTERS/FOOTAGES:** NE NE SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.98605 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.029691 **DATE COLLECTED:** 5 / 0 / 1942

SURFACE ELEVATION (FT.): 422.0 **LOGGED (FT.):** 1330.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. O-1 **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
422.0	PLEISTOCENE		UNCONSOLIDATED	39.0	0.0	
383.0			SANDSTONE/SHALE	118.0	39.0	
265.0			SANDSTONE/SHALE	168.0	157.0	
97.0			FOSSILIFEROUS SHALE	241.0	325.0	WITH SHELLS
-144.0	CARBONDALE	HERRIN	COAL	9.0	566.0	
-153.0			FOSSILIFEROUS SHALE	40.0	575.0	WITH SHELLS
-193.0	CARBONDALE	SPRINGFIELD	COAL	4.0	615.0	
-197.0			FOSSILIFEROUS SHALE	21.0	619.0	WITH SHELLS
-218.0			SANDSTONE/SHALE	690.0	640.0	

MAPID: 05501827000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 4 **QUARTERS/FOOTAGES:** 2290' S line, 525' W line

QUADRANGLE: SESSER **LONGITUDE:** -89.001266 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.029808 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 456.0 **LOGGED (FT.):** 602.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-43.0	MODESTO	PIASA	LIMESTONE & SHALE	4.0	499.0	
-47.0	MODESTO		DARK GRAY SHALE	4.0	503.0	
-51.0	CARBONDALE	DANVILLE	COAL	2.0	507.0	
-53.0	CARBONDALE		SILTY SHALE	13.0	509.0	
-66.0	CARBONDALE	ALLENBY	COAL	1.0	522.0	
-67.0	CARBONDALE		CLAYSTONE & SHALE	6.0	523.0	
-73.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	9.0	529.0	
-82.0	CARBONDALE	LAWSON	SHALE	27.0	538.0	
-109.0	CARBONDALE	BRERETON	LIMESTONE	7.0	565.0	
-116.0	CARBONDALE	ANNA	BLACK SHALE	3.0	572.0	
-119.0	CARBONDALE	ENERGY	GRAY SHALE	20.0	575.0	
-139.0	CARBONDALE	HERRIN	COAL	7.0	595.0	

MAPID: 05523088000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 4 **QUARTERS/FOOTAGES:** SW SW SE NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.998015 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.03108 **DATE COLLECTED:** 1 / 25 / 1981

SURFACE ELEVATION (FT.): 415.0 **LOGGED (FT.):** 609.0 **LOG TYPE:** Drillers Log

SOURCE: S.C. VAUGHAN OIL PROD. CO. 1G **WELL TYPE:** Producer-Oil and Gas

COMMENT: COAL PROTECTED BY CEMENT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-150.0	CARBONDALE	HERRIN	COAL	8.0	565.0	
-190.0	CARBONDALE	SPRINGFIELD	COAL	4.0	605.0	

MAPID: 05500074000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 5 **QUARTERS/FOOTAGES:** SW SW NE NE

QUADRANGLE: SESSER **LONGITUDE:** -89.007316 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.034765 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): 440.0 **LOGGED (FT.):** 608.0 **LOG TYPE:** Drillers Log

SOURCE: WM. CHRISTOPHER **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
440.0			UNCONSOLIDATED	30.0	0.0	
410.0			ROCK	55.8	30.0	
354.2			COAL	0.6	85.8	
353.6			ROCK	35.0	86.4	
318.6			COAL	0.2	121.4	
318.4			ROCK	59.3	121.6	
259.1			COAL	1.8	180.9	
257.3			ROCK	85.1	182.7	
172.2			COAL	1.0	267.8	
171.2			ROCK	166.4	268.8	
4.8			COAL	0.7	435.2	
4.2			ROCK	39.7	435.8	
-35.5			COAL	2.0	475.5	
-37.5			ROCK	12.5	477.5	
-50.0			COAL	0.3	490.0	BONEY
-50.3			ROCK	47.7	490.3	
-98.0			BLACK SHALE	4.5	538.0	
-102.5			BLACK SHALE	27.3	542.5	
-129.8	CARBONDALE	HERRIN	COAL	10.0	569.8	
-139.8	CARBONDALE		SHALE	1.2	579.8	
-141.0	CARBONDALE		LIMESTONE	5.0	581.0	
-146.0	CARBONDALE		SHALE	1.0	586.0	LIMEY
-147.0	CARBONDALE		LIMESTONE	2.0	587.0	
-149.0	CARBONDALE		SHALE	5.0	589.0	
-154.0	CARBONDALE		BLACK SHALE	3.5	594.0	
-157.5	CARBONDALE		LIMESTONE	1.0	597.5	
-158.5	CARBONDALE		BLACK SHALE	3.3	598.5	
-161.8	CARBONDALE	SPRINGFIELD	COAL	4.5	601.8	
-166.3			SHALE	0.0	606.3	

MAPID: 05500074000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 5 **QUARTERS/FOOTAGES:** SW SW NE NE

QUADRANGLE: SESSER **LONGITUDE:** -89.007316 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.034765 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 440.0 **LOGGED (FT.):** 580.0 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-27.8	MODESTO	PIASA	LIMESTONE	4.0	467.8	
-31.8	MODESTO		DARK GRAY SHALE	4.0	471.8	
-35.8	CARBONDALE	DANVILLE	COAL	2.0	475.8	
-37.8	CARBONDALE		SILTY SHALE	12.5	477.8	
-50.3	CARBONDALE	ALLENBY	BONE COAL	0.3	490.3	
-50.6	CARBONDALE		CLAYSTONE & SHALE	6.7	490.6	
-57.3	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	10.0	497.3	
-67.3	CARBONDALE	LAWSON	GRAY SHALE	24.0	507.3	
-91.3	CARBONDALE	BRERETON	LIMESTONE	7.0	531.3	
-98.3	CARBONDALE	ANNA	BLACK SHALE	4.5	538.3	
-102.8	CARBONDALE	ENERGY	DARK GRAY SHALE	3.5	542.8	
-106.3	CARBONDALE	ENERGY	GRAY SHALE	23.8	546.3	
-130.0	CARBONDALE	HERRIN	COAL	10.0	570.0	

MAPID: 05500074000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 5 **QUARTERS/FOOTAGES:** SW SW NE NE

QUADRANGLE: SESSER **LONGITUDE:** -89.007316 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.034765 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): 440.0 **LOGGED (FT.):** 608.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0008 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-130.0	CARBONDALE	HERRIN	COAL	10.0	570.0	
-162.0	CARBONDALE	SPRINGFIELD	COAL	4.5	602.0	

MAPID: 05500074000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 5 **QUARTERS/FOOTAGES:** SW SW NE NE

QUADRANGLE: SESSER **LONGITUDE:** -89.007316 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.034765 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): 440.0 **LOGGED (FT.):** 608.0 **LOG TYPE:** Drillers Log

SOURCE: WILLIAMS CHRISTOPHER 3 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
440.0	PLEISTOCENE		SOIL	2.0	0.0	
438.0	PLEISTOCENE		SANDY CLAY	18.0	2.0	
420.0	PLEISTOCENE		SAND	8.0	20.0	
412.0	PLEISTOCENE		GRAVEL	2.0	28.0	
410.0	BOND		SOFT SHALE	2.0	30.0	
408.0	BOND		SANDY SHALE	4.0	32.0	
404.0	BOND		SHALE	23.3	36.0	
380.7	BOND		SHALE	2.8	59.3	
378.0	BOND		SHALE	4.0	62.0	
374.0	BOND		CALCAREOUS SHALE	2.0	66.0	
372.0	BOND	CARTHAGE	LIMESTONE	3.0	68.0	
369.0	MODESTO		SHALE	1.5	71.0	DARK BLUE
367.5	MODESTO		SHALE	4.5	72.5	
363.0	MODESTO		SANDY SHALE	8.8	77.0	
354.2	MODESTO		COAL	0.6	85.8	
353.6	MODESTO		SHALE	1.0	86.4	LIGHT BLUE
352.6	MODESTO		SANDY SHALE	9.0	87.4	
343.6	MODESTO		SANDSTONE	18.6	96.4	WITH SHALE PARTINGS
325.0	MODESTO		SANDY SHALE	6.4	115.0	
318.6	MODESTO		COAL	0.2	121.4	
318.4	MODESTO		SOFT SHALE	2.4	121.6	
316.0	MODESTO		SANDY SHALE	10.0	124.0	
306.0	MODESTO		SANDY SHALE	7.0	134.0	SANDY WITH LIMESTONE
299.0	MODESTO		SHALE	5.0	141.0	
294.0	MODESTO		LIMESTONE	1.0	146.0	
293.0	MODESTO		SHALE	9.0	147.0	
284.0	MODESTO		SANDY SHALE	9.0	156.0	SANDY WITH LIMESTONE
275.0	MODESTO		SANDY SHALE	12.0	165.0	
263.0	MODESTO		SHALE	2.8	177.0	
260.2	MODESTO		SHALE	1.2	179.8	
259.1	MODESTO		COAL	1.8	180.9	
257.3	MODESTO		SHALE	4.0	182.7	
253.3	MODESTO		SANDSTONE	12.0	186.7	WITH SHALE PARTINGS
241.3	MODESTO		SANDY SHALE	17.3	198.7	
224.0	MODESTO		SHALE	36.0	216.0	
188.0	MODESTO		SHALE	15.8	252.0	
172.2	MODESTO	CHAPEL	COAL	1.0	267.8	
171.2	MODESTO		SHALE	2.0	268.8	
169.2	MODESTO		CALCAREOUS SHALE	5.0	270.8	

164.2	MODESTO		SANDY SHALE	4.3	275.8	
160.0	MODESTO		SANDY SHALE	20.0	280.0	WITH BROWN BANDS
140.0	MODESTO		SANDSTONE	15.0	300.0	WITH SHALE PARTINGS
125.0	MODESTO		SANDSTONE	16.0	315.0	WITH SHALE PARTINGS
109.0	MODESTO		SANDSTONE	16.0	331.0	WITH BROWN BANDS
93.0	MODESTO		SANDY SHALE	0.5	347.0	SANDY WITH COAL
92.5	MODESTO		CALCAREOUS SHALE	1.0	347.5	
91.5	MODESTO		SANDY SHALE	4.5	348.5	
87.0	MODESTO		SANDY SHALE	31.0	353.0	
56.0	MODESTO		SANDY SHALE	5.0	384.0	
51.0	MODESTO		SHALE	19.0	389.0	WITH BROWN BANDS
32.0	MODESTO		SOFT SHALE	1.0	408.0	
31.0	MODESTO		LIMESTONE	2.0	409.0	
29.0	MODESTO		SANDY SHALE	12.0	411.0	WITH SANDSTONE BANDS
17.0	MODESTO		SHALE	10.0	423.0	
7.0	MODESTO		SHALE	2.2	433.0	
4.8	MODESTO		COAL	0.7	435.2	
4.2	MODESTO		SOFT SHALE	1.2	435.8	
3.0	MODESTO		SOFT SHALE	6.0	437.0	
-3.0	MODESTO		SANDSTONE	3.0	443.0	
-6.0	MODESTO		LIMESTONE	2.0	446.0	
-8.0	MODESTO		SANDSTONE	5.0	448.0	WITH SHALE PARTINGS
-13.0	MODESTO		SHALE	12.0	453.0	
-25.0	MODESTO		SANDY SHALE	1.0	465.0	SANDY WITH COAL
-26.0	MODESTO		SANDY SHALE	1.5	466.0	
-27.5	MODESTO	PIASA	LIMESTONE	4.0	467.5	
-31.5	MODESTO		SHALE	1.0	471.5	
-32.5	MODESTO		SHALE	2.0	472.5	
-34.5	MODESTO		SHALE	1.0	474.5	
-35.5	CARBONDALE	DANVILLE	COAL	2.0	475.5	
-37.5	CARBONDALE		SANDY SHALE	12.5	477.5	
-50.0	CARBONDALE	ALLENBY	BONE COAL	0.3	490.0	
-50.3	CARBONDALE		SHALE	2.7	490.3	
-53.0	CARBONDALE		SOFT SHALE	2.0	493.0	
-55.0	CARBONDALE		CALCAREOUS SHALE	2.0	495.0	
-57.0	CARBONDALE	BANKSTON FORK	LIMESTONE	10.0	497.0	
-67.0	CARBONDALE		SHALE	14.0	507.0	DARK BLUE
-81.0	CARBONDALE		SHALE	10.0	521.0	WITH BROWN BANDS; DARK BLUE
-91.0	CARBONDALE	BRERETON	LIMESTONE	7.0	531.0	
-98.0	CARBONDALE	ENERGY	SHALE	3.0	538.0	
-101.0	CARBONDALE	ENERGY	SHALE	1.5	541.0	
-102.5	CARBONDALE	ENERGY	SHALE	3.5	542.5	DARK BLUE
-106.0	CARBONDALE	ENERGY	SHALE	22.0	546.0	
-128.0	CARBONDALE	ENERGY	SHALE	1.8	568.0	
-129.8	CARBONDALE	HERRIN	COAL	10.0	569.8	
-139.8	CARBONDALE		SHALE	1.3	579.8	
-141.0	CARBONDALE		LIMESTONE	5.0	581.0	

-146.0	CARBONDALE		CALCAREOUS SHALE	1.0	586.0
-147.0	CARBONDALE		LIMESTONE	2.0	587.0
-149.0	CARBONDALE		SHALE	5.0	589.0
-154.0	CARBONDALE		SHALE	3.5	594.0
-157.5	CARBONDALE	ST. DAVID	LIMESTONE	1.0	597.5
-158.5	CARBONDALE		SHALE	3.3	598.5
-161.8	CARBONDALE	SPRINGFIELD	COAL	4.5	601.8
-166.3	CARBONDALE		SHALE	1.7	606.3

MAPID: 05500566000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 5 **QUARTERS/FOOTAGES:** NE SE NW

QUADRANGLE: SESSER **LONGITUDE:** -89.013701 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.033538 **DATE COLLECTED:** 11 / 0 / 1941

SURFACE ELEVATION (FT.): 571.0 **LOGGED (FT.):** 1270.0 **LOG TYPE:** Drillers Log

SOURCE: FRANK R. MCQUIGG 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
571.0	PLEISTOCENE		CLAY	30.0	0.0	
541.0			SAND	94.0	30.0	
447.0			FOSSILIFEROUS SHALE	281.0	124.0	WITH SHELLS
166.0			SANDY SHALE	175.0	405.0	WITH SAND
-9.0			SANDSTONE	68.0	580.0	
-77.0			SHALE WITH LIMESTONE	47.0	648.0	WITH LIMESTONE
-124.0			SANDY SHALE	35.0	695.0	WITH SANDSTONE
-159.0	CARBONDALE	HERRIN	COAL	10.0	730.0	
-169.0			SHALE	29.0	740.0	
-198.0	CARBONDALE	SPRINGFIELD	COAL	6.0	769.0	
-204.0			CALCAREOUS SHALE	40.0	775.0	
-244.0			SANDY SHALE	10.0	815.0	
-254.0			SANDSTONE/SHALE	445.0	825.0	

MAPID: 05523964000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 5 **QUARTERS/FOOTAGES:** SE SE NE NE

QUADRANGLE: SESSER **LONGITUDE:** -89.003819 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.034694 **DATE COLLECTED:** 7 / 10 / 1992

SURFACE ELEVATION (FT.): 432.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log

SOURCE: BUDMARK OL CO.,INC. 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT: NO THICKNESS GIVEN FOR COAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-135.0			COAL	-	567.0	NO THICKNESS GIVEN
-185.0			COAL	-	617.0	NO THICKNESS

MAPID: 05502505000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 6 **QUARTERS/FOOTAGES:** 2280' S line, 2310' W line

QUADRANGLE: SESSER **LONGITUDE:** -89.031658 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.029991 **DATE COLLECTED:** 7 / 16 / 1968

SURFACE ELEVATION (FT.): 431.0 **LOGGED (FT.):** 594.0 **LOG TYPE:** Drillers Log

SOURCE: VICTOR R. GALLAGHER 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-120.0	CARBONDALE	HERRIN	COAL	7.0	551.0	
-159.0	CARBONDALE	SPRINGFIELD	COAL	4.0	590.0	

MAPID: 05502505000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 6 **QUARTERS/FOOTAGES:** 2280' S line, 2310' W line

QUADRANGLE: SESSER **LONGITUDE:** -89.031658 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.029991 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 431.0 **LOGGED (FT.):** 560.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-33.0	MODESTO	PIASA	LIMESTONE & SHALE	4.0	464.0	
-37.0	MODESTO		DARK GRAY SHALE	5.0	468.0	
-42.0	CARBONDALE	DANVILLE	COAL	2.0	473.0	
-44.0	CARBONDALE		SILTY SHALE	8.0	475.0	
-52.0	CARBONDALE	ALLENBY	BONE COAL	1.0	483.0	
-53.0	CARBONDALE		CLAYSTONE & SHALE	6.0	484.0	
-59.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	9.0	490.0	
-68.0	CARBONDALE	LAWSON	GRAY SHALE	22.0	499.0	
-90.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	8.0	521.0	
-98.0	CARBONDALE	ANNA	BLACK SHALE	3.0	529.0	
-101.0	CARBONDALE	ENERGY	GRAY SHALE	20.0	532.0	
-121.0	CARBONDALE	HERRIN	COAL	8.0	552.0	

MAPID: 05500075000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 7 **QUARTERS/FOOTAGES:** NW NW NW NW

QUADRANGLE: SESSER **LONGITUDE:** -89.039094 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.023252 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 418.0 **LOGGED (FT.):** 533.0 **LOG TYPE:** Drillers Log

SOURCE: VALIER COAL CO. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
418.0			UNCONSOLIDATED	45.0	0.0	
373.0			ROCK	74.0	45.0	
299.0			COAL	1.7	119.0	DIRTY
297.3			ROCK	114.2	120.7	
183.1			COAL	0.8	234.9	SHALEY
182.3			ROCK	167.3	235.7	
15.0			COAL	1.1	403.0	
13.9			ROCK	39.9	404.1	
-26.0			COAL	1.9	444.0	
-27.9			ROCK	10.6	445.9	
-38.5			COAL	0.5	456.5	DIRTY
-39.0			ROCK	30.0	457.0	
-69.0			BLACK SHALE	12.0	487.0	
-81.0			LIMESTONE	4.0	499.0	
-85.0			BLACK SHALE	4.0	503.0	
-89.0			LIMESTONE	0.5	507.0	
-89.5			BLACK SHALE	0.5	507.5	
-90.0			BLACK SHALE	14.8	508.0	SANDY
-104.8	CARBONDALE	HERRIN	COAL	8.5	522.8	
-113.3	CARBONDALE		BLACK SHALE	1.7	531.3	SOFT

MAPID: 05500075000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 7 **QUARTERS/FOOTAGES:** NW NW NW NW

QUADRANGLE: SESSER **LONGITUDE:** -89.039094 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.023252 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 418.0 **LOGGED (FT.):** 531.5 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-20.2	MODESTO	PIASA	CALCAREOUS SHALE	5.0	438.2	
-25.2	MODESTO		BLACK SHALE	1.0	443.2	
-26.2	CARBONDALE	DANVILLE	COAL	1.9	444.2	
-28.1	CARBONDALE		SILTY SHALE	10.6	446.1	
-38.7	CARBONDALE	ALLENBY	BONE COAL	0.5	456.7	
-39.2	CARBONDALE		CLAYSTONE & SHALE	5.5	457.2	
-44.7	CARBONDALE	BANKSTON FORK	LIMESTONE	9.5	462.7	
-54.2	CARBONDALE	LAWSON	DARK GRAY SHALE	27.0	472.2	
-81.2	CARBONDALE	BRERETON	LIMESTONE	4.0	499.2	
-85.2	CARBONDALE	ANNA	BLACK SHALE	4.0	503.2	
-89.2	CARBONDALE	ENERGY	LIMESTONE	0.5	507.2	
-89.7	CARBONDALE	ENERGY	BLACK SHALE	0.5	507.7	
-90.2	CARBONDALE	ENERGY	SILTY SHALE	14.8	508.2	
-105.0	CARBONDALE	HERRIN	COAL	8.5	523.0	

MAPID: 05500075000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 7 **QUARTERS/FOOTAGES:** NW NW NW NW

QUADRANGLE: SESSER **LONGITUDE:** -89.039094 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.023252 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 417.9 **LOGGED (FT.):** 533.0 **LOG TYPE:**

SOURCE: VALIER CC 0004 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-105.1	CARBONDALE	HERRIN	COAL	8.5	523.0	

MAPID: 05500075000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 7 **QUARTERS/FOOTAGES:** NW NW NW NW

QUADRANGLE: SESSER **LONGITUDE:** -89.039094 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.023252 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 417.9 **LOGGED (FT.):** 533.0 **LOG TYPE:** Drillers Log

SOURCE: VALIER COAL CO. 4 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
417.9	PLEISTOCENE		SAND	12.0	0.0	
405.9	PLEISTOCENE		CLAY	23.0	12.0	BLUE
382.9	PLEISTOCENE		CLAY	10.0	35.0	BLUE
372.9	BOND	CARTHAGE	LIMESTONE	4.0	45.0	
368.9	MODESTO		SHALE	6.0	49.0	
362.9	MODESTO		SANDY SHALE	17.0	55.0	
345.9	MODESTO		SHALE	4.0	72.0	
341.9	MODESTO		SHALE	5.0	76.0	
336.9	MODESTO		SANDY SHALE	6.0	81.0	WITH SANDSTONE PARTINGS
330.9	MODESTO		SANDY SHALE	10.0	87.0	
320.9	MODESTO		SHALE	4.0	97.0	
316.9	MODESTO		SANDY SHALE	5.0	101.0	
311.9	MODESTO		SANDY SHALE	4.0	106.0	
307.9	MODESTO		SHALE	8.0	110.0	
299.9	MODESTO		SHALE	1.0	118.0	
298.9	MODESTO		COAL	1.7	119.0	
297.2	MODESTO		CALCAREOUS SHALE	9.3	120.7	
287.9	MODESTO		SHALE	6.0	130.0	
281.9	MODESTO		SHALE	2.0	136.0	
279.9	MODESTO		SHALE	3.0	138.0	
276.9	MODESTO		CALCAREOUS SHALE	11.0	141.0	
265.9	MODESTO		SANDY SHALE	5.0	152.0	
260.9	MODESTO		SANDSTONE	2.0	157.0	
258.9	MODESTO		SANDY SHALE	69.0	159.0	
189.9	MODESTO		SHALE	6.9	228.0	
183.0	MODESTO	CHAPEL	SHALY COAL	0.8	234.9	
182.2	MODESTO		SHALE	7.3	235.7	
174.9	MODESTO		SANDY SHALE	4.0	243.0	
170.9	MODESTO		SANDY SHALE	16.0	247.0	WITH SANDY PARTINGS
154.9	MODESTO		SANDY SHALE	14.0	263.0	
140.9	MODESTO		SANDSTONE	1.0	277.0	
139.9	MODESTO		SANDY SHALE	103.0	278.0	
36.9	MODESTO		CALCAREOUS SHALE	20.0	381.0	
16.9	MODESTO		SHALE	2.0	401.0	
14.9	MODESTO		COAL	0.9	403.0	
14.0	MODESTO		SOFT SHALE	4.1	403.9	
9.9	MODESTO		SHALE	3.0	408.0	
6.9	MODESTO		SANDY SHALE	15.0	411.0	
-8.1	MODESTO		SHALE	9.9	426.0	

-18.0	MODESTO		COAL	1.1	435.9
-19.1	MODESTO		SHALE	1.0	437.0
-20.1	MODESTO		CALCAREOUS SHALE	1.0	438.0
-21.1	MODESTO	PIASA	LIMESTONE	2.0	439.0
-23.1	MODESTO		CALCAREOUS SHALE	1.0	441.0
-24.1	MODESTO		CALCAREOUS SHALE	1.0	442.0
-25.1	MODESTO		SHALE	1.0	443.0
-26.1	CARBONDALE	DANVILLE	COAL	1.9	444.0
-28.0	CARBONDALE		SHALE	3.1	445.9
-31.1	CARBONDALE		SANDY SHALE	7.5	449.0
-38.6	CARBONDALE	ALLENBY	COAL	0.5	456.5
-39.1	CARBONDALE		SHALE	1.0	457.0
-40.1	CARBONDALE		SOFT SHALE	4.0	458.0
-44.1	CARBONDALE		CALCAREOUS SHALE	0.5	462.0
-44.6	CARBONDALE	BANKSTON FORK	LIMESTONE	9.5	462.5
-54.1	CARBONDALE		SHALE	15.0	472.0
-69.1	CARBONDALE		SHALE	12.0	487.0
-81.1	CARBONDALE	BRERETON	LIMESTONE	4.0	499.0
-85.1	CARBONDALE		SHALE	4.0	503.0
-89.1	CARBONDALE		LIMESTONE	0.5	507.0
-89.6	CARBONDALE	ENERGY	SHALE	0.5	507.5
-90.1	CARBONDALE	ENERGY	SANDY SHALE	14.8	508.0
-104.9	CARBONDALE	HERRIN	COAL	8.5	522.8
-113.4	CARBONDALE		SOFT SHALE	1.7	531.3

MAPID: 05523159000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 7 **QUARTERS/FOOTAGES:** NW NW SE SE

QUADRANGLE: SESSER **LONGITUDE:** -89.02546 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.011971 **DATE COLLECTED:** 11 / 7 / 1981

SURFACE ELEVATION (FT.): 424.6 **LOGGED (FT.):** 570.0 **LOG TYPE:** Drillers Log

SOURCE: BUDMARK OIL CO., INC. 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT: COAL PROTECTED BY CEMENT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-104.4	CARBONDALE	HERRIN	COAL	9.0	529.0	
-140.4	CARBONDALE	SPRINGFIELD	COAL	5.0	565.0	

MAPID: 05500076000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** SE SE SW

QUADRANGLE: SESSER **LONGITUDE:** -89.013256 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.009631 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 418.0 **LOGGED (FT.):** 534.0 **LOG TYPE:** Drillers Log

SOURCE: BIG MUDDY COAL SYN **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
418.0			UNCONSOLIDATED	31.0	0.0	
387.0			ROCK	104.5	31.0	
282.5			COAL	1.5	135.5	
281.0			ROCK	90.0	137.0	
191.0			COAL	1.0	227.0	
190.0			ROCK	200.0	228.0	
-10.0			COAL	1.0	428.0	
-11.0			ROCK	10.6	429.0	
-21.6			COAL	2.2	439.6	
-23.0			ROCK	12.3	441.0	
-35.3			COAL WITH SHALE	0.7	453.3	BLACK SHALE WITH COAL PTGS
-36.0			ROCK	41.0	454.0	
-77.0			LIMESTONE	2.0	495.0	
-79.0			BLACK SHALE	6.0	497.0	
-85.0			BLACK SHALE	21.8	503.0	
-106.8	CARBONDALE	HERRIN	COAL	8.8	524.8	
-115.7	CARBONDALE		ROCK	0.3	533.7	

MAPID: 05500076000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** SE SE SW
QUADRANGLE: SESSER **LONGITUDE:** -89.013256 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.009631 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 418.0 **LOGGED (FT.):** 533.8 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-12.7	MODESTO	PIASA	LIMESTONE	3.5	430.7	
-16.2	MODESTO		DARK GRAY SHALE	5.6	434.2	
-21.8	CARBONDALE	DANVILLE	COAL	2.2	439.8	
-23.9	CARBONDALE		SHALE & SANDSTONE	11.5	441.9	
-35.4	CARBONDALE	ALLENBY	BONE COAL	0.8	453.4	
-36.2	CARBONDALE		GRAY SHALE	6.0	454.2	
-42.2	CARBONDALE	BANKSTON FORK	LIMESTONE	10.0	460.2	
-52.2	CARBONDALE	LAWSON	DARK GRAY SHALE	10.0	470.2	
-62.2	CARBONDALE	LAWSON	GRAY SHALE	15.0	480.2	
-77.2	CARBONDALE	BRERETON	LIMESTONE	2.0	495.2	
-79.2	CARBONDALE	ANNA	BLACK SHALE	6.0	497.2	
-85.2	CARBONDALE	ENERGY	GRAY SHALE	21.8	503.2	
-107.0	CARBONDALE	HERRIN	COAL	8.8	525.0	

MAPID: 05500076000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** SE SE SW
QUADRANGLE: SESSER **LONGITUDE:** -89.013256 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.009631 **DATE COLLECTED:** 0 / 0 / 1904
SURFACE ELEVATION (FT.): 418.3 **LOGGED (FT.):** 534.0 **LOG TYPE:**
SOURCE: BG MUDDYCS0010 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-106.7	CARBONDALE	HERRIN	COAL	8.8	525.0	

MAPID: 05500076000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** SE SE SW

QUADRANGLE: SESSER **LONGITUDE:** -89.013256 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.009631 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 418.3 **LOGGED (FT.):** 533.8 **LOG TYPE:** Drillers Log

SOURCE: BIG MUDDY COAL SYNDICATE 10 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
418.3	PLEISTOCENE		SOIL	1.0	0.0	
417.3	PLEISTOCENE		CLAY	18.0	1.0	BROWN
399.3	PLEISTOCENE		SANDY CLAY	5.0	19.0	BLUE
394.3	PLEISTOCENE		SAND & GRAVEL	7.0	24.0	
387.3	MODESTO		SOFT SHALE	15.0	31.0	
372.3	MODESTO		SHALE	14.0	46.0	LIGHT BLUE
358.3	MODESTO		SANDY SHALE	14.0	60.0	WITH SANDSTONE PARTINGS
344.3	MODESTO		SANDSTONE	7.0	74.0	
337.3	MODESTO		SHALE	6.0	81.0	LIGHT BLUE
331.3	MODESTO		BLACK SHALE	1.0	87.0	
330.3	MODESTO		SHALE	6.0	88.0	LIGHT BLUE
324.3	MODESTO		SHALE	17.0	94.0	
307.3	MODESTO		LIMESTONE	1.0	111.0	
306.3	MODESTO		SHALE	6.0	112.0	
300.3	MODESTO		SHALE	1.0	118.0	
299.3	MODESTO		CALCAREOUS SHALE	8.0	119.0	WITH LIMESTONE
291.3	MODESTO		LIMESTONE	1.0	127.0	
290.3	MODESTO		CALCAREOUS SHALE	7.5	128.0	
282.8	MODESTO		COAL	1.5	135.5	
281.3	MODESTO		CLAYSTONE	0.3	137.0	
281.0	MODESTO		SHALE	2.8	137.3	LIGHT BLUE
278.3	MODESTO		SANDY SHALE	16.0	140.0	SANDY WITH SANDSTONE
262.3	MODESTO		SANDY SHALE	17.0	156.0	
245.3	MODESTO		SHALE	10.0	173.0	LIGHT BLUE
235.3	MODESTO		SHALE	40.0	183.0	LIGHT BLUE
195.3	MODESTO		SHALE WITH LIMESTONE	4.0	223.0	WITH LIMESTONE BANDS
191.3	MODESTO	CHAPEL	COAL	1.0	227.0	
190.3	MODESTO		SHALE	2.0	228.0	
188.3	MODESTO		LIMESTONE	7.0	230.0	
181.3	MODESTO		SANDY SHALE	4.0	237.0	WITH SANDSTONE PARTINGS
177.3	MODESTO		SANDY SHALE	28.0	241.0	WITH SANDSTONE PARTINGS
149.3	MODESTO		SHALE	108.0	269.0	LIGHT BLUE
41.3	MODESTO		SANDY SHALE	5.0	377.0	
36.3	MODESTO		SANDSTONE	5.0	382.0	WITH SHALE PARTINGS
31.3	MODESTO		SANDY SHALE	7.0	387.0	WITH SANDSTONE PARTINGS
24.3	MODESTO		SHALE	3.8	394.0	
20.5	MODESTO		CLAYSTONE	0.6	397.8	
19.9	MODESTO		CLAYSTONE	3.6	398.4	

16.3	MODESTO		SANDSTONE	17.0	402.0	
-0.7	MODESTO		SHALE	3.0	419.0	LIGHT BLUE
-3.7	MODESTO		BLACK SHALE	4.0	422.0	
-7.7	MODESTO		SHALE	2.0	426.0	LIGHT BLUE
-9.7	MODESTO	DEGRAFF	COAL	1.0	428.0	
-10.7	MODESTO		SHALE	1.5	429.0	LIGHT BLUE
-12.2	MODESTO	PIASA	LIMESTONE	3.5	430.5	
-15.7	MODESTO		SHALE	5.6	434.0	BLACK-GRAY
-21.3	CARBONDALE	DANVILLE	COAL	2.2	439.6	
-23.5	CARBONDALE		SHALE	3.3	441.8	LIGHT BLUE
-26.7	CARBONDALE		SANDSTONE	8.0	445.0	
-34.7	CARBONDALE		SHALE	0.3	453.0	LIGHT BLUE
-35.0	CARBONDALE		SHALE W/ COAL STREAKS	0.8	453.3	WITH COAL PARTINGS
-35.7	CARBONDALE		SHALE	6.0	454.0	LIGHT BLUE
-41.7	CARBONDALE	BANKSTON FORK	LIMESTONE	10.0	460.0	
-51.7	CARBONDALE		SHALE	10.0	470.0	DARK BLUE
-61.7	CARBONDALE		SHALE	15.0	480.0	LIGHT BLUE
-76.7	CARBONDALE	BRERETON	LIMESTONE	2.0	495.0	
-78.7	CARBONDALE	ENERGY	SHALE	6.0	497.0	
-84.7	CARBONDALE	ENERGY	SHALE	21.8	503.0	LIGHT BLUE
-106.5	CARBONDALE	HERRIN	COAL	9.0	524.8	WRITTEN AT BOTTOM OF RECORD

MAPID: 05502071000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** NE SW SE NW

QUADRANGLE: SESSER **LONGITUDE:** -89.015185 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.017544 **DATE COLLECTED:** 9 / 6 / 1963

SURFACE ELEVATION (FT.): 437.0 **LOGGED (FT.):** 574.0 **LOG TYPE:** Drillers Log

SOURCE: E.E. REHN 1-B **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-103.0	CARBONDALE	HERRIN	COAL	9.0	540.0	
-133.0	CARBONDALE	SPRINGFIELD	COAL	4.0	570.0	

MAPID: 05502084000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** NE SE SE SW
QUADRANGLE: SESSER **LONGITUDE:** -89.012681 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.010101 **DATE COLLECTED:** 9 / 0 / 1963
SURFACE ELEVATION (FT.): 420.0 **LOGGED (FT.):** 572.0 **LOG TYPE:** Drillers Log
SOURCE: RK PETROL. CORP. 1 **WELL TYPE:** Producer-Oil and Gas
COMMENT: COAL PROTECTED BY SACKS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-106.0	CARBONDALE	HERRIN	COAL	9.0	526.0	
-147.0	CARBONDALE	SPRINGFIELD	COAL	5.0	567.0	

MAPID: 05502195000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of SE
QUADRANGLE: SESSER **LONGITUDE:** -89.010936 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.009633 **DATE COLLECTED:** 10 / 30 / 1964
SURFACE ELEVATION (FT.): 437.0 **LOGGED (FT.):** 608.0 **LOG TYPE:** Drillers Log
SOURCE: R.K. PETROL.CORP. 2 **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-117.0	CARBONDALE	HERRIN	COAL	9.0	554.0	
-166.0	CARBONDALE	SPRINGFIELD	COAL	5.0	603.0	

MAPID: 05502195000C **VERSION:** 2 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of SE
QUADRANGLE: SESSER **LONGITUDE:** -89.010936 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.009633 **DATE COLLECTED:** 10 / 0 / 1964
SURFACE ELEVATION (FT.): 437.0 **LOGGED (FT.):** 1610.0 **LOG TYPE:** Electric Log
SOURCE: R. K. PETROLEUM CORP. **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-338.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	775.0	
-397.0	SPOON	DAVIS	UNCLASSIFIED	-	834.0	
-1173.0	BASE OF PENN.		UNCLASSIFIED	-	1610.0	

MAPID: 05502477000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** NW NE SE NW
QUADRANGLE: SESSER **LONGITUDE:** -89.014052 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.019405 **DATE COLLECTED:** 1 / 3 / 1968
SURFACE ELEVATION (FT.): 450.0 **LOGGED (FT.):** 596.0 **LOG TYPE:** Drillers Log
SOURCE: JOE A. DULL 1 **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-101.0	CARBONDALE	HERRIN	COAL	12.0	551.0	
-141.0	CARBONDALE	SPRINGFIELD	COAL	5.0	591.0	

MAPID: 05500077000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 9 **QUARTERS/FOOTAGES:** NW NW SE NW
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.997741 **GEOLOGIST:** BARGH,M
CONFIDENTIAL: N **LATITUDE:** 38.019349 **DATE COLLECTED:** 0 / 0 / 1904
SURFACE ELEVATION (FT.): 422.0 **LOGGED (FT.):** 571.0 **LOG TYPE:** Survey Core Study
SOURCE: VALIER COAL CO. **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
422.0			UNCONSOLIDATED	16.0	0.0	
406.0			ROCK	78.2	16.0	
327.8			COAL	0.8	94.2	SHALEY
327.0			ROCK	173.0	95.0	
154.0			COAL	1.0	268.0	
153.0			ROCK	165.5	269.0	
-12.5			COAL	0.7	434.5	
-13.2			ROCK	30.8	435.2	
-44.0			COAL	1.0	466.0	
-45.0			ROCK	10.0	467.0	
-55.0			COAL	2.0	477.0	
-57.0			ROCK	11.7	479.0	
-68.7			COAL	0.3	490.7	
-69.0			ROCK	46.0	491.0	
-115.0			BLACK SHALE	1.0	537.0	LIMEY
-116.0			BLACK SHALE	24.4	538.0	
-140.4	CARBONDALE	HERRIN	COAL	8.6	562.4	

MAPID: 05500077000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 9 **QUARTERS/FOOTAGES:** NW NW SE NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.997741 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.019349 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 422.0 **LOGGED (FT.):** 570.6 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-45.6	MODESTO	PIASA	LIMESTONE	6.0	467.6	
-51.6	MODESTO		GRAY SHALE	3.0	473.6	
-54.6	CARBONDALE	DANVILLE	COAL	2.0	476.6	
-56.6	CARBONDALE		SILTY SHALE	11.7	478.6	
-68.3	CARBONDALE	ALLENBY	COAL	0.3	490.3	
-68.6	CARBONDALE		DARK GRAY SHALE	5.0	490.6	
-73.6	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	495.6	
-80.6	CARBONDALE	LAWSON	CALCAREOUS SHALE	9.0	502.6	
-89.6	CARBONDALE	LAWSON	GRAY SHALE	20.0	511.6	
-109.6	CARBONDALE	BRERETON	CALCAREOUS SHALE	3.0	531.6	
-112.6	CARBONDALE	ANNA	BLACK SHALE	3.0	534.6	
-115.6	CARBONDALE	ENERGY	GRAY SHALE	24.4	537.6	
-140.0	CARBONDALE	HERRIN	COAL	8.6	562.0	

MAPID: 05500077000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 9 **QUARTERS/FOOTAGES:** NW NW SE NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.997741 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.019349 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 422.3 **LOGGED (FT.):** 571.0 **LOG TYPE:**

SOURCE: VALIER CC 0009 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-139.7	CARBONDALE	HERRIN	COAL	8.6	562.0	

MAPID: 05500077000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 9 **QUARTERS/FOOTAGES:** NW NW SE NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.997741 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.019349 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 422.3 **LOGGED (FT.):** 571.0 **LOG TYPE:** Drillers Log

SOURCE: VALIER COAL CO. 9 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
422.3	PLEISTOCENE		SOIL	16.0	0.0	
406.3	BOND		SANDY SHALE	1.0	16.0	
405.3	BOND		SANDSTONE	0.5	17.0	
404.8	BOND		SANDY SHALE	3.5	17.5	
401.3	BOND		SANDSTONE	1.0	21.0	
400.3	BOND		SANDY SHALE	30.0	22.0	
370.3	BOND		SANDY SHALE	13.0	52.0	
357.3	BOND		SHALE	7.0	65.0	
350.3	BOND	CARTHAGE	LIMESTONE	5.0	72.0	
345.3	MODESTO		SHALE	6.0	77.0	
339.3	MODESTO		SANDY SHALE	5.0	83.0	
334.3	MODESTO		SANDY SHALE	6.2	88.0	
328.1	MODESTO		SHALY COAL	0.8	94.2	
327.3	MODESTO		SHALE	5.0	95.0	
322.3	MODESTO		SANDY SHALE	17.0	100.0	
305.3	MODESTO		SHALE	3.0	117.0	
302.3	MODESTO		LIMESTONE	5.0	120.0	
297.3	MODESTO		CALCAREOUS SHALE	4.0	125.0	
293.3	MODESTO		SHALE	14.0	129.0	
279.3	MODESTO		CALCAREOUS SHALE	1.0	143.0	
278.3	MODESTO		SHALE	4.0	144.0	
274.3	MODESTO		SHALE	9.0	148.0	
265.3	MODESTO		CALCAREOUS SHALE	5.0	157.0	
260.3	MODESTO		CALCAREOUS SHALE	13.0	162.0	
247.3	MODESTO		SHALE	1.0	175.0	
246.3	MODESTO		SANDY SHALE	22.0	176.0	
224.3	MODESTO		SANDY SHALE	11.0	198.0	
213.3	MODESTO		SHALE	23.0	209.0	
190.3	MODESTO		SHALE	31.0	232.0	
159.3	MODESTO		SHALE	3.0	263.0	
156.3	MODESTO		SHALE	2.0	266.0	
154.3	MODESTO	CHAPEL	COAL	1.0	268.0	
153.3	MODESTO		SHALE	2.0	269.0	
151.3	MODESTO		CALCAREOUS SHALE	6.0	271.0	
145.3	MODESTO		SANDY SHALE	18.0	277.0	
127.3	MODESTO		CALCAREOUS SHALE	2.0	295.0	
125.3	MODESTO		SANDY SHALE	4.0	297.0	
121.3	MODESTO		SANDY SHALE	34.0	301.0	
87.3	MODESTO		SANDY SHALE	60.0	335.0	

27.3	MODESTO		SHALE	18.0	395.0	
9.3	MODESTO		SANDY SHALE	7.0	413.0	
2.3	MODESTO		SANDY SHALE	12.0	420.0	
-9.7	MODESTO		SHALE	2.5	432.0	
-12.2	MODESTO		COAL	0.7	434.5	
-12.9	MODESTO		SHALY LIMESTONE	3.8	435.2	WITH SHALE PARTINGS
-16.7	MODESTO		SANDY SHALE	6.0	439.0	
-22.7	MODESTO		SANDY SHALE	10.0	445.0	
-32.7	MODESTO		SHALE	11.0	455.0	
-43.7	MODESTO	DEGRAFF	COAL	1.0	466.0	
-44.7	MODESTO		SHALE	1.0	467.0	
-45.7	MODESTO	PIASA	LIMESTONE	5.0	468.0	
-50.7	MODESTO	PIASA	LIMESTONE	1.0	473.0	
-51.7	MODESTO		SHALE	3.0	474.0	
-54.7	CARBONDALE	DANVILLE	COAL	2.0	477.0	
-56.7	CARBONDALE		SANDY SHALE	11.7	479.0	
-68.4	CARBONDALE	ALLENBY	COAL	0.3	490.7	
-68.7	CARBONDALE		SOFT SHALE	4.0	491.0	
-72.7	CARBONDALE		CALCAREOUS SHALE	1.0	495.0	
-73.7	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	496.0	
-80.7	CARBONDALE	ENERGY	CALCAREOUS SHALE	8.0	503.0	
-88.7	CARBONDALE	ENERGY	CALCAREOUS SHALE	1.0	511.0	
-89.7	CARBONDALE	ENERGY	SHALE	20.0	512.0	
-109.7	CARBONDALE	ENERGY	CALCAREOUS SHALE	3.0	532.0	
-112.7	CARBONDALE	ENERGY	SHALE	3.0	535.0	
-115.7	CARBONDALE	ENERGY	SHALE	24.4	538.0	
-140.1	CARBONDALE	HERRIN	COAL	8.6	562.4	

MAPID: 05502338000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 10 **QUARTERS/FOOTAGES:** 1965' S line, 691' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.968542 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.014151 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 383.0 **LOGGED (FT.):** 622.2 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 250 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-148.5	MODESTO	PIASA	LIMESTONE	4.3	531.5	
-152.8	MODESTO		BLACK SHALE	3.2	535.8	
-156.0	CARBONDALE	DANVILLE	COAL	2.3	539.0	
-158.3	CARBONDALE	GALUM	LIMESTONE	1.5	541.3	
-159.8	CARBONDALE		GRAY SHALE	8.8	542.8	
-168.5	CARBONDALE	BANKSTON FORK	LIMESTONE	7.9	551.5	
-176.4	CARBONDALE	LAWSON	SILTY SHALE	13.1	559.4	
-189.5	CARBONDALE	LAWSON	DARK GRAY SHALE	21.2	572.5	
-210.7	CARBONDALE	LAWSON	SILTSTONE	0.3	593.7	
-210.9	CARBONDALE	LAWSON	CLAYSTONE	0.3	593.9	
-211.3	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.6	594.3	
-211.8	CARBONDALE	JAMESTOWN	BONE COAL	0.7	594.8	
-212.5	CARBONDALE		CLAYSTONE & SHALE	4.0	595.5	
-216.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	0.9	599.5	
-217.4	CARBONDALE	ENERGY	DARK GRAY SHALE	4.8	600.4	
-222.3	CARBONDALE	ENERGY	SILTY SHALE	8.2	605.3	
-230.4	CARBONDALE	ENERGY	GRAY SHALE	0.6	613.4	
-231.0	CARBONDALE	HERRIN	COAL	8.2	614.0	

MAPID: 05500568000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 11 **QUARTERS/FOOTAGES:** NE SW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.953501 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.018912 **DATE COLLECTED:** 10 / 19 / 1941

SURFACE ELEVATION (FT.): 438.0 **LOGGED (FT.):** 699.0 **LOG TYPE:** Drillers Log

SOURCE: A.W. TORBET, JR. 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-210.0	CARBONDALE	HERRIN	COAL	7.0	648.0	
-255.0	CARBONDALE	SPRINGFIELD	COAL	6.0	693.0	

MAPID: 05500568000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 11 **QUARTERS/FOOTAGES:** NE SW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.953501 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.018912 **DATE COLLECTED:** 0 / 0 / 1941

SURFACE ELEVATION (FT.): 438.0 **LOGGED (FT.):** 2897.0 **LOG TYPE:**

SOURCE: TORBET AW **WELL TYPE:** Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	CARBONDALE	SPRINGFIELD	UNCLASSIFIED	-		

MAPID: 05502008000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 11 **QUARTERS/FOOTAGES:** 2390' N line, 900' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.950784 **GEOLOGIST:** J MCBETH

CONFIDENTIAL: N **LATITUDE:** 38.016894 **DATE COLLECTED:** 8 / 21 / 1962

SURFACE ELEVATION (FT.): 435.6 **LOGGED (FT.):** 751.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP 148 **WELL TYPE:** Coal Test

COMMENT: PERMIT 29;MINE #24

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
435.6	PLEISTOCENE		CLAY	15.1	0.0	
420.5	BOND		SANDSTONE	13.6	15.1	
406.9	BOND		SHALE	0.4	28.7	
406.5	BOND		SANDSTONE	0.1	29.1	
406.4	BOND		SHALE	0.6	29.2	
405.8	BOND		SANDSTONE	0.1	29.8	
405.7	BOND		SHALE	0.4	29.9	
405.3	BOND		SANDSTONE	0.3	30.3	
405.1	BOND		SHALE	1.0	30.5	
404.1	BOND		SANDSTONE	0.2	31.5	
403.9	BOND		SHALE	1.0	31.7	
402.9	BOND		SANDSTONE	32.3	32.7	
370.6	BOND		SIDERITE	0.3	65.0	NODULE
370.3	BOND		SANDSTONE	1.8	65.3	
368.5	BOND		CORE LOSS	1.0	67.1	
367.5	BOND		SHALE	0.2	68.1	BLACK
367.3	BOND	FLANNIGAN	COAL	0.8	68.3	
366.6	BOND		UNDERCLAY	13.0	69.0	SLICKENSIDES, WITH LIMESTONE NODULES
353.6	BOND		GRAY SHALE	3.8	82.0	
349.8	BOND		SHALE	1.8	85.8	CALCAREOUS, WITH LIMESTONE NODULES
348.0	BOND		GRAY SHALE	8.8	87.6	TOP 9"CALC
339.3	BOND		GRAY SHALE	2.5	96.3	WITH BLACK, CALCAREOUS LAMINATIONS
336.8	BOND		GRAY SHALE	0.3	98.8	
336.5	BOND		SANDY SHALE	2.1	99.1	WITH BLACK CALCAREOUS LAMINATIONS
334.4	BOND		GRAY SHALE	1.2	101.2	MICACEOUS
333.3	BOND		GRAY SHALE	7.8	102.3	
325.5	BOND		GRAY SHALE	1.3	110.1	WITH SANDSTONE LAMINATIONS
324.3	BOND		SHALE	36.7	111.3	DARK TO VERY DARK GRAY
287.6	BOND		SIDERITE	0.1	148.0	
287.5	BOND		GRAY SHALE	0.8	148.1	
286.8	BOND		SIDERITE	0.1	148.8	
286.7	BOND		SHALE	0.7	148.9	DARK GRAY
286.0	BOND	CARTHAGE	LIMESTONE	1.3	149.6	ARGILLACEOUS, DARK GRAY
284.7	BOND	CARTHAGE	SHALE	0.3	150.9	CALCAREOUS
284.4	BOND	CARTHAGE	LIMESTONE	4.1	151.2	FOSSILIFEROUS
280.3	BOND		SHALE	5.8	155.3	DARK TO VERY DARK GRAY
274.6	MODESTO		SHALE	0.8	161.0	VERY DARK GRAY WITH LIMESTONE NODULES
273.8	MODESTO		GRAY SHALE	3.8	161.8	

270.1	MODESTO		SANDY SHALE	2.8	165.5	SLICKENSIDES
267.3	MODESTO		SANDY SHALE	10.0	168.3	WITH SANDSTONE LAMINATIONS
257.3	MODESTO		COAL	0.5	178.3	
256.8	MODESTO		GRAY SHALE	0.8	178.8	
256.1	MODESTO		COAL	0.1	179.5	
256.0	MODESTO		GRAY SHALE	9.3	179.6	
246.7	MODESTO		SANDY SHALE	3.3	188.9	
243.3	MODESTO		SILTSTONE	1.5	192.3	MICACEOUS, CARBONACEOUS
241.8	MODESTO		SANDSTONE	2.0	193.8	FINE, WITH THIN CARBONACEOUS
239.8	MODESTO		SANDY SHALE	2.2	195.8	
237.7	MODESTO		GRAY SHALE	6.1	197.9	
231.6	MODESTO	WOMAC	BONE COAL	0.8	204.0	BONY COAL
230.8	MODESTO		UNDERCLAY	3.8	204.8	
227.1	MODESTO		GRAY SHALE	17.8	208.5	SLIGHTLY CALCAREOUS
209.3	MODESTO		SHALE	2.0	226.3	VERY DARK GRAY WITH LIMESTONE NODULES
207.3	MODESTO		SHALE	3.9	228.3	DARK GRAY TO BLACK, CALCAREOUS
203.3	MODESTO		LIMESTONE	1.0	232.3	
202.3	MODESTO		SHALE	0.8	233.3	VERY DARK GRAY WITH LIMESTONE NODULES
201.5	MODESTO		SHALE	1.3	234.1	CALCAREOUS
200.3	MODESTO		GRAY SHALE	3.1	235.3	WITH LIMESTONE NODULES
197.2	MODESTO		SHALE	6.0	238.4	CALCAREOUS
191.2	MODESTO		BONE COAL	0.3	244.4	
190.9	MODESTO		UNDERCLAY	4.3	244.7	CALCAREOUS, SLICKENSIDES, LS NODULES
186.6	MODESTO		GRAY SHALE	11.1	249.0	
175.5	MODESTO		SANDSTONE	5.4	260.1	FINE
170.1	MODESTO		SANDSTONE	4.2	265.5	FINE GRAINED, CARBONACEOUS,
165.9	MODESTO		SANDSTONE	1.2	269.7	MEDIUM TO FINE
164.7	MODESTO		SANDSTONE/SHALE	2.7	270.9	MICACEOUS, CARBONACEOUS
162.0	MODESTO		SANDSTONE	0.3	273.6	
161.7	MODESTO		SANDY SHALE	2.4	273.9	MICACEOUS, CARBONACEOUS
159.3	MODESTO		SANDSTONE	0.4	276.3	
158.8	MODESTO		SANDSTONE/SHALE	0.2	276.8	
158.7	MODESTO		SANDSTONE	1.7	276.9	MICACEOUS, CARBONACEOUS
157.0	MODESTO		SANDSTONE/SHALE	1.7	278.6	MICACEOUS, CARBONACEOUS
155.3	MODESTO		SANDSTONE	1.3	280.3	MICACEOUS, CARBONACEOUS
154.0	MODESTO		SANDSTONE/SHALE	1.3	281.6	WITH CARBONACEOUS LAMINATIONS
152.8	MODESTO		GRAY SHALE	3.9	282.8	MICACEOUS, SS STREAKS, CARBONACEOUS
148.8	MODESTO		SILTSTONE	1.0	286.8	MICACEOUS, CARBONACEOUS
147.8	MODESTO		GRAY SHALE	59.8	287.8	CARBONACEOUS
88.0	MODESTO	CHAPEL	COAL	0.8	347.6	
87.2	MODESTO	CHAPEL	GRAY SHALE	0.2	348.4	
87.0	MODESTO	CHAPEL	COAL	0.4	348.6	
86.7	MODESTO		UNDERCLAY	2.3	348.9	
84.4	MODESTO		GRAY SHALE	14.6	351.2	
69.8	MODESTO		SHALE	3.8	365.8	CALCAREOUS
66.0	MODESTO		GRAY SHALE	46.7	369.6	

19.3	MODESTO		SANDY SHALE	7.6	416.3	
11.7	MODESTO		SILTY SHALE	30.7	423.9	
-19.0	MODESTO		SHALE	31.8	454.6	DARK GRAY; BONE COAL BASAL 0.5 FEET
-50.8	MODESTO		GRAY SHALE	0.2	486.4	
-51.0	MODESTO		UNDERCLAY	1.7	486.6	
-52.7	MODESTO		SHALE	2.3	488.3	DARK TO VERY DARK GRAY
-55.0	MODESTO		SANDY SHALE	1.5	490.6	
-56.5	MODESTO		SHALE	2.0	492.1	WITH SIDERITE NODULES
-58.5	MODESTO		GRAY SHALE	3.8	494.1	WITH THIN SANDSTONE LAMINATIONS
-62.3	MODESTO		SANDSTONE	0.4	497.9	
-62.7	MODESTO		GRAY SHALE	20.1	498.3	
-82.8	MODESTO		SANDY LIMESTONE	0.0	518.4	DARK GRAY
-82.9	MODESTO	POND CREEK	COAL	0.8	518.5	
-83.6	MODESTO		UNDERCLAY	3.6	519.2	
-87.2	MODESTO		SILTSTONE	4.8	522.8	
-92.0	MODESTO		GRAY SHALE	1.7	527.6	
-93.7	MODESTO		SANDSTONE	5.6	529.3	
-99.3	MODESTO		SANDSTONE/SHALE	1.4	534.9	
-100.7	MODESTO		SANDSTONE	1.7	536.3	
-102.4	MODESTO		SHALE	0.0	538.0	
-102.4	MODESTO		SANDSTONE	0.3	538.0	
-102.8	MODESTO		GRAY SHALE	0.3	538.4	WITH THIN SANDSTONE LAMINATIONS
-103.1	MODESTO		SANDSTONE	0.5	538.7	
-103.6	MODESTO		GRAY SHALE	0.6	539.2	WITH SANDSTONE LAMINATIONS
-104.2	MODESTO		SHALE	8.5	539.8	DARK GRAY TO NEAR BLACK
-112.7	MODESTO	DEGRAFF	COAL	0.7	548.3	
-113.4	MODESTO		UNDERCLAY	1.8	549.0	
-115.2	MODESTO		SHALE	2.4	550.8	CALCAREOUS, GREENISH GRAY
-117.5	MODESTO	PIASA	LIMESTONE	4.1	553.1	
-121.6	MODESTO		SHALE	4.8	557.2	BLACK
-126.4	CARBONDALE	DANVILLE	COAL	2.0	562.0	
-128.3	CARBONDALE		UNDERCLAY	0.7	563.9	DARK GRAY
-129.0	CARBONDALE		SANDSTONE	0.9	564.6	MEDIUM TO FINE
-129.9	CARBONDALE		GRAY SHALE	3.5	565.5	WITH SANDSTONE LAMINATIONS
-133.4	CARBONDALE		GRAY SHALE	1.8	569.0	
-135.3	CARBONDALE		CLOD	0.8	570.9	OR UNDERCLAY
-136.1	CARBONDALE		SILTSTONE	1.0	571.7	
-137.1	CARBONDALE		SANDSTONE	3.7	572.7	COARSE, SLIGHTLY CALCAREOUS
-140.8	CARBONDALE		SANDY SHALE	1.0	576.4	
-141.8	CARBONDALE		SHALE	1.2	577.4	DARK GRAY
-143.0	CARBONDALE	ALLENBY	COAL	0.5	578.6	
-143.5	CARBONDALE		UNDERCLAY	6.4	579.1	
-149.9	CARBONDALE	BANKSTON FORK	SHALE WITH LIMESTONE	1.5	585.5	CORRELATION FROM LOG
-151.3	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	586.9	
-155.3	CARBONDALE	BANKSTON FORK	SHALE WITH LIMESTONE	0.5	590.9	
-155.8	CARBONDALE		SANDSTONE	1.5	591.4	
-157.3	CARBONDALE		SILTY SHALE	6.6	592.9	

-163.9	CARBONDALE		SHALE	0.5	599.5	DARK GRAY, SLICKENSIDES
-164.3	CARBONDALE		SILTY SHALE	23.2	599.9	VERY DARK GRAY, SIDERITE BANDS
-187.5	CARBONDALE	CONANT	LIMESTONE	0.3	623.1	BLACK
-187.8	CARBONDALE	JAMESTOWN	COAL	0.6	623.4	BONEY
-188.4	CARBONDALE		SHALE	0.1	624.0	CALCAREOUS
-188.5	CARBONDALE		LIMESTONE	0.1	624.1	ARGILLACEOUS, BLACK
-188.6	CARBONDALE		SHALE	2.4	624.2	CALCAREOUS; BLACK
-191.0	CARBONDALE	BRERETON	LIMESTONE	4.0	626.6	DARK GRAY
-195.0	CARBONDALE	ANNA	SHALE	3.3	630.6	VERY DARK GRAY TO BLACK
-198.2	CARBONDALE	ENERGY	GRAY SHALE	15.0	633.8	
-213.2	CARBONDALE	HERRIN	COAL	0.9	648.8	
-214.2	CARBONDALE	HERRIN	FUSAIN	0.0	649.8	MINERALIZED; & PYRITE
-214.2	CARBONDALE	HERRIN	COAL	1.0	649.8	
-215.2	CARBONDALE	HERRIN	FUSAIN	0.0	650.8	HARD
-215.2	CARBONDALE	HERRIN	COAL	0.1	650.8	
-215.3	CARBONDALE	HERRIN	FUSAIN	0.0	650.9	MINERALIZED
-215.3	CARBONDALE	HERRIN	COAL	2.3	650.9	
-217.7	CARBONDALE	HERRIN	FUSAIN	0.0	653.3	
-217.7	CARBONDALE	HERRIN	COAL	0.6	653.3	
-218.3	CARBONDALE	HERRIN	FUSAIN	0.0	653.9	
-218.3	CARBONDALE	HERRIN	COAL	0.0	653.9	
-218.3	CARBONDALE	HERRIN	FUSAIN	0.0	653.9	
-218.3	CARBONDALE	HERRIN	COAL	0.8	653.9	
-219.1	CARBONDALE	HERRIN	FUSAIN	0.0	654.7	
-219.2	CARBONDALE	HERRIN	COAL	0.9	654.8	
-220.1	CARBONDALE	HERRIN	SHALE	0.1	655.7	BLUE BAND
-220.2	CARBONDALE	HERRIN	COAL	0.9	655.8	
-221.1	CARBONDALE	HERRIN	FUSAIN	0.0	656.7	MINERALIZED
-221.1	CARBONDALE	HERRIN	COAL	0.3	656.7	
-221.4	CARBONDALE	HERRIN	FUSAIN	0.0	657.0	MINERALIZED;LENTICULAR
-221.4	CARBONDALE	HERRIN	COAL	0.0	657.0	
-221.4	CARBONDALE	HERRIN	FUSAIN	0.0	657.0	MINERALIZED,LENTICULAR
-221.5	CARBONDALE	HERRIN	COAL	0.2	657.1	
-221.7	CARBONDALE		UNDERCLAY	3.2	657.3	
-224.9	CARBONDALE		SHALE WITH LIMESTONE	10.0	660.5	
-234.9	CARBONDALE		SILTY SHALE	2.9	670.5	
-237.8	CARBONDALE	BRIAR HILL	COAL	0.1	673.4	
-237.9	CARBONDALE		UNDERCLAY	1.2	673.5	
-239.1	CARBONDALE		GRAY SHALE	0.6	674.7	
-239.7	CARBONDALE		GRAY SHALE	3.1	675.3	WITH SANDSTONE LAMINATIONS
-242.8	CARBONDALE		SANDSTONE	0.3	678.4	MICACEOUS, FINE GRAINED
-243.1	CARBONDALE		GRAY SHALE	3.4	678.7	WITH SANDSTONE LAMINATIONS
-246.5	CARBONDALE		SHALE	8.8	682.1	VERY DARK GRAY; SIDERITE BANDS
-255.2	CARBONDALE		LIMESTONE	1.8	690.8	ARGILLACEOUS, DARK GRAY
-257.0	CARBONDALE		SHALE	3.5	692.6	VERY DARK GRAY; SLICKENSIDES
-260.4	CARBONDALE	ST. DAVID	SANDY LIMESTONE	0.7	696.0	

-261.2	CARBONDALE	TURNER MINE	SHALE	0.1	696.8	BLACK
-261.2	CARBONDALE	SPRINGFIELD	COAL	0.8	696.8	
-262.0	CARBONDALE	SPRINGFIELD	FUSAIN	0.0	697.6	HARD
-262.0	CARBONDALE	SPRINGFIELD	COAL	1.9	697.6	
-264.0	CARBONDALE	SPRINGFIELD	FUSAIN	0.0	699.6	MINERALIZED
-264.0	CARBONDALE	SPRINGFIELD	COAL	0.7	699.6	
-264.7	CARBONDALE		UNDERCLAY	4.2	700.3	
-268.9	CARBONDALE		SANDY SHALE	2.0	704.5	
-270.9	CARBONDALE		SILTSTONE	2.7	706.5	
-273.6	CARBONDALE		GRAY SHALE	12.1	709.2	WITH SANDSTONE LAMINATIONS
-285.7	CARBONDALE		SHALE	4.8	721.3	NEAR BLACK;SIDERITE
-290.5	CARBONDALE		SHALE	24.9	726.1	DARK TO VERY DARK GRAY

MAPID: 05502008000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 11 **QUARTERS/FOOTAGES:** 2390' N line, 900' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.950784 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.016894 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 436.0 **LOGGED (FT.):** 657.5 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. A-148 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-117.5	MODESTO	PIASA	LIMESTONE	4.0	553.5	
-121.5	MODESTO		DARK GRAY SHALE	4.9	557.5	
-126.4	CARBONDALE	DANVILLE	COAL	2.0	562.4	
-128.4	CARBONDALE		SANDSTONE/SILTSTONE	14.5	564.4	
-142.9	CARBONDALE	ALLENBY	BONE COAL	0.7	578.9	
-143.6	CARBONDALE		CLAYSTONE	6.0	579.6	
-149.6	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	5.8	585.6	
-155.4	CARBONDALE	LAWSON	SILTSTONE	4.0	591.4	
-159.3	CARBONDALE	LAWSON	GRAY SHALE	8.8	595.3	
-168.2	CARBONDALE	LAWSON	SILTY SHALE	5.8	604.2	
-173.9	CARBONDALE	LAWSON	DARK GRAY SHALE	13.1	609.9	
-187.0	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.3	623.0	
-187.3	CARBONDALE	JAMESTOWN	BONE COAL	0.6	623.3	
-187.9	CARBONDALE		CALCAREOUS SHALE	2.6	623.9	
-190.5	CARBONDALE	BRERETON	LIMESTONE	4.1	626.5	
-194.6	CARBONDALE	ANNA	BLACK SHALE	3.2	630.6	
-197.8	CARBONDALE	ENERGY	GRAY SHALE	15.3	633.8	
-213.0	CARBONDALE	HERRIN	COAL	8.5	649.0	

MAPID: 05502080000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 11 **QUARTERS/FOOTAGES:** 1790' N line, 622' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.949857 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.018552 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 439.0 **LOGGED (FT.):** 657.2 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 160 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-117.2	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.5	556.2	
-121.7	MODESTO		LIMESTONE W/ SHALE	4.2	560.7	
-125.9	CARBONDALE	DANVILLE	COAL	1.8	564.9	
-127.7	CARBONDALE		SANDSTONE/SILTSTONE	14.3	566.7	
-142.1	CARBONDALE	ALLENBY	COAL	0.5	581.1	
-142.6	CARBONDALE		CLAYSTONE	4.0	581.6	
-146.6	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	5.8	585.6	
-152.3	CARBONDALE	LAWSON	SILTSTONE	1.0	591.3	
-153.3	CARBONDALE	LAWSON	GRAY SHALE	5.3	592.3	
-158.6	CARBONDALE	LAWSON	DARK GRAY SHALE	22.3	597.6	
-180.8	CARBONDALE	CONANT	CALCAREOUS SHALE	0.2	619.8	
-181.0	CARBONDALE	JAMESTOWN	COAL	0.3	620.0	
-181.3	CARBONDALE		CLAYSTONE & SHALE	1.5	620.3	
-182.8	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	4.4	621.8	
-187.2	CARBONDALE	ANNA	BLACK SHALE	2.2	626.2	
-189.4	CARBONDALE	ENERGY	DARK GRAY SHALE	1.9	628.4	
-191.3	CARBONDALE	ENERGY	GRAY SHALE	18.7	630.3	
-210.0	CARBONDALE	HERRIN	COAL	8.2	649.0	

MAPID: 05524795000C **VERSION:** 1 **PROJECT:** NCRDS 2011

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 11 **QUARTERS/FOOTAGES:** 50' N line, 30' E line of SE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.94782 **GEOLOGIST:** LOUCHIOS

CONFIDENTIAL: N **LATITUDE:** 38.019702 **DATE COLLECTED:** 10 / 31 / 1944

SURFACE ELEVATION (FT.): 440.0 **LOGGED (FT.):** 697.6 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 34 **WELL TYPE:** Coal Test

COMMENT: COAL QUAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
440.0	PLEISTOCENE		UNCONSOLIDATED	14.5	0.0	
425.5	BOND		SANDSTONE/SHALE	25.3	14.5	
400.2	BOND		SANDSTONE	25.5	39.8	
374.7	BOND	FLANNIGAN	COAL	0.5	65.3	
374.2	BOND		UNDERCLAY	20.3	65.8	
354.0	BOND		GRAY SHALE	60.4	86.0	
293.6	BOND	CARTHAGE	LIMESTONE	5.8	146.4	SHOAL CREEK
287.7	PATOKA		SHALE	22.6	152.3	
265.2	PATOKA		COAL	0.5	174.8	
264.7	PATOKA		GRAY SHALE	2.9	175.3	
261.7	PATOKA		DARK SHALE	6.7	178.3	
255.0	PATOKA		SILTSTONE	6.7	185.0	
248.3	PATOKA		GRAY SHALE	6.2	191.7	
242.1	PATOKA		BLACK SHALE	0.5	197.9	
241.6	PATOKA		BONE COAL	0.3	198.4	
241.4	PATOKA		UNDERCLAY	4.8	198.6	
236.7	PATOKA		GRAY SHALE	20.5	203.3	
216.2	PATOKA		BLACK SHALE & LIMESTONE	16.2	223.8	
200.0	PATOKA		BONE COAL	0.3	240.0	
199.7	PATOKA		UNDERCLAY	3.4	240.3	
196.3	PATOKA		SHALE & SILTSTONE	104.2	243.7	
92.2	PATOKA	CHAPEL	COAL	1.0	347.8	
91.2	PATOKA		UNDERCLAY	1.8	348.8	
89.4	PATOKA		GRAY SHALE	169.5	350.6	
-80.1	SHELBURN		COAL	0.7	520.1	
-80.8	SHELBURN		UNDERCLAY	4.3	520.8	
-85.0	SHELBURN		SILTY SHALE	24.3	525.0	
-109.3	SHELBURN	PIASA	LIMESTONE	3.8	549.3	CUTLER LS
-113.1	SHELBURN		DARK SHALE	6.6	553.1	
-119.7	SHELBURN	DANVILLE	COAL	2.2	559.7	
-121.8	SHELBURN		UNDERCLAY	2.7	561.8	
-124.5	SHELBURN		GRAY SHALE	4.3	564.5	
-128.8	SHELBURN		SANDSTONE	5.3	568.8	
-134.2	SHELBURN		GRAY SHALE	2.3	574.2	
-136.5	SHELBURN		BONE COAL	0.4	576.5	
-136.9	SHELBURN		UNDERCLAY	4.5	576.9	
-141.3	SHELBURN		GRAY SHALE	1.1	581.3	
-142.4	SHELBURN	BANKSTON FORK	LIMESTONE	6.7	582.4	

-149.1	SHELBURN		SANDSTONE	1.2	589.1
-150.3	SHELBURN		GRAY SHALE	13.8	590.3
-164.0	SHELBURN		DARK SHALE	15.8	604.0
-179.8	SHELBURN	CONANT	LIMESTONE	0.3	619.8
-180.1	SHELBURN	JAMESTOWN	BONE COAL	0.4	620.1
-180.5	SHELBURN		BLACK SHALE	2.0	620.5
-182.4	SHELBURN	BRERETON	BLACK LIMESTONE	3.8	622.4
-186.2	CARBONDALE	ANNA	BLACK SHALE	3.3	626.2
-189.4	CARBONDALE	ENERGY	GRAY SHALE	16.5	629.4
-205.9	CARBONDALE	HERRIN	COAL	7.9	645.9
-213.8	CARBONDALE		UNDERCLAY	2.7	653.8
-216.5	CARBONDALE		LIMESTONE	6.8	656.5
-223.3	CARBONDALE		GRAY SHALE	22.3	663.3
-245.7	CARBONDALE		BLACK LIMESTONE	1.0	685.7
-246.7	CARBONDALE		BLACK SHALE	3.5	686.7
-250.2	CARBONDALE		DARK SHALE	2.2	690.2
-252.3	CARBONDALE	SPRINGFIELD	COAL	3.9	692.3
-256.3	CARBONDALE		UNDERCLAY	1.3	696.3

MAPID: 05501062000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 12 **QUARTERS/FOOTAGES:** 330' N line, 330' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.94664 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.02257 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 401.0 **LOGGED (FT.):** 626.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-125.0	MODESTO	PIASA	LIMESTONE	6.0	526.0	
-131.0	MODESTO		DARK GRAY SHALE	6.0	532.0	
-137.0	CARBONDALE	DANVILLE	COAL	2.0	538.0	
-139.0	CARBONDALE		SANDSTONE/SILTSTONE	13.0	540.0	
-152.0	CARBONDALE	ALLENBY	COAL	1.0	553.0	
-153.0	CARBONDALE		CLAYSTONE & SHALE	8.0	554.0	
-161.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	562.0	
-169.0	CARBONDALE	LAWSON	SHALE	32.0	570.0	
-201.0	CARBONDALE	CONANT	LIMESTONE & SHALE	1.0	602.0	
-202.0	CARBONDALE	JAMESTOWN	COAL	1.0	603.0	
-203.0	CARBONDALE		SHALE	6.0	604.0	
-209.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	8.0	610.0	
-217.0	CARBONDALE	ANNA	BLACK SHALE	2.0	618.0	
-219.0	CARBONDALE	HERRIN	COAL	6.0	620.0	

MAPID: 05501070000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 13 **QUARTERS/FOOTAGES:** 30' S line, 30' W line of SE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.933556 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.00149 **DATE COLLECTED:** 11 / 16 / 1944

SURFACE ELEVATION (FT.): 451.0 **LOGGED (FT.):** 668.1 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 36 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-110.0	MODESTO	PIASA	LIMESTONE	3.6	561.0	
-113.6	MODESTO		DARK GRAY SHALE	3.5	564.6	
-117.1	CARBONDALE	DANVILLE	COAL	1.9	568.1	
-119.0	CARBONDALE		SANDSTONE/SILTSTONE	22.8	570.0	
-141.8	CARBONDALE	ALLENBY	BONE COAL	0.7	592.8	
-142.4	CARBONDALE		CLAYSTONE & SHALE	5.9	593.4	
-148.3	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	599.3	
-152.8	CARBONDALE	LAWSON	SILTY SHALE	2.2	603.8	
-155.0	CARBONDALE	LAWSON	DARK GRAY SHALE	34.8	606.0	
-189.8	CARBONDALE	LAWSON	BONE COAL	0.3	640.8	
-190.2	CARBONDALE	LAWSON	DARK GRAY SHALE	17.1	641.2	
-207.3	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	1.5	658.3	
-208.8	CARBONDALE	ANNA	BLACK SHALE	1.3	659.8	
-210.0	CARBONDALE	HERRIN	COAL	7.1	661.0	

MAPID: 05500078000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 14 **QUARTERS/FOOTAGES:**

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.956582 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.001445 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 606.6 **LOG TYPE:** Drillers Log

SOURCE: DERING COAL CO. 36 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	2.0	0.0	
-	PLEISTOCENE		SAND	21.0	2.0	
-	PLEISTOCENE		UNCONSOLIDATED	9.0	23.0	
-	BOND		BLACK SHALE	8.0	32.0	
-	BOND		SANDSTONE	25.0	40.0	
-	BOND		SHALE	23.0	65.0	
-	BOND		SHALE	10.0	88.0	
-	BOND	CARTHAGE	LIMESTONE	5.0	98.0	
-	MODESTO		BLACK SHALE	3.0	103.0	
-	MODESTO		BLACK SHALE	3.0	106.0	
-	MODESTO		COAL	0.5	109.0	
-	MODESTO		CLAYSTONE	2.5	109.5	
-	MODESTO		BLACK SHALE	16.0	112.0	
-	MODESTO		COAL	0.3	128.0	
-	MODESTO		CLAYSTONE	3.8	128.3	
-	MODESTO		SANDSTONE	12.0	132.0	
-	MODESTO		SHALE	16.0	144.0	LIGHT
-	MODESTO		SHALE	18.0	160.0	
-	MODESTO		BLACK SHALE	1.5	178.0	
-	MODESTO		COAL	0.5	179.5	
-	MODESTO		CLAYSTONE	2.0	180.0	
-	MODESTO		BLACK SHALE	12.0	182.0	
-	MODESTO		SHALE	12.0	194.0	LIGHT
-	MODESTO		SANDSTONE	19.0	206.0	
-	MODESTO		SHALE	5.0	225.0	LIGHT
-	MODESTO		SHALE	20.0	230.0	
-	MODESTO		SHALE	28.0	250.0	
-	MODESTO		BLACK SHALE	22.0	278.0	
-	MODESTO		BLACK SHALE	11.5	300.0	
-	MODESTO	CHAPEL	COAL	0.5	311.5	
-	MODESTO		CLAYSTONE	2.0	312.0	
-	MODESTO		SANDSTONE	4.0	314.0	
-	MODESTO		SANDY SHALE	32.0	318.0	
-	MODESTO		SANDSTONE	56.0	350.0	
-	MODESTO		SHALE	24.0	406.0	
-	MODESTO		SHALE	15.0	430.0	
-	MODESTO		SHALE	5.0	445.0	LIGHT
-	MODESTO		BLACK SHALE	5.0	450.0	
-	MODESTO		SHALE	1.0	455.0	LIGHT

-	MODESTO		LIMESTONE	1.5	456.0	
-	MODESTO		SHALE	10.5	457.5	
-	MODESTO		BLACK SHALE	4.5	468.0	
-	MODESTO		COAL	2.0	472.5	
-	MODESTO		CLAYSTONE	3.0	474.5	
-	MODESTO		SANDSTONE WITH COAL	17.0	477.5	WITH COAL
-	MODESTO		SHALE	2.5	494.5	LIGHT
-	MODESTO	PIASA	LIMESTONE	4.5	497.0	
-	MODESTO		SHALE	2.0	501.5	LIGHT
-	MODESTO		BLACK SHALE	1.0	503.5	
-	MODESTO		COAL	0.2	504.5	
-	MODESTO		CLAYSTONE	0.8	504.7	
-	MODESTO		BLACK SHALE	1.0	505.5	
-	CARBONDALE	DANVILLE	COAL	1.0	506.5	
-	CARBONDALE		CLAYSTONE	2.0	507.5	
-	CARBONDALE		SANDSTONE	5.0	509.5	
-	CARBONDALE		SHALE	6.0	514.5	LIGHT
-	CARBONDALE		BLACK SHALE	5.5	520.5	
-	CARBONDALE		COAL	1.2	526.0	
-	CARBONDALE		CLAYSTONE	2.8	527.2	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	530.0	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	536.5	
-	CARBONDALE		BLACK SHALE	6.0	542.5	
-	CARBONDALE		SANDSTONE	3.0	548.5	
-	CARBONDALE		BLACK SHALE	18.7	551.5	
-	CARBONDALE	JAMESTOWN	COAL	0.3	570.2	
-	CARBONDALE		BLACK SHALE	2.0	570.5	
-	CARBONDALE		LIMESTONE	4.2	572.5	
-	CARBONDALE		BLACK SHALE	1.8	576.7	
-	CARBONDALE		BLACK SHALE	4.0	578.5	
-	CARBONDALE		BLACK SHALE	13.5	582.5	
-	CARBONDALE	HERRIN	COAL	2.5	596.0	
-	CARBONDALE	HERRIN	BLACK SHALE	0.0	598.5	
-	CARBONDALE	HERRIN	COAL	5.5	598.5	
-	CARBONDALE		CLAYSTONE	2.5	604.0	
-	CARBONDALE		LIMESTONE	0.1	606.5	

MAPID: 05500078000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 14 **QUARTERS/FOOTAGES:**

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.956582 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.001445 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 606.6 **LOG TYPE:** Survey Core Study

SOURCE: DERING COAL CO. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-			UNCONSOLIDATED	32.0	0.0	
-			ROCK	77.0	32.0	
-			COAL	0.5	109.0	
-			ROCK	18.5	109.5	
-			COAL	0.3	128.0	
-			ROCK	51.2	128.3	
-			COAL	0.5	179.5	
-			ROCK	131.5	180.0	
-			COAL	0.5	311.5	
-			ROCK	160.5	312.0	
-			COAL	2.0	472.5	
-			ROCK	30.0	474.5	
-			COAL	0.2	504.5	
-			ROCK	1.8	504.7	
-			COAL	1.0	506.5	SPLIT
-			ROCK	18.5	507.5	
-			COAL	1.2	526.0	
-			ROCK	43.0	527.2	
-			COAL	0.3	570.2	
-			ROCK	2.0	570.5	
-			LIMESTONE	3.5	572.5	
-			BLACK SHALE	2.5	576.0	
-			BLACK SHALE	17.5	578.5	
-	CARBONDALE	HERRIN	COAL	8.0	596.0	BLUE BAND .04'
-	CARBONDALE		UNDERCLAY	2.5	604.0	
-	CARBONDALE		ROCK	0.1	606.5	

MAPID: 05500776000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 14 **QUARTERS/FOOTAGES:** 200' N line, 30' W line of NE SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.951859 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.000947 **DATE COLLECTED:** 11 / 2 / 1944

SURFACE ELEVATION (FT.): 414.0 **LOGGED (FT.):** 628.6 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 35 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-104.2	MODESTO	PIASA	LIMESTONE	5.2	518.2	
-109.3	MODESTO		DARK GRAY SHALE	3.9	523.3	
-113.3	CARBONDALE	DANVILLE	COAL	2.0	527.3	
-115.3	CARBONDALE		SANDSTONE/SILTSTONE	19.2	529.3	
-134.4	CARBONDALE	ALLENBY	COAL	0.3	548.4	
-134.7	CARBONDALE		CLAYSTONE	3.3	548.7	
-138.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.8	552.0	
-143.8	CARBONDALE	LAWSON	CALCAREOUS SANDSTONE	1.1	557.8	
-144.9	CARBONDALE	LAWSON	SILTY SHALE	8.5	558.9	
-153.4	CARBONDALE	LAWSON	DARK GRAY SHALE	25.3	567.4	
-178.8	CARBONDALE	JAMESTOWN	BONE COAL	0.3	592.8	
-179.0	CARBONDALE		CALCAREOUS SHALE	2.8	593.0	
-181.8	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	2.2	595.8	
-184.0	CARBONDALE	ANNA	BLACK SHALE	1.8	598.0	
-185.8	CARBONDALE	ENERGY	DARK GRAY SHALE	20.2	599.8	
-206.0	CARBONDALE	HERRIN	COAL	8.6	620.0	

MAPID: 05500757000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 15 **QUARTERS/FOOTAGES:** 806' S line, 631' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.981612 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.996134 **DATE COLLECTED:** 11 / 8 / 1943

SURFACE ELEVATION (FT.): 385.0 **LOGGED (FT.):** 527.3 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 10 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-21.2	MODESTO	PIASA	SANDSTONE/SILTSTONE	4.1	406.2	
-25.3	MODESTO		DARK GRAY SHALE	5.3	410.3	
-30.5	CARBONDALE	DANVILLE	COAL	2.1	415.5	
-32.7	CARBONDALE		SANDSTONE/SILTSTONE	18.8	417.7	
-51.4	CARBONDALE	ALLENBY	COAL	0.5	436.4	
-51.9	CARBONDALE		CLAYSTONE & SHALE	3.3	436.9	
-55.2	CARBONDALE	BANKSTON FORK	LIMESTONE	6.6	440.2	
-61.8	CARBONDALE	LAWSON	SILTSTONE	5.9	446.8	
-67.7	CARBONDALE	LAWSON	SILTY SHALE	23.6	452.7	
-91.3	CARBONDALE	ANNA	BLACK SHALE	4.5	476.3	
-95.8	CARBONDALE	ENERGY	COAL	0.0	480.8	
-95.8	CARBONDALE	ENERGY	SILTY SHALE	37.7	480.8	
-133.5	CARBONDALE	ENERGY	CARBONACEOUS SHALE	0.5	518.5	
-134.0	CARBONDALE	HERRIN	COAL	8.3	519.0	

MAPID: 05501719000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 17 **QUARTERS/FOOTAGES:** 330' S line, 963' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.017857 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.994784 **DATE COLLECTED:** 5 / 0 / 1963

SURFACE ELEVATION (FT.): 422.0 **LOGGED (FT.):** 1570.0 **LOG TYPE:** Electric Log

SOURCE: R. K. PETROLEUM CORP. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-288.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	710.0	
-366.0	SPOON	DAVIS	UNCLASSIFIED	-	788.0	
-1148.0	BASE OF PENN.		UNCLASSIFIED	-	1570.0	

MAPID: 05501719000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 17 **QUARTERS/FOOTAGES:** 330' S line, 963' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.017857 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.994784 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 422.0 **LOGGED (FT.):** 530.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
30.0	MODESTO	PIASA	LIMESTONE & SHALE	6.0	392.0	
24.0	MODESTO		DARK GRAY SHALE	8.0	398.0	
16.0	CARBONDALE	DANVILLE	COAL	2.0	406.0	
14.0	CARBONDALE		SILTY SHALE	7.0	408.0	
7.0	CARBONDALE	ALLENBY	COAL	1.0	415.0	
6.0	CARBONDALE		CLAYSTONE & SHALE	6.0	416.0	
0.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	422.0	
-5.0	CARBONDALE	LAWSON	SHALE	20.0	427.0	
-25.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	3.0	447.0	
-28.0	CARBONDALE	ANNA	BLACK SHALE	2.0	450.0	
-30.0	CARBONDALE	ENERGY	GRAY SHALE	68.0	452.0	
-98.0	CARBONDALE	HERRIN	COAL	10.0	520.0	

MAPID: 05501719000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 17 **QUARTERS/FOOTAGES:** 330' S line, 963' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.017857 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.994784 **DATE COLLECTED:** 5 / 0 / 1963

SURFACE ELEVATION (FT.): 422.0 **LOGGED (FT.):** 564.0 **LOG TYPE:** Drillers Log

SOURCE: R.K. PETROL. CORP. 1-A **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-93.0	CARBONDALE	HERRIN	COAL	9.0	515.0	
-138.0	CARBONDALE	SPRINGFIELD	COAL	4.0	560.0	

MAPID: 05502049000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 17 **QUARTERS/FOOTAGES:** SE SW NW NW
QUADRANGLE: SESSER **LONGITUDE:** -89.019575 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.005409 **DATE COLLECTED:** 4 / 28 / 1963
SURFACE ELEVATION (FT.): 426.0 **LOGGED (FT.):** 590.0 **LOG TYPE:** Drillers Log
SOURCE: LOUIS KAPP 1 **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-121.0	CARBONDALE	HERRIN	COAL	9.0	547.0	
-160.0	CARBONDALE	SPRINGFIELD	COAL	4.0	586.0	

MAPID: 05502219000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 17 **QUARTERS/FOOTAGES:** SW NW NW SW
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.020684 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 37.99987 **DATE COLLECTED:** 4 / 25 / 1965
SURFACE ELEVATION (FT.): 451.0 **LOGGED (FT.):** 615.0 **LOG TYPE:** Drillers Log
SOURCE: R.K. PETROL. CORP. 1-A **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-123.0	CARBONDALE	HERRIN	COAL	9.0	574.0	
-159.0	CARBONDALE	SPRINGFIELD	COAL	5.0	610.0	

MAPID: 05523109000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 17 **QUARTERS/FOOTAGES:** NW SW NW SW
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.020676 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 37.998948 **DATE COLLECTED:** 3 / 17 / 1981
SURFACE ELEVATION (FT.): 450.0 **LOGGED (FT.):** 610.0 **LOG TYPE:** Drillers Log
SOURCE: S.C. VAUGHAN OIL 1 **WELL TYPE:** Producer-Oil and Gas
COMMENT: COAL PROTECTED BY CEMENT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-107.0	CARBONDALE	HERRIN	COAL	8.0	557.0	
-155.0	CARBONDALE	SPRINGFIELD	COAL	5.0	605.0	

MAPID: 05501715000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 18 **QUARTERS/FOOTAGES:** 44' S line, 328' E line of NW

QUADRANGLE: SESSER **LONGITUDE:** -89.031648 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.001528 **DATE COLLECTED:** 4 / 0 / 1942

SURFACE ELEVATION (FT.): 434.5 **LOGGED (FT.):** 516.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
434.5	PLEISTOCENE		UNCONSOLIDATED	18.0	0.0	
416.5			SHALE	2.0	18.0	
414.5			SHALE	4.0	20.0	
410.5			SHALE	36.0	24.0	
374.5			SHALE	32.0	60.0	BOULDERS AT 60'
342.5			LIMESTONE & CONGLOMERATE	3.0	92.0	WATER
339.5			SHALE	33.0	95.0	LIGHT GRAY
306.5			SHALE W/ COAL STREAKS	5.0	128.0	WITHS COAL SEAM
301.5			SANDY SHALE	16.0	133.0	
285.5			SHALE	56.0	149.0	
229.5			SHALE	6.0	205.0	DARK GRAY
223.5			SHALE	34.0	211.0	
189.5			SHALE	113.0	245.0	DARK GRAY
76.5			SANDSTONE	5.0	358.0	
71.5			SHALE	2.0	363.0	
69.5			SHALE	5.0	365.0	
64.5			SHALE	6.0	370.0	
58.5			SHALE	6.0	376.0	
52.5	CARBONDALE	DANVILLE	COAL	1.5	382.0	
51.0	CARBONDALE		SHALE	0.5	383.5	
50.5	CARBONDALE		SHALE	9.0	384.0	LIGHT GRAY
41.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	393.0	
35.5	CARBONDALE		SHALE	3.0	399.0	
32.5	CARBONDALE		SANDSTONE	4.0	402.0	
28.5	CARBONDALE		SHALE W/ COAL STREAKS	12.0	406.0	WIHT COAL SEAM
16.5	CARBONDALE	BRERETON	LIMESTONE	7.0	418.0	
9.5	CARBONDALE	ENERGY	SHALE	8.0	425.0	LIGHT GRAY
1.5	CARBONDALE	ENERGY	SHALE	29.0	433.0	
-27.5	CARBONDALE	ENERGY	SHALE WITH LIMESTONE	10.0	462.0	WITH LIMESTONE SHELLS
-37.5	CARBONDALE	ENERGY	HARD SHALE	30.0	472.0	
-67.5	CARBONDALE	ENERGY	SHALE	14.0	502.0	
-81.5	CARBONDALE	HERRIN	COAL	-	516.0	NO THICKNESS GIVEN

MAPID: 05501715000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 18 **QUARTERS/FOOTAGES:** 44' S line, 328' E line of NW

QUADRANGLE: SESSER **LONGITUDE:** -89.031648 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.001528 **DATE COLLECTED:** 4 / 0 / 1942

SURFACE ELEVATION (FT.): 436.0 **LOGGED (FT.):** 516.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP **WELL TYPE:** Engineering Test Holes

COMMENT: DRILL HOLE FOR POWER CABLES

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
436.0			UNCONSOLIDATED	20.0	0.0	
416.0			ROCK	108.0	20.0	
308.0			COAL WITH SHALE	5.0	128.0	DARK SHALE WITH COAL SEAM
303.0			ROCK	249.0	133.0	
54.0			COAL	1.5	382.0	
53.0			ROCK	133.0	383.0	
-80.0	CARBONDALE	HERRIN	COAL	-	516.0	

MAPID: 05502256000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 18 **QUARTERS/FOOTAGES:** 890' S line, 2130' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.028668 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.99643 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 489.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
46.0	MODESTO	PIASA	LIMESTONE	6.0	354.0	
40.0	MODESTO		DARK GRAY SHALE	4.0	360.0	
36.0	CARBONDALE	DANVILLE	COAL	2.0	364.0	
34.0	CARBONDALE		SILTY SHALE	6.5	366.0	
27.5	CARBONDALE	ALLENBY	COAL	0.5	372.5	
27.0	CARBONDALE		CLAYSTONE & SHALE	6.0	373.0	
21.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	5.0	379.0	
16.0	CARBONDALE	ENERGY	SILTY SHALE	26.0	384.0	
-10.0	CARBONDALE	ENERGY	GRAY SHALE	62.0	410.0	
-72.0	CARBONDALE	ENERGY	SILTY SHALE	8.0	472.0	
-80.0	CARBONDALE	HERRIN	COAL	9.0	480.0	

MAPID: 05502279000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 18 **QUARTERS/FOOTAGES:** NE SE SW NE
QUADRANGLE: SESSER **LONGITUDE:** -89.026488 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.002713 **DATE COLLECTED:** 4 / 8 / 1966
SURFACE ELEVATION (FT.): 402.0 **LOGGED (FT.):** 546.0 **LOG TYPE:** Drillers Log
SOURCE: RK PETROL. CORP. 1 **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-93.0	CARBONDALE	HERRIN	COAL	12.0	495.0	
-134.0	CARBONDALE	SPRINGFIELD	COAL	10.0	536.0	

MAPID: 05502382000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 18 **QUARTERS/FOOTAGES:** SW NE NW SE
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.027619 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 37.99996 **DATE COLLECTED:** 2 / 17 / 1967
SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 542.0 **LOG TYPE:** Drillers Log
SOURCE: HIRAM C. HUGHES 1 **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-96.0	CARBONDALE	HERRIN	COAL	6.0	496.0	
-137.0	CARBONDALE	SPRINGFIELD	COAL	5.0	537.0	

MAPID: 05502548000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 18 **QUARTERS/FOOTAGES:** NE SW SW NE
QUADRANGLE: SESSER **LONGITUDE:** -89.028783 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 38.002747 **DATE COLLECTED:** 3 / 21 / 1969
SURFACE ELEVATION (FT.): 419.0 **LOGGED (FT.):** 554.0 **LOG TYPE:** Drillers Log
SOURCE: JOHN CAREY OIL COMP., INC. 1 **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-91.0	CARBONDALE	HERRIN	COAL	8.0	510.0	
-129.0	CARBONDALE	SPRINGFIELD	COAL	6.0	548.0	

MAPID: 05523023000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 18 **QUARTERS/FOOTAGES:** SE NW SE NE

QUADRANGLE: SESSER **LONGITUDE:** -89.024197 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.003598 **DATE COLLECTED:** 11 / 25 / 1979

SURFACE ELEVATION (FT.): 416.1 **LOGGED (FT.):** 572.0 **LOG TYPE:** Drillers Log

SOURCE: S.C. VAUGHAN OIL PROD. 2 **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-115.9	CARBONDALE	HERRIN	COAL	10.0	532.0	
-149.9	CARBONDALE	SPRINGFIELD	COAL	6.0	566.0	

MAPID: 05500080000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 19 **QUARTERS/FOOTAGES:** 2640' N line, 0' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.021093 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.98659 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 409.0 **LOGGED (FT.):** 485.6 **LOG TYPE:** Drillers Log

SOURCE: JOHN R. WALSH 7 **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
64.5	MODESTO	PIASA	LIMESTONE	4.5	344.5	
60.0	MODESTO		GRAY SHALE	2.3	349.0	
57.7	CARBONDALE	DANVILLE	COAL	2.2	351.3	
55.5	CARBONDALE		SHALE & SANDSTONE	12.3	353.5	
43.2	CARBONDALE	ALLENBY	COAL	0.4	365.8	
42.8	CARBONDALE		CALCAREOUS SHALE	3.0	366.2	
39.8	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	369.2	
36.8	CARBONDALE	LAWSON	CALCAREOUS SHALE	9.5	372.2	
27.3	CARBONDALE		BLACK SHALE	2.0	381.7	
25.3	CARBONDALE	BRERETON	LIMESTONE	5.5	383.7	
19.8	CARBONDALE	ENERGY	SHALE & SANDSTONE	24.0	389.2	
-4.2	CARBONDALE	ENERGY	SILTY SHALE	25.0	413.2	
-29.2	CARBONDALE	ENERGY	GRAY SHALE	18.0	438.2	
-47.2	CARBONDALE	ENERGY	SILTY SHALE	19.3	456.2	
-66.6	CARBONDALE	ENERGY	CARBONACEOUS SHALE	1.4	475.6	
-68.0	CARBONDALE	HERRIN	COAL	8.6	477.0	

MAPID: 05500256000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 20 **QUARTERS/FOOTAGES:** NW SE SE
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.00586 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.98207 **DATE COLLECTED:** 0 / 0 / 1911
SURFACE ELEVATION (FT.): 397.8 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section
SOURCE: OLD BEN 0014 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-53.2	CARBONDALE	HERRIN	COAL	8.5	451.0	

MAPID: 05502036000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 20 **QUARTERS/FOOTAGES:** 1050' N line, 840' W line
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.018231 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.990976 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 401.0 **LOGGED (FT.):** 505.0 **LOG TYPE:** Electric Log
SOURCE: **WELL TYPE:** Oil and Gas Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
32.0	MODESTO	PIASA	LIMESTONE	7.0	369.0	
25.0	MODESTO		BLACK SHALE	3.0	376.0	
22.0	CARBONDALE	DANVILLE	COAL	2.0	379.0	
20.0	CARBONDALE		SHALE	9.0	381.0	
11.0	CARBONDALE	ALLENBY	COAL	0.5	390.0	
10.5	CARBONDALE		CLAYSTONE & SHALE	8.5	390.5	
2.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	4.0	399.0	
-2.0	CARBONDALE	LAWSON	SHALE	17.0	403.0	
-19.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	3.0	420.0	
-22.0	CARBONDALE	ANNA	BLACK SHALE	3.0	423.0	
-25.0	CARBONDALE	ENERGY	GRAY SHALE	71.0	426.0	
-96.0	CARBONDALE	HERRIN	COAL	8.0	497.0	

MAPID: 05500081000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 21 **QUARTERS/FOOTAGES:** SE SW NE
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.989554 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.987534 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 380.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: DERING CC 0073 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-102.0	CARBONDALE	HERRIN	COAL	8.3	482.0	

MAPID: 05500318000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 21 **QUARTERS/FOOTAGES:** SE SW NW
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.998933 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.987514 **DATE COLLECTED:** 0 / 0 / 1939
SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 3000.0 **LOG TYPE:**
SOURCE: ADKINS E S **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-52.0	CARBONDALE	HERRIN	COAL	9.0	447.0	
-95.0	CARBONDALE	SPRINGFIELD	COAL	4.0	490.0	

MAPID: 05500575000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 23 **QUARTERS/FOOTAGES:** NW SE NE
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.950589 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.989568 **DATE COLLECTED:** 0 / 0 / 1941
SURFACE ELEVATION (FT.): 440.0 **LOGGED (FT.):** 2128.0 **LOG TYPE:**
SOURCE: NATION OIL CO. **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	CARBONDALE	SPRINGFIELD	UNCLASSIFIED	-		

MAPID: 05500700000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 23 **QUARTERS/FOOTAGES:** 2429' N line, 1975' E line
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.953968 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.987417 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 402.0 **LOGGED (FT.):** 629.0 **LOG TYPE:** Electric Log
SOURCE: **WELL TYPE:** Oil and Gas Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-113.0	MODESTO	PIASA	LIMESTONE	8.0	515.0	
-121.0	MODESTO		DARK GRAY SHALE	5.0	523.0	
-126.0	CARBONDALE	DANVILLE	COAL	2.0	528.0	
-128.0	CARBONDALE		SANDSTONE/SILTSTONE	20.0	530.0	
-148.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	550.0	
-154.0	CARBONDALE	LAWSON	SHALE	35.0	556.0	
-189.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	5.0	591.0	
-194.0	CARBONDALE	ENERGY	GRAY SHALE	24.0	596.0	
-218.0	CARBONDALE	HERRIN	COAL	9.0	620.0	

MAPID: 05501776000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 23 **QUARTERS/FOOTAGES:** 452' S line, 75' E line of NW NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.952062 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.991717 **DATE COLLECTED:** 7 / 0 / 1951

SURFACE ELEVATION (FT.): 437.0 **LOGGED (FT.):** 1814.0 **LOG TYPE:** Electric Log

SOURCE: SHELL OIL COMPANY **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-449.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	886.0	
-503.0	SPOON	DAVIS	UNCLASSIFIED	-	940.0	
-1377.0	BASE OF PENN.		UNCLASSIFIED	-	1814.0	

MAPID: 05501781000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 24 **QUARTERS/FOOTAGES:** SW NE NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.932362 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.991345 **DATE COLLECTED:** 0 / 0 / 1886

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 507.4 **LOG TYPE:** Drillers Log

SOURCE: DIAMOND PROSPECTNG CO. 5 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	PLEISTOCENE		CLAY	24.2	0.0	YELLOW-BROWN
-	BOND		SANDSTONE	24.3	24.2	
-	BOND		SHALE	6.0	48.5	
-	BOND		SHALE	14.8	54.5	
-	BOND		BLACK SHALE	40.0	69.3	
-	BOND	CARTHAGE	LIMESTONE	8.5	109.3	
-	MODESTO		CARBONACEOUS SHALE	4.5	117.8	
-	MODESTO		BLACK SHALE	17.5	122.3	
-	MODESTO		COAL	0.5	139.8	
-	MODESTO		SHALE	9.0	140.3	
-	MODESTO		LIMESTONE	4.0	149.3	
-	MODESTO		COAL	0.3	153.3	
-	MODESTO		CLAYSTONE	7.3	153.6	
-	MODESTO		SHALE	32.0	160.8	
-	MODESTO		CARBONACEOUS SHALE	2.0	192.8	
-	MODESTO		SHALE	29.0	194.8	WITH HARD BANDS
-	MODESTO		BLACK SHALE	56.0	223.8	WIHT SANDY BANDS
-	MODESTO		SANDSTONE	34.0	279.8	
-	MODESTO		SANDSTONE WITH COAL	7.0	313.8	WITH COAL BANDS
-	MODESTO		SHALE	7.0	320.8	
-	MODESTO		CARBONACEOUS SHALE	3.0	327.8	
-	MODESTO	CHAPEL	COAL	1.0	330.8	
-	MODESTO		BLACK SHALE	21.0	331.8	WITH SANDSTONE BANDS
-	MODESTO		SANDSTONE	21.0	352.8	WITH FLINT
-	MODESTO		BLACK SHALE	27.0	373.8	
-	MODESTO		BLACK SHALE	51.0	400.8	WITH HARD BANDS
-	MODESTO		BLACK SHALE	10.0	451.8	WITH HARD BANDS
-	MODESTO		CARBONACEOUS SHALE	1.0	461.8	
-	MODESTO		BLACK SHALE	2.0	462.8	
-	MODESTO		LIMESTONE	7.0	464.8	
-	MODESTO		BLACK SHALE	20.0	471.8	
-	MODESTO		CARBONACEOUS SHALE	2.0	491.8	
-	MODESTO		COAL	0.6	493.8	
-	MODESTO		CLAYSTONE	13.0	494.4	

MAPID: 05501782000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 24 **QUARTERS/FOOTAGES:** 1640' N line, 1700' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.941219 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.98963 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 453.0 **LOGGED (FT.):** 643.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-83.0	MODESTO	PIASA	LIMESTONE	7.0	536.0	
-90.0	MODESTO		DARK GRAY SHALE	6.0	543.0	
-96.0	CARBONDALE	DANVILLE	COAL	1.0	549.0	
-97.0	CARBONDALE		SANDSTONE/SILTSTONE	20.0	550.0	
-117.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	570.0	
-125.0	CARBONDALE	LAWSON	SHALE	38.0	578.0	
-163.0	CARBONDALE	JAMESTOWN	COAL	1.0	616.0	
-164.0	CARBONDALE		BLACK SHALE	3.0	617.0	
-167.0	CARBONDALE	BRERETON	LIMESTONE	10.0	620.0	
-177.0	CARBONDALE	ANNA	BLACK SHALE	4.0	630.0	
-181.0	CARBONDALE	HERRIN	COAL	9.0	634.0	

MAPID: 05501659000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 25 **QUARTERS/FOOTAGES:** 1050' N line, 500' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.945128 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.976588 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 443.0 **LOGGED (FT.):** 613.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-48.0	MODESTO	PIASA	LIMESTONE & SHALE	4.0	491.0	
-52.0	MODESTO		DARK GRAY SHALE	8.0	495.0	
-60.0	CARBONDALE	DANVILLE	COAL	1.0	503.0	
-61.0	CARBONDALE		SILTY SHALE	18.0	504.0	
-79.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	522.0	
-85.0	CARBONDALE	LAWSON	SHALE	32.0	528.0	
-117.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	5.0	560.0	
-122.0	CARBONDALE	ANNA	BLACK SHALE	4.0	565.0	
-126.0	CARBONDALE	ENERGY	GRAY SHALE	33.0	569.0	
-159.0	CARBONDALE	HERRIN	COAL	11.0	602.0	

MAPID: 05500884000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 26 **QUARTERS/FOOTAGES:** 225' N line, 1223' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.95111 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.978831 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 424.0 **LOGGED (FT.):** 598.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-59.0	MODESTO	PIASA	LIMESTONE	7.0	483.0	
-66.0	MODESTO		DARK GRAY SHALE	5.0	490.0	
-71.0	CARBONDALE	DANVILLE	COAL	2.0	495.0	
-73.0	CARBONDALE		SILTY SHALE	21.0	497.0	
-94.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	518.0	
-102.0	CARBONDALE	LAWSON	SHALE	32.0	526.0	
-134.0	CARBONDALE	ANNA	BLACK SHALE	2.0	558.0	
-136.0	CARBONDALE	ENERGY	GRAY SHALE	28.0	560.0	
-164.0	CARBONDALE	HERRIN	COAL	10.0	588.0	

MAPID: 05500754000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 27 **QUARTERS/FOOTAGES:** 1370' S line, 1370' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.970233 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.968543 **DATE COLLECTED:** 6 / 21 / 1944

SURFACE ELEVATION (FT.): 443.0 **LOGGED (FT.):** 1053.8 **LOG TYPE:** Survey Core Study

SOURCE: CHICAGO ,WILMINGTON,&FRANKLIN **WELL TYPE:** Coal Test

COMMENT: INCLUDES DATA FROM DRILLER'S LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
443.0	PLEISTOCENE		CLAY	12.0	0.0	
431.0	BOND		SANDSTONE	12.3	12.0	
418.7	BOND		SHALE	18.8	24.3	
400.0	BOND		GRAY SHALE	7.8	43.0	
392.2	BOND		SHALE & SANDSTONE	18.5	50.8	GRAY, CALCAREOUS
373.7	BOND		SILTSTONE	8.1	69.3	
365.6	BOND		GRAY SHALE	24.6	77.4	SILTY, MICACEOUS, SANDY, CARBONACEOUS
341.0	BOND		GRAY SHALE	12.6	102.0	MICACEOUS, PYRITE, SIDERITE
328.4	BOND		SILTSTONE	2.0	114.6	CALCAREOUS, ARGILLACEOUS,
326.4			LIMESTONE	2.6	116.6	ARGILLACEOUS
323.8			SILTSTONE	0.8	119.2	PYRITIC,FINES DOWNWARD
323.0			SHALE	4.8	120.0	FRIABLE, PYRTITIC OR CARBONACEOUS; BLACK
318.2			GRAY SHALE	2.7	124.8	LIMESTONE CONCRETIONS,FOSSILIFEROUS
315.5			SILTSTONE	1.5	127.5	ARGILLACEOUS,PYRITIC,CARBONACEOUS
314.0			GRAY SHALE	13.0	129.0	COAL ZONE AT BASE
301.0			UNDERCLAY	0.3	142.0	
300.7			SHALY SILTSTONE	15.0	142.3	
285.7			COAL	0.2	157.3	
285.5			UNDERCLAY	1.6	157.5	
283.9			GRAY SHALE	34.2	159.1	WITH SIDERITE OR LIMESTONE CONCRETIONS
249.7			LIMESTONE	1.6	193.3	SILTY,ARGILLACEOUS
248.1			SHALE	3.1	194.9	CARBONACEOUS; BLACK
245.0			GRAY SHALE	0.4	198.0	CALCAREOUS
244.6			LIMESTONE	0.9	198.4	ARGILLACEOUS
243.7			SILTSTONE	3.1	199.3	
240.6			GRAY SHALE	4.4	202.4	
236.2	MODESTO		SHALE	0.5	206.8	COAL ZONE AT BASE; BLACK
235.7	MODESTO		UNDERCLAY	0.5	207.3	
235.2	MODESTO		SHALE	0.5	207.8	WITH SOME COAL ZONES; BLACK
234.7	MODESTO		UNDERCLAY	9.7	208.3	
225.0	MODESTO		SHALE & SANDSTONE	77.0	218.0	INCLUDES SILTSTONE
148.0	MODESTO		GRAY SHALE	4.7	295.0	HARD,FRIABLE
143.3	MODESTO		SHALE	0.1	299.7	BLACK
143.2	MODESTO		GRAY SHALE	6.7	299.8	
136.5	MODESTO		SHALE	7.1	306.5	BLACK
129.4	MODESTO	CHAPEL	COAL	0.8	313.6	
128.6	MODESTO		UNDERCLAY	4.9	314.4	
123.7	MODESTO		GRAY SHALE	15.4	319.3	

108.3	MODESTO		LIMESTONE	0.5	334.7	
107.8	MODESTO		GRAY SHALE	0.2	335.2	
107.6	MODESTO		LIMESTONE	0.4	335.4	
107.2	MODESTO		SHALE & SANDSTONE	11.1	335.8	
96.1	MODESTO		SILTSTONE	88.1	346.9	
8.0	MODESTO		UNDERCLAY	0.5	435.0	CALCAREOUS, SIDERITIC NODULES
7.5	MODESTO		GRAY SHALE	15.2	435.5	FRACTURED,OIL IN JOINTS
-7.7	MODESTO		LIMESTONE	0.2	450.7	
-7.9	MODESTO		SHALE	0.3	450.9	CALCAREOUS; BLACK
-8.2	MODESTO		GRAY SHALE	16.8	451.2	CALCAREOUS SANDSTONE LAMINAE
-25.0	MODESTO		SHALE	3.6	468.0	CONCRETIONS,BLACK AT BASE
-28.6	MODESTO		COAL	0.7	471.6	
-29.3	MODESTO		UNDERCLAY	0.9	472.3	
-30.2	MODESTO		SILTSTONE	5.0	473.2	
-35.2	MODESTO		SANDSTONE	9.5	478.2	OIL NOTED, GRAY SHALE LAMINAE
-44.7	MODESTO		GRAY SHALE	15.3	487.7	IRONSTONE CONCRETIONS
-60.0	MODESTO		SHALE	1.5	503.0	PYRITIC,FISSILE; BLACK
-61.5	MODESTO		COAL	0.5	504.5	2"BONY
-62.0	MODESTO		UNDERCLAY	5.1	505.0	
-67.1	MODESTO	PIASA	LIMESTONE	6.0	510.1	NAMED CUTLER IN CORE LOG
-73.1	MODESTO		SHALE	0.9	516.1	PYRITIC,CALCAREOUS; BLACK
-74.0	MODESTO		GRAY SHALE	1.3	517.0	
-75.3	MODESTO		LIMESTONE	0.4	518.3	DIRTY
-75.7	CARBONDALE	DANVILLE	COAL	2.1	518.7	NAMED CUTLER IN LOG
-77.8	CARBONDALE		UNDERCLAY	0.8	520.8	
-78.6	CARBONDALE		SHALE & SANDSTONE	7.2	521.6	INTERBEDDED
-85.8	CARBONDALE		GRAY SHALE	4.0	528.8	DARK,SIDERITE,PYRITIC
-89.8	CARBONDALE		COAL	0.0	532.8	NAMED IN CORE LOG
-89.8	CARBONDALE		UNDERCLAY	5.7	532.8	
-95.5	CARBONDALE		COAL	0.1	538.5	NAMED IN CORE LOG
-95.6	CARBONDALE		UNDERCLAY	1.0	538.6	
-96.6	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	539.6	NAMED IN CORE LOG
-98.8	CARBONDALE		SILTSTONE	25.2	541.8	
-124.0	CARBONDALE		GRAY SHALE	9.6	567.0	DARK,SIDERITIC BANDS
-133.6	CARBONDALE	ENERGY	SILTSTONE	49.4	576.6	FINES DOWNWARD LAST 20'
-183.0	CARBONDALE	ENERGY	GRAY SHALE	12.8	626.0	
-195.8	CARBONDALE	HERRIN	COAL	9.3	638.8	CORE LOG NOTES NO BLUE BAND
-205.1	CARBONDALE		UNDERCLAY	4.9	648.1	
-210.0	CARBONDALE		LIMESTONE	9.0	653.0	
-219.0	CARBONDALE		GRAY SHALE	3.1	662.0	DARK
-222.1	CARBONDALE		LIMESTONE	0.4	665.1	CONCRETION,SIDERITIC
-222.5	CARBONDALE		COAL	0.2	665.5	
-222.7	CARBONDALE		GRAY SHALE	6.4	665.7	PYRITIC,SIDERITIC
-229.0	CARBONDALE		SHALE	0.9	672.0	PYRITIC; BLACK
-229.9	CARBONDALE		LIMESTONE	0.3	672.9	ARGILLACEOUS,GRAY TO BLACK
-230.2	CARBONDALE	TURNER MINE	SHALE	2.8	673.2	BLACK,FISSILE,PYRITIC

-233.0	CARBONDALE	DYKERSBURG	GRAY SHALE	9.0	676.0	PYRITIC,SIDERITIC,MICACEOUS
-242.0	CARBONDALE	SPRINGFIELD	COAL	4.1	685.0	
-246.1	CARBONDALE		UNDERCLAY	2.9	689.1	
-249.0	CARBONDALE		SHALE & SANDSTONE	21.5	692.0	INTERBEDDED
-270.5	CARBONDALE		GRAY SHALE	45.2	713.5	
-315.7	CARBONDALE	EXCELLO	SHALE	1.0	758.7	BLACK
-316.7	CARBONDALE	EXCELLO	LIMESTONE	1.4	759.7	CONCRETIONS,ARGILLACEOUS
-318.1	CARBONDALE	EXCELLO	SHALE	5.7	761.1	PYRITIC; BLACK
-323.8	CARBONDALE	HOUCHIN CREEK	COAL	0.9	766.8	SUGGESTED TO BE #4 IN CORE LOG
-324.7	CARBONDALE		UNDERCLAY	2.0	767.7	
-326.7	CARBONDALE		SHALE & SANDSTONE	10.3	769.7	COARSENS DOWNWARD
-337.0	CARBONDALE		GRAY SHALE	6.7	780.0	PYRITIC
-343.7	CARBONDALE		SHALE	2.3	786.7	SIDERITIC,PYRITIC; BLACK
-346.0	CARBONDALE	SURVANT	COAL	0.5	789.0	SHALEY
-346.5	CARBONDALE	SURVANT	COAL	2.2	789.5	SUGGESTED TO BE #2 IN CORE LOG
-348.7	CARBONDALE	SURVANT	COAL	0.5	791.7	BONEY
-349.2	CARBONDALE		PYRITE	0.1	792.2	
-349.3	CARBONDALE		UNDERCLAY	2.6	792.3	PYRITIC
-351.9	CARBONDALE		SILTSTONE/SANDSTONE	17.4	794.9	INTERBEDDED
-369.3	CARBONDALE		SANDSTONE	47.7	812.3	MASSIVE,MICACEOUS
-417.0	CARBONDALE		GRAY SHALE	8.5	860.0	
-425.5	CARBONDALE	MECCA QUARRY	SHALE	2.0	868.5	PYRITIC,SIDERITIC; BLACK
-427.5	CARBONDALE	COLCHESTER	COAL	0.7	870.5	SUGGESTED DEKOVEN IN CORE LOG PYRITE
-428.2	SPOON		UNDERCLAY	2.4	871.2	
-430.6	SPOON		LIMESTONE	0.9	873.6	CRYSTALLINE,SANDY,MICACEOUS,PYRITIC
-431.5	SPOON		SHALE & SANDSTONE	5.2	874.5	
-436.7	SPOON		SILTSTONE/SANDSTONE	2.5	879.7	
-439.2	SPOON		GRAY SHALE	7.2	882.2	LIMESTONE AND IRONSTONE CONCRETIONS
-446.4	SPOON	DEKOVEN	BONE COAL	0.4	889.4	
-446.8	SPOON		GRAY SHALE	2.7	889.8	PLANTS,GRADES TO SILTSTONE
-449.5	SPOON		SILTSTONE	16.5	892.5	
-466.0	SPOON		SANDSTONE	43.8	909.0	PARTLY LAMINATED
-509.8	SPOON	LOWER DEKOVEN	COAL	0.6	952.8	
-510.4	SPOON		UNDERCLAY	2.4	953.4	
-512.8	SPOON		SHALE	2.3	955.8	INCLUDES SIDERITIC BAND; BLACK
-515.1	SPOON	DAVIS	COAL	3.7	958.1	SUGGESTED TO BE DAVIS IN CORE LOG
-518.8	SPOON		UNDERCLAY	2.7	961.8	
-521.5	SPOON		SILTSTONE/SANDSTONE	27.5	964.5	COARSENS DOWNWARD
-549.0	SPOON		GRAY SHALE	5.9	992.0	SIDERITIC
-554.9	SPOON		SHALE	1.1	997.9	POSSIBLY A CONCRETION; BLACK
-556.0	SPOON		GRAY SHALE	2.0	999.0	
-558.0	SPOON	STONEFORT	LIMESTONE	3.3	1001.0	
-561.3	SPOON		GRAY SHALE	1.2	1004.3	
-562.5	SPOON		LIMESTONE	0.2	1005.5	POSSIBLY A CONCRETION
-562.7	SPOON		GRAY SHALE	17.8	1005.7	PARTLY PYRITIC,SIDERITC
-580.5	SPOON	WISE RIDGE	COAL	0.8	1023.5	

-581.3	SPOON		SANDSTONE	10.0	1024.3	INCREASING ORGANIC MATTER W/DEPTH
-591.3	SPOON		GRAY SHALE	4.0	1034.3	WITH SOME COAL ZONES
-595.3	SPOON		SILTSTONE	10.7	1038.3	
-606.0	SPOON		SHALE	0.8	1049.0	BLACK
-606.8	SPOON	MT. RORAH	COAL	2.7	1049.8	SUGGESTED TO BE BALD KNOB IN LOG
-609.5	SPOON		UNDERCLAY	1.4	1052.5	

MAPID: 05500754000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 27 **QUARTERS/FOOTAGES:** 1370' S line, 1370' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.970233 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.968543 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 443.0 **LOGGED (FT.):** 648.3 **LOG TYPE:** Survey Core Study

SOURCE: C.W.&F. COAL CO. 21 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-65.6	MODESTO	PIASA	LIMESTONE	6.0	508.6	
-71.5	MODESTO		DARK GRAY SHALE	2.6	514.5	
-74.1	CARBONDALE	DANVILLE	COAL	2.1	517.1	
-76.2	CARBONDALE		SHALE & SANDSTONE	17.5	519.2	
-93.7	CARBONDALE	ALLENBY	COAL	0.1	536.7	
-93.9	CARBONDALE		CLAYSTONE	1.0	536.9	
-94.8	CARBONDALE	BANKSTON FORK	LIMESTONE	2.8	537.8	
-97.6	CARBONDALE	ENERGY	SHALE & SILTSTONE	7.3	540.6	
-104.8	CARBONDALE	ENERGY	SILTSTONE	19.3	547.8	
-124.2	CARBONDALE	ENERGY	DARK GRAY SHALE	9.6	567.2	
-133.7	CARBONDALE	ENERGY	SILTSTONE	49.4	576.7	
-183.2	CARBONDALE	ENERGY	GRAY SHALE	12.8	626.2	
-196.0	CARBONDALE	HERRIN	COAL	9.3	639.0	

MAPID: 05501101000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 29 **QUARTERS/FOOTAGES:** 0' S line, 0' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.002434 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.964591 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 380.0 **LOGGED (FT.):** 435.5 **LOG TYPE:** Drillers Log

SOURCE: UNITED COAL MINING COMPANY 1 **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
69.1	CARBONDALE	DANVILLE	COAL	1.3	310.9	
67.7	CARBONDALE		SHALE & SANDSTONE	9.7	312.3	
58.1	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	321.9	
51.1	CARBONDALE	LAWSON	CALCAREOUS SHALE	11.0	328.9	
40.1	CARBONDALE	BRERETON	LIMESTONE	5.0	339.9	
35.1	CARBONDALE	ENERGY	SILTY SHALE	35.0	344.9	
0.1	CARBONDALE	ENERGY	GRAY SHALE	28.0	379.9	
-27.9	CARBONDALE	ENERGY	SILTY SHALE	10.0	407.9	
-37.9	CARBONDALE	ENERGY	GRAY SHALE	9.1	417.9	
-47.0	CARBONDALE	HERRIN	COAL	8.5	427.0	

MAPID: 05501790000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 29 **QUARTERS/FOOTAGES:** NE NW NE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.008152 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.978416 **DATE COLLECTED:**

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

SOURCE: UNITED COAL MINING CO. 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	PLEISTOCENE		SOIL	2.0	0.0	
-	PLEISTOCENE		CLAY	14.0	2.0	
-	PLEISTOCENE		SANDY CLAY	16.0	16.0	
-	PLEISTOCENE		SAND	24.0	32.0	
-	PLEISTOCENE		SAND & GRAVEL	2.0	56.0	
-	MODESTO		SHALE	64.5	58.0	
-	MODESTO	CHAPEL	COAL	0.8	122.5	
-	MODESTO		SANDY SHALE	6.7	123.3	
-	MODESTO		SANDY SHALE	8.0	130.0	
-	MODESTO		SANDY SHALE	94.0	138.0	
-	MODESTO		SHALE	25.0	232.0	
-	MODESTO		SHALY SANDSTONE	5.0	257.0	
-	MODESTO		SANDY SHALE	15.0	262.0	
-	MODESTO		SHALE	2.0	277.0	
-	MODESTO		COAL	0.8	279.0	
-	MODESTO		SHALE	3.3	279.8	
-	MODESTO		SANDY SHALE	4.0	283.0	
-	MODESTO		SANDSTONE	5.0	287.0	
-	MODESTO		SANDY SHALE	8.0	292.0	
-	MODESTO		SHALE	13.0	300.0	
-	MODESTO	PIASA	LIMESTONE	3.5	313.0	
-	MODESTO		SHALE	2.3	316.5	
-	CARBONDALE	DANVILLE	COAL	1.8	318.8	
-	CARBONDALE		SANDY SHALE	1.0	320.5	
-	CARBONDALE		SANDSTONE	6.5	321.5	
-	CARBONDALE		SANDY SHALE	2.0	328.0	
-	CARBONDALE		SANDSTONE	1.0	330.0	
-	CARBONDALE		SANDY SHALE	4.8	331.0	
-	CARBONDALE	ALLENBY	COAL	0.3	335.8	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	2.9	336.1	
-	CARBONDALE		SANDY SHALE	10.0	339.0	
-	CARBONDALE	BRERETON	LIMESTONE	2.5	349.0	
-	CARBONDALE	ENERGY	SANDY SHALE	8.5	351.5	SAND WITH PARTINGS
-	CARBONDALE	ENERGY	SANDY SHALE	40.0	360.0	
-	CARBONDALE	ENERGY	SANDY SHALE	30.0	400.0	WITH BROWN BANDS
-	CARBONDALE	ENERGY	SANDY SHALE	8.5	430.0	WITH BROWN BANDS
-	CARBONDALE	ENERGY	SHALE	0.3	438.5	
-	CARBONDALE	HERRIN	COAL	7.0	438.8	
-	CARBONDALE	HERRIN	BLUE BAND	0.2	445.8	

-	CARBONDALE	HERRIN	COAL	1.4	445.9	
-	CARBONDALE		CLAYSTONE	1.7	447.3	
-	CARBONDALE		SHALE	2.0	449.0	
-	CARBONDALE		SHALY LIMESTONE	14.0	451.0	
-	CARBONDALE		SANDSTONE	4.0	465.0	
-	CARBONDALE		SHALE	5.5	469.0	WITH BROWN PARTINGS
-	CARBONDALE		SHALE	1.0	474.5	
-	CARBONDALE		LIMESTONE	0.3	475.5	
-	CARBONDALE		SHALE	1.3	475.8	
-	CARBONDALE		SHALE	1.0	477.0	
-	CARBONDALE		SHALE	6.3	478.0	DARK BLUE
-	CARBONDALE	SPRINGFIELD	COAL	2.0	484.3	
-	CARBONDALE	SPRINGFIELD	CLAYSTONE	0.2	486.3	
-	CARBONDALE	SPRINGFIELD	COAL	1.5	486.5	
-	CARBONDALE		CLAYSTONE	1.0	488.0	

MAPID: 05500089000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 30 **QUARTERS/FOOTAGES:** 2310' N line, 660' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.037432 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.97297 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): 409.0 **LOGGED (FT.):** 537.8 **LOG TYPE:** Drillers Log

SOURCE: UNITED COAL MINING CO. 3 **WELL TYPE:** Coal Test

COMMENT: DEPTHS ALTERED?

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
409.0	PLEISTOCENE		SOIL	1.0	0.0	
408.0	PLEISTOCENE		HARD PAN	4.0	1.0	GRAY
404.0	PLEISTOCENE		CLAY	36.0	5.0	
368.0	MODESTO		SOFT SHALE	19.0	41.0	
349.0	MODESTO		SHALE	5.6	60.0	
343.4	MODESTO		COAL	1.2	65.6	
342.2	MODESTO		SHALE	89.3	66.8	
253.0	MODESTO		SANDY SHALE	4.5	156.0	
248.5	MODESTO	CHAPEL	COAL	0.9	160.5	
247.6	MODESTO		SHALE	5.6	161.4	
242.0	MODESTO		SANDY SHALE	5.0	167.0	
237.0	MODESTO		SANDY SHALE	29.0	172.0	
208.0	MODESTO		LIMESTONE	1.0	201.0	
207.0	MODESTO		SANDY SHALE	39.0	202.0	
168.0	MODESTO		SHALE	29.0	241.0	
139.0	MODESTO		SANDY SHALE	15.0	270.0	
124.0	MODESTO		SHALE	13.0	285.0	
111.0	MODESTO		SHALE	9.0	298.0	
102.0	MODESTO		COAL	0.3	307.0	
101.7	MODESTO		SANDY SHALE	3.8	307.3	
98.0	MODESTO		SANDY SHALE	3.0	311.0	
95.0	MODESTO		SANDY LIMESTONE	1.5	314.0	
93.5	MODESTO		SHALY SANDSTONE	9.5	315.5	
84.0	MODESTO		SANDY SHALE	6.0	325.0	
78.0	MODESTO		SHALE	2.0	331.0	
76.0	MODESTO		SHALE	9.3	333.0	
66.7	MODESTO		COAL	1.1	342.3	
65.6	MODESTO		CLAYSTONE	1.6	343.4	
64.0	MODESTO	PIASA	LIMESTONE	5.0	345.0	
59.0	MODESTO		SHALE	2.3	350.0	
56.7	CARBONDALE	DANVILLE	COAL	0.7	352.3	
56.0	CARBONDALE	DANVILLE	COAL	1.3	353.0	
54.7	CARBONDALE		SANDY SHALE	2.7	354.3	
52.0	CARBONDALE		SHALY SANDSTONE	6.0	357.0	
46.0	CARBONDALE		SANDY SHALE	4.0	363.0	
42.0	CARBONDALE	ALLENBY	BONE COAL	0.3	367.0	
41.7	CARBONDALE		CALCAREOUS SHALE	1.3	367.3	
40.3	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	368.7	
39.0	CARBONDALE		CALCAREOUS SHALE	8.5	370.0	

30.5	CARBONDALE	BRERETON	LIMESTONE	1.5	378.5	
29.0	CARBONDALE	BRERETON	LIMESTONE	6.8	380.0	
22.2	CARBONDALE	ENERGY	SANDY SHALE	79.3	386.8	
-57.0	CARBONDALE	ENERGY	SANDY SHALE	10.0	466.0	
-67.0	CARBONDALE	ENERGY	SANDY SHALE	7.9	476.0	WITH BROWN BANDS
-74.9	CARBONDALE	HERRIN	COAL	7.6	483.9	
-82.5	CARBONDALE	HERRIN	BLUE BAND	0.3	491.5	
-82.8	CARBONDALE	HERRIN	COAL	1.7	491.8	
-84.4	CARBONDALE		CLAYSTONE	9.6	493.4	
-94.0	CARBONDALE		SHALY LIMESTONE	8.0	503.0	WITH SHALE
-102.0	CARBONDALE		LIMESTONE	2.0	511.0	
-104.0	CARBONDALE		SHALE	1.0	513.0	
-105.0	CARBONDALE		SANDY LIMESTONE	5.0	514.0	
-110.0	CARBONDALE		SANDY SHALE	3.0	519.0	
-113.0	CARBONDALE		SHALE	7.5	522.0	WITH BROWN BANDS
-120.5	CARBONDALE		LIMESTONE	0.5	529.5	
-121.0	CARBONDALE		SHALE	3.0	530.0	
-124.0	CARBONDALE		SHALE	6.8	533.0	
-130.8	CARBONDALE	SPRINGFIELD	COAL	4.4	539.8	
-135.2	CARBONDALE		CLAYSTONE	1.7	544.2	

MAPID: 05500089000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 30 **QUARTERS/FOOTAGES:** 2310' N line, 660' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.037432 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.97297 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 409.0 **LOGGED (FT.):** 493.8 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
63.9	MODESTO	PIASA	LIMESTONE	5.0	345.1	
58.9	MODESTO		DARK GRAY SHALE	2.3	350.1	
56.6	CARBONDALE	DANVILLE	COAL	2.0	352.4	
54.6	CARBONDALE		SHALE & SANDSTONE	12.7	354.4	
41.9	CARBONDALE	ALLENBY	BONE COAL	0.3	367.1	
41.6	CARBONDALE		CALCAREOUS SHALE	1.3	367.4	
40.2	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	368.8	
38.9	CARBONDALE	LAWSON	CALCAREOUS SHALE	8.5	370.1	
30.4	CARBONDALE	BRERETON	LIMESTONE	8.3	378.6	
22.2	CARBONDALE	ENERGY	SILTY SHALE	97.2	386.8	
-75.0	CARBONDALE	HERRIN	COAL	9.8	484.0	

MAPID: 05500257000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 30 **QUARTERS/FOOTAGES:** NW NW NW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.038572 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.978427 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 419.9 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: OLD BEN 0012 **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-67.1	CARBONDALE	HERRIN	COAL	9.0	487.0	

MAPID: 05500489000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 30 **QUARTERS/FOOTAGES:** 155' S line, 221' E line of NE NW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.031127 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.976055 **DATE COLLECTED:** 5 / 0 / 1941

SURFACE ELEVATION (FT.): 390.0 **LOGGED (FT.):** 1540.0 **LOG TYPE:** Electric Log

SOURCE: ADKINS, E. S. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-265.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	655.0	
-384.0	SPOON	DAVIS	UNCLASSIFIED	-	774.0	
-1150.0	BASE OF PENN.		UNCLASSIFIED	-	1540.0	

MAPID: 05500736000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 31 **QUARTERS/FOOTAGES:** 1320' S line, 1320' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.025619 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.953561 **DATE COLLECTED:** 12 / 21 / 1943

SURFACE ELEVATION (FT.): 397.0 **LOGGED (FT.):** 502.0 **LOG TYPE:** Survey Core Study

SOURCE: CHIGAGO WILMINGTON &FRANKLIN **WELL TYPE:** Coal Test

COMMENT: INCLUDES DATA FROM DRILLER'S LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
397.0	PLEISTOCENE		CLAY	15.0	0.0	
382.0	PLEISTOCENE		SAND	20.0	15.0	
362.0	PLEISTOCENE		CLAY	25.0	35.0	
337.0	MODESTO		SHALE	3.0	60.0	
334.0	MODESTO		SILTSTONE	40.0	63.0	
294.0	MODESTO		GRAY SHALE	21.0	103.0	SILTY, CARBONACEOUS
273.0	MODESTO		SHALE	3.0	124.0	HARD, FISSILE AT BASE; BLACK
270.0	MODESTO	CHAPEL	COAL	0.8	127.0	NAMED #8 ON DRILLER'S LOG
269.2	MODESTO		UNDERCLAY	6.0	127.8	
263.2	MODESTO		GRAY SHALE	38.3	133.8	LAMINATED
225.0	MODESTO		SANDSTONE	0.3	172.0	
224.7	MODESTO		SILTSTONE	68.8	172.3	
155.8	MODESTO		GRAY SHALE	21.8	241.2	MICACEOUS,DARKEN DOWNWARD
134.0	MODESTO		SHALE	0.8	263.0	CARBONACEOUS; BLACK
133.2	MODESTO		UNDERCLAY	1.0	263.8	
132.2	MODESTO		SILTSTONE/SANDSTONE	18.7	264.8	COARSE; INTERBEDDED WITH SILTY SHALE
113.5	MODESTO		SHALE	2.6	283.5	COAL ZONE AT BASE; BLACK
110.9	MODESTO		UNDERCLAY	2.3	286.1	
108.6	MODESTO		SANDSTONE	14.8	288.4	
93.9	MODESTO		GRAY SHALE	14.4	303.1	
79.5	MODESTO		SHALE	4.3	317.5	PYRITIC; BLACK
75.2	MODESTO		COAL	0.3	321.8	NAMED CUTLER I IN DRILLERS LOG
75.0	MODESTO		UNDERCLAY	2.0	322.0	
73.0	MODESTO	PIASA	LIMESTONE	5.8	324.0	ARGILLACEOUS
67.2	MODESTO		SHALE	5.3	329.8	PYRITIC AT BASE; BLACK
61.9	CARBONDALE	DANVILLE	COAL	1.8	335.1	NAMED CUTLER IN DRILLERS LOG
60.1	CARBONDALE		UNDERCLAY	2.4	336.9	
57.7	CARBONDALE		GRAY SHALE	6.0	339.3	
51.7	CARBONDALE		SANDSTONE	2.2	345.3	
49.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.3	347.5	
43.2	CARBONDALE	ENERGY	SILTSTONE	46.2	353.8	
-3.0	CARBONDALE	ENERGY	GRAY SHALE	42.8	400.0	SANDY
-45.8	CARBONDALE	HERRIN	COAL	1.2	442.8	SUGGESTED TO BE #6 ON CORE LOG
-47.0	CARBONDALE	HERRIN	SHALE	0.1	444.0	BLACK
-47.1	CARBONDALE	HERRIN	COAL	2.8	444.1	
-49.9	CARBONDALE	HERRIN	GRAY SHALE	1.8	446.9	
-51.7	CARBONDALE	HERRIN	COAL	0.7	448.7	INCLUDES .02 COAL PR
-52.5	CARBONDALE		UNDERCLAY	2.9	449.5	

-55.4	CARBONDALE		SILTSTONE	1.0	452.4	
-56.4	CARBONDALE		GRAY SHALE	10.6	453.4	
-67.0	CARBONDALE	BRIAR HILL	COAL	1.4	464.0	
-68.4	CARBONDALE		UNDERCLAY	0.2	465.4	
-68.6	CARBONDALE		LIMESTONE	5.2	465.6	
-73.8	CARBONDALE		SHALE	0.3	470.8	
-74.0	CARBONDALE		SANDSTONE	7.7	471.0	MICACEOUS, NON-CALCAREOUS
-81.7	CARBONDALE		SHALE	6.3	478.7	HARD, MICACEOUS; BLACK
-88.0	CARBONDALE	ST. DAVID	LIMESTONE	1.3	485.0	BLACK, ARGILLACEOUS
-89.2	CARBONDALE	TURNER MINE	SHALE	2.8	486.2	FISSILE; BLACK
-92.0	CARBONDALE	DYKERSBURG	GRAY SHALE	5.2	489.0	
-97.2	CARBONDALE	DYKERSBURG	CLAYSTONE & SILTSTONE	0.8	494.2	
-98.0	CARBONDALE	DYKERSBURG	SILTSTONE	1.3	495.0	
-99.4	CARBONDALE	DYKERSBURG	GRAY SHALE	0.2	496.4	
-99.6	CARBONDALE	SPRINGFIELD	COAL	3.7	496.6	FUSAIN BAND,AGITATED, CALCITE VEINS
-103.2	CARBONDALE		UNDERCLAY	1.9	500.2	

MAPID: 05500736000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 31 **QUARTERS/FOOTAGES:** 1320' S line, 1320' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.025619 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.953561 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 397.0 **LOGGED (FT.):** 450.2 **LOG TYPE:** Survey Core Study

SOURCE: C.W.&F. COAL CO. 6 **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
72.9	MODESTO	PIASA	LIMESTONE	5.8	324.1	
67.1	MODESTO		BLACK SHALE	5.3	329.9	
61.9	CARBONDALE	DANVILLE	COAL	2.0	335.1	
59.9	CARBONDALE		SHALE & SANDSTONE	10.6	337.1	
49.3	CARBONDALE	BANKSTON FORK	LIMESTONE	6.3	347.7	
43.0	CARBONDALE	ENERGY	SILTSTONE	46.2	354.0	
-3.2	CARBONDALE	ENERGY	SILTY SHALE	42.3	400.2	
-45.5	CARBONDALE	ENERGY	GRAY SHALE	0.5	442.5	
-46.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	7.2	443.0	

MAPID: 05500742000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 33 **QUARTERS/FOOTAGES:** 2640' N line, 2640' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.993275 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.957356 **DATE COLLECTED:** 11 / 3 / 1943

SURFACE ELEVATION (FT.): 380.0 **LOGGED (FT.):** 1004.4 **LOG TYPE:** Survey Core Study

SOURCE: CW & F COAL CO 2 **WELL TYPE:** Coal Test

COMMENT: INCLUDES DATA FROM DRILLER'S LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
380.0	PLEISTOCENE		CLAY	32.0	0.0	
348.0	PLEISTOCENE		SAND	23.0	32.0	QUICKSAND, POSSIBLE AQUIFER
325.0	PLEISTOCENE		CLAY	15.0	55.0	
310.0	MODESTO		SILTSTONE	15.8	70.0	FINES DOWN
294.2	MODESTO		SILTSTONE/SANDSTONE	46.4	85.8	FINES DOWN,INTERBEDDED,CALCAR
247.8	MODESTO		GRAY SHALE	6.0	132.2	SILTY,MICACEOUS
241.8	MODESTO		GRAY SHALE	8.7	138.2	
233.1	MODESTO		LIMESTONE	0.6	146.9	ARGILLACEOUS,CARBONACEOUS
232.5	MODESTO		SHALE	0.9	147.5	BLACK
231.6	MODESTO		SHALE	0.4	148.4	HARD,CALCAREOUS
231.2	MODESTO	CHAPEL	COAL	1.0	148.8	CALCITE
230.2	MODESTO		UNDERCLAY	2.8	149.8	
227.4	MODESTO		GRAY SHALE	17.4	152.6	FISSILE, LIMESTONE NODULES, PYRITE
210.0	MODESTO		SILTSTONE/SANDSTONE	105.9	170.0	FINES DOWNWARD
104.1	MODESTO		GRAY SHALE	1.7	275.9	SANDY
102.4	MODESTO		GRAY SHALE	8.8	277.6	SMOOTH,IRONSTONE CONCRETIONS
93.7	MODESTO		SHALE	1.3	286.3	BLACK,MICACEOUS,PYRITIC,LIMESTONE NODULE
92.3	MODESTO		UNDERCLAY	1.0	287.7	
91.3	MODESTO		SILTSTONE	1.0	288.7	LIMESTONE CONCRETIONS
90.3	MODESTO		SILTSTONE/SANDSTONE	7.2	289.7	LAMINATED
83.2	MODESTO		SHALE	10.5	296.8	BLACK SHALE LAMINAE
72.7	MODESTO		SHALE	1.7	307.3	HARD; BLACK
71.0	MODESTO		COAL	0.4	309.0	
70.6	MODESTO		UNDERCLAY	6.8	309.4	
63.8	MODESTO		SANDSTONE	8.0	316.2	CROSS-LAMINATED
55.8	MODESTO		SILTSTONE/SANDSTONE	4.9	324.2	LAMINATED
50.9	MODESTO		SHALE	13.0	329.1	FINES DOWNWARD,SILTY MICACEOUS
37.9	MODESTO		GRAY SHALE	3.1	342.1	VERY DARK,LIGHTER LAMINAE
34.8	MODESTO		COAL	0.4	345.2	
34.4	MODESTO		UNDERCLAY	0.2	345.6	
34.2	MODESTO		SHALE	1.5	345.8	LIMESTONE NODULES, COAL FRAGMENTS
32.7	MODESTO		SHALE	0.8	347.3	SILTY,VERY FISSILE
32.0	MODESTO	PIASA	LIMESTONE	1.8	348.0	HARD
30.2	MODESTO		GRAY SHALE	4.5	349.8	DARK
25.8	CARBONDALE	DANVILLE	COAL	1.8	354.2	CALCITE VEINS
24.1	CARBONDALE		UNDERCLAY	0.8	355.9	SANDY,PYRITIC
23.3	CARBONDALE		GRAY SHALE	4.6	356.7	
18.7	CARBONDALE		SANDSTONE	2.7	361.3	CROSS-BEDDED,SILTSTONE LAMINAE

16.0	CARBONDALE		COAL	0.1	364.0	
15.9	CARBONDALE		LIMESTONE	0.2	364.1	CONCRETION
15.7	CARBONDALE		SHALE	5.5	364.3	SANDY
10.2	CARBONDALE		COAL	0.3	369.8	BONE
10.0	CARBONDALE		UNDERCLAY	1.4	370.0	
8.6	CARBONDALE		GRAY SHALE	3.2	371.4	LIMESTONE NODULES
5.4	CARBONDALE		LIMESTONE	1.7	374.6	SILTY
3.7	CARBONDALE		SILTSTONE	5.8	376.3	
-2.0	CARBONDALE		SHALE	3.0	382.0	SILTY
-5.0	CARBONDALE		SILTSTONE/SANDSTONE	4.0	385.0	INTERBEDDED
-9.0	CARBONDALE		GRAY SHALE	6.8	389.0	
-15.8	CARBONDALE		LIMESTONE	1.3	395.8	POSSIBLE CONCRETION
-17.1	CARBONDALE		GRAY SHALE	0.5	397.1	
-17.6	CARBONDALE		SILTSTONE/SANDSTONE	22.4	397.6	
-40.0	CARBONDALE		LIMESTONE	0.4	420.0	SEPTARIAN CONCRETION
-40.4	CARBONDALE		SILTSTONE/SANDSTONE	8.3	420.4	
-48.7	CARBONDALE		SILTSTONE	45.6	428.7	
-94.3	CARBONDALE		SHALE	10.9	474.3	SANDY, IRONSTONE CONCRETIONS
-105.2	CARBONDALE	HERRIN	COAL	7.8	485.2	NAMED HERRIN IN CORE LOG
-113.0	CARBONDALE	HERRIN	SHALE	0.3	493.0	BLUE BAND
-113.3	CARBONDALE	HERRIN	COAL	1.6	493.3	NAMED HERRIN IN CORE LOG
-114.9	CARBONDALE		UNDERCLAY	0.3	494.9	
-115.1	CARBONDALE		SHALE WITH LIMESTONE	9.3	495.1	
-124.4	CARBONDALE		SHALE	1.0	504.4	
-125.4	CARBONDALE		SANDSTONE	4.9	505.4	
-130.3	CARBONDALE		SILTSTONE/SANDSTONE	2.5	510.3	
-132.8	CARBONDALE		SHALE	7.3	512.8	IRONSTONE CONCRETIONS; BLACK
-140.1	CARBONDALE	ST. DAVID	LIMESTONE	1.1	520.1	HARD,ARGILLACEOUS
-141.2	CARBONDALE	TURNER MINE	SHALE	3.2	521.2	FISSILE; BLACK
-144.4	CARBONDALE	DYKERSBURG	GRAY SHALE	4.9	524.4	
-149.3	CARBONDALE	SPRINGFIELD	COAL	4.4	529.3	
-153.7	CARBONDALE		UNDERCLAY	1.9	533.7	
-155.6	CARBONDALE		SHALY SILTSTONE	56.4	535.6	LAMINATED
-212.0	CARBONDALE		LIMESTONE	0.1	592.0	CONCRETIONS
-212.1	CARBONDALE		SHALE	0.2	592.1	BLACK
-212.3	CARBONDALE		GRAY SHALE	6.0	592.3	SILTY,HARD
-218.3	CARBONDALE		GRAY SHALE	9.4	598.3	IRONSTONE CONCRETIONS
-227.7	CARBONDALE		SHALE	0.8	607.7	CALCAREOUS; BLACK
-228.4	CARBONDALE		UNKNOWN	1.0	608.4	SILICEOUS BAND
-229.4	CARBONDALE	EXCELLO	SHALE	5.9	609.4	FISSILE; BLACK
-235.3	CARBONDALE	HOUCHIN CREEK	COAL	1.3	615.3	
-236.6	CARBONDALE		UNDERCLAY	3.3	616.6	
-239.8	CARBONDALE		SILTSTONE	1.8	619.8	
-241.6	CARBONDALE		SANDSTONE	6.1	621.6	
-247.7	CARBONDALE		SILTSTONE	20.8	627.7	
-268.4	CARBONDALE		GRAY SHALE	11.2	648.4	IRONSTONE CONCRETIONS
-279.6	CARBONDALE		GRAY SHALE	11.0	659.6	VERY DARK TO BLACK, IRONSTONE CONCRETION

-290.6	CARBONDALE		GRAY SHALE	3.2	670.6	IRONSTONE CONCRETIONS
-293.8	CARBONDALE		GRAY SHALE	1.9	673.8	DARK,PYRITE
-295.7	CARBONDALE	SURVANT	COAL	4.9	675.7	SUGGESTED TO BE #2
-300.6	CARBONDALE		UNDERCLAY	0.2	680.6	
-300.8	CARBONDALE		SILTSTONE/SANDSTONE	30.3	680.8	CARBONACEOUS LAMINAE
-331.0	CARBONDALE		SANDSTONE	0.5	711.0	WITH GRAY SHALE CLASTS
-331.5	CARBONDALE		GRAY SHALE	5.4	711.5	PYRITIC
-336.9	CARBONDALE	MECCA QUARRY	SHALE	2.1	716.9	BLACK
-339.0	CARBONDALE	COLCHESTER	COAL	0.9	719.0	
-339.9	SPOON		GRAY SHALE	1.3	719.9	
-341.2	SPOON		SHALE	11.0	721.2	FINES DOWNWARD
-352.2	SPOON		GRAY SHALE	4.6	732.2	PARTLY SANDY
-356.8	SPOON		GRAY SHALE	7.5	736.8	DARK TO BLACK PYRTIC AT BASE
-364.3	SPOON	DEKOVEN	COAL	1.5	744.3	
-365.8	SPOON		SHALE	0.4	745.8	SILTY
-366.2	SPOON		SILTSTONE/SANDSTONE	37.2	746.2	LAMINATED,CARBONACEOUS LAMINAE
-403.3	SPOON		COAL	0.1	783.3	
-403.4	SPOON		SHALE	0.6	783.4	SILTY,CARBONACEOUS
-404.0	SPOON		SILTSTONE	2.4	784.0	
-406.4	SPOON		GRAY SHALE	2.4	786.4	SMOOTH, VERY DARK TO BLACK
-408.8	SPOON		GRAY SHALE	5.2	788.8	CARBONACEOUS
-414.0	SPOON	DAVIS	COAL	2.0	794.0	
-416.0	SPOON		UNDERCLAY	1.4	796.0	SOFT
-417.4	SPOON		GRAY SHALE	1.6	797.4	LAMINATED
-419.0	SPOON		GRAY SHALE	6.6	799.0	SANDY
-425.6	SPOON		SILTSTONE/SANDSTONE	9.8	805.6	INTERLAMINATED
-435.4	SPOON		GRAY SHALE	0.6	815.4	SANDY
-436.0	SPOON		SILTSTONE	16.6	816.0	WITH SANDSTONE LAMINAE
-452.6	SPOON		GRAY SHALE	3.3	832.6	PYRITIC,CRUMBLY
-455.9	SPOON		GRAY SHALE	2.8	835.9	VERY DARK TO BLACK,FISSILE
-458.7	SPOON		COAL	0.8	838.7	
-459.5	SPOON		GRAY SHALE	1.4	839.5	
-460.9	SPOON		SILTSTONE	0.4	840.9	
-461.3	SPOON	STONEFORT	LIMESTONE	3.5	841.3	NAMED STONEFORT IN CORE LOG
-464.8	SPOON		GRAY SHALE	0.6	844.8	
-465.3	SPOON		SHALE	0.2	845.3	BLACK
-465.5	SPOON		GRAY SHALE	1.4	845.5	MOTTLED GREEN & BLACK
-466.9	SPOON		GRAY SHALE	7.0	846.9	IRONSTONE CONCRETIONS
-473.9	SPOON		GRAY SHALE	2.3	853.9	DARK,MICACEOUS
-476.2	SPOON		SHALE	0.8	856.2	FISSILE; BLACK
-477.0	SPOON	WISE RIDGE	COAL	1.0	857.0	
-478.0	SPOON		SILTSTONE	1.0	858.0	POORLY CEMENTED,CARBONACEOUS
-479.0	SPOON		SANDSTONE	2.0	859.0	
-481.0	SPOON		GRAY SHALE	3.8	861.0	SANDY,CRUMBLY
-484.8	SPOON		GRAY SHALE	2.0	864.8	CARBONACEOUS
-486.8	SPOON		GRAY SHALE	3.0	866.8	SILTY

-489.8	SPOON		SANDSTONE	1.5	869.8	MICACEOUS,FINE
-491.3	SPOON		SHALY SILTSTONE	2.5	871.3	INTERLAMINATED
-493.8	SPOON		GRAY SHALE	7.3	873.8	LIMESTONE CONCRETIONS
-501.1	SPOON	MT. RORAH	COAL	3.1	881.1	
-504.2	SPOON		UNDERCLAY	0.8	884.2	SANDY,CRUMBLY
-505.0	SPOON		SHALE	9.9	885.0	
-514.9	SPOON		COAL	0.1	894.9	
-515.0	SPOON		GRAY SHALE	0.6	895.0	SANDY,SOFT
-515.6	SPOON		SILTSTONE/SANDSTONE	18.3	895.6	INTERLAMINATED
-533.9	SPOON		GRAY SHALE	6.0	913.9	FINE SMOOTH
-539.9	SPOON		SILTSTONE	14.0	919.9	
-553.9	SPOON		GRAY SHALE	5.9	933.9	SILTY,CARBONACEOUS
-559.8	SPOON		COAL	0.3	939.8	
-560.1	SPOON		UNDERCLAY	2.0	940.1	
-562.1	SPOON		GRAY SHALE	7.7	942.1	SMOOTH
-569.8	SPOON		SHALE	0.4	949.8	BLACK
-570.2	SPOON		UNDERCLAY	4.8	950.2	
-574.9	SPOON		SILTSTONE	8.1	954.9	ARGILLACEOUS, MICACEOUS, CARBONACEOUS
-583.0	SPOON	CREAL SPRING	LIMESTONE	1.6	963.0	CRYSTALLINE
-584.6	SPOON		SHALE	0.5	964.6	BLACK
-585.2	SPOON		SHALE	3.8	965.2	PYRITIC,MICACEOUS,SANDY; BLACK
-588.9	SPOON		SHALE	0.2	968.9	CARBONACEOUS
-589.1	SPOON		SILTSTONE	3.0	969.1	ARGILLACEOUS
-592.1	SPOON		SANDSTONE	32.3	972.1	COARSE

MAPID: 05500742000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 33 **QUARTERS/FOOTAGES:** 2640' N line, 2640' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.993275 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.957356 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 380.0 **LOGGED (FT.):** 494.4 **LOG TYPE:** Survey Core Study

SOURCE: C.W.&F. COAL CO. 2 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
34.4	MODESTO	PIASA	LIMESTONE	2.8	345.6	
31.7	MODESTO		DARK GRAY SHALE	3.4	348.3	
28.2	CARBONDALE	DANVILLE	COAL	1.8	351.8	
26.5	CARBONDALE		SANDSTONE/SILTSTONE	15.6	353.5	
10.9	CARBONDALE	ALLENBY	BONE COAL	0.3	369.1	
10.7	CARBONDALE		CLAYSTONE & SHALE	4.6	369.3	
6.1	CARBONDALE	BANKSTON FORK	LIMESTONE AND SANDSTONE	1.7	373.9	
4.4	CARBONDALE	LAWSON	SILTSTONE	5.8	375.6	
-1.3	CARBONDALE	LAWSON	SILTY SHALE	3.0	381.3	
-4.3	CARBONDALE	LAWSON	SANDSTONE/SILTSTONE	4.0	384.3	
-8.3	CARBONDALE	LAWSON	DARK GRAY SHALE	6.8	388.3	
-15.1	CARBONDALE	BRERETON	LIMESTONE	1.3	395.1	
-16.4	CARBONDALE	ANNA	CARBONACEOUS SHALE	0.5	396.4	
-16.9	CARBONDALE	ENERGY	SILTSTONE	1.7	396.9	
-18.6	CARBONDALE	ENERGY	SHALE & SILTSTONE	7.4	398.6	
-26.0	CARBONDALE	ENERGY	SANDSTONE/SILTSTONE	22.5	406.0	
-48.5	CARBONDALE	ENERGY	SILTSTONE	45.6	428.5	
-94.1	CARBONDALE	ENERGY	SILTY SHALE	10.9	474.1	
-105.0	CARBONDALE	HERRIN	COAL	9.4	485.0	

MAPID: 05501071000C **VERSION:** 1 **PROJECT:** NCRDS 2011

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 33 **QUARTERS/FOOTAGES:** 800' N line, 50' E line of NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.984214 **GEOLOGIST:** LOUCHIOS

CONFIDENTIAL: N **LATITUDE:** 37.962499 **DATE COLLECTED:** 11 / 25 / 1944

SURFACE ELEVATION (FT.): 378.3 **LOGGED (FT.):** 579.5 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 39 **WELL TYPE:** Coal Test

COMMENT: TRUE ELEV DATUM 6" FROM FLOOR; COAL QUAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
378.3	PLEISTOCENE		UNCONSOLIDATED	30.0	0.0	
348.3	PLEISTOCENE		SAND	40.0	30.0	
308.3	PATOKA		SANDSTONE	19.0	70.0	
289.3	PATOKA		GRAY SHALE	87.4	89.0	
201.9	PATOKA		LIMESTONE	0.6	176.4	
201.3	PATOKA		DARK SHALE	2.8	177.0	
198.5	PATOKA	CHAPEL	COAL	1.2	179.8	
197.4	PATOKA		UNDERCLAY	2.6	180.9	
194.8	PATOKA		GRAY SHALE	154.3	183.5	
40.5	SHELBURN		DARK SHALE	3.5	337.8	
37.0	SHELBURN		COAL	0.7	341.3	
36.3	SHELBURN		UNDERCLAY	5.3	342.0	
31.0	SHELBURN		GRAY SHALE	3.0	347.3	
28.0	SHELBURN		SANDSTONE	5.2	350.3	
22.8	SHELBURN		GRAY SHALE	4.5	355.5	
18.3	SHELBURN		DARK SHALE	15.7	360.0	
2.6	SHELBURN		COAL	0.3	375.7	
2.3	SHELBURN		UNDERCLAY	4.0	376.0	
-1.7	SHELBURN	PIASA	LIMESTONE	3.9	380.0	CUTLER LS
-5.6	SHELBURN		DARK SHALE	2.9	383.9	
-8.5	SHELBURN	DANVILLE	COAL	2.0	386.8	
-10.5	SHELBURN		UNDERCLAY	1.1	388.8	
-11.6	SHELBURN		GRAY SHALE	12.6	389.9	
-24.2	SHELBURN		BONE COAL	0.1	402.5	
-24.3	SHELBURN		UNDERCLAY	3.9	402.6	
-28.2	SHELBURN	BANKSTON FORK	LIMESTONE	1.8	406.5	
-30.0	SHELBURN		GRAY SHALE	23.9	408.3	
-54.0	SHELBURN		SANDSTONE	6.8	432.3	
-60.7	SHELBURN		GRAY SHALE	81.0	439.0	
-141.7	CARBONDALE	HERRIN	COAL	9.4	520.0	
-151.0	CARBONDALE		UNDERCLAY	2.0	529.3	
-153.0	CARBONDALE		LIMESTONE	8.8	531.3	
-161.9	CARBONDALE		DARK SHALE	1.0	540.2	
-162.9	CARBONDALE		SANDSTONE	8.9	541.2	
-171.8	CARBONDALE		DARK SHALE	8.8	550.1	
-180.6	CARBONDALE	ST. DAVID	LIMESTONE	0.8	558.9	
-181.5	CARBONDALE	TURNER MINE	GRAY SHALE	3.3	559.8	
-184.7	CARBONDALE	DYKERSBURG	GRAY SHALE	7.7	563.0	
-192.4	CARBONDALE	SPRINGFIELD	COAL	4.2	570.7	

-196.6	CARBONDALE	UNDERCLAY	3.8	574.9
-200.4	CARBONDALE	GRAY SHALE	0.8	578.7

MAPID: 05500082000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 34 **QUARTERS/FOOTAGES:** 2450' S line, 2200' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.973139 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.95694 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 628.0 **LOG TYPE:** Drillers Log

SOURCE: CHICAGO,WILMINGTON,&F COAL CO.1 **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-82.5	MODESTO	PIASA	LIMESTONE	5.8	482.5	
-88.3	MODESTO		DARK GRAY SHALE	3.8	488.3	
-92.0	CARBONDALE	DANVILLE	COAL	2.0	492.0	
-94.0	CARBONDALE		SANDSTONE/SILTSTONE	12.9	494.0	
-106.9	CARBONDALE	ALLENBY	BONE COAL	0.3	506.9	
-107.3	CARBONDALE		CLAYSTONE & SHALE	6.3	507.3	
-113.6	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	6.0	513.6	
-119.6	CARBONDALE	ENERGY	SILTY SHALE	6.0	519.6	
-125.6	CARBONDALE	ENERGY	DARK GRAY SHALE	18.0	525.6	
-143.6	CARBONDALE	ENERGY	SILTY SHALE	57.0	543.6	
-200.6	CARBONDALE	ENERGY	GRAY SHALE	17.4	600.6	
-218.0	CARBONDALE	ENERGY	BLACK SHALE	1.0	618.0	
-219.0	CARBONDALE	HERRIN	COAL	9.0	619.0	

MAPID: 05500756000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 36 **QUARTERS/FOOTAGES:** 2310' S line, 1650' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.941246 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.956529 **DATE COLLECTED:** 0 / 0 / 1944

SURFACE ELEVATION (FT.): 449.0 **LOGGED (FT.):** 927.0 **LOG TYPE:** Survey Core Study

SOURCE: CHICAGO WILMINGTON& FRANKLIN **WELL TYPE:** Coal Test

COMMENT: CORE LOGS(WILSON;CADY ETAL.)&DRILLERS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
449.0	PLEISTOCENE		CLAY	17.3	0.0	
431.7			SHALE	20.0	17.3	SOFT AT TOP, SANDY,CARBONACEOUS
411.7			LIMESTONE	5.5	37.3	GRADES TO SHALE
406.2			SHALE	4.6	42.8	FOSSILS AT TOP,FISSILE; BLACK
401.7			LIMESTONE	0.4	47.3	POSSIBLE CONCRETION
401.2			GRAY SHALE	25.6	47.8	SILTY,MICACEOUS
375.6			COAL	0.1	73.4	
375.5			UNDERCLAY	1.5	73.5	
374.0			GRAY SHALE	5.0	75.0	SILTY,MICACEOUS
369.0			SILTSTONE	9.9	80.0	
359.1			GRAY SHALE	20.7	89.9	PARTLY PYRITIC
338.4			SHALE	2.7	110.6	FISSILE; BLACK
335.7			LIMESTONE	0.7	113.3	HARD, ARGILLACEOUS
335.1			GRAY SHALE	4.2	113.9	
330.9			UNDERCLAY	3.9	118.1	
327.0			GRAY SHALE	15.0	122.0	
312.0			SILTSTONE/SANDSTONE	95.2	137.0	INTERBEDDED, COARSENS DOWNWARD
216.8			GRAY SHALE	3.9	232.2	FINE, MICACEOUS, CARBONACEOUS
212.9			SHALE	0.2	236.1	SMOOTH,HARD,CARBONACEOUS; BLACK
212.7			GRAY SHALE	8.5	236.3	HARD,DARK
204.2			SHALE	1.3	244.8	BLACK
203.0	MODESTO	CHAPEL	COAL	1.3	246.0	
201.7	MODESTO		UNDERCLAY	6.7	247.3	SANDY
195.1	MODESTO		SILTSTONE	5.8	253.9	HARD MICACEOUS
189.3	MODESTO		GRAY SHALE	17.3	259.7	
172.0	MODESTO		SILTSTONE	59.1	277.0	MASSIVE, CARBONACEOUS
112.9	MODESTO		GRAY SHALE	49.2	336.1	PYRITIC AT BOTTOM
63.7	MODESTO		SHALE	0.2	385.3	BLACK
63.6	MODESTO		GRAY SHALE	1.1	385.4	
62.5	MODESTO		SANDSTONE	5.1	386.5	SILTY,CALCAREOUS
57.4	MODESTO		SILTSTONE	3.1	391.6	
54.3	MODESTO		GRAY SHALE	11.9	394.7	DARK,PYRITIC
42.4	MODESTO		SHALE	3.3	406.6	BLACK
39.2	MODESTO		GRAY SHALE	0.3	409.8	
38.9	MODESTO		COAL	0.5	410.1	
38.3	MODESTO		UNDERCLAY	3.4	410.7	
34.9	MODESTO		SILTSTONE/SANDSTONE	17.5	414.1	
17.4	MODESTO		GRAY SHALE	9.9	431.6	HARD, LAMINATED,SIDERITE CONCRETIONS

7.5	MODESTO		COAL	0.3	441.5	
7.1	MODESTO		UNDERCLAY	1.8	441.9	
5.4	MODESTO		GRAY SHALE	1.3	443.6	PYRITIC,CARBONACEOUS
4.1	MODESTO	PIASA	LIMESTONE	4.1	444.9	AGILLACEOUS
0.0	MODESTO		SHALE	0.3	449.0	CARBONIFEROUS; BLACK
-0.3	MODESTO		GRAY SHALE	3.3	449.3	PYRITIC, GRADES TO BLACK
-3.5	MODESTO		LIMESTONE	1.2	452.5	ARGILLACEOUS, PYRITIC
-4.7	MODESTO		GRAY SHALE	0.8	453.7	DARK,PYRITIC
-5.4	CARBONDALE	DANVILLE	COAL	2.1	454.4	
-7.5	CARBONDALE		UNDERCLAY	0.5	456.5	SILTY
-8.0	CARBONDALE		SILTSTONE/SANDSTONE	10.0	457.0	
-18.0	CARBONDALE		SHALE & SANDSTONE	6.4	467.0	
-24.4	CARBONDALE		SILTSTONE	1.6	473.4	
-26.0	CARBONDALE		GRAY SHALE	1.3	475.0	
-27.2	CARBONDALE		COAL	0.7	476.2	BONEY
-27.9	CARBONDALE		SILTSTONE/SANDSTONE	8.8	476.9	
-36.7	CARBONDALE		GRAY SHALE	17.7	485.7	DARK,MICACEOUS
-54.4	CARBONDALE		SANDSTONE	4.4	503.4	SHALE CLASTS AT BASE
-58.8	CARBONDALE		GRAY SHALE	2.5	507.8	DARK,PYRITIC
-61.3	CARBONDALE		LIMESTONE	2.3	510.3	ARGILLACEOUS
-63.6	CARBONDALE		SHALE	3.3	512.6	FISSILE,CARBONACEOUS; BLACK
-66.9	CARBONDALE	ENERGY	SILTSTONE	21.8	515.9	MICACEOUS
-88.7	CARBONDALE	ENERGY	GRAY SHALE	12.6	537.7	
-101.3	CARBONDALE	HERRIN	COAL	8.2	550.3	
-109.5	CARBONDALE		UNDERCLAY	8.2	558.5	LIMESTONE NODULES
-117.7	CARBONDALE		GRAY SHALE	1.0	566.7	
-118.7	CARBONDALE		SILTSTONE/SANDSTONE	8.5	567.7	INTERBEDDED,LAMINATED
-127.2	CARBONDALE		GRAY SHALE	4.2	576.2	IRONSTONE BANDS
-131.3	CARBONDALE		SHALE	3.2	580.3	LAMINATED; BLACK
-134.5	CARBONDALE	ST. DAVID	LIMESTONE	1.3	583.5	ARGILLACEOUS GRADES DOWN TO BKSH
-135.8	CARBONDALE	TURNER MINE	SHALE	2.6	584.8	FISSILE, COAL STREAKS NEAR BASE; BLACK
-138.4	CARBONDALE	DYKERSBURG	GRAY SHALE	10.0	587.4	BLACK, CARBONACEOUS AT BASE
-148.3	CARBONDALE	SPRINGFIELD	COAL	4.4	597.3	CALCITE VEIN
-152.8	CARBONDALE		UNDERCLAY	2.8	601.8	
-155.5	CARBONDALE		SHALY SILTSTONE	12.9	604.5	INTERBEDDED
-168.5	CARBONDALE		SANDSTONE	6.3	617.5	
-174.7	CARBONDALE		SILTSTONE	23.6	623.7	
-198.3	CARBONDALE		GRAY SHALE	26.2	647.3	SILTY, SIDERITE CONCRETION
-224.5	CARBONDALE	EXCELLO	SHALE	5.3	673.5	CARBONACEOUS BLACK, PYRITIC; BLACK
-229.9	CARBONDALE	HOUCHIN CREEK	COAL	1.0	678.9	SUGGESTED #4 BRIGHT, BANDED
-230.9	CARBONDALE		UNDERCLAY	3.9	679.9	
-234.8	CARBONDALE		SILTSTONE	5.2	683.8	
-240.0	CARBONDALE		GRAY SHALE	13.3	689.0	PYRITIC
-253.3	CARBONDALE	SURVANT	COAL	1.5	702.3	CALCITE FACINGS
-254.8	CARBONDALE		UNDERCLAY	4.9	703.8	
-259.7	CARBONDALE		SILTSTONE/SANDSTONE	14.9	708.7	INTERBEDDED LAMINATED, PLANTS

-274.6	CARBONDALE		GRAY SHALE	1.7	723.6	PLANTS
-276.2	CARBONDALE		COAL	0.2	725.2	
-276.4	CARBONDALE		UNDERCLAY	1.4	725.4	
-277.8	CARBONDALE		SILTSTONE/SANDSTONE	16.7	726.8	LAMINATED, INTERBEDDED FINES DOWNWARD
-294.5	CARBONDALE		GRAY SHALE	31.9	743.5	
-326.4	CARBONDALE		LIMESTONE	1.0	775.4	DARK, ARGILLACEOUS
-327.4	CARBONDALE		GRAY SHALE	5.7	776.4	DARK,PYRITIC,IRON CONCRETIONS
-333.1	CARBONDALE		SHALE	2.6	782.1	BLACK
-335.7	CARBONDALE		SHALE	0.4	784.7	CALCAREOUS
-336.1	CARBONDALE	MECCA QUARRY	SHALE	1.7	785.1	BLACK
-337.8	CARBONDALE		SHALE	0.2	786.8	CALCAREOUS
-338.0	CARBONDALE	COLCHESTER	COAL	0.7	787.0	SUGGESTED DEKOVEN
-338.7	SPOON		SHALE	0.1	787.7	PYRITIC; BLACK
-338.8	SPOON		UNDERCLAY	3.3	787.8	
-342.0	SPOON		SANDSTONE	5.3	791.0	SHALY,PYRITIC
-347.3	SPOON		GRAY SHALE	16.1	796.3	PYRITE, SPHALERITE
-363.3	SPOON	DEKOVEN	COAL	2.0	812.3	SUGGESTED TO BE DAVIS
-365.3	SPOON		SANDSTONE	9.9	814.3	WITH SOME COAL ZONES
-375.2	SPOON		SILTSTONE	10.0	824.2	CARBONACEOUS
-385.2	SPOON		GRAY SHALE	3.7	834.2	LAMINATED
-388.9	SPOON	LOWER DEKOVEN	COAL	1.1	837.9	
-390.0	SPOON		UNDERCLAY	1.4	839.0	
-391.4	SPOON		GRAY SHALE	1.5	840.4	
-392.9	SPOON		SHALE	4.2	841.9	FISSILE, PYRITE AT BASE; BLACK
-397.1	SPOON	DAVIS	COAL	3.9	846.1	BONEY AT TOP PYRITE, FUSAIN
-401.0	SPOON		UNDERCLAY	2.6	850.0	
-403.6	SPOON		SANDSTONE	34.8	852.6	SUGGESTED CURLEW; COARSE
-438.3			GRAY SHALE	2.3	887.3	
-440.6			SHALE	2.4	889.6	BLACK
-443.0	TRADEWATER	WISE RIDGE	COAL	0.3	892.0	
-443.3	TRADEWATER	WISE RIDGE	SHALE	0.2	892.3	BLACK
-443.4	TRADEWATER	WISE RIDGE	COAL	0.4	892.4	
-443.8			UNDERCLAY	4.7	892.8	
-448.5			GRAY SHALE	7.1	897.5	
-455.6			COAL	0.7	904.6	
-456.3			UNDERCLAY	1.7	905.3	
-458.0			GRAY SHALE	5.0	907.0	SIDERITIC
-463.0			SHALE & SANDSTONE	15.0	912.0	INCLUDES SILTSTONE

MAPID: 05500756000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 2E **SECTION:** 36 **QUARTERS/FOOTAGES:** 2310' S line, 1650' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.941246 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.956529 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 449.0 **LOGGED (FT.):** 558.2 **LOG TYPE:** Survey Core Study

SOURCE: C.W.&F. COAL CO. **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
5.5	MODESTO	PIASA	LIMESTONE/UNDERCLAY	4.1	443.5	
1.4	MODESTO		LIMESTONE W/ SHALE	5.4	447.6	
-4.0	CARBONDALE	DANVILLE	COAL	2.2	453.0	
-6.2	CARBONDALE		SILTSTONE	19.7	455.2	
-25.8	CARBONDALE	ALLENBY	BONE COAL	0.7	474.8	
-26.5	CARBONDALE	LAWSON	SILTSTONE	4.0	475.5	
-30.5	CARBONDALE	LAWSON	CALCAREOUS SANDSTONE	4.9	479.5	
-35.4	CARBONDALE	LAWSON	DARK GRAY SHALE	17.8	484.4	
-53.1	CARBONDALE	LAWSON	SANDSTONE	5.3	502.1	
-58.4	CARBONDALE		BLACK SHALE	2.6	507.4	
-61.0	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	2.3	510.0	
-63.3	CARBONDALE	ANNA	BLACK SHALE	4.6	512.3	
-67.8	CARBONDALE	ENERGY	SILTSTONE	20.5	516.8	
-88.3	CARBONDALE	ENERGY	GRAY SHALE	12.7	537.3	
-101.0	CARBONDALE	HERRIN	COAL	8.2	550.0	

MAPID: 05500096000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 2 **QUARTERS/FOOTAGES:** NW NE SW

QUADRANGLE: EWING **LONGITUDE:** -88.847703 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.030087 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 623.3 **LOG TYPE:** Drillers Log

SOURCE: ROTRAMEL, DRILLER **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
407.0			UNCONSOLIDATED	40.0	0.0	
367.0			ROCK	300.0	40.0	
67.0			COAL	1.0	340.0	
66.0			ROCK	137.0	341.0	
-71.0			COAL	0.5	478.0	
-71.5			ROCK	21.5	478.5	
-93.0			COAL	1.0	500.0	
-94.0			ROCK	31.0	501.0	
-125.0			COAL	1.5	532.0	
-126.5			ROCK	10.5	533.5	
-137.0			COAL	2.0	544.0	
-139.0			ROCK	50.0	546.0	
-189.0			SHALE	6.0	596.0	SANDY
-195.0			BLACK SHALE	2.0	602.0	
-197.0			LIMESTONE	3.0	604.0	
-200.0			BLACK SHALE	3.0	607.0	
-203.0			BLACK SHALE	5.0	610.0	
-208.0	CARBONDALE	HERRIN	COAL	6.5	615.0	
-214.5	CARBONDALE		UNDERCLAY	1.3	621.5	

MAPID: 05500096000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 2 **QUARTERS/FOOTAGES:** NW NE SW

QUADRANGLE: EWING **LONGITUDE:** -88.847703 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.030087 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 621.5 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-126.5	MODESTO	PIASA	LIMESTONE	4.5	533.5	
-131.0	MODESTO		SHALE	6.0	538.0	
-137.0	CARBONDALE	DANVILLE	COAL	2.0	544.0	
-139.0	CARBONDALE		SHALE & SANDSTONE	20.0	546.0	
-159.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	566.0	
-165.0	CARBONDALE	LAWSON	SHALE	13.0	572.0	
-178.0	CARBONDALE	LAWSON	SILTY SHALE	17.0	585.0	
-195.0	CARBONDALE		BLACK SHALE	2.0	602.0	
-197.0	CARBONDALE	BRERETON	LIMESTONE	3.0	604.0	
-200.0	CARBONDALE	ANNA	BLACK SHALE	3.0	607.0	
-203.0	CARBONDALE	ENERGY	GRAY SHALE	5.0	610.0	
-208.0	CARBONDALE	HERRIN	COAL	6.5	615.0	

MAPID: 05500096000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 2 **QUARTERS/FOOTAGES:** NW NE SW

QUADRANGLE: EWING **LONGITUDE:** -88.847703 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.030087 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 407.2 **LOGGED (FT.):** 624.0 **LOG TYPE:**

SOURCE: BG MUDDYCS **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-207.8	CARBONDALE	HERRIN	COAL	6.5	615.0	

MAPID: 05500096000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 2 **QUARTERS/FOOTAGES:** NW NE SW

QUADRANGLE: EWING **LONGITUDE:** -88.847703 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.030087 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 407.2 **LOGGED (FT.):** 623.3 **LOG TYPE:** Drillers Log

SOURCE: 11 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
407.2	PLEISTOCENE		SOIL	1.0	0.0	
406.2	PLEISTOCENE		CLAY	15.0	1.0	YELLOW
391.2	BOND		SANDSTONE	24.0	16.0	YELLOW
367.2	BOND		SANDSTONE	13.0	40.0	
354.2	BOND		SHALE	20.0	53.0	
334.2	BOND		SHALE	2.0	73.0	
332.2	BOND		LIMESTONE	8.0	75.0	
324.2	BOND		SHALE	2.0	83.0	
322.2	BOND		SHALE	13.0	85.0	
309.2	BOND	CARTHAGE	LIMESTONE	8.0	98.0	
301.2	MODESTO		SANDY SHALE	20.0	106.0	
281.2	MODESTO		SANDY SHALE	28.0	126.0	
253.2	MODESTO		SHALE	10.0	154.0	
243.2	MODESTO		SANDY SHALE	30.0	164.0	
213.2	MODESTO		SHALE	22.0	194.0	
191.2	MODESTO		SHALE	8.0	216.0	
183.2	MODESTO		SANDY SHALE	39.0	224.0	
144.2	MODESTO		SANDY SHALE	20.0	263.0	
124.2	MODESTO		SANDSTONE	20.0	283.0	
104.2	MODESTO		SANDSTONE	15.0	303.0	
89.2	MODESTO		SHALE	12.0	318.0	
77.2	MODESTO		SHALE	10.0	330.0	WITH BROWN BANDS
67.2	MODESTO	CHAPEL	COAL	1.0	340.0	
66.2	MODESTO		SHALE	9.0	341.0	
57.2	MODESTO		SHALE	3.0	350.0	
54.2	MODESTO		SANDY SHALE	35.0	353.0	
19.2	MODESTO		SANDY SHALE	27.0	388.0	
-7.8	MODESTO		SANDY SHALE	31.0	415.0	
-38.8	MODESTO		SANDY SHALE	6.0	446.0	
-44.8	MODESTO		SHALE	10.0	452.0	
-54.8	MODESTO		SANDY SHALE	10.0	462.0	
-64.8	MODESTO		SHALE	6.0	472.0	
-70.8	MODESTO		COAL	0.5	478.0	
-71.3	MODESTO		SHALE	5.5	478.5	
-76.8	MODESTO		SHALE	9.0	484.0	
-85.8	MODESTO		SHALE	7.0	493.0	
-92.8	MODESTO		COAL	1.0	500.0	
-93.8	MODESTO		SHALE	2.0	501.0	
-95.8	MODESTO		SHALE	2.0	503.0	

-97.8	MODESTO		SANDSTONE	10.0	505.0
-107.8	MODESTO		SANDY SHALE	4.0	515.0
-111.8	MODESTO		SHALE	7.0	519.0
-118.8	MODESTO		SHALE	6.0	526.0
-124.8	MODESTO	DEGRAFF	COAL	1.5	532.0
-126.3	MODESTO	PIASA	LIMESTONE	4.5	533.5
-130.8	MODESTO		SHALE	3.0	538.0
-133.8	MODESTO		SHALE	3.0	541.0
-136.8	CARBONDALE	DANVILLE	COAL	2.0	544.0
-138.8	CARBONDALE		CLAYSTONE	0.5	546.0
-139.3	CARBONDALE		SHALE	1.5	546.5
-140.8	CARBONDALE		SANDY SHALE	10.0	548.0
-150.8	CARBONDALE		SANDSTONE	8.0	558.0
-158.8	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	566.0
-164.8	CARBONDALE		SHALE	4.0	572.0
-168.8	CARBONDALE		SHALE	9.0	576.0
-177.8	CARBONDALE		SANDY SHALE	17.0	585.0
-194.8	CARBONDALE		SHALE	2.0	602.0
-196.8	CARBONDALE	BRERETON	LIMESTONE	3.0	604.0
-199.8	CARBONDALE	ENERGY	SHALE	3.0	607.0
-202.8	CARBONDALE	ENERGY	SHALE	5.0	610.0
-207.8	CARBONDALE	HERRIN	COAL	6.5	615.0
-214.3	CARBONDALE		CLAYSTONE	0.5	621.5
-214.8	CARBONDALE		SHALE	1.3	622.0

MAPID: 05523656000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 2 **QUARTERS/FOOTAGES:** 330' S line, 330' W line

QUADRANGLE: EWING **LONGITUDE:** -88.852303 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.024666 **DATE COLLECTED:** 2 / 10 / 1986

SURFACE ELEVATION (FT.): 422.0 **LOGGED (FT.):** 997.0 **LOG TYPE:** Drillers Log

SOURCE: VICTOR R. GALLAGHER 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT: IRREGULAR SHAPED SECTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-235.0	CARBONDALE	HERRIN	COAL	6.0	657.0	
-309.0	CARBONDALE	SPRINGFIELD	COAL	4.0	731.0	
-393.0	CARBONDALE	HOUCHIN CREEK	COAL	2.0	815.0	
-525.0	CARBONDALE	COLCHESTER	COAL	2.0	947.0	
-546.0	SPOON	DEKOVEN	COAL	3.0	968.0	
-571.0	SPOON	DAVIS	COAL	4.0	993.0	

MAPID: 05500097000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 3 **QUARTERS/FOOTAGES:** SE SE SW NW

QUADRANGLE: EWING **LONGITUDE:** -88.867902 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.031553 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 457.0 **LOGGED (FT.):** 713.0 **LOG TYPE:** Survey Core Study

SOURCE: L. N. WOOD **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
457.0			UNCONSOLIDATED	18.0	0.0	
439.0			ROCK	68.8	18.0	
370.2			COAL	0.3	86.8	
370.0			ROCK	276.0	87.0	
94.0			COAL	0.5	363.0	SPLIT
93.5			SHALE	1.0	363.5	
92.5			COAL	0.8	364.5	SPLIT
91.7			ROCK	158.7	365.3	
-67.0			COAL	0.5	524.0	
-67.5			ROCK	27.5	524.5	
-95.0			COAL	1.0	552.0	
-96.0			ROCK	7.0	553.0	
-103.0			SHALE	5.0	560.0	
-108.0			COAL	2.5	565.0	
-110.5			ROCK	19.5	567.5	
-130.0			COAL	1.5	587.0	
-131.5			ROCK	11.5	588.5	
-143.0			CLAYSTONE & SHALE	25.0	600.0	
-168.0			COAL	0.3	625.0	
-168.3			BLACK SHALE	0.5	625.3	
-168.8			LIMESTONE	4.2	625.8	
-173.0			BLACK SHALE	2.5	630.0	
-175.5			CLAYSTONE & SHALE	7.8	632.5	
-183.3	CARBONDALE	HERRIN	COAL	6.6	640.3	
-189.9	CARBONDALE		UNDERCLAY	1.0	646.9	
-190.9	CARBONDALE		ROCK	29.6	647.9	
-220.5	CARBONDALE		COAL	1.0	677.5	
-221.5	CARBONDALE		ROCK	3.5	678.5	
-225.0	CARBONDALE		SANDSTONE	6.0	682.0	DARK SHALE PARTINGS
-231.0	CARBONDALE		SHALE	7.5	688.0	LS PARTINGS
-238.5	CARBONDALE		LIMESTONE	0.8	695.5	
-239.3	CARBONDALE		BLACK SHALE	3.0	696.3	
-242.3	CARBONDALE		BLACK SHALE	8.0	699.3	
-250.3	CARBONDALE	SPRINGFIELD	COAL	4.0	707.3	
-254.4	CARBONDALE		ROCK	1.6	711.4	

MAPID: 05500097000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 3 **QUARTERS/FOOTAGES:** SE SE SW NW

QUADRANGLE: EWING **LONGITUDE:** -88.867902 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.031553 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 457.0 **LOGGED (FT.):** 646.6 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-96.7	MODESTO	PIASA	LIMESTONE	4.0	553.7	
-100.7	MODESTO		DARK GRAY SHALE	7.0	557.7	
-107.7	CARBONDALE	DANVILLE	COAL	2.5	564.7	
-110.2	CARBONDALE		SHALE & SANDSTONE	19.5	567.2	
-129.7	CARBONDALE	ALLENBY	COAL	1.5	586.7	
-131.2	CARBONDALE		CLAYSTONE	3.0	588.2	
-134.2	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	591.2	
-139.2	CARBONDALE	LAWSON	SILTY SHALE	3.5	596.2	
-142.7	CARBONDALE	LAWSON	CALCAREOUS SHALE	25.0	599.7	
-167.7	CARBONDALE	JAMESTOWN	COAL	0.3	624.7	
-167.9	CARBONDALE		BLACK SHALE	0.5	624.9	
-168.4	CARBONDALE	BRERETON	LIMESTONE	4.3	625.4	
-172.7	CARBONDALE	ANNA	BLACK SHALE	2.5	629.7	
-175.2	CARBONDALE	ENERGY	CLAYSTONE & SHALE	7.8	632.2	
-183.0	CARBONDALE	HERRIN	COAL	6.6	640.0	

MAPID: 05500097000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 3 **QUARTERS/FOOTAGES:** SE SE SW NW

QUADRANGLE: EWING **LONGITUDE:** -88.867902 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.031553 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 457.3 **LOGGED (FT.):** 713.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0002 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-182.7	CARBONDALE	HERRIN	COAL	6.6	640.0	
-249.7	CARBONDALE	SPRINGFIELD	COAL	4.0	707.0	

MAPID: 05500097000C **VERSION:** 4 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 3 **QUARTERS/FOOTAGES:** SE SE SW NW

QUADRANGLE: EWING **LONGITUDE:** -88.867902 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.031553 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 457.0 **LOGGED (FT.):** 713.0 **LOG TYPE:** Drillers Log

SOURCE: DUQUOIN DIAMOND DRLG. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-183.0	CARBONDALE	HERRIN	COAL	6.6	640.0	
-220.0	CARBONDALE	BRIAR HILL	COAL	1.0	677.0	
-250.0	CARBONDALE	SPRINGFIELD	COAL	4.0	707.0	BLACK SHALE ROOF

MAPID: 05500097000C **VERSION:** 5 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 3 **QUARTERS/FOOTAGES:** SE SE SW NW

QUADRANGLE: EWING **LONGITUDE:** -88.867902 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.031553 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 457.3 **LOGGED (FT.):** 713.0 **LOG TYPE:** Drillers Log

SOURCE: DUQUOIN DIAMOND DRILL CO. 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
457.3	PLEISTOCENE		UNCONSOLIDATED	18.0	0.0	
439.3	BOND		SANDSTONE	35.0	18.0	
404.3	BOND		SANDSTONE	33.8	53.0	
370.5	BOND		COAL	0.3	86.8	
370.3	BOND		SANDSTONE	1.0	87.0	
369.3	BOND		SHALE	16.0	88.0	
353.3	BOND	CARTHAGE	FOSSILIFEROUS LIMESTONE	2.0	104.0	BLUE
351.3	BOND	CARTHAGE	LIMESTONE	6.0	106.0	
345.3	MODESTO		BLACK SHALE	4.0	112.0	
341.3	MODESTO		SANDY SHALE	20.0	116.0	WITH LIMESTONE PARTINGS
321.3	MODESTO		SANDSTONE	15.0	136.0	
306.3	MODESTO		SANDSTONE	12.0	151.0	WITH SANDSTONE PARTINGS
294.3	MODESTO		SANDY SHALE	26.0	163.0	WITH SANDSTONE PARTINGS
268.3	MODESTO		SANDY SHALE	10.0	189.0	
258.3	MODESTO		SHALE	28.0	199.0	
230.3	MODESTO		SHALE	5.0	227.0	WITH BROWN LIMESTONE PARTINGS
225.3	MODESTO		FOSSILIFEROUS LIMESTONE	1.0	232.0	
224.3	MODESTO		BLACK SHALE	2.5	233.0	
221.8	MODESTO		LIMESTONE	1.0	235.5	
220.8	MODESTO		SHALE	6.5	236.5	
214.3	MODESTO		CLAYSTONE	4.0	243.0	WITH LIMESTONE
210.3	MODESTO		SANDY SHALE	3.0	247.0	
207.3	MODESTO		SANDY SHALE	14.0	250.0	
193.3	MODESTO		SANDY SHALE	60.0	264.0	WITH LIGHT SAND PARTINGS
133.3	MODESTO		SANDSTONE	36.0	324.0	
97.3	MODESTO		SHALE	3.0	360.0	WITH BROWN LIMESTONE PARTINGS
94.3	MODESTO	CHAPEL	COAL	0.5	363.0	
93.8	MODESTO	CHAPEL	SANDY SHALE	1.0	363.5	
92.8	MODESTO	CHAPEL	COAL	0.8	364.5	
92.0	MODESTO		CLAYSTONE	2.8	365.3	LIGHT
89.3	MODESTO		SHALE	5.0	368.0	
84.3	MODESTO		SANDY SHALE	3.0	373.0	WITH BROWN LIMESTONE PARTINGS
81.3	MODESTO		SANDY SHALE	2.0	376.0	
79.3	MODESTO		SANDY SHALE	12.0	378.0	WITH LIGHT SAND PARTINGS
67.3	MODESTO		SANDY SHALE	119.0	390.0	
-51.7	MODESTO		CALCAREOUS SHALE	9.0	509.0	
-60.7	MODESTO		SANDY SHALE	1.0	518.0	

-61.7	MODESTO		SHALE WITH LIMESTONE	4.0	519.0	WITH LIMESTONE PARTINGS
-65.7	MODESTO		BLACK SHALE	1.0	523.0	
-66.7	MODESTO		COAL	0.5	524.0	
-67.2	MODESTO		CLAYSTONE	1.5	524.5	BROWN
-68.7	MODESTO		CLAYSTONE	3.0	526.0	DARK
-71.7	MODESTO		CLAYSTONE	2.0	529.0	WITH LIMESTONE
-73.7	MODESTO		CALCAREOUS SHALE	7.0	531.0	
-80.7	MODESTO		SANDY SHALE	14.0	538.0	
-94.7	MODESTO		COAL	1.0	552.0	
-95.7	MODESTO		SHALE	1.0	553.0	
-96.7	MODESTO	PIASA	LIMESTONE	4.0	554.0	
-100.7	MODESTO		SHALE	7.0	558.0	
-107.7	CARBONDALE	DANVILLE	COAL	2.5	565.0	
-110.2	CARBONDALE		SANDY SHALE	8.5	567.5	
-118.7	CARBONDALE		SANDY SHALE	1.5	576.0	WITH LIMESTONE PARTINGS
-120.2	CARBONDALE		SANDSTONE	9.0	577.5	LIGHT
-129.2	CARBONDALE		SHALE	0.5	586.5	
-129.7	CARBONDALE	ALLENBY	COAL	1.5	587.0	
-131.2	CARBONDALE		CLAYSTONE	3.0	588.5	DARK
-134.2	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	591.5	
-139.2	CARBONDALE		SANDY SHALE	3.5	596.5	
-142.7	CARBONDALE		SHALE	25.0	600.0	WITH BROWN LIMESTONE PARTINGS
-167.7	CARBONDALE	JAMESTOWN	COAL	0.3	625.0	
-168.0	CARBONDALE	JAMESTOWN	BLACK SHALE	0.5	625.3	
-168.5	CARBONDALE	BRERETON	LIMESTONE	4.3	625.8	
-172.7	CARBONDALE	ENERGY	BLACK SHALE	2.5	630.0	
-175.2	CARBONDALE	ENERGY	SHALE	7.8	632.5	
-183.0	CARBONDALE	HERRIN	COAL	6.6	640.3	
-189.6	CARBONDALE		CLAYSTONE	1.0	646.9	DARK
-190.6	CARBONDALE		SANDY LIMESTONE	14.1	647.9	
-204.7	CARBONDALE		SANDY SHALE	5.0	662.0	WITH LIMESTONE
-209.7	CARBONDALE		SANDY SHALE	9.0	667.0	WITH LIGHT SAND PARTINGS
-218.7	CARBONDALE		BLACK SHALE	0.5	676.0	
-219.2	CARBONDALE		LIMESTONE	1.0	676.5	
-220.2	CARBONDALE	BRIAR HILL	COAL	1.0	677.5	
-221.2	CARBONDALE		CLAYSTONE	0.8	678.5	DARK
-222.0	CARBONDALE		SANDSTONE	3.8	679.3	
-225.7	CARBONDALE		SANDSTONE	5.0	683.0	WITH DARK SHALE PARTINGS; LIGHT
-230.7	CARBONDALE		SHALE WITH LIMESTONE	7.5	688.0	WITH LIMESTONE PARTINGS
-238.2	CARBONDALE	ST. DAVID	FOSSILIFEROUS LIMESTONE	0.8	695.5	
-239.0	CARBONDALE	TURNER MINE	BLACK SHALE	3.0	696.3	
-242.0	CARBONDALE	DYKERSBURG	SHALE	8.2	699.3	
-250.1	CARBONDALE	SPRINGFIELD	COAL	4.0	707.4	
-254.1	CARBONDALE		CLAYSTONE	1.6	711.4	DARK

MAPID: 05500098000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 4 **QUARTERS/FOOTAGES:** NE NW SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.88711 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.030668 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 448.0 **LOGGED (FT.):** 674.0 **LOG TYPE:** Drillers Log

SOURCE: NO COMPANY **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
448.0			UNCONSOLIDATED	47.0	0.0	
401.0			ROCK	325.0	47.0	
76.0			COAL	1.5	372.0	
75.0			ROCK	167.8	373.0	
-92.8			COAL	1.3	540.8	
-94.0			ROCK	98.0	542.0	
-192.0			SHALE	3.3	640.0	SANDY
-195.3			COAL	0.5	643.3	BONEY
-195.8			BLACK SHALE	1.0	643.8	
-196.8			LIMESTONE	4.2	644.8	
-201.0			BLACK SHALE	3.0	649.0	
-204.0			SHALE	13.8	652.0	
-217.8	CARBONDALE	HERRIN	COAL	6.8	665.8	
-224.7	CARBONDALE		SHALE	1.3	672.7	

MAPID: 05500098000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 4 **QUARTERS/FOOTAGES:** NE NW SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.88711 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.030668 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 447.0 **LOGGED (FT.):** 672.9 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-122.9	CARBONDALE		SHALE & SANDSTONE	50.0	569.9	
-172.9	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	619.9	
-177.4	CARBONDALE	LAWSON	SILTY SHALE	6.3	624.4	
-183.7	CARBONDALE	LAWSON	GRAY SHALE	2.5	630.7	
-186.2	CARBONDALE	LAWSON	DARK GRAY SHALE	2.0	633.2	
-188.2	CARBONDALE	LAWSON	BLACK SHALE	5.0	635.2	
-193.2	CARBONDALE	LAWSON	SILTY SHALE	3.0	640.2	
-196.2	CARBONDALE	CONANT	CALCAREOUS SHALE	0.3	643.2	
-196.4	CARBONDALE	JAMESTOWN	BONE COAL	0.5	643.4	
-196.9	CARBONDALE		BLACK SHALE	1.0	643.9	
-197.9	CARBONDALE	BRERETON	LIMESTONE	4.3	644.9	
-202.2	CARBONDALE	ANNA	BLACK SHALE	3.0	649.2	
-205.2	CARBONDALE	ENERGY	GRAY SHALE	13.8	652.2	
-219.0	CARBONDALE	HERRIN	COAL	6.9	666.0	

MAPID: 05500098000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 4 **QUARTERS/FOOTAGES:** NE NW SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.88711 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.030668 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 447.1 **LOGGED (FT.):** 674.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0003 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-218.9	CARBONDALE	HERRIN	COAL	6.8	666.0	

MAPID: 05500098000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 4 **QUARTERS/FOOTAGES:** NE NW SW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.88711 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.030668 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 447.1 **LOGGED (FT.):** 674.0 **LOG TYPE:** Drillers Log

SOURCE: 3 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
447.1	PLEISTOCENE		CLAY	25.0	0.0	YELLOW
422.1	PLEISTOCENE		CLAY	22.0	25.0	BLUE
400.1	BOND		SANDSTONE	10.0	47.0	
390.1	BOND		SHALE	37.0	57.0	
353.1	BOND		SHALE	25.0	94.0	
328.1	BOND	CARTHAGE	LIMESTONE	7.0	119.0	
321.1	MODESTO		SHALE	3.2	126.0	
317.9	MODESTO		SHALE	7.8	129.2	
310.1	MODESTO		SHALE	3.0	137.0	
307.1	MODESTO		LIMESTONE	3.0	140.0	
304.1	MODESTO		LIMESTONE AND SANDSTONE	6.0	143.0	
298.1	MODESTO		SANDY SHALE	45.0	149.0	
253.1	MODESTO		SANDY SHALE	26.0	194.0	
227.1	MODESTO		SHALE	22.0	220.0	
205.1	MODESTO		SHALE	2.0	242.0	
203.1	MODESTO		SHALE	2.0	244.0	
201.1	MODESTO		LIMESTONE	1.0	246.0	
200.1	MODESTO		SHALE	6.0	247.0	
194.1	MODESTO		SHALE	15.0	253.0	
179.1	MODESTO		SHALE	6.0	268.0	
173.1	MODESTO		SANDY SHALE	17.0	274.0	
156.1	MODESTO		SANDY SHALE	45.0	291.0	
111.1	MODESTO		SANDY SHALE	20.0	336.0	
91.1	MODESTO		SHALE	9.0	356.0	
82.1	MODESTO		SHALE	7.0	365.0	WITH GRAY ROCKS
75.1	MODESTO	CHAPEL	COAL	1.5	372.0	
73.6	MODESTO		SHALE	0.5	373.5	
73.1	MODESTO		SHALE	10.0	374.0	
63.1	MODESTO		SANDY SHALE	18.0	384.0	
45.1	MODESTO		SANDY SHALE	10.0	402.0	
35.1	MODESTO		SHALE	18.0	412.0	
17.1	MODESTO		SHALE	28.0	430.0	
-10.9	MODESTO		SHALE	39.0	458.0	
-49.9	MODESTO		SHALE	9.5	497.0	
-59.4	MODESTO		SHALE	1.7	506.5	
-61.1	MODESTO		SHALE	1.3	508.2	
-62.4	MODESTO		SANDY SHALE	1.5	509.5	
-63.9	MODESTO		SANDSTONE	2.0	511.0	

-65.9	MODESTO		SHALE	27.8	513.0	
-93.7	CARBONDALE	DANVILLE	COAL	1.3	540.8	
-94.9	CARBONDALE		SHALE	9.0	542.0	
-103.9	CARBONDALE		SHALE	2.0	551.0	
-105.9	CARBONDALE		SHALE	7.0	553.0	
-112.9	CARBONDALE		SANDY SHALE	10.0	560.0	
-122.9	CARBONDALE		SANDY SHALE	28.0	570.0	
-150.9	CARBONDALE		SANDSTONE	10.0	598.0	
-160.9	CARBONDALE		SANDSTONE	1.8	608.0	
-162.7	CARBONDALE		SANDY SHALE	5.8	609.8	
-168.5	CARBONDALE		SHALE	1.7	615.6	
-170.2	CARBONDALE		SANDY SHALE	2.5	617.3	
-172.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	619.8	
-177.2	CARBONDALE		SANDY SHALE	6.3	624.3	
-183.4	CARBONDALE		SHALE	2.5	630.5	
-185.9	CARBONDALE		SHALE	2.0	633.0	
-187.9	CARBONDALE		SHALE	5.0	635.0	WITH GRAY ROCK
-192.9	CARBONDALE		SANDY SHALE	3.0	640.0	
-195.9	CARBONDALE		SHALE	0.3	643.0	
-196.2	CARBONDALE	JAMESTOWN	BONE COAL	0.5	643.3	
-196.7	CARBONDALE		SHALE	1.0	643.8	
-197.7	CARBONDALE	BRERETON	LIMESTONE	4.3	644.8	DARK
-201.9	CARBONDALE	ENERGY	SHALE	3.0	649.0	
-204.9	CARBONDALE	ENERGY	SHALE	11.0	652.0	
-215.9	CARBONDALE	ENERGY	SHALE	2.8	663.0	
-218.7	CARBONDALE	HERRIN	COAL	6.8	665.8	
-225.6	CARBONDALE		SHALE	1.3	672.7	

MAPID: 05501483000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 4 **QUARTERS/FOOTAGES:** SW NW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.880025 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.035917 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 462.0 **LOGGED (FT.):** 2594.0 **LOG TYPE:** Electric Log

SOURCE: DUNCAN, WALTER **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-204.0	CARBONDALE	HERRIN	COAL	6.0	666.0	
-237.0	CARBONDALE	BRIAR HILL	COAL	-	699.0	
-267.0	CARBONDALE	SPRINGFIELD	COAL	3.0	729.0	SHALE & SILTSTONE ROOF
-345.0	CARBONDALE	HOUCHIN CREEK	COAL	-	807.0	

MAPID: 05502024000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 5 **QUARTERS/FOOTAGES:** 986' N line, 178' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.90816 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.034934 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 661.0 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. C-152 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-109.3	MODESTO	PIASA	LIMESTONE	2.6	569.3	
-111.8	MODESTO		DARK GRAY SHALE	5.8	571.8	
-117.6	CARBONDALE	DANVILLE	COAL	2.6	577.6	
-120.2	CARBONDALE		GRAY SHALE	15.8	580.2	
-135.9	CARBONDALE	GALUM	LIMESTONE	1.7	595.9	
-137.6	CARBONDALE		GRAY SHALE	6.3	597.6	
-143.9	CARBONDALE	BANKSTON FORK	LIMESTONE	3.8	603.9	
-147.8	CARBONDALE	LAWSON	GRAY SHALE	15.7	607.8	
-163.4	CARBONDALE	LAWSON	DARK GRAY SHALE	15.0	623.4	
-178.4	CARBONDALE	LAWSON	SILTSTONE	2.0	638.4	
-180.4	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.9	640.4	
-181.3	CARBONDALE	JAMESTOWN	BONE COAL	0.5	641.3	
-181.8	CARBONDALE		DARK GRAY SHALE	5.0	641.8	
-186.8	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	7.1	646.8	
-193.9	CARBONDALE	ANNA	BLACK SHALE	1.1	653.9	
-195.0	CARBONDALE	HERRIN	COAL	6.0	655.0	

MAPID: 05501072000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 6 **QUARTERS/FOOTAGES:** 510' S line, 50' W line of SE NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.913289 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.032564 **DATE COLLECTED:** 11 / 24 / 1944

SURFACE ELEVATION (FT.): 449.0 **LOGGED (FT.):** 648.8 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 38 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-115.6	MODESTO	PIASA	LIMESTONE/UNDERCLAY	0.7	564.6	
-116.3	MODESTO		DARK GRAY SHALE	3.1	565.3	
-119.3	CARBONDALE	DANVILLE	COAL	2.0	568.3	
-121.3	CARBONDALE		GRAY SHALE	12.4	570.3	
-133.8	CARBONDALE	ALLENBY	BONE COAL	0.5	582.8	
-134.3	CARBONDALE		CLAYSTONE	4.9	583.3	
-139.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.6	588.2	
-143.8	CARBONDALE	LAWSON	SILTY SHALE	7.7	592.8	
-151.4	CARBONDALE	LAWSON	SANDSTONE	0.5	600.4	
-151.9	CARBONDALE	LAWSON	DARK GRAY SHALE	22.3	600.9	
-174.3	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	1.6	623.3	
-175.8	CARBONDALE	JAMESTOWN	BONE COAL	0.3	624.8	
-176.1	CARBONDALE		BLACK SHALE	1.5	625.1	
-177.6	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	3.2	626.6	
-180.8	CARBONDALE	ANNA	BLACK SHALE	3.4	629.8	
-184.2	CARBONDALE	ENERGY	DARK GRAY SHALE	8.8	633.2	
-193.0	CARBONDALE	HERRIN	COAL	6.8	642.0	

MAPID: 05523147000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 6 **QUARTERS/FOOTAGES:** 2300' N line, 1000' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.92602 **GEOLOGIST:** J MCBETH

CONFIDENTIAL: N **LATITUDE:** 38.031549 **DATE COLLECTED:** 5 / 28 / 1981

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 702.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP RLC 4 **WELL TYPE:** Coal Test

COMMENT: PERMIT 29;MINE #24

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-			UNKNOWN	585.0	0.0	LOG DOES NOT LIST
-	CARBONDALE		SILTY SHALE	4.5	585.0	WITH SOME PYRITE NODULES
-	CARBONDALE		SHALE	13.7	589.5	DARK GRAY WITH SOME SIDERITE BANDS
-	CARBONDALE		SHALE	0.6	603.2	CALCAREOUS, DARK GRAY, COAL STREAKS
-	CARBONDALE	BRERETON	LIMESTONE	4.3	603.8	FOSSILS, VERY HARD, DENSE
-	CARBONDALE	ANNA	SHALE	2.6	608.1	SLATY, BLACK, WITH LIMESTONE BEDS
-	CARBONDALE	ENERGY	SILTY SHALE	8.4	610.7	SS INTERBEDS, FOSSILS, PYRITE NODULES
-	CARBONDALE	ENERGY	SILTY SHALE	5.9	619.0	SIDERITE BANDS, PYRITE
-	CARBONDALE	HERRIN	COAL	3.6	624.8	
-	CARBONDALE	HERRIN	PYRITE	0.1	628.4	
-	CARBONDALE	HERRIN	COAL	2.6	628.5	
-	CARBONDALE	HERRIN	PYRITE	0.1	631.1	
-	CARBONDALE	HERRIN	COAL	1.1	631.2	
-	CARBONDALE		CLAYSTONE	1.4	632.3	SLICKENSIDES
-	CARBONDALE		LIMESTONE	0.8	633.7	SHALE STREAKS, PYRITE NODULES AT TOP
-	CARBONDALE		CLAYSTONE	3.6	634.4	SILTY, LIMESTONE NODULES, SOME SLICKS
-	CARBONDALE		CLAYSTONE	2.0	638.0	SOME SLICKENSIDES, FIRM
-	CARBONDALE		SHALE	11.5	640.0	WITH SILTSTONE NODULES
-	CARBONDALE		SHALE	6.2	651.5	DARK GRAY WITH LIGHT GRAY SANDSTONE BEDS
-	CARBONDALE	BRIAR HILL	COAL	0.9	657.7	
-	CARBONDALE		SILTY SHALE	1.7	658.6	PYRITIC, WITH COAL STREAKS
-	CARBONDALE		SANDSTONE/SHALE	3.3	660.3	
-	CARBONDALE		SANDSTONE	2.5	663.6	ARGILLACEOUS, POROUS, COAL STREAKS
-	CARBONDALE		SHALE	2.9	666.1	WITH SANDSTONE
-	CARBONDALE		SHALE	7.0	668.9	WITH SIDERITE BANDS AND NODULES
-	CARBONDALE		SHALE	1.0	675.9	CALCAREOUS, BRACHIOPODS, CRINOIDS
-	CARBONDALE	ST. DAVID	LIMESTONE	1.4	676.9	FOSSILIFEROUS
-	CARBONDALE	ST. DAVID	SHALE	0.4	678.3	FOSSILS, PYRITE
-	CARBONDALE	TURNER MINE	SHALE	3.2	678.6	CALCAREOUS, BLACK, SOME LIMESTONE BEDS
-	CARBONDALE	SPRINGFIELD	COAL	1.1	681.8	
-	CARBONDALE	SPRINGFIELD	SHALE	0.0	682.9	PARTING
-	CARBONDALE	SPRINGFIELD	COAL	0.2	683.0	
-	CARBONDALE	SPRINGFIELD	SHALE	0.0	683.2	
-	CARBONDALE	SPRINGFIELD	COAL	2.2	683.2	
-	CARBONDALE		CLAYSTONE	2.7	685.3	ROOTED, SLICKENSIDES, PYRITE NODULES
-	CARBONDALE		CLAYSTONE	2.1	688.0	ROOTED, PYRITIC, LIMESTONE NODULES
-	CARBONDALE		SHALE	11.9	690.1	WITH SANDSTONE; BURROWS, SIDERITIC

MAPID: 05501073000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 7 **QUARTERS/FOOTAGES:** 300' S line, 50' W line of SW NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.929081 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.017231 **DATE COLLECTED:** 11 / 14 / 1944

SURFACE ELEVATION (FT.): 440.0 **LOGGED (FT.):** 663.8 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 37 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-116.9	MODESTO	PIASA	LIMESTONE	3.8	556.9	
-120.7	MODESTO		DARK GRAY SHALE	6.9	560.7	
-127.6	CARBONDALE	DANVILLE	COAL	2.0	567.6	
-129.6	CARBONDALE		SHALE & SANDSTONE	19.5	569.6	
-149.1	CARBONDALE	ALLENBY	BONE COAL	0.5	589.1	
-149.6	CARBONDALE		CLAYSTONE	2.2	589.6	
-151.8	CARBONDALE	BANKSTON FORK	LIMESTONE	5.1	591.8	
-156.8	CARBONDALE	LAWSON	GRAY SHALE	5.4	596.8	
-162.3	CARBONDALE	LAWSON	DARK GRAY SHALE	25.0	602.3	
-187.3	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	4.0	627.3	
-191.3	CARBONDALE	ENERGY	DARK GRAY SHALE	24.8	631.3	
-216.0	CARBONDALE	HERRIN	COAL	7.8	656.0	

MAPID: 05501485000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 7 **QUARTERS/FOOTAGES:** 330' N line, 2606' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.91839 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.022911 **DATE COLLECTED:** 12 / 0 / 1950

SURFACE ELEVATION (FT.): 447.0 **LOGGED (FT.):** 1730.0 **LOG TYPE:** Electric Log

SOURCE: DUNCAN, WALTER **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-421.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	868.0	
-501.0	SPOON	DAVIS	UNCLASSIFIED	-	948.0	
-1283.0	BASE OF PENN.		UNCLASSIFIED	-	1730.0	

MAPID: 05501485000C **VERSION:** 2 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 7 **QUARTERS/FOOTAGES:** 330' N line, 2606' E line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.91839 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.022911 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 447.0 **LOGGED (FT.):** 2991.0 **LOG TYPE:** Electric Log

SOURCE: DUNCAN, WALTER **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-179.0	CARBONDALE	HERRIN	COAL	5.0	626.0	
-225.0	CARBONDALE	BRIAR HILL	COAL	-	672.0	
-251.0	CARBONDALE	SPRINGFIELD	COAL	3.0	698.0	BLACK SHALE & LIMESTONE ROOF
-323.0	CARBONDALE	HOUCHIN CREEK	COAL	-	770.0	

MAPID: 05502196000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 8 **QUARTERS/FOOTAGES:** 330' N line, 720' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.906774 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.023155 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 458.0 **LOGGED (FT.):** 2989.0 **LOG TYPE:** Electric Log

SOURCE: REHN, E. E. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-195.0	CARBONDALE	HERRIN	COAL	7.0	653.0	
-250.0	CARBONDALE	SPRINGFIELD	COAL	4.0	708.0	BLACK SHALE & LIMESTONE ROOF
-326.0	CARBONDALE	HOUCHIN CREEK	COAL	-	784.0	

MAPID: 05502196000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 8 **QUARTERS/FOOTAGES:** 330' N line, 720' W line

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.906774 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.023155 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 458.0 **LOGGED (FT.):** 660.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-102.0	MODESTO	PIASA	LIMESTONE	5.0	560.0	
-107.0	MODESTO		DARK GRAY SHALE	4.0	565.0	
-111.0	CARBONDALE	DANVILLE	COAL	1.0	569.0	
-112.0	CARBONDALE		SHALE & SANDSTONE	27.5	570.0	
-139.5	CARBONDALE	ALLENBY	BONE COAL	0.5	597.5	
-140.0	CARBONDALE		CLAYSTONE	2.0	598.0	
-142.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	600.0	
-146.0	CARBONDALE	LAWSON	SHALE	26.0	604.0	
-172.0	CARBONDALE	BRERETON	LIMESTONE	7.0	630.0	
-179.0	CARBONDALE	ANNA	BLACK SHALE	3.0	637.0	
-182.0	CARBONDALE	ENERGY	GRAY SHALE	13.0	640.0	
-195.0	CARBONDALE	HERRIN	COAL	7.0	653.0	

MAPID: 05500099000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 9 **QUARTERS/FOOTAGES:** SE SE SW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.877417 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.017058 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 441.4 **LOGGED (FT.):** 640.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0012 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-189.6	CARBONDALE	HERRIN	COAL	6.4	631.0	

MAPID: 05500099000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 9 **QUARTERS/FOOTAGES:** SE SE SW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.877417 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.017058 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 441.0 **LOGGED (FT.):** 639.7 **LOG TYPE:** Drillers Log

SOURCE: ROTRAMEL **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
441.0			UNCONSOLIDATED	43.0	0.0	
398.0			ROCK	308.0	43.0	
90.0			COAL	1.0	351.0	
89.0			ROCK	154.1	352.0	
-65.1			COAL	1.1	506.1	
-66.2			ROCK	97.8	507.2	
-164.0			SHALE	16.5	605.0	
-180.5			COAL	0.5	621.5	
-181.0			BLACK SHALE	2.5	622.0	
-183.5			LIMESTONE	4.5	624.5	
-188.0			BLACK SHALE	2.3	629.0	
-190.3	CARBONDALE	HERRIN	COAL	6.4	631.3	
-196.8	CARBONDALE		SHALE	1.9	637.8	

MAPID: 05500099000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 9 **QUARTERS/FOOTAGES:** SE SE SW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.877417 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.017058 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 441.4 **LOGGED (FT.):** 639.7 **LOG TYPE:** Drillers Log

SOURCE: 12 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
441.4	PLEISTOCENE		SOIL	1.0	0.0	
440.4	PLEISTOCENE		CLAY	15.0	1.0	YELLOW
425.4	BOND		SANDSTONE	27.0	16.0	
398.4	BOND		SHALE	27.0	43.0	
371.4	BOND		SHALE	18.0	70.0	
353.4	BOND		SHALE	6.0	88.0	
347.4	BOND	CARTHAGE	LIMESTONE	6.0	94.0	
341.4	MODESTO		SHALE	2.0	100.0	
339.4	MODESTO		SHALE	6.0	102.0	
333.4	MODESTO		SHALE	7.0	108.0	
326.4	MODESTO		LIMESTONE	3.0	115.0	
323.4	MODESTO		SANDY SHALE	21.0	118.0	
302.4	MODESTO		SANDY SHALE	37.0	139.0	
265.4	MODESTO		SANDY SHALE	43.0	176.0	
222.4	MODESTO		LIMESTONE	1.0	219.0	
221.4	MODESTO		SHALE	2.0	220.0	
219.4	MODESTO		SHALE	10.0	222.0	
209.4	MODESTO		SANDY SHALE	37.0	232.0	
172.4	MODESTO		SANDY SHALE	49.0	269.0	
123.4	MODESTO		SANDY SHALE	20.0	318.0	
103.4	MODESTO		SHALE	9.5	338.0	
93.9	MODESTO		SHALE	3.5	347.5	
90.4	MODESTO		COAL	1.0	351.0	
89.4	MODESTO		SHALE	5.0	352.0	
84.4	MODESTO		SHALY SANDSTONE	27.0	357.0	
57.4	MODESTO		SHALE	10.0	384.0	
47.4	MODESTO		SANDY SHALE	18.0	394.0	
29.4	MODESTO		SANDY SHALE	24.0	412.0	
5.4	MODESTO		SANDY SHALE	11.0	436.0	
-5.6	MODESTO		SHALE	18.0	447.0	
-23.6	MODESTO		SHALE	10.0	465.0	
-33.6	MODESTO		SHALY SANDSTONE	10.0	475.0	
-43.6	MODESTO		SHALE	17.0	485.0	
-60.6	MODESTO		SHALE	4.1	502.0	
-64.7	CARBONDALE	DANVILLE	COAL	1.1	506.1	
-65.8	CARBONDALE		SOFT SHALE	12.8	507.2	
-78.6	CARBONDALE		SANDY SHALE	18.0	520.0	WITH SANDSTONE PARTINGS
-96.6	CARBONDALE		SANDY SHALE	27.0	538.0	
-123.6	CARBONDALE		SANDY SHALE	28.0	565.0	

-151.6	CARBONDALE		SANDY SHALE	16.0	593.0
-167.6	CARBONDALE		SANDY SHALE	12.0	609.0
-179.6	CARBONDALE		CALCAREOUS SHALE	0.5	621.0
-180.1	CARBONDALE	JAMESTOWN	COAL	0.5	621.5
-180.6	CARBONDALE		SHALE	2.5	622.0
-183.1	CARBONDALE	BRERETON	LIMESTONE	4.5	624.5
-187.6	CARBONDALE		SHALE	2.3	629.0
-189.9	CARBONDALE	HERRIN	COAL	1.2	631.3
-191.1	CARBONDALE	HERRIN	COAL	5.3	632.5
-196.4	CARBONDALE		SANDY SHALE	1.9	637.8

MAPID: 05500100000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 9 **QUARTERS/FOOTAGES:** SW SE SE SE

QUADRANGLE: EWING **LONGITUDE:** -88.873967 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.009654 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): 425.7 **LOGGED (FT.):** 619.0 **LOG TYPE:**

SOURCE: C W F CC 0001 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-185.3	CARBONDALE	HERRIN	COAL	6.8	611.0	

MAPID: 05500100000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 9 **QUARTERS/FOOTAGES:** SW SE SE SE

QUADRANGLE: EWING **LONGITUDE:** -88.873967 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.009654 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): 426.0 **LOGGED (FT.):** 619.0 **LOG TYPE:** Drillers Log

SOURCE: SULLIVAN MCHY C **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
426.0			UNCONSOLIDATED	19.0	0.0	
407.0			ROCK	80.6	19.0	
326.4			COAL	0.1	99.6	
326.3			ROCK	236.6	99.7	
89.7			COAL	0.4	336.3	
89.2			ROCK	143.7	336.8	
-54.5			COAL	1.0	480.5	
-55.5			ROCK	41.0	481.5	
-96.5			COAL	0.8	522.5	
-97.3			ROCK	13.2	523.3	
-110.5			COAL	2.2	536.5	
-112.7			ROCK	17.8	538.7	
-130.5			COAL	0.6	556.5	
-131.1			ROCK	19.9	557.1	
-151.0			BLACK SHALE	22.0	577.0	
-173.0			LIMESTONE	3.6	599.0	
-176.6			BLACK SHALE	3.0	602.6	
-179.6			BLACK SHALE	5.2	605.6	
-184.8	CARBONDALE	HERRIN	COAL	6.7	610.8	BLUE BAND .08'
-191.5	CARBONDALE		UNDERCLAY	1.5	617.5	

MAPID: 05500100000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 9 **QUARTERS/FOOTAGES:** SW SE SE SE

QUADRANGLE: EWING **LONGITUDE:** -88.873967 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.009654 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): 425.7 **LOGGED (FT.):** 619.0 **LOG TYPE:** Drillers Log

SOURCE: SULLIVAN MACHINERY CO. 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
425.7	PLEISTOCENE		UNCONSOLIDATED	4.0	0.0	
421.7	PLEISTOCENE		SANDSTONE	3.0	4.0	
418.7	PLEISTOCENE		SANDSTONE	12.0	7.0	
406.7	BOND		SOFT SHALE	5.5	19.0	
401.2	BOND		SANDY SHALE	5.5	24.5	
395.7	BOND		SANDSTONE	14.0	30.0	WITH SHALE PARTINGS
381.7	BOND		SANDY SHALE	14.0	44.0	
367.7	BOND		SHALE	22.0	58.0	
345.7	BOND	CARTHAGE	LIMESTONE	7.0	80.0	
338.7	MODESTO		SHALE	0.8	87.0	
337.9	MODESTO		SHALE	3.0	87.8	
334.9	MODESTO		SHALE	4.3	90.8	
330.7	MODESTO		SHALE	4.6	95.0	
326.1	MODESTO		COAL	0.1	99.6	
326.0	MODESTO		CLAYSTONE	2.7	99.7	
323.4	MODESTO		SANDY SHALE	17.7	102.3	
305.7	MODESTO		SANDY SHALE	54.0	120.0	
251.7	MODESTO		SHALE	9.0	174.0	
242.7	MODESTO		SHALE	18.0	183.0	WITH HARD BANDS
224.7	MODESTO		SHALE	0.5	201.0	
224.2	MODESTO		SHALE	2.0	201.5	
222.2	MODESTO		LIMESTONE	0.7	203.5	
221.5	MODESTO		SHALE WITH LIMESTONE	24.8	204.2	WITH LIMESTONE BANDS
196.7	MODESTO		SANDY SHALE	31.0	229.0	
165.7	MODESTO		SANDSTONE	9.5	260.0	WITH SHALE PARTINGS
156.2	MODESTO		SANDY SHALE	10.0	269.5	
146.2	MODESTO		SANDSTONE	20.5	279.5	WITH SHALE PARTINGS
125.7	MODESTO		SANDY SHALE	12.0	300.0	
113.7	MODESTO		SANDSTONE	13.0	312.0	
100.7	MODESTO		SHALE	5.5	325.0	WITH HARD BANDS
95.2	MODESTO		SHALE	1.0	330.5	
94.2	MODESTO		SHALE	0.8	331.5	
93.4	MODESTO		LIMESTONE	1.4	332.3	
91.9	MODESTO		SHALE	2.6	333.8	
89.4	MODESTO		COAL	0.4	336.3	
88.9	MODESTO		CLAYSTONE	0.3	336.8	
88.7	MODESTO		SHALE	5.0	337.0	
83.7	MODESTO		SANDY SHALE	50.0	342.0	
33.7	MODESTO		SHALE	67.5	392.0	

-33.8	MODESTO		SANDSTONE	3.0	459.5	
-36.8	MODESTO		SHALE	18.0	462.5	
-54.8	MODESTO		COAL	1.0	480.5	
-55.8	MODESTO		SHALE	16.5	481.5	
-72.3	MODESTO		SANDY SHALE	3.0	498.0	
-75.3	MODESTO		SHALE WITH LIMESTONE	13.5	501.0	WITH LIMESTONE BANDS
-88.8	MODESTO		SHALE	8.0	514.5	DARK BLUE
-96.8	MODESTO		BONE COAL	0.8	522.5	
-97.6	MODESTO		SHALE	3.5	523.3	
-101.1	MODESTO	PIASA	LIMESTONE	3.3	526.8	
-104.3	MODESTO		SHALE	6.5	530.0	
-110.8	CARBONDALE	DANVILLE	COAL	2.2	536.5	
-113.0	CARBONDALE		SHALE	0.3	538.7	
-113.3	CARBONDALE		SHALE	9.0	539.0	
-122.3	CARBONDALE		SANDSTONE	7.0	548.0	
-129.3	CARBONDALE		SHALE	1.5	555.0	
-130.8	CARBONDALE	ALLENBY	COAL	0.6	556.5	
-131.4	CARBONDALE		SHALE	1.9	557.1	
-133.3	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	559.0	
-138.3	CARBONDALE		SANDY SHALE	2.0	564.0	
-140.3	CARBONDALE		SANDY SHALE	6.0	566.0	WITH LIMESTONE BANDS
-146.3	CARBONDALE		SHALE	5.0	572.0	
-151.3	CARBONDALE		SHALE	22.0	577.0	WITH HARD BANDS
-173.3	CARBONDALE	BRERETON	LIMESTONE	3.6	599.0	
-176.9	CARBONDALE	ENERGY	SHALE	3.0	602.6	
-179.9	CARBONDALE	ENERGY	SHALE	5.2	605.6	
-185.1	CARBONDALE	HERRIN	COAL	6.0	610.8	
-191.1	CARBONDALE	HERRIN	CLAYSTONE	0.1	616.8	CLAY
-191.1	CARBONDALE	HERRIN	COAL	0.7	616.8	
-191.8	CARBONDALE		CLAYSTONE	1.5	617.5	

MAPID: 05500101000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 9 **QUARTERS/FOOTAGES:** SE NW NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.887248 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.02147 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): 418.8 **LOGGED (FT.):** 634.0 **LOG TYPE:** Drillers Log

SOURCE: HARRY STAMPER, BENTON 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
418.8	PLEISTOCENE		CLAY	8.0	0.0	YELLOW
410.8	PLEISTOCENE		SAND	2.0	8.0	
408.8	PLEISTOCENE		CLAY & GRAVEL	3.0	10.0	WITH GRAVEL
405.8	BOND		SANDSTONE	7.0	13.0	
398.8	BOND		SOFT SHALE	5.0	20.0	
393.8	BOND		SOFT SHALE	6.0	25.0	
387.8	BOND		SANDY SHALE	30.0	31.0	WITH SANDSTONE BANDS
357.8	BOND		SANDY SHALE	15.0	61.0	
342.8	BOND		SHALE	2.0	76.0	
340.8	BOND	CARTHAGE	LIMESTONE	5.0	78.0	
335.8	MODESTO		SHALE	3.0	83.0	
332.8	MODESTO		SANDY SHALE	8.0	86.0	
324.8	MODESTO		COAL	0.1	94.0	
324.7	MODESTO		SOFT SHALE	2.9	94.1	
321.8	MODESTO		SANDY SHALE	98.0	97.0	
223.8	MODESTO		SHALE	2.0	195.0	
221.8	MODESTO		LIMESTONE	1.0	197.0	
220.8	MODESTO		SANDY SHALE	12.0	198.0	
208.8	MODESTO		CALCAREOUS SHALE	8.0	210.0	WITH LIMESTONE
200.8	MODESTO		SANDY SHALE	12.0	218.0	WITH SANDSTONE PARTINGS
188.8	MODESTO		SANDSTONE	3.0	230.0	
185.8	MODESTO		SANDY SHALE	34.0	233.0	SANDY WITH SANDSTONE
151.8	MODESTO		SANDSTONE/SHALE	43.0	267.0	
108.8	MODESTO		SANDY SHALE	16.0	310.0	
92.8	MODESTO		SHALE	3.0	326.0	
89.8	MODESTO		SHALE	2.0	329.0	
87.8	MODESTO		COAL	0.5	331.0	
87.3	MODESTO		SOFT SHALE	3.5	331.5	
83.8	MODESTO		SANDY SHALE	34.0	335.0	WITH SANDSTONE PARTINGS
49.8	MODESTO		SHALE	89.0	369.0	
-39.2	MODESTO		CALCAREOUS SHALE	1.0	458.0	
-40.2	MODESTO		SANDSTONE/SHALE	5.0	459.0	
-45.2	MODESTO		SHALE WITH LIMESTONE	20.0	464.0	WITH LIMESTONE BANDS
-65.2	MODESTO		SHALE	3.5	484.0	
-68.7	MODESTO		COAL	1.0	487.5	
-69.7	MODESTO		LIMESTONE	4.5	488.5	PIASA?
-74.2			SANDY SHALE	12.0	493.0	
-86.2			SANDY SHALE	31.0	505.0	

-117.2			SANDY SHALE	19.0	536.0	SANDY WITH SANDSTONE
-136.2			SANDSTONE WITH COAL	5.0	555.0	WITH COAL PARTINGS -- ALLENBY? #7?
-141.2			SHALE	1.5	560.0	
-142.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	561.5	
-144.2	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	563.0	
-147.2	CARBONDALE		SHALE	6.0	566.0	
-153.2	CARBONDALE		SHALE	16.0	572.0	DARK BLUE
-169.2	CARBONDALE		SANDSTONE	2.0	588.0	
-171.2	CARBONDALE		SANDY SHALE	1.2	590.0	
-172.4	CARBONDALE	JAMESTOWN	COAL	0.3	591.2	
-172.6	CARBONDALE		SHALE	0.6	591.4	
-173.2	CARBONDALE	BRERETON	LIMESTONE	2.0	592.0	
-175.2	CARBONDALE		SHALE	2.0	594.0	
-177.2	CARBONDALE		SHALE	20.5	596.0	WITH BROWN BANDS
-197.7	CARBONDALE	HERRIN	COAL	7.3	616.5	
-205.0	CARBONDALE		CLAYSTONE	1.3	623.8	
-206.2	CARBONDALE		LIMESTONE & SHALE	2.0	625.0	
-208.2	CARBONDALE		SHALE & SANDSTONE	3.0	627.0	
-211.2	CARBONDALE		SANDSTONE	4.0	630.0	

MAPID: 05500101000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 9 **QUARTERS/FOOTAGES:** SE NW NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.887248 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.02147 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): 418.9 **LOGGED (FT.):** 634.0 **LOG TYPE:**

SOURCE: BG MUDDYCS 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-198.1	CARBONDALE	HERRIN	COAL	7.3	617.0	

MAPID: 05501798000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 9 **QUARTERS/FOOTAGES:** NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.886108 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.020503 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): 426.0 **LOGGED (FT.):** 607.0 **LOG TYPE:** Drillers Log

SOURCE: BENTON C C **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
426.0			UNCONSOLIDATED	68.0	0.0	
358.0			ROCK	24.2	68.0	
333.8			COAL	0.4	92.2	
333.4			ROCK	76.0	92.6	
257.4			COAL	1.1	168.6	
256.3			ROCK	93.0	169.7	
163.3			COAL	0.8	262.7	
162.5			ROCK	161.5	263.5	
1.0			COAL	0.7	425.0	
0.3			ROCK	37.5	425.7	
-37.2			COAL	0.8	463.2	
-38.0			ROCK	10.5	464.0	
-48.5			COAL	1.8	474.5	
-50.3			ROCK	10.5	476.3	
-60.8			COAL	0.2	486.8	
-61.0			ROCK	27.0	487.0	
-88.0			BLACK SHALE	21.0	514.0	
-109.0			LIMESTONE	5.0	535.0	
-114.0			SHALE	3.0	540.0	
-117.0			BLACK SHALE	14.1	543.0	
-131.1	CARBONDALE	HERRIN	COAL	7.5	557.1	
-138.6	CARBONDALE		SHALE	1.4	564.6	
-140.0	CARBONDALE		ROCK	14.0	566.0	
-154.0	CARBONDALE		BLACK SHALE	15.0	580.0	
-169.0	CARBONDALE		LIMESTONE	1.0	595.0	
-170.0	CARBONDALE		BLACK SHALE	4.0	596.0	
-174.0	CARBONDALE		BLACK SHALE	1.6	600.0	
-175.6	CARBONDALE	SPRINGFIELD	COAL	4.2	601.6	
-179.8			SHALE	1.3	605.8	

MAPID: 05501798000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 9 **QUARTERS/FOOTAGES:** NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.886108 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.020503 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 426.0 **LOGGED (FT.):** 564.5 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-30.0	MODESTO	PIASA	LIMESTONE	5.0	456.0	
-35.0	MODESTO		GRAY SHALE	4.4	461.0	
-39.4	CARBONDALE	DANVILLE	COAL	1.8	465.4	
-41.3	CARBONDALE		SHALE	10.6	467.3	
-51.8	CARBONDALE	ALLENBY	COAL	0.2	477.8	
-52.0	CARBONDALE		CLAYSTONE & SHALE	5.0	478.0	
-57.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	483.0	
-64.0	CARBONDALE	LAWSON	SILTY SHALE	3.0	490.0	
-67.0	CARBONDALE	LAWSON	GRAY SHALE	33.0	493.0	
-100.0	CARBONDALE	BRERETON	LIMESTONE	5.0	526.0	
-105.0	CARBONDALE	ANNA	BLACK SHALE	3.0	531.0	
-108.0	CARBONDALE	ENERGY	GRAY SHALE	23.0	534.0	
-131.0	CARBONDALE	HERRIN	COAL	7.5	557.0	

MAPID: 05501798000C **VERSION:** 3 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 9 **QUARTERS/FOOTAGES:** NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.886108 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.020503 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 426.0 **LOGGED (FT.):** 607.0 **LOG TYPE:** Drillers Log

SOURCE: WARD R R **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-131.0	CARBONDALE	HERRIN	COAL	7.5	557.0	
-176.0	CARBONDALE	SPRINGFIELD	COAL	-	602.0	

MAPID: 05501798000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 9 **QUARTERS/FOOTAGES:** NW

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.886108 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.020503 **DATE COLLECTED:** 0 / 0 / 1905

SURFACE ELEVATION (FT.): 425.7 **LOGGED (FT.):** 607.0 **LOG TYPE:** Drillers Log

SOURCE: BENTON COAL CO. **WELL TYPE:** Coal Test

COMMENT: UNIT DEPTHS ALTERED FROM ORIG.LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
425.7	PLEISTOCENE		UNCONSOLIDATED	15.0	0.0	
410.7	PLEISTOCENE		GRAVEL	6.0	15.0	WITH CLAY
404.7	PLEISTOCENE		CLAY	11.0	21.0	BLUE
393.7	PLEISTOCENE		SAND	8.0	32.0	
385.7	PLEISTOCENE		SAND	15.0	40.0	
370.7	PLEISTOCENE		CLAY	9.0	55.0	BLUE
361.7	PLEISTOCENE		SAND & GRAVEL	4.0	64.0	
357.7	BOND	CARTHAGE	LIMESTONE	2.0	68.0	
355.7	MODESTO		SHALE	1.0	70.0	
354.7	MODESTO		SHALE	4.0	71.0	
350.7	MODESTO		SANDY SHALE	7.2	75.0	
343.5	MODESTO		COAL	0.4	82.2	
343.1	MODESTO		SHALE W/ COAL STREAKS	4.4	82.6	WITH COAL PARTINGS
338.7	MODESTO		SANDY SHALE	12.0	87.0	
326.7	MODESTO		SHALE	28.0	99.0	
298.7	MODESTO		BLACK SHALE	4.0	127.0	
294.7	MODESTO		SHALE	8.0	131.0	
286.7	MODESTO		SHALE	3.0	139.0	
283.7	MODESTO		SANDY SHALE	16.0	142.0	
267.7	MODESTO		SHALE	1.6	158.0	DARK BLUE
266.1	MODESTO		COAL	1.1	159.6	
265.0	MODESTO		SHALE	2.3	160.7	
262.7	MODESTO		SANDY SHALE	38.0	163.0	
224.7	MODESTO		SHALE	4.0	201.0	
220.7	MODESTO		SHALE	47.0	205.0	
173.7	MODESTO		SHALE	1.7	252.0	
172.0	MODESTO	CHAPEL	COAL	0.8	253.7	
171.2	MODESTO		SOFT SHALE	4.5	254.5	
166.7	MODESTO		SANDY SHALE	21.0	259.0	
145.7	MODESTO		SANDSTONE	6.0	280.0	WITH SHALE PARTINGS
139.7	MODESTO		LIMESTONE	1.0	286.0	
138.7	MODESTO		SANDSTONE	2.0	287.0	
136.7	MODESTO		LIMESTONE	2.0	289.0	
134.7	MODESTO		SANDY SHALE	21.0	291.0	
113.7	MODESTO		SANDY SHALE	52.0	312.0	
61.7	MODESTO		SANDY SHALE	31.0	364.0	
30.7	MODESTO		SHALE	2.0	395.0	
28.7	MODESTO		SOFT SHALE	2.0	397.0	
26.7	MODESTO		SANDY LIMESTONE	9.0	399.0	

17.7	MODESTO		SHALE	4.0	408.0	
13.7	MODESTO		BLACK SHALE	6.0	412.0	
7.7	MODESTO		COAL	0.7	418.0	
7.0	MODESTO		SANDY SHALE	21.3	418.7	
-14.3	MODESTO		SANDY LIMESTONE	5.0	440.0	
-19.3	MODESTO		SANDY SHALE	5.0	445.0	
-24.3	MODESTO		SHALE	6.2	450.0	
-30.5	MODESTO	DEGRAFF	COAL	0.8	456.2	
-31.3	MODESTO		SHALE	1.0	457.0	
-32.3	MODESTO	PIASA	LIMESTONE	4.0	458.0	
-36.3	MODESTO		SHALE	4.4	462.0	
-40.7	CARBONDALE	DANVILLE	COAL	1.8	466.4	
-42.6	CARBONDALE		SANDY SHALE	8.8	468.3	
-51.3	CARBONDALE		SHALE	1.8	477.0	
-53.1	CARBONDALE	ALLENBY	COAL	0.2	478.8	
-53.3	CARBONDALE		SOFT SHALE	5.0	479.0	
-58.3	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	484.0	
-65.3	CARBONDALE		SANDY SHALE	3.0	491.0	
-68.3	CARBONDALE		SHALE	12.0	494.0	
-80.3	CARBONDALE		SHALE	21.0	506.0	
-101.3	CARBONDALE	BRERETON	LIMESTONE	5.0	527.0	
-106.3	CARBONDALE	ENERGY	SHALE	3.0	532.0	
-109.3	CARBONDALE	ENERGY	SHALE	14.4	535.0	
-123.7	CARBONDALE	HERRIN	COAL	7.5	549.4	
-131.2	CARBONDALE		SOFT SHALE	1.4	556.9	
-132.6	CARBONDALE		SHALE	23.0	558.3	
-155.6	CARBONDALE		SHALE	6.0	581.3	WITH BROWN BANDS
-161.6	CARBONDALE	ST. DAVID	LIMESTONE	1.0	587.3	
-162.6	CARBONDALE		BLACK SHALE	4.0	588.3	
-166.6	CARBONDALE		SHALE	1.6	592.3	
-168.1	CARBONDALE	SPRINGFIELD	COAL	4.2	593.8	
-172.3	CARBONDALE		SOFT SHALE	1.3	598.0	

MAPID: 05502152000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 9 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of NW SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.878024 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.01382 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 445.0 **LOGGED (FT.):** 3061.0 **LOG TYPE:** Electric Log

SOURCE: COY OIL, INC. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-188.0	CARBONDALE	HERRIN	COAL	6.0	633.0	
-221.0	CARBONDALE	BRIAR HILL	COAL	-	666.0	
-250.0	CARBONDALE	SPRINGFIELD	COAL	4.0	695.0	BLACK SHALE & LIMESTONE ROOF
-329.0	CARBONDALE	HOUCHIN CREEK	COAL	-	774.0	

MAPID: 05500103000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 10 **QUARTERS/FOOTAGES:** NW NW NE SE

QUADRANGLE: EWING **LONGITUDE:** -88.857491 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.015907 **DATE COLLECTED:** 6 / 0 / 1909

SURFACE ELEVATION (FT.): 408.0 **LOGGED (FT.):** 624.0 **LOG TYPE:** Drillers Log

SOURCE: NO COMPANY **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
408.0			UNCONSOLIDATED	45.0	0.0	
363.0			ROCK	285.0	45.0	
78.0			COAL	0.5	330.0	
77.5			ROCK	162.5	330.5	
-85.0			COAL	1.0	493.0	
-86.0			ROCK	28.0	494.0	
-114.0			COAL	0.7	522.0	BONEY
-114.7			ROCK	15.1	522.7	
-129.8			COAL	2.3	537.8	
-132.0			ROCK	17.0	540.0	
-149.0			COAL	0.8	557.0	
-149.8			ROCK	31.2	557.8	
-181.0			SHALE	11.0	589.0	
-192.0			COAL	0.3	600.0	
-192.3			SHALE	1.7	600.3	
-194.0			LIMESTONE	7.0	602.0	
-201.0			BLACK SHALE	2.5	609.0	
-203.5			SHALE	3.0	611.5	
-206.5	CARBONDALE	HERRIN	COAL	7.8	614.5	
-214.3	CARBONDALE		SHALE	1.0	622.3	
-215.3	CARBONDALE		ROCK	0.7	623.3	

MAPID: 05500103000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 10 **QUARTERS/FOOTAGES:** NW NW NE SE

QUADRANGLE: EWING **LONGITUDE:** -88.857491 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.015907 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 408.0 **LOGGED (FT.):** 622.8 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-114.5	MODESTO	PIASA	LIMESTONE	4.3	522.5	
-118.8	MODESTO		DARK GRAY SHALE	9.4	526.8	
-128.3	CARBONDALE	DANVILLE	COAL	2.3	536.3	
-130.5	CARBONDALE	GALUM	LIMESTONE	2.0	538.5	
-132.5	CARBONDALE		GRAY SHALE	17.0	540.5	
-149.5	CARBONDALE	ALLENBY	COAL	0.8	557.5	
-150.3	CARBONDALE		CLAYSTONE & SHALE	3.3	558.3	
-153.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	561.5	
-159.5	CARBONDALE	LAWSON	DARK GRAY SHALE	33.0	567.5	
-192.5	CARBONDALE	JAMESTOWN	COAL	0.3	600.5	
-192.8	CARBONDALE		DARK GRAY SHALE	1.8	600.8	
-194.5	CARBONDALE	BRERETON	LIMESTONE	7.0	602.5	
-201.5	CARBONDALE	ANNA	BLACK SHALE	2.5	609.5	
-204.0	CARBONDALE	ENERGY	GRAY SHALE	3.0	612.0	
-207.0	CARBONDALE	HERRIN	COAL	7.8	615.0	

MAPID: 05500103000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 10 **QUARTERS/FOOTAGES:** NW NW NE SE

QUADRANGLE: EWING **LONGITUDE:** -88.857491 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.015907 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 407.7 **LOGGED (FT.):** 624.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0001 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-207.3	CARBONDALE	HERRIN	COAL	7.8	615.0	

MAPID: 05500103000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 10 **QUARTERS/FOOTAGES:** NW NW NE SE

QUADRANGLE: EWING **LONGITUDE:** -88.857491 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.015907 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 407.7 **LOGGED (FT.):** 624.0 **LOG TYPE:** Drillers Log

SOURCE: 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
407.7	PLEISTOCENE		CLAY	25.0	0.0	YELLOW
382.7	PLEISTOCENE		CLAY	20.0	25.0	BLUE
362.7	BOND		SOFT SHALE	16.0	45.0	
346.7	BOND		LIMESTONE	7.0	61.0	
339.7	BOND		SHALE	3.0	68.0	
336.7	BOND		SHALE	9.0	71.0	
327.7	BOND	CARTHAGE	SANDY LIMESTONE	9.0	80.0	WITH SAND
318.7	MODESTO		SANDY SHALE	27.0	89.0	
291.7	MODESTO		SANDY SHALE	54.0	116.0	
237.7	MODESTO		SHALE	38.0	170.0	
199.7	MODESTO		SHALE	25.0	208.0	
174.7	MODESTO		SANDY SHALE	20.0	233.0	
154.7	MODESTO		SANDSTONE	51.0	253.0	
103.7	MODESTO		SHALE	23.0	304.0	
80.7	MODESTO		SHALE	3.0	327.0	
77.7	MODESTO	CHAPEL	COAL	0.5	330.0	
77.2	MODESTO		SHALE	6.5	330.5	
70.7	MODESTO		SANDY SHALE	24.0	337.0	
46.7	MODESTO		SHALE	99.0	361.0	
-52.3	MODESTO		SHALE	3.0	460.0	
-55.3	MODESTO		SHALE	1.0	463.0	
-56.3	MODESTO		SANDY SHALE	8.0	464.0	
-64.3	MODESTO		SANDY SHALE	4.0	472.0	
-68.3	MODESTO		SHALE	13.0	476.0	
-81.3	MODESTO		SHALE	4.0	489.0	
-85.3	MODESTO		COAL	1.0	493.0	
-86.3	MODESTO		SANDY SHALE	6.0	494.0	
-92.3	MODESTO		SHALE	10.0	500.0	
-102.3	MODESTO		SHALE	12.0	510.0	
-114.3	MODESTO		SANDY SHALE	0.7	522.0	
-115.0	MODESTO	DEGRAFF	BONE COAL	0.3	522.7	
-115.3	MODESTO		SOFT SHALE	1.0	523.0	
-116.3	MODESTO	PIASA	LIMESTONE	4.3	524.0	
-120.6	MODESTO		SHALE	6.7	528.3	
-127.3	MODESTO		SHALE	2.8	535.0	
-130.1	CARBONDALE	DANVILLE	COAL	2.3	537.8	VEIN NO.1
-132.3	CARBONDALE		SHALE	6.0	540.0	
-138.3	CARBONDALE		SHALE	5.0	546.0	
-143.3	CARBONDALE		SHALE	5.0	551.0	

-148.3	CARBONDALE		SHALE	1.0	556.0	
-149.3	CARBONDALE	ALLENBY	COAL	0.8	557.0	NO.2
-150.1	CARBONDALE		SHALE	3.3	557.8	
-153.3	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	561.0	
-159.3	CARBONDALE		SHALE	33.0	567.0	WITH ROCK BANDS
-192.3	CARBONDALE	JAMESTOWN	COAL	0.3	600.0	
-192.6	CARBONDALE		SHALE	1.8	600.3	
-194.3	CARBONDALE	BRERETON	LIMESTONE	7.0	602.0	
-201.3	CARBONDALE	ENERGY	BLUE SHALE	2.5	609.0	
-203.8	CARBONDALE	ENERGY	SHALE	3.0	611.5	
-206.8	CARBONDALE	HERRIN	COAL	7.8	614.5	
-214.6	CARBONDALE		SHALE	1.0	622.3	
-215.6	CARBONDALE		LIMESTONE	0.7	623.3	

MAPID: 05501799000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 10 **QUARTERS/FOOTAGES:** NW NW SE

QUADRANGLE: EWING **LONGITUDE:** -88.861598 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.015486 **DATE COLLECTED:** 0 / 0 / 1912

SURFACE ELEVATION (FT.): 439.1 **LOGGED (FT.):** 660.0 **LOG TYPE:** Drillers Log

SOURCE: 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
439.1	PLEISTOCENE		UNCONSOLIDATED	17.0	0.0	
422.1	BOND		SANDSTONE	14.5	17.0	
407.6	BOND		SANDSTONE	2.5	31.5	
405.1	BOND		SANDSTONE	11.5	34.0	
393.6	BOND		COAL	0.5	45.5	
393.1	BOND		CLAYSTONE	2.5	46.0	
390.6	BOND		CALCAREOUS SHALE	29.0	48.5	
361.6	BOND		BLACK SHALE	21.5	77.5	
340.1	BOND	CARTHAGE	LIMESTONE	7.8	99.0	
332.3	MODESTO		BLACK SHALE	4.9	106.8	
327.4	MODESTO		CLAYSTONE	8.5	111.7	
318.9	MODESTO		SANDSTONE	15.8	120.2	
303.1	MODESTO		SANDY SHALE	69.0	136.0	
234.1	MODESTO		BLACK SHALE	23.8	205.0	
210.3	MODESTO		BLACK SHALE	2.5	228.8	
207.8	MODESTO		LIMESTONE	0.8	231.3	
207.0	MODESTO		SHALE	14.9	232.1	
192.1	MODESTO		SANDSTONE	18.0	247.0	
174.1	MODESTO		SANDY SHALE	7.0	265.0	
167.1	MODESTO		SANDSTONE	75.0	272.0	
92.1	MODESTO		BLACK SHALE	9.5	347.0	
82.6	MODESTO		BLACK SHALE	2.0	356.5	
80.6	MODESTO	CHAPEL	COAL	0.8	358.5	
79.8	MODESTO		CLAYSTONE	2.7	359.3	
77.1	MODESTO		SANDSTONE	46.0	362.0	
31.1	MODESTO		CALCAREOUS SHALE	76.5	408.0	
-45.4	MODESTO		LIMESTONE	0.5	484.5	
-45.9	MODESTO		CALCAREOUS SHALE	2.0	485.0	
-47.9	MODESTO		LIMESTONE	0.7	487.0	
-48.6	MODESTO		CALCAREOUS SHALE	8.3	487.7	
-56.9	MODESTO		LIMESTONE	0.7	496.0	
-57.6	MODESTO		CALCAREOUS SHALE	2.8	496.7	
-60.4	MODESTO		LIMESTONE	1.5	499.5	
-61.9	MODESTO		CALCAREOUS SHALE	16.0	501.0	
-77.9	MODESTO		LIMESTONE	0.5	517.0	
-78.4	MODESTO		CALCAREOUS SHALE	4.5	517.5	
-82.9	MODESTO	PIASA	FOSSILIFEROUS LIMESTONE	12.0	522.0	
-94.9	MODESTO		CALCAREOUS SHALE	17.0	534.0	

-111.9	CARBONDALE	DANVILLE	COAL	0.5	551.0	
-112.4	CARBONDALE	GALUM	LIMESTONE	5.0	551.5	
-117.4	CARBONDALE		BLACK SHALE	17.5	556.5	WITH LIME PARTINGS
-134.9	CARBONDALE	ALLENBY	COAL	0.5	574.0	
-135.4	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	574.5	
-137.9	CARBONDALE	BANKSTON FORK	BLACK SHALE	5.5	577.0	WITH LIMESTONE PARTINGS
-143.4	CARBONDALE	BANKSTON FORK	LIMESTONE	7.5	582.5	
-150.9	CARBONDALE		BLACK SHALE	5.0	590.0	
-155.9	CARBONDALE		LIMESTONE	1.0	595.0	
-156.9	CARBONDALE		BLACK SHALE	4.5	596.0	
-161.4	CARBONDALE		LIMESTONE	0.5	600.5	
-161.9	CARBONDALE		BLACK SHALE	19.0	601.0	
-180.9	CARBONDALE	BRERETON	LIMESTONE	4.0	620.0	
-184.9	CARBONDALE		BLACK SHALE	12.0	624.0	
-196.9	CARBONDALE	HERRIN	BLACK SHALE & COAL	10.0	636.0	WITH COAL PARTINGS
-206.9	CARBONDALE		BLACK SHALE	12.5	646.0	
-219.4	CARBONDALE		SANDSTONE	1.5	658.5	

MAPID: 05501799000C **VERSION:** 2 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 10 **QUARTERS/FOOTAGES:** NW NW SE

QUADRANGLE: EWING **LONGITUDE:** -88.861598 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.015486 **DATE COLLECTED:** 0 / 0 / 1912

SURFACE ELEVATION (FT.): 439.0 **LOGGED (FT.):** 660.0 **LOG TYPE:** Drillers Log

SOURCE: CHAS. WOODFORD, DRILLER **WELL TYPE:** Engineering Test Holes

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
439.0			UNCONSOLIDATED	17.0	0.0	
422.0			ROCK	28.5	17.0	
393.5			COAL	0.5	45.5	
393.0			ROCK	312.5	46.0	
80.5			COAL	0.8	358.5	
79.7			ROCK	191.7	359.3	
-112.0			COAL	0.5	551.0	
-112.5			ROCK	22.5	551.5	
-135.0			COAL	0.5	574.0	
-135.5			ROCK	61.5	574.5	
-197.0			COAL WITH SHALE	10.0	636.0	COAL AND SHALE MIXED
-207.0			ROCK	14.0	646.0	

MAPID: 05522773000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 10 **QUARTERS/FOOTAGES:** SE SE SW

QUADRANGLE: EWING **LONGITUDE:** -88.863943 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.009986 **DATE COLLECTED:** 3 / 1 / 1976

SURFACE ELEVATION (FT.): 410.0 **LOGGED (FT.):** 79.0 **LOG TYPE:** Drillers Log

SOURCE: GEORGE KEEN, DRILLER **WELL TYPE:** Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
410.0			UNCONSOLIDATED	27.0	0.0	
383.0			ROCK	43.0	27.0	
340.0			COAL WITH SHALE	3.0	70.0	COAL AND SHALE MIXED
337.0			ROCK	6.0	73.0	

MAPID: 05501486000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 11 **QUARTERS/FOOTAGES:** 2310' S line, 330' E line

QUADRANGLE: EWING **LONGITUDE:** -88.836245 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.015223 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 2656.0 **LOG TYPE:** Electric Log

SOURCE: CENTRAL PIPELINE CO **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-194.0	CARBONDALE	HERRIN	COAL	5.0	594.0	
-234.0	CARBONDALE	BRIAR HILL	COAL	-	634.0	
-263.0	CARBONDALE	SPRINGFIELD	COAL	4.0	663.0	SHALE & SILTSTONE ROOF
-347.0	CARBONDALE	HOUCHIN CREEK	COAL	-	747.0	

MAPID: 05501486000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 11 **QUARTERS/FOOTAGES:** 2310' S line, 330' E line

QUADRANGLE: EWING **LONGITUDE:** -88.836245 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.015223 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 405.0 **LOGGED (FT.):** 600.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-103.0	MODESTO	PIASA	LIMESTONE	6.0	508.0	
-109.0	MODESTO		DARK GRAY SHALE	8.0	514.0	
-117.0	CARBONDALE	DANVILLE	COAL	2.0	522.0	
-119.0	CARBONDALE		SHALE & SANDSTONE	18.0	524.0	
-137.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	542.0	
-142.0	CARBONDALE	LAWSON	SHALE	35.0	547.0	
-177.0	CARBONDALE	JAMESTOWN	BONE COAL	1.0	582.0	
-178.0	CARBONDALE		DARK GRAY SHALE	1.0	583.0	
-179.0	CARBONDALE	BRERETON	LIMESTONE	6.0	584.0	
-185.0	CARBONDALE	ANNA	SHALE	4.0	590.0	
-189.0	CARBONDALE	HERRIN	COAL	6.0	594.0	

MAPID: 05501486000C **VERSION:** 3 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 11 **QUARTERS/FOOTAGES:** 2310' S line, 330' E line

QUADRANGLE: EWING **LONGITUDE:** -88.836245 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.015223 **DATE COLLECTED:** 12 / 0 / 1945

SURFACE ELEVATION (FT.): 402.0 **LOGGED (FT.):** 1794.0 **LOG TYPE:** Electric Log

SOURCE: CENTRAL PIPELINE CO **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-466.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	868.0	
-533.0	SPOON	DAVIS	UNCLASSIFIED	-	935.0	
-1392.0	BASE OF PENN.		UNCLASSIFIED	-	1794.0	

MAPID: 05500105000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 12 **QUARTERS/FOOTAGES:** SE SE SE NE

QUADRANGLE: EWING **LONGITUDE:** -88.817161 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.016323 **DATE COLLECTED:** 9 / 0 / 1909

SURFACE ELEVATION (FT.): 410.0 **LOGGED (FT.):** 631.5 **LOG TYPE:** Drillers Log

SOURCE: U. S. STEEL C **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
410.0			UNCONSOLIDATED	9.0	0.0	
401.0			ROCK	334.0	9.0	
67.0			COAL	1.0	343.0	
66.0			ROCK	131.0	344.0	
-65.0			COAL	0.3	475.0	
-65.3			ROCK	55.2	475.3	
-120.5			COAL	2.2	530.5	
-122.7			ROCK	12.8	532.7	
-135.5			COAL	2.3	545.5	
-137.8			ROCK	22.2	547.8	
-160.0			SHALE	41.5	570.0	SANDY
-201.5			COAL	0.5	611.5	
-202.0			BLACK SHALE	4.0	612.0	
-206.0			LIMESTONE	6.0	616.0	
-212.0			BLACK SHALE	1.7	622.0	
-213.7	CARBONDALE	HERRIN	COAL	6.3	623.7	
-220.0	CARBONDALE		CLAYSTONE & SHALE	1.5	630.0	

MAPID: 05500105000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 12 **QUARTERS/FOOTAGES:** SE SE SE NE
QUADRANGLE: EWING **LONGITUDE:** -88.817161 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.016323 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 410.0 **LOGGED (FT.):** 630.3 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-125.8	MODESTO		DARK GRAY SHALE	10.0	535.8	
-135.8	CARBONDALE	DANVILLE	COAL	2.3	545.8	
-138.1	CARBONDALE		SHALE	17.3	548.1	
-155.3	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	565.3	
-160.3	CARBONDALE	LAWSON	SILTY SHALE	41.5	570.3	
-201.8	CARBONDALE	JAMESTOWN	BONE COAL	0.5	611.8	
-202.3	CARBONDALE		DARK GRAY SHALE	4.0	612.3	
-206.3	CARBONDALE	BRERETON	LIMESTONE	6.0	616.3	
-212.3	CARBONDALE	ANNA	BLACK SHALE	1.7	622.3	
-214.0	CARBONDALE	HERRIN	COAL	6.3	624.0	

MAPID: 05500105000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 12 **QUARTERS/FOOTAGES:** SE SE SE NE
QUADRANGLE: EWING **LONGITUDE:** -88.817161 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.016323 **DATE COLLECTED:** 0 / 0 / 1909
SURFACE ELEVATION (FT.): 409.5 **LOGGED (FT.):** 632.0 **LOG TYPE:**
SOURCE: BG MUDDYCS0005 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-214.5	CARBONDALE	HERRIN	COAL	6.3	624.0	

MAPID: 05501487000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 12 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of SE SW
QUADRANGLE: EWING **LONGITUDE:** -88.829339 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 38.009667 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 428.0 **LOGGED (FT.):** 3029.0 **LOG TYPE:** Electric Log
SOURCE: CENTRAL PIPELINE CO **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-169.0	CARBONDALE	HERRIN	COAL	6.0	597.0	
-209.0	CARBONDALE	BRIAR HILL	COAL	-	637.0	
-238.0	CARBONDALE	SPRINGFIELD	COAL	4.0	666.0	SHALE & SILTSTONE ROOF
-316.0	CARBONDALE	HOUCHIN CREEK	COAL	-	744.0	

MAPID: 05500869000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 13 **QUARTERS/FOOTAGES:** 1650' S line, 990' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.820157 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.998774 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 463.0 **LOGGED (FT.):** 3156.0 **LOG TYPE:** Electric Log

SOURCE: BRADLEY, J. T. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-171.0	CARBONDALE	HERRIN	COAL	6.0	634.0	
-211.0	CARBONDALE	BRIAR HILL	COAL	-	674.0	
-244.0	CARBONDALE	SPRINGFIELD	COAL	5.0	707.0	BLACK SHALE & LIMESTONE ROOF
-325.0	CARBONDALE	HOUCHIN CREEK	COAL	-	788.0	

MAPID: 05500869000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 13 **QUARTERS/FOOTAGES:** 1650' S line, 990' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.820157 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.998774 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 463.0 **LOGGED (FT.):** 641.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-85.0	MODESTO	PIASA	LIMESTONE	6.0	548.0	
-91.0	MODESTO		DARK GRAY SHALE	9.0	554.0	
-100.0	CARBONDALE	DANVILLE	COAL	3.0	563.0	
-103.0	CARBONDALE		SHALE	14.0	566.0	
-117.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	580.0	
-123.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	23.0	586.0	
-146.0	CARBONDALE	LAWSON	SHALE	12.0	609.0	
-158.0	CARBONDALE	BRERETON	LIMESTONE	7.0	621.0	
-165.0	CARBONDALE	ANNA	BLACK SHALE	2.0	628.0	
-167.0	CARBONDALE	ENERGY	GRAY SHALE	4.0	630.0	
-171.0	CARBONDALE	HERRIN	COAL	7.0	634.0	

MAPID: 05500929000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 16 **QUARTERS/FOOTAGES:** 330' N line, 300' W line of SE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.880609 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.000919 **DATE COLLECTED:** 12 / 0 / 1946

SURFACE ELEVATION (FT.): 436.0 **LOGGED (FT.):** 1820.0 **LOG TYPE:** Electric Log

SOURCE: IN FARM BUR. COOP. ASSOC **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-438.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	874.0	
-524.0	SPOON	DAVIS	UNCLASSIFIED	-	960.0	
-1384.0	BASE OF PENN.		UNCLASSIFIED	-	1820.0	

MAPID: 05501460000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 16 **QUARTERS/FOOTAGES:** 990' N line, 330' E line

QUADRANGLE: EWING **LONGITUDE:** -88.873395 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.00646 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 438.0 **LOGGED (FT.):** 3030.0 **LOG TYPE:** Electric Log

SOURCE: DUNCAN, WALTER OIL CO. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-189.0	CARBONDALE	HERRIN	COAL	6.0	627.0	
-226.0	CARBONDALE	BRIAR HILL	COAL	-	664.0	
-252.0	CARBONDALE	SPRINGFIELD	COAL	2.0	690.0	BLACK SHALE & LIMESTONE ROOF
-327.0	CARBONDALE	HOUCHIN CREEK	COAL	-	765.0	

MAPID: 05501460000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 16 **QUARTERS/FOOTAGES:** 990' N line, 330' E line

QUADRANGLE: EWING **LONGITUDE:** -88.873395 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.00646 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 438.0 **LOGGED (FT.):** 632.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-100.0	MODESTO	PIASA	LIMESTONE	4.0	538.0	
-104.0	MODESTO		DARK GRAY SHALE	8.0	542.0	
-112.0	CARBONDALE	DANVILLE	COAL	2.0	550.0	
-114.0	CARBONDALE		SILTY SHALE	23.0	552.0	
-137.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	575.0	
-143.0	CARBONDALE	LAWSON	SHALE	32.0	581.0	
-175.0	CARBONDALE	JAMESTOWN	BONE COAL	0.5	613.0	
-175.5	CARBONDALE		CLAYSTONE & SHALE	2.5	613.5	
-178.0	CARBONDALE	BRERETON	LIMESTONE	10.0	616.0	
-188.0	CARBONDALE	ANNA	BLACK SHALE	2.0	626.0	
-190.0	CARBONDALE	HERRIN	COAL	4.0	628.0	

MAPID: 05523002000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 16 **QUARTERS/FOOTAGES:** SE NW NE

QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.878123 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.00643 **DATE COLLECTED:** 7 / 24 / 1978

SURFACE ELEVATION (FT.): 440.0 **LOGGED (FT.):** 98.0 **LOG TYPE:** Drillers Log

SOURCE: GEORGE KEEN, DRILLER **WELL TYPE:** Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
440.0			UNCONSOLIDATED	25.0	0.0	
415.0			ROCK	71.0	25.0	
344.0			COAL	2.0	96.0	

MAPID: 05500207000M **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 17 **QUARTERS/FOOTAGES:** SW SW NE
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.89921 **GEOLOGIST:** BARGH,M
CONFIDENTIAL: N **LATITUDE:** 38.002865 **DATE COLLECTED:** 0 / 0 / 1934
SURFACE ELEVATION (FT.): 433.0 **LOGGED (FT.):** 630.0 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-FRANKLIN MNG C **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
433.0			UNKNOWN	616.0	0.0	
-183.0			LIMESTONE	7.0	616.0	
-			SHALE	-		
-	CARBONDALE	HERRIN	COAL	7.0		AVERAGE THICKNESS
-	CARBONDALE		CLAYSTONE	-		

MAPID: 05500207001M **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 17 **QUARTERS/FOOTAGES:** SW SW NE
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.89921 **GEOLOGIST:** BARGH,M
CONFIDENTIAL: N **LATITUDE:** 38.002865 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 433.0 **LOGGED (FT.):** 7.5 **LOG TYPE:** Measured section
SOURCE: MINE NOTES-FRANKLIN MNG C **WELL TYPE:** Underground mine
COMMENT: 12.5' NORTH OF SHAFT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-			SHALE	-		WHITE
-	CARBONDALE	HERRIN	COAL	7.5		WITH THIN PYRITE LENSES
-	CARBONDALE		CLAYSTONE	-		

MAPID: 05500258000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 17 **QUARTERS/FOOTAGES:** SW SW NE
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.89921 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.002865 **DATE COLLECTED:** 0 / 0 / 1918
SURFACE ELEVATION (FT.): 433.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section
SOURCE: FRAN CO MC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-190.0	CARBONDALE	HERRIN	COAL	9.5	623.0	

MAPID: 05501268000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 18 **QUARTERS/FOOTAGES:** 330' N line, 990' W line
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.925732 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 38.008258 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 442.0 **LOGGED (FT.):** 2219.0 **LOG TYPE:** Electric Log
SOURCE: HAIR C EDWIN **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-215.0	CARBONDALE	HERRIN	COAL	7.0	657.0	
-236.0	CARBONDALE	BRIAR HILL	COAL	-	678.0	
-266.0	CARBONDALE	SPRINGFIELD	COAL	3.0	708.0	BLACK SHALE & LIMESTONE ROOF
-341.0	CARBONDALE	HOUCHIN CREEK	COAL	-	783.0	

MAPID: 05501268000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 18 **QUARTERS/FOOTAGES:** 330' N line, 990' W line
QUADRANGLE: REND LAKE DAM **LONGITUDE:** -88.925732 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.008258 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 442.0 **LOGGED (FT.):** 664.0 **LOG TYPE:** Electric Log
SOURCE: **WELL TYPE:** Oil and Gas Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-102.0	CARBONDALE		SHALE	50.0	544.0	
-152.0	CARBONDALE	ALLENBY	COAL	1.0	594.0	
-153.0	CARBONDALE		CLAYSTONE & SHALE	4.0	595.0	
-157.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	599.0	
-165.0	CARBONDALE	LAWSON	SHALE	35.5	607.0	
-200.5	CARBONDALE	JAMESTOWN	BONE COAL	0.5	642.5	
-201.0	CARBONDALE		CALCAREOUS SHALE	4.0	643.0	
-205.0	CARBONDALE	BRERETON	LIMESTONE	7.0	647.0	
-212.0	CARBONDALE	ANNA	BLACK SHALE	2.0	654.0	
-214.0	CARBONDALE	HERRIN	COAL	8.0	656.0	

MAPID: 05500259000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 19 **QUARTERS/FOOTAGES:** SW NW SW
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.927649 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.984345 **DATE COLLECTED:** 0 / 0 / 1904
SURFACE ELEVATION (FT.): 483.9 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section
SOURCE: C W F CC **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-140.1	CARBONDALE	HERRIN	COAL	9.5	624.0	

MAPID: 05501801000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 19 **QUARTERS/FOOTAGES:** 986' S line, 333' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.927647 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.982427 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 472.0 **LOGGED (FT.):** 2165.0 **LOG TYPE:** Electric Log

SOURCE: SHELL OIL COMPANY **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-127.0	CARBONDALE	HERRIN	COAL	9.0	599.0	
-172.0	CARBONDALE	SPRINGFIELD	COAL	4.0	644.0	BLACK SHALE & LIMESTONE ROOF
-242.0	CARBONDALE	HOUCHIN CREEK	COAL	-	714.0	

MAPID: 05501801000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 19 **QUARTERS/FOOTAGES:** 986' S line, 333' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.927647 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.982427 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 472.0 **LOGGED (FT.):** 608.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-30.0	MODESTO	PIASA	LIMESTONE	6.0	502.0	
-36.0	MODESTO		SHALE	4.0	508.0	
-40.0	CARBONDALE	DANVILLE	COAL	2.0	512.0	
-42.0	CARBONDALE		SILTY SHALE	18.0	514.0	
-60.0	CARBONDALE	ALLENBY	COAL	1.0	532.0	
-61.0	CARBONDALE		CLAYSTONE & SHALE	1.0	533.0	
-62.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	534.0	
-68.0	CARBONDALE	LAWSON	SHALE	33.0	540.0	
-101.0	CARBONDALE	BRERETON	LIMESTONE	6.0	573.0	
-107.0	CARBONDALE	ANNA	BLACK SHALE	3.0	579.0	
-110.0	CARBONDALE	ENERGY	GRAY SHALE	17.0	582.0	
-127.0	CARBONDALE	HERRIN	COAL	9.0	599.0	

MAPID: 05500109000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 21 **QUARTERS/FOOTAGES:** SW SW NW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.88996 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.988174 **DATE COLLECTED:** 6 / 0 / 1903

SURFACE ELEVATION (FT.): 424.2 **LOGGED (FT.):** 598.0 **LOG TYPE:** Drillers Log

SOURCE: DERING COAL CO. 101 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
424.2	PLEISTOCENE		CLAY	9.0	0.0	YELLOW
415.2	BOND		SANDSTONE	32.0	9.0	
383.2	BOND		SHALE	16.0	41.0	
367.2	BOND	CARTHAGE	LIMESTONE	7.0	57.0	
360.2	MODESTO		SHALE	4.0	64.0	
356.2	MODESTO		SHALE	1.0	68.0	
355.2	MODESTO		SANDSTONE	36.0	69.0	
319.2	MODESTO		LIMESTONE	2.0	105.0	
317.2	MODESTO		SANDSTONE	22.0	107.0	
295.2	MODESTO		SANDY SHALE	10.0	129.0	
285.2	MODESTO		SHALE	11.0	139.0	
274.2	MODESTO		SHALE	3.0	150.0	
271.2	MODESTO		SANDY SHALE	4.0	153.0	
267.2	MODESTO		SHALE	2.0	157.0	
265.2	MODESTO		SANDSTONE	54.5	159.0	
210.7	MODESTO		SHALE	4.0	213.5	
206.7	MODESTO		SANDSTONE	2.5	217.5	
204.2	MODESTO		SANDY SHALE	17.0	220.0	
187.2	MODESTO		SANDSTONE	45.5	237.0	
141.7	MODESTO		SHALE	12.5	282.5	
129.2	MODESTO		SHALE	3.0	295.0	
126.2	MODESTO		SHALE	2.6	298.0	
123.6	MODESTO	CHAPEL	COAL	0.9	300.6	
122.7	MODESTO		SANDY SHALE	30.5	301.5	
92.2	MODESTO		SHALE	93.0	332.0	
-0.8	MODESTO		SHALE	2.0	425.0	
-2.8	MODESTO		SHALE	1.0	427.0	
-3.8	MODESTO		SANDSTONE	5.0	428.0	
-8.8	MODESTO		SHALE	13.0	433.0	
-21.8	MODESTO		SHALE	8.0	446.0	
-29.8	MODESTO		COAL	0.8	454.0	
-30.6	MODESTO		CONGLOMERATE	2.2	454.8	
-32.8	MODESTO		SHALE	4.0	457.0	
-36.8	MODESTO		SANDSTONE	14.0	461.0	
-50.8	MODESTO		SANDY SHALE	5.0	475.0	
-55.8	MODESTO		SHALE	8.0	480.0	
-63.8	MODESTO	DEGRAFF	COAL	0.9	488.0	
-64.7	MODESTO		SANDY SHALE	0.6	488.9	
-65.3	MODESTO		SHALE	1.5	489.5	

-66.8	MODESTO	PIASA	LIMESTONE	5.0	491.0
-71.8	MODESTO		SHALE	4.4	496.0
-76.2	CARBONDALE	DANVILLE	COAL	2.0	500.4
-78.2	CARBONDALE		SHALE	1.6	502.4
-79.8	CARBONDALE		SANDSTONE	2.0	504.0
-81.8	CARBONDALE		SHALE	1.0	506.0
-82.8	CARBONDALE		SANDSTONE	10.0	507.0
-92.8	CARBONDALE		SHALE	4.0	517.0
-96.8	CARBONDALE	ALLENBY	COAL	0.8	521.0
-97.6	CARBONDALE		SHALE	2.2	521.8
-99.8	CARBONDALE		SANDY SHALE	1.0	524.0
-100.8	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	525.0
-106.8	CARBONDALE		SHALE	21.0	531.0
-127.8	CARBONDALE		SANDSTONE	9.0	552.0
-136.8	CARBONDALE		SHALE	1.4	561.0
-138.2	CARBONDALE	JAMESTOWN	COAL	0.3	562.4
-138.6	CARBONDALE	JAMESTOWN	BLACK SHALE	0.4	562.8
-139.0	CARBONDALE	BRERETON	LIMESTONE	5.8	563.2
-144.8	CARBONDALE	ENERGY	SHALE	3.0	569.0
-147.8	CARBONDALE	ENERGY	SANDY SHALE	16.3	572.0
-164.1	CARBONDALE	HERRIN	COAL	8.4	588.3
-172.6	CARBONDALE		CLAYSTONE	1.3	596.8

MAPID: 05500109000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 21 **QUARTERS/FOOTAGES:** SW SW NW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.88996 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.988174 **DATE COLLECTED:** 0 / 0 / 1903

SURFACE ELEVATION (FT.): 424.2 **LOGGED (FT.):** 598.0 **LOG TYPE:**

SOURCE: PEABODY 0101 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-163.8	CARBONDALE	HERRIN	COAL	8.4	588.0	

MAPID: 05500260000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 21 **QUARTERS/FOOTAGES:** NW NE NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.875905 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.993418 **DATE COLLECTED:** 0 / 0 / 1916

SURFACE ELEVATION (FT.): 415.1 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: U.S. FUEL **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-186.9	CARBONDALE	HERRIN	COAL	6.0	602.0	

MAPID: 05501555000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 21 **QUARTERS/FOOTAGES:** 550' N line, 675' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.874801 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.992777 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 415.1 **LOGGED (FT.):** 660.5 **LOG TYPE:** Drillers Log

SOURCE: MIDDLE FORK MINING CO. 2 **WELL TYPE:** Mine Shaft

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
415.1	PLEISTOCENE		CLAY	27.0	0.0	
388.1	BOND		SANDY SHALE	42.0	27.0	
346.1	BOND		SOFT SHALE	1.0	69.0	
345.1	BOND		CALCAREOUS SHALE	1.0	70.0	
344.1	BOND	CARTHAGE	LIMESTONE	4.0	71.0	
340.1	BOND	CARTHAGE	LIMESTONE	2.0	75.0	
338.1	MODESTO		SHALE	3.0	77.0	
335.1	MODESTO		SHALE	21.0	80.0	
314.1	MODESTO		CALCAREOUS SHALE	3.0	101.0	
311.1	MODESTO		SANDSTONE	18.0	104.0	
293.1	MODESTO		SANDY SHALE	19.0	122.0	
274.1	MODESTO		SANDY SHALE	33.5	141.0	
240.6	MODESTO		CALCAREOUS SHALE	1.0	174.5	
239.6	MODESTO		SHALE	2.5	175.5	
237.1	MODESTO		LIMESTONE	0.7	178.0	
236.4	MODESTO		SHALE	6.3	178.7	
230.1	MODESTO		SOFT SHALE	2.0	185.0	
228.1	MODESTO		SHALE	2.0	187.0	
226.1	MODESTO		SHALE WITH LIMESTONE	7.0	189.0	WITH LIMESTONE PARTINGS
219.1	MODESTO		SANDY SHALE	14.0	196.0	
205.1	MODESTO		SHALY SANDSTONE	35.0	210.0	
170.1	MODESTO		SANDY SHALE	1.5	245.0	
168.6	MODESTO		SANDSTONE	6.0	246.5	
162.6	MODESTO		SANDY SHALE	6.5	252.5	
156.1	MODESTO		SANDSTONE	1.0	259.0	
155.1	MODESTO		SANDY SHALE	2.0	260.0	
153.1	MODESTO		SANDSTONE	11.0	262.0	
142.1	MODESTO		SANDSTONE	4.0	273.0	
138.1	MODESTO		SHALE	31.0	277.0	WITH BROWN PARTINGS
107.1	MODESTO		BLACK SHALE	3.0	308.0	
104.1	MODESTO		CALCAREOUS SHALE	2.0	311.0	
102.1	MODESTO		SHALE	2.0	313.0	
100.1	MODESTO	CHAPEL	COAL	0.7	315.0	
99.4	MODESTO		CLAYSTONE	3.0	315.7	
96.4	MODESTO		SANDY SHALE	23.3	318.7	
73.1	MODESTO		SANDY SHALE	37.0	342.0	
36.1	MODESTO		SANDY SHALE	29.0	379.0	
7.1	MODESTO		SHALE	28.0	408.0	
-20.9	MODESTO		SHALE	3.0	436.0	WITH HARD BROWN PARTINGS

-23.9	MODESTO		SANDY SHALE	2.0	439.0	
-25.9	MODESTO		SANDY SHALE	9.0	441.0	
-34.9	MODESTO		SHALE	3.0	450.0	
-37.9	MODESTO		SHALE	5.0	453.0	
-42.9	MODESTO		SHALE	5.0	458.0	
-47.9	MODESTO		COAL	0.8	463.0	
-48.7	MODESTO		SOFT SHALE	9.2	463.8	
-57.9	MODESTO		SHALE	2.0	473.0	
-59.9	MODESTO		SANDSTONE	8.0	475.0	
-67.9	MODESTO		SANDSTONE	4.0	483.0	
-71.9	MODESTO		SANDY SHALE	5.0	487.0	
-76.9	MODESTO		SHALE	9.7	492.0	WITH BROWN PARTINGS
-86.6	MODESTO	DEGRAFF	COAL	1.2	501.7	
-87.7	MODESTO		CLAYSTONE	1.0	502.8	
-88.7	MODESTO	PIASA	LIMESTONE	5.0	503.8	
-93.7	MODESTO		SHALE	3.2	508.8	
-96.9	MODESTO		SHALE	0.8	512.0	
-97.7	CARBONDALE	DANVILLE	COAL	2.2	512.8	
-99.8	CARBONDALE		SANDY SHALE	10.1	514.9	
-109.9	CARBONDALE		SANDSTONE	2.0	525.0	
-111.9	CARBONDALE		SHALE	7.3	527.0	WITH HARD PARTINGS
-119.2	CARBONDALE	ALLENBY	COAL	0.7	534.3	
-119.9	CARBONDALE		SHALE	4.0	535.0	
-123.9	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	539.0	
-125.9	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	541.0	
-131.9	CARBONDALE		SHALE	20.0	547.0	DARK GRAY
-151.9	CARBONDALE		SHALE	14.3	567.0	WITH HARD PARTINGS
-166.2	CARBONDALE	JAMESTOWN	SHALY COAL	0.5	581.3	
-166.7	CARBONDALE		SHALE	6.2	581.8	WITH HARD PARTINGS
-172.9	CARBONDALE	BRERETON	LIMESTONE	7.3	588.0	
-180.2	CARBONDALE		SHALE	1.0	595.3	
-181.2	CARBONDALE	HERRIN	COAL	5.8	596.3	
-187.1	CARBONDALE	HERRIN	SHALE	0.1	602.2	
-187.2	CARBONDALE	HERRIN	COAL	0.8	602.3	
-188.0	CARBONDALE		SANDY SHALE	0.4	603.1	
-188.4	CARBONDALE		SHALE	2.5	603.5	
-190.9	CARBONDALE		SANDY LIMESTONE	7.0	606.0	
-197.9	CARBONDALE		SANDY SHALE	15.0	613.0	
-212.9	CARBONDALE		SHALE	2.5	628.0	
-215.4	CARBONDALE	BRIAR HILL	COAL	1.0	630.5	
-216.4	CARBONDALE	BRIAR HILL	COAL	0.7	631.5	
-217.1	CARBONDALE		SHALE	0.5	632.2	
-217.6	CARBONDALE		SANDSTONE	5.3	632.7	
-222.9	CARBONDALE		SHALE	3.0	638.0	WITH BROWN PARTINGS
-225.9	CARBONDALE		SHALE	7.0	641.0	
-232.9	CARBONDALE		SHALE	1.0	648.0	
-233.9	CARBONDALE	ST. DAVID	LIMESTONE	1.0	649.0	

-234.9	CARBONDALE		SHALE	0.5	650.0
-235.4	CARBONDALE		SHALE	4.0	650.5
-239.4	CARBONDALE		SHALE	1.3	654.5
-240.7	CARBONDALE	SPRINGFIELD	COAL	4.3	655.8
-245.1	CARBONDALE		SHALE	0.3	660.2

MAPID: 05501555000C **VERSION:** 2 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 21 **QUARTERS/FOOTAGES:** 550' N line, 675' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.874801 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.992777 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 415.0 **LOGGED (FT.):** 661.0 **LOG TYPE:**

SOURCE: MIDDLE FORK MNG **WELL TYPE:** Mine Shaft

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-181.0	CARBONDALE	HERRIN	COAL	6.8	596.0	
-215.0	CARBONDALE	BRIAR HILL	COAL	1.7	630.0	
-241.0	CARBONDALE	SPRINGFIELD	COAL	4.3	656.0	BLACK SHALE & LIMESTONE ROOF

MAPID: 05501556000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 21 **QUARTERS/FOOTAGES:** 0' N line, 0' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.87243 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.994238 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 412.9 **LOGGED (FT.):** 589.0 **LOG TYPE:** Drillers Log

SOURCE: MIDDLE FORK MINING CO. 1 **WELL TYPE:** Mine Shaft

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
412.9	PLEISTOCENE		CLAY	21.0	0.0	YELLOW
391.9	PLEISTOCENE		CLAY & GRAVEL	3.0	21.0	WITH GRAVEL
388.9	BOND		SHALE	33.0	24.0	
355.9	BOND	CARTHAGE	LIMESTONE	6.5	57.0	
349.4	MODESTO		SHALE	2.5	63.5	
346.9	MODESTO		BLACK SHALE	1.0	66.0	
345.9	MODESTO		SOFT SHALE	16.0	67.0	
329.9	MODESTO		COAL	0.5	83.0	
329.4	MODESTO		SOFT SHALE	5.5	83.5	
323.9	MODESTO		LIMESTONE	3.0	89.0	
320.9	MODESTO		SANDY SHALE	14.0	92.0	
306.9	MODESTO		SANDY SHALE	54.0	106.0	
252.9	MODESTO		SOFT SHALE	6.0	160.0	
246.9	MODESTO		BLACK SHALE	3.5	166.0	
243.4	MODESTO		SHALE	6.0	169.5	
237.4	MODESTO		SHALE	3.5	175.5	
233.9	MODESTO		CALCAREOUS SHALE	8.0	179.0	
225.9	MODESTO		SANDY SHALE	44.0	187.0	
181.9	MODESTO		SANDY SHALE	20.0	231.0	
161.9	MODESTO		SHALY SANDSTONE	15.0	251.0	
146.9	MODESTO		SANDY SHALE	1.0	266.0	
145.9	MODESTO		SHALE	30.0	267.0	WITH HARD BROWN PARTINGS
115.9	MODESTO		CALCAREOUS SHALE	1.0	297.0	
114.9	MODESTO		BLACK SHALE	3.5	298.0	
111.4	MODESTO		SHALE	8.0	301.5	
103.4	MODESTO	CHAPEL	COAL	0.5	309.5	
102.9	MODESTO		SHALE	10.0	310.0	
92.9	MODESTO		SANDY SHALE	7.0	320.0	
85.9	MODESTO		SANDY SHALE	27.0	327.0	
58.9	MODESTO		SANDY SHALE	24.0	354.0	
34.9	MODESTO		SHALE	25.0	378.0	
9.9	MODESTO		SHALE	17.0	403.0	WITH HARD LIMESTONE PARTINGS
-7.1	MODESTO		SHALE	3.0	420.0	
-10.1	MODESTO		SHALY LIMESTONE	5.0	423.0	
-15.1	MODESTO		SHALE	2.0	428.0	
-17.1	MODESTO		SOFT SHALE	11.0	430.0	
-28.1	MODESTO		SHALE	3.5	441.0	
-31.6	MODESTO		COAL	0.8	444.5	
-32.4	MODESTO		CLAYSTONE	7.7	445.3	

-40.1	MODESTO		SHALE	1.0	453.0	
-41.1	MODESTO		SHALE	7.0	454.0	WITH BROWN PARTINGS
-48.1	MODESTO		SHALY SANDSTONE	9.0	461.0	
-57.1	MODESTO		SANDY SHALE	6.0	470.0	
-63.1	MODESTO		SHALE	6.0	476.0	
-69.1	MODESTO		SHALE	4.3	482.0	
-73.4	MODESTO	DEGRAFF	COAL	1.0	486.3	
-74.4	MODESTO		CLAYSTONE	1.5	487.3	
-75.9	MODESTO	PIASA	LIMESTONE	3.5	488.8	
-79.4	MODESTO	PIASA	SHALY LIMESTONE	1.0	492.3	
-80.4	MODESTO		SHALE	5.7	493.3	
-86.1	MODESTO		SHALE WITH LIMESTONE	1.0	499.0	WITH LIMESTONE SPOTS
-87.1	MODESTO		SHALE	0.3	500.0	
-87.4	CARBONDALE	DANVILLE	COAL	2.3	500.3	
-89.8	CARBONDALE		SHALE	6.3	502.7	
-96.1	CARBONDALE		SHALE	5.0	509.0	
-101.1	CARBONDALE		SHALE	4.0	514.0	
-105.1	CARBONDALE	ALLENBY	COAL	0.4	518.0	
-105.5	CARBONDALE		SHALE	1.6	518.4	
-107.1	CARBONDALE		SHALE	3.0	520.0	
-110.1	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	523.0	
-115.1	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	528.0	
-116.1	CARBONDALE		SOFT SHALE	18.0	529.0	WITH LIMESTONE PARTINGS
-134.1	CARBONDALE		SHALE	13.0	547.0	
-147.1	CARBONDALE	BRERETON	LIMESTONE	4.5	560.0	
-151.6	CARBONDALE	ENERGY	SHALE	1.5	564.5	
-153.1	CARBONDALE	ENERGY	SHALE	0.5	566.0	
-153.6	CARBONDALE	ENERGY	SHALE	12.9	566.5	
-166.5	CARBONDALE	HERRIN	COAL	0.6	579.4	
-167.1	CARBONDALE	HERRIN	COAL	5.5	580.0	
-172.6	CARBONDALE	HERRIN	SHALE	0.2	585.5	
-172.8	CARBONDALE	HERRIN	COAL	0.9	585.7	
-173.7	CARBONDALE		SHALE	0.4	586.6	
-174.1	CARBONDALE		SANDY SHALE	1.5	587.0	
-175.6	CARBONDALE		SANDSTONE	0.5	588.5	

MAPID: 05501556000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 21 **QUARTERS/FOOTAGES:** 0' N line, 0' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.87243 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.994238 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 413.0 **LOGGED (FT.):** 586.2 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-75.4	MODESTO	PIASA	LIMESTONE	4.5	488.4	
-79.9	MODESTO		DARK GRAY SHALE	7.0	492.9	
-86.9	CARBONDALE	DANVILLE	COAL	2.3	499.9	
-89.2	CARBONDALE		GRAY SHALE	15.3	502.2	
-104.6	CARBONDALE	ALLENBY	COAL	0.4	517.6	
-105.0	CARBONDALE		DARK GRAY SHALE	4.6	518.0	
-109.6	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	522.6	
-115.6	CARBONDALE	LAWSON	LIMESTONE W/ SHALE	18.0	528.6	
-133.6	CARBONDALE	LAWSON	DARK GRAY SHALE	13.0	546.6	
-146.6	CARBONDALE	BRERETON	LIMESTONE	4.5	559.6	
-151.1	CARBONDALE	ANNA	BLACK SHALE	2.0	564.1	
-153.1	CARBONDALE	ENERGY	GRAY SHALE	12.9	566.1	
-166.0	CARBONDALE	HERRIN	COAL	7.2	579.0	

MAPID: 05502235000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 22 **QUARTERS/FOOTAGES:** 175' S line, 950' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.86926 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.980301 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 606.4 **LOG TYPE:** Survey Core Study

SOURCE: FREEMAN COAL MINING CO. 05-3-65 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-127.8	CARBONDALE		MOTTLED SHALE	11.0	516.8	
-138.8	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	527.8	
-145.8	CARBONDALE	LAWSON	SILTY SHALE	26.8	534.8	
-172.6	CARBONDALE	LAWSON	SILTY SHALE	9.8	561.6	
-182.5	CARBONDALE	LAWSON	GRAY SHALE	2.6	571.5	
-185.0	CARBONDALE	LAWSON	DARK GRAY SHALE	2.7	574.0	
-187.7	CARBONDALE	LAWSON	CALCAREOUS SHALE	0.6	576.7	
-188.3	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	5.5	577.3	
-193.8	CARBONDALE	ANNA	BLACK SHALE	3.9	582.8	
-197.7	CARBONDALE	ENERGY	GRAY SHALE	4.3	586.7	
-202.0	CARBONDALE	ENERGY	SILTY SHALE	5.9	591.0	
-207.9	CARBONDALE	ENERGY	BLACK SHALE	0.1	596.9	
-208.0	CARBONDALE	HERRIN	COAL	9.4	597.0	

MAPID: 05500111000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 25 **QUARTERS/FOOTAGES:** 1650' N line, 1650' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.82958 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.975259 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 431.0 **LOGGED (FT.):** 664.0 **LOG TYPE:**

SOURCE: DIAMONDMAR0002 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-222.0	CARBONDALE	HERRIN	COAL	10.2	653.0	

MAPID: 05500111000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 25 **QUARTERS/FOOTAGES:** 1650' N line, 1650' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.82958 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.975259 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 431.0 **LOGGED (FT.):** 663.2 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-110.3	MODESTO	PIASA	LIMESTONE	4.5	541.3	
-114.8	MODESTO		GRAY SHALE	5.3	545.8	
-120.1	CARBONDALE	DANVILLE	COAL	2.0	551.1	
-122.1	CARBONDALE		SHALE & SANDSTONE	18.6	553.1	
-140.7	CARBONDALE	ALLENBY	COAL	0.5	571.7	
-141.2	CARBONDALE		DARK GRAY SHALE	4.2	572.2	
-145.3	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	576.3	
-151.8	CARBONDALE	LAWSON	SHALE & SANDSTONE	8.5	582.8	
-160.3	CARBONDALE	LAWSON	SILTY SHALE	10.0	591.3	
-170.3	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	5.0	601.3	
-175.3	CARBONDALE	LAWSON	SANDSTONE	5.0	606.3	
-180.3	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	15.0	611.3	
-195.3	CARBONDALE	JAMESTOWN	COAL	0.3	626.3	
-195.6	CARBONDALE		BLACK SHALE	2.8	626.6	
-198.3	CARBONDALE	BRERETON	LIMESTONE	6.0	629.3	
-204.3	CARBONDALE	ANNA	BLACK SHALE	6.0	635.3	
-210.3	CARBONDALE	ENERGY	GRAY SHALE	11.7	641.3	
-222.0	CARBONDALE	HERRIN	COAL	10.2	653.0	

MAPID: 05500111000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 25 **QUARTERS/FOOTAGES:** 1650' N line, 1650' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.82958 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.975259 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 431.0 **LOGGED (FT.):** 664.0 **LOG TYPE:** Drillers Log

SOURCE: DIAMOND AND MARSHALL 2 **WELL TYPE:** Coal Test

COMMENT: UNIT DEPTHS ALTERED FROM ORIG.LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
431.0	PLEISTOCENE		CLAY	21.0	0.0	
410.0	PLEISTOCENE		SAND	10.0	21.0	
400.0	PLEISTOCENE		SANDSTONE	2.0	31.0	WITH GRAVEL
398.0	BOND		SANDSTONE	18.0	33.0	
380.0	BOND		SHALE	37.0	51.0	
343.0	BOND		SHALE	2.3	88.0	
340.7	BOND		SHALE	0.7	90.3	
340.0	BOND		SHALE	1.0	91.0	
339.0	BOND	CARTHAGE	LIMESTONE	6.0	92.0	
333.0	MODESTO		SHALE	3.7	98.0	
329.3	MODESTO		LIMESTONE	0.3	101.7	
329.0	MODESTO		SHALE	8.0	102.0	
321.0	MODESTO		COAL	0.3	110.0	
320.7	MODESTO		SHALE	1.0	110.3	
319.7	MODESTO		LIMESTONE	0.5	111.3	
319.2	MODESTO		SANDSTONE	16.3	111.8	WITH LIMESTONE PARTINGS
303.0	MODESTO		SHALY SANDSTONE	21.0	128.0	
282.0	MODESTO		SHALE	55.0	149.0	WITH BROWN SPOTS
227.0	MODESTO		SHALE	2.8	204.0	
224.2	MODESTO		SHALE	3.0	206.8	
221.2	MODESTO		LIMESTONE	0.5	209.8	
220.7	MODESTO		SHALE	8.8	210.3	
212.0	MODESTO		SHALE	4.0	219.0	
208.0	MODESTO		SHALE	10.0	223.0	
198.0	MODESTO		SANDY SHALE	19.0	233.0	
179.0	MODESTO		SANDY SHALE	17.0	252.0	WITH SANDSTONE PARTINGS
162.0	MODESTO		SANDSTONE	2.0	269.0	
160.0	MODESTO		SANDY SHALE	3.5	271.0	
156.5	MODESTO		SANDSTONE	58.5	274.5	
98.0	MODESTO		SHALE	7.0	333.0	WITH BROWN BANDS
91.0	MODESTO		SHALE	3.0	340.0	
88.0	MODESTO		SHALE	9.0	343.0	
79.0	MODESTO		SHALE	16.0	352.0	WITH BROWN BANDS
63.0	MODESTO		SANDSTONE	4.0	368.0	
59.0	MODESTO		SANDSTONE	30.0	372.0	WITH SHALE PARTINGS
29.0	MODESTO		SANDY SHALE	55.0	402.0	
-26.0	MODESTO		SHALE	20.0	457.0	WITH BROWN BANDS
-46.0	MODESTO		SHALE	2.3	477.0	

-48.3	MODESTO		COAL	0.3	479.3	
-48.5	MODESTO		CLAYSTONE	1.0	479.5	
-49.5	MODESTO		LIMESTONE	2.5	480.5	
-52.0	MODESTO		CALCAREOUS SHALE	7.0	483.0	
-59.0	MODESTO		SHALE	17.0	490.0	DARK BLUE
-76.0	MODESTO		SHALE	2.0	507.0	
-78.0	MODESTO		COAL	1.0	509.0	
-79.0	MODESTO		SHALE	2.0	510.0	
-81.0	MODESTO		CALCAREOUS SHALE	3.0	512.0	
-84.0	MODESTO		SANDSTONE	6.0	515.0	
-90.0	MODESTO		SANDY SHALE	5.0	521.0	
-95.0	MODESTO		SHALE	6.0	526.0	
-101.0	MODESTO		SHALE	6.5	532.0	WITH BROWN BANDS; DARK BLUE
-107.5	MODESTO		SHALE	0.9	538.5	
-108.4	MODESTO	DEGRAFF	COAL	1.1	539.4	
-109.6	MODESTO		SHALE	1.5	540.6	
-111.1	MODESTO	PIASA	LIMESTONE	4.5	542.1	
-115.6	MODESTO		SHALE	1.0	546.6	
-116.6	MODESTO		SHALE	4.3	547.6	
-120.8	CARBONDALE	DANVILLE	COAL	2.0	551.8	
-122.8	CARBONDALE		SHALE	1.0	553.8	
-123.8	CARBONDALE		SANDY SHALE	7.3	554.8	
-131.1	CARBONDALE		SHALE	1.0	562.1	
-132.1	CARBONDALE		SHALE	1.0	563.1	
-133.1	CARBONDALE		SANDSTONE	7.5	564.1	
-140.6	CARBONDALE		SHALE	0.8	571.6	
-141.4	CARBONDALE	ALLENBY	COAL	0.5	572.4	
-141.9	CARBONDALE		SHALE	2.2	572.9	DARK BLUE
-144.1	CARBONDALE		SHALE	2.0	575.1	
-146.1	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	577.1	
-152.6	CARBONDALE		SANDY SHALE	1.5	583.6	
-154.1	CARBONDALE		SHALE	5.0	585.1	
-159.1	CARBONDALE		SANDSTONE	2.0	590.1	WITH SHALE PARTINGS
-161.1	CARBONDALE		SANDY SHALE	10.0	592.1	WITH BROWN BANDS
-171.1	CARBONDALE		SHALY SANDSTONE	5.0	602.1	
-176.1	CARBONDALE		SANDSTONE	5.0	607.1	
-181.1	CARBONDALE		SANDSTONE	15.0	612.1	WITH SHALE PARTINGS
-196.1	CARBONDALE	JAMESTOWN	COAL	0.3	627.1	
-196.3	CARBONDALE		SHALE	2.8	627.3	
-199.1	CARBONDALE	BRERETON	LIMESTONE	6.0	630.1	
-205.1	CARBONDALE	ENERGY	SHALE	6.0	636.1	
-211.1	CARBONDALE	ENERGY	SHALE	3.0	642.1	
-214.1	CARBONDALE	ENERGY	SHALE	8.7	645.1	WITH BROWN BANDS
-222.8	CARBONDALE	HERRIN	COAL	10.2	653.8	
-232.9	CARBONDALE		CLAYSTONE	1.2	663.9	

MAPID: 05501802000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 25 **QUARTERS/FOOTAGES:** NE NE NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.818117 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.978841 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 420.0 **LOGGED (FT.):** 730.0 **LOG TYPE:** Drillers Log

SOURCE: BIG MUDDY COAL SYNDICATE 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
420.0	PLEISTOCENE		UNCONSOLIDATED	18.0	0.0	
402.0			SHALE	12.0	18.0	
390.0			SANDSTONE	10.5	30.0	
379.5			CLAYSTONE	49.0	40.5	BLUE
330.5			SHALE	4.2	89.5	
326.3			COAL	2.0	93.7	
324.3			CLAYSTONE	7.3	95.7	WITH LIMESTONE
317.0			SHALE	26.2	103.0	
290.8			COAL	2.3	129.2	
288.6			CLAYSTONE	2.0	131.4	
286.6			SHALE	6.5	133.4	
280.1			BLACK SHALE	4.7	139.9	
275.4			SANDY SHALE	96.3	144.6	
179.2			BLACK SHALE	6.7	240.8	
172.5			LIMESTONE	4.2	247.5	
168.3			BLACK SHALE	7.3	251.7	
161.0			COAL	1.5	259.0	
159.5			CLAYSTONE	3.5	260.5	
156.0			SANDSTONE	28.2	264.0	
127.8			LIMESTONE	10.3	292.2	
117.5			SANDSTONE	62.2	302.5	
55.3			SHALE	30.5	364.7	
24.8			SANDSTONE	8.0	395.2	
16.8			SHALE	10.3	403.2	
6.6			BLACK SHALE	14.2	413.4	
-7.6			CLAYSTONE	3.5	427.6	
-11.1			SANDSTONE	42.8	431.1	WITH SHALE
-53.9			SHALE	12.7	473.9	
-66.6			LIMESTONE/CHERT	6.3	486.6	WITH FLINT
-72.9			SHALE	8.2	492.9	
-81.1			SANDSTONE	3.0	501.1	
-84.1			SANDY SHALE	19.2	504.1	
-103.3			SHALE	18.0	523.3	LIGHT
-121.3			LIMESTONE	5.5	541.3	
-126.8			CLAYSTONE	4.3	546.8	
-131.0			BLACK SHALE	8.4	551.0	
-139.4			BLACK SHALE	16.0	559.4	WITH SAND
-155.4			SHALE	22.0	575.4	
-177.4			BLACK SHALE	6.0	597.4	

-183.4			LIMESTONE	5.5	603.4	
-188.9			SHALE	6.0	608.9	
-194.9			BLACK SHALE	18.2	614.9	
-213.1			BLACK SHALE	8.5	633.1	
-221.6			CLAYSTONE	1.5	641.6	
-223.1			LIMESTONE	4.2	643.1	
-227.3			SANDSTONE	21.3	647.3	
-248.6			SANDY SHALE	11.3	668.6	
-259.9			SHALE	8.3	679.9	
-268.2			BLACK SHALE	4.5	688.2	
-272.7			SHALE	12.3	692.7	
-285.0			SHALE	3.5	705.0	
-288.5			BLACK SHALE	21.5	708.5	
-310.0	CARBONDALE	HERRIN	COAL	-	730.0	NO THICKNESS GIVEN/HOLE CONTINUED TO 743

MAPID: 05500112000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 26 **QUARTERS/FOOTAGES:** 330' N line, 2310' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.845628 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.978882 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 609.0 **LOG TYPE:**

SOURCE: DIAMONDMAR **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-197.0	CARBONDALE	HERRIN	COAL	10.0	597.0	

MAPID: 05500112000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 26 **QUARTERS/FOOTAGES:** 330' N line, 2310' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.845628 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.978882 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 401.0 **LOGGED (FT.):** 607.0 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-87.7	MODESTO	PIASA	LIMESTONE	4.0	488.7	
-91.7	MODESTO		GRAY SHALE	7.5	492.7	
-99.2	CARBONDALE	DANVILLE	COAL	2.0	500.2	
-101.2	CARBONDALE		SHALE & SANDSTONE	16.5	502.2	
-117.7	CARBONDALE	ALLENBY	COAL	0.5	518.7	
-118.2	CARBONDALE		DARK GRAY SHALE	2.5	519.2	
-120.7	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	521.7	
-127.7	CARBONDALE	LAWSON	DARK GRAY SHALE	8.0	528.7	
-135.7	CARBONDALE	LAWSON	GRAY SHALE	10.0	536.7	
-145.7	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	8.0	546.7	
-153.7	CARBONDALE	LAWSON	SANDSTONE	3.0	554.7	
-156.7	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	13.3	557.7	
-170.0	CARBONDALE	JAMESTOWN	COAL	0.5	571.0	
-170.5	CARBONDALE		BLACK SHALE	1.7	571.5	
-172.2	CARBONDALE	BRERETON	LIMESTONE	5.5	573.2	
-177.7	CARBONDALE	ANNA	BLACK SHALE	6.0	578.7	
-183.7	CARBONDALE	ENERGY	GRAY SHALE	12.3	584.7	
-196.0	CARBONDALE	HERRIN	COAL	10.0	597.0	

MAPID: 05500112000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 26 **QUARTERS/FOOTAGES:** 330' N line, 2310' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.845628 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.978882 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 609.0 **LOG TYPE:** Drillers Log

SOURCE: DIAMOND AND MARSHALL 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
400.0	PLEISTOCENE		SOIL	6.0	0.0	
394.0	PLEISTOCENE		SAND	13.0	6.0	YELLOW
381.0	PLEISTOCENE		SAND	22.0	19.0	DARK
359.0	MODESTO		LIMESTONE	4.0	41.0	
355.0	MODESTO		SHALE	5.0	45.0	
350.0	MODESTO		SHALE	8.0	50.0	
342.0	MODESTO		COAL	0.3	58.0	
341.7	MODESTO		SHALE	2.7	58.3	
339.0	MODESTO		SANDSTONE	11.0	61.0	
328.0	MODESTO		SANDSTONE	36.0	72.0	WITH BROWN BANDS
292.0	MODESTO		SANDY SHALE	45.0	108.0	WITH BROWN BANDS
247.0	MODESTO		SHALE	1.5	153.0	
245.5	MODESTO		SHALE	2.5	154.5	
243.0	MODESTO		LIMESTONE	0.8	157.0	
242.2	MODESTO		SHALE	4.2	157.8	
238.0	MODESTO		SHALE	4.0	162.0	
234.0	MODESTO		SHALE	5.0	166.0	
229.0	MODESTO		SHALE	4.0	171.0	
225.0	MODESTO		SANDY SHALE	3.0	175.0	
222.0	MODESTO		SHALE	12.0	178.0	
210.0	MODESTO		SANDY SHALE	3.0	190.0	
207.0	MODESTO		SANDSTONE	8.0	193.0	WITH SHALE PARTINGS
199.0	MODESTO		SANDY SHALE	15.0	201.0	
184.0	MODESTO		SANDSTONE	4.0	216.0	WITH SHALE PARTINGS
180.0	MODESTO		SANDY SHALE	6.0	220.0	
174.0	MODESTO		SANDSTONE	16.0	226.0	WITH SHALE PARTINGS
158.0	MODESTO		SANDSTONE	22.0	242.0	
136.0	MODESTO		SANDY SHALE	2.0	264.0	
134.0	MODESTO		SANDSTONE	8.0	266.0	
126.0	MODESTO		SHALY SANDSTONE	14.0	274.0	
112.0	MODESTO		SHALE	1.0	288.0	
111.0	MODESTO		SHALE	4.0	289.0	
107.0	MODESTO	CHAPEL	COAL	0.3	293.0	
106.7	MODESTO	CHAPEL	SHALE	1.7	293.3	
105.0	MODESTO	CHAPEL	COAL	0.5	295.0	
104.5	MODESTO		SHALE	6.5	295.5	
98.0	MODESTO		SHALE	2.0	302.0	
96.0	MODESTO		SHALE	7.0	304.0	WITH BROWN BANDS

89.0	MODESTO		SANDSTONE	22.0	311.0	WITH SHALE PARTINGS
67.0	MODESTO		SANDY SHALE	29.0	333.0	
38.0	MODESTO		SANDY SHALE	8.0	362.0	WITH SANDSTONE PARTINGS
30.0	MODESTO		SHALE	40.0	370.0	
-10.0	MODESTO		SHALE	16.0	410.0	WITH BROWN BANDS
-26.0	MODESTO		SHALE	3.0	426.0	
-29.0	MODESTO		COAL	0.3	429.0	1
-29.3	MODESTO		SHALE	1.8	429.3	
-31.0	MODESTO		LIMESTONE	4.0	431.0	
-35.0	MODESTO		CALCAREOUS SHALE	2.0	435.0	
-37.0	MODESTO		SHALE	15.0	437.0	WITH BROWN BANDS; DARK BLUE
-52.0	MODESTO		SHALE	5.0	452.0	DARK BLUE
-57.0	MODESTO		SHALE	3.5	457.0	
-60.5	MODESTO		COAL	1.0	460.5	
-61.5	MODESTO		SHALE	0.5	461.5	
-62.0	MODESTO		SOFT SHALE	2.0	462.0	
-64.0	MODESTO		SANDSTONE	11.0	464.0	WITH LIMESTONE SPOTS
-75.0	MODESTO		SANDY SHALE	4.0	475.0	
-79.0	MODESTO		SHALE	7.0	479.0	WITH BROWN BANDS; DARK BLUE
-86.0	MODESTO	DEGRAFF	COAL	1.0	486.0	
-87.0	MODESTO		CLAYSTONE	2.0	487.0	
-89.0	MODESTO	PIASA	LIMESTONE	4.0	489.0	
-93.0	MODESTO		SHALE	2.0	493.0	
-95.0	MODESTO		SHALE	5.5	495.0	
-100.5	CARBONDALE	DANVILLE	COAL	2.0	500.5	
-102.5	CARBONDALE		CLAYSTONE	1.0	502.5	
-103.5	CARBONDALE		SANDY SHALE	2.5	503.5	
-106.0	CARBONDALE		SANDSTONE	4.0	506.0	
-110.0	CARBONDALE		SANDY SHALE	2.0	510.0	
-112.0	CARBONDALE		SANDSTONE	4.0	512.0	
-116.0	CARBONDALE		SANDSTONE	3.0	516.0	
-119.0	CARBONDALE	ALLENBY	COAL	0.5	519.0	
-119.5	CARBONDALE		SHALE	0.5	519.5	
-120.0	CARBONDALE		SHALE	2.0	520.0	
-122.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	522.0	
-129.0	CARBONDALE		SANDY SHALE	3.0	529.0	
-132.0	CARBONDALE		SHALE	5.0	532.0	DARK BLUE
-137.0	CARBONDALE		SANDY SHALE	2.0	537.0	WITH SANDSTONE PARTINGS
-139.0	CARBONDALE		SHALE	8.0	539.0	
-147.0	CARBONDALE		SHALY SANDSTONE	8.0	547.0	
-155.0	CARBONDALE		SANDSTONE	3.0	555.0	
-158.0	CARBONDALE		SANDSTONE	13.3	558.0	WITH SHALE PARTINGS
-171.3	CARBONDALE	JAMESTOWN	COAL	0.5	571.3	
-171.8	CARBONDALE		SHALE	1.7	571.8	
-173.5	CARBONDALE	BRERETON	LIMESTONE	5.5	573.5	
-179.0	CARBONDALE	ENERGY	SHALE	6.0	579.0	
-185.0	CARBONDALE	ENERGY	SHALE	5.0	585.0	

-190.0	CARBONDALE	ENERGY	SHALE	7.3	590.0	WITH BROWN BANDS
-197.3	CARBONDALE	HERRIN	COAL	10.0	597.3	
-207.3	CARBONDALE		CLAYSTONE	1.7	607.3	

MAPID: 05502214000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 27 **QUARTERS/FOOTAGES:** 1368' N line, 1060' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.86892 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.976039 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 584.8 **LOG TYPE:** Survey Core Study

SOURCE: FREEMAN COAL MINING CORP. 05-2-65 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-95.3	MODESTO	PIASA	ROCK	1.0	484.3	
-96.3	MODESTO		ROCK	2.0	485.3	
-98.3	CARBONDALE	DANVILLE	COAL	1.5	487.3	
-99.8	CARBONDALE		SILTY SHALE	22.0	488.8	
-121.8	CARBONDALE	ALLENBY	COAL	2.5	510.8	
-124.3	CARBONDALE		CLAYSTONE & SHALE	4.0	513.3	
-128.3	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	517.3	
-136.3	CARBONDALE	LAWSON	SILTY SHALE	36.7	525.3	
-173.0	CARBONDALE	JAMESTOWN	COAL	0.3	562.0	
-173.3	CARBONDALE		CALCAREOUS SHALE	4.0	562.3	
-177.3	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	10.8	566.3	
-188.0	CARBONDALE	HERRIN	COAL	7.8	577.0	

MAPID: 05500746000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 28 **QUARTERS/FOOTAGES:** 750' S line, 750' E line of SE SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.884634 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.967285 **DATE COLLECTED:** 10 / 21 / 1944

SURFACE ELEVATION (FT.): 390.0 **LOGGED (FT.):** 607.0 **LOG TYPE:** Drillers Log

SOURCE: CHICAGO, WILMINGTON &FRANKLIN **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
390.0	PLEISTOCENE		SANDY CLAY	40.0	0.0	
350.0	PLEISTOCENE		CLAY	2.5	40.0	
347.5	PLEISTOCENE		SANDY CLAY	12.5	42.5	
335.0	PLEISTOCENE		SAND	2.5	55.0	
332.5	PLEISTOCENE		SANDY CLAY	2.5	57.5	
330.0			SHALE	5.0	60.0	
325.0			SHALE WITH LIMESTONE	90.0	65.0	INTERBEDDED SANDY SHALE AND LIMESTONE
235.0			SANDSTONE	22.5	155.0	
212.5			SHALE	9.5	177.5	SANDY
203.0			SANDSTONE	5.0	187.0	
198.0			SHALE	40.5	192.0	
157.5			SHALE WITH LIMESTONE	2.5	232.5	
155.0			SHALE	17.5	235.0	
137.5			SHALE	2.5	252.5	DARK,INCLUDES COAL
135.0			SHALE	2.5	255.0	
132.5	MODESTO	CHAPEL	COAL	2.5	257.5	INCLUDES LIMESTONE
130.0	MODESTO		SHALE	6.0	260.0	
124.0	MODESTO		LIMESTONE	3.0	266.0	
121.0	MODESTO		SHALE	31.0	269.0	SANDY
90.0	MODESTO		GRAY SHALE	2.5	300.0	DARK
87.5	MODESTO		SHALE	42.5	302.5	
45.0	MODESTO		GRAY SHALE	32.5	345.0	
12.5	MODESTO		SHALE WITH LIMESTONE	2.5	377.5	
10.0	MODESTO		GRAY SHALE	2.5	380.0	
7.5	MODESTO		SHALE WITH LIMESTONE	2.5	382.5	
5.0	MODESTO		BLACK SHALE & LIMESTONE	2.5	385.0	
2.5	MODESTO		LIMESTONE	2.5	387.5	
0.0	MODESTO		GRAY SHALE	10.0	390.0	
-10.0	MODESTO		SHALE WITH LIMESTONE	5.0	400.0	
-15.0	MODESTO		GRAY SHALE	5.0	405.0	
-20.0	MODESTO		BLACK SHALE & LIMESTONE	2.5	410.0	
-22.5	MODESTO		SHALE WITH LIMESTONE	2.5	412.5	
-25.0	MODESTO		GRAY SHALE	2.5	415.0	
-27.5	MODESTO		SHALE WITH LIMESTONE	7.5	417.5	
-35.0	MODESTO		GRAY SHALE	25.0	425.0	
-60.0	MODESTO	PIASA	LIMESTONE	7.5	450.0	HARD
-67.5	MODESTO		GRAY SHALE	5.0	457.5	

-72.5	CARBONDALE	DANVILLE	SHALE/COAL	2.5	462.5	GRAY; WITH 6" COAL
-75.0	CARBONDALE		GRAY SHALE	15.0	465.0	
-90.0	CARBONDALE		SHALE	5.5	480.0	SANDY
-95.5	CARBONDALE	BANKSTON FORK	LIMESTONE	8.5	485.5	
-104.0	CARBONDALE		GRAY SHALE	28.0	494.0	
-132.0	CARBONDALE		SILTSTONE	9.0	522.0	
-141.0	CARBONDALE		LIMESTONE	8.0	531.0	
-149.0	CARBONDALE		SHALE	4.0	539.0	BLACK
-153.0	CARBONDALE	ENERGY	GRAY SHALE	7.2	543.0	
-160.2	CARBONDALE	HERRIN	COAL	6.8	550.2	
-167.0	CARBONDALE		UNDERCLAY	7.0	557.0	
-174.0	CARBONDALE		CONGLOMERATE	3.0	564.0	
-177.0	CARBONDALE		SHALE	14.0	567.0	SANDY
-191.0	CARBONDALE		GRAY SHALE	9.0	581.0	
-200.0	CARBONDALE		CONGLOMERATE	2.0	590.0	
-202.0	CARBONDALE		SHALE	4.0	592.0	BLACK
-206.0	CARBONDALE	ST. DAVID	LIMESTONE	0.5	596.0	
-206.5	CARBONDALE	DYKERSBURG	GRAY SHALE	4.5	596.5	
-211.0	CARBONDALE	SPRINGFIELD	COAL	4.5	601.0	
-215.5	CARBONDALE		UNDERCLAY	1.6	605.5	

MAPID: 05502181000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 28 **QUARTERS/FOOTAGES:** 1930' S line, 1770' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.885199 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.97054 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 387.0 **LOGGED (FT.):** 570.0 **LOG TYPE:** Survey Core Study

SOURCE: FREEMAN COAL MINING CORP. 05-7-64 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-71.6	MODESTO	PIASA	ROCK	1.0	458.6	
-72.6	MODESTO		GRAY SHALE	2.0	459.6	
-74.6	CARBONDALE	DANVILLE	COAL	2.5	461.6	
-77.1	CARBONDALE		SHALE	25.5	464.1	
-102.6	CARBONDALE	BANKSTON FORK	LIMESTONE	10.0	489.6	
-112.6	CARBONDALE	LAWSON	SILTY SHALE	30.0	499.6	
-142.6	CARBONDALE	LAWSON	SANDSTONE/SILTSTONE	3.8	529.6	
-146.3	CARBONDALE	JAMESTOWN	COAL	0.3	533.3	
-146.6	CARBONDALE		BLACK SHALE	1.8	533.6	
-148.4	CARBONDALE	BRERETON	LIMESTONE	5.6	535.4	
-154.0	CARBONDALE	ANNA	BLACK SHALE	3.1	541.0	
-157.1	CARBONDALE	ENERGY	DARK GRAY SHALE	2.8	544.1	
-159.8	CARBONDALE	ENERGY	GRAY SHALE	13.4	546.8	
-173.3	CARBONDALE	ENERGY	CARBONACEOUS SHALE	0.8	560.3	
-174.0	CARBONDALE	HERRIN	COAL	9.0	561.0	

MAPID: 05500751000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 29 **QUARTERS/FOOTAGES:** 2550' N line, 1370' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.896165 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.97279 **DATE COLLECTED:** 1 / 0 / 1945

SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 568.2 **LOG TYPE:** Drillers Log

SOURCE: CHICAGO, WILMINGTON & FRANKLIN **WELL TYPE:** Coal Test

COMMENT: TIMED LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
407.0			UNKNOWN	28.0	0.0	
379.0			LIMESTONE	5.0	28.0	SUGGESTED TO BE SHOAL CREEK
374.0			SHALE	17.0	33.0	
357.0			SHALE & SANDSTONE	57.0	50.0	INTERBEDDED
300.0			LIMESTONE	1.0	107.0	
299.0			SHALE	7.0	108.0	SANDY
292.0			LIMESTONE	2.0	115.0	
290.0			SHALE	39.0	117.0	INTERBEDDED WITH SANDY SHALE
251.0			SANDSTONE	3.0	156.0	HARD
248.0			SHALE	86.0	159.0	SANDY
162.0			SANDSTONE	5.0	245.0	
157.0			SHALE	5.0	250.0	
152.0			SHALE	2.0	255.0	BLACK
150.0			GRAY SHALE	3.0	257.0	
147.0	MODESTO	CHAPEL	SHALE	5.0	260.0	WITH COAL
142.0	MODESTO		SHALE	122.0	265.0	SANDY
20.0	MODESTO		LIMESTONE	0.5	387.0	
19.5	MODESTO		SHALE	0.5	387.5	SANDY
19.0	MODESTO		LIMESTONE	0.5	388.0	
18.5	MODESTO		SHALE	1.5	388.5	SANDY
17.0	MODESTO		LIMESTONE	4.0	390.0	
13.0	MODESTO		SHALE	1.0	394.0	
12.0	MODESTO		SHALE	6.0	395.0	SANDY
6.0	MODESTO		LIMESTONE	2.5	401.0	
3.5	MODESTO		SHALE	11.5	403.5	
-8.0	MODESTO		SHALE/COAL	5.0	415.0	BLACK SHALE & COAL, NAMED CUTLER
-13.0	MODESTO		SHALE	15.0	420.0	CALCAREOUS
-28.0	MODESTO		SHALE WITH LIMESTONE	5.0	435.0	
-33.0	MODESTO		SHALE	13.5	440.0	
-46.5	MODESTO	PIASA	LIMESTONE	5.0	453.5	NAMED PIASA IN LOG
-51.5	MODESTO		SHALE	1.5	458.5	
-53.0	CARBONDALE	DANVILLE	GRAY SHALE	5.0	460.0	WITH COAL
-58.0	CARBONDALE		SHALE	19.0	465.0	
-77.0	CARBONDALE		LIMESTONE	1.0	484.0	
-78.0	CARBONDALE		SHALE	5.0	485.0	CALCAREOUS
-83.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	490.0	
-91.0	CARBONDALE		SHALE	24.0	498.0	SUGGESTED TO BE LAWSON
-115.0	CARBONDALE		SHALE	1.0	522.0	CALCAREOUS
-116.0	CARBONDALE		GRAY SHALE	8.0	523.0	

-124.0	CARBONDALE		LIMESTONE	1.0	531.0	SUGGESTED TO BE CONANT
-125.0	CARBONDALE		SHALE	3.0	532.0	SUGGESTED TO BE JAMESTOWN; BLACK
-128.0	CARBONDALE	BRERETON	LIMESTONE	5.0	535.0	SUGGESTED TO BE BRERETON
-133.0	CARBONDALE	ANNA	SHALE	5.0	540.0	SUGGESTED TO BE ANNA; BLACK
-138.0	CARBONDALE	ENERGY	GRAY SHALE	14.6	545.0	
-152.6	CARBONDALE	HERRIN	COAL	8.6	559.6	

MAPID: 05500751000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 29 **QUARTERS/FOOTAGES:** 2550' N line, 1370' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.896165 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.97279 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 568.6 **LOG TYPE:** Drillers Log

SOURCE: C.W.&F. COAL CO. 23-44 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-46.9	MODESTO	PIASA	LIMESTONE	5.0	453.9	
-51.9	MODESTO		SHALE	4.0	458.9	
-55.9	CARBONDALE	DANVILLE	COAL	0.5	462.9	
-56.4	CARBONDALE		GRAY SHALE	21.0	463.4	
-77.4	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	14.0	484.4	
-91.4	CARBONDALE	LAWSON	SHALE	24.0	498.4	
-115.4	CARBONDALE	LAWSON	CALCAREOUS SHALE	1.0	522.4	
-116.4	CARBONDALE	LAWSON	GRAY SHALE	8.0	523.4	
-124.4	CARBONDALE	CONANT	LIMESTONE	1.0	531.4	
-125.4	CARBONDALE		BLACK SHALE	3.0	532.4	
-128.4	CARBONDALE	BRERETON	LIMESTONE	5.0	535.4	
-133.4	CARBONDALE	ANNA	BLACK SHALE	5.0	540.4	
-138.4	CARBONDALE	ENERGY	GRAY SHALE	14.6	545.4	
-153.0	CARBONDALE	HERRIN	COAL	8.6	560.0	

MAPID: 05501243000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 29 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NE SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.904166 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.969757 **DATE COLLECTED:** 6 / 0 / 1956

SURFACE ELEVATION (FT.): 428.0 **LOGGED (FT.):** 1705.0 **LOG TYPE:** Electric Log

SOURCE: NEW IL MID CONT. OIL **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-367.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	795.0	
-430.0	SPOON	DAVIS	UNCLASSIFIED	-	858.0	
-1277.0	BASE OF PENN.		UNCLASSIFIED	-	1705.0	

MAPID: 05500261000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 30 **QUARTERS/FOOTAGES:** NE NE NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.911108 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.978914 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 478.0 **LOGGED (FT.):** 620.0 **LOG TYPE:** Drillers Log

SOURCE: HART-WILLIAMS COAL CO. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
478.0	PLEISTOCENE		CLAY	5.0	0.0	
473.0	BOND		SANDSTONE	3.0	5.0	
470.0	BOND		COAL	0.5	8.0	
469.5	BOND		CLAYSTONE	3.5	8.5	
466.0	BOND		SANDSTONE	1.0	12.0	
465.0	BOND		SANDSTONE	24.0	13.0	
441.0	BOND		SANDY SHALE	26.0	37.0	
415.0	BOND		SHALE	8.0	63.0	
407.0	BOND	CARTHAGE	LIMESTONE	6.0	71.0	
401.0	MODESTO		SHALE	4.0	77.0	
397.0	MODESTO		SHALE	9.0	81.0	
388.0	MODESTO		SLATY SHALE	19.0	90.0	
369.0	MODESTO		SHALE	3.0	109.0	
366.0	MODESTO		COAL	0.2	112.0	
365.8	MODESTO		SHALE	0.8	112.2	
365.0	MODESTO		SHALE	1.0	113.0	
364.0	MODESTO		SHALE	4.0	114.0	
360.0	MODESTO		SANDSTONE	5.0	118.0	
355.0	MODESTO		COAL	0.3	123.0	
354.7	MODESTO		LIMESTONE	2.7	123.3	
352.0	MODESTO		SHALE	10.0	126.0	
342.0	MODESTO		SHALE	24.0	136.0	
318.0	MODESTO		SHALE	2.0	160.0	
316.0	MODESTO		LIMESTONE	0.5	162.0	
315.5	MODESTO		SHALE	8.5	162.5	
307.0	MODESTO		SANDSTONE	15.0	171.0	
292.0	MODESTO		SANDSTONE	39.0	186.0	
253.0	MODESTO		SANDSTONE	47.0	225.0	
206.0	MODESTO		SANDSTONE	2.5	272.0	
203.5	MODESTO		SANDY SHALE	9.5	274.5	
194.0	MODESTO		SANDSTONE	8.0	284.0	WITH SHALE PARTINGS
186.0	MODESTO		SANDSTONE	6.0	292.0	
180.0	MODESTO		SANDSTONE	4.0	298.0	WITH SHALE PARTINGS
176.0	MODESTO		SANDSTONE	6.0	302.0	WITH SHALE PARTINGS
170.0	MODESTO		SHALE	3.0	308.0	
167.0	MODESTO		SHALE	0.5	311.0	
166.5	MODESTO	CHAPEL	COAL	0.9	311.5	
165.6	MODESTO		CLAYSTONE	3.6	312.4	
162.0	MODESTO		SANDY SHALE	16.0	316.0	

146.0	MODESTO		SANDSTONE	9.0	332.0	WITH SHALE PARTINGS
137.0	MODESTO		SANDY SHALE	20.0	341.0	
117.0	MODESTO		SANDY SHALE	10.0	361.0	
107.0	MODESTO		SHALE	27.0	371.0	
80.0	MODESTO		SHALE	27.0	398.0	
53.0	MODESTO		SHALE	17.0	425.0	
36.0	MODESTO		SHALE	4.0	442.0	
32.0	MODESTO		SHALE	1.0	446.0	
31.0	MODESTO		SHALE	1.5	447.0	
29.5	MODESTO		SANDSTONE	5.5	448.5	
24.0	MODESTO		SHALE	8.0	454.0	
16.0	MODESTO		LIMESTONE	1.0	462.0	
15.0	MODESTO		SHALE	3.0	463.0	
12.0	MODESTO		SHALE	4.5	466.0	
7.5	MODESTO		COAL	1.0	470.5	
6.5	MODESTO		SHALE	4.5	471.5	
2.0	MODESTO		SANDSTONE	9.0	476.0	
-7.0	MODESTO		SANDY SHALE	4.0	485.0	
-11.0	MODESTO		SHALE	7.0	489.0	
-18.0	MODESTO		SHALE	4.0	496.0	
-22.0	MODESTO	DEGRAFF	COAL WITH SHALE	0.6	500.0	WITH SHALE
-22.6	MODESTO		SHALE	2.4	500.6	
-25.0	MODESTO		SHALE	3.0	503.0	
-28.0	MODESTO	PIASA	LIMESTONE	3.0	506.0	
-31.0	MODESTO		SHALE	3.0	509.0	
-34.0	MODESTO		SHALE	2.3	512.0	
-36.3	CARBONDALE	DANVILLE	COAL	2.2	514.3	
-38.5	CARBONDALE		SANDSTONE	4.0	516.5	
-42.5	CARBONDALE		SHALE	3.0	520.5	
-45.5	CARBONDALE		SANDSTONE	1.0	523.5	
-46.5	CARBONDALE		SHALE	1.5	524.5	
-48.0	CARBONDALE		SHALE	3.0	526.0	
-51.0	CARBONDALE		SHALE	7.0	529.0	
-58.0	CARBONDALE		SANDSTONE	3.0	536.0	
-61.0	CARBONDALE	ALLENBY	COAL	0.7	539.0	
-61.7	CARBONDALE		SHALE	1.0	539.7	
-62.7	CARBONDALE		SHALE	2.3	540.7	
-65.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	543.0	
-70.5	CARBONDALE		SHALE	11.5	548.5	
-82.0	CARBONDALE		SHALE	16.0	560.0	
-98.0	CARBONDALE		SHALE	10.0	576.0	
-108.0	CARBONDALE		SHALE	1.0	586.0	
-109.0	CARBONDALE		SHALE	1.0	587.0	
-110.0	CARBONDALE	BRERETON	LIMESTONE	7.0	588.0	
-117.0	CARBONDALE	ENERGY	SHALE	3.0	595.0	
-120.0	CARBONDALE	ENERGY	SANDY SHALE	1.5	598.0	
-121.5	CARBONDALE	ENERGY	SANDY SHALE	8.5	599.5	
-130.0	CARBONDALE	HERRIN	COAL	8.4	608.0	

-138.4	CARBONDALE	CLAYSTONE	1.1	616.4
-139.5	CARBONDALE	LIMESTONE	2.5	617.5

MAPID: 05500261000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 30 **QUARTERS/FOOTAGES:** NE NE NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.911108 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.978914 **DATE COLLECTED:** 0 / 0 / 1907

SURFACE ELEVATION (FT.): 474.2 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: C W F CC 0002 **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-163.8	CARBONDALE	HERRIN	COAL	9.0	638.0	

MAPID: 05500724000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 30 **QUARTERS/FOOTAGES:** 335' N line, 360' E line of NW SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.925464 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.971472 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 448.0 **LOGGED (FT.):** 2136.0 **LOG TYPE:** Electric Log

SOURCE: ADKINS, E. S. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-132.0	CARBONDALE	HERRIN	COAL	10.0	580.0	
-174.0	CARBONDALE	SPRINGFIELD	COAL	4.0	622.0	SHALE & SILTSTONE ROOF
-247.0	CARBONDALE	HOUCHIN CREEK	COAL	-	695.0	

MAPID: 05500745000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 30 **QUARTERS/FOOTAGES:** 310' N line, 275' W line of NE NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.913685 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.978955 **DATE COLLECTED:** 5 / 3 / 1944

SURFACE ELEVATION (FT.): 465.0 **LOGGED (FT.):** 1045.0 **LOG TYPE:** Drillers Log

SOURCE: CW & F COAL CO 16-44 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
465.0	PLEISTOCENE		UNCONSOLIDATED	12.0	0.0	
453.0	PLEISTOCENE		CLAY	13.0	12.0	
440.0	BOND		SHALE	18.0	25.0	STICKY,SOFT
422.0	BOND		GRAY SHALE	30.0	43.0	WITH SANDSTONE INTERBEDS
392.0	BOND		SHALE	20.0	73.0	
372.0	BOND	CARTHAGE	LIMESTONE	7.0	93.0	
365.0	MODESTO		SHALE	47.0	100.0	
318.0	MODESTO		GRAY SHALE	30.5	147.0	TOUGH,DARK
287.5	MODESTO		SHALE	2.5	177.5	BLACK
285.0	MODESTO		GRAY SHALE	7.0	180.0	DARK
278.0	MODESTO		SHALE	25.0	187.0	
253.0	MODESTO		SANDSTONE	95.0	212.0	
158.0	MODESTO		SANDSTONE	10.5	307.0	SHALE LAMINAE
147.5	MODESTO		SHALE	0.8	317.5	BLACK
146.7	MODESTO		LIMESTONE	1.3	318.3	
145.5	MODESTO		SHALE	2.0	319.5	BLACK
143.5	MODESTO	CHAPEL	COAL	1.1	321.5	
142.4	MODESTO		SHALE	0.8	322.6	DARK
141.7	MODESTO		LIMESTONE	6.7	323.3	
135.0	MODESTO		SHALE	6.5	330.0	DARK
128.5	MODESTO		LIMESTONE	0.5	336.5	
128.0	MODESTO		SHALE	20.0	337.0	TOUGH,DARK
108.0	MODESTO		SHALE	73.0	357.0	
35.0	MODESTO		SHALE	23.5	430.0	DARK
11.5	MODESTO		LIMESTONE	3.5	453.5	SHALEY
8.0	MODESTO		SHALE	3.0	457.0	DARK
5.0	MODESTO		SHALE	20.0	460.0	
-15.0	MODESTO		SHALE	15.0	480.0	SANDY
-30.0	MODESTO		SHALE	18.0	495.0	
-48.0	MODESTO	PIASA	LIMESTONE	4.0	513.0	SUGGESTED TO BE PIASA
-52.0	MODESTO		SHALE	3.0	517.0	
-55.0	CARBONDALE	DANVILLE	COAL	2.0	520.0	
-57.0	CARBONDALE		SHALE	5.0	522.0	
-62.0	CARBONDALE		SHALE	4.5	527.0	SANDY TOUGH
-66.5	CARBONDALE		SHALE	6.5	531.5	DARK
-73.0	CARBONDALE		GRAY SHALE	13.0	538.0	SANDY
-86.0	CARBONDALE		SANDSTONE	5.5	551.0	SHALE LAMINAE
-91.5	CARBONDALE		GRAY SHALE	8.0	556.5	SANDY
-99.5	CARBONDALE		GRAY SHALE	2.5	564.5	TOUGH

-102.0	CARBONDALE		SHALE	8.0	567.0	SANDY
-110.0	CARBONDALE		SHALE	20.0	575.0	
-130.0	CARBONDALE		LIMESTONE	3.0	595.0	
-133.0	CARBONDALE	ENERGY	SHALE	4.0	598.0	
-137.0	CARBONDALE	ENERGY	GRAY SHALE	15.0	602.0	TOUGH
-152.0	CARBONDALE	ENERGY	SHALE	6.0	617.0	
-158.0	CARBONDALE	HERRIN	COAL	8.0	623.0	
-166.0	CARBONDALE		SHALE	25.0	631.0	
-191.0	CARBONDALE		GRAY SHALE	7.5	656.0	
-198.5	CARBONDALE	TURNER MINE	SHALE	1.0	663.5	HARD; BLACK
-199.5	CARBONDALE	SPRINGFIELD	COAL	4.0	664.5	
-203.5	CARBONDALE		SHALE	3.0	668.5	STICKY
-206.5	CARBONDALE		LIMESTONE	3.0	671.5	
-209.5	CARBONDALE		SHALE	6.5	674.5	SANDY
-216.0	CARBONDALE		SHALE	29.0	681.0	
-245.0	CARBONDALE		SHALE	29.0	710.0	DARK,TOUGH
-274.0	CARBONDALE		SHALE	6.0	739.0	HARD; BLACK
-280.0	CARBONDALE		SHALE	22.4	745.0	
-302.4	CARBONDALE	HOUCHIN CREEK	COAL	1.6	767.4	SUGGESTED TO BE #4
-304.0	CARBONDALE		SHALE	36.0	769.0	
-340.0	CARBONDALE		GRAY SHALE	29.0	805.0	TOUGH
-369.0			SHALE	20.0	834.0	
-389.0			SHALE	10.0	854.0	SANDY
-399.0			SHALE & SANDSTONE	30.0	864.0	
-429.0			SANDSTONE	41.0	894.0	SUGGESTED TO BE PALZO
-470.0			COAL	2.5	935.0	SUGGESTED TO BE DAVIS
-472.5			LIMESTONE	7.5	937.5	SHALEY
-480.0			SHALE	20.0	945.0	
-500.0			SHALE	15.0	965.0	DARK
-515.0			SHALE	2.5	980.0	HARD; BLACK
-517.5			COAL	1.0	982.5	
-518.5			GRAY SHALE	1.5	983.5	STICKY
-520.0			SHALE	20.0	985.0	
-540.0			SHALE	1.5	1005.0	DARK
-541.5			COAL	1.0	1006.5	
-542.5			GRAY SHALE	17.5	1007.5	DARK
-560.0			SHALE	6.5	1025.0	
-566.5			COAL	2.5	1031.5	SUGGESTED TO BE BOLD KNOB
-569.0			SHALE	11.0	1034.0	

MAPID: 05500605000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 31 **QUARTERS/FOOTAGES:** 1149' N line, 340' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.927811 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.961882 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 442.0 **LOGGED (FT.):** 2135.0 **LOG TYPE:** Electric Log

SOURCE: ADKINS, E. S. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-134.0	CARBONDALE	HERRIN	COAL	9.0	576.0	
-181.0	CARBONDALE	SPRINGFIELD	COAL	4.0	623.0	BLACK SHALE & LIMESTONE ROOF
-256.0	CARBONDALE	HOUCHIN CREEK	COAL	-	698.0	

MAPID: 05500749000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 31 **QUARTERS/FOOTAGES:** 1290' S line, 2625' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.919579 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.953904 **DATE COLLECTED:** 5 / 20 / 1944

SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 984.0 **LOG TYPE:** Survey Core Study

SOURCE: CW & F COAL CO 19-44 **WELL TYPE:** Coal Test

COMMENT: DATA FROM DRILLER'S LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
407.0	PLEISTOCENE		CLAY	18.0	0.0	
389.0			SHALE	19.0	18.0	SOFT
370.0			UNDERCLAY	3.5	37.0	
366.5			SHALE	6.5	40.5	ROTTEN
360.0			SHALE	3.7	47.0	
356.3			SHALY SILTSTONE	29.9	50.7	
326.4			LIMESTONE	0.8	80.6	SILTY BLACK CARBONACEOUS
325.6			SHALE	2.7	81.4	BLACK
322.9			LIMESTONE	0.4	84.1	SILTY,BLACK,CARBONACEOUS
322.5			SILTSTONE	2.1	84.5	
320.4			GRAY SHALE	2.0	86.6	
318.4			SANDSTONE	0.3	88.6	CALCAREOUS
318.2	BOND	CARTHAGE	LIMESTONE	3.1	88.8	CRYSTALLINE; SHALE, SANDSTONE FRAGMENTS
315.1	MODESTO		SANDSTONE	3.0	91.9	CALCAREOUS,AGRILLACEOUS
312.1	MODESTO		UNDERCLAY	7.1	94.9	INCLUDES POORLY CONSOLIDATED CLAYSHALE
305.0	MODESTO		LIMESTONE	0.1	102.0	NODULAR
304.9	MODESTO		SHALE	12.9	102.1	COARSENS DOWNWARD
292.0	MODESTO		SILTSTONE/SANDSTONE	30.0	115.0	INTERLAMINATED; FINE, CROSS-BEDDED
262.0	MODESTO		SANDSTONE	32.9	145.0	CARBONACEOUS & MICACEOUS LAMINAE
229.1	MODESTO		SANDSTONE	46.3	177.9	MASSIVE,PARTLY CALCAREOUS
182.8	MODESTO		UNDERCLAY	0.2	224.2	
182.7	MODESTO		LIMESTONE	0.6	224.3	EARTHLY,HARD,PYRITIC
182.1	MODESTO		UNDERCLAY	0.3	224.9	
181.7	MODESTO		SHALE	2.8	225.3	FISSILE; BLACK
179.0	MODESTO		LIMESTONE	2.1	228.0	FISSILE,INTERBEDDED COAL
176.9	MODESTO	CHAPEL	COAL	0.5	230.1	
176.4	MODESTO	CHAPEL	COAL	0.5	230.6	
175.9	MODESTO		UNDERCLAY	0.7	231.1	
175.2	MODESTO		UNDERCLAY	3.3	231.8	CALCAREOUS NODULES
171.9	MODESTO		SHALE	0.9	235.1	NODULAR
171.0	MODESTO		UNDERCLAY	1.2	236.0	
169.8	MODESTO		SHALE	17.3	237.2	SANDSTONE INTERBEDS, COARSENS DOWNWARD
152.6	MODESTO		SHALE & SANDSTONE	0.6	254.4	GRAY; INTERBEDDED
152.0	MODESTO		SANDSTONE	41.0	255.0	OFTEN CROSS BEDDED
111.0	MODESTO		SILTSTONE	67.0	296.0	SANDY LAMINAE, FINES DOWNWARD
44.0	MODESTO		SHALE	8.7	363.0	IRONSTONE CONCRETIONS
35.3	MODESTO		SHALE	0.7	371.7	BLACK
34.7	MODESTO		LIMESTONE	0.2	372.3	CONCRETION

34.5	MODESTO		SHALE	1.1	372.5	BLACK
33.4	MODESTO		UNDERCLAY	0.8	373.6	
32.6	MODESTO		SHALE	0.3	374.4	SANDY,FRIABLE
32.3	MODESTO		SANDSTONE	5.8	374.7	
26.5	MODESTO		SHALE	14.7	380.5	SILTY,HARD,SANDY LAMINAE
11.8	MODESTO		SHALE	6.6	395.2	BLACK
5.2	MODESTO		COAL	0.7	401.8	
4.5	MODESTO		UNDERCLAY	1.6	402.5	
2.9	MODESTO		UNDERCLAY	3.4	404.1	
-0.5	MODESTO		SILTSTONE/SANDSTONE	20.5	407.5	INTERLAMINATED,INTERBEDDED
-20.9	MODESTO		SHALE	2.8	427.9	BLACK
-23.7	MODESTO		SHALE	1.3	430.7	
-25.0	MODESTO		GRAY SHALE	1.9	432.0	DARK
-26.9	MODESTO		COAL	0.1	433.9	
-27.0	MODESTO		GRAY SHALE	1.0	434.0	DARK
-28.0	MODESTO		SHALE	1.7	435.0	BLACK
-29.7	MODESTO		COAL	0.6	436.7	BONEY
-30.3	MODESTO		UNDERCLAY	1.3	437.3	
-31.6	MODESTO	PIASA	LIMESTONE	4.8	438.6	NAMED CUTLER
-36.4	MODESTO		SHALE	0.2	443.4	WITH SOME COAL ZONES
-36.6	MODESTO		SHALE	0.4	443.6	BLACK
-37.0	MODESTO		GRAY SHALE	0.6	444.0	
-37.6	MODESTO		SHALE	0.1	444.6	CARBONACEOUS; BLACK
-37.7	CARBONDALE	DANVILLE	COAL	2.1	444.7	NAMED CUTLER
-39.8	CARBONDALE		SHALE	2.9	446.8	BLACK
-42.6	CARBONDALE		SANDSTONE	1.7	449.6	
-44.3	CARBONDALE		SILTSTONE/SANDSTONE	0.8	451.3	INTERLAMINATED
-45.0	CARBONDALE		SHALY SILTSTONE	2.0	452.0	INTERLAMINATED
-47.0	CARBONDALE		SANDSTONE	0.7	454.0	SILTSTONE LAMINAE
-47.7	CARBONDALE		SHALE	1.5	454.7	BLACK
-49.2	CARBONDALE		SANDSTONE	1.5	456.2	
-50.7	CARBONDALE		SILTSTONE	1.3	457.7	
-52.0	CARBONDALE		GRAY SHALE	3.2	459.0	
-55.2	CARBONDALE		UNDERCLAY	0.2	462.2	
-55.4	CARBONDALE		SANDSTONE	5.0	462.4	
-60.4	CARBONDALE		SILTSTONE	1.1	467.4	
-61.5	CARBONDALE	ALLENBY	COAL	0.8	468.5	NAMED BANKSTON FORK IN LOG
-62.3	CARBONDALE	ALLENBY	COAL	0.8	469.3	NAMED BANKSTON FORK IN LOG
-63.1	CARBONDALE		UNDERCLAY	1.4	470.1	
-64.5	CARBONDALE		SHALE	1.8	471.5	CARBONACEOUS
-66.3	CARBONDALE	BANKSTON FORK	LIMESTONE	4.8	473.3	GLAUCONITE
-71.1	CARBONDALE		SILTSTONE	36.0	478.1	
-107.1	CARBONDALE	BRERETON	LIMESTONE	3.3	514.1	DARK,NAMED HERRIN IN CORE LOG
-110.4	CARBONDALE	ANNA	SHALE	2.2	517.4	BLACK
-112.6	CARBONDALE	ANNA	LIMESTONE	0.9	519.6	CONCRETION,PYRITIC
-113.5	CARBONDALE	ANNA	SHALE	1.0	520.5	BLACK
-114.5	CARBONDALE	ENERGY	GRAY SHALE	0.1	521.5	PYRITIC

-114.6	CARBONDALE	ENERGY	GRAY SHALE	22.9	521.6	
-137.5	CARBONDALE	HERRIN	COAL	8.5	544.5	DATA FROM DRILLERS LOG
-146.0	CARBONDALE		SHALE	4.0	553.0	DATA FROM DRILLER'S LOG
-150.0	CARBONDALE		UNDERCLAY	6.7	557.0	WITH LIMESTONE NODULES
-156.7	CARBONDALE		SANDSTONE	7.7	563.7	WITH INTERBEDDED SILTSTONE
-164.4	CARBONDALE		GRAY SHALE	1.4	571.4	WITH SANDSTONE LAMINAE
-165.8	CARBONDALE		SHALE	7.8	572.8	IRONSTONE CONCRETIONS; BLACK
-173.6	CARBONDALE	ST. DAVID	LIMESTONE	1.4	580.6	NAMED ST DAVID IN COAL LOG
-175.0	CARBONDALE	TURNER MINE	SHALE	4.1	582.0	PETROLIFEROUS; BLACK
-179.1	CARBONDALE	DYKERSBURG	SHALE	4.7	586.1	
-183.8	CARBONDALE	SPRINGFIELD	COAL	4.1	590.8	
-187.9	CARBONDALE		UNDERCLAY	3.0	594.9	
-190.9	CARBONDALE		LIMESTONE	0.1	597.9	CONCRETION
-191.0	CARBONDALE		UNDERCLAY	2.8	598.0	INCLUDES PYRITE NODULES
-193.8	CARBONDALE		SILTSTONE/SANDSTONE	15.3	600.8	INTERBEDDED,INTERLAMINATED
-209.0	CARBONDALE		SILTSTONE	40.0	616.0	
-249.0	CARBONDALE		GRAY SHALE	10.8	656.0	DARK
-259.8	CARBONDALE	HANOVER	LIMESTONE	2.0	666.8	CONCRETION HARD
-261.8	CARBONDALE	EXCELLO	SHALE	5.0	668.8	BLACK
-266.8	CARBONDALE	HOUCHIN CREEK	COAL	0.8	673.8	
-267.6	CARBONDALE		UNDERCLAY	4.1	674.6	
-271.7	CARBONDALE		SILTSTONE	4.0	678.7	SANDY LAMINAE
-275.7	CARBONDALE		GRAY SHALE	16.7	682.7	
-292.4	CARBONDALE	SURVANT	COAL	1.7	699.4	SUGGESTED TO BE #2 IN CORE LOG
-294.1	CARBONDALE		SANDSTONE	14.8	701.1	
-308.9	CARBONDALE		COAL	0.0	715.9	
-308.9	CARBONDALE		SHALE & SANDSTONE	6.4	715.9	INTERLAMINATED WITH BLACK SILTSTONE
-315.3	CARBONDALE	SURVANT	COAL	1.2	722.3	SUGGESTED TO BE #2 IN DRILLER'S LOG
-316.5	CARBONDALE		UNDERCLAY	1.7	723.5	
-318.1	CARBONDALE		SANDSTONE	5.7	725.1	MASSIVE
-323.8	CARBONDALE		SANDSTONE	4.5	730.8	SILTSTONE LAMINAE
-328.4	CARBONDALE		SILTSTONE	6.5	735.4	SANDSTONE LAMINAE
-334.8	CARBONDALE		SILTSTONE	26.9	741.8	CARBONACEOUS
-361.8	CARBONDALE		SHALE	3.7	768.8	BLACK
-365.5	CARBONDALE	OAK GROVE	LIMESTONE	1.0	772.5	ARGILLACEOUS,CARBONACEOUS
-366.5	CARBONDALE	MECCA QUARRY	SHALE	10.5	773.5	BLACK
-377.0	CARBONDALE	COLCHESTER	COAL	0.5	784.0	
-377.5	SPOON		UNDERCLAY	3.5	784.5	
-381.0	SPOON		SANDSTONE	2.8	788.0	
-383.8	SPOON		SANDSTONE	1.5	790.8	SILTSTONE LAMINAE
-385.3	SPOON		GRAY SHALE	1.2	792.3	SILTY LAMINAE
-386.5	SPOON		SANDSTONE	2.0	793.5	SILTSTONE LAMINAE
-388.5	SPOON		SANDSTONE	19.5	795.5	CROSS-BEDDED, FINES DOWN, SHALE LAMINAE
-408.0	SPOON		GRAY SHALE	4.3	815.0	
-412.3	SPOON	DEKOVEN	COAL	2.7	819.3	SUGGESTED TO BE DEKOVEN
-415.0	SPOON		UNDERCLAY	0.2	822.0	

-415.2	SPOON		SHALE	1.5	822.2	SANDY
-416.7	SPOON		SHALE & SANDSTONE	5.6	823.7	GRAY; INTERBEDDED
-422.3	SPOON		UNKNOWN	5.7	829.3	GAP IN RECORD
-428.0	SPOON		SHALY SILTSTONE	3.5	835.0	BKSH INTERLAMINATED W/WHITE SLTST
-431.5	SPOON		SHALY SILTSTONE	6.1	838.5	INTERLAMINATED
-437.6	SPOON		GRAY SHALE	2.2	844.6	
-439.7	SPOON		SHALE	1.8	846.7	SIDERITIC LAYERS,PYRITE; BLACK
-441.5	SPOON	LOWER DEKOVEN	COAL	1.3	848.5	BRIGHT;PYRITE;FUSAIN
-442.8	SPOON		UNDERCLAY	1.8	849.8	
-444.6	SPOON		SHALE	7.6	851.6	CALCAREOUS; BLACK
-452.1	SPOON		SHALE	4.5	859.1	BLACK
-456.6	SPOON	DAVIS	COAL	2.8	863.6	DRILLER REPORTS 3.67
-459.4	SPOON		UNDERCLAY	0.8	866.4	DEPTH FROM CORE LOG
-460.2	SPOON		GRAY SHALE	2.4	867.2	DEPTHS OVERLAP FROM 864.0-869.2
-462.6	SPOON		SANDSTONE	4.4	869.6	SHALE BLEBS AND LAMINAE
-467.0	SPOON		SANDSTONE	8.6	874.0	
-475.6	SPOON		SHALE	5.9	882.6	COAL STRINGERS,SIDERITE NODULES,BLACK
-481.5	SPOON		COAL	0.8	888.5	SUGGESTED TO BE STONEFORT
-482.3	SPOON		UNDERCLAY	1.8	889.3	
-484.0	SPOON		SHALE	4.4	891.0	FRIABLE; BLACK
-488.4	SPOON		GRAY SHALE	2.0	895.4	
-490.4	SPOON	STONEFORT	LIMESTONE	0.3	897.4	HARD,ARGILLACEOUS,CRYSTALLINE
-490.7	SPOON		GRAY SHALE	13.8	897.7	SIDERITE, PYRITE, IRONSTONE CONCRETIONS
-504.5	SPOON	WISE RIDGE	COAL	0.7	911.5	
-505.2	SPOON		UNDERCLAY	5.0	912.2	
-510.2	SPOON		SHALY SILTSTONE	11.7	917.2	
-521.9	SPOON		GRAY SHALE	8.6	928.9	DARK TO BLACK;SIDERITIC CONCRETIONS
-530.5	SPOON		SHALE	0.4	937.5	FISSILE; BLACK
-530.9	SPOON	MT. RORAH	COAL	1.5	937.9	SUGGESTED TO BE BALD KNOB
-532.4	SPOON		UNDERCLAY	5.9	939.4	
-538.3	SPOON		SHALE	6.9	945.3	SPHALERITE,PYRITIC,IRONSTONE BANDS
-545.2	SPOON	MURPHYSBORO	COAL	1.5	952.2	PYRITE AT BASE
-546.7	SPOON		SANDSTONE/SILTSTONE	30.3	953.7	PARTLY LAMINATED,CROSS-BEDDED&MICACEOUS

MAPID: 05500749000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 31 **QUARTERS/FOOTAGES:** 1290' S line, 2625' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.919579 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.953904 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 557.5 **LOG TYPE:** Survey Core Study

SOURCE: C.W.&F. COAL CO. 19 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-34.1	MODESTO	PIASA	LIMESTONE	4.8	441.1	
-38.9	MODESTO		BLACK SHALE	1.3	445.9	
-40.1	CARBONDALE	DANVILLE	COAL	2.0	447.1	
-42.2	CARBONDALE		SANDSTONE/SILTSTONE	22.5	449.2	
-64.7	CARBONDALE	ALLENBY	COAL	0.8	471.7	
-65.6	CARBONDALE		CLAYSTONE & SHALE	2.6	472.6	
-68.1	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.8	475.1	
-72.9	CARBONDALE	LAWSON	SILTSTONE	35.7	479.9	
-108.6	CARBONDALE	BRERETON	LIMESTONE	3.3	515.6	
-111.9	CARBONDALE	ANNA	BLACK SHALE	4.0	518.9	
-115.9	CARBONDALE	ENERGY	DARK GRAY SHALE	0.1	522.9	
-116.0	CARBONDALE	ENERGY	SHALE & SILTSTONE	10.0	523.0	
-126.0	CARBONDALE	ENERGY	GRAY SHALE	12.0	533.0	
-138.0	CARBONDALE	HERRIN	COAL	12.5	545.0	

MAPID: 05500750000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 31 **QUARTERS/FOOTAGES:** 300' N line, 300' E line of NE NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.911032 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.964343 **DATE COLLECTED:** 11 / 22 / 1944

SURFACE ELEVATION (FT.): 367.0 **LOGGED (FT.):** 591.5 **LOG TYPE:** Drillers Log

SOURCE: CW & F COAL CO 22-44 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
367.0	PLEISTOCENE		SANDY CLAY	70.0	0.0	
297.0	BOND		SHALE	10.0	70.0	
287.0	BOND		SHALE	5.0	80.0	BLACK
282.0	BOND		SHALE	7.5	85.0	
274.5	BOND		SHALE	5.0	92.5	SANDY
269.5	BOND		ROCK	7.5	97.5	HARD
262.0	BOND		SHALE	10.0	105.0	
252.0	BOND		SHALE	10.0	115.0	SANDY
242.0	BOND		SHALE	30.0	125.0	
212.0	BOND		SHALE	50.0	155.0	SANDY
162.0	BOND	CARTHAGE	LIMESTONE	10.0	205.0	
152.0	MODESTO		SHALE	10.0	215.0	SANDY
142.0	MODESTO		SHALE	2.5	225.0	
139.5	MODESTO		SHALE	2.5	227.5	SANDY
137.0	MODESTO		SHALE	2.5	230.0	BLACK
134.5	MODESTO		SHALE	25.0	232.5	SANDY
109.5	MODESTO		SHALE	2.5	257.5	HARD, LIMESTONE LAMINAE
107.0	MODESTO		SHALE	112.5	260.0	SANDY
-5.5	MODESTO		SANDSTONE	3.5	372.5	
-9.0	MODESTO		SHALE	16.5	376.0	
-25.5	MODESTO		SHALE	7.5	392.5	BLACK
-33.0	MODESTO		SHALE	6.0	400.0	SANDY
-39.0	MODESTO		LIMESTONE	2.0	406.0	HARD
-41.0	MODESTO		SHALE	2.0	408.0	SANDY
-43.0	MODESTO		SHALE	24.7	410.0	HARD,SANDY
-67.7	MODESTO	PIASA	LIMESTONE	4.0	434.7	HARD
-71.7	MODESTO		SHALE	1.3	438.7	HARD, SANDY
-73.0	CARBONDALE	DANVILLE	COAL	1.0	440.0	
-74.0	CARBONDALE		UNDERCLAY	1.0	441.0	
-75.0	CARBONDALE		GRAY SHALE	5.5	442.0	
-80.5	CARBONDALE		SHALE	7.5	447.5	HARD,SANDY
-88.0	CARBONDALE		GRAY SHALE	7.5	455.0	LIMESTONE BED AT 462'
-95.5	CARBONDALE		SHALE	9.5	462.5	SANDY
-105.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	472.0	
-113.0	CARBONDALE		GRAY SHALE	5.0	480.0	
-118.0	CARBONDALE		SHALE	19.5	485.0	HARD, SANDY
-137.5	CARBONDALE	BRERETON	LIMESTONE	2.0	504.5	
-139.5	CARBONDALE	ANNA	SHALE	3.9	506.5	BLACK
-143.4	CARBONDALE	ENERGY	GRAY SHALE	27.8	510.4	

-171.2	CARBONDALE	HERRIN	COAL	8.9	538.2	
-180.1	CARBONDALE		UNDERCLAY	2.4	547.1	
-182.5	CARBONDALE		CONGLOMERATE	6.0	549.5	
-188.5	CARBONDALE		LIMESTONE	3.0	555.5	
-191.5	CARBONDALE		GRAY SHALE	12.0	558.5	
-203.5	CARBONDALE	ST. DAVID	LIMESTONE	1.0	570.5	
-204.5	CARBONDALE	TURNER MINE	SHALE	3.0	571.5	BLACK
-207.5	CARBONDALE	DYKERSBURG	SHALE	10.8	574.5	GRAY
-218.3	CARBONDALE	SPRINGFIELD	COAL	3.9	585.3	
-222.2	CARBONDALE		UNDERCLAY	2.3	589.2	

MAPID: 05500753000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 31 **QUARTERS/FOOTAGES:** 570' S line, 45' E line of SW NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.91486 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.959338 **DATE COLLECTED:** 1 / 28 / 1945

SURFACE ELEVATION (FT.): 401.0 **LOGGED (FT.):** 540.3 **LOG TYPE:** Time Log

SOURCE: CW & F COAL CO 25-45 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
401.0			CORE LOSS	30.0	0.0	
371.0			CORE LOSS	510.3	30.0	DRILLER'S TIME LOG ONLY

MAPID: 05500755000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 31 **QUARTERS/FOOTAGES:** 80' N line, 20' W line of SW NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.919402 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.961199 **DATE COLLECTED:** 2 / 7 / 1945

SURFACE ELEVATION (FT.): 417.0 **LOGGED (FT.):** 563.7 **LOG TYPE:** Time Log

SOURCE: CW & F COAL CO 26-45 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
417.0			NO RECORD	30.0	0.0	
387.0			CORE LOSS	533.7	30.0	DRILLER'S TIME LOG ONLY

MAPID: 05500747000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 32 **QUARTERS/FOOTAGES:** 350' N line, 300' E line of NE NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.892405 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.964221 **DATE COLLECTED:** 11 / 3 / 1944

SURFACE ELEVATION (FT.): 384.0 **LOGGED (FT.):** 586.3 **LOG TYPE:** Drillers Log

SOURCE: CW & F COAL CO 18-44 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
384.0	PLEISTOCENE		SANDY CLAY	55.0	0.0	
329.0			SHALE	10.0	55.0	
319.0			SHALE	29.0	65.0	SANDY
290.0			SHALE	11.0	94.0	LIME BEDS AT 96.5; BLACK
279.0			SHALE	35.0	105.0	SANDY
244.0			LIMESTONE	45.0	140.0	
199.0			SANDSTONE	2.5	185.0	INTERBEDDED WITH LIMESTONE
196.5			SANDSTONE	17.5	187.5	
179.0			SHALE & SANDSTONE	2.5	205.0	GRAY
176.5			GRAY SHALE	157.5	207.5	
19.0			LIMESTONE	10.0	365.0	
9.0			SHALE	9.0	375.0	
0.0			SHALE	8.5	384.0	BLACK
-8.5			UNDERCLAY	5.0	392.5	
-13.5			SHALE	30.0	397.5	SANDY
-43.5	MODESTO	PIASA	LIMESTONE	5.0	427.5	HARD
-48.5			SHALE	32.5	432.5	
-81.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.5	465.0	
-88.5	CARBONDALE		SHALE	25.0	472.5	
-113.5	CARBONDALE		GRAY SHALE	6.7	497.5	CORED FROM 500'
-120.2	CARBONDALE		SILTSTONE	3.6	504.2	
-123.8	CARBONDALE		SHALE	3.5	507.8	BLACK
-127.3	CARBONDALE	BRERETON	LIMESTONE	4.8	511.3	
-132.0	CARBONDALE	ANNA	SHALE	5.0	516.0	BLACK
-137.0	CARBONDALE	ENERGY	GRAY SHALE	13.3	521.0	
-150.3	CARBONDALE	HERRIN	COAL	8.7	534.3	
-158.9	CARBONDALE		UNDERCLAY	3.1	542.9	
-162.0	CARBONDALE		CONGLOMERATE	2.0	546.0	
-164.0	CARBONDALE		SHALE WITH LIMESTONE	5.0	548.0	SANDY SHALE
-169.0	CARBONDALE		GRAY SHALE	7.1	553.0	
-176.1	CARBONDALE		SANDSTONE	3.4	560.1	
-179.5	CARBONDALE		GRAY SHALE	7.5	563.5	
-187.0	CARBONDALE		CORE LOSS	2.5	571.0	GAP IN RECORD
-189.5	CARBONDALE	TURNER MINE	SHALE	7.8	573.5	BLACK
-197.3	CARBONDALE	SPRINGFIELD	COAL	4.0	581.3	
-201.3	CARBONDALE		UNDERCLAY	0.9	585.3	

MAPID: 05500752000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 32 **QUARTERS/FOOTAGES:** 1280' S line, 1360' W line
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.905207 **GEOLOGIST:** HAMER
CONFIDENTIAL: N **LATITUDE:** 37.954004 **DATE COLLECTED:** 1 / 15 / 1945
SURFACE ELEVATION (FT.): 388.7 **LOGGED (FT.):** 530.0 **LOG TYPE:** Time Log
SOURCE: CW & F COAL CO 24 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
388.7			UNCLASSIFIED	521.6	0.0	
-132.9	CARBONDALE	HERRIN	COAL	7.7	521.6	
-140.6	CARBONDALE		UNDERCLAY	0.8	529.3	

MAPID: 05500752000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 32 **QUARTERS/FOOTAGES:** 1280' S line, 1360' W line
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.905207 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.954004 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 529.7 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-26.0	MODESTO	PIASA	LIMESTONE	5.0	415.0	
-31.0	CARBONDALE		SHALE	31.5	420.0	
-62.5	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	451.5	
-67.5	CARBONDALE	LAWSON	SHALE	37.5	456.5	
-105.0	CARBONDALE	CONANT	LIMESTONE	2.0	494.0	
-107.0	CARBONDALE		BLACK SHALE	3.0	496.0	
-110.0	CARBONDALE	BRERETON	LIMESTONE	17.0	499.0	
-127.0	CARBONDALE	ANNA	BLACK SHALE	4.6	516.0	
-133.0	CARBONDALE	HERRIN	COAL	7.7	522.0	

MAPID: 05501989000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 32 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of NE SW
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.904196 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.95692 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 2939.0 **LOG TYPE:** Electric Log
SOURCE: KAPP, LOUIS H., JR. **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-135.0	CARBONDALE	HERRIN	COAL	9.0	524.0	
-181.0	CARBONDALE	SPRINGFIELD	COAL	3.0	570.0	
-256.0	CARBONDALE	HOUCHIN CREEK	COAL	-	645.0	

MAPID: 05501502000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 33 **QUARTERS/FOOTAGES:** 2620' N line, 1346' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.877496 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.958012 **DATE COLLECTED:** 0 / 0 / 1959

SURFACE ELEVATION (FT.): 389.7 **LOGGED (FT.):** 623.9 **LOG TYPE:** Drillers Log

SOURCE: CW & F COAL CO 5 **WELL TYPE:** Coal Test

COMMENT: INCLUDES DATA FROM SURVEY COAL SAMPLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
389.7	PLEISTOCENE		CLAY	5.0	0.0	
384.7	PLEISTOCENE		SANDY CLAY	35.0	5.0	
349.7	PLEISTOCENE		SAND	8.0	40.0	QUICKSAND
341.7			SHALE	5.0	48.0	BLACK
336.7			GRAY SHALE	351.0	53.0	
-14.3			LIMESTONE	4.0	404.0	
-18.3			GRAY SHALE	65.0	408.0	
-83.3			LIMESTONE	5.0	473.0	
-88.3			GRAY SHALE	25.0	478.0	
-113.3	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	503.0	
-120.3	CARBONDALE		GRAY SHALE	47.0	510.0	
-167.3	CARBONDALE	BRERETON	LIMESTONE	10.3	557.0	
-177.6	CARBONDALE	ANNA	SHALE	1.7	567.3	PARTLY SLATY; BLACK
-179.3	CARBONDALE	HERRIN	COAL	0.5	569.0	GRAY SHALE INTERBEDS
-179.8	CARBONDALE	HERRIN	GRAY SHALE	0.3	569.5	
-180.1	CARBONDALE	HERRIN	COAL	0.2	569.8	GRAY SHALE LAMINAE
-180.3	CARBONDALE	HERRIN	GRAY SHALE	0.1	570.0	VITRAIN LAMINAE
-180.4	CARBONDALE	HERRIN	COAL	0.1	570.1	
-180.5	CARBONDALE	HERRIN	GRAY SHALE	1.3	570.2	PYRITE CARBONACEOUS LAMINAE
-181.8	CARBONDALE	HERRIN	CLAYSTONE & SHALE	0.0	571.5	
-181.8	CARBONDALE	HERRIN	COAL	5.1	571.5	NO BLUE BAND; CALCITE
-186.9	CARBONDALE		UNDERCLAY	0.1	576.6	DEPTH ADJUSTED
-187.0	CARBONDALE		GRAY SHALE	2.3	576.7	DEPTH ADJUSTED
-189.3	CARBONDALE		SHALE WITH LIMESTONE	3.0	579.0	
-192.3	CARBONDALE		LIMESTONE	3.0	582.0	
-195.3	CARBONDALE		SHALE WITH LIMESTONE	4.0	585.0	
-199.3	CARBONDALE		SANDSTONE	3.0	589.0	
-202.3	CARBONDALE		SHALE	12.0	592.0	SANDY
-214.3	CARBONDALE	ST. DAVID	LIMESTONE	1.0	604.0	
-215.3	CARBONDALE	TURNER MINE	SHALE	3.0	605.0	BLACK
-218.3	CARBONDALE	DYKERSBURG	GRAY SHALE	11.8	608.0	
-230.1	CARBONDALE	SPRINGFIELD	COAL	4.1	619.8	

MAPID: 05501502000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 33 **QUARTERS/FOOTAGES:** 2620' N line, 1346' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.877496 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.958012 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 390.0 **LOGGED (FT.):** 576.1 **LOG TYPE:** Survey Core Study

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-82.5	MODESTO	PIASA	LIMESTONE	5.0	472.5	
-87.5	CARBONDALE		GRAY SHALE	25.0	477.5	
-112.5	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	502.5	
-119.5	CARBONDALE	LAWSON	GRAY SHALE	47.0	509.5	
-166.5	CARBONDALE	BRERETON	LIMESTONE	10.3	556.5	
-176.8	CARBONDALE	ANNA	BLACK SHALE	1.7	566.8	
-178.5	CARBONDALE	ENERGY	COAL	0.5	568.5	
-179.0	CARBONDALE	ENERGY	CARBONACEOUS SHALE	0.3	569.0	
-179.3	CARBONDALE	ENERGY	BONE COAL	0.3	569.3	
-179.6	CARBONDALE	ENERGY	COAL	0.1	569.6	
-179.7	CARBONDALE	ENERGY	GRAY SHALE	1.3	569.7	
-181.0	CARBONDALE	HERRIN	COAL	5.1	571.0	

MAPID: 05501503000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 33 **QUARTERS/FOOTAGES:** 50' S line, 328' E line of SE SE NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.873946 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.958023 **DATE COLLECTED:** 3 / 2 / 1959

SURFACE ELEVATION (FT.): 391.9 **LOGGED (FT.):** 630.8 **LOG TYPE:** Drillers Log

SOURCE: CW & F COAL CO 6 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
391.9	PLEISTOCENE		CLAY	5.0	0.0	
386.9	PLEISTOCENE		SANDY CLAY	35.0	5.0	
351.9			LIMESTONE	3.0	40.0	
348.9			SHALE	2.0	43.0	BLACK
346.9			GRAY SHALE	98.0	45.0	
248.9			LIMESTONE	2.0	143.0	
246.9			GRAY SHALE	25.0	145.0	
221.9			SANDSTONE	6.0	170.0	INTERBEDDED WITH LIMESTONE
215.9			SANDSTONE	7.0	176.0	
208.9			GRAY SHALE	38.0	183.0	
170.9			SANDSTONE	28.0	221.0	
142.9			GRAY SHALE	156.0	249.0	
-13.1			LIMESTONE	3.0	405.0	
-16.1			GRAY SHALE	35.0	408.0	
-51.1			LIMESTONE	2.0	443.0	
-53.1			GRAY SHALE	25.0	445.0	
-78.1	MODESTO	PIASA	LIMESTONE	4.0	470.0	
-82.1	MODESTO		GRAY SHALE	4.0	474.0	
-86.1	CARBONDALE	DANVILLE	COAL	2.0	478.0	
-88.1	CARBONDALE		SHALE	30.0	480.0	SANDY
-118.1	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	510.0	
-124.1	CARBONDALE		GRAY SHALE	40.8	516.0	
-164.9	CARBONDALE	JAMESTOWN	COAL	0.5	556.8	
-165.4	CARBONDALE		GRAY SHALE	5.0	557.3	
-170.4	CARBONDALE	BRERETON	LIMESTONE	13.2	562.3	
-183.5	CARBONDALE	ANNA	SHALE	2.6	575.4	BLACK
-186.1	CARBONDALE	HERRIN	COAL	8.3	578.0	SAMPLE DESCRIPTION
-194.4	CARBONDALE		SHALE WITH LIMESTONE	8.8	586.3	
-203.1	CARBONDALE		SHALE	6.0	595.0	SANDY
-209.1	CARBONDALE		GRAY SHALE	11.5	601.0	
-220.6	CARBONDALE	ST. DAVID	LIMESTONE	1.0	612.5	
-221.6	CARBONDALE	TURNER MINE	SHALE	6.0	613.5	BLACK
-227.6	CARBONDALE	DYKERSBURG	GRAY SHALE	8.2	619.5	
-235.8	CARBONDALE	SPRINGFIELD	COAL	3.1	627.7	SAMPLE DESCRIPTION AVAILABLE

MAPID: 05501389000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 34 **QUARTERS/FOOTAGES:** 500' N line, 2411' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.862408 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.963881 **DATE COLLECTED:** 6 / 25 / 1958

SURFACE ELEVATION (FT.): 427.9 **LOGGED (FT.):** 651.8 **LOG TYPE:** Survey Core Study

SOURCE: CW & F COAL CO 1-58 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
427.9	PLEISTOCENE		CLAY	40.0	0.0	PARTLY SANDY
387.9			GRAY SHALE	14.5	40.0	
373.4			LIMESTONE	5.9	54.5	
367.5			GRAY SHALE	2.6	60.4	DARK,SOFT
364.9			SHALE	1.8	63.0	CARBONACEOUS,HARD; BLACK
363.1			LIMESTONE	0.3	64.8	DENSE
362.9			GRAY SHALE	0.3	65.0	SOFT,FISSILE
362.6			LIMESTONE	0.2	65.3	DENSE
362.4			GRAY SHALE	10.5	65.5	SOFT,FISSILE
351.9			GRAY SHALE	6.0	76.0	DARK,PLANTS
345.9			COAL	0.5	82.0	BRIGHT, BONEY AT BASE
345.4			GRAY SHALE	3.2	82.5	
342.2			SHALE	0.2	85.7	VITRAIN LAMINAE; BLACK
342.0			GRAY SHALE	0.1	85.9	PYRITE AND CARBONACEOUS PLANT MOLDS
341.9			COAL	0.0	86.0	VITRAIN
341.9			GRAY SHALE	0.1	86.0	PLANT MOLDS
341.8			SHALE	0.1	86.1	VITRAIN LAMINAE; BLACK
341.6			COAL	0.1	86.3	BRIGHT
341.6			UNDERCLAY	2.5	86.3	LIMESTONE NODULES IN FRACTURE
339.1			CLAYSTONE & SILTSTONE	1.9	88.8	SILTY, LIMESTONE NODULES
337.2			SILTSTONE	9.3	90.7	
327.9			GRAY SHALE	49.3	100.0	INCREASE IN FOSSILS DOWNWARD
278.6			LIMESTONE	0.6	149.3	FINELY CRYSTALLINE
278.0			GRAY SHALE	4.1	149.9	
273.9			CLAYSTONE	1.5	154.0	
272.4			GRAY SHALE	4.5	155.5	WITH LIMESTONE NODULES
267.9			SILTSTONE	2.3	160.0	MASSIVE
265.6			SANDSTONE	1.5	162.3	
264.1			SHALE & SANDSTONE	0.9	163.8	INTERLAMINATED
263.2			SANDSTONE	109.2	164.7	
154.1			GRAY SHALE	15.8	273.8	PLANTS AT BOTTOM
138.2			COAL	0.3	289.7	BRIGHT BANDED
137.9			SHALE	1.4	290.0	FISSILE,PLANT MOLDS; BLACK
136.5			GRAY SHALE	5.3	291.4	FISSILE,PLANT MOLDS
131.2			COAL	0.2	296.7	BRIGHT BANDED
131.0			UNDERCLAY	3.0	296.9	
128.1			CLAYSTONE & SILTSTONE	0.8	299.8	WITH LIMESTONE NODULES
127.2			GRAY SHALE	12.3	300.7	LAMINATED

114.9			SHALE & SANDSTONE	0.3	313.0	FOSSILIFEROUS SIDERITE NODULES
114.6			SANDSTONE	1.3	313.3	
113.2			SHALE & SANDSTONE	3.8	314.7	INTERBEDDED
109.4			GRAY SHALE	1.3	318.5	SILTSTONE INTERBEDS
108.1			SILTSTONE	4.3	319.8	SHALE INTERBEDS
103.9			GRAY SHALE	102.8	324.0	
1.1			COAL	0.1	426.8	BONY,PYRITE
1.0			UNDERCLAY	1.3	426.9	
-0.3			SILTSTONE	2.7	428.2	
-2.9			SHALE & SANDSTONE	2.3	430.8	INTERLAMINATED, CALCAREOUS SANDSTONE
-5.2			GRAY SHALE	16.9	433.1	WELL LAMINATED
-22.1			SHALE	2.0	450.0	LAMINATED; BLACK
-24.1			COAL	0.7	452.0	BRIGHT BANDED,.5'BONE
-24.8			UNDERCLAY	2.3	452.7	PYRITE CONCRETIONS
-27.0			GRAY SHALE	2.0	454.9	WEAK
-29.0			UNDERCLAY	0.6	456.9	
-29.6			LIMESTONE	1.0	457.5	
-30.6			GRAY SHALE	13.5	458.5	CALCAREOUS NODULES
-44.1			SANDSTONE	4.7	472.0	PARTLY CALCAREOUS
-48.8			SHALE & SANDSTONE	2.9	476.7	
-51.7			GRAY SHALE	18.8	479.6	
-70.5			SHALE	1.3	498.4	COAL LAMINAE; BLACK
-71.9	MODESTO		COAL	0.3	499.8	BRIGHT BANDED
-72.2	MODESTO		UNDERCLAY	1.3	500.1	
-73.4	MODESTO	PIASA	LIMESTONE	4.5	501.3	ARGILLACEOUS,MASSIVE;NAMED CUTLER
-77.9	MODESTO		GRAY SHALE	3.0	505.8	
-80.9	MODESTO		LIMESTONE	0.2	508.8	DENSE SEPTARIAN CONCRETIONS
-81.1	MODESTO		GRAY SHALE	3.9	509.0	
-85.0	CARBONDALE	DANVILLE	COAL	1.1	512.9	BRIGHT BANDED
-86.1	CARBONDALE		UNDERCLAY	0.8	514.0	
-86.9	CARBONDALE		SILTSTONE	4.8	514.8	
-91.6	CARBONDALE		SANDSTONE	1.9	519.5	
-93.5	CARBONDALE		GRAY SHALE	2.3	521.4	
-95.9	CARBONDALE		BONE COAL	0.1	523.8	
-95.9	CARBONDALE		UNDERCLAY	0.1	523.8	
-96.0	CARBONDALE		UNKNOWN	1.1	523.9	BOTTOM OF CORE BOX
-97.1	CARBONDALE		UNDERCLAY	1.3	525.0	
-98.5	CARBONDALE		SANDSTONE	6.4	526.4	
-104.9	CARBONDALE		GRAY SHALE	0.8	532.8	
-105.7	CARBONDALE	ALLENBY	COAL	1.0	533.6	BRIGHT BANDED
-106.6	CARBONDALE		UNDERCLAY	1.0	534.5	
-107.6	CARBONDALE		GRAY SHALE	0.5	535.5	HARD,CALCAREOUS
-108.1	CARBONDALE	BANKSTON FORK	LIMESTONE	11.2	536.0	
-119.3	CARBONDALE		SILTSTONE	0.6	547.2	
-119.9	CARBONDALE		GRAY SHALE	42.8	547.8	
-162.6	CARBONDALE	JAMESTOWN	COAL	0.2	590.5	DEPTH ADJUSTED BRIGHT BANDED

-162.8	CARBONDALE	JAMESTOWN	COAL	0.1	590.7	BONEY
-162.9	CARBONDALE		ROCK	0.0	590.8	CALCITE
-162.9	CARBONDALE		GRAY SHALE	4.3	590.8	DARK
-167.1	CARBONDALE	BRERETON	LIMESTONE	6.3	595.0	THICKNESS ADJUSTED
-173.4	CARBONDALE		GRAY SHALE	0.3	601.3	
-173.6	CARBONDALE	ANNA	SHALE	0.6	601.5	WELL LAMINATED; BLACK
-174.2	CARBONDALE	ENERGY	GRAY SHALE	1.6	602.1	DEPTH ADJUSTED
-175.8	CARBONDALE	HERRIN	COAL	10.2	603.7	DETAILED DESCRIPTION AVAILABLE
-186.0	CARBONDALE		UNDERCLAY	1.8	613.9	THICKNESS ADJUSTED
-187.8	CARBONDALE		SILTSTONE	16.3	615.7	COARSENS DOWNWARD
-204.1	CARBONDALE		GRAY SHALE	0.3	632.0	LAMINATED
-204.4	CARBONDALE	ST. DAVID	LIMESTONE	1.5	632.3	DARK,ARGILLACEOUS
-205.9	CARBONDALE	TURNER MINE	SHALE	5.1	633.8	BLACK,FINE,LAMINATED,WITH LIMESTONE
-211.0	CARBONDALE		GRAY SHALE	0.5	638.9	DARK, CALCAREOUS
-211.5	CARBONDALE	DYKERSBURG	GRAY SHALE	8.1	639.4	LAMINATED,PYRITE
-219.6	CARBONDALE	SPRINGFIELD	COAL	4.3	647.5	BRIGHT,BANDED,PYRITE

MAPID: 05501389000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 34 **QUARTERS/FOOTAGES:** 500' N line, 2411' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.862408 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.963881 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 428.0 **LOGGED (FT.):** 614.3 **LOG TYPE:** Survey Core Study

SOURCE: **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-70.9	MODESTO	PIASA	LIMESTONE	4.5	498.9	
-75.4	MODESTO		DARK GRAY SHALE	7.2	503.4	
-82.6	CARBONDALE	DANVILLE	COAL	1.2	510.6	
-83.8	CARBONDALE		SANDSTONE/SILTSTONE	19.5	511.8	
-103.4	CARBONDALE	ALLENBY	COAL	1.0	531.4	
-104.3	CARBONDALE		CLAYSTONE & SHALE	1.5	532.3	
-105.8	CARBONDALE	BANKSTON FORK	LIMESTONE	11.2	533.8	
-117.0	CARBONDALE	LAWSON	SILTSTONE	0.6	545.0	
-117.5	CARBONDALE	LAWSON	GRAY SHALE	2.0	545.5	
-119.5	CARBONDALE	LAWSON	DARK GRAY SHALE	40.8	547.5	
-160.3	CARBONDALE	JAMESTOWN	BONE COAL	0.3	588.3	
-160.5	CARBONDALE		BLACK SHALE	4.3	588.5	
-164.8	CARBONDALE	BRERETON	LIMESTONE	4.9	592.8	
-169.7	CARBONDALE	ANNA	BLACK SHALE	2.2	597.7	
-171.9	CARBONDALE	ENERGY	GRAY SHALE	4.1	599.9	
-176.0	CARBONDALE	HERRIN	COAL	10.3	604.0	

MAPID: 05501501000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 34 **QUARTERS/FOOTAGES:** 30' S line, 604' W line of SW NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.861352 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.958014 **DATE COLLECTED:** 0 / 0 / 1959

SURFACE ELEVATION (FT.): 426.6 **LOGGED (FT.):** 656.9 **LOG TYPE:** Drillers Log

SOURCE: CW & F COAL CO 4 **WELL TYPE:** Coal Test

COMMENT: DAY OF DATA NOT RECORDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
426.6	PLEISTOCENE		CLAY	5.0	0.0	
421.6	PLEISTOCENE		SANDY CLAY	50.0	5.0	
371.6			GRAY SHALE	14.0	55.0	
357.6			LIMESTONE	5.0	69.0	
352.6			GRAY SHALE	110.0	74.0	
242.6			SHALE	5.0	184.0	SANDY
237.6			SANDSTONE	101.0	189.0	
136.6			GRAY SHALE	217.0	290.0	
-80.4	MODESTO	PIASA	LIMESTONE	4.0	507.0	
-84.4	MODESTO		GRAY SHALE	5.0	511.0	
-89.4	CARBONDALE	DANVILLE	COAL	2.5	516.0	
-91.9	CARBONDALE		GRAY SHALE	25.5	518.5	
-117.4	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	544.0	
-124.4	CARBONDALE		GRAY SHALE	44.0	551.0	
-168.4	CARBONDALE		SHALE	7.0	595.0	BLACK
-175.4	CARBONDALE	BRERETON	LIMESTONE	6.0	602.0	
-181.4	CARBONDALE	ENERGY	GRAY SHALE	11.0	608.0	
-192.4	CARBONDALE	HERRIN	COAL	9.6	619.0	
-202.0	CARBONDALE		GRAY SHALE	10.4	628.6	
-212.4	CARBONDALE	ST. DAVID	LIMESTONE	2.0	639.0	
-214.4	CARBONDALE	TURNER MINE	SHALE	5.0	641.0	BLACK
-219.4	CARBONDALE	DYKERSBURG	GRAY SHALE	6.8	646.0	
-226.2	CARBONDALE	SPRINGFIELD	COAL	4.1	652.8	

MAPID: 05502184000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 34 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of SW SW

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.869377 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.951444 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 406.0 **LOGGED (FT.):** 3010.0 **LOG TYPE:** Electric Log

SOURCE: TROOP, R. H. ETAL **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-196.0	CARBONDALE	HERRIN	COAL	9.0	602.0	
-237.0	CARBONDALE	SPRINGFIELD	COAL	3.0	643.0	BLACK SHALE & LIMESTONE ROOF
-307.0	CARBONDALE	HOUCHIN CREEK	COAL	-	713.0	

MAPID: 05500113000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 35 **QUARTERS/FOOTAGES:** 330' S line, 330' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.8368 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.951647 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 473.0 **LOGGED (FT.):** 727.0 **LOG TYPE:**

SOURCE: DIAMONDMAR0001 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-172.0	CARBONDALE	HERRIN	COAL	7.6	645.0	
-251.0	CARBONDALE	SPRINGFIELD	COAL	4.0	724.0	

MAPID: 05500113000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 35 **QUARTERS/FOOTAGES:** 330' S line, 330' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.8368 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.951647 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 473.0 **LOGGED (FT.):** 660.6 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-83.3	MODESTO	PIASA	LIMESTONE	4.5	556.3	
-87.8	MODESTO		GRAY SHALE	4.8	560.8	
-92.6	CARBONDALE	DANVILLE	COAL	2.0	565.6	
-94.6	CARBONDALE		SHALE & SANDSTONE	18.7	567.6	
-113.3	CARBONDALE	ALLENBY	COAL	0.7	586.3	
-113.9	CARBONDALE		DARK GRAY SHALE	3.3	586.9	
-117.3	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	590.3	
-124.3	CARBONDALE	LAWSON	GRAY SHALE	21.5	597.3	
-145.8	CARBONDALE	LAWSON	SILTY SHALE	8.0	618.8	
-153.8	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	10.7	626.8	
-164.4	CARBONDALE	JAMESTOWN	BONE COAL	0.3	637.4	
-164.8	CARBONDALE		BLACK SHALE	5.5	637.8	
-170.3	CARBONDALE	BRERETON	LIMESTONE	8.5	643.3	
-178.8	CARBONDALE	ANNA	BLACK SHALE	1.3	651.8	
-180.0	CARBONDALE	HERRIN	COAL	7.6	653.0	

MAPID: 05500113000C **VERSION:** 3 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 35 **QUARTERS/FOOTAGES:** 330' S line, 330' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.8368 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.951647 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 473.0 **LOGGED (FT.):** 728.0 **LOG TYPE:** Drillers Log

SOURCE: DIAMOND & MARSHALL **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-172.0	CARBONDALE	HERRIN	COAL	7.6	645.0	
-200.0	CARBONDALE	BRIAR HILL	COAL	0.7	673.0	
-251.0	CARBONDALE	SPRINGFIELD	COAL	4.0	724.0	SHALE & SILTSTONE ROOF

MAPID: 05500113000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 35 **QUARTERS/FOOTAGES:** 330' S line, 330' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.8368 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.951647 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 473.0 **LOGGED (FT.):** 728.0 **LOG TYPE:** Drillers Log

SOURCE: DIAMOND-MARSHALL 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
473.0	PLEISTOCENE		CLAY	10.0	0.0	
463.0	BOND		SANDSTONE	14.0	10.0	YELLOW
449.0	BOND		SHALY SANDSTONE	7.0	24.0	
442.0	BOND		SANDSTONE WITH COAL	4.5	31.0	SHALEY WITH COAL
437.5	BOND		COAL	0.3	35.5	
437.2	BOND		SHALE	1.3	35.8	
436.0	BOND		SANDSTONE	7.0	37.0	
429.0	BOND		SANDY LIMESTONE	1.0	44.0	
428.0	BOND		SANDY SHALE	5.0	45.0	
423.0	BOND		SHALE	13.0	50.0	
410.0	BOND		SANDSTONE	7.0	63.0	WITH SHALE PARTINGS
403.0	BOND		SANDY SHALE	12.0	70.0	
391.0	BOND		SANDY SHALE	27.0	82.0	
364.0	BOND		SHALE	1.0	109.0	
363.0	BOND		SHALE	0.5	110.0	
362.5	BOND		SHALE	2.5	110.5	
360.0	BOND		SHALE	1.0	113.0	
359.0	BOND	CARTHAGE	LIMESTONE	5.0	114.0	
354.0	MODESTO		SHALE	4.0	119.0	
350.0	MODESTO		LIMESTONE	1.0	123.0	
349.0	MODESTO		SHALE	6.0	124.0	
343.0	MODESTO		SHALE	6.3	130.0	WITH BROWN PARTINGS
336.7	MODESTO		COAL	0.7	136.3	
336.0	MODESTO		SANDY SHALE	3.8	137.0	
332.2	MODESTO		COAL	0.1	140.8	
332.2	MODESTO		SANDY SHALE	1.2	140.8	
331.0	MODESTO		SOFT SHALE	3.0	142.0	
328.0	MODESTO		SANDSTONE	18.0	145.0	
310.0	MODESTO		SANDY SHALE	27.0	163.0	
283.0	MODESTO		SHALE	12.5	190.0	
270.5	MODESTO		SHALE	1.0	202.5	
269.5	MODESTO		SHALE	3.0	203.5	
266.5	MODESTO		CALCAREOUS SHALE	0.5	206.5	
266.0	MODESTO		SHALE	4.0	207.0	
262.0	MODESTO		CALCAREOUS SHALE	5.0	211.0	
257.0	MODESTO		CALCAREOUS SHALE	9.0	216.0	
248.0	MODESTO		SHALE	9.0	225.0	
239.0	MODESTO		SANDSTONE	18.0	234.0	WITH SHALE PARTINGS
221.0	MODESTO		SANDSTONE	14.0	252.0	

207.0	MODESTO		SANDSTONE	40.0	266.0	WITH SHALE PARTINGS
167.0	MODESTO		SANDSTONE	35.0	306.0	
132.0	MODESTO		SHALE	5.0	341.0	WITH BROWN BANDS
127.0	MODESTO		SHALE	2.0	346.0	
125.0	MODESTO		LIMESTONE	0.5	348.0	
124.5	MODESTO		SHALE	2.5	348.5	
122.0	MODESTO		SHALE	5.8	351.0	DARK BLUE
116.2	MODESTO	CHAPEL	BONE COAL	0.5	356.8	
115.7	MODESTO		SHALE	2.7	357.3	
113.0	MODESTO		SHALE WITH LIMESTONE	9.0	360.0	WITH LIMESTONE BANDS
104.0	MODESTO		SANDY SHALE	22.0	369.0	
82.0	MODESTO		SANDSTONE	6.0	391.0	WITH SHALE PARTINGS
76.0	MODESTO		SANDSTONE	76.0	397.0	WITH SHALE PARTINGS
0.0	MODESTO		SHALE	2.3	473.0	
-2.3	MODESTO		COAL	0.3	475.3	
-2.7	MODESTO		SHALE	2.3	475.7	
-5.0	MODESTO		LIMESTONE	2.0	478.0	
-7.0	MODESTO		CALCAREOUS SHALE	4.0	480.0	
-11.0	MODESTO		SANDY SHALE	17.2	484.0	WITH SANDSTONE PARTINGS
-28.2	MODESTO		SHALE	2.0	501.2	
-30.2	MODESTO		COAL	1.3	503.2	
-31.5	MODESTO		CLAYSTONE	2.5	504.5	
-34.0	MODESTO		SHALE	4.0	507.0	
-38.0	MODESTO		SHALE	2.0	511.0	
-40.0	MODESTO		SANDSTONE	13.0	513.0	
-53.0	MODESTO		SHALE	7.0	526.0	
-60.0	MODESTO		SHALE	10.0	533.0	DARK BLUE
-70.0	MODESTO		SHALE	2.0	543.0	
-72.0	MODESTO	DEGRAFF	BONE COAL	0.5	545.0	
-72.5	MODESTO		SHALE	2.5	545.5	
-75.0	MODESTO	PIASA	LIMESTONE	4.5	548.0	
-79.5	MODESTO		SHALE	4.8	552.5	
-84.3	CARBONDALE	DANVILLE	COAL	2.0	557.3	
-86.3	CARBONDALE		SHALE	1.2	559.3	
-87.5	CARBONDALE		SANDY SHALE	4.0	560.5	
-91.5	CARBONDALE		SANDSTONE	2.0	564.5	
-93.5	CARBONDALE		SHALE	2.0	566.5	
-95.5	CARBONDALE		SANDSTONE	8.0	568.5	
-103.5	CARBONDALE		SANDY SHALE	1.5	576.5	
-105.0	CARBONDALE	ALLENBY	COAL	0.7	578.0	
-105.7	CARBONDALE		SHALE	3.3	578.7	DARK BLUE
-109.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	582.0	
-116.0	CARBONDALE		SHALE	5.5	589.0	
-121.5	CARBONDALE		SHALE	6.0	594.5	
-127.5	CARBONDALE		SHALE	10.0	600.5	WITH FIRE CLAY BAND
-137.5	CARBONDALE		SANDY SHALE	8.0	610.5	
-145.5	CARBONDALE		SANDSTONE	10.7	618.5	WITH SHALE PARTINGS

-156.2	CARBONDALE	JAMESTOWN	BONE COAL	0.3	629.2	
-156.5	CARBONDALE		SHALE	5.5	629.5	
-162.0	CARBONDALE	BRERETON	LIMESTONE	8.5	635.0	
-170.5	CARBONDALE		SHALE	1.3	643.5	
-171.8	CARBONDALE	HERRIN	COAL	7.6	644.8	
-179.3	CARBONDALE		CLAYSTONE	1.2	652.3	
-180.5	CARBONDALE		CLAYSTONE	1.0	653.5	
-181.5	CARBONDALE		SANDY SHALE	8.0	654.5	SANDY WITH LIMESTONE
-189.5	CARBONDALE		SANDY SHALE	8.0	662.5	
-197.5	CARBONDALE		SANDY SHALE	2.3	670.5	
-199.8	CARBONDALE	BRIAR HILL	COAL	0.7	672.8	
-200.5	CARBONDALE		SANDY SHALE	8.0	673.5	
-208.5	CARBONDALE		SANDSTONE	16.5	681.5	
-225.0	CARBONDALE		SHALE	2.5	698.0	DARK BLUE
-227.5	CARBONDALE		SHALE	1.0	700.5	DARK BLUE
-228.5	CARBONDALE		CALCAREOUS SHALE	1.5	701.5	
-230.0	CARBONDALE		SHALE	6.5	703.0	
-236.5	CARBONDALE		SHALE	13.6	709.5	
-250.1	CARBONDALE	SPRINGFIELD	COAL	4.0	723.1	
-254.1	CARBONDALE		CLAYSTONE	0.4	727.1	

MAPID: 05500262000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 35 **QUARTERS/FOOTAGES:** NE SE SE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.836787 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.953449 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 493.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: BLACK STAR **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-178.0	CARBONDALE	HERRIN	COAL	7.5	671.0	

MAPID: 05501642000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 35 **QUARTERS/FOOTAGES:** 200' N line, 400' W line of SE NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.838771 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.961039 **DATE COLLECTED:** 11 / 0 / 1960

SURFACE ELEVATION (FT.): 451.0 **LOGGED (FT.):** 1855.0 **LOG TYPE:** Electric Log

SOURCE: REHN, E. E. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-424.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	875.0	
-494.0	SPOON	DAVIS	UNCLASSIFIED	-	945.0	
-1404.0	BASE OF PENN.		UNCLASSIFIED	-	1855.0	

MAPID: 05501642000C **VERSION:** 2 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 35 **QUARTERS/FOOTAGES:** 200' N line, 400' W line of SE NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.838771 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.961039 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 451.0 **LOGGED (FT.):** 3174.0 **LOG TYPE:** Electric Log

SOURCE: REHN, E. E. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-176.0	CARBONDALE	HERRIN	COAL	9.0	627.0	
-251.0	CARBONDALE	SPRINGFIELD	COAL	3.0	702.0	SHALE & SILTSTONE ROOF
-320.0	CARBONDALE	HOUCHIN CREEK	COAL	-	771.0	

MAPID: 05502284000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 36 **QUARTERS/FOOTAGES:** 1860' S line, 2310' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.827546 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.955902 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 515.0 **LOGGED (FT.):** 3227.0 **LOG TYPE:** Electric Log

SOURCE: ANDERSON, JABE J. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-158.0	CARBONDALE	HERRIN	COAL	7.0	673.0	
-196.0	CARBONDALE	BRIAR HILL	COAL	-	711.0	
-233.0	CARBONDALE	SPRINGFIELD	COAL	3.0	748.0	SHALE & SILTSTONE ROOF
-322.0	CARBONDALE	HOUCHIN CREEK	COAL	-	837.0	

MAPID: 05502284000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 3E **SECTION:** 36 **QUARTERS/FOOTAGES:** 1860' S line, 2310' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.827546 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.955902 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 515.0 **LOGGED (FT.):** 680.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-60.0	MODESTO	PIASA	LIMESTONE	4.0	575.0	
-64.0	MODESTO		GRAY SHALE	6.0	579.0	
-70.0	CARBONDALE	DANVILLE	COAL	1.0	585.0	
-71.0	CARBONDALE		SILTY SHALE	21.0	586.0	
-92.0	CARBONDALE	ALLENBY	COAL	1.0	607.0	
-93.0	CARBONDALE		DARK GRAY SHALE	6.0	608.0	
-99.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	614.0	
-105.0	CARBONDALE	LAWSON	SHALE	7.0	620.0	
-112.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	18.0	627.0	
-130.0	CARBONDALE	LAWSON	SILTY SHALE	10.0	645.0	
-140.0	CARBONDALE	JAMESTOWN	BONE COAL	0.5	655.0	
-140.5	CARBONDALE		BLACK SHALE	0.5	655.5	
-141.0	CARBONDALE	BRERETON	LIMESTONE	5.0	656.0	
-146.0	CARBONDALE	ANNA	BLACK SHALE	2.0	661.0	
-148.0	CARBONDALE	ENERGY	DARK GRAY SHALE	1.0	663.0	
-149.0	CARBONDALE	ENERGY	GRAY SHALE	9.0	664.0	
-158.0	CARBONDALE	HERRIN	COAL	7.0	673.0	

MAPID: 05501115000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 1 **QUARTERS/FOOTAGES:** 330' N line, 990' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.709377 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.03711 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 527.0 **LOGGED (FT.):** 3410.0 **LOG TYPE:** Electric Log

SOURCE: LYNCH OIL CO. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-305.0	CARBONDALE	DANVILLE	COAL	-	832.0	
-311.0	CARBONDALE	SS BELOW NO. 7	SANDSTONE/SHALE	22.0	838.0	
-338.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	865.0	
-349.0	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	35.0	876.0	
-403.0	CARBONDALE	HERRIN	COAL	7.0	930.0	
-441.0	CARBONDALE	BRIAR HILL	COAL	-	968.0	
-478.0	CARBONDALE	SPRINGFIELD	COAL	5.0	1005.0	LIMESTONE W/ SHALE ROOF
-503.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	20.0	1030.0	
-523.0	CARBONDALE	HOUCHIN CREEK	COAL	-	1050.0	

MAPID: 05501115000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 1 **QUARTERS/FOOTAGES:** 330' N line, 990' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.709377 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.03711 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 527.0 **LOGGED (FT.):** 938.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-291.0	MODESTO	PIASA	LIMESTONE	5.0	818.0	
-296.0	MODESTO		SHALE	10.5	823.0	
-306.5	CARBONDALE	DANVILLE	COAL	1.5	833.5	
-308.0	CARBONDALE		SHALE & SANDSTONE	31.0	835.0	
-339.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	2.0	866.0	
-341.0	CARBONDALE	LAWSON	SHALE	6.0	868.0	
-347.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	17.0	874.0	
-364.0	CARBONDALE	LAWSON	SANDSTONE	20.0	891.0	
-384.0	CARBONDALE	LAWSON	GRAY SHALE	7.0	911.0	
-391.0	CARBONDALE	CONANT	LIMESTONE & SHALE	0.5	918.0	
-391.5	CARBONDALE	JAMESTOWN	BONE COAL	0.5	918.5	
-392.0	CARBONDALE	BRERETON	LIMESTONE	6.0	919.0	
-398.0	CARBONDALE	ANNA	BLACK SHALE	3.0	925.0	
-401.0	CARBONDALE	ENERGY	GRAY SHALE	3.0	928.0	
-404.0	CARBONDALE	HERRIN	COAL	7.0	931.0	

MAPID: 05501136000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 2 **QUARTERS/FOOTAGES:** 330' N line, 330' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.725335 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.037288 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 532.0 **LOGGED (FT.):** 3414.0 **LOG TYPE:** Electric Log

SOURCE: IN FARM BUR. COOP. ASSOC **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-297.0	CARBONDALE	DANVILLE	COAL	-	829.0	
-308.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	6.0	840.0	
-323.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	855.0	
-330.0	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	20.0	862.0	
-380.0	CARBONDALE	HERRIN	COAL	6.0	912.0	
-418.0	CARBONDALE	BRIAR HILL	COAL	-	950.0	
-454.0	CARBONDALE	SPRINGFIELD	COAL	6.0	986.0	SHALE & SILTSTONE ROOF
-476.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	30.0	1008.0	
-512.0	CARBONDALE	HOUCHIN CREEK	COAL	-	1044.0	

MAPID: 05501136000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 2 **QUARTERS/FOOTAGES:** 330' N line, 330' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.725335 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.037288 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 532.0 **LOGGED (FT.):** 918.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-281.0	MODESTO	PIASA	LIMESTONE & SHALE	5.0	813.0	
-286.0	MODESTO		SHALE	12.0	818.0	
-298.0	CARBONDALE	DANVILLE	COAL	3.0	830.0	
-301.0	CARBONDALE		SHALE & SANDSTONE	24.0	833.0	
-325.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	3.0	857.0	
-328.0	CARBONDALE	LAWSON	SHALE & SANDSTONE	40.0	860.0	
-368.0	CARBONDALE	CONANT	LIMESTONE & SHALE	0.5	900.0	
-368.5	CARBONDALE	JAMESTOWN	BONE COAL	0.5	900.5	
-369.0	CARBONDALE		SHALE	3.0	901.0	
-372.0	CARBONDALE	BRERETON	LIMESTONE	4.0	904.0	
-376.0	CARBONDALE	ANNA	BLACK SHALE	2.0	908.0	
-380.0	CARBONDALE	HERRIN	COAL	6.0	912.0	

MAPID: 05500939000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 3 **QUARTERS/FOOTAGES:** 2310' N line, 1650' W line

QUADRANGLE: EWING **LONGITUDE:** -88.755468 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.032088 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 507.0 **LOGGED (FT.):** 3393.0 **LOG TYPE:** Electric Log

SOURCE: OHIO OIL CO., THE **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-239.0	CARBONDALE	DANVILLE	COAL	-	746.0	
-240.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	9.0	747.0	
-269.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	776.0	
-323.0	CARBONDALE	HERRIN	COAL	7.0	830.0	
-363.0	CARBONDALE	BRIAR HILL	COAL	-	870.0	
-390.0	CARBONDALE	SPRINGFIELD	COAL	4.0	897.0	BLACK SHALE & LIMESTONE ROOF
-400.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	8.0	907.0	
-469.0	CARBONDALE	HOUCHIN CREEK	COAL	-	976.0	

MAPID: 05500939000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 3 **QUARTERS/FOOTAGES:** 2310' N line, 1650' W line

QUADRANGLE: EWING **LONGITUDE:** -88.755468 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.032088 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 507.0 **LOGGED (FT.):** 838.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-227.0	MODESTO	PIASA	LIMESTONE	6.0	734.0	
-233.0	MODESTO		SHALE	8.0	740.0	
-241.0	CARBONDALE	DANVILLE	COAL	2.0	748.0	
-243.0	CARBONDALE		SHALE & SANDSTONE	27.0	750.0	
-270.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	5.0	777.0	
-275.0	CARBONDALE	LAWSON	SILTY SHALE	36.0	782.0	
-311.0	CARBONDALE	BRERETON	LIMESTONE	3.0	818.0	
-314.0	CARBONDALE	ANNA	BLACK SHALE	3.0	821.0	
-317.0	CARBONDALE	ENERGY	GRAY SHALE	8.0	824.0	
-325.0	CARBONDALE	HERRIN	COAL	6.0	832.0	

MAPID: 05500114000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 7 **QUARTERS/FOOTAGES:** SE SE SE SE
QUADRANGLE: EWING **LONGITUDE:** -88.799187 **GEOLOGIST:** BARGH,M
CONFIDENTIAL: N **LATITUDE:** 38.010114 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 449.0 **LOGGED (FT.):** 753.8 **LOG TYPE:** Survey Core Study
SOURCE: BIG MUDDY COAL SYN **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
449.0			UNCONSOLIDATED	60.0	0.0	
389.0			ROCK	359.4	60.0	
29.6			COAL	2.2	419.4	
27.4			ROCK	95.2	421.6	
-67.8			COAL	1.8	516.8	
-69.5			ROCK	106.7	518.5	
-176.2			COAL	1.8	625.2	
-177.9			ROCK	58.4	626.9	
-236.3			COAL	0.5	685.3	
-236.8			ROCK	27.2	685.8	
-264.0			SHALE	25.0	713.0	
-289.0	CARBONDALE	HERRIN	COAL	8.3	738.0	
-297.3			ROCK	7.5	746.3	

MAPID: 05500114000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 7 **QUARTERS/FOOTAGES:** SE SE SE SE
QUADRANGLE: EWING **LONGITUDE:** -88.799187 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.010114 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 449.0 **LOGGED (FT.):** 746.3 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-186.3	CARBONDALE		SHALE & SANDSTONE	50.0	635.3	
-236.3	CARBONDALE	ALLENBY	COAL	0.5	685.3	
-236.8	CARBONDALE		CLAYSTONE	3.7	685.8	
-240.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.2	689.5	
-243.7	CARBONDALE	LAWSON	DARK GRAY SHALE	10.3	692.7	
-253.9	CARBONDALE	LAWSON	SANDSTONE	10.1	702.9	
-264.0	CARBONDALE	BRERETON	GRAY SHALE	3.5	713.0	
-267.5	CARBONDALE	ANNA	BLACK SHALE	2.5	716.5	
-270.0	CARBONDALE	ENERGY	GRAY SHALE	19.0	719.0	
-289.0	CARBONDALE	HERRIN	COAL	8.3	738.0	

MAPID: 05500114000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 7 **QUARTERS/FOOTAGES:** SE SE SE SE

QUADRANGLE: EWING **LONGITUDE:** -88.799187 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.010114 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 449.2 **LOGGED (FT.):** 754.0 **LOG TYPE:**

SOURCE: BG MUDDYCS **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-288.8	CARBONDALE	HERRIN	COAL	8.3	738.0	

MAPID: 05500114000C **VERSION:** 4 **PROJECT:** NCRDS87

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 7 **QUARTERS/FOOTAGES:** SE SE SE SE

QUADRANGLE: EWING **LONGITUDE:** -88.799187 **GEOLOGIST:** WEIBEL

CONFIDENTIAL: N **LATITUDE:** 38.010114 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 440.0 **LOGGED (FT.):** 753.8 **LOG TYPE:** Drillers Log

SOURCE: BIG MUDDY COAL SYNDICATE **WELL TYPE:** Coal Test

COMMENT: IMPRECISE LOCATION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
440.0	BOND		UNCONSOLIDATED	60.5	0.0	
379.5	BOND		LIMESTONE	1.7	60.5	
377.8	BOND		SHALE	46.2	62.2	
331.7	BOND		SANDSTONE	48.3	108.3	
283.3	BOND		SHALE	69.3	156.7	
214.1	BOND		BLACK SHALE	5.8	225.9	
208.2	BOND	CARTHAGE	LIMESTONE	2.3	231.8	UNCERTAIN CORRELATION
205.9	MODESTO		SHALE	81.3	234.1	
124.6	MODESTO		SANDSTONE	36.6	315.4	
88.0	MODESTO		SHALE	9.5	352.0	
78.5	MODESTO		SANDSTONE	12.0	361.5	
66.5	MODESTO		SHALE	45.9	373.5	
20.6	MODESTO		COAL	2.2	419.4	
18.4	MODESTO		UNDERCLAY	2.7	421.6	
15.7	MODESTO		LIMESTONE	1.5	424.3	
14.2	MODESTO		SHALE	18.2	425.8	
-3.9	MODESTO		BLACK SHALE	4.3	443.9	
-8.2	MODESTO		UNDERCLAY	2.4	448.2	
-10.6	MODESTO		LIMESTONE	9.7	450.6	
-20.3	MODESTO		SANDSTONE	12.3	460.3	
-32.6	MODESTO		SHALE	29.3	472.6	
-61.9	MODESTO		BLACK SHALE	14.8	501.9	
-76.8	MODESTO		COAL	1.8	516.8	
-78.5	MODESTO		UNDERCLAY	4.7	518.5	
-83.2	MODESTO		SANDSTONE	8.5	523.2	
-91.7	MODESTO		LIMESTONE	4.3	531.7	
-95.9	MODESTO		SHALE	61.2	535.9	
-157.1	MODESTO		BLACK SHALE	3.2	597.1	
-160.3	MODESTO		UNDERCLAY	0.8	600.3	
-161.0	MODESTO		LIMESTONE	4.7	601.0	
-165.7	MODESTO		SHALE	16.3	605.7	
-182.0	MODESTO		BLACK SHALE	3.2	622.0	
-185.2	MODESTO		COAL	1.8	625.2	
-186.9	MODESTO		UNDERCLAY	2.3	626.9	
-189.3	MODESTO		SHALE	25.3	629.3	
-214.6	MODESTO		SANDSTONE	28.3	654.6	
-242.8	MODESTO		BLACK SHALE	2.5	682.8	
-245.3	CARBONDALE	DANVILLE	COAL	0.5	685.3	
-245.8	CARBONDALE		UNDERCLAY	3.7	685.8	

-249.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.2	689.5
-252.7	CARBONDALE		DARK SHALE	10.3	692.7
-262.9	CARBONDALE		SANDSTONE	10.1	702.9
-273.0	CARBONDALE		SHALE	3.5	713.0
-276.5	CARBONDALE	ANNA	BLACK SHALE	2.5	716.5
-279.0	CARBONDALE	ENERGY	GRAY SHALE	19.0	719.0
-298.0	CARBONDALE	HERRIN	COAL	8.3	738.0
-306.3	CARBONDALE		UNKNOWN	7.5	746.3

MAPID: 05500114000C **VERSION:** 5 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 7 **QUARTERS/FOOTAGES:** SE SE SE SE

QUADRANGLE: EWING **LONGITUDE:** -88.799187 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.010114 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 449.2 **LOGGED (FT.):** 746.3 **LOG TYPE:** Drillers Log

SOURCE: BIG MUDDY COAL SYNDICATE **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
449.2	PLEISTOCENE		UNCONSOLIDATED	32.3	0.0	
416.9			SAND & GRAVEL	28.2	32.3	
388.7			LIMESTONE	1.7	60.5	
387.0			CLAYSTONE	46.2	62.2	BLUE
340.9			SANDSTONE	48.3	108.3	
292.5			SANDY SHALE	20.1	156.7	
272.4			SHALE	49.2	176.8	
223.3			SHALE	3.5	225.9	
219.8			BLACK SHALE	2.3	229.4	
217.4			LIMESTONE	2.3	231.8	
215.1			SHALE	34.3	234.1	
180.8			SANDY SHALE	47.0	268.4	
133.8			SANDSTONE	36.6	315.4	
97.2			SHALE	9.5	352.0	
87.7			SANDSTONE	12.0	361.5	BLUE
75.7			SANDY SHALE	42.6	373.5	
33.1			BLACK SHALE	3.3	416.1	
29.8	MODESTO	CHAPEL	COAL	2.2	419.4	
27.6	MODESTO		CLAYSTONE	2.7	421.6	
24.9	MODESTO		LIMESTONE	1.5	424.3	
23.4	MODESTO		SHALE	18.2	425.8	
5.3	MODESTO		BLACK SHALE	4.3	443.9	
1.0	MODESTO		CLAYSTONE	2.4	448.2	
-1.4	MODESTO		LIMESTONE	9.7	450.6	
-11.1	MODESTO		SANDSTONE	12.3	460.3	
-23.4	MODESTO		SANDY SHALE	10.3	472.6	
-33.6	MODESTO		SHALE	19.1	482.8	
-52.7	MODESTO		SHALE	4.5	501.9	
-57.2	MODESTO		BLACK SHALE	10.3	506.4	
-67.6	MODESTO		COAL	1.8	516.8	
-69.3	MODESTO		CLAYSTONE	4.7	518.5	
-74.0	MODESTO		SANDSTONE	8.5	523.2	BLUE
-82.5	MODESTO		LIMESTONE	4.3	531.7	
-86.7	MODESTO		SANDY SHALE	26.5	535.9	
-113.2	MODESTO		SHALE	34.7	562.4	
-147.9	MODESTO		BLACK SHALE	3.2	597.1	
-151.1	MODESTO		CLAYSTONE	0.8	600.3	
-151.8	MODESTO	PIASA	LIMESTONE/CHERT	4.7	601.0	WITH FLINT
-156.5	MODESTO		SHALE	16.3	605.7	

-172.8	MODESTO		BLACK SHALE	3.2	622.0
-176.0	CARBONDALE	DANVILLE	COAL	1.8	625.2
-177.7	CARBONDALE		CLAYSTONE	2.3	626.9
-180.1	CARBONDALE		SHALE	15.1	629.3
-195.1	CARBONDALE		SANDY SHALE	10.3	644.3
-205.4	CARBONDALE		SANDSTONE	28.3	654.6
-233.6	CARBONDALE		SHALE	2.5	682.8
-236.1	CARBONDALE	ALLENBY	COAL	0.5	685.3
-236.6	CARBONDALE		CLAYSTONE	3.7	685.8
-240.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.2	689.5
-243.5	CARBONDALE		SHALE	10.3	692.7
-253.7	CARBONDALE		SANDSTONE	10.1	702.9
-263.8	CARBONDALE		SHALE	3.5	713.0
-267.3	CARBONDALE		BLACK SHALE	2.5	716.5
-269.8	CARBONDALE		BLACK SHALE	19.0	719.0
-288.8	CARBONDALE	HERRIN	COAL	8.3	738.0

MAPID: 05500732000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 8 **QUARTERS/FOOTAGES:** 2310' N line, 2310' W line

QUADRANGLE: EWING **LONGITUDE:** -88.79051 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.018136 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 405.0 **LOGGED (FT.):** 3199.0 **LOG TYPE:** Electric Log

SOURCE: AETNA OIL CO., ETAL **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-182.0	CARBONDALE	DANVILLE	COAL	-	587.0	
-201.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	606.0	
-219.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	20.0	624.0	
-261.0	CARBONDALE	HERRIN	COAL	6.0	666.0	
-271.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	12.0	676.0	
-297.0	CARBONDALE	BRIAR HILL	COAL	-	702.0	
-325.0	CARBONDALE	SPRINGFIELD	COAL	5.0	730.0	BLACK SHALE & LIMESTONE ROOF
-337.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	15.0	742.0	
-411.0	CARBONDALE	HOUCHIN CREEK	COAL	-	816.0	

MAPID: 05500732000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 8 **QUARTERS/FOOTAGES:** 2310' N line, 2310' W line

QUADRANGLE: EWING **LONGITUDE:** -88.79051 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.018136 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 405.0 **LOGGED (FT.):** 674.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-169.0	MODESTO	PIASA	LIMESTONE	8.0	574.0	
-177.0	MODESTO		SHALE	9.0	582.0	
-186.0	CARBONDALE	DANVILLE	COAL	1.0	591.0	
-187.0	CARBONDALE		SILTY SHALE	15.0	592.0	
-202.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	5.0	607.0	
-207.0	CARBONDALE	LAWSON	SILTY SHALE	12.0	612.0	
-219.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	24.0	624.0	
-243.0	CARBONDALE	LAWSON	SHALE	6.0	648.0	
-249.0	CARBONDALE	LAWSON	CLAYSTONE & SHALE	2.0	654.0	
-251.0	CARBONDALE	BRERETON	LIMESTONE	6.0	656.0	
-257.0	CARBONDALE	ANNA	SHALE	4.0	662.0	
-261.0	CARBONDALE	HERRIN	COAL	8.0	666.0	

MAPID: 05500732000C **VERSION:** 3 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 8 **QUARTERS/FOOTAGES:** 2310' N line, 2310' W line

QUADRANGLE: EWING **LONGITUDE:** -88.79051 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.018136 **DATE COLLECTED:** 0 / 0 / 1943

SURFACE ELEVATION (FT.): 405.0 **LOGGED (FT.):** 1990.0 **LOG TYPE:** Electric Log

SOURCE: AETNA OIL CO., ETAL **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-519.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	924.0	
-590.0	SPOON	DAVIS	UNCLASSIFIED	-	995.0	
-1585.0	BASE OF PENN.		UNCLASSIFIED	-	1990.0	

MAPID: 05500115000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 9 **QUARTERS/FOOTAGES:** NW NW NW NW

QUADRANGLE: EWING **LONGITUDE:** -88.778982 **GEOLOGIST:** BARGH,M

CONFIDENTIAL: N **LATITUDE:** 38.024135 **DATE COLLECTED:** 9 / 0 / 1909

SURFACE ELEVATION (FT.): 405.0 **LOGGED (FT.):** 717.8 **LOG TYPE:** Survey Core Study

SOURCE: B. M. C. S. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
405.0			UNCONSOLIDATED	47.0	0.0	
358.0			ROCK	263.0	47.0	
95.0			COAL	1.5	310.0	
93.5			ROCK	103.5	311.5	
-10.0			COAL	0.3	415.0	
-10.3			ROCK	159.2	415.3	
-169.5			COAL	0.7	574.5	
-170.2			ROCK	26.3	575.2	
-196.5			COAL	1.5	601.5	
-198.0			ROCK	14.1	603.0	
-212.1			COAL	2.2	617.1	
-214.3			ROCK	15.0	619.3	
-229.3			COAL	0.2	634.3	
-229.5			ROCK	38.5	634.5	
-268.0			SANDSTONE	13.0	673.0	
-281.0			SHALE	3.0	686.0	
-284.0			COAL WITH SHALE	1.0	689.0	COAL AND BLUE SHALE MIXED
-285.0			BLACK SHALE	10.5	690.0	
-295.5			LIMESTONE	7.0	700.5	
-302.5			BLACK SHALE	2.0	707.5	
-304.5	CARBONDALE	HERRIN	COAL	7.2	709.5	
-311.7			SHALE	1.9	716.7	

MAPID: 05500115000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 9 **QUARTERS/FOOTAGES:** NW NW NW NW
QUADRANGLE: EWING **LONGITUDE:** -88.778982 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.024135 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 405.0 **LOGGED (FT.):** 717.2 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-198.5	MODESTO	PIASA	LIMESTONE	5.0	603.5	
-203.5	MODESTO		SHALE	8.1	608.5	
-211.6	CARBONDALE	DANVILLE	COAL	2.2	616.6	
-213.8	CARBONDALE		SHALE & SANDSTONE	15.1	618.8	
-228.8	CARBONDALE	ALLENBY	COAL	0.2	633.8	
-229.0	CARBONDALE		GRAY SHALE	6.5	634.0	
-235.5	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	7.5	640.5	
-243.0	CARBONDALE	LAWSON	SHALE & SANDSTONE	25.5	648.0	
-268.5	CARBONDALE	LAWSON	SILTY SHALE	13.0	673.5	
-281.5	CARBONDALE	LAWSON	CALCAREOUS SHALE	3.0	686.5	
-284.5	CARBONDALE	LAWSON	GRAY SHALE	8.0	689.5	
-292.5	CARBONDALE	LAWSON	CALCAREOUS SHALE	3.5	697.5	
-296.0	CARBONDALE	BRERETON	LIMESTONE	7.0	701.0	
-303.0	CARBONDALE	ANNA	BLACK SHALE	2.0	708.0	
-305.0	CARBONDALE	HERRIN	COAL	7.2	710.0	

MAPID: 05500115000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 9 **QUARTERS/FOOTAGES:** NW NW NW NW
QUADRANGLE: EWING **LONGITUDE:** -88.778982 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 38.024135 **DATE COLLECTED:** 0 / 0 / 1909
SURFACE ELEVATION (FT.): 405.3 **LOGGED (FT.):** 718.0 **LOG TYPE:**
SOURCE: BG MUDDYCS **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-303.7	CARBONDALE	HERRIN	COAL	7.2	709.0	

MAPID: 05500115000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 9 **QUARTERS/FOOTAGES:** NW NW NW NW

QUADRANGLE: EWING **LONGITUDE:** -88.778982 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.024135 **DATE COLLECTED:** 9 / 0 / 1909

SURFACE ELEVATION (FT.): 405.3 **LOGGED (FT.):** 717.8 **LOG TYPE:** Drillers Log

SOURCE: BIG MUDDY COAL SYNDICATE 6 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
405.3	PLEISTOCENE		CLAY	1.0	0.0	
404.3	PLEISTOCENE		CLAY	14.0	1.0	YELLOW
390.3	PLEISTOCENE		SAND	32.0	15.0	
358.3	BOND		SANDSTONE	22.0	47.0	
336.3	BOND		SANDY SHALE	21.0	69.0	
315.3	BOND		SANDSTONE	14.0	90.0	
301.3	BOND		LIMESTONE & CONGLOMERATE	1.0	104.0	
300.3	BOND		SHALE	15.0	105.0	
285.3	BOND		SHALE	13.0	120.0	
272.3	BOND		SHALE	16.0	133.0	
256.3	BOND	CARTHAGE	LIMESTONE	9.0	149.0	
247.3	MODESTO		SHALE	3.0	158.0	DARK BLUE
244.3	MODESTO		SANDY SHALE	11.0	161.0	
233.3	MODESTO		SOFT SHALE	3.0	172.0	
230.3	MODESTO		SANDY SHALE	6.0	175.0	
224.3	MODESTO		SANDSTONE	19.0	181.0	
205.3	MODESTO		SANDY SHALE	90.0	200.0	
115.3	MODESTO		LIMESTONE	1.0	290.0	
114.3	MODESTO		SHALE	2.5	291.0	
111.8	MODESTO		SHALE	16.5	293.5	
95.3	MODESTO		COAL	1.5	310.0	
93.8	MODESTO		SHALE	3.5	311.5	
90.3	MODESTO		SANDY SHALE	66.0	315.0	
24.3	MODESTO		SANDSTONE	2.0	381.0	
22.3	MODESTO		SANDY SHALE	12.0	383.0	
10.3	MODESTO		SHALE	6.0	395.0	
4.3	MODESTO		SHALY LIMESTONE	7.0	401.0	WITH SHALE PARTINGS
-2.7	MODESTO		SHALE	7.0	408.0	
-9.7	MODESTO	CHAPEL	COAL	0.3	415.0	
-10.0	MODESTO		SANDY SHALE	3.8	415.3	
-13.8	MODESTO		SANDSTONE	53.0	419.1	
-66.8	MODESTO		SANDSTONE WITH COAL	3.0	472.1	WITH COAL PARTINGS
-69.8	MODESTO		LIMESTONE & CONGLOMERATE	1.0	475.1	
-70.8	MODESTO		SANDY SHALE	53.0	476.1	
-123.8	MODESTO		SHALE	11.0	529.1	
-134.8	MODESTO		SANDY LIMESTONE	8.0	540.1	SANDY WITH SHALE
-142.8	MODESTO		SANDY SHALE	12.0	548.1	

-154.8	MODESTO		SHALE	9.0	560.1	
-163.8	MODESTO		SHALE	5.5	569.1	DARK BLUE
-169.3	MODESTO		COAL	0.7	574.6	
-170.0	MODESTO		SOFT SHALE	3.8	575.3	
-173.8	MODESTO		SANDY SHALE	10.0	579.1	
-183.8	MODESTO		SANDY SHALE	4.0	589.1	
-187.8	MODESTO		SHALE	8.5	593.1	
-196.3	MODESTO	DEGRAFF	COAL	1.5	601.6	
-197.8	MODESTO		SHALE	1.0	603.1	
-198.8	MODESTO	PIASA	LIMESTONE	5.0	604.1	
-203.8	MODESTO		SHALE	1.0	609.1	
-204.8	MODESTO		SHALE	7.1	610.1	
-211.9	CARBONDALE	DANVILLE	COAL	2.2	617.2	
-214.1	CARBONDALE		SANDY SHALE	6.8	619.4	
-220.8	CARBONDALE		SANDSTONE	8.3	626.1	
-229.2	CARBONDALE	ALLENBY	COAL	0.2	634.5	
-229.3	CARBONDALE		SHALE	6.5	634.6	
-235.8	CARBONDALE		LIMESTONE	1.5	641.1	
-237.3	CARBONDALE		CALCAREOUS SHALE	4.5	642.6	
-241.8	CARBONDALE		SANDY SHALE	1.0	647.1	
-242.8	CARBONDALE		LIMESTONE	0.5	648.1	
-243.3	CARBONDALE		SANDY SHALE	11.5	648.6	
-254.8	CARBONDALE		SANDY SHALE	4.0	660.1	WITH SANDSTONE
-258.8	CARBONDALE		SANDY SHALE	4.0	664.1	
-262.8	CARBONDALE		SANDSTONE	5.0	668.1	
-267.8	CARBONDALE		SANDY SHALE	13.0	673.1	
-280.8	CARBONDALE		SANDY SHALE	3.0	686.1	
-283.8	CARBONDALE	JAMESTOWN	SHALE W/ COAL STREAKS	1.0	689.1	WITH COAL PARTINGS
-284.8	CARBONDALE		SHALE	7.0	690.1	
-291.8	CARBONDALE		CALCAREOUS SHALE	3.5	697.1	
-295.3	CARBONDALE	BRERETON	LIMESTONE	7.0	700.6	
-302.3	CARBONDALE		SHALE	2.0	707.6	
-304.3	CARBONDALE	HERRIN	COAL	7.2	709.6	
-311.5	CARBONDALE		SANDY SHALE	1.0	716.8	

MAPID: 05501137000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 11 **QUARTERS/FOOTAGES:** 990' S line, 990' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.727825 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.012842 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 438.0 **LOGGED (FT.):** 3329.0 **LOG TYPE:** Electric Log

SOURCE: OIL MANAGEMENT, INC. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-252.0	CARBONDALE	DANVILLE	COAL	-	690.0	
-258.0	CARBONDALE	SS BELOW NO. 7	SANDSTONE/SHALE	11.0	696.0	
-282.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	720.0	
-294.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	28.0	732.0	
-347.0	CARBONDALE	HERRIN	COAL	5.0	785.0	
-357.0	CARBONDALE	VERMILIONVILLE	SANDSTONE/SHALE	13.0	795.0	
-388.0	CARBONDALE	BRIAR HILL	COAL	-	826.0	
-390.0	CARBONDALE	CANTON		7.0	828.0	
-418.0	CARBONDALE	SPRINGFIELD	COAL	5.0	856.0	BLACK SHALE & LIMESTONE ROOF
-468.0	CARBONDALE	SS BELOW NO. 5	SANDSTONE/SHALE	11.0	906.0	
-482.0	CARBONDALE	HOUCHIN CREEK	COAL	-	920.0	

MAPID: 05501137000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 11 **QUARTERS/FOOTAGES:** 990' S line, 990' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.727825 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.012842 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 438.0 **LOGGED (FT.):** 890.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-342.0	MODESTO	PIASA	LIMESTONE	4.0	780.0	
-346.0	MODESTO		SHALE	9.0	784.0	
-355.0	CARBONDALE	DANVILLE	COAL	1.5	793.0	
-356.5	CARBONDALE		SILTY SHALE	27.0	794.5	
-383.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	821.5	
-387.0	CARBONDALE	LAWSON	SHALE	5.0	825.0	
-392.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	30.0	830.0	
-422.0	CARBONDALE	LAWSON	SHALE	10.0	860.0	
-432.0	CARBONDALE	BRERETON	LIMESTONE	3.0	870.0	
-435.0	CARBONDALE	ANNA	CALCAREOUS SANDSTONE	2.0	873.0	
-437.0	CARBONDALE	ENERGY	GRAY SHALE	9.0	875.0	
-446.0	CARBONDALE	HERRIN	COAL	6.0	884.0	

MAPID: 05501137000C **VERSION:** 3 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 11 **QUARTERS/FOOTAGES:** 990' S line, 990' E line

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.727825 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.012842 **DATE COLLECTED:** 1 / 0 / 1952

SURFACE ELEVATION (FT.): 438.0 **LOGGED (FT.):** 2014.0 **LOG TYPE:** Electric Log

SOURCE: OIL MANAGEMENT, INC. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-594.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	1032.0	
-662.0	SPOON	DAVIS	UNCLASSIFIED	-	1100.0	
-1576.0	BASE OF PENN.		UNCLASSIFIED	-	2014.0	

MAPID: 05501377000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 13 **QUARTERS/FOOTAGES:** 330' S line, 330' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.70744 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.995663 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 557.0 **LOGGED (FT.):** 3425.0 **LOG TYPE:** Electric Log

SOURCE: BREHM, C. E. DRLG.&PROD. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-387.0	CARBONDALE	HERRIN	COAL	9.0	944.0	
-437.0	CARBONDALE	SPRINGFIELD	COAL	6.0	994.0	BLACK SHALE & LIMESTONE ROOF
-510.0	CARBONDALE	HOUCHIN CREEK	COAL	-	1067.0	

MAPID: 05502501000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 13 **QUARTERS/FOOTAGES:** 330' S line, 330' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.70744 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.995663 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 524.0 **LOGGED (FT.):** 886.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-249.0	MODESTO	PIASA	LIMESTONE & SHALE	7.0	773.0	
-256.0	MODESTO		SHALE	12.0	780.0	
-268.0	CARBONDALE	DANVILLE	COAL	1.5	792.0	
-269.5	CARBONDALE		SILTY SHALE	16.5	793.5	
-286.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	3.0	810.0	
-289.0	CARBONDALE	LAWSON	SHALE & SANDSTONE	55.0	813.0	
-344.0	CARBONDALE	CONANT	LIMESTONE & SHALE	0.5	868.0	
-344.5	CARBONDALE	JAMESTOWN	BONE COAL	0.5	868.5	
-345.0	CARBONDALE		SHALE	2.0	869.0	
-347.0	CARBONDALE	BRERETON	LIMESTONE	5.0	871.0	
-352.0	CARBONDALE	ANNA	BLACK SHALE	3.0	876.0	
-355.0	CARBONDALE	HERRIN	COAL	7.0	879.0	

MAPID: 05500622000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 14 **QUARTERS/FOOTAGES:** 660' S line, 1980' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.731259 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.997148 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 467.0 **LOGGED (FT.):** 774.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-203.6	MODESTO	PIASA	LIMESTONE	6.0	670.6	
-209.6	MODESTO		SHALE	1.4	676.6	
-211.0	CARBONDALE	DANVILLE	COAL	2.0	678.0	
-213.0	CARBONDALE		CLAYSTONE & SHALE	20.0	680.0	
-233.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	10.0	700.0	
-243.0	CARBONDALE	LAWSON	SHALE & SANDSTONE	10.0	710.0	
-253.0	CARBONDALE	LAWSON	SANDSTONE	20.0	720.0	
-273.0	CARBONDALE	LAWSON	SHALE	13.0	740.0	
-286.0	CARBONDALE	CONANT	LIMESTONE & SHALE	0.5	753.0	
-286.5	CARBONDALE	JAMESTOWN	BONE COAL	0.5	753.5	
-287.0	CARBONDALE		SHALE	6.0	754.0	
-293.0	CARBONDALE	BRERETON	LIMESTONE	6.0	760.0	
-299.0	CARBONDALE	ANNA	BLACK SHALE	2.0	766.0	
-301.0	CARBONDALE	HERRIN	COAL	6.0	768.0	

MAPID: 05501138000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 14 **QUARTERS/FOOTAGES:** 660' N line, 660' E line of SW

QUADRANGLE: MACEDONIA **LONGITUDE:** -88.735958 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 38.000796 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 454.0 **LOGGED (FT.):** 3263.0 **LOG TYPE:** Electric Log

SOURCE: SEABOARD OIL OF DE **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-222.0	CARBONDALE	DANVILLE	COAL	-	676.0	
-226.0	CARBONDALE	SS BELOW NO. 7	SANDSTONE/SHALE	16.0	680.0	
-250.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	704.0	
-261.0	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	25.0	715.0	
-308.0	CARBONDALE	HERRIN	COAL	6.0	762.0	
-329.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	5.0	783.0	
-346.0	CARBONDALE	BRIAR HILL	COAL	-	800.0	
-350.0	CARBONDALE	CANTON	CALCAREOUS SANDSTONE	8.0	804.0	
-376.0	CARBONDALE	SPRINGFIELD	COAL	5.0	830.0	BLACK SHALE & LIMESTONE ROOF
-450.0	CARBONDALE	HOUCHIN CREEK	COAL	-	904.0	

MAPID: 05500116000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 16 **QUARTERS/FOOTAGES:** 0' S line, 2640' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.771055 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.995028 **DATE COLLECTED:** 0 / 0 / 1907

SURFACE ELEVATION (FT.): 478.3 **LOGGED (FT.):** 704.0 **LOG TYPE:**

SOURCE: BG MUDDYCS **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-220.7	CARBONDALE	HERRIN	COAL	4.8	699.0	

MAPID: 05500116000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 16 **QUARTERS/FOOTAGES:** 0' S line, 2640' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.771055 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.995028 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 478.0 **LOGGED (FT.):** 705.0 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-125.2	MODESTO	PIASA	LIMESTONE	4.0	603.2	
-129.2	MODESTO		GRAY SHALE	6.3	607.2	
-135.5	CARBONDALE	DANVILLE	COAL	2.0	613.5	
-137.5	CARBONDALE		SHALE & SANDSTONE	20.7	615.5	
-158.2	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	11.0	636.2	
-169.2	CARBONDALE	LAWSON	GRAY SHALE	8.8	647.2	
-177.9	CARBONDALE	LAWSON	COAL	0.3	655.9	
-178.2	CARBONDALE	LAWSON	SANDSTONE	4.0	656.2	
-182.2	CARBONDALE	LAWSON	SHALE & SANDSTONE	14.0	660.2	
-196.2	CARBONDALE	LAWSON	SILTY SHALE	6.5	674.2	
-202.7	CARBONDALE	JAMESTOWN	COAL	0.2	680.7	
-202.8	CARBONDALE		BLACK SHALE	0.7	680.8	
-203.5	CARBONDALE	BRERETON	LIMESTONE	2.0	681.5	
-205.5	CARBONDALE	ANNA	BLACK SHALE	2.7	683.5	
-208.2	CARBONDALE	ENERGY	GRAY SHALE	12.1	686.2	
-220.3	CARBONDALE	ENERGY	COAL	0.1	698.3	
-220.3	CARBONDALE	ENERGY	GRAY SHALE	0.7	698.3	
-221.0	CARBONDALE	HERRIN	COAL	6.0	699.0	

MAPID: 05500116000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 16 **QUARTERS/FOOTAGES:** 0' S line, 2640' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.771055 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.995028 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 478.3 **LOGGED (FT.):** 704.8 **LOG TYPE:** Drillers Log

SOURCE: WOOD 3 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
478.3	PLEISTOCENE		CLAY	21.0	0.0	
457.3	BOND		SANDSTONE	47.0	21.0	
410.3	BOND		SANDSTONE	2.0	68.0	
408.3	BOND		SANDSTONE	55.0	70.0	
353.3	BOND		SHALE	38.0	125.0	
315.3	BOND	CARTHAGE	LIMESTONE	2.0	163.0	
313.3	BOND	CARTHAGE	LIMESTONE	6.0	165.0	
307.3	MODESTO		SHALE	5.0	171.0	
302.3	MODESTO		SOFT SHALE	8.0	176.0	
294.3	MODESTO		SHALE WITH LIMESTONE	10.0	184.0	WITH LIMESTONE SPOTS
284.3	MODESTO		SHALE	19.0	194.0	
265.3	MODESTO		SHALE	42.0	213.0	
223.3	MODESTO		SHALE	29.0	255.0	
194.3	MODESTO		SHALE	10.0	284.0	WITH HARD BANDS
184.3	MODESTO		SHALY LIMESTONE	1.5	294.0	WITH SHALE
182.8	MODESTO		SHALE	0.5	295.5	DARK BLUE
182.3	MODESTO		SHALE	1.5	296.0	
180.8	MODESTO		LIMESTONE	1.0	297.5	
179.8	MODESTO		SHALE	5.5	298.5	
174.3	MODESTO		LIMESTONE	0.5	304.0	
173.8	MODESTO		SHALE	27.5	304.5	
146.3	MODESTO		SANDY SHALE	25.0	332.0	WITH SANDSTONE PARTINGS
121.3	MODESTO		SANDSTONE	25.0	357.0	
96.3	MODESTO		SANDSTONE	23.0	382.0	
73.3	MODESTO		SHALE	5.0	405.0	DARK BLUE
68.3	MODESTO		SHALE	5.0	410.0	WITH HARD SPOTS
63.3	MODESTO		SHALE	1.5	415.0	
61.8	MODESTO		SHALY LIMESTONE	1.5	416.5	WITH SHALE
60.3	MODESTO		SHALE	16.0	418.0	
44.3	MODESTO	CHAPEL	COAL	1.0	434.0	
43.3	MODESTO		SHALE	5.0	435.0	WITH HARD BANDS
38.3	MODESTO		SHALE	20.0	440.0	
18.3	MODESTO		SANDY SHALE	11.0	460.0	
7.3	MODESTO		SANDSTONE	31.0	471.0	
-23.7	MODESTO		SHALE	7.0	502.0	
-30.7	MODESTO		SANDY SHALE	21.0	509.0	WITH SANDSTONE PARTINGS
-51.7	MODESTO		SHALE	12.0	530.0	DARK GRAY
-63.7	MODESTO		SHALE	12.0	542.0	
-75.7	MODESTO		SHALE	4.0	554.0	

-79.7	MODESTO		COAL	0.1	558.0	
-79.8	MODESTO		SHALE	4.9	558.1	
-84.7	MODESTO		SHALE	6.0	563.0	DARK GRAY
-90.7	MODESTO		SHALE	5.0	569.0	DARK GRAY
-95.7	MODESTO		SHALE	4.0	574.0	
-99.7	MODESTO		COAL	1.0	578.0	
-100.7	MODESTO		SHALE	2.0	579.0	LIGHT GRAY
-102.7	MODESTO		SANDY SHALE	6.0	581.0	
-108.7	MODESTO		SHALE	8.0	587.0	
-116.7	MODESTO		SHALE	5.7	595.0	WITH BROWN BANDS; DARK BLUE
-122.4	MODESTO	DEGRAFF	COAL	0.6	600.7	
-123.0	MODESTO		SOFT SHALE	1.8	601.3	
-124.7	MODESTO	PIASA	LIMESTONE	4.0	603.0	
-128.7	MODESTO		SHALE	1.0	607.0	DARK BLUE
-129.7	MODESTO		SHALE	2.0	608.0	
-131.7	MODESTO		SHALE	3.3	610.0	DARK BLUE
-135.0	CARBONDALE	DANVILLE	COAL	2.0	613.3	
-137.0	CARBONDALE		SANDY SHALE	13.7	615.3	
-150.7	CARBONDALE		SANDSTONE	4.0	629.0	WITH SHALE PARTINGS
-154.7	CARBONDALE		SHALE	2.0	633.0	WITH BROWN BANDS
-156.7	CARBONDALE		SHALE	1.0	635.0	
-157.7	CARBONDALE	BANKSTON FORK	LIMESTONE	11.0	636.0	
-168.7	CARBONDALE		SHALE	6.0	647.0	
-174.7	CARBONDALE		SHALE	2.8	653.0	DARK BLUE
-177.5	CARBONDALE		COAL	0.3	655.8	
-177.7	CARBONDALE		SANDSTONE	4.0	656.0	LIGHT
-181.7	CARBONDALE		SANDSTONE	14.0	660.0	WITH SHALE
-195.7	CARBONDALE		SANDY SHALE	6.5	674.0	WITH LIGHT SAND PARTINGS
-202.2	CARBONDALE	JAMESTOWN	COAL	0.2	680.5	
-202.4	CARBONDALE		SHALE	0.7	680.7	
-203.0	CARBONDALE	BRERETON	LIMESTONE	2.0	681.3	
-205.0	CARBONDALE	ENERGY	SHALE	2.7	683.3	
-207.7	CARBONDALE	ENERGY	SHALE	12.1	686.0	
-219.8	CARBONDALE	HERRIN	COAL	0.1	698.1	
-219.9	CARBONDALE	HERRIN	SHALE	0.7	698.2	
-220.5	CARBONDALE	HERRIN	COAL	4.8	698.8	
-225.4	CARBONDALE		CLAYSTONE	1.1	703.7	

MAPID: 05501241000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 16 **QUARTERS/FOOTAGES:** 660' S line, 660' W line
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.777895 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.99684 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 485.0 **LOGGED (FT.):** 3148.0 **LOG TYPE:** Electric Log
SOURCE: TAYLOR, BEN J., ETAL **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-208.0	CARBONDALE	HERRIN	COAL	4.0	693.0	
-241.0	CARBONDALE	BRIAR HILL	COAL	-	726.0	
-269.0	CARBONDALE	SPRINGFIELD	COAL	5.0	754.0	BLACK SHALE & LIMESTONE ROOF
-350.0	CARBONDALE	HOUCHIN CREEK	COAL	-	835.0	

MAPID: 05500117000C **VERSION:** 1 **PROJECT:** BLM

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 17 **QUARTERS/FOOTAGES:** 400' N line, 1' E line of SE
QUADRANGLE: EWING **LONGITUDE:** -88.780031 **GEOLOGIST:** BARGH,M
CONFIDENTIAL: N **LATITUDE:** 38.001299 **DATE COLLECTED:** 0 / 0 / 1909
SURFACE ELEVATION (FT.): 443.0 **LOGGED (FT.):** 661.5 **LOG TYPE:** Survey Core Study
SOURCE: HART-WILLIAMS C **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
443.0			UNCONSOLIDATED	9.5	0.0	
433.5			ROCK	260.5	9.5	
173.0			COAL	1.5	270.0	
171.5			ROCK	108.5	271.5	
63.0			COAL WITH SHALE	1.5	380.0	COAL AND SHALE MIXED
61.5			ROCK	17.5	381.5	
44.0			COAL	0.3	399.0	
43.7			ROCK	124.2	399.3	
-80.5			COAL	0.5	523.5	
-81.0			ROCK	30.0	524.0	
-111.0			COAL	2.0	554.0	
-113.0			ROCK	13.0	556.0	
-126.0			COAL	2.0	569.0	
-128.0			ROCK	54.0	571.0	
-182.0			SANDSTONE	14.8	625.0	
-196.8			LIMESTONE	0.5	639.8	
-197.3			COAL	0.8	640.3	
-198.0			SHALE	8.5	641.0	SANDY
-206.5			LIMESTONE	6.5	649.5	
-213.0	CARBONDALE	HERRIN	COAL	5.3	656.0	

MAPID: 05500117000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 17 **QUARTERS/FOOTAGES:** 400' N line, 1' E line of SE

QUADRANGLE: EWING **LONGITUDE:** -88.780031 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.001299 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 442.0 **LOGGED (FT.):** 661.3 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-112.5	MODESTO	PIASA	LIMESTONE	3.5	554.5	
-116.0	MODESTO		DARK GRAY SHALE	9.0	558.0	
-125.0	CARBONDALE	DANVILLE	COAL	2.0	567.0	
-127.0	CARBONDALE		ROCK	10.0	569.0	
-137.0	CARBONDALE	ALLENBY	BLACK SHALE	0.5	579.0	
-137.5	CARBONDALE		CLAYSTONE	0.5	579.5	
-138.0	CARBONDALE	BANKSTON FORK	SANDSTONE	5.0	580.0	
-143.0	CARBONDALE	LAWSON	SILTY SHALE	2.0	585.0	
-145.0	CARBONDALE	LAWSON	SANDSTONE	3.0	587.0	
-148.0	CARBONDALE	LAWSON	SILTY SHALE	15.0	590.0	
-163.0	CARBONDALE	LAWSON	SANDSTONE	20.0	605.0	
-183.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	14.8	625.0	
-197.8	CARBONDALE	CONANT	LIMESTONE	0.5	639.8	
-198.3	CARBONDALE	JAMESTOWN	COAL	0.8	640.3	
-199.0	CARBONDALE		DARK GRAY SHALE	8.5	641.0	
-207.5	CARBONDALE	BRERETON	LIMESTONE	6.5	649.5	
-214.0	CARBONDALE	HERRIN	COAL	5.3	656.0	

MAPID: 05500117000C **VERSION:** 3 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 17 **QUARTERS/FOOTAGES:** 400' N line, 1' E line of SE

QUADRANGLE: EWING **LONGITUDE:** -88.780031 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 38.001299 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 442.5 **LOGGED (FT.):** 662.0 **LOG TYPE:**

SOURCE: HART WMS 0001 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-213.5	CARBONDALE	HERRIN	COAL	5.5	656.0	

MAPID: 05500117000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 17 **QUARTERS/FOOTAGES:** 400' N line, 1' E line of SE

QUADRANGLE: EWING **LONGITUDE:** -88.780031 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 38.001299 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 442.5 **LOGGED (FT.):** 661.3 **LOG TYPE:** Drillers Log

SOURCE: HART-WILLIAMS 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
442.5	PLEISTOCENE		SANDY CLAY	9.5	0.0	
433.0	BOND		SANDSTONE	42.5	9.5	YELLOW
390.5	BOND		SANDSTONE	20.0	52.0	LIGHT
370.5	BOND		SANDY SHALE	12.0	72.0	WITH HARD SAND PARTINGS
358.5	BOND		SANDSTONE	3.0	84.0	
355.5	BOND		SANDY SHALE	24.0	87.0	WITH HARD SAND PARTINGS
331.5	BOND		SANDY SHALE	10.0	111.0	
321.5	BOND		LIMESTONE	7.5	121.0	
314.0	BOND		BLACK SHALE	1.0	128.5	
313.0	BOND		BLACK SHALE	2.5	129.5	
310.5	BOND		CLAYSTONE	2.0	132.0	
308.5	BOND		SANDY SHALE	10.0	134.0	
298.5	BOND	CARTHAGE	SANDY LIMESTONE	15.0	144.0	
283.5	MODESTO		SHALE	71.0	159.0	
212.5	MODESTO		SHALE	21.0	230.0	
191.5	MODESTO		SANDY SHALE	2.0	251.0	
189.5	MODESTO		BLACK SHALE	2.0	253.0	
187.5	MODESTO		LIMESTONE	2.0	255.0	GREEN
185.5	MODESTO		CLAYSTONE	5.0	257.0	DARK
180.5	MODESTO		CLAYSTONE	4.0	262.0	LIGHT
176.5	MODESTO		SHALE	4.0	266.0	
172.5	MODESTO		COAL	1.5	270.0	
171.0	MODESTO		CLAYSTONE	1.5	271.5	
169.5	MODESTO		SANDY SHALE	5.0	273.0	
164.5	MODESTO		SANDSTONE	76.0	278.0	WITH DARK SHALE PARTINGS
88.5	MODESTO		SANDY SHALE	6.0	354.0	
82.5	MODESTO		SHALE WITH LIMESTONE	14.0	360.0	WITH LIMESTONE PARTINGS
68.5	MODESTO		SANDY SHALE	4.0	374.0	
64.5	MODESTO		BLACK SHALE	2.0	378.0	
62.5	MODESTO	CHAPEL	COAL W/ BLACK SHALE	1.5	380.0	
61.0	MODESTO		SANDY SHALE	8.0	381.5	
53.0	MODESTO		SHALE	9.5	389.5	
43.5	MODESTO		COAL	0.3	399.0	
43.2	MODESTO		CLAYSTONE	0.8	399.3	LIGHT
42.5	MODESTO		SANDY SHALE	22.0	400.0	
20.5	MODESTO		SANDSTONE	13.0	422.0	
7.5	MODESTO		SANDSTONE	15.0	435.0	
-7.5	MODESTO		SANDY SHALE	16.0	450.0	
-23.5	MODESTO		SANDY SHALE	15.0	466.0	WITH HARD SAND PARTINGS

-38.5	MODESTO		SANDY SHALE	7.0	481.0	
-45.5	MODESTO		SHALE	8.0	488.0	
-53.5	MODESTO		BLACK SHALE	2.0	496.0	
-55.5	MODESTO		BLACK SHALE	2.0	498.0	
-57.5	MODESTO		SANDY LIMESTONE	13.0	500.0	
-70.5	MODESTO		BLACK SHALE	10.5	513.0	
-81.0	MODESTO		COAL	0.5	523.5	
-81.5	MODESTO		CLAYSTONE	2.5	524.0	
-84.0	MODESTO		SANDSTONE	3.0	526.5	
-87.0	MODESTO		SANDY LIMESTONE	5.5	529.5	
-92.5	MODESTO		SANDY SHALE	11.0	535.0	
-103.5	MODESTO		SANDY SHALE	5.0	546.0	WITH LIMESTONE PARTINGS
-108.5	MODESTO		BLACK SHALE	3.0	551.0	WITH BROWN PARTINGS
-111.5	MODESTO	DEGRAFF	COAL	2.0	554.0	
-113.5	MODESTO		CLAYSTONE	0.5	556.0	
-114.0	MODESTO	PIASA	LIMESTONE	3.5	556.5	
-117.5	MODESTO		SHALE	2.0	560.0	
-119.5	MODESTO		BLACK SHALE	2.0	562.0	
-121.5	MODESTO		SANDY SHALE	3.0	564.0	
-124.5	MODESTO		BLACK SHALE	2.0	567.0	
-126.5	CARBONDALE	DANVILLE	COAL	2.0	569.0	
-128.5	CARBONDALE	BANKSTON FORK	SANDY LIMESTONE	7.0	571.0	
-135.5	CARBONDALE		SANDY SHALE	3.0	578.0	
-138.5	CARBONDALE		BLACK SHALE	0.5	581.0	
-139.0	CARBONDALE		CLAYSTONE	0.5	581.5	
-139.5	CARBONDALE		SANDSTONE	3.0	582.0	
-142.5	CARBONDALE		SANDY SHALE	2.0	585.0	WITH LIGHT SAND PARTINGS
-144.5	CARBONDALE		SANDSTONE	3.0	587.0	
-147.5	CARBONDALE		SANDY SHALE	10.0	590.0	
-157.5	CARBONDALE		SANDY SHALE	5.0	600.0	
-162.5	CARBONDALE		SANDSTONE	7.0	605.0	WITH DARK SHALE PARTINGS; LIGHT
-169.5	CARBONDALE		SANDSTONE	11.0	612.0	
-180.5	CARBONDALE		SANDSTONE/LIMESTONE	2.0	623.0	WITH HARD DARK PARTINGS
-182.5	CARBONDALE		SANDSTONE	14.8	625.0	WITH DARK SHALE PARTINGS; LIGHT
-197.3	CARBONDALE	CONANT	FOSSILIFEROUS LIMESTONE	0.5	639.8	
-197.8	CARBONDALE	JAMESTOWN	COAL	0.8	640.3	
-198.5	CARBONDALE		SANDY SHALE	3.0	641.0	WITH LIGHT SAND PARTINGS
-201.5	CARBONDALE		HARD SHALE	5.5	644.0	
-207.0	CARBONDALE	BRERETON	LIMESTONE	6.5	649.5	
-213.5	CARBONDALE	HERRIN	COAL	5.3	656.0	

MAPID: 05501114000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 17 **QUARTERS/FOOTAGES:** 60' N line, 60' E line of SE SE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.780341 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.998543 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 488.0 **LOGGED (FT.):** 2716.0 **LOG TYPE:** Electric Log

SOURCE: TAYLOR & SCHUMACHER **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-119.0	CARBONDALE	DANVILLE	COAL	-	607.0	
-134.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	3.0	622.0	
-145.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	633.0	
-172.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	14.0	660.0	
-222.0	CARBONDALE	HERRIN	COAL	7.0	710.0	
-259.0	CARBONDALE	SPRINGFIELD	COAL	5.0	747.0	BLACK SHALE & LIMESTONE ROOF
-272.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	8.0	760.0	
-340.0	CARBONDALE	HOUCHIN CREEK	COAL	-	828.0	

MAPID: 05500118000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 19 **QUARTERS/FOOTAGES:** 1980' N line, 0' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.816821 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.98928 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 437.6 **LOGGED (FT.):** 671.0 **LOG TYPE:**

SOURCE: BG MUDDYCS0007 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-233.4	CARBONDALE	HERRIN	COAL	9.3	671.0	

MAPID: 05500118000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 19 **QUARTERS/FOOTAGES:** 1980' N line, 0' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.816821 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.98928 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 438.0 **LOGGED (FT.):** 677.0 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-126.2	MODESTO		SHALE	10.0	564.2	
-136.2	CARBONDALE	DANVILLE	COAL	2.0	574.2	
-138.2	CARBONDALE		SILTY SHALE	25.0	576.2	
-163.2	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	601.2	
-168.2	CARBONDALE	LAWSON	SILTY SHALE	43.0	606.2	
-211.2	CARBONDALE	ANNA	DARK GRAY SHALE	1.5	649.2	
-212.7	CARBONDALE	ENERGY	BONE COAL	0.5	650.7	
-213.2	CARBONDALE	ENERGY	GRAY SHALE	9.0	651.2	
-222.2	CARBONDALE	ENERGY	CALCAREOUS SHALE	10.8	660.2	
-233.0	CARBONDALE	HERRIN	COAL	6.0	671.0	

MAPID: 05500118000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 19 **QUARTERS/FOOTAGES:** 1980' N line, 0' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.816821 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.98928 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 437.6 **LOGGED (FT.):** 680.0 **LOG TYPE:** Drillers Log

SOURCE: L.N. WOOD 7 **WELL TYPE:** Coal Test

COMMENT: NO COAL THICKNESS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
437.6	PLEISTOCENE		UNCONSOLIDATED	1.0	0.0	
436.6	PLEISTOCENE		CLAY	19.0	1.0	YELLOW
417.6	PLEISTOCENE		SANDY CLAY	13.0	20.0	YELLOW
404.6	BOND		SANDSTONE	18.0	33.0	YELLOW
386.6	BOND		SANDSTONE	25.0	51.0	
361.6	BOND		SANDSTONE WITH COAL	2.0	76.0	WITH COAL PARTINGS
359.6	BOND		SANDY SHALE	18.0	78.0	
341.6	BOND		SHALE	5.0	96.0	
336.6	BOND		SANDY SHALE	1.0	101.0	
335.6	BOND	CARTHAGE	LIMESTONE	6.5	102.0	
329.1	MODESTO		SHALE	1.5	108.5	
327.6	MODESTO		SHALE	2.0	110.0	
325.6	MODESTO		SANDY SHALE	8.0	112.0	
317.6	MODESTO		SANDSTONE	17.0	120.0	WITH LIMESTONE SPOTS
300.6	MODESTO		SANDY SHALE	35.0	137.0	
265.6	MODESTO		SANDY SHALE	34.0	172.0	
231.6	MODESTO		SANDY SHALE	22.0	206.0	
209.6	MODESTO		SHALE	2.0	228.0	
207.6	MODESTO		LIMESTONE	0.5	230.0	
207.1	MODESTO		SHALE WITH LIMESTONE	7.5	230.5	WITH LIMESTONE SPOTS
199.6	MODESTO		SANDY SHALE	35.0	238.0	
164.6	MODESTO		SANDY SHALE	22.0	273.0	
142.6	MODESTO		SANDSTONE	23.0	295.0	
119.6	MODESTO		SANDY SHALE	8.0	318.0	
111.6	MODESTO		SANDSTONE	19.0	326.0	
92.6	MODESTO		SANDSTONE	2.0	345.0	
90.6	MODESTO		SHALE	13.0	347.0	
77.6	MODESTO		SHALE	2.0	360.0	
75.6	MODESTO		SHALE	11.0	362.0	
64.6	MODESTO		SHALE WITH LIMESTONE	9.0	373.0	WITH LIMESTONE SPOTS
55.6	MODESTO		SANDY SHALE	19.0	382.0	
36.6	MODESTO		SANDY SHALE	19.0	401.0	
17.6	MODESTO		SHALE	17.0	420.0	
0.6	MODESTO		SANDY SHALE	22.0	437.0	
-21.4	MODESTO		SANDY SHALE	16.0	459.0	
-37.4	MODESTO		SHALE	25.0	475.0	
-62.4	MODESTO		SHALE	1.0	500.0	
-63.4	MODESTO		COAL	0.4	501.0	
-63.8	MODESTO		SANDY SHALE	26.6	501.4	

-90.4	MODESTO		SHALE	4.0	528.0	
-94.4	MODESTO		COAL	1.0	532.0	
-95.4	MODESTO		SHALE	14.0	533.0	
-109.4	MODESTO		CALCAREOUS SHALE	2.0	547.0	
-111.4	MODESTO		SANDSTONE	7.0	549.0	
-118.4	MODESTO		SHALE	3.0	556.0	
-121.4	MODESTO		COAL	1.0	559.0	
-122.4	MODESTO		SHALE	13.0	560.0	
-135.4	MODESTO		SANDY SHALE	1.0	573.0	
-136.4	CARBONDALE	DANVILLE	COAL	2.0	574.0	
-138.4	CARBONDALE		SANDY SHALE	18.0	576.0	
-156.4	CARBONDALE		SOFT SHALE	7.0	594.0	
-163.4	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	601.0	
-168.4	CARBONDALE		SANDY SHALE	3.0	606.0	
-171.4	CARBONDALE		SANDY SHALE	14.0	609.0	
-185.4	CARBONDALE		SANDY SHALE	21.0	623.0	
-206.4	CARBONDALE		SANDY SHALE	5.0	644.0	
-211.4	CARBONDALE		SHALE	1.5	649.0	
-212.9	CARBONDALE	JAMESTOWN	BONE COAL	0.5	650.5	
-213.4	CARBONDALE	ENERGY	SHALE	9.0	651.0	
-222.4	CARBONDALE	ENERGY	CALCAREOUS SHALE	10.8	660.0	
-233.2	CARBONDALE	HERRIN	COAL	0.0	670.8	THICKNESS NOT GIVEN FOR COAL

MAPID: 05500625000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 20 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of SE NW

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.792888 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.988541 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 3268.0 **LOG TYPE:** Electric Log

SOURCE: CARTER OIL COMPANY **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	CARBONDALE	DANVILLE	COAL	-	577.0	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	-	600.0	
-	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	7.0	634.0	
-	CARBONDALE	HERRIN	COAL	8.0	677.0	
-	CARBONDALE	BRIAR HILL	COAL	-	710.0	
-	CARBONDALE	SPRINGFIELD	COAL	5.0	720.0	BLACK SHALE & LIMESTONE ROOF
-	CARBONDALE	SS BELOW NO. 5		6.0	732.0	
-	CARBONDALE	HOUCHIN CREEK	COAL	-	794.0	

MAPID: 05501500000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 20 **QUARTERS/FOOTAGES:** 1650' S line, 1650' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.785988 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.984978 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 494.0 **LOGGED (FT.):** 731.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-112.0	MODESTO	PIASA	LIMESTONE	4.0	606.0	
-116.0	MODESTO		SHALE	7.5	610.0	
-123.5	CARBONDALE	DANVILLE	COAL	2.5	617.5	
-126.0	CARBONDALE		SILTY SHALE	25.0	620.0	
-151.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	3.0	645.0	
-154.0	CARBONDALE	LAWSON	SILTY SHALE	40.0	648.0	
-194.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	15.0	688.0	
-209.0	CARBONDALE	CONANT	LIMESTONE & SHALE	0.5	703.0	
-209.5	CARBONDALE	JAMESTOWN	BONE COAL	0.5	703.5	
-210.0	CARBONDALE		CLAYSTONE & SHALE	6.0	704.0	
-216.0	CARBONDALE	BRERETON	LIMESTONE	6.0	710.0	
-222.0	CARBONDALE	ANNA	SHALE	7.0	716.0	
-229.0	CARBONDALE	HERRIN	COAL	8.0	723.0	

MAPID: 05501139000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 21 **QUARTERS/FOOTAGES:** 100' N line, 460' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.77866 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.994742 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 486.0 **LOGGED (FT.):** 3200.0 **LOG TYPE:** Electric Log

SOURCE: TAYLOR & SCHUMACHER **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-121.0	CARBONDALE	DANVILLE	COAL	-	607.0	
-126.0	CARBONDALE	SS BELOW NO. 7	SANDSTONE/SHALE	8.0	612.0	
-154.0	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	24.0	640.0	
-212.0	CARBONDALE	HERRIN	COAL	6.0	698.0	
-238.0	CARBONDALE	BRIAR HILL	COAL	-	724.0	
-239.0	CARBONDALE	CANTON	CALCAREOUS SANDSTONE	5.0	725.0	
-266.0	CARBONDALE	SPRINGFIELD	COAL	4.0	752.0	BLACK SHALE & LIMESTONE ROOF
-280.0	CARBONDALE	SS BELOW NO. 5		16.0	766.0	
-358.0	CARBONDALE	HOUCHIN CREEK	COAL	-	844.0	

MAPID: 05501139000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 21 **QUARTERS/FOOTAGES:** 100' N line, 460' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.77866 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.994742 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 486.0 **LOGGED (FT.):** 704.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-98.0	MODESTO	PIASA	LIMESTONE	4.0	584.0	
-102.0	MODESTO		SHALE	8.0	588.0	
-110.0	CARBONDALE	DANVILLE	COAL	2.0	596.0	
-112.0	CARBONDALE		SHALE & SANDSTONE	30.0	598.0	
-142.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	34.0	628.0	
-176.0	CARBONDALE	LAWSON	SILTY SHALE	20.0	662.0	
-196.0	CARBONDALE		CLAYSTONE	2.0	682.0	
-198.0	CARBONDALE	BRERETON	LIMESTONE	6.0	684.0	
-204.0	CARBONDALE	ANNA	BLACK SHALE	2.0	690.0	
-206.0	CARBONDALE	ENERGY	GRAY SHALE	6.0	692.0	
-212.0	CARBONDALE	HERRIN	COAL	6.0	698.0	

MAPID: 05501223000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 22 **QUARTERS/FOOTAGES:** 1650' S line, 330' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.744242 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.984993 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 468.0 **LOGGED (FT.):** 3230.0 **LOG TYPE:** Electric Log

SOURCE: TARTAN OIL COMPANY **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-272.0	CARBONDALE	HERRIN	COAL	10.0	740.0	
-306.0	CARBONDALE	BRIAR HILL	COAL	-	774.0	
-329.0	CARBONDALE	SPRINGFIELD	COAL	5.0	797.0	BLACK SHALE & LIMESTONE ROOF
-404.0	CARBONDALE	HOUCHIN CREEK	COAL	-	872.0	

MAPID: 05501223000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 22 **QUARTERS/FOOTAGES:** 1650' S line, 330' E line
QUADRANGLE: AKIN **LONGITUDE:** -88.744242 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.984993 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 468.0 **LOGGED (FT.):** 750.0 **LOG TYPE:** Electric Log
SOURCE: **WELL TYPE:** Oil and Gas Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-165.0	MODESTO	PIASA	LIMESTONE & SHALE	4.0	633.0	
-169.0	MODESTO		SHALE	8.0	637.0	
-177.0	CARBONDALE	DANVILLE	COAL	1.0	645.0	
-178.0	CARBONDALE		SHALE & SANDSTONE	27.0	646.0	
-205.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	3.0	673.0	
-208.0	CARBONDALE	LAWSON	SILTY SHALE	25.0	676.0	
-233.0	CARBONDALE	LAWSON	SANDSTONE	13.0	701.0	
-246.0	CARBONDALE	LAWSON	SHALE	7.0	714.0	
-253.0	CARBONDALE	ANNA	BLACK SHALE	2.0	721.0	
-255.0	CARBONDALE	ENERGY	GRAY SHALE	17.0	723.0	
-272.0	CARBONDALE	HERRIN	COAL	10.0	740.0	

MAPID: 05501223000C **VERSION:** 3 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 22 **QUARTERS/FOOTAGES:** 1650' S line, 330' E line
QUADRANGLE: AKIN **LONGITUDE:** -88.744242 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.984993 **DATE COLLECTED:** 4 / 0 / 1956
SURFACE ELEVATION (FT.): 468.0 **LOGGED (FT.):** 1952.0 **LOG TYPE:** Electric Log
SOURCE: TARTAN OIL COMPANY **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-522.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	990.0	
-592.0	SPOON	DAVIS	UNCLASSIFIED	-	1060.0	
-1484.0	BASE OF PENN.		UNCLASSIFIED	-	1952.0	

MAPID: 05500119000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 23 **QUARTERS/FOOTAGES:** 2640' N line, 0' E line
QUADRANGLE: AKIN **LONGITUDE:** -88.724431 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.988099 **DATE COLLECTED:** 0 / 0 / 1909
SURFACE ELEVATION (FT.): 512.0 **LOGGED (FT.):** 860.0 **LOG TYPE:**
SOURCE: BG MUDDYCS **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-341.0	CARBONDALE	HERRIN	COAL	7.0	853.0	

MAPID: 05500119000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 23 **QUARTERS/FOOTAGES:** 2640' N line, 0' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.724431 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.988099 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 512.0 **LOGGED (FT.):** 860.0 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-236.7	MODESTO	PIASA	LIMESTONE	4.0	748.7	
-240.7	MODESTO		SHALE	12.0	752.7	
-252.7	CARBONDALE	DANVILLE	COAL	2.0	764.7	
-254.7	CARBONDALE		SHALE & SANDSTONE	13.3	766.7	
-268.0	CARBONDALE	ALLENBY	COAL	0.2	780.0	
-268.2	CARBONDALE	BANKSTON FORK	LIMESTONE AND SANDSTONE	10.0	780.2	
-278.2	CARBONDALE	LAWSON	SANDSTONE	5.0	790.2	
-283.2	CARBONDALE	LAWSON	SHALE & SANDSTONE	36.0	795.2	
-319.2	CARBONDALE	LAWSON	SANDSTONE	8.0	831.2	
-327.2	CARBONDALE	LAWSON	DARK GRAY SHALE	3.0	839.2	
-330.2	CARBONDALE	JAMESTOWN	COAL	0.3	842.2	
-330.5	CARBONDALE		DARK GRAY SHALE	3.7	842.5	
-334.2	CARBONDALE	BRERETON	LIMESTONE	4.0	846.2	
-338.2	CARBONDALE	ANNA	BLACK SHALE	2.8	850.2	
-341.0	CARBONDALE	HERRIN	COAL	7.0	853.0	

MAPID: 05500119000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 23 **QUARTERS/FOOTAGES:** 2640' N line, 0' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.724431 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.988099 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 512.0 **LOGGED (FT.):** 860.3 **LOG TYPE:** Drillers Log

SOURCE: L.N. WOOD 9 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
512.0	PLEISTOCENE		UNCONSOLIDATED	10.0	0.0	
502.0	BOND		SHALE	5.0	10.0	
497.0	BOND		SHALE	29.0	15.0	
468.0	BOND		SANDY SHALE	36.0	44.0	
432.0	BOND		SHALE	21.0	80.0	
411.0	BOND		COAL	0.6	101.0	
410.4	BOND		SHALE	0.4	101.6	
410.0	BOND		SANDSTONE	11.0	102.0	
399.0	BOND		SHALE	20.0	113.0	
379.0	BOND		SANDY SHALE	7.0	133.0	
372.0	BOND		SANDSTONE	15.0	140.0	
357.0	BOND		SANDSTONE	19.0	155.0	
338.0	BOND		SANDSTONE	14.0	174.0	
324.0	BOND		SANDSTONE	10.0	188.0	
314.0	BOND		SANDSTONE	32.0	198.0	
282.0	BOND		CONCRETION	3.0	230.0	
279.0	BOND		SANDY SHALE	9.0	233.0	
270.0	BOND		SANDSTONE	20.0	242.0	
250.0	BOND		SANDY SHALE	9.0	262.0	
241.0	BOND		SANDY SHALE	12.0	271.0	
229.0	BOND	CARTHAGE	LIMESTONE	5.0	283.0	
224.0	BOND	CARTHAGE	LIMESTONE	2.0	288.0	
222.0	MODESTO		SHALE	3.0	290.0	
219.0	MODESTO		SANDY SHALE	8.0	293.0	
211.0	MODESTO		SANDY SHALE	23.0	301.0	
188.0	MODESTO		SANDY SHALE	25.0	324.0	
163.0	MODESTO		SANDY SHALE	8.0	349.0	
155.0	MODESTO		SANDY SHALE	19.0	357.0	
136.0	MODESTO		SANDY SHALE	22.0	376.0	
114.0	MODESTO		SANDY SHALE	10.0	398.0	
104.0	MODESTO		SHALE	2.0	408.0	
102.0	MODESTO		SANDY SHALE	16.5	410.0	
85.5	MODESTO		COAL	0.5	426.5	
85.0	MODESTO		SANDY SHALE	20.0	427.0	
65.0	MODESTO		SANDY SHALE	13.0	447.0	
52.0	MODESTO		SANDSTONE	80.0	460.0	
-28.0	MODESTO		SANDY SHALE	17.0	540.0	
-45.0	MODESTO		SHALY SANDSTONE	22.0	557.0	
-67.0	MODESTO		SANDY SHALE	22.0	579.0	

-89.0	MODESTO		SANDSTONE	12.0	601.0	WITH SHALE PARTINGS
-101.0	MODESTO		SANDY SHALE	15.0	613.0	
-116.0	MODESTO		SANDY SHALE	14.0	628.0	
-130.0	MODESTO		SHALE	20.0	642.0	
-150.0	MODESTO		SANDY SHALE	11.0	662.0	
-161.0	MODESTO		SHALE	4.0	673.0	
-165.0	MODESTO		SHALE	6.0	677.0	
-171.0	MODESTO		SHALE W/ COAL STREAKS	1.0	683.0	WITH COAL PARTINGS
-172.0	MODESTO		SHALE	4.0	684.0	
-176.0	MODESTO		SANDSTONE	19.0	688.0	
-195.0	MODESTO		SHALE	6.0	707.0	
-201.0	MODESTO		COAL	1.0	713.0	
-202.0	MODESTO		COAL	1.0	714.0	
-203.0	MODESTO		CLAYSTONE	5.0	715.0	
-208.0	MODESTO		SANDY SHALE	8.0	720.0	
-216.0	MODESTO		SANDY SHALE	10.0	728.0	
-226.0	MODESTO		SHALE	2.0	738.0	WITH BROWN SPOTS
-228.0	MODESTO		SHALE	1.0	740.0	
-229.0	MODESTO	DEGRAFF	COAL	2.0	741.0	
-231.0	MODESTO		SHALE	1.0	743.0	
-232.0	MODESTO	PIASA	LIMESTONE	4.0	744.0	
-236.0	MODESTO		SHALE	6.0	748.0	
-242.0	MODESTO		SHALE	6.0	754.0	
-248.0	CARBONDALE	DANVILLE	COAL	2.0	760.0	
-250.0	CARBONDALE		SHALE	2.0	762.0	
-252.0	CARBONDALE		SHALE	3.0	764.0	
-255.0	CARBONDALE		SHALE	3.0	767.0	
-258.0	CARBONDALE		SANDSTONE	4.0	770.0	
-262.0	CARBONDALE		SHALE	1.3	774.0	
-263.3	CARBONDALE	ALLENBY	COAL	0.2	775.3	
-263.5	CARBONDALE	BANKSTON FORK	SANDY LIMESTONE	9.5	775.5	
-273.0	CARBONDALE		SANDSTONE	5.0	785.0	
-278.0	CARBONDALE		SANDY SHALE	5.0	790.0	
-283.0	CARBONDALE		SHALE	5.0	795.0	
-288.0	CARBONDALE		CALCAREOUS SHALE	4.0	800.0	
-292.0	CARBONDALE		SANDY SHALE	9.0	804.0	
-301.0	CARBONDALE		SHALE	4.0	813.0	
-305.0	CARBONDALE		SANDSTONE	5.0	817.0	
-310.0	CARBONDALE		SANDY SHALE	9.0	822.0	
-319.0	CARBONDALE		SANDSTONE	7.0	831.0	
-326.0	CARBONDALE		SANDSTONE WITH COAL	1.0	838.0	WITH COAL PARTINGS
-327.0	CARBONDALE		SHALE	3.0	839.0	
-330.0	CARBONDALE	JAMESTOWN	COAL	0.3	842.0	
-330.3	CARBONDALE		SHALE	3.7	842.3	
-334.0	CARBONDALE	BRERETON	LIMESTONE	4.0	846.0	
-338.0	CARBONDALE	ANNA	BLACK SHALE	2.8	850.0	
-340.8	CARBONDALE	HERRIN	COAL	7.0	852.8	

-347.8	CARBONDALE	SHALE	0.4	859.8

MAPID: 05500916000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 23 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of NE NW

QUADRANGLE: AKIN **LONGITUDE:** -88.734852 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.992539 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 462.0 **LOGGED (FT.):** 2860.0 **LOG TYPE:** Electric Log

SOURCE: STEWART OIL CO. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-220.0	CARBONDALE	DANVILLE	COAL	-	682.0	
-244.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	706.0	
-268.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	13.0	730.0	
-306.0	CARBONDALE	HERRIN	COAL	6.0	768.0	
-314.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	12.0	776.0	
-348.0	CARBONDALE	BRIAR HILL	COAL	-	810.0	
-373.0	CARBONDALE	SPRINGFIELD	COAL	4.0	835.0	BLACK SHALE ROOF
-444.0	CARBONDALE	HOUCHIN CREEK	COAL	-	906.0	

MAPID: 05500673000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 24 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of SW

QUADRANGLE: AKIN **LONGITUDE:** -88.723349 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.981742 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 488.0 **LOGGED (FT.):** 3213.0 **LOG TYPE:** Electric Log

SOURCE: SEABOARD OIL OF DE **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-217.0	CARBONDALE	DANVILLE	COAL	-	705.0	
-222.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	5.0	710.0	
-245.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	733.0	
-258.0	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	28.0	746.0	
-312.0	CARBONDALE	HERRIN	COAL	8.0	800.0	
-350.0	CARBONDALE	BRIAR HILL	COAL	-	838.0	
-386.0	CARBONDALE	SPRINGFIELD	COAL	6.0	874.0	SHALE & SILTSTONE ROOF
-421.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	2.0	909.0	
-449.0	CARBONDALE	HOUCHIN CREEK	COAL	-	937.0	

MAPID: 05501281000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 24 **QUARTERS/FOOTAGES:** 1650' S line, 1650' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.712078 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.985049 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 510.0 **LOGGED (FT.):** 880.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-238.0	MODESTO	PIASA	LIMESTONE	4.0	748.0	
-242.0	MODESTO		SHALE	10.5	752.0	
-252.5	CARBONDALE	DANVILLE	COAL	2.5	762.5	
-255.0	CARBONDALE		SILTY SHALE	20.0	765.0	
-275.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	785.0	
-279.0	CARBONDALE	LAWSON	SILTY SHALE	35.5	789.0	
-314.5	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	24.0	824.5	
-338.5	CARBONDALE	LAWSON	DARK GRAY SHALE	4.0	848.5	
-342.5	CARBONDALE	JAMESTOWN	BONE COAL	0.5	852.5	
-343.0	CARBONDALE		DARK GRAY SHALE	6.0	853.0	
-349.0	CARBONDALE	BRERETON	LIMESTONE	7.0	859.0	
-356.0	CARBONDALE	ANNA	BLACK SHALE	4.0	866.0	
-360.0	CARBONDALE	HERRIN	COAL	10.0	870.0	

MAPID: 05501140000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 25 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of NW NW

QUADRANGLE: AKIN **LONGITUDE:** -88.721161 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.977964 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 480.0 **LOGGED (FT.):** 3301.0 **LOG TYPE:** Electric Log

SOURCE: DORAN PAUL EST **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-198.0	CARBONDALE	DANVILLE	COAL	-	678.0	
-202.0	CARBONDALE	SS BELOW NO. 7	SANDSTONE/SHALE	10.0	682.0	
-226.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	706.0	
-239.0	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	31.0	719.0	
-312.0	CARBONDALE	HERRIN	COAL	10.0	792.0	
-323.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	4.0	803.0	
-334.0	CARBONDALE	BRIAR HILL	COAL	-	814.0	
-357.0	CARBONDALE	SPRINGFIELD	COAL	6.0	837.0	BLACK SHALE ROOF
-397.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	20.0	877.0	
-420.0	CARBONDALE	HOUCHIN CREEK	COAL	-	900.0	

MAPID: 05501219000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 25 **QUARTERS/FOOTAGES:** 990' S line, 990' W line

QUADRANGLE: AKIN **LONGITUDE:** -88.721272 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.968658 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 461.0 **LOGGED (FT.):** 741.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-175.0	MODESTO	PIASA	LIMESTONE	5.0	636.0	
-180.0	MODESTO		SHALE	12.0	641.0	
-192.0	CARBONDALE	DANVILLE	COAL	1.0	653.0	
-193.0	CARBONDALE		SILTY SHALE	23.0	654.0	
-216.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	7.0	677.0	
-223.0	CARBONDALE	LAWSON	SILTY SHALE	33.0	684.0	
-256.0	CARBONDALE	BRERETON	LIMESTONE	3.0	717.0	
-259.0	CARBONDALE	ENERGY	GRAY SHALE	15.0	720.0	
-274.0	CARBONDALE	HERRIN	COAL	6.0	735.0	

MAPID: 05501058000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 26 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NW

QUADRANGLE: AKIN **LONGITUDE:** -88.742059 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.974015 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 461.0 **LOGGED (FT.):** 3313.0 **LOG TYPE:** Electric Log

SOURCE: STEWART OIL CO. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-175.0	CARBONDALE	DANVILLE	COAL	-	636.0	
-184.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	10.0	645.0	
-201.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	662.0	
-227.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	29.0	688.0	
-285.0	CARBONDALE	HERRIN	COAL	8.0	746.0	
-296.0	CARBONDALE	VERMILIONVILLE		8.0	757.0	
-336.0	CARBONDALE	SPRINGFIELD	COAL	4.0	797.0	BLACK SHALE ROOF
-346.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	8.0	807.0	
-409.0	CARBONDALE	HOUCHIN CREEK	COAL	-	870.0	

MAPID: 05501348000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 26 **QUARTERS/FOOTAGES:** 330' S line, 990' W line

QUADRANGLE: AKIN **LONGITUDE:** -88.739842 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.966676 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 468.0 **LOGGED (FT.):** 720.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-151.0	MODESTO	PIASA	LIMESTONE	6.0	619.0	
-157.0	MODESTO		SHALE	9.0	625.0	
-166.0	CARBONDALE	DANVILLE	COAL	2.0	634.0	
-168.0	CARBONDALE		SHALE	19.0	636.0	
-187.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	5.0	655.0	
-192.0	CARBONDALE	LAWSON	SILTY SHALE	18.0	660.0	
-210.0	CARBONDALE	LAWSON	SANDSTONE	27.0	678.0	
-237.0	CARBONDALE	BRERETON	LIMESTONE	7.0	705.0	
-244.0	CARBONDALE	ANNA	BLACK SHALE	2.0	712.0	
-246.0	CARBONDALE	HERRIN	COAL	6.0	714.0	

MAPID: 05501413000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 26 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of SE SW

QUADRANGLE: AKIN **LONGITUDE:** -88.737485 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.968579 **DATE COLLECTED:** 9 / 0 / 1958

SURFACE ELEVATION (FT.): 468.0 **LOGGED (FT.):** 1985.0 **LOG TYPE:** Electric Log

SOURCE: BREHM, C. E. DRLG.&PROD. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-508.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	976.0	
-567.0	SPOON	DAVIS	UNCLASSIFIED	-	1035.0	
-1517.0	BASE OF PENN.		UNCLASSIFIED	-	1985.0	

MAPID: 05500120000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 27 **QUARTERS/FOOTAGES:** 2310' S line, 330' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.744381 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.972087 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 470.0 **LOGGED (FT.):** 741.0 **LOG TYPE:**

SOURCE: BG MUDDYCS **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-261.0	CARBONDALE	HERRIN	COAL	8.6	731.0	

MAPID: 05500120000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 27 **QUARTERS/FOOTAGES:** 2310' S line, 330' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.744381 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.972087 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 451.0 **LOGGED (FT.):** 739.6 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-166.7	MODESTO	PIASA	LIMESTONE	4.0	617.7	
-170.7	MODESTO		CALCAREOUS SHALE	7.5	621.7	
-178.2	CARBONDALE	DANVILLE	COAL	2.0	629.2	
-180.3	CARBONDALE		SHALE & SANDSTONE	18.5	631.3	
-198.7	CARBONDALE	ALLENBY	COAL	0.2	649.7	
-198.9	CARBONDALE		CLAYSTONE & SHALE	5.1	649.9	
-204.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	655.0	
-208.0	CARBONDALE	LAWSON	SILTY SHALE	40.0	659.0	
-248.0	CARBONDALE	JAMESTOWN	COAL	0.3	699.0	
-248.3	CARBONDALE		DARK GRAY SHALE	1.8	699.3	
-250.0	CARBONDALE	BRERETON	LIMESTONE	4.0	701.0	
-254.0	CARBONDALE	ENERGY	DARK GRAY SHALE	26.0	705.0	
-280.0	CARBONDALE	HERRIN	COAL	8.6	731.0	

MAPID: 05500120000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 27 **QUARTERS/FOOTAGES:** 2310' S line, 330' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.744381 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.972087 **DATE COLLECTED:** 11 / 3 / 1909

SURFACE ELEVATION (FT.): 450.8 **LOGGED (FT.):** 740.5 **LOG TYPE:** Drillers Log

SOURCE: L.N. WOOD 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
450.8	PLEISTOCENE		CLAY	11.0	0.0	GRAY
439.8	BOND		SANDSTONE	14.0	11.0	
425.8	BOND		SANDSTONE	24.0	25.0	
401.8	BOND		SOFT SHALE	2.0	49.0	
399.8	BOND		SANDSTONE	34.0	51.0	
365.8	BOND		SHALE	7.0	85.0	
358.8	BOND		LIMESTONE & SHALE	0.9	92.0	
357.9	BOND		COAL	0.1	92.9	
357.8	BOND		LIMESTONE	1.0	93.0	
356.8	BOND		SOFT SHALE	10.0	94.0	
346.8	BOND		SHALE	45.5	104.0	
301.3	BOND		SHALE	1.5	149.5	DARK GRAY
299.8	BOND	CARTHAGE	LIMESTONE	8.5	151.0	
291.3	MODESTO		SHALE	1.5	159.5	
289.8	MODESTO		SHALE	2.0	161.0	
287.8	MODESTO		SOFT SHALE	8.0	163.0	
279.8	MODESTO		SANDY SHALE	15.0	171.0	
264.8	MODESTO		SHALE	82.0	186.0	
182.8	MODESTO		SHALE	2.0	268.0	WITH BROWN BANDS; DARK GRAY
180.8	MODESTO		SHALE	8.0	270.0	WITH HARD BANDS
172.8	MODESTO		LIMESTONE	1.0	278.0	
171.8	MODESTO		SOFT SHALE	7.0	279.0	
164.8	MODESTO		SHALE	11.0	286.0	
153.8	MODESTO		COAL	1.8	297.0	
152.0	MODESTO		SOFT SHALE	1.3	298.8	
150.8	MODESTO		SANDY SHALE	7.0	300.0	
143.8	MODESTO		SANDY SHALE	19.0	307.0	WITH SANDSTONE PARTINGS
124.8	MODESTO		SANDSTONE	97.0	326.0	
27.8	MODESTO		SANDSTONE	47.0	423.0	WITH SHALE PARTINGS
-19.2	MODESTO		SANDSTONE	8.0	470.0	
-27.2	MODESTO		SANDSTONE	50.0	478.0	WITH SHALE PARTINGS
-77.2	MODESTO		SANDSTONE	2.5	528.0	
-79.7	MODESTO		SANDSTONE	1.0	530.5	
-80.7	MODESTO		SHALE	12.5	531.5	DARK BLUE
-93.2	MODESTO		SHALE	10.0	544.0	WITH BROWN SPOTS; DARK BLUE
-103.2	MODESTO		COAL	0.3	554.0	
-103.5	MODESTO		SANDY SHALE	11.8	554.3	WITH LIMESTONE
-115.2	MODESTO		SANDY SHALE	1.0	566.0	

-116.2	MODESTO		SHALE	7.0	567.0	
-123.2	MODESTO		SHALE	6.0	574.0	
-129.2	MODESTO		COAL	1.0	580.0	
-130.2	MODESTO		SOFT SHALE	6.0	581.0	
-136.2	MODESTO		SANDSTONE	5.0	587.0	
-141.2	MODESTO		SHALE WITH LIMESTONE	10.0	592.0	WITH LIMESTONE SPOTS
-151.2	MODESTO		SANDY SHALE	7.0	602.0	
-158.2	MODESTO		SHALE	6.0	609.0	WITH BROWN BANDS; DARK BLUE
-164.2	MODESTO	DEGRAFF	COAL	0.3	615.0	
-164.5	MODESTO		SHALE	1.8	615.3	
-166.2	MODESTO	PIASA	LIMESTONE	4.0	617.0	
-170.2	MODESTO		SHALE	1.5	621.0	
-171.7	MODESTO		SHALE WITH LIMESTONE	6.0	622.5	WITH LIMESTONE SPOTS
-177.7	CARBONDALE	DANVILLE	COAL	2.0	628.5	
-179.7	CARBONDALE		SHALE	1.5	630.5	
-181.2	CARBONDALE		SANDSTONE	6.0	632.0	
-187.2	CARBONDALE		SANDY SHALE	5.0	638.0	
-192.2	CARBONDALE		SANDSTONE	3.0	643.0	
-195.2	CARBONDALE		SHALE WITH LIMESTONE	3.0	646.0	WITH LIMESTONE BANDS
-198.2	CARBONDALE	ALLENBY	COAL	0.2	649.0	
-198.4	CARBONDALE		SOFT SHALE	5.8	649.2	
-204.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	655.0	
-208.2	CARBONDALE		SANDY SHALE	7.0	659.0	WITH SANDSTONE PARTINGS
-215.2	CARBONDALE		SANDY SHALE	6.0	666.0	
-221.2	CARBONDALE		SANDY SHALE	14.0	672.0	WITH SANDSTONE PARTINGS
-235.2	CARBONDALE		SANDY SHALE	13.0	686.0	
-248.2	CARBONDALE	JAMESTOWN	COAL	0.3	699.0	
-248.5	CARBONDALE		SHALE	1.8	699.3	DARK BLUE
-250.2	CARBONDALE	BRERETON	LIMESTONE	4.0	701.0	
-254.2	CARBONDALE	ENERGY	SHALE	7.0	705.0	DARK BLUE
-261.2	CARBONDALE	ENERGY	SHALE	19.0	712.0	WITH BROWN BANDS; DARK BLUE
-280.2	CARBONDALE	HERRIN	COAL	8.6	731.0	
-288.8	CARBONDALE		SANDY SHALE	0.9	739.6	

MAPID: 05501141000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 27 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of NW SE

QUADRANGLE: AKIN **LONGITUDE:** -88.749065 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.972129 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 478.0 **LOGGED (FT.):** 3238.0 **LOG TYPE:** Electric Log

SOURCE: EVERHART J WILLIAM **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-168.0	CARBONDALE	DANVILLE	COAL	-	646.0	
-176.0	CARBONDALE	SS BELOW NO. 7	SANDSTONE/SHALE	12.0	654.0	
-195.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	673.0	
-220.0	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	26.0	698.0	
-266.0	CARBONDALE	HERRIN	COAL	7.0	744.0	
-292.0	CARBONDALE	BRIAR HILL	COAL	-	770.0	
-327.0	CARBONDALE	SPRINGFIELD	COAL	4.0	805.0	
-346.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	6.0	824.0	
-402.0	CARBONDALE	HOUCHIN CREEK	COAL	-	880.0	

MAPID: 05500894000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 28 **QUARTERS/FOOTAGES:** 2310' N line, 2310' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.769999 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.974011 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 480.0 **LOGGED (FT.):** 3222.0 **LOG TYPE:** Electric Log

SOURCE: ARVIN DRILLING **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-150.0	CARBONDALE	DANVILLE	COAL	-	630.0	
-162.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	8.0	642.0	
-180.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	660.0	
-194.0	CARBONDALE	ANVIL ROCK		6.0	674.0	
-252.0	CARBONDALE	HERRIN	COAL	10.0	732.0	
-275.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	5.0	755.0	
-288.0	CARBONDALE	BRIAR HILL	COAL	-	768.0	
-306.0	CARBONDALE	SPRINGFIELD	COAL	5.0	786.0	
-324.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	12.0	804.0	
-384.0	CARBONDALE	HOUCHIN CREEK	COAL	-	864.0	

MAPID: 05500894000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 28 **QUARTERS/FOOTAGES:** 2310' N line, 2310' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.769999 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.974011 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 480.0 **LOGGED (FT.):** 742.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-139.0	MODESTO	PIASA	LIMESTONE	5.0	619.0	
-144.0	MODESTO		SHALE	9.0	624.0	
-153.0	CARBONDALE	DANVILLE	COAL	2.0	633.0	
-155.0	CARBONDALE		SHALE & SANDSTONE	25.0	635.0	
-180.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	10.0	660.0	
-190.0	CARBONDALE	LAWSON	SILTY SHALE	37.0	670.0	
-227.0	CARBONDALE	BRERETON	LIMESTONE	6.0	707.0	
-233.0	CARBONDALE	ANNA	BLACK SHALE	3.0	713.0	
-236.0	CARBONDALE	ENERGY	GRAY SHALE	17.0	716.0	
-253.0	CARBONDALE	HERRIN	COAL	9.0	733.0	

MAPID: 05500121000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 29 **QUARTERS/FOOTAGES:** 1320' S line, 0' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.780398 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.969152 **DATE COLLECTED:** 0 / 0 / 1909

SURFACE ELEVATION (FT.): 457.5 **LOGGED (FT.):** 706.0 **LOG TYPE:**

SOURCE: BG MUDDYCS **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-238.5	CARBONDALE	HERRIN	COAL	7.8	696.0	

MAPID: 05500121000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 29 **QUARTERS/FOOTAGES:** 1320' S line, 0' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.780398 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.969152 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 457.0 **LOGGED (FT.):** 703.8 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-140.0	MODESTO	PIASA	LIMESTONE	4.0	597.0	
-144.0	MODESTO		SHALE	5.0	601.0	
-149.0	CARBONDALE	DANVILLE	COAL	2.0	606.0	
-151.0	CARBONDALE		SILTY SHALE	18.0	608.0	
-169.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	626.0	
-172.0	CARBONDALE	LAWSON	SILTY SHALE	5.0	629.0	
-177.0	CARBONDALE	BRERETON	LIMESTONE	6.0	634.0	
-183.0	CARBONDALE	ENERGY	SILTY SHALE	10.0	640.0	
-193.0	CARBONDALE	ENERGY	SHALE	46.0	650.0	
-239.0	CARBONDALE	HERRIN	COAL	7.8	696.0	

MAPID: 05500121000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 29 **QUARTERS/FOOTAGES:** 1320' S line, 0' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.780398 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.969152 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 457.7 **LOGGED (FT.):** 706.0 **LOG TYPE:** Drillers Log

SOURCE: 10 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
457.7	PLEISTOCENE		UNCONSOLIDATED	52.5	0.0	
405.2	BOND		SHALE	23.5	52.5	
381.7	BOND		SANDSTONE	26.0	76.0	
355.7	BOND		SANDSTONE	12.0	102.0	
343.7	BOND		SANDY SHALE	37.0	114.0	
306.7	BOND	CARTHAGE	LIMESTONE	8.0	151.0	
298.7	MODESTO		SHALE	2.0	159.0	
296.7	MODESTO		SHALE	6.0	161.0	
290.7	MODESTO		SHALE	2.0	167.0	
288.7	MODESTO		COAL	1.0	169.0	
287.7	MODESTO		SANDY SHALE	15.0	170.0	
272.7	MODESTO		SANDY SHALE	20.0	185.0	
252.7	MODESTO		SHALE	27.0	205.0	
225.7	MODESTO		SANDY SHALE	29.0	232.0	
196.7	MODESTO		SHALE	9.0	261.0	
187.7	MODESTO		SHALE	2.0	270.0	
185.7	MODESTO		CALCAREOUS SHALE	2.0	272.0	
183.7	MODESTO		SHALE	8.0	274.0	
175.7	MODESTO		SHALE	7.0	282.0	
168.7	MODESTO		COAL	1.0	289.0	
167.7	MODESTO		SANDY SHALE	10.0	290.0	
157.7	MODESTO		SANDY SHALE	23.0	300.0	
134.7	MODESTO		SANDY SHALE	25.0	323.0	
109.7	MODESTO		SANDSTONE	30.0	348.0	
79.7	MODESTO		SANDSTONE	25.0	378.0	
54.7	MODESTO		SANDY SHALE	7.0	403.0	
47.7	MODESTO	CHAPEL	COAL	0.5	410.0	
47.2	MODESTO		CLAYSTONE	6.5	410.5	
40.7	MODESTO		SANDY SHALE	20.0	417.0	
20.7	MODESTO		SANDY SHALE	22.0	437.0	
-1.3	MODESTO		SANDY SHALE	23.0	459.0	
-24.3	MODESTO		SANDSTONE	10.0	482.0	
-34.3	MODESTO		SHALE	8.0	492.0	
-42.3	MODESTO		SHALE	18.0	500.0	
-60.3	MODESTO		SHALE	12.0	518.0	
-72.3	MODESTO		COAL	0.3	530.0	
-72.6	MODESTO		SHALE	1.7	530.3	
-74.3	MODESTO		SANDY LIMESTONE	9.0	532.0	
-83.3	MODESTO		SHALE	15.3	541.0	

-98.6	MODESTO		COAL	1.7	556.3
-100.3	MODESTO		CLAYSTONE	1.0	558.0
-101.3	MODESTO		SHALE	3.0	559.0
-104.3	MODESTO		CALCAREOUS SHALE	22.0	562.0
-126.3	MODESTO		SHALE	8.0	584.0
-134.3	MODESTO	DEGRAFF	COAL	1.0	592.0
-135.3	MODESTO		SHALE	4.0	593.0
-139.3	MODESTO	PIASA	LIMESTONE	4.0	597.0
-143.3	MODESTO		SHALE	2.0	601.0
-145.3	MODESTO		SHALE	3.0	603.0
-148.3	CARBONDALE	DANVILLE	COAL	2.0	606.0
-150.3	CARBONDALE		SANDY SHALE	15.0	608.0
-165.3	CARBONDALE		SHALE	3.0	623.0
-168.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	626.0
-171.3	CARBONDALE		SANDY SHALE	5.0	629.0
-176.3	CARBONDALE	BRERETON	LIMESTONE	6.0	634.0
-182.3	CARBONDALE	ENERGY	SANDY SHALE	10.0	640.0
-192.3	CARBONDALE	ENERGY	SHALE	10.0	650.0
-202.3	CARBONDALE	ENERGY	SHALE	15.0	660.0
-217.3	CARBONDALE	ENERGY	SHALE	11.0	675.0
-228.3	CARBONDALE	ENERGY	SHALE	10.0	686.0
-238.3	CARBONDALE	HERRIN	COAL	7.8	696.0
-246.1	CARBONDALE		CALCAREOUS SHALE	2.3	703.8

MAPID: 05501475000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 29 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.788341 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.97387 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 474.0 **LOGGED (FT.):** 3177.0 **LOG TYPE:** Electric Log

SOURCE: OIL MANAGEMENT, INC. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-226.0	CARBONDALE	HERRIN	COAL	6.0	700.0	
-256.0	CARBONDALE	BRIAR HILL	COAL	-	730.0	
-289.0	CARBONDALE	SPRINGFIELD	COAL	5.0	763.0	SHALE & SILTSTONE ROOF
-366.0	CARBONDALE	HOUCHIN CREEK	COAL	-	840.0	

MAPID: 05501253000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 32 **QUARTERS/FOOTAGES:** 2310' S line, 2310' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.788589 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.957263 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 445.0 **LOGGED (FT.):** 680.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-167.0	CARBONDALE	LAWSON	SILTY SHALE	50.0	612.0	
-217.0	CARBONDALE	JAMESTOWN	BONE COAL	1.0	662.0	
-218.0	CARBONDALE		SHALE	2.0	663.0	
-220.0	CARBONDALE	BRERETON	LIMESTONE	9.0	665.0	
-229.0	CARBONDALE	ANNA	BLACK SHALE	2.0	674.0	
-231.0	CARBONDALE	HERRIN	COAL	4.0	676.0	

MAPID: 05500935000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 33 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of SW SW

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.777144 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.951846 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 425.0 **LOGGED (FT.):** 3183.0 **LOG TYPE:** Electric Log

SOURCE: GEORGE & WRATHER OIL **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-143.0	CARBONDALE	DANVILLE	COAL	-	568.0	
-147.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	6.0	572.0	
-160.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	585.0	
-173.0	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	24.0	598.0	
-219.0	CARBONDALE	HERRIN	COAL	6.0	644.0	
-228.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	10.0	653.0	
-253.0	CARBONDALE	BRIAR HILL	COAL	-	678.0	
-313.0	CARBONDALE	SPRINGFIELD	COAL	4.0	738.0	SHALE ROOF
-327.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	15.0	752.0	
-389.0	CARBONDALE	HOUCHIN CREEK	COAL	-	814.0	

MAPID: 05501284000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 33 **QUARTERS/FOOTAGES:** 1650' N line, 330' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.763219 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.961006 **DATE COLLECTED:** 11 / 0 / 1956

SURFACE ELEVATION (FT.): 446.0 **LOGGED (FT.):** 2000.0 **LOG TYPE:** Electric Log

SOURCE: KEWANEE OIL & GAS **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-489.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	935.0	
-560.0	SPOON	DAVIS	UNCLASSIFIED	-	1006.0	
-1554.0	BASE OF PENN.		UNCLASSIFIED	-	2000.0	

MAPID: 05501284000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 33 **QUARTERS/FOOTAGES:** 1650' N line, 330' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.763219 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.961006 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 446.0 **LOGGED (FT.):** 672.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-123.0	MODESTO	PIASA	LIMESTONE	4.0	569.0	
-127.0	MODESTO		SHALE	6.0	573.0	
-133.0	CARBONDALE	DANVILLE	COAL	3.0	579.0	
-136.0	CARBONDALE		SHALE & SANDSTONE	23.0	582.0	
-159.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	5.0	605.0	
-164.0	CARBONDALE	LAWSON	SHALE & SANDSTONE	34.0	610.0	
-198.0	CARBONDALE	LAWSON	GRAY SHALE	10.0	644.0	
-208.0	CARBONDALE	JAMESTOWN	BONE COAL	1.0	654.0	
-209.0	CARBONDALE	BRERETON	LIMESTONE	5.0	655.0	
-214.0	CARBONDALE	ANNA	BLACK SHALE	2.0	660.0	
-216.0	CARBONDALE	ENERGY	GRAY SHALE	4.0	662.0	
-220.0	CARBONDALE	HERRIN	COAL	6.0	666.0	

MAPID: 05501819000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 34 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of NW SE
QUADRANGLE: AKIN **LONGITUDE:** -88.749241 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.955604 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 464.0 **LOGGED (FT.):** 3264.0 **LOG TYPE:** Electric Log
SOURCE: CARTER OIL COMPANY **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-240.0	CARBONDALE	HERRIN	COAL	6.0	704.0	
-268.0	CARBONDALE	BRIAR HILL	COAL	-	732.0	
-330.0	CARBONDALE	SPRINGFIELD	COAL	5.0	794.0	SHALE ROOF
-404.0	CARBONDALE	HOUCHIN CREEK	COAL	-	868.0	

MAPID: 05502129000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 34 **QUARTERS/FOOTAGES:** 1330' N line, 1550' E line
QUADRANGLE: AKIN **LONGITUDE:** -88.748745 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.962006 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 445.0 **LOGGED (FT.):** 693.7 **LOG TYPE:** Survey Core Study
SOURCE: TENNESSEE VALLEY AUTHORITY 2 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION, CORE C6439

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-146.0	MODESTO	PIASA	LIMESTONE	4.0	591.0	
-150.0	CARBONDALE	LAWSON	SILTY SHALE	60.0	595.0	
-210.0	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.3	655.0	
-210.3	CARBONDALE	JAMESTOWN	BONE COAL	0.5	655.3	
-210.8	CARBONDALE		LIMESTONE W/ SHALE	4.7	655.8	
-215.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	9.4	660.5	
-224.8	CARBONDALE	ANNA	DARK GRAY SHALE	0.2	669.8	
-242.0	CARBONDALE	HERRIN	COAL	6.7	687.0	

MAPID: 05501142000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 35 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of SE

QUADRANGLE: AKIN **LONGITUDE:** -88.726085 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.957617 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 485.0 **LOGGED (FT.):** 3286.0 **LOG TYPE:** Electric Log

SOURCE: BILSKY, W. F. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-197.0	CARBONDALE	DANVILLE	COAL	-	682.0	
-210.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	5.0	695.0	
-218.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	703.0	
-237.0	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	20.0	722.0	
-281.0	CARBONDALE	HERRIN	COAL	5.0	766.0	
-288.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	5.0	773.0	
-307.0	CARBONDALE	BRIAR HILL	COAL	-	792.0	
-372.0	CARBONDALE	SPRINGFIELD	COAL	5.0	857.0	SHALE ROOF
-423.0	CARBONDALE	SS BELOW NO. 5	SANDSTONE/SHALE	17.0	908.0	
-441.0	CARBONDALE	HOUCHIN CREEK	COAL	-	926.0	

MAPID: 05501187000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 35 **QUARTERS/FOOTAGES:** 1650' N line, 2310' W line

QUADRANGLE: AKIN **LONGITUDE:** -88.735293 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.961271 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 453.0 **LOGGED (FT.):** 727.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-162.0	MODESTO	PIASA	LIMESTONE	5.0	615.0	
-167.0	MODESTO		GRAY SHALE	10.0	620.0	
-177.0	CARBONDALE	DANVILLE	COAL	2.0	630.0	
-179.0	CARBONDALE		SILTY SHALE	21.0	632.0	
-200.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	3.0	653.0	
-203.0	CARBONDALE	LAWSON	SILTY SHALE	25.0	656.0	
-228.0	CARBONDALE	LAWSON	SANDSTONE	14.0	681.0	
-242.0	CARBONDALE	LAWSON	SHALE	7.0	695.0	
-249.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	5.0	702.0	
-254.0	CARBONDALE	ANNA	BLACK SHALE	3.0	707.0	
-257.0	CARBONDALE	ENERGY	GRAY SHALE	8.0	710.0	
-265.0	CARBONDALE	HERRIN	COAL	9.0	718.0	

MAPID: 05501252000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 35 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of NE SW
QUADRANGLE: AKIN **LONGITUDE:** -88.73762 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.957518 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 454.0 **LOGGED (FT.):** 3087.0 **LOG TYPE:** Electric Log
SOURCE: BREHM, C. E. DRLG.&PROD. **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-221.0	CARBONDALE	HERRIN	COAL	5.0	675.0	
-251.0	CARBONDALE	BRIAR HILL	COAL	-	705.0	
-306.0	CARBONDALE	SPRINGFIELD	COAL	5.0	760.0	SHALE ROOF
-386.0	CARBONDALE	HOUCHIN CREEK	COAL	-	840.0	

MAPID: 05501143000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 36 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of SE
QUADRANGLE: AKIN **LONGITUDE:** -88.714562 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.957547 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 522.0 **LOGGED (FT.):** 3377.0 **LOG TYPE:** Electric Log
SOURCE: LEWIS, WILL I. **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-226.0	CARBONDALE	DANVILLE	COAL	-	748.0	
-240.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	12.0	762.0	
-256.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	778.0	
-285.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	6.0	807.0	
-324.0	CARBONDALE	HERRIN	COAL	8.0	846.0	
-342.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	3.0	864.0	
-348.0	CARBONDALE	BRIAR HILL	COAL	-	870.0	
-408.0	CARBONDALE	SPRINGFIELD	COAL	6.0	930.0	SHALE ROOF
-454.0	CARBONDALE	HOUCHIN CREEK	COAL	-	976.0	

MAPID: 05502134000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 6S 4E **SECTION:** 36 **QUARTERS/FOOTAGES:** 450' N line, 2580' W line

QUADRANGLE: AKIN **LONGITUDE:** -88.715802 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.96462 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 478.0 **LOGGED (FT.):** 810.3 **LOG TYPE:** Survey Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY 5 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION, CORE C6442

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-203.7	MODESTO	PIASA	LIMESTONE	3.0	681.7	
-206.7	MODESTO		GRAY SHALE	12.0	684.7	
-218.7	CARBONDALE	DANVILLE	COAL	1.0	696.7	
-219.7	CARBONDALE		SILTY SHALE	22.0	697.7	
-241.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	719.7	
-243.7	CARBONDALE	LAWSON	SANDSTONE	47.5	721.7	
-291.2	CARBONDALE		BLACK SHALE	0.1	769.2	
-291.3	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	5.3	769.3	
-296.6	CARBONDALE	ANNA	BLACK SHALE	4.2	774.6	
-300.8	CARBONDALE	ENERGY	GRAY SHALE	21.3	778.8	
-322.0	CARBONDALE	HERRIN	COAL	10.3	800.0	

MAPID: 05500286000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 1 **QUARTERS/FOOTAGES:** 0' S line, 0' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.039711 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.935193 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 412.0 **LOGGED (FT.):** 442.5 **LOG TYPE:** Drillers Log

SOURCE: BELL & ZOLLER COAL CO 22 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
113.4	MODESTO	PIASA	LIMESTONE	4.3	298.6	
109.2	MODESTO		BLACK SHALE	2.8	302.8	
106.4	CARBONDALE	DANVILLE	COAL	2.4	305.6	
104.0	CARBONDALE		SHALE & SANDSTONE	6.5	308.0	
97.5	CARBONDALE	ALLENBY	BONE COAL	0.3	314.5	
97.2	CARBONDALE		CLAYSTONE	1.8	314.8	
95.3	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.5	316.7	
90.8	CARBONDALE	LAWSON	GRAY SHALE	4.7	321.2	
86.2	CARBONDALE	LAWSON	SILTY SHALE	1.2	325.8	
85.0	CARBONDALE	BRERETON	LIMESTONE	7.6	327.0	
77.4	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	27.3	334.6	
50.2	CARBONDALE	ENERGY	CARBONACEOUS SHALE	4.0	361.8	
46.2	CARBONDALE	ENERGY	SILTY SHALE	45.3	365.8	
0.8	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	14.7	411.2	
-13.8	CARBONDALE	ENERGY	SILTY SHALE	5.2	425.8	
-19.0	CARBONDALE	HERRIN	COAL	11.5	431.0	

MAPID: 05502114000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 1 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.0481 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.941927 **DATE COLLECTED:** 1 / 0 / 1964

SURFACE ELEVATION (FT.): 392.3 **LOGGED (FT.):** 1495.0 **LOG TYPE:** Electric Log

SOURCE: VAUGHN, A. B. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-267.7	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	660.0	
-337.7	SPOON	DAVIS	UNCLASSIFIED	-	730.0	
-1102.7	BASE OF PENN.		UNCLASSIFIED	-	1495.0	

MAPID: 05500852000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 2 **QUARTERS/FOOTAGES:** 2310' N line, 990' E line
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.062285 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.943569 **DATE COLLECTED:** 4 / 0 / 1948
SURFACE ELEVATION (FT.): 420.0 **LOGGED (FT.):** 1600.0 **LOG TYPE:** Electric Log
SOURCE: TEXACO, INC. **WELL TYPE:** Dry Hole
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-242.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	662.0	
-305.0	SPOON	DAVIS	UNCLASSIFIED	-	725.0	
-1180.0	BASE OF PENN.		UNCLASSIFIED	-	1600.0	

MAPID: 05500852000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 2 **QUARTERS/FOOTAGES:** 2310' N line, 990' E line
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.062285 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.943569 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 420.0 **LOGGED (FT.):** 443.0 **LOG TYPE:** Electric Log
SOURCE: **WELL TYPE:** Oil and Gas Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
136.0	MODESTO	PIASA	LIMESTONE	7.0	284.0	
129.0	CARBONDALE	ENERGY	SHALE & SANDSTONE	47.0	291.0	
82.0	CARBONDALE	ENERGY	SANDSTONE	28.0	338.0	
54.0	CARBONDALE	ENERGY	SHALE	12.0	366.0	
42.0	CARBONDALE	ENERGY	SANDSTONE	65.0	378.0	

MAPID: 05500291000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 4 **QUARTERS/FOOTAGES:** 330' S line, 330' W line
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.113083 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.937154 **DATE COLLECTED:** 0 / 0 / 1912
SURFACE ELEVATION (FT.): 435.3 **LOGGED (FT.):** 464.0 **LOG TYPE:**
SOURCE: FRAN CO CC0006 **WELL TYPE:** Coal Test
COMMENT: SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-14.7	CARBONDALE	HERRIN	COAL	4.3	450.0	CORRELATION UNCERTAIN

MAPID: 05500291000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 4 **QUARTERS/FOOTAGES:** 330' S line, 330' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.113083 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.937154 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 435.0 **LOGGED (FT.):** 380.3 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
140.2	MODESTO	PIASA	LIMESTONE	5.5	294.8	
134.7	MODESTO		BLACK SHALE	2.0	300.3	
132.7	CARBONDALE	DANVILLE	COAL	2.0	302.3	
130.7	CARBONDALE		SHALE & SANDSTONE	12.0	304.3	
118.7	CARBONDALE	ALLENBY	COAL	0.2	316.3	
118.5	CARBONDALE		CLAYSTONE	2.0	316.5	
116.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	318.5	
114.0	CARBONDALE	LAWSON	SILTY SHALE	7.3	321.0	
106.7	CARBONDALE	BRERETON	LIMESTONE	6.0	328.3	
100.7	CARBONDALE	ENERGY	GRAY SHALE	41.7	334.3	
59.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	4.3	376.0	

MAPID: 05500291000C **VERSION:** 3 **PROJECT:** NCRDS87

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 4 **QUARTERS/FOOTAGES:** 330' S line, 330' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.113083 **GEOLOGIST:** WEIBEL

CONFIDENTIAL: N **LATITUDE:** 37.937154 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 435.3 **LOGGED (FT.):** 464.0 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COUNTY COAL CO. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
435.3			UNCONSOLIDATED	14.0	0.0	
421.3			SANDSTONE	4.0	14.0	
417.3			SHALE	14.0	18.0	
403.3			SHALE & SANDSTONE	8.0	32.0	
395.3			SHALE	15.0	40.0	
380.3			SANDSTONE	5.0	55.0	
375.3			GRAY SHALE	47.0	60.0	
328.3			DARK SHALE	3.0	107.0	
325.3			BLACK SHALE	3.3	110.0	
322.0			COAL	0.7	113.3	
321.3			UNDERCLAY	2.5	114.0	
318.8			LIMESTONE	1.0	116.5	
317.8			SHALE	2.5	117.5	
315.3			SHALE & SANDSTONE	6.0	120.0	
309.3			SANDSTONE	8.0	126.0	
301.3			SHALE	124.0	134.0	
177.3			DARK SHALE	1.0	258.0	
176.3			COAL	0.6	259.0	
175.7			UNDERCLAY	3.4	259.6	
172.3			SHALE & SANDSTONE	14.0	263.0	
158.3			GRAY SHALE	12.5	277.0	
145.8			DARK SHALE	4.0	289.5	
141.8			SHALE	1.0	293.5	
140.8	MODESTO	PIASA	LIMESTONE	5.5	294.5	
135.3			BLACK SHALE	2.0	300.0	
133.3	CARBONDALE	DANVILLE	COAL	2.0	302.0	
131.3	CARBONDALE		GRAY SHALE	1.0	304.0	
130.3	CARBONDALE		SANDSTONE	9.0	305.0	
121.3	CARBONDALE		SHALE	2.0	314.0	
119.3	CARBONDALE		COAL	0.2	316.0	
119.1	CARBONDALE		UNDERCLAY	2.0	316.2	
117.1	CARBONDALE		LIMESTONE	2.5	318.2	
114.6	CARBONDALE		GRAY SHALE	7.3	320.7	
107.3	CARBONDALE		LIMESTONE	6.0	328.0	
101.3	CARBONDALE	ENERGY	GRAY SHALE	41.0	334.0	0.17 SH PARTING & 0.33 SH PARTING
59.6	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	4.3	375.7	
55.3	CARBONDALE		UNDERCLAY	4.0	380.0	
51.3	CARBONDALE		SHALE	72.0	384.0	

-20.7	CARBONDALE	SANDSTONE	8.0	456.0

MAPID: 05500291000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 4 **QUARTERS/FOOTAGES:** 330' S line, 330' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.113083 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.937154 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 435.3 **LOGGED (FT.):** 464.0 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COUNTY COAL CORP. 6 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
435.3	PLEISTOCENE		CLAY	14.0	0.0	
421.3	MODESTO		SANDSTONE	4.0	14.0	
417.3	MODESTO		SANDY SHALE	14.0	18.0	
403.3	MODESTO		SANDSTONE	8.0	32.0	WITH SHALE PARTINGS
395.3	MODESTO		SANDY SHALE	15.0	40.0	
380.3	MODESTO		SANDSTONE	5.0	55.0	
375.3	MODESTO		SOFT SHALE	47.0	60.0	
328.3	MODESTO		SHALE	3.0	107.0	WITH BROWN BANDS
325.3	MODESTO		SHALE	3.3	110.0	
322.0	MODESTO		COAL	0.7	113.3	
321.3	MODESTO		CLAYSTONE	2.5	114.0	
318.8	MODESTO		LIMESTONE	1.0	116.5	
317.8	MODESTO		SANDY SHALE	2.5	117.5	
315.3	MODESTO		SANDSTONE	6.0	120.0	WITH SHALE PARTINGS
309.3	MODESTO		SANDSTONE	8.0	126.0	
301.3	MODESTO		SANDY SHALE	101.0	134.0	
200.3	MODESTO		SHALE	4.0	235.0	WITH BROWN PARTINGS
196.3	MODESTO		SANDY SHALE	1.0	239.0	
195.3	MODESTO		SHALE & SANDSTONE	18.0	240.0	
177.3	MODESTO		SHALE	1.0	258.0	DARK GRAY
176.3	MODESTO		COAL	0.6	259.0	
175.7	MODESTO		CLAYSTONE	3.4	259.6	
172.3	MODESTO		SHALE & SANDSTONE	14.0	263.0	
158.3	MODESTO		SHALE	12.5	277.0	
145.8	MODESTO		SHALE	4.0	289.5	WITH BROWN BANDS
141.8	MODESTO		SHALE	1.0	293.5	LIGHT GRAY
140.8	MODESTO	PIASA	LIMESTONE	5.5	294.5	
135.3	MODESTO		SHALE	2.0	300.0	
133.3	CARBONDALE	DANVILLE	COAL	2.0	302.0	
131.3	CARBONDALE		SANDY SHALE	1.0	304.0	
130.3	CARBONDALE		SANDSTONE	1.0	305.0	
129.3	CARBONDALE		SANDSTONE	8.0	306.0	WITH SHALE PARTINGS
121.3	CARBONDALE		SHALE	2.0	314.0	WITH BROWN BANDS
119.3	CARBONDALE	ALLENBY	COAL	0.2	316.0	
119.1	CARBONDALE		CLAYSTONE	2.0	316.2	
117.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	318.2	
114.6	CARBONDALE		SANDY SHALE	7.3	320.7	
107.3	CARBONDALE	BRERETON	LIMESTONE	6.0	328.0	

101.3	CARBONDALE	ENERGY	SHALE	19.0	334.0	
82.3	CARBONDALE	ENERGY	SHALE	22.4	353.0	WITH BROWN BANDS
59.9	CARBONDALE	ENERGY	SHALE	0.3	375.4	
59.6	CARBONDALE	HERRIN	COAL	2.3	375.7	
57.4	CARBONDALE	HERRIN	SHALE	0.2	377.9	
57.2	CARBONDALE	HERRIN	COAL	0.8	378.1	
56.5	CARBONDALE	HERRIN	SHALE	0.3	378.8	
56.1	CARBONDALE	HERRIN	COAL	0.8	379.2	
55.3	CARBONDALE		CLAYSTONE	4.0	380.0	
51.3	CARBONDALE		SHALE	72.0	384.0	WITH BROWN BANDS
-20.7	CARBONDALE		SHALY SANDSTONE	8.0	456.0	

MAPID: 05500288000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 5 **QUARTERS/FOOTAGES:** 330' N line, 990' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.117935 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.949102 **DATE COLLECTED:** 0 / 0 / 1912

SURFACE ELEVATION (FT.): 404.3 **LOGGED (FT.):** 425.0 **LOG TYPE:**

SOURCE: FRAN CO CC0003 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-10.7	CARBONDALE	HERRIN	COAL	7.5	415.0	

MAPID: 05500288000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 5 **QUARTERS/FOOTAGES:** 330' N line, 990' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.117935 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.949102 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 404.0 **LOGGED (FT.):** 422.5 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
115.8	MODESTO	PIASA	CALCAREOUS SHALE	9.0	288.2	
106.8	MODESTO		GRAY SHALE	3.7	297.2	
103.2	CARBONDALE	DANVILLE	COAL	0.7	300.8	
102.5	CARBONDALE		SILTY SHALE	14.2	301.5	
88.3	CARBONDALE	ALLENBY	COAL	0.5	315.7	
87.8	CARBONDALE		CLAYSTONE	4.0	316.2	
83.8	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	320.2	
78.8	CARBONDALE	LAWSON	SILTY SHALE	11.0	325.2	
67.8	CARBONDALE	BRERETON	LIMESTONE	9.5	336.2	
58.3	CARBONDALE	ANNA	BLACK SHALE	1.5	345.7	
56.8	CARBONDALE	ENERGY	LIMESTONE	1.0	347.2	
55.8	CARBONDALE	ENERGY	SILTY SHALE	11.0	348.2	
44.8	CARBONDALE	ENERGY	GRAY SHALE	55.8	359.2	
-11.0	CARBONDALE	HERRIN	COAL	7.5	415.0	

MAPID: 05500288000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 5 **QUARTERS/FOOTAGES:** 330' N line, 990' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.117935 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.949102 **DATE COLLECTED:** 0 / 0 / 1912

SURFACE ELEVATION (FT.): 404.3 **LOGGED (FT.):** 424.5 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COUNTY COAL CORP. 3 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
404.3	PLEISTOCENE		CLAY	17.0	0.0	
387.3	MODESTO		SANDSTONE	12.0	17.0	
375.3	MODESTO		SANDY SHALE	67.0	29.0	
308.3	MODESTO		SHALE	3.3	96.0	
305.0	MODESTO	CHAPEL	COAL	0.7	99.3	
304.3	MODESTO		CLAYSTONE	3.0	100.0	
301.3	MODESTO		SANDY SHALE	8.0	103.0	
293.3	MODESTO		SANDSTONE	8.0	111.0	WITH SHALE PARTINGS
285.3	MODESTO		SANDY SHALE	109.0	119.0	
176.3	MODESTO		SANDY SHALE	20.0	228.0	WITH BROWN BANDS
156.3	MODESTO		SHALE	3.0	248.0	DARK GRAY
153.3	MODESTO		SANDY SHALE	11.0	251.0	
142.3	MODESTO		SHALE	1.0	262.0	
141.3	MODESTO		SANDY SHALE	14.0	263.0	
127.3	MODESTO		COAL	1.5	277.0	
125.8	MODESTO		SANDY SHALE	9.5	278.5	
116.3	MODESTO		SHALE WITH LIMESTONE	9.0	288.0	WITH LIMESTONE SPOTS
107.3	MODESTO		SHALE	3.7	297.0	
103.6	CARBONDALE	DANVILLE	COAL	0.7	300.7	
103.0	CARBONDALE		SANDY SHALE	14.2	301.3	
88.8	CARBONDALE	ALLENBY	COAL	0.5	315.5	
88.3	CARBONDALE		CLAYSTONE	4.0	316.0	
84.3	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	320.0	
79.3	CARBONDALE		SANDY SHALE	11.0	325.0	
68.3	CARBONDALE	BRERETON	LIMESTONE	9.5	336.0	
58.8	CARBONDALE	BRERETON	SHALE	1.5	345.5	
57.3	CARBONDALE	BRERETON	LIMESTONE	1.0	347.0	
56.3	CARBONDALE	ENERGY	SANDY SHALE	11.0	348.0	
45.3	CARBONDALE	ENERGY	SHALE	55.8	359.0	WITH BROWN BANDS
-10.5	CARBONDALE	HERRIN	COAL	7.5	414.8	
-18.0	CARBONDALE		SHALE W/ COAL STREAKS	1.3	422.3	WITH COAL PARTINGS
-19.4	CARBONDALE		LIMESTONE	0.3	423.7	
-19.7	CARBONDALE		SHALE	0.5	424.0	

MAPID: 05500292000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 6 **QUARTERS/FOOTAGES:** 660' S line, 1980' E line
QUADRANGLE: ELKVILLE **LONGITUDE:** -89.13985 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.937953 **DATE COLLECTED:** 0 / 0 / 1912
SURFACE ELEVATION (FT.): 392.9 **LOGGED (FT.):** 400.0 **LOG TYPE:**
SOURCE: FRAN CO CC0007 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		COAL ABSENT OR ERODED

MAPID: 05500292000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 6 **QUARTERS/FOOTAGES:** 660' S line, 1980' E line
QUADRANGLE: ELKVILLE **LONGITUDE:** -89.13985 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.937953 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 393.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	CARBONDALE	ENERGY	GRAY SHALE	90.0		
-	CARBONDALE	ENERGY	BONE COAL	0.2		
-	CARBONDALE	ENERGY	SHALE & SANDSTONE	43.6		
-	CARBONDALE	ENERGY	LIMESTONE	2.5		
-	CARBONDALE	ENERGY	SHALE & SANDSTONE	43.0		

MAPID: 05502145000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 6 **QUARTERS/FOOTAGES:** 330' N line, 330' E line
QUADRANGLE: ELKVILLE **LONGITUDE:** -89.133867 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.949082 **DATE COLLECTED:** 6 / 0 / 1964
SURFACE ELEVATION (FT.): 418.0 **LOGGED (FT.):** 1730.0 **LOG TYPE:** Electric Log
SOURCE: NAT'L. ASSOC. PETRO. CO. **WELL TYPE:** Dry Hole
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-252.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	670.0	
-327.0	SPOON	DAVIS	UNCLASSIFIED	-	745.0	
-1312.0	BASE OF PENN.		UNCLASSIFIED	-	1730.0	

MAPID: 05500191000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 7 **QUARTERS/FOOTAGES:** 2640' N line, 2640' E line

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.142119 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.928831 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**

SOURCE: WESTERN CM0002 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
30.0	CARBONDALE	HERRIN	COAL	4.6	365.0	

MAPID: 05500191000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 7 **QUARTERS/FOOTAGES:** 2640' N line, 2640' E line

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.142119 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.928831 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 369.6 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
144.0	MODESTO	PIASA	LIMESTONE	2.5	251.0	
141.5	CARBONDALE	ENERGY	SANDSTONE	49.0	253.5	
92.5	CARBONDALE	ENERGY	SHALE & SANDSTONE	7.0	302.5	
85.5	CARBONDALE	ENERGY	SILTY SHALE	47.0	309.5	
38.5	CARBONDALE	ENERGY	CARBONACEOUS SANDSTONE	9.4	356.5	
30.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	4.6	365.0	

MAPID: 05500191000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 7 **QUARTERS/FOOTAGES:** 2640' N line, 2640' E line

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.142119 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.928831 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 380.0 **LOG TYPE:** Drillers Log

SOURCE: WESTERN COAL & MINING CO. 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
395.0	PLEISTOCENE		UNCONSOLIDATED	2.0	0.0	
393.0	PLEISTOCENE		CLAY	16.0	2.0	YELLOW
377.0	PLEISTOCENE		SAND	12.0	18.0	YELLOW
365.0	PLEISTOCENE		SANDY CLAY	8.0	30.0	
357.0			SHALE	3.0	38.0	
354.0			LIMESTONE	1.0	41.0	
353.0			SHALE	103.0	42.0	
250.0			SHALE	10.0	145.0	WITH BROWN BANDS
240.0			SHALE	7.5	155.0	
232.5			SANDY SHALE	14.5	162.5	
218.0			SHALE	3.0	177.0	
215.0			SHALE W/ COAL STREAKS	3.0	180.0	WITH COAL PARTINGS
212.0			SHALE	11.0	183.0	
201.0			SHALE	26.0	194.0	WITH BROWN BANDS
175.0			SANDSTONE	1.0	220.0	
174.0			SANDY SHALE	14.0	221.0	
160.0			SANDY SHALE	15.5	235.0	WITH LIMESTONE BANDS
144.5			LIMESTONE	2.5	250.5	
142.0			SANDSTONE	49.0	253.0	
93.0			SHALE & SANDSTONE	7.0	302.0	
86.0			SANDY SHALE	44.0	309.0	
42.0			SANDY SHALE	3.0	353.0	
39.0			SANDSTONE WITH COAL	5.0	356.0	WITH COAL PARTINGS
34.0			SANDY SHALE	1.0	361.0	
33.0			SANDSTONE WITH COAL	3.4	362.0	WITH COAL PARTINGS
29.6	CARBONDALE	HERRIN	COAL	3.1	365.4	
26.5	CARBONDALE	HERRIN	SHALY COAL	1.5	368.5	
25.0			SHALE	10.0	370.0	

MAPID: 05526385000C **VERSION:** 1 **PROJECT:** NCRDS 2013

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 7 **QUARTERS/FOOTAGES:** 523' S line, 1395' E line

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.137695 **GEOLOGIST:** LOUCHIOS

CONFIDENTIAL: N **LATITUDE:** 37.922738 **DATE COLLECTED:** 2 / 25 / 1980

SURFACE ELEVATION (FT.): 448.0 **LOGGED (FT.):** 480.0 **LOG TYPE:** Drillers Log

SOURCE: CONSOLIDATION COAL CO. 80-DN-25 **WELL TYPE:** Coal Test

COMMENT: ROYAL FALCON MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
448.0			NO RECORD	62.0	0.0	
386.0	PATOKA		SANDY SHALE	28.0	62.0	
358.0	PATOKA		BLACK SHALE	2.0	90.0	
356.0	PATOKA	CHAPEL	COAL	1.5	92.0	
354.5	PATOKA		SANDY SHALE	136.5	93.5	
218.0	SHELBURN	ATTILA	BLACK SHALE	3.0	230.0	
215.0	SHELBURN		SANDSTONE	32.0	233.0	
183.0	SHELBURN	PIASA	LIMESTONE	4.0	265.0	
179.0	SHELBURN	FARMINGTON	SHALE	5.0	269.0	
174.0	SHELBURN	DANVILLE	COAL	1.5	274.0	
172.5	SHELBURN		SANDY SHALE	20.5	275.5	
152.0	SHELBURN	BANKSTON FORK	LIMESTONE	1.0	296.0	
151.0	SHELBURN	BANKSTON FORK	SHALE	4.0	297.0	
147.0	SHELBURN	BANKSTON FORK	LIMESTONE	2.0	301.0	
145.0	SHELBURN	BANKSTON FORK	SHALE	3.0	303.0	
142.0	SHELBURN	BANKSTON FORK	LIMESTONE	2.0	306.0	
140.0	SHELBURN	ANVIL ROCK	SANDSTONE	85.8	308.0	
54.2	CARBONDALE	HERRIN	COAL	2.1	393.8	
52.1	CARBONDALE	HERRIN	SHALE	7.1	395.9	
45.0	CARBONDALE	HERRIN	COAL	2.8	403.0	
42.2	CARBONDALE	HERRIN	SHALE	0.8	405.8	
41.4	CARBONDALE	HERRIN	COAL	0.4	406.6	
41.0	CARBONDALE	HERRIN	SHALE	3.5	407.0	
37.5	CARBONDALE	HERRIN	COAL	2.4	410.5	
35.1	CARBONDALE		SHALE	1.1	412.9	
34.0	CARBONDALE	HIGGINSVILLE	LIMESTONE	7.0	414.0	
27.0	CARBONDALE	HIGGINSVILLE	SHALE	4.0	421.0	
23.0	CARBONDALE	HIGGINSVILLE	LIMESTONE	1.0	425.0	
22.0	CARBONDALE		SANDY SHALE	14.0	426.0	
8.0	CARBONDALE	TURNER MINE	BLACK SHALE	2.5	440.0	
5.5	CARBONDALE	DYKERSBURG	SHALE	3.5	442.5	
2.0	CARBONDALE	SPRINGFIELD	COAL	4.0	446.0	
-2.0	CARBONDALE		SANDY SHALE	30.0	450.0	

MAPID: 05500293000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 8 **QUARTERS/FOOTAGES:** 0' S line, 1320' W line

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.128251 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.921352 **DATE COLLECTED:** 0 / 0 / 1922

SURFACE ELEVATION (FT.): 438.1 **LOGGED (FT.):** 460.0 **LOG TYPE:**

SOURCE: FRAN CO CC0008 **WELL TYPE:** Coal Test

COMMENT: SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
40.1	CARBONDALE	HERRIN	COAL	-	398.0	CORRELATION UNCERTAIN

MAPID: 05500293000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 8 **QUARTERS/FOOTAGES:** 0' S line, 1320' W line

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.128251 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.921352 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 438.0 **LOGGED (FT.):** 426.2 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
183.2	MODESTO		BLACK SHALE	4.5	254.8	
178.7	CARBONDALE	DANVILLE	COAL	1.3	259.3	
177.4	CARBONDALE		SHALE & SANDSTONE	10.2	260.6	
167.2	CARBONDALE	ALLENBY	BONE COAL	0.5	270.8	
166.7	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	271.3	
164.2	CARBONDALE	LAWSON	GRAY SHALE	5.0	273.8	
159.2	CARBONDALE	LAWSON	SILTY SHALE	11.7	278.8	
147.6	CARBONDALE		CLAYSTONE	3.3	290.4	
144.3	CARBONDALE	BRERETON	LIMESTONE W/ SHALE	15.0	293.7	
129.3	CARBONDALE	ENERGY	GRAY SHALE	9.0	308.7	
120.3	CARBONDALE	ENERGY	SHALE & SANDSTONE	14.0	317.7	
106.3	CARBONDALE	ENERGY	SILTY SHALE	43.0	331.7	
63.3	CARBONDALE	ENERGY	GRAY SHALE	23.3	374.7	
40.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	28.2	398.0	

MAPID: 05500293000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 8 **QUARTERS/FOOTAGES:** 0' S line, 1320' W line

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.128251 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.921352 **DATE COLLECTED:** 0 / 0 / 1912

SURFACE ELEVATION (FT.): 438.1 **LOGGED (FT.):** 460.0 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COUNTY COAL CORP. 8 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
438.1	PLEISTOCENE		CLAY	12.0	0.0	
426.1	MODESTO		SANDSTONE	46.0	12.0	
380.1	MODESTO		SANDY SHALE	24.0	58.0	
356.1	MODESTO		SHALE	7.8	82.0	WITH BROWN PARTINGS
348.3	MODESTO	CHAPEL	COAL	1.0	89.8	
347.3	MODESTO		CLAYSTONE	5.2	90.8	
342.1	MODESTO		SANDY SHALE	16.0	96.0	WITH SANDSTONE PARTINGS
326.1	MODESTO		SHALY SANDSTONE	5.0	112.0	
321.1	MODESTO		SANDY LIMESTONE	3.0	117.0	
318.1	MODESTO		SHALE WITH LIMESTONE	3.0	120.0	WITH LIMESTONE PARTINGS
315.1	MODESTO		SANDY SHALE	31.0	123.0	
284.1	MODESTO		SHALE	47.0	154.0	
237.1	MODESTO		SANDY SHALE	13.0	201.0	
224.1	MODESTO		SANDY SHALE	27.0	214.0	
197.1	MODESTO		SANDY SHALE	14.0	241.0	
183.1	MODESTO		SHALE	4.5	255.0	
178.6	MODESTO		COAL	1.3	259.5	
177.3	MODESTO		SHALE	5.2	260.8	
172.1	MODESTO		SANDSTONE	5.0	266.0	
167.1	MODESTO	DEGRAFF	SHALE W/ COAL STREAKS	0.5	271.0	WITH COAL PARTINGS
166.6	MODESTO	PIASA	LIMESTONE	2.5	271.5	
164.1			SHALE	5.0	274.0	NO #7?
159.1			SANDY SHALE	11.7	279.0	NO #7?
147.4	CARBONDALE	ALLENBY	COAL	0.1	290.7	
147.3	CARBONDALE		CLAYSTONE	3.3	290.8	
144.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	294.0	
142.1	CARBONDALE		SANDY SHALE	7.0	296.0	
135.1	CARBONDALE	BRERETON	LIMESTONE	6.0	303.0	
129.1	CARBONDALE		SHALE	9.0	309.0	
120.1	CARBONDALE		SANDSTONE	14.0	318.0	WITH SHALE PARTINGS
106.1	CARBONDALE		SANDY SHALE	39.0	332.0	
67.1	CARBONDALE		SANDY SHALE	4.0	371.0	
63.1	CARBONDALE		SHALE	23.3	375.0	WITH BROWN PARTINGS
39.8	CARBONDALE	HERRIN	COAL	0.2	398.3	
39.6	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	3.0	398.5	WITH SHALE PARTINGS
36.6	CARBONDALE	HERRIN	SHALE W/ COAL STREAKS	12.5	401.5	WITH COAL PARTINGS
24.1	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	3.0	414.0	WITH SHALE PARTINGS

21.1	CARBONDALE	HERRIN	SHALE W/ COAL STREAKS	5.8	417.0	WITH COAL PARTINGS
15.3	CARBONDALE	HERRIN	COAL	1.7	422.8	
13.6	CARBONDALE	HERRIN	PYRITE	0.0	424.5	
13.6	CARBONDALE	HERRIN	COAL	2.0	424.5	
11.6	CARBONDALE		CLAYSTONE	0.5	426.5	
11.1	CARBONDALE		LIMESTONE	5.0	427.0	
6.1	CARBONDALE		SHALE	6.0	432.0	
0.1	CARBONDALE		SHALE	3.0	438.0	
-2.9	CARBONDALE	SPRINGFIELD	COAL	1.0	441.0	
-3.9	CARBONDALE	SPRINGFIELD	PYRITE	0.1	442.0	
-4.0	CARBONDALE	SPRINGFIELD	COAL	1.4	442.1	
-5.4	CARBONDALE	SPRINGFIELD	SHALE	0.1	443.5	
-5.5	CARBONDALE	SPRINGFIELD	COAL	1.6	443.6	CORE
-7.1	CARBONDALE		CLAYSTONE	2.8	445.2	
-9.9	CARBONDALE		SANDY SHALE	7.0	448.0	
-16.9	CARBONDALE		LIMESTONE	3.0	455.0	
-19.9	CARBONDALE		SHALE	2.0	458.0	

MAPID: 05501490000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 8 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of NW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.124726 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.929706 **DATE COLLECTED:** 7 / 0 / 1949

SURFACE ELEVATION (FT.): 415.0 **LOGGED (FT.):** 1670.0 **LOG TYPE:** Electric Log

SOURCE: FORTNER W G **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-225.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	640.0	
-305.0	SPOON	DAVIS	UNCLASSIFIED	-	720.0	
-1255.0	BASE OF PENN.		UNCLASSIFIED	-	1670.0	

MAPID: 05500192000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 9 **QUARTERS/FOOTAGES:** SW NE SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.099164 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.926066 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 423.0 **LOGGED (FT.):** 490.0 **LOG TYPE:** Drillers Log

SOURCE: WESTERN COAL & MINING CO. 4 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
423.0	PLEISTOCENE		UNCONSOLIDATED	19.0	0.0	
404.0	MODESTO		SANDSTONE	4.0	19.0	
400.0	MODESTO		SANDY SHALE	27.0	23.0	
373.0	MODESTO		SANDSTONE	5.0	50.0	
368.0	MODESTO		SHALE	2.0	55.0	
366.0	MODESTO		SHALE	5.4	57.0	DARK BLUE
360.6	MODESTO	CHAPEL	COAL	0.8	62.4	
359.8	MODESTO		SHALE	4.8	63.2	LIGHT BLUE
355.0	MODESTO		SANDY SHALE	10.0	68.0	
345.0	MODESTO		SANDSTONE	4.0	78.0	
341.0	MODESTO		SANDY SHALE	8.0	82.0	
333.0	MODESTO		SANDSTONE	5.0	90.0	
328.0	MODESTO		SANDY SHALE	5.0	95.0	
323.0	MODESTO		SHALE	84.0	100.0	
239.0	MODESTO		SANDY SHALE	13.0	184.0	
226.0	MODESTO		SHALE	2.0	197.0	
224.0	MODESTO		CALCAREOUS SHALE	6.0	199.0	
218.0	MODESTO		SANDSTONE	6.0	205.0	
212.0	MODESTO		SANDY SHALE	5.5	211.0	
206.5	MODESTO		SANDSTONE	5.5	216.5	WITH LIMESTONE
201.0	MODESTO		SANDY SHALE	19.0	222.0	
182.0	MODESTO		SANDY SHALE	5.8	241.0	
176.2	MODESTO		SOFT SHALE	1.7	246.8	
174.5	MODESTO		SHALE W/ COAL STREAKS	0.5	248.5	WITH COAL
174.0	MODESTO		SANDY SHALE	11.0	249.0	
163.0	MODESTO		SANDY SHALE	7.0	260.0	
156.0	MODESTO		SANDSTONE	4.8	267.0	
151.2	MODESTO		COAL	0.2	271.8	
151.0	MODESTO		SHALE WITH LIMESTONE	5.5	272.0	WITH LIMESTONE BANDS
145.5	MODESTO		LIMESTONE	1.5	277.5	
144.0	MODESTO		SANDY SHALE	28.0	279.0	
116.0	CARBONDALE	DANVILLE	COAL	1.5	307.0	
114.5	CARBONDALE		SHALE	4.5	308.5	
110.0	CARBONDALE		SANDY SHALE	38.0	313.0	
72.0	CARBONDALE		SANDY SHALE	38.0	351.0	
34.0	CARBONDALE		SANDY SHALE	4.4	389.0	
29.6	CARBONDALE	HERRIN	COAL	0.1	393.4	
29.5	CARBONDALE		SANDSTONE	33.5	393.5	WITH SHALE PARTINGS
-4.0	CARBONDALE		SANDSTONE WITH COAL	35.0	427.0	WITH COAL PARTINGS

-39.0	CARBONDALE		SANDSTONE WITH COAL	20.4	462.0	WITH COAL PARTINGS
-59.4	CARBONDALE	SPRINGFIELD	COAL	5.2	482.4	
-64.6	CARBONDALE		SHALE	2.4	487.6	

MAPID: 05500192000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 9 **QUARTERS/FOOTAGES:** SW NE SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.099164 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.926066 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 423.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**

SOURCE: WESTERN CM0004 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	UNCLASSIFIED	0.0		COAL ABSENT OR ERODED
-59.0	CARBONDALE	SPRINGFIELD	COAL	5.2	482.0	

MAPID: 05500290000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 9 **QUARTERS/FOOTAGES:** 330' N line, 330' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.09693 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.935295 **DATE COLLECTED:** 0 / 0 / 1912

SURFACE ELEVATION (FT.): 427.7 **LOGGED (FT.):** 572.0 **LOG TYPE:**

SOURCE: FRAN CO CC0005 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
7.7	CARBONDALE	HERRIN	COAL	-	420.0	CORRELATION UNCERTAIN

MAPID: 05500290000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 9 **QUARTERS/FOOTAGES:** 330' N line, 330' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.09693 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.935295 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 428.0 **LOGGED (FT.):** 351.3 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
196.3	MODESTO		SILTY SHALE	40.0	231.7	
156.3	CARBONDALE	DANVILLE	COAL	0.7	271.7	
155.7	CARBONDALE		CLAYSTONE	1.3	272.3	
154.3	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	273.7	
149.3	CARBONDALE	LAWSON	SILTY SHALE	8.0	278.7	
141.3	CARBONDALE	LAWSON	SANDSTONE	4.0	286.7	
137.3	CARBONDALE	LAWSON	CARBONACEOUS SANDSTONE	6.0	290.7	
131.3	CARBONDALE	LAWSON	CALCAREOUS SHALE	6.0	296.7	
125.3	CARBONDALE	BRERETON	LIMESTONE	1.5	302.7	
123.8	CARBONDALE	ENERGY	SILTY SHALE	42.8	304.2	
81.0	CARBONDALE	HERRIN	COAL	4.3	347.0	

MAPID: 05500290000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 9 **QUARTERS/FOOTAGES:** 330' N line, 330' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.09693 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.935295 **DATE COLLECTED:** 0 / 0 / 1912

SURFACE ELEVATION (FT.): 427.7 **LOGGED (FT.):** 572.0 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COUNTY COAL CORP. 5 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
427.7	PLEISTOCENE		CLAY	20.0	0.0	
407.7			SANDSTONE	6.0	20.0	
401.7			SHALE & SANDSTONE	53.0	26.0	
348.7			SANDY SHALE	6.6	79.0	
342.1	MODESTO	CHAPEL	COAL	0.4	85.6	
341.7			CLAYSTONE	6.0	86.0	
335.7			SANDY SHALE	19.0	92.0	WITH SANDSTONE
316.7			SANDY SHALE	109.0	111.0	
207.7			SHALE	12.0	220.0	
195.7			SANDY SHALE	40.0	232.0	
155.7			COAL	0.7	272.0	
155.0			CLAYSTONE	1.3	272.7	
153.7			LIMESTONE	5.0	274.0	
148.7			SANDY SHALE	8.0	279.0	
140.7			SANDSTONE	4.0	287.0	
136.7			SANDSTONE WITH COAL	6.0	291.0	WITH COAL PARTINGS
130.7			SHALE WITH LIMESTONE	6.0	297.0	WITH LIMESTONE SPOTS
124.7			LIMESTONE	1.5	303.0	
123.2			SANDY SHALE	42.8	304.5	
80.4	CARBONDALE	HERRIN	COAL	3.7	347.3	
76.7	CARBONDALE	HERRIN	SHALE	0.2	351.0	
76.5	CARBONDALE	HERRIN	COAL	0.4	351.2	
76.1	CARBONDALE	HERRIN	SHALE W/ COAL STREAKS	1.0	351.6	WITH COAL PARTINGS
75.1			SANDY SHALE	35.4	352.6	
39.7			SANDY SHALE	17.0	388.0	WITH SANDSTONE PARTINGS
22.7			SANDSTONE	5.0	405.0	WITH SHALE PARTINGS
17.7			SANDY SHALE	10.0	410.0	WITH SANDSTONE PARTINGS
7.7			SANDSTONE	47.0	420.0	WITH SHALE PARTINGS
-39.3			SANDY SHALE	10.0	467.0	
-49.3			SHALE	20.0	477.0	WITH BROWN SPOTS
-69.3			SANDY SHALE	15.0	497.0	
-84.3			SANDSTONE	5.0	512.0	
-89.3			SANDY SHALE	1.0	517.0	
-90.3			SANDSTONE	40.0	518.0	
-130.3			LIMESTONE	1.3	558.0	
-131.6			SHALE	6.0	559.3	
-137.6			COAL	1.0	565.3	
-138.6			SHALE WITH LIMESTONE	5.8	566.3	WITH LIMESTONE SPOTS

MAPID: 05501353000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 9 **QUARTERS/FOOTAGES:** 370' N line, 330' E line of SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.096854 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.927805 **DATE COLLECTED:** 8 / 0 / 1957

SURFACE ELEVATION (FT.): 422.0 **LOGGED (FT.):** 1530.0 **LOG TYPE:** Electric Log

SOURCE: REE, INC. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-238.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	660.0	
-316.0	SPOON	DAVIS	UNCLASSIFIED	-	738.0	
-1108.0	BASE OF PENN.		UNCLASSIFIED	-	1530.0	

MAPID: 05500283000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 10 **QUARTERS/FOOTAGES:** 2310' N line, 990' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.080554 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.929536 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 420.0 **LOGGED (FT.):** 420.7 **LOG TYPE:** Drillers Log

SOURCE: BELL & ZOLLER COAL CO 19 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
202.0	MODESTO	PIASA	LIMESTONE	4.6	218.0	
197.4	MODESTO		DARK GRAY SHALE	3.8	222.6	
193.6	CARBONDALE	DANVILLE	COAL	2.3	226.4	
191.3	CARBONDALE		SILTY SHALE	11.4	228.7	
179.9	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	2.0	240.1	UPPER BENCH
177.9	CARBONDALE	BANKSTON FORK	SILTY SHALE	2.6	242.1	SHALE PARTING
175.3	CARBONDALE	BANKSTON FORK	LIMESTONE	1.6	244.7	LOWER BENCH
173.8	CARBONDALE	LAWSON	SILTY SHALE	28.3	246.2	
145.5	CARBONDALE	ENERGY	COAL	1.8	274.5	
143.7	CARBONDALE	ENERGY	CARBONACEOUS SHALE	7.4	276.3	
136.3	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	38.0	283.7	
98.3	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	99.0	321.7	

MAPID: 05500289000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 10 **QUARTERS/FOOTAGES:** SE NW SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.082879 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.925853 **DATE COLLECTED:** 0 / 0 / 1912

SURFACE ELEVATION (FT.): 426.1 **LOGGED (FT.):** 548.0 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COUNTY COAL CORP. 4 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
426.1	PLEISTOCENE		CLAY	15.0	0.0	
411.1	MODESTO		SANDSTONE	11.0	15.0	
400.1	MODESTO		SANDY SHALE	6.0	26.0	
394.1	MODESTO		SANDY SHALE	28.0	32.0	WITH SANDSTONE PARTINGS
366.1	MODESTO		SHALE	5.0	60.0	
361.1	MODESTO		SHALE	3.5	65.0	
357.6	MODESTO	CHAPEL	COAL	0.3	68.5	
357.3	MODESTO		CLAYSTONE	3.3	68.8	
354.1	MODESTO		SHALE	3.0	72.0	
351.1	MODESTO		SANDY SHALE	114.0	75.0	
237.1	MODESTO		SHALE	3.0	189.0	
234.1	MODESTO		SHALE & SANDSTONE	19.0	192.0	
215.1	MODESTO		SHALE	1.0	211.0	DARK GRAY
214.1	MODESTO		SHALE	4.0	212.0	
210.1	MODESTO		SHALE & SANDSTONE	9.0	216.0	
201.1	MODESTO		SANDY SHALE	20.0	225.0	
181.1	MODESTO	PIASA	LIMESTONE	7.0	245.0	
174.1	MODESTO		SHALE	1.0	252.0	
173.1	CARBONDALE	DANVILLE	COAL	1.2	253.0	
171.9			SANDY SHALE	9.8	254.2	
162.1			SHALE	4.0	264.0	WITH BROWN BANDS; DARK GRAY
158.1			SANDY SHALE	1.0	268.0	
157.1			SHALE WITH LIMESTONE	7.0	269.0	WITH LIMESTONE SPOTS
150.1			SANDY SHALE	28.6	276.0	
121.5			COAL	1.4	304.6	
120.1			CLAYSTONE	0.5	306.0	
119.6			SANDY SHALE	18.5	306.5	
101.1			SANDY SHALE	21.0	325.0	SANDY WITH SANDSTONE
80.1			SANDSTONE	25.0	346.0	WITH SHALE PARTINGS
55.1			SANDY SHALE	14.0	371.0	
41.1			SANDY SHALE	46.0	385.0	WITH SANDSTONE PARTINGS
-4.9			SANDSTONE	46.0	431.0	
-50.9			SANDY CONGLOMERATE	4.0	477.0	
-54.9			SANDSTONE	9.0	481.0	
-63.9			SANDY CONGLOMERATE	5.0	490.0	
-68.9			SANDY SHALE	33.0	495.0	WITH SANDSTONE PARTINGS
-101.9			SHALE	4.0	528.0	WITH BROWN BANDS
-105.9			LIMESTONE	1.5	532.0	DARK

-107.4	SHALE	5.3	533.5	
-112.7	COAL	1.3	538.8	
-114.0	CLAYSTONE	2.9	540.1	
-116.9	SHALE WITH LIMESTONE	5.0	543.0	WITH LIMESTONE SPOTS

MAPID: 05500289000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 10 **QUARTERS/FOOTAGES:** SE NW SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.082879 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.925853 **DATE COLLECTED:** 0 / 0 / 1912

SURFACE ELEVATION (FT.): 426.1 **LOGGED (FT.):** 548.0 **LOG TYPE:**

SOURCE: FRAN CO CC0004 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
26.1	CARBONDALE	HERRIN	COAL	-	400.0	CORRELATION UNCERTAIN

MAPID: 05500279000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 11 **QUARTERS/FOOTAGES:** 1320' N line, 660' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.060942 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.932265 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 431.0 **LOGGED (FT.):** 421.2 **LOG TYPE:** Drillers Log

SOURCE: BELL & ZOLLER COAL CO 15 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
163.0	MODESTO	PIASA	LIMESTONE	5.8	268.0	
157.2	MODESTO		DARK GRAY SHALE	2.6	273.8	
154.6	CARBONDALE	DANVILLE	COAL	2.4	276.4	
152.2	CARBONDALE		GRAY SHALE	8.2	278.8	
144.0	CARBONDALE	ALLENBY	COAL	0.2	287.0	
143.8	CARBONDALE		CALCAREOUS SHALE	9.6	287.2	
134.2	CARBONDALE	BANKSTON FORK	LIMESTONE	5.1	296.8	
129.2	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	61.6	301.8	
67.6	CARBONDALE	ENERGY	CARBONACEOUS SHALE	48.6	363.4	
19.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	9.2	412.0	

MAPID: 05502103000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 11 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of SW SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.066708 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.923969 **DATE COLLECTED:** 12 / 0 / 1963

SURFACE ELEVATION (FT.): 405.0 **LOGGED (FT.):** 1465.0 **LOG TYPE:** Electric Log

SOURCE: GALLAGHER, VICTOR R. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-190.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	595.0	
-250.0	SPOON	DAVIS	UNCLASSIFIED	-	655.0	
-1060.0	BASE OF PENN.		UNCLASSIFIED	-	1465.0	

MAPID: 05500278000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 12 **QUARTERS/FOOTAGES:** 2640' N line, 660' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.056357 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.928539 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 439.0 **LOGGED (FT.):** 410.4 **LOG TYPE:** Drillers Log

SOURCE: BELL & ZOLLER COAL CO 16 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
183.0	MODESTO	PIASA	LIMESTONE	6.1	256.0	
176.9	MODESTO		DARK GRAY SHALE	1.8	262.1	
175.1	CARBONDALE	DANVILLE	COAL	2.3	263.9	
172.8	CARBONDALE		SHALE & SANDSTONE	8.4	266.2	
164.4	CARBONDALE	ALLENBY	BLACK SHALE	0.4	274.6	
164.0	CARBONDALE		GRAY SHALE	7.4	275.0	
156.6	CARBONDALE	BANKSTON FORK	LIMESTONE	3.9	282.4	
152.7	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	48.3	286.3	
104.3	CARBONDALE	ENERGY	SILTY SHALE	56.7	334.7	
47.7	CARBONDALE	ENERGY	CARBONACEOUS SHALE	5.9	391.3	
41.0	CARBONDALE	HERRIN	SANDSTONE	12.4	398.0	

MAPID: 05500194000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 13 **QUARTERS/FOOTAGES:** 1320' N line, 1980' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.046719 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.917147 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 423.8 **LOGGED (FT.):** 476.0 **LOG TYPE:**

SOURCE: BELL ZOLL 0003 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-12.2	CARBONDALE	HERRIN	COAL	11.5	436.0	
-46.2	CARBONDALE	SPRINGFIELD	COAL	5.0	470.0	

MAPID: 05500194000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 13 **QUARTERS/FOOTAGES:** 1320' N line, 1980' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.046719 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.917147 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 406.0 **LOGGED (FT.):** 447.5 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
117.0	MODESTO		BLACK SHALE	1.7	289.0	
115.3	CARBONDALE	DANVILLE	COAL	1.8	290.7	
113.5	CARBONDALE		SHALE & SANDSTONE	12.0	292.5	
101.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	304.5	
99.0	CARBONDALE	LAWSON	CALCAREOUS SHALE	9.5	307.0	
89.5	CARBONDALE	BRERETON	LIMESTONE	8.0	316.5	
81.5	CARBONDALE	ENERGY	SHALE & SANDSTONE	26.0	324.5	
55.5	CARBONDALE	ENERGY	SANDSTONE	21.5	350.5	
34.0	CARBONDALE	ENERGY	GRAY SHALE	24.5	372.0	
9.5	CARBONDALE	ENERGY	SHALE & SANDSTONE	18.0	396.5	
-8.5	CARBONDALE	ENERGY	SILTY SHALE	21.5	414.5	
-30.0	CARBONDALE	HERRIN	COAL	11.5	436.0	

MAPID: 05500194000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 13 **QUARTERS/FOOTAGES:** 1320' N line, 1980' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.046719 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.917147 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 423.8 **LOGGED (FT.):** 476.0 **LOG TYPE:** Drillers Log

SOURCE: ZIEGLER COAL CO. 3 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
423.8	PLEISTOCENE		CLAY	15.0	0.0	YELLOW
408.8	MODESTO		SANDSTONE	16.5	15.0	
392.3	MODESTO		SHALE	1.5	31.5	
390.8	MODESTO		SANDSTONE	10.0	33.0	
380.8	MODESTO		SANDSTONE	29.0	43.0	WITH SHALE PARTINGS
351.8	MODESTO		SANDSTONE	17.0	72.0	
334.8	MODESTO		BLACK SHALE	3.6	89.0	
331.2	MODESTO	CHAPEL	COAL	1.2	92.6	
330.0	MODESTO		SHALE	2.0	93.8	
328.0	MODESTO		CONGLOMERATE	5.3	95.8	
322.8	MODESTO		SHALE	56.0	101.0	
266.8	MODESTO		BLACK SHALE	63.0	157.0	
203.8	MODESTO		SANDSTONE	20.0	220.0	WITH SHALE PARTINGS
183.8	MODESTO		BLACK SHALE	1.0	240.0	WITH SHALE PARTINGS
182.8	MODESTO		BLACK SHALE	1.1	241.0	
181.7	MODESTO		COAL	0.6	242.1	
181.0	MODESTO		SHALE	11.3	242.8	
169.8	MODESTO		SHALE	6.0	254.0	
163.8	MODESTO		SANDY SHALE	2.0	260.0	
161.8	MODESTO		SANDSTONE	4.0	262.0	WITH SHALE PARTINGS
157.8	MODESTO		SANDSTONE	22.5	266.0	
135.3	MODESTO		BLACK SHALE	1.7	288.5	
133.6	CARBONDALE	DANVILLE	COAL	1.8	290.2	
131.8	CARBONDALE		SANDSTONE	2.0	292.0	
129.8	CARBONDALE		SANDY SHALE	8.0	294.0	
121.8	CARBONDALE		SHALE	2.0	302.0	
119.8	CARBONDALE		LIMESTONE	2.5	304.0	
117.3	CARBONDALE		BLACK SHALE	9.5	306.5	WITH LIMESTONE PARTINGS
107.8	CARBONDALE		LIMESTONE	8.0	316.0	
99.8	CARBONDALE		SANDSTONE	16.0	324.0	
83.8	CARBONDALE		SANDY SHALE	10.0	340.0	
73.8	CARBONDALE		SANDSTONE	21.5	350.0	
52.3	CARBONDALE		SHALE	2.5	371.5	
49.8	CARBONDALE		BLACK SHALE	22.0	374.0	
27.8	CARBONDALE		SANDY SHALE	18.0	396.0	
9.8	CARBONDALE		SANDY SHALE	21.5	414.0	WITH SANDSTONE PARTINGS
-11.7	CARBONDALE	HERRIN	COAL	11.5	435.5	
-23.2	CARBONDALE		CLAYSTONE	2.0	447.0	
-25.2	CARBONDALE		LIMESTONE	1.5	449.0	

-26.7	CARBONDALE		SHALE	0.5	450.5
-27.2	CARBONDALE		LIMESTONE	4.0	451.0
-31.2	CARBONDALE		BLACK SHALE	5.0	455.0
-36.2	CARBONDALE		BLACK SHALE	10.0	460.0
-46.2	CARBONDALE	SPRINGFIELD	COAL	5.0	470.0
-51.2	CARBONDALE		SHALE	1.0	475.0

MAPID: 05500272000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 13 **QUARTERS/FOOTAGES:** NW SW SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.048115 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.909064 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 407.5 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: BELL ZOLL 0001 **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
16.5	CARBONDALE	HERRIN	COAL	10.0	391.0	

MAPID: 05500280000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 13 **QUARTERS/FOOTAGES:** NE SW SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.045746 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.908999 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 414.8 **LOGGED (FT.):** 401.0 **LOG TYPE:** Measured section

SOURCE: BELL ZOLL 0001 **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
23.8	CARBONDALE	HERRIN	COAL	10.0	391.0	

MAPID: 05500196000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 14 **QUARTERS/FOOTAGES:** SE SE SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.059915 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.907528 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 413.7 **LOGGED (FT.):** 418.0 **LOG TYPE:** Drillers Log

SOURCE: ZEIGLER COAL CO. 9 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
413.7	PLEISTOCENE		CLAY	14.0	0.0	YELLOW
399.7	PLEISTOCENE		CLAY	6.0	14.0	
393.7	MODESTO		SANDSTONE	13.0	20.0	
380.7	MODESTO		BLACK SHALE	4.0	33.0	
376.7	MODESTO		SHALE	127.0	37.0	
249.7	MODESTO		SANDY SHALE	9.0	164.0	WITH SANDSTONE PARTINGS
240.7	MODESTO		SANDSTONE	9.0	173.0	
231.7	MODESTO		SANDY SHALE	1.0	182.0	WITH SANDSTONE PARTINGS
230.7	MODESTO		SANDY SHALE	1.0	183.0	WITH SANDSTONE BANDS
229.7	MODESTO		SHALE	1.0	184.0	
228.7	MODESTO		COAL	0.2	185.0	
228.5	MODESTO		SHALE	0.8	185.2	LIGHT BLUE
227.7	MODESTO		SHALE	8.5	186.0	
219.2	MODESTO		SANDSTONE	17.5	194.5	
201.7	MODESTO		SANDSTONE	7.0	212.0	WITH SHALE PARTINGS
194.7	MODESTO		SHALE	7.0	219.0	
187.7	MODESTO	PIASA	LIMESTONE	6.0	226.0	
181.7	MODESTO		SHALE	1.0	232.0	
180.7	MODESTO		SHALE	2.0	233.0	
178.7	CARBONDALE	DANVILLE	COAL	2.2	235.0	
176.5	CARBONDALE		SHALE	4.8	237.2	
171.7	CARBONDALE		SHALE	2.0	242.0	
169.7	CARBONDALE		LIMESTONE	21.5	244.0	
148.2	CARBONDALE		SANDSTONE	25.5	265.5	
122.7	CARBONDALE	ENERGY	SANDY SHALE	28.0	291.0	
94.7	CARBONDALE	ENERGY	BLACK SHALE	1.0	319.0	
93.7	CARBONDALE	ENERGY	SANDY SHALE	53.0	320.0	WITH SANDSTONE
40.7	CARBONDALE	ENERGY	SANDY SHALE	10.0	373.0	WITH SANDSTONE PARTINGS
30.7	CARBONDALE	ENERGY	SHALE	2.5	383.0	WITH HARD SANDSTONE
28.2	CARBONDALE	HERRIN	COAL	12.0	385.5	
16.2	CARBONDALE		SHALE	8.0	397.5	
8.2	CARBONDALE		SHALE	1.1	405.5	
7.1	CARBONDALE		SHALE	6.2	406.6	
0.9	CARBONDALE	SPRINGFIELD	COAL	4.3	412.8	
-3.3	CARBONDALE		SHALE	1.0	417.0	

MAPID: 05500196000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 14 **QUARTERS/FOOTAGES:** SE SE SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.059915 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.907528 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 413.7 **LOGGED (FT.):** 418.0 **LOG TYPE:**

SOURCE: BELL ZOLL 0009 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
27.7	CARBONDALE	HERRIN	COAL	12.0	386.0	
0.7	CARBONDALE	SPRINGFIELD	COAL	4.3	413.0	

MAPID: 05500197000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 15 **QUARTERS/FOOTAGES:** NE SE SW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.087445 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.909386 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 355.0 **LOG TYPE:** Drillers Log

SOURCE: WESTERN COAL & MINING CO. 3 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
395.0	PLEISTOCENE		UNCONSOLIDATED	2.0	0.0	
393.0	PLEISTOCENE		CLAY	22.0	2.0	YELLOW
371.0	MODESTO		SANDY SHALE	3.0	24.0	
368.0	MODESTO		SANDSTONE	2.0	27.0	
366.0	MODESTO		SANDY SHALE	8.0	29.0	
358.0	MODESTO		SANDSTONE	3.0	37.0	
355.0	MODESTO		SHALE WITH LIMESTONE	10.0	40.0	WITH LIMESTONE BANDS
345.0	MODESTO		SHALE	98.0	50.0	
247.0	MODESTO		SANDY SHALE	3.0	148.0	
244.0	MODESTO		SANDY SHALE	14.0	151.0	
230.0	MODESTO		SANDSTONE	2.0	165.0	
228.0	MODESTO		SHALE	1.3	167.0	
226.7	MODESTO		SHALY COAL	0.2	168.3	
226.5	MODESTO		SHALE	4.5	168.5	
222.0	MODESTO		SANDSTONE	10.0	173.0	
212.0	MODESTO		SANDY SHALE	20.0	183.0	
192.0	MODESTO		SHALE	2.5	203.0	
189.5	MODESTO	DEGRAFF	SHALY COAL	0.5	205.5	
189.0	MODESTO		SHALE	2.0	206.0	
187.0	MODESTO	PIASA	LIMESTONE	3.5	208.0	
183.5	MODESTO		SHALE	5.0	211.5	
178.5	CARBONDALE	DANVILLE	COAL	2.1	216.5	
176.4	CARBONDALE		CALCAREOUS SHALE	4.4	218.6	
172.0	CARBONDALE		SANDY SHALE	3.0	223.0	
169.0	CARBONDALE		SHALE	1.0	226.0	
168.0	CARBONDALE		SHALE	1.0	227.0	
167.0	CARBONDALE		SHALE	2.5	228.0	
164.5	CARBONDALE		CALCAREOUS SHALE	9.5	230.5	
155.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.5	240.0	
146.5	CARBONDALE	ENERGY	SANDY SHALE	8.5	248.5	SAND WITH LIMESTONE
138.0	CARBONDALE	ENERGY	SANDY SHALE	29.0	257.0	
109.0	CARBONDALE	ENERGY	SHALE	55.8	286.0	WITH BROWN BANDS
53.2	CARBONDALE	HERRIN	COAL	2.8	341.8	
50.4	CARBONDALE	HERRIN	SHALE	0.3	344.6	
50.2	CARBONDALE	HERRIN	COAL	0.7	344.8	
49.5	CARBONDALE	HERRIN	SHALE	0.8	345.5	
48.7	CARBONDALE	HERRIN	COAL	1.0	346.3	
47.7	CARBONDALE	HERRIN	SHALE	0.3	347.3	
47.3	CARBONDALE	HERRIN	COAL	4.3	347.7	

43.0	CARBONDALE	HERRIN	BLACK SHALE	0.3	352.0
42.7	CARBONDALE	HERRIN	COAL	1.0	352.3
41.7	CARBONDALE		SHALE	0.3	353.3
41.3	CARBONDALE		SHALE	1.3	353.7

MAPID: 05500197000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 15 **QUARTERS/FOOTAGES:** NE SE SW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.087445 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.909386 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 354.0 **LOG TYPE:**

SOURCE: WESTERN CM0003 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
53.0	CARBONDALE	HERRIN	COAL	11.5	342.0	

MAPID: 05500282000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 15 **QUARTERS/FOOTAGES:** 1320' S line, 1320' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.08159 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.910212 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 386.0 **LOGGED (FT.):** 345.7 **LOG TYPE:** Drillers Log

SOURCE: BELL & ZOLLER COAL CO 18 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
190.6	MODESTO	PIASA	LIMESTONE	4.8	195.4	
183.7	CARBONDALE	DANVILLE	COAL	2.2	202.3	
161.1	CARBONDALE	BANKSTON FORK	LIMESTONE	6.4	224.9	
154.7	CARBONDALE	ENERGY	SILTY SHALE	44.9	231.3	
109.7	CARBONDALE	ENERGY	DARK GRAY SHALE	9.3	276.3	
100.5	CARBONDALE	ENERGY	SILTY SHALE	48.6	285.5	
51.9	CARBONDALE	HERRIN	COAL	11.6	334.1	

MAPID: 05523153000C **VERSION:** 1 **PROJECT:** NCRDS

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 15 **QUARTERS/FOOTAGES:** 2400' S line, 75' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.095329 **GEOLOGIST:** LOUCHIOS

CONFIDENTIAL: N **LATITUDE:** 37.913325 **DATE COLLECTED:** / / 1981

SURFACE ELEVATION (FT.): 399.0 **LOGGED (FT.):** 423.8 **LOG TYPE:** Drillers Log

SOURCE: ZEIGLER COAL CO. 38-11 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
399.0	PLEISTOCENE		SOIL	11.5	0.0	
387.5	PLEISTOCENE		GLACIAL DRIFT	20.5	11.5	
367.0			GRAY SHALE	7.5	32.0	
359.5			BLACK SHALE	1.5	39.5	
358.0			COAL	1.0	41.0	
357.0			UNDERCLAY	1.5	42.0	
355.5			GRAY SHALE	18.5	43.5	
337.0			SANDSTONE	5.0	62.0	
332.0			SANDY SHALE	14.5	67.0	
317.5			SANDSTONE	2.5	81.5	
315.0			SANDY SHALE	85.5	84.0	
229.5	SHELBURN		LIMESTONE	1.5	169.5	
228.0	SHELBURN		SANDY SHALE	11.5	171.0	
216.5	SHELBURN		SANDSTONE	6.5	182.5	
210.0	SHELBURN		BLACK SHALE	2.0	189.0	
208.0	SHELBURN		CLAYSTONE	5.0	191.0	
203.0	SHELBURN		SANDY SHALE	6.0	196.0	
197.0	SHELBURN		SANDSTONE	14.0	202.0	
183.0	SHELBURN		SANDY SHALE	13.0	216.0	
170.0	SHELBURN		GRAY SHALE	3.0	229.0	
167.0	SHELBURN		LIMESTONE	5.5	232.0	
161.5	SHELBURN		DARK SHALE	1.5	237.5	
160.0	SHELBURN		CLAYSTONE	1.5	239.0	
158.5	SHELBURN	DANVILLE	COAL	1.5	240.5	
157.0	SHELBURN		UNDERCLAY	2.0	242.0	
155.0	SHELBURN		GRAY SHALE	12.5	244.0	
142.5	SHELBURN		SANDSTONE	5.0	256.5	
137.5	SHELBURN		SHALE	4.5	261.5	
133.0	SHELBURN		LIMESTONE	4.0	266.0	
129.0	SHELBURN		GRAY SHALE	3.0	270.0	
126.0	SHELBURN		SANDY SHALE	9.0	273.0	
117.0	SHELBURN		SANDSTONE	9.0	282.0	
108.0	SHELBURN		SHALY SANDSTONE	23.0	291.0	
85.0	SHELBURN		SILTY SHALE	44.2	314.0	
40.8	SHELBURN		GRAY SHALE	4.2	358.2	
36.6	SHELBURN		COAL	1.8	362.4	
34.8	SHELBURN		GRAY SHALE	0.4	364.2	
34.4	SHELBURN		COAL WITH SHALE	2.3	364.6	
32.2	SHELBURN		GRAY SHALE	6.7	366.8	

25.5	SHELBURN		SIDERITE	0.4	373.5
25.1	SHELBURN		GRAY SHALE	4.5	373.9
20.6	SHELBURN		GRAY SHALE	10.1	378.4
10.5	CARBONDALE	HERRIN	COAL	11.7	388.5
-1.1	CARBONDALE		CLAYSTONE	0.9	400.1
-2.0	CARBONDALE		CONGLOMERATE	2.7	401.0
-4.7	CARBONDALE		CLAYSTONE	3.1	403.7
-7.8	CARBONDALE		SHALE	0.6	406.8
-8.4	CARBONDALE		LIMESTONE	1.7	407.4
-10.1	CARBONDALE	TURNER MINE	BLACK SHALE	6.4	409.1
-16.5	CARBONDALE	SPRINGFIELD	COAL	4.6	415.5
-21.1	CARBONDALE		CLAYSTONE	0.8	420.1
-21.9	CARBONDALE		SHALE	2.4	420.9
-24.3	CARBONDALE		SILTSTONE	0.3	423.3

MAPID: 05500295000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 16 **QUARTERS/FOOTAGES:** 2640' N line, 1320' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.109653 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.914173 **DATE COLLECTED:** 0 / 0 / 1912

SURFACE ELEVATION (FT.): 430.8 **LOGGED (FT.):** 440.0 **LOG TYPE:**

SOURCE: THOMSON 0009 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
46.8	CARBONDALE	HERRIN	COAL	9.6	384.0	
1.8	CARBONDALE	SPRINGFIELD	COAL	4.6	429.0	

MAPID: 05500295000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 16 **QUARTERS/FOOTAGES:** 2640' N line, 1320' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.109653 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.914173 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 431.0 **LOGGED (FT.):** 393.6 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
244.7	MODESTO		ARGILLACEOUS SANDSTONE	67.0	186.3	
177.7	CARBONDALE	DANVILLE	COAL	0.7	253.3	
177.1	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	253.9	
175.7	CARBONDALE	ENERGY	SILTY SHALE	4.0	255.3	
171.7	CARBONDALE	ENERGY	CALCAREOUS SHALE	5.0	259.3	
166.7	CARBONDALE	ENERGY	SANDSTONE	80.0	264.3	
86.7	CARBONDALE	ENERGY	SANDSTONE	39.8	344.3	
47.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	9.6	384.0	

MAPID: 05500295000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 16 **QUARTERS/FOOTAGES:** 2640' N line, 1320' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.109653 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.914173 **DATE COLLECTED:** 0 / 0 / 1912

SURFACE ELEVATION (FT.): 430.8 **LOGGED (FT.):** 440.0 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COUNTY COAL CO. 9 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
430.8	PLEISTOCENE		CLAY	39.5	0.0	
391.3			SOFT SHALE	0.5	39.5	
390.8			COAL	0.5	40.0	
390.3			SHALE	89.5	40.5	
300.8			SOFT SHALE	35.0	130.0	
265.8			SANDY SHALE	5.0	165.0	WITH SANDSTONE PARTINGS
260.8			SANDY SHALE	5.0	170.0	SANDY WITH SANDSTONE
255.8			SHALE	1.0	175.0	
254.8			SHALE	4.0	176.0	GRAY-RED
250.8			SANDY SHALE	4.0	180.0	
246.8			LIMESTONE	2.0	184.0	
244.8			SANDSTONE	66.0	186.0	WITH SHALE PARTINGS
178.8			SANDSTONE	1.0	252.0	
177.8			COAL	0.7	253.0	
177.1			LIMESTONE	1.3	253.7	
175.8			SANDY SHALE	4.0	255.0	
171.8			SHALE WITH LIMESTONE	5.0	259.0	WITH LIMESTONE SPOTS
166.8			SANDSTONE	80.0	264.0	WITH SHALE PARTINGS
86.8			SANDSTONE	39.8	344.0	
47.0	CARBONDALE	HERRIN	COAL	0.3	383.8	
46.8	CARBONDALE	HERRIN	COAL	1.0	384.0	
45.8	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	2.0	385.0	WITH SHALE PARTINGS
43.8	CARBONDALE	HERRIN	SHALE W/ COAL STREAKS	4.0	387.0	WITH COAL PARTINGS
39.8	CARBONDALE	HERRIN	COAL	2.3	391.0	
37.5	CARBONDALE		CLAYSTONE	0.7	393.3	
36.8	CARBONDALE		LIMESTONE	10.0	394.0	
26.8	CARBONDALE		SHALE	17.0	404.0	WITH BROWN PARTINGS
9.8	CARBONDALE		LIMESTONE	1.0	421.0	
8.8	CARBONDALE		SHALE	4.0	422.0	
4.8	CARBONDALE		SHALE	3.1	426.0	
1.7	CARBONDALE	SPRINGFIELD	COAL	4.2	429.1	
-2.5	CARBONDALE	SPRINGFIELD	PYRITE	0.1	433.3	
-2.5	CARBONDALE	SPRINGFIELD	COAL	0.3	433.3	
-2.9	CARBONDALE		CLAYSTONE	0.8	433.7	
-3.7	CARBONDALE		SHALE	3.5	434.5	WITH DARK SPOTS
-7.2	CARBONDALE		SHALE WITH LIMESTONE	2.0	438.0	WITH LIMESTONE SPOTS

MAPID: 05523154000C **VERSION:** 1 **PROJECT:** NCRDS

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 17 **QUARTERS/FOOTAGES:** 100' S line, 75' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.114484 **GEOLOGIST:** LOUCHIOS

CONFIDENTIAL: N **LATITUDE:** 37.906975 **DATE COLLECTED:** / / 1981

SURFACE ELEVATION (FT.): 438.3 **LOGGED (FT.):** 420.0 **LOG TYPE:** Drillers Log

SOURCE: ZEIGLER COAL CO. 38-7 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
438.3	PLEISTOCENE		SOIL	9.5	0.0	
428.8	PLEISTOCENE		GLACIAL DRIFT	6.0	9.5	
422.8			SANDSTONE	18.5	15.5	
404.3			DARK SHALE	4.2	34.0	
400.1			COAL	0.3	38.2	
399.8			CLAYSTONE	0.5	38.5	
399.3			SANDY SHALE	24.5	39.0	
374.8			GRAY SHALE	93.5	63.5	
281.3	SHELBURN		BLACK SHALE	0.5	157.0	
280.8	SHELBURN		SANDY SHALE	15.5	157.5	
265.3	SHELBURN		SANDSTONE	1.0	173.0	
264.3	SHELBURN		BLACK SHALE	1.0	174.0	
263.3	SHELBURN		CLAYSTONE	3.0	175.0	
260.3	SHELBURN		SHALE	2.5	178.0	
257.8	SHELBURN		SANDY SHALE	43.5	180.5	
214.3	SHELBURN		SANDSTONE	2.0	224.0	
212.3	SHELBURN	DANVILLE	COAL	1.5	226.0	
210.8	SHELBURN		SANDY SHALE	3.5	227.5	
207.3	SHELBURN		SANDSTONE	25.5	231.0	
181.8	SHELBURN		LIMESTONE	7.0	256.5	
174.8	SHELBURN		GRAY SHALE	2.5	263.5	
172.3	SHELBURN		SHALE	6.5	266.0	
165.8	SHELBURN		SILTY SHALE	16.5	272.5	
149.3	SHELBURN		SANDY SHALE	71.0	289.0	
78.3	CARBONDALE	HERRIN	COAL	11.9	360.0	
66.4	CARBONDALE		CLAYSTONE & SILTSTONE	2.1	371.9	
64.3	CARBONDALE		NO RECORD	36.8	374.0	
27.5	CARBONDALE	SPRINGFIELD	COAL	4.7	410.8	

MAPID: 05500297000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 18 **QUARTERS/FOOTAGES:** NW SE SW

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.145223 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.909389 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**

SOURCE: FRAN CO CC **WELL TYPE:** Coal Test

COMMENT: LOCATION AND SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
22.0	CARBONDALE	HERRIN	COAL	10.0	378.0	

MAPID: 05526383000C **VERSION:** 1 **PROJECT:** NCRDS 2013

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 18 **QUARTERS/FOOTAGES:** 994' S line, 1617' W line

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.145229 **GEOLOGIST:** LOUCHIOS

CONFIDENTIAL: N **LATITUDE:** 37.909375 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 388.0 **LOG TYPE:** Drillers Log

SOURCE: CONSOLIDATION COAL CO. 00-FC-297 **WELL TYPE:** Coal Test

COMMENT: ROYAL FALCON MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
400.0			UNCLASSIFIED	378.0	0.0	
22.0	CARBONDALE	HERRIN	COAL	10.0	378.0	

MAPID: 05500199000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 19 **QUARTERS/FOOTAGES:** SE SW SE

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.138456 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.892735 **DATE COLLECTED:** 0 / 0 / 1922

SURFACE ELEVATION (FT.): 393.6 **LOGGED (FT.):** 266.5 **LOG TYPE:** Drillers Log

SOURCE: WESTERN COAL & MINING CO. 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
393.6	PLEISTOCENE		CLAY	22.0	0.0	
371.6	MODESTO		SHALE	77.0	22.0	
294.6	MODESTO		SANDSTONE	19.0	99.0	
275.6	MODESTO		COAL	0.5	118.0	
275.1	MODESTO		SHALE	4.5	118.5	
270.6	MODESTO		SANDY SHALE	1.5	123.0	
269.1	MODESTO		SANDSTONE	9.0	124.5	
260.1	MODESTO		SHALE	26.0	133.5	
234.1	MODESTO	PIASA	LIMESTONE	5.0	159.5	
229.1	MODESTO		SHALE	1.0	164.5	
228.1	MODESTO		SHALE	10.0	165.5	
218.1	MODESTO		SHALE	3.0	175.5	
215.1	CARBONDALE	DANVILLE	COAL	3.0	178.5	
212.1	CARBONDALE	BANKSTON FORK	LIMESTONE	16.0	181.5	
196.1	CARBONDALE		SHALE	11.0	197.5	
185.1	CARBONDALE		BLACK SHALE	4.0	208.5	
181.1	CARBONDALE	BRERETON	LIMESTONE	3.0	212.5	
178.1	CARBONDALE	ENERGY	BLACK SHALE	40.0	215.5	
138.1	CARBONDALE	HERRIN	COAL	5.3	255.5	
132.8	CARBONDALE	HERRIN	BLACK SHALE	0.3	260.8	
132.6	CARBONDALE	HERRIN	COAL	2.5	261.0	
130.1	CARBONDALE		BLACK SHALE	0.3	263.5	
129.8	CARBONDALE		CLAYSTONE	2.8	263.8	

MAPID: 05500199000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 19 **QUARTERS/FOOTAGES:** SE SW SE

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.138456 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.892735 **DATE COLLECTED:** 0 / 0 / 1922

SURFACE ELEVATION (FT.): 393.6 **LOGGED (FT.):** 267.0 **LOG TYPE:**

SOURCE: WESTERN CM0001 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
137.6	CARBONDALE	HERRIN	COAL	8.0	256.0	

MAPID: 05500200000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 19 **QUARTERS/FOOTAGES:** SW NE SE

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.136218 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.896463 **DATE COLLECTED:** 0 / 0 / 1922

SURFACE ELEVATION (FT.): 399.2 **LOGGED (FT.):** 291.3 **LOG TYPE:** Drillers Log

SOURCE: WESTERN COAL & MINING CO. 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
399.2	PLEISTOCENE		CLAY	48.0	0.0	
351.2	MODESTO		SHALE	14.0	48.0	
337.2	MODESTO		SHALE	55.0	62.0	
282.2	MODESTO		LIMESTONE	2.5	117.0	
279.7	MODESTO		SHALE	1.5	119.5	
278.2	MODESTO		LIMESTONE	3.5	121.0	
274.7	MODESTO		SANDSTONE	14.5	124.5	
260.2	MODESTO		SHALE	9.0	139.0	
251.2	MODESTO		SHALE	4.0	148.0	
247.2	MODESTO		SHALE	24.0	152.0	
223.2	MODESTO	PIASA	LIMESTONE	5.0	176.0	
218.2			SHALE	7.0	181.0	
211.2			SANDSTONE	5.0	188.0	
206.2			SHALE	10.5	193.0	
195.7	CARBONDALE	BANKSTON FORK	LIMESTONE	9.5	203.5	
186.2	CARBONDALE		SHALE	15.0	213.0	
171.2	CARBONDALE		SHALE	10.5	228.0	
160.7	CARBONDALE	BRERETON	LIMESTONE	5.5	238.5	
155.2	CARBONDALE	ENERGY	BLACK SHALE	11.0	244.0	
144.2	CARBONDALE	ENERGY	SHALE	26.0	255.0	
118.2	CARBONDALE	HERRIN	COAL	10.0	281.0	
108.2	CARBONDALE		CLAYSTONE	0.3	291.0	

MAPID: 05500200000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 19 **QUARTERS/FOOTAGES:** SW NE SE

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.136218 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.896463 **DATE COLLECTED:** 0 / 0 / 1922

SURFACE ELEVATION (FT.): 399.2 **LOGGED (FT.):** 299.0 **LOG TYPE:**

SOURCE: WESTERN CM 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
118.2	CARBONDALE	HERRIN	COAL	10.0	281.0	

MAPID: 05500201000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 19 **QUARTERS/FOOTAGES:** SE NW SW

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.147475 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.896396 **DATE COLLECTED:** 0 / 0 / 1922

SURFACE ELEVATION (FT.): 401.5 **LOGGED (FT.):** 314.0 **LOG TYPE:** Drillers Log

SOURCE: WESTERN COAL & MINING CO. 3 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
401.5	PLEISTOCENE		CLAY	32.0	0.0	
369.5	MODESTO		SHALE	13.0	32.0	
356.5	MODESTO		SHALE	86.0	45.0	
270.5	MODESTO		LIMESTONE	8.0	131.0	
262.5	MODESTO		SHALE	2.0	139.0	
260.5	MODESTO		LIMESTONE	4.0	141.0	
256.5	MODESTO		SANDSTONE	5.0	145.0	
251.5	MODESTO		BLACK SHALE & COAL	5.0	150.0	WITH COAL
246.5	MODESTO		SHALE	15.0	155.0	
231.5	MODESTO		SHALE WITH LIMESTONE	26.0	170.0	WITH LIMESTONE
205.5	MODESTO	PIASA	LIMESTONE	7.0	196.0	
198.5	MODESTO		BLACK SHALE	2.0	203.0	
196.5	CARBONDALE	DANVILLE	COAL	2.0	205.0	
194.5	CARBONDALE		SHALE	14.0	207.0	
180.5	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	221.0	
172.5	CARBONDALE		SANDSTONE	10.0	229.0	
162.5	CARBONDALE		SHALE	13.0	239.0	
149.5	CARBONDALE	BRERETON	LIMESTONE	3.0	252.0	
146.5	CARBONDALE	ENERGY	BLACK SHALE	4.0	255.0	
142.5	CARBONDALE	ENERGY	SHALE	45.5	259.0	
97.0	CARBONDALE	HERRIN	COAL	8.5	304.5	
88.5	CARBONDALE		CLAYSTONE	1.0	313.0	

MAPID: 05500201000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 19 **QUARTERS/FOOTAGES:** SE NW SW

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.147475 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.896396 **DATE COLLECTED:** 0 / 0 / 1922

SURFACE ELEVATION (FT.): 401.5 **LOGGED (FT.):** 314.0 **LOG TYPE:**

SOURCE: WESTERN CM0003 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
96.5	CARBONDALE	HERRIN	COAL	8.5	305.0	

MAPID: 05501088000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 19 **QUARTERS/FOOTAGES:** 1156' N line, 2584' W line

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.141852 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.903465 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 398.0 **LOGGED (FT.):** 329.6 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COUNTY COAL CO. 12 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
222.6	MODESTO		SHALE & SANDSTONE	20.0	175.4	
202.6	CARBONDALE	DANVILLE	BONE COAL	2.8	195.4	
199.7	CARBONDALE	GALUM	LIMESTONE	3.3	198.3	
196.4	CARBONDALE		BLACK SHALE	5.7	201.6	
190.7	CARBONDALE	BANKSTON FORK	LIMESTONE	9.7	207.3	
181.1	CARBONDALE	LAWSON	CALCAREOUS SHALE	2.0	216.9	
179.1	CARBONDALE		BLACK SHALE	3.3	218.9	
175.7	CARBONDALE	BRERETON	LIMESTONE	3.3	222.3	
172.5	CARBONDALE	ENERGY	GRAY SHALE	74.1	225.5	
98.4	CARBONDALE	ENERGY	CALCAREOUS SHALE	11.0	299.6	
87.4	CARBONDALE	ENERGY	GRAY SHALE	7.4	310.6	
80.0	CARBONDALE	HERRIN	COAL	11.6	318.0	

MAPID: 05501081000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 20 **QUARTERS/FOOTAGES:** 2640' N line, 1320' W line

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.128253 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.899413 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 418.0 **LOGGED (FT.):** 326.5 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COUNTY COAL CO. 5 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
224.2	MODESTO	PIASA	LIMESTONE	5.0	193.8	
219.2	MODESTO		DARK GRAY SHALE	3.4	198.8	
215.7	CARBONDALE	DANVILLE	COAL	2.2	202.3	
213.6	CARBONDALE		SANDSTONE/SILTSTONE	10.0	204.4	
203.6	CARBONDALE		CALCAREOUS SHALE	1.6	214.4	
202.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.8	216.0	
200.2	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	9.0	217.8	
191.2	CARBONDALE	LAWSON	SILTY SHALE	5.0	226.8	
186.2	CARBONDALE	BRERETON	LIMESTONE	5.0	231.8	
181.2	CARBONDALE	ENERGY	ROCK	10.0	236.8	
171.2	CARBONDALE	ENERGY	GRAY SHALE	68.8	246.8	
102.4	CARBONDALE	ENERGY	DARK GRAY SHALE	1.4	315.6	
101.0	CARBONDALE	HERRIN	COAL	9.5	317.0	

MAPID: 05523338000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 21 **QUARTERS/FOOTAGES:** 495' S line, 235' W line of SE SW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.108787 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.893347 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 447.8 **LOGGED (FT.):** 1470.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1022.2	BASE OF PENN.		UNCLASSIFIED	-	1470.0	

MAPID: 05500202000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 22 **QUARTERS/FOOTAGES:** NW NW SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.085139 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.898324 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 394.7 **LOGGED (FT.):** 366.0 **LOG TYPE:** Drillers Log

SOURCE: ZEIGLER COAL CO. 12 **WELL TYPE:** Coal Test

COMMENT: UNIT DEPTHS ALTERED FROM ORIG.LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
394.7	PLEISTOCENE		SANDY CLAY	30.0	0.0	YELLOW
364.7	MODESTO		SOFT SHALE	35.0	30.0	
329.7	MODESTO		SHALE	45.0	65.0	
284.7	MODESTO		SHALE	0.5	110.0	
284.2	MODESTO		SHALE	1.0	110.5	
283.2	MODESTO		SHALY SANDSTONE	13.5	111.5	
269.7	MODESTO		SANDSTONE	5.0	125.0	
264.7	MODESTO		SHALE	1.5	130.0	
263.2	MODESTO		COAL	0.5	131.5	
262.7	MODESTO		SHALE	7.0	132.0	
255.7	MODESTO		SANDY SHALE	6.0	139.0	
249.7	MODESTO		SANDSTONE	10.0	145.0	
239.7	MODESTO		SANDY SHALE	14.0	155.0	
225.7	MODESTO		SHALE	1.5	169.0	
224.2	MODESTO	DEGRAFF	COAL	0.2	170.5	
224.0	MODESTO		SHALE	2.0	170.7	
222.0	MODESTO	PIASA	LIMESTONE	5.3	172.7	
216.7	MODESTO		SHALE	1.5	178.0	DARK BLUE
215.2	CARBONDALE	DANVILLE	COAL	2.1	179.5	
213.1	CARBONDALE		SHALE	8.4	181.6	DARK BLUE
204.7	CARBONDALE	ALLENBY	COAL	0.1	190.0	
204.6	CARBONDALE		SHALE	2.4	190.1	LIGHT
202.2	CARBONDALE		LIMESTONE	1.0	192.5	
201.2	CARBONDALE		CALCAREOUS SHALE	9.5	193.5	
191.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.8	203.0	
186.9	CARBONDALE		SHALY SANDSTONE	26.3	207.8	
160.7	CARBONDALE	ENERGY	SANDY SHALE	77.0	234.0	
83.7	CARBONDALE	ENERGY	SHALE	3.5	311.0	DARK BLUE
80.2	CARBONDALE	HERRIN	COAL	8.5	314.5	
71.7	CARBONDALE		SHALE	1.5	323.0	
70.2	CARBONDALE		SHALE	2.3	324.5	
67.9	CARBONDALE		LIMESTONE	10.8	326.8	
57.2	CARBONDALE		SHALE	1.0	337.5	
56.2	CARBONDALE		SANDSTONE	8.0	338.5	
48.2	CARBONDALE		SHALE	9.3	346.5	
38.9	CARBONDALE		SHALE	3.0	355.8	
35.9	CARBONDALE		SHALE	3.3	358.8	
32.5	CARBONDALE	SPRINGFIELD	COAL	4.4	362.2	
28.2	CARBONDALE		SHALE	0.9	366.5	

MAPID: 05500202000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 22 **QUARTERS/FOOTAGES:** NW NW SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.085139 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.898324 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 394.7 **LOGGED (FT.):** 366.0 **LOG TYPE:**

SOURCE: BELL ZOLL 0012 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
79.7	CARBONDALE	HERRIN	COAL	8.5	315.0	
33.7	CARBONDALE	SPRINGFIELD	COAL	4.4	361.0	

MAPID: 05500294000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 22 **QUARTERS/FOOTAGES:** NW SW NE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.085128 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.902004 **DATE COLLECTED:** 0 / 0 / 1912

SURFACE ELEVATION (FT.): 391.0 **LOGGED (FT.):** 343.0 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COUNTY COAL CORP. 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
391.0	PLEISTOCENE		CLAY	15.5	0.0	
375.5	MODESTO		SANDSTONE	6.5	15.5	
369.0	MODESTO		SHALE	105.0	22.0	
264.0	MODESTO		SANDY SHALE	18.0	127.0	
246.0	MODESTO		SHALY SANDSTONE	2.0	145.0	
244.0	MODESTO		SHALE	1.0	147.0	
243.0	MODESTO		COAL	0.3	148.0	
242.7	MODESTO		CLAYSTONE	0.7	148.3	
242.0	MODESTO		SHALE	4.5	149.0	
237.5	MODESTO		SANDSTONE	29.5	153.5	
208.0	MODESTO		SHALE	5.0	183.0	
203.0	MODESTO	PIASA	LIMESTONE	3.5	188.0	
199.5	MODESTO		SHALE	4.8	191.5	
194.7	CARBONDALE	DANVILLE	COAL	1.9	196.3	
192.8	CARBONDALE		CLAYSTONE	0.7	198.2	
192.2	CARBONDALE		SHALE	10.2	198.8	
182.0	CARBONDALE		SHALE	2.0	209.0	
180.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	211.0	
179.0	CARBONDALE		CALCAREOUS SHALE	8.0	212.0	
171.0	CARBONDALE	BRERETON	LIMESTONE	6.5	220.0	
164.5	CARBONDALE	ENERGY	CALCAREOUS SHALE	2.5	226.5	
162.0	CARBONDALE	ENERGY	SANDY SHALE	66.0	229.0	
96.0	CARBONDALE	ENERGY	SHALE	35.3	295.0	
60.7	CARBONDALE	HERRIN	BONE COAL	0.3	330.3	
60.3	CARBONDALE	HERRIN	COAL	7.9	330.7	
52.4	CARBONDALE	HERRIN	BLUE BAND	0.2	338.6	
52.2	CARBONDALE	HERRIN	COAL	2.0	338.8	
50.2	CARBONDALE		CLAYSTONE	2.3	340.8	

MAPID: 05500294000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 22 **QUARTERS/FOOTAGES:** NW SW NE
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.085128 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.902004 **DATE COLLECTED:** 0 / 0 / 1912
SURFACE ELEVATION (FT.): 391.0 **LOGGED (FT.):** 343.0 **LOG TYPE:**
SOURCE: FRAN CO CC0001 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
61.0	CARBONDALE	HERRIN	COAL	10.4	330.0	

MAPID: 05500956000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 22 **QUARTERS/FOOTAGES:** 660' N line, 330' W line of NW
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.094422 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.904883 **DATE COLLECTED:** 6 / 0 / 1942
SURFACE ELEVATION (FT.): 425.0 **LOGGED (FT.):** 1475.0 **LOG TYPE:** Electric Log
SOURCE: OIL CARRIERS INC **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-240.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	665.0	
-310.0	SPOON	DAVIS	UNCLASSIFIED	-	735.0	
-1050.0	BASE OF PENN.		UNCLASSIFIED	-	1475.0	

MAPID: 05502481000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 23 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of NE NE
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.059886 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.90379 **DATE COLLECTED:** 1 / 0 / 1968
SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 1490.0 **LOG TYPE:** Electric Log
SOURCE: GALLAGHER, VICTOR R. **WELL TYPE:** Dry Hole
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-195.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	590.0	
-270.0	SPOON	DAVIS	UNCLASSIFIED	-	665.0	
-1095.0	BASE OF PENN.		UNCLASSIFIED	-	1490.0	

MAPID: 05500203000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 24 **QUARTERS/FOOTAGES:** 1320' S line, 1320' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.044618 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.895084 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 402.2 **LOGGED (FT.):** 423.0 **LOG TYPE:**

SOURCE: BELL ZOLL 0002 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
36.2	CARBONDALE	HERRIN	COAL	9.3	366.0	
-15.8	CARBONDALE	SPRINGFIELD	COAL	4.3	418.0	

MAPID: 05500203000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 24 **QUARTERS/FOOTAGES:** 1320' S line, 1320' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.044618 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.895084 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 402.0 **LOGGED (FT.):** 375.3 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
178.7	MODESTO		BLACK SHALE	2.5	223.3	
176.2	CARBONDALE	DANVILLE	COAL	2.2	225.8	
174.0	CARBONDALE		BLACK SHALE	1.3	228.0	
172.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	229.3	
167.7	CARBONDALE	LAWSON	UNKNOWN	1.0	234.3	
166.7	CARBONDALE	LAWSON	SANDSTONE	1.0	235.3	
165.7	CARBONDALE	LAWSON	BLACK SHALE	2.0	236.3	
163.7	CARBONDALE	LAWSON	CARBONACEOUS SHALE	5.0	238.3	
158.7	CARBONDALE	BRERETON	LIMESTONE	18.0	243.3	
140.7	CARBONDALE	ENERGY	SHALE & SANDSTONE	18.0	261.3	
122.7	CARBONDALE	ENERGY	SANDSTONE	48.0	279.3	
74.7	CARBONDALE	ENERGY	SHALE	10.0	327.3	
64.7	CARBONDALE	ENERGY	SILTY SHALE	22.0	337.3	
42.7	CARBONDALE	ENERGY	SANDSTONE	6.7	359.3	
36.0	CARBONDALE	HERRIN	COAL	9.3	366.0	

MAPID: 05500203000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 24 **QUARTERS/FOOTAGES:** 1320' S line, 1320' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.044618 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.895084 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 402.2 **LOGGED (FT.):** 423.0 **LOG TYPE:** Drillers Log

SOURCE: ZEIGLER COAL CO. 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
402.2	PLEISTOCENE		CLAY	32.0	0.0	YELLOW
370.2	MODESTO		SHALE	3.0	32.0	
367.2	MODESTO		SANDSTONE	1.0	35.0	
366.2	MODESTO		SANDY SHALE	3.0	36.0	
363.2	MODESTO		BLACK SHALE	9.0	39.0	
354.2	MODESTO		SANDY SHALE	19.0	48.0	
335.2	MODESTO		BLACK SHALE	14.0	67.0	
321.2	MODESTO		SANDY SHALE	15.0	81.0	
306.2	MODESTO		SHALE	16.0	96.0	
290.2	MODESTO		SLATY SHALE	7.0	112.0	
283.2	MODESTO		BLACK SHALE	36.0	119.0	
247.2	MODESTO		SANDSTONE	1.0	155.0	
246.2	MODESTO		BLACK SHALE	2.0	156.0	
244.2	MODESTO		SANDSTONE	7.0	158.0	
237.2	MODESTO		BLACK SHALE	4.0	165.0	
233.2	MODESTO		BLACK SHALE	14.0	169.0	
219.2	MODESTO		SHALE	5.0	183.0	
214.2	MODESTO		SANDSTONE	9.0	188.0	
205.2	MODESTO		BLACK SHALE	6.0	197.0	
199.2	MODESTO		BLACK SHALE	22.0	203.0	
177.2	MODESTO		BLACK SHALE	2.5	225.0	
174.7	CARBONDALE	DANVILLE	COAL	2.2	227.5	
172.5	CARBONDALE		BLACK SHALE	1.3	229.7	
171.2	CARBONDALE	GALUM	LIMESTONE	4.0	231.0	
167.2	CARBONDALE		SANDSTONE	1.0	235.0	
166.2	CARBONDALE		BLACK SHALE	2.0	236.0	
164.2	CARBONDALE	ALLENBY	BLACK SHALE & COAL	5.0	238.0	SHALEY WITH COAL
159.2	CARBONDALE	BANKSTON FORK	LIMESTONE	18.0	243.0	
141.2	CARBONDALE		BLACK SHALE	10.0	261.0	
131.2	CARBONDALE		SILTSTONE/SANDSTONE	8.0	271.0	
123.2	CARBONDALE		SANDSTONE	28.0	279.0	
95.2	CARBONDALE		SANDSTONE	20.0	307.0	
75.2	CARBONDALE		BLACK SHALE	10.0	327.0	
65.2	CARBONDALE		SANDY SHALE	22.0	337.0	
43.2	CARBONDALE		SANDSTONE	6.7	359.0	
36.5	CARBONDALE	HERRIN	COAL	9.3	365.7	
27.3	CARBONDALE		CLAYSTONE	1.1	374.9	
26.2	CARBONDALE		CLAYSTONE	4.0	376.0	
22.2	CARBONDALE		LIMESTONE	12.0	380.0	

10.2	CARBONDALE		SANDSTONE	3.0	392.0
7.2	CARBONDALE		SHALE	18.0	395.0
-10.8	CARBONDALE		BLACK SHALE	4.5	413.0
-15.3	CARBONDALE	SPRINGFIELD	COAL	4.3	417.5
-19.6	CARBONDALE		CLAYSTONE	1.2	421.8

MAPID: 05500204000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 25 **QUARTERS/FOOTAGES:** 1320' N line, 1320' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.04464 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.887795 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 365.6 **LOGGED (FT.):** 348.0 **LOG TYPE:**

SOURCE: BELL ZOLL 0004 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
71.6	CARBONDALE	HERRIN	COAL	8.2	294.0	
23.6	CARBONDALE	SPRINGFIELD	COAL	3.1	342.0	

MAPID: 05500204000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 25 **QUARTERS/FOOTAGES:** 1320' N line, 1320' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.04464 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.887795 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 366.0 **LOGGED (FT.):** 302.2 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
216.0	MODESTO	PIASA	LIMESTONE	2.0	150.0	
214.0	MODESTO		SANDSTONE	4.0	152.0	
210.0	CARBONDALE	DANVILLE	BONE COAL	2.5	156.0	
207.5	CARBONDALE		SANDSTONE	5.0	158.5	
202.5	CARBONDALE	ALLENBY	COAL	0.5	163.5	
202.0	CARBONDALE		SANDSTONE	3.0	164.0	
199.0	CARBONDALE	BANKSTON FORK	LIMESTONE	11.0	167.0	
188.0	CARBONDALE	LAWSON	GRAY SHALE	4.0	178.0	
184.0	CARBONDALE	BRERETON	LIMESTONE	10.0	182.0	
174.0	CARBONDALE	ENERGY	GRAY SHALE	5.0	192.0	
169.0	CARBONDALE	ENERGY	SANDSTONE	64.0	197.0	
105.0	CARBONDALE	ENERGY	SHALE & SANDSTONE	31.0	261.0	
72.0	CARBONDALE	HERRIN	COAL	8.2	294.0	

MAPID: 05500204000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 25 **QUARTERS/FOOTAGES:** 1320' N line, 1320' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.04464 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.887795 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 365.5 **LOGGED (FT.):** 348.0 **LOG TYPE:** Drillers Log

SOURCE: ZEIGLER COAL CO. 4 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
365.5	PLEISTOCENE		CLAY	24.0	0.0	YELLOW
341.5	PLEISTOCENE		SAND	8.0	24.0	
333.5	PLEISTOCENE		CLAY	3.0	32.0	YELLOW
330.5	PLEISTOCENE		SAND	2.0	35.0	
328.5	PLEISTOCENE		CLAY	4.0	37.0	YELLOW
324.5	MODESTO		SHALE	2.5	41.0	
322.0	MODESTO		SHALE	25.5	43.5	
296.5	MODESTO		SHALE	20.0	69.0	
276.5	MODESTO		SANDY SHALE	11.0	89.0	
265.5	MODESTO		SHALE	10.0	100.0	
255.5	MODESTO		BLACK SHALE	1.0	110.0	
254.5	MODESTO		COAL	0.5	111.0	
254.0	MODESTO		COAL	0.5	111.5	
253.5	MODESTO		SHALE	14.0	112.0	
239.5	MODESTO		SHALE	24.0	126.0	
215.5	MODESTO	PIASA	LIMESTONE	2.0	150.0	
213.5	MODESTO		SANDSTONE	4.0	152.0	
209.5	MODESTO		SHALE	2.0	156.0	
207.5	CARBONDALE	DANVILLE	COAL WITH SHALE	2.5	158.0	
205.0	CARBONDALE		SANDSTONE	5.0	160.5	
200.0	CARBONDALE	ALLENBY	COAL	0.5	165.5	
199.5	CARBONDALE		SANDSTONE	3.0	166.0	
196.5	CARBONDALE	BANKSTON FORK	LIMESTONE	11.0	169.0	
185.5	CARBONDALE		SHALE	4.0	180.0	
181.5	CARBONDALE	BRERETON	LIMESTONE	10.0	184.0	
171.5	CARBONDALE	ENERGY	SHALE	5.0	194.0	
166.5	CARBONDALE	ENERGY	SANDSTONE	64.0	199.0	
102.5	CARBONDALE	ENERGY	SANDSTONE/SHALE	31.0	263.0	COAL AT BOTTOM
71.5	CARBONDALE	HERRIN	COAL	8.2	294.0	
63.3	CARBONDALE		SHALE	0.8	302.2	
62.5	CARBONDALE		LIMESTONE	14.0	303.0	
48.5	CARBONDALE		SHALE	9.0	317.0	
39.5	CARBONDALE		SHALE	15.8	326.0	
23.7	CARBONDALE	SPRINGFIELD	COAL	4.1	341.8	
19.7	CARBONDALE		SOFT SHALE	2.2	345.8	

MAPID: 05501916000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 25 **QUARTERS/FOOTAGES:** NE NE SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.041159 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.883025 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 375.0 **LOGGED (FT.):** 373.8 **LOG TYPE:** Drillers Log

SOURCE: 39 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
375.0	PLEISTOCENE		UNCONSOLIDATED	67.0	0.0	
308.0	MODESTO		SANDY SHALE	38.0	67.0	
270.0	MODESTO		SHALE	7.5	105.0	
262.5	MODESTO		BLACK SHALE	0.5	112.5	
262.0	MODESTO		CLAYSTONE	1.0	113.0	LIGHT
261.0	MODESTO		SANDY SHALE	15.0	114.0	SAND WITH LIMESTONE PART
246.0	MODESTO		SANDSTONE	4.0	129.0	WITH SHALE PARTINGS
242.0	MODESTO		BLACK SHALE	1.0	133.0	
241.0	MODESTO		BLACK SHALE & COAL	0.8	134.0	WITH COAL
240.2	MODESTO		CLAYSTONE	9.3	134.8	
231.0	MODESTO		SANDY SHALE	4.0	144.0	
227.0	MODESTO		SANDSTONE	6.0	148.0	
221.0	MODESTO		SANDY SHALE	19.0	154.0	PARTING
202.0	MODESTO		SHALE W/ COAL STREAKS	6.5	173.0	WITH COAL PARTINGS
195.5	MODESTO	PIASA	LIMESTONE	4.5	179.5	
191.0	MODESTO		SANDY SHALE	3.0	184.0	
188.0	CARBONDALE	DANVILLE	COAL WITH SHALE	2.0	187.0	WITH SHALE, SOFT
186.0	CARBONDALE		SANDY SHALE	6.0	189.0	
180.0	CARBONDALE	ALLENBY	SHALE	3.0	195.0	1" COAL
177.0	CARBONDALE		LIMESTONE	3.5	198.0	
173.5	CARBONDALE		SANDSTONE	13.5	201.5	
160.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	215.0	DARK GRAY
152.0	CARBONDALE	ENERGY	SANDSTONE	103.5	223.0	WITH SHALE PARTINGS
48.5	CARBONDALE	HERRIN	COAL	10.0	326.5	
38.5	CARBONDALE		CLAYSTONE	1.8	336.5	
36.7	CARBONDALE		LIMESTONE	8.0	338.3	
28.7	CARBONDALE		CLAYSTONE	1.0	346.3	
27.7	CARBONDALE		SANDSTONE/SHALE	4.0	347.3	
23.7	CARBONDALE		SHALE	5.0	351.3	
18.7	CARBONDALE	ST. DAVID	LIMESTONE	2.0	356.3	
16.7	CARBONDALE	TURNER MINE	BLACK SHALE	4.8	358.3	
12.0	CARBONDALE	DYKERSBURG	SHALE	5.3	363.0	
6.7	CARBONDALE	SPRINGFIELD	COAL	4.5	368.3	
2.2	CARBONDALE		CLAYSTONE	1.0	372.8	

MAPID: 05500176000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 26 **QUARTERS/FOOTAGES:** NW NW SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.06672 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.88326 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 385.0 **LOGGED (FT.):** 346.0 **LOG TYPE:** Drillers Log

SOURCE: ZEIGLER COAL CO. 7 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
385.0	PLEISTOCENE		CLAY	18.0	0.0	LIGHT YELLOW
367.0	PLEISTOCENE		SAND	11.0	18.0	
356.0	PLEISTOCENE		SANDY CLAY	29.0	29.0	
327.0	PLEISTOCENE		SAND	6.0	58.0	RED
321.0	MODESTO		SHALE	38.0	64.0	
283.0	MODESTO		SHALY SANDSTONE	21.0	102.0	
262.0	MODESTO		SHALE	1.5	123.0	
260.5	MODESTO		COAL	0.5	124.5	
260.0	MODESTO		SHALE	3.0	125.0	
257.0	MODESTO		SHALE	7.0	128.0	
250.0	MODESTO		SANDY SHALE	11.0	135.0	
239.0	MODESTO		SHALE	19.0	146.0	
220.0	MODESTO		SHALE	2.0	165.0	
218.0	MODESTO		SHALE	3.0	167.0	LIGHT
215.0	MODESTO	PIASA	LIMESTONE	4.8	170.0	
210.2	MODESTO		SHALE	1.7	174.8	
208.5	CARBONDALE	DANVILLE	COAL	2.1	176.5	
206.4	CARBONDALE		SANDY SHALE	6.8	178.6	
199.6	CARBONDALE	ALLENBY	COAL	0.1	185.4	
199.5	CARBONDALE		SHALE	2.5	185.5	
197.0	CARBONDALE	BANKSTON FORK	SANDY LIMESTONE	1.5	188.0	
195.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	189.5	
189.0	CARBONDALE		SHALE	4.0	196.0	LIGHT
185.0	CARBONDALE		SHALE	5.5	200.0	
179.5	CARBONDALE	BRERETON	LIMESTONE	7.0	205.5	
172.5	CARBONDALE	ENERGY	SHALY SANDSTONE	35.5	212.5	
137.0	CARBONDALE	ENERGY	SANDY SHALE	32.0	248.0	
105.0	CARBONDALE	ENERGY	SANDY SHALE	26.0	280.0	
79.0	CARBONDALE	ENERGY	SANDSTONE	6.5	306.0	
72.5	CARBONDALE	HERRIN	COAL	9.9	312.5	
62.6	CARBONDALE		SHALE	1.7	322.4	
60.9	CARBONDALE		SHALY LIMESTONE	9.9	324.1	WITH SHALE PARTINGS
51.0	CARBONDALE		SHALE	4.0	334.0	
47.0	CARBONDALE		SHALE	8.0	338.0	

MAPID: 05500176000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 26 **QUARTERS/FOOTAGES:** NW NW SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.06672 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.88326 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 385.0 **LOGGED (FT.):** 346.0 **LOG TYPE:**

SOURCE: BELL ZOLL 0007 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
72.0	CARBONDALE	HERRIN	COAL	9.9	313.0	

MAPID: 05500206000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 26 **QUARTERS/FOOTAGES:** SW SE NE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.06208 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.885106 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 323.0 **LOG TYPE:** Drillers Log

SOURCE: 38 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
395.0	PLEISTOCENE		UNCONSOLIDATED	71.0	0.0	
324.0	MODESTO		SOFT SHALE	4.0	71.0	
320.0	MODESTO		LIMESTONE	16.0	75.0	
304.0	MODESTO		BLACK SHALE	1.0	91.0	
303.0	MODESTO		COAL	0.8	92.0	
302.2	MODESTO		CLAYSTONE	0.3	92.8	DARK
302.0	MODESTO		SANDY SHALE	7.0	93.0	
295.0	MODESTO		SANDSTONE	10.0	100.0	
285.0	MODESTO		SANDY SHALE	22.0	110.0	SAND WITH PARTINGS
263.0	MODESTO		BLACK SHALE & COAL	1.0	132.0	WITH COAL PARTINGS
262.0	MODESTO		SHALE	3.0	133.0	
259.0	MODESTO	PIASA	LIMESTONE	4.5	136.0	
254.5	MODESTO		CLAYSTONE	0.5	140.5	DARK
254.0	MODESTO		BLACK SHALE	1.5	141.0	
252.5	CARBONDALE	DANVILLE	COAL	2.5	142.5	
250.0	CARBONDALE		SANDY SHALE	1.0	145.0	
249.0	CARBONDALE		CLAYSTONE	1.0	146.0	LIGHT
248.0	CARBONDALE		SANDY SHALE	6.0	147.0	
242.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	153.0	
240.0	CARBONDALE		CLAYSTONE	8.0	155.0	FIRE WITH LIMESTONE PART
232.0	CARBONDALE		SANDY SHALE	2.0	163.0	
230.0	CARBONDALE	BRERETON	LIMESTONE	5.5	165.0	DARK
224.5	CARBONDALE	ENERGY	SANDY SHALE	89.5	170.5	
135.0	CARBONDALE	ENERGY	SHALE	12.0	260.0	
123.0	CARBONDALE	HERRIN	COAL	9.0	272.0	
114.0	CARBONDALE		CLAYSTONE	4.9	281.0	
109.0	CARBONDALE		LIMESTONE	9.0	286.0	
100.0	CARBONDALE		SANDSTONE	5.0	295.0	
95.0	CARBONDALE		SANDY SHALE	5.0	300.0	
90.0	CARBONDALE		SANDY SHALE	6.0	305.0	WITH SANDSTONE PARTINGS
84.0	CARBONDALE	ST. DAVID	LIMESTONE	2.5	311.0	DARK GRAY
81.5	CARBONDALE	TURNER MINE	BLACK SHALE	5.0	313.5	
76.5	CARBONDALE	SPRINGFIELD	COAL	4.0	318.5	
72.5	CARBONDALE		CLAYSTONE	0.5	322.5	

MAPID: 05500206000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 26 **QUARTERS/FOOTAGES:** SW SE NE
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.06208 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.885106 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 323.0 **LOG TYPE:**
SOURCE: HALLIDAY 0038 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
123.0	CARBONDALE	HERRIN	COAL	9.0	272.0	
76.0	CARBONDALE	SPRINGFIELD	COAL	4.0	319.0	

MAPID: 05500273000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 26 **QUARTERS/FOOTAGES:** SW SE NW
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.07131 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.885185 **DATE COLLECTED:** 0 / 0 / 1918
SURFACE ELEVATION (FT.): 384.7 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section
SOURCE: BELL ZOLL 002A **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
85.7	CARBONDALE	HERRIN	COAL	-	299.0	

MAPID: 05500296000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 26 **QUARTERS/FOOTAGES:** NW SE NW
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.071288 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.887073 **DATE COLLECTED:** 0 / 0 / 1918
SURFACE ELEVATION (FT.): 387.7 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section
SOURCE: BELL ZOLL 002H **WELL TYPE:** Underground mine
COMMENT:

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

MAPID: 05500303000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 26 **QUARTERS/FOOTAGES:** NW SE NW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.071288 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.887073 **DATE COLLECTED:** 0 / 0 / 1918

SURFACE ELEVATION (FT.): 387.7 **LOGGED (FT.):** 304.0 **LOG TYPE:** Drillers Log

SOURCE: BELL & ZOLLER MINNG CO. 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
387.7	PLEISTOCENE		UNCONSOLIDATED	69.0	0.0	
318.7	MODESTO		SOFT SHALE	7.0	69.0	
311.7	MODESTO		SHALE	10.0	76.0	
301.7	MODESTO		SANDY SHALE	29.0	86.0	WITH SANDSTONE PARTINGS
272.7	MODESTO		SOFT SHALE	1.0	115.0	
271.7	MODESTO		SHALE	1.0	116.0	
270.7	MODESTO		SOFT SHALE	6.0	117.0	
264.7	MODESTO		SANDY SHALE	29.0	123.0	WITH SANDSTONE
235.7	MODESTO		SHALE	3.0	152.0	
232.7	MODESTO		SHALE	0.5	155.0	
232.2	MODESTO		CLAYSTONE	1.5	155.5	
230.7	MODESTO	PIASA	LIMESTONE	6.0	157.0	
224.7	MODESTO		SHALE	2.5	163.0	
222.2	CARBONDALE	DANVILLE	COAL	2.0	165.5	
220.2	CARBONDALE		SANDY SHALE	7.5	167.5	
212.7	CARBONDALE		SOFT SHALE	3.0	175.0	
209.7	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	178.0	
201.7	CARBONDALE		SANDY SHALE	17.0	186.0	
184.7	CARBONDALE		SANDSTONE/SHALE	3.0	203.0	
181.7	CARBONDALE	ENERGY	SANDY SHALE	88.3	206.0	
93.4	CARBONDALE	HERRIN	COAL	9.2	294.3	
84.3	CARBONDALE		CLAYSTONE	0.6	303.4	

MAPID: 05500303000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 26 **QUARTERS/FOOTAGES:** NW SE NW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.071288 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.887073 **DATE COLLECTED:** 0 / 0 / 1918

SURFACE ELEVATION (FT.): 387.7 **LOGGED (FT.):** 304.0 **LOG TYPE:**

SOURCE: BELL ZOLL **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
93.7	CARBONDALE	HERRIN	COAL	9.2	294.0	

MAPID: 05500304000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 26 **QUARTERS/FOOTAGES:** SW SE NW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.07131 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.885185 **DATE COLLECTED:** 0 / 0 / 1918

SURFACE ELEVATION (FT.): 384.7 **LOGGED (FT.):** 305.0 **LOG TYPE:** Drillers Log

SOURCE: BELL & ZOLLER MINING CO. 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
384.7	PLEISTOCENE		UNCONSOLIDATED	79.0	0.0	
305.7	MODESTO		SHALE	11.0	79.0	
294.7	MODESTO		SANDY SHALE	18.0	90.0	
276.7	MODESTO		SHALE	1.5	108.0	
275.2	MODESTO		COAL	0.5	109.5	
274.7	MODESTO		SOFT SHALE	5.0	110.0	
269.7	MODESTO		SHALE	5.0	115.0	
264.7	MODESTO		SHALY SANDSTONE	4.0	120.0	
260.7	MODESTO		SANDSTONE	2.0	124.0	
258.7	MODESTO		SANDY SHALE	14.0	126.0	
244.7	MODESTO		SHALE	12.5	140.0	
232.2	MODESTO		SHALE	2.0	152.5	
230.2	MODESTO		SOFT SHALE	1.5	154.5	
228.7	MODESTO	PIASA	LIMESTONE	4.0	156.0	
224.7	MODESTO		SOFT SHALE	1.0	160.0	
223.7	MODESTO		SHALE	0.5	161.0	
223.2	CARBONDALE	DANVILLE	COAL	2.0	161.5	
221.2	CARBONDALE		CLAYSTONE	0.5	163.5	
220.7	CARBONDALE		SHALE	7.0	164.0	
213.7	CARBONDALE		SHALE	1.0	171.0	
212.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	172.0	
209.7	CARBONDALE		SANDY SHALE	9.0	175.0	
200.7	CARBONDALE		SHALE	4.0	184.0	
196.7	CARBONDALE	BRERETON	LIMESTONE	6.5	188.0	
190.2	CARBONDALE	ENERGY	SHALE	0.5	194.5	
189.7	CARBONDALE	ENERGY	SANDY SHALE	100.4	195.0	
89.3	CARBONDALE	HERRIN	COAL	9.1	295.4	
80.2	CARBONDALE		CLAYSTONE	0.5	304.5	

MAPID: 05500304000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 26 **QUARTERS/FOOTAGES:** SW SE NW
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.07131 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.885185 **DATE COLLECTED:** 0 / 0 / 1918
SURFACE ELEVATION (FT.): 384.7 **LOGGED (FT.):** 305.0 **LOG TYPE:**
SOURCE: BELL ZOLL 0002 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
89.7	CARBONDALE	HERRIN	COAL	9.1	295.0	

MAPID: 05502585000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 26 **QUARTERS/FOOTAGES:** 218' S line, 115' W line of SE NW
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.072068 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.884851 **DATE COLLECTED:** 4 / 0 / 1970
SURFACE ELEVATION (FT.): 394.0 **LOGGED (FT.):** 1460.0 **LOG TYPE:** Electric Log
SOURCE: GALLAGHER, VICTOR R. **WELL TYPE:** Dry Hole
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-136.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	530.0	
-206.0	SPOON	DAVIS	UNCLASSIFIED	-	600.0	
-1066.0	BASE OF PENN.		UNCLASSIFIED	-	1460.0	

MAPID: 05500207000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 27 **QUARTERS/FOOTAGES:** 0' S line, 2640' E line
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.086388 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.876842 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 385.8 **LOGGED (FT.):** 305.0 **LOG TYPE:**
SOURCE: BELL ZOLL 0010 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
132.8	CARBONDALE	HERRIN	COAL	8.7	253.0	
86.8	CARBONDALE	SPRINGFIELD	COAL	4.0	299.0	

MAPID: 05500207000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 27 **QUARTERS/FOOTAGES:** 0' S line, 2640' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.086388 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.876842 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 386.0 **LOGGED (FT.):** 261.7 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
262.0	MODESTO	PIASA	LIMESTONE	5.0	124.0	
257.0	MODESTO		DARK GRAY SHALE	3.4	129.0	
253.6	CARBONDALE	DANVILLE	COAL	2.2	132.4	
251.4	CARBONDALE		GRAY SHALE	9.1	134.6	
242.3	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	143.7	
239.3	CARBONDALE	LAWSON	CALCAREOUS SHALE	9.3	146.7	
230.0	CARBONDALE	LAWSON	SILTY SHALE	6.0	156.0	
224.0	CARBONDALE	LAWSON	DARK GRAY SHALE	1.5	162.0	
222.5	CARBONDALE	BRERETON	LIMESTONE	4.0	163.5	
218.5	CARBONDALE	ENERGY	GRAY SHALE	38.5	167.5	
180.0	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	39.0	206.0	
141.0	CARBONDALE	ENERGY	GRAY SHALE	8.0	245.0	
133.0	CARBONDALE	HERRIN	COAL	8.7	253.0	

MAPID: 05500207000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 27 **QUARTERS/FOOTAGES:** 0' S line, 2640' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.086388 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.876842 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 385.8 **LOGGED (FT.):** 305.0 **LOG TYPE:** Drillers Log

SOURCE: ZEIGLER COAL CO. 10 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
385.8	PLEISTOCENE		CLAY	28.0	0.0	YELLOW
357.8	PLEISTOCENE		SANDSTONE	14.0	28.0	WITH CLAY
343.8	PLEISTOCENE		CLAY & GRAVEL	16.0	42.0	
327.8	PLEISTOCENE		SANDY CLAY	8.0	58.0	YELLOW
319.8	MODESTO		SANDY SHALE	8.0	66.0	
311.8	MODESTO		SHALE	6.0	74.0	LIGHT
305.8	MODESTO		SHALE	12.5	80.0	
293.3	MODESTO		COAL	1.0	92.5	
292.3	MODESTO		SHALE	0.5	93.5	LIGHT
291.8	MODESTO		SHALE	15.0	94.0	
276.8	MODESTO		SANDSTONE	9.0	109.0	
267.8	MODESTO		SHALE	6.0	118.0	
261.8	MODESTO	PIASA	LIMESTONE	5.0	124.0	
256.8	MODESTO		SHALE	3.4	129.0	
253.4	CARBONDALE	DANVILLE	COAL	2.2	132.4	
251.2	CARBONDALE		SHALE	5.4	134.6	
245.8	CARBONDALE		SHALE	3.7	140.0	LIGHT
242.1	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	143.7	
239.1	CARBONDALE		CALCAREOUS SHALE	9.3	146.7	
229.8	CARBONDALE		SANDY SHALE	6.0	156.0	
223.8	CARBONDALE		SHALE	1.5	162.0	
222.3	CARBONDALE	BRERETON	LIMESTONE	4.0	163.5	
218.3	CARBONDALE	ENERGY	SHALE	38.5	167.5	
179.8	CARBONDALE	ENERGY	SHALY SANDSTONE	39.0	206.0	
140.8	CARBONDALE	ENERGY	SHALE	8.0	245.0	
132.8	CARBONDALE	HERRIN	COAL	8.7	253.0	
124.1	CARBONDALE		SHALE	3.8	261.7	
120.3	CARBONDALE		SHALY LIMESTONE	9.5	265.5	WITH SHALE PARTINGS
110.8	CARBONDALE		SHALE	2.0	275.0	
108.8	CARBONDALE		SANDSTONE	4.0	277.0	
104.8	CARBONDALE		SHALE	2.0	281.0	
102.8	CARBONDALE		SHALE	6.0	283.0	
96.8	CARBONDALE		SHALE	1.3	289.0	
95.5	CARBONDALE		SHALE	3.0	290.3	
92.5	CARBONDALE		SHALE	5.8	293.3	
86.6	CARBONDALE	SPRINGFIELD	COAL	4.0	299.2	
82.6	CARBONDALE		SHALE	1.8	303.2	LIGHT

MAPID: 05502386000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 27 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of SE SE NW
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.087569 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.885286 **DATE COLLECTED:** 4 / 0 / 1967
SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 1425.0 **LOG TYPE:** Electric Log
SOURCE: SUN PRODUCTION COMPANY **WELL TYPE:** Dry Hole
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-131.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	520.0	
-191.0	SPOON	DAVIS	UNCLASSIFIED	-	580.0	
-1036.0	BASE OF PENN.		UNCLASSIFIED	-	1425.0	

MAPID: 05500208000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 28 **QUARTERS/FOOTAGES:** 2640' N line, 0' E line
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.095703 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.884638 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 391.0 **LOGGED (FT.):** 346.0 **LOG TYPE:**
SOURCE: HALLIDAY 0037 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
100.0	CARBONDALE	HERRIN	COAL	9.3	291.0	
51.0	CARBONDALE	SPRINGFIELD	COAL	4.3	340.0	

MAPID: 05500208000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 28 **QUARTERS/FOOTAGES:** 2640' N line, 0' E line
QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.095703 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.884638 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 346.0 **LOGGED (FT.):** 300.3 **LOG TYPE:** Drillers Log
SOURCE: **WELL TYPE:** Coal Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
156.5	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	189.5	
151.5	CARBONDALE	ENERGY	SILTY SHALE	21.0	194.5	
130.5	CARBONDALE	ENERGY	CLAYSTONE & SHALE	75.5	215.5	
55.0	CARBONDALE	HERRIN	COAL	9.3	291.0	

MAPID: 05500208000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 28 **QUARTERS/FOOTAGES:** 2640' N line, 0' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.095703 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.884638 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 391.0 **LOGGED (FT.):** 346.2 **LOG TYPE:** Drillers Log

SOURCE: 37 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
391.0	PLEISTOCENE		UNCONSOLIDATED	52.0	0.0	
339.0			SHALE	49.0	52.0	
290.0			LIMESTONE	0.3	101.0	
289.7			CLAYSTONE	0.8	101.3	
289.0			SANDY SHALE	16.0	102.0	
273.0			BLACK SHALE	1.5	118.0	
271.5			SHALE	7.0	119.5	
264.5			COAL	1.0	126.5	
263.5			SANDSTONE	4.0	127.5	
259.5			LIMESTONE	0.5	131.5	DARK
259.0			SHALE	4.0	132.0	
255.0			SANDSTONE	5.0	136.0	
250.0			SANDY SHALE	11.0	141.0	
239.0			BLACK SHALE & COAL	1.0	152.0	WITH COAL PARTINGS
238.0			CLAYSTONE	2.0	153.0	
236.0			SANDSTONE	8.5	155.0	
227.5			SANDY SHALE	9.5	163.5	
218.0			SHALE	3.0	173.0	
215.0			CLAYSTONE	2.0	176.0	BLUE
213.0			LIMESTONE	0.2	178.0	
212.8			SANDY SHALE	11.0	178.2	
201.8			LIMESTONE	5.0	189.2	
196.8			SANDY SHALE	21.0	194.2	
175.8			SHALE	75.5	215.2	LIGHT
100.3	CARBONDALE	HERRIN	COAL	9.3	290.7	
91.1	CARBONDALE		CLAYSTONE	4.3	299.9	
86.8	CARBONDALE		LIMESTONE	11.0	304.2	
75.8	CARBONDALE		SANDSTONE	9.0	315.2	
66.8	CARBONDALE		SANDY SHALE	12.0	324.2	
54.8	CARBONDALE	ST. DAVID	LIMESTONE	2.0	336.2	
52.8	CARBONDALE	TURNER MINE	BLACK SHALE	2.0	338.2	
50.8	CARBONDALE	SPRINGFIELD	COAL	4.3	340.2	
46.6	CARBONDALE		CLAYSTONE	1.8	344.4	

MAPID: 05500274000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 28 **QUARTERS/FOOTAGES:** SW SW NW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.113139 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.885422 **DATE COLLECTED:** 0 / 0 / 1908

SURFACE ELEVATION (FT.): 413.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: FRAN CO MC0007 **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
108.0	CARBONDALE	HERRIN	COAL	9.5	305.0	

MAPID: 05500339000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 28 **QUARTERS/FOOTAGES:** SW SW SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.103887 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.877898 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**

SOURCE: OIL CARIER **WELL TYPE:** Oil and Gas Test

COMMENT:

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

MAPID: 05500209000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 29 **QUARTERS/FOOTAGES:** SE NE NE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.115438 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.889173 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 416.0 **LOGGED (FT.):** 369.5 **LOG TYPE:** Drillers Log

SOURCE: 35 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
416.0	PLEISTOCENE		UNCONSOLIDATED	24.0	0.0	
392.0			SANDSTONE	5.0	24.0	
387.0			SANDY SHALE	27.0	29.0	
360.0			SHALE	68.3	56.0	
291.7			BLACK SHALE	0.8	124.3	
291.0			CLAYSTONE	2.0	125.0	
289.0			SANDY SHALE	18.0	127.0	
271.0			BLACK SHALE	2.0	145.0	
269.0			SHALE	1.0	147.0	
268.0			COAL	1.0	148.0	
267.0			CLAYSTONE	7.0	149.0	
260.0			SANDY SHALE	19.0	156.0	
241.0			SANDSTONE	5.0	175.0	LIGHT
236.0			SANDSTONE	6.0	180.0	WITH SHALE PARTINGS
230.0			SHALE	2.5	186.0	
227.5			CLAYSTONE	1.5	188.5	
226.0	MODESTO	PIASA	LIMESTONE	5.0	190.0	
221.0	MODESTO		SANDY SHALE	2.0	195.0	
219.0	MODESTO		LIMESTONE	1.0	197.0	DARK
218.0	CARBONDALE	DANVILLE	COAL	2.5	198.0	
215.5	CARBONDALE		SANDY SHALE	10.8	200.5	
204.7	CARBONDALE		SHALE	2.5	211.3	
202.2	CARBONDALE	ALLENBY	COAL	0.3	213.8	
202.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	214.0	
200.7	CARBONDALE	BANKSTON FORK	CLAYSTONE	4.0	215.3	
196.7	CARBONDALE	BANKSTON FORK	LIMESTONE	9.0	219.3	
187.7	CARBONDALE		SANDSTONE	8.0	228.3	
179.7	CARBONDALE		SANDY SHALE	17.0	236.3	
162.7	CARBONDALE	BRERETON	LIMESTONE	4.0	253.3	DARK
158.7	CARBONDALE	ENERGY	BLACK SHALE	3.0	257.3	
155.7	CARBONDALE	ENERGY	SANDY SHALE	33.0	260.3	
122.7	CARBONDALE	ENERGY	SHALE	16.0	293.3	
106.7	CARBONDALE	HERRIN	COAL	9.8	309.3	
96.9	CARBONDALE		CLAYSTONE	2.2	319.1	
94.7	CARBONDALE		LIMESTONE	12.0	321.3	
82.7	CARBONDALE		SANDY SHALE	8.0	333.3	
74.7	CARBONDALE		SHALE	13.0	341.3	
61.7	CARBONDALE	ST. DAVID	LIMESTONE	2.0	354.3	DARK
59.7	CARBONDALE	TURNER MINE	BLACK SHALE	4.0	356.3	

55.7	CARBONDALE	DYKERSBURG	SHALE	4.0	360.3
51.7	CARBONDALE	SPRINGFIELD	COAL	4.3	364.3
47.5	CARBONDALE		SHALE	1.0	368.5

MAPID: 05500209000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 29 **QUARTERS/FOOTAGES:** SE NE NE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.115438 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.889173 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 416.0 **LOGGED (FT.):** 370.0 **LOG TYPE:**

SOURCE: HALLIDAY 0035 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
107.0	CARBONDALE	HERRIN	COAL	9.8	309.0	
52.0	CARBONDALE	SPRINGFIELD	COAL	4.3	364.0	

MAPID: 05501077000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 29 **QUARTERS/FOOTAGES:** 1320' S line, 2640' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.123527 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.880545 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 396.0 **LOGGED (FT.):** 302.3 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COUNTY COAL CO. 1 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
200.6	MODESTO	PIASA	LIMESTONE	4.3	195.4	
196.2	MODESTO		CLAYSTONE	0.8	199.8	
195.4	CARBONDALE	DANVILLE	COAL	1.8	200.6	
193.7	CARBONDALE		SHALE & SANDSTONE	4.6	202.3	
189.1	CARBONDALE	ALLENBY	BLACK SHALE	7.3	206.9	
181.8	CARBONDALE		SHALE & SANDSTONE	5.9	214.2	
175.9	CARBONDALE	BANKSTON FORK	LIMESTONE	11.3	220.1	
164.6	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	6.5	231.4	
158.1	CARBONDALE	LAWSON	GRAY SHALE	9.0	237.9	
149.1	CARBONDALE	LAWSON	DARK GRAY SHALE	17.0	246.9	
132.1	CARBONDALE	LAWSON	BLACK SHALE	7.0	263.9	
125.1	CARBONDALE	BRERETON	LIMESTONE W/ SHALE	15.0	270.9	
110.1	CARBONDALE	ANNA	BLACK SHALE	8.1	285.9	
102.0	CARBONDALE	HERRIN	COAL	8.3	294.0	

MAPID: 05500210000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** NW SE NW
QUADRANGLE: ELKVILLE **LONGITUDE:** -89.145249 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 37.887072 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 291.0 **LOG TYPE:** Drillers Log
SOURCE: FRANKLIN COUNTY COAL CO. **WELL TYPE:** Coal Test
COMMENT: FROM BLUE PRINT FKLN. CO. COAL CO.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
126.0	CARBONDALE	HERRIN	COAL	10.0	281.0	ELEV. BASE NO.6 COAL 116

MAPID: 05500210000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** NW SE NW
QUADRANGLE: ELKVILLE **LONGITUDE:** -89.145249 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.887072 **DATE COLLECTED:** 0 / 0 / 1918
SURFACE ELEVATION (FT.): 410.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: WESTERN CM **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
129.0	CARBONDALE	HERRIN	COAL	10.0	281.0	

MAPID: 05500211000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** SE SW SE
QUADRANGLE: ELKVILLE **LONGITUDE:** -89.138546 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 37.877739 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 393.0 **LOGGED (FT.):** 189.5 **LOG TYPE:** Drillers Log
SOURCE: FRANKLIN COUNTY COAL CO. **WELL TYPE:** Coal Test
COMMENT: FROM BLUE PRINT FKLIN. CO. COAL CO.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
213.0	CARBONDALE	HERRIN	COAL	9.5	180.0	ELEV. BASE NO.6 COAL

MAPID: 05500211000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** SE SW SE
QUADRANGLE: ELKVILLE **LONGITUDE:** -89.138546 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.877739 **DATE COLLECTED:** 0 / 0 / 1918
SURFACE ELEVATION (FT.): 393.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: WESTERN CM **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
213.0	CARBONDALE	HERRIN	COAL	9.5	180.0	

MAPID: 05500212000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** SE SE SW

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.14306 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.877715 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 402.0 **LOGGED (FT.):** 172.0 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COUNTY COAL CO. **WELL TYPE:** Coal Test

COMMENT: FROM BLUE PRINT FNKLN. CO. COAL CO.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
239.0	CARBONDALE	HERRIN	COAL	9.0	163.0	ELEV. BASE NO.6 COAL 230

MAPID: 05500212000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** SE SE SW

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.14306 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.877715 **DATE COLLECTED:** 0 / 0 / 1918

SURFACE ELEVATION (FT.): 405.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**

SOURCE: WESTERN CM **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
242.0	CARBONDALE	HERRIN	COAL	9.0	163.0	

MAPID: 05500213000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** NE SE NE

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.133977 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.887147 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 404.0 **LOGGED (FT.):** 306.3 **LOG TYPE:** Drillers Log

SOURCE: 34 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
404.0	PLEISTOCENE		UNCONSOLIDATED	40.0	0.0	
364.0	MODESTO		SHALE	41.5	40.0	WITH HARD PARTINGS
322.5	MODESTO		BLACK SHALE	0.5	81.5	
322.0	MODESTO		SANDY SHALE	17.0	82.0	
305.0	MODESTO		SANDY SHALE	3.0	99.0	
302.0	MODESTO		BLACK SHALE	1.5	102.0	
300.5	MODESTO		COAL	1.0	103.5	
299.5	MODESTO		CLAYSTONE	0.3	104.5	DARK
299.2	MODESTO		CLAYSTONE	5.3	104.8	LIGHT
294.0	MODESTO		SANDY SHALE	11.0	110.0	SAND WITH HARD PART
283.0	MODESTO		SANDSTONE	4.0	121.0	
279.0	MODESTO		SANDY SHALE	3.0	125.0	SAND WITH HARD PART
276.0	MODESTO		SANDY SHALE	3.0	128.0	
273.0	MODESTO		SHALE	9.0	131.0	WITH HARD PARTINGS
264.0	MODESTO		SHALE	2.0	140.0	
262.0	MODESTO		CLAYSTONE	3.0	142.0	
259.0	MODESTO	PIASA	LIMESTONE	5.0	145.0	
254.0	MODESTO		BLACK SHALE	1.0	150.0	
253.0	MODESTO		SHALE	1.0	151.0	
252.0	MODESTO		BLACK SHALE	1.5	152.0	
250.5	CARBONDALE	DANVILLE	COAL	2.3	153.5	
248.2	CARBONDALE		SHALE	9.3	155.8	
239.0	CARBONDALE	ALLENBY	SHALE W/ COAL STREAKS	1.5	165.0	WITH COAL PARTINGS
237.5	CARBONDALE	BANKSTON FORK	LIMESTONE	0.5	166.5	
237.0	CARBONDALE	BANKSTON FORK	CLAYSTONE	3.0	167.0	
234.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	170.0	
228.0	CARBONDALE		SANDSTONE	4.0	176.0	
224.0	CARBONDALE	ENERGY	SANDY SHALE	5.0	180.0	
219.0	CARBONDALE	ENERGY	SHALE	20.0	185.0	
199.0	CARBONDALE	ENERGY	BLACK SHALE	3.5	205.0	
195.5	CARBONDALE	ENERGY	SHALE	41.5	208.5	WITH HARD PARTINGS
154.0	CARBONDALE	HERRIN	COAL	9.5	250.0	
144.5	CARBONDALE		CLAYSTONE	1.0	259.5	
143.5	CARBONDALE		CLAYSTONE	1.5	260.5	FIRE WITH LIMESTONE PART
142.0	CARBONDALE		LIMESTONE	13.0	262.0	
129.0	CARBONDALE		SANDY SHALE	14.0	275.0	
115.0	CARBONDALE	ST. DAVID	LIMESTONE	1.0	289.0	
114.0	CARBONDALE	TURNER MINE	BLACK SHALE	4.0	290.0	

110.0	CARBONDALE	DYKERSBURG	SHALE	6.5	294.0
103.5	CARBONDALE	SPRINGFIELD	COAL	4.8	300.5
98.7	CARBONDALE		SHALE	1.0	305.3

MAPID: 05500213000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** NE SE NE

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.133977 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.887147 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 404.0 **LOGGED (FT.):** 306.0 **LOG TYPE:**

SOURCE: HALLIDAY 34 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
154.0	CARBONDALE	HERRIN	COAL	9.5	250.0	
103.0	CARBONDALE	SPRINGFIELD	COAL	4.8	301.0	

MAPID: 05500214000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** SE NW SW

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.147548 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.881439 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 412.0 **LOGGED (FT.):** 207.4 **LOG TYPE:** Drillers Log

SOURCE: WESTERN COAL & MINING CO. 29 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
412.0	PLEISTOCENE		SOIL	18.0	0.0	
394.0			SANDSTONE	93.0	18.0	
301.0			LIMESTONE	9.0	111.0	
292.0			SHALE	60.0	120.0	
232.0	CARBONDALE	BRERETON	LIMESTONE	6.0	180.0	
226.0	CARBONDALE	ENERGY	BLACK SHALE	7.0	186.0	
219.0	CARBONDALE	ENERGY	BLACK SHALE	5.0	193.0	
214.0	CARBONDALE	HERRIN	COAL	9.4	198.0	

MAPID: 05500214000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** SE NW SW

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.147548 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.881439 **DATE COLLECTED:** 0 / 0 / 1918

SURFACE ELEVATION (FT.): 412.0 **LOGGED (FT.):** 208.0 **LOG TYPE:**

SOURCE: WESTERN CM0029 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
214.0	CARBONDALE	HERRIN	COAL	9.4	198.0	

MAPID: 05500215000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** SE NW SE

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.13852 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.881491 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.5 **LOGGED (FT.):** 268.0 **LOG TYPE:** Drillers Log

SOURCE: WESTERN COAL & MINING CO. 32 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
395.5	PLEISTOCENE		SAND/CLAY	36.0	0.0	
359.5			BLACK SHALE	9.0	36.0	
350.5			BLACK SHALE	34.0	45.0	
316.5			BLACK SHALE	7.0	79.0	
309.5			BLACK SHALE	40.0	86.0	
269.5			SHALE	54.0	126.0	
215.5	CARBONDALE	BANKSTON FORK	LIMESTONE	7.5	180.0	
208.0	CARBONDALE		SANDSTONE	10.0	187.5	
198.0	CARBONDALE		SHALE	14.0	197.5	
184.0	CARBONDALE	BRERETON	LIMESTONE	16.0	211.5	
168.0	CARBONDALE	ENERGY	BLACK SHALE	18.0	227.5	
150.0	CARBONDALE	ENERGY	BLACK SHALE	7.0	245.5	
143.0	CARBONDALE	ENERGY	BLACK SHALE	5.0	252.5	
138.0	CARBONDALE	HERRIN	COAL	10.0	257.5	
128.0	CARBONDALE		CLAYSTONE	0.5	267.5	

MAPID: 05500215000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** SE NW SE

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.13852 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.881491 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.5 **LOGGED (FT.):** 268.0 **LOG TYPE:**

SOURCE: WESTERN CM0032 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
137.5	CARBONDALE	HERRIN	COAL	10.0	258.0	

MAPID: 05500216000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** NE NE SE

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.133996 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.883392 **DATE COLLECTED:** 6 / 12 / 1918

SURFACE ELEVATION (FT.): 397.5 **LOGGED (FT.):** 315.0 **LOG TYPE:** Drillers Log

SOURCE: WESTERN COAL & MINING CO. 36 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
397.5	PLEISTOCENE		CLAY	32.0	0.0	
365.5			BLACK SHALE	62.0	32.0	
303.5			BLACK SHALE	12.0	94.0	
291.5			BLACK SHALE	6.0	106.0	
285.5			SHALE	14.0	112.0	
271.5			SANDSTONE	6.0	126.0	
265.5			SHALE	72.0	132.0	
193.5			LIMESTONE	8.0	204.0	
185.5			BLACK SHALE	2.0	212.0	
183.5			SHALE	60.0	214.0	
123.5			BLACK SHALE	1.5	274.0	
122.0			BLACK SHALE	18.0	275.5	
104.0	CARBONDALE	BRERETON	LIMESTONE	6.0	293.5	
98.0	CARBONDALE	ANNA	BLACK SHALE	5.0	299.5	
93.0	CARBONDALE	HERRIN	COAL	10.0	304.5	
83.0	CARBONDALE		CLAYSTONE	0.5	314.5	

MAPID: 05500216000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** NE NE SE

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.133996 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.883392 **DATE COLLECTED:** 0 / 0 / 1918

SURFACE ELEVATION (FT.): 397.5 **LOGGED (FT.):** 315.0 **LOG TYPE:**

SOURCE: WESTERN CM0036 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
92.5	CARBONDALE	HERRIN	COAL	10.0	305.0	

MAPID: 05500787000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** 990' S line, 990' E line

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.136339 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.879546 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 258.1 **LOG TYPE:** Survey Core Study

SOURCE: FRANKLIN COUNTY COAL CO. 42W **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
262.1	CARBONDALE		SANDSTONE/SILTSTONE	50.0	132.9	
212.1	CARBONDALE	BANKSTON FORK	LIMESTONE	2.2	182.9	UPPER BENCH
209.9	CARBONDALE	BANKSTON FORK	CLAYSTONE	0.1	185.1	SHALE PARTING
209.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.3	185.2	LOWER BENCH
208.5	CARBONDALE	LAWSON	CALCAREOUS SANDSTONE	7.4	186.5	
201.1	CARBONDALE	LAWSON	SANDSTONE	2.0	193.9	
199.1	CARBONDALE	LAWSON	CALCAREOUS SANDSTONE	9.0	195.9	
190.1	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	1.6	204.9	
188.5	CARBONDALE	ENERGY	SHALE & SILTSTONE	20.3	206.5	
168.2	CARBONDALE	ENERGY	NODULAR LIMESTONE	0.7	226.8	
167.5	CARBONDALE	ENERGY	SANDSTONE/SILTSTONE	2.0	227.5	
165.5	CARBONDALE	ENERGY	DARK GRAY SHALE	14.0	229.5	
151.5	CARBONDALE	ENERGY	MOTTLED SHALE	4.5	243.5	
147.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	10.1	248.0	

MAPID: 05502595000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** 1820' N line, 50' W line
QUADRANGLE: ELKVILLE **LONGITUDE:** -89.150719 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.88671 **DATE COLLECTED:** 8 / 21 / 1970
SURFACE ELEVATION (FT.): 399.0 **LOGGED (FT.):** 276.7 **LOG TYPE:** Survey Core Study
SOURCE: TRUAX-TRAER COAL CO C-850 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
204.8	CARBONDALE		SANDSTONE	9.8	194.2	
195.1	CARBONDALE	BANKSTON FORK	LIMESTONE	4.1	203.9	
191.0	CARBONDALE	LAWSON	SANDSTONE	7.5	208.0	
183.5	CARBONDALE	LAWSON	SILTSTONE	6.9	215.5	
176.6	CARBONDALE	LAWSON	GRAY SHALE	22.6	222.4	
154.0	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	1.7	245.0	
152.3	CARBONDALE	ANNA	BLACK SHALE	2.6	246.7	
149.7	CARBONDALE	ENERGY	DARK GRAY SHALE	4.2	249.3	
145.5	CARBONDALE	ENERGY	SILTY SHALE	1.0	253.5	
144.6	CARBONDALE	ENERGY	GRAY SHALE	13.6	254.4	
131.0	CARBONDALE	HERRIN	COAL	8.7	268.0	

MAPID: 05502597000C **VERSION:** 1 **PROJECT:** NCRDS

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** 2200' S line, 100' W line
QUADRANGLE: ELKVILLE **LONGITUDE:** -89.150593 **GEOLOGIST:** LOUCHIOS
CONFIDENTIAL: N **LATITUDE:** 37.882761 **DATE COLLECTED:** 8 / 25 / 1970
SURFACE ELEVATION (FT.): 401.1 **LOGGED (FT.):** 174.6 **LOG TYPE:** Drillers Log
SOURCE: TRUAX-TRAER COAL CO C-852 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
401.1	PLEISTOCENE		CLAY	10.0	0.0	BROWN
391.1	SHELBURN		GRAY SANDSTONE	51.0	10.0	
340.1	SHELBURN		GRAY SANDSTONE	30.0	61.0	
310.1	SHELBURN		GRAY SANDSTONE	16.0	91.0	SCATTERED COAL SEAMS
294.1	SHELBURN		SHALY SANDSTONE	17.0	107.0	
277.1	SHELBURN		GRAY SHALE	18.0	124.0	
259.1	SHELBURN		LIMESTONE	1.2	142.0	
257.9	CARBONDALE	ANNA	BLACK SHALE	6.0	143.2	
251.9	CARBONDALE	ENERGY	DARK SHALE	9.8	149.2	
242.1	CARBONDALE	HERRIN	COAL	9.1	159.0	
233.0	CARBONDALE		UNDERCLAY	6.5	168.1	

MAPID: 05526375000C **VERSION:** 1 **PROJECT:** NCRDS 2013

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** 48' S line, 2445' E line

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.141374 **GEOLOGIST:** LOUCHIOS

CONFIDENTIAL: N **LATITUDE:** 37.876922 **DATE COLLECTED:** 6 / / 1977

SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 270.0 **LOG TYPE:** Drillers Log

SOURCE: CONSOLIDATION COAL CO. 77-DN-5 **WELL TYPE:** Coal Test

COMMENT: ROYAL FALCON MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
400.0	SHELBURN		NO RECORD	22.0	0.0	
378.0	SHELBURN		SANDY SHALE	17.0	22.0	
361.0	SHELBURN		SHALY SANDSTONE	43.0	39.0	
318.0	SHELBURN		SANDSTONE	22.0	82.0	
296.0	SHELBURN	BANKSTON FORK	LIMESTONE	8.0	104.0	
288.0	SHELBURN		SHALE	8.0	112.0	
280.0	SHELBURN		DARK SHALE	4.0	120.0	
276.0	SHELBURN		SANDY SHALE	8.0	124.0	
268.0	SHELBURN		SHALE	24.4	132.0	
243.6	SHELBURN	BRERETON	LIMESTONE	1.6	156.4	
242.0	CARBONDALE	ANNA	BLACK SHALE	4.0	158.0	
238.0	CARBONDALE	ENERGY	SHALE	28.5	162.0	
209.5	CARBONDALE	HERRIN	COAL	5.7	190.5	
203.8	CARBONDALE	HERRIN	SHALE	1.0	196.2	
202.8	CARBONDALE	HERRIN	COAL	3.6	197.2	
199.2	CARBONDALE		SHALE	5.2	200.8	
194.0	CARBONDALE		CLAY	4.0	206.0	
190.0	CARBONDALE		SANDY SHALE	14.0	210.0	
176.0	CARBONDALE	ST. DAVID	LIMESTONE	2.0	224.0	
174.0	CARBONDALE	TURNER MINE	BLACK SHALE	4.0	226.0	
170.0	CARBONDALE	DYKERSBURG	SHALE	8.8	230.0	
161.2	CARBONDALE	SPRINGFIELD	COAL	4.6	238.8	
156.6	CARBONDALE		SANDY SHALE	26.6	243.4	

MAPID: 05526381000C **VERSION:** 1 **PROJECT:** NCRDS 2013

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** 2377' S line, 2486' W line
QUADRANGLE: ELKVILLE **LONGITUDE:** -89.142301 **GEOLOGIST:** LOUCHIOS
CONFIDENTIAL: N **LATITUDE:** 37.883312 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 400.4 **LOGGED (FT.):** 261.0 **LOG TYPE:** Drillers Log
SOURCE: CONSOLIDATION COAL CO. 77-DN-6 **WELL TYPE:** Coal Test
COMMENT: ROYAL FALCON MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
400.4			NO RECORD	30.0	0.0	
370.4	SHELBURN		SHALE	13.5	30.0	
356.9	SHELBURN		LIMESTONE	2.5	43.5	
354.4	SHELBURN		SHALE WITH LIMESTONE	72.0	46.0	INTERBEDDED
282.4	SHELBURN	BANKSTON FORK	LIMESTONE	10.0	118.0	
272.4	SHELBURN	ANVIL ROCK	SANDY SHALE	9.0	128.0	
263.4	CARBONDALE	ENERGY	SHALE	62.3	137.0	
201.1	CARBONDALE	HERRIN	COAL	8.9	199.3	
192.3	CARBONDALE	HIGGINSVILLE	LIMESTONE	10.9	208.1	
181.4	CARBONDALE		SANDSTONE	5.0	219.0	
176.4	CARBONDALE		SHALE	18.0	224.0	
158.4	CARBONDALE	ST. DAVID	LIMESTONE	2.0	242.0	
156.4	CARBONDALE	TURNER MINE	BLACK SHALE	5.7	244.0	
150.7	CARBONDALE	SPRINGFIELD	COAL	3.8	249.7	
146.9	CARBONDALE		SHALE	7.5	253.5	

MAPID: 05526382000C **VERSION:** 1 **PROJECT:** NCRDS 2013

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 30 **QUARTERS/FOOTAGES:** 1479' N line, 1299' W line
QUADRANGLE: ELKVILLE **LONGITUDE:** -89.146378 **GEOLOGIST:** LOUCHIOS
CONFIDENTIAL: N **LATITUDE:** 37.88769 **DATE COLLECTED:** / / 1918
SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 291.0 **LOG TYPE:** Drillers Log
SOURCE: CONSOLIDATION COAL CO. 18-FC-210 **WELL TYPE:** Coal Test
COMMENT: ROYAL FALCON

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
407.0			UNCLASSIFIED	281.0	0.0	
126.0	CARBONDALE	HERRIN	COAL	10.0	281.0	

MAPID: 05500217000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 31 **QUARTERS/FOOTAGES:** 0' N line, 0' W line

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.15097 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.876737 **DATE COLLECTED:** 0 / 0 / 1918

SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 195.0 **LOG TYPE:**

SOURCE: WESTERN CM0022 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
223.0	CARBONDALE	HERRIN	COAL	9.5	184.0	

MAPID: 05500217000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 31 **QUARTERS/FOOTAGES:** 0' N line, 0' W line

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.15097 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.876737 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 193.5 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
350.0	CARBONDALE	LAWSON	SANDSTONE	90.0	57.0	
260.0	CARBONDALE		GRAY SHALE	16.5	147.0	
243.5	CARBONDALE	BRERETON	LIMESTONE	3.5	163.5	
240.0	CARBONDALE	ANNA	BLACK SHALE	10.0	167.0	
230.0	CARBONDALE	ENERGY	GRAY SHALE	7.0	177.0	
223.0	CARBONDALE	HERRIN	COAL	9.5	184.0	

MAPID: 05500217000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 31 **QUARTERS/FOOTAGES:** 0' N line, 0' W line

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.15097 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.876737 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 194.5 **LOG TYPE:** Drillers Log

SOURCE: WESTERN COAL & MINING CO. 22 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
407.0	PLEISTOCENE		SOIL	23.0	0.0	
384.0			SANDSTONE/SILTSTONE	34.0	23.0	
350.0			SANDSTONE	90.0	57.0	
260.0			BLACK SHALE	16.5	147.0	
243.5	CARBONDALE	BRERETON	LIMESTONE	3.5	163.5	
240.0	CARBONDALE	ENERGY	BLACK SHALE	10.0	167.0	
230.0	CARBONDALE	ENERGY	BLACK SHALE	7.0	177.0	
223.0	CARBONDALE	HERRIN	COAL	9.5	184.0	
213.5	CARBONDALE		CLAYSTONE	0.5	193.5	
213.0	CARBONDALE		LIMESTONE	0.5	194.0	

MAPID: 05500218000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 31 **QUARTERS/FOOTAGES:** NW NW SW

QUADRANGLE: DE SOTO **LONGITUDE:** -89.149869 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.868341 **DATE COLLECTED:** 5 / 7 / 1918

SURFACE ELEVATION (FT.): 401.2 **LOGGED (FT.):** 176.0 **LOG TYPE:** Drillers Log

SOURCE: WESTERN COAL & MINING CO. 28 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
401.2	PLEISTOCENE		SOIL	25.0	0.0	
376.2			SANDSTONE/SILTSTONE	15.0	25.0	
361.2			SANDSTONE	96.0	40.0	
265.2			BLACK SHALE	6.0	136.0	
259.2			BLACK SHALE	7.0	142.0	
252.2			BLACK SHALE	16.5	149.0	
235.7	CARBONDALE	HERRIN	COAL	3.5	165.5	
232.2	CARBONDALE	HERRIN	PYRITE	0.3	169.0	
231.9	CARBONDALE	HERRIN	COAL	3.0	169.3	
228.9	CARBONDALE	HERRIN	BLUE BAND	0.3	172.3	
228.7	CARBONDALE	HERRIN	COAL	1.7	172.5	
227.0	CARBONDALE		CLAYSTONE	1.2	174.2	
225.9	CARBONDALE		LIMESTONE	0.7	175.3	

MAPID: 05500218000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 31 **QUARTERS/FOOTAGES:** NW NW SW

QUADRANGLE: DE SOTO **LONGITUDE:** -89.149869 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.868341 **DATE COLLECTED:** 0 / 0 / 1918

SURFACE ELEVATION (FT.): 401.2 **LOGGED (FT.):** 176.0 **LOG TYPE:**

SOURCE: WESTERN CM0028 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
235.2	CARBONDALE	HERRIN	COAL	8.7	166.0	

MAPID: 05500219000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 31 **QUARTERS/FOOTAGES:** SW NW SW

QUADRANGLE: DE SOTO **LONGITUDE:** -89.149874 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.866475 **DATE COLLECTED:** 5 / 12 / 1918

SURFACE ELEVATION (FT.): 396.5 **LOGGED (FT.):** 178.0 **LOG TYPE:** Drillers Log

SOURCE: WESTERN COAL & MINING CO. 30 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
396.5	PLEISTOCENE		SOIL	25.0	0.0	
371.5			SANDSTONE/SILTSTONE	15.0	25.0	
356.5			SANDSTONE	85.0	40.0	
271.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	125.0	
270.0	CARBONDALE		BLACK SHALE	3.5	126.5	
266.5	CARBONDALE		BLACK SHALE	4.0	130.0	
262.5	CARBONDALE		BLACK SHALE	15.0	134.0	
247.5	CARBONDALE	BRERETON	LIMESTONE	1.5	149.0	
246.0	CARBONDALE	ENERGY	BLACK SHALE	16.0	150.5	
230.0	CARBONDALE	HERRIN	COAL	5.0	166.5	
225.0	CARBONDALE	HERRIN	SMUT	0.3	171.5	
224.7	CARBONDALE	HERRIN	COAL	2.0	171.8	
222.7	CARBONDALE	HERRIN	BLUE BAND	0.3	173.8	
222.5	CARBONDALE	HERRIN	COAL	3.0	174.0	
219.5	CARBONDALE		CLAYSTONE	0.3	177.0	
219.2	CARBONDALE		LIMESTONE	0.7	177.3	

MAPID: 05500219000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 31 **QUARTERS/FOOTAGES:** SW NW SW

QUADRANGLE: DE SOTO **LONGITUDE:** -89.149874 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.866475 **DATE COLLECTED:** 0 / 0 / 1918

SURFACE ELEVATION (FT.): 396.5 **LOGGED (FT.):** 178.0 **LOG TYPE:**

SOURCE: WESTERN CM0030 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
229.5	CARBONDALE	HERRIN	COAL	10.5	167.0	

MAPID: 05500220000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 31 **QUARTERS/FOOTAGES:** NE NW NW

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.147586 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.875821 **DATE COLLECTED:** 5 / 24 / 1918

SURFACE ELEVATION (FT.): 416.3 **LOGGED (FT.):** 163.0 **LOG TYPE:** Drillers Log

SOURCE: WESTERN COAL & MINING CO. 33 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
416.3	PLEISTOCENE		SOIL	25.0	0.0	
391.3			SANDSTONE/SILTSTONE	25.0	25.0	
366.3			SANDSTONE	70.0	50.0	
296.3			BLACK SHALE	17.0	120.0	
279.3	CARBONDALE	BRERETON	LIMESTONE	2.5	137.0	
276.8	CARBONDALE	ENERGY	BLACK SHALE	6.5	139.5	
270.3	CARBONDALE	ENERGY	BLACK SHALE	7.3	146.0	
263.0	CARBONDALE	HERRIN	COAL	3.5	153.3	
259.5	CARBONDALE	HERRIN	SMUT	0.3	156.8	
259.3	CARBONDALE	HERRIN	COAL	2.3	157.0	
257.0	CARBONDALE	HERRIN	BLUE BAND	0.3	159.3	
256.8	CARBONDALE	HERRIN	COAL	2.0	159.5	
254.8	CARBONDALE		CLAYSTONE	1.3	161.5	
253.5	CARBONDALE		LIMESTONE	0.3	162.8	

MAPID: 05500220000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 31 **QUARTERS/FOOTAGES:** NE NW NW
QUADRANGLE: ELKVILLE **LONGITUDE:** -89.147586 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.875821 **DATE COLLECTED:** 0 / 0 / 1918
SURFACE ELEVATION (FT.): 416.3 **LOGGED (FT.):** 163.0 **LOG TYPE:**
SOURCE: WESTERN CM0033 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
263.3	CARBONDALE	HERRIN	COAL	8.3	153.0	

MAPID: 05500221000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 31 **QUARTERS/FOOTAGES:** SE NW NW
QUADRANGLE: DE SOTO **LONGITUDE:** -89.147592 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 37.873955 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 408.4 **LOGGED (FT.):** 180.0 **LOG TYPE:** Drillers Log
SOURCE: WESTERN COAL & MINING CO. 34 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
408.4	PLEISTOCENE		SOIL	25.0	0.0	
383.4			SANDSTONE/SILTSTONE	25.0	25.0	
358.4			SANDSTONE	88.0	50.0	
270.4			BLACK SHALE	12.0	138.0	
258.4	CARBONDALE	BRERETON	LIMESTONE	2.5	150.0	
255.9	CARBONDALE	ENERGY	BLACK SHALE	5.5	152.5	
250.4	CARBONDALE	ENERGY	BLACK SHALE	9.5	158.0	
240.9	CARBONDALE	HERRIN	COAL	5.3	167.5	
235.6	CARBONDALE	HERRIN	SMUT	0.2	172.8	
235.4	CARBONDALE	HERRIN	COAL	3.8	173.0	
231.6	CARBONDALE		PYRITE	0.3	176.8	
231.4	CARBONDALE		CLAYSTONE	2.0	177.0	
229.4	CARBONDALE		LIMESTONE	1.0	179.0	

MAPID: 05500221000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 31 **QUARTERS/FOOTAGES:** SE NW NW
QUADRANGLE: DE SOTO **LONGITUDE:** -89.147592 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.873955 **DATE COLLECTED:** 0 / 0 / 1918
SURFACE ELEVATION (FT.): 408.4 **LOGGED (FT.):** 180.0 **LOG TYPE:**
SOURCE: WESTERN CM0034 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
240.4	CARBONDALE	HERRIN	COAL	9.3	168.0	

MAPID: 05500275000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 31 **QUARTERS/FOOTAGES:** SE NW SE
QUADRANGLE: DE SOTO **LONGITUDE:** -89.13856 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.866525 **DATE COLLECTED:** 0 / 0 / 1918
SURFACE ELEVATION (FT.): 416.0 **LOGGED (FT.):** 264.0 **LOG TYPE:** Measured section
SOURCE: WESTERN CM0002 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
256.0	CARBONDALE	HERRIN	COAL	10.0	160.0	

MAPID: 05501320000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 31 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of NE NW
QUADRANGLE: ELKVILLE **LONGITUDE:** -89.145308 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.875855 **DATE COLLECTED:** 5 / 0 / 1957
SURFACE ELEVATION (FT.): 425.0 **LOGGED (FT.):** 1550.0 **LOG TYPE:** Electric Log
SOURCE: CITIES SERVICE OIL CO. **WELL TYPE:** Dry Hole
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
55.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	370.0	
-15.0	SPOON	DAVIS	UNCLASSIFIED	-	440.0	
-1125.0	BASE OF PENN.		UNCLASSIFIED	-	1550.0	

MAPID: 05590134000C **VERSION:** 1 **PROJECT:** LUMP

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 31 **QUARTERS/FOOTAGES:** 650' N line, 50' W line of SE SW
QUADRANGLE: DE SOTO **LONGITUDE:** -89.146311 **GEOLOGIST:** NORTH
CONFIDENTIAL: N **LATITUDE:** 37.863761 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 410.0 **LOGGED (FT.):** 73.6 **LOG TYPE:** Drillers Log
SOURCE: ILLINI ENERGY RESOURCES R-34 **WELL TYPE:** Coal Test
COMMENT: PERMIT #309 BURNING STAR #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
344.0	CARBONDALE	HERRIN	COAL	7.6	66.0	

MAPID: 05590135000C **VERSION:** 1 **PROJECT:** LUMP

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 31 **QUARTERS/FOOTAGES:** 100' S line, 250' W line of SW SW

QUADRANGLE: DE SOTO **LONGITUDE:** -89.15015 **GEOLOGIST:** NORTH

CONFIDENTIAL: N **LATITUDE:** 37.862084 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 410.0 **LOGGED (FT.):** 56.6 **LOG TYPE:** Drillers Log

SOURCE: ILLINI ENERGY RESOURCES A-72 **WELL TYPE:** Coal Test

COMMENT: PERMIT #309 BURNING STAR #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
360.0	CARBONDALE	HERRIN	COAL	6.6	50.0	

MAPID: 05500222000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 32 **QUARTERS/FOOTAGES:** NW SW NW

QUADRANGLE: DE SOTO **LONGITUDE:** -89.131744 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.872166 **DATE COLLECTED:** 7 / 9 / 1918

SURFACE ELEVATION (FT.): 396.0 **LOGGED (FT.):** 241.0 **LOG TYPE:** Drillers Log

SOURCE: WESTERN COAL & MINING CO. 40 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
396.0	PLEISTOCENE		UNCONSOLIDATED	25.0	0.0	
371.0			BLACK SHALE	15.0	25.0	
356.0			COAL	0.5	40.0	
355.5			CLAYSTONE	3.5	40.5	
352.0			SANDY SLATE	56.0	44.0	
296.0			SANDSTONE	75.0	100.0	
221.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	175.0	
218.5	CARBONDALE		BLACK SHALE	9.5	177.5	
209.0	CARBONDALE		BLACK SHALE	13.0	187.0	
196.0	CARBONDALE		BLACK SHALE	23.0	200.0	
173.0	CARBONDALE	BRERETON	LIMESTONE	3.5	223.0	
169.5	CARBONDALE	ANNA	BLACK SHALE	4.0	226.5	
165.5	CARBONDALE	HERRIN	COAL	6.5	230.5	
159.0	CARBONDALE	HERRIN	BLUE BAND	0.2	237.0	
158.8	CARBONDALE	HERRIN	COAL	2.0	237.2	
156.8	CARBONDALE		CLAYSTONE	1.5	239.2	
155.3	CARBONDALE		LIMESTONE	0.3	240.7	

MAPID: 05500222000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 32 **QUARTERS/FOOTAGES:** NW SW NW

QUADRANGLE: DE SOTO **LONGITUDE:** -89.131744 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.872166 **DATE COLLECTED:** 0 / 0 / 1918

SURFACE ELEVATION (FT.): 396.0 **LOGGED (FT.):** 241.0 **LOG TYPE:**

SOURCE: WESTERN CM0040 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
165.0	CARBONDALE	HERRIN	COAL	8.7	231.0	

MAPID: 05500223000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 32 **QUARTERS/FOOTAGES:** NE SW NW

QUADRANGLE: DE SOTO **LONGITUDE:** -89.129425 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.87218 **DATE COLLECTED:** 7 / 15 / 1918

SURFACE ELEVATION (FT.): 394.0 **LOGGED (FT.):** 157.0 **LOG TYPE:** Drillers Log

SOURCE: WESTERN COAL & MINING CO. 41 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
394.0	PLEISTOCENE		SOIL	25.0	0.0	
369.0			SANDSTONE/SILTSTONE	25.0	25.0	
344.0			SANDSTONE	36.0	50.0	
308.0			BLACK SHALE	33.0	86.0	
275.0	CARBONDALE	BRERETON	LIMESTONE	3.5	119.0	
271.5	CARBONDALE	ENERGY	BLACK SHALE	3.5	122.5	
268.0	CARBONDALE	ENERGY	BLACK SHALE	8.0	126.0	
260.0	CARBONDALE	ENERGY	BLACK SHALE	11.5	134.0	
248.5	CARBONDALE	HERRIN	COAL	2.0	145.5	
246.5	CARBONDALE	HERRIN	SMUT	0.3	147.5	
246.2	CARBONDALE	HERRIN	COAL	1.8	147.8	
244.5	CARBONDALE	HERRIN	PYRITE	0.3	149.5	
244.2	CARBONDALE	HERRIN	COAL	2.7	149.8	
241.5	CARBONDALE	HERRIN	BLUE BAND	0.2	152.5	
241.3	CARBONDALE	HERRIN	COAL	2.2	152.7	
239.2	CARBONDALE		CLAYSTONE	2.0	154.8	
237.2	CARBONDALE		LIMESTONE	0.2	156.8	

MAPID: 05500223000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 32 **QUARTERS/FOOTAGES:** NE SW NW

QUADRANGLE: DE SOTO **LONGITUDE:** -89.129425 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.87218 **DATE COLLECTED:** 0 / 0 / 1918

SURFACE ELEVATION (FT.): 394.0 **LOGGED (FT.):** 157.0 **LOG TYPE:**

SOURCE: WESTERN CM0041 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
248.0	CARBONDALE	HERRIN	COAL	9.3	146.0	

MAPID: 05500224000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 32 **QUARTERS/FOOTAGES:** SW SE SE

QUADRANGLE: HERRIN **LONGITUDE:** -89.117787 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.862861 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 398.0 **LOGGED (FT.):** 558.8 **LOG TYPE:** Drillers Log

SOURCE: CONSOLID. COAL CO., ST.LOUIS **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
398.0	PLEISTOCENE		UNCONSOLIDATED	4.0	0.0	
394.0	PLEISTOCENE		CLAY	4.0	4.0	YELLOW
390.0			SANDSTONE	60.0	8.0	
330.0			SANDSTONE	52.0	68.0	
278.0			SHALE	1.0	120.0	
277.0	CARBONDALE	BRERETON	LIMESTONE	4.0	121.0	
273.0	CARBONDALE		BLACK SHALE	4.0	125.0	
269.0	CARBONDALE		BLACK SHALE	14.0	129.0	
255.0	CARBONDALE	HERRIN	COAL	7.6	143.0	
247.4	CARBONDALE		CLAYSTONE	5.0	150.6	
242.4	CARBONDALE		LIMESTONE	5.0	155.6	
237.4	CARBONDALE		SANDSTONE	15.0	160.6	
222.4	CARBONDALE		BLACK SHALE	16.0	175.6	
206.4	CARBONDALE		BLACK SHALE	6.0	191.6	
200.4	CARBONDALE	SPRINGFIELD	COAL	4.5	197.6	
195.9	CARBONDALE		CLAYSTONE	15.0	202.1	WITH SHALE
180.9	CARBONDALE		BLACK SHALE	55.0	217.1	
125.9	CARBONDALE		BLACK SHALE	6.0	272.1	
119.9	CARBONDALE	HOUCHIN CREEK	COAL	2.5	278.1	
117.4	CARBONDALE		BLACK SHALE	15.0	280.6	
102.4	CARBONDALE		BLACK SHALE	7.0	295.6	
95.4	CARBONDALE	SURVANT	COAL	2.0	302.6	
93.4	CARBONDALE		SANDSTONE	65.0	304.6	
28.4	CARBONDALE		BLACK SHALE	10.0	369.6	
18.4	CARBONDALE	COLCHESTER	COAL	1.0	379.6	
17.4	TRADEWATER		CLAYSTONE	15.0	380.6	
2.4	TRADEWATER		SANDSTONE	19.0	395.6	
-16.6	TRADEWATER		BLACK SHALE	20.0	414.6	
-36.6	TRADEWATER		COAL	3.0	434.6	
-39.6	TRADEWATER		CLAYSTONE	5.0	437.6	
-44.6	TRADEWATER		BLACK SHALE	7.0	442.6	
-51.6	TRADEWATER		BLACK SHALE	1.0	449.6	
-52.6	TRADEWATER		COAL	1.0	450.6	
-53.6	TRADEWATER		CLAYSTONE	2.0	451.6	
-55.6	TRADEWATER		BLACK SHALE	18.0	453.6	
-73.6	TRADEWATER		CLAYSTONE	5.2	471.6	
-78.8	TRADEWATER		BLACK SHALE	20.0	476.8	
-98.8	TRADEWATER		SANDSTONE	20.0	496.8	
-118.8	TRADEWATER		CONGLOMERATE	18.0	516.8	

-136.8	TRADEWATER	SANDSTONE/SILTSTONE	15.0	534.8	
-151.8	TRADEWATER	SANDSTONE/SILTSTONE	9.0	549.8	LIGHT

MAPID: 05500224000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 32 **QUARTERS/FOOTAGES:** SW SE SE

QUADRANGLE: HERRIN **LONGITUDE:** -89.117787 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.862861 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 398.0 **LOGGED (FT.):** 559.0 **LOG TYPE:**

SOURCE: CONSOL STL **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
255.0	CARBONDALE	HERRIN	COAL	7.6	143.0	
200.0	CARBONDALE	SPRINGFIELD	COAL	4.5	198.0	

MAPID: 05501079000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 32 **QUARTERS/FOOTAGES:** 660' N line, 1320' W line

QUADRANGLE: ELKVILLE **LONGITUDE:** -89.12831 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.875045 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 191.4 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COUNTY COAL CO. 3 **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
309.1	CARBONDALE		SILTY SHALE	15.0	85.9	
294.1	CARBONDALE	ALLENBY	BONE COAL	0.8	100.9	
293.3	CARBONDALE		SHALE & SANDSTONE	4.8	101.7	
288.5	CARBONDALE	BANKSTON FORK	LIMESTONE	8.7	106.5	UPPER BENCH
279.8	CARBONDALE	BANKSTON FORK	SILTY SHALE	2.0	115.2	SHALE PARTING
277.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	117.2	LOWER BENCH
276.8	CARBONDALE	LAWSON	SILTY SHALE	14.5	118.2	
262.3	CARBONDALE	LAWSON	DARK GRAY SHALE	32.5	132.7	
229.8	CARBONDALE	BRERETON	LIMESTONE	11.8	165.2	
218.1	CARBONDALE	ANNA	BLACK SHALE	7.1	176.9	
211.0	CARBONDALE	HERRIN	COAL	7.4	184.0	

MAPID: 05500276000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 33 **QUARTERS/FOOTAGES:** NW NW SW

QUADRANGLE: HERRIN **LONGITUDE:** -89.113156 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.868516 **DATE COLLECTED:** 0 / 0 / 1907

SURFACE ELEVATION (FT.): 392.9 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: FRAN CO MC000S **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
178.9	CARBONDALE	HERRIN	COAL	8.9	214.0	

MAPID: 05501085000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 33 **QUARTERS/FOOTAGES:** 0' S line, 2640' E line

QUADRANGLE: HERRIN **LONGITUDE:** -89.104855 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.862 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 350.0 **LOGGED (FT.):** 129.3 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COUNTY COAL CO. 9 **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
316.2	CARBONDALE		ROCK	9.0	33.8	
307.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.8	42.8	
302.5	CARBONDALE	LAWSON	LIMESTONE W/ SHALE	4.0	47.5	
298.5	CARBONDALE	LAWSON	SILTY SHALE	4.0	51.5	
294.5	CARBONDALE	LAWSON	GRAY SHALE	1.5	55.5	
293.0	CARBONDALE	LAWSON	DARK GRAY SHALE	24.5	57.0	
268.5	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	3.0	81.5	
265.5	CARBONDALE	ANNA	BLACK SHALE	3.0	84.5	
262.5	CARBONDALE	ENERGY	GRAY SHALE	33.5	87.5	
229.0	CARBONDALE	HERRIN	COAL	8.3	121.0	

MAPID: 05501089000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 34 **QUARTERS/FOOTAGES:** 1180' S line, 580' W line

QUADRANGLE: HERRIN **LONGITUDE:** -89.093728 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.865359 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 380.0 **LOGGED (FT.):** 130.4 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COUNTY COAL CO. 13 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
333.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	47.0	
326.0	CARBONDALE	LAWSON	SANDSTONE	10.0	54.0	
316.0	CARBONDALE	LAWSON	SHALE & SANDSTONE	10.0	64.0	
306.0	CARBONDALE	LAWSON	GRAY SHALE	13.0	74.0	
293.0	CARBONDALE	BRERETON	LIMESTONE	4.0	87.0	
289.0	CARBONDALE	ANNA	BLACK SHALE	3.0	91.0	
286.0	CARBONDALE	ENERGY	CALCAREOUS SHALE	6.5	94.0	
279.5	CARBONDALE	ENERGY	GRAY SHALE	8.0	100.5	
271.5	CARBONDALE	ENERGY	BLACK SHALE	1.0	108.5	
270.5	CARBONDALE	ENERGY	GRAY SHALE	13.3	109.5	
257.2	CARBONDALE	ENERGY	BLACK SHALE	0.3	122.8	
257.0	CARBONDALE	HERRIN	COAL	7.4	123.0	

MAPID: 05502388000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 34 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NW NE

QUADRANGLE: HERRIN **LONGITUDE:** -89.085349 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.87405 **DATE COLLECTED:** 5 / 0 / 1967

SURFACE ELEVATION (FT.): 397.0 **LOGGED (FT.):** 1400.0 **LOG TYPE:** Electric Log

SOURCE: GALLAGHER, VICTOR R. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-93.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	490.0	
-163.0	SPOON	DAVIS	UNCLASSIFIED	-	560.0	
-1003.0	BASE OF PENN.		UNCLASSIFIED	-	1400.0	

MAPID: 05500225000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 35 **QUARTERS/FOOTAGES:** SE SE SE
QUADRANGLE: HERRIN **LONGITUDE:** -89.059927 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 37.862877 **DATE COLLECTED:** 0 / 0 / 1916
SURFACE ELEVATION (FT.): 371.5 **LOGGED (FT.):** 276.0 **LOG TYPE:** Drillers Log
SOURCE: 3 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
371.5	PLEISTOCENE		CLAY	21.0	0.0	
350.5	PLEISTOCENE		CLAY	39.0	21.0	WITH SAND, BLUE
311.5	MODESTO		SHALE	65.0	60.0	
246.5	MODESTO	PIASA	LIMESTONE	10.0	125.0	
236.5	CARBONDALE	DANVILLE	COAL	2.0	135.0	
234.5	CARBONDALE		BLACK SHALE	3.0	137.0	
231.5	CARBONDALE		SHALE	9.0	140.0	
222.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	149.0	
216.5	CARBONDALE		SHALE	17.0	155.0	
199.5	CARBONDALE	BRERETON	LIMESTONE	7.0	172.0	
192.5	CARBONDALE		SHALE	86.0	179.0	
106.5	CARBONDALE	HERRIN	COAL	11.0	265.0	

MAPID: 05500225000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 35 **QUARTERS/FOOTAGES:** SE SE SE
QUADRANGLE: HERRIN **LONGITUDE:** -89.059927 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.862877 **DATE COLLECTED:** 0 / 0 / 1916
SURFACE ELEVATION (FT.): 371.5 **LOGGED (FT.):** 276.0 **LOG TYPE:**
SOURCE: OLD BEN 0003 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
107.5	CARBONDALE	HERRIN	COAL	-	264.0	

MAPID: 05500231000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 35 **QUARTERS/FOOTAGES:** SE SE SE
QUADRANGLE: HERRIN **LONGITUDE:** -89.059927 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.862877 **DATE COLLECTED:** 0 / 0 / 1916
SURFACE ELEVATION (FT.): 369.0 **LOGGED (FT.):** 226.0 **LOG TYPE:**
SOURCE: OLD BEN 0001 **WELL TYPE:** Coal Test
COMMENT:

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

MAPID: 05500312000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 35 **QUARTERS/FOOTAGES:** 1220' S line, 100' W line

QUADRANGLE: HERRIN **LONGITUDE:** -89.077034 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.865393 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 244.5 **LOG TYPE:** Drillers Log

SOURCE: BELL & ZOLLER COAL CO 23 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
268.7	MODESTO	PIASA	LIMESTONE	5.6	120.3	
263.2	MODESTO		DARK GRAY SHALE	3.9	125.8	
259.2	CARBONDALE	DANVILLE	COAL	2.6	129.8	
256.7	CARBONDALE		SHALE	9.0	132.3	
247.7	CARBONDALE	ALLENBY	BONE COAL	0.3	141.3	
247.3	CARBONDALE		CLAYSTONE & SHALE	4.8	141.7	
242.5	CARBONDALE	BANKSTON FORK	LIMESTONE	7.1	146.5	
235.4	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	8.2	153.6	
227.2	CARBONDALE	LAWSON	SILTY SHALE	4.0	161.8	
223.2	CARBONDALE	LAWSON	DARK GRAY SHALE	15.5	165.8	
207.7	CARBONDALE	BRERETON	LIMESTONE	3.8	181.3	
203.9	CARBONDALE	ANNA	BLACK SHALE	4.7	185.1	
199.2	CARBONDALE	ENERGY	SILTY SHALE	5.7	189.8	
193.6	CARBONDALE	ENERGY	GRAY SHALE	40.6	195.4	
153.0	CARBONDALE	HERRIN	COAL	8.5	236.0	

MAPID: 05500957000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 36 **QUARTERS/FOOTAGES:** 2035' N line, 1666' E line

QUADRANGLE: HERRIN **LONGITUDE:** -89.045739 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.870927 **DATE COLLECTED:** 8 / 0 / 1942

SURFACE ELEVATION (FT.): 383.5 **LOGGED (FT.):** 1450.0 **LOG TYPE:** Electric Log

SOURCE: BUTLER, A. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-136.5	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	520.0	
-206.5	SPOON	DAVIS	UNCLASSIFIED	-	590.0	
-1066.5	BASE OF PENN.		UNCLASSIFIED	-	1450.0	

MAPID: 05500957000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 1E **SECTION:** 36 **QUARTERS/FOOTAGES:** 2035' N line, 1666' E line

QUADRANGLE: HERRIN **LONGITUDE:** -89.045739 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.870927 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 384.0 **LOGGED (FT.):** 294.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
245.0	MODESTO	PIASA	LIMESTONE & SHALE	3.0	139.0	
242.0	MODESTO		DARK GRAY SHALE	6.0	142.0	
236.0	CARBONDALE	DANVILLE	COAL	2.0	148.0	
234.0	CARBONDALE		CLAYSTONE & SHALE	12.0	150.0	
222.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	4.0	162.0	
218.0	CARBONDALE	LAWSON	CALCAREOUS SHALE	10.0	166.0	
208.0	CARBONDALE	BRERETON	LIMESTONE	11.0	176.0	
197.0	CARBONDALE	ANNA	BLACK SHALE	3.0	187.0	
194.0	CARBONDALE	ENERGY	SILTY SHALE	24.0	190.0	
170.0	CARBONDALE	ENERGY	GRAY SHALE	70.0	214.0	
100.0	CARBONDALE	HERRIN	COAL	10.0	284.0	

MAPID: 05500094000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** SW SW NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.936667 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.944095 **DATE COLLECTED:** 0 / 0 / 1920

SURFACE ELEVATION (FT.): 398.0 **LOGGED (FT.):** 577.5 **LOG TYPE:** Drillers Log

SOURCE: CHICAGO WILMINGTON & FRANKLIN 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
398.0	PLEISTOCENE		CLAY	30.0	0.0	
368.0	MODESTO		SANDSTONE	2.0	30.0	
366.0	MODESTO		SANDSTONE	23.0	32.0	
343.0	MODESTO		SHALE	10.0	55.0	
333.0	MODESTO		SANDY SHALE	85.0	65.0	
248.0	MODESTO		SANDSTONE	30.0	150.0	
218.0	MODESTO		SHALE	23.0	180.0	
195.0	MODESTO		SHALE	3.0	203.0	
192.0	MODESTO		SANDY SHALE	4.0	206.0	
188.0	MODESTO	CHAPEL	COAL	1.0	210.0	
187.0	MODESTO		CLAYSTONE	6.0	211.0	
181.0	MODESTO		SANDSTONE	10.0	217.0	
171.0	MODESTO		SANDY SHALE	20.0	227.0	
151.0	MODESTO		SHALE	20.0	247.0	
131.0	MODESTO		SANDY SHALE	10.0	267.0	
121.0	MODESTO		CLAYSTONE	3.0	277.0	
118.0	MODESTO		SANDY SHALE	63.0	280.0	
55.0	MODESTO		SANDSTONE	13.0	343.0	
42.0	MODESTO		SANDY SHALE	6.0	356.0	
36.0	MODESTO		SHALE	14.7	362.0	
21.3	MODESTO		COAL	0.3	376.7	
21.0	MODESTO		CLAYSTONE	3.0	377.0	
18.0	MODESTO		SANDSTONE	2.0	380.0	
16.0	MODESTO		SANDY SHALE	8.0	382.0	
8.0	MODESTO		SHALE	14.0	390.0	
-6.0	MODESTO		SANDY SHALE	3.0	404.0	
-9.0	MODESTO		SHALE	5.0	407.0	
-14.0	MODESTO	PIASA	LIMESTONE	5.0	412.0	
-19.0	MODESTO		SHALE	3.0	417.0	
-22.0	CARBONDALE	DANVILLE	COAL	1.0	420.0	
-23.0	CARBONDALE		SANDSTONE	12.0	421.0	
-35.0	CARBONDALE		SANDY SHALE	9.0	433.0	
-44.0	CARBONDALE		SHALE	2.0	442.0	
-46.0	CARBONDALE		SHALE	7.0	444.0	
-53.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	451.0	
-57.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	455.0	
-59.0	CARBONDALE		CALCAREOUS SHALE	3.0	457.0	
-62.0	CARBONDALE	BRERETON	LIMESTONE	3.0	460.0	
-65.0	CARBONDALE	ENERGY	SHALE	20.0	463.0	WITH BROWN BANDS

-85.0	CARBONDALE	ENERGY	SHALE	9.0	483.0	WITH BROWN BANDS
-94.0	CARBONDALE	ENERGY	SHALE	8.0	492.0	
-102.0	CARBONDALE	ENERGY	SHALE W/ COAL STREAKS	6.0	500.0	WITH COAL PARTINGS
-108.0	CARBONDALE	ENERGY	SHALE	2.0	506.0	
-110.0	CARBONDALE	ENERGY	CLAYSTONE	2.0	508.0	
-112.0	CARBONDALE	ENERGY	SHALE	11.5	510.0	WITH BROWN BANDS
-123.5	CARBONDALE	HERRIN	COAL	9.6	521.5	
-133.1	CARBONDALE		CLAYSTONE	1.9	531.1	
-135.0	CARBONDALE		LIMESTONE	5.0	533.0	
-140.0	CARBONDALE		LIMESTONE	4.0	538.0	
-144.0	CARBONDALE		SANDSTONE	9.0	542.0	
-153.0	CARBONDALE		SHALE	2.0	551.0	
-155.0	CARBONDALE		SHALE	3.0	553.0	WITH BROWN BANDS
-158.0	CARBONDALE		LIMESTONE	1.5	556.0	
-159.5	CARBONDALE		SHALE	1.5	557.5	
-161.0	CARBONDALE		SHALE	4.0	559.0	
-165.0	CARBONDALE		SHALE	3.0	563.0	
-168.0	CARBONDALE		SHALE	6.0	566.0	
-174.0	CARBONDALE	SPRINGFIELD	COAL	3.8	572.0	
-177.8	CARBONDALE		CLAYSTONE	1.7	575.8	

MAPID: 05500188000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** SE NE SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.939003 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.940509 **DATE COLLECTED:** 0 / 0 / 1920

SURFACE ELEVATION (FT.): 403.0 **LOGGED (FT.):** 523.0 **LOG TYPE:**

SOURCE: C W F CC 0001 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-111.0	CARBONDALE	HERRIN	COAL	9.8	514.0	

MAPID: 05500277000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** SE NE NW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.938957 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.94778 **DATE COLLECTED:** 0 / 0 / 1930

SURFACE ELEVATION (FT.): 413.8 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: C W F CC 0002 **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-109.2	CARBONDALE	HERRIN	COAL	8.5	523.0	

MAPID: 05500300000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** 675' N line, 2030' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.939933 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.948301 **DATE COLLECTED:** 4 / 0 / 1929

SURFACE ELEVATION (FT.): 413.8 **LOGGED (FT.):** 532.0 **LOG TYPE:** Drillers Log

SOURCE: FRANKLIN COAL CO. 1-29 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
413.8	PLEISTOCENE		CLAY	33.0	0.0	
380.8	MODESTO		SHALE	20.0	33.0	
360.8	MODESTO		SANDSTONE	6.0	53.0	
354.8	MODESTO		SANDY SHALE	21.0	59.0	
333.8	MODESTO		SHALY SANDSTONE	4.0	80.0	
329.8	MODESTO		SANDSTONE	32.0	84.0	
297.8	MODESTO		SANDY SHALE	33.0	116.0	
264.8	MODESTO		SANDSTONE	53.0	149.0	
211.8	MODESTO		SHALE	10.0	202.0	
201.8	MODESTO		SHALE	4.0	212.0	
197.8	MODESTO	CHAPEL	COAL	1.5	216.0	
196.3	MODESTO		CLAYSTONE	5.5	217.5	
190.8	MODESTO		SANDSTONE	5.0	223.0	
185.8	MODESTO		SHALY SANDSTONE	12.0	228.0	
173.8	MODESTO		SANDY SHALE	70.0	240.0	
103.8	MODESTO		SANDSTONE	40.0	310.0	
63.8	MODESTO		SHALE	9.0	350.0	
54.8	MODESTO		SHALY SANDSTONE	10.0	359.0	
44.8	MODESTO		SANDSTONE	6.0	369.0	
38.8	MODESTO		SHALE	8.0	375.0	
30.8	MODESTO		COAL	1.5	383.0	
29.3	MODESTO		CLAYSTONE	5.0	384.5	
24.3	MODESTO		SHALY SANDSTONE	12.5	389.5	
11.8	MODESTO		SANDSTONE	8.0	402.0	
3.8	MODESTO		SHALE	7.8	410.0	
-4.0	MODESTO	DEGRAFF	COAL	0.6	417.8	
-4.5	MODESTO		CLAYSTONE	3.2	418.3	
-7.7	MODESTO		SHALE	5.5	421.5	
-13.2	CARBONDALE	DANVILLE	COAL	1.9	427.0	
-15.1	CARBONDALE		CLAYSTONE	1.6	428.9	
-16.7	CARBONDALE		SANDSTONE	4.5	430.5	
-21.2	CARBONDALE		SHALE	7.0	435.0	
-28.2	CARBONDALE		SANDY SHALE	15.0	442.0	
-43.2	CARBONDALE		SHALE	6.0	457.0	
-49.2	CARBONDALE		LIMESTONE	1.0	463.0	
-50.2	CARBONDALE		SHALE	23.0	464.0	
-73.2	CARBONDALE		SHALE	3.0	487.0	
-76.2	CARBONDALE	BRERETON	LIMESTONE	4.0	490.0	
-80.2	CARBONDALE	ENERGY	SANDY SHALE	5.0	494.0	

-85.2	CARBONDALE	ENERGY	SHALE	6.0	499.0
-91.2	CARBONDALE	ENERGY	SHALE	14.5	505.0
-105.7	CARBONDALE	ENERGY	SHALE	4.0	519.5
-109.7	CARBONDALE	HERRIN	COAL	8.5	523.5

MAPID: 05500300000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** 675' N line, 2030' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.939933 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.948301 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 414.0 **LOGGED (FT.):** 532.5 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-4.7	MODESTO	PIASA	CLAYSTONE	3.2	418.7	
-7.8	MODESTO		DARK GRAY SHALE	5.5	421.8	
-13.3	CARBONDALE	DANVILLE	COAL	1.9	427.3	
-15.3	CARBONDALE		SHALE & SANDSTONE	28.3	429.3	
-43.5	CARBONDALE		DARK GRAY SHALE	6.0	457.5	
-49.5	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	463.5	
-50.5	CARBONDALE	LAWSON	SILTY SHALE	23.0	464.5	
-73.5	CARBONDALE	LAWSON	GRAY SHALE	3.0	487.5	
-76.5	CARBONDALE	BRERETON	LIMESTONE	4.0	490.5	
-80.5	CARBONDALE	ENERGY	SILTY SHALE	5.0	494.5	
-85.5	CARBONDALE	ENERGY	GRAY SHALE	6.0	499.5	
-91.5	CARBONDALE	ENERGY	DARK GRAY SHALE	14.5	505.5	
-106.0	CARBONDALE	ENERGY	GRAY SHALE	4.0	520.0	
-110.0	CARBONDALE	HERRIN	COAL	8.5	524.0	

MAPID: 05500332000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** NE NE SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.938992 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.942325 **DATE COLLECTED:** 7 / 0 / 1941

SURFACE ELEVATION (FT.): 412.0 **LOGGED (FT.):** 1650.0 **LOG TYPE:** Electric Log

SOURCE: MARGRAVE D M **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-368.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	780.0	
-438.0	SPOON	DAVIS	UNCLASSIFIED	-	850.0	
-1238.0	BASE OF PENN.		UNCLASSIFIED	-	1650.0	

MAPID: 05500332000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 1 **QUARTERS/FOOTAGES:** NE NE SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.938992 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.942325 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 412.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**

SOURCE: MRGRAVE DM **WELL TYPE:** Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-129.0	CARBONDALE	HERRIN	COAL	9.0	541.0	
-175.0	CARBONDALE	SPRINGFIELD	COAL	4.0	587.0	

MAPID: 05500095000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 2 **QUARTERS/FOOTAGES:** SW SE NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.950512 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.944333 **DATE COLLECTED:** 0 / 0 / 1920

SURFACE ELEVATION (FT.): 432.0 **LOGGED (FT.):** 624.0 **LOG TYPE:** Drillers Log

SOURCE: CHICAGO, WILMINGTON & FRANKLIN3 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
432.0	PLEISTOCENE		CLAY	7.3	0.0	
424.7	PLEISTOCENE		SAND	2.7	7.3	
422.0	PLEISTOCENE		CLAY	16.0	10.0	
406.0	BOND		SANDSTONE	1.3	26.0	
404.7	BOND		SHALE	3.8	27.3	WITH CLAY
401.0	BOND		SANDY SHALE	2.2	31.0	
398.8	BOND	CARTHAGE	LIMESTONE	5.8	33.2	
393.0	MODESTO		SHALE	7.0	39.0	
386.0	MODESTO		SHALE	4.3	46.0	
381.7	MODESTO		SOFT SHALE	7.7	50.3	
374.0	MODESTO		SHALE	9.0	58.0	
365.0	MODESTO		SHALE	25.8	67.0	
339.2	MODESTO		SHALE	1.3	92.8	
338.0	MODESTO		SHALE	24.5	94.0	
313.5	MODESTO		SHALE	7.5	118.5	
306.0	MODESTO		SHALE	13.5	126.0	
292.5	MODESTO		SANDY SHALE	7.2	139.5	
285.3	MODESTO		COAL	0.7	146.7	
284.7	MODESTO		SANDY SHALE	40.2	147.3	
244.5	MODESTO		SANDSTONE	6.5	187.5	
238.0	MODESTO		SANDY SHALE	34.5	194.0	
203.5	MODESTO		SHALE	16.5	228.5	
187.0	MODESTO		SHALE	7.3	245.0	
179.7	MODESTO	CHAPEL	COAL	0.7	252.3	
179.0	MODESTO		CLAYSTONE	5.5	253.0	
173.5	MODESTO		SANDY SHALE	22.7	258.5	
150.8	MODESTO		SANDSTONE	0.6	281.2	
150.2	MODESTO		SHALE	83.3	281.8	
66.9	MODESTO		SANDY SHALE	15.6	365.1	
51.3	MODESTO		SHALE	6.3	380.7	WITH BROWN BANDS
45.0	MODESTO		SHALE	3.2	387.0	
41.8	MODESTO		SANDSTONE	1.8	390.2	
40.0	MODESTO		SHALE	15.0	392.0	
25.0	MODESTO		SANDY SHALE	3.0	407.0	
22.0	MODESTO		SHALE	5.3	410.0	
16.7	MODESTO		COAL	0.5	415.3	
16.2	MODESTO		SHALE	7.3	415.8	
9.0	MODESTO		SANDY SHALE	7.5	423.0	
1.5	MODESTO		SHALE	16.5	430.5	

-15.0	MODESTO		SHALE	5.7	447.0	WITH BROWN BANDS
-20.7	MODESTO	DEGRAFF	COAL	0.3	452.7	
-21.0	MODESTO		CLAYSTONE	5.0	453.0	
-26.0	MODESTO	PIASA	LIMESTONE	4.5	458.0	
-30.5	MODESTO		SHALE	1.0	462.5	
-31.5	MODESTO		SHALE	2.3	463.5	
-33.8	CARBONDALE	DANVILLE	COAL	1.8	465.8	
-35.7	CARBONDALE		SANDY SHALE	12.5	467.7	
-48.2	CARBONDALE	ALLENBY	BONE COAL	0.4	480.2	
-48.6	CARBONDALE	ALLENBY	SHALE	2.5	480.6	
-51.1	CARBONDALE	ALLENBY	COAL	0.5	483.1	
-51.6	CARBONDALE		SHALE	4.4	483.6	
-56.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	488.0	
-61.0	CARBONDALE		SHALE	2.0	493.0	
-63.0	CARBONDALE		SANDY SHALE	5.0	495.0	
-68.0	CARBONDALE		SANDY SHALE	14.5	500.0	
-82.5	CARBONDALE		SHALE	7.5	514.5	
-90.0	CARBONDALE	BRERETON	LIMESTONE	5.5	522.0	
-95.5	CARBONDALE	ENERGY	BLACK SHALE	3.5	527.5	
-99.0	CARBONDALE	ENERGY	SANDY SHALE	3.0	531.0	
-102.0	CARBONDALE	ENERGY	SANDY SHALE	19.0	534.0	
-121.0	CARBONDALE	ENERGY	SANDY SHALE	1.0	553.0	
-122.0	CARBONDALE	ENERGY	SHALE	8.7	554.0	WITH BROWN BANDS
-130.7	CARBONDALE	HERRIN	COAL	0.1	562.7	
-130.8	CARBONDALE	HERRIN	SHALE	0.6	562.8	
-131.3	CARBONDALE	HERRIN	COAL	1.3	563.3	
-132.6	CARBONDALE	HERRIN	BLACK SHALE	0.1	564.6	
-132.7	CARBONDALE	HERRIN	COAL	0.6	564.7	
-133.3	CARBONDALE	HERRIN	BLACK SHALE	0.0	565.3	
-133.3	CARBONDALE	HERRIN	COAL	4.8	565.3	
-138.1	CARBONDALE	HERRIN	BLACK SHALE	0.1	570.1	
-138.2	CARBONDALE	HERRIN	COAL	0.3	570.2	
-138.4	CARBONDALE	HERRIN	BLACK SHALE	0.1	570.4	
-138.5	CARBONDALE	HERRIN	COAL	1.8	570.5	
-140.3	CARBONDALE		CLAYSTONE	1.8	572.3	
-142.0	CARBONDALE		CALCAREOUS SHALE	2.5	574.0	
-144.5	CARBONDALE		LIMESTONE	4.5	576.5	
-149.0	CARBONDALE		SHALE	4.0	581.0	
-153.0	CARBONDALE		SANDY SHALE	8.5	585.0	
-161.5	CARBONDALE		SANDSTONE	4.5	593.5	
-166.0	CARBONDALE		SHALE	8.0	598.0	WITH BROWN BANDS
-174.0	CARBONDALE	ST. DAVID	LIMESTONE	1.0	606.0	
-175.0	CARBONDALE	TURNER MINE	BLACK SHALE	2.7	607.0	
-177.7	CARBONDALE	TURNER MINE	SANDY SHALE	0.8	609.7	
-178.5	CARBONDALE	TURNER MINE	BLACK SHALE	1.0	610.5	
-179.5	CARBONDALE		SHALE	6.8	611.5	
-186.3	CARBONDALE	SPRINGFIELD	COAL	1.6	618.3	

-187.9	CARBONDALE	SPRINGFIELD	COAL	0.0	619.9
-188.0	CARBONDALE	SPRINGFIELD	COAL	1.9	620.0
-189.8	CARBONDALE	SPRINGFIELD	PYRITE	0.0	621.8
-189.9	CARBONDALE	SPRINGFIELD	COAL	0.3	621.9
-190.2	CARBONDALE	SPRINGFIELD	PYRITE	0.2	622.2
-190.3	CARBONDALE	SPRINGFIELD	COAL	0.3	622.3
-190.7	CARBONDALE		CLAYSTONE	1.3	622.7

MAPID: 05500743000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 2 **QUARTERS/FOOTAGES:** 70' S line, 1632' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.952885 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.936336 **DATE COLLECTED:** 3 / 27 / 1944

SURFACE ELEVATION (FT.): 408.8 **LOGGED (FT.):** 884.0 **LOG TYPE:** Drillers Log

SOURCE: CW & F COAL CO 14 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
408.8	PLEISTOCENE		CLAY	15.0	0.0	
393.8	PLEISTOCENE		SAND	9.0	15.0	
384.8	PLEISTOCENE		CLAY	6.0	24.0	
378.8			GRAY SHALE	82.0	30.0	
296.8			SHALE	7.5	112.0	DARK, STICKY
289.3			COAL	1.0	119.5	SUGGESTED TO BE #8
288.3			GRAY SHALE	14.5	120.5	
273.8			SHALE	50.0	135.0	
223.8			SHALE & SANDSTONE	30.0	185.0	
193.8			SHALE	5.0	215.0	SANDY
188.8			SHALE	18.0	220.0	
170.8			LIMESTONE	1.0	238.0	
169.8			SHALE	51.0	239.0	
118.8			GRAY SHALE	25.0	290.0	TOUGH
93.8			SHALE	30.0	315.0	
63.8			GRAY SHALE	20.0	345.0	
43.8			SHALE	6.0	365.0	
37.8			SHALE	17.0	371.0	SANDY
20.8			SHALE	7.3	388.0	
13.5			COAL	0.7	395.3	
12.8			GRAY SHALE	4.0	396.0	STICKY
8.8			LIMESTONE	8.0	400.0	
0.8			GRAY SHALE	18.0	408.0	TOUGH
-17.2			SHALE	12.5	426.0	
-29.7	MODESTO	PIASA	LIMESTONE	3.5	438.5	SUGGESTED TO BE CUTLER
-33.2	MODESTO		SHALE	4.8	442.0	
-38.0	CARBONDALE	DANVILLE	COAL	1.7	446.8	NAMED CUTLER IN LOG
-39.6	CARBONDALE		SHALE	4.6	448.4	
-44.2	CARBONDALE		SHALE	3.0	453.0	SANDY
-47.2	CARBONDALE		GRAY SHALE	4.0	456.0	
-51.2	CARBONDALE	ALLENBY	COAL	0.3	460.0	NAMED ALLERTON IN LOG
-51.5	CARBONDALE	ALLENBY	SHALE	0.8	460.3	
-52.2	CARBONDALE	ALLENBY	COAL	0.3	461.0	NAMED BANKSTON FORK IN LOG
-52.5	CARBONDALE		GRAY SHALE	7.7	461.3	
-60.2	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	469.0	HARD, BROWN
-67.2	CARBONDALE		SHALE	28.0	476.0	
-95.2	CARBONDALE	BRERETON	LIMESTONE	3.5	504.0	NAMED HERRIN IN LOG
-98.7	CARBONDALE	ENERGY	SHALE	8.5	507.5	
-107.2	CARBONDALE	ENERGY	GRAY SHALE	20.0	516.0	

-127.2	CARBONDALE	ENERGY	SHALE	11.3	536.0	
-138.5	CARBONDALE	HERRIN	COAL	8.8	547.3	
-147.3	CARBONDALE		UNDERCLAY	0.9	556.1	
-148.2	CARBONDALE		LIMESTONE	7.0	557.0	SHALEY
-155.2	CARBONDALE		LIMESTONE	2.0	564.0	
-157.2	CARBONDALE		SHALE	1.5	566.0	
-158.7	CARBONDALE		SANDSTONE	6.5	567.5	
-165.2	CARBONDALE		SHALE	10.0	574.0	
-175.2	CARBONDALE		SHALE	12.5	584.0	DARK
-187.7	CARBONDALE	SPRINGFIELD	COAL	4.4	596.5	NAMED #5 IN LOG
-192.1	CARBONDALE		LIMESTONE	1.1	600.9	
-193.2	CARBONDALE		SHALE	2.0	602.0	
-195.2	CARBONDALE		SHALE	18.0	604.0	SANDY
-213.2	CARBONDALE		GRAY SHALE	34.0	622.0	
-247.2	CARBONDALE		SHALE	19.0	656.0	
-266.2	CARBONDALE	EXCELLO	SHALE	2.5	675.0	DARK
-268.7	CARBONDALE	HOUCHIN CREEK	COAL	1.4	677.5	NAMED #4 IN LOG
-270.1	CARBONDALE		LIMESTONE	2.1	678.9	
-272.2	CARBONDALE		SHALE	9.0	681.0	SANDY
-281.2	CARBONDALE		GRAY SHALE	12.0	690.0	TOUGH
-293.2	CARBONDALE		SHALE	6.5	702.0	
-299.7	CARBONDALE	SURVANT	COAL	1.0	708.5	NAMED #2 IN LOG
-300.7	CARBONDALE		SHALE	2.5	709.5	
-303.2	CARBONDALE		GRAY SHALE	30.0	712.0	DARK;LIMESTONE INTERBEDS
-333.2	CARBONDALE		SHALE	27.0	742.0	
-360.2	CARBONDALE		SHALE	22.0	769.0	DARK
-382.2	CARBONDALE	COLCHESTER	COAL	0.8	791.0	
-383.0	SPOON		SHALE	23.2	791.8	STICKY AT TOP
-406.2	SPOON		SHALE	37.0	815.0	SANDY
-443.2	SPOON	DEKOVEN	COAL	0.8	852.0	
-444.0	SPOON		SHALE	6.5	852.8	DARK
-450.5	SPOON	DAVIS	COAL	2.8	859.3	
-453.3	SPOON		LIMESTONE	0.9	862.1	
-454.2	SPOON		SHALE	8.0	863.0	
-462.2	SPOON		SANDSTONE	13.0	871.0	

MAPID: 05500743000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 2 **QUARTERS/FOOTAGES:** 70' S line, 1632' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.952885 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.936336 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 409.0 **LOGGED (FT.):** 555.8 **LOG TYPE:** Drillers Log

SOURCE: C.W.&F. COAL CO. 14 **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-29.9	MODESTO	PIASA	LIMESTONE	3.5	438.9	
-33.4	MODESTO		SHALE	4.8	442.4	
-38.2	CARBONDALE	DANVILLE	COAL	1.7	447.2	
-39.8	CARBONDALE		SHALE	11.6	448.8	
-51.4	CARBONDALE	ALLENBY	BONE COAL	1.3	460.4	
-52.7	CARBONDALE		GRAY SHALE	7.7	461.7	
-60.4	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	469.4	
-67.4	CARBONDALE	LAWSON	SHALE	28.0	476.4	
-95.4	CARBONDALE	BRERETON	LIMESTONE	3.5	504.4	
-98.9	CARBONDALE	ENERGY	GRAY SHALE	39.1	507.9	
-138.0	CARBONDALE	HERRIN	COAL	8.8	547.0	

MAPID: 05501289000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 2 **QUARTERS/FOOTAGES:** 315' S line, 330' E line of NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.948226 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.944281 **DATE COLLECTED:** 12 / 0 / 1956

SURFACE ELEVATION (FT.): 418.0 **LOGGED (FT.):** 1650.0 **LOG TYPE:** Electric Log

SOURCE: SHELL OIL COMPANY **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-362.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	780.0	
-432.0	SPOON	DAVIS	UNCLASSIFIED	-	850.0	
-1232.0	BASE OF PENN.		UNCLASSIFIED	-	1650.0	

MAPID: 05500153000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 4 **QUARTERS/FOOTAGES:** 0' N line, 2640' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.99332 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.950068 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 380.0 **LOGGED (FT.):** 480.2 **LOG TYPE:** Survey Core Study

SOURCE: WILMINGTON STAR COAL CO. 14 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
42.3	MODESTO	PIASA	LIMESTONE	3.0	337.7	
39.3	MODESTO		BLACK SHALE	4.6	340.7	
34.7	CARBONDALE	DANVILLE	COAL	1.8	345.3	
32.9	CARBONDALE		GRAY SHALE	12.9	347.1	
20.0	CARBONDALE	ALLENBY	COAL	0.3	360.0	
19.7	CARBONDALE	BANKSTON FORK	LIMESTONE	1.4	360.3	
18.3	CARBONDALE	LAWSON	GRAY SHALE	12.0	361.7	
6.3	CARBONDALE	LAWSON	SILTY SHALE	7.0	373.7	
-0.7	CARBONDALE	BRERETON	LIMESTONE	6.0	380.7	
-6.7	CARBONDALE	ENERGY	SILTY SHALE	65.0	386.7	
-71.7	CARBONDALE	ENERGY	GRAY SHALE	19.3	451.7	
-91.0	CARBONDALE	HERRIN	COAL	9.2	471.0	

MAPID: 05502270000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 4 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.001961 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.943756 **DATE COLLECTED:** 2 / 0 / 1966

SURFACE ELEVATION (FT.): 382.0 **LOGGED (FT.):** 1600.0 **LOG TYPE:** Electric Log

SOURCE: GALLAGHER, VICTOR R. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-318.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	700.0	
-398.0	SPOON	DAVIS	UNCLASSIFIED	-	780.0	
-1218.0	BASE OF PENN.		UNCLASSIFIED	-	1600.0	

MAPID: 05500739000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 5 **QUARTERS/FOOTAGES:** 200' N line, 200' E line of NE NW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.012991 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.949394 **DATE COLLECTED:** 0 / 0 / 1943

SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 515.0 **LOG TYPE:** Drillers Log

SOURCE: C W & F COAL CO 9 **WELL TYPE:** Coal Test

COMMENT: INCOMPLETE SURVEY CORE STUDY AVAILABLE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
400.0	PLEISTOCENE		CLAY	20.0	0.0	
380.0	PLEISTOCENE		SAND	12.0	20.0	QUICK SAND
368.0	PLEISTOCENE		SANDY CLAY	48.0	32.0	
320.0			LIMESTONE	40.0	80.0	
280.0			GRAY SHALE	4.0	120.0	
276.0			SHALE	3.3	124.0	BLACK
272.7			COAL	0.7	127.3	
272.0			UNDERCLAY	9.0	128.0	
263.0			GRAY SHALE	22.0	137.0	LIMESTONE INTERBEDS
241.0			GRAY SHALE	18.0	159.0	SANDY;SANDSTONE INTERBEDS
223.0			GRAY SHALE	20.0	177.0	
203.0			SHALE	58.0	197.0	SANDY;SANDSTONE INTERBEDS
145.0			SHALE	10.0	255.0	DARK
135.0			SHALE	3.0	265.0	DARK, STICKY
132.0			GRAY SHALE	19.0	268.0	SANDY
113.0			SHALE	1.5	287.0	BLACK
111.5			COAL	0.8	288.5	
110.7			UNDERCLAY	15.8	289.3	
95.0			GRAY SHALE	21.0	305.0	
74.0			SHALE	2.0	326.0	DARK
72.0			COAL	0.3	328.0	
71.7			UNDERCLAY	3.7	328.3	
68.0			GRAY SHALE	2.5	332.0	
65.5			SHALE	3.3	334.5	DARK
62.2			COAL	2.3	337.8	
59.8			GRAY SHALE	1.1	340.2	
58.7			SANDSTONE	2.7	341.3	
56.0			GRAY SHALE	1.0	344.0	
55.0			SHALE	0.3	345.0	DARK
54.7			COAL	0.1	345.3	
54.6			UNDERCLAY	1.6	345.4	
53.0			LIMESTONE	18.5	347.0	
34.5	CARBONDALE		GRAY SHALE	29.5	365.5	SANDY
5.0	CARBONDALE		GRAY SHALE	74.0	395.0	THICKNESS ADJUSTED
-69.0	CARBONDALE	HERRIN	COAL	3.4	469.0	NAMED #6 IN LOG
-72.4	CARBONDALE	HERRIN	GRAY SHALE	0.7	472.4	BLUE SLATE
-73.0	CARBONDALE	HERRIN	BONE COAL	0.7	473.0	
-73.7	CARBONDALE	HERRIN	COAL	0.9	473.7	
-74.6	CARBONDALE	HERRIN	SHALE	2.0	474.6	DARK

-76.6	CARBONDALE	HERRIN	COAL	1.8	476.6	
-78.4	CARBONDALE		UNDERCLAY	0.3	478.4	
-78.7	CARBONDALE		CONGLOMERATE	6.3	478.7	
-85.0	CARBONDALE		SHALE	8.0	485.0	DARK
-93.0	CARBONDALE		SANDSTONE	4.0	493.0	
-97.0	CARBONDALE		SHALE	6.0	497.0	DARK
-103.0	CARBONDALE	TURNER MINE	SHALE	4.0	503.0	BLACK
-107.0	CARBONDALE	DYKERSBURG	GRAY SHALE	4.0	507.0	
-111.0	CARBONDALE	SPRINGFIELD	COAL	4.0	511.0	NAMED #5 IN LOG

MAPID: 05500740000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 5 **QUARTERS/FOOTAGES:** 2620' S line, 100' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.021172 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.942781 **DATE COLLECTED:** 12 / 0 / 1943

SURFACE ELEVATION (FT.): 384.5 **LOGGED (FT.):** 1006.8 **LOG TYPE:** Survey Core Study

SOURCE: CW & F COAL CO 10 **WELL TYPE:** Coal Test

COMMENT: DATA FROM DRILLER'S LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
384.5	PLEISTOCENE		CLAY	23.0	0.0	WITH BOULDERS
361.5	PLEISTOCENE		SAND	9.0	23.0	QUICKSAND
352.5	PLEISTOCENE		CLAY	13.0	32.0	
339.5			SHALE	5.0	45.0	SOFT
334.5			GRAY SHALE	45.8	50.0	SANDY;SILTSTONE INTERBEDS
288.7			GRAY SHALE	6.5	95.8	
282.2			GRAY SHALE	4.1	102.3	DARK TO BLACK;PYRITIC
278.1	MODESTO	CHAPEL	COAL	0.8	106.4	
277.3	MODESTO		UNDERCLAY	1.8	107.2	
275.5	MODESTO		SILTSTONE	5.5	109.0	CALCAREOUS,LAMINATED
270.0	MODESTO		GRAY SHALE	19.8	114.5	SANDY, SOME SILTSTONE STRINGERS
250.2	MODESTO		SILTSTONE	63.0	134.3	LAMINATED
187.2	MODESTO		GRAY SHALE	12.0	197.3	SILTY,SLTST LAMINAE
175.2	MODESTO		SILTSTONE	18.3	209.3	LAMINATED
156.9	MODESTO		GRAY SHALE	9.3	227.6	SANDY
147.6	MODESTO		GRAY SHALE	2.8	236.9	DARK
144.7	MODESTO		SILTSTONE	6.0	239.8	LAMINATED
138.7	MODESTO		GRAY SHALE	3.3	245.8	SANDY
135.4	MODESTO		SILTSTONE	7.2	249.1	
128.2	MODESTO		GRAY SHALE	2.3	256.3	SANDY,PARTLY CALCAREOUS
125.9	MODESTO		SHALE	2.3	258.6	BLACK
123.6	MODESTO		GRAY SHALE	7.5	260.9	
116.1	MODESTO		SHALE	3.0	268.4	GRADES TO SILTSTONE
113.1	MODESTO		SILTSTONE	7.9	271.4	SANDSTONE AND SILTSTONE LAMINAE
105.2	MODESTO		GRAY SHALE	6.0	279.3	SANDY
99.2	MODESTO		GRAY SHALE	6.7	285.3	
92.5	MODESTO		GRAY SHALE	5.2	292.0	DARK,CARBONACEOUS AT BASE
87.3	MODESTO		BONE COAL	0.3	297.2	
87.1	MODESTO		GRAY SHALE	1.5	297.4	DARK,CARBONACEOUS & PYRITIC
85.6	MODESTO	PIASA	LIMESTONE	2.5	298.9	ARGILLACEOUS,SHALEY AT BASE
83.1	MODESTO		GRAY SHALE	0.3	301.4	
82.8	MODESTO		GRAY SHALE	4.7	301.7	DARK TO BLACK,PYRITE
78.2	MODESTO		GRAY SHALE	1.0	306.3	DARK, CALCAREOUS
77.2	CARBONDALE	DANVILLE	COAL	2.6	307.3	PYRITE
74.6	CARBONDALE		UNDERCLAY	1.3	309.9	
73.3	CARBONDALE		SILTSTONE	5.8	311.2	LAMINATED
67.6	CARBONDALE		GRAY SHALE	2.5	316.9	
65.1	CARBONDALE		BONE COAL	0.2	319.4	

64.9	CARBONDALE		LIMESTONE	0.3	319.6	
64.6	CARBONDALE		GRAY SHALE	1.7	319.9	CALCAREOUS
62.9	CARBONDALE		SILTSTONE	12.0	321.6	LS NODULES;PARTLY SHALY,CALCAREOUS
50.9	CARBONDALE	BANKSTON FORK	LIMESTONE	8.2	333.6	BROWN,SUGGESTED BRERTON
42.7	CARBONDALE		SHALE	0.2	341.8	SUGGESTED TO BE ANNA; BLACK
42.6	CARBONDALE		GRAY SHALE	6.0	341.9	SANDY
36.6	CARBONDALE		SILTSTONE	2.0	347.9	
34.6	CARBONDALE		SANDSTONE	14.9	349.9	SILTSTONE LAMINAE
19.7	CARBONDALE		SILTSTONE	13.0	364.8	SHALY SILTSTONE LAMINAE
6.7	CARBONDALE		SILTSTONE	16.4	377.8	
-9.8	CARBONDALE		COAL	0.7	394.3	BOTTOM 3" INTERBEDDED W/SILTSTONE
-10.4	CARBONDALE	ENERGY	SILTSTONE	14.5	394.9	FINES DOWNWARD
-24.9	CARBONDALE	ENERGY	GRAY SHALE	12.8	409.4	SILTY
-37.7	CARBONDALE	ENERGY	SHALE	9.6	422.2	SANDY,FINELY LAMINATED
-47.3	CARBONDALE	ENERGY	SHALE	1.2	431.8	
-48.4	CARBONDALE	HERRIN	COAL	4.0	432.9	
-52.4	CARBONDALE	HERRIN	SHALE	1.4	436.9	BLACK
-53.8	CARBONDALE	HERRIN	COAL	1.2	438.3	
-55.0	CARBONDALE	HERRIN	GRAY SHALE	1.0	439.5	DARK
-56.0	CARBONDALE	HERRIN	COAL	1.7	440.5	
-57.7	CARBONDALE		UNDERCLAY	0.4	442.2	
-58.1	CARBONDALE		LIMESTONE	6.3	442.6	SHALEY
-64.4	CARBONDALE		GRAY SHALE	0.3	448.9	DARK,SANDY
-64.7	CARBONDALE		SILTSTONE	0.3	449.2	
-65.0	CARBONDALE		SANDSTONE	9.1	449.5	FINES DOWNWARD
-74.1	CARBONDALE		SILTSTONE	1.8	458.6	
-75.8	CARBONDALE		GRAY SHALE	7.8	460.3	DARK
-83.7	CARBONDALE	TURNER MINE	SHALE	1.0	468.2	WITH SOME COAL ZONES; BLACK
-84.7	CARBONDALE	DYKERSBURG	GRAY SHALE	8.7	469.2	DARK
-93.4	CARBONDALE	SPRINGFIELD	COAL	4.2	477.9	
-97.6	CARBONDALE		UNDERCLAY	3.8	482.1	
-101.4	CARBONDALE		SILTSTONE	9.9	485.9	THICKNESS ADJUSTED
-111.3	CARBONDALE		SILTSTONE	4.9	495.8	SANDSTONE LAMINAE, FINING DOWNWARD
-116.3	CARBONDALE		GRAY SHALE	6.3	500.8	SANDY
-122.5	CARBONDALE		GRAY SHALE	40.0	507.0	FINE
-162.5	CARBONDALE		GRAY SHALE	4.6	547.0	
-167.1	CARBONDALE		GRAY SHALE	0.3	551.6	PARTLY BLACK
-167.4	CARBONDALE		LIMESTONE	1.3	551.9	CONCRETION
-168.7	CARBONDALE	EXCELLO	SHALE	4.6	553.2	FISSILE; BLACK
-173.3	CARBONDALE	HOUCHIN CREEK	COAL	1.1	557.8	
-174.3	CARBONDALE		SILTSTONE	8.7	558.8	
-183.0	CARBONDALE		GRAY SHALE	14.2	567.5	MICACEOUS
-197.2	CARBONDALE		GRAY SHALE	1.7	581.7	DARK
-198.8	CARBONDALE	SURVANT	COAL	0.5	583.3	
-199.3	CARBONDALE		UNDERCLAY	0.5	583.8	
-199.8	CARBONDALE		SILTSTONE	1.2	584.3	
-201.0	CARBONDALE		GRAY SHALE	23.6	585.5	WITH SILTSTONE STRINGERS

-224.6	CARBONDALE		SANDSTONE	18.8	609.1	SILTSTONE LAMINAE
-243.4	CARBONDALE		SILTSTONE	15.8	627.9	SHALEY
-259.3	CARBONDALE		GRAY SHALE	14.8	643.8	SANDY
-274.0	CARBONDALE		LIMESTONE	1.6	658.5	ARGILLACEOUS BROWN,HARD,DENSE
-275.6	CARBONDALE		GRAY SHALE	8.8	660.1	DARK,HARD
-284.3	CARBONDALE	COLCHESTER	COAL	0.8	668.8	
-285.2	SPOON		UNDERCLAY	4.8	669.7	
-290.0	SPOON		SILTSTONE	6.4	674.5	
-297.4	SPOON		SILTSTONE	-	681.9	
-297.4	SPOON		SHALE	1.1	681.9	SILTY
-298.5	SPOON		GRAY SHALE	1.8	683.0	
-300.3	SPOON	DEKOVEN	COAL	1.7	684.8	BONE
-301.9	SPOON		GRAY SHALE	0.5	686.4	SILTY
-302.4	SPOON		SILTSTONE/SANDSTONE	51.9	686.9	INTERBEDDED,INTERLAMINATED
-354.3	SPOON	LOWER DEKOVEN	COAL	0.8	738.8	
-355.1	SPOON		UNDERCLAY	1.4	739.6	
-356.5	SPOON		SHALE	7.7	741.0	DARK
-364.2	SPOON		GRAY SHALE	1.2	748.7	PARTLY BLACK,FISSILE
-365.3	SPOON	DAVIS	COAL	0.6	749.8	BONEY
-365.9	SPOON	DAVIS	COAL	2.8	750.4	
-368.8	SPOON		GRAY SHALE	0.3	753.3	CARBONACEOUS
-369.0	SPOON		GRAY SHALE	2.0	753.5	SANDY
-371.0	SPOON		SILTSTONE	7.7	755.5	
-378.7	SPOON		GRAY SHALE	10.3	763.2	SANDY
-388.9	SPOON		SHALE	2.0	773.4	PYRITIC; BLACK
-390.9	SPOON		SILTSTONE	6.8	775.4	CARBONACEOUS
-397.7	SPOON		GRAY SHALE	12.5	782.2	DARK TO BLACK
-410.2	SPOON		SILTSTONE	0.8	794.7	
-411.0	SPOON		SHALE	1.7	795.5	FISSILE,PYRITIC; BLACK
-412.7	SPOON	WISE RIDGE	COAL	0.8	797.2	
-413.5	SPOON		GRAY SHALE	1.6	798.0	DARK
-415.1	SPOON		SILTSTONE	1.2	799.6	
-416.3	SPOON		SHALE	2.0	800.8	WITH BLACK CARBONACEOUS
-418.3	SPOON		GRAY SHALE	2.3	802.8	DARK SANDY
-420.5	SPOON		GRAY SHALE	6.9	805.0	DARK TO BLACK
-427.4	SPOON	MT. RORAH	COAL	1.2	811.9	
-428.6	SPOON		GRAY SHALE	7.1	813.1	
-435.7	SPOON		GRAY SHALE	2.3	820.2	DARK,CARBONACEOUS
-438.0	SPOON		GRAY SHALE	1.4	822.5	
-439.4	SPOON		GRAY SHALE	14.5	823.9	DARK,PARTLY BLACK
-453.9	SPOON		COAL	2.3	838.4	CORE GAP,COAL REPORTED IN DRILLER'S LOG
-456.2	SPOON		COAL	0.3	840.7	
-456.4	SPOON		GRAY SHALE	13.5	840.9	DARK CARBONACEOUS,SILTY
-469.9	SPOON		GRAY SHALE	2.7	854.4	DARK, BLACK FISSILE
-472.6	SPOON	MURPHYSBORO	COAL	0.1	857.1	CORE GAP, COAL REPORTED IN DRILLER'S LOG
-472.7	SPOON	MURPHYSBORO	COAL	4.1	857.2	COAL REPORTED IN DRILLER'S LOG

-476.8	SILTSTONE	13.2	861.3	DEPTH ADJUSTED HENCEFORTH
-489.9	GRAY SHALE	3.9	874.4	PARTLY,SANDY
-493.8	SILTSTONE	57.6	878.3	LAMINATED
-551.4	SANDSTONE	7.0	935.9	
-558.4	GRAY SHALE	2.8	942.9	SILTY
-561.2	LIMESTONE	1.0	945.7	CONCRETION
-562.2	GRAY SHALE	10.6	946.7	
-572.8	SANDSTONE	2.5	957.3	
-575.3	SANDSTONE	4.0	959.8	CROSS-BEDDED
-579.3	SILTSTONE	1.2	963.8	LAMINATED
-580.4	SANDSTONE	7.4	964.9	CROSS-BEDDED
-587.8	GRAY SHALE	10.0	972.3	SILTY
-597.8	SHALY SILTSTONE	22.4	982.3	BLACK,INTERBEDDED
-620.3	SANDSTONE	2.0	1004.8	CARBONACEOUS

MAPID: 05500740000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 5 **QUARTERS/FOOTAGES:** 2620' S line, 100' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.021172 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.942781 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 385.0 **LOGGED (FT.):** 442.5 **LOG TYPE:** Survey Core Study

SOURCE: C.W.&F. COAL CO. 10 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
88.3	MODESTO	PIASA	LIMESTONE/UNDERCLAY	3.5	296.7	
84.8	MODESTO		DARK GRAY SHALE	5.9	300.2	
78.9	CARBONDALE	DANVILLE	COAL	2.6	306.1	
76.3	CARBONDALE		SHALE & SILTSTONE	9.5	308.7	
66.8	CARBONDALE	ALLENBY	BONE COAL	0.2	318.2	
66.6	CARBONDALE	BANKSTON FORK	LIMESTONE	0.3	318.4	
66.3	CARBONDALE	LAWSON	CARBONACEOUS SHALE	1.7	318.7	
64.6	CARBONDALE	LAWSON	LIMESTONE W/ SHALE	10.6	320.4	
54.0	CARBONDALE	LAWSON	SILTSTONE	1.4	331.0	
52.6	CARBONDALE	BRERETON	LIMESTONE	8.2	332.4	
44.4	CARBONDALE	ANNA	BLACK SHALE	0.2	340.6	
44.3	CARBONDALE	ENERGY	SANDSTONE/SILTSTONE	52.3	340.7	
-8.1	CARBONDALE	ENERGY	COAL	0.7	393.1	
-8.7	CARBONDALE	ENERGY	SILTSTONE	14.5	393.7	
-23.2	CARBONDALE	ENERGY	SILTY SHALE	23.3	408.2	
-46.6	CARBONDALE	ENERGY	SHALE	1.4	431.6	
-48.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	9.5	433.0	

MAPID: 05502379000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 5 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of SW NE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.011153 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.945458 **DATE COLLECTED:** 2 / 0 / 1967

SURFACE ELEVATION (FT.): 401.0 **LOGGED (FT.):** 1710.0 **LOG TYPE:** Electric Log

SOURCE: GALLAGHER, VICTOR R. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-289.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	690.0	
-379.0	SPOON	DAVIS	UNCLASSIFIED	-	780.0	
-1309.0	BASE OF PENN.		UNCLASSIFIED	-	1710.0	

MAPID: 05500737000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 6 **QUARTERS/FOOTAGES:** SW NW NE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.029422 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.947221 **DATE COLLECTED:** 12 / 10 / 1943

SURFACE ELEVATION (FT.): 402.0 **LOGGED (FT.):** 874.5 **LOG TYPE:** Survey Core Study

SOURCE: CW & F COAL CO 7 **WELL TYPE:** Coal Test

COMMENT: DATA FROM DRILLER'S LOG INCLUDED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
402.0	PLEISTOCENE		CLAY	20.0	0.0	
382.0	PLEISTOCENE		UNCONSOLIDATED	8.0	20.0	
374.0	PLEISTOCENE		CLAY	11.5	28.0	THICKNESS ADJUSTED
362.5			SILTSTONE/SANDSTONE	17.5	39.5	INTERBEDDED
345.0			GRAY SHALE	40.0	57.0	SANDY
305.0			GRAY SHALE	24.0	97.0	FINE
281.0			GRAY SHALE	0.5	121.0	DARK,ARGILLACEOUS
280.5			SHALE	0.7	121.5	BLACK
279.8			GRAY SHALE	0.6	122.2	DARK
279.2			SHALE	0.5	122.8	BLACK
278.7			SHALY SILTSTONE	0.3	123.3	
278.4			SHALE	0.1	123.6	BLACK
278.3			LIMESTONE	0.3	123.7	WITH PYRITE
278.1	MODESTO	CHAPEL	COAL	0.8	123.9	
277.3	MODESTO		UNDERCLAY	3.7	124.7	
273.7	MODESTO		SILTSTONE	3.7	128.3	LAMINATED
270.0	MODESTO		SHALE	8.1	132.0	SANDY
261.9	MODESTO		CONGLOMERATE	0.6	140.1	ZONE IN SHALE
261.3	MODESTO		SHALE	16.3	140.7	SANDY
245.0	MODESTO		SILTSTONE	11.3	157.0	CARBONACEOUS LAMINAE
233.7	MODESTO		GRAY SHALE	9.0	168.3	
224.7	MODESTO		SHALE	70.0	177.3	CALCAREOUS SILTSTONE LAMINAE
154.7	MODESTO		GRAY SHALE	8.8	247.3	DARK
145.8	MODESTO		LIMESTONE	0.2	256.2	CONCRETION
145.7	MODESTO		SHALE	0.8	256.3	BLACK
144.9	MODESTO		UNDERCLAY	1.0	257.1	
143.9	MODESTO		SILTSTONE	19.2	258.1	
124.7	MODESTO		SHALE	1.4	277.3	PYRITIC; BLACK
123.3	MODESTO		COAL	0.2	278.7	
123.2	MODESTO		UNDERCLAY	5.3	278.8	
117.8	MODESTO		SILTSTONE	1.7	284.2	
116.2	MODESTO		SANDSTONE	8.5	285.8	FINE CALCAREOUS
107.7	MODESTO		SILTSTONE	3.1	294.3	LAMINATED
104.6	MODESTO		SHALE	13.0	297.4	
91.6	MODESTO		SHALE	5.7	310.4	SIDERITE CONCRETION; BLACK
85.9	MODESTO		COAL	0.4	316.1	
85.5	MODESTO		UNDERCLAY	0.3	316.5	
85.2	MODESTO		GRAY SHALE	0.8	316.8	
84.4	MODESTO	PIASA	LIMESTONE	4.2	317.6	ARGILLACEOUS

80.2	MODESTO		SHALE	2.8	321.8	DARK TO BLACK
77.4	MODESTO		PYRITE	0.3	324.6	
77.2	CARBONDALE	DANVILLE	COAL	2.1	324.8	
75.1	CARBONDALE		UNDERCLAY	0.1	326.9	
75.0	CARBONDALE		GRAY SHALE	7.8	327.0	
67.2	CARBONDALE		LIMESTONE	0.5	334.8	ARGILLACEOUS
66.7	CARBONDALE		GRAY SHALE	3.8	335.3	DEPTH ADJUSTED HENCEFORTH; COARSENS
62.9	CARBONDALE		SANDSTONE	6.1	339.1	CALCAREOUS SILTSTONE LAMINAE
56.8	CARBONDALE		GRAY SHALE	8.1	345.2	
48.7	CARBONDALE	BANKSTON FORK	LIMESTONE	7.5	353.3	BUFF
41.2	CARBONDALE	ENERGY	GRAY SHALE	5.5	360.8	SANDY
35.8	CARBONDALE	ENERGY	GRAY SHALE	6.0	366.2	SANDY,SILTSTONE LAMINAE
29.8	CARBONDALE	ENERGY	SHALY SILTSTONE	8.1	372.2	INTERBEDDED
21.7	CARBONDALE	ENERGY	SILTSTONE	5.8	380.3	WITH GRAY SHALE
15.9	CARBONDALE	ENERGY	SHALY SILTSTONE	11.2	386.1	INTERBEDDED
4.7	CARBONDALE	ENERGY	GRAY SHALE	1.4	397.3	SANDY
3.3	CARBONDALE	HERRIN	COAL	0.1	398.7	BONY WITH SILTSTONE
3.2	CARBONDALE	HERRIN	COAL	0.0	398.8	
3.2	CARBONDALE	HERRIN	SILTSTONE	0.1	398.8	
3.1	CARBONDALE	HERRIN	COAL	0.3	398.9	SHALE INTERBEDDED
2.8	CARBONDALE	HERRIN	COAL	0.4	399.2	
2.4	CARBONDALE	HERRIN	GRAY SHALE	0.7	399.6	DARK,BLACK
1.7	CARBONDALE	HERRIN	COAL	1.4	400.3	
0.4	CARBONDALE	HERRIN	GRAY SHALE	1.0	401.6	DARK,SANDY
-0.6	CARBONDALE	HERRIN	COAL	0.7	402.6	
-1.3	CARBONDALE	HERRIN	GRAY SHALE	0.5	403.3	WITH COAL
-1.8	CARBONDALE	HERRIN	COAL	0.1	403.8	
-1.9	CARBONDALE	HERRIN	SILTSTONE	0.1	403.9	
-2.0	CARBONDALE	HERRIN	COAL	0.2	404.0	
-2.2	CARBONDALE	HERRIN	SILTSTONE	0.1	404.2	
-2.3	CARBONDALE	HERRIN	COAL	0.1	404.3	BONE
-2.4	CARBONDALE		SHALY SILTSTONE	3.1	404.4	
-5.5	CARBONDALE		GRAY SHALE	1.7	407.5	DARK,CARBONACEOUS
-7.1	CARBONDALE		GRAY SHALE	49.7	409.1	SANDY,CARBONACEOUS
-56.8	CARBONDALE		GRAY SHALE	0.5	458.8	DARK,BLACK
-57.3	CARBONDALE		GRAY SHALE	2.5	459.3	
-59.8	CARBONDALE		COAL	1.8	461.8	PROBABLY LOWER BENCH OF HERRIN
-61.5	CARBONDALE		UNDERCLAY	0.8	463.5	
-62.3	CARBONDALE		LIMESTONE	2.0	464.3	
-64.3	CARBONDALE		LIMESTONE	10.0	466.3	SHALEY
-74.3	CARBONDALE		SANDSTONE	6.0	476.3	
-80.3	CARBONDALE	TURNER MINE	SHALE	8.4	482.3	BLACK
-88.7	CARBONDALE	DYKERSBURG	SHALE	8.8	490.7	
-97.5	CARBONDALE	DYKERSBURG	GRAY SHALE	0.8	499.5	DARK,BLACK
-98.3	CARBONDALE	SPRINGFIELD	COAL	3.6	500.3	
-101.9	CARBONDALE		UNDERCLAY	2.8	503.9	
-104.8	CARBONDALE		SILTSTONE	3.3	506.8	

-108.0	CARBONDALE		GRAY SHALE	63.9	510.0	
-171.9	CARBONDALE		GRAY SHALE	0.4	573.9	DARK,BLACK
-172.3	CARBONDALE		SHALE	0.8	574.3	BLACK
-173.1	CARBONDALE		LIMESTONE	1.4	575.1	CONCRETION
-174.5	CARBONDALE	EXCELLO	SHALE	3.2	576.5	FISSILE; BLACK
-177.7	CARBONDALE	HOUCHIN CREEK	COAL	1.8	579.7	
-179.4	CARBONDALE		UNDERCLAY	0.7	581.4	
-180.1	CARBONDALE		GRAY SHALE	7.7	582.1	
-187.8	CARBONDALE		LIMESTONE	0.4	589.8	CONCRETION
-188.2	CARBONDALE		GRAY SHALE	3.6	590.2	
-191.8	CARBONDALE		GRAY SHALE	4.6	593.8	DARK,BLACK
-196.4	CARBONDALE	SURVANT	COAL	1.6	598.4	
-198.0	CARBONDALE		UNDERCLAY	1.3	600.0	
-199.3	CARBONDALE		SILTSTONE	1.3	601.3	
-200.7	CARBONDALE		SANDSTONE	1.5	602.7	SILTSTONE LAMINAE
-202.2	CARBONDALE		SILTSTONE	0.8	604.2	
-203.0	CARBONDALE		GRAY SHALE	2.5	605.0	DARK,SANDY
-205.5	CARBONDALE		SILTSTONE & SHALE	5.6	607.5	BLACK SHALE LAMINAE
-211.1	CARBONDALE		SHALE	11.3	613.1	SANDY, SILTSTONE LAMINAE; BLACK
-222.3	CARBONDALE		SANDSTONE	8.0	624.3	FINE TO MEDIUM GRAINED
-230.3	CARBONDALE		SHALY SILTSTONE	4.2	632.3	INTERBEDDED
-234.5	CARBONDALE		SILTSTONE	19.3	636.5	CARBONACEOUS
-253.8	CARBONDALE		GRAY SHALE	17.3	655.8	SANDY,DARK GRADING TO BLACK
-271.0	CARBONDALE		LIMESTONE	1.5	673.0	BROWN,ARGILLACEOUS
-272.5	CARBONDALE	MECCA QUARRY	SHALE	5.2	674.5	4" BROWN CONCRETION AT 677'; BLACK
-277.7	CARBONDALE		SHALE	1.1	679.7	SILTSTONE; BLACK
-278.8	CARBONDALE		SHALE	1.3	680.8	FISSILE; BLACK
-280.1	CARBONDALE	COLCHESTER	COAL	0.6	682.1	
-280.7	SPOON		UNDERCLAY	1.8	682.7	
-282.5	SPOON		GRAY SHALE	0.1	684.5	
-282.6	SPOON		SILTSTONE	3.0	684.6	LIMESTONE NODULES, COARSENS DOWNWARD
-285.6	SPOON		SANDSTONE	9.8	687.6	
-295.3	SPOON		GRAY SHALE	5.8	697.3	DARK,SANDY
-301.1	SPOON		SILTSTONE	0.3	703.1	WITH SOME COAL ZONES
-301.3	SPOON		SILTSTONE	15.1	703.3	LAMINATED
-316.5	SPOON		GRAY SHALE	5.8	718.5	SANDY DARK,BLACK
-322.3	SPOON		SILTSTONE	2.3	724.3	LAMINATED
-324.5	SPOON		GRAY SHALE	0.3	726.5	
-324.8	SPOON		SANDSTONE	7.0	726.8	FINE LAMINATED
-331.8	SPOON		SILTSTONE	8.3	733.8	CALCAREOUS/CARBONACEOUS LAMINAE
-340.1	SPOON		GRAY SHALE	9.6	742.1	DARK,SANDY
-349.7	SPOON		SHALE	1.0	751.7	FISSILE; BLACK
-350.7	SPOON	LOWER DEKOVEN	COAL	0.8	752.7	
-351.4	SPOON		SHALE	3.0	753.4	HARD; BLACK
-354.4	SPOON		SHALE	0.8	756.4	BROWN & GRAY
-355.3	SPOON		SILTSTONE	0.2	757.3	

-355.4	SPOON	DAVIS	COAL	2.4	757.4	
-357.8	SPOON		UNDERCLAY	2.5	759.8	
-360.3	SPOON		SILTSTONE	9.0	762.3	LAMINATED
-369.3	SPOON		GRAY SHALE	8.0	771.3	SANDY
-377.3	SPOON		GRAY SHALE	7.0	779.3	DARK,BLACK
-384.3	SPOON		SILTSTONE	8.0	786.3	DARK
-392.3	SPOON		SHALE	4.9	794.3	BLACK
-397.3	SPOON		COAL	0.9	799.3	
-398.2	SPOON		UNDERCLAY	1.7	800.2	
-399.8	SPOON	STONEFORT	LIMESTONE	0.8	801.8	BROWNISH,ARGILLACEOUS
-400.7	SPOON		GRAY SHALE	2.0	802.7	BLACK,LAMINAE
-402.7	SPOON		SILTSTONE	2.3	804.7	
-405.0	SPOON		GRAY SHALE	3.8	807.0	
-408.8	SPOON		GRAY SHALE	2.5	810.8	DARK,BLACK
-411.3	SPOON	WISE RIDGE	COAL	1.3	813.3	
-412.6	SPOON		SILTSTONE	1.3	814.6	
-413.8	SPOON		SANDSTONE	6.0	815.8	
-419.8	SPOON		SILTSTONE	2.8	821.8	
-422.7	SPOON		GRAY SHALE	2.1	824.7	CARBONACEOUS
-424.8	SPOON		GRAY SHALE	11.0	826.8	DARK,GRAY
-435.8	SPOON	MT. RORAH	COAL	2.3	837.8	
-438.0	SPOON		UNDERCLAY	1.8	840.0	
-439.8	SPOON		SILTSTONE	3.2	841.8	
-443.0	SPOON		SHALE	7.3	845.0	BLACK
-450.3	SPOON	CREAL SPRING	LIMESTONE	0.7	852.3	HARD,ARGILLACEOUS,DARK
-451.0	SPOON		SHALE	12.0	853.0	COAL ZONE AT BASE; BLACK
-463.0	SPOON	MURPHYSBORO	COAL	4.1	865.0	
-467.1	SPOON		UNDERCLAY	1.4	869.1	
-468.5	SPOON		SILTSTONE	4.0	870.5	

MAPID: 05500738000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 6 **QUARTERS/FOOTAGES:** 600' N line, 100' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.021767 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.948263 **DATE COLLECTED:** 12 / 16 / 1943

SURFACE ELEVATION (FT.): 405.0 **LOGGED (FT.):** 516.5 **LOG TYPE:** Survey Core Study

SOURCE: CW & F COAL CO 8 **WELL TYPE:** Coal Test

COMMENT: INCLUDES DATA FROM DRILLER'S LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
405.0	PLEISTOCENE		CLAY	10.0	0.0	
395.0	PLEISTOCENE		SAND	15.0	10.0	BROWN
380.0	PLEISTOCENE		SAND	23.0	25.0	QUICKSAND
357.0	PLEISTOCENE		CLAY	27.0	48.0	
330.0			SHALE	7.0	75.0	SOFT
323.0			SILTSTONE	36.5	82.0	
286.5			GRAY SHALE	12.3	118.5	
274.2			GRAY SHALE	3.3	130.8	DARK,BLACK,PYRITE CARBONACEOUS
270.8			SHALE	1.2	134.2	
269.7	MODESTO	CHAPEL	COAL	0.7	135.3	
269.0	MODESTO		UNDERCLAY	3.7	136.0	
265.3	MODESTO		SILTSTONE	3.0	139.7	
262.3	MODESTO		GRAY SHALE	20.3	142.7	OCCASIONAL SILTSTONE, LAMINAE
242.0	MODESTO		SILTSTONE	33.5	163.0	CONGL.BAND AT 191.1, W/COARSE SAND
208.5	MODESTO		SILTSTONE	54.1	196.5	DEPTH ADJUSTED;CALCAREOUS
154.4	MODESTO		GRAY SHALE	18.3	250.6	
136.2	MODESTO		SHALE	1.2	268.8	PYRITE; BLACK
135.0	MODESTO		UNDERCLAY	1.3	270.0	
133.7	MODESTO		SILTSTONE	18.9	271.3	PARTLY SHALY
114.8	MODESTO		SANDSTONE	1.3	290.2	SHALEY
113.6	MODESTO		SHALE	2.0	291.4	FISSILE;PYRITIC AT BASE; BLACK
111.6	MODESTO		UNDERCLAY	3.3	293.4	
108.2	MODESTO		SILTSTONE	1.8	296.8	
106.4	MODESTO		SANDSTONE	13.7	298.6	FINES DOWNWARD
92.7	MODESTO		GRAY SHALE	7.0	312.3	
85.7	MODESTO		GRAY SHALE	7.5	319.3	SANDY
78.2	MODESTO		GRAY SHALE	3.9	326.8	DARK,BLACK,FISSILE,PYRITIC
74.3	MODESTO	PIASA	LIMESTONE	3.6	330.7	HARD,BROWNISH GRAY
70.7	MODESTO		GRAY SHALE	1.7	334.3	WITH CARBONACEOUS PIECES
69.1	MODESTO		GRAY SHALE	2.3	335.9	DARK,BLACK
66.8	CARBONDALE	DANVILLE	COAL	2.0	338.2	WITH FUSAIN PARTING
64.8	CARBONDALE		UNDERCLAY	1.6	340.2	
63.2	CARBONDALE		SILTSTONE	3.8	341.8	COARSE
59.3	CARBONDALE		SANDSTONE	6.3	345.7	COARSE,CALCAREOUS
53.1	CARBONDALE		GRAY SHALE	1.3	351.9	DARK,SANDY
51.7	CARBONDALE		SHALE	0.5	353.3	FISSILE; BLACK
51.2	CARBONDALE		BONE COAL	0.6	353.8	WITH COAL
50.7	CARBONDALE		UNDERCLAY	1.7	354.3	LIMESTONE NODULES

49.0	CARBONDALE		SILTSTONE	12.2	356.0	CALCAREOUS
36.8	CARBONDALE	BANKSTON FORK	LIMESTONE	6.8	368.2	BUFF
30.0	CARBONDALE	ENERGY	GRAY SHALE	7.5	375.0	SANDY
22.5	CARBONDALE	ENERGY	SILTSTONE	8.0	382.5	MICACEOUS/CALCAREOUS INTERBEDS
14.5	CARBONDALE	ENERGY	GRAY SHALE	11.0	390.5	DARK,SANDY
3.5	CARBONDALE	ENERGY	GRAY SHALE	0.4	401.5	HARD,SILTY
3.1	CARBONDALE	HERRIN	COAL	4.1	401.9	NO BLUE BAND
-1.0	CARBONDALE		UNDERCLAY	4.3	406.0	
-5.3	CARBONDALE		GRAY SHALE	2.2	410.3	THICKNESS ADJUSTED,CONGLOMERATIC
-7.4	CARBONDALE		SILTSTONE	38.7	412.4	
-46.1	CARBONDALE		SHALE	19.7	451.1	SILTY
-65.8	CARBONDALE		SHALE	0.7	470.8	BLACK
-66.5	CARBONDALE		COAL	1.4	471.5	PROBABLY LOWER BENCH OF HERRIN
-67.8	CARBONDALE		UNDERCLAY	0.8	472.8	
-68.7	CARBONDALE		LIMESTONE	11.2	473.7	WEATHERED AT TOP
-79.8	CARBONDALE		GRAY SHALE	0.4	484.8	CARBONACEOUS
-80.3	CARBONDALE		SANDSTONE	9.4	485.3	FINES DOWN TO SILTSTONE
-89.7	CARBONDALE		SHALE	6.3	494.7	PYRITIC; BLACK
-95.9	CARBONDALE	ST. DAVID	LIMESTONE	0.8	500.9	HARD,BLACK
-96.6	CARBONDALE	TURNER MINE	SHALE	3.0	501.6	FISSILE; BLACK
-99.6	CARBONDALE	DYKERSBURG	GRAY SHALE	6.6	504.6	DARK,SANDY
-106.3	CARBONDALE	DYKERSBURG	GRAY SHALE	0.5	511.3	
-106.8	CARBONDALE	SPRINGFIELD	COAL	3.9	511.8	
-110.7	CARBONDALE		UNDERCLAY	0.8	515.7	DEPTH ADJUSTED

MAPID: 05500738000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 6 **QUARTERS/FOOTAGES:** 600' N line, 100' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.021767 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.948263 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 405.0 **LOGGED (FT.):** 472.4 **LOG TYPE:** Survey Core Study

SOURCE: C.W.&F. COAL CO. 8 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
61.2	MODESTO	PIASA	LIMESTONE	3.6	343.8	
57.6	MODESTO		DARK GRAY SHALE	3.9	347.4	
53.7	CARBONDALE	DANVILLE	COAL	2.0	351.3	
51.7	CARBONDALE	ALLENBY	BONE COAL	0.6	353.3	
51.1	CARBONDALE		LIMESTONE W/ SHALE	1.7	353.9	
49.4	CARBONDALE	LAWSON	SILTSTONE	12.2	355.6	
37.3	CARBONDALE	BRERETON	LIMESTONE	6.8	367.7	
30.4	CARBONDALE	ENERGY	SHALE & SILTSTONE	15.5	374.6	
14.9	CARBONDALE	ENERGY	SILTY SHALE	11.4	390.1	
3.6	CARBONDALE	HERRIN	COAL	5.1	401.4	
-1.5	CARBONDALE		SHALE & SILTSTONE	63.8	406.5	
-65.3	CARBONDALE		BLACK SHALE	0.7	470.3	
-66.0	CARBONDALE	BRIAR HILL	COAL	1.4	471.0	

MAPID: 05500741000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 6 **QUARTERS/FOOTAGES:** 600' S line, 300' W line of SW SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.029621 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.937201 **DATE COLLECTED:** 11 / 11 / 1943

SURFACE ELEVATION (FT.): 378.0 **LOGGED (FT.):** 484.5 **LOG TYPE:** Survey Core Study

SOURCE: CW & F COAL CO 11 **WELL TYPE:** Coal Test

COMMENT: INCLUDES DATA FROM DRILLER'S LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
378.0	PLEISTOCENE		CLAY	23.0	0.0	
355.0			SHALE	6.0	23.0	SOFT;THICKNESS ADJUSTED
349.0			SHALE	42.5	29.0	SANDY
306.5			SILTSTONE	0.1	71.5	BLACK
306.4			GRAY SHALE	1.8	71.6	DARK
304.6			LIMESTONE	0.3	73.4	DARK GRAY,ARGILLACEOUS
304.2			GRAY SHALE	1.2	73.8	DARK,FISSILE
303.1			SANDSTONE	0.8	74.9	
302.2			SHALE	1.9	75.8	HARD; BLACK
300.3			GRAY SHALE	1.8	77.7	SOFT
298.5	MODESTO	CHAPEL	COAL	0.8	79.5	PYRITE,KAOLITE
297.8	MODESTO		UNDERCLAY	4.5	80.2	
293.3	MODESTO		GRAY SHALE	1.0	84.7	SANDY
292.3	MODESTO		SILTSTONE	5.1	85.7	LAMINATED
287.2	MODESTO		GRAY SHALE	6.1	90.8	CARBONACEOUS
281.1	MODESTO		GRAY SHALE	21.9	96.9	SANDY; SILTSTONE STREAKS
259.2	MODESTO		SILTSTONE	11.4	118.8	
247.8	MODESTO		SHALY SILTSTONE	21.9	130.2	LAMINATED;SHALE CARBONACEOUS
225.9	MODESTO		SHALY SILTSTONE	20.0	152.1	LAMINATED
205.9	MODESTO		SHALY SILTSTONE	20.0	172.1	INTERLAMINATED; WITH SILTSTONE BEDS
185.9	MODESTO		GRAY SHALE	7.1	192.1	DARK
178.8	MODESTO		GRAY SHALE	12.7	199.2	SANDY;CARBONACEOUS SILTSTONE LAMINAE
166.1	MODESTO		GRAY SHALE	0.4	211.9	HARD,DARK,BLACK
165.7	MODESTO		UNDERCLAY	0.5	212.3	
165.1	MODESTO		SHALE	1.3	212.9	PYRITIC; BLACK
164.0	MODESTO		UNDERCLAY	1.5	214.0	
162.5	MODESTO		SILTSTONE	13.2	215.5	CALCAREOUS
149.3	MODESTO		GRAY SHALE	2.9	228.7	
146.4	MODESTO		SILTSTONE	3.9	231.6	SHALY AT BASE; COARSE LAMINAE
142.5	MODESTO		GRAY SHALE	0.8	235.5	
141.7	MODESTO		SHALE	0.1	236.3	SOFT; BLACK
141.7	MODESTO		GRAY SHALE	0.3	236.3	
141.3	MODESTO		SHALE	0.4	236.7	PYRITIC; BLACK
140.9	MODESTO		GRAY SHALE	1.3	237.1	DARK
139.7	MODESTO		UNDERCLAY	6.3	238.3	
133.4	MODESTO		GRAY SHALE	0.8	244.6	SANDY
132.7	MODESTO		SILTSTONE	0.8	245.3	
131.9	MODESTO		SANDSTONE	6.8	246.1	COARSE;SILTSTONE & SHALE INTERBEDS

125.1	MODESTO		SHALE	0.8	252.9	CARBONACEOUS;SILTY
124.3	MODESTO		SILTSTONE	7.8	253.7	SANDSTONE LAMINAE
116.5	MODESTO		GRAY SHALE	3.0	261.5	SILTY
113.5	MODESTO		GRAY SHALE	7.6	264.5	DARK;IRONSTONE CONCRETIONS
105.9	MODESTO		COAL WITH SHALE	0.2	272.1	COAL & BLACK SHALE
105.7	MODESTO		COAL	0.1	272.3	
105.6	MODESTO		UNDERCLAY	2.7	272.4	
102.9	MODESTO	PIASA	LIMESTONE	2.3	275.1	SOFT
100.6	MODESTO		GRAY SHALE	3.0	277.4	
97.6	MODESTO		SHALE	1.1	280.4	BLACK
96.5	CARBONDALE	DANVILLE	COAL	2.3	281.5	
94.2	CARBONDALE		GRAY SHALE	3.5	283.8	SANDY,CARBONACEOUS
90.7	CARBONDALE		SILTSTONE	1.7	287.3	CALCAREOUS
89.1	CARBONDALE		GRAY SHALE	3.8	288.9	SANDY
85.3	CARBONDALE		SILTSTONE	0.3	292.7	BLACK,CARBONACEOUS
85.1	CARBONDALE		UNDERCLAY	2.2	292.9	
82.9	CARBONDALE		LIMESTONE	0.9	295.1	PALE,ARGILLACEOUS
82.0	CARBONDALE		SILTSTONE	10.5	296.0	LIMESTONE NODULES
71.5	CARBONDALE	BANKSTON FORK	LIMESTONE	8.8	306.5	FINE,BUFF SANDY
62.7	CARBONDALE		SANDSTONE	3.5	315.3	FINE
59.2	CARBONDALE	ENERGY	SILTSTONE	24.8	318.8	SANDSTONE LAMINAE
34.4	CARBONDALE	ENERGY	SILTSTONE	14.7	343.6	SHALEY
19.7	CARBONDALE	ENERGY	SHALE	20.0	358.3	SILTY CARBONACEOUS
-0.3	CARBONDALE	ENERGY	GRAY SHALE	50.2	378.3	SILTY,CARBONACEOUS,PARTLY LAMIN.W/SLTST
-50.4	CARBONDALE	ENERGY	SHALE	1.1	428.4	
-51.5	CARBONDALE	HERRIN	COAL	1.8	429.5	
-53.3	CARBONDALE	HERRIN	SHALE	1.4	431.3	HARD; BLACK
-54.7	CARBONDALE	HERRIN	COAL	2.6	432.7	
-57.3	CARBONDALE	HERRIN	SHALE	0.7	435.3	
-58.0	CARBONDALE	HERRIN	COAL	3.4	436.0	
-61.4	CARBONDALE		SHALE	2.6	439.4	CORE GAP;DRILLER REPORTS DARK SHALE
-64.0	CARBONDALE		SHALE	8.0	442.0	SANDY SHALE
-72.0	CARBONDALE		GRAY SHALE	1.9	450.0	SILTY,LIMESTONE NODULES
-73.9	CARBONDALE	ST. DAVID	LIMESTONE	1.3	451.9	
-75.2	CARBONDALE	TURNER MINE	SHALE	0.3	453.2	BLACK
-75.4	CARBONDALE	SPRINGFIELD	COAL	4.4	453.4	
-79.8	CARBONDALE		UNDERCLAY	4.4	457.8	
-84.2	CARBONDALE		SILTSTONE	5.7	462.2	CALCAREOUS
-89.9	CARBONDALE		GRAY SHALE	16.7	467.9	SILTSTONE LAMINAE

MAPID: 05500158000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 7 **QUARTERS/FOOTAGES:** SW SW SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.029418 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.921831 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 463.0 **LOG TYPE:** Drillers Log

SOURCE: ZEIGLER COAL CO. 5 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	MODESTO	CHAPEL	COAL	0.8		DEPTHS IN LOG UNRELIABLE
-	MODESTO		COAL	0.4		DEPTHS IN LOG UNRELIABLE
-	MODESTO		COAL	0.5		DEPTHS IN LOG UNRELIABLE
-	CARBONDALE	DANVILLE	COAL	2.4		DEPTHS IN LOG UNRELIABLE
-	CARBONDALE	HERRIN	COAL	13.9		DEPTHS IN LOG UNRELIABLE
-	CARBONDALE	SPRINGFIELD	COAL	4.6		DEPTHS IN LOG UNRELIABLE

MAPID: 05500158000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 7 **QUARTERS/FOOTAGES:** SW SW SE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.029418 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.921831 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 463.0 **LOG TYPE:**

SOURCE: BELL ZOLL 0005 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-36.0	CARBONDALE	HERRIN	COAL	13.9	425.0	
-68.0	CARBONDALE	SPRINGFIELD	COAL	4.6	457.0	

MAPID: 05501103000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 7 **QUARTERS/FOOTAGES:** 2310' N line, 330' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.038603 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.929165 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 607.5 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 2 **WELL TYPE:** Coal Test

COMMENT: LOCATION WRONG? COAL ELV TO LOW.

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-105.3	MODESTO	PIASA	LIMESTONE	5.5	505.3	
-110.8	MODESTO		BLACK SHALE	2.1	510.8	
-112.8	CARBONDALE	DANVILLE	COAL	2.4	512.8	
-115.3	CARBONDALE		SILTY SHALE	9.5	515.3	
-124.8	CARBONDALE	ALLENBY	CARBONACEOUS SHALE	0.5	524.8	
-125.3	CARBONDALE		GRAY SHALE	10.0	525.3	
-135.3	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	535.3	
-142.3	CARBONDALE	LAWSON	GRAY SHALE	27.0	542.3	
-169.3	CARBONDALE	JAMESTOWN	COAL	0.5	569.3	
-169.8	CARBONDALE		GRAY SHALE	1.0	569.8	
-170.8	CARBONDALE	BRERETON	LIMESTONE	7.5	570.8	
-178.3	CARBONDALE	ANNA	BLACK SHALE	5.0	578.3	
-183.3	CARBONDALE	ENERGY	SILTY SHALE	3.0	583.3	
-186.3	CARBONDALE	ENERGY	GRAY SHALE	12.8	586.3	
-199.0	CARBONDALE	HERRIN	COAL	8.5	599.0	

MAPID: 05500159000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** 0' N line, 0' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.021656 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.935544 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 446.9 **LOG TYPE:** Drillers Log

SOURCE: ZEIGLER COAL CO. 13 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
112.0	MODESTO	PIASA	LIMESTONE	5.0	283.0	
107.0	MODESTO		DARK GRAY SHALE	4.7	288.0	
102.3	CARBONDALE	DANVILLE	COAL	2.1	292.7	
100.2	CARBONDALE		CLAYSTONE & SHALE	21.3	294.8	
79.0	CARBONDALE	BANKSTON FORK	LIMESTONE	9.0	316.0	
70.0	CARBONDALE	ENERGY	SILTY SHALE	42.0	325.0	
28.0	CARBONDALE	ENERGY	GRAY SHALE	69.2	367.0	
-41.0	CARBONDALE	HERRIN	COAL	10.9	436.0	

MAPID: 05500160000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** SW SW SW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.020183 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.92184 **DATE COLLECTED:** 0 / 0 / 1912

SURFACE ELEVATION (FT.): 365.0 **LOGGED (FT.):** 394.0 **LOG TYPE:** Drillers Log

SOURCE: ZEIGLER COAL CO. 14 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
365.0	PLEISTOCENE		CLAY	14.0	0.0	BLUE
351.0	PLEISTOCENE		CLAY	21.0	14.0	YELLOW
330.0	PLEISTOCENE		SANDY CLAY	8.0	35.0	
322.0	MODESTO		SHALE	3.3	43.0	
318.7	MODESTO		BONE COAL	0.5	46.3	
318.2	MODESTO		SOFT SHALE	13.3	46.8	
305.0	MODESTO		SHALE	22.0	60.0	
283.0	MODESTO		SHALE	11.0	82.0	
272.0	MODESTO		SANDY SHALE	27.0	93.0	
245.0	MODESTO		SHALE	58.0	120.0	
187.0	MODESTO		SANDY SHALE	21.0	178.0	
166.0	MODESTO		SHALE	2.3	199.0	
163.7	MODESTO		COAL	0.8	201.3	
163.0	MODESTO		CLAYSTONE	11.0	202.0	
152.0	MODESTO		SHALE	11.0	213.0	
141.0	MODESTO		SHALY SANDSTONE	22.0	224.0	
119.0	MODESTO		SANDSTONE	4.0	246.0	
115.0	CARBONDALE	DANVILLE	BONE COAL	2.3	250.0	
112.7	CARBONDALE		SANDY SHALE	5.7	252.3	
107.0	CARBONDALE		CLAYSTONE	3.0	258.0	
104.0	CARBONDALE	GALUM	LIMESTONE	1.0	261.0	
103.0	CARBONDALE		SANDY SHALE	12.0	262.0	
91.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.0	274.0	
83.0	CARBONDALE		SHALY SANDSTONE	17.0	282.0	
66.0	CARBONDALE	ENERGY	SANDY SHALE	75.0	299.0	
-9.0	CARBONDALE	ENERGY	SHALE	9.3	374.0	WITH HARD BANDS
-18.3	CARBONDALE	HERRIN	COAL	10.5	383.3	
-28.8	CARBONDALE		CLAYSTONE	0.2	393.8	

MAPID: 05500161000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** NE SW NE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.008755 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.931064 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 377.0 **LOGGED (FT.):** 585.0 **LOG TYPE:** Drillers Log

SOURCE: ZEIGLER COAL CO. 8 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
377.0	PLEISTOCENE		CLAY	23.5	0.0	
353.5	PLEISTOCENE		SAND	21.5	23.5	
332.0	PLEISTOCENE		GRAVEL	3.0	45.0	
329.0	PLEISTOCENE		SAND & GRAVEL	3.5	48.0	
325.5	PLEISTOCENE		SAND	3.5	51.5	
322.0	PLEISTOCENE		CLAY	9.0	55.0	
313.0	PLEISTOCENE		SAND & GRAVEL	6.0	64.0	
307.0	PLEISTOCENE		CLAY & GRAVEL	3.0	70.0	
304.0	MODESTO		SHALE	4.0	73.0	
300.0	MODESTO	CHAPEL	COAL	0.5	77.0	
299.5	MODESTO		SHALE	3.3	77.5	
296.2	MODESTO		SHALE	6.2	80.8	
290.0	MODESTO		SANDY SHALE	33.0	87.0	WITH SANDSTONE PARTINGS
257.0	MODESTO		SANDY SHALE	43.0	120.0	SANDY WITH SANDSTONE
214.0	MODESTO		SANDY SHALE	35.0	163.0	WITH SANDSTONE PARTINGS
179.0	MODESTO		SANDY SHALE	6.0	198.0	SANDY WITH SANDSTONE
173.0	MODESTO		SHALE	8.7	204.0	
164.3	MODESTO		SHALE	0.7	212.7	
163.7	MODESTO		SHALE	1.7	213.3	
162.0	MODESTO		CONGLOMERATE	1.0	215.0	
161.0	MODESTO		SANDY SHALE	16.5	216.0	SANDY WITH SANDSTONE
144.5	MODESTO		BLACK SHALE	1.5	232.5	
143.0	MODESTO		SHALE	1.3	234.0	
141.7	MODESTO		COAL	0.7	235.3	
141.0	MODESTO		SHALE	4.0	236.0	
137.0	MODESTO		SANDY SHALE	2.5	240.0	
134.5	MODESTO		SHALE	2.5	242.5	
132.0	MODESTO		SANDY SHALE	3.5	245.0	
128.5	MODESTO		SANDSTONE	14.0	248.5	
114.5	MODESTO		SHALE	1.5	262.5	
113.0	MODESTO		SHALE	9.7	264.0	DARK BLUE
103.3	MODESTO	DEGRAFF	COAL	0.4	273.7	
102.9	MODESTO		SHALE	1.3	274.1	
101.6	MODESTO	PIASA	LIMESTONE	3.3	275.4	
98.3	MODESTO	PIASA	LIMESTONE	0.8	278.7	
97.5	MODESTO		BLACK SHALE	2.0	279.5	
95.5	CARBONDALE	DANVILLE	COAL	2.2	281.5	
93.3	CARBONDALE		BLACK SHALE	5.8	283.7	
87.5	CARBONDALE		BLACK SHALE	5.0	289.5	

82.5	CARBONDALE		LIMESTONE	0.5	294.5	
82.0	CARBONDALE		SOFT SHALE	4.0	295.0	
78.0	CARBONDALE		LIMESTONE	1.5	299.0	
76.5	CARBONDALE		CONGLOMERATE	8.5	300.5	
68.0	CARBONDALE		SANDSTONE	5.0	309.0	
63.0	CARBONDALE		BLACK SHALE	1.5	314.0	WITH SANDSTONE PARTINGS
61.5	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	315.5	
56.0	CARBONDALE		SHALE	9.0	321.0	WITH BLUE SANDSTONE BAND
47.0	CARBONDALE		SANDY SHALE	21.0	330.0	WITH SANDSTONE PARTINGS
26.0	CARBONDALE		SANDSTONE	30.0	351.0	
-4.0	CARBONDALE		SANDY SHALE	23.0	381.0	
-27.0	CARBONDALE		SANDSTONE	4.8	404.0	
-31.8	CARBONDALE	HERRIN	COAL	0.3	408.8	
-32.1	CARBONDALE	HERRIN	SHALE	0.3	409.1	
-32.4	CARBONDALE	HERRIN	COAL	0.3	409.4	
-32.7	CARBONDALE	HERRIN	SHALE	0.3	409.7	
-33.0	CARBONDALE	HERRIN	COAL	0.3	410.0	
-33.3	CARBONDALE	HERRIN	SHALE	0.3	410.3	
-33.7	CARBONDALE	HERRIN	COAL	8.5	410.7	
-42.2	CARBONDALE		SHALE	1.8	419.2	
-44.0	CARBONDALE		LIMESTONE	8.0	421.0	
-52.0	CARBONDALE		CONGLOMERATE	4.0	429.0	
-56.0	CARBONDALE		SANDSTONE	5.5	433.0	
-61.5	CARBONDALE		BLACK SHALE	7.5	438.5	
-69.0	CARBONDALE		SHALE	2.3	446.0	
-71.3	CARBONDALE		BLACK SHALE	2.0	448.3	
-73.3	CARBONDALE		BLACK SHALE	1.7	450.3	WITH LIMESTONE BANDS
-75.0	CARBONDALE		BLACK SHALE	3.0	452.0	
-78.0	CARBONDALE	SPRINGFIELD	COAL	4.0	455.0	
-82.0	CARBONDALE		SHALE	5.0	459.0	
-87.0	CARBONDALE		CONGLOMERATE	6.5	464.0	
-93.5	CARBONDALE		SANDY SHALE	8.5	470.5	
-102.0	CARBONDALE		SANDSTONE	4.0	479.0	
-106.0	CARBONDALE		SANDSTONE	12.5	483.0	WITH SHALE PARTINGS
-118.5	CARBONDALE		BLACK SHALE	10.5	495.5	
-129.0	CARBONDALE		SHALE	20.0	506.0	
-149.0	CARBONDALE		BLACK SHALE	4.0	526.0	
-153.0	CARBONDALE		SHALE	1.0	530.0	
-154.0	CARBONDALE	EXCELLO	BLACK SHALE	5.8	531.0	
-159.8	CARBONDALE	HOUCHIN CREEK	COAL	1.4	536.8	
-161.3	CARBONDALE		SHALE	2.3	538.3	
-163.5	CARBONDALE		LIMESTONE	1.5	540.5	
-165.0	CARBONDALE		BLACK SHALE	16.2	542.0	
-181.2	CARBONDALE	SURVANT	COAL	1.6	558.2	
-182.8	CARBONDALE		SANDY SHALE	5.3	559.8	
-188.0	CARBONDALE		SHALE	6.7	565.0	
-194.7	CARBONDALE		SANDSTONE	13.3	571.7	

MAPID: 05500161000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** NE SW NE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.008755 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.931064 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 377.0 **LOGGED (FT.):** 585.0 **LOG TYPE:**

SOURCE: BELL ZOLL 0008 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-32.0	CARBONDALE	HERRIN	COAL	10.3	409.0	
-78.0	CARBONDALE	SPRINGFIELD	COAL	4.0	455.0	

MAPID: 05501462000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 8 **QUARTERS/FOOTAGES:** 450' S line, 273' E line of SW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.013036 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.922224 **DATE COLLECTED:** 5 / 0 / 1955

SURFACE ELEVATION (FT.): 378.0 **LOGGED (FT.):** 1684.0 **LOG TYPE:** Electric Log

SOURCE: PURE OIL CO., THE **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-250.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	628.0	
-326.0	SPOON	DAVIS	UNCLASSIFIED	-	704.0	
-1306.0	BASE OF PENN.		UNCLASSIFIED	-	1684.0	

MAPID: 05500162000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 10 **QUARTERS/FOOTAGES:** SE NW SE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.971483 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.926123 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 375.0 **LOGGED (FT.):** 527.8 **LOG TYPE:** Drillers Log

SOURCE: 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
375.0	PLEISTOCENE		CLAY	32.0	0.0	
343.0	PLEISTOCENE		SAND	18.0	32.0	
325.0	PLEISTOCENE		CLAY	9.0	50.0	
316.0	PLEISTOCENE		SAND	10.0	59.0	
306.0	MODESTO		SHALE	13.0	69.0	
293.0	MODESTO		SANDSTONE	72.0	82.0	
221.0	MODESTO		SHALE	12.0	154.0	
209.0	MODESTO	CHAPEL	COAL	0.7	166.0	
208.3	MODESTO		SANDSTONE	25.3	166.7	
183.0	MODESTO		SHALE	128.0	192.0	
55.0	MODESTO		COAL	1.0	320.0	
54.0	MODESTO		SHALE	5.0	321.0	
49.0	MODESTO		SANDSTONE	20.0	326.0	
29.0	MODESTO		SHALE	16.8	346.0	
12.2	MODESTO		COAL	0.3	362.8	
12.0	MODESTO		SANDSTONE	9.0	363.0	
3.0	MODESTO		SHALE	2.0	372.0	
1.0	CARBONDALE	DANVILLE	COAL	2.0	374.0	
-1.0	CARBONDALE		SHALE	14.0	376.0	
-15.0	CARBONDALE	BANKSTON FORK	LIMESTONE	9.0	390.0	
-24.0	CARBONDALE		SHALE	18.0	399.0	
-42.0	CARBONDALE		SANDSTONE	3.0	417.0	
-45.0	CARBONDALE	ENERGY	SHALE	4.5	420.0	
-49.5	CARBONDALE	ENERGY	BLACK SHALE	1.5	424.5	
-51.0	CARBONDALE	ENERGY	SHALE	81.0	426.0	
-132.0	CARBONDALE	ENERGY	SHALE	9.3	507.0	
-141.3	CARBONDALE	HERRIN	COAL	11.5	516.3	

MAPID: 05500162000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 10 **QUARTERS/FOOTAGES:** SE NW SE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.971483 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.926123 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 375.0 **LOGGED (FT.):** 529.0 **LOG TYPE:**

SOURCE: C W F CC 0002 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-141.0	CARBONDALE	HERRIN	COAL	11.5	516.0	

MAPID: 05500234000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 10 **QUARTERS/FOOTAGES:** SW SE SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.978567 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.922409 **DATE COLLECTED:** 0 / 0 / 1911

SURFACE ELEVATION (FT.): 419.1 **LOGGED (FT.):** 562.0 **LOG TYPE:** Drillers Log

SOURCE: CHCGO,WLMNGTN,&VRMLN COAL CO. F **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
419.1	PLEISTOCENE		CLAY	14.0	0.0	
405.1	PLEISTOCENE		CLAY	56.0	14.0	WITH SAND
349.1	PLEISTOCENE		CLAY	10.0	70.0	BLUE
339.1	PLEISTOCENE		SAND	20.2	80.0	
318.9	MODESTO		SANDSTONE	59.3	100.2	
259.6	MODESTO		SHALE	8.0	159.5	
251.6	MODESTO	CHAPEL	COAL	1.4	167.5	
250.2	MODESTO		CLAYSTONE	4.5	168.9	
245.7	MODESTO		SHALE	23.6	173.4	
222.1	MODESTO		SANDY SHALE	49.0	197.0	
173.1	MODESTO		SHALE	31.0	246.0	
142.1	MODESTO		SHALE	21.3	277.0	
120.8	MODESTO		SHALE	1.5	298.3	
119.3	MODESTO		CLAYSTONE	1.0	299.8	
118.3	MODESTO		SANDY SHALE	16.3	300.8	
102.1	MODESTO		COAL	6.5	317.0	
95.6	MODESTO		CLAYSTONE	7.5	323.5	
88.1	MODESTO		SANDSTONE	14.0	331.0	WITH SHALE PARTINGS
74.1	MODESTO		SHALE	18.0	345.0	
56.1	MODESTO	DEGRAFF	SHALY COAL	0.7	363.0	
55.4	MODESTO		CLAYSTONE	2.3	363.7	
53.1	MODESTO		CALCAREOUS SHALE	1.0	366.0	
52.1	MODESTO	PIASA	LIMESTONE	3.0	367.0	
49.1	MODESTO		SHALE	2.5	370.0	
46.6	MODESTO		LIMESTONE	0.5	372.5	
46.1	CARBONDALE	DANVILLE	COAL	2.3	373.0	
43.8	CARBONDALE		SANDY SHALE	5.8	375.3	
38.1	CARBONDALE		SHALE	5.2	381.0	
32.9	CARBONDALE	ALLENBY	COAL	0.2	386.2	
32.8	CARBONDALE	BANKSTON FORK	LIMESTONE	0.5	386.3	
32.3	CARBONDALE	BANKSTON FORK	SHALE	4.2	386.8	
28.1	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	391.0	
25.1	CARBONDALE	BANKSTON FORK	LIMESTONE	0.5	394.0	
24.6	CARBONDALE		SANDY SHALE	17.5	394.5	
7.1	CARBONDALE		SHALE	4.0	412.0	
3.1	CARBONDALE	BRERETON	LIMESTONE	2.0	416.0	
1.1	CARBONDALE	ENERGY	SHALE	1.0	418.0	
0.1	CARBONDALE	ENERGY	SANDY SHALE	43.0	419.0	
-42.9	CARBONDALE	ENERGY	SHALE	42.8	462.0	

-85.7	CARBONDALE	HERRIN	COAL	7.1	504.8
-92.7	CARBONDALE	HERRIN	BLUE BAND	0.1	511.8
-92.8	CARBONDALE	HERRIN	COAL	2.1	511.9
-94.9	CARBONDALE		CLAYSTONE	1.0	514.0
-95.9	CARBONDALE		SHALY LIMESTONE	8.0	515.0
-103.9	CARBONDALE		LIMESTONE	4.0	523.0
-107.9	CARBONDALE		SHALE	10.0	527.0
-117.9	CARBONDALE		SHALE	1.0	537.0
-118.9	CARBONDALE		UNCLASSIFIED	1.0	538.0
-119.9	CARBONDALE		SHALE	4.0	539.0
-123.9	CARBONDALE		SHALE	8.8	543.0
-132.7	CARBONDALE	SPRINGFIELD	COAL	4.3	551.8
-136.9	CARBONDALE		SHALE	3.5	556.0
-140.4	CARBONDALE		LIMESTONE	2.5	559.5

MAPID: 05500235000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 10 **QUARTERS/FOOTAGES:** 330' S line, 990' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.980983 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.922381 **DATE COLLECTED:** 0 / 0 / 1912

SURFACE ELEVATION (FT.): 446.6 **LOGGED (FT.):** 537.0 **LOG TYPE:** Drillers Log

SOURCE: CHCGO,WLMNGTN,&VRMLN COAL CO. G **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
446.6	PLEISTOCENE		CLAY	12.0	0.0	YELLOW
434.6	PLEISTOCENE		CLAY	59.0	12.0	WITH SAND
375.6	PLEISTOCENE		CLAY	39.0	71.0	YELLOW
336.6	PLEISTOCENE		SAND	22.0	110.0	
314.6	MODESTO		SHALE	2.5	132.0	
312.1	MODESTO		SANDSTONE	51.5	134.5	
260.6	MODESTO		SHALE	5.0	186.0	
255.6	MODESTO	CHAPEL	COAL	1.2	191.0	
254.4	MODESTO		CLAYSTONE	7.8	192.2	
246.6	MODESTO		SANDY SHALE	8.0	200.0	
238.6	MODESTO		SANDY SHALE	19.0	208.0	
219.6	MODESTO		SANDY SHALE	30.0	227.0	SANDY WITH SHALE
189.6	MODESTO		SHALE	59.0	257.0	
130.6	MODESTO		SHALE	5.0	316.0	
125.6	MODESTO		SHALE	0.8	321.0	
124.8	MODESTO		SANDY SHALE	18.3	321.8	
106.6	MODESTO		SHALE	3.0	340.0	
103.6	MODESTO		SHALE	0.9	343.0	
102.7	MODESTO		COAL	0.8	343.9	
101.8	MODESTO		CLAYSTONE	6.8	344.8	
95.1	MODESTO		SANDSTONE	13.5	351.5	
81.6	MODESTO		SANDY SHALE	5.0	365.0	
76.6	MODESTO		SHALE	5.0	370.0	
71.6	MODESTO		SHALE	8.2	375.0	
63.4	MODESTO		COAL	0.5	383.2	
62.9	MODESTO		CLAYSTONE	2.2	383.7	
60.8	MODESTO	PIASA	LIMESTONE	3.2	385.8	
57.6	MODESTO		SHALE	5.8	389.0	
51.8	CARBONDALE	DANVILLE	COAL	2.3	394.8	
49.5	CARBONDALE		SANDY SHALE	6.9	397.1	
42.6	CARBONDALE		SHALE	3.2	404.0	
39.4	CARBONDALE	ALLENBY	COAL	0.2	407.2	
39.3	CARBONDALE		CLAYSTONE	3.7	407.3	
35.6	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	411.0	
31.6	CARBONDALE		SANDY SHALE	6.0	415.0	
25.6	CARBONDALE		SANDY SHALE	11.0	421.0	
14.6	CARBONDALE		SHALE	4.7	432.0	
9.9	CARBONDALE	BRERETON	LIMESTONE	1.3	436.7	
8.6	CARBONDALE	ENERGY	SHALE	0.7	438.0	

7.9	CARBONDALE	ENERGY	SANDY SHALE	27.3	438.7
-19.4	CARBONDALE	ENERGY	SHALE	59.3	466.0
-78.7	CARBONDALE	HERRIN	COAL	0.7	525.3
-79.4	CARBONDALE	HERRIN	COAL	8.0	526.0
-87.4	CARBONDALE	HERRIN	BLUE BAND	0.1	534.0
-87.5	CARBONDALE	HERRIN	COAL	1.5	534.1
-89.0	CARBONDALE		CLAYSTONE	0.2	535.6
-89.2	CARBONDALE		SHALY LIMESTONE	1.3	535.8

MAPID: 05500235000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 10 **QUARTERS/FOOTAGES:** 330' S line, 990' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.980983 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.922381 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 447.0 **LOGGED (FT.):** 535.3 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
61.5	MODESTO	PIASA	LIMESTONE	3.2	385.5	
58.3	MODESTO		GRAY SHALE	5.8	388.7	
52.5	CARBONDALE	DANVILLE	COAL	2.3	394.5	
50.2	CARBONDALE		SILTY SHALE	10.1	396.8	
40.2	CARBONDALE	ALLENBY	COAL	0.2	406.8	
40.0	CARBONDALE		CLAYSTONE	3.7	407.0	
36.3	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	410.7	
32.3	CARBONDALE	LAWSON	SILTY SHALE	17.0	414.7	
15.3	CARBONDALE	LAWSON	DARK GRAY SHALE	4.7	431.7	
10.7	CARBONDALE	BRERETON	LIMESTONE	1.3	436.3	
9.3	CARBONDALE	ANNA	DARK GRAY SHALE	0.7	437.7	
8.7	CARBONDALE	ENERGY	SILTY SHALE	27.3	438.3	
-18.7	CARBONDALE	ENERGY	GRAY SHALE	59.3	465.7	
-78.0	CARBONDALE	HERRIN	COAL	10.3	525.0	

MAPID: 05500266000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 10 **QUARTERS/FOOTAGES:** SW SE SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.978567 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.922409 **DATE COLLECTED:** 0 / 0 / 1913

SURFACE ELEVATION (FT.): 423.6 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: C W F CC 0001 **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-85.4	CARBONDALE	HERRIN	COAL	9.4	509.0	

MAPID: 05500104000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 11 **QUARTERS/FOOTAGES:** 2310' N line, 2310' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.955193 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.929776 **DATE COLLECTED:** 0 / 0 / 1920

SURFACE ELEVATION (FT.): 375.0 **LOGGED (FT.):** 569.0 **LOG TYPE:** Drillers Log

SOURCE: CHCGO WLMNGTN & FRNKLN COAL CO2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
375.0	PLEISTOCENE		CLAY	12.0	0.0	
363.0	PLEISTOCENE		CLAY	15.0	12.0	BLUE
348.0	PLEISTOCENE		SAND	46.0	27.0	
302.0	MODESTO		SHALE	1.5	73.0	
300.5	MODESTO		SHALE W/ COAL STREAKS	1.5	74.5	WITH COAL PARTINGS
299.0	MODESTO		SANDY SHALE	24.0	76.0	
275.0	MODESTO		SANDSTONE	44.0	100.0	
231.0	MODESTO		SANDY SHALE	20.0	144.0	
211.0	MODESTO		SANDSTONE	11.0	164.0	
200.0	MODESTO		SHALE	15.0	175.0	
185.0	MODESTO		LIMESTONE	2.0	190.0	
183.0	MODESTO		SHALE	2.0	192.0	
181.0	MODESTO	CHAPEL	COAL	0.5	194.0	
180.5	MODESTO		CLAYSTONE	1.5	194.5	
179.0	MODESTO		LIMESTONE	6.5	196.0	
172.5	MODESTO		SANDY SHALE	7.5	202.5	
165.0	MODESTO		LIMESTONE	2.5	210.0	
162.5	MODESTO		SANDY SHALE	4.5	212.5	
158.0	MODESTO		LIMESTONE	6.5	217.0	
151.5	MODESTO		SANDY SHALE	31.5	223.5	
120.0	MODESTO		SHALE	57.0	255.0	
63.0	MODESTO		SHALE	1.0	312.0	
62.0	MODESTO		SANDY SHALE	26.0	313.0	
36.0	MODESTO		LIMESTONE	5.0	339.0	
31.0	MODESTO		LIMESTONE	0.5	344.0	
30.5	MODESTO		SANDY SHALE	12.0	344.5	
18.5	MODESTO		SHALE	13.5	356.5	
5.0	MODESTO		SANDY SHALE	6.0	370.0	
-1.0	MODESTO		SHALE	16.0	376.0	
-17.0	MODESTO		CLAYSTONE	0.5	392.0	
-17.5	MODESTO		SANDY SHALE	8.5	392.5	
-26.0	MODESTO		SOFT SHALE	5.0	401.0	
-31.0	MODESTO	PIASA	LIMESTONE	4.0	406.0	
-35.0	MODESTO		SHALE	3.8	410.0	
-38.8	CARBONDALE	DANVILLE	COAL	3.2	413.8	
-42.0	CARBONDALE		SHALE	3.0	417.0	
-45.0	CARBONDALE		SHALE	8.0	420.0	
-53.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	428.0	
-59.0	CARBONDALE	ENERGY	CALCAREOUS SHALE	6.0	434.0	

-65.0	CARBONDALE	ENERGY	SHALE	13.0	440.0	
-78.0	CARBONDALE	ENERGY	SANDY SHALE	10.5	453.0	
-88.5	CARBONDALE	ENERGY	SHALE	4.5	463.5	
-93.0	CARBONDALE	ENERGY	SHALE	24.0	468.0	
-117.0	CARBONDALE	ENERGY	SHALE	20.0	492.0	WITH BROWN BANDS
-137.0	CARBONDALE	ENERGY	SHALE	3.2	512.0	
-140.2	CARBONDALE	HERRIN	COAL	8.8	515.2	
-149.0	CARBONDALE		CLAYSTONE	3.0	524.0	
-152.0	CARBONDALE		LIMESTONE	17.5	527.0	
-169.5	CARBONDALE		SANDY SHALE	12.5	544.5	
-182.0	CARBONDALE	ST. DAVID	LIMESTONE	1.0	557.0	
-183.0	CARBONDALE		SHALE	2.5	558.0	
-185.5	CARBONDALE		SANDY SHALE	4.3	560.5	
-189.8	CARBONDALE	SPRINGFIELD	COAL	3.8	564.8	
-193.6	CARBONDALE		CLAYSTONE	0.4	568.6	

MAPID: 05500104000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 11 **QUARTERS/FOOTAGES:** 2310' N line, 2310' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.955193 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.929776 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 375.0 **LOGGED (FT.):** 523.8 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-30.8	MODESTO	PIASA	LIMESTONE	4.0	405.8	
-34.8	MODESTO		GRAY SHALE	3.8	409.8	
-38.7	CARBONDALE	DANVILLE	COAL	3.2	413.7	
-41.8	CARBONDALE		GRAY SHALE	11.0	416.8	
-52.8	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	427.8	
-58.8	CARBONDALE	ENERGY	CALCAREOUS SHALE	6.0	433.8	
-64.8	CARBONDALE	ENERGY	GRAY SHALE	13.0	439.8	
-77.8	CARBONDALE	ENERGY	SILTY SHALE	10.5	452.8	
-88.3	CARBONDALE	ENERGY	DARK GRAY SHALE	4.5	463.3	
-92.8	CARBONDALE	ENERGY	GRAY SHALE	47.2	467.8	
-140.0	CARBONDALE	HERRIN	COAL	8.8	515.0	

MAPID: 05500165000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 12 **QUARTERS/FOOTAGES:** 2310' N line, 2310' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.939088 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.929588 **DATE COLLECTED:** 0 / 0 / 1902

SURFACE ELEVATION (FT.): 398.0 **LOGGED (FT.):** 513.0 **LOG TYPE:**

SOURCE: C W F CC 000A **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-106.0	CARBONDALE	HERRIN	COAL	8.3	504.0	

MAPID: 05500165000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 12 **QUARTERS/FOOTAGES:** 2310' N line, 2310' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.939088 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.929588 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 398.0 **LOGGED (FT.):** 512.3 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-16.2	MODESTO	PIASA	LIMESTONE	3.5	414.2	
-19.7	MODESTO		BLACK SHALE	3.5	417.7	
-23.2	CARBONDALE	DANVILLE	COAL	1.8	421.2	
-25.0	CARBONDALE	ALLENBY	COAL	0.8	423.0	
-25.8	CARBONDALE		SILTY SHALE	6.2	423.8	
-32.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	430.0	
-38.0	CARBONDALE	LAWSON	CALCAREOUS SHALE	7.0	436.0	
-45.0	CARBONDALE	LAWSON	SILTY SHALE	17.0	443.0	
-62.0	CARBONDALE	LAWSON	GRAY SHALE	3.0	460.0	
-65.0	CARBONDALE	LAWSON	SANDSTONE	3.0	463.0	
-68.0	CARBONDALE	BRERETON	CALCAREOUS SHALE	3.0	466.0	
-71.0	CARBONDALE	ANNA	BLACK SHALE	5.0	469.0	
-76.0	CARBONDALE	ENERGY	SILTY SHALE	13.0	474.0	
-89.0	CARBONDALE	ENERGY	GRAY SHALE	17.0	487.0	
-106.0	CARBONDALE	HERRIN	COAL	8.3	504.0	

MAPID: 05500165000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 12 **QUARTERS/FOOTAGES:** 2310' N line, 2310' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.939088 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.929588 **DATE COLLECTED:** 0 / 0 / 1902

SURFACE ELEVATION (FT.): 398.0 **LOGGED (FT.):** 513.0 **LOG TYPE:** Drillers Log

SOURCE: A.B. MCKEAN 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
398.0	PLEISTOCENE		CLAY	17.0	0.0	YELLOW
381.0	PLEISTOCENE		SAND	15.0	17.0	
366.0	PLEISTOCENE		CLAY	11.0	32.0	YELLOW
355.0	PLEISTOCENE		CLAY	1.0	43.0	BLUE
354.0	PLEISTOCENE		CLAY	28.0	44.0	YELLOW
326.0	MODESTO		COAL	0.5	72.0	
325.5	MODESTO		SHALE	2.5	72.5	
323.0	MODESTO		SANDY SHALE	6.0	75.0	
317.0	MODESTO		SANDSTONE	1.0	81.0	
316.0	MODESTO		SANDY SHALE	3.0	82.0	
313.0	MODESTO		SANDSTONE	6.5	85.0	
306.5	MODESTO		SANDY SHALE	2.0	91.5	
304.5	MODESTO		SANDSTONE	2.0	93.5	
302.5	MODESTO		SANDY SHALE	6.5	95.5	
296.0	MODESTO		SANDY SHALE	15.5	102.0	
280.5	MODESTO		SANDSTONE	2.0	117.5	
278.5	MODESTO		SANDY SHALE	3.5	119.5	
275.0	MODESTO		SHALE	2.0	123.0	
273.0	MODESTO		SANDSTONE	25.3	125.0	
247.7	MODESTO		SANDSTONE	12.7	150.3	WITH SHALE PARTINGS
235.0	MODESTO		SANDSTONE	21.0	163.0	
214.0	MODESTO		SHALE	7.5	184.0	
206.5	MODESTO	CHAPEL	COAL	0.3	191.5	
206.2	MODESTO		CLAYSTONE	5.2	191.8	
201.0	MODESTO		SHALE	13.0	197.0	
188.0	MODESTO		SANDSTONE	2.0	210.0	
186.0	MODESTO		SHALE	3.5	212.0	
182.5	MODESTO		SANDSTONE	40.5	215.5	
142.0	MODESTO		SHALE	73.3	256.0	
68.7	MODESTO		SHALE	1.7	329.3	
67.0	MODESTO		SHALE	1.0	331.0	
66.0	MODESTO		SANDSTONE	5.3	332.0	
60.7	MODESTO		SANDY SHALE	10.7	337.3	WITH SANDSTONE
50.0	MODESTO		SHALE	11.0	348.0	
39.0	MODESTO		COAL	0.9	359.0	
38.1	MODESTO		CLAYSTONE	4.1	359.9	
34.0	MODESTO		SANDSTONE	14.3	364.0	
19.7	MODESTO		SANDY SHALE	5.0	378.3	
14.7	MODESTO		SHALE	12.7	383.3	

2.0	MODESTO	DEGRAFF	COAL	0.7	396.0
1.3	MODESTO		SHALE	2.3	396.7
-1.0	MODESTO		CLAYSTONE	2.0	399.0
-3.0	MODESTO	PIASA	LIMESTONE	3.5	401.0
-6.5	MODESTO		SHALE	3.5	404.5
-10.0	CARBONDALE	DANVILLE	COAL	1.8	408.0
-11.8	CARBONDALE		CLAYSTONE	4.2	409.8
-16.0	CARBONDALE		SANDSTONE	3.0	414.0
-19.0	CARBONDALE		SHALE	3.0	417.0
-22.0	CARBONDALE		SHALE	1.3	420.0
-23.3	CARBONDALE	ALLENBY	COAL	0.3	421.3
-23.6	CARBONDALE	ALLENBY	CLAYSTONE	0.7	421.6
-24.3	CARBONDALE		SHALE	0.8	422.3
-25.0	CARBONDALE		COAL	0.8	423.0
-25.8	CARBONDALE		SANDY SHALE	6.2	423.8
-32.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	430.0
-38.0	CARBONDALE		CALCAREOUS SHALE	7.0	436.0
-45.0	CARBONDALE		SANDY SHALE	17.0	443.0
-62.0	CARBONDALE		SHALE	3.0	460.0
-65.0	CARBONDALE		SANDSTONE	3.0	463.0
-68.0	CARBONDALE		CALCAREOUS SHALE	3.0	466.0
-71.0	CARBONDALE		SHALE	5.0	469.0
-76.0	CARBONDALE		SANDY SHALE	13.0	474.0
-89.0	CARBONDALE		SHALE	17.0	487.0
-106.0	CARBONDALE	HERRIN	COAL	8.3	504.0
-114.3	CARBONDALE		CLAYSTONE	0.7	512.3

MAPID: 05500334000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 12 **QUARTERS/FOOTAGES:** SE NE NW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.939015 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.933246 **DATE COLLECTED:**

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

SOURCE: ADKINS E S **WELL TYPE:** Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	COAL	11.0	484.0	

MAPID: 05500744000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 12 **QUARTERS/FOOTAGES:** 251' S line, 536' E line of NE NW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.939713 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.933045 **DATE COLLECTED:** 4 / 11 / 1944

SURFACE ELEVATION (FT.): 397.3 **LOGGED (FT.):** 910.0 **LOG TYPE:** Drillers Log

SOURCE: CW & F COAL CO 15 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
397.3	PLEISTOCENE		CLAY	20.0	0.0	
377.3	PLEISTOCENE		SAND	8.0	20.0	
369.3	PLEISTOCENE		CLAY	37.0	28.0	
332.3			SHALE	7.0	65.0	
325.3			SHALE & SANDSTONE	63.0	72.0	
262.3			SHALE	15.0	135.0	
247.3			SANDSTONE	28.0	150.0	
219.3			SHALE	32.0	178.0	
187.3			SHALE	20.0	210.0	SANDY
167.3			GRAY SHALE	70.0	230.0	
97.3			SHALE	52.0	300.0	
45.3			COAL	0.7	352.0	SUGGESTED TO BE CUTLER III
44.6			SHALE	7.3	352.7	
37.3			SANDSTONE	13.0	360.0	
24.3			SHALE	20.7	373.0	
3.6			COAL	0.3	393.7	SUGGESTED TO BE CUTLER II
3.3			SHALE	1.0	394.0	
2.3	MODESTO	PIASA	LIMESTONE	2.0	395.0	
0.3	MODESTO		SHALE	5.5	397.0	DARK
-5.2	CARBONDALE	DANVILLE	COAL	1.5	402.5	
-6.7	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	404.0	
-12.7	CARBONDALE		COAL	0.3	410.0	
-13.0	CARBONDALE		SHALE	4.8	410.3	STICKY
-17.7	CARBONDALE	ENERGY	GRAY SHALE	22.0	415.0	TOUGH
-39.7	CARBONDALE	ENERGY	SHALE	60.1	437.0	
-99.8	CARBONDALE	HERRIN	COAL	9.3	497.1	
-109.0	CARBONDALE		SHALE	1.7	506.3	
-110.7	CARBONDALE		CONGLOMERATE	5.0	508.0	LIMESTONE
-115.7	CARBONDALE		LIMESTONE	5.0	513.0	
-120.7	CARBONDALE		GRAY SHALE	10.0	518.0	SANDY
-130.7	CARBONDALE		SHALE	4.0	528.0	DARK
-134.7	CARBONDALE		SHALE	6.0	532.0	HARD; BLACK
-140.7	CARBONDALE		GRAY SHALE	4.0	538.0	TOUGH
-144.7	CARBONDALE		SHALE	6.3	542.0	
-151.0	CARBONDALE	SPRINGFIELD	COAL	3.9	548.3	
-154.9	CARBONDALE		SHALE	14.8	552.2	
-169.7	CARBONDALE		SHALE	18.0	567.0	SANDY
-187.7	CARBONDALE		SHALE	12.0	585.0	
-199.7	CARBONDALE		GRAY SHALE	25.0	597.0	

-224.7	CARBONDALE		SHALE	11.0	622.0	
-235.7	CARBONDALE	HOUCHIN CREEK	COAL	1.0	633.0	
-236.7	CARBONDALE		SHALE	29.8	634.0	
-266.5	CARBONDALE	SURVANT	COAL	0.9	663.8	
-267.5	CARBONDALE		SHALE	11.3	664.8	SANDY
-278.7	CARBONDALE		SHALE	5.0	676.0	
-283.7	CARBONDALE		SHALE	4.0	681.0	SANDY
-287.7	CARBONDALE		GRAY SHALE	25.0	685.0	SANDSTONE,INTERBEDS
-312.7	CARBONDALE		SHALE	39.3	710.0	
-352.0	CARBONDALE	COLCHESTER	COAL	0.7	749.3	
-352.7	SPOON		SHALE	4.0	750.0	
-356.7	SPOON		SANDSTONE	7.0	754.0	
-363.7	SPOON		SHALE	6.0	761.0	
-369.7	SPOON		SHALE	14.0	767.0	DARK
-383.7	SPOON	DEKOVEN	COAL	2.5	781.0	
-386.2	SPOON		GRAY SHALE	16.5	783.5	
-402.7	SPOON		SHALE	9.0	800.0	
-411.7	SPOON		SHALE	1.0	809.0	COAL PARTINGS
-412.7	SPOON	DAVIS	COAL	2.4	810.0	
-415.1	SPOON		SHALE	7.6	812.4	
-422.7	SPOON		SANDSTONE	20.0	820.0	
-442.7	SPOON		SHALE	10.0	840.0	DARK
-452.7	SPOON		SHALE	1.2	850.0	
-453.9	SPOON		COAL	0.8	851.2	
-454.7	SPOON		SHALE	2.0	852.0	
-456.7	SPOON	STONEFORT	LIMESTONE	5.0	854.0	
-461.7	SPOON		SHALE	11.0	859.0	
-472.7	SPOON		GRAY SHALE	8.0	870.0	TOUGH
-480.7	SPOON		SHALE	12.0	878.0	DARK
-492.7	SPOON		SHALE	11.7	890.0	
-504.4	SPOON	WISE RIDGE	COAL	2.3	901.7	NAMED BALD KNOB IN LOG
-506.7	SPOON		SHALE	6.0	904.0	

MAPID: 05500166000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 13 **QUARTERS/FOOTAGES:** SE SE NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.929618 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.914678 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 378.0 **LOGGED (FT.):** 474.0 **LOG TYPE:** Drillers Log

SOURCE: MCKEAN 3 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
378.0	PLEISTOCENE		CLAY	48.0	0.0	
330.0	PLEISTOCENE		SAND	8.0	48.0	
322.0	MODESTO		SANDSTONE	18.0	56.0	
304.0	MODESTO		SANDY SHALE	13.0	74.0	
291.0	MODESTO		SANDSTONE	1.0	87.0	
290.0	MODESTO		SANDY SHALE	9.0	88.0	
281.0	MODESTO		SANDSTONE	31.0	97.0	
250.0	MODESTO		SHALE	8.0	128.0	
242.0	MODESTO		SHALE	1.0	136.0	
241.0	MODESTO	CHAPEL	COAL	0.3	137.0	
240.7	MODESTO		CLAYSTONE	3.8	137.3	
237.0	MODESTO		SANDY SHALE	14.0	141.0	
223.0	MODESTO		SHALE	4.0	155.0	
219.0	MODESTO		SANDSTONE	7.0	159.0	WITH SHALE PARTINGS
212.0	MODESTO		SANDSTONE	24.0	166.0	
188.0	MODESTO		SHALE	37.0	190.0	
151.0	MODESTO		SANDSTONE	15.0	227.0	WITH SHALE PARTINGS
136.0	MODESTO		SANDY SHALE	13.0	242.0	WITH SANDSTONE PARTINGS
123.0	MODESTO		SHALE	19.5	255.0	
103.5	MODESTO		SHALE	0.5	274.5	
103.0	MODESTO		SHALE	1.0	275.0	
102.0	MODESTO		SANDSTONE	11.5	276.0	
90.5	MODESTO		SANDY SHALE	13.5	287.5	WITH SANDSTONE PARTINGS
77.0	MODESTO		SHALE	5.0	301.0	
72.0	MODESTO		COAL	1.0	306.0	
71.0	MODESTO		CLAYSTONE	5.0	307.0	
66.0	MODESTO		SANDY SHALE	14.0	312.0	
52.0	MODESTO		SANDSTONE	28.0	326.0	WITH SHALE PARTINGS
24.0	MODESTO		SANDSTONE	8.0	354.0	
16.0	CARBONDALE	DANVILLE	COAL	1.0	362.0	
15.0	CARBONDALE		CLAYSTONE	7.0	363.0	
8.0	CARBONDALE		SANDSTONE	6.0	370.0	
2.0	CARBONDALE		SHALE	1.0	376.0	
1.0	CARBONDALE		SHALE	3.0	377.0	
-2.0	CARBONDALE		SHALE	0.8	380.0	
-2.8	CARBONDALE	ALLENBY	COAL	0.8	380.8	
-3.5	CARBONDALE		SHALE	4.5	381.5	
-8.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	386.0	
-14.0	CARBONDALE		SHALE	21.0	392.0	

-35.0	CARBONDALE		SANDY SHALE	10.0	413.0
-45.0	CARBONDALE		SHALE	2.3	423.0
-47.3	CARBONDALE	BRERETON	LIMESTONE	3.0	425.3
-50.3	CARBONDALE	ENERGY	SHALE	10.7	428.3
-61.0	CARBONDALE	ENERGY	SHALE	25.3	439.0
-86.3	CARBONDALE	HERRIN	COAL	9.5	464.3
-95.8	CARBONDALE		CLAYSTONE	0.3	473.8

MAPID: 05500166000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 13 **QUARTERS/FOOTAGES:** SE SE NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.929618 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.914678 **DATE COLLECTED:** 0 / 0 / 1902

SURFACE ELEVATION (FT.): 378.0 **LOGGED (FT.):** 474.0 **LOG TYPE:**

SOURCE: C W F CC 0003 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-86.0	CARBONDALE	HERRIN	COAL	9.5	464.0	

MAPID: 05500177000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 13 **QUARTERS/FOOTAGES:** 330' N line, 2310' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.936528 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.920495 **DATE COLLECTED:** 0 / 0 / 1920

SURFACE ELEVATION (FT.): 376.0 **LOGGED (FT.):** 525.0 **LOG TYPE:** Drillers Log

SOURCE: CHCGO WLMNGTN & FRNKLN COAL CO4 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
376.0	PLEISTOCENE		CLAY	25.0	0.0	WITH SAND
351.0	PLEISTOCENE		SAND	32.0	25.0	
319.0	PLEISTOCENE		CLAY	2.5	57.0	SHALE NOTED IN LOG
316.5	PLEISTOCENE		SAND & GRAVEL	0.5	59.5	
316.0	MODESTO		SANDSTONE	85.5	60.0	
230.5	MODESTO		SHALE	4.0	145.5	
226.5	MODESTO	CHAPEL	COAL	0.5	149.5	
226.0	MODESTO		CLAYSTONE	5.0	150.0	
221.0	MODESTO		SHALE	19.0	155.0	
202.0	MODESTO		SANDSTONE	14.0	174.0	
188.0	MODESTO		SANDY SHALE	78.0	188.0	
110.0	MODESTO		SHALE	22.5	266.0	
87.5	MODESTO		SHALE	1.5	288.5	
86.0	MODESTO		SHALE	5.0	290.0	
81.0	MODESTO		SANDSTONE	11.0	295.0	
70.0	MODESTO		SANDY SHALE	7.3	306.0	
62.7	MODESTO		SHALE	5.3	313.3	
57.5	MODESTO		SHALE	5.7	318.5	
51.8	MODESTO		COAL	0.8	324.2	
51.0	MODESTO		CLAYSTONE	3.0	325.0	
48.0	MODESTO		SHALE	10.0	328.0	
38.0	MODESTO		SANDY SHALE	24.5	338.0	
13.5	MODESTO		SANDSTONE	2.5	362.5	
11.0	MODESTO		SANDY SHALE	2.5	365.0	
8.5	MODESTO		SHALE	5.2	367.5	
3.3	CARBONDALE	DANVILLE	COAL	2.3	372.7	
1.0	CARBONDALE		SANDY SHALE	17.3	375.0	
-16.3	CARBONDALE	ALLENBY	COAL	0.3	392.3	
-16.7	CARBONDALE		CLAYSTONE	4.3	392.7	
-21.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	397.0	
-27.5	CARBONDALE		SHALE	5.5	403.5	
-33.0	CARBONDALE		SANDY SHALE	23.0	409.0	
-56.0	CARBONDALE	BRERETON	LIMESTONE	3.0	432.0	
-59.0	CARBONDALE	ENERGY	SHALE	1.0	435.0	
-60.0	CARBONDALE	ENERGY	SHALE	5.5	436.0	
-65.5	CARBONDALE	ENERGY	SHALE	4.5	441.5	
-70.0	CARBONDALE	ENERGY	SHALE	27.2	446.0	WITH BROWN BANDS
-97.2	CARBONDALE	HERRIN	COAL	9.0	473.2	
-106.2	CARBONDALE		CLAYSTONE	1.2	482.2	

-107.3	CARBONDALE		LIMESTONE	10.2	483.3
-117.5	CARBONDALE		SANDY SHALE	5.5	493.5
-123.0	CARBONDALE		SHALE	6.0	499.0
-129.0	CARBONDALE	ST. DAVID	LIMESTONE	1.0	505.0
-130.0	CARBONDALE		SHALE	4.0	506.0
-134.0	CARBONDALE		SHALE	9.6	510.0
-143.6	CARBONDALE	SPRINGFIELD	COAL	4.1	519.6
-147.7	CARBONDALE		CLAYSTONE	1.3	523.7

MAPID: 05500177000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 13 **QUARTERS/FOOTAGES:** 330' N line, 2310' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.936528 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.920495 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 376.0 **LOGGED (FT.):** 482.0 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
13.7	MODESTO	PIASA	SHALE & SANDSTONE	5.0	362.3	
8.7	MODESTO		DARK GRAY SHALE	5.2	367.3	
3.5	CARBONDALE	DANVILLE	COAL	2.3	372.5	
1.2	CARBONDALE		SILTY SHALE	17.3	374.8	
-16.2	CARBONDALE	ALLENBY	COAL	0.3	392.2	
-16.5	CARBONDALE		CLAYSTONE	4.3	392.5	
-20.8	CARBONDALE	BANKSTON FORK	LIMESTONE	6.5	396.8	
-27.3	CARBONDALE	LAWSON	GRAY SHALE	5.5	403.3	
-32.8	CARBONDALE	LAWSON	SILTY SHALE	23.0	408.8	
-55.8	CARBONDALE	BRERETON	LIMESTONE	3.0	431.8	
-58.8	CARBONDALE	ANNA	BLACK SHALE	6.5	434.8	
-65.3	CARBONDALE	ENERGY	GRAY SHALE	31.7	441.3	
-97.0	CARBONDALE	HERRIN	COAL	9.0	473.0	

MAPID: 05500189000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 13 **QUARTERS/FOOTAGES:** NE SE SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.939007 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.90923 **DATE COLLECTED:** 0 / 0 / 1920

SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 518.0 **LOG TYPE:** Drillers Log

SOURCE: CHCGO WLMNGTN & FRNKLN COAL CO6 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
400.0	PLEISTOCENE		CLAY	18.0	0.0	
382.0	PLEISTOCENE		SANDY CLAY	30.0	18.0	
352.0	PLEISTOCENE		SAND	12.0	48.0	
340.0	PLEISTOCENE		CLAY	14.0	60.0	WITH SAND BANDS
326.0	MODESTO		SANDSTONE	18.0	74.0	
308.0	MODESTO		SANDY SHALE	11.0	92.0	
297.0	MODESTO		SANDSTONE	20.0	103.0	
277.0	MODESTO		SANDY SHALE	13.0	123.0	
264.0	MODESTO		SHALE	12.5	136.0	
251.5	MODESTO		SHALE	7.5	148.5	
244.0	MODESTO		SANDY SHALE	109.0	156.0	
135.0	MODESTO		SHALE	10.0	265.0	
125.0	MODESTO		SHALE	8.0	275.0	
117.0	MODESTO		SHALE	3.0	283.0	
114.0	MODESTO		SHALE	3.5	286.0	
110.5	MODESTO		SANDSTONE	9.5	289.5	
101.0	MODESTO		SANDY SHALE	11.0	299.0	
90.0	MODESTO		SHALE	12.0	310.0	
78.0	MODESTO		BONE COAL	1.2	322.0	
76.8	MODESTO		CLAYSTONE	1.5	323.2	
75.3	MODESTO		CALCAREOUS SHALE	5.3	324.7	
70.0	MODESTO		SANDY SHALE	18.0	330.0	
52.0	MODESTO		SHALE	4.0	348.0	
48.0	MODESTO		SHALE	3.0	352.0	
45.0	MODESTO	PIASA	LIMESTONE	5.7	355.0	
39.3	MODESTO		SHALE	4.3	360.7	
35.1	CARBONDALE	DANVILLE	COAL	2.0	364.9	
33.1	CARBONDALE		SHALE	3.1	366.9	
30.0	CARBONDALE		SANDY SHALE	6.0	370.0	
24.0	CARBONDALE		SHALE	1.2	376.0	
22.8	CARBONDALE	ALLENBY	COAL	0.3	377.2	
22.5	CARBONDALE		SANDSTONE	17.5	377.5	
5.0	CARBONDALE		SANDY SHALE	10.0	395.0	
-5.0	CARBONDALE		SANDSTONE	11.5	405.0	
-16.5	CARBONDALE		SANDY SHALE	5.5	416.5	
-22.0	CARBONDALE		SHALE	3.5	422.0	
-25.5	CARBONDALE		LIMESTONE	4.0	425.5	
-29.5	CARBONDALE	ENERGY	SHALE	2.5	429.5	
-32.0	CARBONDALE	ENERGY	SANDY SHALE	20.0	432.0	

-52.0	CARBONDALE	ENERGY	SHALE	17.1	452.0	
-69.1	CARBONDALE	HERRIN	COAL	9.1	469.1	
-78.2	CARBONDALE		CLAYSTONE	1.8	478.2	
-80.0	CARBONDALE		CALCAREOUS SHALE	11.0	480.0	
-91.0	CARBONDALE		SHALE	6.0	491.0	
-97.0	CARBONDALE		LIMESTONE	1.0	497.0	
-98.0	CARBONDALE		COAL	0.3	498.0	#5A?
-98.3	CARBONDALE		SHALE	2.8	498.3	
-101.0	CARBONDALE		SHALE	11.1	501.0	
-112.1	CARBONDALE	SPRINGFIELD	COAL	4.3	512.1	
-116.4	CARBONDALE		CLAYSTONE	1.6	516.4	

MAPID: 05500189000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 13 **QUARTERS/FOOTAGES:** NE SE SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.939007 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.90923 **DATE COLLECTED:** 0 / 0 / 1920

SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: C W F CC 002A **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-79.0	CARBONDALE	HERRIN	COAL	9.1	479.0	
-112.0	CARBONDALE	SPRINGFIELD	COAL	4.3	512.0	

MAPID: 05500267000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 13 **QUARTERS/FOOTAGES:** NE SE SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.939007 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.90923 **DATE COLLECTED:** 0 / 0 / 1922

SURFACE ELEVATION (FT.): 399.0 **LOGGED (FT.):** 514.0 **LOG TYPE:** Drillers Log

SOURCE: CHCGO WLMNGTN & FRNKLN COAL CO **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
399.0	PLEISTOCENE		CLAYSTONE	15.0	0.0	
384.0	PLEISTOCENE		SANDY CLAY	28.0	15.0	
356.0	PLEISTOCENE		SAND	19.0	43.0	
337.0	PLEISTOCENE		CLAY	2.0	62.0	
335.0	PLEISTOCENE		SAND/CLAY	10.0	64.0	
325.0	MODESTO		SANDY SHALE	23.0	74.0	
302.0	MODESTO		SANDSTONE	29.0	97.0	
273.0	MODESTO		SHALE	12.5	126.0	
260.5	MODESTO		COAL	0.3	138.5	
260.2	MODESTO		CLAYSTONE	5.2	138.8	
255.0	MODESTO		SHALE	13.0	144.0	
242.0	MODESTO		SANDY SHALE	99.5	157.0	
142.5	MODESTO		SHALE	19.5	256.5	
123.0	MODESTO		SANDSTONE	9.0	276.0	
114.0	MODESTO		SANDY SHALE	15.0	285.0	
99.0	MODESTO		SHALE	6.6	300.0	
92.4	MODESTO		COAL	0.8	306.6	
91.6	MODESTO		CLAYSTONE	3.6	307.4	
88.0	MODESTO		SANDY SHALE	26.0	311.0	
62.0	MODESTO		SHALE	5.5	337.0	
56.5	MODESTO	DEGRAFF	COAL	0.2	342.5	
56.3	MODESTO		CLAYSTONE	1.3	342.7	
55.0	MODESTO	PIASA	LIMESTONE	5.5	344.0	
49.5	MODESTO		SHALE	6.7	349.5	
42.8	CARBONDALE	DANVILLE	COAL	2.8	356.2	
40.0	CARBONDALE		CLAYSTONE	0.5	359.0	
39.5	CARBONDALE		SANDY SHALE	40.5	359.5	
-1.0	CARBONDALE		SHALE	6.0	400.0	
-7.0	CARBONDALE		LIMESTONE	2.5	406.0	
-9.5	CARBONDALE		SHALE	6.0	408.5	
-15.5	CARBONDALE		SHALE	7.5	414.5	
-23.0	CARBONDALE		SHALE	35.0	422.0	WITH BROWN BANDS
-58.0	CARBONDALE		SHALE	7.1	457.0	
-65.1	CARBONDALE	HERRIN	COAL	9.0	464.1	
-74.1	CARBONDALE		CLAYSTONE	1.9	473.1	
-76.0	CARBONDALE		SHALE	7.5	475.0	
-83.5	CARBONDALE		SANDY SHALE	11.2	482.5	
-94.7	CARBONDALE		LIMESTONE	1.3	493.7	
-96.0	CARBONDALE		SHALE	3.0	495.0	

-99.0	CARBONDALE		SANDY SHALE	0.8	498.0
-99.8	CARBONDALE		SHALE	1.0	498.8
-100.8	CARBONDALE		SHALE	9.6	499.8
-110.4	CARBONDALE	SPRINGFIELD	COAL	3.8	509.4
-114.2	CARBONDALE		CLAYSTONE	0.8	513.2

MAPID: 05500267000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 13 **QUARTERS/FOOTAGES:** NE SE SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.939007 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.90923 **DATE COLLECTED:** 0 / 0 / 1920

SURFACE ELEVATION (FT.): 399.0 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: C W F CC 002H **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-80.0	CARBONDALE	HERRIN	COAL	9.0	479.0	
-125.0	CARBONDALE	SPRINGFIELD	COAL	3.8	524.0	

MAPID: 05501990000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 13 **QUARTERS/FOOTAGES:** 380' S line, 330' E line of SW NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.934276 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.914883 **DATE COLLECTED:** 6 / 0 / 1962

SURFACE ELEVATION (FT.): 379.0 **LOGGED (FT.):** 1760.0 **LOG TYPE:** Electric Log

SOURCE: CARTER JAMES E **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-331.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	710.0	
-401.0	SPOON	DAVIS	UNCLASSIFIED	-	780.0	
-1381.0	BASE OF PENN.		UNCLASSIFIED	-	1760.0	

MAPID: 05500168000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 14 **QUARTERS/FOOTAGES:** SE SE NW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.957541 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.915081 **DATE COLLECTED:** 0 / 0 / 1917

SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 576.0 **LOG TYPE:** Drillers Log

SOURCE: CHCGO WLMNGTN & FRNKLN COAL CO2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
400.0	PLEISTOCENE		CLAY	20.0	0.0	
380.0	PLEISTOCENE		SANDY CLAY	20.0	20.0	
360.0	PLEISTOCENE		CLAY, SAND & GRAVEL	29.4	40.0	SANDY WITH GRAVEL
330.6	MODESTO		SOFT SHALE	3.6	69.4	
327.0	MODESTO		SANDY SHALE	4.0	73.0	
323.0	MODESTO		SANDSTONE	2.2	77.0	
320.8	MODESTO		SANDY SHALE	1.0	79.2	
319.8	MODESTO		SANDSTONE	101.2	80.2	
218.7	MODESTO		SHALE	8.2	181.3	
210.5	MODESTO	CHAPEL	COAL	0.7	189.5	
209.8	MODESTO		SOFT SHALE	2.0	190.2	
207.8	MODESTO		SHALE	13.8	192.2	
194.0	MODESTO		SHALE	19.0	206.0	
175.0	MODESTO		SANDY SHALE	90.0	225.0	
85.0	MODESTO		SHALE	7.0	315.0	
78.0	MODESTO		SANDY SHALE	5.0	322.0	
73.0	MODESTO		SANDSTONE	8.0	327.0	
65.0	MODESTO		SHALE	18.0	335.0	
47.0	MODESTO		SHALE	12.0	353.0	
35.0	MODESTO		SANDY SHALE	5.0	365.0	
30.0	MODESTO		SANDSTONE	22.5	370.0	
7.5	MODESTO		SANDY SHALE	17.5	392.5	
-10.0	CARBONDALE	DANVILLE	COAL	1.0	410.0	
-11.0	CARBONDALE		SHALE	14.7	411.0	
-25.7	CARBONDALE	BANKSTON FORK	LIMESTONE	5.6	425.7	
-31.3	CARBONDALE		SHALE	6.5	431.3	
-37.8	CARBONDALE		SHALE	20.4	437.8	
-58.2	CARBONDALE	BRERETON	LIMESTONE	1.3	458.2	
-59.5	CARBONDALE	ENERGY	BLACK SHALE	2.0	459.5	
-61.5	CARBONDALE	ENERGY	SHALE	2.5	461.5	
-64.0	CARBONDALE	ENERGY	SHALE	12.0	464.0	
-76.0	CARBONDALE	ENERGY	SHALE	17.0	476.0	WITH BROWN BANDS
-93.0	CARBONDALE	ENERGY	SHALE	42.0	493.0	WITH BROWN BANDS
-135.0	CARBONDALE	HERRIN	COAL	7.1	535.0	
-142.1	CARBONDALE	HERRIN	BLUE BAND	0.1	542.1	
-142.2	CARBONDALE	HERRIN	COAL	3.1	542.2	
-145.3	CARBONDALE		CLAYSTONE	3.2	545.3	
-148.5	CARBONDALE		LIMESTONE	9.3	548.5	
-157.8	CARBONDALE		BLACK SHALE	4.2	557.8	

-162.0	CARBONDALE		SHALE	8.4	562.0
-170.4	CARBONDALE	SPRINGFIELD	COAL	3.0	570.4
-173.4	CARBONDALE		CLAYSTONE	2.6	573.4

MAPID: 05500169000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 14 **QUARTERS/FOOTAGES:** 2030' N line, 2500' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.956914 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.916011 **DATE COLLECTED:** 0 / 0 / 1917

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 572.7 **LOG TYPE:** Drillers Log

SOURCE: CHCGO WLMNGTN & FRNKLN 3 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
395.0	PLEISTOCENE		CLAY	40.0	0.0	
355.0	PLEISTOCENE		SANDY CLAY	29.0	40.0	
326.0	PLEISTOCENE		SAND & GRAVEL	4.5	69.0	
321.5	MODESTO		SHALE	1.0	73.5	
320.5	MODESTO		SANDY SHALE	9.5	74.5	
311.0	MODESTO		SANDSTONE	87.5	84.0	
223.5	MODESTO		SHALE	12.0	171.5	WITH BROWN BANDS
211.5	MODESTO	CHAPEL	COAL	0.5	183.5	
211.0	MODESTO		SHALE	3.0	184.0	
208.0	MODESTO		SANDY SHALE	31.0	187.0	
177.0	MODESTO		SANDY SHALE	4.0	218.0	
173.0	MODESTO		SANDSTONE	4.5	222.0	
168.5	MODESTO		SANDY SHALE	30.5	226.5	
138.0	MODESTO		SANDY SHALE	19.0	257.0	
119.0	MODESTO		SANDY SHALE	35.0	276.0	
84.0	MODESTO		SHALE	12.4	311.0	
71.5	MODESTO		SHALE	1.2	323.5	
70.3	MODESTO		SHALE	4.3	324.7	
66.0	MODESTO		SANDSTONE	6.0	329.0	
60.0	MODESTO		SANDY SHALE	7.0	335.0	
53.0	MODESTO		SHALE	8.5	342.0	
44.5	MODESTO		SHALE	0.5	350.5	
44.0	MODESTO		SHALE	1.5	351.0	
42.5	MODESTO		COAL	1.0	352.5	
41.5	MODESTO		CLAYSTONE	3.0	353.5	
38.5	MODESTO		SHALE	17.5	356.5	
21.0	MODESTO		SANDY SHALE	6.0	374.0	
15.0	MODESTO		SANDSTONE	16.0	380.0	
-1.0	MODESTO		SHALE	4.0	396.0	
-5.0	MODESTO	PIASA	LIMESTONE	4.0	400.0	
-9.0	MODESTO		SHALE	1.0	404.0	
-10.0	MODESTO		SHALE	3.3	405.0	
-13.3	CARBONDALE	DANVILLE	COAL	2.3	408.3	
-15.7	CARBONDALE		SHALE	4.0	410.7	
-19.7	CARBONDALE		SANDY SHALE	3.5	414.7	
-23.2	CARBONDALE		SHALE	1.8	418.2	
-25.0	CARBONDALE	ALLENBY	COAL	0.3	420.0	
-25.3	CARBONDALE		SHALE	4.8	420.3	
-30.2	CARBONDALE	BANKSTON FORK	LIMESTONE	6.3	425.2	

-36.5	CARBONDALE		SHALE	25.5	431.5	
-62.0	CARBONDALE	BRERETON	LIMESTONE	2.8	457.0	
-64.8	CARBONDALE	ENERGY	BLACK SHALE	2.0	459.8	
-66.8	CARBONDALE	ENERGY	SHALE	15.2	461.8	
-82.0	CARBONDALE	ENERGY	SHALE WITH LIMESTONE	20.0	477.0	WITH LIMESTONE BANDS
-102.0	CARBONDALE	ENERGY	SHALE	26.7	497.0	WITH BROWN BANDS
-128.7	CARBONDALE	HERRIN	COAL	8.7	523.7	
-137.3	CARBONDALE	HERRIN	BLUE BAND	0.1	532.3	
-137.4	CARBONDALE	HERRIN	COAL	1.0	532.4	
-138.4	CARBONDALE		CLAYSTONE	3.0	533.4	FIRE WITH LIMESTONE PART
-141.4	CARBONDALE		LIMESTONE	5.5	536.4	
-146.9	CARBONDALE		SOFT SHALE	0.3	541.9	
-147.3	CARBONDALE		SANDY SHALE	3.5	542.3	
-150.8	CARBONDALE		SANDSTONE	5.1	545.8	
-155.8	CARBONDALE		SHALE	2.7	550.8	
-158.5	CARBONDALE	ST. DAVID	LIMESTONE	0.8	553.5	
-159.3	CARBONDALE	TURNER MINE	BLACK SHALE	4.3	554.3	
-163.7	CARBONDALE	DYKERSBURG	SHALE	10.0	558.7	
-173.7	CARBONDALE	SPRINGFIELD	COAL	3.7	568.7	
-177.3	CARBONDALE		CLAYSTONE	0.3	572.3	

MAPID: 05500169000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 14 **QUARTERS/FOOTAGES:** 2030' N line, 2500' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.956914 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.916011 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 533.8 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-5.4	MODESTO	PIASA	LIMESTONE	4.0	400.4	
-9.4	MODESTO		DARK GRAY SHALE	4.3	404.4	
-13.7	CARBONDALE	DANVILLE	COAL	2.3	408.7	
-16.0	CARBONDALE		SHALE	9.3	411.0	
-25.3	CARBONDALE	ALLENBY	COAL	0.3	420.3	
-25.7	CARBONDALE		DARK GRAY SHALE	4.8	420.7	
-30.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.3	425.5	
-36.8	CARBONDALE	LAWSON	DARK GRAY SHALE	25.5	431.8	
-62.3	CARBONDALE	BRERETON	LIMESTONE	2.8	457.3	
-65.2	CARBONDALE	ANNA	BLACK SHALE	2.0	460.2	
-67.2	CARBONDALE	ENERGY	DARK GRAY SHALE	15.2	462.2	
-82.3	CARBONDALE	ENERGY	CALCAREOUS SHALE	20.0	477.3	
-102.3	CARBONDALE	ENERGY	GRAY SHALE	26.7	497.3	
-129.0	CARBONDALE	HERRIN	COAL	9.8	524.0	

MAPID: 05500173000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 14 **QUARTERS/FOOTAGES:** SW SE NW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.959848 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.915089 **DATE COLLECTED:** 0 / 0 / 1917

SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 575.5 **LOG TYPE:** Drillers Log

SOURCE: CHCGO WLMNGTN & FRNKLN COAL CO4 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
400.0	PLEISTOCENE		CLAY	23.0	0.0	
377.0	PLEISTOCENE		SAND & GRAVEL	10.0	23.0	
367.0	PLEISTOCENE		CLAY, SAND & GRAVEL	31.3	33.0	SANDY WITH GRAVEL
335.7	MODESTO		SHALE	2.7	64.3	
333.0	MODESTO		SANDY SHALE	4.0	67.0	
329.0	MODESTO		SANDSTONE	1.5	71.0	
327.5	MODESTO		SANDY SHALE	2.0	72.5	
325.5	MODESTO		SANDSTONE	126.5	74.5	
199.0	MODESTO		SHALE	8.0	201.0	
191.0	MODESTO		SANDY SHALE	101.0	209.0	
90.0	MODESTO		SHALE	17.0	310.0	
73.0	MODESTO		SANDSTONE	7.0	327.0	
66.0	MODESTO		SHALE	7.0	334.0	
59.0	MODESTO		BLACK SHALE	2.0	341.0	
57.0	MODESTO		COAL	1.3	343.0	
55.7	MODESTO		CLAYSTONE	2.0	344.3	
53.7	MODESTO		SHALE	16.3	346.3	
37.5	MODESTO		SANDY SHALE	8.5	362.5	
29.0	MODESTO		SANDSTONE	21.0	371.0	
8.0	MODESTO		SHALE	7.0	392.0	
1.0	MODESTO	PIASA	LIMESTONE	3.7	399.0	
-2.7	MODESTO		SHALE	4.0	402.7	
-6.7	CARBONDALE	DANVILLE	COAL	1.7	406.7	
-8.3	CARBONDALE		SHALE	4.0	408.3	
-12.3	CARBONDALE		SANDY SHALE	5.7	412.3	
-18.0	CARBONDALE		SANDY SHALE	17.0	418.0	
-35.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	435.0	
-41.0	CARBONDALE		SANDY SHALE	16.0	441.0	
-57.0	CARBONDALE	BRERETON	LIMESTONE	1.2	457.0	
-58.2	CARBONDALE	ENERGY	SHALE	34.8	458.2	
-93.0	CARBONDALE	ENERGY	SHALE	31.0	493.0	WITH BROWN PARTINGS
-124.0	CARBONDALE	HERRIN	COAL	7.1	524.0	
-131.1	CARBONDALE	HERRIN	BLUE BAND	0.0	531.1	
-131.2	CARBONDALE	HERRIN	COAL	2.3	531.2	
-133.5	CARBONDALE		CLAYSTONE	1.5	533.5	WITH LIMESTONE
-135.0	CARBONDALE		LIMESTONE	4.5	535.0	
-139.5	CARBONDALE		SANDSTONE	10.0	539.5	
-149.5	CARBONDALE		SHALE	6.5	549.5	
-156.0	CARBONDALE	ST. DAVID	LIMESTONE	1.0	556.0	

-157.0	CARBONDALE	TURNER MINE	BLACK SHALE	4.5	557.0
-161.5	CARBONDALE	DYKERSBURG	SHALE	9.8	561.5
-171.3	CARBONDALE	SPRINGFIELD	COAL	3.1	571.3
-174.4	CARBONDALE		CLAYSTONE	1.1	574.4

MAPID: 05500167000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 15 **QUARTERS/FOOTAGES:** 0' S line, 0' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.984455 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.906639 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 415.0 **LOGGED (FT.):** 482.0 **LOG TYPE:** Drillers Log

SOURCE: JOHN R. WALSH 8 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
415.0	PLEISTOCENE		CLAY	48.0	0.0	YELLOW
367.0	PLEISTOCENE		SAND	4.5	48.0	
362.5	PLEISTOCENE		SANDY CLAY	7.5	52.5	
355.0	PLEISTOCENE		CLAY	10.0	60.0	BLUE
345.0	PLEISTOCENE		CLAY	16.0	70.0	BLUE
329.0	MODESTO		SANDY SHALE	27.0	86.0	
302.0	MODESTO		SHALE	4.0	113.0	
298.0	MODESTO		SHALE	0.3	117.0	
297.7	MODESTO		SANDY SHALE	0.8	117.3	
297.0	MODESTO		SHALE	5.0	118.0	
292.0	MODESTO	CHAPEL	COAL	1.1	123.0	
290.9	MODESTO		CLAYSTONE	4.9	124.1	
286.0	MODESTO		SANDY SHALE	2.0	129.0	
284.0	MODESTO		SHALE	13.0	131.0	
271.0	MODESTO		SANDY SHALE	4.0	144.0	
267.0	MODESTO		SANDY SHALE	27.0	148.0	
240.0	MODESTO		SANDY SHALE	26.0	175.0	
214.0	MODESTO		SANDY SHALE	27.0	201.0	
187.0	MODESTO		SANDY SHALE	29.0	228.0	
158.0	MODESTO		SANDY SHALE	16.0	257.0	WITH SANDSTONE PARTINGS
142.0	MODESTO		SHALE	1.0	273.0	
141.0	MODESTO		SHALE	3.0	274.0	
138.0	MODESTO		COAL	0.2	277.0	
137.8	MODESTO		SOFT SHALE	2.8	277.2	
135.0	MODESTO		SANDY SHALE	21.0	280.0	
114.0	MODESTO		SANDY SHALE	21.0	301.0	
93.0	MODESTO		SANDSTONE	5.0	322.0	
88.0	MODESTO		SANDSTONE	6.0	327.0	
82.0	MODESTO		CALCAREOUS SHALE	2.5	333.0	
79.5	MODESTO	PIASA	LIMESTONE	2.5	335.5	
77.0	MODESTO		SHALE	2.5	338.0	
74.5	CARBONDALE	DANVILLE	COAL	1.2	340.5	
73.3	CARBONDALE		SANDY SHALE	12.3	341.7	
61.0	CARBONDALE		SANDSTONE	1.0	354.0	
60.0	CARBONDALE		SHALE	2.0	355.0	
58.0	CARBONDALE	ALLENBY	COAL	0.2	357.0	
57.8	CARBONDALE		LIMESTONE	0.5	357.2	
57.3	CARBONDALE		SOFT SHALE	3.5	357.7	
53.8	CARBONDALE		LIMESTONE	4.0	361.2	

49.8	CARBONDALE		LIMESTONE	5.5	365.2
44.3	CARBONDALE	ENERGY	SANDY SHALE	3.3	370.7
41.0	CARBONDALE	ENERGY	SANDY SHALE	27.0	374.0
14.0	CARBONDALE	ENERGY	SANDY SHALE	19.0	401.0
-5.0	CARBONDALE	ENERGY	SANDY SHALE	28.0	420.0
-33.0	CARBONDALE	ENERGY	SANDY SHALE	24.2	448.0
-57.2	CARBONDALE	HERRIN	COAL	9.2	472.2
-66.3	CARBONDALE		CLAYSTONE	0.7	481.3

MAPID: 05500167000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 15 **QUARTERS/FOOTAGES:** 0' S line, 0' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.984455 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.906639 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 415.0 **LOGGED (FT.):** 481.2 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
82.2	MODESTO	PIASA	LIMESTONE & SHALE	5.0	332.8	
77.2	MODESTO		GRAY SHALE	2.5	337.8	
74.7	CARBONDALE	DANVILLE	COAL	1.2	340.3	
73.5	CARBONDALE		SHALE & SANDSTONE	15.3	341.5	
58.2	CARBONDALE	ALLENBY	COAL	0.2	356.8	
58.0	CARBONDALE	BANKSTON FORK	LIMESTONE	0.5	357.0	
57.5	CARBONDALE	LAWSON	CLAYSTONE & SHALE	3.5	357.5	
54.0	CARBONDALE	BRERETON	LIMESTONE	9.5	361.0	
44.5	CARBONDALE	ANNA	DARK GRAY SHALE	3.3	370.5	
41.2	CARBONDALE	ENERGY	SILTY SHALE	98.2	373.8	
-57.0	CARBONDALE	HERRIN	COAL	9.2	472.0	

MAPID: 05501630000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 15 **QUARTERS/FOOTAGES:** 480' S line, 330' W line of SE SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.978574 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.908004 **DATE COLLECTED:** 9 / 0 / 1960

SURFACE ELEVATION (FT.): 402.0 **LOGGED (FT.):** 1632.0 **LOG TYPE:** Electric Log

SOURCE: HOWARD & HOWELL **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-303.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	705.0	
-376.0	SPOON	DAVIS	UNCLASSIFIED	-	778.0	
-1230.0	BASE OF PENN.		UNCLASSIFIED	-	1632.0	

MAPID: 05500170000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 16 **QUARTERS/FOOTAGES:** 1980' N line, 1980' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.995917 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.915737 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 385.0 **LOG TYPE:** Drillers Log

SOURCE: DERING COAL CO. 97 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	PLEISTOCENE		CLAY	34.0	0.0	
-	PLEISTOCENE		SAND	10.0	34.0	
-	PLEISTOCENE		CLAY	3.0	44.0	BLUE
-	PLEISTOCENE		SAND & GRAVEL	9.0	47.0	
-	MODESTO		SHALE	10.0	56.0	
-	MODESTO		SANDY SHALE	65.0	66.0	
-	MODESTO		SANDY SHALE	20.0	131.0	WITH HARD BANDS
-	MODESTO		SHALE	5.0	151.0	DARK BLUE
-	MODESTO		SHALE	1.0	156.0	
-	MODESTO		SOFT SHALE	1.0	157.0	
-	MODESTO		LIMESTONE	1.5	158.0	
-	MODESTO		SANDSTONE	6.5	159.5	
-	MODESTO		SANDY SHALE	8.0	166.0	
-	MODESTO		SHALE	2.0	174.0	
-	MODESTO		SHALE	2.0	176.0	
-	MODESTO		SHALE	2.5	178.0	RED-BLUE
-	MODESTO		SHALE	4.5	180.5	LIGHT BLUE
-	MODESTO		SANDY SHALE	15.5	185.0	
-	MODESTO		SANDSTONE	26.2	200.5	
-	MODESTO		SOFT SHALE	2.3	226.7	
-	MODESTO		SHALE	2.5	229.0	
-	MODESTO		CALCAREOUS SHALE	2.5	231.5	
-	MODESTO	PIASA	LIMESTONE	2.6	234.0	
-	MODESTO		SHALE	1.2	236.6	
-	CARBONDALE	DANVILLE	COAL	1.3	237.8	
-	CARBONDALE		SHALE	2.9	239.1	
-	CARBONDALE		SANDY SHALE	8.8	242.0	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	0.8	250.8	
-	CARBONDALE	BANKSTON FORK	SANDY SHALE	2.4	251.6	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	254.0	
-	CARBONDALE		SANDY SHALE	15.0	255.0	
-	CARBONDALE		SHALE	7.0	270.0	
-	CARBONDALE		SANDSTONE	15.0	277.0	
-	CARBONDALE		SANDSTONE	14.0	292.0	WITH SHALE PARTINGS
-	CARBONDALE	ENERGY	SANDY SHALE	65.7	306.0	
-	CARBONDALE	HERRIN	COAL	9.2	371.7	
-	CARBONDALE		CLAYSTONE	2.7	380.8	
-	CARBONDALE		CALCAREOUS SHALE	1.5	383.5	

MAPID: 05500170000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 16 **QUARTERS/FOOTAGES:** 1980' N line, 1980' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.995917 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.915737 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 375.0 **LOGGED (FT.):** 381.2 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
143.0	MODESTO	PIASA	LIMESTONE & SHALE	5.1	232.0	
137.9	MODESTO		BLACK SHALE	1.2	237.1	
136.7	CARBONDALE	DANVILLE	COAL	1.3	238.3	
135.4	CARBONDALE		SILTY SHALE	11.7	239.6	
123.7	CARBONDALE	BANKSTON FORK	LIMESTONE	0.8	251.3	
122.9	CARBONDALE	LAWSON	SILTY SHALE	2.4	252.1	
120.5	CARBONDALE	BRERETON	LIMESTONE	1.0	254.5	
119.5	CARBONDALE	ENERGY	SILTY SHALE	15.0	255.5	
104.5	CARBONDALE	ENERGY	GRAY SHALE	7.0	270.5	
97.5	CARBONDALE	ENERGY	SANDSTONE	15.0	277.5	
82.5	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	14.0	292.5	
68.5	CARBONDALE	ENERGY	SILTY SHALE	65.7	306.5	
3.0	CARBONDALE	HERRIN	COAL	9.2	372.0	

MAPID: 05500171000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 16 **QUARTERS/FOOTAGES:** SE SW NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.990184 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.914855 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 379.0 **LOGGED (FT.):** 419.0 **LOG TYPE:** Drillers Log

SOURCE: CHCGO WLMNGTN & VRMLN COAL CO E **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
379.0	PLEISTOCENE		SOIL	3.0	0.0	
376.0	PLEISTOCENE		CLAY	41.0	3.0	
335.0	PLEISTOCENE		SAND	24.0	44.0	
311.0	PLEISTOCENE		GRAVEL	2.0	68.0	
309.0	MODESTO		SOFT SHALE	1.0	70.0	
308.0	MODESTO		SANDY SHALE	11.0	71.0	
297.0	MODESTO		SANDY SHALE	18.0	82.0	WITH HARD BANDS
279.0	MODESTO		SANDY SHALE	51.0	100.0	
228.0	MODESTO		SANDY SHALE	25.0	151.0	SANDY WITH SANDSTONE
203.0	MODESTO		SANDY SHALE	12.0	176.0	SANDY WITH SANDSTONE
191.0	MODESTO		SHALE	8.0	188.0	DARK GRAY
183.0	MODESTO		SHALE	1.0	196.0	
182.0	MODESTO		SHALE	18.0	197.0	LIGHT
164.0	MODESTO		SHALE	4.1	215.0	
159.9	MODESTO	CHAPEL	COAL	0.6	219.1	
159.3	MODESTO		SOFT SHALE	1.3	219.7	
158.0	MODESTO		SOFT SHALE	5.0	221.0	WITH LIMESTONE
153.0	MODESTO		SHALE	5.0	226.0	WITH BLUE LIMESTONE BAND
148.0	MODESTO		SANDY SHALE	14.0	231.0	
134.0	MODESTO		SANDSTONE	3.0	245.0	
131.0	MODESTO		SANDSTONE	7.0	248.0	
124.0	MODESTO		SHALE	5.3	255.0	WITH BROWN BANDS
118.7	MODESTO		COAL	0.3	260.3	
118.3	MODESTO		SHALE	6.0	260.7	
112.3	MODESTO		LIMESTONE	2.3	266.7	
110.0	MODESTO		SHALE	2.0	269.0	
108.0	MODESTO		SHALE	2.0	271.0	BLACK-GRAY
106.0	MODESTO		COAL	1.2	273.0	
104.8	MODESTO		SANDY SHALE	0.8	274.2	
104.0	MODESTO		SANDY SHALE	5.5	275.0	
98.5	MODESTO		SANDSTONE	1.0	280.5	
97.5	MODESTO		SANDSTONE	3.5	281.5	WITH SHALE PARTINGS
94.0	MODESTO		SHALE	3.0	285.0	LIGHT BLUE
91.0	MODESTO		SHALE W/ COAL STREAKS	0.5	288.0	WITH COAL PARTINGS
90.5	MODESTO		SOFT SHALE	3.0	288.5	
87.5	MODESTO	PIASA	LIMESTONE	2.0	291.5	
85.5	CARBONDALE		SHALE	9.5	293.5	LIGHT
76.0	CARBONDALE		SHALE	9.0	303.0	

67.0	CARBONDALE		SHALE	1.5	312.0	LIGHT BLUE
65.5	CARBONDALE		SANDSTONE	27.5	313.5	WITH SHALE PARTINGS
38.0	CARBONDALE		SANDY SHALE	24.0	341.0	
14.0	CARBONDALE		SANDY SHALE	23.0	365.0	
-9.0	CARBONDALE		SHALE	17.8	388.0	WITH BROWN BANDS
-26.8	CARBONDALE	HERRIN	COAL	9.5	405.8	
-36.3	CARBONDALE		CLAYSTONE	2.0	415.3	
-38.3	CARBONDALE		CONGLOMERATE	1.8	417.3	

MAPID: 05501797000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 16 **QUARTERS/FOOTAGES:** SW NW NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.992476 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.918504 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 379.0 **LOGGED (FT.):** 425.0 **LOG TYPE:** Drillers Log

SOURCE: DERING COAL CO. 98 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
379.0	PLEISTOCENE		UNCONSOLIDATED	7.0	0.0	
372.0			HARD PAN	28.0	7.0	
344.0			SAND	10.0	35.0	YELLOW
334.0			CLAY	6.0	45.0	BLUE
328.0			SAND	19.0	51.0	
309.0			SANDY SLATE	15.0	70.0	
294.0			SANDSTONE	20.0	85.0	
274.0			SANDY SLATE	40.0	105.0	
234.0			BLACK SHALE	70.0	145.0	
164.0			BLACK SHALE	7.0	215.0	
157.0			COAL	1.0	222.0	
156.0			CLAYSTONE	6.0	223.0	
150.0			BLACK SHALE	30.0	229.0	
120.0			BLACK SHALE	11.0	259.0	
109.0			LIMESTONE	3.8	270.0	
105.2			SANDSTONE	8.0	273.8	
97.2			BLACK SHALE	12.2	281.8	
85.0			LIMESTONE	8.5	294.0	
76.5			SANDSTONE	41.5	302.5	
35.0			SANDY SLATE	20.0	344.0	
15.0			BLACK SHALE	48.0	364.0	
-33.0	CARBONDALE	HERRIN	COAL	7.0	412.0	
-40.0			CLAYSTONE	6.0	419.0	

MAPID: 05502274000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 16 **QUARTERS/FOOTAGES:** 400' S line, 330' E line of SE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.985604 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.907723 **DATE COLLECTED:** 3 / 0 / 1966

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 1610.0 **LOG TYPE:** Electric Log

SOURCE: GALLAGHER, VICTOR R. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-295.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	690.0	
-375.0	SPOON	DAVIS	UNCLASSIFIED	-	770.0	
-1215.0	BASE OF PENN.		UNCLASSIFIED	-	1610.0	

MAPID: 05502318000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 17 **QUARTERS/FOOTAGES:** 1980' N line, 2310' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.010868 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.915531 **DATE COLLECTED:** 10 / 0 / 1966

SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 1560.0 **LOG TYPE:** Electric Log

SOURCE: GALLAGHER, VICTOR R. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-211.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	600.0	
-301.0	SPOON	DAVIS	UNCLASSIFIED	-	690.0	
-1171.0	BASE OF PENN.		UNCLASSIFIED	-	1560.0	

MAPID: 05502318000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 17 **QUARTERS/FOOTAGES:** 1980' N line, 2310' E line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.010868 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.915531 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 371.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
161.0	MODESTO	PIASA	LIMESTONE & SHALE	4.0	228.0	
157.0	MODESTO		DARK GRAY SHALE	4.0	232.0	
153.0	CARBONDALE	DANVILLE	COAL	2.0	236.0	
151.0	CARBONDALE		CLAYSTONE & SHALE	11.0	238.0	
140.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	3.0	249.0	
137.0	CARBONDALE	LAWSON	SILTY SHALE	8.0	252.0	
129.0	CARBONDALE	BRERETON	LIMESTONE	7.0	260.0	
122.0	CARBONDALE	ENERGY	SHALE	9.0	267.0	
113.0	CARBONDALE	ENERGY	SILTY SHALE	38.0	276.0	
75.0	CARBONDALE	ENERGY	GRAY SHALE	48.0	314.0	
27.0	CARBONDALE	HERRIN	COAL	9.0	362.0	

MAPID: 05501823000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 18 **QUARTERS/FOOTAGES:** SE NE NW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.031721 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.91818 **DATE COLLECTED:** 0 / 0 / 1931

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 422.0 **LOG TYPE:** Drillers Log

SOURCE: BELL & ZOLLER COAL & MINING 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	40.0	0.0	
-			SHALE WITH LIMESTONE	237.0	40.0	WITH LIME OR SANDSTONE
-			SANDSTONE	50.0	277.0	
-			LIMESTONE	15.0	327.0	
-			SANDSTONE	58.0	342.0	
-			SANDSTONE	22.0	400.0	
-	CARBONDALE	HERRIN	COAL	-	422.0	THICKNESS NOT GIVEN

MAPID: 05501329000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 19 **QUARTERS/FOOTAGES:** 1372' S line, 1120' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.036102 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.895309 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 393.0 **LOGGED (FT.):** 354.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
192.0	MODESTO	PIASA	LIMESTONE	4.0	201.0	
188.0	MODESTO		BLACK SHALE	5.0	205.0	
183.0	CARBONDALE	DANVILLE	COAL	2.0	210.0	
181.0	CARBONDALE		CLAYSTONE & SHALE	11.0	212.0	
170.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	8.0	223.0	
162.0	CARBONDALE	LAWSON	CLAYSTONE & SHALE	4.0	231.0	
158.0	CARBONDALE	BRERETON	LIMESTONE	7.0	235.0	
151.0	CARBONDALE	ANNA	BLACK SHALE	4.0	242.0	
147.0	CARBONDALE	ENERGY	GRAY SHALE	34.0	246.0	
113.0	CARBONDALE	ENERGY	GRAY SHALE	65.0	280.0	
48.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	9.0	345.0	

MAPID: 05501824000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 19 **QUARTERS/FOOTAGES:** SE NE NW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.031743 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.903543 **DATE COLLECTED:** 0 / 0 / 1929

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 372.0 **LOG TYPE:** Drillers Log

SOURCE: BELL & ZOLLER MINING CO 1 **WELL TYPE:** Engineering Test Holes

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	PLEISTOCENE		MUD	4.0	0.0	
-			CLAY & GRAVEL	34.0	4.0	WITH GRAVEL, YELLOW
-			BLACK SHALE	30.0	38.0	
-			BLACK SHALE	68.0	68.0	
-			SANDSTONE	14.0	136.0	
-			BLACK SHALE	5.0	150.0	
-			LIMESTONE	3.0	155.0	
-			SHALE	6.0	158.0	
-			SANDSTONE	5.0	164.0	
-			SANDSTONE	17.0	169.0	
-			BLACK SHALE	10.0	186.0	
-			LIMESTONE	6.0	196.0	
-			BLACK SHALE	16.0	202.0	
-			SANDY SHALE	17.0	218.0	
-			LIMESTONE	10.0	235.0	
-			LIMESTONE	9.0	245.0	
-			SANDSTONE	65.0	254.0	
-			SANDY SHALE	17.0	319.0	
-			SANDSTONE	20.0	336.0	
-	CARBONDALE	HERRIN	COAL	6.0	356.0	
-			CLAYSTONE	1.0	362.0	
-			UNCLASSIFIED	1.0	363.0	
-			LIMESTONE	8.0	364.0	LIGHT BROWN

MAPID: 05500174000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 20 **QUARTERS/FOOTAGES:** 2640' N line, 1320' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.01667 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.899019 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 382.0 **LOGGED (FT.):** 415.0 **LOG TYPE:**

SOURCE: BELL ZOLL 0001 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
27.0	CARBONDALE	HERRIN	COAL	9.2	355.0	
-25.0	CARBONDALE	SPRINGFIELD	COAL	3.8	407.0	

MAPID: 05500174000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 20 **QUARTERS/FOOTAGES:** 2640' N line, 1320' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.01667 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.899019 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 382.0 **LOGGED (FT.):** 364.2 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
173.0	MODESTO	PIASA	SANDSTONE	4.0	209.0	
169.0	MODESTO		DARK GRAY SHALE	2.0	213.0	
167.0	CARBONDALE	DANVILLE	COAL	1.5	215.0	
165.5	CARBONDALE		SILTSTONE	14.5	216.5	
151.0	CARBONDALE	ALLENBY	BLACK SHALE	1.0	231.0	
150.0	CARBONDALE		CLAYSTONE	2.0	232.0	
148.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	234.0	
146.0	CARBONDALE	LAWSON	SANDSTONE	11.0	236.0	
135.0	CARBONDALE	BRERETON	LIMESTONE	7.0	247.0	
128.0	CARBONDALE	ENERGY	SHALE & SANDSTONE	16.0	254.0	
112.0	CARBONDALE	ENERGY	SILTY SHALE	35.5	270.0	
76.5	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	45.0	305.5	
31.5	CARBONDALE	ENERGY	SILTY SHALE	8.5	350.5	
23.0	CARBONDALE	ENERGY	GRAY SHALE	1.2	359.0	
27.0	CARBONDALE	HERRIN	COAL	9.2	355.0	

MAPID: 05500174000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 20 **QUARTERS/FOOTAGES:** 2640' N line, 1320' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.01667 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.899019 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 382.0 **LOGGED (FT.):** 422.5 **LOG TYPE:** Drillers Log

SOURCE: ZEIGLER COAL CO. 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
382.0	PLEISTOCENE		CLAY	37.5	0.0	YELLOW
344.5	PLEISTOCENE		SAND	27.5	37.5	
317.0	PLEISTOCENE		GRAVEL	3.0	65.0	
314.0	MODESTO		SANDY SHALE	96.5	68.0	
217.5	MODESTO		BLACK SHALE	2.5	164.5	
215.0	MODESTO		SHALE	4.0	167.0	
211.0	MODESTO		LIMESTONE	0.5	171.0	
210.5	MODESTO		SHALE	1.5	171.5	
209.0	MODESTO		SANDSTONE	18.0	173.0	
191.0	MODESTO		SANDY SHALE	9.0	191.0	
182.0	MODESTO		SANDSTONE	4.0	200.0	
178.0	MODESTO		SHALE	4.5	204.0	DARK BLUE
173.5	MODESTO		COAL	0.5	208.5	
173.0	MODESTO		SANDSTONE	4.0	209.0	
169.0	MODESTO		SHALE	2.0	213.0	DARK BLUE
167.0	CARBONDALE	DANVILLE	COAL	1.5	215.0	
165.5	CARBONDALE		SHALE	0.5	216.5	LIGHT BLUE
165.0	CARBONDALE		SANDY SHALE	7.0	217.0	
158.0	CARBONDALE		SANDY SHALE	2.0	224.0	WITH SANDSTONE
156.0	CARBONDALE		SANDSTONE	1.0	226.0	
155.0	CARBONDALE		SANDY SHALE	2.5	227.0	WITH SANDSTONE
152.5	CARBONDALE		SHALE	1.5	229.5	
151.0	CARBONDALE		SHALE	1.0	231.0	
150.0	CARBONDALE		SHALE	2.0	232.0	
148.0	CARBONDALE		LIMESTONE	2.0	234.0	
146.0	CARBONDALE		SANDSTONE	11.0	236.0	
135.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	247.0	
128.0	CARBONDALE		SANDY SHALE	9.0	254.0	
119.0	CARBONDALE		SANDSTONE	9.0	263.0	WITH SHALE PARTINGS
110.0	CARBONDALE		SANDY SHALE	19.5	272.0	WITH SANDSTONE
90.5	CARBONDALE		SANDY SHALE	16.0	291.5	WITH SANDSTONE PARTINGS
74.5	CARBONDALE		SANDSTONE	21.0	307.5	WITH SHALE PARTINGS
53.5	CARBONDALE		SANDSTONE	1.5	328.5	
52.0	CARBONDALE		SANDSTONE	4.5	330.0	WITH SHALE PARTINGS
47.5	CARBONDALE		SANDSTONE	18.0	334.5	WITH SHALE PARTINGS
29.5	CARBONDALE		SANDY SHALE	8.5	352.5	
21.0	CARBONDALE		BLACK SHALE	1.2	361.0	
19.8	CARBONDALE	HERRIN	COAL	9.2	362.2	

10.7	CARBONDALE		SHALE	1.7	371.3
9.0	CARBONDALE		SANDSTONE	5.2	373.0
3.8	CARBONDALE		CONGLOMERATE	0.3	378.2
3.5	CARBONDALE		CONGLOMERATE & LIMESTONE	6.0	378.5
-2.5	CARBONDALE		CONGLOMERATE	1.5	384.5
-4.0	CARBONDALE		LIMESTONE	2.5	386.0
-6.5	CARBONDALE		CONGLOMERATE	2.0	388.5
-8.5	CARBONDALE		SANDSTONE	3.0	390.5
-11.5	CARBONDALE		BLACK SHALE	8.0	393.5
-19.5	CARBONDALE		SANDSTONE	1.0	401.5
-20.5	CARBONDALE		SHALE	12.0	402.5
-32.5	CARBONDALE	SPRINGFIELD	COAL	3.8	414.5
-36.3	CARBONDALE		SHALE	3.8	418.3
-40.2	CARBONDALE		LIMESTONE	0.3	422.2

MAPID: 05502323000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 20 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NE NW

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.015518 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.9035 **DATE COLLECTED:** 10 / 0 / 1966

SURFACE ELEVATION (FT.): 372.0 **LOGGED (FT.):** 1630.0 **LOG TYPE:** Electric Log

SOURCE: GALLAGHER, VICTOR R. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-208.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	580.0	
-298.0	SPOON	DAVIS	UNCLASSIFIED	-	670.0	
-1258.0	BASE OF PENN.		UNCLASSIFIED	-	1630.0	

MAPID: 05500175000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 21 **QUARTERS/FOOTAGES:** 2596' S line, 77' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.0025 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.898599 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 397.0 **LOG TYPE:**

SOURCE: VALIER CC 0011 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
8.0	CARBONDALE	HERRIN	COAL	9.3	387.0	

MAPID: 05500175000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 21 **QUARTERS/FOOTAGES:** 2596' S line, 77' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.0025 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.898599 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 396.3 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
153.0	MODESTO	PIASA	LIMESTONE	2.0	242.0	
151.0	MODESTO		SHALE	2.5	244.0	
148.5	CARBONDALE	DANVILLE	COAL	0.8	246.5	
147.7	CARBONDALE		SHALE & SANDSTONE	5.2	247.3	
142.6	CARBONDALE	ALLENBY	COAL	0.3	252.4	
142.2	CARBONDALE		SHALE	9.3	252.8	
133.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	262.0	
128.5	CARBONDALE	LAWSON	SILTY SHALE	13.0	266.5	
115.5	CARBONDALE	BRERETON	LIMESTONE	4.0	279.5	
111.5	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	6.0	283.5	
105.5	CARBONDALE	ENERGY	SILTY SHALE	4.0	289.5	
101.5	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	10.0	293.5	
91.5	CARBONDALE	ENERGY	SILTY SHALE	83.8	303.5	
8.0	CARBONDALE	HERRIN	COAL	9.3	387.0	

MAPID: 05500175000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 21 **QUARTERS/FOOTAGES:** 2596' S line, 77' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.0025 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.898599 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 397.0 **LOG TYPE:** Drillers Log

SOURCE: VALIER COAL CO. 11 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
395.0	PLEISTOCENE		CLAY	16.0	0.0	
379.0	PLEISTOCENE		SAND	2.0	16.0	
377.0	PLEISTOCENE		CLAY	8.0	18.0	
369.0	PLEISTOCENE		CLAY	39.0	26.0	
330.0	MODESTO		SHALE	1.0	65.0	
329.0	MODESTO		SANDY SHALE	36.0	66.0	
293.0	MODESTO		SANDY SHALE	47.0	102.0	SANDY WITH SANDSTONE
246.0	MODESTO		SHALE	17.0	149.0	WITH SHALE PARTINGS
229.0	MODESTO		SHALE	1.0	166.0	
228.0	MODESTO		SHALE	3.0	167.0	DARK BLUE
225.0	MODESTO		SOFT SHALE	1.0	170.0	
224.0	MODESTO		LIMESTONE	1.0	171.0	
223.0	MODESTO		SANDSTONE	9.0	172.0	WITH SHALE PARTINGS
214.0	MODESTO		SANDY SHALE	6.0	181.0	WITH SANDSTONE BANDS
208.0	MODESTO		SHALE	5.0	187.0	
203.0	MODESTO		COAL	0.5	192.0	
202.5	MODESTO		CLAYSTONE	1.5	192.5	
201.0	MODESTO		SOFT SHALE	3.0	194.0	
198.0	MODESTO		SANDSTONE	13.0	197.0	
185.0	MODESTO		SANDY SHALE	9.0	210.0	WITH SANDSTONE PARTINGS
176.0	MODESTO		SHALE	15.4	219.0	
160.6	MODESTO	DEGRAFF	COAL	0.2	234.4	
160.4	MODESTO		SOFT SHALE	4.3	234.6	
156.2	MODESTO	PIASA	LIMESTONE	1.7	238.8	
154.5	MODESTO	PIASA	SHALE	1.0	240.5	
153.5	MODESTO	PIASA	LIMESTONE	0.5	241.5	
153.0	MODESTO	PIASA	LIMESTONE	1.5	242.0	
151.5	MODESTO		SHALE	2.5	243.5	
149.0	CARBONDALE	DANVILLE	COAL	0.8	246.0	
148.2	CARBONDALE		SANDY SHALE	3.0	246.8	
145.2	CARBONDALE		SANDSTONE	1.5	249.8	
143.7	CARBONDALE		SHALE	0.7	251.3	
143.1	CARBONDALE	ALLENBY	COAL	0.3	251.9	
142.7	CARBONDALE		SHALE	9.3	252.3	
133.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	261.5	
130.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	265.0	
129.0	CARBONDALE		SANDY SHALE	13.0	266.0	WITH SANDSTONE PARTINGS
116.0	CARBONDALE	BRERETON	LIMESTONE	4.0	279.0	

112.0	CARBONDALE	ENERGY	SANDSTONE	6.0	283.0	WITH SHALE PARTINGS
106.0	CARBONDALE	ENERGY	SANDY SHALE	4.0	289.0	WITH SANDSTONE PARTINGS
102.0	CARBONDALE	ENERGY	SANDSTONE	10.0	293.0	WITH SHALE PARTINGS
92.0	CARBONDALE	ENERGY	SANDY SHALE	18.0	303.0	WITH SANDSTONE PARTINGS
74.0	CARBONDALE	ENERGY	SANDY SHALE	37.0	321.0	SANDY WITH SANDSTONE
37.0	CARBONDALE	ENERGY	SANDY SHALE	28.8	358.0	
8.2	CARBONDALE	HERRIN	COAL	0.3	386.8	
8.0	CARBONDALE	HERRIN	COAL	0.3	387.0	
7.7	CARBONDALE	HERRIN	COAL	8.8	387.3	
-1.0	CARBONDALE		CLAYSTONE	1.0	396.0	

MAPID: 05502436000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 21 **QUARTERS/FOOTAGES:** NE NW SE SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.996343 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.894699 **DATE COLLECTED:** 7 / 26 / 1967

SURFACE ELEVATION (FT.): 401.0 **LOGGED (FT.):** 450.0 **LOG TYPE:** Drillers Log

SOURCE: VICTOR R. GALLAGHER 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT: ABNDNED & PLGGD 1967 COVERED W/CEMENT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-44.0	CARBONDALE	SPRINGFIELD	COAL	5.0	445.0	

MAPID: 05500659000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 23 **QUARTERS/FOOTAGES:** 331' N line, 347' E line of NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.948473 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.905671 **DATE COLLECTED:** 2 / 0 / 1943

SURFACE ELEVATION (FT.): 402.0 **LOGGED (FT.):** 1800.0 **LOG TYPE:** Electric Log

SOURCE: SMOKEY OIL CO. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-328.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	730.0	
-398.0	SPOON	DAVIS	UNCLASSIFIED	-	800.0	
-1398.0	BASE OF PENN.		UNCLASSIFIED	-	1800.0	

MAPID: 05500959000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 23 **QUARTERS/FOOTAGES:** 278' S line, 1656' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.952857 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.8923 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 424.0 **LOGGED (FT.):** 518.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
50.0	MODESTO	PIASA	LIMESTONE	6.0	374.0	
44.0	MODESTO		BLACK SHALE	3.0	380.0	
41.0	CARBONDALE	DANVILLE	COAL	1.0	383.0	
40.0	CARBONDALE		CALCAREOUS SHALE	6.0	384.0	
34.0	CARBONDALE	ENERGY	SILTY SHALE	34.0	390.0	
0.0	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	16.0	424.0	
-16.0	CARBONDALE	ENERGY	SILTY SHALE	67.0	440.0	
-84.0	CARBONDALE	HERRIN	COAL	10.0	508.0	

MAPID: 05500268000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 24 **QUARTERS/FOOTAGES:** SE NE SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.938937 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.896249 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 405.7 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: SOU ILL CC0021 **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-39.3	CARBONDALE	HERRIN	COAL	9.0	445.0	

MAPID: 05501641000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 24 **QUARTERS/FOOTAGES:** 369' S line, 149' E line of NE SE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.92891 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.896346 **DATE COLLECTED:** 11 / 0 / 1960

SURFACE ELEVATION (FT.): 410.0 **LOGGED (FT.):** 1700.0 **LOG TYPE:** Electric Log

SOURCE: ADKINS, RALPH M. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-295.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	705.0	
-365.0	SPOON	DAVIS	UNCLASSIFIED	-	775.0	
-1290.0	BASE OF PENN.		UNCLASSIFIED	-	1700.0	

MAPID: 05501825000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 24 **QUARTERS/FOOTAGES:**

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.937787 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.899012 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 408.8 **LOG TYPE:** Drillers Log

SOURCE: T. HORN **WELL TYPE:** Unsuccessful or Unknown Results

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
407.0	PLEISTOCENE		CLAY	27.0	0.0	YELLOW
380.0	PLEISTOCENE		SAND	10.0	27.0	YELLOW
370.0	PLEISTOCENE		SANDY CLAY	23.0	37.0	YELLOW
347.0	PLEISTOCENE		CLAYSTONE	3.0	60.0	
344.0	PLEISTOCENE		SAND	7.0	63.0	
337.0	PLEISTOCENE		SANDSTONE	5.0	70.0	WITH CLAY
332.0	PLEISTOCENE		CLAY	6.0	75.0	BLUE
326.0	MODESTO		SANDSTONE	20.0	81.0	
306.0	MODESTO		SHALE	17.0	101.0	
289.0	MODESTO		BLACK SHALE	7.0	118.0	
282.0	MODESTO		CLAYSTONE	6.0	125.0	WITH LIMESTONE PEBBLES
276.0	MODESTO		SANDY SHALE	11.0	131.0	WITH LIGHT SAND PARTINGS
265.0	MODESTO		SHALE	11.5	142.0	
253.5	MODESTO		BLACK SHALE	11.5	153.5	
242.0	MODESTO		CLAYSTONE	0.8	165.0	
241.2	MODESTO		SANDSTONE	1.0	165.8	LIGHT
240.2	MODESTO		SANDY SHALE	20.0	166.8	
220.2	MODESTO		SHALE	6.0	186.8	
214.2	MODESTO		BLACK SHALE	4.0	192.8	
210.2	MODESTO		SHALE	2.0	196.8	
208.2	MODESTO		COAL	1.0	198.8	
207.2	MODESTO		CLAYSTONE	2.5	199.8	
204.7	MODESTO		LIMESTONE	0.5	202.3	
204.2	MODESTO		CLAYSTONE	2.0	202.8	DARK
202.2	MODESTO		SANDY LIMESTONE	8.0	204.8	
194.2	MODESTO		LIMESTONE	1.0	212.8	DARK GRAY
193.2	MODESTO		SANDY LIMESTONE	3.0	213.8	
190.2	MODESTO		SANDY SHALE	14.0	216.8	WITH BROWN LIME PARTINGS
176.2	MODESTO		SHALE WITH LIMESTONE	5.3	230.8	WITH LIME PARTINGS
171.0	MODESTO		BLACK SHALE	0.8	236.0	
170.2	MODESTO		COAL	0.3	236.8	
170.0	MODESTO		CLAYSTONE	1.0	237.0	
169.0	MODESTO		LIMESTONE	3.0	238.0	
166.0	MODESTO		SHALE	1.0	241.0	
165.0	MODESTO		BLACK SHALE	1.5	242.0	
163.5	MODESTO		BLACK SHALE	1.0	243.5	
162.5	MODESTO		BLACK SHALE	1.5	244.5	
161.0	MODESTO		COAL	3.0	246.0	
158.0	MODESTO		CLAYSTONE	1.5	249.0	

156.5	MODESTO		VARRIGATED SHALE	2.5	250.5	
154.0	MODESTO		SANDY SHALE	5.0	253.0	WITH LIGHT SAND PARTINGS
149.0	MODESTO		SANDY SHALE	2.0	258.0	SAND WITH LIMESTONE
147.0	MODESTO		SHALE	3.0	260.0	
144.0	MODESTO		BLACK SHALE	0.3	263.0	
143.7	MODESTO		CLAYSTONE	0.5	263.3	
143.2	MODESTO		SHALE	5.3	263.8	
138.0	MODESTO		LIMESTONE	3.5	269.0	
134.5	MODESTO		CLAYSTONE	0.5	272.5	WITH LIMESTONE, DARK
134.0	MODESTO		SANDY LIMESTONE	5.0	273.0	LIGHT
129.0	MODESTO		SANDY SHALE	17.0	278.0	
112.0	CARBONDALE		BLACK SHALE	1.0	295.0	#7 HORIZON?
111.0	CARBONDALE		SANDY SHALE	4.0	296.0	
107.0	CARBONDALE		SANDY SHALE	27.5	300.0	
79.5	CARBONDALE		SANDY SHALE	21.5	327.5	WITH BROWN PARTINGS
58.0	CARBONDALE		SANDY SHALE	8.8	349.0	
49.2	CARBONDALE		CLAYSTONE	1.5	357.8	DARK
47.7	CARBONDALE	BANKSTON FORK	LIMESTONE	10.3	359.3	
37.5	CARBONDALE		SANDY SHALE	7.8	369.5	SAND WITH LIMESTONE
29.7	CARBONDALE		SANDSTONE	3.0	377.3	LIGHT
26.7	CARBONDALE		SANDY SHALE	11.0	380.3	SAND WITH LIMESTONE
15.7	CARBONDALE	BRERETON	LIMESTONE	1.0	391.3	
14.7	CARBONDALE	BRERETON	BLACK SHALE	3.0	392.3	
11.7	CARBONDALE	BRERETON	CONGLOMERATE & LIMESTONE	1.0	395.3	
10.7	CARBONDALE		SANDY SHALE	5.0	396.3	
5.7	CARBONDALE	HERRIN	COAL	4.5	401.3	
1.2	CARBONDALE		CLAYSTONE	3.0	405.8	

MAPID: 05501929000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 24 **QUARTERS/FOOTAGES:** 1159' N line, 2621' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.938099 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.903188 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 388.0 **LOGGED (FT.):** 462.5 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
58.9	MODESTO	PIASA	LIMESTONE	3.2	329.1	
55.7	MODESTO		BLACK SHALE	3.9	332.3	
51.8	CARBONDALE	DANVILLE	COAL	1.8	336.2	
50.0	CARBONDALE		SANDSTONE/SILTSTONE	8.5	338.0	
41.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	346.5	
38.0	CARBONDALE	LAWSON	SILTY SHALE	6.0	350.0	
32.0	CARBONDALE	JAMESTOWN	BONE COAL	0.5	356.0	
31.5	CARBONDALE		CLAYSTONE & SHALE	4.0	356.5	
27.5	CARBONDALE	BRERETON	LIMESTONE	4.5	360.5	
23.0	CARBONDALE	ENERGY	SILTY SHALE	25.0	365.0	
-2.0	CARBONDALE	ENERGY	DARK GRAY SHALE	5.0	390.0	
-7.0	CARBONDALE	ENERGY	SILTY SHALE	5.0	395.0	
-12.0	CARBONDALE	ENERGY	GRAY SHALE	52.0	400.0	
-64.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	10.5	452.0	

MAPID: 05500178000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 25 **QUARTERS/FOOTAGES:** SE NW SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.943483 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.88146 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 394.0 **LOGGED (FT.):** 431.8 **LOG TYPE:** Drillers Log

SOURCE: C. B. & Q. **WELL TYPE:** Coal Test

COMMENT: NO LOG/MINED OUT AREA

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-37.0	CARBONDALE	HERRIN	COAL	9.0	431.0	

MAPID: 05500178000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 25 **QUARTERS/FOOTAGES:** SE NW SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.943483 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.88146 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 394.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**

SOURCE: OLD BEN COAL CO. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-37.0	CARBONDALE	HERRIN	COAL	9.0	431.0	

MAPID: 05500179000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 25 **QUARTERS/FOOTAGES:** 660' N line, 660' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.930741 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.889867 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 401.0 **LOGGED (FT.):** 449.5 **LOG TYPE:** Drillers Log

SOURCE: WILMINGTON STAR COAL CO. 1 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
89.2	MODESTO	PIASA	LIMESTONE	4.5	311.8	
84.7	CARBONDALE	DANVILLE	COAL	1.5	316.3	
83.2	CARBONDALE		CLAYSTONE & SHALE	21.5	317.8	
61.7	CARBONDALE	ALLENBY	CARBONACEOUS SHALE	2.5	339.3	
59.2	CARBONDALE		CLAYSTONE	4.0	341.8	
55.2	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	345.8	
49.7	CARBONDALE	ENERGY	SILTY SHALE	89.8	351.3	
-40.0	CARBONDALE	HERRIN	COAL	8.5	441.0	

MAPID: 05500269000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 25 **QUARTERS/FOOTAGES:** NE NE NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.929623 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.890765 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 401.6 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: OLD BEN 0008 **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-40.4	CARBONDALE	HERRIN	COAL	9.0	442.0	

MAPID: 05500671000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 25 **QUARTERS/FOOTAGES:** 309' S line, 341' E line of NE
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.929546 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.885088 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 397.0 **LOGGED (FT.):** 2834.0 **LOG TYPE:** Electric Log
SOURCE: ADKINS, E. S. **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-21.0	CARBONDALE	HERRIN	COAL	8.0	418.0	
-67.0	CARBONDALE	SPRINGFIELD	COAL	5.0	464.0	BLACK SHALE & LIMESTONE ROOF
-147.0	CARBONDALE	HOUCHIN CREEK	COAL	-	544.0	

MAPID: 05500671000C **VERSION:** 2 **PROJECT:** CONTROL

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 25 **QUARTERS/FOOTAGES:** 309' S line, 341' E line of NE
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.929546 **GEOLOGIST:** HINES
CONFIDENTIAL: N **LATITUDE:** 37.885088 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 2834.0 **LOG TYPE:** Survey Sample Study
SOURCE: ADKINS, E. S. **WELL TYPE:** Oil and Gas Test
COMMENT: OILWELLS LOGGED BY COAL SECT-LOGS IN GRU

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-			NO RECORD	0.0	0.0	

MAPID: 05500932000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 25 **QUARTERS/FOOTAGES:** 410' N line, 330' E line of SE NE
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.929539 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.886833 **DATE COLLECTED:** 1 / 0 / 1949
SURFACE ELEVATION (FT.): 394.0 **LOGGED (FT.):** 1625.0 **LOG TYPE:** Electric Log
SOURCE: HOWELL J V ETAL **WELL TYPE:** Dry Hole
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-271.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	665.0	
-346.0	SPOON	DAVIS	UNCLASSIFIED	-	740.0	
-1231.0	BASE OF PENN.		UNCLASSIFIED	-	1625.0	

MAPID: 05501832000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 25 **QUARTERS/FOOTAGES:** 330' N line, 450' E line of NW SE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.934566 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.883319 **DATE COLLECTED:** 10 / 0 / 1952

SURFACE ELEVATION (FT.): 402.0 **LOGGED (FT.):** 1652.0 **LOG TYPE:** Electric Log

SOURCE: BARTMES, ROSS **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-248.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	650.0	
-323.0	SPOON	DAVIS	UNCLASSIFIED	-	725.0	
-1250.0	BASE OF PENN.		UNCLASSIFIED	-	1652.0	

MAPID: 05501835000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 25 **QUARTERS/FOOTAGES:** NW NE NE NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.930212 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.891226 **DATE COLLECTED:** 9 / 0 / 1947

SURFACE ELEVATION (FT.): 408.0 **LOGGED (FT.):** 950.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. 1-A **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
408.0	PLEISTOCENE		UNCONSOLIDATED	74.0	0.0	
334.0			SANDY SHALE	61.0	74.0	SANDY WITH SHELLS
273.0			SANDY SHALE	60.0	135.0	
213.0			SANDY SHALE	125.0	195.0	
88.0			LIMESTONE	5.0	320.0	
83.0			SANDY SHALE	25.0	325.0	
58.0			SANDY SHALE	45.0	350.0	SANDY WITH LIMESTONE
13.0			SANDSTONE/SHALE	57.0	395.0	
-44.0	CARBONDALE	HERRIN	COAL	9.0	452.0	
-53.0			LIMESTONE W/ SHALE	25.0	461.0	WITH SHALE
-78.0			SHALE	18.0	486.0	
-96.0	CARBONDALE	SPRINGFIELD	COAL	4.0	504.0	
-100.0			SHALE WITH LIMESTONE	50.0	508.0	WITH LIMESTONE
-150.0			SANDY SHALE	72.0	558.0	
-222.0			SANDSTONE	65.0	630.0	
-287.0			SANDSTONE	15.0	695.0	WITH SHALE
-302.0			SANDY SHALE	165.0	710.0	WITH SAND
-467.0			SANDY SHALE	75.0	875.0	

MAPID: 05501326000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 26 **QUARTERS/FOOTAGES:** 1530' S line, 450' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.94855 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.881093 **DATE COLLECTED:** 10 / 0 / 1949

SURFACE ELEVATION (FT.): 472.0 **LOGGED (FT.):** 1660.0 **LOG TYPE:** Electric Log

SOURCE: LEWIS, WILL I. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-318.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	790.0	
-388.0	SPOON	DAVIS	UNCLASSIFIED	-	860.0	
-1188.0	BASE OF PENN.		UNCLASSIFIED	-	1660.0	

MAPID: 05501326000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 26 **QUARTERS/FOOTAGES:** 1530' S line, 450' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.94855 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.881093 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 472.0 **LOGGED (FT.):** 542.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
76.0	MODESTO	PIASA	LIMESTONE	4.0	396.0	
72.0	MODESTO		BLACK SHALE	6.0	400.0	
66.0	CARBONDALE	DANVILLE	COAL	1.5	406.0	
64.5	CARBONDALE	ENERGY	CALCAREOUS SHALE	6.5	407.5	
58.0	CARBONDALE	ENERGY	CLAYSTONE & SHALE	6.0	414.0	
52.0	CARBONDALE	ENERGY	SHALE	16.0	420.0	
36.0	CARBONDALE	ENERGY	SANDSTONE	52.0	436.0	
-16.0	CARBONDALE	ENERGY	SILTY SHALE	46.0	488.0	
-62.0	CARBONDALE	HERRIN	COAL WITH SHALE PARTINGS	8.0	534.0	

MAPID: 05525030000C **VERSION:** 1 **PROJECT:** NCRDS 2011

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 26 **QUARTERS/FOOTAGES:** 2103' N line, 2237' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.954774 **GEOLOGIST:** LOUCHIOS

CONFIDENTIAL: N **LATITUDE:** 37.885744 **DATE COLLECTED:** 4 / 6 / 1943

SURFACE ELEVATION (FT.): 449.0 **LOGGED (FT.):** 523.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 2 **WELL TYPE:** Coal Test

COMMENT: LISTS (D.H. #9) ALSO

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
449.0	PLEISTOCENE		UNCONSOLIDATED	18.0	0.0	
431.0	PLEISTOCENE		SAND	12.0	18.0	
419.0	PLEISTOCENE		CLAY	20.0	30.0	
399.0	PLEISTOCENE		SAND	8.0	50.0	
391.0	PLEISTOCENE		UNCONSOLIDATED	59.0	58.0	GUMBO
332.0	PLEISTOCENE		SAND & GRAVEL	39.0	117.0	
293.0	SHELBURN		SANDSTONE	4.0	156.0	
289.0	SHELBURN		LIMESTONE	4.0	160.0	
285.0	SHELBURN		BLACK SHALE	3.0	164.0	
282.0	SHELBURN		GRAY SHALE	9.0	167.0	
273.0	SHELBURN		GRAY SHALE	3.0	176.0	2" COAL
270.0	SHELBURN		GRAY SHALE	24.0	179.0	
246.0	SHELBURN		LIMESTONE	5.0	203.0	
241.0	SHELBURN		GRAY SHALE	117.0	208.0	
124.0	SHELBURN		BLACK SHALE	10.0	325.0	
114.0	SHELBURN		GRAY SHALE	10.0	335.0	
104.0	SHELBURN		SANDSTONE	3.0	345.0	
101.0	SHELBURN		GRAY SHALE	28.0	348.0	
73.0	SHELBURN	PIASA	LIMESTONE	3.0	376.0	LISTED AS CUTLER LS
70.0	SHELBURN		GRAY SHALE	3.0	379.0	
67.0	SHELBURN	DANVILLE	COAL	2.0	382.0	STATES NO. 8 COAL BUT NOT LIKELY
65.0	SHELBURN		GRAY SHALE	17.0	384.0	
48.0	SHELBURN	BANKSTON FORK	LIMESTONE	4.0	401.0	
44.0	CARBONDALE	ENERGY	GRAY SHALE	114.0	405.0	
-70.0	CARBONDALE	HERRIN	COAL	4.0	519.0	DRILLED 4' IN COAL

MAPID: 05500180000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 27 **QUARTERS/FOOTAGES:** 2640' N line, 2640' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.97456 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.884125 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 392.0 **LOGGED (FT.):** 398.0 **LOG TYPE:**

SOURCE: CBQ RR 0006 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
4.0	CARBONDALE	HERRIN	COAL	8.8	388.0	

MAPID: 05500180000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 27 **QUARTERS/FOOTAGES:** 2640' N line, 2640' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.97456 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.884125 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 392.0 **LOGGED (FT.):** 396.8 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
143.0	MODESTO	PIASA	LIMESTONE & SHALE	4.5	249.0	
138.5	MODESTO		GRAY SHALE	2.2	253.5	
136.3	CARBONDALE	DANVILLE	COAL	2.0	255.7	
134.3	CARBONDALE		SHALE	8.5	257.7	
125.8	CARBONDALE	ALLENBY	COAL	0.3	266.2	
125.5	CARBONDALE		CLAYSTONE & SHALE	4.5	266.5	
121.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	271.0	
117.0	CARBONDALE	ENERGY	SILTY SHALE	9.0	275.0	
108.0	CARBONDALE	ENERGY	SANDSTONE	1.0	284.0	
107.0	CARBONDALE	ENERGY	SILTY SHALE	4.0	285.0	
103.0	CARBONDALE	ENERGY	SILTY SHALE	99.0	289.0	
4.0	CARBONDALE	HERRIN	COAL	8.8	388.0	

MAPID: 05500180000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 27 **QUARTERS/FOOTAGES:** 2640' N line, 2640' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.97456 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.884125 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 392.0 **LOGGED (FT.):** 398.0 **LOG TYPE:** Drillers Log

SOURCE: C.B. & Q. RR 6 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
392.0	PLEISTOCENE		CLAY	23.0	0.0	
369.0	PLEISTOCENE		SAND	2.0	23.0	
367.0	PLEISTOCENE		CLAY & GRAVEL	3.0	25.0	
364.0	PLEISTOCENE		CLAY	1.0	28.0	CLAY AND SHALE, SOFT
363.0	PLEISTOCENE		CLAY	34.0	29.0	
329.0	PLEISTOCENE		SAND	8.0	63.0	
321.0	PLEISTOCENE		SANDY CLAY	9.0	71.0	
312.0	MODESTO		SANDY SHALE	1.0	80.0	
311.0	MODESTO		SOFT SHALE	9.0	81.0	
302.0	MODESTO		SANDY SHALE	5.0	90.0	
297.0	MODESTO		SHALE	15.0	95.0	
282.0	MODESTO		SANDY SHALE	28.0	110.0	SANDY WITH SANDSTONE
254.0	MODESTO		SANDY SHALE	36.0	138.0	WITH SANDSTONE PARTINGS
218.0	MODESTO		SHALE	5.0	174.0	
213.0	MODESTO		SHALE	0.8	179.0	
212.2	MODESTO		SOFT SHALE	0.8	179.8	
211.4	MODESTO		SANDSTONE	9.4	180.6	
202.0	MODESTO		SANDSTONE	4.0	190.0	WITH SHALE PARTINGS
198.0	MODESTO		SHALE & SANDSTONE	6.0	194.0	
192.0	MODESTO		SHALE	8.0	200.0	
184.0	MODESTO		COAL	1.0	208.0	
183.0	MODESTO		CLAYSTONE	5.0	209.0	
178.0	MODESTO		SOFT SHALE	1.0	214.0	
177.0	MODESTO		SANDSTONE	6.0	215.0	
171.0	MODESTO		SANDY SHALE	12.0	221.0	WITH SANDSTONE PARTINGS
159.0	MODESTO		LIMESTONE	0.5	233.0	
158.5	MODESTO		SANDY SHALE	2.0	233.5	
156.5	MODESTO		SHALE	5.5	235.5	
151.0	MODESTO		SHALE	6.0	241.0	
145.0	MODESTO		SHALE	2.0	247.0	DARK BLUE
143.0	MODESTO		CALCAREOUS SHALE	1.0	249.0	
142.0	MODESTO	PIASA	LIMESTONE	3.0	250.0	
139.0	MODESTO		CALCAREOUS SHALE	0.5	253.0	
138.5	MODESTO		SHALE	2.2	253.5	
136.3	CARBONDALE	DANVILLE	COAL	2.0	255.7	
134.3	CARBONDALE		CLAYSTONE	0.3	257.7	
134.0	CARBONDALE		SANDY SHALE	5.0	258.0	
129.0	CARBONDALE		SHALE	3.0	263.0	LIGHT
126.0	CARBONDALE		SHALE	0.2	266.0	DARK BLUE

125.8	CARBONDALE	ALLENBY	COAL	0.3	266.2	
125.5	CARBONDALE		SOFT SHALE	4.5	266.5	
121.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	271.0	
117.0	CARBONDALE		SANDY SHALE	9.0	275.0	SANDY WITH SANDSTONE
108.0	CARBONDALE		SANDSTONE	1.0	284.0	
107.0	CARBONDALE	ENERGY	SANDY SHALE	21.0	285.0	SANDY WITH SANDSTONE
86.0	CARBONDALE	ENERGY	SANDY SHALE	5.0	306.0	
81.0	CARBONDALE	ENERGY	SANDY SHALE	29.0	311.0	
52.0	CARBONDALE	ENERGY	SANDY SHALE	32.0	340.0	
20.0	CARBONDALE	ENERGY	SANDY SHALE	16.0	372.0	
4.0	CARBONDALE	HERRIN	COAL	3.3	388.0	
0.7	CARBONDALE	HERRIN	COAL	5.5	391.3	
-4.8	CARBONDALE		CLAYSTONE	1.3	396.8	

MAPID: 05502282000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 27 **QUARTERS/FOOTAGES:** 625' S line, 330' W line of NW NW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.982903 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.889455 **DATE COLLECTED:** 5 / 0 / 1966

SURFACE ELEVATION (FT.): 392.5 **LOGGED (FT.):** 1590.0 **LOG TYPE:** Electric Log

SOURCE: GALLAGHER, VICTOR R. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-247.5	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	640.0	
-317.5	SPOON	DAVIS	UNCLASSIFIED	-	710.0	
-1197.5	BASE OF PENN.		UNCLASSIFIED	-	1590.0	

MAPID: 05500181000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 28 **QUARTERS/FOOTAGES:** 330' N line, 2310' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.994642 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.890496 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 420.0 **LOGGED (FT.):** 425.3 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 5 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
146.0	MODESTO	PIASA	LIMESTONE	3.0	274.0	
143.0	MODESTO		DARK GRAY SHALE	3.8	277.0	
139.2	CARBONDALE	DANVILLE	COAL	1.8	280.8	
137.3	CARBONDALE		CALCAREOUS SHALE	10.3	282.7	
127.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	293.0	
126.0	CARBONDALE	LAWSON	CALCAREOUS SHALE	3.0	294.0	
123.0	CARBONDALE	BRERETON	LIMESTONE	2.0	297.0	
121.0	CARBONDALE	ENERGY	SILTY SHALE	34.0	299.0	
87.0	CARBONDALE	ENERGY	SANDSTONE	20.0	333.0	
67.0	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	43.0	353.0	
24.0	CARBONDALE	ENERGY	SILTY SHALE	20.2	396.0	
4.0	CARBONDALE	HERRIN	COAL	9.3	416.0	

MAPID: 05502297000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 28 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NW SE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.992135 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.881314 **DATE COLLECTED:** 7 / 0 / 1966

SURFACE ELEVATION (FT.): 419.0 **LOGGED (FT.):** 1520.0 **LOG TYPE:** Electric Log

SOURCE: GALLAGHER, VICTOR R. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-231.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	650.0	
-311.0	SPOON	DAVIS	UNCLASSIFIED	-	730.0	
-1101.0	BASE OF PENN.		UNCLASSIFIED	-	1520.0	

MAPID: 05500183000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 29 **QUARTERS/FOOTAGES:** 2640' N line, 1320' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.016707 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.884136 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 420.0 **LOGGED (FT.):** 412.8 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
172.0	MODESTO	PIASA	LIMESTONE & SHALE	6.0	248.0	
166.0	MODESTO		GRAY SHALE	2.0	254.0	
164.0	CARBONDALE	DANVILLE	COAL	2.2	256.0	
161.8	CARBONDALE		SILTY SHALE	7.8	258.2	
154.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	266.0	
151.0	CARBONDALE		CALCAREOUS SHALE	15.0	269.0	
136.0	CARBONDALE	BRERETON	LIMESTONE	6.0	284.0	
130.0	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	38.0	290.0	
92.0	CARBONDALE	ENERGY	SILTY SHALE	76.3	328.0	
16.0	CARBONDALE	HERRIN	COAL	8.8	404.0	

MAPID: 05502278000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 29 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of SW NE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.008458 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.886834 **DATE COLLECTED:** 4 / 0 / 1966

SURFACE ELEVATION (FT.): 425.0 **LOGGED (FT.):** 1556.0 **LOG TYPE:** Electric Log

SOURCE: GALLAGHER, VICTOR R. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-217.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	642.0	
-299.0	SPOON	DAVIS	UNCLASSIFIED	-	724.0	
-1131.0	BASE OF PENN.		UNCLASSIFIED	-	1556.0	

MAPID: 05502588000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 30 **QUARTERS/FOOTAGES:** 2385' N line, 330' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.038855 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.884954 **DATE COLLECTED:** 6 / 0 / 1970

SURFACE ELEVATION (FT.): 383.0 **LOGGED (FT.):** 1620.0 **LOG TYPE:** Electric Log

SOURCE: GALLAGHER, VICTOR R. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-177.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	560.0	
-262.0	SPOON	DAVIS	UNCLASSIFIED	-	645.0	
-1237.0	BASE OF PENN.		UNCLASSIFIED	-	1620.0	

MAPID: 05502588000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 30 **QUARTERS/FOOTAGES:** 2385' N line, 330' W line

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.038855 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.884954 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 383.0 **LOGGED (FT.):** 338.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
191.0	MODESTO	PIASA	CALCAREOUS SHALE	4.0	192.0	
187.0	MODESTO		DARK GRAY SHALE	4.0	196.0	
183.0	CARBONDALE	DANVILLE	COAL	2.0	200.0	
181.0	CARBONDALE		SILTY SHALE	8.0	202.0	
173.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	4.0	210.0	
169.0	CARBONDALE	LAWSON	SHALE	12.0	214.0	
157.0	CARBONDALE	BRERETON	LIMESTONE	5.0	226.0	
152.0	CARBONDALE	ENERGY	SILTY SHALE	29.0	231.0	
123.0	CARBONDALE	ENERGY	SHALE	23.0	260.0	
100.0	CARBONDALE	ENERGY	CALCAREOUS SHALE	7.0	283.0	
93.0	CARBONDALE	ENERGY	GRAY SHALE	40.0	290.0	
53.0	CARBONDALE	HERRIN	COAL	8.0	330.0	

MAPID: 05500184000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 31 **QUARTERS/FOOTAGES:** 1980' S line, 660' W line

QUADRANGLE: HERRIN **LONGITUDE:** -89.037644 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.86735 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 384.0 **LOGGED (FT.):** 282.0 **LOG TYPE:**

SOURCE: CHI CARTER **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
113.0	CARBONDALE	HERRIN	COAL	9.3	271.0	

MAPID: 05500184000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 31 **QUARTERS/FOOTAGES:** 1980' S line, 660' W line

QUADRANGLE: HERRIN **LONGITUDE:** -89.037644 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.86735 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 384.0 **LOGGED (FT.):** 280.3 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
254.0	MODESTO	PIASA	LIMESTONE	4.8	130.0	
249.2	MODESTO		DARK GRAY SHALE	2.3	134.8	
247.0	CARBONDALE	DANVILLE	COAL	2.3	137.0	
244.7	CARBONDALE		SHALE & SANDSTONE	7.8	139.3	
237.0	CARBONDALE	ALLENBY	BLACK SHALE	1.5	147.0	
235.5	CARBONDALE		CLAYSTONE	2.0	148.5	
233.5	CARBONDALE	BANKSTON FORK	LIMESTONE AND SANDSTONE	9.5	150.5	
224.0	CARBONDALE	LAWSON	SANDSTONE	2.0	160.0	
222.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	5.0	162.0	
217.0	CARBONDALE	BRERETON	LIMESTONE	9.5	167.0	
207.5	CARBONDALE	ANNA	BLACK SHALE	1.0	176.5	
206.5	CARBONDALE	ENERGY	SANDSTONE	3.5	177.5	
203.0	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	29.0	181.0	
174.0	CARBONDALE	ENERGY	SILTY SHALE	61.0	210.0	
113.0	CARBONDALE	HERRIN	COAL	9.3	271.0	

MAPID: 05500184000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 31 **QUARTERS/FOOTAGES:** 1980' S line, 660' W line

QUADRANGLE: HERRIN **LONGITUDE:** -89.037644 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.86735 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 384.0 **LOGGED (FT.):** 282.0 **LOG TYPE:** Drillers Log

SOURCE: CHICAGO & CARTERVILLE COAL CO **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
384.0	PLEISTOCENE		UNCONSOLIDATED	39.0	0.0	
345.0	PLEISTOCENE		SAND	12.0	39.0	
333.0	PLEISTOCENE		CLAY	3.0	51.0	
330.0	PLEISTOCENE		SAND	14.0	54.0	
316.0	MODESTO		SHALE	5.0	68.0	
311.0	MODESTO		SANDY SHALE	7.0	73.0	WITH HARD SAND PARTINGS
304.0	MODESTO		SHALE	1.5	80.0	
302.5	MODESTO		BLACK SHALE	1.3	81.5	
301.2	MODESTO		SHALE	0.5	82.8	
300.7	MODESTO		COAL	0.8	83.3	
300.0	MODESTO		CLAYSTONE	0.5	84.0	LIGHT
299.5	MODESTO		LIMESTONE	0.5	84.5	
299.0	MODESTO		CLAYSTONE	3.0	85.0	BLUE
296.0	MODESTO		SANDSTONE	10.0	88.0	
286.0	MODESTO		SANDSTONE	10.0	98.0	WITH SHALE PARTINGS
276.0	MODESTO		SANDY SHALE	15.0	108.0	
261.0	MODESTO		SHALE	5.5	123.0	WITH HARD LIME PARTING
255.5	MODESTO	DEGRAFF	SHALE W/ COAL STREAKS	0.8	128.5	WITH SMALL COAL SEAMS
254.7	MODESTO		CLAYSTONE	0.8	129.3	LIGHT
254.0	MODESTO	PIASA	LIMESTONE	4.0	130.0	
250.0	MODESTO	PIASA	LIMESTONE & CONGLOMERATE	0.8	134.0	
249.2	MODESTO		SHALE	0.5	134.8	
248.7	MODESTO		BLACK SHALE	1.0	135.3	
247.7	MODESTO		SHALE	0.8	136.3	
247.0	CARBONDALE	DANVILLE	COAL	2.3	137.0	
244.7	CARBONDALE		CLAYSTONE	0.8	139.3	
244.0	CARBONDALE		SANDSTONE	2.0	140.0	
242.0	CARBONDALE		SANDY SHALE	3.0	142.0	
239.0	CARBONDALE		SHALE	2.0	145.0	
237.0	CARBONDALE		BLACK SHALE	1.5	147.0	
235.5	CARBONDALE		CLAYSTONE	2.0	148.5	DARK
233.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	150.5	
231.0	CARBONDALE	BANKSTON FORK	SANDY LIMESTONE	7.0	153.0	
224.0	CARBONDALE		SANDSTONE	2.0	160.0	
222.0	CARBONDALE		SANDSTONE	5.0	162.0	WITH SHALE PARTINGS; LIGHT
217.0	CARBONDALE	BRERETON	LIMESTONE	9.5	167.0	DARK GRAY
207.5	CARBONDALE	ENERGY	BLACK SHALE	1.0	176.5	
206.5	CARBONDALE	ENERGY	SANDSTONE	3.5	177.5	

203.0	CARBONDALE	ENERGY	SANDSTONE	29.0	181.0	WITH SHALE PARTINGS; LIGHT
174.0	CARBONDALE	ENERGY	SANDY SHALE	61.0	210.0	SANDY WITH LIMESTONE PART
113.0	CARBONDALE	HERRIN	COAL	9.3	271.0	
103.7	CARBONDALE		CLAYSTONE	1.8	280.3	DARK

MAPID: 05502309000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 31 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of SW NE

QUADRANGLE: HERRIN **LONGITUDE:** -89.029477 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.870234 **DATE COLLECTED:** 8 / 0 / 1966

SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 1510.0 **LOG TYPE:** Electric Log

SOURCE: GALLAGHER, VICTOR R. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-156.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	545.0	
-261.0	SPOON	DAVIS	UNCLASSIFIED	-	650.0	
-1121.0	BASE OF PENN.		UNCLASSIFIED	-	1510.0	

MAPID: 05500185000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 32 **QUARTERS/FOOTAGES:** NW NE NE

QUADRANGLE: CHRISTOPHER **LONGITUDE:** -89.006068 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.875759 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 432.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**

SOURCE: **WELL TYPE:** Coal Test

COMMENT: SURFACE ELEVATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
52.0	CARBONDALE	HERRIN	COAL	10.9	380.0	

MAPID: 05500186000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 33 **QUARTERS/FOOTAGES:** NW SW NW

QUADRANGLE: HERRIN **LONGITUDE:** -89.001336 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.872064 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 429.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**

SOURCE: **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
44.0	CARBONDALE	HERRIN	COAL	10.0	385.0	

MAPID: 05500187000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 33 **QUARTERS/FOOTAGES:** 1320' S line, 1320' E line

QUADRANGLE: JOHNSTON CITY **LONGITUDE:** -88.987911 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.865545 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 384.0 **LOGGED (FT.):** 352.0 **LOG TYPE:**

SOURCE: CBQ RR 0014 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
42.0	CARBONDALE	HERRIN	COAL	8.3	342.0	

MAPID: 05500187000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 33 **QUARTERS/FOOTAGES:** 1320' S line, 1320' E line

QUADRANGLE: JOHNSTON CITY **LONGITUDE:** -88.987911 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.865545 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 384.0 **LOGGED (FT.):** 350.3 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
179.0	MODESTO	PIASA	LIMESTONE	2.7	205.0	
176.3	MODESTO		BLACK SHALE	2.3	207.7	
174.0	CARBONDALE	DANVILLE	COAL	2.0	210.0	
172.0	CARBONDALE		SHALE & SANDSTONE	7.0	212.0	
165.0	CARBONDALE	ALLENBY	BLACK SHALE	1.0	219.0	
164.0	CARBONDALE		CLAYSTONE & SHALE	4.0	220.0	
160.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	224.0	
157.5	CARBONDALE	ENERGY	CALCAREOUS SHALE	9.5	226.5	
148.0	CARBONDALE	ENERGY	SILTY SHALE	8.0	236.0	
140.0	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	33.0	244.0	
107.0	CARBONDALE	ENERGY	SILTY SHALE	65.3	277.0	
42.0	CARBONDALE	HERRIN	COAL	8.3	342.0	

MAPID: 05500187000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 33 **QUARTERS/FOOTAGES:** 1320' S line, 1320' E line

QUADRANGLE: JOHNSTON CITY **LONGITUDE:** -88.987911 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.865545 **DATE COLLECTED:** 0 / 0 / 1904

SURFACE ELEVATION (FT.): 384.0 **LOGGED (FT.):** 352.0 **LOG TYPE:** Drillers Log

SOURCE: C.B. & Q. RR 14 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
384.0	PLEISTOCENE		CLAY	16.0	0.0	
368.0	PLEISTOCENE		SAND	52.0	16.0	
316.0	PLEISTOCENE		GRAVEL	3.0	68.0	
313.0	MODESTO		SANDY SHALE	8.0	71.0	WITH SANDSTONE PARTINGS
305.0	MODESTO		SANDY SHALE	47.0	79.0	SANDY WITH SANDSTONE
258.0	MODESTO		SHALE	6.0	126.0	
252.0	MODESTO		SHALE	1.0	132.0	
251.0	MODESTO		SANDSTONE	8.0	133.0	
243.0	MODESTO		SANDSTONE	9.0	141.0	WITH SHALE PARTINGS
234.0	MODESTO		SHALE	7.0	150.0	
227.0	MODESTO		COAL	0.6	157.0	
226.4	MODESTO		SOFT SHALE	6.4	157.6	
220.0	MODESTO		SANDY SHALE	2.0	164.0	
218.0	MODESTO		SANDSTONE	8.0	166.0	
210.0	MODESTO		SANDY SHALE	8.0	174.0	
202.0	MODESTO		SHALE	16.0	182.0	
186.0	MODESTO		SHALE	2.0	198.0	
184.0	MODESTO	DEGRAFF	COAL WITH SHALE	0.5	200.0	
183.5	MODESTO		SOFT SHALE	3.0	200.5	
180.5	MODESTO		CONGLOMERATE	1.5	203.5	
179.0	MODESTO	PIASA	LIMESTONE	2.7	205.0	
176.3	MODESTO		SHALE	2.3	207.7	
174.0	CARBONDALE	DANVILLE	COAL	2.0	210.0	
172.0	CARBONDALE		SANDY SHALE	4.0	212.0	
168.0	CARBONDALE		SANDSTONE	3.0	216.0	WITH SHALE PARTINGS
165.0	CARBONDALE		SHALE	1.0	219.0	
164.0	CARBONDALE		SOFT SHALE	4.0	220.0	
160.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	224.0	
157.5	CARBONDALE		CALCAREOUS SHALE	9.5	226.5	
148.0	CARBONDALE		SANDY SHALE	8.0	236.0	SANDY WITH SANDSTONE
140.0	CARBONDALE		SANDSTONE	33.0	244.0	WITH SHALE PARTINGS
107.0	CARBONDALE	ENERGY	SANDY SHALE	65.3	277.0	
41.7	CARBONDALE	HERRIN	COAL	8.3	342.3	
33.3	CARBONDALE		CLAYSTONE	1.3	350.7	

MAPID: 05500270000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 33 **QUARTERS/FOOTAGES:** NW SW SW

QUADRANGLE: HERRIN **LONGITUDE:** -89.001268 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.864685 **DATE COLLECTED:** 0 / 0 / 1908

SURFACE ELEVATION (FT.): 401.2 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: FRAN CO MC0005 **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
62.2	CARBONDALE	HERRIN	COAL	10.0	339.0	

MAPID: 05500336000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 34 **QUARTERS/FOOTAGES:** 1987' S line, 2601' W line

QUADRANGLE: JOHNSTON CITY **LONGITUDE:** -88.974362 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.86738 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 392.0 **LOGGED (FT.):** 372.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
170.0	MODESTO	PIASA	LIMESTONE & SHALE	4.0	222.0	
166.0	MODESTO		BLACK SHALE	3.0	226.0	
163.0	CARBONDALE	DANVILLE	COAL	2.0	229.0	
161.0	CARBONDALE		CLAYSTONE & SHALE	18.0	231.0	
143.0	CARBONDALE	BANKSTON FORK	CALCAREOUS SHALE	3.0	249.0	
140.0	CARBONDALE	ENERGY	CALCAREOUS SHALE	10.0	252.0	
130.0	CARBONDALE	ENERGY	SILTY SHALE	38.0	262.0	
92.0	CARBONDALE	ENERGY	SILTY SHALE	63.0	300.0	
29.0	CARBONDALE	HERRIN	COAL	9.0	363.0	

MAPID: 05501325000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 34 **QUARTERS/FOOTAGES:** 260' N line, 560' W line of SW NE

QUADRANGLE: JOHNSTON CITY **LONGITUDE:** -88.972539 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.87236 **DATE COLLECTED:** 11 / 0 / 1944

SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 1525.0 **LOG TYPE:** Electric Log

SOURCE: ADKINS, E. S. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-251.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	640.0	
-371.0	SPOON	DAVIS	UNCLASSIFIED	-	760.0	
-1136.0	BASE OF PENN.		UNCLASSIFIED	-	1525.0	

MAPID: 05500190000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 35 **QUARTERS/FOOTAGES:** SE NW NW

QUADRANGLE: JOHNSTON CITY **LONGITUDE:** -88.961863 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.874028 **DATE COLLECTED:** 0 / 0 / 1913

SURFACE ELEVATION (FT.): 407.5 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: OLD BEN 015A **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-14.5	CARBONDALE	HERRIN	COAL	8.8	422.0	

MAPID: 05500271000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 35 **QUARTERS/FOOTAGES:** 990' N line, 330' W line

QUADRANGLE: JOHNSTON CITY **LONGITUDE:** -88.964175 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.874083 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 399.0 **LOGGED (FT.):** 426.9 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 1 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
120.0	MODESTO	PIASA	LIMESTONE	3.0	279.0	
117.0	MODESTO		DARK GRAY SHALE	3.1	282.0	
113.9	CARBONDALE	DANVILLE	COAL	2.3	285.1	
111.7	CARBONDALE		SILTY SHALE	5.7	287.3	
106.0	CARBONDALE		CALCAREOUS SHALE	3.0	293.0	
103.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.7	296.0	
98.3	CARBONDALE	ENERGY	SHALE	4.0	300.7	
94.3	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	8.3	304.7	
86.0	CARBONDALE	ENERGY	SHALE	10.0	313.0	
76.0	CARBONDALE	ENERGY	ARGILLACEOUS SANDSTONE	16.0	323.0	
60.0	CARBONDALE	ENERGY	SILTY SHALE	63.9	339.0	
-19.0	CARBONDALE	HERRIN	COAL	8.9	418.0	

MAPID: 05500639000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 35 **QUARTERS/FOOTAGES:** NW NE NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.95038 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.875934 **DATE COLLECTED:** 8 / 0 / 1942

SURFACE ELEVATION (FT.): 425.0 **LOGGED (FT.):** 760.0 **LOG TYPE:** Drillers Log

SOURCE: E.S. ADKINS 1P **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
425.0	PLEISTOCENE		SAND	45.0	0.0	
380.0			UNKNOWN	60.0	45.0	MISSING
320.0			FOSSILIFEROUS SHALE	195.0	105.0	WITH SHELLS
125.0			COAL	4.0	300.0	
121.0			SHALE	38.0	304.0	
83.0			LIMESTONE	3.0	342.0	
80.0			SHALE	10.0	345.0	
70.0			SANDY SHALE	8.0	355.0	WITH SAND
62.0			LIMESTONE	7.0	363.0	
55.0			SANDY SHALE	108.0	370.0	WITH SAND
-53.0	CARBONDALE	HERRIN	COAL	9.0	478.0	
-62.0			LIMESTONE	13.0	487.0	
-75.0			SHALE	27.0	500.0	
-102.0	CARBONDALE	SPRINGFIELD	COAL	6.0	527.0	
-108.0			SANDY SHALE	227.0	533.0	

MAPID: 05501324000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 35 **QUARTERS/FOOTAGES:** 480' N line, 210' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.947645 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.875545 **DATE COLLECTED:** 12 / 0 / 1950

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 1570.0 **LOG TYPE:** Electric Log

SOURCE: SCHOONMAKER, GEORGE C. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-295.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	690.0	
-365.0	SPOON	DAVIS	UNCLASSIFIED	-	760.0	
-1175.0	BASE OF PENN.		UNCLASSIFIED	-	1570.0	

MAPID: 05501839000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 35 **QUARTERS/FOOTAGES:**

QUADRANGLE: JOHNSTON CITY **LONGITUDE:** -88.955995 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.869395 **DATE COLLECTED:** 0 / 0 / 1901

SURFACE ELEVATION (FT.): 385.0 **LOGGED (FT.):** 320.0 **LOG TYPE:** Drillers Log

SOURCE: INTERSTATE FUEL CO. 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
385.0	PLEISTOCENE		CLAY	6.0	0.0	YELLOW
379.0	PLEISTOCENE		CLAY	15.0	6.0	BLUE
364.0	MODESTO		BLACK SHALE	5.0	21.0	
359.0	MODESTO		UNKNOWN	4.0	26.0	LOG SAYS 'IRON BLOOM'
355.0	MODESTO		CLAYSTONE & SILTSTONE	7.0	30.0	DRIFT NOTED IN LOG
348.0	MODESTO		CLAYSTONE & SILTSTONE	4.0	37.0	CLAY NOTED IN LOG
344.0	MODESTO		LIMESTONE	0.8	41.0	
343.2	MODESTO		SANDSTONE	2.2	41.8	
341.0	MODESTO		BLACK SHALE	14.0	44.0	
327.0	MODESTO		SANDSTONE	8.0	58.0	
319.0	MODESTO	CHAPEL	COAL	1.2	66.0	
317.8	MODESTO		SHALE	13.0	67.2	
304.8	MODESTO		BLACK SHALE	6.0	80.2	
298.8	MODESTO		LIMESTONE	2.3	86.2	
296.5	MODESTO		SHALE	5.0	88.5	
291.5	MODESTO		SANDY SHALE	37.0	93.5	
254.5	MODESTO		SANDY SHALE	59.0	130.5	
195.5	MODESTO		COAL	0.5	189.5	
195.0	MODESTO		SANDY SHALE	8.0	190.0	
187.0	MODESTO		SHALE	6.0	198.0	WITH LIGHT SHALE
181.0	MODESTO		SHALE	5.7	204.0	
175.3	MODESTO		COAL	0.6	209.7	
174.7	MODESTO		SANDY SHALE	4.0	210.3	
170.7	MODESTO		SANDSTONE	7.0	214.3	LIGHT GRAY
163.7	MODESTO		CLAYSTONE	3.0	221.3	
160.7	MODESTO		BLACK SHALE	6.5	224.3	
154.2	MODESTO		SANDY SHALE	1.7	230.8	
152.6	MODESTO		SHALE	5.7	232.4	
146.9	MODESTO		COAL	0.8	238.1	
146.2	MODESTO		CLAYSTONE	4.8	238.8	
141.3	MODESTO		SANDSTONE	7.2	243.7	LIGHT GRAY
134.2	MODESTO		SHALE	9.9	250.8	
124.2	MODESTO	PIASA	LIMESTONE	5.4	260.8	
118.8	MODESTO		SHALE	1.7	266.2	
117.2	CARBONDALE	DANVILLE	COAL	2.3	267.8	
114.9	CARBONDALE		SANDY SHALE	1.9	270.1	
113.0	CARBONDALE		SANDSTONE	1.4	272.0	
111.6	CARBONDALE		SHALE	5.3	273.4	
106.3	CARBONDALE	ALLENBY	SHALE W/ COAL STREAKS	0.6	278.7	WITH COAL

105.7	CARBONDALE		CLAYSTONE	4.0	279.3	
101.7	CARBONDALE	BANKSTON FORK	LIMESTONE	4.8	283.3	BUFF
96.9	CARBONDALE		CLAYSTONE	5.0	288.1	
91.9	CARBONDALE		SANDY CLAY	14.7	293.1	GRAY
77.2	CARBONDALE		SHALE	1.3	307.8	DARK GRAY
76.0	CARBONDALE		SANDSTONE	3.4	309.0	LIGHT GRAY
72.6	CARBONDALE		SANDY SHALE	7.6	312.4	

MAPID: 05500337000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 36 **QUARTERS/FOOTAGES:** NE NW SE

QUADRANGLE: JOHNSTON CITY **LONGITUDE:** -88.933933 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.868513 **DATE COLLECTED:**

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

SOURCE: ADKINS E S **WELL TYPE:** Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	COAL	-	419.0	

MAPID: 05502259000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 36 **QUARTERS/FOOTAGES:** 760' N line, 333' E line

QUADRANGLE: JOHNSTON CITY **LONGITUDE:** -88.92935 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.874671 **DATE COLLECTED:** 12 / 0 / 1965

SURFACE ELEVATION (FT.): 430.0 **LOGGED (FT.):** 1600.0 **LOG TYPE:** Electric Log

SOURCE: KILLION & MCCLEMONT OIL **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-240.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	670.0	
-365.0	SPOON	DAVIS	UNCLASSIFIED	-	795.0	
-1170.0	BASE OF PENN.		UNCLASSIFIED	-	1600.0	

MAPID: 05502259000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 2E **SECTION:** 36 **QUARTERS/FOOTAGES:** 760' N line, 333' E line

QUADRANGLE: JOHNSTON CITY **LONGITUDE:** -88.92935 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.874671 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 430.0 **LOGGED (FT.):** 432.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
135.0	MODESTO	PIASA	LIMESTONE	4.0	295.0	
131.0	MODESTO		DARK GRAY SHALE	3.5	299.0	
127.5	CARBONDALE	DANVILLE	COAL	1.5	302.5	
126.0	CARBONDALE		CALCAREOUS SHALE	11.0	304.0	
115.0	CARBONDALE	ALLENBY	BONE COAL	1.0	315.0	
114.0	CARBONDALE		CLAYSTONE & SHALE	7.0	316.0	
107.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	323.0	
104.0	CARBONDALE	ENERGY	SILTY SHALE	18.0	326.0	
86.0	CARBONDALE	ENERGY	DARK GRAY SHALE	6.0	344.0	
80.0	CARBONDALE	ENERGY	SILTY SHALE	73.0	350.0	
7.0	CARBONDALE	HERRIN	COAL	9.0	423.0	

MAPID: 05501492000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 1 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of SE SE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.820599 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.939087 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 462.0 **LOGGED (FT.):** 3150.0 **LOG TYPE:** Electric Log

SOURCE: COLLINS BROTHERS OIL CO. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-152.0	CARBONDALE	HERRIN	COAL	8.0	614.0	
-198.0	CARBONDALE	BRIAR HILL	COAL	-	660.0	
-243.0	CARBONDALE	SPRINGFIELD	COAL	3.0	705.0	SHALE & SILTSTONE ROOF
-315.0	CARBONDALE	HOUCHIN CREEK	COAL	-	777.0	

MAPID: 05502263000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 1 **QUARTERS/FOOTAGES:** 2310' N line, 2310' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.827664 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.944391 **DATE COLLECTED:** 1 / 0 / 1966

SURFACE ELEVATION (FT.): 467.0 **LOGGED (FT.):** 1820.0 **LOG TYPE:** Electric Log

SOURCE: ANDERSON, JABE J. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-443.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	910.0	
-513.0	SPOON	DAVIS	UNCLASSIFIED	-	980.0	
-1353.0	BASE OF PENN.		UNCLASSIFIED	-	1820.0	

MAPID: 05502263000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 1 **QUARTERS/FOOTAGES:** 2310' N line, 2310' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.827664 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.944391 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 467.0 **LOGGED (FT.):** 656.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-81.0	MODESTO	PIASA	LIMESTONE	5.5	548.0	
-86.5	MODESTO		SHALE	5.0	553.5	
-91.5	CARBONDALE	DANVILLE	COAL	2.5	558.5	
-94.0	CARBONDALE		SHALE & SANDSTONE	19.0	561.0	
-113.0	CARBONDALE	ALLENBY	COAL	1.0	580.0	
-114.0	CARBONDALE		CLAYSTONE & SHALE	4.0	581.0	
-118.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	585.0	
-124.0	CARBONDALE	LAWSON	SILTY SHALE	18.5	591.0	
-142.5	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	8.0	609.5	
-150.5	CARBONDALE	LAWSON	SILTY SHALE	10.0	617.5	
-160.5	CARBONDALE	BRERETON	LIMESTONE	5.0	627.5	
-165.5	CARBONDALE	ANNA	BLACK SHALE	2.5	632.5	
-168.0	CARBONDALE	ENERGY	GRAY SHALE	15.0	635.0	
-183.0	CARBONDALE	HERRIN	COAL	6.0	650.0	

MAPID: 05523315000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 1 **QUARTERS/FOOTAGES:** 725' S line, 75' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.817339 **GEOLOGIST:** D NORTH

CONFIDENTIAL: N **LATITUDE:** 37.938411 **DATE COLLECTED:** 1 / 7 / 1982

SURFACE ELEVATION (FT.): 425.0 **LOGGED (FT.):** 725.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. RLC3 **WELL TYPE:** Coal Test

COMMENT: PERMIT 30 POOR LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
425.0	PLEISTOCENE		CLAY	26.0	0.0	
399.0	BOND		SHALE	29.0	26.0	GRAY
370.0	BOND	CARTHAGE	LIMESTONE	36.0	55.0	
334.0	MODESTO		BLUE SHALE	5.0	91.0	
329.0	MODESTO		SHALE	21.0	96.0	GRAY
308.0	MODESTO	INGLEFIELD	SANDSTONE	8.0	117.0	
300.0	MODESTO		GREEN SHALE	23.0	125.0	
277.0	MODESTO		SHALE	20.0	148.0	GRAY
257.0	MODESTO	CARLINVILLE	LIMESTONE	16.0	168.0	
241.0	MODESTO		SHALE	105.0	184.0	SANDY SILTY; GRAY
136.0	MODESTO		SHALE	2.0	289.0	BLACK
134.0	MODESTO		SHALE	7.0	291.0	
127.0	MODESTO	CHAPEL	COAL	2.0	298.0	
125.0	MODESTO	TRIVOLI	SANDSTONE/SHALE	128.0	300.0	
-3.0	MODESTO		SHALE	3.0	428.0	BLACK
-6.0	MODESTO	FARMINGTON	SHALE	29.0	431.0	GRAY
-35.0	MODESTO		SHALE	3.0	460.0	BLACK
-38.0	CARBONDALE	DANVILLE	COAL	1.0	463.0	
-39.0	CARBONDALE		SHALE	94.0	464.0	GRAY
-133.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	558.0	
-135.0	CARBONDALE		SILTY SHALE	31.0	560.0	
-166.0	CARBONDALE		SHALE	3.0	591.0	BLACK
-169.0	CARBONDALE	BRERETON	LIMESTONE	7.1	594.0	
-176.1	CARBONDALE	ANNA	SHALE	0.2	601.1	BLACK
-176.3	CARBONDALE	HERRIN	COAL	6.1	601.3	
-182.4	CARBONDALE		UNDERCLAY	2.1	607.4	
-184.5	CARBONDALE		SANDSTONE	5.5	609.5	
-190.0	CARBONDALE	DYKERSBURG	SHALE	68.9	615.0	GRAY
-258.9	CARBONDALE	SPRINGFIELD	COAL	4.2	683.9	
-263.1			UNDERCLAY	4.4	688.1	
-267.5			SHALE	32.5	692.5	GRAY

MAPID: 05523316000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 1 **QUARTERS/FOOTAGES:** 207' N line, 15' E line of SW SW SW

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.83349 **GEOLOGIST:** NORTH

CONFIDENTIAL: N **LATITUDE:** 37.937595 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 484.0 **LOGGED (FT.):** 735.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. RLC 8 **WELL TYPE:** Coal Test

COMMENT: PERMIT 30

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
484.0	PLEISTOCENE		CLAY	7.0	0.0	
477.0	PLEISTOCENE		SAND	25.0	7.0	
452.0	BOND		SHALE	4.0	32.0	SANDY; GRAY
448.0	BOND		SANDSTONE	5.0	36.0	
443.0	BOND		LIMESTONE	2.0	41.0	
441.0	BOND		SHALE	75.0	43.0	GREEN,SANDY; GRAY
366.0	BOND	CARTHAGE	LIMESTONE	4.0	118.0	
362.0	MODESTO		SHALE	2.0	122.0	BLACK
360.0	MODESTO		SHALE	78.0	124.0	GRAY
282.0	MODESTO		SHALE	5.0	202.0	BLACK
277.0	MODESTO		SHALE	123.0	207.0	SOME SANDY; GRAY
154.0	MODESTO		LIMESTONE	1.0	330.0	
153.0	MODESTO		SHALE	32.0	331.0	GRAY
121.0	MODESTO	TRIVOLI	SANDSTONE	62.0	363.0	
59.0	MODESTO		SHALE	45.0	425.0	GRAY
14.0	MODESTO		LIMESTONE	2.0	470.0	
12.0	MODESTO		SHALE	22.0	472.0	GRAY
-10.0	MODESTO		COAL	2.0	494.0	
-12.0	MODESTO		SHALE	46.0	496.0	GRAY
-58.0	MODESTO	PIASA	LIMESTONE	3.0	542.0	
-61.0	MODESTO		SHALE	1.0	545.0	BLACK
-62.0	MODESTO		SHALE	7.0	546.0	GRAY
-69.0	CARBONDALE	DANVILLE	COAL	2.0	553.0	
-71.0	CARBONDALE		SHALE	12.0	555.0	GRAY
-83.0	CARBONDALE		SANDSTONE	3.0	567.0	
-86.0	CARBONDALE		SHALE	5.0	570.0	GRAY
-91.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	575.0	
-96.0	CARBONDALE	ANVIL ROCK	SHALE	8.0	580.0	GRAY
-104.0	CARBONDALE	ANVIL ROCK	SANDSTONE	10.0	588.0	
-114.0	CARBONDALE	ANVIL ROCK	SHALE	5.0	598.0	GRAY
-119.0	CARBONDALE	ANVIL ROCK	SANDSTONE	5.0	603.0	
-124.0	CARBONDALE	ANVIL ROCK	SHALE	12.8	608.0	GRAY
-136.8	CARBONDALE	CONANT	LIMESTONE	0.4	620.8	
-137.2	CARBONDALE	JAMESTOWN	COAL	0.7	621.2	
-137.9	CARBONDALE		SHALE	1.0	621.9	GRAY
-138.9	CARBONDALE		SHALE	3.7	622.9	BLACK
-142.6	CARBONDALE	BRERETON	LIMESTONE	9.0	626.6	
-151.6	CARBONDALE	ANNA	SHALE	1.9	635.6	BLACK
-153.5	CARBONDALE	HERRIN	COAL	6.7	637.5	

-160.2	CARBONDALE		UNDERCLAY	2.8	644.2	
-163.0	CARBONDALE		SHALE	4.0	647.0	GRAY
-167.0	CARBONDALE		SANDSTONE	12.0	651.0	
-179.0	CARBONDALE		SHALE	11.0	663.0	GRAY
-190.0	CARBONDALE	BRIAR HILL	COAL	1.0	674.0	
-191.0	CARBONDALE	CANTON	SHALE	9.0	675.0	GRAY
-200.0	CARBONDALE	ST. DAVID	LIMESTONE	2.0	684.0	
-202.0	CARBONDALE	TURNER MINE	SHALE	4.7	686.0	BLACK
-206.7	CARBONDALE	DYKERSBURG	SHALE	17.7	690.7	GRAY
-224.4	CARBONDALE	SPRINGFIELD	COAL	4.3	708.4	
-228.7	CARBONDALE		UNDERCLAY	4.8	712.7	
-233.5	CARBONDALE		SANDSTONE	1.8	717.5	
-235.3	CARBONDALE		UNDERCLAY	0.9	719.3	
-236.2	CARBONDALE		SANDSTONE	3.8	720.2	
-240.0	CARBONDALE		SHALE	11.0	724.0	SANDY; GRAY

MAPID: 05523853000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 1 **QUARTERS/FOOTAGES:** NE NE SE NW

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.826966 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.946725 **DATE COLLECTED:** 5 / 3 / 1990

SURFACE ELEVATION (FT.): 452.1 **LOGGED (FT.):** 657.0 **LOG TYPE:** Drillers Log

SOURCE: HITE OPERATING CO., INC 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT: GAS WELL COMPLETED IN COAL MINE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-187.9	CARBONDALE	HERRIN	COAL	6.0	640.0	

MAPID: 05500132000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 2 **QUARTERS/FOOTAGES:** 1320' S line, 1320' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.840356 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.939959 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 490.0 **LOGGED (FT.):** 666.3 **LOG TYPE:** Drillers Log

SOURCE: WILMINGTON STAR COAL CO. A **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-91.7	CARBONDALE		GRAY SHALE	15.5	581.7	
-107.2	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	597.2	
-111.7	CARBONDALE	LAWSON	CALCAREOUS SHALE	1.0	601.7	
-112.7	CARBONDALE	LAWSON	GRAY SHALE	7.0	602.7	
-119.7	CARBONDALE	LAWSON	SHALE & SANDSTONE	20.0	609.7	
-139.7	CARBONDALE	LAWSON	GRAY SHALE	9.5	629.7	
-149.2	CARBONDALE	LAWSON	SANDSTONE	4.5	639.2	
-153.7	CARBONDALE	JAMESTOWN	BONE COAL	0.5	643.7	
-154.2	CARBONDALE		DARK GRAY SHALE	8.0	644.2	
-162.2	CARBONDALE	BRERETON	LIMESTONE	7.5	652.2	
-169.7	CARBONDALE	ANNA	GRAY SHALE	0.3	659.7	
-170.0	CARBONDALE	HERRIN	COAL	6.3	660.0	

MAPID: 05523317000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 2 **QUARTERS/FOOTAGES:** 1284' N line, 2445' W line of NW SW SE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.836554 **GEOLOGIST:** NORTH

CONFIDENTIAL: N **LATITUDE:** 37.936406 **DATE COLLECTED:** 3 / 1 / 1982

SURFACE ELEVATION (FT.): 470.0 **LOGGED (FT.):** 635.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. RLC 7 **WELL TYPE:** Coal Test

COMMENT: PERMIT 30

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
470.0	PLEISTOCENE		CLAY	15.0	0.0	
455.0	PLEISTOCENE		SAND	22.0	15.0	
433.0	BOND		LIMESTONE	5.0	37.0	
428.0	BOND		SHALE	16.0	42.0	GRAY
412.0	BOND		SANDSTONE	5.0	58.0	
407.0	BOND		SHALE	52.0	63.0	SANDY; GRAY
355.0	BOND	CARTHAGE	LIMESTONE	4.0	115.0	
351.0	MODESTO		SHALE	11.0	119.0	BLACK
340.0	MODESTO		SHALE	28.0	130.0	GRAY
312.0	MODESTO		SANDSTONE	12.0	158.0	
300.0	MODESTO		LIMESTONE	3.0	170.0	
297.0	MODESTO		SHALE	28.0	173.0	GRAY
269.0	MODESTO		LIMESTONE	2.0	201.0	
267.0	MODESTO		SHALE	17.0	203.0	GRAY
250.0	MODESTO		SANDSTONE	18.0	220.0	
232.0	MODESTO		SHALE	62.0	238.0	SANDY; GRAY
170.0	MODESTO		SANDSTONE	15.0	300.0	
155.0	MODESTO		SHALE	47.0	315.0	GRAY
108.0	MODESTO		SHALE	6.0	362.0	BLACK
102.0	MODESTO		SHALE	2.0	368.0	GRAY
100.0	MODESTO		SANDSTONE	2.0	370.0	
98.0	MODESTO		SHALE	5.0	372.0	GRAY
93.0			SHALE	26.0	377.0	BLACK
67.0			SHALE	7.0	403.0	GRAY
60.0			SANDSTONE	34.0	410.0	
26.0			LIMESTONE	1.0	444.0	
25.0			SHALE	35.0	445.0	GRAY
-10.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.2	480.0	SILTSTONE
-17.2	CARBONDALE		SHALE	16.1	487.2	GRAY
-33.3	CARBONDALE		SANDSTONE	8.0	503.3	
-41.3	CARBONDALE		SHALE	16.8	511.3	GRAY
-58.1	CARBONDALE		SHALE	10.0	528.1	BLACK
-68.1	CARBONDALE	BRERETON	LIMESTONE	6.2	538.1	
-74.3	CARBONDALE	ANNA	SHALE	1.7	544.3	BLACK
-76.0	CARBONDALE	HERRIN	COAL	6.5	546.0	
-82.5	CARBONDALE		UNDERCLAY	8.5	552.5	
-91.0	CARBONDALE		SHALE	15.0	561.0	GRAY
-106.0	CARBONDALE	BRIAR HILL	COAL	1.0	576.0	
-107.0	CARBONDALE	CANTON	SHALE	15.0	577.0	GRAY

-122.0	CARBONDALE	ST. DAVID	LIMESTONE	2.0	592.0	
-124.0	CARBONDALE	DYKERSBURG	SHALE	12.5	594.0	GRAY
-136.5	CARBONDALE	SPRINGFIELD	COAL	4.4	606.5	
-140.9	CARBONDALE		UNDERCLAY	6.0	610.9	
-146.9	CARBONDALE		SANDSTONE	18.1	616.9	SHALEY

MAPID: 05522804000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 3 **QUARTERS/FOOTAGES:** 330' S line, 990' W line of NW

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.869469 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.94414 **DATE COLLECTED:** 7 / 0 / 1979

SURFACE ELEVATION (FT.): 424.0 **LOGGED (FT.):** 1770.0 **LOG TYPE:** Electric Log

SOURCE: GOOSE CREEK OIL CO. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-416.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	840.0	
-486.0	SPOON	DAVIS	UNCLASSIFIED	-	910.0	
-1346.0	BASE OF PENN.		UNCLASSIFIED	-	1770.0	

MAPID: 05500133000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 4 **QUARTERS/FOOTAGES:** NW SE NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.876505 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.945942 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 391.0 **LOGGED (FT.):** 567.0 **LOG TYPE:** Drillers Log

SOURCE: J. DIAMOND **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
391.0	PLEISTOCENE		CLAY	3.0	0.0	
388.0	PLEISTOCENE		SAND	2.0	3.0	
386.0	PLEISTOCENE		CLAY	22.5	5.0	
363.5	BOND	CARTHAGE	LIMESTONE	2.5	27.5	
361.0	BOND	CARTHAGE	LIMESTONE	3.3	30.0	
357.7	MODESTO		SHALE	7.8	33.3	
350.0	MODESTO		SANDY SHALE	1.0	41.0	
349.0	MODESTO		SHALE	10.0	42.0	
339.0	MODESTO		COAL	0.3	52.0	
338.7	MODESTO		CLAYSTONE	1.8	52.3	
337.0	MODESTO		SHALE	31.0	54.0	
306.0	MODESTO		SHALE	26.0	85.0	
280.0	MODESTO		SHALE	4.0	111.0	
276.0	MODESTO		SHALE	3.0	115.0	
273.0	MODESTO		SHALE	21.0	118.0	
252.0	MODESTO		SHALE	6.3	139.0	
245.7	MODESTO		SANDSTONE	3.0	145.3	
242.7	MODESTO		SANDY SHALE	10.5	148.3	
232.2	MODESTO		SHALE	8.2	158.8	
224.0	MODESTO		SHALE	55.0	167.0	
169.0	MODESTO		SANDSTONE	24.0	222.0	
145.0	MODESTO	CHAPEL	COAL	0.3	246.0	
144.7	MODESTO		SHALE	1.7	246.3	
143.0	MODESTO		SHALE	9.0	248.0	
134.0	MODESTO		SHALE	18.0	257.0	
116.0	MODESTO		SHALE	30.0	275.0	
86.0	MODESTO		SHALE	2.6	305.0	
83.4	MODESTO		COAL	0.2	307.6	
83.2	MODESTO		SHALE	18.3	307.8	
65.0	MODESTO		SHALE	27.0	326.0	
38.0	MODESTO		SHALE	22.5	353.0	
15.5	MODESTO		SANDY SHALE	2.4	375.5	WITH SANDSTONE PARTINGS
13.1	MODESTO		COAL	0.1	377.9	
13.0	MODESTO		SHALE	2.0	378.0	
11.0	MODESTO		SANDSTONE	6.0	380.0	
5.0	MODESTO		SHALE	11.0	386.0	
-6.0	MODESTO		SHALE	7.0	397.0	
-13.0	MODESTO		SHALE	1.3	404.0	
-14.3	MODESTO		COAL	0.9	405.3	

-15.3	MODESTO		SHALE	5.0	406.3	
-20.3	MODESTO		LIMESTONE	8.7	411.3	
-28.9	MODESTO		SANDSTONE WITH COAL	4.6	419.9	WITH 10" OF COAL
-33.5	MODESTO		SHALE	13.5	424.5	
-47.0	MODESTO		SANDY SHALE	7.0	438.0	WITH SANDSTONE PARTINGS
-54.0	MODESTO	DEGRAFF	COAL	0.9	445.0	
-54.9	MODESTO		SHALE	2.1	445.9	
-57.0	MODESTO	PIASA	LIMESTONE	3.0	448.0	
-60.0	MODESTO	PIASA	LIMESTONE	1.2	451.0	
-61.2	MODESTO		SHALE	1.3	452.2	
-62.5	MODESTO		SHALE	3.3	453.5	
-65.8	CARBONDALE	DANVILLE	COAL	1.9	456.8	
-67.7	CARBONDALE		SANDSTONE	0.3	458.7	
-68.0	CARBONDALE		SHALE	0.8	459.0	
-68.8	CARBONDALE		SANDSTONE	4.3	459.8	
-73.0	CARBONDALE		SHALE	0.4	464.0	
-73.4	CARBONDALE		SANDSTONE	11.6	464.4	
-85.0	CARBONDALE		SANDSTONE	1.0	476.0	
-86.0	CARBONDALE		SHALE	1.0	477.0	
-87.0	CARBONDALE	ALLENBY	COAL	0.8	478.0	
-87.8	CARBONDALE		SHALE	3.7	478.8	
-91.5	CARBONDALE	BANKSTON FORK	LIMESTONE	2.5	482.5	
-94.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.5	485.0	
-98.5	CARBONDALE		SHALE	10.5	489.5	
-109.0	CARBONDALE		SHALE	5.0	500.0	
-114.0	CARBONDALE		SANDY SHALE	8.0	505.0	
-122.0	CARBONDALE		SHALE	10.0	513.0	
-132.0	CARBONDALE		SHALE	4.0	523.0	
-136.0	CARBONDALE		SHALE	6.6	527.0	
-142.6	CARBONDALE	CONANT	LIMESTONE	0.8	533.6	
-143.4	CARBONDALE	JAMESTOWN	COAL	0.6	534.4	
-144.0	CARBONDALE		SHALE	0.3	535.0	
-144.3	CARBONDALE		LIMESTONE	0.3	535.3	
-144.5	CARBONDALE		SHALE	6.0	535.5	
-150.5	CARBONDALE	BRERETON	LIMESTONE	8.8	541.5	
-159.3	CARBONDALE	ENERGY	SHALE	1.7	550.3	
-161.0	CARBONDALE	ENERGY	SHALE	2.2	552.0	
-163.2	CARBONDALE	ENERGY	SHALE	0.7	554.2	
-163.8	CARBONDALE	HERRIN	COAL	9.9	554.8	
-173.8	CARBONDALE		SHALE	2.3	564.8	

MAPID: 05500133000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 4 **QUARTERS/FOOTAGES:** NW SE NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.876505 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.945942 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 391.0 **LOGGED (FT.):** 567.0 **LOG TYPE:**

SOURCE: DIAMOND **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-164.0	CARBONDALE	HERRIN	COAL	9.9	555.0	

MAPID: 05500789000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 4 **QUARTERS/FOOTAGES:** 370' S line, 50' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.891956 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.936904 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 412.0 **LOGGED (FT.):** 569.1 **LOG TYPE:** Survey Core Study

SOURCE: PEABODY COAL CO. 1 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-41.0	MODESTO	PIASA	LIMESTONE	4.2	453.0	
-45.3	MODESTO		DARK GRAY SHALE	4.8	457.3	
-50.0	CARBONDALE	DANVILLE	COAL	1.3	462.0	
-51.3	CARBONDALE		SANDSTONE/SILTSTONE	19.1	463.3	
-70.4	CARBONDALE	ALLENBY	COAL	0.6	482.4	
-71.0	CARBONDALE		CLAYSTONE & SHALE	5.6	483.0	
-76.5	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	5.8	488.5	
-82.3	CARBONDALE	LAWSON	SILTSTONE	3.5	494.3	
-85.9	CARBONDALE	LAWSON	GRAY SHALE	14.0	497.9	
-99.9	CARBONDALE	LAWSON	CARBONACEOUS SANDSTONE	3.0	511.9	
-102.8	CARBONDALE	LAWSON	SHALE & SANDSTONE	1.1	514.8	
-103.9	CARBONDALE	LAWSON	CALCAREOUS SANDSTONE	0.5	515.9	
-104.4	CARBONDALE	CONANT	LIMESTONE W/ SHALE	0.4	516.4	
-104.7	CARBONDALE	JAMESTOWN	BONE COAL	0.4	516.7	
-105.1	CARBONDALE		DARK GRAY SHALE	3.3	517.1	
-108.3	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	6.5	520.3	
-114.8	CARBONDALE	ANNA	BLACK SHALE	5.5	526.8	
-120.3	CARBONDALE	ENERGY	SILTY SHALE	17.3	532.3	
-137.5	CARBONDALE	ENERGY	DARK GRAY SHALE	11.5	549.5	
-149.0	CARBONDALE	HERRIN	COAL	8.1	561.0	

MAPID: 05501360000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 4 **QUARTERS/FOOTAGES:** 445' S line, 250' W line of SE SW
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.886461 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.937106 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 436.0 **LOGGED (FT.):** 3007.0 **LOG TYPE:** Electric Log
SOURCE: MOSEBACK PAUL **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-137.0	CARBONDALE	HERRIN	COAL	7.0	573.0	
-180.0	CARBONDALE	SPRINGFIELD	COAL	4.0	616.0	SHALE & SILTSTONE ROOF
-252.0	CARBONDALE	HOUCHIN CREEK	COAL	-	688.0	

MAPID: 05501542000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 4 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of SW SE
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.878889 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.936784 **DATE COLLECTED:** 8 / 0 / 1959
SURFACE ELEVATION (FT.): 409.0 **LOGGED (FT.):** 1650.0 **LOG TYPE:** Electric Log
SOURCE: NAT'L. ASSOC. PETRO. CO. **WELL TYPE:** Dry Hole
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-371.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	780.0	
-441.0	SPOON	DAVIS	UNCLASSIFIED	-	850.0	
-1241.0	BASE OF PENN.		UNCLASSIFIED	-	1650.0	

MAPID: 05502093000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 5 **QUARTERS/FOOTAGES:** 1010' N line, 500' W line of SW
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.90862 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.940422 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 382.0 **LOGGED (FT.):** 2940.0 **LOG TYPE:** Electric Log
SOURCE: REHN, E. E. **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-112.0	CARBONDALE	HERRIN	COAL	10.0	494.0	
-173.0	CARBONDALE	SPRINGFIELD	COAL	4.0	555.0	BLACK SHALE & LIMESTONE ROOF
-252.0	CARBONDALE	HOUCHIN CREEK	COAL	-	634.0	

MAPID: 05502570000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 5 **QUARTERS/FOOTAGES:** 955' N line, 1650' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.904662 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.947842 **DATE COLLECTED:** 10 / 0 / 1969

SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 1680.0 **LOG TYPE:** Electric Log

SOURCE: WISER OIL CO., THE **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-361.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	750.0	
-431.0	SPOON	DAVIS	UNCLASSIFIED	-	820.0	
-1291.0	BASE OF PENN.		UNCLASSIFIED	-	1680.0	

MAPID: 05502570000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 5 **QUARTERS/FOOTAGES:** 955' N line, 1650' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.904662 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.947842 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 389.0 **LOGGED (FT.):** 527.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-20.0	MODESTO	PIASA	LIMESTONE	5.0	409.0	
-25.0	MODESTO		SHALE	5.0	414.0	
-30.0	CARBONDALE	DANVILLE	COAL	1.0	419.0	
-31.0	CARBONDALE		SANDSTONE/SILTSTONE	24.0	420.0	
-55.0	CARBONDALE	ALLENBY	COAL	0.5	444.0	
-55.5	CARBONDALE		CLAYSTONE & SHALE	4.5	444.5	
-60.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	6.0	449.0	
-66.0	CARBONDALE	LAWSON	SHALE	31.0	455.0	
-97.0	CARBONDALE	CONANT	LIMESTONE W/ SHALE	0.5	486.0	
-97.5	CARBONDALE	JAMESTOWN	BONE COAL	0.5	486.5	
-98.0	CARBONDALE		SHALE	1.0	487.0	
-99.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	5.0	488.0	
-104.0	CARBONDALE	ANNA	BLACK SHALE	2.0	493.0	
-106.0	CARBONDALE	ENERGY	GRAY SHALE	25.0	495.0	
-131.0	CARBONDALE	HERRIN	COAL	7.0	520.0	

MAPID: 05500748000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 6 **QUARTERS/FOOTAGES:** 1642' S line, 650' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.926288 **GEOLOGIST:** HAMER

CONFIDENTIAL: N **LATITUDE:** 37.940324 **DATE COLLECTED:** 6 / 1 / 1944

SURFACE ELEVATION (FT.): 404.0 **LOGGED (FT.):** 570.7 **LOG TYPE:** Survey Core Study

SOURCE: CW & F COAL CO 20 **WELL TYPE:** Coal Test

COMMENT: INCLUDES DATA FROM DRILLER'S LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
404.0	PLEISTOCENE		CLAY	24.0	0.0	
380.0	PLEISTOCENE		SAND	28.0	24.0	QUICKSAND
352.0	PLEISTOCENE		CLAY	11.0	52.0	
341.0			LIMESTONE	0.3	63.0	
340.7			GRAY SHALE	11.8	63.3	ROTTEN
329.0			SHALE & SANDSTONE	10.8	75.0	LAMINATED;INTERBEDDED;CALCAREOUS
318.2			SHALE	5.2	85.8	CORE GAP;DATA FROM DRILLER'S LOG
313.0			GRAY SHALE	20.0	91.0	PLANTS & TREES
293.0			SHALE & SANDSTONE	27.7	111.0	CALCAREOUS VEINS & LAMINATED
265.3			SANDSTONE	47.7	138.7	MASSIVE,COARSE,NON-CALCAREOUS
217.7			SHALE & SANDSTONE	1.8	186.3	INTERLAMINATED
215.8			SANDSTONE	3.9	188.2	MASSIVE,COARSE,NON-CALCAREOUS
211.9			CONGLOMERATE	0.1	192.1	IRONSTONE CONCRETIONS
211.8			GRAY SHALE	7.9	192.2	DARK,SMOOTH
203.9			SHALE	3.7	200.1	BLACK,CALCAREOUS,FISSILE AT BASE
200.2			SANDSTONE	0.6	203.8	CALCAREOUS,CARBONACEOUS
199.7			SHALE	2.8	204.3	PLANTS IN BASAL 1'; BLACK
196.9			GRAY SHALE	0.6	207.1	DARK,PLANTS
196.4	MODESTO	CHAPEL	BONE COAL	0.0	207.6	
196.3	MODESTO	CHAPEL	COAL	0.3	207.7	
196.1	MODESTO		UNDERCLAY	6.1	207.9	THICKNESS ADJUSTED
190.0	MODESTO		SHALE	11.3	214.0	WITH SANDY LAMINAE
178.7	MODESTO		SHALE	6.0	225.3	SANDY; WTIH CALCAREOUS SANDY LAMINAE
172.7	MODESTO		GRAY SHALE	11.0	231.3	CALCAREOUS SANDY LAMINAE;SOME CROSS-BEDS
161.7	MODESTO		SILTSTONE	46.7	242.3	LAMINATION DEVELOPS DOWNWARD
115.0	MODESTO		GRAY SHALE	17.5	289.0	SILTY;FINE SANDSTONE LAMINAE
97.5	MODESTO		GRAY SHALE	0.5	306.5	CORE GAP; DATA FROM DRILLERS LOG
97.0	MODESTO		GRAY SHALE	20.0	307.0	FINE,DARK,SILTSTONE LAMINAE
77.0	MODESTO		GRAY SHALE	18.0	327.0	FINE
59.0	MODESTO		GRAY SHALE	2.0	345.0	CORE GAP;DATA FROM DRILLERS LOG
57.0	MODESTO		GRAY SHALE	1.1	347.0	
55.9	MODESTO		GRAY SHALE	0.8	348.1	DARK,CARBONACEOUS,SOFT
55.1	MODESTO		SHALE	0.2	348.9	DARK, CALCAREOUS
54.9	MODESTO		GRAY SHALE	0.7	349.1	DARK TO BLACK,PYRITE
54.2	MODESTO		UNDERCLAY	2.5	349.8	
51.7	MODESTO		LIMESTONE	0.2	352.3	NODULAR
51.5	MODESTO		SANDSTONE	8.0	352.5	FINE,ARGILLACEOUS

43.6	MODESTO		GRAY SHALE	6.4	360.4	SILT/SANDSTONE CALCAREOUS LAMINAE
37.2	MODESTO		GRAY SHALE	7.2	366.8	DARK TO BLACK
30.0	MODESTO		SHALE	5.4	374.0	PYRITE TRAILS; BLACK
24.6	MODESTO		COAL	0.9	379.4	
23.7	MODESTO		UNDERCLAY	3.9	380.3	
19.7	MODESTO		SHALE	1.3	384.3	
18.5	MODESTO		SILTSTONE/SANDSTONE	17.3	385.5	INTERBEDDED, LAMINATED
1.2	MODESTO		GRAY SHALE	10.2	402.8	DARK,CONCRETIONS
-9.0	MODESTO		SHALE	1.5	413.0	PYRITE; BLACK
-10.5	MODESTO		SHALE	0.3	414.5	
-10.8	MODESTO		COAL	0.6	414.8	
-11.4	MODESTO		UNDERCLAY	2.4	415.4	CALCAREOUS AT BASE
-13.8	MODESTO	PIASA	LIMESTONE	2.8	417.8	
-16.5	MODESTO		GRAY SHALE	0.1	420.5	CALCAREOUS
-16.6	MODESTO		LIMESTONE	0.3	420.6	ARGILLACEOUS
-16.9	MODESTO		GRAY SHALE	0.1	420.9	SOFT CALCAREOUS
-17.0	MODESTO		GRAY SHALE	0.3	421.0	DARK TO BLACK
-17.3	MODESTO		GRAY SHALE	2.0	421.3	LAMINATED SOFT
-19.3	MODESTO		SHALE	1.2	423.3	PYRITE; BLACK
-20.4	CARBONDALE	DANVILLE	COAL	0.6	424.4	
-21.0	CARBONDALE		SILTSTONE	3.7	425.0	
-24.7	CARBONDALE		GRAY SHALE	0.4	428.7	HARD
-25.1	CARBONDALE		SANDSTONE	2.5	429.1	
-27.5	CARBONDALE		SILTSTONE	0.3	431.5	
-27.8	CARBONDALE		GRAY SHALE	6.2	431.8	
-34.0	CARBONDALE		COAL	0.1	438.0	
-34.1	CARBONDALE		UNDERCLAY	2.8	438.1	
-37.0	CARBONDALE		GRAY SHALE	0.8	441.0	DARK,PYRITIC,CARBONACEOUS
-37.7	CARBONDALE		COAL	0.5	441.7	
-38.2	CARBONDALE		UNDERCLAY	6.5	442.2	THICKNESS ADJUSTED
-44.8	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	448.8	PALE,ARGILLACEOUS
-46.3	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	450.3	DENSE
-50.3	CARBONDALE		SILTSTONE	4.0	454.3	
-54.3	CARBONDALE		GRAY SHALE	32.1	458.3	
-86.5	CARBONDALE	BRERETON	LIMESTONE	2.3	490.5	ARGILLACEOUS,CARBONACEOUS
-88.8	CARBONDALE	ANNA	SHALE	5.2	492.8	PYRITE; BLACK
-94.0	CARBONDALE	ENERGY	GRAY SHALE	21.6	498.0	THICKNESS ADJUSTED
-115.6	CARBONDALE	HERRIN	COAL	9.4	519.6	CORE GAP;THICKNESS FROM DRILLER'S LOG
-125.0	CARBONDALE		UNDERCLAY	4.3	529.0	LIMESTONE NODULES
-129.3	CARBONDALE		SHALE	0.0	533.3	WITH SOME COAL ZONES; BLACK
-129.3	CARBONDALE		UNDERCLAY	0.2	533.3	
-129.5	CARBONDALE		SANDSTONE	6.8	533.5	CARBONACEOUS LAMINAE
-136.3	CARBONDALE		GRAY SHALE	2.9	540.3	DARK,LAMINATED
-139.2	CARBONDALE		SHALE	3.6	543.2	PYRITE; BLACK
-142.8	CARBONDALE	ST. DAVID	LIMESTONE	2.0	546.8	ARGILLACEOUS
-144.7	CARBONDALE	TURNER MINE	SHALE	5.0	548.7	PYRITE; BLACK

-149.7	CARBONDALE	DYKERSBURG	GRAY SHALE	6.0	553.7	PYRITE
-155.7	CARBONDALE	DYKERSBURG	GRAY SHALE	1.0	559.7	HARD
-156.7	CARBONDALE	SPRINGFIELD	COAL	4.3	560.7	
-161.0	CARBONDALE		UNDERCLAY	4.7	565.0	DATA ROM DRILLER'S LOG DEPTH ADJUSTED
-165.7	CARBONDALE		SANDSTONE	1.0	569.7	

MAPID: 05500748000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 6 **QUARTERS/FOOTAGES:** 1642' S line, 650' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.926288 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.940324 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 404.0 **LOGGED (FT.):** 531.4 **LOG TYPE:** Survey Core Study

SOURCE: C.W.&F. COAL CO. 20 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-13.3	MODESTO	PIASA	LIMESTONE	3.1	417.3	
-16.4	MODESTO		SHALE	4.5	420.4	
-20.9	CARBONDALE	DANVILLE	COAL	0.6	424.9	
-21.5	CARBONDALE		SANDSTONE/SILTSTONE	17.3	425.5	
-38.8	CARBONDALE	ALLENBY	COAL	0.5	442.8	
-39.3	CARBONDALE		CLAYSTONE & SHALE	5.0	443.3	
-44.3	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	5.6	448.3	
-49.9	CARBONDALE	LAWSON	SILTSTONE	4.0	453.9	
-53.9	CARBONDALE	LAWSON	GRAY SHALE	3.0	457.9	
-56.9	CARBONDALE	LAWSON	DARK GRAY SHALE	12.7	460.9	
-69.6	CARBONDALE	LAWSON	GRAY SHALE	13.8	473.6	
-83.3	CARBONDALE	LAWSON	DARK GRAY SHALE	2.8	487.3	
-86.1	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	2.3	490.1	
-88.4	CARBONDALE	ANNA	BLACK SHALE	4.6	492.4	
-93.0	CARBONDALE	ENERGY	GRAY SHALE	25.0	497.0	
-118.0	CARBONDALE	HERRIN	COAL	9.4	522.0	

MAPID: 05502029000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 6 **QUARTERS/FOOTAGES:** 350' N line, 350' W line of SW SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.927324 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.938436 **DATE COLLECTED:** 11 / 0 / 1962

SURFACE ELEVATION (FT.): 404.0 **LOGGED (FT.):** 1720.0 **LOG TYPE:** Electric Log

SOURCE: R. K. PETROLEUM CORP. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-1316.0	BASE OF PENN.		UNCLASSIFIED	-	1720.0	

MAPID: 05502039000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 6 **QUARTERS/FOOTAGES:** 325' N line, 525' W line of SW NW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.926754 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.94576 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 408.0 **LOGGED (FT.):** 2859.0 **LOG TYPE:** Electric Log

SOURCE: R. K. PETROLEUM CORP. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-111.0	CARBONDALE	HERRIN	COAL	8.0	519.0	
-167.0	CARBONDALE	SPRINGFIELD	COAL	4.0	575.0	BLACK SHALE & LIMESTONE ROOF
-246.0	CARBONDALE	HOUCHIN CREEK	COAL	-	654.0	

MAPID: 05501934000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 7 **QUARTERS/FOOTAGES:** 330' N line, 440' W line of SE NW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.922431 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.931388 **DATE COLLECTED:** 8 / 0 / 1961

SURFACE ELEVATION (FT.): 404.0 **LOGGED (FT.):** 1660.0 **LOG TYPE:** Electric Log

SOURCE: REHN, E. E. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1256.0	BASE OF PENN.		UNCLASSIFIED	-	1660.0	

MAPID: 05500025601M **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 8 **QUARTERS/FOOTAGES:** SE SE SE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.893215 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.922798 **DATE COLLECTED:** 0 / 0 / 1907

SURFACE ELEVATION (FT.): 404.5 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: ISGS MINE NOTES - PEABODY MINE 18 **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-99.5	CARBONDALE	HERRIN	COAL	8.1	504.0	

MAPID: 05500134000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 8 **QUARTERS/FOOTAGES:** SE NE SE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.893231 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.926287 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 522.0 **LOG TYPE:** Drillers Log

SOURCE: DERING COAL CO. 34 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
407.0	PLEISTOCENE		UNCONSOLIDATED	6.0	0.0	
401.0	PLEISTOCENE		SAND	14.0	6.0	
387.0	PLEISTOCENE		GRAVEL	5.0	20.0	
382.0	PLEISTOCENE		SAND	5.0	25.0	
377.0	PLEISTOCENE		GLACIAL DRIFT	40.0	30.0	
337.0	MODESTO		SANDY SHALE	2.0	70.0	
335.0	MODESTO		COAL	0.5	72.0	
334.5	MODESTO		SANDY SHALE	3.5	72.5	
331.0	MODESTO		COAL	0.3	76.0	
330.7	MODESTO		SANDY SHALE	19.8	76.3	
311.0	MODESTO		SANDSTONE	69.0	96.0	
242.0	MODESTO		SANDY SHALE	5.0	165.0	
237.0	MODESTO		SANDSTONE	10.0	170.0	
227.0	MODESTO		SANDY SHALE	5.0	180.0	
222.0	MODESTO		SANDSTONE	35.0	185.0	
187.0	MODESTO		SHALE	15.0	220.0	
172.0	MODESTO		SANDSTONE	45.0	235.0	
127.0	MODESTO		SHALE	46.0	280.0	
81.0	MODESTO		SHALE	2.0	326.0	
79.0	MODESTO		SHALE	7.0	328.0	LIGHT
72.0	MODESTO		LIMESTONE	3.0	335.0	
69.0	MODESTO		SHALE	6.0	338.0	LIGHT
63.0	MODESTO		SHALE	10.0	344.0	
53.0	MODESTO		BLACK SHALE	1.5	354.0	
51.5	MODESTO		COAL	0.5	355.5	
51.0	MODESTO		CLAYSTONE	4.0	356.0	
47.0	MODESTO		SHALE	5.0	360.0	
42.0	MODESTO		LIMESTONE	3.0	365.0	
39.0	MODESTO		SHALE	14.5	368.0	LIGHT
24.5	MODESTO		BLACK SHALE	9.8	382.5	
14.7	MODESTO		COAL	0.5	392.3	
14.2	MODESTO		CLAYSTONE	2.8	392.8	BROWN
11.5	MODESTO	PIASA	LIMESTONE	5.5	395.5	
6.0	MODESTO		BLACK SHALE	4.0	401.0	
2.0	CARBONDALE	DANVILLE	COAL	1.5	405.0	
0.5	CARBONDALE		CLAYSTONE	2.5	406.5	
-2.0	CARBONDALE		SANDSTONE/COAL	20.0	409.0	
-22.0	CARBONDALE		SHALE	1.0	429.0	LIGHT
-23.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.5	430.0	

-30.5	CARBONDALE		SHALE	3.5	437.5	LIGHT
-34.0	CARBONDALE		SHALE	29.0	441.0	
-63.0	CARBONDALE		BLACK SHALE	3.5	470.0	
-66.5	CARBONDALE		LIMESTONE	5.0	473.5	
-71.5	CARBONDALE		BLACK SHALE	3.0	478.5	
-74.5	CARBONDALE		COAL	0.5	481.5	
-75.0	CARBONDALE		CLAYSTONE	4.0	482.0	
-79.0	CARBONDALE		BLACK SHALE	24.8	486.0	
-103.8	CARBONDALE	HERRIN	COAL	6.7	510.8	
-110.5	CARBONDALE	HERRIN	CLAYSTONE	0.3	517.5	
-110.8	CARBONDALE	HERRIN	COAL	2.9	517.8	
-113.7	CARBONDALE		CLAYSTONE	1.3	520.7	

MAPID: 05500134000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 8 **QUARTERS/FOOTAGES:** SE NE SE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.893231 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.926287 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 522.0 **LOG TYPE:**

SOURCE: PEABODY 0034 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-104.0	CARBONDALE	HERRIN	COAL	9.8	511.0	

MAPID: 05500135000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 8 **QUARTERS/FOOTAGES:** 190' S line, 240' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.892911 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.922451 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 404.0 **LOGGED (FT.):** 518.0 **LOG TYPE:**

SOURCE: PEABODY 0033 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-98.0	CARBONDALE	HERRIN	COAL	10.3	502.0	

MAPID: 05500135000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 8 **QUARTERS/FOOTAGES:** 190' S line, 240' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.892911 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.922451 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 404.0 **LOGGED (FT.):** 512.3 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
23.3	MODESTO	PIASA	LIMESTONE	6.5	380.7	
16.8	MODESTO		BLACK SHALE	6.2	387.2	
10.7	CARBONDALE	DANVILLE	COAL	1.8	393.3	
8.8	CARBONDALE		SHALE & SANDSTONE	21.5	395.2	
-12.7	CARBONDALE	BANKSTON FORK	LIMESTONE	5.8	416.7	
-18.4	CARBONDALE	LAWSON	GRAY SHALE	35.3	422.4	
-53.7	CARBONDALE	LAWSON	SANDSTONE	1.5	457.7	
-55.2	CARBONDALE	JAMESTOWN	COAL	0.5	459.2	
-55.7	CARBONDALE		BLACK SHALE	1.5	459.7	
-57.2	CARBONDALE	BRERETON	LIMESTONE	5.0	461.2	
-62.2	CARBONDALE	ANNA	BLACK SHALE	6.0	466.2	
-68.2	CARBONDALE	ENERGY	GRAY SHALE	29.8	472.2	
-98.0	CARBONDALE	HERRIN	COAL	10.3	502.0	

MAPID: 05500135000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 8 **QUARTERS/FOOTAGES:** 190' S line, 240' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.892911 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.922451 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 404.0 **LOGGED (FT.):** 517.7 **LOG TYPE:** Drillers Log

SOURCE: DERING COAL CO. 33 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
404.0	PLEISTOCENE		UNCONSOLIDATED	3.0	0.0	
401.0	PLEISTOCENE		SAND	17.0	3.0	
384.0	PLEISTOCENE		GRAVEL	6.0	20.0	
378.0	PLEISTOCENE		SAND	14.0	26.0	
364.0	PLEISTOCENE		UNCONSOLIDATED	10.0	40.0	
354.0	PLEISTOCENE		UNCONSOLIDATED	10.5	50.0	
343.5	MODESTO		SHALE	25.5	60.5	
318.0	MODESTO		SANDSTONE	148.0	86.0	
170.0	MODESTO		SANDSTONE	12.0	234.0	
158.0	MODESTO		SANDSTONE	10.0	246.0	
148.0	MODESTO		SANDY SHALE	30.0	256.0	
118.0	MODESTO		SHALE	24.0	286.0	
94.0	MODESTO		BLACK SHALE	3.5	310.0	
90.5	MODESTO		COAL	0.5	313.5	
90.0	MODESTO		CLAYSTONE	2.0	314.0	
88.0	MODESTO		CALCAREOUS SHALE	10.0	316.0	
78.0	MODESTO		SHALE	12.0	326.0	
66.0	MODESTO		BLACK SHALE	4.0	338.0	
62.0	MODESTO		COAL	1.5	342.0	
60.5	MODESTO		CLAYSTONE	3.5	343.5	
57.0	MODESTO		SANDSTONE	9.0	347.0	
48.0	MODESTO		SHALE	4.0	356.0	LIGHT
44.0	MODESTO		LIMESTONE	2.5	360.0	
41.5	MODESTO		CALCAREOUS SHALE	3.5	362.5	
38.0	MODESTO		SHALE	12.0	366.0	LIGHT BLUE
26.0	MODESTO		BLACK SHALE	2.0	378.0	
24.0	MODESTO	DEGRAFF	COAL	0.2	380.0	
23.8	MODESTO		CLAYSTONE	0.8	380.2	
23.0	MODESTO	PIASA	LIMESTONE	6.5	381.0	
16.5	MODESTO		SHALE	2.5	387.5	
14.0	MODESTO		BLACK SHALE	3.7	390.0	
10.3	CARBONDALE	DANVILLE	COAL	1.8	393.7	
8.5	CARBONDALE		CLAYSTONE	2.0	395.5	
6.5	CARBONDALE		SANDSTONE	4.5	397.5	
2.0	CARBONDALE		SHALE	3.0	402.0	
-1.0	CARBONDALE		SANDSTONE	8.0	405.0	
-9.0	CARBONDALE		SHALE	4.0	413.0	LIGHT-DARK
-13.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.8	417.0	
-18.8	CARBONDALE		SHALE	5.3	422.8	LIGHT

-24.0	CARBONDALE		SHALE	30.0	428.0
-54.0	CARBONDALE		SANDSTONE	1.5	458.0
-55.5	CARBONDALE	JAMESTOWN	COAL	0.5	459.5
-56.0	CARBONDALE		BLACK SHALE	1.5	460.0
-57.5	CARBONDALE	BRERETON	LIMESTONE	5.0	461.5
-62.5	CARBONDALE		BLACK SHALE	2.5	466.5
-65.0	CARBONDALE		ROCK	1.0	469.0
-66.0	CARBONDALE		BLACK SHALE	2.5	470.0
-68.5	CARBONDALE		SHALE	12.5	472.5
-81.0	CARBONDALE		BLACK SHALE	17.3	485.0
-98.3	CARBONDALE	HERRIN	COAL	10.3	502.3
-108.7	CARBONDALE		SHALE	5.0	512.7

MAPID: 05501361000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 8 **QUARTERS/FOOTAGES:** 1228' S line, 350' E line of NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.89334 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.932298 **DATE COLLECTED:** 11 / 0 / 1957

SURFACE ELEVATION (FT.): 403.0 **LOGGED (FT.):** 1695.0 **LOG TYPE:** Electric Log

SOURCE: DUNCAN, WALTER **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-361.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	764.0	
-429.0	SPOON	DAVIS	UNCLASSIFIED	-	832.0	
-1292.0	BASE OF PENN.		UNCLASSIFIED	-	1695.0	

MAPID: 05501361000C **VERSION:** 2 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 8 **QUARTERS/FOOTAGES:** 1228' S line, 350' E line of NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.89334 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.932298 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 403.0 **LOGGED (FT.):** 2990.0 **LOG TYPE:** Electric Log

SOURCE: DUNCAN, WALTER **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-130.0	CARBONDALE	HERRIN	COAL	10.0	533.0	
-173.0	CARBONDALE	SPRINGFIELD	COAL	3.0	576.0	BLACK SHALE & LIMESTONE ROOF
-249.0	CARBONDALE	HOUCHIN CREEK	COAL	-	652.0	

MAPID: 05501418000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 8 **QUARTERS/FOOTAGES:** 100' N line, 330' E line of SE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.893253 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.928631 **DATE COLLECTED:** 12 / 0 / 1958

SURFACE ELEVATION (FT.): 413.0 **LOGGED (FT.):** 1700.0 **LOG TYPE:** Electric Log

SOURCE: DUNCAN, WALTER **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1287.0	BASE OF PENN.		UNCLASSIFIED	-	1700.0	

MAPID: 05501362000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 9 **QUARTERS/FOOTAGES:** 160' S line, 440' E line of NW NW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.888857 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.932826 **DATE COLLECTED:** 12 / 0 / 1957

SURFACE ELEVATION (FT.): 414.0 **LOGGED (FT.):** 1704.0 **LOG TYPE:** Electric Log

SOURCE: MOSEBACK PAUL **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1290.0	BASE OF PENN.		UNCLASSIFIED	-	1704.0	

MAPID: 05501395000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 9 **QUARTERS/FOOTAGES:** 1040' N line, 1650' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.886374 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.933006 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 417.0 **LOGGED (FT.):** 2814.0 **LOG TYPE:** Electric Log

SOURCE: MOSEBACK PAUL **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-130.0	CARBONDALE	HERRIN	COAL	9.0	547.0	
-180.0	CARBONDALE	SPRINGFIELD	COAL	4.0	597.0	SHALE & SILTSTONE ROOF
-255.0	CARBONDALE	HOUCHIN CREEK	COAL	-	672.0	

MAPID: 05501395000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 9 **QUARTERS/FOOTAGES:** 1040' N line, 1650' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.886374 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.933006 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 417.0 **LOGGED (FT.):** 556.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-20.0	MODESTO	PIASA	LIMESTONE	6.0	437.0	
-26.0	MODESTO		BLACK SHALE	4.5	443.0	
-30.5	CARBONDALE	DANVILLE	COAL	2.5	447.5	
-33.0	CARBONDALE		SHALE & SANDSTONE	17.0	450.0	
-50.0	CARBONDALE	ALLENBY	COAL	1.0	467.0	
-51.0	CARBONDALE		CLAYSTONE & SHALE	3.0	468.0	
-54.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	471.0	
-61.0	CARBONDALE	LAWSON	SHALE	19.0	478.0	
-80.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	21.0	497.0	
-101.0	CARBONDALE	JAMESTOWN	COAL	0.5	518.0	
-101.5	CARBONDALE		BLACK SHALE	1.5	518.5	
-103.0	CARBONDALE	BRERETON	LIMESTONE	5.0	520.0	
-108.0	CARBONDALE	ANNA	BLACK SHALE	3.0	525.0	
-111.0	CARBONDALE	ENERGY	GRAY SHALE	19.0	528.0	
-130.0	CARBONDALE	HERRIN	COAL	9.0	547.0	

MAPID: 05500136000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 10 **QUARTERS/FOOTAGES:** 990' N line, 990' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.869474 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.933191 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 424.0 **LOGGED (FT.):** 567.0 **LOG TYPE:**

SOURCE: PEABODY 0035 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-133.0	CARBONDALE	HERRIN	COAL	8.1	557.0	

MAPID: 05500136000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 10 **QUARTERS/FOOTAGES:** 990' N line, 990' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.869474 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.933191 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 424.0 **LOGGED (FT.):** 565.1 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-27.0	MODESTO	PIASA	LIMESTONE	4.0	451.0	
-31.0	MODESTO		DARK GRAY SHALE	3.0	455.0	
-34.0	CARBONDALE	DANVILLE	COAL	2.0	458.0	
-36.0	CARBONDALE		GRAY SHALE	21.0	460.0	
-57.0	CARBONDALE	ALLENBY	COAL	1.0	481.0	
-58.0	CARBONDALE		CLAYSTONE & SHALE	6.0	482.0	
-64.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	488.0	
-69.5	CARBONDALE	LAWSON	SILTY SHALE	47.5	493.5	
-117.0	CARBONDALE	JAMESTOWN	COAL	0.3	541.0	
-117.3	CARBONDALE		SHALE & SANDSTONE	5.8	541.3	
-123.0	CARBONDALE	BRERETON	LIMESTONE	8.0	547.0	
-131.0	CARBONDALE	ANNA	BLACK SHALE	2.3	555.0	
-133.0	CARBONDALE	HERRIN	COAL	8.1	557.0	

MAPID: 05500136000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 10 **QUARTERS/FOOTAGES:** 990' N line, 990' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.869474 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.933191 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 424.0 **LOGGED (FT.):** 567.0 **LOG TYPE:** Drillers Log

SOURCE: DERING COAL CO. 35 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
424.0	PLEISTOCENE		UNCONSOLIDATED	3.0	0.0	
421.0	MODESTO		SANDSTONE	12.0	3.0	WITH HARDPAN
409.0	MODESTO		BLACK SHALE	5.0	15.0	
404.0	MODESTO		CLAYSTONE	0.5	20.0	
403.5	MODESTO		SANDY SHALE	11.0	20.5	
392.5	MODESTO		COAL	0.6	31.5	
391.9	MODESTO		CLAYSTONE	1.2	32.1	
390.7	MODESTO		SANDSTONE	3.0	33.3	
387.7	MODESTO		BLACK SHALE	46.0	36.3	
341.7	MODESTO		COAL	0.3	82.3	
341.4	MODESTO		BLACK SHALE	2.4	82.6	
339.0	MODESTO		LIMESTONE	1.7	85.0	
337.3	MODESTO		SANDY SLATE	4.0	86.7	
333.3	MODESTO		BLACK SHALE	20.2	90.7	
313.2	MODESTO		COAL	1.3	110.8	
311.8	MODESTO		CLAYSTONE	0.5	112.2	
311.3	MODESTO		SHALE	4.0	112.7	LIGHT
307.3	MODESTO		SANDSTONE	107.3	116.7	
200.0	MODESTO		BLACK SHALE	7.0	224.0	
193.0	MODESTO	CHAPEL	COAL	0.3	231.0	
192.7	MODESTO	CHAPEL	COAL W/ BLACK SHALE	1.5	231.3	WITH SLATE
191.2	MODESTO		CLAYSTONE	0.6	232.8	
190.6	MODESTO		SHALE	3.0	233.4	LIGHT
187.6	MODESTO		SANDSTONE	15.6	236.4	
172.0	MODESTO		SHALE	20.0	252.0	
152.0	MODESTO		SANDSTONE	44.0	272.0	
108.0	MODESTO		SANDY SHALE	5.0	316.0	
103.0	MODESTO		SANDSTONE	8.0	321.0	
95.0	MODESTO		SANDY SHALE	5.5	329.0	
89.5	MODESTO		LIMESTONE	2.0	334.5	
87.5	MODESTO		SHALE	35.5	336.5	
52.0	MODESTO		BLACK SHALE	3.5	372.0	
48.5	MODESTO		COAL	0.3	375.5	
48.2	MODESTO		CLAYSTONE	0.6	375.8	
47.6	MODESTO		SHALE	5.6	376.4	LIGHT
42.0	MODESTO		BLACK SHALE	9.0	382.0	
33.0	MODESTO		BLACK SHALE	12.5	391.0	
20.5	MODESTO		COAL	0.5	403.5	
20.0	MODESTO		CLAYSTONE	1.5	404.0	

18.5	MODESTO		SHALE	3.5	405.5	LIGHT
15.0	MODESTO		LIMESTONE	1.0	409.0	
14.0	MODESTO		SHALE	1.5	410.0	
12.5	MODESTO		LIMESTONE	0.7	411.5	
11.8	MODESTO		SHALE	10.0	412.2	LIGHT
1.8	MODESTO		BLACK SHALE	26.8	422.2	
-25.0	MODESTO		COAL	0.5	449.0	
-25.5	MODESTO		CLAYSTONE	0.5	449.5	
-26.0	MODESTO		SHALE	1.0	450.0	
-27.0	MODESTO		LIMESTONE	4.0	451.0	
-31.0	MODESTO		SHALE	1.0	455.0	
-32.0	MODESTO		BLACK SHALE	2.0	456.0	
-34.0	CARBONDALE	DANVILLE	COAL	2.0	458.0	
-36.0	CARBONDALE		CLAYSTONE	0.5	460.0	
-36.5	CARBONDALE		SHALE	5.5	460.5	
-42.0	CARBONDALE		SHALE	15.0	466.0	
-57.0	CARBONDALE	ALLENBY	COAL	1.0	481.0	
-58.0	CARBONDALE		CLAYSTONE	2.0	482.0	
-60.0	CARBONDALE		SANDSTONE	4.0	484.0	
-64.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	488.0	
-69.5	CARBONDALE		SANDY SLATE	47.5	493.5	
-117.0	CARBONDALE	JAMESTOWN	COAL	0.3	541.0	
-117.3	CARBONDALE		SANDSTONE	1.3	541.3	
-118.5	CARBONDALE		BLACK SHALE	2.5	542.5	
-121.0	CARBONDALE		BLACK SHALE	2.0	545.0	
-123.0	CARBONDALE	BRERETON	LIMESTONE	8.0	547.0	
-131.0	CARBONDALE	ANNA	BLACK SHALE	1.5	555.0	
-132.5	CARBONDALE		PYRITE	0.8	556.5	
-133.3	CARBONDALE	HERRIN	COAL	8.1	557.3	
-141.3	CARBONDALE		CLAYSTONE	1.7	565.3	

MAPID: 05501960000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 11 **QUARTERS/FOOTAGES:** 170' S line, 890' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.851023 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.922525 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 415.0 **LOGGED (FT.):** 3079.0 **LOG TYPE:** Electric Log

SOURCE: MOHAWK DRILLING CO **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-125.0	CARBONDALE	HERRIN	COAL	9.0	540.0	
-165.0	CARBONDALE	SPRINGFIELD	COAL	3.0	580.0	SHALE & SILTSTONE ROOF
-235.0	CARBONDALE	HOUCHIN CREEK	COAL	-	650.0	

MAPID: 05501960000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 11 **QUARTERS/FOOTAGES:** 170' S line, 890' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.851023 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.922525 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 415.0 **LOGGED (FT.):** 550.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-10.0	MODESTO	PIASA	LIMESTONE & SHALE	5.0	425.0	
-15.0	MODESTO		DARK GRAY SHALE	6.0	430.0	
-21.0	CARBONDALE	DANVILLE	COAL	2.0	436.0	
-23.0	CARBONDALE		SHALE & SANDSTONE	16.0	438.0	
-39.0	CARBONDALE	ALLENBY	COAL	1.0	454.0	
-40.0	CARBONDALE		CLAYSTONE & SHALE	7.0	455.0	
-47.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	462.0	
-53.0	CARBONDALE	LAWSON	SILTY SHALE	24.0	468.0	
-77.0	CARBONDALE	LAWSON	SANDSTONE	8.0	492.0	
-85.0	CARBONDALE	LAWSON	SHALE	13.0	500.0	
-98.0	CARBONDALE	JAMESTOWN	COAL	1.0	513.0	
-99.0	CARBONDALE		BLACK SHALE	2.0	514.0	
-101.0	CARBONDALE	BRERETON	LIMESTONE	6.0	516.0	
-107.0	CARBONDALE	ANNA	BLACK SHALE	3.0	522.0	
-110.0	CARBONDALE	ENERGY	GRAY SHALE	15.0	525.0	
-125.0	CARBONDALE	HERRIN	COAL	10.0	540.0	

MAPID: 05501960000C **VERSION:** 3 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 11 **QUARTERS/FOOTAGES:** 170' S line, 890' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.851023 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.922525 **DATE COLLECTED:** 10 / 0 / 1961

SURFACE ELEVATION (FT.): 415.0 **LOGGED (FT.):** 1744.0 **LOG TYPE:** Electric Log

SOURCE: MOHAWK DRILLING CO **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-355.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	770.0	
-429.0	SPOON	DAVIS	UNCLASSIFIED	-	844.0	
-1329.0	BASE OF PENN.		UNCLASSIFIED	-	1744.0	

MAPID: 05523318000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 11 **QUARTERS/FOOTAGES:** SW SW NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.843813 **GEOLOGIST:** NORTH

CONFIDENTIAL: N **LATITUDE:** 37.93009 **DATE COLLECTED:** 2 / 15 / 1982

SURFACE ELEVATION (FT.): 428.0 **LOGGED (FT.):** 630.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. RLC 6 **WELL TYPE:** Coal Test

COMMENT: PERMIT 30

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
428.0	PLEISTOCENE		CLAY	22.0	0.0	
406.0	BOND	CARTHAGE	LIMESTONE	5.0	22.0	
401.0	MODESTO		SHALE	5.0	27.0	BLACK
396.0	MODESTO		SHALE	100.0	32.0	GRAY
296.0	MODESTO		SHALE	7.0	132.0	BLACK
289.0	MODESTO		SHALE	16.0	139.0	GRAY
273.0	MODESTO		LIMESTONE	2.0	155.0	
271.0	MODESTO		SHALE	81.0	157.0	SANDY; GRAY
190.0	MODESTO	TRIVOLI	SANDSTONE	77.0	238.0	
113.0	MODESTO		SHALE	49.0	315.0	GRAY
64.0	MODESTO		SANDSTONE	20.0	364.0	
44.0	MODESTO		SHALE	25.0	384.0	SANDY; GRAY
19.0	MODESTO		SANDSTONE	14.0	409.0	
5.0	MODESTO		SHALE	22.0	423.0	SANDY; GRAY
-17.0	MODESTO		LIMESTONE	3.0	445.0	
-20.0	MODESTO		SANDSTONE/SHALE	32.0	448.0	
-52.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	480.0	
-57.0	CARBONDALE		SHALE	42.0	485.0	GRAY
-99.0	CARBONDALE		SHALE	6.0	527.0	BLACK
-105.0	CARBONDALE	BRERETON	LIMESTONE	2.5	533.0	
-107.5	CARBONDALE		UNKNOWN	8.0	535.5	
-115.5	CARBONDALE	HERRIN	COAL	6.7	543.5	
-122.2	CARBONDALE		UNKNOWN	4.8	550.2	
-127.0	CARBONDALE		SANDSTONE	11.0	555.0	
-138.0	CARBONDALE	CANTON	SHALE	9.0	566.0	GRAY
-147.0	CARBONDALE		SHALE	3.0	575.0	BLACK
-150.0	CARBONDALE	ST. DAVID	LIMESTONE	3.0	578.0	
-153.0	CARBONDALE	TURNER MINE	SHALE	8.0	581.0	BLACK
-161.0	CARBONDALE	DYKERSBURG	SHALE	11.4	589.0	GRAY
-172.4	CARBONDALE	SPRINGFIELD	COAL	4.2	600.4	
-176.6	CARBONDALE		UNDERCLAY	4.3	604.6	
-180.9	CARBONDALE		SANDSTONE	5.2	608.9	
-186.1	CARBONDALE		UNKNOWN	15.9	614.1	

MAPID: 05500771000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 12 **QUARTERS/FOOTAGES:** 30' S line, 30' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.835461 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.922303 **DATE COLLECTED:** 7 / 20 / 1945

SURFACE ELEVATION (FT.): 412.0 **LOGGED (FT.):** 512.2 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 47 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-0.6	MODESTO	PIASA	LIMESTONE	2.4	412.6	
-3.0	MODESTO		SHALE	4.8	415.0	
-7.9	CARBONDALE	DANVILLE	COAL	2.3	419.9	
-10.2	CARBONDALE		SHALE & SANDSTONE	17.6	422.2	
-27.8	CARBONDALE	ALLENBY	COAL	0.5	439.8	
-28.3	CARBONDALE		CLAYSTONE & SHALE	6.8	440.3	
-35.1	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	3.2	447.1	
-38.3	CARBONDALE	LAWSON	SHALE & SILTSTONE	7.2	450.3	
-45.5	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	1.9	457.5	
-47.4	CARBONDALE	LAWSON	GRAY SHALE	16.7	459.4	
-64.1	CARBONDALE	LAWSON	SHALE & SILTSTONE	12.7	476.1	
-76.7	CARBONDALE	LAWSON	GRAY SHALE	0.2	488.7	
-76.9	CARBONDALE	JAMESTOWN	COAL	0.1	488.9	
-77.0	CARBONDALE		BLACK SHALE	1.0	489.0	
-78.0	CARBONDALE	BRERETON	LIMESTONE	4.6	490.0	
-82.6	CARBONDALE	ANNA	BLACK SHALE	2.3	494.6	
-84.9	CARBONDALE	ENERGY	GRAY SHALE	8.1	496.9	
-93.0	CARBONDALE	HERRIN	COAL	7.2	505.0	

MAPID: 05523319000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 12 **QUARTERS/FOOTAGES:** 256' S line, 240' W line of SE SE NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.818567 **GEOLOGIST:** D NORTH

CONFIDENTIAL: N **LATITUDE:** 37.929887 **DATE COLLECTED:** 2 / 29 / 1982

SURFACE ELEVATION (FT.): 415.0 **LOGGED (FT.):** 680.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. RLC 4 **WELL TYPE:** Coal Test

COMMENT: PERMIT 30

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
415.0	PLEISTOCENE		CLAY	25.0	0.0	
390.0	PLEISTOCENE		SAND & GRAVEL	15.0	25.0	
375.0	BOND		SHALE	39.0	40.0	GRAY
336.0	BOND	CARTHAGE	LIMESTONE	2.0	79.0	
334.0	MODESTO		SHALE	156.0	81.0	SANDY, GREEN; GRAY
178.0	MODESTO		BLUE SHALE	13.0	237.0	
165.0	MODESTO		SHALE	40.0	250.0	GRAY
125.0	MODESTO		SHALE & SANDSTONE	12.0	290.0	
113.0	MODESTO	TRIVOLI	SANDSTONE	54.0	302.0	
59.0	MODESTO		SHALE	26.0	356.0	SANDY; GRAY
33.0	MODESTO		SANDSTONE	18.0	382.0	
15.0	MODESTO		SANDY SHALE	12.0	400.0	
3.0	CARBONDALE	DANVILLE	BLUE SHALE	12.0	412.0	
-9.0	CARBONDALE	ANVIL ROCK	SANDSTONE	46.0	424.0	
-55.0	CARBONDALE	ANVIL ROCK	SHALE	58.0	470.0	SANDY; GRAY
-113.0	CARBONDALE	ANVIL ROCK	SANDSTONE	11.0	528.0	SILTY
-124.0	CARBONDALE	ANVIL ROCK	SHALE	15.0	539.0	SANDY
-139.0	CARBONDALE	BRERETON	LIMESTONE	5.2	554.0	
-144.2	CARBONDALE	ANNA	BLUE SHALE	1.6	559.2	
-145.8	CARBONDALE	ENERGY	SHALE	3.6	560.8	GRAY
-149.4	CARBONDALE	HERRIN	COAL	6.5	564.4	
-155.9	CARBONDALE		UNDERCLAY	1.8	570.9	
-157.7	CARBONDALE		SANDSTONE	5.3	572.7	
-163.0	CARBONDALE	CANTON	SHALE	28.0	578.0	GRAY
-191.0	CARBONDALE	CANTON	SANDSTONE	21.0	606.0	SHALEY
-212.0	CARBONDALE	DYKERSBURG	SHALE	20.1	627.0	GRAY
-232.1	CARBONDALE	SPRINGFIELD	COAL	4.2	647.1	
-236.3	CARBONDALE		UNDERCLAY	3.7	651.3	
-240.0	CARBONDALE		SHALE	7.5	655.0	GRAY
-247.5	CARBONDALE		SANDSTONE	1.5	662.5	
-249.0	CARBONDALE		SHALE	16.0	664.0	SANDY

MAPID: 05523320000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 12 **QUARTERS/FOOTAGES:** 2577' S line, 963' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.820432 **GEOLOGIST:** NORTH

CONFIDENTIAL: N **LATITUDE:** 37.929103 **DATE COLLECTED:** 2 / 11 / 1982

SURFACE ELEVATION (FT.): 422.0 **LOGGED (FT.):** 665.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. RLC 5 **WELL TYPE:** Coal Test

COMMENT: PERMIT 30

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
422.0	PLEISTOCENE		CLAY	38.0	0.0	
384.0	BOND	CARTHAGE	LIMESTONE	4.0	38.0	
380.0	MODESTO		SHALE	11.0	42.0	BLACK
369.0	MODESTO		SHALE	69.0	53.0	GRAY
300.0	MODESTO		LIMESTONE	2.0	122.0	
298.0	MODESTO		SHALE	46.0	124.0	GRAY
252.0	MODESTO	TRIVOLI	SHALE & SANDSTONE	49.0	170.0	
203.0	MODESTO	TRIVOLI	SHALE	65.0	219.0	GRAY
138.0	MODESTO	TRIVOLI	SANDSTONE	53.0	284.0	
85.0	MODESTO		SHALE	79.0	337.0	GRAY
6.0	CARBONDALE	DANVILLE	COAL	1.0	416.0	
5.0	CARBONDALE		UNDERCLAY	4.0	417.0	
1.0	CARBONDALE		SHALE	12.0	421.0	GRAY
-11.0	CARBONDALE		SANDSTONE	9.0	433.0	
-20.0	CARBONDALE		SHALE	27.0	442.0	GRAY
-47.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	469.0	
-50.0	CARBONDALE	ENERGY	SHALE	76.0	472.0	GRAY
-126.0	CARBONDALE	ENERGY	SHALE	2.8	548.0	BLACK
-128.8	CARBONDALE	ENERGY	SHALE	9.3	550.8	GRAY
-138.1	CARBONDALE	HERRIN	COAL	7.0	560.1	
-145.1	CARBONDALE		UNDERCLAY	9.9	567.1	
-155.0	CARBONDALE		SHALE	14.0	577.0	GRAY
-169.0	CARBONDALE	BRIAR HILL	COAL	2.0	591.0	
-171.0	CARBONDALE	CANTON	SHALE	2.0	593.0	GRAY
-173.0	CARBONDALE	ST. DAVID	LIMESTONE	2.0	595.0	
-175.0	CARBONDALE	TURNER MINE	SHALE	9.0	597.0	BLACK
-184.0	CARBONDALE	DYKERSBURG	SHALE	23.4	606.0	GRAY
-207.4	CARBONDALE	SPRINGFIELD	COAL	4.5	629.4	
-211.9	CARBONDALE		UNDERCLAY	3.7	633.9	
-215.6	CARBONDALE		UNKNOWN	27.4	637.6	

MAPID: 05500137000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 13 **QUARTERS/FOOTAGES:** 1320' S line, 1320' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.821693 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.910686 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 406.0 **LOGGED (FT.):** 526.3 **LOG TYPE:** Drillers Log

SOURCE: WILMINGTON STAR COAL CO. 1 OR B **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-7.7	CARBONDALE		SILTY SHALE	48.0	413.7	
-55.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	461.7	
-58.7	CARBONDALE	LAWSON	CALCAREOUS SHALE	2.0	464.7	
-60.7	CARBONDALE	LAWSON	SHALE	27.0	466.7	
-87.7	CARBONDALE	LAWSON	SILTY SHALE	13.0	493.7	
-100.7	CARBONDALE	CONANT	CALCAREOUS SHALE	1.0	506.7	
-101.7	CARBONDALE	JAMESTOWN	COAL	0.3	507.7	
-102.0	CARBONDALE		DARK GRAY SHALE	5.2	508.0	
-107.2	CARBONDALE	BRERETON	LIMESTONE	6.3	513.2	
-113.5	CARBONDALE	ANNA	BLACK SHALE	0.5	519.5	
-114.0	CARBONDALE	HERRIN	COAL	6.3	520.0	

MAPID: 05500951000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 13 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of NW SE NW

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.829776 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.917505 **DATE COLLECTED:** 5 / 0 / 1946

SURFACE ELEVATION (FT.): 404.0 **LOGGED (FT.):** 1738.0 **LOG TYPE:** Electric Log

SOURCE: ROBINSON & PUCKETT, INC. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1334.0	BASE OF PENN.		UNCLASSIFIED	-	1738.0	

MAPID: 05500951000C **VERSION:** 2 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 13 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of NW SE NW
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.829776 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.917505 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 404.0 **LOGGED (FT.):** 3050.0 **LOG TYPE:** Electric Log
SOURCE: ROBINSON & PUCKETT, INC. **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-101.0	CARBONDALE	HERRIN	COAL	8.0	505.0	
-122.0	CARBONDALE	BRIAR HILL	COAL	-	526.0	
-176.0	CARBONDALE	SPRINGFIELD	COAL	5.0	580.0	SHALE ROOF
-248.0	CARBONDALE	HOUCHIN CREEK	COAL	-	652.0	

MAPID: 05500330000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 14 **QUARTERS/FOOTAGES:** NE NE SE
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.836688 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.913893 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 402.0 **LOGGED (FT.):** 3101.0 **LOG TYPE:** Electric Log
SOURCE: ADKINS, E. S. **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-90.0	CARBONDALE	HERRIN	COAL	10.0	492.0	
-168.0	CARBONDALE	SPRINGFIELD	COAL	4.0	570.0	
-240.0	CARBONDALE	HOUCHIN CREEK	COAL	-	642.0	

MAPID: 05500330000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 14 **QUARTERS/FOOTAGES:** NE NE SE
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.836688 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.913893 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: ADKINS ES **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	COAL	6.5	503.0	
-	CARBONDALE	SPRINGFIELD	COAL	4.5	572.0	

MAPID: 05500330000C **VERSION:** 3 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 14 **QUARTERS/FOOTAGES:** NE NE SE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.836688 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.913893 **DATE COLLECTED:** 7 / 0 / 1940

SURFACE ELEVATION (FT.): 402.0 **LOGGED (FT.):** 1720.0 **LOG TYPE:** Electric Log

SOURCE: ADKINS, E. S. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1318.0	BASE OF PENN.		UNCLASSIFIED	-	1720.0	

MAPID: 05500952000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 14 **QUARTERS/FOOTAGES:** 2299' S line, 2299' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.846158 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.913732 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 403.0 **LOGGED (FT.):** 514.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1.0	MODESTO	PIASA	LIMESTONE & SHALE	6.0	404.0	
-7.0	MODESTO		SHALE	7.0	410.0	
-14.0	CARBONDALE	DANVILLE	COAL	2.0	417.0	
-16.0	CARBONDALE		SHALE & SANDSTONE	20.0	419.0	
-36.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	439.0	
-42.0	CARBONDALE	LAWSON	SHALE	5.0	445.0	
-47.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	23.0	450.0	
-70.0	CARBONDALE	LAWSON	SHALE	17.0	473.0	
-87.0	CARBONDALE	CONANT	CALCAREOUS SHALE	0.5	490.0	
-87.5	CARBONDALE	JAMESTOWN	BONE COAL	0.5	490.5	
-88.0	CARBONDALE		DARK GRAY SHALE	3.0	491.0	
-91.0	CARBONDALE	BRERETON	LIMESTONE	6.0	494.0	
-97.0	CARBONDALE	ANNA	SHALE	8.0	500.0	
-105.0	CARBONDALE	HERRIN	COAL	6.0	508.0	

MAPID: 05500790000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 15 **QUARTERS/FOOTAGES:** 1320' N line, 1320' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.858738 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.918311 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 400.0 **LOGGED (FT.):** 493.7 **LOG TYPE:** Survey Core Study

SOURCE: PEABODY COAL CO. 27 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
28.7	MODESTO	PIASA	LIMESTONE/UNDERCLAY	3.9	371.3	
24.8	MODESTO		DARK GRAY SHALE	4.6	375.2	
20.2	CARBONDALE	DANVILLE	COAL	2.0	379.8	
18.2	CARBONDALE		SANDSTONE/SILTSTONE	21.3	381.8	
-3.1	CARBONDALE	ALLENBY	COAL	0.5	403.1	
-3.6	CARBONDALE		CLAYSTONE	4.1	403.6	
-7.7	CARBONDALE	BANKSTON FORK	LIMESTONE	5.9	407.7	
-13.6	CARBONDALE	LAWSON	GRAY SHALE	9.3	413.6	
-22.9	CARBONDALE	LAWSON	SILTY SHALE	13.1	422.9	
-36.0	CARBONDALE	LAWSON	GRAY SHALE	5.5	436.0	
-41.5	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	7.0	441.5	
-48.5	CARBONDALE	LAWSON	SHALE & SANDSTONE	6.0	448.5	
-54.5	CARBONDALE	CONANT	CALCAREOUS SHALE	0.6	454.5	
-55.1	CARBONDALE	JAMESTOWN	BONE COAL	0.2	455.1	
-55.3	CARBONDALE		BLACK SHALE	2.4	455.3	
-57.7	CARBONDALE	BRERETON	LIMESTONE	2.7	457.7	
-60.3	CARBONDALE	ANNA	BLACK SHALE	1.1	460.3	
-61.4	CARBONDALE	ENERGY	GRAY SHALE	23.6	461.4	
-85.0	CARBONDALE	HERRIN	COAL	8.7	485.0	

MAPID: 05501528000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 15 **QUARTERS/FOOTAGES:** 230' N line, 450' W line of SW NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.861912 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.917617 **DATE COLLECTED:** 7 / 0 / 1959

SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 1720.0 **LOG TYPE:** Electric Log

SOURCE: NAT'L. ASSOC. PETRO. CO. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-313.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	720.0	
-393.0	SPOON	DAVIS	UNCLASSIFIED	-	800.0	
-1313.0	BASE OF PENN.		UNCLASSIFIED	-	1720.0	

MAPID: 05501528000C **VERSION:** 2 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 15 **QUARTERS/FOOTAGES:** 230' N line, 450' W line of SW NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.861912 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.917617 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 3017.0 **LOG TYPE:** Electric Log

SOURCE: NAT'L. ASSOC. PETRO. CO. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-89.0	CARBONDALE	HERRIN	COAL	7.0	496.0	
-137.0	CARBONDALE	SPRINGFIELD	COAL	3.0	544.0	SHALE & SILTSTONE ROOF
-207.0	CARBONDALE	HOUCHIN CREEK	COAL	-	614.0	

MAPID: 05502048000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 16 **QUARTERS/FOOTAGES:** 1245' N line, 1030' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.888383 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.918457 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 395.0 **LOGGED (FT.):** 497.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
17.0	MODESTO	PIASA	LIMESTONE	5.0	378.0	
12.0	MODESTO		DARK GRAY SHALE	4.0	383.0	
8.0	CARBONDALE	DANVILLE	COAL	2.0	387.0	
6.0	CARBONDALE		SANDSTONE/SILTSTONE	20.0	389.0	
-14.0	CARBONDALE	ALLENBY	COAL	0.5	409.0	
-14.5	CARBONDALE		CLAYSTONE & SHALE	4.5	409.5	
-19.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	414.0	
-25.0	CARBONDALE	LAWSON	SHALE	39.0	420.0	
-64.0	CARBONDALE	BRERETON	LIMESTONE	5.0	459.0	
-69.0	CARBONDALE	ANNA	BLACK SHALE	3.0	464.0	
-72.0	CARBONDALE	ENERGY	GRAY SHALE	21.0	467.0	
-93.0	CARBONDALE	HERRIN	COAL	9.0	488.0	

MAPID: 05502171000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 16 **QUARTERS/FOOTAGES:** 315' S line, 330' E line of SW NW
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.888263 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.915406 **DATE COLLECTED:** 8 / 0 / 1964
SURFACE ELEVATION (FT.): 397.0 **LOGGED (FT.):** 1600.0 **LOG TYPE:** Electric Log
SOURCE: REHN, E. E. **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1203.0	BASE OF PENN.		UNCLASSIFIED	-	1600.0	

MAPID: 05502171000C **VERSION:** 2 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 16 **QUARTERS/FOOTAGES:** 315' S line, 330' E line of SW NW
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.888263 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.915406 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 397.0 **LOGGED (FT.):** 3010.0 **LOG TYPE:** Electric Log
SOURCE: REHN, E. E. **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-85.0	CARBONDALE	HERRIN	COAL	8.0	482.0	
-134.0	CARBONDALE	SPRINGFIELD	COAL	4.0	531.0	SHALE & SILTSTONE ROOF
-217.0	CARBONDALE	HOUCHIN CREEK	COAL	-	614.0	

MAPID: 05500138000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 17 **QUARTERS/FOOTAGES:** 660' S line, 1980' E line
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.898583 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.908937 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 385.0 **LOGGED (FT.):** 463.0 **LOG TYPE:**
SOURCE: PEABODY 0100 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-64.0	CARBONDALE	HERRIN	COAL	8.8	449.0	

MAPID: 05500138000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 17 **QUARTERS/FOOTAGES:** 660' S line, 1980' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.898583 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.908937 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 385.0 **LOGGED (FT.):** 457.8 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
46.0	MODESTO	PIASA	LIMESTONE	7.0	339.0	
39.0	MODESTO		SHALE	4.0	346.0	
35.0	CARBONDALE	DANVILLE	COAL	2.0	350.0	
33.0	CARBONDALE		SILTY SHALE	21.0	352.0	
12.0	CARBONDALE	LAWSON	SANDSTONE	27.0	373.0	
-15.0	CARBONDALE	LAWSON	SHALE	16.5	400.0	
-31.5	CARBONDALE	BRERETON	LIMESTONE	3.5	416.5	
-35.0	CARBONDALE	ANNA	BLACK SHALE	5.0	420.0	
-40.0	CARBONDALE	ENERGY	GRAY SHALE	24.0	425.0	
-64.0	CARBONDALE	HERRIN	COAL	8.8	449.0	

MAPID: 05500138000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 17 **QUARTERS/FOOTAGES:** 660' S line, 1980' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.898583 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.908937 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 385.0 **LOGGED (FT.):** 462.7 **LOG TYPE:** Drillers Log

SOURCE: DERING COAL CO. 100 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
385.0	PLEISTOCENE		CLAY	32.0	0.0	
353.0	PLEISTOCENE		SAND	9.5	32.0	
343.5	MODESTO		SANDSTONE	51.2	41.5	
292.3	MODESTO		SHALE	3.0	92.7	
289.3	MODESTO		CALCAREOUS SHALE	25.0	95.7	
264.3	MODESTO		SHALE	18.0	120.7	
246.3	MODESTO		SANDSTONE	86.0	138.7	
160.3	MODESTO		SHALE	67.5	224.7	
92.8	MODESTO		COAL	0.5	292.2	
92.3	MODESTO		BLACK SHALE	0.3	292.7	
92.0	MODESTO		SHALE	3.7	293.0	
88.3	MODESTO		SILTSTONE/LIMESTONE	42.0	296.7	
46.3	MODESTO		LIMESTONE	7.0	338.7	
39.3	MODESTO		SHALE	4.0	345.7	
35.3			COAL	2.0	349.7	
33.3			SANDY SHALE	21.0	351.7	
12.3			SANDSTONE	27.0	372.7	
-14.7			SHALE	16.5	399.7	
-31.2			LIMESTONE	3.5	416.2	
-34.7			BLACK SHALE	5.0	419.7	
-39.7			SHALE	24.0	424.7	
-63.7			CLAYSTONE	8.8	448.7	
-72.4			CLAYSTONE	0.5	457.4	
-72.9			LIMESTONE	4.8	457.9	

MAPID: 05501399000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 17 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of NE NW
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.902251 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.919096 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 382.0 **LOGGED (FT.):** 3000.0 **LOG TYPE:** Electric Log
SOURCE: REHN, E. E. **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-114.0	CARBONDALE	HERRIN	COAL	8.0	496.0	
-144.0	CARBONDALE	SPRINGFIELD	COAL	4.0	526.0	SHALE & SILTSTONE ROOF
-222.0	CARBONDALE	HOUCHIN CREEK	COAL	-	604.0	

MAPID: 05501973000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 17 **QUARTERS/FOOTAGES:** 350' S line, 520' W line of NE NE
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.894737 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.919192 **DATE COLLECTED:** 1 / 0 / 1962
SURFACE ELEVATION (FT.): 391.0 **LOGGED (FT.):** 1661.0 **LOG TYPE:** Electric Log
SOURCE: KAPP, LOUIS H., JR. **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1270.0	BASE OF PENN.		UNCLASSIFIED	-	1661.0	

MAPID: 05500264000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 18 **QUARTERS/FOOTAGES:** NW SE SW
QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.922673 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.909538 **DATE COLLECTED:** 0 / 0 / 1905
SURFACE ELEVATION (FT.): 399.3 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section
SOURCE: PEABODY 0018 **WELL TYPE:** Underground mine
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-101.7	CARBONDALE	HERRIN	COAL	10.0	501.0	

MAPID: 05500719000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 18 **QUARTERS/FOOTAGES:** 719' S line, 472' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.926771 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.908637 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 402.0 **LOGGED (FT.):** 486.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
45.0	MODESTO	PIASA	LIMESTONE	4.0	357.0	
41.0	MODESTO		SHALE	5.0	361.0	
36.0	CARBONDALE	DANVILLE	COAL	2.0	366.0	
34.0	CARBONDALE		SANDSTONE/SILTSTONE	24.0	368.0	
10.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	392.0	
3.0	CARBONDALE	LAWSON	SHALE	26.0	399.0	
-23.0	CARBONDALE		BLACK SHALE	2.0	425.0	
-25.0	CARBONDALE	BRERETON	LIMESTONE	4.0	427.0	
-29.0	CARBONDALE	ANNA	BLACK SHALE	4.0	431.0	
-33.0	CARBONDALE	ENERGY	GRAY SHALE	41.0	435.0	
-74.0	CARBONDALE	HERRIN	COAL	10.0	476.0	

MAPID: 05500733000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 18 **QUARTERS/FOOTAGES:** 339' N line, 166' E line of NW NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.915385 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.92084 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 387.0 **LOGGED (FT.):** 2213.0 **LOG TYPE:** Electric Log

SOURCE: ADKINS, E. S. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-80.0	CARBONDALE	HERRIN	COAL	8.0	467.0	
-131.0	CARBONDALE	SPRINGFIELD	COAL	3.0	518.0	SHALE & SILTSTONE ROOF
-209.0	CARBONDALE	HOUCHIN CREEK	COAL	-	596.0	

MAPID: 05500139000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 19 **QUARTERS/FOOTAGES:** 990' S line, 330' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.927316 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.89477 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 410.0 **LOGGED (FT.):** 476.0 **LOG TYPE:**

SOURCE: SCHEIDER P **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-56.0	CARBONDALE	HERRIN	COAL	9.7	466.0	

MAPID: 05500139000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 19 **QUARTERS/FOOTAGES:** 990' S line, 330' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.927316 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.89477 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 410.0 **LOGGED (FT.):** 475.7 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
72.5	MODESTO	PIASA	NODULAR LIMESTONE	4.8	337.5	
67.7	CARBONDALE	DANVILLE	COAL	1.8	342.3	
66.0	CARBONDALE		SHALE & SANDSTONE	20.5	344.0	
45.5	CARBONDALE	ALLENBY	COAL	0.5	364.5	
45.0	CARBONDALE		GRAY SHALE	9.5	365.0	
35.5	CARBONDALE	BANKSTON FORK	NODULAR LIMESTONE	6.0	374.5	
29.5	CARBONDALE	LAWSON	DARK GRAY SHALE	23.0	380.5	
6.5	CARBONDALE	ANNA	BLACK SHALE	1.3	403.5	
5.2	CARBONDALE	ENERGY	GRAY SHALE	24.8	404.8	
-19.5	CARBONDALE	ENERGY	CLAYSTONE & SHALE	3.5	429.5	
-23.0	CARBONDALE	ENERGY	GRAY SHALE	2.5	433.0	
-25.5	CARBONDALE	ENERGY	SANDSTONE	1.2	435.5	
-26.7	CARBONDALE	ENERGY	GRAY SHALE	29.3	436.7	
-56.0	CARBONDALE	HERRIN	COAL	9.7	466.0	

MAPID: 05500139000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 19 **QUARTERS/FOOTAGES:** 990' S line, 330' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.927316 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.89477 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 410.0 **LOGGED (FT.):** 475.5 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
410.0	PLEISTOCENE		UNCONSOLIDATED	5.0	0.0	
405.0	PLEISTOCENE		HARD PAN	10.0	5.0	
395.0	PLEISTOCENE		SAND	5.0	15.0	YELLOW
390.0	PLEISTOCENE		SAND	20.0	20.0	ROTTEN SANDSTONE NOTED IN LOG
370.0	PLEISTOCENE		CLAY	12.0	40.0	BLUE
358.0	PLEISTOCENE		BOULDER	0.5	52.0	
357.5	PLEISTOCENE		SAND	2.5	52.5	GRAY
355.0	PLEISTOCENE		SAND	30.0	55.0	
325.0	MODESTO		SANDSTONE	3.5	85.0	
321.5	MODESTO		CARBONACEOUS SHALE	0.4	88.5	
321.1	MODESTO		SANDSTONE	14.1	88.9	
307.0	MODESTO		BLACK SHALE	14.0	103.0	
293.0	MODESTO		CARBONACEOUS SHALE	3.0	117.0	
290.0	MODESTO		SHALE	8.5	120.0	LIGHT BLUE
281.5	MODESTO	CHAPEL	COAL	0.3	128.5	
281.2	MODESTO		BLACK SHALE	19.3	128.8	
262.0	MODESTO		BLACK SHALE	5.0	148.0	
257.0	MODESTO		SANDSTONE	6.0	153.0	PRYERS NOTED IN LOG
251.0	MODESTO		SANDSTONE	3.0	159.0	
248.0	MODESTO		BLACK SHALE	6.0	162.0	
242.0	MODESTO		SANDSTONE	87.0	168.0	PRYERS NOTED IN LOG
155.0	MODESTO		BLACK SHALE	11.0	255.0	
144.0	MODESTO		CARBONACEOUS SHALE	3.0	266.0	
141.0	MODESTO		LIMESTONE	7.0	269.0	
134.0	MODESTO		BLACK SHALE	7.0	276.0	
127.0	MODESTO		SANDSTONE	8.0	283.0	DARK BLUE
119.0	MODESTO		CARBONACEOUS SHALE	8.0	291.0	
111.0	MODESTO		COAL	0.9	299.0	
110.1	MODESTO		CLAYSTONE	2.1	299.9	
108.0	MODESTO		SANDSTONE	14.0	302.0	
94.0	MODESTO		BLACK SHALE	14.0	316.0	
80.0	MODESTO		ROCK	3.0	330.0	LOG SAYS 'GRANITE'
77.0	MODESTO		BLACK SHALE	2.0	333.0	
75.0	MODESTO		BLACK SHALE	2.0	335.0	
73.0	MODESTO	PIASA	LIMESTONE	4.8	337.0	
68.2	CARBONDALE	DANVILLE	COAL	1.8	341.8	
66.5	CARBONDALE		BLACK SHALE	8.5	343.5	
58.0	CARBONDALE		SANDSTONE WITH COAL	10.0	352.0	WITH COAL, GRAY
48.0	CARBONDALE		BLACK SHALE	2.0	362.0	

46.0	CARBONDALE	ALLENBY	COAL	0.5	364.0	
45.5	CARBONDALE		BLACK SHALE	9.5	364.5	
36.0	CARBONDALE	BANKSTON FORK	LIMESTONE/CHERT	6.0	374.0	
30.0	CARBONDALE		BLACK SHALE	23.0	380.0	
7.0	CARBONDALE		CARBONACEOUS SHALE	1.3	403.0	
5.7	CARBONDALE		BLACK SHALE	24.8	404.3	
-19.0	CARBONDALE		BLACK SHALE	3.5	429.0	WITH FIRE CLAY
-22.5	CARBONDALE		BLACK SHALE	2.5	432.5	
-25.0	CARBONDALE		SANDSTONE	1.2	435.0	
-26.2	CARBONDALE		BLACK SHALE	29.3	436.2	
-55.5	CARBONDALE	HERRIN	COAL	9.7	465.5	
-65.2	CARBONDALE		CLAYSTONE	0.3	475.2	

MAPID: 05501318000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 19 **QUARTERS/FOOTAGES:** 354' S line, 269' E line of NW SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.924681 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.896681 **DATE COLLECTED:** 4 / 0 / 1957

SURFACE ELEVATION (FT.): 417.0 **LOGGED (FT.):** 1656.0 **LOG TYPE:** Electric Log

SOURCE: HORN RAYMOND O **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1239.0	BASE OF PENN.		UNCLASSIFIED	-	1656.0	

MAPID: 05501318000C **VERSION:** 2 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 19 **QUARTERS/FOOTAGES:** 354' S line, 269' E line of NW SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.924681 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.896681 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 417.0 **LOGGED (FT.):** 2901.0 **LOG TYPE:** Electric Log

SOURCE: HORN RAYMOND O **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-60.0	CARBONDALE	HERRIN	COAL	8.0	477.0	
-109.0	CARBONDALE	SPRINGFIELD	COAL	4.0	526.0	SHALE & SILTSTONE ROOF
-187.0	CARBONDALE	HOUCHIN CREEK	COAL	-	604.0	

MAPID: 05501918000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 19 **QUARTERS/FOOTAGES:** NW SW SE NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.913847 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.900883 **DATE COLLECTED:** 2 / 0 / 1961

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 1904.0 **LOG TYPE:** Drillers Log

SOURCE: MCCLEMENT & KILLION 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-			SANDSTONE	472.0	0.0	WITH SHALE
-	CARBONDALE	HERRIN	COAL	8.0	472.0	
-			SANDSTONE	38.0	480.0	WITH SHALE
-	CARBONDALE	SPRINGFIELD	COAL	5.0	518.0	
-			SANDY SHALE	1381.0	523.0	WITH SAND

MAPID: 05500265000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 20 **QUARTERS/FOOTAGES:** NE SE SE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.892431 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.895162 **DATE COLLECTED:** 0 / 0 / 1913

SURFACE ELEVATION (FT.): 420.2 **LOGGED (FT.):** 0.0 **LOG TYPE:** Measured section

SOURCE: OLD BEN 0009 **WELL TYPE:** Underground mine

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-51.8	CARBONDALE	HERRIN	COAL	9.0	472.0	

MAPID: 05501190000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 20 **QUARTERS/FOOTAGES:** 600' S line, 393' W line of SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.90814 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.893742 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 420.0 **LOGGED (FT.):** 2824.0 **LOG TYPE:** Electric Log

SOURCE: MOSEBACK PAUL **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-40.0	CARBONDALE	HERRIN	COAL	8.0	460.0	
-85.0	CARBONDALE	SPRINGFIELD	COAL	5.0	505.0	BLACK SHALE & LIMESTONE ROOF
-162.0	CARBONDALE	HOUCHIN CREEK	COAL	-	582.0	

MAPID: 05501191000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 20 **QUARTERS/FOOTAGES:** 720' S line, 960' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.906176 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.89411 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 427.0 **LOGGED (FT.):** 2915.0 **LOG TYPE:** Electric Log

SOURCE: MOSEBACK PAUL **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-36.0	CARBONDALE	HERRIN	COAL	9.0	463.0	
-88.0	CARBONDALE	SPRINGFIELD	COAL	4.0	515.0	SHALE & SILTSTONE ROOF
-162.0	CARBONDALE	HOUCHIN CREEK	COAL	-	589.0	

MAPID: 05501191000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 20 **QUARTERS/FOOTAGES:** 720' S line, 960' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.906176 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.89411 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 427.0 **LOGGED (FT.):** 474.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
76.0	MODESTO	PIASA	LIMESTONE	7.0	351.0	
69.0	MODESTO		CLAYSTONE & SHALE	5.0	358.0	
64.0	CARBONDALE	DANVILLE	COAL	2.0	363.0	
62.0	CARBONDALE		SHALE & SANDSTONE	16.0	365.0	
46.0	CARBONDALE	ALLENBY	COAL	1.0	381.0	
45.0	CARBONDALE		CLAYSTONE & SHALE	4.0	382.0	
41.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	386.0	
34.0	CARBONDALE	LAWSON	SHALE & SANDSTONE	33.0	393.0	
1.0	CARBONDALE	JAMESTOWN	COAL	1.0	426.0	
0.0	CARBONDALE	ENERGY	SILTY SHALE	10.0	427.0	
-10.0	CARBONDALE	ENERGY	GRAY SHALE	27.0	437.0	
-37.0	CARBONDALE	HERRIN	COAL	10.0	464.0	

MAPID: 05501191000C **VERSION:** 3 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 20 **QUARTERS/FOOTAGES:** 720' S line, 960' W line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.906176 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.89411 **DATE COLLECTED:** 12 / 0 / 1955

SURFACE ELEVATION (FT.): 427.0 **LOGGED (FT.):** 1638.0 **LOG TYPE:** Electric Log

SOURCE: MOSEBACK PAUL **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-1211.0	BASE OF PENN.		UNCLASSIFIED	-	1638.0	

MAPID: 05522754000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 20 **QUARTERS/FOOTAGES:** SW NW NW NW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.909356 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.905614 **DATE COLLECTED:** 3 / 9 / 1976

SURFACE ELEVATION (FT.): 396.1 **LOGGED (FT.):** 485.3 **LOG TYPE:** Survey Core Study

SOURCE: 1 **WELL TYPE:** Engineering Test Holes

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
340.8	MODESTO		SANDSTONE	10.0	55.3	WITH BLACK BANDS
330.8	MODESTO		SANDSTONE	21.4	65.3	
309.5	MODESTO		SILTY SHALE	31.3	86.6	
278.2	MODESTO		SILTSTONE	2.5	117.9	
275.7	MODESTO		SHALE	2.2	120.4	
273.5	MODESTO		CALCAREOUS SANDSTONE	2.0	122.6	GRAY
271.5	MODESTO		SILTSTONE	0.2	124.6	
271.3	MODESTO		SHALE	0.4	124.8	GRAY-BLACK
270.8	MODESTO		CLAYSTONE	0.6	125.3	DARK GRAY
270.2	MODESTO		SOFT SHALE	2.3	125.9	
267.9	MODESTO		SIDERITE	0.3	128.2	LIGHT BROWN
267.6	MODESTO		SHALE	10.1	128.5	
257.5	MODESTO	CHAPEL	COAL	0.0	138.6	
257.5	MODESTO	CHAPEL	SOFT SHALE	0.5	138.6	
257.1	MODESTO	CHAPEL	COAL	0.2	139.0	
256.9	MODESTO		CLAYSTONE & SILTSTONE	6.0	139.2	GRAY
250.8	MODESTO		SHALE	25.5	145.3	
225.3	MODESTO		SILTSTONE	54.5	170.8	
170.8	MODESTO		SHALE	46.5	225.3	
124.3	MODESTO		LIMESTONE	0.2	271.8	
124.2	MODESTO		SHALE	1.0	271.9	GRAY-BLACK
123.2	MODESTO		COAL	0.1	272.9	
123.2	MODESTO		CLAYSTONE & SILTSTONE	1.5	272.9	GRAY
121.7	MODESTO		SILTSTONE	1.4	274.4	
120.3	MODESTO		SILTY SHALE	2.7	275.8	
117.6	MODESTO		SANDSTONE	5.5	278.5	LIGHT GRAY
112.1	MODESTO		CALCAREOUS SILTSTONE	1.3	284.0	GRAY
110.8	MODESTO		SHALE	15.0	285.3	DARK GRAY
95.9	MODESTO		COAL	0.7	300.2	
95.2	MODESTO		CLAYSTONE	4.4	300.9	GRN GRY
90.8	MODESTO		SHALE	2.3	305.3	
88.5	MODESTO		SANDSTONE	7.7	307.6	LIGHT GRAY
80.8	MODESTO		UNCLASSIFIED	10.0	315.3	CORE MISSING
70.8	MODESTO		SHALE	20.0	325.3	
50.8	MODESTO		SILTSTONE	6.4	345.3	
44.4	MODESTO		SANDSTONE	2.3	351.7	LIGHT GRAY
42.1	CARBONDALE	DANVILLE	COAL	1.7	354.0	
40.5	CARBONDALE		SILTSTONE	9.7	355.6	

30.8	CARBONDALE	ALLENBY	COAL	0.2	365.3	
30.6	CARBONDALE		SANDSTONE	3.1	365.5	
27.5	CARBONDALE		SANDSTONE	6.7	368.6	
20.8	CARBONDALE		SILTSTONE	0.3	375.3	
20.5	CARBONDALE		SANDSTONE	5.1	375.6	LIGHT GRAY
15.4	CARBONDALE		SHALE	1.6	380.7	
13.9	CARBONDALE	BANKSTON FORK	LIMESTONE	6.3	382.2	
7.6	CARBONDALE		SILTSTONE	5.9	388.5	
1.7	CARBONDALE		SHALE	1.0	394.4	DARK GRAY
0.8	CARBONDALE		SILTSTONE	20.0	395.3	
-19.2	CARBONDALE		SHALE	6.0	415.3	
-25.2	CARBONDALE	BRERETON	LIMESTONE	3.2	421.3	
-28.4	CARBONDALE	ANNA	BLACK SHALE	2.2	424.5	
-30.6	CARBONDALE	ENERGY	SHALE	42.1	426.7	
-72.7	CARBONDALE	HERRIN	COAL	10.5	468.8	
-83.2	CARBONDALE		CLAYSTONE & SILTSTONE	1.6	479.3	GRAY
-84.8	CARBONDALE		SILTSTONE	4.4	480.9	

MAPID: 05522755000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 20 **QUARTERS/FOOTAGES:** SE NW NW NW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.90821 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.905627 **DATE COLLECTED:** 3 / 15 / 1976

SURFACE ELEVATION (FT.): 389.5 **LOGGED (FT.):** 481.0 **LOG TYPE:** Survey Core Study

SOURCE: 2 **WELL TYPE:** Engineering Test Holes

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
354.5	MODESTO		ARGILLACEOUS SANDSTONE	8.0	35.0	GRAY
346.5	MODESTO		SILTSTONE	12.0	43.0	
334.5	MODESTO		ARGILLACEOUS SANDSTONE	6.7	55.0	
327.8	MODESTO		COAL	0.1	61.7	
327.7	MODESTO		SOFT SHALE	1.0	61.8	
326.7	MODESTO		SANDSTONE	1.2	62.8	
325.5	MODESTO		BONE COAL	0.6	64.0	
325.0	MODESTO		SANDSTONE	0.5	64.5	
324.5	MODESTO		SANDSTONE	32.5	65.0	
292.0	MODESTO		SHALE	17.5	97.5	
274.5	MODESTO		SANDSTONE	9.0	115.0	
265.5	MODESTO		SHALE	8.3	124.0	
257.2	MODESTO	CHAPEL	BONE COAL	0.3	132.3	
256.9	MODESTO		SHALE	29.4	132.6	
227.5	MODESTO		SILTSTONE	3.0	162.0	WITH CALC SANDSTONE
224.5	MODESTO		SANDSTONE	20.0	165.0	
204.5	MODESTO		SILTSTONE	70.0	185.0	WITH SANDSTONE
134.5	MODESTO		SHALE	19.2	255.0	
115.3	MODESTO		COAL	0.3	274.2	
115.0	MODESTO		CLAYSTONE	0.6	274.5	
114.5	MODESTO		SHALE	1.7	275.0	
112.8	MODESTO		ARGILLACEOUS SANDSTONE	12.3	276.7	
100.5	MODESTO		SHALE	16.6	289.0	DARK GRAY
83.9	MODESTO		COAL	0.9	305.6	
83.0	MODESTO		SHALE	0.6	306.5	
82.5	MODESTO		CLAYSTONE & SILTSTONE	12.2	307.0	
70.3	MODESTO		SHALE	1.2	319.2	
69.1	MODESTO		SANDSTONE WITH COAL	27.9	320.4	WITH COALY STREAKS
41.3	CARBONDALE	DANVILLE	COAL	3.6	348.2	WITH CALCITE
37.7	CARBONDALE		CARBONACEOUS SHALE	5.7	351.8	
32.0	CARBONDALE		SANDSTONE	15.5	357.5	
16.5	CARBONDALE	ALLENBY	BONE COAL	0.3	373.0	
16.2	CARBONDALE		CALCAREOUS CLAYSTONE	5.7	373.3	
10.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	379.0	
4.5	CARBONDALE		SHALE	32.6	385.0	
-28.1	CARBONDALE	BRERETON	LIMESTONE	2.3	417.6	

-30.4	CARBONDALE	ANNA	BLACK SHALE	4.0	419.9
-34.4	CARBONDALE	ENERGY	SHALE	42.3	423.9
-76.7	CARBONDALE	HERRIN	COAL	12.1	466.2
-88.8	CARBONDALE		SHALE	2.7	478.3

MAPID: 05522756000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 20 **QUARTERS/FOOTAGES:** NE NW NW NW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.90824 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.90656 **DATE COLLECTED:** 3 / 22 / 1976

SURFACE ELEVATION (FT.): 395.9 **LOGGED (FT.):** 485.0 **LOG TYPE:** Survey Core Study

SOURCE: 3 **WELL TYPE:** Engineering Test Holes

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
360.9	MODESTO		SHALE	6.0	35.0	>GREEN-GRAY
354.9	MODESTO		SANDSTONE	46.6	41.0	
308.3	MODESTO		SHALE	29.5	87.6	
278.9	MODESTO		SANDSTONE	0.6	117.0	
278.3	MODESTO		SHALE	5.4	117.6	
272.9	MODESTO		SANDSTONE	1.8	123.0	
271.1	MODESTO		SHALE	0.3	124.8	
270.9	MODESTO		SANDSTONE	1.4	125.0	
269.5	MODESTO		SHALE	11.9	126.4	
257.6	MODESTO		CLAYSTONE	6.7	138.3	
250.9	MODESTO		SHALE	2.6	145.0	
248.3	MODESTO		SILTSTONE	1.0	147.6	
247.3	MODESTO		SHALE	124.4	148.6	
122.9	MODESTO		LIMESTONE	2.0	273.0	
120.9	MODESTO		SILTSTONE	8.0	275.0	
112.9	MODESTO		SHALE	15.6	283.0	
97.3	MODESTO		COAL	0.6	298.6	
96.7	MODESTO		CLAYSTONE & SILTSTONE	4.3	299.2	
92.4	MODESTO		SHALE	43.7	303.5	
48.7	MODESTO		SANDSTONE	5.8	347.2	
42.9	CARBONDALE	DANVILLE	COAL	1.4	353.0	
41.5	CARBONDALE		CLAYSTONE & SILTSTONE	3.7	354.4	
37.9	CARBONDALE		SILTSTONE	11.0	358.0	
26.9	CARBONDALE		SHALE	2.0	369.0	
24.9	CARBONDALE		SANDSTONE	11.2	371.0	
13.7	CARBONDALE		SHALE	0.8	382.2	
12.9	CARBONDALE	BANKSTON FORK	LIMESTONE	5.9	383.0	
7.0	CARBONDALE		SHALE	32.6	388.9	
-25.6	CARBONDALE	BRERETON	LIMESTONE	2.8	421.5	
-28.4	CARBONDALE	ANNA	BLACK SHALE	2.4	424.3	
-30.7	CARBONDALE	ENERGY	SHALE	8.4	426.6	
-39.1	CARBONDALE	ENERGY	SHALE	32.3	435.0	
-71.4	CARBONDALE	HERRIN	COAL	5.7	467.3	
-77.1	CARBONDALE	HERRIN	COAL	4.9	473.0	
-82.0	CARBONDALE	HIGGINSVILLE	LIMESTONE	3.2	477.9	
-85.1	CARBONDALE		LIMESTONE	1.7	481.0	
-86.8	CARBONDALE		SHALE	2.3	482.7	

MAPID: 05500141000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 21 **QUARTERS/FOOTAGES:** SW SE SE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.876108 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.893296 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 484.0 **LOG TYPE:** Drillers Log

SOURCE: O'GARA COAL CO. 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
407.0	PLEISTOCENE		UNCONSOLIDATED	10.0	0.0	
397.0	PLEISTOCENE		SAND	4.0	10.0	
393.0	PLEISTOCENE		CLAY & GRAVEL	10.0	14.0	WITH GRAVEL
383.0	MODESTO		SANDSTONE	0.5	24.0	
382.5	MODESTO		SANDSTONE	4.0	24.5	
378.5	MODESTO		CLAYSTONE	21.5	28.5	BLUE
357.0	MODESTO		COAL	2.0	50.0	
355.0	MODESTO		CLAYSTONE	4.5	52.0	
350.5	MODESTO		SANDSTONE	2.0	56.5	
348.5	MODESTO		SANDY SHALE	18.3	58.5	
330.2	MODESTO		SANDSTONE	3.5	76.8	
326.7	MODESTO		SANDY SHALE	45.3	80.3	
281.4	MODESTO		SHALE	21.3	125.6	
260.2	MODESTO		BLACK SHALE	4.8	146.8	WITH CLAY
255.3	MODESTO		SANDY SHALE	3.0	151.7	
252.3	MODESTO	CHAPEL	COAL	0.5	154.7	
251.8	MODESTO		CLAYSTONE	3.5	155.2	
248.3	MODESTO		SANDSTONE	79.2	158.7	
169.2	MODESTO		LIMESTONE	4.0	237.8	
165.2	MODESTO		SANDSTONE	18.8	241.8	
146.4	MODESTO		SHALE	31.3	260.6	
115.2	MODESTO		BLACK SHALE	2.0	291.8	WITH CLAY
113.2	MODESTO		COAL	0.0	293.8	TRACE
113.2	MODESTO		CLAYSTONE	2.0	293.8	
111.2	MODESTO		SHALE	2.0	295.8	LIGHT
109.2	MODESTO		LIMESTONE	2.0	297.8	
107.2	MODESTO		SHALE	14.0	299.8	
93.2	MODESTO		BLACK SHALE	10.5	313.8	WITH CLAY
82.7	MODESTO		COAL	0.5	324.3	
82.2	MODESTO		CLAYSTONE	3.0	324.8	
79.2	MODESTO		SHALE	6.1	327.8	WITH CLAY
73.1	MODESTO		SANDSTONE	11.8	333.9	
61.3	MODESTO		SANDY SHALE	14.3	345.7	
47.0	MODESTO		BLACK SHALE	9.7	360.0	WITH LIMESTONE
37.3	MODESTO		COAL	0.0	369.7	TRACE
37.3	MODESTO		CLAYSTONE	2.0	369.7	
35.3	MODESTO	PIASA	LIMESTONE	4.0	371.7	
31.3	MODESTO		SHALE	1.0	375.7	LIGHT
30.3	MODESTO		BLACK SHALE	3.0	376.7	WITH CLAY

27.3	CARBONDALE	DANVILLE	COAL	1.5	379.7	
25.8	CARBONDALE		SANDSTONE	5.0	381.2	
20.8	CARBONDALE		SANDY SHALE	3.0	386.2	
17.8	CARBONDALE		SHALE	3.5	389.2	
14.3	CARBONDALE	ALLENBY	COAL	0.5	392.7	
13.8	CARBONDALE		BLACK SHALE	8.7	393.2	
5.2	CARBONDALE	BANKSTON FORK	LIMESTONE/CHERT	6.0	401.8	WITH FLINT
-0.8	CARBONDALE		SHALE	5.0	407.8	
-5.8	CARBONDALE		LIMESTONE	2.5	412.8	
-8.3	CARBONDALE		BLACK SHALE	19.0	415.3	
-27.3	CARBONDALE		SANDSTONE	11.0	434.3	
-38.3	CARBONDALE		CARBONACEOUS SHALE	0.9	445.3	
-39.3	CARBONDALE	BRERETON	LIMESTONE	4.3	446.3	DARK
-43.6	CARBONDALE		BLACK SHALE	3.2	450.6	
-46.8	CARBONDALE		LIMESTONE	0.3	453.8	
-47.1	CARBONDALE		BLACK SHALE	1.3	454.1	
-48.3	CARBONDALE		BLACK SHALE	18.5	455.3	
-66.8	CARBONDALE	HERRIN	COAL	9.2	473.8	
-76.0	CARBONDALE		CLAYSTONE	1.0	483.0	

MAPID: 05500141000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 21 **QUARTERS/FOOTAGES:** SW SE SE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.876108 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.893296 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 407.0 **LOGGED (FT.):** 484.0 **LOG TYPE:**

SOURCE: SAHARA 0001 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-67.0	CARBONDALE	HERRIN	COAL	9.2	474.0	

MAPID: 05500142000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 21 **QUARTERS/FOOTAGES:** 0' S line, 0' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.872604 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.892363 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 402.0 **LOGGED (FT.):** 482.7 **LOG TYPE:** Drillers Log

SOURCE: WILMINGTON STAR COAL CO. X G **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
31.2	MODESTO	PIASA	LIMESTONE	5.0	370.8	
26.2	MODESTO		DARK GRAY SHALE	1.7	375.8	
24.5	CARBONDALE	DANVILLE	COAL	2.2	377.5	
22.3	CARBONDALE		SHALE & SANDSTONE	16.7	379.7	
5.7	CARBONDALE	ALLENBY	COAL	0.8	396.3	
4.8	CARBONDALE		CLAYSTONE	4.7	397.2	
0.2	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	401.8	
-5.8	CARBONDALE	LAWSON	DARK GRAY SHALE	23.0	407.8	
-28.8	CARBONDALE	LAWSON	SILTY SHALE	4.0	430.8	
-32.8	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	11.0	434.8	
-43.8	CARBONDALE	LAWSON	GRAY SHALE	2.0	445.8	
-45.8	CARBONDALE	BRERETON	LIMESTONE	4.0	447.8	
-49.8	CARBONDALE	ANNA	BLACK SHALE	4.0	451.8	
-53.8	CARBONDALE	ENERGY	GRAY SHALE	18.2	455.8	
-72.0	CARBONDALE	HERRIN	COAL	8.7	474.0	

MAPID: 05500672000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 21 **QUARTERS/FOOTAGES:** 477' N line, 330' E line of NW SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.887856 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.898472 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 398.0 **LOGGED (FT.):** 2955.0 **LOG TYPE:** Electric Log

SOURCE: ADKINS, E. S. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-50.0	CARBONDALE	HERRIN	COAL	7.0	448.0	
-98.0	CARBONDALE	SPRINGFIELD	COAL	4.0	496.0	SHALE & SILTSTONE ROOF
-174.0	CARBONDALE	HOUCHIN CREEK	COAL	-	572.0	

MAPID: 05500672000C **VERSION:** 2 **PROJECT:** CONTROL

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 21 **QUARTERS/FOOTAGES:** 477' N line, 330' E line of NW SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.887856 **GEOLOGIST:** HINES

CONFIDENTIAL: N **LATITUDE:** 37.898472 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 2955.0 **LOG TYPE:** Survey Sample Study

SOURCE: ADKINS, E. S. **WELL TYPE:** Oil and Gas Test

COMMENT: OILWELLS LOGGED BY COAL SECT-LOGS IN GRU

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-			NO RECORD	0.0	0.0	

MAPID: 05500672000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 21 **QUARTERS/FOOTAGES:** 477' N line, 330' E line of NW SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.887856 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.898472 **DATE COLLECTED:** 12 / 0 / 1941

SURFACE ELEVATION (FT.): 398.0 **LOGGED (FT.):** 626.0 **LOG TYPE:** Drillers Log

SOURCE: E.S. ADKINS 1 **WELL TYPE:** Producer-Oil and Gas

COMMENT: COAL DIV. CONTROL WELL #1

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
398.0	PLEISTOCENE		UNCONSOLIDATED	44.0	0.0	
354.0	MODESTO		SANDY SHALE	82.0	44.0	WITH SANDSTONE BANDS
272.0	MODESTO		BLACK SHALE	3.0	126.0	
269.0	MODESTO		SHALE	8.0	129.0	
261.0	MODESTO		LIMESTONE	2.0	137.0	
259.0	MODESTO		BLACK SHALE & COAL	1.0	139.0	WITH COAL
258.0	MODESTO		SHALE	14.0	140.0	
244.0	MODESTO		SANDSTONE	75.0	154.0	
169.0	MODESTO		SANDY SHALE	54.0	229.0	WITH SANDSTONE BANDS
115.0	MODESTO		LIMESTONE	2.0	283.0	
113.0	MODESTO		BLACK SHALE	2.0	285.0	
111.0	MODESTO		SHALE/UNDERCLAY	21.0	287.0	WITH UNDERCLAY
90.0	MODESTO		SANDY SHALE	5.0	308.0	WITH SANDSTONE
85.0	MODESTO		LIMESTONE	1.0	313.0	
84.0	MODESTO		BLACK SHALE	2.0	314.0	
82.0	MODESTO		SHALE/UNDERCLAY	4.0	316.0	WITH UNDERCLAY
78.0	MODESTO		COAL	5.0	320.0	
73.0	MODESTO		SANDSTONE	20.0	325.0	
53.0	MODESTO		SHALE	4.0	345.0	
49.0	MODESTO	PIASA	LIMESTONE	4.0	349.0	
45.0	MODESTO		SHALE/UNDERCLAY	5.0	353.0	WITH UNDERCLAY
40.0	CARBONDALE	DANVILLE	COAL	2.0	358.0	
38.0	CARBONDALE		UNDERCLAY	3.0	360.0	
35.0	CARBONDALE		SHALE	4.0	363.0	
31.0	CARBONDALE		SANDSTONE	4.0	367.0	
27.0	CARBONDALE		BLACK SHALE	3.0	371.0	
24.0	CARBONDALE		SHALE WITH LIMESTONE	6.0	374.0	WITH LIMESTONE
18.0	CARBONDALE	BANKSTON FORK	LIMESTONE	10.0	380.0	
8.0	CARBONDALE		SHALE	35.0	390.0	
-27.0	CARBONDALE		LIMESTONE	1.0	425.0	
-28.0	CARBONDALE		BLACK SHALE	2.0	426.0	
-30.0	CARBONDALE		SHALE	2.0	428.0	
-32.0	CARBONDALE		LIMESTONE	2.0	430.0	
-34.0	CARBONDALE		BLACK SHALE	1.0	432.0	
-35.0	CARBONDALE	BRERETON	LIMESTONE	12.0	433.0	
-47.0	CARBONDALE	ANNA	BLACK SHALE	3.0	445.0	
-50.0	CARBONDALE	HERRIN	COAL	7.0	448.0	
-57.0	CARBONDALE		UNDERCLAY	3.0	455.0	

-60.0	CARBONDALE		LIMESTONE	4.0	458.0	
-64.0	CARBONDALE		SHALE	4.0	462.0	
-68.0	CARBONDALE		SANDSTONE	3.0	466.0	
-71.0	CARBONDALE		LIMESTONE	1.0	469.0	
-72.0	CARBONDALE		SHALE	12.0	470.0	
-84.0	CARBONDALE	ST. DAVID	LIMESTONE	3.0	482.0	
-87.0	CARBONDALE	TURNER MINE	BLACK SHALE	2.0	485.0	
-89.0	CARBONDALE	DYKERSBURG	SHALE	7.0	487.0	
-96.0	CARBONDALE	SPRINGFIELD	COAL	4.0	494.0	
-100.0	CARBONDALE		SHALE/UNDERCLAY	3.0	498.0	WITH UNDERCLAY
-103.0	CARBONDALE		SHALE	3.0	501.0	
-106.0	CARBONDALE		SHALE WITH LIMESTONE	3.0	504.0	WITH LIMESTONE
-109.0	CARBONDALE		LIMESTONE	3.0	507.0	
-112.0	CARBONDALE		SHALE	4.0	510.0	
-116.0	CARBONDALE		SANDSTONE	16.0	514.0	
-132.0	CARBONDALE		SANDY SHALE	43.0	530.0	WITH SANDSTONE BANDS
-175.0	CARBONDALE	EXCELLO	BLACK SHALE	10.0	573.0	
-185.0	CARBONDALE	HOUCHIN CREEK	COAL	2.0	583.0	
-187.0	CARBONDALE		SHALE/UNDERCLAY	3.0	585.0	WITH UNDERCLAY
-190.0	CARBONDALE		LIMESTONE	2.0	588.0	
-192.0	CARBONDALE		SANDY SHALE	24.0	590.0	WITH SANDSTONE BANDS
-216.0	CARBONDALE	SURVANT	COAL	3.0	614.0	
-219.0	CARBONDALE		SHALE/UNDERCLAY	3.0	617.0	WITH UNDERCLAY
-222.0	CARBONDALE		SHALE	5.0	620.0	
-227.0	CARBONDALE		SANDSTONE	1.0	625.0	

MAPID: 05500796000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 22 **QUARTERS/FOOTAGES:** 285' N line, 50' W line of NW NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.863304 **GEOLOGIST:** D NORTH

CONFIDENTIAL: N **LATITUDE:** 37.906477 **DATE COLLECTED:** 12 / 7 / 1944

SURFACE ELEVATION (FT.): 402.0 **LOGGED (FT.):** 562.7 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. 41 **WELL TYPE:** Coal Test

COMMENT: PERMIT 30 STRAT COL AVAIL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
402.0			UNDERCLAY	183.6	0.0	
218.4	MODESTO		LIMESTONE	0.2	183.6	ARGILLACEOUS
218.2	MODESTO		SHALE	1.8	183.8	GRAY
216.4	MODESTO	CHAPEL	COAL	0.5	185.6	
215.9	MODESTO		SHALE	6.0	186.1	GRAY
209.9	MODESTO	TRIVOLI	SANDSTONE	83.6	192.1	
126.3	MODESTO	SCOTTVILLE	LIMESTONE	2.5	275.7	CONGLOMERATE
123.8	MODESTO		SHALE	48.9	278.2	GRAY
74.9	MODESTO		COAL	0.2	327.1	
74.7	MODESTO		UNDERCLAY	1.8	327.3	
72.9	MODESTO		SHALE	28.2	329.1	GRAY
44.7	MODESTO		COAL	0.8	357.3	
43.9	MODESTO		UNDERCLAY	5.3	358.1	
38.6	MODESTO		SANDSTONE	11.6	363.4	
27.0	MODESTO		SHALE	22.9	375.0	GRAY
4.1	MODESTO		COAL	0.8	397.9	
3.3	MODESTO		UNDERCLAY	1.5	398.7	
1.8	MODESTO	PIASA	LIMESTONE	5.7	400.2	
-3.9	MODESTO		SHALE	4.3	405.9	GRAY
-8.2	CARBONDALE	DANVILLE	COAL	2.0	410.2	
-10.2	CARBONDALE		UNDERCLAY	3.4	412.2	
-13.6	CARBONDALE		SHALE	9.1	415.6	GRAY
-22.7	CARBONDALE		SANDSTONE	5.8	424.7	
-28.5	CARBONDALE	ALLENBY	COAL	0.2	430.5	
-28.7	CARBONDALE		UNDERCLAY	3.0	430.7	
-31.7	CARBONDALE	BANKSTON FORK	LIMESTONE	9.6	433.7	
-41.3	CARBONDALE	ANVIL ROCK	SHALE	17.0	443.3	GRAY
-58.3	CARBONDALE	ANVIL ROCK	SANDSTONE	4.5	460.3	
-62.8	CARBONDALE	ANVIL ROCK	SHALE	18.1	464.8	GRAY
-80.9	CARBONDALE	CONANT	LIMESTONE	0.9	482.9	
-81.8	CARBONDALE		BLUE SHALE	2.8	483.8	
-84.6	CARBONDALE	BRERETON	LIMESTONE	6.7	486.6	
-91.3	CARBONDALE	ANNA	BLUE SHALE	3.8	493.3	
-95.1	CARBONDALE	ENERGY	SHALE	9.8	497.1	GRAY
-104.9	CARBONDALE	HERRIN	COAL	7.8	506.9	
-112.7	CARBONDALE		UNDERCLAY	4.8	514.7	
-117.5	CARBONDALE		LIMESTONE	3.0	519.5	
-120.5	CARBONDALE		SHALE	1.8	522.5	GRAY
-122.3	CARBONDALE		SANDSTONE	5.2	524.3	

-127.5	CARBONDALE	CANTON	SHALE	5.8	529.5	GRAY
-133.3	CARBONDALE	ST. DAVID	LIMESTONE	1.3	535.3	
-134.6	CARBONDALE	TURNER MINE	BLUE SHALE	4.2	536.6	
-138.8	CARBONDALE	DYKERSBURG	SHALE	13.2	540.8	GRAY
-152.1	CARBONDALE	SPRINGFIELD	COAL	4.3	554.1	
-156.4	CARBONDALE		UNDERCLAY	3.8	558.4	
-160.2	CARBONDALE		SHALE	0.5	562.2	GRAY

MAPID: 05500796000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 22 **QUARTERS/FOOTAGES:** 285' N line, 50' W line of NW NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.863304 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.906477 **DATE COLLECTED:** 12 / 7 / 1944

SURFACE ELEVATION (FT.): 401.0 **LOGGED (FT.):** 515.8 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 41 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
0.8	MODESTO	PIASA	LIMESTONE	5.7	400.2	
-4.9	MODESTO		DARK GRAY SHALE	4.3	405.9	
-9.2	CARBONDALE	DANVILLE	COAL	2.0	410.2	
-11.2	CARBONDALE		SHALE & SANDSTONE	18.4	412.2	
-29.6	CARBONDALE	ALLENBY	COAL	0.2	430.6	
-29.9	CARBONDALE		CLAYSTONE & SHALE	5.2	430.9	
-35.1	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	7.4	436.1	
-42.5	CARBONDALE	LAWSON	DARK GRAY SHALE	17.0	443.5	
-59.5	CARBONDALE	LAWSON	SANDSTONE	1.1	460.5	
-60.6	CARBONDALE	LAWSON	SHALE & SANDSTONE	3.4	461.6	
-64.0	CARBONDALE	LAWSON	SILTY SHALE	8.4	465.0	
-72.4	CARBONDALE	LAWSON	DARK GRAY SHALE	9.7	473.4	
-82.1	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.9	483.1	
-83.0	CARBONDALE		BLACK SHALE	2.8	484.0	
-85.8	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	6.6	486.8	
-92.4	CARBONDALE	ANNA	BLACK SHALE	3.8	493.4	
-96.3	CARBONDALE	ENERGY	GRAY SHALE	9.8	497.3	
-106.0	CARBONDALE	HERRIN	COAL	8.8	507.0	

MAPID: 05501178000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 22 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NW SE
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.862276 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.897065 **DATE COLLECTED:** 10 / 0 / 1955
SURFACE ELEVATION (FT.): 413.0 **LOGGED (FT.):** 1510.0 **LOG TYPE:** Electric Log
SOURCE: HALBERT RALPH C **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1097.0	BASE OF PENN.		UNCLASSIFIED	-	1510.0	

MAPID: 05501178000C **VERSION:** 2 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 22 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NW SE
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.862276 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.897065 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 413.0 **LOGGED (FT.):** 3001.0 **LOG TYPE:** Electric Log
SOURCE: HALBERT RALPH C **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-104.0	CARBONDALE	HERRIN	COAL	8.0	517.0	
-143.0	CARBONDALE	SPRINGFIELD	COAL	4.0	556.0	
-213.0	CARBONDALE	HOUCHIN CREEK	COAL	-	626.0	

MAPID: 05500143000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 23 **QUARTERS/FOOTAGES:** 2310' S line, 2310' W line
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.846149 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.898926 **DATE COLLECTED:** 0 / 0 / 1910
SURFACE ELEVATION (FT.): 437.0 **LOGGED (FT.):** 541.0 **LOG TYPE:**
SOURCE: SAHARA 0005 **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-95.0	CARBONDALE	HERRIN	COAL	7.5	532.0	

MAPID: 05500143000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 23 **QUARTERS/FOOTAGES:** 2310' S line, 2310' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.846149 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.898926 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 437.0 **LOGGED (FT.):** 539.5 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
7.5	MODESTO	PIASA	LIMESTONE	4.5	429.5	
3.0	MODESTO		LIMESTONE W/ SHALE	5.0	434.0	
-2.0	CARBONDALE	DANVILLE	BLACK SHALE	2.0	439.0	
-4.0	CARBONDALE		SHALE & SANDSTONE	20.0	441.0	
-24.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	461.0	
-29.5	CARBONDALE	LAWSON	CLAYSTONE	4.0	466.5	
-33.5	CARBONDALE	LAWSON	DARK GRAY SHALE	5.5	470.5	
-39.0	CARBONDALE	LAWSON	SILTY SHALE	16.0	476.0	
-55.0	CARBONDALE	LAWSON	SHALE	19.0	492.0	
-74.0	CARBONDALE		BLACK SHALE	4.0	511.0	
-78.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	5.5	515.0	
-83.5	CARBONDALE	ANNA	BLACK SHALE	6.0	520.5	
-89.5	CARBONDALE	ENERGY	GRAY SHALE	5.5	526.5	
-95.0	CARBONDALE	HERRIN	COAL	7.5	532.0	

MAPID: 05500143000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 23 **QUARTERS/FOOTAGES:** 2310' S line, 2310' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.846149 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.898926 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 437.0 **LOGGED (FT.):** 541.0 **LOG TYPE:** Drillers Log

SOURCE: O'GARA COAL CO. 5 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
437.0	PLEISTOCENE		UNCONSOLIDATED	15.0	0.0	
422.0			SANDSTONE	3.0	15.0	
419.0			SHALE	11.0	18.0	
408.0			COAL	1.0	29.0	
407.0			CLAYSTONE	3.0	30.0	BLUE
404.0			SANDSTONE	3.0	33.0	
401.0			CLAYSTONE	49.0	36.0	BLUE
352.0			BONE COAL	2.0	85.0	
350.0			SHALE	1.0	87.0	
349.0			LIMESTONE	2.0	88.0	
347.0			CLAYSTONE	4.0	90.0	
343.0			SHALE	21.0	94.0	
322.0			COAL	2.0	115.0	
320.0			CLAYSTONE	2.0	117.0	
318.0			SHALE	6.0	119.0	
312.0			BLACK SHALE	2.0	125.0	
310.0			SANDY SHALE	101.0	127.0	
209.0			BLACK SHALE	2.0	228.0	
207.0			LIMESTONE	1.0	230.0	
206.0			SHALE	5.0	231.0	
201.0			COAL	1.5	236.0	#8?
199.5			CLAYSTONE	3.5	237.5	
196.0			SANDSTONE	18.0	241.0	
178.0			LIMESTONE	6.0	259.0	
172.0			SANDSTONE	58.0	265.0	
114.0			SHALE	28.5	323.0	
85.5			SANDSTONE	6.0	351.5	
79.5			SHALE	10.0	357.5	
69.5			BLACK SHALE	12.0	367.5	
57.5			CLAYSTONE	2.5	379.5	
55.0			SANDY SHALE	3.5	382.0	
51.5			SANDSTONE	34.5	385.5	
17.0			SHALE	9.5	420.0	
7.5			LIMESTONE/CHERT	4.5	429.5	WITH FLINT
3.0			SHALE	4.0	434.0	
-1.0			LIMESTONE	1.0	438.0	
-2.0			BLACK SHALE	2.0	439.0	#7 HORIZON?
-4.0			SANDSTONE	3.0	441.0	
-7.0			SHALE	7.0	444.0	

-14.0			SANDSTONE	2.0	451.0	
-16.0			SHALE	8.0	453.0	LIGHT
-24.0			LIMESTONE	5.5	461.0	
-29.5			CLAYSTONE	4.0	466.5	
-33.5			BLACK SHALE	5.5	470.5	
-39.0			SANDY SLATE	16.0	476.0	
-55.0			SHALE	19.0	492.0	
-74.0			BLACK SHALE	4.0	511.0	
-78.0	CARBONDALE	BRERETON	LIMESTONE	5.5	515.0	
-83.5	CARBONDALE		BLACK SHALE	6.0	520.5	
-89.5	CARBONDALE		BLACK SHALE	5.5	526.5	
-95.0	CARBONDALE	HERRIN	COAL	7.5	532.0	
-102.5	CARBONDALE		UNKNOWN	1.1	539.5	LOG NOTES "BENDER"
-103.6	CARBONDALE		UNDERCLAY	0.4	540.6	

MAPID: 05501494000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 23 **QUARTERS/FOOTAGES:** 330' S line, 330' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.836657 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.893497 **DATE COLLECTED:** 8 / 0 / 1950

SURFACE ELEVATION (FT.): 509.0 **LOGGED (FT.):** 1642.0 **LOG TYPE:** Electric Log

SOURCE: NATION OIL CO. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1133.0	BASE OF PENN.		UNCLASSIFIED	-	1642.0	

MAPID: 05501494000C **VERSION:** 2 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 23 **QUARTERS/FOOTAGES:** 330' S line, 330' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.836657 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.893497 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 509.0 **LOGGED (FT.):** 3187.0 **LOG TYPE:** Electric Log

SOURCE: NATION OIL CO. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-100.0	CARBONDALE	HERRIN	COAL	7.0	609.0	
-169.0	CARBONDALE	SPRINGFIELD	COAL	3.0	678.0	SHALE & SILTSTONE ROOF
-243.0	CARBONDALE	HOUCHIN CREEK	COAL	-	752.0	

MAPID: 05500797000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 24 **QUARTERS/FOOTAGES:** 150' N line, 860' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.832491 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.906931 **DATE COLLECTED:** 12 / 16 / 1944

SURFACE ELEVATION (FT.): 418.0 **LOGGED (FT.):** 526.3 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 43 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-2.0	MODESTO	PIASA	LIMESTONE	2.8	420.0	
-4.7	MODESTO		ROCK	7.7	422.7	
-12.4	CARBONDALE	DANVILLE	COAL	2.0	430.4	
-14.4	CARBONDALE		DARK GRAY SHALE	14.2	432.4	
-28.6	CARBONDALE	ALLENBY	COAL	0.3	446.6	
-28.9	CARBONDALE		CLAYSTONE & SHALE	5.4	446.9	
-34.3	CARBONDALE	BANKSTON FORK	LIMESTONE	2.3	452.3	
-36.7	CARBONDALE	LAWSON	DARK GRAY SHALE	10.7	454.7	
-47.3	CARBONDALE	LAWSON	SHALE & SANDSTONE	13.2	465.3	
-60.5	CARBONDALE	LAWSON	SILTY SHALE	15.3	478.5	
-75.8	CARBONDALE	LAWSON	DARK GRAY SHALE	1.6	493.8	
-77.3	CARBONDALE	JAMESTOWN	BONE COAL	0.3	495.3	
-77.7	CARBONDALE		DARK GRAY SHALE	0.9	495.7	
-78.6	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	4.0	496.6	
-82.6	CARBONDALE	ANNA	BLACK SHALE	3.8	500.6	
-86.4	CARBONDALE	ENERGY	GRAY SHALE	14.6	504.4	
-101.0	CARBONDALE	HERRIN	COAL	7.3	519.0	

MAPID: 05501912000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 24 **QUARTERS/FOOTAGES:**

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.826276 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.899816 **DATE COLLECTED:**

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

SOURCE: **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	30.0	0.0	
-	MODESTO		BLACK SHALE	2.0	30.0	
-	MODESTO		CLAYSTONE	2.0	32.0	
-	MODESTO		SHALEY CLAYSTONE	48.0	34.0	WITH SHALE
-	MODESTO		SHALE	28.0	82.0	
-	MODESTO		BLACK SHALE	3.0	110.0	
-	MODESTO		CLAYSTONE	10.0	113.0	
-	MODESTO		SHALE	22.0	123.0	
-	MODESTO		COAL	1.3	145.0	
-	MODESTO		CLAYSTONE	0.8	146.3	
-	MODESTO		SHALE	91.0	147.0	
-	MODESTO		LIMESTONE	1.0	238.0	
-	MODESTO		BLACK SHALE	2.0	239.0	
-	MODESTO		LIMESTONE	0.6	241.0	
-	MODESTO		SHALE	8.4	241.6	
-	MODESTO	CHAPEL	COAL	1.7	250.0	
-	MODESTO		SHALE	1.3	251.7	
-	MODESTO		SANDY SHALE	42.0	253.0	
-	MODESTO		SANDSTONE	27.0	295.0	
-	MODESTO		SHALE	41.0	322.0	
-	MODESTO		BLACK SHALE	5.0	363.0	
-	MODESTO		COAL	0.1	368.0	
-	MODESTO		SHALE	6.9	368.1	LIGHT
-	MODESTO		BLACK SHALE	18.5	375.0	
-	MODESTO		COAL	0.7	393.5	
-	MODESTO		CLAYSTONE	13.8	394.2	
-	MODESTO		SANDY SHALE	8.0	408.0	
-	MODESTO		SANDSTONE	6.0	416.0	
-	MODESTO		SHALE	19.0	422.0	
-	MODESTO		BLACK SHALE	1.0	441.0	
-	MODESTO	DEGRAFF	COAL	0.3	442.0	
-	MODESTO		CLAYSTONE	0.8	442.3	
-	MODESTO	PIASA	LIMESTONE	3.3	443.0	
-	MODESTO		SHALE	6.0	446.3	WITH CLAY
-	MODESTO		BLACK SHALE	3.0	452.3	
-	CARBONDALE	DANVILLE	COAL	2.3	455.3	
-	CARBONDALE		CLAYSTONE	3.4	457.6	
-	CARBONDALE		SANDY SHALE	10.0	461.0	
-	CARBONDALE		SANDSTONE	3.0	471.0	

MAPID: 05500777000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 25 **QUARTERS/FOOTAGES:** 700' N line, 30' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.83542 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.890667 **DATE COLLECTED:** 12 / 15 / 1944

SURFACE ELEVATION (FT.): 469.0 **LOGGED (FT.):** 577.3 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 42 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-6.3	MODESTO	PIASA	LIMESTONE/UNDERCLAY	3.4	475.3	
-9.7	MODESTO		DARK GRAY SHALE	6.7	478.7	
-16.3	CARBONDALE	DANVILLE	COAL	2.0	485.3	
-18.3	CARBONDALE		SANDSTONE/SILTSTONE	9.5	487.3	
-27.8	CARBONDALE	ALLENBY	COAL	0.2	496.8	
-28.0	CARBONDALE		CLAYSTONE	4.9	497.0	
-32.8	CARBONDALE	BANKSTON FORK	LIMESTONE/UNDERCLAY	4.6	501.8	
-37.4	CARBONDALE	LAWSON	CLAYSTONE & SHALE	3.5	506.4	
-40.9	CARBONDALE	LAWSON	DARK GRAY SHALE	5.3	509.9	
-46.2	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	20.0	515.2	
-66.2	CARBONDALE	LAWSON	SANDSTONE/SILTSTONE	7.5	535.2	
-73.7	CARBONDALE	LAWSON	SILTY SHALE	2.3	542.7	
-76.0	CARBONDALE	CONANT	CALCAREOUS SHALE	0.4	545.0	
-76.4	CARBONDALE	JAMESTOWN	BONE COAL	0.3	545.4	
-76.6	CARBONDALE		DARK GRAY SHALE	0.8	545.6	
-77.4	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	3.2	546.4	
-80.6	CARBONDALE	ANNA	BLACK SHALE	2.2	549.6	
-82.7	CARBONDALE	ENERGY	GRAY SHALE	18.3	551.7	
-101.0	CARBONDALE	HERRIN	COAL	7.3	570.0	

MAPID: 05522776000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 25 **QUARTERS/FOOTAGES:** 65' N line, 73' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.817258 **GEOLOGIST:** J MCBETH

CONFIDENTIAL: N **LATITUDE:** 37.892163 **DATE COLLECTED:** 4 / 29 / 1976

SURFACE ELEVATION (FT.): 466.8 **LOGGED (FT.):** 690.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. 332 **WELL TYPE:** Coal Test

COMMENT: PERMIT 22;MINE #27

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
466.8	PLEISTOCENE		UNCONSOLIDATED	3.0	0.0	SOIL&CLAY
463.8	PLEISTOCENE		CLAY	7.5	3.0	
456.3	PLEISTOCENE		SAND	4.3	10.5	
452.0	PLEISTOCENE		CLAY	3.0	14.8	
449.0	PLEISTOCENE		SAND/CLAY	0.2	17.8	VERY FINE GRAINED SAND
448.8	PLEISTOCENE		SAND & GRAVEL	5.0	18.0	
443.8	BOND		SANDSTONE	34.1	23.0	MICACEOUS, FIRM, TAN TO BROWN
409.7	BOND		SANDSTONE	9.5	57.1	FINE,FIRM
400.2	BOND		LIMESTONE	1.8	66.6	ARGILLACEOUS
398.4	BOND		SHALE	0.5	68.4	GRAY TO BLACK
397.9	BOND		SHALE	4.0	68.9	BLACK
393.9	BOND		SHALE	0.5	72.9	BLACK TO GRAY
393.4	BOND		GRAY SHALE	10.0	73.4	SOME CARBONACEOUS FOSSILS
383.4	BOND		SILTY SHALE	7.3	83.4	
376.1	BOND	FLANNIGAN	COAL	0.4	90.7	
375.7	BOND		GRAY SHALE	15.7	91.1	WITH SANDY CALCAREOUS LAMINATIONS
360.0	BOND		GRAY SHALE	2.7	106.8	SOFT;SLICKENSIDES
357.3	BOND		SHALE WITH LIMESTONE	4.7	109.5	LIMESTONE IN SHALE MATRIX
352.6	BOND		GRAY SHALE	3.8	114.2	SILTY
348.9	BOND		LIMESTONE	0.3	117.9	ARGILLACEOUS
348.5	BOND		GRAY SHALE	2.2	118.3	WITH THIN CALCAREOUS BANDS
346.4	BOND		SIDERITE	0.8	120.4	BAND
345.6	BOND		GRAY SHALE	12.5	121.2	FEW IRONSTONE BANDS
333.1	BOND		GRAY SHALE	13.3	133.7	
319.8	BOND		SHALE	3.2	147.0	DARK GRAY TO BLACK, FOSSILIFEROUS
316.6	BOND		SHALE	2.5	150.2	CALCAREOUS; BLACK
314.1	BOND	CARTHAGE	LIMESTONE	1.1	152.7	ARGILLACEOUS, FOSSILIFEROUS
313.0			SHALE	1.4	153.8	SOFT, WITH SLICKENSIDES
311.6			SHALE	6.1	155.2	FIRM, IRREGULAR BEDDING AND SLICKS
305.5			SHALE WITH LIMESTONE	0.4	161.3	
305.1			SILTY SHALE	2.0	161.7	MICACEOUS
303.1			SANDY SHALE	16.6	163.7	CALCAREOUS
286.5			SILTY SHALE	3.5	180.3	
283.0	MODESTO	WOMAC	COAL	1.2	183.8	
281.8	MODESTO		SANDY SHALE	4.3	185.0	DARK GRAY WITH THIN COAL STRINGERS
277.5	MODESTO		GRAY SHALE	4.0	189.3	WITH SANDSTONE LAMINATIONS
273.5	MODESTO		SANDSTONE	9.6	193.3	ARGILLACEOUS, CALCAREOUS, FINE, HARD
263.9	MODESTO		SANDSTONE/SHALE	6.9	202.9	

257.0	MODESTO		SILTY SHALE	16.9	209.8	
240.1	MODESTO		SILTY SHALE	35.8	226.7	SLICKENSIDES AT BASE
204.3	MODESTO		SHALE	13.9	262.5	WITH IRONSTONE BEDS AND LENSES
190.4	MODESTO		SHALE	2.7	276.4	CALCAREOUS, DARK GRAY TO BLACK, FOSSILS
187.7	MODESTO		SHALE	1.5	279.1	SLIGHTLY CALCAREOUS; BLACK
186.2	MODESTO		LIMESTONE	1.0	280.6	ARGILLACEOUS, BROWN, FOSSILIFEROUS
185.2	MODESTO		SHALE	6.5	281.6	CARBONACEOUS, PLANT FOSSILS, PYRITE, FE
178.7	MODESTO	CHAPEL	COAL	0.3	288.1	DIRTY
178.3	MODESTO	CHAPEL	SHALE	2.5	288.5	CARBONACEOUS WITH COAL STRINGERS
175.9	MODESTO		SHALE	1.2	290.9	GRAY, WITH COAL STRINGERS
174.7	MODESTO		SHALE	1.0	292.1	SANDSTONE INTERBEDS
173.7	MODESTO	TRIVOLI	SANDSTONE	4.5	293.1	FINE
169.2	MODESTO	TRIVOLI	SANDSTONE	37.0	297.6	MICACEOUS, FINE GRAINED, SHALE BEDS
132.2	MODESTO	TRIVOLI	SANDSTONE	28.6	334.6	MICACEOUS, SHALE BEDS, COAL STRINGERS
103.6	MODESTO		GRAY SHALE	18.9	363.2	HARD, WITH IRONSTONE BANDS
84.7	MODESTO		GRAY SHALE	15.5	382.1	SOFT,WEAK
69.2	MODESTO		SHALE	10.9	397.6	DARK GRAY, WITH IRONSTONE BANDS
58.3	MODESTO		SHALE	1.7	408.5	CALCAREOUS, DARK GRAY TO BLACK, FOSSILS
56.6	MODESTO		SHALE	4.8	410.2	DARK GRAY
51.8	MODESTO		SHALE	0.1	415.0	WITH COAL
51.7	MODESTO	POND CREEK	COAL	0.2	415.1	
51.5	MODESTO		SILTY SHALE	2.4	415.3	
49.1	MODESTO		SANDY SHALE	8.0	417.7	CALCAREOUS
41.1	MODESTO		GRAY SHALE	7.9	425.7	WITH SANDY LAMINATIONS
33.2	MODESTO		SHALE	19.1	433.6	DARK GRAY TO BLACK
14.1	MODESTO	DEGRAFF	COAL	0.8	452.7	
13.3	MODESTO		SHALE	0.5	453.5	BLACK
12.8	MODESTO		GRAY SHALE	0.8	454.0	
12.0	MODESTO		LIMESTONE	0.3	454.8	GRAY
11.7	MODESTO		GRAY SHALE	6.0	455.1	
5.7	MODESTO		SHALE	4.0	461.1	WITH LIMESTONE NODULES
1.7	MODESTO		SHALE	7.1	465.1	GRAY TO DARK GRAY; CARBONACEOUS BEDS
-5.4	MODESTO		SHALE	15.6	472.2	FEW IRONSTONE BANDS
-21.0	MODESTO		SILTY SHALE	3.4	487.8	
-24.4	MODESTO		GRAY SHALE	16.8	491.2	
-41.2	CARBONDALE		SANDSTONE	14.5	508.0	COARSE WITH COAL BANDS
-55.6	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	522.4	
-58.6	CARBONDALE		SILTY SHALE	7.0	525.4	WITH 2" LIMESTONE BAND
-65.6	CARBONDALE		GRAY SHALE	4.8	532.4	WITH SANDSTONE LAMINATIONS
-70.4	CARBONDALE		SILTY SHALE	9.6	537.2	
-80.0	CARBONDALE		SANDSTONE	1.0	546.8	
-81.0	CARBONDALE		SANDSTONE/SHALE	13.8	547.8	
-94.8	CARBONDALE	JAMESTOWN	COAL	0.3	561.6	
-95.1	CARBONDALE		SHALE	0.4	561.9	BLACK
-95.5	CARBONDALE	BRERETON	LIMESTONE	4.4	562.3	GRAY TO BLACK
-99.9	CARBONDALE	ANNA	SHALE	4.4	566.7	BLACK

-104.3	CARBONDALE	ENERGY	GRAY SHALE	10.3	571.1	
-114.5	CARBONDALE	HERRIN	COAL	3.7	581.3	
-118.3	CARBONDALE	HERRIN	FUSAIN	0.0	585.1	
-118.3	CARBONDALE	HERRIN	COAL	0.9	585.1	
-119.2	CARBONDALE	HERRIN	SHALE	0.0	586.0	WITH SLICKENSIDES
-119.2	CARBONDALE	HERRIN	COAL	1.1	586.0	
-120.3	CARBONDALE	HERRIN	SHALE	0.1	587.1	BLUE BAND
-120.4	CARBONDALE	HERRIN	COAL	0.4	587.2	
-120.8	CARBONDALE	HERRIN	FUSAIN	0.0	587.6	
-120.9	CARBONDALE	HERRIN	COAL	0.2	587.7	
-121.1	CARBONDALE		UNDERCLAY	1.7	587.9	
-122.8	CARBONDALE		SHALE WITH LIMESTONE	10.8	589.6	LIMESTONE IN SHALE MATRIX
-133.6	CARBONDALE		GRAY SHALE	5.0	600.4	
-138.6	CARBONDALE		SHALE	2.0	605.4	DARK GRAY
-140.6	CARBONDALE	ST. DAVID	LIMESTONE	1.3	607.4	ARGILLACEOUS, BLACK, FOSSILS
-141.9	CARBONDALE	DYKERSBURG	GRAY SHALE	10.8	608.7	WITH SANDSTONE LAMINATIONS
-152.7	CARBONDALE	DYKERSBURG	SHALY SANDSTONE	6.4	619.5	MICACEOUS, SLIGHTLY CALCAREOUS
-159.1	CARBONDALE	DYKERSBURG	SILTY SHALE	41.6	625.9	POOR CONTACT W/COAL
-200.7	CARBONDALE	SPRINGFIELD	COAL	4.1	667.5	
-204.8	CARBONDALE		UNDERCLAY	2.1	671.6	
-206.9	CARBONDALE		SANDY SHALE	16.3	673.7	

MAPID: 05501236000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 26 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.843707 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.891646 **DATE COLLECTED:** 5 / 0 / 1956

SURFACE ELEVATION (FT.): 499.0 **LOGGED (FT.):** 1726.0 **LOG TYPE:** Electric Log

SOURCE: INLAND PRODUCERS CO **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-363.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	862.0	
-453.0	SPOON	DAVIS	UNCLASSIFIED	-	952.0	
-1227.0	BASE OF PENN.		UNCLASSIFIED	-	1726.0	

MAPID: 05501236000C **VERSION:** 2 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 26 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.843707 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.891646 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 499.0 **LOGGED (FT.):** 3166.0 **LOG TYPE:** Electric Log

SOURCE: INLAND PRODUCERS CO **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-98.0	CARBONDALE	HERRIN	COAL	7.0	597.0	
-118.0	CARBONDALE	BRIAR HILL	COAL	-	617.0	
-155.0	CARBONDALE	SPRINGFIELD	COAL	4.0	654.0	SHALE & SILTSTONE ROOF
-225.0	CARBONDALE	HOUCHIN CREEK	COAL	-	724.0	

MAPID: 05522663000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 26 **QUARTERS/FOOTAGES:** 550' N line, 100' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.853847 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.891003 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 519.0 **LOGGED (FT.):** 626.4 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 304 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1.0	MODESTO	PIASA	LIMESTONE	3.0	520.0	
-4.0	MODESTO		SHALE	6.0	523.0	
-10.0	CARBONDALE	DANVILLE	COAL	2.0	529.0	
-12.0	CARBONDALE		SHALE	18.0	531.0	
-30.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	549.0	
-34.0	CARBONDALE	LAWSON	SHALE & SANDSTONE	31.0	553.0	
-65.0	CARBONDALE	LAWSON	GRAY SHALE	17.0	584.0	
-82.0	CARBONDALE	BRERETON	LIMESTONE	6.0	601.0	
-88.0	CARBONDALE	ANNA	BLACK SHALE	2.0	607.0	
-90.0	CARBONDALE	ENERGY	GRAY SHALE	9.0	609.0	
-99.0	CARBONDALE	HERRIN	COAL	8.4	618.0	

MAPID: 05524050000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 26 **QUARTERS/FOOTAGES:** 200' N line, 800' W line of NE NW

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.846735 **GEOLOGIST:** JMCBETH

CONFIDENTIAL: N **LATITUDE:** 37.891995 **DATE COLLECTED:** 11 / 22 / 1974

SURFACE ELEVATION (FT.): 495.2 **LOGGED (FT.):** 700.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. 312 **WELL TYPE:** Coal Test

COMMENT: PERMIT 211; JOHN ROSS PLANT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
495.2	PLEISTOCENE		CLAY	8.8	0.0	
486.4	PLEISTOCENE		SANDY CLAY	3.4	8.8	
482.9			SHALY SANDSTONE	0.3	12.3	SOFT
482.6			CLAYSTONE	0.5	12.6	
482.1			SHALY SANDSTONE	5.6	13.1	SOFT
476.5			SANDY SHALE	13.4	18.7	INTERBEDDED WITH SHALEY SANDSTONE
463.0			SANDSTONE	3.3	32.2	
459.7			SANDSTONE	1.0	35.5	CARBONACEOUS, DARK GRAY SHALE STRINGERS
458.7			SHALE	1.2	36.5	CARBONACEOUS, DARK GRAY
457.5	BOND		GRAY SHALE	20.3	37.7	
437.2	BOND		SHALE	1.3	58.0	FOSSILIFEROUS; BLACK
435.9	BOND		SHALY SANDSTONE	4.8	59.3	FOSSILIFEROUS
431.0	BOND		SHALE	5.1	64.2	BLACK
426.0	BOND		LIMESTONE	0.3	69.2	
425.7	BOND		GRAY SHALE	2.4	69.5	DARK
423.2	BOND		SHALE	6.0	72.0	CALCAREOUS, SLIGHTLY SANDY
417.2	BOND		GRAY SHALE	13.8	78.0	
403.5	BOND		SHALE	0.7	91.7	WITH COAL; BLACK
402.8	BOND		GRAY SHALE	0.6	92.4	
402.2	BOND		COAL	0.1	93.0	
402.1	BOND		GRAY SHALE	2.0	93.1	WITH COAL
400.1	BOND		SILTY SHALE	3.6	95.1	DARK GRAY
396.6	BOND		SHALE	0.2	98.6	BLACK
396.4	BOND	FLANNIGAN	COAL	0.1	98.8	CORRELATION UNCERTAIN
396.3	BOND		UNDERCLAY	3.3	98.9	WITH SLICKENSIDES AND LIMESTONE FRAGMENT
393.1	BOND		GRAY SHALE	9.5	102.1	
383.6	BOND		LIMESTONE	0.8	111.6	ARGILLACEOUS
382.8	BOND		GRAY SHALE	1.0	112.4	
381.8	BOND		SILTY SHALE	30.4	113.4	WITH SIDERITE
351.4	BOND		GRAY SHALE	1.0	143.8	DARK, FOSSILIFEROUS
350.4	BOND		SHALE	2.8	144.8	BLACK
347.7	BOND	CARTHAGE	LIMESTONE	0.5	147.5	ARGILLACEOUS; CORRELATION UNCERTAIN
347.2	MODESTO		SHALE	4.4	148.0	CALCAREOUS, SOFT
342.8	MODESTO		GRAY SHALE	2.8	152.4	HARD
340.0	MODESTO		GRAY SHALE	0.9	155.2	
339.1	MODESTO		SILTY SHALE	19.0	156.1	SOME CALCAREOUS LAMINATIONS; SIDERITE
320.1	MODESTO		GRAY SHALE	1.7	175.1	WITH HAIRLINE COAL STRINGERS
318.4	MODESTO	WOMAC	COAL	1.2	176.8	

317.2	MODESTO		GRAY SHALE	2.8	178.0	FIRM
314.4	MODESTO		GRAY SHALE	5.0	180.8	
309.4	MODESTO		GRAY SHALE	26.3	185.8	WITH SANDY CALCAREOUS LAMINATIONS
283.2	MODESTO		SILTY SHALE	27.4	212.0	
255.8	MODESTO		GRAY SHALE	16.7	239.4	
239.1	MODESTO		GRAY SHALE	18.3	256.1	SLIGHTLY CALCAREOUS
220.8	MODESTO		GRAY SHALE	5.3	274.4	DARK WITH SHELLS
215.6	MODESTO	CHAPEL	COAL	0.6	279.6	
214.9	MODESTO	CHAPEL	SHALE	1.7	280.3	WITH COAL; BLACK
213.2	MODESTO		SILTY SHALE	3.0	282.0	
210.3	MODESTO		SANDSTONE	12.9	284.9	
197.3	MODESTO		SHALE	50.6	297.9	
146.8	MODESTO	TRIVOLI	SANDSTONE	55.7	348.4	WITH CARBONACEOUS SHALE BEDS
91.1	MODESTO	TRIVOLI	SANDSTONE	0.8	404.1	CALCAREOUS
90.3	MODESTO		CONGLOMERATE	0.3	404.9	LIMESTONE FRAGMENTS IN A SHALE MATRIX
90.0	MODESTO		SHALE	1.8	405.2	BLACK
88.3	MODESTO		GRAY SHALE	2.1	406.9	
86.2	MODESTO	LAKE CREEK	COAL	0.1	409.0	CORRELATION UNCERTAIN
86.1	MODESTO		GRAY SHALE	1.5	409.1	
84.6	MODESTO		LIMESTONE	3.0	410.6	ARGILLACEOUS
81.6	MODESTO		SHALE & SANDSTONE	2.5	413.6	
79.1	MODESTO		GRAY SHALE	3.8	416.1	WITH IRREGULAR SANDSTONE LAMINATIONS
75.3	MODESTO		GRAY SHALE	10.1	419.9	DARK WITH SANDY LAMINATIONS
65.2	MODESTO		SHALE	9.0	430.0	VERY DARK GRAY TO BLACK; BLACK
56.2	MODESTO	POND CREEK	COAL	0.8	439.0	CORRELATION UNCERTAIN
55.5	MODESTO		UNDERCLAY	3.0	439.7	
52.5	MODESTO		CONGLOMERATE	0.8	442.7	LIMESTONE FRAGMENTS IN SHALE MATRIX
51.7	MODESTO		UNDERCLAY	1.2	443.5	WITH GRAY SHALE
50.5	MODESTO		SHALY SANDSTONE	2.5	444.7	CALCAREOUS
48.0	MODESTO		SHALY SANDSTONE	4.5	447.2	
43.6	MODESTO		SANDSTONE	7.0	451.6	
36.5	MODESTO		SHALE	13.6	458.7	
22.9	MODESTO		GRAY SHALE	6.8	472.3	DARK
16.1	MODESTO	DEGRAFF	COAL	0.4	479.1	
15.7	MODESTO		GRAY SHALE	0.3	479.5	DARK
15.4	MODESTO	PIASA	LIMESTONE	3.7	479.8	ARGILLACEOUS
11.7	MODESTO		COAL	0.6	483.5	
11.2	MODESTO		GRAY SHALE	6.7	484.0	DARK
4.4	CARBONDALE	DANVILLE	COAL	1.6	490.8	
2.9	CARBONDALE		UNDERCLAY	7.6	492.3	
-4.7	CARBONDALE		SHALE	4.2	499.9	
-8.9	CARBONDALE		SANDSTONE	5.5	504.1	COARSE;BROWN
-14.4	CARBONDALE		GRAY SHALE	2.6	509.6	
-17.0	CARBONDALE	ALLENBY	COAL	0.5	512.2	
-17.5	CARBONDALE		UNDERCLAY	6.3	512.7	
-23.8	CARBONDALE	BANKSTON FORK	LIMESTONE	3.4	519.0	

-27.2	CARBONDALE		GRAY SHALE	6.9	522.4	HARD
-34.0	CARBONDALE		GRAY SHALE	0.8	529.2	DARK SOFT
-34.8	CARBONDALE	ANVIL ROCK	SHALE & SANDSTONE	29.5	530.0	
-64.2	CARBONDALE	JAMESTOWN	COAL	0.3	559.4	
-64.5	CARBONDALE		SHALE	1.0	559.7	BLACK
-65.5	CARBONDALE	BRERETON	LIMESTONE	5.2	560.7	
-70.8	CARBONDALE	ANNA	SHALE	3.4	566.0	BLACK
-74.1	CARBONDALE	ENERGY	SHALE	2.4	569.3	DARK GRAY
-76.5	CARBONDALE	ENERGY	GRAY SHALE	17.8	571.7	WITH SIDERITE
-94.3	CARBONDALE	HERRIN	COAL	8.2	589.5	
-102.5	CARBONDALE		UNDERCLAY	0.3	597.7	
-102.8	CARBONDALE		LIMESTONE	3.2	598.0	ARGILLACEOUS
-106.1	CARBONDALE		CONGLOMERATE	5.4	601.3	LIMESTONE FRAGMENTS IN SHALE MATRIX
-111.5	CARBONDALE		SILTY SHALE	0.5	606.7	
-112.0	CARBONDALE		SANDSTONE	2.9	607.2	SLIGHTLY SHALEY
-114.9	CARBONDALE		GRAY SHALE	2.2	610.1	DARK
-117.1	CARBONDALE	ST. DAVID	LIMESTONE	1.8	612.3	ARGILLACEOUS, DARK GRAY
-118.9	CARBONDALE	TURNER MINE	SHALE	2.7	614.1	BLACK
-121.6	CARBONDALE	DYKERSBURG	GRAY SHALE	18.8	616.8	
-140.3	CARBONDALE	DYKERSBURG	GRAY SHALE	2.6	635.5	WITH COAL
-142.9	CARBONDALE	SPRINGFIELD	COAL	3.5	638.1	
-146.4	CARBONDALE		UNDERCLAY	3.0	641.6	
-149.4	CARBONDALE		SHALE & SANDSTONE	10.0	644.6	
-159.4	CARBONDALE		SILTY SHALE	3.4	654.6	
-162.7	CARBONDALE		GRAY SHALE	42.1	657.9	

MAPID: 05524059000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 26 **QUARTERS/FOOTAGES:** 200' N line, 3440' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.847498 **GEOLOGIST:** J MCBETH

CONFIDENTIAL: N **LATITUDE:** 37.891991 **DATE COLLECTED:** 1 / 4 / 1975

SURFACE ELEVATION (FT.): 495.3 **LOGGED (FT.):** 700.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. 312 **WELL TYPE:** Coal Test

COMMENT: PERMIT 165; JOHN ROSS PREP PLANT

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
495.3	PLEISTOCENE		CLAY	12.3	0.0	
483.0	PLEISTOCENE		SAND	0.3	12.3	
482.7	PLEISTOCENE		CLAY	0.5	12.6	
482.2	BOND		SHALY SANDSTONE	5.6	13.1	
476.5	BOND		SANDSTONE/SHALE	13.4	18.8	INTERBEDDED
463.1	BOND		SANDSTONE	3.3	32.2	MICACEOUS
459.8	BOND		SANDSTONE	1.0	35.5	MICACEOUS, CARBONACEOUS, SHALE
458.8	BOND		SHALE	1.2	36.5	MICACEOUS, BLACK, CARBONACEOUS
457.6	BOND		GRAY SHALE	18.7	37.7	WITH SANDY LAMINATIONS
439.0	BOND		SHALE	1.7	56.3	GRAY TO DARK GRAY
437.3	BOND		SHALE	1.4	58.0	FOSSILIFEROUS; BLACK
435.9	BOND		LIMESTONE & SHALE	4.8	59.4	FOSSILIFEROUS
431.1	BOND		SHALE	5.1	64.2	BLACK
426.0	BOND		LIMESTONE	0.3	69.3	GRAY
425.8	BOND		SHALE	2.4	69.5	DARK GRAY
423.3	BOND		GRAY SHALE	6.0	72.0	SLIGHTY SANDY AND CALCAREOUS
417.3	BOND		GRAY SHALE	13.8	78.0	
403.5	BOND		SHALE	0.7	91.8	WITH COAL; BLACK
402.9	BOND		GRAY SHALE	0.6	92.4	WITH COAL
402.3	BOND		COAL	0.1	93.0	
402.2	BOND		GRAY SHALE	2.0	93.1	WITH COAL
400.2	BOND		SILTY SHALE	3.6	95.1	CARBONACEOUS, DARK GRAY
396.6	BOND		SHALE	0.2	98.7	BLACK
396.5	BOND		COAL	0.1	98.8	
396.4	BOND		UNDERCLAY	3.3	98.9	WITH LIMESTONE FRAGMENTS, FRACTURED
393.1	BOND		GRAY SHALE	9.5	102.2	WITH SANDY LAMINATIONS
383.7	BOND		LIMESTONE	0.8	111.6	ARGILLACEOUS, LIGHT GRAY
382.8	BOND		GRAY SHALE	1.0	112.5	
381.9	BOND		SILTY SHALE	30.3	113.4	WITH SIDERITE BANDS
351.5	BOND		SHALE	1.0	143.8	DARK GRAY WITH FOSSILS
350.5	BOND		SHALE	2.8	144.8	BLACK
347.8	BOND	CARTHAGE	LIMESTONE	0.5	147.5	ARGILLACEOUS, GRAY
347.3			SHALE	4.4	148.0	CALCAREOUS, SOFT
342.9			GRAY SHALE	2.8	152.4	HARD
340.1			GRAY SHALE	0.9	155.2	
339.2			SILTY SHALE	5.9	156.1	WITH SANDY CALCAREOUS LAMINATIONS
333.3			SIDERITE	0.1	162.0	SIDERITE BANDS
333.2			SILTY SHALE	13.0	162.1	WITH SANDY CALCAREOUS LAMINATIONS

320.2			GRAY SHALE	1.7	175.1	WITH FEW 1/16" COAL STRINGERS
318.5	MODESTO	WOMAC	COAL	1.2	176.8	
317.3	MODESTO		UNDERCLAY	2.8	178.0	WITH FEW COAL STRINGERS
314.5	MODESTO		GRAY SHALE	5.0	180.8	
309.5	MODESTO		SANDY SHALE	26.3	185.8	
283.3	MODESTO		SILTY SHALE	44.1	212.0	
239.2	MODESTO		SHALE	18.3	256.1	DARK GRAY TO BLACK; SLIGHTLY CALCAREOUS
221.0	MODESTO		SHALE	5.3	274.3	DARK GRAY, WITH FOSSILS AT TOP
215.7	MODESTO	CHAPEL	COAL	0.6	279.6	
215.0	MODESTO	CHAPEL	SHALE	1.7	280.3	CARBONACEOUS; BLACK
213.3	MODESTO		SILTY SHALE	3.0	282.0	
210.4	MODESTO		SANDSTONE	12.9	284.9	FEW THIN CARBONACEOUS STRINGERS
197.5	MODESTO		SHALE	50.6	297.8	DARK GRAY
146.9	MODESTO	TRIVOLI	SANDSTONE	56.4	348.4	
90.5	MODESTO		LIMESTONE & SHALE	0.3	404.8	LIMESTONE IN SHALE MATRIX
90.1	MODESTO		SHALE	1.8	405.2	BLACK
88.4	MODESTO		SHALE	2.1	406.9	DARK GRAY
86.3	MODESTO	LAKE CREEK	COAL	0.1	409.0	
86.2	MODESTO		GRAY SHALE	1.5	409.1	
84.7	MODESTO		LIMESTONE	3.0	410.6	ARGILLACEOUS, GRAY TO TAN
81.7	MODESTO		SANDSTONE/SHALE	2.5	413.6	
79.2	MODESTO		GRAY SHALE	3.8	416.1	WITH SANDSTONE LAMINATIONS
75.4	MODESTO		SHALE	10.1	419.9	DARK GRAY WITH SANDY LAMINATIONS
65.3	MODESTO		SHALE	9.0	430.0	VERY DARK GRAY TO BLACK
56.3	MODESTO	POND CREEK	COAL	0.8	439.0	
55.6	MODESTO		UNDERCLAY	3.0	439.7	
52.6	MODESTO		LIMESTONE & SHALE	0.8	442.7	LIMESTONE FRAGMENTS IN SHALE MATRIX
51.8	MODESTO		UNDERCLAY	1.2	443.5	
50.6	MODESTO		SANDSTONE	14.0	444.7	
36.6	MODESTO		SANDSTONE/SHALE	13.6	458.7	
23.0	MODESTO		SHALE	6.8	472.3	DARK GRAY
16.2	MODESTO	DEGRAFF	COAL	0.4	479.1	
15.8	MODESTO		SHALE	0.3	479.5	DARK GRAY
15.5	MODESTO	PIASA	LIMESTONE	3.7	479.8	ARGILLACEOUS, BROWN
11.8	MODESTO		COAL	0.6	483.5	
11.3	MODESTO		SHALE	6.7	484.0	DARK GRAY; SLIGHTLY CALCAREOUS
4.5	CARBONDALE	DANVILLE	COAL	1.6	490.8	
3.0	CARBONDALE		UNDERCLAY	7.6	492.3	
-4.6	CARBONDALE		GRAY SHALE	4.2	499.9	
-8.8	CARBONDALE		SANDSTONE	5.5	504.1	COARSE,BROWN
-14.3	CARBONDALE		GRAY SHALE	2.6	509.6	WITH SANDY LAMINATIONS
-16.9	CARBONDALE	ALLENBY	COAL	0.5	512.2	
-17.4	CARBONDALE		UNDERCLAY	6.3	512.7	
-23.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.4	519.0	BROWNISH GRAY
-27.1	CARBONDALE		GRAY SHALE	6.9	522.4	HARD, SOME CALCAREOUS ZONES
-34.0	CARBONDALE		SHALE	0.8	529.3	DARK GRAY,SOFT

-34.7	CARBONDALE	ANVIL ROCK	SHALE	29.5	530.0	WITH SANDSTONE
-64.2	CARBONDALE	JAMESTOWN	COAL	0.3	559.5	BROKEN
-64.5	CARBONDALE		SHALE	1.0	559.8	BLACK
-65.5	CARBONDALE	BRERETON	LIMESTONE	5.2	560.8	ARGILLACEOUS, BROWN TO BLACK
-70.7	CARBONDALE	ANNA	SHALE	3.4	566.0	BLACK
-74.1	CARBONDALE	ENERGY	SHALE	20.2	569.4	DARK GRAY WITH SIDERITE
-94.2	CARBONDALE	HERRIN	COAL	5.7	589.5	
-99.9	CARBONDALE	HERRIN	FUSAIN	0.0	595.2	
-99.9	CARBONDALE	HERRIN	COAL	2.6	595.2	
-102.5	CARBONDALE		UNDERCLAY	0.3	597.8	
-102.7	CARBONDALE		LIMESTONE	3.2	598.0	ARGILLACEOUS
-106.0	CARBONDALE		LIMESTONE & SHALE	5.4	601.3	LIMESTONE IN SHALE MATRIX
-111.4	CARBONDALE		SILTY SHALE	0.5	606.7	
-111.9	CARBONDALE		SANDSTONE	2.9	607.2	SHALEY
-114.8	CARBONDALE		SHALE	2.2	610.1	DARK GRAY
-117.0	CARBONDALE	ST. DAVID	LIMESTONE	1.8	612.3	ARGILLACEOUS, DARK GRAY
-118.8	CARBONDALE	TURNER MINE	SHALE	2.7	614.1	BLACK
-121.5	CARBONDALE	DYKERSBURG	GRAY SHALE	18.8	616.8	
-140.2	CARBONDALE	DYKERSBURG	SHALE	2.4	635.5	
-142.6	CARBONDALE	DYKERSBURG	SHALE	0.2	637.9	WITH COAL
-142.8	CARBONDALE	SPRINGFIELD	COAL	3.5	638.1	
-146.3	CARBONDALE		UNDERCLAY	3.0	641.6	
-149.3	CARBONDALE		SHALE & SANDSTONE	10.0	644.6	
-159.3	CARBONDALE		SILTY SHALE	3.4	654.6	
-162.7	CARBONDALE		GRAY SHALE	42.0	658.0	SOME SIDERITE

MAPID: 05500770000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 27 **QUARTERS/FOOTAGES:** 50' N line, 700' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.856629 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.89236 **DATE COLLECTED:** 1 / 3 / 1945

SURFACE ELEVATION (FT.): 449.0 **LOGGED (FT.):** 546.7 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 44 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
8.8	MODESTO	PIASA	LIMESTONE	4.2	440.2	
4.7	MODESTO		BLACK SHALE	7.6	444.3	
-2.9	CARBONDALE	DANVILLE	COAL	2.7	451.9	
-5.6	CARBONDALE		DARK GRAY SHALE	7.5	454.6	
-13.1	CARBONDALE	ALLENBY	COAL	0.4	462.1	
-13.5	CARBONDALE		CLAYSTONE & SHALE	5.7	462.5	
-19.2	CARBONDALE	BANKSTON FORK	LIMESTONE	6.8	468.2	
-26.0	CARBONDALE	LAWSON	SILTY SHALE	28.8	475.0	
-54.7	CARBONDALE	LAWSON	CALCAREOUS SANDSTONE	3.3	503.7	
-58.0	CARBONDALE	LAWSON	SILTY SHALE	3.3	507.0	
-61.3	CARBONDALE	JAMESTOWN	COAL	0.2	510.3	
-61.5	CARBONDALE		BLACK SHALE	1.3	510.5	
-62.8	CARBONDALE	BRERETON	LIMESTONE	3.0	511.8	
-65.8	CARBONDALE	ANNA	BLACK SHALE	2.3	514.8	
-68.0	CARBONDALE	ENERGY	GRAY SHALE	21.0	517.0	
-89.0	CARBONDALE	HERRIN	COAL	8.7	538.0	

MAPID: 05500798000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 27 **QUARTERS/FOOTAGES:** 50' S line, 2610' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.86353 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.878181 **DATE COLLECTED:** 12 / 28 / 1944

SURFACE ELEVATION (FT.): 420.0 **LOGGED (FT.):** 480.4 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 45 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
47.9	MODESTO	PIASA	LIMESTONE	3.4	372.1	
44.5	MODESTO		DARK GRAY SHALE	3.3	375.5	
41.1	CARBONDALE	DANVILLE	COAL	2.0	378.9	
39.1	CARBONDALE		SHALE & SANDSTONE	16.7	380.9	
22.5	CARBONDALE	ALLENBY	COAL	0.4	397.5	
22.0	CARBONDALE		CLAYSTONE & SHALE	8.8	398.0	
13.2	CARBONDALE	BANKSTON FORK	LIMESTONE	5.2	406.8	
8.0	CARBONDALE	LAWSON	SILTY SHALE	12.4	412.0	
-4.4	CARBONDALE	LAWSON	DARK GRAY SHALE	19.0	424.4	
-23.4	CARBONDALE	LAWSON	CALCAREOUS SANDSTONE	1.0	443.4	
-24.4	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	8.0	444.4	
-32.4	CARBONDALE	LAWSON	SILTY SHALE	1.4	452.4	
-33.8	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.9	453.8	
-34.7	CARBONDALE		DARK GRAY SHALE	4.2	454.7	
-38.9	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	10.7	458.9	
-49.6	CARBONDALE	ANNA	BLACK SHALE	3.4	469.6	
-53.0	CARBONDALE	HERRIN	COAL	7.4	473.0	

MAPID: 05501075000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 27 **QUARTERS/FOOTAGES:** 244' S line, 1824' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.866266 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.87871 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 420.0 **LOGGED (FT.):** 477.4 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 79 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
55.9	MODESTO	PIASA	LIMESTONE	4.3	364.1	
51.6	MODESTO		DARK GRAY SHALE	4.3	368.4	
47.3	CARBONDALE	DANVILLE	COAL	1.7	372.7	
45.7	CARBONDALE		SANDSTONE/SILTSTONE	20.0	374.3	
25.7	CARBONDALE	ALLENBY	COAL	0.4	394.3	
25.3	CARBONDALE		CLAYSTONE & SHALE	7.8	394.7	
17.5	CARBONDALE	BANKSTON FORK	LIMESTONE	4.8	402.5	
12.7	CARBONDALE	LAWSON	SILTSTONE	0.5	407.3	
12.2	CARBONDALE	LAWSON	GRAY SHALE	29.5	407.8	
-17.3	CARBONDALE	LAWSON	SILTSTONE	2.2	437.3	
-19.4	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	5.8	439.4	
-25.2	CARBONDALE	LAWSON	BLACK SHALE	0.3	445.2	
-25.4	CARBONDALE	JAMESTOWN	BONE COAL	0.3	445.4	
-25.7	CARBONDALE		DARK GRAY SHALE	1.3	445.7	
-26.9	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	4.6	446.9	
-31.5	CARBONDALE	ANNA	BLACK SHALE	3.8	451.5	
-35.3	CARBONDALE	ENERGY	GRAY SHALE	13.8	455.3	
-49.0	CARBONDALE	HERRIN	COAL	8.4	469.0	

MAPID: 05500146000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 28 **QUARTERS/FOOTAGES:** 330' S line, 990' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.876066 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.878857 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 414.0 **LOGGED (FT.):** 475.0 **LOG TYPE:**

SOURCE: SAHARA 0003 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-51.0	CARBONDALE	HERRIN	COAL	8.3	465.0	

MAPID: 05500146000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 28 **QUARTERS/FOOTAGES:** 330' S line, 990' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.876066 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.878857 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 414.0 **LOGGED (FT.):** 473.3 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
58.0	MODESTO	PIASA	LIMESTONE	4.0	356.0	
54.0	MODESTO		BLACK SHALE	2.5	360.0	
51.5	CARBONDALE	DANVILLE	COAL	1.5	362.5	
50.0	CARBONDALE		SHALE & SANDSTONE	19.0	364.0	
31.0	CARBONDALE	ALLENBY	COAL	0.5	383.0	
30.5	CARBONDALE		CLAYSTONE & SHALE	6.5	383.5	
24.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.5	390.0	
18.5	CARBONDALE	LAWSON	BLACK SHALE	0.5	395.5	
18.0	CARBONDALE	LAWSON	CLAYSTONE	3.0	396.0	
15.0	CARBONDALE	LAWSON	LIMESTONE & SHALE	2.0	399.0	
13.0	CARBONDALE	LAWSON	GRAY SHALE	19.0	401.0	
-6.0	CARBONDALE	LAWSON	SANDSTONE	11.0	420.0	
-17.0	CARBONDALE		BLACK SHALE	1.0	431.0	
-18.0	CARBONDALE	BRERETON	LIMESTONE	5.5	432.0	
-23.5	CARBONDALE	ANNA	BLACK SHALE	4.0	437.5	
-27.5	CARBONDALE	ENERGY	SILTY SHALE	3.0	441.5	
-30.5	CARBONDALE	ENERGY	GRAY SHALE	20.5	444.5	
-51.0	CARBONDALE	HERRIN	BONE COAL	8.3	465.0	

MAPID: 05522763000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 28 **QUARTERS/FOOTAGES:** SW NW SW NE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.881374 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.887384 **DATE COLLECTED:** 6 / 3 / 1976

SURFACE ELEVATION (FT.): 415.0 **LOGGED (FT.):** 497.0 **LOG TYPE:** Drillers Log

SOURCE: HOMEIER (?) OIL ENTERPRISES 1-A **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-74.0	CARBONDALE	HERRIN	COAL	8.0	489.0	

MAPID: 05500147000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 29 **QUARTERS/FOOTAGES:** NE NE SE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.892486 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.884069 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 413.0 **LOGGED (FT.):** 500.0 **LOG TYPE:** Drillers Log

SOURCE: O'GARA COAL CO. 4 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
413.0	PLEISTOCENE		UNCONSOLIDATED	16.0	0.0	
397.0	PLEISTOCENE		SANDSTONE	17.0	16.0	WITH GRAVEL AND CLAY
380.0	MODESTO		LIMESTONE	1.5	33.0	
378.5	MODESTO		MUDSTONE	24.5	34.5	BLUE
354.0	MODESTO		SANDSTONE	45.0	59.0	
309.0	MODESTO		SHALE	44.0	104.0	
265.0	MODESTO		BLACK SHALE	1.0	148.0	
264.0	MODESTO		LIMESTONE	0.5	149.0	
263.5	MODESTO		SHALE	24.5	149.5	
239.0	MODESTO		SHALE	35.0	174.0	
204.0	MODESTO		SANDSTONE	10.0	209.0	
194.0	MODESTO		SHALE	7.0	219.0	
187.0	MODESTO		SANDSTONE	7.0	226.0	
180.0	MODESTO		SANDY SHALE	37.0	233.0	
143.0	MODESTO		SANDSTONE WITH COAL	6.0	270.0	WITH COAL
137.0	MODESTO		SHALE	5.0	276.0	
132.0	MODESTO		BLACK SHALE	2.0	281.0	WITH LIMESTONE
130.0	MODESTO		CLAYSTONE	2.5	283.0	
127.5	MODESTO		SANDY LIMESTONE	10.5	285.5	WITH SANDSTONE
117.0	MODESTO		SHALE	5.0	296.0	
112.0	MODESTO		BLACK SHALE	12.0	301.0	
100.0	MODESTO		COAL	1.0	313.0	
99.0	MODESTO		CLAYSTONE	6.0	314.0	
93.0	MODESTO		SANDY LIMESTONE	7.0	320.0	WITH SANDSTONE
86.0	MODESTO		SHALE	23.0	327.0	
63.0	MODESTO		BLACK SHALE	1.5	350.0	
61.5	MODESTO		CLAYSTONE	1.0	351.5	
60.5	MODESTO	PIASA	LIMESTONE/CHERT	3.5	352.5	WITH FLINT
57.0	MODESTO		SHALE	3.0	356.0	
54.0	MODESTO		BLACK SHALE	2.5	359.0	
51.5	CARBONDALE	DANVILLE	COAL	1.5	361.5	
50.0	CARBONDALE		SHALE	7.0	363.0	
43.0	CARBONDALE		SANDY SHALE	7.0	370.0	
36.0	CARBONDALE		SANDSTONE	10.0	377.0	
26.0	CARBONDALE		SHALE	3.0	387.0	
23.0	CARBONDALE	ALLENBY	COAL	0.5	390.0	
22.5	CARBONDALE		CLAYSTONE	3.5	390.5	
19.0	CARBONDALE	BANKSTON FORK	LIMESTONE/CHERT	5.5	394.0	WITH FLINT
13.5	CARBONDALE	BANKSTON FORK	SHALE	2.0	399.5	

11.5	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	401.5
8.5	CARBONDALE		SANDY SHALE	2.5	404.5
6.0	CARBONDALE		SHALE	23.0	407.0
-17.0	CARBONDALE		BLACK SHALE	1.0	430.0
-18.0	CARBONDALE		SHALE	7.0	431.0
-25.0	CARBONDALE		SANDY SHALE	3.0	438.0
-28.0	CARBONDALE		BLACK SHALE	49.4	441.0
-77.4	CARBONDALE	HERRIN	COAL	8.1	490.4
-85.5	CARBONDALE		CLAYSTONE	1.5	498.5

MAPID: 05500147000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 29 **QUARTERS/FOOTAGES:** NE NE SE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.892486 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.884069 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 413.0 **LOGGED (FT.):** 490.0 **LOG TYPE:**

SOURCE: SAHARA 0004 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-77.0	CARBONDALE	HERRIN	COAL	8.1	490.0	

MAPID: 05500333000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 29 **QUARTERS/FOOTAGES:** NE SE SE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.892545 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.88037 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 405.0 **LOGGED (FT.):** 476.3 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 29A **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
59.7	MODESTO	PIASA	LIMESTONE	4.0	345.3	
55.7	MODESTO		DARK GRAY SHALE	3.8	349.3	
51.8	CARBONDALE	DANVILLE	COAL	1.8	353.2	
50.0	CARBONDALE		SILTY SHALE	16.3	355.0	
33.7	CARBONDALE	ALLENBY	BONE COAL	1.0	371.3	
32.7	CARBONDALE		CLAYSTONE & SHALE	3.0	372.3	
29.7	CARBONDALE	BANKSTON FORK	LIMESTONE	3.5	375.3	
26.2	CARBONDALE	LAWSON	GRAY SHALE	7.5	378.8	
18.7	CARBONDALE	LAWSON	SILTY SHALE	2.7	386.3	
16.0	CARBONDALE	LAWSON	LIMESTONE AND SANDSTONE	0.5	389.0	
15.5	CARBONDALE	LAWSON	SILTY SHALE	1.1	389.5	
14.4	CARBONDALE	LAWSON	DARK GRAY SHALE	28.8	390.6	
-14.3	CARBONDALE	ANNA	BLACK SHALE	3.0	419.3	
-17.3	CARBONDALE	ENERGY	DARK GRAY SHALE	45.7	422.3	
-63.0	CARBONDALE	HERRIN	COAL	8.3	468.0	

MAPID: 05500333000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 29 **QUARTERS/FOOTAGES:** NE SE SE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.892545 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.88037 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 405.3 **LOGGED (FT.):** 0.0 **LOG TYPE:**

SOURCE: OLD BEN COAL CO. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-69.7	CARBONDALE	HERRIN	COAL	8.3	475.0	

MAPID: 05501276000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 29 **QUARTERS/FOOTAGES:** 330' N line, 310' E line of SW SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.905846 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.880048 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 399.0 **LOGGED (FT.):** 2950.0 **LOG TYPE:** Electric Log

SOURCE: EAKLE & HOLDER PETRO. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-51.0	CARBONDALE	HERRIN	COAL	9.0	450.0	
-101.0	CARBONDALE	SPRINGFIELD	COAL	4.0	500.0	SHALE & SILTSTONE ROOF
-181.0	CARBONDALE	HOUCHIN CREEK	COAL	-	580.0	

MAPID: 05502557000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 29 **QUARTERS/FOOTAGES:** 330' S line, 350' W line of SW NW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.908099 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.88554 **DATE COLLECTED:** 6 / 0 / 1969

SURFACE ELEVATION (FT.): 408.0 **LOGGED (FT.):** 1570.0 **LOG TYPE:** Electric Log

SOURCE: KILLION, ETAL **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-288.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	696.0	
-362.0	SPOON	DAVIS	UNCLASSIFIED	-	770.0	
-1162.0	BASE OF PENN.		UNCLASSIFIED	-	1570.0	

MAPID: 05502590000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 29 **QUARTERS/FOOTAGES:** 400' N line, 270' W line of SE NW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.903898 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.887343 **DATE COLLECTED:** 6 / 0 / 1970

SURFACE ELEVATION (FT.): 411.0 **LOGGED (FT.):** 1605.0 **LOG TYPE:** Electric Log

SOURCE: KILLION, ETAL **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1194.0	BASE OF PENN.		UNCLASSIFIED	-	1605.0	

MAPID: 05500871000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 30 **QUARTERS/FOOTAGES:** 2370' N line, 2302' E line

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.917334 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.885507 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 398.0 **LOGGED (FT.):** 434.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
96.0	MODESTO	PIASA	LIMESTONE	6.0	302.0	
90.0	MODESTO		DARK GRAY SHALE	3.0	308.0	
87.0	CARBONDALE	DANVILLE	COAL	1.0	311.0	
86.0	CARBONDALE		SHALE	19.0	312.0	
67.0	CARBONDALE	ALLENBY	BONE COAL	1.0	331.0	
66.0	CARBONDALE		CLAYSTONE & SHALE	4.0	332.0	
62.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	336.0	
59.0	CARBONDALE	LAWSON	SHALE	30.0	339.0	
29.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	9.0	369.0	
20.0	CARBONDALE	ENERGY	GRAY SHALE	48.0	378.0	
-28.0	CARBONDALE	HERRIN	COAL	8.0	426.0	

MAPID: 05501851000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 30 **QUARTERS/FOOTAGES:** 500' N line, 650' E line of SE NW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.921098 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.886929 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 393.0 **LOGGED (FT.):** 2858.0 **LOG TYPE:** Electric Log

SOURCE: BARTMES, ROSS **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-37.0	CARBONDALE	HERRIN	COAL	8.0	430.0	
-83.0	CARBONDALE	SPRINGFIELD	COAL	4.0	476.0	BLACK SHALE & LIMESTONE ROOF
-161.0	CARBONDALE	HOUCHIN CREEK	COAL	-	554.0	

MAPID: 05501860000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 30 **QUARTERS/FOOTAGES:** NE SW NW SE

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.916981 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.882248 **DATE COLLECTED:** 4 / 0 / 1948

SURFACE ELEVATION (FT.): **LOGGED (FT.):** 1185.0 **LOG TYPE:** Drillers Log

SOURCE: ROSS BARTMES 2-B **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-	PLEISTOCENE		UNCONSOLIDATED	40.0	0.0	
-			FOSSILIFEROUS SHALE	80.0	40.0	WITH SHELLS
-			FOSSILIFEROUS SHALE	75.0	120.0	WITH SHELLS
-			SANDY SHALE	212.0	195.0	WITH SAND
-			SANDSTONE	13.0	407.0	WITH SHALE
-	CARBONDALE	HERRIN	COAL	9.0	420.0	
-			SANDSTONE	40.0	429.0	WITH SHALE
-	CARBONDALE	SPRINGFIELD	COAL	5.0	469.0	
-			SANDSTONE	171.0	474.0	WITH SHALE
-			SANDY SHALE	370.0	645.0	WITH SAND
-			SHALE	170.0	1015.0	

MAPID: 05501239000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 31 **QUARTERS/FOOTAGES:** 435' N line, 230' W line of SW NE

QUADRANGLE: JOHNSTON CITY **LONGITUDE:** -88.918153 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.87215 **DATE COLLECTED:** 6 / 0 / 1956

SURFACE ELEVATION (FT.): 412.0 **LOGGED (FT.):** 1560.0 **LOG TYPE:** Electric Log

SOURCE: MCCLEMENT, R. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-1148.0	BASE OF PENN.		UNCLASSIFIED	-	1560.0	

MAPID: 05501358000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 31 **QUARTERS/FOOTAGES:** 1705' N line, 1590' E line

QUADRANGLE: JOHNSTON CITY **LONGITUDE:** -88.915054 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.872413 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 405.0 **LOGGED (FT.):** 440.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
103.0	MODESTO	PIASA	LIMESTONE	6.0	302.0	
97.0	MODESTO		DARK GRAY SHALE	3.5	308.0	
93.5	CARBONDALE	DANVILLE	COAL	1.5	311.5	
92.0	CARBONDALE		SHALE	12.0	313.0	
80.0	CARBONDALE	ALLENBY	BONE COAL	1.0	325.0	
79.0	CARBONDALE		CLAYSTONE & SHALE	4.0	326.0	
75.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	3.0	330.0	
72.0	CARBONDALE	LAWSON	SHALE	25.0	333.0	
47.0	CARBONDALE	BRERETON	CALCAREOUS SHALE	4.0	358.0	
43.0	CARBONDALE	ENERGY	GRAY SHALE	68.0	362.0	
-25.0	CARBONDALE	HERRIN	COAL	10.0	430.0	

MAPID: 05502002000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 31 **QUARTERS/FOOTAGES:** 300' S line, 333' W line of SE NE

QUADRANGLE: JOHNSTON CITY **LONGITUDE:** -88.913197 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.870426 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 405.0 **LOGGED (FT.):** 2813.0 **LOG TYPE:** Electric Log

SOURCE: MCCLEMENT & KILLION **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-29.0	CARBONDALE	HERRIN	COAL	9.0	434.0	
-78.0	CARBONDALE	SPRINGFIELD	COAL	4.0	483.0	SHALE & SILTSTONE ROOF
-159.0	CARBONDALE	HOUCHIN CREEK	COAL	-	564.0	

MAPID: 05522662000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 32 **QUARTERS/FOOTAGES:** 2505' N line, 1650' W line

QUADRANGLE: JOHNSTON CITY **LONGITUDE:** -88.903923 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.870373 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 418.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
418.0				0.0	0.0	UNCLASSIFIED
68.0	MODESTO	PIASA	LIMESTONE & SHALE	5.0	350.0	
63.0	MODESTO		DARK GRAY SHALE	3.0	355.0	
60.0	CARBONDALE	DANVILLE	COAL	2.0	358.0	
58.0	CARBONDALE		SHALE	13.0	360.0	
45.0	CARBONDALE	ALLENBY	BONE COAL	1.0	373.0	
44.0	CARBONDALE		CLAYSTONE & SHALE	3.0	374.0	
41.0	CARBONDALE	BANKSTON FORK	LIMESTONE	4.0	377.0	
37.0	CARBONDALE	LAWSON	SHALE	29.0	381.0	
8.0	CARBONDALE	BRERETON	CALCAREOUS SHALE	3.0	410.0	
5.0	CARBONDALE	ENERGY	GRAY SHALE	62.0	413.0	
-57.0	CARBONDALE	HERRIN	COAL	9.0	475.0	

MAPID: 05522757000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 32 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of NW SW

QUADRANGLE: JOHNSTON CITY **LONGITUDE:** -88.906568 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.866784 **DATE COLLECTED:** 5 / 0 / 1976

SURFACE ELEVATION (FT.): 422.0 **LOGGED (FT.):** 1705.0 **LOG TYPE:** Electric Log

SOURCE: DULL, JOE A. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1283.0	BASE OF PENN.		UNCLASSIFIED	-	1705.0	

MAPID: 05500627000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 34 **QUARTERS/FOOTAGES:** 2310' N line, 990' W line
QUADRANGLE: PITTSBURG **LONGITUDE:** -88.869177 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.87165 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 422.0 **LOGGED (FT.):** 3189.0 **LOG TYPE:** Electric Log
SOURCE: ADKINS, E. S. **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-48.0	CARBONDALE	HERRIN	COAL	7.0	470.0	
-100.0	CARBONDALE	SPRINGFIELD	COAL	3.0	522.0	SHALE & SILTSTONE ROOF
-174.0	CARBONDALE	HOUCHIN CREEK	COAL	-	596.0	

MAPID: 05500627000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 34 **QUARTERS/FOOTAGES:** 2310' N line, 990' W line
QUADRANGLE: PITTSBURG **LONGITUDE:** -88.869177 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.87165 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 425.0 **LOGGED (FT.):** 478.0 **LOG TYPE:** Electric Log
SOURCE: **WELL TYPE:** Oil and Gas Test
COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
53.0	MODESTO	PIASA	LIMESTONE	5.0	372.0	
48.0	MODESTO		DARK GRAY SHALE	4.0	377.0	
44.0	CARBONDALE	DANVILLE	COAL	2.0	381.0	
42.0	CARBONDALE		SHALE	20.0	383.0	
22.0	CARBONDALE	BANKSTON FORK	LIMESTONE	7.0	403.0	
15.0	CARBONDALE	LAWSON	SHALE	28.0	410.0	
-13.0	CARBONDALE	LAWSON	SILTY SHALE	20.0	438.0	
-33.0	CARBONDALE	LAWSON	DARK GRAY SHALE	3.0	458.0	
-36.0	CARBONDALE	BRERETON	LIMESTONE	7.0	461.0	
-43.0	CARBONDALE	ANNA	BLACK SHALE	2.0	468.0	
-45.0	CARBONDALE	HERRIN	COAL	8.0	470.0	

MAPID: 05500627000C **VERSION:** 3 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 34 **QUARTERS/FOOTAGES:** 2310' N line, 990' W line
QUADRANGLE: PITTSBURG **LONGITUDE:** -88.869177 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.87165 **DATE COLLECTED:** 6 / 0 / 1942
SURFACE ELEVATION (FT.): 422.0 **LOGGED (FT.):** 1598.0 **LOG TYPE:** Electric Log
SOURCE: ADKINS, E. S. **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1176.0	BASE OF PENN.		UNCLASSIFIED	-	1598.0	

MAPID: 05500148000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 35 **QUARTERS/FOOTAGES:** 660' N line, 1980' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.842518 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.876124 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 433.0 **LOGGED (FT.):** 511.0 **LOG TYPE:**

SOURCE: SAHARA 0002 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-69.0	CARBONDALE	HERRIN	COAL	8.1	502.0	

MAPID: 05500148000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 35 **QUARTERS/FOOTAGES:** 660' N line, 1980' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.842518 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.876124 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 433.0 **LOGGED (FT.):** 511.1 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
68.5	MODESTO		SANDSTONE	52.0	364.5	
16.5	CARBONDALE	DANVILLE	COAL	1.5	416.5	
15.0	CARBONDALE		SHALE & SANDSTONE	9.5	418.0	
5.5	CARBONDALE	ALLENBY	BONE COAL	1.0	427.5	
4.5	CARBONDALE		CLAYSTONE & SHALE	8.5	428.5	
-4.0	CARBONDALE	BANKSTON FORK	LIMESTONE	8.5	437.0	
-12.5	CARBONDALE	LAWSON	GRAY SHALE	6.0	445.5	
-18.5	CARBONDALE	LAWSON	LIMESTONE & SHALE	2.5	451.5	
-21.0	CARBONDALE	LAWSON	LIMESTONE W/ SHALE	6.0	454.0	
-27.0	CARBONDALE	LAWSON	LIMESTONE & SHALE	2.5	460.0	
-29.5	CARBONDALE	LAWSON	SHALE & SANDSTONE	10.5	462.5	
-40.0	CARBONDALE		BLACK SHALE	2.7	473.0	
-42.7	CARBONDALE	BRERETON	LIMESTONE	6.0	475.7	
-48.7	CARBONDALE	ANNA	BLACK SHALE	5.8	481.7	
-54.5	CARBONDALE	ENERGY	GRAY SHALE	15.5	487.5	
-70.0	CARBONDALE	HERRIN	COAL	8.1	503.0	

MAPID: 05500148000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 35 **QUARTERS/FOOTAGES:** 660' N line, 1980' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.842518 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.876124 **DATE COLLECTED:** 0 / 0 / 1906

SURFACE ELEVATION (FT.): 433.0 **LOGGED (FT.):** 511.0 **LOG TYPE:** Drillers Log

SOURCE: O'GARA COAL CO. 2 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
433.0	PLEISTOCENE		UNCONSOLIDATED	14.0	0.0	
419.0	PLEISTOCENE		SAND & GRAVEL	6.0	14.0	
413.0	PLEISTOCENE		CLAY	9.0	20.0	BLACK
404.0	MODESTO		SHALE WITH LIMESTONE	19.0	29.0	WITH LIMESTONE
385.0	MODESTO		BLACK SHALE	2.0	48.0	
383.0	MODESTO		LIMESTONE	1.0	50.0	
382.0	MODESTO		SHALE WITH LIMESTONE	35.0	51.0	WITH LIMESTONE
347.0	MODESTO		COAL	2.0	86.0	
345.0	MODESTO		CLAYSTONE	4.0	88.0	WITH SHALE
341.0	MODESTO		SHALE	3.0	92.0	
338.0	MODESTO		SANDSTONE	23.0	95.0	
315.0	MODESTO		SANDY SHALE	21.0	118.0	
294.0	MODESTO		SANDSTONE	2.0	139.0	
292.0	MODESTO		SHALE	43.0	141.0	
249.0	MODESTO		SHALE	1.5	184.0	
247.5	MODESTO		LIMESTONE	0.5	185.5	DARK
247.0	MODESTO		SHALE	15.0	186.0	
232.0	MODESTO		BLACK SHALE	3.0	201.0	
229.0	MODESTO		SANDSTONE	58.0	204.0	
171.0	MODESTO		LIMESTONE	3.0	262.0	
168.0	MODESTO		SHALE	43.0	265.0	
125.0	MODESTO		BLACK SHALE	2.0	308.0	
123.0	MODESTO		CLAYSTONE	3.0	310.0	
120.0	MODESTO		LIMESTONE	3.0	313.0	
117.0	MODESTO		SHALY LIMESTONE	9.0	316.0	WITH SHALE
108.0	MODESTO		BLACK SHALE	13.5	325.0	WITH CLAY
94.5	MODESTO		COAL	0.5	338.5	
94.0	MODESTO		CLAYSTONE	3.0	339.0	
91.0	MODESTO		LIMESTONE	2.0	342.0	
89.0	MODESTO		SHALE	6.0	344.0	
83.0	MODESTO		LIMESTONE	3.0	350.0	
80.0	MODESTO		SANDSTONE	4.0	353.0	
76.0	MODESTO		SHALE	7.0	357.0	
69.0	MODESTO		SANDSTONE	52.0	364.0	
17.0	CARBONDALE	DANVILLE	COAL	1.5	416.0	
15.5	CARBONDALE		CLAYSTONE	2.5	417.5	
13.0	CARBONDALE		SANDSTONE	7.0	420.0	
6.0	CARBONDALE	ALLENBY	COAL W/ BLACK SHALE	1.0	427.0	WITH SLATE
5.0	CARBONDALE		CLAYSTONE	1.0	428.0	

4.0	CARBONDALE		SHALE	7.5	429.0	
-3.5	CARBONDALE	BANKSTON FORK	LIMESTONE/CHERT	8.5	436.5	WITH FLINT
-12.0	CARBONDALE		BLACK SHALE	6.0	445.0	
-18.0	CARBONDALE		LIMESTONE	2.5	451.0	
-20.5	CARBONDALE		BLACK SHALE	6.0	453.5	WITH LIMESTONE
-26.5	CARBONDALE		LIMESTONE	2.5	459.5	
-29.0	CARBONDALE		SANDSTONE	9.0	462.0	
-38.0	CARBONDALE		SANDY SHALE	1.5	471.0	
-39.5	CARBONDALE		BLACK SHALE	2.7	472.5	
-42.2	CARBONDALE	BRERETON	LIMESTONE	6.0	475.2	DARK
-48.2	CARBONDALE		BLACK SHALE	5.8	481.2	
-54.0	CARBONDALE		BLACK SHALE	15.5	487.0	
-69.5	CARBONDALE	HERRIN	COAL	8.1	502.5	
-77.6	CARBONDALE		CLAYSTONE	0.4	510.6	

MAPID: 05500149000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 36 **QUARTERS/FOOTAGES:** 330' S line, 2310' W line

QUADRANGLE: PITTSBURG **LONGITUDE:** -88.827549 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.863866 **DATE COLLECTED:** 0 / 0 / 1923

SURFACE ELEVATION (FT.): 430.3 **LOGGED (FT.):** 574.0 **LOG TYPE:**

SOURCE: MADISON CC0019 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-58.7	CARBONDALE	HERRIN	COAL	6.9	489.0	
-132.7	CARBONDALE	SPRINGFIELD	COAL	4.3	563.0	

MAPID: 05500149000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 36 **QUARTERS/FOOTAGES:** 330' S line, 2310' W line

QUADRANGLE: PITTSBURG **LONGITUDE:** -88.827549 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.863866 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 430.0 **LOGGED (FT.):** 495.9 **LOG TYPE:** Survey Core Study

SOURCE: **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
36.8	MODESTO	PIASA	NODULAR LIMESTONE	3.5	393.2	
33.3	MODESTO		BLACK SHALE	5.3	396.7	
28.0	CARBONDALE	DANVILLE	COAL	0.6	402.0	
27.4	CARBONDALE		SANDSTONE/SILTSTONE	11.8	402.6	
15.7	CARBONDALE	ALLENBY	BONE COAL	0.3	414.3	
15.4	CARBONDALE		CLAYSTONE & SHALE	4.2	414.6	
11.3	CARBONDALE	BANKSTON FORK	LIMESTONE	4.2	418.7	
7.1	CARBONDALE	LAWSON	SANDSTONE/SILTSTONE	11.4	422.9	
-4.3	CARBONDALE	LAWSON	BONE COAL	0.1	434.3	
-4.4	CARBONDALE	LAWSON	SANDSTONE/SILTSTONE	23.6	434.4	
-28.0	CARBONDALE	LAWSON	SILTSTONE	12.3	458.0	
-40.2	CARBONDALE	LAWSON	SHALE & SANDSTONE	1.5	470.2	
-41.7	CARBONDALE	CONANT	LIMESTONE & SHALE	0.5	471.7	
-42.2	CARBONDALE	JAMESTOWN	COAL	0.4	472.2	
-42.7	CARBONDALE		BLACK SHALE	3.3	472.7	
-46.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	2.1	476.0	
-48.1	CARBONDALE	ANNA	BLACK SHALE	3.3	478.1	
-51.3	CARBONDALE	ENERGY	GRAY SHALE	7.7	481.3	
-59.0	CARBONDALE	HERRIN	COAL	6.9	489.0	

MAPID: 05500149000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 3E **SECTION:** 36 **QUARTERS/FOOTAGES:** 330' S line, 2310' W line

QUADRANGLE: PITTSBURG **LONGITUDE:** -88.827549 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.863866 **DATE COLLECTED:** 0 / 0 / 1923

SURFACE ELEVATION (FT.): 430.3 **LOGGED (FT.):** 574.0 **LOG TYPE:** Survey Core Study

SOURCE: MADISON COAL CORP. 19 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
430.3	PLEISTOCENE		UNCONSOLIDATED	57.0	0.0	
373.3			SHALE	3.0	57.0	
370.3			SANDSTONE	15.0	60.0	
355.3			SANDSTONE	1.0	75.0	
354.3			SANDSTONE	10.0	76.0	
344.3			SANDY SHALE	1.7	86.0	
342.6			CARBONACEOUS SHALE	0.3	87.7	
342.4			BONE COAL	0.1	87.9	
342.3			SOFT SHALE	3.0	88.0	
339.3			SANDY SHALE	9.0	91.0	
330.3			SANDSTONE	1.0	100.0	LIGHT GRAY
329.3			SANDY SHALE	9.0	101.0	
320.3			SANDY SHALE	18.0	110.0	
302.3			SHALE	1.8	128.0	DARK GRAY
300.5			LAMINATED SHALE	40.3	129.8	
260.3			SHALE	6.5	170.0	DARK GRAY
253.8			SHALE	3.8	176.5	
250.0			LIMESTONE	0.8	180.3	
249.3			SHALE	8.8	181.0	
240.5			CALCAREOUS SHALE	2.6	189.8	
237.9			BONE COAL	0.9	192.4	
237.0			SHALE WITH LIMESTONE	3.7	193.3	WITH LIMESTONE NODULES
233.3			SOFT SHALE	27.0	197.0	
206.3			SANDY SHALE	2.0	224.0	
204.3			SANDY SHALE	8.0	226.0	
196.3			SANDY SHALE	1.3	234.0	
195.0			SANDSTONE	0.3	235.3	LIGHT GRAY
194.7			SHALE	18.4	235.6	
176.3			LAMINATED SHALE	54.5	254.0	
121.8			HARD SHALE	2.3	308.5	
119.5			SHALE	0.6	310.8	
118.9			SLATY SHALE	2.6	311.4	
116.3			COAL	0.1	314.0	
116.2			SHALE	0.9	314.1	
115.3			CALCAREOUS SHALE	0.5	315.0	
114.8			LIMESTONE	1.7	315.5	
113.1			SANDY SHALE	6.8	317.2	
106.3			SANDY SHALE	9.0	324.0	
97.3			SHALE	0.9	333.0	DARK GRAY

96.4	SHALE	11.5	333.9	WITH COAL PARTINGS AT BOTTOM
84.9	COAL	0.6	345.4	
84.3	SHALE	3.4	346.0	LIGHT GRAY
80.9	SANDY SHALE	0.6	349.4	
80.3	SOFT SHALE	4.8	350.0	
75.5	SANDY SHALE	1.1	354.8	
74.5	SHALY SANDSTONE	1.8	355.8	LIGHT GRAY
72.6	SANDSTONE	4.5	357.7	
68.1	SANDY SHALE	8.0	362.2	
60.1	SHALE	2.8	370.2	
57.4	SHALE	3.2	372.9	LIGHT GRAY
54.2	LAMINATED SHALE	6.9	376.1	
47.3	SHALE	7.7	383.0	DARK GRAY
39.6	BONE COAL	0.2	390.7	
39.5	SHALE	0.4	390.8	
39.0	SOFT SHALE	0.8	391.3	
38.3	SOFT SHALE	1.2	392.0	
37.1	LIMESTONE	3.5	393.2	
33.6	SLATY SHALE	1.3	396.7	
32.4	LAMINATED SHALE	4.1	397.9	
28.3	COAL	0.6	402.0	
27.7	SANDY SHALE	3.4	402.6	
24.3	SHALE	2.8	406.0	
21.5	SHALE WITH LIMESTONE	0.5	408.8	WITH LIMESTONE
21.0	SANDY SHALE	4.8	409.3	WITH SANDSTONE PARTINGS
16.3	LAMINATED SHALE	0.3	414.0	
16.0	BONE COAL	0.3	414.3	
15.7	SOFT SHALE	1.9	414.6	
13.8	CALCAREOUS SHALE	2.3	416.5	
11.5	LIMESTONE	4.8	418.8	
6.8	SANDSTONE	1.7	423.5	
5.1	SANDY SHALE	4.6	425.2	
0.5	SANDY SHALE	1.5	429.8	
-1.0	LAMINATED SHALE	3.1	431.3	
-4.0	BONE COAL	0.1	434.3	
-4.1	SHALE	1.5	434.4	DARK GRAY
-5.6	SANDSTONE	4.4	435.9	LIGHT GRAY
-10.0	LAMINATED SHALE	15.3	440.3	
-25.3	SANDY SHALE	5.4	455.6	
-30.7	SANDY SHALE	10.8	461.0	
-41.5	LIMESTONE	0.1	471.8	
-41.5	SHALE	0.4	471.8	
-42.0	COAL	0.4	472.3	
-42.4	HARD SHALE	3.3	472.7	
-45.7	LIMESTONE	2.1	476.0	
-47.8	HARD SHALE	3.3	478.1	
-51.0	SHALE	6.8	481.3	

-57.8			SOFT SHALE	0.9	488.1	
-58.7	CARBONDALE	HERRIN	COAL	6.9	489.0	
-65.6			CLAYSTONE	2.7	495.9	
-68.3			CALCAREOUS SHALE	1.3	498.6	
-69.5			LIMESTONE	3.0	499.8	
-72.5			LAMINATED SHALE	3.2	502.8	
-75.7			CALCAREOUS SHALE	1.0	506.0	
-76.7			LAMINATED SHALE	1.3	507.0	
-78.0			CALCAREOUS SHALE	1.7	508.3	
-79.6			LIMESTONE	2.5	509.9	
-82.1			SHALE	6.6	512.4	
-88.7			SHALE	39.3	519.0	
-128.0			LAMINATED SHALE	3.6	558.3	
-131.5			HARD SHALE	0.7	561.8	
-132.2	CARBONDALE	SPRINGFIELD	COAL	4.3	562.5	
-136.5			SHALE	3.7	566.8	GREEN-GRAY
-140.2			SOFT SHALE	1.2	570.5	
-141.4			CALCAREOUS SHALE	1.2	571.7	
-142.5			SHALY LIMESTONE	1.2	572.8	LIGHT GRAY

MAPID: 05500606000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 1 **QUARTERS/FOOTAGES:** 380' N line, 660' E line of NW SE

QUADRANGLE: AKIN **LONGITUDE:** -88.713496 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.942784 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 580.0 **LOGGED (FT.):** 3457.0 **LOG TYPE:** Electric Log

SOURCE: CATLETT W F **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-194.0	CARBONDALE	DANVILLE	COAL	-	774.0	
-200.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	10.0	780.0	
-216.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	796.0	
-228.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	44.0	808.0	
-284.0	CARBONDALE	HERRIN	COAL	6.0	864.0	
-290.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	8.0	870.0	
-310.0	CARBONDALE	BRIAR HILL	COAL	-	890.0	
-386.0	CARBONDALE	SPRINGFIELD	COAL	5.0	966.0	SHALE ROOF
-404.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	46.0	984.0	
-452.0	CARBONDALE	HOUCHIN CREEK	COAL	-	1032.0	

MAPID: 05501133000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 1 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of SW

QUADRANGLE: AKIN **LONGITUDE:** -88.724008 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.942985 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 532.0 **LOGGED (FT.):** 3388.0 **LOG TYPE:** Electric Log

SOURCE: GEORGE & WRATHER OIL **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-184.0	CARBONDALE	DANVILLE	COAL	-	716.0	
-198.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	6.0	730.0	
-208.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	740.0	
-223.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	5.0	755.0	
-268.0	CARBONDALE	HERRIN	COAL	5.0	800.0	
-278.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	18.0	810.0	
-300.0	CARBONDALE	BRIAR HILL	COAL	-	832.0	
-392.0	CARBONDALE	SPRINGFIELD	COAL	6.0	924.0	SHALE ROOF
-428.0	CARBONDALE	HOUCHIN CREEK	COAL	-	960.0	

MAPID: 05501868000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 1 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NW NE

QUADRANGLE: AKIN **LONGITUDE:** -88.714648 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.948365 **DATE COLLECTED:** 6 / 0 / 1951

SURFACE ELEVATION (FT.): 585.0 **LOGGED (FT.):** 2040.0 **LOG TYPE:** Electric Log

SOURCE: CARTER OIL COMPANY **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1455.0	BASE OF PENN.		UNCLASSIFIED	-	2040.0	

MAPID: 05502135000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 1 **QUARTERS/FOOTAGES:** 500' S line, 350' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.707794 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.93793 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 509.0 **LOGGED (FT.):** 784.6 **LOG TYPE:** Survey Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY 6 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION, CORE C6443

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-172.2	MODESTO	PIASA	LIMESTONE	3.5	681.2	
-175.7	CARBONDALE	LAWSON	DARK GRAY SHALE	2.5	684.7	
-178.2	CARBONDALE	LAWSON	SANDSTONE	44.0	687.2	
-222.2	CARBONDALE	LAWSON	SILTY SHALE	29.1	731.2	
-251.3	CARBONDALE	LAWSON	SILTSTONE	7.9	760.3	
-259.2	CARBONDALE	LAWSON	GRAY SHALE	0.7	768.2	
-259.9	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.5	768.9	
-260.4	CARBONDALE	JAMESTOWN	COAL	0.2	769.4	
-260.6	CARBONDALE		CALCAREOUS SHALE	3.1	769.6	
-263.7	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	5.1	772.7	
-268.8	CARBONDALE	ANNA	BLACK SHALE	1.2	777.8	
-270.0	CARBONDALE	HERRIN	COAL	5.6	779.0	

MAPID: 05500122000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 2 **QUARTERS/FOOTAGES:** SE SW SW

QUADRANGLE: AKIN **LONGITUDE:** -88.740349 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.937498 **DATE COLLECTED:** 1 / 8 / 1910

SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 702.0 **LOG TYPE:** Drillers Log

SOURCE: HART & WILLIAMS 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
460.0	PLEISTOCENE		UNCONSOLIDATED	11.0	0.0	
449.0	BOND		SANDSTONE	73.0	11.0	
376.0	BOND		SANDY SHALE	23.0	84.0	
353.0	BOND		SANDSTONE	10.0	107.0	
343.0	BOND		COAL	1.0	117.0	
342.0	BOND		SANDY SHALE	9.0	118.0	
333.0	BOND		SANDSTONE	27.0	127.0	
306.0	BOND		SANDY SHALE	24.0	154.0	
282.0	BOND		SHALE	3.0	178.0	
279.0	BOND	CARTHAGE	LIMESTONE	9.0	181.0	
270.0	MODESTO		SHALE	28.0	190.0	
242.0	MODESTO		COAL	1.0	218.0	
241.0	MODESTO		SHALE	12.0	219.0	
229.0	MODESTO		SANDY SHALE	40.0	231.0	
189.0	MODESTO		CALCAREOUS SHALE	15.0	271.0	
174.0	MODESTO		SANDY SHALE	10.0	286.0	
164.0	MODESTO		COAL	1.8	296.0	
162.2	MODESTO		SANDY SHALE	50.2	297.8	
112.0	MODESTO		SANDSTONE	19.0	348.0	
93.0	MODESTO		SANDY SHALE	12.0	367.0	
81.0	MODESTO		SANDSTONE	33.0	379.0	
48.0	MODESTO		SANDY SHALE	33.0	412.0	
15.0	MODESTO		SANDSTONE	76.0	445.0	
-61.0	MODESTO		SHALE	9.0	521.0	
-70.0	MODESTO		SHALE	16.0	530.0	
-86.0	MODESTO		COAL	1.0	546.0	
-87.0	MODESTO		SHALE	27.0	547.0	
-114.0	MODESTO		SHALE	1.0	574.0	
-115.0	MODESTO		COAL	2.0	575.0	
-117.0	MODESTO		SANDY SHALE	16.0	577.0	
-133.0	MODESTO		SHALE	12.0	593.0	
-145.0	MODESTO		COAL	1.0	605.0	
-146.0	MODESTO		SHALE	3.0	606.0	
-149.0	MODESTO	PIASA	LIMESTONE	2.0	609.0	
-151.0	MODESTO		SANDY SHALE	6.0	611.0	
-157.0	CARBONDALE	DANVILLE	COAL	2.0	617.0	
-159.0	CARBONDALE		SHALE	9.0	619.0	
-168.0	CARBONDALE		SANDY SHALE	5.0	628.0	
-173.0	CARBONDALE		SANDSTONE	4.0	633.0	

-177.0	CARBONDALE		SANDY SHALE	1.0	637.0
-178.0	CARBONDALE		BLACK SHALE	1.0	638.0
-179.0	CARBONDALE		CALCAREOUS SHALE	8.0	639.0
-187.0	CARBONDALE		SANDY SHALE	19.0	647.0
-206.0	CARBONDALE		SANDSTONE	25.0	666.0
-231.0	CARBONDALE		SANDY SHALE	3.0	691.0
-234.0	CARBONDALE		LIMESTONE	1.0	694.0
-235.0	CARBONDALE	JAMESTOWN	COAL	1.0	695.0
-236.0	CARBONDALE		SHALE	4.0	696.0
-240.0	CARBONDALE		LIMESTONE	2.0	700.0

MAPID: 05500122000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 2 **QUARTERS/FOOTAGES:** SE SW SW

QUADRANGLE: AKIN **LONGITUDE:** -88.740349 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.937498 **DATE COLLECTED:** 0 / 0 / 1910

SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 709.0 **LOG TYPE:**

SOURCE: HART WMS 0001 **WELL TYPE:** Coal Test

COMMENT: EXACT LOCATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-242.0	CARBONDALE	HERRIN	COAL	7.0	702.0	

MAPID: 05501132000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 2 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of NW NW

QUADRANGLE: AKIN **LONGITUDE:** -88.740259 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.94835 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 478.0 **LOGGED (FT.):** 3284.0 **LOG TYPE:** Electric Log

SOURCE: CARTER OIL COMPANY **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-166.0	CARBONDALE	DANVILLE	COAL	-	644.0	
-170.0	CARBONDALE	SS BELOW NO. 7	SANDSTONE/SHALE	12.0	648.0	
-186.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	664.0	
-205.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	7.0	683.0	
-249.0	CARBONDALE	HERRIN	COAL	5.0	727.0	
-264.0	CARBONDALE	VERMILIONVILLE	SANDSTONE/SHALE	20.0	742.0	
-288.0	CARBONDALE	BRIAR HILL	COAL	-	766.0	
-368.0	CARBONDALE	SPRINGFIELD	COAL	5.0	846.0	SHALE ROOF
-386.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	12.0	864.0	
-414.0	CARBONDALE	HOUCHIN CREEK	COAL	-	892.0	

MAPID: 05501527000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 2 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of SE SE
QUADRANGLE: AKIN **LONGITUDE:** -88.728726 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.937584 **DATE COLLECTED:** 8 / 0 / 1959
SURFACE ELEVATION (FT.): 503.0 **LOGGED (FT.):** 1900.0 **LOG TYPE:** Electric Log
SOURCE: KUZMICH, R. W. **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-1397.0	BASE OF PENN.		UNCLASSIFIED	-	1900.0	

MAPID: 05502131000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 2 **QUARTERS/FOOTAGES:** 300' S line, 2150' W line
QUADRANGLE: AKIN **LONGITUDE:** -88.736344 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.93745 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 494.0 **LOGGED (FT.):** 729.5 **LOG TYPE:** Survey Core Study
SOURCE: TENNESSEE VALLEY AUTHORITY 7 **WELL TYPE:** Coal Test
COMMENT: GOOD DESCRIPTION, CORE C6444

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-133.9	MODESTO	PIASA	LIMESTONE	1.5	627.9	
-135.4	MODESTO		DARK GRAY SHALE	9.5	629.4	
-144.9	CARBONDALE	DANVILLE	COAL	2.7	638.9	
-147.6	CARBONDALE	LAWSON	CLAYSTONE & SHALE	16.3	641.6	
-163.9	CARBONDALE	LAWSON	SANDSTONE	4.5	657.9	
-168.4	CARBONDALE	LAWSON	SILTY SHALE	19.5	662.4	
-187.9	CARBONDALE	LAWSON	SANDSTONE	8.0	681.9	
-195.9	CARBONDALE	LAWSON	SILTSTONE	20.5	689.9	
-216.4	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.6	710.4	
-217.0	CARBONDALE	JAMESTOWN	BONE COAL	0.4	711.0	
-217.4	CARBONDALE		CALCAREOUS SHALE	3.9	711.4	
-221.3	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	8.2	715.3	
-229.4	CARBONDALE	ANNA	DARK GRAY SHALE	0.6	723.4	
-230.0	CARBONDALE	HERRIN	COAL	5.5	724.0	

MAPID: 05501026000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 3 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NW SE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.752056 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.941082 **DATE COLLECTED:** 12 / 0 / 1949

SURFACE ELEVATION (FT.): 487.0 **LOGGED (FT.):** 1904.0 **LOG TYPE:** Electric Log

SOURCE: CARTER OIL COMPANY **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1417.0	BASE OF PENN.		UNCLASSIFIED	-	1904.0	

MAPID: 05501026000C **VERSION:** 2 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 3 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NW SE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.752056 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.941082 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 487.0 **LOGGED (FT.):** 3165.0 **LOG TYPE:** Electric Log

SOURCE: CARTER OIL COMPANY **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-147.0	CARBONDALE	DANVILLE	COAL	-	634.0	
-159.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	8.0	646.0	
-171.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	658.0	
-183.0	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	24.0	670.0	
-233.0	CARBONDALE	HERRIN	COAL	5.0	720.0	
-241.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	8.0	728.0	
-265.0	CARBONDALE	BRIAR HILL	COAL	-	752.0	
-347.0	CARBONDALE	SPRINGFIELD	COAL	5.0	834.0	SHALE ROOF
-378.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	8.0	865.0	
-399.0	CARBONDALE	HOUCHIN CREEK	COAL	-	886.0	

MAPID: 05501162000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 3 **QUARTERS/FOOTAGES:** 1650' N line, 2310' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.751843 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.946475 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 476.0 **LOGGED (FT.):** 724.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-142.0	MODESTO	PIASA	LIMESTONE	7.0	618.0	
-149.0	MODESTO		DARK GRAY SHALE	8.0	625.0	
-157.0	CARBONDALE	DANVILLE	COAL	2.0	633.0	
-159.0	CARBONDALE		SHALE & SANDSTONE	20.0	635.0	
-179.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	5.0	655.0	
-184.0	CARBONDALE	LAWSON	SILTY SHALE	8.0	660.0	
-192.0	CARBONDALE	LAWSON	SANDSTONE	9.0	668.0	
-201.0	CARBONDALE	LAWSON	SILTY SHALE	7.0	677.0	
-208.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	13.0	684.0	
-221.0	CARBONDALE	LAWSON	GRAY SHALE	8.0	697.0	
-229.0	CARBONDALE	CONANT	LIMESTONE & SHALE	0.5	705.0	
-229.5	CARBONDALE	JAMESTOWN	BONE COAL	0.5	705.5	
-230.0	CARBONDALE		CALCAREOUS SHALE	3.0	706.0	
-233.0	CARBONDALE	BRERETON	LIMESTONE	9.0	709.0	
-242.0	CARBONDALE	ANNA	BLACK SHALE	2.0	718.0	
-244.0	CARBONDALE	HERRIN	COAL	4.0	720.0	

MAPID: 05501131000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 4 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NE SW

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.775127 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.940956 **DATE COLLECTED:** 1 / 0 / 1949

SURFACE ELEVATION (FT.): 483.0 **LOGGED (FT.):** 1968.0 **LOG TYPE:** Electric Log

SOURCE: OLSON CAMP H **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1485.0	BASE OF PENN.		UNCLASSIFIED	-	1968.0	

MAPID: 05501131000C **VERSION:** 2 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 4 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NE SW

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.775127 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.940956 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 483.0 **LOGGED (FT.):** 3170.0 **LOG TYPE:** Electric Log

SOURCE: OLSON CAMP H **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-126.0	CARBONDALE	DANVILLE	COAL	-	609.0	
-127.0	CARBONDALE	SS BELOW NO. 7	SANDSTONE/SHALE	24.0	610.0	
-157.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	640.0	
-179.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	22.0	662.0	
-217.0	CARBONDALE	HERRIN	COAL	5.0	700.0	
-225.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	8.0	708.0	
-249.0	CARBONDALE	BRIAR HILL	COAL	-	732.0	
-314.0	CARBONDALE	SPRINGFIELD	COAL	4.0	797.0	SHALE ROOF
-325.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	16.0	808.0	
-390.0	CARBONDALE	HOUCHIN CREEK	COAL	-	873.0	

MAPID: 05502128000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 4 **QUARTERS/FOOTAGES:** 1300' N line, 20' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.762616 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.947425 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 453.0 **LOGGED (FT.):** 673.5 **LOG TYPE:** Survey Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY 1 **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION, CORE C6438

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-125.5	MODESTO	PIASA	LIMESTONE	4.3	578.5	
-129.8	CARBONDALE	LAWSON	LIMESTONE W/ SHALE	6.3	582.8	
-136.1	CARBONDALE	LAWSON	GRAY SHALE	69.8	589.1	
-205.9	CARBONDALE	BRERETON	LIMESTONE	8.8	658.9	
-214.7	CARBONDALE	ANNA	GRAY SHALE	0.3	667.7	
-215.0	CARBONDALE	HERRIN	COAL	5.5	668.0	

MAPID: 05500660000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 5 **QUARTERS/FOOTAGES:** 330' N line, 330' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.798152 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.949937 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 443.0 **LOGGED (FT.):** 3200.0 **LOG TYPE:** Electric Log

SOURCE: LARIO OIL & GAS **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-124.0	CARBONDALE	DANVILLE	COAL	-	567.0	
-147.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	590.0	
-157.0	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	22.0	600.0	
-214.0	CARBONDALE	HERRIN	COAL	7.0	657.0	
-239.0	CARBONDALE	BRIAR HILL	COAL	-	682.0	
-289.0	CARBONDALE	SPRINGFIELD	COAL	5.0	732.0	SHALE ROOF
-297.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	22.0	740.0	
-361.0	CARBONDALE	HOUCHIN CREEK	COAL	-	804.0	

MAPID: 05501209000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 5 **QUARTERS/FOOTAGES:** 330' S line, 990' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.795823 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.937102 **DATE COLLECTED:** 1 / 0 / 1956

SURFACE ELEVATION (FT.): 446.0 **LOGGED (FT.):** 1864.0 **LOG TYPE:** Electric Log

SOURCE: SHARP OLEN D **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1418.0	BASE OF PENN.		UNCLASSIFIED	-	1864.0	

MAPID: 05501209000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 5 **QUARTERS/FOOTAGES:** 330' S line, 990' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.795823 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.937102 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 446.0 **LOGGED (FT.):** 636.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-95.0	MODESTO	PIASA	LIMESTONE	6.0	541.0	
-101.0	MODESTO		SHALE	7.0	547.0	
-108.0	CARBONDALE	DANVILLE	COAL	2.0	554.0	
-110.0	CARBONDALE		SHALE	18.0	556.0	
-128.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	5.0	574.0	
-133.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	38.0	579.0	
-171.0	CARBONDALE	LAWSON	SHALE	4.0	617.0	
-175.0	CARBONDALE	BRERETON	LIMESTONE	7.0	621.0	
-182.0	CARBONDALE	ANNA	BLACK SHALE	2.0	628.0	
-184.0	CARBONDALE	HERRIN	COAL	6.0	630.0	

MAPID: 05500124000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 6 **QUARTERS/FOOTAGES:** NE SE SW

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.809348 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.938912 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 428.0 **LOGGED (FT.):** 598.0 **LOG TYPE:**

SOURCE: WARD **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-164.0	CARBONDALE	HERRIN	COAL	-	592.0	

MAPID: 05501130000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 6 **QUARTERS/FOOTAGES:** 330' S line, 2310' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.80901 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.937077 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 421.0 **LOGGED (FT.):** 3120.0 **LOG TYPE:** Electric Log

SOURCE: COLLINS BROTHERS OIL CO. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-119.0	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	12.0	540.0	
-159.0	CARBONDALE	HERRIN	COAL	6.0	580.0	
-189.0	CARBONDALE	BRIAR HILL	COAL	-	610.0	
-243.0	CARBONDALE	SPRINGFIELD	COAL	4.0	664.0	SHALE ROOF
-256.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	27.0	677.0	
-319.0	CARBONDALE	HOUCHIN CREEK	COAL	-	740.0	

MAPID: 05501130000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 6 **QUARTERS/FOOTAGES:** 330' S line, 2310' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.80901 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.937077 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 421.0 **LOGGED (FT.):** 586.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-36.0	MODESTO	PIASA	CALCAREOUS SHALE	9.0	457.0	
-45.0	CARBONDALE		SHALE	50.0	466.0	
-95.0	CARBONDALE	LAWSON	SHALE	50.0	516.0	
-145.0	CARBONDALE		BLACK SHALE	2.0	566.0	
-147.0	CARBONDALE	BRERETON	LIMESTONE	6.0	568.0	
-153.0	CARBONDALE	ANNA	BLACK SHALE	1.5	574.0	
-154.5	CARBONDALE	ENERGY	GRAY SHALE	4.5	575.5	
-159.0	CARBONDALE	HERRIN	COAL	6.0	580.0	

MAPID: 05501871000C **VERSION:** 1 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 6 **QUARTERS/FOOTAGES:**
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.808178 **GEOLOGIST:** KOROSE
CONFIDENTIAL: N **LATITUDE:** 37.943493 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: H.M. PARKS & CO 1 **WELL TYPE:** Coal Test
COMMENT: LOCATION UNCERTAIN

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-			UNCLASSIFIED	0.0	0.0	TOPS NOT ENTERED

MAPID: 05502486000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 6 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of SW SE
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.804903 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.938916 **DATE COLLECTED:** 2 / 0 / 1968
SURFACE ELEVATION (FT.): 412.0 **LOGGED (FT.):** 1830.0 **LOG TYPE:** Electric Log
SOURCE: REHN, E. E. **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1418.0	BASE OF PENN.		UNCLASSIFIED	-	1830.0	

MAPID: 05501129000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 7 **QUARTERS/FOOTAGES:** 330' S line, 310' E line of NW NE
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.804771 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.933462 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 415.0 **LOGGED (FT.):** 3118.0 **LOG TYPE:** Electric Log
SOURCE: COLLINS BROTHERS OIL CO. **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-89.0	CARBONDALE	DANVILLE	COAL	-	504.0	
-96.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	13.0	511.0	
-113.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	528.0	
-133.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	12.0	548.0	
-172.0	CARBONDALE	HERRIN	COAL	6.0	587.0	
-202.0	CARBONDALE	BRIAR HILL	COAL	-	617.0	
-270.0	CARBONDALE	SPRINGFIELD	COAL	4.0	685.0	SHALE ROOF
-335.0	CARBONDALE	HOUCHIN CREEK	COAL	-	750.0	

MAPID: 05501225000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 7 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of SE NW

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.811445 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.929916 **DATE COLLECTED:** 4 / 0 / 1956

SURFACE ELEVATION (FT.): 412.0 **LOGGED (FT.):** 1826.0 **LOG TYPE:** Electric Log

SOURCE: PURE OIL CO., THE **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1414.0	BASE OF PENN.		UNCLASSIFIED	-	1826.0	

MAPID: 05501247000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 7 **QUARTERS/FOOTAGES:** 2310' S line, 2310' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.809015 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.928182 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 417.0 **LOGGED (FT.):** 588.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-70.0	MODESTO	PIASA	LIMESTONE	6.0	487.0	
-76.0	MODESTO		SHALE	7.0	493.0	
-83.0	CARBONDALE	DANVILLE	COAL	2.0	500.0	
-85.0	CARBONDALE		SHALE & SANDSTONE	22.0	502.0	
-107.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	4.0	524.0	
-111.0	CARBONDALE	LAWSON	SILTY SHALE	17.0	528.0	
-128.0	CARBONDALE	LAWSON	SANDSTONE	12.0	545.0	
-140.0	CARBONDALE	LAWSON	SHALE	14.0	557.0	
-154.0	CARBONDALE	BRERETON	LIMESTONE	5.0	571.0	
-159.0	CARBONDALE	ANNA	BLACK SHALE	2.0	576.0	
-161.0	CARBONDALE	ENERGY	GRAY SHALE	4.0	578.0	
-165.0	CARBONDALE	HERRIN	COAL	6.0	582.0	

MAPID: 05524362000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 7 **QUARTERS/FOOTAGES:** 250' N line, 240' W line of SE NW SE
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.805027 **GEOLOGIST:** NORTH
CONFIDENTIAL: N **LATITUDE:** 37.926457 **DATE COLLECTED:** 2 / 15 / 1974
SURFACE ELEVATION (FT.): 475.5 **LOGGED (FT.):** 748.7 **LOG TYPE:** Drillers Log
SOURCE: OLD BEN COAL CO. DH301 **WELL TYPE:** Coal Test
COMMENT: PERMIT 30

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
475.5			UNKNOWN	603.9	0.0	
-128.4	CARBONDALE		SHALE	9.8	603.9	GRAY
-138.2	CARBONDALE		SHALE	0.4	613.7	BLACK
-138.6	CARBONDALE	JAMESTOWN	COAL	0.1	614.1	
-138.7	CARBONDALE		SHALE	0.9	614.2	GRAY
-139.6	CARBONDALE		SHALE	1.1	615.1	BLACK
-140.7	CARBONDALE	BRERETON	LIMESTONE	1.9	616.2	
-142.6	CARBONDALE	ANNA	SHALE	2.0	618.1	BLACK
-144.6	CARBONDALE	ENERGY	SHALE	12.0	620.1	GRAY
-156.6	CARBONDALE	HERRIN	COAL	6.1	632.1	
-162.7	CARBONDALE		UNDERCLAY	1.9	638.2	
-164.6	CARBONDALE		UNKNOWN	79.5	640.1	
-244.1	CARBONDALE	DYKERSBURG	SHALE	19.8	719.6	GRAY
-263.9	CARBONDALE	DYKERSBURG	SHALE	0.1	739.4	BLACK
-264.0	CARBONDALE	SPRINGFIELD	COAL	5.1	739.5	
-269.1	CARBONDALE		UNDERCLAY	4.1	744.6	

MAPID: 05501507000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 8 **QUARTERS/FOOTAGES:** 2310' N line, 330' W line
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.798038 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.929788 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 424.0 **LOGGED (FT.):** 3121.0 **LOG TYPE:** Electric Log
SOURCE: FARRAR DRILLING CO **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-174.0	CARBONDALE	HERRIN	COAL	5.0	598.0	
-211.0	CARBONDALE	BRIAR HILL	COAL	-	635.0	
-286.0	CARBONDALE	SPRINGFIELD	COAL	5.0	710.0	SHALE ROOF
-336.0	CARBONDALE	HOUCHIN CREEK	COAL	-	760.0	

MAPID: 05501507000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 8 **QUARTERS/FOOTAGES:** 2310' N line, 330' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.798038 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.929788 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 424.0 **LOGGED (FT.):** 604.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-85.0	MODESTO	PIASA	LIMESTONE	7.0	509.0	
-92.0	CARBONDALE	LAWSON	SILTY SHALE	8.0	516.0	
-100.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	46.0	524.0	
-146.0	CARBONDALE	LAWSON	SHALE	10.0	570.0	
-156.0	CARBONDALE	BRERETON	CALCAREOUS SHALE	4.0	580.0	
-160.0	CARBONDALE	ANNA	BLACK SHALE	2.0	584.0	
-162.0	CARBONDALE	ENERGY	GRAY SHALE	12.0	586.0	
-174.0	CARBONDALE	HERRIN	COAL	6.0	598.0	

MAPID: 05501507000C **VERSION:** 3 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 8 **QUARTERS/FOOTAGES:** 2310' N line, 330' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.798038 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.929788 **DATE COLLECTED:** 3 / 0 / 1959

SURFACE ELEVATION (FT.): 424.0 **LOGGED (FT.):** 1850.0 **LOG TYPE:** Electric Log

SOURCE: FARRAR DRILLING CO **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1426.0	BASE OF PENN.		UNCLASSIFIED	-	1850.0	

MAPID: 05500263000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 9 **QUARTERS/FOOTAGES:** 150' N line, 518' W line of NE SW

QUADRANGLE: WEST FRANKFORT **LONGITUDE:** -88.774435 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.928669 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 482.0 **LOGGED (FT.):** 3064.0 **LOG TYPE:** Electric Log

SOURCE: CONNELLY ETAL **WELL TYPE:** Producer-Oil

COMMENT: COORDINATES UPDATED

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-116.0	CARBONDALE	DANVILLE	COAL	-	598.0	
-125.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	9.0	607.0	
-138.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	620.0	
-160.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	8.0	642.0	
-194.0	CARBONDALE	HERRIN	COAL	5.0	676.0	
-220.0	CARBONDALE	BRIAR HILL	COAL	-	702.0	
-288.0	CARBONDALE	SPRINGFIELD	COAL	5.0	770.0	SHALE ROOF
-298.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	22.0	780.0	
-364.0	CARBONDALE	HOUCHIN CREEK	COAL	-	846.0	

MAPID: 05500881000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 9 **QUARTERS/FOOTAGES:** 990' N line, 990' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.766074 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.933762 **DATE COLLECTED:** 9 / 0 / 1948

SURFACE ELEVATION (FT.): 494.0 **LOGGED (FT.):** 1980.0 **LOG TYPE:** Electric Log

SOURCE: CARTER OIL COMPANY **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-476.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	970.0	
-544.0	SPOON	DAVIS	UNCLASSIFIED	-	1038.0	
-1486.0	BASE OF PENN.		UNCLASSIFIED	-	1980.0	

MAPID: 05500881000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 9 **QUARTERS/FOOTAGES:** 990' N line, 990' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.766074 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.933762 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 494.0 **LOGGED (FT.):** 700.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-98.0	MODESTO	PIASA	LIMESTONE & SHALE	6.0	592.0	
-104.0	MODESTO		SHALE	7.0	598.0	
-111.0	CARBONDALE	DANVILLE	COAL	2.0	605.0	
-113.0	CARBONDALE	LAWSON	SILTY SHALE	63.0	607.0	
-176.0	CARBONDALE	LAWSON	SHALE	15.0	670.0	
-191.0	CARBONDALE	ANNA	BLACK SHALE	2.0	685.0	
-193.0	CARBONDALE	ENERGY	GRAY SHALE	7.0	687.0	
-200.0	CARBONDALE	HERRIN	COAL	6.0	694.0	

MAPID: 05501875000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 9 **QUARTERS/FOOTAGES:** 330' S line, 165' E line of NW

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.772278 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.930003 **DATE COLLECTED:** 2 / 0 / 1949

SURFACE ELEVATION (FT.): 485.0 **LOGGED (FT.):** 1980.0 **LOG TYPE:** Electric Log

SOURCE: PERRINE & PERRINE **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1495.0	BASE OF PENN.		UNCLASSIFIED	-	1980.0	

MAPID: 05500897000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 10 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of SW SE

QUADRANGLE: AKIN **LONGITUDE:** -88.749675 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.922657 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 498.0 **LOGGED (FT.):** 3136.0 **LOG TYPE:** Electric Log

SOURCE: FRODERMAN, ETAL **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-132.0	CARBONDALE	DANVILLE	COAL	-	630.0	
-138.0	CARBONDALE	SS BELOW NO. 7	SILTSTONE	6.0	636.0	
-172.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	12.0	670.0	
-208.0	CARBONDALE	HERRIN	COAL	6.0	706.0	
-237.0	CARBONDALE	BRIAR HILL	COAL	-	735.0	
-318.0	CARBONDALE	SPRINGFIELD	COAL	6.0	816.0	SANDSTONE/SHALE ROOF
-362.0	CARBONDALE	HOUCHIN CREEK	COAL	-	860.0	

MAPID: 05501603000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 10 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NE SW

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.756764 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.926348 **DATE COLLECTED:** 5 / 0 / 1960

SURFACE ELEVATION (FT.): 472.0 **LOGGED (FT.):** 1906.0 **LOG TYPE:** Electric Log

SOURCE: DUNCAN, N. V. DRLG. CO. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1434.0	BASE OF PENN.		UNCLASSIFIED	-	1906.0	

MAPID: 05502136000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 10 **QUARTERS/FOOTAGES:** 2300' N line, 1600' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.757041 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.93019 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 498.0 **LOGGED (FT.):** 725.5 **LOG TYPE:** Survey Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY 8 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION, CORE C6445

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-128.1	MODESTO	PIASA	LIMESTONE	3.0	626.1	
-131.1	CARBONDALE	LAWSON	DARK GRAY SHALE	5.0	629.1	
-136.1	CARBONDALE	LAWSON	SANDSTONE	47.0	634.1	
-183.1	CARBONDALE	LAWSON	SILTY SHALE	14.0	681.1	
-197.1	CARBONDALE	LAWSON	SHALE & SILTSTONE	12.4	695.1	
-209.4	CARBONDALE	CONANT	LIMESTONE/UNDERCLAY	0.4	707.4	
-209.8	CARBONDALE	JAMESTOWN	COAL	0.3	707.8	
-210.0	CARBONDALE		CLAYSTONE	0.3	708.0	
-210.3	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	7.9	708.3	
-218.3	CARBONDALE	ANNA	DARK GRAY SHALE	2.8	716.3	
-221.0	CARBONDALE	HERRIN	COAL	6.5	719.0	

MAPID: 05501128000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 11 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of SW NE

QUADRANGLE: AKIN **LONGITUDE:** -88.73102 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.932042 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 505.0 **LOGGED (FT.):** 3360.0 **LOG TYPE:** Electric Log

SOURCE: DUNCAN, WALTER **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-152.0	CARBONDALE	DANVILLE	COAL	-	657.0	
-172.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	677.0	
-183.0	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	25.0	688.0	
-232.0	CARBONDALE	HERRIN	COAL	4.0	737.0	
-240.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	11.0	745.0	
-331.0	CARBONDALE	SPRINGFIELD	COAL	4.0	836.0	SHALE ROOF
-341.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	64.0	846.0	
-405.0	CARBONDALE	HOUCHIN CREEK	COAL	-	910.0	

MAPID: 05501378000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 11 **QUARTERS/FOOTAGES:** 990' N line, 330' W line

QUADRANGLE: AKIN **LONGITUDE:** -88.742692 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.933845 **DATE COLLECTED:** 1 / 0 / 1958

SURFACE ELEVATION (FT.): 496.0 **LOGGED (FT.):** 1763.0 **LOG TYPE:** Electric Log

SOURCE: ATHENE DEV. CO., INC. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1267.0	BASE OF PENN.		UNCLASSIFIED	-	1763.0	

MAPID: 05501378000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 11 **QUARTERS/FOOTAGES:** 990' N line, 330' W line

QUADRANGLE: AKIN **LONGITUDE:** -88.742692 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.933845 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 496.0 **LOGGED (FT.):** 728.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-129.0	MODESTO	PIASA	LIMESTONE	5.0	625.0	
-134.0	MODESTO		CALCAREOUS SHALE	9.0	630.0	
-143.0	CARBONDALE	DANVILLE	COAL	1.0	639.0	
-144.0	CARBONDALE		SILTY SHALE	23.0	640.0	
-167.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	3.0	663.0	
-170.0	CARBONDALE	LAWSON	SILTY SHALE	17.0	666.0	
-187.0	CARBONDALE	LAWSON	SANDSTONE	10.0	683.0	
-197.0	CARBONDALE	LAWSON	SILTY SHALE	17.0	693.0	
-214.0	CARBONDALE	CONANT	LIMESTONE & SHALE	0.5	710.0	
-214.5	CARBONDALE	JAMESTOWN	COAL	0.5	710.5	
-215.0	CARBONDALE		CLAYSTONE & SHALE	3.0	711.0	
-218.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	9.0	714.0	
-227.0	CARBONDALE	ANNA	DARK GRAY SHALE	1.0	723.0	
-228.0	CARBONDALE	HERRIN	COAL	4.0	724.0	

MAPID: 05501545000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 11 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of SE SW

QUADRANGLE: AKIN **LONGITUDE:** -88.73802 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.922705 **DATE COLLECTED:** 8 / 0 / 1955

SURFACE ELEVATION (FT.): 489.0 **LOGGED (FT.):** 1995.0 **LOG TYPE:** Electric Log

SOURCE: COLLINS BROTHERS OIL CO. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-521.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	1010.0	
-583.0	SPOON	DAVIS	UNCLASSIFIED	-	1072.0	
-1506.0	BASE OF PENN.		UNCLASSIFIED	-	1995.0	

MAPID: 05501127000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 12 **QUARTERS/FOOTAGES:** 360' S line, 270' E line of NW

QUADRANGLE: AKIN **LONGITUDE:** -88.716825 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.930262 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 490.0 **LOGGED (FT.):** 3178.0 **LOG TYPE:** Electric Log

SOURCE: CARTER OIL COMPANY **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-204.0	CARBONDALE	DANVILLE	COAL	-	694.0	
-214.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	4.0	704.0	
-225.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	715.0	
-237.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	29.0	727.0	
-284.0	CARBONDALE	HERRIN	COAL	5.0	774.0	
-310.0	CARBONDALE	BRIAR HILL	COAL	-	800.0	
-388.0	CARBONDALE	SPRINGFIELD	COAL	4.0	878.0	SHALE ROOF
-406.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	26.0	896.0	
-446.0	CARBONDALE	HOUCHIN CREEK	COAL	-	936.0	

MAPID: 05502132000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 12 **QUARTERS/FOOTAGES:** 2150' N line, 1600' W line

QUADRANGLE: AKIN **LONGITUDE:** -88.71963 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.930714 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 504.0 **LOGGED (FT.):** 782.4 **LOG TYPE:** Survey Core Study

SOURCE: TENNESSEE VALLEY AUTHORITY 4 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION, CORE C6441

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-180.9	MODESTO	PIASA	LIMESTONE	3.0	684.9	
-183.9	MODESTO		SILTY SHALE	8.0	687.9	
-191.9	CARBONDALE	DANVILLE	COAL	3.0	695.9	
-194.9	CARBONDALE		SILTY SHALE	12.0	698.9	
-206.9	CARBONDALE	BANKSTON FORK	LIMESTONE	1.5	710.9	
-208.4	CARBONDALE	LAWSON	SILTY SHALE	42.3	712.4	
-250.7	CARBONDALE	LAWSON	SHALE & SANDSTONE	10.5	754.7	
-261.2	CARBONDALE	CONANT	CALCAREOUS SHALE	0.5	765.2	
-261.7	CARBONDALE	JAMESTOWN	BONE COAL	0.3	765.7	
-262.0	CARBONDALE		DARK GRAY SHALE	3.9	766.0	
-265.9	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	6.3	769.9	
-272.1	CARBONDALE	ANNA	DARK GRAY SHALE	0.9	776.1	
-273.0	CARBONDALE	HERRIN	COAL	5.4	777.0	

MAPID: 05501126000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 13 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of SE SE

QUADRANGLE: AKIN **LONGITUDE:** -88.707783 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.910029 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 475.0 **LOGGED (FT.):** 3300.0 **LOG TYPE:** Electric Log

SOURCE: DOERR ELIAS A INC **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-141.0	CARBONDALE	DANVILLE	COAL	-	616.0	
-159.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	8.0	634.0	
-179.0	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	28.0	654.0	
-215.0	CARBONDALE	HERRIN	COAL	6.0	690.0	
-225.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	6.0	700.0	
-255.0	CARBONDALE	BRIAR HILL	COAL	-	730.0	
-310.0	CARBONDALE	SPRINGFIELD	COAL	4.0	785.0	SHALE ROOF
-339.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	32.0	814.0	
-379.0	CARBONDALE	HOUCHIN CREEK	COAL	-	854.0	

MAPID: 05501538000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 13 **QUARTERS/FOOTAGES:** 330' S line, 1650' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.712397 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.908159 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 480.0 **LOGGED (FT.):** 706.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-134.0	MODESTO	PIASA	LIMESTONE	6.0	614.0	
-140.0	MODESTO		SILTY SHALE	8.0	620.0	
-148.0	CARBONDALE	DANVILLE	COAL	2.0	628.0	
-150.0	CARBONDALE		SILTY SHALE	14.0	630.0	
-164.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	6.0	644.0	
-170.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	9.0	650.0	
-179.0	CARBONDALE	LAWSON	SHALE	9.0	659.0	
-188.0	CARBONDALE	LAWSON	SANDSTONE	8.0	668.0	
-196.0	CARBONDALE	LAWSON	SHALE	15.0	676.0	
-211.0	CARBONDALE	CONANT	LIMESTONE & SHALE	0.5	691.0	
-211.5	CARBONDALE	JAMESTOWN	BONE COAL	0.5	691.5	
-212.0	CARBONDALE		DARK GRAY SHALE	2.0	692.0	
-214.0	CARBONDALE	BRERETON	LIMESTONE	6.5	694.0	
-220.5	CARBONDALE	ANNA	DARK GRAY SHALE	1.5	700.5	
-222.0	CARBONDALE	HERRIN	COAL	4.0	702.0	

MAPID: 05501033000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 14 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NE SW

QUADRANGLE: AKIN **LONGITUDE:** -88.737962 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.911786 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 497.0 **LOGGED (FT.):** 3153.0 **LOG TYPE:** Electric Log

SOURCE: RODGERS S A **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-135.0	CARBONDALE	DANVILLE	COAL	-	632.0	
-143.0	CARBONDALE	SS BELOW NO. 7	SANDSTONE/SHALE	20.0	640.0	
-175.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	12.0	672.0	
-213.0	CARBONDALE	HERRIN	COAL	5.0	710.0	
-239.0	CARBONDALE	BRIAR HILL	COAL	-	736.0	
-251.0	CARBONDALE	CANTON	SILTSTONE	12.0	748.0	
-317.0	CARBONDALE	SPRINGFIELD	COAL	5.0	814.0	SHALE ROOF
-339.0	CARBONDALE	SS BELOW NO. 5	SANDSTONE/SHALE	44.0	836.0	
-383.0	CARBONDALE	HOUCHIN CREEK	COAL	-	880.0	

MAPID: 05501557000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 14 **QUARTERS/FOOTAGES:** 330' N line, 990' W line
QUADRANGLE: AKIN **LONGITUDE:** -88.740378 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.920868 **DATE COLLECTED:** 8 / 0 / 1959
SURFACE ELEVATION (FT.): 499.0 **LOGGED (FT.):** 1904.0 **LOG TYPE:** Electric Log
SOURCE: COLLINS BROTHERS OIL CO. **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1405.0	BASE OF PENN.		UNCLASSIFIED	-	1904.0	

MAPID: 05501557000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 14 **QUARTERS/FOOTAGES:** 330' N line, 990' W line
QUADRANGLE: AKIN **LONGITUDE:** -88.740378 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.920868 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 499.0 **LOGGED (FT.):** 735.0 **LOG TYPE:** Electric Log
SOURCE: **WELL TYPE:** Oil and Gas Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-137.0	MODESTO	PIASA	LIMESTONE	5.0	636.0	
-142.0	MODESTO		SILTY SHALE	8.5	641.0	
-150.5	CARBONDALE	DANVILLE	COAL	1.5	649.5	
-152.0	CARBONDALE		SHALE & SANDSTONE	22.0	651.0	
-174.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	4.0	673.0	
-178.0	CARBONDALE	LAWSON	SILTY SHALE	19.0	677.0	
-197.0	CARBONDALE	LAWSON	SANDSTONE	8.0	696.0	
-205.0	CARBONDALE	LAWSON	SHALE	12.0	704.0	
-217.0	CARBONDALE	BRERETON	LIMESTONE	11.5	716.0	
-228.5	CARBONDALE	ANNA	BLACK SHALE	2.5	727.5	
-231.0	CARBONDALE	HERRIN	COAL	5.0	730.0	

MAPID: 05500128000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 15 **QUARTERS/FOOTAGES:** 990' S line, 330' E line
QUADRANGLE: AKIN **LONGITUDE:** -88.744884 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.909982 **DATE COLLECTED:** 0 / 0 / 1903
SURFACE ELEVATION (FT.): 478.0 **LOGGED (FT.):** 670.0 **LOG TYPE:**
SOURCE: BUNDY **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-185.0	CARBONDALE	HERRIN	COAL	5.3	663.0	

MAPID: 05500128000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 15 **QUARTERS/FOOTAGES:** 990' S line, 330' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.744884 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.909982 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 478.0 **LOGGED (FT.):** 668.3 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-91.5	MODESTO	PIASA	LIMESTONE	5.0	569.5	
-96.5	MODESTO		GRAY SHALE	7.3	574.5	
-103.8	CARBONDALE	DANVILLE	COAL	2.0	581.8	
-105.8	CARBONDALE		SHALE & SANDSTONE	17.7	583.8	
-123.5	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	601.5	
-129.5	CARBONDALE	LAWSON	SANDSTONE	13.0	607.5	
-142.5	CARBONDALE	LAWSON	GRAY SHALE	4.0	620.5	
-146.5	CARBONDALE	LAWSON	SANDSTONE	14.0	624.5	
-160.5	CARBONDALE	LAWSON	SILTY SHALE	4.0	638.5	
-164.5	CARBONDALE	LAWSON	GRAY SHALE	6.0	642.5	
-170.5	CARBONDALE	CONANT	LIMESTONE	0.5	648.5	
-171.0	CARBONDALE	JAMESTOWN	COAL	0.3	649.0	
-171.3	CARBONDALE		BLACK SHALE	5.0	649.3	
-176.3	CARBONDALE	BRERETON	LIMESTONE	5.3	654.3	
-181.5	CARBONDALE	ANNA	BLACK SHALE	3.5	659.5	
-185.0	CARBONDALE	HERRIN	COAL	5.3	663.0	

MAPID: 05500128000C **VERSION:** 3 **PROJECT:** NCRDS87

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 15 **QUARTERS/FOOTAGES:** 990' S line, 330' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.744884 **GEOLOGIST:** WEIBEL

CONFIDENTIAL: N **LATITUDE:** 37.909982 **DATE COLLECTED:** 0 / 0 / 1903

SURFACE ELEVATION (FT.): 478.0 **LOGGED (FT.):** 670.0 **LOG TYPE:** Drillers Log

SOURCE: J.C. BUNDY **WELL TYPE:** Coal Test

COMMENT: LOCATION IMPRECISE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
478.0			UNCONSOLIDATED	39.0	0.0	
439.0	BOND		SANDSTONE/SHALE	49.8	39.0	
389.2	BOND		COAL	0.7	88.8	
388.5	BOND		SHALE	4.5	89.5	
384.0	BOND		SANDSTONE	4.5	94.0	
379.5	BOND		CONGLOMERATE	3.0	98.5	
376.5	BOND		SHALE & SANDSTONE	52.5	101.5	
324.0	BOND	CARTHAGE	LIMESTONE	7.0	154.0	
317.0	MODESTO		BLACK SHALE	3.0	161.0	
314.0	MODESTO		SHALE	37.3	164.0	
276.7	MODESTO		BONE COAL	0.3	201.3	
276.5	MODESTO		SHALE	1.5	201.5	
275.0	MODESTO		COAL	0.1	203.0	
274.9	MODESTO		UNDERCLAY	3.1	203.1	
271.9	MODESTO		SANDSTONE	15.9	206.1	
256.0	MODESTO		SHALE	1.0	222.0	
255.0	MODESTO		CONGLOMERATE	1.5	223.0	
253.5	MODESTO		SHALE	29.5	224.5	
224.0	MODESTO		BLACK SHALE	4.0	254.0	
220.0	MODESTO		SHALE	1.0	258.0	
219.0	MODESTO		LIMESTONE	1.0	259.0	
218.0	MODESTO		SHALE	23.0	260.0	
195.0	MODESTO	CHAPEL	COAL	1.0	283.0	
194.0	MODESTO		SHALE & SANDSTONE	41.0	284.0	
153.0	MODESTO		SHALE	43.0	325.0	
110.0	MODESTO		BLACK SHALE	0.5	368.0	
109.5	MODESTO		LIMESTONE	1.5	368.5	
108.0	MODESTO		SANDSTONE	130.0	370.0	
-22.0	MODESTO		BLACK SHALE	2.0	500.0	
-24.0	MODESTO		SHALE	1.3	502.0	
-25.3	MODESTO		BLACK SHALE	0.4	503.3	
-25.7	MODESTO		COAL	2.3	503.7	
-28.0	MODESTO		SHALE	12.0	506.0	
-40.0	MODESTO		BLACK SHALE	15.2	518.0	
-55.2	MODESTO		COAL	0.7	533.2	
-55.8	MODESTO		SHALE	3.2	533.8	
-59.0	MODESTO		SANDSTONE	10.0	537.0	
-69.0	MODESTO		SHALE	20.0	547.0	
-89.0	MODESTO		COAL	0.4	567.0	

-89.4	MODESTO		SHALE	1.6	567.4	
-91.0	MODESTO	PIASA	LIMESTONE	5.0	569.0	
-96.0	MODESTO		SHALE	7.3	574.0	
-103.3	CARBONDALE	DANVILLE	COAL	2.0	581.3	UNCERTAIN CORRELATION
-105.3	CARBONDALE		SHALE	6.7	583.3	
-112.0	CARBONDALE		SANDSTONE	7.0	590.0	
-119.0	CARBONDALE		SHALE	4.0	597.0	
-123.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	601.0	
-129.0	CARBONDALE		SHALE & SANDSTONE	41.5	607.0	
-170.5	CARBONDALE		LIMESTONE	0.0	648.5	
-170.5	CARBONDALE		COAL	0.3	648.5	
-170.8	CARBONDALE		BLACK SHALE	5.0	648.8	
-175.8	CARBONDALE	BRERETON	LIMESTONE	5.3	653.8	
-181.0	CARBONDALE	ANNA	BLACK SHALE	3.5	659.0	
-184.5	CARBONDALE	HERRIN	COAL	5.3	662.5	
-189.8	CARBONDALE		UNDERCLAY	2.3	667.8	

MAPID: 05500128000C **VERSION:** 4 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 15 **QUARTERS/FOOTAGES:** 990' S line, 330' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.744884 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.909982 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 478.0 **LOGGED (FT.):** 670.0 **LOG TYPE:** Drillers Log

SOURCE: BUNDY, J. C. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-103.0	CARBONDALE	DANVILLE	COAL	2.0	581.0	
-112.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	7.0	590.0	
-123.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	601.0	
-129.0	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	31.0	607.0	
-184.0	CARBONDALE	HERRIN	COAL	5.3	662.0	

MAPID: 05500128000C **VERSION:** 5 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 15 **QUARTERS/FOOTAGES:** 990' S line, 330' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.744884 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.909982 **DATE COLLECTED:** 0 / 0 / 1903

SURFACE ELEVATION (FT.): 478.0 **LOGGED (FT.):** 670.0 **LOG TYPE:** Drillers Log

SOURCE: J C BUNDY **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
478.0	PLEISTOCENE		CLAY	10.0	0.0	YELLOW
468.0	PLEISTOCENE		CLAY	20.0	10.0	BLUE
448.0	PLEISTOCENE		CLAY	9.0	30.0	YELLOW
439.0	BOND		SANDY SHALE	27.0	39.0	
412.0	BOND		SANDSTONE	1.0	66.0	
411.0	BOND		SANDY SHALE	3.0	67.0	
408.0	BOND		SANDSTONE	1.0	70.0	
407.0	BOND		SANDY SHALE	10.0	71.0	
397.0	BOND		SANDSTONE	1.5	81.0	
395.5	BOND		SANDY SHALE	4.7	82.5	
390.8	BOND		SANDSTONE	1.7	87.2	
389.2	BOND		COAL	0.7	88.8	
388.5	BOND		SHALE	4.5	89.5	
384.0	BOND		SANDSTONE	4.5	94.0	
379.5	BOND		CONGLOMERATE	3.0	98.5	
376.5	BOND		SANDY SHALE	14.5	101.5	
362.0	BOND		SANDSTONE	8.7	116.0	
353.3	BOND		SANDY SHALE	29.3	124.7	
324.0	BOND	CARTHAGE	LIMESTONE	7.0	154.0	
317.0	MODESTO		SHALE	3.0	161.0	
314.0	MODESTO		SANDY SHALE	9.0	164.0	
305.0	MODESTO		SHALE	28.3	173.0	
276.7	MODESTO		SHALY COAL	0.3	201.3	
276.5	MODESTO		SHALE	1.5	201.5	
275.0	MODESTO		COAL	0.1	203.0	
275.0	MODESTO		SHALE	3.1	203.0	
271.8	MODESTO		SANDSTONE	15.8	206.2	
256.0	MODESTO		SANDY SHALE	1.0	222.0	
255.0	MODESTO		CONGLOMERATE	1.5	223.0	
253.5	MODESTO		SHALE	7.0	224.5	
246.5	MODESTO		SHALE	22.5	231.5	
224.0	MODESTO		SHALE	4.0	254.0	
220.0	MODESTO		SHALE	1.0	258.0	
219.0	MODESTO		LIMESTONE	1.0	259.0	
218.0	MODESTO		SHALE	8.0	260.0	
210.0	MODESTO		SANDY SHALE	15.0	268.0	
195.0	MODESTO	CHAPEL	COAL	1.0	283.0	
194.0	MODESTO		SANDY SHALE	11.0	284.0	
183.0	MODESTO		SANDY SHALE	2.0	295.0	

181.0	MODESTO		SANDSTONE	14.0	297.0	WITH SHALE PARTINGS
167.0	MODESTO		SANDSTONE	1.0	311.0	
166.0	MODESTO		SANDSTONE	2.0	312.0	WITH SHALE PARTINGS
164.0	MODESTO		SANDY SHALE	11.0	314.0	
153.0	MODESTO		SHALE	43.0	325.0	
110.0	MODESTO		SHALE	0.5	368.0	
109.5	MODESTO		LIMESTONE	1.5	368.5	
108.0	MODESTO		SANDSTONE	10.0	370.0	
98.0	MODESTO		SANDSTONE	120.0	380.0	WITH SHALE PARTINGS
-22.0	MODESTO		SHALE	2.0	500.0	
-24.0	MODESTO		SHALE	1.3	502.0	
-25.3	MODESTO		SHALE	0.4	503.3	
-25.7	MODESTO		COAL	2.3	503.7	
-28.0	MODESTO		SHALE	12.0	506.0	
-40.0	MODESTO		SHALE	15.2	518.0	
-55.2	MODESTO		COAL	0.7	533.2	
-55.8	MODESTO		SHALE	3.2	533.8	
-59.0	MODESTO		SANDSTONE	10.0	537.0	
-69.0	MODESTO		SHALE	20.0	547.0	
-89.0	MODESTO	DEGRAFF	COAL	0.4	567.0	
-89.4	MODESTO		SHALE	1.6	567.4	
-91.0	MODESTO	PIASA	LIMESTONE	5.0	569.0	
-96.0	MODESTO		SHALE	7.3	574.0	
-103.3	CARBONDALE	DANVILLE	COAL	2.0	581.3	
-105.3	CARBONDALE		SANDY SHALE	6.7	583.3	
-112.0	CARBONDALE		SANDSTONE	7.0	590.0	
-119.0	CARBONDALE		SHALE	4.0	597.0	
-123.0	CARBONDALE	BANKSTON FORK	LIMESTONE	6.0	601.0	
-129.0	CARBONDALE		SANDSTONE	13.0	607.0	
-142.0	CARBONDALE		SHALE	4.0	620.0	
-146.0	CARBONDALE		SANDSTONE	14.0	624.0	
-160.0	CARBONDALE		SANDY SHALE	4.0	638.0	
-164.0	CARBONDALE		SHALE	6.0	642.0	
-170.0	CARBONDALE	CONANT	LIMESTONE	0.5	648.0	
-170.5	CARBONDALE	JAMESTOWN	COAL	0.3	648.5	
-170.8	CARBONDALE		SHALE	5.0	648.8	
-175.8	CARBONDALE	BRERETON	LIMESTONE	5.3	653.8	
-181.0	CARBONDALE		SHALE	3.5	659.0	
-184.5	CARBONDALE	HERRIN	COAL	5.3	662.5	
-189.8	CARBONDALE		SHALE	2.3	667.8	

MAPID: 05500921000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 15 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of NW

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.754357 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.92083 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 506.0 **LOGGED (FT.):** 3123.0 **LOG TYPE:** Electric Log

SOURCE: FRODERMAN, ETAL **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-114.0	CARBONDALE	DANVILLE	COAL	-	620.0	
-132.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	638.0	
-151.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	13.0	657.0	
-192.0	CARBONDALE	HERRIN	COAL	5.0	698.0	
-202.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	12.0	708.0	
-221.0	CARBONDALE	BRIAR HILL	COAL	-	727.0	
-288.0	CARBONDALE	SPRINGFIELD	COAL	5.0	794.0	SHALE ROOF
-296.0	CARBONDALE	SS BELOW NO. 5	SANDSTONE/SHALE	18.0	802.0	
-361.0	CARBONDALE	HOUCHIN CREEK	COAL	-	867.0	

MAPID: 05500922000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 15 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.752057 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.920832 **DATE COLLECTED:** 6 / 0 / 1948

SURFACE ELEVATION (FT.): 510.0 **LOGGED (FT.):** 1910.0 **LOG TYPE:** Electric Log

SOURCE: FRODERMAN, ETAL **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1400.0	BASE OF PENN.		UNCLASSIFIED	-	1910.0	

MAPID: 05501125000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 15 **QUARTERS/FOOTAGES:** 488' N line, 387' W line of SE NW
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.756518 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.916744 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 3125.0 **LOG TYPE:** Electric Log
SOURCE: BARTMES, ROSS **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	CARBONDALE	DANVILLE	COAL	-	612.0	
-	CARBONDALE	SS BELOW NO. 7	SANDSTONE/SILTSTONE	16.0	616.0	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	-	638.0	
-	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	22.0	654.0	
-	CARBONDALE	HERRIN	COAL	4.0	696.0	
-	CARBONDALE	VERMILIONVILLE		10.0	708.0	
-	CARBONDALE	BRIAR HILL	COAL	-	723.0	
-	CARBONDALE	SPRINGFIELD	COAL	5.0	800.0	SHALE ROOF
-	CARBONDALE	HOUCHIN CREEK	COAL	-	860.0	

MAPID: 05501608000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 15 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of SW SW
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.761356 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.90986 **DATE COLLECTED:** 6 / 0 / 1960
SURFACE ELEVATION (FT.): 474.0 **LOGGED (FT.):** 1970.0 **LOG TYPE:** Electric Log
SOURCE: KAPP, LOUIS H., JR. **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-481.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	955.0	
-531.0	SPOON	DAVIS	UNCLASSIFIED	-	1005.0	
-1496.0	BASE OF PENN.		UNCLASSIFIED	-	1970.0	

MAPID: 05500129000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 16 **QUARTERS/FOOTAGES:** 1320' N line, 1320' E line
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.767168 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.918091 **DATE COLLECTED:** 0 / 0 / 1906
SURFACE ELEVATION (FT.): 484.0 **LOGGED (FT.):** 695.0 **LOG TYPE:**
SOURCE: THOMSON **WELL TYPE:** Coal Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-204.0	CARBONDALE	HERRIN	COAL	7.2	688.0	

MAPID: 05500129000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 16 **QUARTERS/FOOTAGES:** 1320' N line, 1320' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.767168 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.918091 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 484.0 **LOGGED (FT.):** 695.2 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-144.7	MODESTO	PIASA	CLAYSTONE & SHALE	0.3	628.7	
-145.0	MODESTO		SHALE	7.0	629.0	
-152.0	CARBONDALE	DANVILLE	COAL	2.0	636.0	
-154.0	CARBONDALE	LAWSON	SHALE	4.0	638.0	
-158.0	CARBONDALE	LAWSON	SILTY SHALE	38.0	642.0	
-196.0	CARBONDALE	LAWSON	SANDSTONE	1.0	680.0	
-197.0	CARBONDALE	BRERETON	LIMESTONE	6.0	681.0	
-203.0	CARBONDALE	ANNA	BLACK SHALE	1.0	687.0	
-204.0	CARBONDALE	HERRIN	COAL	7.2	688.0	

MAPID: 05500970000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 16 **QUARTERS/FOOTAGES:** 330' S line, 330' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.763643 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.908017 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 484.0 **LOGGED (FT.):** 3109.0 **LOG TYPE:** Electric Log

SOURCE: TEX HARVEY OIL CO **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-113.0	CARBONDALE	DANVILLE	COAL	-	597.0	
-130.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	614.0	
-143.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	25.0	627.0	
-184.0	CARBONDALE	HERRIN	COAL	5.0	668.0	
-196.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	6.0	680.0	
-210.0	CARBONDALE	BRIAR HILL	COAL	-	694.0	
-280.0	CARBONDALE	SPRINGFIELD	COAL	5.0	764.0	SHALE ROOF
-346.0	CARBONDALE	HOUCHIN CREEK	COAL	-	830.0	

MAPID: 05501176000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 16 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of SE SW
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.774928 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.909831 **DATE COLLECTED:** 10 / 0 / 1955
SURFACE ELEVATION (FT.): 488.0 **LOGGED (FT.):** 1978.0 **LOG TYPE:** Electric Log
SOURCE: JOHNSTON & OWEN **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1490.0	BASE OF PENN.		UNCLASSIFIED	-	1978.0	

MAPID: 05501124000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 17 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of NW NE
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.786468 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.920813 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 448.0 **LOGGED (FT.):** 3150.0 **LOG TYPE:** Electric Log
SOURCE: PROD PIPELINE **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-98.0	CARBONDALE	DANVILLE	COAL	-	546.0	
-105.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	11.0	553.0	
-119.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	567.0	
-142.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	22.0	590.0	
-186.0	CARBONDALE	HERRIN	COAL	4.0	634.0	
-195.0	CARBONDALE	VERMILIONVILLE	SANDSTONE/SILTSTONE	7.0	643.0	
-216.0	CARBONDALE	BRIAR HILL	COAL	-	664.0	
-245.0	CARBONDALE	CANTON	SILTSTONE	6.0	693.0	
-276.0	CARBONDALE	SPRINGFIELD	COAL	4.0	724.0	SHALE & SILTSTONE ROOF
-290.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	10.0	738.0	
-355.0	CARBONDALE	HOUCHIN CREEK	COAL	-	803.0	

MAPID: 05501290000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 17 **QUARTERS/FOOTAGES:** 1650' S line, 2310' E line
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.788672 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.911565 **DATE COLLECTED:** 12 / 0 / 1956
SURFACE ELEVATION (FT.): 463.0 **LOGGED (FT.):** 1840.0 **LOG TYPE:** Electric Log
SOURCE: EASTERN PETROLEUM CO. **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1377.0	BASE OF PENN.		UNCLASSIFIED	-	1840.0	

MAPID: 05501290000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 17 **QUARTERS/FOOTAGES:** 1650' S line, 2310' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.788672 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.911565 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 463.0 **LOGGED (FT.):** 691.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-129.0	MODESTO	PIASA	LIMESTONE	4.0	592.0	
-133.0	MODESTO		SHALE	8.0	596.0	
-141.0	CARBONDALE	DANVILLE	COAL	2.0	604.0	
-143.0	CARBONDALE		SHALE & SANDSTONE	24.0	606.0	
-167.0	CARBONDALE	LAWSON	SHALE	13.0	630.0	
-180.0	CARBONDALE	LAWSON	SHALE & SANDSTONE	10.0	643.0	
-190.0	CARBONDALE	LAWSON	SANDSTONE	14.0	653.0	
-204.0	CARBONDALE	LAWSON	SILTY SHALE	5.0	667.0	
-209.0	CARBONDALE	BRERETON	LIMESTONE	7.0	672.0	
-216.0	CARBONDALE	ANNA	BLACK SHALE	1.0	679.0	
-217.0	CARBONDALE	ENERGY	GRAY SHALE	4.0	680.0	
-221.0	CARBONDALE	HERRIN	COAL	7.0	684.0	

MAPID: 05524363000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 17 **QUARTERS/FOOTAGES:** 75' S line, 400' E line of NW SW NW

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.798155 **GEOLOGIST:** NORTH

CONFIDENTIAL: N **LATITUDE:** 37.916347 **DATE COLLECTED:** 3 / 9 / 1975

SURFACE ELEVATION (FT.): 482.9 **LOGGED (FT.):** 647.0 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. DH320 **WELL TYPE:** Coal Test

COMMENT: PERMIT 30

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
482.9			UNKNOWN	630.2	0.0	
-147.3	CARBONDALE	ENERGY	SHALE	8.5	630.2	GRAY
-155.8	CARBONDALE	HERRIN	COAL	6.4	638.7	
-162.2	CARBONDALE		UNDERCLAY	1.9	645.1	

MAPID: 05500772000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 18 **QUARTERS/FOOTAGES:** 270' N line, 60' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.816861 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.921186 **DATE COLLECTED:** 5 / 31 / 1945

SURFACE ELEVATION (FT.): 408.0 **LOGGED (FT.):** 550.3 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CORP. 48 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
408.0	PLEISTOCENE		SOIL	32.0	0.0	
376.0	MODESTO		SHALE	1.2	32.0	GRAY
374.8	BOND	CARTHAGE	LIMESTONE	3.8	33.2	
371.0	MODESTO		BLUE SHALE	5.0	37.0	
366.0	MODESTO		SHALE	19.2	42.0	GRAY
346.8	MODESTO	NEW HAVEN	COAL	0.5	61.2	
346.3	MODESTO		SHALE	0.4	61.7	GRAY
345.9	MODESTO		UNDERCLAY	2.5	62.1	
343.4	MODESTO		SHALE	52.6	64.6	GRAY
290.8	MODESTO	CRAMER	LIMESTONE	0.7	117.2	
290.1	MODESTO		SHALE	32.2	117.9	GRAY
257.9	MODESTO	CHAPEL	COAL	1.9	150.1	
256.0	MODESTO		UNDERCLAY	6.1	152.0	
249.9	MODESTO		SHALE	78.8	158.1	GRAY
171.1	MODESTO		LIMESTONE	0.8	236.9	
170.3	MODESTO		SHALE	1.3	237.7	GRAY
169.0	MODESTO		LIMESTONE	1.0	239.0	
168.0	MODESTO		SHALE	0.7	240.0	GRAY
167.3	MODESTO		COAL	0.4	240.7	
166.9	MODESTO		SHALE	14.9	241.1	GRAY
152.0	MODESTO		SANDSTONE	84.1	256.0	
67.9	MODESTO		SHALE	37.3	340.1	GRAY
30.6	MODESTO		COAL	0.1	377.4	
30.5	MODESTO		UNDERCLAY	2.5	377.5	
28.0	MODESTO	PIASA	LIMESTONE	1.9	380.0	
26.1	MODESTO		SHALE	26.6	381.9	GRAY
-0.5	CARBONDALE	DANVILLE	COAL	1.0	408.5	
-1.5	CARBONDALE		UNDERCLAY	3.3	409.5	
-4.8	CARBONDALE		SHALE	11.3	412.8	GRAY
-16.1	CARBONDALE		BLUE SHALE	0.5	424.1	
-16.6	CARBONDALE		LIMESTONE	0.1	424.6	
-16.7	CARBONDALE		SHALE	23.0	424.7	GRAY
-39.7	CARBONDALE		SANDSTONE	2.9	447.7	
-42.6	CARBONDALE		SHALE	9.5	450.6	GRAY
-52.1	CARBONDALE	ALLENBY	SHALE	1.9	460.1	COAL LENSES; GRAY
-54.0	CARBONDALE		SHALE & SANDSTONE	16.3	462.0	
-70.3	CARBONDALE		SHALE	4.6	478.3	GRAY
-74.9	CARBONDALE	BANKSTON FORK	LIMESTONE	4.9	482.9	
-79.8	CARBONDALE	ANVIL ROCK	SHALE	6.8	487.8	GRAY

-86.6	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	15.1	494.6	
-101.7	CARBONDALE	ANVIL ROCK	SANDSTONE	8.8	509.7	
-110.5	CARBONDALE	ANVIL ROCK	SHALE	7.8	518.5	GRAY
-118.3	CARBONDALE	JAMESTOWN	COAL	0.1	526.3	
-118.4	CARBONDALE		BLUE SHALE	0.8	526.4	
-119.2	CARBONDALE	BRERETON	LIMESTONE	3.0	527.2	
-122.2	CARBONDALE	ANNA	BLUE SHALE	2.0	530.2	
-124.2	CARBONDALE	ENERGY	SHALE	11.2	532.2	GRAY
-135.4	CARBONDALE	HERRIN	COAL	6.2	543.4	
-141.6	CARBONDALE		UNDERCLAY	2.1	549.6	
-143.7	CARBONDALE		SANDSTONE	4.2	551.7	
-147.9	CARBONDALE		SHALE	17.4	555.9	GRAY
-165.3	CARBONDALE		LIMESTONE	0.7	573.3	
-166.0	CARBONDALE	BRIAR HILL	COAL	1.0	574.0	
-167.0	CARBONDALE		UNDERCLAY	1.4	575.0	
-168.4	CARBONDALE	CANTON	SHALE	2.8	576.4	GRAY
-171.2	CARBONDALE		LIMESTONE	0.6	579.2	
-171.8	CARBONDALE	DYKERSBURG	SHALE	5.8	579.8	GRAY
-177.6	CARBONDALE	DYKERSBURG	SANDSTONE	0.5	585.6	
-178.1	CARBONDALE	DYKERSBURG	SHALE	48.4	586.1	GRAY
-226.5	CARBONDALE	SPRINGFIELD	COAL	4.0	634.5	
-230.5	CARBONDALE		UNDERCLAY	3.1	638.5	

MAPID: 05500864000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 18 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of NW NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.804726 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.920824 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 498.0 **LOGGED (FT.):** 3206.0 **LOG TYPE:** Electric Log

SOURCE: DUNBAR, J. V., ETAL **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-150.0	CARBONDALE	HERRIN	COAL	6.0	648.0	
-180.0	CARBONDALE	BRIAR HILL	COAL	-	678.0	
-260.0	CARBONDALE	SPRINGFIELD	COAL	4.0	758.0	SHALE ROOF
-314.0	CARBONDALE	HOUCHIN CREEK	COAL	-	812.0	

MAPID: 05524364000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 18 **QUARTERS/FOOTAGES:** 270' S line, 60' E line of NW NW

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.812781 **GEOLOGIST:** D NORTH

CONFIDENTIAL: N **LATITUDE:** 37.918876 **DATE COLLECTED:** 5 / 22 / 1945

SURFACE ELEVATION (FT.): 408.3 **LOGGED (FT.):** 641.6 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. 48 **WELL TYPE:** Coal Test

COMMENT: PERMIT 30 STRAT COL AVAIL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
408.3	PLEISTOCENE		SOIL	32.0	0.0	
376.3	MODESTO		SHALE	1.2	32.0	GRAY
375.1	BOND	CARTHAGE	LIMESTONE	3.8	33.2	
371.3	MODESTO		BLUE SHALE	5.0	37.0	
366.3	MODESTO		SHALE	19.2	42.0	GRAY
347.1	MODESTO	NEW HAVEN	COAL	0.5	61.2	
346.6	MODESTO		SHALE	0.4	61.7	GRAY
346.2	MODESTO		UNDERCLAY	2.5	62.1	
343.7	MODESTO		SHALE	52.6	64.6	GRAY
291.1	MODESTO	CRAMER	LIMESTONE	0.7	117.2	
290.4	MODESTO		SHALE	32.2	117.9	GRAY
258.2	MODESTO	CHAPEL	COAL	1.9	150.1	
256.3	MODESTO		UNDERCLAY	6.1	152.0	
250.2	MODESTO		SHALE	78.8	158.1	GRAY
171.4	MODESTO		LIMESTONE	0.8	236.9	
170.6	MODESTO		SHALE	1.3	237.7	GRAY
169.3	MODESTO		LIMESTONE	1.0	239.0	
168.3	MODESTO		SHALE	0.7	240.0	GRAY
167.6	MODESTO		COAL	0.4	240.7	
167.2	MODESTO		SHALE	14.9	241.1	GRAY
152.3	MODESTO		SANDSTONE	84.1	256.0	
68.2	MODESTO		SHALE	37.3	340.1	GRAY
30.9	MODESTO		COAL	0.1	377.4	
30.8	MODESTO		UNDERCLAY	2.5	377.5	
28.3	MODESTO	PIASA	LIMESTONE	1.9	380.0	
26.4	MODESTO		SHALE	26.6	381.9	GRAY
-0.2	CARBONDALE	DANVILLE	COAL	1.0	408.5	
-1.2	CARBONDALE		UNDERCLAY	3.3	409.5	
-4.5	CARBONDALE		SHALE	11.3	412.8	GRAY
-15.8	CARBONDALE		BLUE SHALE	0.5	424.1	
-16.3	CARBONDALE		LIMESTONE	0.1	424.6	
-16.4	CARBONDALE		SHALE	23.0	424.7	GRAY
-39.4	CARBONDALE		SANDSTONE	2.9	447.7	
-42.3	CARBONDALE		SHALE	9.5	450.6	GRAY
-51.8	CARBONDALE	ALLENBY	SHALE	1.9	460.1	COAL LENSES; GRAY
-53.7	CARBONDALE		SHALE & SANDSTONE	16.3	462.0	
-70.0	CARBONDALE		SHALE	4.6	478.3	GRAY
-74.6	CARBONDALE	BANKSTON FORK	LIMESTONE	4.9	482.9	
-79.5	CARBONDALE	ANVIL ROCK	SHALE	6.8	487.8	GRAY

-86.3	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	15.1	494.6	
-101.4	CARBONDALE	ANVIL ROCK	SANDSTONE	8.8	509.7	
-110.2	CARBONDALE	ANVIL ROCK	SHALE	7.8	518.5	GRAY
-118.0	CARBONDALE	JAMESTOWN	COAL	0.1	526.3	
-118.1	CARBONDALE		BLUE SHALE	0.8	526.4	
-118.9	CARBONDALE	BRERETON	LIMESTONE	3.0	527.2	
-121.9	CARBONDALE	ANNA	BLUE SHALE	2.0	530.2	
-123.9	CARBONDALE	ENERGY	SHALE	11.2	532.2	GRAY
-135.1	CARBONDALE	HERRIN	COAL	6.2	543.4	
-141.3	CARBONDALE		UNDERCLAY	2.1	549.6	
-143.4	CARBONDALE		SANDSTONE	4.2	551.7	
-147.6	CARBONDALE		SHALE	17.4	555.9	GRAY
-165.0	CARBONDALE		LIMESTONE	0.7	573.3	
-165.7	CARBONDALE	BRIAR HILL	COAL	1.0	574.0	
-166.7	CARBONDALE		UNDERCLAY	1.4	575.0	
-168.1	CARBONDALE	CANTON	SHALE	2.8	576.4	GRAY
-170.9	CARBONDALE		LIMESTONE	0.6	579.2	
-171.5	CARBONDALE	DYKERSBURG	SHALE	5.8	579.8	GRAY
-177.3	CARBONDALE	DYKERSBURG	SANDSTONE	0.5	585.6	
-177.8	CARBONDALE	DYKERSBURG	SHALE	48.4	586.1	GRAY
-226.2	CARBONDALE	SPRINGFIELD	COAL	4.0	634.5	
-230.2	CARBONDALE		UNDERCLAY	3.1	638.5	

MAPID: 05524365000C **VERSION:** 1 **PROJECT:** NCRDS99

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 18 **QUARTERS/FOOTAGES:** 50' S line, 425' W line of SW SE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.80658 **GEOLOGIST:** D NORTH

CONFIDENTIAL: N **LATITUDE:** 37.907075 **DATE COLLECTED:** 6 / 2 / 1945

SURFACE ELEVATION (FT.): 418.4 **LOGGED (FT.):** 670.8 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CO. 49 **WELL TYPE:** Coal Test

COMMENT: PERMIT 30 STRAT COLM AVAIL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
418.4	PLEISTOCENE		SOIL	52.5	0.0	
365.9	BOND	CARTHAGE	LIMESTONE	5.3	52.5	
360.6	MODESTO		BLUE SHALE	4.3	57.8	
356.3	MODESTO		SHALE	23.5	62.1	GRAY
332.8	MODESTO	NEW HAVEN	COAL	0.2	85.6	
332.6	MODESTO		SHALE	12.4	85.8	GRAY
320.2	MODESTO		LIMESTONE	1.1	98.2	
319.1	MODESTO		SHALE	38.4	99.3	GRAY
280.7	MODESTO		LIMESTONE	0.3	137.7	
280.4	MODESTO		BLUE SHALE	2.3	138.0	
278.1	MODESTO	CRAMER	LIMESTONE	0.8	140.3	
277.3	MODESTO		SHALE	29.0	141.1	GRAY
248.3	MODESTO	CHAPEL	COAL	1.8	170.1	
246.5	MODESTO		UNDERCLAY	2.8	171.9	
243.7	MODESTO		SHALE	83.2	174.7	GRAY
160.5	MODESTO		LIMESTONE	0.8	257.9	
159.7	MODESTO		BLUE SHALE	2.8	258.7	
156.9	MODESTO		LIMESTONE	0.8	261.5	
156.1	MODESTO		BLUE SHALE	0.2	262.3	
155.9	MODESTO		COAL	11.2	262.5	
144.7	MODESTO		SHALE	10.2	273.7	GRAY
134.5	MODESTO	TRIVOLI	SANDSTONE	99.2	283.9	
35.3	MODESTO		SHALE	26.2	383.1	GRAY
9.1	MODESTO		COAL	0.1	409.3	
9.0	MODESTO		UNDERCLAY	2.3	409.4	
6.7	MODESTO		SHALE	12.8	411.7	GRAY
-6.1	MODESTO		BLUE SHALE	13.5	424.5	
-19.6	MODESTO		COAL	0.8	438.0	
-20.4	MODESTO		UNDERCLAY	5.8	438.8	
-26.2	MODESTO		SANDSTONE	6.8	444.6	
-33.0	MODESTO		SHALE	2.7	451.4	GRAY
-35.7	MODESTO		SANDSTONE	4.5	454.1	
-40.2	MODESTO		SHALE	5.0	458.6	GRAY
-45.2	MODESTO		BLUE SHALE	14.0	463.6	
-59.2	MODESTO		COAL	0.3	477.6	
-59.5	MODESTO		UNDERCLAY	5.6	477.9	
-65.1	MODESTO		SHALE	5.1	483.5	GRAY
-70.2	CARBONDALE	DANVILLE	COAL	2.0	488.6	
-72.2	CARBONDALE		UNDERCLAY	1.8	490.6	

-74.0	CARBONDALE	ANVIL ROCK	SANDSTONE/SHALE	37.8	492.4	
-111.8	CARBONDALE	ANVIL ROCK	SHALE	25.0	530.2	GRAY
-136.8	CARBONDALE		LIMESTONE	0.1	555.2	
-136.9	CARBONDALE	JAMESTOWN	COAL	0.1	555.3	
-137.0	CARBONDALE		BLUE SHALE	0.6	555.4	
-137.6	CARBONDALE	BRERETON	LIMESTONE	3.4	556.0	
-141.0	CARBONDALE	ANNA	BLUE SHALE	2.3	559.4	
-143.3	CARBONDALE	ENERGY	SHALE	10.3	561.7	GRAY
-153.6	CARBONDALE	HERRIN	COAL	6.5	572.0	
-160.1	CARBONDALE		UNDERCLAY	3.3	578.5	
-163.4	CARBONDALE		SHALE	19.7	581.8	GRAY
-183.1	CARBONDALE		LIMESTONE	0.3	601.5	
-183.4	CARBONDALE	BRIAR HILL	COAL	0.5	601.8	
-183.9	CARBONDALE	DYKERSBURG	SHALE	64.3	602.3	GRAY
-248.2	CARBONDALE	SPRINGFIELD	COAL	4.2	666.6	

MAPID: 05500130000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 19 **QUARTERS/FOOTAGES:** 1320' S line, 0' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.817027 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.895982 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 420.0 **LOGGED (FT.):** 545.0 **LOG TYPE:**

SOURCE: C W F CC **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-117.0	CARBONDALE	HERRIN	COAL	6.1	537.0	

MAPID: 05500130000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 19 **QUARTERS/FOOTAGES:** 1320' S line, 0' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.817027 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.895982 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 422.0 **LOGGED (FT.):** 543.1 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-21.1	MODESTO	PIASA	LIMESTONE	3.3	443.1	
-24.4	MODESTO		CLAYSTONE & SHALE	9.0	446.4	
-33.4	CARBONDALE	DANVILLE	COAL	2.3	455.4	
-35.7	CARBONDALE		SHALE & SANDSTONE	20.4	457.7	
-56.1	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	5.0	478.1	
-61.1	CARBONDALE	LAWSON	CALCAREOUS SHALE	7.0	483.1	
-68.1	CARBONDALE	LAWSON	DARK GRAY SHALE	17.0	490.1	
-85.1	CARBONDALE	LAWSON	SANDSTONE	3.0	507.1	
-88.1	CARBONDALE	LAWSON	DARK GRAY SHALE	14.0	510.1	
-102.1	CARBONDALE		BLACK SHALE	3.9	524.1	
-106.0	CARBONDALE	BRERETON	LIMESTONE	6.5	528.0	
-112.5	CARBONDALE	ANNA	BLACK SHALE	2.5	534.5	
-115.0	CARBONDALE	HERRIN	COAL	6.1	537.0	

MAPID: 05500130000C **VERSION:** 3 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 19 **QUARTERS/FOOTAGES:** 1320' S line, 0' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.817027 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.895982 **DATE COLLECTED:**

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

SOURCE: WILLIAMS W W **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	CARBONDALE	DANVILLE	COAL	2.3	455.0	
-	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	3.0	471.0	
-	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	478.0	
-	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	3.0	507.0	
-	CARBONDALE	HERRIN	COAL	6.1	537.0	

MAPID: 05500130000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 19 **QUARTERS/FOOTAGES:** 1320' S line, 0' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.817027 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.895982 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 420.0 **LOGGED (FT.):** 544.8 **LOG TYPE:** Drillers Log

SOURCE: W.W. WILLIAMS **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
420.0	PLEISTOCENE		UNCONSOLIDATED	30.0	0.0	
390.0			BLACK SHALE	2.0	30.0	
388.0			CLAYSTONE	2.0	32.0	
386.0			SHALE	48.0	34.0	
338.0			SHALE	28.0	82.0	
310.0			BLACK SHALE	3.0	110.0	
307.0			CLAYSTONE	10.0	113.0	
297.0			SHALE	22.0	123.0	
275.0			COAL	1.3	145.0	
273.7			CLAYSTONE	0.8	146.3	
273.0			SHALE	91.0	147.0	
182.0			LIMESTONE	1.0	238.0	
181.0			BLACK SHALE	2.0	239.0	
179.0			LIMESTONE	0.6	241.0	
178.4			SHALE	8.4	241.6	
170.0	MODESTO	CHAPEL	COAL	1.7	250.0	
168.3	MODESTO		SHALE	1.3	251.7	
167.0	MODESTO		SANDY SHALE	42.0	253.0	
125.0	MODESTO		SANDSTONE	27.0	295.0	
98.0	MODESTO		SHALE	41.0	322.0	
57.0	MODESTO		BLACK SHALE	5.0	363.0	
52.0	MODESTO		COAL	0.1	368.0	
51.9	MODESTO		SHALE	6.9	368.1	LIGHT
45.0	MODESTO		BLACK SHALE	18.5	375.0	
26.5	MODESTO		COAL	0.7	393.5	
25.8	MODESTO		CLAYSTONE	13.8	394.2	
12.0	MODESTO		SANDY SHALE	8.0	408.0	
4.0	MODESTO		SANDSTONE	6.0	416.0	
-2.0	MODESTO		SHALE	19.0	422.0	
-21.0	MODESTO		SHALE	1.0	441.0	
-22.0	MODESTO	DEGRAFF	COAL	0.3	442.0	
-22.3	MODESTO		CLAYSTONE	0.8	442.3	
-23.0	MODESTO	PIASA	LIMESTONE	3.3	443.0	
-26.3	MODESTO		SHALE	6.0	446.3	WITH CLAY
-32.3	MODESTO		BLACK SHALE	3.0	452.3	
-35.3	CARBONDALE	DANVILLE	COAL	2.3	455.3	
-37.6	CARBONDALE		CLAYSTONE	3.4	457.6	
-41.0	CARBONDALE		SANDY SHALE	10.0	461.0	
-51.0	CARBONDALE		SANDSTONE	3.0	471.0	

-54.0	CARBONDALE		SHALE	4.0	474.0	WITH CLAY
-58.0	CARBONDALE	BANKSTON FORK	LIMESTONE	5.0	478.0	
-63.0	CARBONDALE		CALCAREOUS SHALE	7.0	483.0	
-70.0	CARBONDALE		SHALE	17.0	490.0	
-87.0	CARBONDALE		SANDSTONE	3.0	507.0	
-90.0	CARBONDALE		SHALE	14.0	510.0	
-104.0	CARBONDALE	JAMESTOWN	COAL	0.1	524.0	
-104.1	CARBONDALE		BLACK SHALE	3.9	524.1	
-108.0	CARBONDALE	BRERETON	LIMESTONE	6.5	528.0	
-114.5	CARBONDALE	ANNA	BLACK SHALE	2.5	534.5	
-117.0	CARBONDALE	HERRIN	COAL	6.1	537.0	
-123.1	CARBONDALE		CLAYSTONE	1.7	543.1	

MAPID: 05501123000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 20 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of SW SE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.78625 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.895079 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 460.0 **LOGGED (FT.):** 3250.0 **LOG TYPE:** Electric Log

SOURCE: REA R L **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-90.0	CARBONDALE	DANVILLE	COAL	-	550.0	
-114.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	6.0	574.0	
-133.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	13.0	593.0	
-177.0	CARBONDALE	HERRIN	COAL	4.0	637.0	
-232.0	CARBONDALE	CANTON	CALCAREOUS SANDSTONE	9.0	692.0	
-274.0	CARBONDALE	SPRINGFIELD	COAL	3.0	734.0	SHALE ROOF
-349.0	CARBONDALE	HOUCHIN CREEK	COAL	-	809.0	

MAPID: 05501628000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 20 **QUARTERS/FOOTAGES:** 990' N line, 2310' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.790949 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.904266 **DATE COLLECTED:** 8 / 0 / 1960

SURFACE ELEVATION (FT.): 466.0 **LOGGED (FT.):** 1822.0 **LOG TYPE:** Electric Log

SOURCE: MENHALL, J. W. & CO. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1356.0	BASE OF PENN.		UNCLASSIFIED	-	1822.0	

MAPID: 05501628000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 20 **QUARTERS/FOOTAGES:** 990' N line, 2310' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.790949 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.904266 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 466.0 **LOGGED (FT.):** 639.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-71.0	MODESTO	PIASA	LIMESTONE & SHALE	6.0	537.0	
-77.0	MODESTO		SHALE	6.0	543.0	
-83.0	CARBONDALE	DANVILLE	COAL	1.5	549.0	
-84.5	CARBONDALE	LAWSON	SHALE & SANDSTONE	66.0	550.5	
-150.5	CARBONDALE	CONANT	LIMESTONE & SHALE	0.5	616.5	
-151.0	CARBONDALE	JAMESTOWN	COAL	0.5	617.0	
-151.5	CARBONDALE		BLACK SHALE	4.5	617.5	
-156.0	CARBONDALE	BRERETON	LIMESTONE & SHALE	5.0	622.0	
-161.0	CARBONDALE	ANNA	BLACK SHALE	1.0	627.0	
-162.0	CARBONDALE	HERRIN	COAL	11.0	628.0	

MAPID: 05501122000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 21 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.770342 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.900658 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 463.0 **LOGGED (FT.):** 3225.0 **LOG TYPE:** Electric Log

SOURCE: POLLACK LOUIS **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-83.0	CARBONDALE	DANVILLE	COAL	-	546.0	
-96.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	6.0	559.0	
-107.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	570.0	
-130.0	CARBONDALE	ANVIL ROCK	SANDSTONE/SILTSTONE	9.0	593.0	
-163.0	CARBONDALE	HERRIN	COAL	6.0	626.0	
-193.0	CARBONDALE	BRIAR HILL	COAL	-	656.0	
-259.0	CARBONDALE	SPRINGFIELD	COAL	5.0	722.0	SHALE ROOF
-282.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	5.0	745.0	
-337.0	CARBONDALE	HOUCHIN CREEK	COAL	-	800.0	

MAPID: 05502086000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 21 **QUARTERS/FOOTAGES:** 330' S line, 330' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.779335 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.893242 **DATE COLLECTED:** 10 / 0 / 1963

SURFACE ELEVATION (FT.): 446.0 **LOGGED (FT.):** 1904.0 **LOG TYPE:** Electric Log

SOURCE: LOHMANN-JOHNSON DRLG. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1458.0	BASE OF PENN.		UNCLASSIFIED	-	1904.0	

MAPID: 05502086000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 21 **QUARTERS/FOOTAGES:** 330' S line, 330' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.779335 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.893242 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 446.0 **LOGGED (FT.):** 608.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-62.0	MODESTO	PIASA	LIMESTONE	5.0	508.0	
-67.0	MODESTO		SHALE	6.0	513.0	
-73.0	CARBONDALE	DANVILLE	COAL	1.0	519.0	
-74.0	CARBONDALE		SILTY SHALE	18.0	520.0	
-92.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	538.0	
-95.0	CARBONDALE	LAWSON	SILTY SHALE	33.0	541.0	
-128.0	CARBONDALE	LAWSON	CALCAREOUS SHALE	10.0	574.0	
-138.0	CARBONDALE	ANNA	BLACK SHALE	2.0	584.0	
-140.0	CARBONDALE	ENERGY	GRAY SHALE	16.0	586.0	
-156.0	CARBONDALE	HERRIN	COAL	6.0	602.0	

MAPID: 05501121000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 22 **QUARTERS/FOOTAGES:** 330' N line, 330' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.761331 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.90621 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 468.0 **LOGGED (FT.):** 3253.0 **LOG TYPE:** Electric Log

SOURCE: STEWART OIL ETAL **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-112.0	CARBONDALE	DANVILLE	COAL	-	580.0	
-122.0	CARBONDALE	SS BELOW NO. 7	SILTSTONE	5.0	590.0	
-145.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	11.0	613.0	
-182.0	CARBONDALE	HERRIN	COAL	6.0	650.0	
-192.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	12.0	660.0	
-214.0	CARBONDALE	BRIAR HILL	COAL	-	682.0	
-281.0	CARBONDALE	SPRINGFIELD	COAL	4.0	749.0	SHALE ROOF
-352.0	CARBONDALE	HOUCHIN CREEK	COAL	-	820.0	

MAPID: 05501121000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 22 **QUARTERS/FOOTAGES:** 330' N line, 330' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.761331 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.90621 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 468.0 **LOGGED (FT.):** 656.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-99.0	MODESTO	PIASA	LIMESTONE	9.0	567.0	
-108.0	MODESTO		SHALE	6.5	576.0	
-114.5	CARBONDALE	DANVILLE	COAL	1.5	582.5	
-116.0	CARBONDALE		SILTY SHALE	16.0	584.0	
-132.0	CARBONDALE	LAWSON	SILTY SHALE	11.0	600.0	
-143.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	14.0	611.0	
-157.0	CARBONDALE	LAWSON	SILTY SHALE	14.0	625.0	
-171.0	CARBONDALE	CONANT	LIMESTONE & SHALE	0.5	639.0	
-171.5	CARBONDALE	JAMESTOWN	BONE COAL	0.5	639.5	
-172.0	CARBONDALE		SHALE	2.0	640.0	
-174.0	CARBONDALE	BRERETON	LIMESTONE	7.5	642.0	
-181.5	CARBONDALE	ANNA	BLACK SHALE	2.5	649.5	
-184.0	CARBONDALE	HERRIN	COAL	4.0	652.0	

MAPID: 05501121000C **VERSION:** 3 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 22 **QUARTERS/FOOTAGES:** 330' N line, 330' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.761331 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.90621 **DATE COLLECTED:** 7 / 0 / 1954

SURFACE ELEVATION (FT.): 468.0 **LOGGED (FT.):** 1947.0 **LOG TYPE:** Electric Log

SOURCE: STEWART OIL ETAL **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1479.0	BASE OF PENN.		UNCLASSIFIED	-	1947.0	

MAPID: 05501120000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 23 **QUARTERS/FOOTAGES:** 330' N line, 2310' W line

QUADRANGLE: AKIN **LONGITUDE:** -88.735664 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.906312 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 496.0 **LOGGED (FT.):** 3262.0 **LOG TYPE:** Electric Log

SOURCE: CALVERT & WILLIS, INC. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-114.0	CARBONDALE	DANVILLE	COAL	-	610.0	
-131.0	CARBONDALE	SS BELOW NO. 7	SANDSTONE/SILTSTONE	7.0	627.0	
-152.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	14.0	648.0	
-190.0	CARBONDALE	HERRIN	COAL	5.0	686.0	
-197.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	10.0	693.0	
-216.0	CARBONDALE	BRIAR HILL	COAL	-	712.0	
-224.0	CARBONDALE	CANTON	SILTSTONE	10.0	720.0	
-296.0	CARBONDALE	SPRINGFIELD	COAL	4.0	792.0	SHALE ROOF
-330.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	24.0	826.0	
-356.0	CARBONDALE	HOUCHIN CREEK	COAL	-	852.0	

MAPID: 05501120000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 23 **QUARTERS/FOOTAGES:** 330' N line, 2310' W line

QUADRANGLE: AKIN **LONGITUDE:** -88.735664 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.906312 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 496.0 **LOGGED (FT.):** 691.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-101.0	MODESTO	PIASA	LIMESTONE	6.0	597.0	
-107.0	MODESTO		SHALE	7.0	603.0	
-114.0	CARBONDALE	DANVILLE	COAL	2.0	610.0	
-116.0	CARBONDALE		SILTY SHALE	16.0	612.0	
-132.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	6.0	628.0	
-138.0	CARBONDALE	LAWSON	SILTY SHALE	13.0	634.0	
-151.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	17.0	647.0	
-168.0	CARBONDALE	LAWSON	SHALE	11.0	664.0	
-179.0	CARBONDALE	CONANT	LIMESTONE & SHALE	0.5	675.0	
-179.5	CARBONDALE	JAMESTOWN	BONE COAL	0.5	675.5	
-180.0	CARBONDALE		SHALE	1.0	676.0	
-181.0	CARBONDALE	BRERETON	LIMESTONE	7.0	677.0	
-188.0	CARBONDALE	ANNA	BLACK SHALE	2.0	684.0	
-190.0	CARBONDALE	HERRIN	COAL	5.0	686.0	

MAPID: 05501120000C **VERSION:** 3 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 23 **QUARTERS/FOOTAGES:** 330' N line, 2310' W line

QUADRANGLE: AKIN **LONGITUDE:** -88.735664 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.906312 **DATE COLLECTED:** 10 / 0 / 1949

SURFACE ELEVATION (FT.): 496.0 **LOGGED (FT.):** 2070.0 **LOG TYPE:** Electric Log

SOURCE: CALVERT & WILLIS, INC. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1574.0	BASE OF PENN.		UNCLASSIFIED	-	2070.0	

MAPID: 05500123000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 24 **QUARTERS/FOOTAGES:** 0' S line, 0' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.706724 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.892696 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 466.6 **LOGGED (FT.):** 700.0 **LOG TYPE:**

SOURCE: DIAM JONES0001 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-226.4	CARBONDALE	HERRIN	COAL	6.8	693.0	

MAPID: 05500123000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 24 **QUARTERS/FOOTAGES:** 0' S line, 0' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.706724 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.892696 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 467.0 **LOGGED (FT.):** 699.8 **LOG TYPE:** Drillers Log

SOURCE: **WELL TYPE:** Coal Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-171.0	CARBONDALE	BANKSTON FORK	LIMESTONE W/ SHALE	10.5	638.0	
-181.5	CARBONDALE	LAWSON	ROCK	12.5	648.5	
-194.0	CARBONDALE	LAWSON	SHALE & SANDSTONE	12.0	661.0	
-206.0	CARBONDALE	LAWSON	DARK GRAY SHALE	11.8	673.0	
-217.8	CARBONDALE	JAMESTOWN	COAL	0.3	684.8	
-218.0	CARBONDALE		BLACK SHALE	2.5	685.0	
-220.5	CARBONDALE	BRERETON	LIMESTONE	5.0	687.5	
-225.5	CARBONDALE	ANNA	BLACK SHALE	0.5	692.5	
-226.0	CARBONDALE	HERRIN	COAL	6.8	693.0	

MAPID: 05500123000C **VERSION:** 3 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 24 **QUARTERS/FOOTAGES:** 0' S line, 0' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.706724 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.892696 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 467.0 **LOGGED (FT.):** 699.8 **LOG TYPE:** Drillers Log

SOURCE: DIAMOND & JONES PROSP. CO 1 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
467.0	PLEISTOCENE		UNCONSOLIDATED	14.4	0.0	
452.6			SANDSTONE	12.0	14.4	YELLOW
440.6			SANDY SHALE	12.0	26.4	
428.6			SHALE	12.0	38.4	WITH BLACK STREAKS
416.6			SHALE	12.0	50.4	
404.6			ROCK	0.8	62.4	
403.7			SHALE	29.8	63.3	
374.0			COAL	0.8	93.0	
373.2			SHALE	5.2	93.8	
368.0			SANDSTONE	35.8	99.0	WITH SHALE
332.2			COAL	0.2	134.8	
332.0			SANDSTONE	12.0	135.0	WITH SOAP STONE
320.0			SANDSTONE	12.0	147.0	WITH SHALE
308.0			SANDSTONE	24.0	159.0	
284.0			SANDSTONE	12.0	183.0	
272.0			SANDSTONE	15.0	195.0	
257.0			SANDSTONE	12.0	210.0	WITH SHALE
245.0			BLACK SHALE	4.0	222.0	
241.0			COAL	0.7	226.0	
240.3			SHALE	7.3	226.7	
233.0			SANDSTONE	28.0	234.0	WITH SHALE
205.0			SHALE	24.0	262.0	
181.0			SANDSTONE	11.2	286.0	
169.8			BLACK SHALE	0.8	297.2	
169.0			SANDSTONE	12.0	298.0	
157.0			SANDSTONE	11.7	310.0	WITH SHALE
145.3			COAL	0.3	321.7	
145.0			SANDSTONE	22.8	322.0	WITH SHALE
122.2			SHALE	47.3	344.8	
75.0			SANDY SHALE	22.5	392.0	WITH SANDSTONE
52.5			SHALE	8.5	414.5	
44.0	MODESTO	CHAPEL	COAL	0.8	423.0	
43.2	MODESTO		SHALE	2.7	423.8	
40.5	MODESTO		SANDY SHALE	23.5	426.5	SANDY WITH SANDSTONE
17.0	MODESTO		SANDSTONE	25.2	450.0	
-8.2	MODESTO		SANDSTONE	11.8	475.2	WITH LIMESTONE
-20.0	MODESTO		SHALE	12.0	487.0	
-32.0	MODESTO		SHALE	36.2	499.0	
-68.2	MODESTO		SANDY SHALE	24.8	535.2	

-93.0	MODESTO		BLACK SHALE	8.0	560.0	
-101.0	MODESTO		COAL	0.9	568.0	
-101.9	MODESTO		SHALE	0.3	568.9	
-102.3	MODESTO		SANDSTONE	11.0	569.3	
-113.3	MODESTO		SANDSTONE	12.5	580.3	WITH SHALE
-125.8	MODESTO		BLACK SHALE	0.5	592.8	
-126.3	MODESTO		BLACK SHALE	11.8	593.3	
-138.0	MODESTO		ROCK	2.0	605.0	
-140.0	CARBONDALE	DANVILLE	COAL	2.7	607.0	
-142.7	CARBONDALE		SHALE	7.3	609.7	
-150.0	CARBONDALE		SANDSTONE	21.0	617.0	WITH SHALE
-171.0	CARBONDALE		LIMESTONE W/ SHALE	10.5	638.0	WITH SOAP STONE
-181.5	CARBONDALE		LIMESTONE/SHALE/SANDSTONE	12.5	648.5	WITH SANDSTONE, SHALE
-194.0	CARBONDALE		SANDSTONE	12.0	661.0	WITH SHALE
-206.0	CARBONDALE		BLACK SHALE	11.8	673.0	
-217.8	CARBONDALE	JAMESTOWN	COAL	0.3	684.8	
-218.0	CARBONDALE	JAMESTOWN	BLACK SHALE	2.5	685.0	
-220.5	CARBONDALE	BRERETON	LIMESTONE	5.0	687.5	
-225.5	CARBONDALE		SHALE	0.5	692.5	
-226.0	CARBONDALE	HERRIN	COAL	6.8	693.0	

MAPID: 05500898000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 24 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of NW NW

QUADRANGLE: AKIN **LONGITUDE:** -88.721724 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.906287 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 462.0 **LOGGED (FT.):** 3225.0 **LOG TYPE:** Electric Log

SOURCE: PERRINE & PERRINE **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-153.0	CARBONDALE	DANVILLE	COAL	-	615.0	
-172.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	13.0	634.0	
-196.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	7.0	658.0	
-232.0	CARBONDALE	HERRIN	COAL	6.0	694.0	
-242.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	9.0	704.0	
-264.0	CARBONDALE	BRIAR HILL	COAL	-	726.0	
-278.0	CARBONDALE	CANTON		10.0	740.0	
-344.0	CARBONDALE	SPRINGFIELD	COAL	5.0	806.0	SHALE ROOF
-396.0	CARBONDALE	HOUCHIN CREEK	COAL	-	858.0	

MAPID: 05500126000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 25 **QUARTERS/FOOTAGES:** 1820' N line, 20' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.706828 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.887672 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 425.0 **LOGGED (FT.):** 651.8 **LOG TYPE:** Drillers Log

SOURCE: BIG CREEK COALS, INC. 5 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-131.2	MODESTO	PIASA	LIMESTONE	8.0	556.2	
-139.2	MODESTO		DARK GRAY SHALE	4.7	564.2	
-143.8	CARBONDALE	DANVILLE	COAL	1.8	568.8	
-145.7	CARBONDALE		SHALE & SANDSTONE	12.5	570.7	
-158.2	CARBONDALE	BANKSTON FORK	LIMESTONE	14.8	583.2	
-173.0	CARBONDALE	LAWSON	GRAY SHALE	10.2	598.0	
-183.2	CARBONDALE	LAWSON	SANDSTONE	9.0	608.2	
-192.2	CARBONDALE	LAWSON	GRAY SHALE	16.0	617.2	
-208.2	CARBONDALE	CONANT	LIMESTONE	0.5	633.2	
-208.7	CARBONDALE	JAMESTOWN	DARK GRAY SHALE	0.5	633.7	
-209.2	CARBONDALE		LIMESTONE W/ SHALE	5.0	634.2	
-214.2	CARBONDALE	BRERETON	LIMESTONE	6.2	639.2	
-220.3	CARBONDALE	ANNA	BLACK SHALE	0.7	645.3	
-221.0	CARBONDALE	HERRIN	COAL	5.8	646.0	

MAPID: 05500126000C **VERSION:** 2 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 25 **QUARTERS/FOOTAGES:** 1820' N line, 20' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.706828 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.887672 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 424.0 **LOGGED (FT.):** 1.0 **LOG TYPE:** Drillers Log

SOURCE: BIG CREEK COALS, INC. **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-145.0	CARBONDALE	DANVILLE	COAL	1.8	569.0	
-146.8	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	3.0	570.8	
-149.8	CARBONDALE	BANKSTON FORK	LIMESTONE	15.0	573.8	
-184.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	9.0	608.0	
-222.0	CARBONDALE	HERRIN	COAL	5.8	646.0	
-253.0	CARBONDALE	CANTON	SHALE & SANDSTONE	18.0	677.0	
-327.0	CARBONDALE	SPRINGFIELD	COAL	4.8	751.0	SHALE AND SANDSTONE ROOF

MAPID: 05501201000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 25 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of SE SE
QUADRANGLE: AKIN **LONGITUDE:** -88.707952 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.880792 **DATE COLLECTED:** 11 / 0 / 1955
SURFACE ELEVATION (FT.): 430.0 **LOGGED (FT.):** 1861.0 **LOG TYPE:** Electric Log
SOURCE: BREHM, C. E. DRLG.&PROD. **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1431.0	BASE OF PENN.		UNCLASSIFIED	-	1861.0	

MAPID: 05501227000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 25 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of NW
QUADRANGLE: AKIN **LONGITUDE:** -88.717154 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.886255 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 472.0 **LOGGED (FT.):** 3335.0 **LOG TYPE:** Electric Log
SOURCE: ORGAN DWIGHT **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-220.0	CARBONDALE	HERRIN	COAL	7.0	692.0	
-331.0	CARBONDALE	SPRINGFIELD	COAL	5.0	803.0	SHALE ROOF
-396.0	CARBONDALE	HOUCHIN CREEK	COAL	-	868.0	

MAPID: 05501119000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 26 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of SE
QUADRANGLE: AKIN **LONGITUDE:** -88.726387 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.88441 **DATE COLLECTED:** 8 / 0 / 1951
SURFACE ELEVATION (FT.): 438.0 **LOGGED (FT.):** 1965.0 **LOG TYPE:** Electric Log
SOURCE: WISE OIL CO **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-490.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	928.0	
-552.0	SPOON	DAVIS	UNCLASSIFIED	-	990.0	
-1527.0	BASE OF PENN.		UNCLASSIFIED	-	1965.0	

MAPID: 05501119000C **VERSION:** 2 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 26 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of SE

QUADRANGLE: AKIN **LONGITUDE:** -88.726387 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.88441 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 438.0 **LOGGED (FT.):** 3314.0 **LOG TYPE:** Electric Log

SOURCE: WISE OIL CO **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-121.0	CARBONDALE	DANVILLE	COAL	-	559.0	
-128.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	6.0	566.0	
-142.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	580.0	
-158.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	8.0	596.0	
-204.0	CARBONDALE	HERRIN	COAL	4.0	642.0	
-250.0	CARBONDALE	CANTON	SILTSTONE	10.0	688.0	
-312.0	CARBONDALE	SPRINGFIELD	COAL	4.0	750.0	SHALE ROOF
-366.0	CARBONDALE	HOUCHIN CREEK	COAL	-	804.0	

MAPID: 05502377000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 26 **QUARTERS/FOOTAGES:** 660' S line, 330' W line

QUADRANGLE: AKIN **LONGITUDE:** -88.742424 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.879794 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 456.0 **LOGGED (FT.):** 564.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-14.0	MODESTO	PIASA	LIMESTONE & SHALE	5.0	470.0	
-19.0	MODESTO		SHALE	8.0	475.0	
-27.0	CARBONDALE	DANVILLE	COAL	1.5	483.0	
-28.5	CARBONDALE		SILTY SHALE	20.5	484.5	
-49.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	4.0	505.0	
-53.0	CARBONDALE	LAWSON	SILTY SHALE	39.0	509.0	
-92.0	CARBONDALE	CONANT	LIMESTONE	0.5	548.0	
-92.5	CARBONDALE	JAMESTOWN	COAL	0.5	548.5	
-93.0	CARBONDALE		LIMESTONE W/ SHALE	1.0	549.0	
-94.0	CARBONDALE	BRERETON	LIMESTONE	7.0	550.0	
-101.0	CARBONDALE	ANNA	BLACK SHALE	2.0	557.0	
-103.0	CARBONDALE	HERRIN	COAL	5.0	559.0	

MAPID: 05500323000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 27 **QUARTERS/FOOTAGES:** SE SW SE
QUADRANGLE: AKIN **LONGITUDE:** -88.749456 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.878843 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 494.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: BENEDUM TR **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-111.0	CARBONDALE	HERRIN	COAL	5.0	605.0	

MAPID: 05500858000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 27 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of SE NE
QUADRANGLE: AKIN **LONGITUDE:** -88.744815 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.887995 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 502.0 **LOGGED (FT.):** 3232.0 **LOG TYPE:** Electric Log
SOURCE: REDWINE NASH ETAL **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-33.0	CARBONDALE	DANVILLE	COAL	-	535.0	
-46.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	8.0	548.0	
-58.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	560.0	
-74.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	14.0	576.0	
-118.0	CARBONDALE	HERRIN	COAL	5.0	620.0	
-158.0	CARBONDALE	CANTON	SANDSTONE/SHALE	20.0	660.0	
-218.0	CARBONDALE	SPRINGFIELD	COAL	5.0	720.0	SHALE AND SANDSTONE ROOF
-278.0	CARBONDALE	HOUCHIN CREEK	COAL	-	780.0	

MAPID: 05501334000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 27 **QUARTERS/FOOTAGES:** 2310' N line, 990' E line
QUADRANGLE: AKIN **LONGITUDE:** -88.747094 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.886168 **DATE COLLECTED:** 2 / 0 / 1955
SURFACE ELEVATION (FT.): 520.0 **LOGGED (FT.):** 1978.0 **LOG TYPE:** Electric Log
SOURCE: NAT'L. ASSOC. PETRO. CO. **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1458.0	BASE OF PENN.		UNCLASSIFIED	-	1978.0	

MAPID: 05501334000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 27 **QUARTERS/FOOTAGES:** 2310' N line, 990' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.747094 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.886168 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 520.0 **LOGGED (FT.):** 634.5 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-17.0	MODESTO	PIASA	LIMESTONE	8.0	537.0	
-25.0	MODESTO		SHALE	5.0	545.0	
-30.0	CARBONDALE	DANVILLE	COAL	2.0	550.0	
-32.0	CARBONDALE		SILTY SHALE	22.0	552.0	
-54.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	6.0	574.0	
-60.0	CARBONDALE	LAWSON	SILTY SHALE	38.0	580.0	
-98.0	CARBONDALE	CONANT	LIMESTONE & SHALE	0.5	618.0	
-98.5	CARBONDALE	JAMESTOWN	COAL	0.5	618.5	
-99.0	CARBONDALE		LIMESTONE W/ SHALE	1.0	619.0	
-100.0	CARBONDALE	BRERETON	LIMESTONE	7.5	620.0	
-107.5	CARBONDALE	ANNA	BLACK SHALE	2.5	627.5	
-110.0	CARBONDALE	HERRIN	COAL	4.5	630.0	

MAPID: 05501387000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 28 **QUARTERS/FOOTAGES:** 1650' S line, 1650' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.768162 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.882407 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 454.0 **LOGGED (FT.):** 3249.0 **LOG TYPE:** Electric Log

SOURCE: DUNCAN, N. V., EST. OF **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-142.0	CARBONDALE	HERRIN	COAL	5.0	596.0	
-178.0	CARBONDALE	BRIAR HILL	COAL	-	632.0	
-233.0	CARBONDALE	SPRINGFIELD	COAL	4.0	687.0	
-309.0	CARBONDALE	HOUCHIN CREEK	COAL	-	763.0	

MAPID: 05501387000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 28 **QUARTERS/FOOTAGES:** 1650' S line, 1650' E line
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.768162 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.882407 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 454.0 **LOGGED (FT.):** 601.0 **LOG TYPE:** Electric Log
SOURCE: **WELL TYPE:** Oil and Gas Test
COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-53.0	MODESTO	PIASA	LIMESTONE	5.0	507.0	
-58.0	MODESTO		SHALE	6.0	512.0	
-64.0	CARBONDALE	DANVILLE	COAL	2.0	518.0	
-66.0	CARBONDALE		SILTY SHALE	18.0	520.0	
-84.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	2.0	538.0	
-86.0	CARBONDALE	LAWSON	SHALE & SANDSTONE	37.0	540.0	
-123.0	CARBONDALE	BRERETON	LIMESTONE	7.0	577.0	
-130.0	CARBONDALE	ANNA	BLACK SHALE	3.0	584.0	
-133.0	CARBONDALE	ENERGY	GRAY SHALE	9.0	587.0	
-142.0	CARBONDALE	HERRIN	COAL	5.0	596.0	

MAPID: 05501387000C **VERSION:** 3 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 28 **QUARTERS/FOOTAGES:** 1650' S line, 1650' E line
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.768162 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.882407 **DATE COLLECTED:** 6 / 0 / 1958
SURFACE ELEVATION (FT.): 454.0 **LOGGED (FT.):** 1930.0 **LOG TYPE:** Electric Log
SOURCE: DUNCAN, N. V., EST. OF **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-446.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	900.0	
-524.0	SPOON	DAVIS	UNCLASSIFIED	-	978.0	
-1476.0	BASE OF PENN.		UNCLASSIFIED	-	1930.0	

MAPID: 05501509000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 28 **QUARTERS/FOOTAGES:** 330' S line, 330' W line of NW
QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.779366 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.886003 **DATE COLLECTED:** 4 / 0 / 1958
SURFACE ELEVATION (FT.): 491.0 **LOGGED (FT.):** 1956.0 **LOG TYPE:** Electric Log
SOURCE: LINDSAY, THEODORE R. **WELL TYPE:** Producer-Oil and Gas
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
-1465.0	BASE OF PENN.		UNCLASSIFIED	-	1956.0	

MAPID: 05500779000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 29 **QUARTERS/FOOTAGES:** 50' S line, 1370' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.794103 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.877962 **DATE COLLECTED:** 6 / 14 / 1945

SURFACE ELEVATION (FT.): 472.0 **LOGGED (FT.):** 597.8 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CO. 51 **WELL TYPE:** Coal Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-31.0	MODESTO	PIASA	LIMESTONE	4.4	503.0	
-35.5	MODESTO		DARK GRAY SHALE	6.9	507.5	
-42.4	CARBONDALE	DANVILLE	COAL	1.7	514.4	
-44.0	CARBONDALE		CLAYSTONE & SHALE	8.8	516.0	
-52.8	CARBONDALE	ALLENBY	BONE COAL	0.2	524.8	
-53.0	CARBONDALE		SHALE & SANDSTONE	7.8	525.0	
-60.8	CARBONDALE	BANKSTON FORK	CLAYSTONE & SHALE	1.8	532.8	
-62.5	CARBONDALE	LAWSON	SANDSTONE/SILTSTONE	9.4	534.5	
-71.9	CARBONDALE	LAWSON	COAL	0.1	543.9	
-72.0	CARBONDALE	LAWSON	SILTY SHALE	15.9	544.0	
-88.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	6.5	560.0	
-94.5	CARBONDALE	LAWSON	DARK GRAY SHALE	8.6	566.5	
-103.0	CARBONDALE	CONANT	LIMESTONE & SHALE	0.3	575.0	
-103.3	CARBONDALE		BLACK SHALE	0.4	575.3	
-103.7	CARBONDALE	BRERETON	LIMESTONE & SHALE	4.8	575.7	
-108.5	CARBONDALE	ANNA	BLACK SHALE	3.5	580.5	
-112.0	CARBONDALE	ENERGY	GRAY SHALE	7.0	584.0	
-119.0	CARBONDALE	HERRIN	COAL	6.8	591.0	

MAPID: 05500779000C **VERSION:** 2 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 29 **QUARTERS/FOOTAGES:** 50' S line, 1370' W line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.794103 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.877962 **DATE COLLECTED:** 6 / 14 / 1945

SURFACE ELEVATION (FT.): 472.0 **LOGGED (FT.):** 693.0 **LOG TYPE:** Survey Core Study

SOURCE: OLD BEN COAL CO. 51 **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-42.0	CARBONDALE	DANVILLE	COAL	1.8	514.0	
-58.0	CARBONDALE	BANKSTON FORK	LIMESTONE	3.4	530.0	
-61.0	CARBONDALE	ANVIL ROCK	SANDSTONE/SILTSTONE	34.0	533.0	
-119.0	CARBONDALE	HERRIN	COAL	6.8	591.0	
-127.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	2.7	599.0	
-146.0	CARBONDALE	BRIAR HILL	COAL	0.9	618.0	
-216.0	CARBONDALE	SPRINGFIELD	COAL	4.6	688.0	

MAPID: 05500795000C **VERSION:** 1 **PROJECT:** NCRDS 2011

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 30 **QUARTERS/FOOTAGES:** 125' S line, 30' E line of NE NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.798991 **GEOLOGIST:** LOUCHIOS

CONFIDENTIAL: N **LATITUDE:** 37.889019 **DATE COLLECTED:** 7 / 6 / 1945

SURFACE ELEVATION (FT.): 450.1 **LOGGED (FT.):** 670.8 **LOG TYPE:** Drillers Log

SOURCE: OLD BEN COAL CORP. 50 **WELL TYPE:** Coal Test

COMMENT: TRUE ELEV DATUM 6" FROM FLOOR; COAL QUAL

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
450.1	PLEISTOCENE		UNCONSOLIDATED	8.5	0.0	
441.6			SANDSTONE	41.9	8.5	
399.7			COAL	0.3	50.4	
399.4			SANDSTONE	0.8	50.7	
398.6			COAL	0.1	51.5	
398.4			SANDSTONE	1.0	51.7	
397.4			COAL	0.1	52.7	
397.4			SANDSTONE	0.4	52.7	
397.0			COAL	0.2	53.1	
396.8			SANDSTONE	1.0	53.3	
395.8			GRAY SHALE	0.2	54.3	
395.6			LIMESTONE	4.6	54.5	
391.0			BLACK SHALE	3.8	59.1	
387.2			GRAY SHALE	24.3	62.9	
362.8			COAL	0.4	87.3	
362.4			GRAY SHALE	23.3	87.7	
339.1			LIMESTONE	1.0	111.0	
338.1			GRAY SHALE	31.1	112.0	
307.0			BLACK LIMESTONE	0.5	143.1	
306.5			BLACK SHALE	2.4	143.6	
304.1			LIMESTONE	0.8	146.0	
303.3			SHALE & SANDSTONE	130.3	146.8	
172.9			LIMESTONE	0.8	277.2	
172.2			SHALE & SANDSTONE	115.8	277.9	
56.3			LIMESTONE	0.3	393.8	
56.1			BLACK SHALE	5.1	394.0	
51.0			COAL	0.1	399.1	
50.9			UNDERCLAY	2.9	399.2	
48.1			SILTSTONE	7.0	402.0	
41.1			DARK SHALE	19.3	409.0	
21.8			COAL	0.7	428.3	
21.2			UNDERCLAY	8.1	428.9	
13.1			GRAY SHALE	9.2	437.0	
3.9			SANDSTONE	26.5	446.2	
-22.6			BLACK SHALE	2.3	472.7	
-24.8			COAL	0.3	474.9	
-25.1			UNDERCLAY	3.3	475.2	
-28.4	SHELBURN	PIASA	LIMESTONE	3.2	478.5	CUTLER
-31.6	SHELBURN		DARK SHALE	4.5	481.7	

-36.1	SHELBURN		BLACK SHALE	0.8	486.2
-36.9	SHELBURN	DANVILLE	COAL	2.0	487.0
-38.9	SHELBURN		UNDERCLAY	1.6	489.0
-40.5	SHELBURN		SANDSTONE	1.9	490.6
-42.4	SHELBURN		SILTY SHALE	4.3	492.5
-46.7	SHELBURN		BONE COAL	0.1	496.8
-46.8	SHELBURN		UNDERCLAY	0.9	496.9
-47.7	SHELBURN		SANDSTONE	2.0	497.8
-49.7	SHELBURN		SILTSTONE	1.0	499.8
-50.7	SHELBURN		GRAY SHALE	5.1	500.8
-55.8	SHELBURN	BANKSTON FORK	LIMESTONE	2.8	505.9
-58.6	SHELBURN		SHALE & SANDSTONE	39.4	508.7
-98.0	SHELBURN	JAMESTOWN	BONE COAL	0.3	548.1
-98.2	SHELBURN		BLACK SHALE	0.8	548.3
-98.9	SHELBURN		LIMESTONE	0.7	549.0
-99.7	SHELBURN		BLACK SHALE	1.3	549.8
-101.0	SHELBURN		DARK SHALE	13.5	551.1
-114.4	SHELBURN		GRAY SHALE	5.2	564.5
-119.7	CARBONDALE	HERRIN	COAL	6.0	569.8
-125.8	CARBONDALE		UNDERCLAY	4.0	575.9
-129.8	CARBONDALE		SHALE & SANDSTONE	81.3	579.9
-211.2	CARBONDALE	SPRINGFIELD	COAL	4.1	661.3
-215.2	CARBONDALE		UNDERCLAY	3.4	665.3
-218.7	CARBONDALE		SILTSTONE	2.1	668.8

MAPID: 05501113000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 30 **QUARTERS/FOOTAGES:** 330' S line, 330' E line of NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.800033 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.885966 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 489.0 **LOGGED (FT.):** 3276.0 **LOG TYPE:** Electric Log

SOURCE: SEABOARD OIL OF DE **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-37.0	CARBONDALE	DANVILLE	COAL	-	526.0	
-55.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	544.0	
-71.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	12.0	560.0	
-117.0	CARBONDALE	HERRIN	COAL	8.0	606.0	
-145.0	CARBONDALE	BRIAR HILL	COAL	-	634.0	
-176.0	CARBONDALE	CANTON	CALCAREOUS SANDSTONE	5.0	665.0	
-209.0	CARBONDALE	SPRINGFIELD	COAL	4.0	698.0	SHALE AND SANDSTONE ROOF
-243.0	CARBONDALE	SS BELOW NO. 5	SILTSTONE/SANDSTONE	10.0	732.0	
-291.0	CARBONDALE	HOUCHIN CREEK	COAL	-	780.0	

MAPID: 05500131000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 31 **QUARTERS/FOOTAGES:** SW SW SE

QUADRANGLE: PITTSBURG **LONGITUDE:** -88.806863 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.864002 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 497.0 **LOGGED (FT.):** 644.0 **LOG TYPE:** Drillers Log

SOURCE: MADISON COAL CORP **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
68.0	CARBONDALE	DANVILLE	COAL	9.0	429.0	
67.0	CARBONDALE	SS BELOW NO. 7	SANDSTONE/SILTSTONE	59.0	430.0	
-1.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	25.0	498.0	
-51.0	CARBONDALE	HERRIN	COAL	7.3	548.0	
-137.0	CARBONDALE	SPRINGFIELD	COAL	4.2	634.0	SHALE ROOF

MAPID: 05500131000C **VERSION:** 2 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 31 **QUARTERS/FOOTAGES:** SW SW SE

QUADRANGLE: PITTSBURG **LONGITUDE:** -88.806863 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.864002 **DATE COLLECTED:** 0 / 0 / 1923

SURFACE ELEVATION (FT.): 496.9 **LOGGED (FT.):** 644.0 **LOG TYPE:**

SOURCE: MADISON CC **WELL TYPE:** Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-51.1	CARBONDALE	HERRIN	COAL	7.3	548.0	
-137.1	CARBONDALE	SPRINGFIELD	COAL	4.2	634.0	

MAPID: 05500131000C **VERSION:** 3 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 31 **QUARTERS/FOOTAGES:** SW SW SE

QUADRANGLE: PITTSBURG **LONGITUDE:** -88.806863 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.864002 **DATE COLLECTED:** 0 / 0 / 1923

SURFACE ELEVATION (FT.): 497.0 **LOGGED (FT.):** 555.3 **LOG TYPE:** Survey Core Study

SOURCE: MADISON COAL CORP 20 **WELL TYPE:** Coal Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
57.8	CARBONDALE		SANDSTONE/SILTSTONE	50.0	439.2	
7.8	CARBONDALE	ALLENBY	CONGLOMERATE	3.7	489.2	
4.2	CARBONDALE	LAWSON	SILTY SHALE	6.0	492.8	
-1.8	CARBONDALE	LAWSON	SANDSTONE	25.0	498.8	
-26.8	CARBONDALE	LAWSON	GRAY SHALE	12.8	523.8	
-39.6	CARBONDALE	LAWSON	DARK GRAY SHALE	1.1	536.6	
-40.7	CARBONDALE	LAWSON	BLACK SHALE	0.3	537.7	
-41.0	CARBONDALE	JAMESTOWN	BONE COAL	0.3	538.0	
-41.3	CARBONDALE		BLACK SHALE	5.7	538.3	
-47.0	CARBONDALE	BRERETON	LIMESTONE/UNDERCLAY	3.6	544.0	
-50.6	CARBONDALE	ANNA	BLACK SHALE	0.4	547.6	
-51.0	CARBONDALE	HERRIN	COAL	7.3	548.0	

MAPID: 05500131000C **VERSION:** 4 **PROJECT:** NCRDS96

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 31 **QUARTERS/FOOTAGES:** SW SW SE

QUADRANGLE: PITTSBURG **LONGITUDE:** -88.806863 **GEOLOGIST:** KOROSE

CONFIDENTIAL: N **LATITUDE:** 37.864002 **DATE COLLECTED:** 7 / 24 / 1923

SURFACE ELEVATION (FT.): 496.9 **LOGGED (FT.):** 644.0 **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
496.9	PLEISTOCENE		UNCONSOLIDATED	25.0	0.0	
471.9			SANDSTONE	13.0	25.0	
458.9			SHALE	1.6	38.0	WITH BLACK SLATE
457.3			SANDY SHALE	3.4	39.6	
453.9			SHALE	36.0	43.0	
417.9			SOFT SHALE	11.0	79.0	
406.9			SHALE WITH LIMESTONE	5.0	90.0	WITH LIMESTONE CONCRETIONS
401.9			CALCAREOUS SHALE	7.5	95.0	
394.4			SHALE	8.5	102.5	DARK GRAY
385.9			SOFT SHALE	15.0	111.0	
370.9			CALCAREOUS SHALE	2.0	126.0	
368.9			SOFT SHALE	13.0	128.0	
355.9			SANDSTONE/SHALE	16.0	141.0	
339.9			SOFT SHALE	4.5	157.0	
335.4			SANDY SHALE	1.0	161.5	
334.4			SANDSTONE	6.5	162.5	LIGHT GRAY
327.9			SANDY SHALE	21.0	169.0	
306.9			LAMINATED SHALE	40.0	190.0	
266.9			SHALE	13.0	230.0	
253.9			SLATY SHALE	1.0	243.0	
252.9			CALCAREOUS SHALE	1.0	244.0	
251.9			SANDY SHALE	3.0	245.0	
248.9			SLATY SHALE	2.3	248.0	
246.6	MODESTO	CHAPEL	BONE COAL	0.2	250.3	#8?
246.4	MODESTO	CHAPEL	SHALE W/ COAL STREAKS	0.2	250.5	WITH COAL PARTINGS -- #8?
246.2			SOFT SHALE	13.3	250.7	
232.9			CALCAREOUS SHALE	2.0	264.0	
230.9			LIMESTONE	0.1	266.0	
230.8			SANDY SHALE	2.1	266.1	
228.7			CALCAREOUS SHALE	13.3	268.2	
215.4			SANDY SHALE	1.5	281.5	
213.9			SANDSTONE	8.3	283.0	
205.6			SANDY SHALE	1.6	291.3	
204.1			SANDSTONE	0.3	292.8	LIGHT GRAY
203.7			SANDY SHALE	0.7	293.2	
203.1			SANDSTONE	0.7	293.8	WITH DARK SHALE STREAK;LIGHT GRAY
202.4			SANDY SHALE	46.8	294.5	
155.6			LAMINATED SHALE	19.7	341.3	
135.9			LAMINATED SHALE	15.8	361.0	

120.1			SHALE	5.3	376.8	DARK GRAY
114.9			SANDY SHALE	2.5	382.0	
112.4			CALCAREOUS SHALE	2.7	384.5	
109.7			SHALY LIMESTONE	1.3	387.2	LIGHT GRAY
108.4			SANDY SHALE	9.0	388.5	
99.4			SANDY SHALE	12.0	397.5	
87.4			LAMINATED SHALE	13.7	409.5	
73.7			HARD SHALE	0.5	423.2	
73.2			SHALE	1.0	423.7	PYRITIC INCLUSIONS;DARK GRAY
72.2			SLATY SHALE	3.3	424.7	
69.0			SLATY SHALE	0.7	427.9	
68.3			SLATY SHALE	0.7	428.6	
67.6	CARBONDALE	DANVILLE	COAL	0.8	429.3	#7?
66.9			SANDY SHALE	1.0	430.0	
65.9			SANDY SHALE	0.7	431.0	
65.2			MICACEOUS SANDSTONE	9.3	431.7	LIGHT GRAY
55.9			SANDSTONE	3.3	441.0	LIGHT GRAY
52.6			SANDY SHALE	21.0	444.3	
31.6			MICACEOUS SANDSTONE	2.0	465.3	LIGHT GRAY
29.6			SANDY SHALE	7.2	467.3	
22.5			SANDSTONE	10.6	474.4	LIGHT GRAY
11.9			SANDSTONE	1.0	485.0	
10.9			CONGLOMERATE	0.3	486.0	
10.6			SANDSTONE	2.5	486.3	LIGHT GRAY
8.1			SHALY SANDSTONE	2.3	488.8	LIGHT GRAY
5.9			SANDY SHALE	6.0	491.0	
-0.1			HARD SHALE	1.0	497.0	
-1.1			HARD SHALE	0.4	498.0	
-1.5			MICACEOUS SANDSTONE	25.4	498.4	LIGHT GRAY
-26.9			CALCAREOUS SHALE	12.8	523.8	
-39.7			CALCAREOUS SHALE	1.1	536.6	
-40.8			SLATY SHALE	0.3	537.7	
-41.1	CARBONDALE	JAMESTOWN	BONE COAL	0.3	538.0	
-41.4	CARBONDALE		SLATY SHALE	5.7	538.3	
-47.1	CARBONDALE	BRERETON	SHALY LIMESTONE	3.6	544.0	LIGHT GRAY
-50.7	CARBONDALE		SLATY SHALE	0.4	547.6	
-51.1	CARBONDALE	HERRIN	COAL	7.3	548.0	
-58.4	CARBONDALE		CLAYSTONE	2.8	555.3	
-61.1	CARBONDALE		SOFT SHALE	3.4	558.0	
-64.5	CARBONDALE		SHALY LIMESTONE	3.1	561.4	LIGHT GRAY
-67.6	CARBONDALE		LAMINATED SHALE	2.3	564.5	
-69.9	CARBONDALE		SHALY LIMESTONE	0.5	566.8	LIGHT GRAY
-70.4	CARBONDALE		CALCAREOUS SHALE	5.2	567.3	
-75.5	CARBONDALE		SANDY SHALE	2.3	572.4	WITH SANDSTONE PARTINGS
-77.9	CARBONDALE		SANDY SHALE	17.0	574.8	WITH SANDSTONE PARTINGS
-94.9	CARBONDALE		HARD SHALE	42.3	591.8	
-137.1	CARBONDALE	SPRINGFIELD	COAL	4.2	634.0	

-141.3	CARBONDALE	CLAYSTONE	4.5	638.2
-145.8	CARBONDALE	CALCAREOUS SHALE	1.3	642.7

MAPID: 05501547000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 31 **QUARTERS/FOOTAGES:** 330' S line, 316' W line of SE SW

QUADRANGLE: PITTSBURG **LONGITUDE:** -88.811418 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.863966 **DATE COLLECTED:** 0 / 0 / 1900

SURFACE ELEVATION (FT.): 483.0 **LOGGED (FT.):** 1840.0 **LOG TYPE:** Electric Log

SOURCE: MUTUAL OIL & GAS CO. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-357.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	840.0	
-407.0	SPOON	DAVIS	UNCLASSIFIED	-	890.0	
-1357.0	BASE OF PENN.		UNCLASSIFIED	-	1840.0	

MAPID: 05501547000C **VERSION:** 2 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 31 **QUARTERS/FOOTAGES:** 330' S line, 316' W line of SE SW

QUADRANGLE: PITTSBURG **LONGITUDE:** -88.811418 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.863966 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 486.0 **LOGGED (FT.):** 3156.0 **LOG TYPE:** Electric Log

SOURCE: MUTUAL OIL & GAS CO. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-72.0	CARBONDALE	HERRIN	COAL	5.0	558.0	
-114.0	CARBONDALE	BRIAR HILL	COAL	-	600.0	
-160.0	CARBONDALE	SPRINGFIELD	COAL	4.0	646.0	SHALE AND SANDSTONE ROOF
-231.0	CARBONDALE	HOUCHIN CREEK	COAL	-	717.0	

MAPID: 05522664000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 31 **QUARTERS/FOOTAGES:** 220' N line, 75' E line

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.799139 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.877203 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 493.0 **LOGGED (FT.):** 0.0 **LOG TYPE:**

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: GOOD DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
493.0				5.9	0.0	UNCLASSIFIED
-5.6	MODESTO	PIASA	LIMESTONE	3.0	498.6	
-8.6	MODESTO		DARK GRAY SHALE	9.0	501.6	
-17.6	CARBONDALE	DANVILLE	COAL	2.0	510.6	
-19.6	CARBONDALE		SHALE & SANDSTONE	13.0	512.6	
-32.6	CARBONDALE	BANKSTON FORK	LIMESTONE	3.0	525.6	
-35.6	CARBONDALE	LAWSON	SHALE	11.0	528.6	
-46.6	CARBONDALE	LAWSON	SHALE & SANDSTONE	7.0	539.6	
-53.6	CARBONDALE	LAWSON	SANDSTONE	18.0	546.6	
-71.6	CARBONDALE	LAWSON	GRAY SHALE	21.0	564.6	
-92.6	CARBONDALE	BRERETON	LIMESTONE	6.5	585.6	
-99.1	CARBONDALE	ANNA	BLACK SHALE	3.0	592.1	
-102.1	CARBONDALE	ENERGY	GRAY SHALE	5.9	595.1	
-108.0	CARBONDALE	HERRIN	COAL	3.3	601.0	

MAPID: 05501343000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 32 **QUARTERS/FOOTAGES:** 2310' N line, 330' E line

QUADRANGLE: PITTSBURG **LONGITUDE:** -88.781723 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.871477 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 493.0 **LOGGED (FT.):** 3250.0 **LOG TYPE:** Electric Log

SOURCE: LINDSAY, THEODORE R. **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-144.0	CARBONDALE	HERRIN	COAL	6.0	637.0	
-179.0	CARBONDALE	BRIAR HILL	COAL	-	672.0	
-246.0	CARBONDALE	SPRINGFIELD	COAL	4.0	739.0	SHALE AND SANDSTONE ROOF
-329.0	CARBONDALE	HOUCHIN CREEK	COAL	-	822.0	

MAPID: 05501343000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 32 **QUARTERS/FOOTAGES:** 2310' N line, 330' E line

QUADRANGLE: PITTSBURG **LONGITUDE:** -88.781723 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.871477 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 493.0 **LOGGED (FT.):** 643.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-50.0	MODESTO	PIASA	LIMESTONE	4.0	543.0	
-54.0	MODESTO		SHALE	6.0	547.0	
-60.0	CARBONDALE	DANVILLE	COAL	2.0	553.0	
-62.0	CARBONDALE		SHALE & SANDSTONE	25.0	555.0	
-87.0	CARBONDALE	LAWSON	SHALE & SANDSTONE	23.0	580.0	
-110.0	CARBONDALE	LAWSON	SHALE	6.0	603.0	
-116.0	CARBONDALE	LAWSON	SILTY SHALE	5.0	609.0	
-121.0	CARBONDALE	BRERETON	LIMESTONE	6.0	614.0	
-127.0	CARBONDALE	ANNA	BLACK SHALE	2.5	620.0	
-129.5	CARBONDALE	ENERGY	GRAY SHALE	14.5	622.5	
-144.0	CARBONDALE	HERRIN	COAL	6.0	637.0	

MAPID: 05501343000C **VERSION:** 3 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 32 **QUARTERS/FOOTAGES:** 2310' N line, 330' E line

QUADRANGLE: PITTSBURG **LONGITUDE:** -88.781723 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.871477 **DATE COLLECTED:** 6 / 0 / 1957

SURFACE ELEVATION (FT.): 493.0 **LOGGED (FT.):** 1915.0 **LOG TYPE:** Electric Log

SOURCE: LINDSAY, THEODORE R. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-437.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	930.0	
-487.0	SPOON	DAVIS	UNCLASSIFIED	-	980.0	
-1422.0	BASE OF PENN.		UNCLASSIFIED	-	1915.0	

MAPID: 05522675000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 33 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of NE SE NW

QUADRANGLE: PITTSBURG **LONGITUDE:** -88.772597 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.873286 **DATE COLLECTED:** 10 / 0 / 1974

SURFACE ELEVATION (FT.): 484.0 **LOGGED (FT.):** 1930.0 **LOG TYPE:** Electric Log

SOURCE: POLLACK BROS. OIL PROD. **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-436.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	920.0	
-501.0	SPOON	DAVIS	UNCLASSIFIED	-	985.0	
-1446.0	BASE OF PENN.		UNCLASSIFIED	-	1930.0	

MAPID: 05500630000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 34 **QUARTERS/FOOTAGES:** 330' N line, 660' W line of NE

QUADRANGLE: THOMPSONVILLE **LONGITUDE:** -88.750701 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.877013 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 497.0 **LOGGED (FT.):** 3163.0 **LOG TYPE:** Electric Log

SOURCE: WILHEMI & GILLIAM **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-43.0	CARBONDALE	DANVILLE	COAL	-	540.0	
-51.0	CARBONDALE	SS BELOW NO. 7	SANDSTONE/SILTSTONE	6.0	548.0	
-83.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	580.0	
-95.0	CARBONDALE	ANVIL ROCK	SILTSTONE/SANDSTONE	4.0	592.0	
-123.0	CARBONDALE	HERRIN	COAL	4.0	620.0	
-150.0	CARBONDALE	CANTON	SANDSTONE/SHALE	18.0	647.0	
-210.0	CARBONDALE	SPRINGFIELD	COAL	5.0	707.0	SHALE AND SANDSTONE ROOF
-225.0	CARBONDALE	SS BELOW NO. 5	SILTSTONE	10.0	722.0	
-289.0	CARBONDALE	HOUCHIN CREEK	COAL	-	786.0	

MAPID: 05501992000C **VERSION:** 1 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 34 **QUARTERS/FOOTAGES:** 330' N line, 990' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.747044 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.877033 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 453.0 **LOGGED (FT.):** 590.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: POOR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-42.0	MODESTO	PIASA	LIMESTONE & SHALE	5.0	495.0	
-47.0	MODESTO		SHALE	8.0	500.0	
-55.0	CARBONDALE	DANVILLE	COAL	1.0	508.0	
-56.0	CARBONDALE		SHALE & SANDSTONE	21.0	509.0	
-77.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	5.0	530.0	
-82.0	CARBONDALE	LAWSON	SILTY SHALE	38.0	535.0	
-120.0	CARBONDALE	JAMESTOWN	BONE COAL	1.0	573.0	
-121.0	CARBONDALE		SHALE	3.0	574.0	
-124.0	CARBONDALE	BRERETON	LIMESTONE	6.0	577.0	
-130.0	CARBONDALE	ANNA	BLACK SHALE	3.0	583.0	
-133.0	CARBONDALE	HERRIN	COAL	4.0	586.0	

MAPID: 05522660000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 34 **QUARTERS/FOOTAGES:** 330' N line, 330' E line of NW SW

QUADRANGLE: PITTSBURG **LONGITUDE:** -88.758878 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.869656 **DATE COLLECTED:** 4 / 0 / 1974

SURFACE ELEVATION (FT.): 484.0 **LOGGED (FT.):** 1820.0 **LOG TYPE:** Electric Log

SOURCE: HANSON OIL COMPANY **WELL TYPE:** Dry Hole

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-441.0	CARBONDALE	COLCHESTER	UNCLASSIFIED	-	925.0	
-506.0	SPOON	DAVIS	UNCLASSIFIED	-	990.0	
-1336.0	BASE OF PENN.		UNCLASSIFIED	-	1820.0	

MAPID: 05500325000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 35 **QUARTERS/FOOTAGES:** 198' S line, 25' E line of NE NW
QUADRANGLE: HARCO **LONGITUDE:** -88.734608 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.874908 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 455.0 **LOGGED (FT.):** 3300.0 **LOG TYPE:** Electric Log
SOURCE: BENDENUM & TREES **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-48.0	CARBONDALE	DANVILLE	COAL	-	503.0	
-58.0	CARBONDALE	SS BELOW NO. 7	CALCAREOUS SANDSTONE	8.0	513.0	
-71.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	526.0	
-123.0	CARBONDALE	HERRIN	COAL	6.0	578.0	
-152.0	CARBONDALE	VERMILIONVILLE	CALCAREOUS SANDSTONE	10.0	607.0	
-217.0	CARBONDALE	SPRINGFIELD	COAL	5.0	672.0	SHALE ROOF
-285.0	CARBONDALE	HOUCHIN CREEK	COAL	-	740.0	

MAPID: 05500327000C **VERSION:** 1 **PROJECT:** CIRC 24

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 35 **QUARTERS/FOOTAGES:** NE NW NW
QUADRANGLE: AKIN **LONGITUDE:** -88.740158 **GEOLOGIST:**
CONFIDENTIAL: N **LATITUDE:** 37.87707 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): **LOGGED (FT.):** 0.0 **LOG TYPE:**
SOURCE: HLMRICH PNE **WELL TYPE:** Oil and Gas Test
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-	CARBONDALE	HERRIN	COAL	10.0	560.0	

MAPID: 05501277000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 35 **QUARTERS/FOOTAGES:** 2310' N line, 330' W line
QUADRANGLE: HARCO **LONGITUDE:** -88.742698 **GEOLOGIST:** HOPKINS
CONFIDENTIAL: N **LATITUDE:** 37.871593 **DATE COLLECTED:**
SURFACE ELEVATION (FT.): 444.0 **LOGGED (FT.):** 3129.0 **LOG TYPE:** Electric Log
SOURCE: KUZMICH, R. W. **WELL TYPE:** Producer-Oil
COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-120.0	CARBONDALE	HERRIN	COAL	6.0	564.0	
-208.0	CARBONDALE	SPRINGFIELD	COAL	4.0	652.0	SHALE AND SANDSTONE ROOF
-286.0	CARBONDALE	HOUCHIN CREEK	COAL	-	730.0	

MAPID: 05501277000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 35 **QUARTERS/FOOTAGES:** 2310' N line, 330' W line

QUADRANGLE: HARCO **LONGITUDE:** -88.742698 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.871593 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 444.0 **LOGGED (FT.):** 570.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-54.0	CARBONDALE	DANVILLE	COAL	0.5	498.0	
-54.5	CARBONDALE		SHALE	9.0	498.5	
-63.5	CARBONDALE	ALLENBY	BONE COAL	0.5	507.5	
-64.0	CARBONDALE		SHALE	4.0	508.0	
-68.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	2.0	512.0	
-70.0	CARBONDALE	LAWSON	SILTY SHALE	11.0	514.0	
-81.0	CARBONDALE	LAWSON	SANDSTONE	15.0	525.0	
-96.0	CARBONDALE	LAWSON	SHALE	11.0	540.0	
-107.0	CARBONDALE	JAMESTOWN	BONE COAL	1.0	551.0	
-108.0	CARBONDALE		SHALE	1.0	552.0	
-109.0	CARBONDALE	BRERETON	LIMESTONE	9.5	553.0	
-118.5	CARBONDALE	ANNA	BLACK SHALE	2.5	562.5	
-121.0	CARBONDALE	HERRIN	COAL	5.0	565.0	

MAPID: 05500329000C **VERSION:** 1 **PROJECT:** CIRC 431

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 36 **QUARTERS/FOOTAGES:** 330' N line, 330' W line of SW

QUADRANGLE: HARCO **LONGITUDE:** -88.724395 **GEOLOGIST:** HOPKINS

CONFIDENTIAL: N **LATITUDE:** 37.869834 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 451.0 **LOGGED (FT.):** 3220.0 **LOG TYPE:** Electric Log

SOURCE: HELMERICK & PAYNE, ETAL **WELL TYPE:** Producer-Oil

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-71.0	CARBONDALE	DANVILLE	COAL	-	522.0	
-83.0	CARBONDALE	SS BELOW NO. 7	SILTSTONE	5.0	534.0	
-95.0	CARBONDALE	BANKSTON FORK	LIMESTONE	-	546.0	
-109.0	CARBONDALE	ANVIL ROCK	CALCAREOUS SANDSTONE	8.0	560.0	
-146.0	CARBONDALE	HERRIN	COAL	5.0	597.0	
-186.0	CARBONDALE	CANTON	CALCAREOUS SANDSTONE	10.0	637.0	
-231.0	CARBONDALE	SPRINGFIELD	COAL	4.0	682.0	SHALE AND SANDSTONE ROOF
-246.0	CARBONDALE	SS BELOW NO. 5	CALCAREOUS SANDSTONE	13.0	697.0	
-309.0	CARBONDALE	HOUCHIN CREEK	COAL	-	760.0	

MAPID: 05501195000C **VERSION:** 1 **PROJECT:** CUSMAP

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 36 **QUARTERS/FOOTAGES:** 330' N line, 2310' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.714867 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.877126 **DATE COLLECTED:** 1 / 0 / 1956

SURFACE ELEVATION (FT.): 432.0 **LOGGED (FT.):** 1851.0 **LOG TYPE:** Electric Log

SOURCE: CALVERT DRILLING, INC. **WELL TYPE:** Producer-Oil and Gas

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-1419.0	BASE OF PENN.		UNCLASSIFIED	-	1851.0	

MAPID: 05501195000C **VERSION:** 2 **PROJECT:** ROOF STUDY

COUNTY: FRANKLIN **TWP/RNG:** 7S 4E **SECTION:** 36 **QUARTERS/FOOTAGES:** 330' N line, 2310' E line

QUADRANGLE: AKIN **LONGITUDE:** -88.714867 **GEOLOGIST:**

CONFIDENTIAL: N **LATITUDE:** 37.877126 **DATE COLLECTED:**

SURFACE ELEVATION (FT.): 432.0 **LOGGED (FT.):** 636.0 **LOG TYPE:** Electric Log

SOURCE: **WELL TYPE:** Oil and Gas Test

COMMENT: FAIR DESCRIPTION

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	THICKNESS (FT.) OVERBURDEN	COMMENT
-107.0	MODESTO	PIASA	LIMESTONE & SHALE	5.0	539.0	
-112.0	MODESTO		SHALE	6.0	544.0	
-118.0	CARBONDALE	DANVILLE	COAL	2.0	550.0	
-120.0	CARBONDALE		SHALE & SANDSTONE	24.0	552.0	
-144.0	CARBONDALE	BANKSTON FORK	LIMESTONE & SHALE	9.0	576.0	
-153.0	CARBONDALE	LAWSON	SHALE	7.0	585.0	
-160.0	CARBONDALE	LAWSON	ARGILLACEOUS SANDSTONE	8.0	592.0	
-168.0	CARBONDALE	LAWSON	SHALE	17.0	600.0	
-185.0	CARBONDALE	JAMESTOWN	BONE COAL	1.0	617.0	
-186.0	CARBONDALE		SHALE	2.0	618.0	
-188.0	CARBONDALE	BRERETON	LIMESTONE	7.0	620.0	
-195.0	CARBONDALE	ANNA	BLACK SHALE	3.0	627.0	
-198.0	CARBONDALE	HERRIN	COAL	6.0	630.0	