



Status Report

Total Records: 107

TOP 3 COUNTY RECORDS

BUREAU 107

TOP 3 MEMBER RECORDS

HERRIN 43 COAL
 COLCHESTER 30 COAL
 DANVILLE 15 COAL

TOP 3 LOG TYPE RECORDS

Drillers Log 105
 Survey Sample Study 1
 Electric Log 1

TOP 3 COAL RECORDS

HERRIN 43
 COLCHESTER 30
 DANVILLE 15

Data Summary

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

Depth and Thickness measurements in feet

Member	Lithology	Avg. Depth	Min. Depth	Max. Depth	Avg. Thk	Min. Thk	Max. Thk
DANVILLE	COAL	204.9	100.0	273.0	3.1	1.2	4.0
BANKSTON FORK	LIMESTONE	259.5	253.0	266.0	1.5	1.0	2.0
BRERETON	LIMESTONE	284.0	284.0	284.0	1.0	1.0	1.0
ANNA	SHALE	155.8	45.0	239.0	4.6	2.5	10.0
HERRIN	COAL	118.1	10.0	322.0	3.8	0.2	6.2
TURNER MINE	SHALE	243.0	162.0	329.0	3.8	2.0	8.0
SPRINGFIELD	COAL	225.9	64.2	331.0	4.5	3.0	5.5
EXCELLO	SHALE	262.3	222.0	343.0	1.0	1.0	1.0
HOUCHIN CREEK	COAL	262.8	227.0	355.2	2.3	1.6	2.6
MECCA QUARRY	SHALE	272.7	147.0	382.0	2.7	1.0	6.6
FRANCIS CREEK	SANDSTONE	255.3	159.0	303.5	1.2	0.5	2.5
COLCHESTER	COAL	321.2	120.0	501.0	2.7	0.3	3.9
Net Coal					16.4		

MAPID: 01100001000C VERSION: 1

PROJECT: NCRDS87

COUNTY: BUREAU TWP/RNG: 14N 8E SECTION: 5 NWNWNW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: WHITEFIELD LONGITUDE: -89.619947

GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 41.232971

DATE COLLECTED: 0 / 0 / 1931

SURFACE ELEVATION (FT.): 796.0 LOGGED (FT.): 200.0

LOG TYPE: Survey Sample Study

SOURCE: U.S. LANDING FIELD (FARM)

WELL TYPE: Coal Test

COMMENT: LOCATION AND ELEVATION IMPRECISE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
796.0			UNCONSOLIDATED	130.0	0.0	
666.0	MODESTO		UNCLASSIFIED	5.0	130.0	
661.0	MODESTO		SHALE	10.0	135.0	
651.0	CARBONDALE	DANVILLE	COAL	3.0	145.0	
648.0	CARBONDALE		LIMESTONE	2.0	148.0	
646.0	CARBONDALE		UNCLASSIFIED	35.0	150.0	
611.0	CARBONDALE	HERRIN	COAL	5.0	185.0	
606.0	CARBONDALE		SHALE	10.0	190.0	
596.0	CARBONDALE		UNCLASSIFIED	0.0	200.0	

MAPID: 01121465000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 14N 8E SECTION: 5 SENWSW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: WHITEFIELD LONGITUDE: -89.617735

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.225822

DATE COLLECTED: 10 / 26 / 1979

SURFACE ELEVATION (FT.): LOGGED (FT.): 197.0

LOG TYPE: Drillers Log

SOURCE: S. DEAN ALBRECHT 89749

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	5.0	0.0	TOP SOIL
-			CLAY	35.0	5.0	GY CLY; GY
-			CLAY	15.0	40.0	
-			CLAY	15.0	55.0	
-			CLAY	3.0	70.0	
-			SAND	2.0	73.0	
-			SHALE	82.0	75.0	
-			COAL	4.0	157.0	
-			SHALE	9.0	161.0	
-			SANDSTONE	10.0	170.0	
-			SHALE	17.0	180.0	

MAPID: 01121217000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 14N 8E SECTION: 9 SE

FOOT (NS): 1500 S FOOT (EW): 200 E

QUADRANGLE: WHITEFIELD LONGITUDE: -89.583168

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.211122

DATE COLLECTED: 3 / 25 / 1977

SURFACE ELEVATION (FT.): LOGGED (FT.): 750.0

LOG TYPE: Drillers Log

SOURCE: S. DEAN ALBRECHT 51206

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	2.0	0.0	TOP SOIL
-			CLAY	12.0	2.0	
-			CLAY	124.0	14.0	
-			CLAY	4.0	138.0	
-			CLAY	48.0	142.0	
-			GRAY SHALE	58.0	190.0	
-			COAL	1.0	248.0	
-			SHALE	48.0	249.0	
-			LIMESTONE	7.0	297.0	
-			GRAY SHALE	76.0	304.0	
-			GRAY SHALE	92.0	380.0	
-			SHALE	145.0	472.0	
-			LIMESTONE	133.0	617.0	

MAPID: 01121704000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 14N 8E SECTION: 19 NWSESW

FOOT (NS): 100 N FOOT (EW): 120 W

QUADRANGLE: BRADFORD LONGITUDE: -89.635665

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.180872

DATE COLLECTED: 10 / 5 / 1978

SURFACE ELEVATION (FT.): LOGGED (FT.): 515.0

LOG TYPE: Drillers Log

SOURCE: JERRY H. WAKEFIELD 80398

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	2.0	0.0	
-			SAND	60.0	2.0	
-			SANDY CLAY	18.0	62.0	
-			GRAVEL	10.0	80.0	
-			CLAY	15.0	90.0	
-			GRAY SHALE	55.0	105.0	
-			COAL	2.0	160.0	
-			UNKNOWN	38.0	162.0	
-			COAL	1.0	200.0	
-			GRAY SHALE	109.0	201.0	
-			CALCAREOUS SHALE	205.0	310.0	

MAPID: 01121712000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 15N 6E SECTION: 12 SWNWSE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: NEPONSET LONGITUDE: -89.750121

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.297213

DATE COLLECTED: 4 / 30 / 1982

SURFACE ELEVATION (FT.): LOGGED (FT.): 515.0

LOG TYPE: Drillers Log

SOURCE: S. DEAN ALBRECHT 103277

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			CLAY	30.0	0.0
-			GRAY SHALE	76.0	30.0
-			UNDERCLAY	6.0	106.0
-			GRAY SHALE	24.0	112.0
-	CARBONDALE	HERRIN	COAL	4.0	136.0
-			GRAY SHALE	83.0	140.0
-			CALCAREOUS SHALE	12.0	223.0
-			DARK GRAY SHALE	90.0	235.0
-			BLACK SHALE	45.0	325.0
-			SANDSTONE	4.0	370.0
-			BLACK SHALE	5.0	374.0
-			SHALE	3.0	379.0
-			SHALE	68.0	382.0
-			LIMESTONE	65.0	450.0

MAPID: 01190001000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 15N 6E SECTION: 18 NWSW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: NEPONSET LONGITUDE: -89.855029

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.283834

DATE COLLECTED: 0 / 0 / 1944

SURFACE ELEVATION (FT.): 741.1 LOGGED (FT.): 58.3

LOG TYPE: Drillers Log

SOURCE: WILMINGTON MINING CO. A-22

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
741.1			SANDY CLAY	25.0	0.0
716.1			SHALE	29.0	25.0
687.1	CARBONDALE	HERRIN	COAL	4.3	54.0

MAPID: 01190002000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 15N 6E SECTION: 18 NWSW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: NEPONSET LONGITUDE: -89.855029

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.283834

DATE COLLECTED: 0 / 0 / 1944

SURFACE ELEVATION (FT.): 782.2 LOGGED (FT.): 96.7

LOG TYPE: Drillers Log

SOURCE: WILMINGTON COAL CO. A-28

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
782.2			CLAY	35.0	0.0	
747.2			SANDY CLAY	25.0	35.0	
722.2			SHALE	32.0	60.0	
690.2	CARBONDALE	HERRIN	COAL	4.7	92.0	

MAPID: 01121713000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 15N 6E SECTION: 25 NWNWSW

FOOT (NS): 100 N FOOT (EW): 150 W

QUADRANGLE: NEPONSET LONGITUDE: -89.760537

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.255508

DATE COLLECTED: 10 / 21 / 1971

SURFACE ELEVATION (FT.): LOGGED (FT.): 523.0

LOG TYPE: Drillers Log

SOURCE: JERRY H. WAKEFIELD 14942

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	2.0	0.0	TOPSOIL
-			UNCONSOLIDATED	265.0	2.0	CLAY AND GLACIAL DRIFT
-			SHALE	42.0	267.0	
-			LIMESTONE	1.0	309.0	
-			DARK SHALE	55.0	310.0	
-			COAL	3.0	365.0	
-			CALCAREOUS SHALE	18.0	368.0	
-			SANDSTONE	19.0	386.0	
-			CALCAREOUS SHALE	25.0	405.0	
-			LIMESTONE	75.0	430.0	
-			ROCK	18.0	505.0	

MAPID: 01122104000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 15N 7E SECTION: 12 SENESE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: BUDA LONGITUDE: -89.627532

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.296633

DATE COLLECTED: 1 / 24 / 1994

SURFACE ELEVATION (FT.): LOGGED (FT.): 578.0

LOG TYPE: Drillers Log

SOURCE: DEAN S. ALBRECHT 019815

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	5.0	0.0	BRICKS AND DIRT
-			CLAY	10.0	5.0	
-			CLAY	8.0	15.0	GY CLY; GY
-			GRAVEL	6.0	23.0	
-			CLAY	69.0	29.0	GY CLY; GY
-			CALCAREOUS SHALE	62.0	98.0	
-			SILTSTONE	15.0	160.0	
-			SILTSTONE	24.0	175.0	
-			COAL	4.0	199.0	
-			SILTSTONE	13.0	203.0	
-			SHALE	249.0	216.0	
-			SHALE	53.0	465.0	
-			LIMESTONE	22.0	518.0	
-			SHALE	3.0	540.0	
-			SANDSTONE	35.0	543.0	

MAPID: 01122004000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 15N 7E SECTION: 13 SWSWSE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: BUDA LONGITUDE: -89.634703

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.278486

DATE COLLECTED: 9 / 29 / 1989

SURFACE ELEVATION (FT.): LOGGED (FT.): 496.0

LOG TYPE: Drillers Log

SOURCE: DEAN S. ALBRECHT 014916

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	6.0	0.0	TOP SOIL
-			SAND	15.0	6.0	
-			GRAVEL	2.0	21.0	
-			CLAY	10.0	23.0	
-			GRAVEL	3.0	33.0	
-			CLAY	13.0	36.0	
-			GRAY SHALE	44.0	49.0	
-			COAL	3.0	93.0	
-			GRAY SHALE	34.0	96.0	
-			SANDSTONE	3.0	130.0	
-			CALCAREOUS SHALE	9.0	133.0	
-	CARBONDALE	DANVILLE	COAL	2.0	142.0	
-			SHALE	9.0	144.0	
-			SANDY SHALE	5.0	153.0	
-			SANDSTONE	20.0	158.0	
-			SHALE	1.0	178.0	
-			SANDSTONE	18.0	179.0	
-			GRAY SHALE	51.0	197.0	
-			SHALE	224.0	248.0	
-			LIMESTONE	24.0	472.0	

MAPID: 01121272000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 15N 7E SECTION: 26 NESENE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: BUDA LONGITUDE: -89.646675

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.258436

DATE COLLECTED: 11 / 28 / 1978

SURFACE ELEVATION (FT.): LOGGED (FT.): 200.0

LOG TYPE: Drillers Log

SOURCE: DEAN S. ALBRECHT 82542

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			CLAY	20.0	0.0
-			SHALE	80.0	20.0
-	CARBONDALE	DANVILLE	COAL	4.0	100.0
-	CARBONDALE		SHALE	31.0	104.0
-	CARBONDALE		SANDSTONE	3.0	135.0
-	CARBONDALE		SHALE	17.0	138.0
-	CARBONDALE	HERRIN	COAL	3.0	155.0
-			SHALE	4.0	158.0
-			LIMESTONE	2.0	162.0
-			SHALE	36.0	164.0

MAPID: 01100664000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 15N 7E SECTION: 36 SE

FOOT (NS): 60 S FOOT (EW): 40 E

QUADRANGLE: BRADFORD LONGITUDE: -89.625826

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.233916

DATE COLLECTED: 9 / 10 / 1968

SURFACE ELEVATION (FT.): LOGGED (FT.): 150.0

LOG TYPE: Drillers Log

SOURCE: S. DEAN ALBRECHT 956

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			CLAY	7.0	0.0
-			GRAVEL	2.0	7.0
-			SANDSTONE	4.0	9.0
-			CALCAREOUS SHALE	4.0	13.0
-			GRAY SHALE	4.0	17.0
-			SHALE	19.0	21.0
-			LIMESTONE	1.0	40.0
-			SHALE	34.0	41.0
-			COAL	2.0	75.0
-			GRAY SHALE	29.0	77.0
-			COAL	3.0	106.0
-			SHALE	41.0	109.0

MAPID: 01100417000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 15N 8E SECTION: 4 SESWSE

FOOT (NS): 260 S FOOT (EW): 20 E

QUADRANGLE: WYANET LONGITUDE: -89.574072

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.307054

DATE COLLECTED: 0 / 0 / 1965

SURFACE ELEVATION (FT.): LOGGED (FT.): 380.0

LOG TYPE: Drillers Log

SOURCE: WALLACE ENGEL 147

WELL TYPE: Oil and Gas Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	2.0	0.0	TOP SOIL
-			CLAY	8.0	2.0	
-			GRAVEL	2.0	10.0	
-			CLAY	53.0	12.0	
-			CLAY	13.0	65.0	
-			SANDY CLAY	4.0	78.0	
-			CLAY	11.0	82.0	
-			SHALE	105.0	93.0	
-			COAL	2.0	198.0	
-			SHALE	24.0	200.0	
-			ROCK	2.0	224.0	
-			SHALE	74.0	226.0	
-			SHALE	5.0	300.0	
-			ROCK	4.0	305.0	
-			SHALE	16.0	309.0	
-			COAL	1.0	325.0	
-			SHALE	19.0	326.0	
-			ROCK	2.0	345.0	
-			SHALE	33.0	347.0	

MAPID: 01100388000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 15N 8E SECTION: 10 SWSESWSE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: WYANET LONGITUDE: -89.556364

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.29225

DATE COLLECTED: 9 / 15 / 1967

SURFACE ELEVATION (FT.): LOGGED (FT.): 182.0

LOG TYPE: Drillers Log

SOURCE: O LOUTES & SON NF 2864

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	19.0	0.0	
-			SAND	2.0	19.0	
-			CLAY	5.0	21.0	
-			SANDY CLAY	12.0	26.0	
-			SAND	6.0	38.0	
-			CLAY	21.0	44.0	
-			SAND	8.0	65.0	
-			CLAY	4.0	73.0	
-			UNCLASSIFIED	2.0	77.0	WOOD
-			CLAY	15.0	79.0	
-			CLAY	38.0	94.0	
-			CLAY	7.0	132.0	
-			SANDSTONE	2.0	139.0	
-			SHALE	11.0	141.0	
-			SHALE	1.0	152.0	
-	CARBONDALE	ANNA	BLACK SHALE	3.0	153.0	
-	CARBONDALE	HERRIN	COAL	2.0	156.0	
-			SHALE	11.0	158.0	
-			SANDSTONE	10.0	169.0	
-			SHALE	3.0	179.0	

MAPID: 01100320000C VERSION: 1

PROJECT: AVAIL-2

COUNTY: BUREAU TWP/RNG: 15N 8E SECTION: 27 NW

FOOT (NS): 750 N FOOT (EW): 80 W

QUADRANGLE: WYANET LONGITUDE: -89.568135

GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.260957

DATE COLLECTED: 6 / 0 / 1963

SURFACE ELEVATION (FT.): 915.0 LOGGED (FT.): 503.0

LOG TYPE: Electric Log

SOURCE: VICKERY DRILL CO. INC. 320

WELL TYPE: Structure Test

COMMENT: ESTIMATED FROM E-LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
915.0			UNKNOWN	501.0	0.0	
414.0	CARBONDALE	COLCHESTER	COAL	2.0	501.0	

MAPID: 01100006000C VERSION: 1

PROJECT: AVAIL02

COUNTY: BUREAU TWP/RNG: 15N 9E SECTION: 18

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: WYANET LONGITUDE: -89.500228

GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.284945

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 512.0 LOGGED (FT.): 161.5

LOG TYPE: Drillers Log

SOURCE: IL REPORTS VOL. 5 P. 173 6

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
512.0			UNKNOWN	160.0	0.0	
352.0	CARBONDALE	COLCHESTER	COAL	1.5	160.0	

MAPID: 01100006000C VERSION: 2

PROJECT: NCRDS87

COUNTY: BUREAU TWP/RNG: 15N 9E SECTION: 18

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: WYANET LONGITUDE: -89.500228

GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 41.284945

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 520.0 LOGGED (FT.): 238.3

LOG TYPE: Drillers Log

SOURCE:

WELL TYPE: Coal Test

COMMENT: LOCATION IMPRECISE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
520.0			UNCONSOLIDATED	71.0	0.0	
449.0	CARBONDALE		UNCLASSIFIED	84.5	71.0	
364.5	CARBONDALE	MECCA QUARRY	BLACK SHALE	3.5	155.5	
361.0	CARBONDALE	FRANCIS CREEK	SHALE	2.5	159.0	
358.5	CARBONDALE	COLCHESTER	COAL	1.5	161.5	
357.0	SPOON		UNDERCLAY	1.0	163.0	
356.0	SPOON		UNCLASSIFIED	74.3	164.0	

MAPID: 01100007000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 15N 10E SECTION: 4 SWSWNE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: DEPUE LONGITUDE: -89.34343

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.313989

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 506.0 LOGGED (FT.): 283.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 4B

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
506.0			UNCONSOLIDATED	100.0	0.0	SD, GRAVEL, AND CLY
406.0			CALCAREOUS SHALE	23.0	100.0	
383.0			GRAY SHALE	23.0	123.0	
360.0			CALCAREOUS SHALE	37.0	146.0	
323.0	CARBONDALE	COLCHESTER	COAL	2.0	183.0	
321.0			UNDERCLAY	15.0	185.0	
306.0			CALCAREOUS SHALE	29.0	200.0	
277.0			LIMESTONE	0.5	229.0	
276.5			GRAY SHALE	43.0	229.5	
233.5			COAL	0.3	272.5	
233.2			UNCLASSIFIED	0.2	272.8	SULFUR BAND
233.1			COAL	0.4	272.9	
232.7			CALCAREOUS SHALE	0.5	273.3	
232.2			CALCAREOUS SHALE	9.0	273.8	

MAPID: 01100008000C VERSION: 2

PROJECT: NCRDS87

COUNTY: BUREAU TWP/RNG: 15N 10E SECTION: 4 NWNE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: DEPUE LONGITUDE: -89.342206

GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 41.318524

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 488.0 LOGGED (FT.): 369.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO.

WELL TYPE: Coal Test

COMMENT: LOCATION & ELEVATION IMPRECISE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
488.0			UNCONSOLIDATED	135.0	0.0	
353.0	CARBONDALE		SHALE	12.0	135.0	
341.0	CARBONDALE	MECCA QUARRY	BLACK SHALE	3.0	147.0	
338.0	CARBONDALE	COLCHESTER	COAL	0.0	150.0	
338.0			SHALE	8.0	150.0	
330.0			LIMESTONE	2.0	158.0	
328.0			SHALE	4.0	160.0	
324.0			LIMESTONE	1.0	164.0	
323.0			SHALE	42.0	165.0	
281.0			BLACK SHALE	3.0	207.0	
278.0			GRAY SHALE	4.0	210.0	
274.0			COAL	3.5	214.0	
270.5			UNDERCLAY	0.5	217.5	
270.0			SHALE	27.0	218.0	
243.0			BLACK SHALE	1.0	245.0	
242.0			SHALE	3.0	246.0	
239.0			COAL	1.3	249.0	
237.7			SHALE	13.7	250.3	
224.0			COAL	1.0	264.0	
223.0			SHALE	5.0	265.0	
218.0			UNCLASSIFIED	38.0	270.0	
180.0			LIMESTONE	61.0	308.0	TOP OF DEVONIAN?

MAPID: 01100008000C VERSION: 3

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 15N 10E SECTION: 4 NWNE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: DEPUE LONGITUDE: -89.342206

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.318524

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 488.0 LOGGED (FT.): 369.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 27

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
488.0			UNCONSOLIDATED	135.0	0.0	
353.0			GRAY SHALE	8.0	135.0	
345.0			GRAY SHALE	4.0	143.0	
341.0			BLACK SHALE	3.0	147.0	
338.0			GRAY SHALE	8.0	150.0	
330.0			LIMESTONE	2.0	158.0	
328.0			CALCAREOUS SHALE	4.0	160.0	
324.0			LIMESTONE	1.0	164.0	
323.0			CALCAREOUS SHALE	8.0	165.0	
315.0			CALCAREOUS SHALE	6.0	173.0	
309.0			CALCAREOUS SHALE	28.0	179.0	
281.0			BLACK SHALE	3.0	207.0	
278.0			GRAY SHALE	4.0	210.0	
274.0			COAL	3.0	214.0	
271.0			UNDERCLAY	1.0	217.0	
270.0			GRAY SHALE	15.0	218.0	
255.0			SANDY SHALE	2.0	233.0	
253.0			GRAY SHALE	10.0	235.0	
243.0			BLACK SHALE	1.0	245.0	
242.0			CALCAREOUS SHALE	2.0	246.0	
240.0			COAL	1.6	248.0	
238.4			CALCAREOUS SHALE	14.4	249.6	
224.0			COAL	1.0	264.0	
223.0			SHALE	5.0	265.0	
218.0			BLACK SHALE	2.0	270.0	
216.0			SHALE	22.0	272.0	
194.0			LIGHT SHALE	0.5	294.0	
193.5			SANDY SHALE	13.5	294.5	
180.0			LIMESTONE	5.0	308.0	
175.0			LIMESTONE	56.0	313.0	

MAPID: 01100009000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 15N 10E SECTION: 5 SWSWSE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: DEPUE LONGITUDE: -89.362697

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.306755

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 593.0 LOGGED (FT.): 349.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 2B

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
593.0			UNCONSOLIDATED	210.0	0.0	SAND, CLY. AND GRAVEL
383.0			SHALE	0.3	210.0	
382.7			LIMESTONE	1.8	210.3	
381.0			SHALE	8.0	212.0	
373.0			LIMESTONE	4.0	220.0	
369.0			CALCAREOUS SHALE	39.0	224.0	
330.0			DARK SHALE	8.0	263.0	
322.0			BLACK SHALE	1.0	271.0	
321.0			COAL	0.5	272.0	
320.5			BLACK SHALE	9.0	272.5	
311.5			COAL	2.5	281.5	
309.0			SANDY SHALE	31.0	284.0	
278.0			COAL	1.3	315.0	
276.7			UNDERCLAY	4.8	316.3	
272.0			COAL	0.5	321.0	
271.5			CALCAREOUS SHALE	9.5	321.5	
262.0			DARK SHALE	14.0	331.0	
248.0			COAL	1.0	345.0	
247.0			SANDY SHALE	3.0	346.0	

MAPID: 01100877000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 15N 10E SECTION: 6 SWNESE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: PRINCETON SOUTH LONGITUDE: -89.377113

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.310446

DATE COLLECTED: 6 / 12 / 1972

SURFACE ELEVATION (FT.): LOGGED (FT.): 114.0

LOG TYPE: Drillers Log

SOURCE: GEO LUTES NF 14926

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	4.0	0.0	
-			GRAVEL	14.0	4.0	
-			CLAY	15.0	18.0	BLU CLY; BLU
-			COAL	1.0	33.0	
-			SANDSTONE	4.0	34.0	
-			COAL	1.0	38.0	
-			CALCAREOUS SHALE	7.0	39.0	
-			SANDSTONE	1.0	46.0	
-			GRAY SHALE	34.0	47.0	
-			SANDSTONE	2.0	81.0	
-			SHALE	12.0	83.0	
-			SANDSTONE	5.0	95.0	
-			SANDSTONE	14.0	100.0	

MAPID: 01100010000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 15N 10E SECTION: 7 SWNE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: PRINCETON SOUTH LONGITUDE: -89.380864

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.300435

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 498.0 LOGGED (FT.): 297.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 1B

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
498.0			CLAY	100.0	0.0
398.0			SHALE	12.0	100.0
386.0			SHALE	29.0	112.0
357.0			SANDY SHALE	12.0	141.0
345.0			CALCAREOUS SHALE	37.0	153.0
308.0			CALCAREOUS SHALE	8.0	190.0
300.0			COAL	2.4	198.0
297.6			SANDY SHALE	38.6	200.4
259.0			COAL	1.0	239.0
258.0			UNDERCLAY	8.0	240.0
250.0			SHALE	12.0	248.0
238.0			BLACK SHALE	5.0	260.0
233.0			COAL	1.0	265.0
232.0			SHALE	5.0	266.0
227.0			COAL	0.5	271.0
226.5			LIGHT SHALE	8.5	271.5
218.0			COAL	1.0	280.0
217.0			UNDERCLAY	5.0	281.0
212.0			SHALE	11.0	286.0

MAPID: 01100013000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 15N 10E SECTION: 19 SWNE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: PRINCETON SOUTH LONGITUDE: -89.377584

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.274125

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 464.0 LOGGED (FT.): 243.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 29

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
464.0			UNCONSOLIDATED	20.0	0.0	SOIL AND CLAY
444.0			SAND	15.0	20.0	
429.0			SAND	15.0	35.0	
414.0			SAND	12.0	50.0	SD
402.0			CLAY	2.0	62.0	GY CLY; GY
400.0			LIMESTONE	2.0	64.0	
398.0			GRAY SHALE	33.0	66.0	
365.0			CALCAREOUS SHALE	21.0	99.0	
344.0			CALCAREOUS SHALE	8.0	120.0	
336.0			COAL	2.7	128.0	
333.3			CALCAREOUS SHALE	0.7	130.7	
332.7			SANDY SHALE	24.7	131.3	
308.0			BLACK SHALE	1.0	156.0	
307.0			CALCAREOUS SHALE	7.0	157.0	
300.0			SHALE	3.0	164.0	
297.0			BLACK SHALE	1.0	167.0	
296.0			GRAY SHALE	1.0	168.0	
295.0			SANDY SHALE	18.0	169.0	
277.0			CALCAREOUS SHALE	1.0	187.0	
276.0			SANDY SHALE	3.0	188.0	
273.0			COAL	1.8	191.0	
271.2			SANDY SHALE	7.2	192.8	
264.0			UNDERCLAY	1.6	200.0	
262.4			COAL	0.9	201.6	
261.5			UNDERCLAY	0.3	202.5	
261.2			GRAY SHALE	1.0	202.8	
260.2			SANDY SHALE	8.2	203.8	
252.0			CALCAREOUS SHALE	4.0	212.0	
248.0			SANDY SHALE	15.0	216.0	
233.0			LIMESTONE	12.0	231.0	

MAPID: 01121156000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 6E SECTION: 16 NWNENE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: MINERAL LONGITUDE: -89.804215

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.37874

DATE COLLECTED: 8 / 6 / 1976

SURFACE ELEVATION (FT.): LOGGED (FT.): 207.0

LOG TYPE: Drillers Log

SOURCE: S. DEAN ALBRECHT 50663

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			CLAY	5.0	0.0
-			SAND	10.0	5.0
-			SAND	33.0	15.0
-			CLAY	65.0	48.0
-			SHALE	7.0	113.0
-	CARBONDALE	COLCHESTER	COAL	1.0	120.0
-			SHALE	5.0	121.0
-			ROCK	2.0	126.0
-			SHALE	79.0	128.0

MAPID: 01121012000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 6E SECTION: 17 SWSWSE

FOOT (NS): 100 S FOOT (EW): 300 W

QUADRANGLE: NEPONSET LONGITUDE: -89.828316

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.365475

DATE COLLECTED: 10 / 10 / 1974

SURFACE ELEVATION (FT.): LOGGED (FT.): 409.0

LOG TYPE: Drillers Log

SOURCE: S. DEAN ALBRECHT 33774

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			CLAY	8.0	0.0
-			GRAY SHALE	42.0	8.0
-			COAL	2.0	50.0
-			GRAY SHALE	8.0	52.0
-			COAL	1.0	60.0
-			SHALE	97.0	61.0
-	CARBONDALE	COLCHESTER	COAL	2.0	158.0
-			SHALE	113.0	160.0
-			LIMESTONE	136.0	273.0

MAPID: 01121299000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 6E SECTION: 21 NWSWSW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: NEPONSET LONGITUDE: -89.818546

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.35333

DATE COLLECTED: 8 / 13 / 1977

SURFACE ELEVATION (FT.): LOGGED (FT.): 218.0

LOG TYPE: Drillers Log

SOURCE: S.D. ALBRECHT 64278

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	10.0	0.0	TOP SOIL
-			GRAY SHALE	40.0	10.0	
-	CARBONDALE	HERRIN	COAL	3.0	50.0	
-			GRAY SHALE	10.0	53.0	
-			SHALE	12.0	63.0	
-			GRAY SHALE	19.0	75.0	
-			COAL	9.0	94.0	
-			SHALE	110.0	103.0	
-			LIMESTONE	5.0	213.0	

MAPID: 01100015000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 6E SECTION: 22 SWSWSE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: NEPONSET LONGITUDE: -89.789211

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.351549

DATE COLLECTED: 8 / 7 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 60.8

LOG TYPE: Drillers Log

SOURCE: MISS. COAL CORP. 315

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	7.0	0.0	
-			SHALE	2.0	7.0	
-			COAL	1.5	9.0	
-			UNDERCLAY	2.0	10.5	
-			SHALE	9.5	12.5	
-			SANDSTONE	3.0	22.0	
-			SANDY SHALE	20.0	25.0	
-	CARBONDALE	ANNA	SHALE	10.0	45.0	
-	CARBONDALE	HERRIN	COAL	5.8	55.0	

MAPID: 01100016000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 6E SECTION: 22 SWNWSE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: NEPONSET LONGITUDE: -89.78926

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.355191

DATE COLLECTED: 8 / 7 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 57.1

LOG TYPE: Drillers Log

SOURCE: MISS. COAL CORP. 340

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			UNCONSOLIDATED	3.0	0.0
-			SAND	12.0	3.0
-			BLACK SHALE	5.0	15.0
-			SANDY SHALE	25.0	20.0
-			GRAY SHALE	7.0	45.0
-	CARBONDALE	HERRIN	COAL	5.1	52.0

MAPID: 01100017000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 6E SECTION: 23 SWSWSWSW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: NEPONSET LONGITUDE: -89.780061

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.351121

DATE COLLECTED: 8 / 7 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 58.0

LOG TYPE: Drillers Log

SOURCE: MISS. COAL CORP. 317

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			UNCONSOLIDATED	6.0	0.0
-			SAND	7.0	6.0
-	CARBONDALE	HERRIN	COAL	1.5	13.0
-			UNDERCLAY	9.5	14.5
-			SHALE	34.0	24.0

MAPID: 01100018000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 6E SECTION: 23 NESESE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: NEPONSET LONGITUDE: -89.7627

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.353625

DATE COLLECTED: 0 / 0 / 1870

SURFACE ELEVATION (FT.): 710.0 LOGGED (FT.): 247.2

LOG TYPE: Drillers Log

SOURCE: SHEFFIELD M & T 3

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
710.0			UNCONSOLIDATED	12.0	0.0	SOIL AND CLAY
698.0			SAND	3.0	12.0	
695.0			SANDSTONE	3.0	15.0	
692.0			SHALE	7.0	18.0	
685.0			SHALE	11.3	25.0	
673.7			ROCK	0.7	36.3	
673.0			SHALE	1.0	37.0	
672.0	CARBONDALE	HERRIN	COAL	4.4	38.0	
667.6			SHALE	31.3	42.4	
636.3			CALCAREOUS SHALE	19.0	73.7	
617.3			SANDY SHALE	27.0	92.7	
590.3			SANDY SHALE	5.3	119.7	
585.0			DARK GRAY SHALE	35.0	125.0	
550.0			GRAY SHALE	46.7	160.0	
503.3			LIGHT SHALE	4.0	206.7	
499.3			GRAY SHALE	4.5	210.7	
494.8			LIGHT SHALE	2.8	215.2	
492.0			LIMESTONE	0.7	218.0	
491.3			SHALE	2.0	218.7	
489.3			DARK SHALE	5.5	220.7	
483.8			SHALE	2.7	226.2	
481.2			LIGHT SHALE	6.0	228.8	
475.2			SHALE	0.8	234.8	
474.3			SHALE	11.5	235.7	

MAPID: 01121883000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 6E SECTION: 23 SENENE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: NEPONSET LONGITUDE: -89.762863

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.362636

DATE COLLECTED: 5 / 30 / 1986

SURFACE ELEVATION (FT.): LOGGED (FT.): 42.0

LOG TYPE: Drillers Log

SOURCE: GEORGE W. LUTES 124167

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	7.0	0.0	
-			SAND	3.0	7.0	
-			GRAVEL	21.0	10.0	
-			COAL	1.0	31.0	
-			SANDSTONE	10.0	32.0	

MAPID: 01100020000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 6E SECTION: 24 NWSWNE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: NEPONSET LONGITUDE: -89.750404

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.36071

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 680.0 LOGGED (FT.): 251.1

LOG TYPE: Drillers Log

SOURCE: SHEFFIELD MINING & TRANSPORT. 1

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
680.0			UNCONSOLIDATED	9.5	0.0	SOIL
670.5			SANDY CLAY	0.5	9.5	
670.0	CARBONDALE	HERRIN	COAL	0.2	10.0	
669.8	CARBONDALE		UNDERCLAY	8.0	10.2	
661.8	CARBONDALE		SHALE	10.0	18.2	SH W/SS
651.8	CARBONDALE		SANDY SHALE	22.0	28.2	
629.8	CARBONDALE		DARK SHALE	36.0	50.2	
593.8	CARBONDALE		SANDY SHALE	8.0	86.2	
585.8	CARBONDALE		CALCAREOUS SHALE	94.0	94.2	
491.8	CARBONDALE		SHALE	4.0	188.2	
487.8	CARBONDALE	COLCHESTER	COAL	2.3	192.2	
485.6			UNDERCLAY	1.7	194.4	
483.9			SHALE	19.7	196.1	
464.2			SHALE	0.4	215.8	
463.8			COAL	1.9	216.2	
461.9			SANDY SHALE	17.0	218.1	
444.9			SANDSTONE	9.0	235.1	
435.9			SANDY SHALE	2.0	244.1	
433.9			LIMESTONE	1.6	246.1	
432.3			DARK SHALE	2.0	247.7	
430.3			COAL	1.4	249.7	

MAPID: 01121082000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 6E SECTION: 24 SWNESE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: BUDA LONGITUDE: -89.74536

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.355258

DATE COLLECTED: 9 / 8 / 1975

SURFACE ELEVATION (FT.): LOGGED (FT.): 103.0

LOG TYPE: Drillers Log

SOURCE: S.DEAN ALBRECHT 40956

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	2.0	0.0	TOP SOIL
-			SANDY CLAY	4.0	2.0	
-			CLAY	9.0	6.0	
-			SANDSTONE	8.0	15.0	
-			GRAY SHALE	17.0	23.0	
-	CARBONDALE	HERRIN	COAL	4.0	40.0	
-			GRAY SHALE	3.0	44.0	
-			LIMESTONE	2.0	47.0	
-			SHALE	54.0	49.0	

MAPID: 01100021000C VERSION: 1

PROJECT: NCRDS87

COUNTY: BUREAU TWP/RNG: 16N 6E SECTION: 25 SW

FOOT (NS): 1 N FOOT (EW): 1 E

QUADRANGLE: NEPONSET LONGITUDE: -89.751425

GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 41.343554

DATE COLLECTED: 0 / 0 / 1870

SURFACE ELEVATION (FT.): 732.0 LOGGED (FT.): 259.0

LOG TYPE: Drillers Log

SOURCE: SHEFFIELD MIN. & TRANSP.

WELL TYPE: Coal Test

COMMENT: ELEVATION IMPRECISE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
732.0			UNCONSOLIDATED	14.0	0.0	
718.0	CARBONDALE		SHALE	4.0	14.0	
714.0	CARBONDALE	HERRIN	COAL	2.0	18.0	
712.0	CARBONDALE		SHALE	18.0	20.0	
694.0	CARBONDALE		SANDSTONE	5.0	38.0	
689.0	CARBONDALE		UNCLASSIFIED	16.0	43.0	
673.0	CARBONDALE		DARK SHALE	5.2	59.0	
667.8	CARBONDALE	SPRINGFIELD	COAL	3.5	64.2	
664.3	CARBONDALE		LIMESTONE	5.3	67.7	
659.0	CARBONDALE		UNCLASSIFIED	172.5	73.0	
486.5	CARBONDALE		DARK SHALE	8.0	245.5	
478.5	CARBONDALE		BLACK SHALE	1.5	253.5	
477.0	CARBONDALE	COLCHESTER	COAL	3.0	255.0	
474.0	SPOON		UNDERCLAY	1.0	258.0	

MAPID: 01100022000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 6E SECTION: 25 SWNESE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: BUDA LONGITUDE: -89.74522

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.340738

DATE COLLECTED: 8 / 13 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 52.0

LOG TYPE: Drillers Log

SOURCE: MISS. COAL CORP. 249

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			UNCONSOLIDATED	5.0	0.0
-			SAND	16.0	5.0
-			SHALE	27.0	21.0
-	CARBONDALE	HERRIN	COAL	4.0	48.0

MAPID: 01100334000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 6E SECTION: 27 NESESW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: NEPONSET LONGITUDE: -89.79136

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.338804

DATE COLLECTED: 7 / 8 / 1966

SURFACE ELEVATION (FT.): 782.2 LOGGED (FT.): 134.0

LOG TYPE: Drillers Log

SOURCE: CALIFORNIA NUCLEAR B-1

WELL TYPE: Water Test

COMMENT: C-4927

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
782.2			UNCONSOLIDATED	14.0	0.0
768.2			CLAY	7.5	14.0
760.7			SANDY CLAY	21.5	21.5
739.2			SAND	7.0	43.0
732.2			GRAY SHALE	13.0	50.0
719.2			SHALE	5.0	63.0
714.2			GRAY SHALE	16.0	68.0
698.2			GRAY SHALE	13.5	84.0
684.7	CARBONDALE	HERRIN	COAL	5.5	97.5
679.2			GRAY SHALE	2.0	103.0
677.2			GRAY SHALE	4.5	105.0
672.7			SHALE	4.5	109.5
668.2			SANDY SHALE	12.5	114.0
655.7			UNCLASSIFIED	7.5	126.5

MAPID: 01100024000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 6E SECTION: 28 SWSENW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: NEPONSET LONGITUDE: -89.813479

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.344079

DATE COLLECTED: 8 / 8 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 60.0

LOG TYPE: Drillers Log

SOURCE: MISS. COAL CORP. 260

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			UNCONSOLIDATED	13.0	0.0
-			SHALE	6.5	13.0
-	CARBONDALE	HERRIN	COAL	2.0	19.5
-			SHALE	13.5	21.5
-			SANDY SHALE	25.0	35.0

MAPID: 01121978000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 6E SECTION: 33 NENESE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: NEPONSET LONGITUDE: -89.800686

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.327898

DATE COLLECTED: 9 / 26 / 1988

SURFACE ELEVATION (FT.): LOGGED (FT.): 169.0

LOG TYPE: Drillers Log

SOURCE: DEAN S. ALBRECHT 006161

WELL TYPE: Water Well

COMMENT: DEPTH-TDEPTH OK

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			CLAY	20.0	0.0
-			GRAVEL	3.0	20.0
-			CLAY	8.0	23.0
-			SAND	1.0	31.0
-			GRAY SHALE	3.0	32.0
-			SHALE	85.0	35.0
-	CARBONDALE	DANVILLE	COAL	4.0	120.0
-	CARBONDALE		SHALE	42.0	124.0
-	CARBONDALE	HERRIN	COAL	3.0	166.0

MAPID: 01100028000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 7E SECTION: 30 SWSENW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: BUDA LONGITUDE: -89.736302

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.344327

DATE COLLECTED: 8 / 12 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 61.7

LOG TYPE: Drillers Log

SOURCE: MISS. COAL CORP. 252A

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			UNCONSOLIDATED	6.0	0.0
-			SHALE	6.0	6.0
-	CARBONDALE	HERRIN	COAL	1.8	12.0
-			SHALE	44.0	13.8
-			COAL	3.8	57.8

MAPID: 01100030000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 7E SECTION: 30 SENENW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: BUDA LONGITUDE: -89.733852

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.347974

DATE COLLECTED: 0 / 0 / 1870

SURFACE ELEVATION (FT.): LOGGED (FT.): 211.0

LOG TYPE: Drillers Log

SOURCE: SHEFFIELD CITY TEST 5

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			SANDY CLAY	8.0	0.0	
-			UNCONSOLIDATED	2.0	8.0	SD & GRAVEL
-			CLAY	6.0	10.0	
-	CARBONDALE	HERRIN	COAL	4.5	16.0	
-			SHALE	38.5	20.5	
-			SANDSTONE	11.0	59.0	
-			GRAY SHALE	16.0	70.0	
-			LIGHT SHALE	13.0	86.0	
-			DARK SHALE	3.0	99.0	
-			SANDSTONE	9.0	102.0	
-			DARK SHALE	2.0	111.0	
-			SHALE	1.0	113.0	
-			SHALE	27.0	114.0	
-			SANDSTONE	6.0	141.0	
-			GRAY SHALE	39.0	147.0	
-			DARK SHALE	10.0	186.0	
-			SHALE	2.0	196.0	
-			DARK SHALE	3.0	198.0	
-			SHALE	2.0	201.0	
-			CALCAREOUS SHALE	3.5	203.0	
-			SHALE	0.5	206.5	
-			COAL	3.0	207.0	
-			UNDERCLAY	1.0	210.0	

MAPID: 01100031000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 7E SECTION: 31 SWNENW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: BUDA LONGITUDE: -89.736264

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.333385

DATE COLLECTED: 8 / 11 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 52.0

LOG TYPE: Drillers Log

SOURCE: MISS. COAL CORP. 127A

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			UNCONSOLIDATED	8.0	0.0
-			SAND	13.0	8.0
-			SHALE	29.0	21.0
-	CARBONDALE	HERRIN	COAL	2.0	50.0

MAPID: 01100033000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 7E SECTION: 31 SWSNW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: BUDA LONGITUDE: -89.736109

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.329746

DATE COLLECTED: 8 / 11 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 35.0

LOG TYPE: Drillers Log

SOURCE: MISS. COAL CORP. 33

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			UNCONSOLIDATED	10.0	0.0
-			SAND	13.0	10.0
-			ROCK	8.0	23.0
-	CARBONDALE	HERRIN	COAL	4.0	31.0

MAPID: 01100034000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 7E SECTION: 31 SWNE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: BUDA LONGITUDE: -89.730178

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.330654

DATE COLLECTED: 8 / 8 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 29.5

LOG TYPE: Drillers Log

SOURCE: MISS. COAL CORP. 153AA

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			UNCONSOLIDATED	5.0	0.0
-			SAND	2.0	5.0
-			LIGHT SHALE	17.0	7.0
-	CARBONDALE	HERRIN	COAL	5.5	24.0

MAPID: 01100035000C VERSION: 2

PROJECT: NCRDS87

COUNTY: BUREAU TWP/RNG: 16N 7E SECTION: 31 SWSENE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: BUDA LONGITUDE: -89.726575

GEOLOGIST: C TREWORGY

CONFIDENTIAL: N LATITUDE: 41.329742

DATE COLLECTED: 8 / 11 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 36.4

LOG TYPE: Drillers Log

SOURCE: MISSISSIPPI COAL CO. NO. 154A

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			UNCONSOLIDATED	12.0	0.0
-	CARBONDALE		SHALE	20.0	12.0
-	CARBONDALE	HERRIN	COAL	4.4	32.0

MAPID: 01100035000C VERSION: 3

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 7E SECTION: 31 SWSENE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: BUDA LONGITUDE: -89.726575

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.329742

DATE COLLECTED: 8 / 11 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 36.4

LOG TYPE: Drillers Log

SOURCE: MISS. COAL CORP. 154A

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			UNCONSOLIDATED	3.0	0.0
-			SAND	9.0	3.0
-			SHALE	20.0	12.0
-	CARBONDALE	HERRIN	COAL	4.4	32.0

MAPID: 01100037000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 7E SECTION: 31 SWNENW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: BUDA LONGITUDE: -89.736264

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.333385

DATE COLLECTED: 8 / 9 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 30.8

LOG TYPE: Drillers Log

SOURCE: MISS. COAL CORP. 177A

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			UNCONSOLIDATED	10.0	0.0
-			SANDY SHALE	5.0	10.0
-			GRAY SHALE	13.0	15.0
-	CARBONDALE	HERRIN	COAL	2.8	28.0

MAPID: 01100040000C VERSION: 2

PROJECT: NCRDS87

COUNTY: BUREAU TWP/RNG: 16N 7E SECTION: 32 SWNWSE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: BUDA LONGITUDE: -89.711789

GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 41.326129

DATE COLLECTED: 8 / 8 / 1928

SURFACE ELEVATION (FT.): 720.0 LOGGED (FT.): 56.3

LOG TYPE: Drillers Log

SOURCE: MISS. COAL CORP.

WELL TYPE: Coal Test

COMMENT: ELEVATION IMPRECISE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
720.0			UNCONSOLIDATED	10.0	0.0	
710.0	CARBONDALE		UNCLASSIFIED	5.0	10.0	
705.0	CARBONDALE		SHALE	37.7	15.0	
667.3	CARBONDALE	HERRIN	COAL	3.7	52.7	

MAPID: 01100040000C VERSION: 3

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 7E SECTION: 32 SWNWSE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: BUDA LONGITUDE: -89.711789

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.326129

DATE COLLECTED: 8 / 8 / 1928

SURFACE ELEVATION (FT.): LOGGED (FT.): 56.3

LOG TYPE: Drillers Log

SOURCE: MISS. COAL CORP. 132A

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	10.0	0.0	
-			SANDY SHALE	5.0	10.0	
-			GRAY SHALE	15.7	15.0	
-			LIGHT SHALE	9.3	30.7	
-			SHALE	12.7	40.0	
-	CARBONDALE	HERRIN	COAL	3.7	52.7	

MAPID: 01100043000C VERSION: 1

PROJECT: NCRDS87

COUNTY: BUREAU TWP/RNG: 16N 9E SECTION: 1 NWSW

FOOT (NS): 723 S FOOT (EW): 67 W

QUADRANGLE: PRINCETON NORTH LONGITUDE: -89.412401

GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 41.398605

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 718.4 LOGGED (FT.): 427.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO.

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
718.4			UNCONSOLIDATED	144.0	0.0	
574.4	MODESTO		UNCLASSIFIED	54.3	144.0	
520.1	CARBONDALE	DANVILLE	COAL	2.3	198.3	UNCERTAIN CORRELATION
517.7	CARBONDALE		UNDERCLAY	12.3	200.7	
505.4	CARBONDALE		SANDSTONE	8.0	213.0	
497.4	CARBONDALE		UNCLASSIFIED	27.0	221.0	
470.4	CARBONDALE		LIMESTONE	2.0	248.0	
468.4	CARBONDALE		SHALE	15.0	250.0	
453.4	CARBONDALE		SANDSTONE	5.0	265.0	
448.4	CARBONDALE		UNCLASSIFIED	10.0	270.0	
438.4	CARBONDALE		SHALE	49.0	280.0	
389.4	CARBONDALE	TURNER MINE	BLACK SHALE	2.0	329.0	
387.4	CARBONDALE	SPRINGFIELD	COAL	0.0	331.0	
387.4	CARBONDALE		SHALE	12.0	331.0	
375.4	CARBONDALE	EXCELLO	BLACK SHALE	1.0	343.0	
374.4	CARBONDALE		UNCLASSIFIED	11.2	344.0	
363.2	CARBONDALE	HOUCHIN CREEK	COAL	1.6	355.2	
361.6	CARBONDALE		SHALE	3.3	356.8	
358.4	CARBONDALE		LIMESTONE	3.0	360.0	
355.4	CARBONDALE		SHALE	46.0	363.0	
309.4	CARBONDALE		BLACK SHALE	2.6	409.0	
306.8	CARBONDALE		SHALE	4.2	411.6	
302.6	CARBONDALE	COLCHESTER	COAL	3.4	415.8	
299.2	SPOON		UNDERCLAY	7.8	419.2	

MAPID: 01170002000C VERSION: 1

PROJECT: NCRDS

COUNTY: BUREAU TWP/RNG: 16N 9E SECTION: 2

FOOT (NS): 180 N FOOT (EW): 1390 W

QUADRANGLE: PRINCETON NORTH LONGITUDE: -89.426977

GEOLOGIST: LOUCHIOS

CONFIDENTIAL: N LATITUDE: 41.407003

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 734.0 LOGGED (FT.): 419.0

LOG TYPE: Drillers Log

SOURCE: UTAH INTERNATIONAL 02C44

WELL TYPE: Coal Test

COMMENT: CODED COAL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
734.0			NO RECORD	295.0	0.0
439.0	CARBONDALE		SHALE	11.0	295.0
428.0	CARBONDALE		GREEN SHALE	11.0	306.0
417.0	CARBONDALE		BLACK SHALE	4.0	317.0
413.0	CARBONDALE		CLAYSTONE	3.0	321.0
410.0	CARBONDALE		GREEN SHALE	29.0	324.0
381.0	CARBONDALE		SANDSTONE	10.0	353.0
371.0	CARBONDALE		BLACK SHALE	3.0	363.0
368.0	CARBONDALE		SHALE	25.0	366.0
343.0	CARBONDALE		SHALE	13.0	391.0 FOSSIL SHELLS
330.0	CARBONDALE		BLACK SHALE	2.0	404.0
328.0	CARBONDALE		SHALE	2.5	406.0
325.5	CARBONDALE	COLCHESTER	COAL	3.0	408.5
322.5	CARBONDALE		CLAYSTONE	7.5	411.5

MAPID: 01100045000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 9E SECTION: 12 SWSESW

FOOT (NS): 234 S FOOT (EW): 604 W

QUADRANGLE: PRINCETON NORTH LONGITUDE: -89.405419

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.379057

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 674.5 LOGGED (FT.): 394.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. U

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
674.5			UNCONSOLIDATED	3.0	0.0	SOIL
671.5			CLAY	3.0	3.0	
668.5			SAND	7.0	6.0	
661.5			GRAVEL	5.0	13.0	
656.5			SAND	16.0	18.0	
640.5			SANDY CLAY	18.0	34.0	
622.5			UNCONSOLIDATED	13.0	52.0	
609.5			SAND	7.0	65.0	
602.5			SAND	11.0	72.0	
591.5			CLAY	1.0	83.0	
590.5			SANDSTONE	9.0	84.0	
581.5			SANDY SHALE	25.0	93.0	
556.5			GRAY SHALE	7.0	118.0	
549.5			CALCAREOUS SHALE	2.0	125.0	
547.5			ROCK	1.0	127.0	
546.5			CALCAREOUS SHALE	22.0	128.0	
524.5	CARBONDALE	DANVILLE	COAL	2.0	150.0	
522.5	CARBONDALE	DANVILLE	SHALE	1.0	152.0	
521.5	CARBONDALE	DANVILLE	COAL	0.5	153.0	
521.0	CARBONDALE		UNDERCLAY	6.5	153.5	
514.5	CARBONDALE		CALCAREOUS SHALE	9.0	160.0	
505.5	CARBONDALE		LIMESTONE	1.0	169.0	
504.5	CARBONDALE		SANDY SHALE	16.0	170.0	
488.5	CARBONDALE	ANNA	BLACK SHALE	2.5	186.0	
486.0	CARBONDALE	HERRIN	COAL	5.5	188.5	
480.5	CARBONDALE		UNDERCLAY	3.0	194.0	
477.5	CARBONDALE		LIMESTONE	12.0	197.0	
465.5	CARBONDALE		SANDSTONE	2.0	209.0	
463.5	CARBONDALE		GRAY SHALE	7.0	211.0	
456.5	CARBONDALE		SANDY SHALE	70.0	218.0	
386.5	CARBONDALE	TURNER MINE	BLACK SHALE	2.0	288.0	
384.5	CARBONDALE		CALCAREOUS SHALE	11.0	290.0	
373.5	CARBONDALE		LIMESTONE	1.0	301.0	
372.5	CARBONDALE		GRAY SHALE	10.0	302.0	
362.5	CARBONDALE		CALCAREOUS SHALE	11.0	312.0	
351.5	CARBONDALE		SANDSTONE	9.0	323.0	
342.5	CARBONDALE		SANDY SHALE	7.0	332.0	
335.5	CARBONDALE		CALCAREOUS SHALE	25.0	339.0	
310.5	CARBONDALE		SHALE	9.0	364.0	

301.5	CARBONDALE		CALCAREOUS SHALE	3.0	373.0
298.5	CARBONDALE	MECCA QUARRY	BLACK SHALE	3.0	376.0
295.5	CARBONDALE		SHALE	3.0	379.0
292.5	CARBONDALE	COLCHESTER	COAL	3.8	382.0
288.7			UNDERCLAY	6.2	385.8
282.5			CALCAREOUS SHALE	2.0	392.0

MAPID: 01170001000C VERSION: 1

PROJECT: NCRDS

COUNTY: BUREAU TWP/RNG: 16N 9E SECTION: 13

FOOT (NS): 240 S FOOT (EW): 1700 W

QUADRANGLE: PRINCETON SOUTH LONGITUDE: -89.405794

GEOLOGIST: LOUCHIOS

CONFIDENTIAL: N LATITUDE: 41.364573

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 319.0

LOG TYPE: Drillers Log

SOURCE: UTAH INTERNATIONAL 01C46

WELL TYPE: Coal Test

COMMENT: CODED COAL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
650.0			NO RECORD	238.0	0.0	
412.0	CARBONDALE		BLACK SHALE	2.0	238.0	
410.0	CARBONDALE		GREEN SHALE	25.0	240.0	
385.0	CARBONDALE		DARK SHALE	25.5	265.0	
359.5	CARBONDALE		DARK SHALE	7.5	290.5	FOSSIL SHELLS
352.0	CARBONDALE		BLACK SHALE	2.0	298.0	
350.0	CARBONDALE		GREEN SHALE	7.5	300.0	
342.5	CARBONDALE	COLCHESTER	COAL	2.5	307.5	
340.0	CARBONDALE		CLAYSTONE	9.0	310.0	

MAPID: 01170000000C VERSION: 1

PROJECT: NCRDS

COUNTY: BUREAU TWP/RNG: 16N 9E SECTION: 14

FOOT (NS): 1370 N FOOT (EW): 2400 W

QUADRANGLE: PRINCETON SOUTH LONGITUDE: -89.422849

GEOLOGIST: LOUCHIOS

CONFIDENTIAL: N LATITUDE: 41.374765

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 700.0 LOGGED (FT.): 385.0

LOG TYPE: Drillers Log

SOURCE: UTAH INTERNATIONAL 02C47

WELL TYPE: Coal Test

COMMENT: CODED COAL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		
				UNIT	OVERBURDEN COMMENT	
700.0			NO RECORD	274.0	0.0	
426.0	CARBONDALE		DARK SHALE	9.5	274.0	
416.5	CARBONDALE		BLACK SHALE	1.5	283.5	
415.0	CARBONDALE		COAL	0.7	285.0	
414.3	CARBONDALE		CLAYSTONE	4.3	285.7	
410.0	CARBONDALE		DARK SHALE	10.0	290.0	
400.0	CARBONDALE		BLACK SHALE	1.0	300.0	
399.0	CARBONDALE		GREEN SHALE	10.0	301.0	
389.0	CARBONDALE		BLACK SHALE	4.0	311.0	
385.0	CARBONDALE		LIMESTONE	1.0	315.0	
384.0	CARBONDALE		SANDSTONE	12.0	316.0	
372.0	CARBONDALE		BLACK SHALE	31.0	328.0	
341.0	CARBONDALE		SHALE	4.0	359.0	FOSSIL SHELLS
337.0	CARBONDALE		DARK SHALE	1.0	363.0	
336.0	CARBONDALE		BLACK SHALE	2.0	364.0	
334.0	CARBONDALE		SHALE	8.0	366.0	
326.0	CARBONDALE	COLCHESTER	COAL	3.0	374.0	
323.0	CARBONDALE		CLAYSTONE	6.0	377.0	
317.0	CARBONDALE		SANDY SHALE	2.0	383.0	

MAPID: 01100620000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 9E SECTION: 34 NW/NENWNW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: PRINCETON SOUTH LONGITUDE: -89.447288

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.334741

DATE COLLECTED: 1 / 19 / 1968

SURFACE ELEVATION (FT.): LOGGED (FT.): 209.0

LOG TYPE: Drillers Log

SOURCE: O. LUTES AND SON 92-40

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			CLAY	14.0	0.0	
-			SAND	3.0	14.0	
-			CLAY	2.0	17.0	
-			CLAY	14.0	19.0	
-			SAND	5.0	33.0	
-			CLAY	87.0	38.0	
-			CLAY	31.0	125.0	
-			SAND	2.0	156.0	
-			CLAY	1.0	158.0	
-			SAND	11.0	159.0	
-			SAND	14.0	170.0	
-			SAND	16.0	184.0	
-			COAL	1.0	200.0	
-			UNDERCLAY	1.0	201.0	
-			SANDSTONE	7.0	202.0	

MAPID: 01100048000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 9E SECTION: 36 SENWSE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: PRINCETON SOUTH LONGITUDE: -89.398566

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.324996

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 496.0 LOGGED (FT.): 384.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 23

WELL TYPE: Coal Test

COMMENT: DEPTH-TDEPTH OK

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
496.0			UNCONSOLIDATED	32.0	0.0	SD AND GRAVEL
464.0			GRAVEL	16.0	32.0	
448.0			UNCONSOLIDATED	40.0	48.0	SD AND GRAVEL
408.0			UNCONSOLIDATED	7.0	88.0	SD AND GRAVEL
401.0			SANDY CLAY	5.0	95.0	
396.0			SAND	11.0	100.0	
385.0			UNCONSOLIDATED	16.0	111.0	SD & GRAVEL
369.0			UNCONSOLIDATED	12.0	127.0	SD & GRAVEL
357.0			GRAVEL	2.0	139.0	
355.0			GRAVEL	20.0	141.0	
335.0			GRAVEL	3.0	161.0	
332.0			CALCAREOUS SHALE	13.0	164.0	
319.0			BLACK SHALE	3.0	177.0	
316.0			GRAY SHALE	6.0	180.0	
310.0			COAL	2.7	186.0	
307.3			UNDERCLAY	0.3	188.7	
307.0			UNDERCLAY	1.0	189.0	
306.0			SHALE	5.0	190.0	
301.0			SANDY SHALE	1.0	195.0	
300.0			SANDSTONE	14.0	196.0	
286.0			SANDY SHALE	2.0	210.0	
284.0			GRAY SHALE	6.0	212.0	
278.0			GRAY SHALE	9.0	218.0	
269.0			COAL	1.8	227.0	
267.2			UNDERCLAY	1.0	228.8	
266.2			GRAY SHALE	13.0	229.8	
253.2			SANDY SHALE	10.0	242.8	
243.2			CALCAREOUS SHALE	3.0	252.8	
240.2			COAL	1.2	255.8	
239.0			UNDERCLAY	1.0	257.0	
238.0			GRAY SHALE	13.0	258.0	
225.0			COAL	1.7	271.0	
223.3			UNDERCLAY	2.3	272.7	
221.0			CALCAREOUS SHALE	21.0	275.0	
200.0			SANDY SHALE	3.0	296.0	
197.0			CALCAREOUS SHALE	12.0	299.0	
185.0			LIMESTONE	69.0	311.0	
116.0			LIMESTONE	5.0	380.0	

MAPID: 01100003000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 10E SECTION: 5 NWNE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: MALDEN LONGITUDE: -89.361959

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.405812

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 461.0

LOG TYPE: Drillers Log

SOURCE: ILLINOIS COAL SYN. 3

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
650.0			UNCONSOLIDATED	4.0	0.0	SOIL
646.0			UNCONSOLIDATED	14.0	4.0	SD & GRAVEL
632.0			CLAY	5.0	18.0	
627.0			CLAY	5.0	23.0	
622.0			UNCONSOLIDATED	2.0	28.0	SD & GRAVEL
620.0			CLAY	27.0	30.0	
593.0			CLAY	3.0	57.0	
590.0			CLAY	38.0	60.0	
552.0			UNCONSOLIDATED	25.0	98.0	SD & GRAVEL
527.0			CLAY	15.0	123.0	
512.0			SAND	37.0	138.0	
475.0			SANDSTONE	9.0	175.0	
466.0			CALCAREOUS SHALE	2.0	184.0	
464.0			LIMESTONE	4.0	186.0	
460.0			CALCAREOUS SHALE	3.0	190.0	
457.0			LIMESTONE	1.0	193.0	
456.0			SANDY SHALE	56.0	194.0	
400.0			CALCAREOUS SHALE	15.0	250.0	
385.0			BLACK SHALE	2.3	265.0	
382.7			CALCAREOUS SHALE	0.8	267.3	
382.0			CALCAREOUS SHALE	16.0	268.0	
366.0			BLACK SHALE	2.0	284.0	
364.0			GRAY SHALE	27.0	286.0	
337.0			CALCAREOUS SHALE	28.0	313.0	
309.0			BLACK SHALE	2.5	341.0	
306.5			GRAY SHALE	7.5	343.5	
299.0			COAL	2.8	351.0	
296.2			UNDERCLAY	3.2	353.8	
293.0			SANDSTONE	11.0	357.0	
282.0			SANDSTONE	12.0	368.0	
270.0			CALCAREOUS SHALE	11.0	380.0	
259.0			GRAY SHALE	7.0	391.0	
252.0			SANDSTONE	6.0	398.0	
246.0			BLACK SHALE	0.5	404.0	
245.5			SANDSTONE	33.5	404.5	
212.0			LIMESTONE	5.0	438.0	
207.0			GRAY SHALE	10.0	443.0	
197.0			LIMESTONE	8.0	453.0	

MAPID: 01100052000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 10E SECTION: 5 NESW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: MALDEN LONGITUDE: -89.366651

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.398359

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 633.6 LOGGED (FT.): 370.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. N

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
633.6			UNCONSOLIDATED	71.0	0.0	CLY, SAND, AND GRAVEL
562.6			LIMESTONE	5.0	71.0	
557.6			SHALE	24.0	76.0	
533.6			SHALE	4.0	100.0	
529.6			SHALE	7.0	104.0	
522.6			CALCAREOUS SHALE	4.0	111.0	
518.6			COAL	3.5	115.0	
515.1			UNDERCLAY	5.5	118.5	
509.6			SANDY SHALE	26.0	124.0	
483.6			SANDSTONE	25.0	150.0	
458.6			LIGHT SHALE	5.0	175.0	
453.6			SANDY SHALE	50.0	180.0	
403.6			SANDSTONE	15.0	230.0	
388.6			SANDY SHALE	21.0	245.0	
367.6			BLACK SHALE	2.0	266.0	
365.6			SHALE	2.0	268.0	
363.6			CALCAREOUS SHALE	70.0	270.0	
293.6			SHALE	9.0	340.0	
284.6			BLACK SHALE	3.0	349.0	
281.6			SHALE	7.0	352.0	
274.6			COAL	3.0	359.0	
271.6			UNDERCLAY	5.0	362.0	
266.6			UNDERCLAY	1.0	367.0	
265.6			UNDERCLAY	2.0	368.0	

MAPID: 01100053000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 10E SECTION: 6 SWNWNW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: PRINCETON NORTH LONGITUDE: -89.392218

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.404793

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 719.2 LOGGED (FT.): 433.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. L

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
719.2			UNCONSOLIDATED	166.0	0.0	CLAY, GRAVEL, AND SAND
553.2			SHALE	15.0	166.0	
538.2			DARK SHALE	14.0	181.0	
524.2			DARK SHALE	0.2	195.0	
524.0			COAL	2.8	195.2	
521.2			UNDERCLAY	2.0	198.0	
519.2			UNCLASSIFIED	2.0	200.0	IRON BAND
517.2			SHALE	11.0	202.0	
506.2			SANDY SHALE	24.0	213.0	
482.2			BLACK SHALE	1.0	237.0	
481.2			COAL	1.5	238.0	
479.7			SHALE	0.4	239.5	
479.3			COAL	2.3	239.9	
476.9			UNDERCLAY	6.8	242.3	
470.2			CALCAREOUS SHALE	9.0	249.0	
461.2			SANDSTONE	4.0	258.0	
457.2			SANDY SHALE	48.0	262.0	
409.2			CALCAREOUS SHALE	18.0	310.0	
391.2			BLACK SHALE	2.0	328.0	
389.2			CALCAREOUS SHALE	12.0	330.0	
377.2			SANDY SHALE	12.0	342.0	
365.2			CALCAREOUS SHALE	8.0	354.0	
357.2			SANDSTONE	6.0	362.0	
351.2			CALCAREOUS SHALE	30.0	368.0	
321.2			SHALE	2.0	398.0	
319.2			ROCK	2.0	400.0	
317.2			SHALE	5.0	402.0	
312.2			BLACK SHALE	2.0	407.0	
310.2			SHALE	12.0	409.0	
298.2			COAL	4.0	421.0	
294.2			SANDY SHALE	8.0	425.0	

MAPID: 01100054000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 10E SECTION: 7 SESESE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: MALDEN LONGITUDE: -89.374899

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.379155

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 673.8 LOGGED (FT.): 390.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. M

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
673.8			UNCONSOLIDATED	189.0	0.0	CLY, SAND, AND GRAVEL
484.8			UNDERCLAY	1.0	189.0	
483.8			LIGHT SHALE	5.0	190.0	
478.8			LIMESTONE	0.5	195.0	
478.3			CALCAREOUS SHALE	0.5	195.5	
477.8			COAL	2.8	196.0	
475.0			UNDERCLAY	7.2	198.8	
467.8			LIGHT SHALE	6.0	206.0	
461.8			LIMESTONE	1.0	212.0	
460.8			SANDSTONE	3.0	213.0	
457.8			LIGHT SHALE	3.0	216.0	
454.8			SANDSTONE	10.0	219.0	
444.8			CALCAREOUS SHALE	6.0	229.0	
438.8			CALCAREOUS SHALE	52.0	235.0	
386.8			BLACK SHALE	2.0	287.0	
384.8			CALCAREOUS SHALE	17.0	289.0	
367.8			CALCAREOUS SHALE	7.0	306.0	
360.8			CALCAREOUS SHALE	21.0	313.0	
339.8			CALCAREOUS SHALE	3.0	334.0	
336.8			ROCK	0.3	337.0	
336.5			CALCAREOUS SHALE	1.7	337.3	
334.8			SANDSTONE	2.0	339.0	
332.8			BLACK SHALE	26.0	341.0	
306.8			BLACK SHALE	2.0	367.0	
304.8			GRAY SHALE	9.0	369.0	
295.8			COAL	3.4	378.0	
292.4			UNDERCLAY	8.6	381.4	

MAPID: 01100055000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 10E SECTION: 7 NWNWNE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: PRINCETON NORTH LONGITUDE: -89.382341

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.391949

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 681.3 LOGGED (FT.): 378.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. J

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
681.3			UNCONSOLIDATED	122.7	0.0	CLAY, GRAVEL, AND SAND
558.6			SHALE	4.0	122.7	
554.6			SHALE	3.0	126.7	
551.6			SHALE	10.3	129.7	
541.3			SHALE	6.0	140.0	
535.3			SANDSTONE	4.0	146.0	
531.3			UNDERCLAY	4.0	150.0	
527.3			SANDSTONE	7.0	154.0	
520.3			CALCAREOUS SHALE	7.0	161.0	
513.3			CALCAREOUS SHALE	2.2	168.0	
511.1			COAL	1.2	170.2	
510.0			UNDERCLAY	1.7	171.3	
508.3			CALCAREOUS SHALE	8.5	173.0	
499.8			SHALE	1.5	181.5	
498.3			CALCAREOUS SHALE	4.0	183.0	
494.3			SANDSTONE	10.0	187.0	
484.3			SANDSTONE	11.5	197.0	
472.8			BLACK SHALE	5.5	208.5	
467.3			COAL	0.8	214.0	
466.5			UNDERCLAY	1.3	214.8	
465.3			CALCAREOUS SHALE	8.0	216.0	
457.3			CALCAREOUS SHALE	3.0	224.0	
454.3			LIMESTONE	2.0	227.0	
452.3			GRAY SHALE	4.0	229.0	
448.3			SANDY SHALE	43.0	233.0	
405.3			SANDY SHALE	18.0	276.0	
387.3			SANDY SHALE	3.0	294.0	
384.3			BLACK SHALE	4.0	297.0	
380.3			GRAY SHALE	8.0	301.0	
372.3			CALCAREOUS SHALE	5.0	309.0	
367.3			LIMESTONE	2.0	314.0	
365.3			GRAY SHALE	3.0	316.0	
362.3			BLACK SHALE	1.5	319.0	
360.8			GRAY SHALE	10.5	320.5	
350.3			LIMESTONE	2.0	331.0	
348.3			SANDY SHALE	5.0	333.0	
343.3			LIGHT SHALE	9.0	338.0	
334.3			CALCAREOUS SHALE	11.0	347.0	
323.3			CALCAREOUS SHALE	16.0	358.0	

307.3

DARK SHALE

4.0

374.0

MAPID: 01100056000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 10E SECTION: 8 NWSE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: MALDEN LONGITUDE: -89.361667

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.383713

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 615.6 LOGGED (FT.): 347.4

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. K

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
470.6			SANDY SHALE	6.0	145.0	
464.6			BLACK SHALE	4.0	151.0	
460.6			COAL	2.3	155.0	
458.3			SHALE	0.7	157.3	
457.7			COAL	2.0	157.9	
455.7			UNDERCLAY	3.1	159.9	
452.6			LIMESTONE	1.0	163.0	
451.6			CALCAREOUS SHALE	9.0	164.0	
442.6			SANDSTONE	22.0	173.0	
420.6			SANDY SHALE	42.0	195.0	
378.6			CALCAREOUS SHALE	10.0	237.0	
368.6			BLACK SHALE	3.0	247.0	
365.6			CALCAREOUS SHALE	10.0	250.0	
355.6			SANDSTONE	6.0	260.0	
349.6			LIGHT SHALE	15.0	266.0	
334.6			SANDSTONE	9.0	281.0	
325.6			SANDSTONE	3.0	290.0	
322.6			SANDY SHALE	7.0	293.0	
315.6			SANDSTONE	2.0	300.0	
313.6			CALCAREOUS SHALE	13.0	302.0	
300.6			CALCAREOUS SHALE	15.0	315.0	
285.6			BLACK SHALE	3.0	330.0	
282.6			LIGHT SHALE	8.0	333.0	
274.6			COAL	3.4	341.0	
615.6			UNCONSOLIDATED	90.0	0.0	CLY, GRAVEL, AND SD
525.6			LIMESTONE	3.0	90.0	
522.6			SANDSTONE	15.0	93.0	
507.6			CALCAREOUS SHALE	3.0	108.0	
504.6			COAL	2.1	111.0	
502.5			UNDERCLAY	2.9	113.1	
499.6			SHALE	19.0	116.0	
480.6			SANDSTONE	10.0	135.0	
271.2			UNDERCLAY	2.0	344.4	
269.2			LIMESTONE	1.0	346.4	

MAPID: 01100059000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 10E SECTION: 17 NESENW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: DEPUE LONGITUDE: -89.365187

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.373782

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 582.0 LOGGED (FT.): 158.3

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. N

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
556.8			SHALE	3.5	25.2	
553.3			SHALE	3.0	28.7	
550.3			SANDSTONE	7.8	31.7	
542.5			SANDSTONE	3.5	39.5	
539.0			SANDSTONE	3.5	43.0	
535.5			SHALE	6.8	46.5	
528.7			SHALE	10.8	53.3	
517.8			SHALE	3.5	64.2	
514.3			SHALE	3.5	67.7	
510.8			SHALE	1.0	71.2	
509.8			GRAY SHALE	17.0	72.2	
492.8			BLACK SHALE	6.0	89.2	
486.8			COAL	2.2	95.2	
484.7			UNDERCLAY	15.5	97.3	
469.2			SANDSTONE	15.0	112.8	
454.2			GRAY SHALE	11.3	127.8	
442.9			GRAY SHALE	1.0	139.1	
441.9			LIMESTONE	0.3	140.1	
441.7			BLACK SHALE	1.5	140.3	
440.2			COAL	4.5	141.8	
435.7			UNDERCLAY	12.0	146.3	
582.0			UNCONSOLIDATED	8.0	0.0	SOIL AND CLAY
574.0			LIMESTONE	0.7	8.0	
573.3			CALCAREOUS SHALE	4.0	8.7	
569.3			LIMESTONE	6.5	12.7	
562.8			CALCAREOUS SHALE	1.5	19.2	
561.3			CALCAREOUS SHALE	4.5	20.7	

MAPID: 01100061000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 10E SECTION: 19 SENE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: PRINCETON SOUTH LONGITUDE: -89.375775

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.358496

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 658.1 LOGGED (FT.): 386.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. R

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
658.1			UNCONSOLIDATED	91.0	0.0	CLY, GRAVEL, AND SD
567.1			CALCAREOUS SHALE	19.0	91.0	
548.1			SHALE	20.0	110.0	
528.1			CALCAREOUS SHALE	25.0	130.0	
503.1			COAL	1.0	155.0	
502.1			COAL	1.3	156.0	
500.8			UNDERCLAY	1.8	157.3	
499.1			CALCAREOUS SHALE	15.0	159.0	
484.1			SANDSTONE	11.0	174.0	
473.1			CALCAREOUS SHALE	6.0	185.0	
467.1			SHALE	1.0	191.0	
466.1			SHALE	3.0	192.0	
463.1			COAL	0.5	195.0	
462.6			COAL	5.5	195.5	
457.1			LIMESTONE	1.0	201.0	
456.1			SANDY SHALE	6.5	202.0	
449.6			SANDSTONE	6.5	208.5	
443.1			SANDY SHALE	51.0	215.0	
392.1			CALCAREOUS SHALE	18.0	266.0	
374.1			BLACK SHALE	3.0	284.0	
371.1			CALCAREOUS SHALE	62.0	287.0	
309.1			SHALE	22.0	349.0	
287.1			BLACK SHALE	4.0	371.0	
283.1			SHALE	3.0	375.0	
280.1			COAL	3.3	378.0	
276.8			UNDERCLAY	3.8	381.3	
273.1			SANDSTONE	1.0	385.0	

MAPID: 01100062000C VERSION: 2

PROJECT: NCRDS87

COUNTY: BUREAU TWP/RNG: 16N 10E SECTION: 19 SESW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: PRINCETON SOUTH LONGITUDE: -89.385375

GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 41.351223

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 572.0 LOGGED (FT.): 324.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO.

WELL TYPE: Coal Test

COMMENT: LOCATION IMPRECISE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
572.0			UNCONSOLIDATED	108.0	0.0	
464.0	CARBONDALE		UNCLASSIFIED	70.0	108.0	
394.0	CARBONDALE		SHALE	44.0	178.0	
350.0	CARBONDALE	EXCELLO	BLACK SHALE	1.0	222.0	
349.0	CARBONDALE		SHALE	4.0	223.0	
345.0	CARBONDALE	HOUCHIN CREEK	COAL	2.4	227.0	UNCERTAIN CORRELATION
342.6	CARBONDALE		UNDERCLAY	2.6	229.4	
340.0	CARBONDALE		UNCLASSIFIED	22.0	232.0	
318.0	CARBONDALE		SHALE	2.0	254.0	
316.0	CARBONDALE		BLACK SHALE	2.0	256.0	
314.0	CARBONDALE		SHALE	4.0	258.0	
310.0	CARBONDALE	MECCA QUARRY	BLACK SHALE	1.0	262.0	
309.0	CARBONDALE	COLCHESTER	COAL	2.3	263.0	
306.7	SPOON		UNDERCLAY	0.7	265.3	
306.0	SPOON		UNCLASSIFIED	14.0	266.0	
292.0	SPOON		SHALE	15.0	280.0	
277.0			LIMESTONE	29.0	295.0	TOP OF DEVONIAN?

MAPID: 01100062000C VERSION: 3

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 10E SECTION: 19 SESW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: PRINCETON SOUTH LONGITUDE: -89.385375

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.351223

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 572.0 LOGGED (FT.): 324.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 20

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
572.0			UNCONSOLIDATED	2.0	0.0	
570.0			UNCONSOLIDATED	8.0	2.0	SAND, GRAVEL, & BOULDERS
562.0			UNCONSOLIDATED	5.0	10.0	SAND, GRAVEL, & BOULDERS
557.0			UNCONSOLIDATED	1.0	15.0	SAND, GRAVEL, & BOULDERS
556.0			CLAY	4.0	16.0	
552.0			CLAY	10.0	20.0	
542.0			SAND	41.0	30.0	
501.0			SAND	26.0	71.0	
475.0			UNCONSOLIDATED	11.0	97.0	
464.0			SANDSTONE	25.0	108.0	
439.0			GRAY SHALE	9.0	133.0	
430.0			ROCK	1.0	142.0	
429.0			CALCAREOUS SHALE	10.0	143.0	
419.0			LIMESTONE	1.0	153.0	
418.0			SHALE	7.0	154.0	
411.0			GRAY SHALE	9.0	161.0	
402.0			CALCAREOUS SHALE	8.0	170.0	
394.0			CALCAREOUS SHALE	8.0	178.0	
386.0			CALCAREOUS SHALE	26.0	186.0	
360.0			ROCK	1.0	212.0	
359.0			CALCAREOUS SHALE	9.0	213.0	
350.0	CARBONDALE	EXCELLO	BLACK SHALE	1.0	222.0	
349.0	CARBONDALE		CALCAREOUS SHALE	4.0	223.0	
345.0	CARBONDALE	HOUCHIN CREEK	COAL	2.4	227.0	
342.6	CARBONDALE		UNDERCLAY	3.0	229.4	
339.6	CARBONDALE		SHALE	21.6	232.4	
318.0	CARBONDALE		CALCAREOUS SHALE	2.0	254.0	
316.0	CARBONDALE		BLACK SHALE	2.0	256.0	
314.0	CARBONDALE		CALCAREOUS SHALE	4.0	258.0	
310.0	CARBONDALE	MECCA QUARRY	BLACK SHALE	1.0	262.0	
309.0	CARBONDALE	COLCHESTER	COAL	2.3	263.0	
306.7			UNDERCLAY	0.7	265.3	
306.0			ROCK	0.5	266.0	
305.5			GRAY SHALE	13.5	266.5	
292.0			SANDY SHALE	15.0	280.0	
277.0			LIMESTONE	10.0	295.0	
267.0			LIMESTONE	19.0	305.0	

MAPID: 01100886000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 10E SECTION: 31 NWSENE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: PRINCETON SOUTH LONGITUDE: -89.376975

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.330394

DATE COLLECTED: 7 / 14 / 1972

SURFACE ELEVATION (FT.): LOGGED (FT.): 251.0

LOG TYPE: Drillers Log

SOURCE: O LUTES & SON NF 15148

WELL TYPE: Water Well

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			CLAY	15.0	0.0
-			GRAVEL	12.0	15.0
-			CLAY	35.0	27.0
-			CLAY	10.0	62.0
-			CLAY	25.0	72.0
-			COAL	1.0	97.0
-			UNDERCLAY	1.0	98.0
-			SANDSTONE	11.0	99.0
-			SANDSTONE	10.0	110.0
-			SHALE	4.0	120.0
-			GRAY SHALE	21.0	124.0
-			SANDSTONE	21.0	145.0
-			SANDSTONE	51.0	166.0
-			SHALE	20.0	217.0
-			SANDSTONE	14.0	237.0

MAPID: 01100069000C VERSION: 1

PROJECT: NCRDS87

COUNTY: BUREAU TWP/RNG: 16N 11E SECTION: 1 SE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LADD LONGITUDE: -89.170003

GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 41.39731

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 610.0 LOGGED (FT.): 462.5

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO.

WELL TYPE: Coal Test

COMMENT: LOCATION IMPRECISE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
610.0			UNCONSOLIDATED	40.0	0.0	
570.0	CARBONDALE		UNCLASSIFIED	21.0	40.0	UNCERTAIN CORRELATION
549.0	CARBONDALE		LIMESTONE	0.5	61.0	
548.5	CARBONDALE		SHALE	7.5	61.5	
541.0	CARBONDALE		LIMESTONE	7.0	69.0	
534.0	CARBONDALE		SHALE	18.0	76.0	
516.0	CARBONDALE		LIMESTONE	2.5	94.0	
513.5	CARBONDALE		SHALE	20.5	96.5	
493.0	CARBONDALE		LIMESTONE	3.0	117.0	
490.0	CARBONDALE		SHALE	7.0	120.0	
483.0	CARBONDALE		LIMESTONE	2.0	127.0	
481.0	CARBONDALE		UNCLASSIFIED	21.0	129.0	
460.0	CARBONDALE		SHALE	34.0	150.0	
426.0	CARBONDALE		SANDSTONE	55.0	184.0	
371.0	CARBONDALE	ANNA	DARK SHALE	3.0	239.0	UNCERTAIN CORRELATION
368.0	CARBONDALE	HOUCHIN CREEK	COAL	2.6	242.0	UNCERTAIN CORRELATION
365.4	CARBONDALE		UNDERCLAY	4.4	244.6	
361.0	CARBONDALE		SANDSTONE	10.0	249.0	
351.0	CARBONDALE		SHALE	20.0	259.0	
331.0	CARBONDALE	MECCA QUARRY	DARK SHALE	3.0	279.0	UNCERTAIN CORRELATION
328.0	CARBONDALE	COLCHESTER	COAL	0.3	282.0	UNCERTAIN CORRELATION
327.7			UNDERCLAY	7.7	282.3	
320.0			SHALE	90.0	290.0	
230.0			BLACK SHALE	6.0	380.0	
224.0			SHALE	0.0	386.0	
224.0			LIMESTONE	13.0	386.0	
211.0			SHALE	1.0	399.0	
210.0			LIMESTONE	10.0	400.0	
200.0			SHALE	11.0	410.0	
189.0			UNCLASSIFIED	38.0	421.0	
151.0			COAL	3.0	459.0	
148.0			UNDERCLAY	0.5	462.0	

MAPID: 01100070000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 11E SECTION: 7 NENW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: MALDEN LONGITUDE: -89.270317

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.391456

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 667.0 LOGGED (FT.): 464.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 10

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
667.0			CLAY	20.0	0.0
647.0			CLAY	30.0	20.0
617.0			CLAY	35.0	50.0
582.0			GRAVEL	1.0	85.0
581.0			CLAY	6.0	86.0
575.0			GRAVEL	2.0	92.0
573.0			CLAY	7.0	94.0
566.0			SAND	9.0	101.0
557.0			CLAY	15.0	110.0
542.0			CLAY	11.0	125.0
531.0			SANDY SHALE	12.0	136.0
519.0			LIMESTONE	3.0	148.0
516.0			SANDY SHALE	5.0	151.0
511.0			LIMESTONE	4.0	156.0
507.0			CALCAREOUS SHALE	2.0	160.0
505.0			LIMESTONE	16.0	162.0
489.0			SANDY SHALE	34.0	178.0
455.0			LIMESTONE	3.0	212.0
452.0			SANDY SHALE	23.0	215.0
429.0			LIMESTONE	4.0	238.0
425.0			CALCAREOUS SHALE	5.0	242.0
420.0	CARBONDALE	DANVILLE	COAL	3.2	247.0
416.8	CARBONDALE		SANDY SHALE	10.8	250.2
406.0	CARBONDALE		SANDSTONE	5.0	261.0
401.0	CARBONDALE	BANKSTON FORK	LIMESTONE	1.0	266.0
400.0	CARBONDALE		SANDY SHALE	14.0	267.0
386.0	CARBONDALE		SANDY SHALE	3.0	281.0
383.0	CARBONDALE	BRERETON	LIMESTONE	1.0	284.0
382.0	CARBONDALE		CALCAREOUS SHALE	2.0	285.0
380.0	CARBONDALE	HERRIN	COAL	4.3	287.0
375.7			SANDY SHALE	24.8	291.3
351.0			SANDSTONE	16.0	316.0
335.0			GRAY SHALE	49.0	332.0
286.0			CALCAREOUS SHALE	2.0	381.0
284.0			SANDY SHALE	3.0	383.0
281.0			LIMESTONE	1.0	386.0
280.0			CALCAREOUS SHALE	9.0	387.0
271.0			SANDY SHALE	7.0	396.0
264.0			LIMESTONE	7.0	403.0

257.0	GRAY SHALE	43.0	410.0
214.0	BLACK SHALE	2.0	453.0
212.0	GRAY SHALE	9.0	455.0

MAPID: 01100074000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 11E SECTION: 11 SENE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LADD LONGITUDE: -89.182763

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.388053

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 600.0 LOGGED (FT.): 457.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 74

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
600.0			UNCONSOLIDATED	2.5	0.0
597.5			SAND	6.0	2.5
591.5			CLAY	11.0	8.5
580.5			SANDSTONE	3.5	19.5
577.0			SHALE	25.0	23.0
552.0			SANDSTONE	7.0	48.0
545.0			SANDSTONE	4.0	55.0
541.0			ROCK	6.0	59.0
535.0			CALCAREOUS SHALE	1.5	65.0
533.5			GRAY SHALE	1.5	66.5
532.0			LIMESTONE	4.0	68.0
528.0			GRAY SHALE	9.6	72.0
518.4			COAL	0.4	81.6
518.0			CALCAREOUS SHALE	8.0	82.0
510.0			LIMESTONE	3.0	90.0
507.0			LIMESTONE	17.0	93.0
490.0			LIMESTONE	5.0	110.0
485.0			GRAY SHALE	5.0	115.0
480.0			LIMESTONE	2.0	120.0
478.0			GRAY SHALE	15.0	122.0
463.0			LIMESTONE	2.0	137.0
461.0			GRAY SHALE	4.0	139.0
457.0			LIMESTONE	3.0	143.0
454.0			CALCAREOUS SHALE	1.0	146.0
453.0			GRAY SHALE	8.0	147.0
445.0			LIMESTONE	1.0	155.0
444.0			SHALE	2.5	156.0
441.5			UNCLASSIFIED	1.5	158.5
440.0			SHALE	19.0	160.0
421.0			SANDSTONE	52.0	179.0
369.0			SANDY SHALE	13.0	231.0
356.0			CALCAREOUS SHALE	2.0	244.0
354.0	CARBONDALE	DANVILLE	COAL	3.3	246.0
350.7	CARBONDALE		UNDERCLAY	3.7	249.3
347.0	CARBONDALE	BANKSTON FORK	LIMESTONE	2.0	253.0
345.0	CARBONDALE		GRAY SHALE	6.0	255.0
339.0	CARBONDALE		SANDSTONE	5.0	261.0
334.0	CARBONDALE		SANDY SHALE	11.0	266.0
323.0	CARBONDALE		CALCAREOUS SHALE	3.7	277.0

319.3	CARBONDALE	HERRIN	COAL	4.5	280.7
314.8			UNDERCLAY	2.9	285.2
312.0			LIMESTONE	4.0	288.0
308.0			SANDSTONE	4.0	292.0
304.0			SANDY SHALE	64.0	296.0
240.0			GRAY SHALE	14.0	360.0
226.0			GRAY SHALE	6.0	374.0
220.0			LIMESTONE	3.0	380.0
217.0			BLACK SHALE	7.0	383.0
210.0			GRAY SHALE	4.0	390.0
206.0			LIMESTONE	5.0	394.0
201.0			SANDY SHALE	21.0	399.0
180.0			CALCAREOUS SHALE	4.0	420.0
176.0			DARK SHALE	26.0	424.0
150.0			CALCAREOUS SHALE	2.8	450.0
147.2			COAL	3.2	452.8
144.0			UNDERCLAY	1.0	456.0

MAPID: 01100077000C VERSION: 2

PROJECT: NCRDS87

COUNTY: BUREAU TWP/RNG: 16N 11E SECTION: 35 SESWSW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: SPRING VALLEY LONGITUDE: -89.19486

GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 41.321485

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 545.0 LOGGED (FT.): 343.5

LOG TYPE: Drillers Log

SOURCE: SPRING VALLEY COAL CO.

WELL TYPE: Mine Shaft

COMMENT: ELEVATION IMPRECISE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
545.0			UNCONSOLIDATED	39.4	0.0	
505.6			UNCLASSIFIED	0.5	39.4	
505.1			LIMESTONE	1.5	39.9	
503.6			UNCLASSIFIED	4.5	41.4	
499.1			LIMESTONE	1.5	45.9	
497.6			UNCLASSIFIED	10.0	47.4	
487.6			SANDSTONE	36.0	57.4	
451.6	CARBONDALE		SHALE	27.0	93.4	UNCERTAIN CORRELATION
424.6	CARBONDALE	HERRIN	COAL	4.0	120.4	UNCERTAIN CORRELATION
420.6	CARBONDALE		UNDERCLAY	15.0	124.4	
405.6	CARBONDALE		LIMESTONE	3.0	139.4	
402.6	CARBONDALE		SANDSTONE	6.0	142.4	
396.6	CARBONDALE		UNCLASSIFIED	12.4	148.4	
384.2	CARBONDALE		LIMESTONE	1.2	160.8	
383.0	CARBONDALE	TURNER MINE	BLACK SHALE	3.5	162.0	
379.5	CARBONDALE	SPRINGFIELD	COAL	5.5	165.5	
374.0	CARBONDALE		UNCLASSIFIED	81.0	171.0	
293.0	CARBONDALE		UNDERCLAY	5.3	252.0	
287.7	CARBONDALE		LIMESTONE	2.6	257.3	
285.1	CARBONDALE	MECCA QUARRY	BLACK SHALE	6.6	259.9	
278.5	CARBONDALE	COLCHESTER	COAL	0.0	266.5	
278.5	SPOON		UNDERCLAY	7.3	266.5	
271.2	SPOON		UNCLASSIFIED	66.7	273.8	
204.5	SPOON		COAL	3.0	340.5	

MAPID: 01100077000C VERSION: 3

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 16N 11E SECTION: 35 SESWSW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: SPRING VALLEY LONGITUDE: -89.19486

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.321485

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): LOGGED (FT.): 343.5

LOG TYPE: Drillers Log

SOURCE: SPRING VALLEY COAL CO. 1

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	17.4	0.0	
-			UNCONSOLIDATED	10.0	17.4	
-			BLACK SHALE	2.0	27.4	
-			GRAY SHALE	10.0	29.4	
-			ROCK	0.5	39.4	
-			LIMESTONE	1.5	39.9	
-			ROCK	4.5	41.4	
-			LIMESTONE	1.5	45.9	
-			ROCK	10.0	47.4	
-			SANDSTONE	36.0	57.4	
-			BLACK SHALE	27.0	93.4	
-	CARBONDALE	HERRIN	COAL	4.0	120.4	
-	CARBONDALE		UNDERCLAY	15.0	124.4	
-	CARBONDALE		LIMESTONE	3.0	139.4	
-	CARBONDALE		SANDSTONE	6.0	142.4	
-	CARBONDALE		SHALE	12.4	148.4	
-	CARBONDALE		LIMESTONE	1.2	160.8	
-	CARBONDALE	TURNER MINE	BLACK SHALE	3.5	162.0	
-	CARBONDALE	SPRINGFIELD	COAL	5.5	165.5	
-			SANDSTONE	7.0	171.0	
-			SANDY SHALE	20.0	178.0	
-			SHALE	47.5	198.0	
-			BLACK SHALE	4.5	245.5	
-			BLACK SHALE	2.0	250.0	
-			UNDERCLAY	5.3	252.0	
-			LIMESTONE	2.6	257.3	
-			ROCK	6.6	259.9	
-			UNDERCLAY	7.3	266.5	
-			ROCK	9.0	273.8	
-			SANDY SHALE	37.0	282.8	
-			UNCLASSIFIED	1.7	319.8	IRON BAND
-			ROCK	2.0	321.5	
-			SHALE	17.0	323.5	
-			COAL	3.0	340.5	

MAPID: 01170007000C VERSION: 1

PROJECT: NCRDS

COUNTY: BUREAU TWP/RNG: 16N 11E SECTION: 36
QUADRANGLE: SPRING VALLEY LONGITUDE: -89.164841
CONFIDENTIAL: N LATITUDE: 41.32156
SURFACE ELEVATION (FT.): 609.0 LOGGED (FT.): 950.0
SOURCE: UTAH INTERNATIONAL 11C79
COMMENT: CODED COAL LOG

FOOT (NS): 320 S FOOT (EW): 300 E
GEOLOGIST: LOUCHIOS
DATE COLLECTED: 0 / 0 / 1926
LOG TYPE: Drillers Log
WELL TYPE: Coal Test

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
609.0			UNCLASSIFIED	240.0	0.0	
369.0	CARBONDALE	SPRINGFIELD	COAL	3.0	240.0	UNCERTAIN CORRELATION
366.0	CARBONDALE		UNCLASSIFIED	107.0	243.0	
259.0	CARBONDALE	COLCHESTER	COAL	3.0	350.0	UNCERTAIN CORRELATION
256.0			SHALE	42.0	353.0	
214.0			COAL	3.0	395.0	
211.0			UNCLASSIFIED	452.0	398.0	

MAPID: 01170006000C VERSION: 1

PROJECT: NCRDS

COUNTY: BUREAU TWP/RNG: 17N 9E SECTION: 25
QUADRANGLE: PRINCETON NORTH LONGITUDE: -89.412491
CONFIDENTIAL: N LATITUDE: 41.422392
SURFACE ELEVATION (FT.): 718.0 LOGGED (FT.): 401.0
SOURCE: UTAH INTERNATIONAL 06C81
COMMENT: CODED COAL LOG

FOOT (NS): 120 S FOOT (EW): 100 W
GEOLOGIST: LOUCHIOS
DATE COLLECTED: 0 / 0 / 0
LOG TYPE: Drillers Log
WELL TYPE: Coal Test

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
718.0			NO RECORD	296.0	0.0	
422.0	CARBONDALE		BLACK SHALE	1.0	296.0	
421.0	CARBONDALE		SHALE	12.0	297.0	
409.0	CARBONDALE		SANDY SHALE	11.0	309.0	
398.0	CARBONDALE		GREEN SHALE	3.0	320.0	
395.0	CARBONDALE		SANDSTONE	8.0	323.0	
387.0	CARBONDALE		CLAYSTONE	5.0	331.0	
382.0	CARBONDALE		SHALE	4.0	336.0	
378.0	CARBONDALE		SANDSTONE	4.0	340.0	
374.0	CARBONDALE		SHALE	27.0	344.0	
347.0	CARBONDALE		SHALE	11.0	371.0	FOSSIL SHELLS
336.0	CARBONDALE	MECCA QUARRY	BLACK SHALE	3.0	382.0	
333.0	CARBONDALE		SHALE	6.0	385.0	
327.0	CARBONDALE	COLCHESTER	COAL	3.0	391.0	
324.0	CARBONDALE		CLAYSTONE	7.0	394.0	

MAPID: 01100082000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 10E SECTION: 1 SESWNW

FOOT (NS): 0 S FOOT (EW): 0 E

QUADRANGLE: MALDEN LONGITUDE: -89.290874

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.487933

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 767.1 LOGGED (FT.): 408.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 30

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
767.1			UNCONSOLIDATED	2.0	0.0	SOIL
765.1			CLAY	18.0	2.0	
747.1			SAND	13.0	20.0	
734.1			CLAY	81.0	33.0	
653.1			GRAVEL	1.0	114.0	
652.1			SANDY CLAY	10.0	115.0	
642.1			CLAY	5.0	125.0	
637.1			CLAY	10.0	130.0	
627.1			SANDY CLAY	20.0	140.0	
607.1			CLAY	10.0	160.0	
597.1			SANDY CLAY	24.0	170.0	
573.1			UNCLASSIFIED	1.0	194.0	GAP IN LOG DATA
572.1			SAND	48.0	195.0	
524.1			GRAVEL	3.0	243.0	
521.1			SAND	4.0	246.0	
517.1			SANDY CLAY	10.0	250.0	
507.1			SAND	52.0	260.0	
455.1			GRAVEL	2.0	312.0	
453.1			CALCAREOUS SHALE	8.0	314.0	
445.1			BLACK SHALE	5.0	322.0	
440.1			SANDY SHALE	8.0	327.0	
432.1			SHALE	10.0	335.0	
422.1			SANDSTONE	8.0	345.0	
414.1			SANDY SHALE	37.0	353.0	
377.1			DARK SHALE	12.0	390.0	
365.1			GRAY SHALE	1.5	402.0	
363.6			COAL	2.8	403.5	
360.8			UNDERCLAY	1.7	406.3	

MAPID: 01100083000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 10E SECTION: 10 NWNWSW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: MALDEN LONGITUDE: -89.334108

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.472475

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 772.0 LOGGED (FT.): 480.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. D

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
772.0			CLAY	18.0	0.0	
754.0			CLAY	55.0	18.0	GY CLY; GRAY
699.0			GRAVEL	2.0	73.0	
697.0			CLAY	53.0	75.0	
644.0			SANDY CLAY	2.0	128.0	
642.0			SAND	11.0	130.0	
631.0			CLAY	9.0	141.0	
622.0			CLAY	3.0	150.0	
619.0			CLAY	2.0	153.0	GY CLY; GY
617.0			CLAY	4.0	155.0	
613.0			SAND	5.0	159.0	
608.0			SAND	4.0	164.0	
604.0			SANDY CLAY	4.0	168.0	
600.0			SAND	2.0	172.0	
598.0			SANDY CLAY	2.0	174.0	
596.0			GRAVEL	4.0	176.0	
592.0			SAND	2.0	180.0	
590.0			GRAVEL	6.0	182.0	
584.0			SANDY CLAY	4.0	188.0	
580.0			SAND	2.0	192.0	
578.0			GRAVEL	4.0	194.0	
574.0			SANDY CLAY	3.0	198.0	
571.0			CLAY	6.0	201.0	
565.0			SANDY CLAY	8.0	207.0	
557.0			CLAY	9.0	215.0	
548.0			SANDY CLAY	9.0	224.0	
539.0			UNCONSOLIDATED	12.0	233.0	SD & GRAVEL
527.0			SAND	2.0	245.0	
525.0			GRAVEL	1.0	247.0	
524.0			SANDY CLAY	10.0	248.0	
514.0			SANDY CLAY	8.0	258.0	
506.0			SAND	14.0	266.0	
492.0			SAND	16.0	280.0	
476.0			SAND	8.0	296.0	
468.0			SAND	4.0	304.0	
464.0			GRAVEL	3.0	308.0	
461.0			SAND	24.0	311.0	
437.0			GRAVEL	8.5	335.0	
428.5			UNDERCLAY	7.5	343.5	

421.0	CALCAREOUS SHALE	24.0	351.0
397.0	BLACK SHALE	4.0	375.0
393.0	GRAY SHALE	1.0	379.0
392.0	SANDY SHALE	7.0	380.0
385.0	UNDERCLAY	1.0	387.0
384.0	CALCAREOUS SHALE	2.0	388.0
382.0	SANDSTONE	10.0	390.0
372.0	SHALE	6.0	400.0
366.0	SANDSTONE	24.0	406.0
342.0	CALCAREOUS SHALE	16.0	430.0
326.0	CALCAREOUS SHALE	12.0	446.0
314.0	BLACK SHALE	1.0	458.0
313.0	ROCK	0.5	459.0
312.5	BLACK SHALE	0.5	459.5
312.0	SHALE	7.2	460.0
304.8	COAL	3.3	467.2
301.5	UNDERCLAY	1.5	470.5
300.0	SANDSTONE	8.0	472.0

MAPID: 01170003000C VERSION: 1

PROJECT: NCRDS

COUNTY: BUREAU TWP/RNG: 17N 10E SECTION: 19

FOOT (NS): 270 S FOOT (EW): 300 W

QUADRANGLE: PRINCETON NORTH LONGITUDE: -89.392247

GEOLOGIST: LOUCHIOS

CONFIDENTIAL: N LATITUDE: 41.437535

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 744.0 LOGGED (FT.): 442.0

LOG TYPE: Drillers Log

SOURCE: UTAH INTERNATIONAL 09C85

WELL TYPE: Coal Test

COMMENT: UTAH INTERNATIONAL 09C85

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.) UNIT	OVERBURDEN	COMMENT
744.0			NO RECORD	287.0	0.0	
457.0			SHALE	5.0	287.0	
452.0			SANDY SHALE	42.0	292.0	
410.0			SHALE	8.0	334.0	
402.0			DARK SHALE	2.0	342.0	
400.0			UNCLASSIFIED	57.0	344.0	
343.0			GREEN SHALE	22.0	401.0	
321.0			BLACK SHALE	2.0	423.0	
319.0			SHALE	8.0	425.0	
311.0	CARBONDALE	COLCHESTER	COAL	3.9	433.0	UNCERTAIN CORRELATION
307.1			CLAYSTONE	5.1	436.9	

MAPID: 01170005000C VERSION: 1

PROJECT: NCRDS

COUNTY: BUREAU TWP/RNG: 17N 10E SECTION: 19

FOOT (NS): 180 N FOOT (EW): 260 W

QUADRANGLE: PRINCETON NORTH LONGITUDE: -89.392497

GEOLOGIST: LOUCHIOS

CONFIDENTIAL: N LATITUDE: 41.450901

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 725.0 LOGGED (FT.): 458.0

LOG TYPE: Drillers Log

SOURCE: UTAH INTERNATIONAL 07C102

WELL TYPE: Coal Test

COMMENT: CODED COAL LOGS

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
725.0			NO RECORD	265.0	0.0	
460.0			GREEN SHALE	5.0	265.0	
455.0			SANDY SHALE	5.0	270.0	
450.0			LIMESTONE	2.0	275.0	
448.0			BLACK SHALE	3.0	277.0	
445.0	CARBONDALE	SPRINGFIELD	COAL	5.0	280.0	UNCERTAIN CORRELATION
440.0			CLAYSTONE	3.0	285.0	
437.0			SHALE	13.0	288.0	
424.0			LIMESTONE	2.0	301.0	
422.0			SHALE	7.0	303.0	
415.0			LIMESTONE	1.0	310.0	
414.0			DARK SHALE	9.0	311.0	
405.0			SANDSTONE	24.0	320.0	
381.0			LIMESTONE	0.5	344.0	
380.5			SANDSTONE	3.5	344.5	
377.0			SHALE	19.0	348.0	
358.0			DARK SHALE	34.0	367.0	
324.0			SANDSTONE	19.0	401.0	
305.0			SHALE	14.0	420.0	
291.0			DARK SHALE	20.0	434.0	
271.0	CARBONDALE	COLCHESTER	COAL	3.0	454.0	UNCERTAIN CORRELATION
268.0			CLAYSTONE	1.0	457.0	

MAPID: 01100087000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 10E SECTION: 23 SESWNE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: MALDEN LONGITUDE: -89.302398

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.445038

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 751.0 LOGGED (FT.): 498.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. A

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
751.0			UNCONSOLIDATED	1.0	0.0	TOP SOIL
750.0			CLAY	5.0	1.0	
745.0			SAND	3.0	6.0	
742.0			CLAY	11.0	9.0	
731.0			CLAY	18.0	20.0	BLU CLY; BLU
713.0			GRAVEL	6.0	38.0	
707.0			CLAY	3.0	44.0	BLU CLY; BLU
704.0			SANDY CLAY	27.0	47.0	BLU CLY; BLU
677.0			SAND	3.0	74.0	
674.0			GRAVEL	6.0	77.0	
668.0			SANDY CLAY	3.0	83.0	
665.0			GRAVEL	3.0	86.0	
662.0			CLAY	2.0	89.0	LT BLU CLAY; LT BLU
660.0			CLAY	26.0	91.0	LT BLU CLY; LT BLU
634.0			CLAY	8.0	117.0	BLU CLY; BLU
626.0			SANDY CLAY	10.0	125.0	
616.0			SAND	13.0	135.0	
603.0			SANDY CLAY	24.0	148.0	
579.0			SAND	3.0	172.0	
576.0			SANDY CLAY	31.0	175.0	
545.0			SANDY CLAY	9.0	206.0	
536.0			SANDY CLAY	21.0	215.0	BLU CLY; BLU
515.0			SAND	4.0	236.0	
511.0			SAND	89.0	240.0	
422.0			UNCONSOLIDATED	4.0	329.0	
418.0			LIGHT SHALE	6.0	333.0	
412.0			SANDSTONE	7.0	339.0	
405.0			CALCAREOUS SHALE	54.5	346.0	
350.5			BLACK SHALE	2.5	400.5	
348.0			GRAY SHALE	4.0	403.0	
344.0			LIMESTONE	5.0	407.0	
339.0			DARK SHALE	2.0	412.0	
337.0			UNDERCLAY	11.0	414.0	
326.0			SANDSTONE	4.0	425.0	
322.0			SANDY SHALE	1.0	429.0	
321.0			SANDSTONE	1.0	430.0	
320.0			CONGLOMERATE	2.0	431.0	
318.0			LIMESTONE AND SAND	4.0	433.0	
314.0			SANDSTONE	11.0	437.0	

303.0	SANDY SHALE	6.0	448.0
297.0	CALCAREOUS SHALE	25.5	454.0
271.5	BLACK SHALE	1.0	479.5
270.5	LIGHT SHALE	4.5	480.5
266.0	CALCAREOUS SHALE	6.0	485.0
260.0	COAL	3.2	491.0
256.8	UNDERCLAY	3.8	494.2

MAPID: 01170004000C VERSION: 1

PROJECT: NCRDS

COUNTY: BUREAU TWP/RNG: 17N 10E SECTION: 30

FOOT (NS): 1400 S FOOT (EW): 1280 W

QUADRANGLE: PRINCETON NORTH LONGITUDE: -89.388686

GEOLOGIST: LOUCHIOS

CONFIDENTIAL: N LATITUDE: 41.426161

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 708.0 LOGGED (FT.): 452.0

LOG TYPE: Drillers Log

SOURCE: UTAH INTERNATIONAL 08C117

WELL TYPE: Coal Test

COMMENT: CODED COAL LOG

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	OVERBURDEN	COMMENT
708.0			NO RECORD	230.0	0.0	
478.0			SANDSTONE	2.0	230.0	
476.0			SHALE	4.0	232.0	
472.0	CARBONDALE	HERRIN	COAL	3.0	236.0	UNCERTAIN CORRELATION
469.0			CLAYSTONE	12.0	239.0	
457.0			SANDSTONE	10.0	251.0	
447.0			DARK SHALE	9.0	261.0	
438.0			BLACK SHALE	9.0	270.0	
429.0	CARBONDALE	SPRINGFIELD	COAL	5.5	279.0	UNCERTAIN CORRELATION
423.5			CLAYSTONE	3.5	284.5	
420.0			LIMESTONE	13.0	288.0	
407.0			SHALE	6.0	301.0	
401.0			BLACK SHALE	47.0	307.0	
354.0			DARK SHALE	8.0	354.0	
346.0			BLACK SHALE	3.0	362.0	
343.0			DARK SHALE	7.0	365.0	
336.0			SHALE	3.0	372.0	
333.0			BLACK SHALE	3.0	375.0	
330.0			LIMESTONE	7.0	378.0	
323.0			SANDY SHALE	14.0	385.0	
309.0			SHALE	26.0	399.0	
283.0			DARK SHALE	3.0	425.0	
280.0			BLACK SHALE	2.0	428.0	
278.0			SHALE	10.0	430.0	
268.0	CARBONDALE	COLCHESTER	COAL	3.5	440.0	UNCERTAIN LOCATION
264.5			SANDSTONE	8.5	443.5	

MAPID: 01100091000C VERSION: 2

PROJECT: NCRDS87

COUNTY: BUREAU TWP/RNG: 17N 10E SECTION: 34 NESWNE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: MALDEN LONGITUDE: -89.322161

GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 41.417751

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 725.2 LOGGED (FT.): 485.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO.

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
725.2			UNCONSOLIDATED	297.0	0.0
428.2	CARBONDALE		UNCLASSIFIED	2.7	297.0
425.5	CARBONDALE		SHALE	2.3	299.7
423.2	CARBONDALE	MECCA QUARRY	BLACK SHALE	1.5	302.0
421.7	CARBONDALE	FRANCIS CREEK	UNCLASSIFIED	0.5	303.5
421.2	CARBONDALE	COLCHESTER	COAL	3.3	304.0
417.9			UNDERCLAY	0.7	307.3
417.2			UNCLASSIFIED	16.0	308.0
401.2			SHALE	62.6	324.0
338.6			BLACK SHALE	2.8	386.6
335.9			UNCLASSIFIED	6.7	389.3
329.2			SHALE	2.0	396.0
327.2			BLACK SHALE	3.0	398.0
324.2			UNCLASSIFIED	42.0	401.0
282.2			SHALE	20.4	443.0
261.8			BLACK SHALE	2.4	463.4
259.4			UNCLASSIFIED	8.7	465.8
250.7			COAL	4.0	474.5
246.7			SHALE	0.5	478.5
246.2			UNDERCLAY	4.0	479.0
242.2			UNCLASSIFIED	2.0	483.0

MAPID: 01100091000C VERSION: 3

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 10E SECTION: 34 NESWNE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: MALDEN LONGITUDE: -89.322161

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.417751

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 725.2 LOGGED (FT.): 485.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. H

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
725.2			UNCONSOLIDATED	3.0	0.0	SOIL
722.2			CLAY	10.0	3.0	
712.2			CLAY	11.5	13.0	
700.7			SAND	2.0	24.5	
698.7			CLAY	13.5	26.5	
685.2			GRAVEL	2.0	40.0	
683.2			SAND	8.0	42.0	
675.2			CLAY	10.0	50.0	
665.2			GRAVEL	4.0	60.0	
661.2			CLAY	6.0	64.0	
655.2			SAND	11.0	70.0	
644.2			CLAY	11.0	81.0	
633.2			SAND	4.0	92.0	
629.2			CLAY	2.0	96.0	
627.2			SAND	3.0	98.0	
624.2			CLAY	7.0	101.0	
617.2			CLAY	11.0	108.0	
606.2			CLAY	12.0	119.0	
594.2			SAND	5.0	131.0	
589.2			CLAY	30.0	136.0	
559.2			SAND	11.0	166.0	
548.2			CLAY	4.0	177.0	
544.2			SANDY CLAY	5.0	181.0	
539.2			SAND	14.0	186.0	
525.2			CLAY	2.0	200.0	
523.2			SAND	9.0	202.0	
514.2			SANDY CLAY	3.0	211.0	
511.2			SANDY CLAY	7.0	214.0	
504.2			SAND	4.0	221.0	
500.2			SANDY CLAY	4.0	225.0	
496.2			SAND	19.0	229.0	
477.2			GRAVEL	18.0	248.0	
459.2			SAND	2.0	266.0	
457.2			COAL	2.0	268.0	
455.2			SANDSTONE	21.0	270.0	
434.2			SANDSTONE	3.0	291.0	
431.2			SANDSTONE	3.0	294.0	
428.2			SHALE	2.0	297.0	
426.2			ROCK	0.7	299.0	

425.5			CALCAREOUS SHALE	2.3	299.7
423.2	CARBONDALE	MECCA QUARRY	BLACK SHALE	1.5	302.0
421.7	CARBONDALE	FRANCIS CREEK	LIGHT SHALE	0.5	303.5
421.2	CARBONDALE	COLCHESTER	COAL	3.3	304.0
417.9			UNDERCLAY	0.7	307.3
417.2			UNDERCLAY	16.0	308.0
401.2			CALCAREOUS SHALE	15.0	324.0
386.2			CALCAREOUS SHALE	29.0	339.0
357.2			CALCAREOUS SHALE	18.6	368.0
338.6			BLACK SHALE	2.8	386.6
335.9			SANDY SHALE	6.7	389.3
329.2			CALCAREOUS SHALE	2.0	396.0
327.2			BLACK SHALE	3.0	398.0
324.2			GRAY SHALE	11.0	401.0
313.2			SANDY SHALE	20.0	412.0
293.2			SANDY SHALE	8.4	432.0
284.8			ROCK	0.3	440.4
284.4			SANDY SHALE	2.3	440.8
282.2			CALCAREOUS SHALE	10.0	443.0
272.2			SHALE	10.0	453.0
262.2			CALCAREOUS SHALE	0.4	463.0
261.8			BLACK SHALE	2.4	463.4
259.4			SHALE	8.7	465.8
250.7			COAL	4.0	474.5
246.7			CALCAREOUS SHALE	0.5	478.5
246.2			UNDERCLAY	4.0	479.0
242.2			SANDY SHALE	2.0	483.0

MAPID: 01100092000C VERSION: 2

PROJECT: NCRDS87

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 3 NENWNW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LADD LONGITUDE: -89.216885

GEOLOGIST: WEIBEL

CONFIDENTIAL: N LATITUDE: 41.494288

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 735.0 LOGGED (FT.): 328.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO.

WELL TYPE: Coal Test

COMMENT: ELEVATION IMPRECISE

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
735.0			UNCONSOLIDATED	143.0	0.0	
592.0	CARBONDALE		SHALE	8.0	143.0	
584.0	CARBONDALE		LIMESTONE	2.0	151.0	
582.0	CARBONDALE		SHALE	41.0	153.0	
541.0	CARBONDALE		UNCLASSIFIED	34.0	194.0	
507.0	CARBONDALE		SANDSTONE	38.0	228.0	
469.0	CARBONDALE		SHALE	8.0	266.0	
461.0	CARBONDALE	TURNER MINE	DARK SHALE	8.0	274.0	
453.0	CARBONDALE	SPRINGFIELD	COAL	3.8	282.0	
449.2	CARBONDALE		UNDERCLAY	1.2	285.8	
448.0	CARBONDALE		SHALE	7.0	287.0	
441.0	CARBONDALE		SANDSTONE	10.0	294.0	
431.0	CARBONDALE		SHALE	17.0	304.0	
414.0	CARBONDALE	COLCHESTER	COAL	3.9	321.0	UNCERTAIN CORRELATION
410.1	SPOON		DARK SHALE	0.7	324.9	
409.4			SHALE	2.4	325.6	

MAPID: 01100092000C VERSION: 3

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 3 NENWNW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LADD LONGITUDE: -89.216885

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.494288

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): LOGGED (FT.): 328.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 54

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	143.0	0.0	CLY, SD, AND GRAVEL
-			SHALE	8.0	143.0	
-			LIMESTONE	2.0	151.0	
-			SHALE	38.0	153.0	
-			SHALE	3.0	191.0	
-			SHALE	24.0	194.0	
-			SANDY SHALE	10.0	218.0	
-			SANDSTONE	38.0	228.0	
-			DARK SHALE	8.0	266.0	
-			DARK SHALE	8.0	274.0	
-			COAL	3.8	282.0	
-			UNDERCLAY	1.2	285.8	
-			LIGHT SHALE	7.0	287.0	
-			SANDSTONE	10.0	294.0	
-			LIGHT SHALE	17.0	304.0	
-			COAL	1.7	321.0	
-			UNCLASSIFIED	0.1	322.7	SULPHUR
-			COAL	1.5	322.8	
-			DARK SHALE	1.3	324.3	
-			SHALE	1.4	325.6	
-			LIGHT SHALE	1.0	327.0	

MAPID: 01100095000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 13 SWSWSW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LADD LONGITUDE: -89.180108

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.453119

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 690.0 LOGGED (FT.): 353.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 16

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
690.0			CLAY	20.0	0.0
670.0			SANDY CLAY	60.0	20.0
610.0			GRAVEL	50.0	80.0
560.0			CLAY	7.0	130.0
553.0			SANDY SHALE	47.0	137.0
506.0			BLACK SHALE	3.0	184.0
503.0			LIMESTONE	7.0	187.0
496.0			CALCAREOUS SHALE	2.0	194.0
494.0			SANDY SHALE	3.0	196.0
491.0			LIMESTONE	2.0	199.0
489.0			SANDY SHALE	25.0	201.0
464.0			SANDY SHALE	13.0	226.0
451.0			BLACK SHALE	4.0	239.0
447.0			CALCAREOUS SHALE	14.0	243.0
433.0			COAL	2.5	257.0
430.5			SANDY SHALE	21.5	259.5
409.0			BLACK SHALE	4.0	281.0
405.0			LIMESTONE	10.0	285.0
395.0			SANDSTONE	2.0	295.0
393.0			SANDY SHALE	3.0	297.0
390.0			BLACK SHALE	1.0	300.0
389.0			SANDY SHALE	4.0	301.0
385.0			LIMESTONE	48.0	305.0

MAPID: 01100096000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 15 SWSW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LADD LONGITUDE: -89.217552

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.453695

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 705.0 LOGGED (FT.): 436.0

LOG TYPE: Drillers Log

SOURCE: ST. PAUL & BRACVILLE CO.

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
308.0			CALCAREOUS SHALE	18.5	397.0	
289.5			BLACK SHALE	3.5	415.5	
286.0			CALCAREOUS SHALE	7.8	419.0	
278.2			COAL	1.8	426.8	
276.4			UNCLASSIFIED	0.0	428.6	SULPHUR BAND
276.4			COAL	0.6	428.6	
275.7			UNCLASSIFIED	0.3	429.3	SULPHUR BAND
275.5			COAL	0.6	429.5	
705.0			UNCONSOLIDATED	1.0	0.0	TOP SOIL
704.0			CLAY	8.0	1.0	
696.0			SAND	2.0	9.0	
694.0			GRAVEL	1.0	11.0	
693.0			SANDY CLAY	60.0	12.0	
633.0			UNCONSOLIDATED	17.0	72.0	SD & GRAVEL
616.0			UNCONSOLIDATED	27.0	89.0	SD & GRAVEL
589.0			SHALE	9.0	116.0	
580.0			SHALE	3.0	125.0	
577.0			SHALE	3.5	128.0	
573.5			CALCAREOUS SHALE	7.5	131.5	
566.0			SHALE	12.0	139.0	
554.0			CALCAREOUS SHALE	5.0	151.0	
549.0			SHALE	1.0	156.0	
548.0			CALCAREOUS SHALE	20.0	157.0	
528.0			SANDY SHALE	22.0	177.0	
506.0			SANDSTONE	8.0	199.0	
498.0			SANDSTONE	9.0	207.0	
489.0			CALCAREOUS SHALE	11.0	216.0	
478.0			CALCAREOUS SHALE	5.7	227.0	
472.3			SANDY SHALE	5.3	232.7	
467.0			SANDSTONE	20.0	238.0	
447.0			BLACK SHALE	11.0	258.0	
436.0			COAL	3.5	269.0	
432.5			UNDERCLAY	2.8	272.5	
429.7			SANDY SHALE	18.7	275.3	
411.0			CALCAREOUS SHALE	18.0	294.0	
393.0			DARK SHALE	27.0	312.0	
366.0			CALCAREOUS SHALE	10.0	339.0	
356.0			DARK SHALE	2.7	349.0	
353.3			BLACK SHALE	2.8	351.7	

350.6	CALCAREOUS SHALE	7.3	354.4
343.2	BLACK SHALE	3.0	361.8
340.2	CALCAREOUS SHALE	2.3	364.8
338.0	CALCAREOUS SHALE	3.0	367.0
335.0	LIMESTONE	3.0	370.0
332.0	SANDY SHALE	18.0	373.0
314.0	CALCAREOUS SHALE	6.0	391.0
274.9	UNDERCLAY	2.9	430.1
272.0	SANDY SHALE	3.0	433.0

MAPID: 01100097000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 16 NWNE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LADD LONGITUDE: -89.227466

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.464525

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 706.3 LOGGED (FT.): 513.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO 11

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
706.3			UNCONSOLIDATED	12.0	0.0	SOIL AND CLAY
694.3			UNCONSOLIDATED	4.0	12.0	SD & GRAVEL
690.3			CLAY	2.0	16.0	
688.3			CLAY	44.0	18.0	
644.3			UNCONSOLIDATED	63.0	62.0	SD & GRAVEL
581.3			SAND	10.0	125.0	
571.3			UNCONSOLIDATED	53.0	135.0	SD & GRAVEL
518.3			CLAY	17.0	188.0	
501.3			SAND	23.0	205.0	
478.3			GRAY SHALE	14.5	228.0	
463.8			BLACK SHALE	2.5	242.5	
461.3			LIMESTONE	2.0	245.0	
459.3			GRAY SHALE	3.0	247.0	
456.3			SANDSTONE	38.0	250.0	
418.3			CALCAREOUS SHALE	30.0	288.0	
388.3			GRAY SHALE	7.5	318.0	
380.8			COAL	3.5	325.5	
377.3			UNDERCLAY	2.0	329.0	
375.3			LIMESTONE	2.0	331.0	
373.3			CALCAREOUS SHALE	14.0	333.0	
359.3			LIMESTONE	1.0	347.0	
358.3			GRAY SHALE	30.0	348.0	
328.3			SANDSTONE	12.0	378.0	
316.3			CALCAREOUS SHALE	7.0	390.0	
309.3			SANDSTONE	3.0	397.0	
306.3			LIMESTONE	4.0	400.0	
302.3			SANDSTONE	19.0	404.0	
283.3			LIMESTONE	90.0	423.0	

MAPID: 01100098000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 17 NWSW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: MALDEN LONGITUDE: -89.255602

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.457015

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): LOGGED (FT.): 430.5

LOG TYPE: Drillers Log

SOURCE: ST. PAUL & BRACVILLE COAL CO.

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			SANDY CLAY	75.0	0.0	
-			SAND	15.0	75.0	
-			UNCONSOLIDATED	4.0	90.0	SD & GRAVEL
-			SANDY CLAY	2.0	94.0	
-			SANDY CLAY	39.0	96.0	
-			SANDY CLAY	16.0	135.0	
-			SAND	29.0	151.0	
-			SANDY CLAY	55.0	180.0	
-			SAND	33.0	235.0	
-			SHALE	15.0	268.0	
-			GRAY SHALE	8.0	283.0	
-			DARK SHALE	5.0	291.0	
-			SHALE	10.0	296.0	
-			DARK SHALE	13.0	306.0	
-			GRAY SHALE	12.0	319.0	
-			BLACK SHALE	5.0	331.0	
-			LIMESTONE	1.0	336.0	
-			DARK SHALE	10.0	337.0	
-			GRAY SHALE	17.0	347.0	
-			LIMESTONE	15.0	364.0	
-			DARK SHALE	12.0	379.0	
-			DARK SHALE	20.0	391.0	
-			SHALE	2.0	411.0	
-			DARK SHALE	8.1	413.0	
-			COAL	2.1	421.1	
-			UNDERCLAY	0.3	423.2	
-			SANDSTONE	7.0	423.5	

MAPID: 01100100000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 17 SWNESW

FOOT (NS): 0 S FOOT (EW): 0 W

QUADRANGLE: MALDEN LONGITUDE: -89.253285

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.455199

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 739.6 LOGGED (FT.): 423.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 22

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
739.6			CLAY	30.0	0.0
709.6			CLAY	15.0	30.0
694.6			SAND	3.0	45.0
691.6			CLAY	12.0	48.0
679.6			GRAVEL	16.0	60.0
663.6			CLAY	14.0	76.0
649.6			GRAVEL	8.0	90.0
641.6			CLAY	52.0	98.0
589.6			SAND	30.0	150.0
559.6			CLAY	10.0	180.0
549.6			CLAY	40.0	190.0
509.6			SAND	35.0	230.0
474.6			SAND	3.0	265.0
471.6			LIMESTONE	2.0	268.0
469.6			SANDSTONE	10.0	270.0
459.6			SANDY SHALE	14.0	280.0
445.6			SANDY SHALE	20.0	294.0
425.6			GRAY SHALE	16.0	314.0
409.6			CALCAREOUS SHALE	3.0	330.0
406.6			SANDSTONE	35.0	333.0
371.6			LIMESTONE	3.0	368.0
368.6			SANDSTONE	12.0	371.0
356.6			CALCAREOUS SHALE	25.0	383.0
331.6			CALCAREOUS SHALE	7.0	408.0
324.6			COAL	3.2	415.0
321.4			SANDSTONE	4.8	418.2

MAPID: 01100101000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 19 SWNW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: MALDEN LONGITUDE: -89.274484

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.445938

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 728.3 LOGGED (FT.): 457.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST 1

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
728.3			UNCONSOLIDATED	141.0	0.0	CLY, SD, AND GRAVEL
587.3			SAND	29.0	141.0	
558.3			SANDY CLAY	33.0	170.0	
525.3			SAND	54.0	203.0	
471.3			GRAY SHALE	11.0	257.0	
460.3			SHALE	9.0	268.0	
451.3			COAL	4.5	277.0	
446.8			UNDERCLAY	0.5	281.5	
446.3			GRAY SHALE	14.0	282.0	
432.3			CALCAREOUS SHALE	11.0	296.0	
421.3			GRAY SHALE	7.0	307.0	
414.3			SANDSTONE	10.0	314.0	
404.3			SANDSTONE	20.0	324.0	
384.3			DARK SHALE	24.0	344.0	
360.3			LIMESTONE	4.0	368.0	
356.3			SHALE	13.0	372.0	
343.3			LIMESTONE	5.0	385.0	
338.3			SANDSTONE	15.0	390.0	
323.3			DARK SHALE	20.0	405.0	
303.3			DARK SHALE	16.0	425.0	
287.3			BLACK SHALE	5.0	441.0	
282.3			COAL	3.0	446.0	
279.3			UNDERCLAY	2.0	449.0	
277.3			SANDSTONE	6.0	451.0	

MAPID: 01100102000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 19 NWNWNW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: MALDEN LONGITUDE: -89.275568

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.450486

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 728.3 LOGGED (FT.): 458.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 18

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
728.3			UNCONSOLIDATED	2.0	0.0	TOP SOIL
726.3			CLAY	5.0	2.0	
721.3			CLAY	40.0	7.0	
681.3			UNCONSOLIDATED	16.0	47.0	SD & GRAVEL
665.3			CLAY	14.0	63.0	
651.3			SAND	3.0	77.0	
648.3			CLAY	40.0	80.0	
608.3			SAND	35.0	120.0	
573.3			SAND	12.0	155.0	
561.3			SANDY CLAY	13.0	167.0	
548.3			SANDY CLAY	41.0	180.0	
507.3			SAND	17.0	221.0	
490.3			CLAY	12.0	238.0	
478.3			SAND	15.0	250.0	
463.3			LIGHT SHALE	5.0	265.0	
458.3			SANDY SHALE	5.0	270.0	
453.3			LIMESTONE	2.0	275.0	
451.3			BLACK SHALE	3.0	277.0	
448.3			COAL	5.0	280.0	
443.3			UNDERCLAY	3.0	285.0	
440.3			SHALE	13.0	288.0	
427.3			LIMESTONE	2.0	301.0	
425.3			SHALE	7.0	303.0	
418.3			LIMESTONE	1.0	310.0	
417.3			GRAY SHALE	9.0	311.0	
408.3			SANDSTONE	7.0	320.0	
401.3			SANDSTONE	17.0	327.0	
384.3			LIMESTONE	0.5	344.0	
383.8			SANDSTONE	3.5	344.5	
380.3			SHALE	19.0	348.0	
361.3			GRAY SHALE	34.0	367.0	
327.3			SANDSTONE	19.0	401.0	
308.3			SHALE	14.0	420.0	
294.3			GRAY SHALE	20.0	434.0	
274.3			COAL	3.0	454.0	
271.3			UNDERCLAY	1.0	457.0	

MAPID: 01100103000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 20 NESE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LADD LONGITUDE: -89.241639

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.442458

DATE COLLECTED: 1 / 26 / 1931

SURFACE ELEVATION (FT.): 641.0 LOGGED (FT.): 475.0

LOG TYPE: Drillers Log

SOURCE: ST. PAUL & BRACVILLE COAL CO.

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
641.0			UNCONSOLIDATED	11.0	0.0
630.0			SAND	11.0	11.0
619.0			SAND	8.0	22.0
611.0			SAND	8.0	30.0
603.0			CLAY	23.0	38.0
580.0			SANDY CLAY	27.0	61.0
553.0			SAND	8.0	88.0
545.0			CLAY	1.0	96.0
544.0			CALCAREOUS SHALE	18.0	97.0
526.0			CALCAREOUS SHALE	18.0	115.0
508.0			CALCAREOUS SHALE	7.0	133.0
501.0			CALCAREOUS SHALE	8.0	140.0
493.0			CALCAREOUS SHALE	14.0	148.0
479.0			CALCAREOUS SHALE	8.0	162.0
471.0			GRAY SHALE	17.0	170.0
454.0			SANDSTONE	10.0	187.0
444.0			BLACK SHALE	10.0	197.0
434.0			DARK SHALE	7.0	207.0
427.0			COAL	3.0	214.0
424.0			UNDERCLAY	8.0	217.0
416.0			UNDERCLAY	2.0	225.0
414.0			UNDERCLAY	7.0	227.0
407.0			SANDSTONE	7.0	234.0
400.0			SANDSTONE	5.0	241.0
395.0			GRAY SHALE	12.0	246.0
383.0			BLACK SHALE	4.0	258.0
379.0			BLACK SHALE	2.0	262.0
377.0			COAL	1.0	264.0
376.0			UNDERCLAY	0.3	265.0
375.7			UNDERCLAY	5.7	265.3
370.0			GRAY SHALE	12.0	271.0
358.0			GRAY SHALE	23.0	283.0
335.0			GRAY SHALE	28.0	306.0
307.0			BLACK SHALE	5.0	334.0
302.0			DARK SHALE	10.0	339.0
292.0			UNDERCLAY	5.0	349.0
287.0			SANDSTONE	18.0	354.0
269.0			DARK SHALE	8.0	372.0
261.0			BLACK SHALE	21.0	380.0

240.0	BLACK SHALE	6.5	401.0
233.5	COAL	3.5	407.5
230.0	UNDERCLAY	2.0	411.0
228.0	SANDSTONE	13.0	413.0
215.0	DARK SHALE	10.0	426.0
205.0	UNDERCLAY	19.0	436.0
186.0	UNDERCLAY	13.0	455.0
173.0	SANDSTONE	7.0	468.0

MAPID: 01100104000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 20 SENE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LADD LONGITUDE: -89.241676

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.44612

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 462.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 17

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
675.0			UNCONSOLIDATED	3.0	0.0	TOP SOIL
672.0			UNCONSOLIDATED	7.0	3.0	
665.0			UNCONSOLIDATED	5.0	10.0	
660.0			CLAY	30.0	15.0	
630.0			UNCONSOLIDATED	23.0	45.0	
607.0			CLAY	4.0	68.0	
603.0			SAND	14.0	72.0	
589.0			CLAY	14.0	86.0	
575.0			CLAY	2.0	100.0	
573.0			SHALE	7.0	102.0	
566.0			LIMESTONE	3.0	109.0	
563.0			SHALE	7.0	112.0	
556.0			CALCAREOUS SHALE	17.0	119.0	
539.0			LIMESTONE	2.0	136.0	
537.0			SHALE	10.0	138.0	
527.0			GRAY SHALE	6.0	148.0	
521.0			CALCAREOUS SHALE	6.0	154.0	
515.0			CALCAREOUS SHALE	10.0	160.0	
505.0			SANDSTONE	30.0	170.0	
475.0			CALCAREOUS SHALE	33.0	200.0	
442.0			SANDSTONE	5.0	233.0	
437.0			SANDY SHALE	12.0	238.0	
425.0			UNDERCLAY	6.0	250.0	
419.0			SHALE	2.0	256.0	
417.0			SHALE	2.0	258.0	
415.0			BLACK SHALE	5.0	260.0	
410.0			COAL	6.0	265.0	
404.0			UNDERCLAY	3.0	271.0	
401.0			SANDY SHALE	6.0	274.0	
395.0			CONGLOMERATE	5.0	280.0	
390.0			SANDY SHALE	15.0	285.0	
375.0			CALCAREOUS SHALE	10.0	300.0	
365.0			CONGLOMERATE	1.0	310.0	
364.0			CALCAREOUS SHALE	26.0	311.0	
338.0			BLACK SHALE	2.0	337.0	
336.0			GRAY SHALE	7.0	339.0	
329.0			BLACK SHALE	6.0	346.0	
323.0			UNDERCLAY	5.0	352.0	
318.0			GRAY SHALE	9.0	357.0	

309.0	SANDY SHALE	14.0	366.0
295.0	CALCAREOUS SHALE	15.0	380.0
280.0	BLACK SHALE	13.0	395.0
267.0	GRAY SHALE	6.0	408.0
261.0	COAL	3.0	414.0
258.0	UNDERCLAY	2.0	417.0
256.0	SANDSTONE	4.0	419.0
252.0	SANDY SHALE	6.0	423.0
246.0	CALCAREOUS SHALE	5.0	429.0
241.0	BLACK SHALE	6.0	434.0
235.0	CONGLOMERATE	1.0	440.0
234.0	SHALE	1.0	441.0
233.0	CALCAREOUS SHALE	13.0	442.0
220.0	SANDSTONE	3.0	455.0
217.0	SHALE	1.0	458.0
216.0	COAL	1.3	459.0
214.7	UNDERCLAY	1.8	460.3

MAPID: 01100105000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 24 SWSWSW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LADD LONGITUDE: -89.18003

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.438511

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 675.0 LOGGED (FT.): 447.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 21

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
261.0			SANDSTONE	3.0	414.0	
258.0			SHALE	27.0	417.0	
231.0			COAL	3.0	444.0	
675.0			UNCONSOLIDATED	2.0	0.0	BK SOIL
673.0			CLAY	18.0	2.0	
655.0			UNCONSOLIDATED	6.0	20.0	SD & GRAVEL
649.0			CLAY	14.0	26.0	
635.0			SAND	2.0	40.0	
633.0			CLAY	13.0	42.0	
620.0			SAND	5.0	55.0	
615.0			UNCONSOLIDATED	5.0	60.0	SD & GRAVEL
610.0			LIMESTONE	22.0	65.0	
588.0			SHALE	7.0	87.0	
581.0			COAL	0.3	94.0	
580.7			SHALE	10.8	94.3	
570.0			LIMESTONE	11.0	105.0	
559.0			SHALE	12.0	116.0	
547.0			LIMESTONE	0.5	128.0	
546.5			SHALE	10.5	128.5	
536.0			LIMESTONE	1.0	139.0	
535.0			SHALE	38.0	140.0	
497.0			LIMESTONE	2.0	178.0	
495.0			SHALE	18.0	180.0	
477.0			LIMESTONE	1.0	198.0	
476.0			SHALE	16.0	199.0	
460.0			SANDSTONE	8.0	215.0	
452.0			SANDY SHALE	16.0	223.0	
436.0			GRAY SHALE	10.0	239.0	
426.0			COAL	3.7	249.0	
422.3			UNDERCLAY	4.3	252.7	
418.0			SHALE	6.0	257.0	
412.0			SANDSTONE	12.0	263.0	
400.0			SHALE	1.0	275.0	
399.0			SANDSTONE	3.0	276.0	
396.0			SHALE	8.0	279.0	
388.0			LIMESTONE	1.0	287.0	
387.0			SHALE	4.0	288.0	
383.0			COAL	3.8	292.0	
379.2			UNDERCLAY	12.2	295.8	

367.0	SANDSTONE	11.0	308.0
356.0	SANDY SHALE	46.0	319.0
310.0	SHALE	9.0	365.0
301.0	SHALE	11.0	374.0
290.0	LIMESTONE	3.0	385.0
287.0	SANDY SHALE	6.0	388.0
281.0	SHALE	9.0	394.0
272.0	SANDSTONE	4.0	403.0
268.0	SANDY SHALE	7.0	407.0

MAPID: 01100106000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 25 SWSESW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LADD LONGITUDE: -89.176032

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.423953

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 468.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 8

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
650.0			UNCONSOLIDATED	2.0	0.0	TOP SOIL
648.0			CLAY	3.0	2.0	
645.0			UNCONSOLIDATED	4.0	5.0	
641.0			CLAY	1.0	9.0	
640.0			CLAY	18.0	10.0	
622.0			SAND	9.0	28.0	
613.0			GRAVEL	5.0	37.0	
608.0			CLAY	15.0	42.0	
593.0			CLAY	17.0	57.0	
576.0			LIMESTONE	12.5	74.0	
563.5			UNDERCLAY	3.5	86.5	
560.0			GRAY SHALE	4.6	90.0	
555.4			COAL	0.4	94.6	
555.0			GRAY SHALE	9.0	95.0	
546.0			LIMESTONE	13.0	104.0	
533.0			UNDERCLAY	10.0	117.0	
523.0			SHALE	11.0	127.0	
512.0			LIMESTONE	2.0	138.0	
510.0			GRAY SHALE	6.0	140.0	
504.0			LIMESTONE	2.0	146.0	
502.0			GRAY SHALE	8.0	148.0	
494.0			SHALE	12.0	156.0	
482.0			LIMESTONE	5.0	168.0	
477.0			SHALE	43.0	173.0	
434.0			SANDSTONE	13.0	216.0	
421.0			SANDY SHALE	22.0	229.0	
399.0			COAL	4.0	251.0	
395.0			UNDERCLAY	4.0	255.0	
391.0			LIMESTONE	6.0	259.0	
385.0			GRAY SHALE	3.0	265.0	
382.0			SANDY SHALE	24.0	268.0	
358.0			CALCAREOUS SHALE	0.5	292.0	
357.5			BLACK SHALE	0.5	292.5	
357.0			GRAY SHALE	0.7	293.0	
356.3			COAL	0.3	293.7	
356.0			COAL	1.4	294.0	
354.6			ROCK	0.2	295.4	
354.4			COAL	1.6	295.6	
352.8			UNDERCLAY	2.0	297.2	

350.8	LIMESTONE	5.5	299.2	
345.3	SANDY SHALE	76.0	304.7	
269.3	GRAY SHALE	7.0	380.7	
262.2	BLACK SHALE	2.0	387.8	
260.3	GRAY SHALE	5.0	389.7	
255.3	BLACK SHALE	6.0	394.7	
249.3	GRAY SHALE	7.3	400.7	
242.0	SANDY SHALE	8.0	408.0	
234.0	SANDSTONE	4.0	416.0	
230.0	SANDY SHALE	10.0	420.0	
220.0	GRAY SHALE	6.0	430.0	
214.0	DARK SHALE	9.0	436.0	
205.0	GRAY SHALE	1.0	445.0	
204.0	DARK SHALE	8.0	446.0	
196.0	GRAY SHALE	2.0	454.0	
194.0	BLACK SHALE	3.0	456.0	
191.0	GRAY SHALE	4.0	459.0	
187.0	COAL	2.2	463.0	
184.8	UNCLASSIFIED	1.0	465.2	SULPHUR
183.8	COAL	1.0	466.2	
182.8	SANDY SHALE	0.8	467.2	

MAPID: 01100107000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 27 NWNWSE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LADD LONGITUDE: -89.208762

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.429105

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): LOGGED (FT.): 458.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 7

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			UNCONSOLIDATED	14.0	0.0	SOIL AND CLAY
-			UNCONSOLIDATED	15.0	14.0	SD & GRAVEL
-			SAND	13.0	29.0	
-			CLAY	7.0	42.0	
-			UNCONSOLIDATED	27.0	49.0	SD & GRAVEL
-			CLAY	2.0	76.0	
-			LIMESTONE	5.0	78.0	
-			GRAY SHALE	16.0	83.0	
-			LIMESTONE	3.0	99.0	
-			GRAY SHALE	11.0	102.0	
-			GRAY SHALE	27.0	113.0	
-			LIMESTONE	3.0	140.0	
-			CALCAREOUS SHALE	15.0	143.0	
-			UNDERCLAY	12.0	158.0	
-			SANDY SHALE	18.0	170.0	
-			SANDSTONE	45.0	188.0	
-			GRAY SHALE	5.0	233.0	
-			CALCAREOUS SHALE	13.0	238.0	
-			COAL	2.1	251.0	
-			GRAY SHALE	11.9	253.1	
-			GRAY SHALE	10.0	265.0	
-			SANDY SHALE	15.0	275.0	
-			CALCAREOUS SHALE	6.5	290.0	
-			COAL	1.8	296.5	
-			SANDSTONE	0.2	298.3	
-			COAL	2.2	298.5	
-			GRAY SHALE	3.3	300.7	
-			LIMESTONE	4.5	304.0	
-			GRAY SHALE	6.5	308.5	
-			GRAY SHALE	20.0	315.0	
-			CALCAREOUS SHALE	43.0	335.0	
-			BLACK SHALE	2.0	378.0	
-			GRAY SHALE	4.0	380.0	
-			LIMESTONE	3.0	384.0	
-			BLACK SHALE	5.0	387.0	
-			UNDERCLAY	11.0	392.0	
-			LIMESTONE	4.0	403.0	
-			SANDSTONE	11.0	407.0	
-			CALCAREOUS SHALE	11.0	418.0	

-	CALCAREOUS SHALE	12.0	429.0
-	SHALE	2.5	441.0
-	CALCAREOUS SHALE	9.5	443.5
-	COAL	3.5	453.0
-	SANDSTONE	1.5	456.5

MAPID: 01100108000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 27 NWSE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LADD LONGITUDE: -89.207543

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.428206

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 700.0 LOGGED (FT.): 457.0

LOG TYPE: Drillers Log

SOURCE: ST. PAUL COAL CO. 27

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
700.0			UNCONSOLIDATED	2.5	0.0	TOP SOIL
697.5			CLAY	2.5	2.5	
695.0			SAND	3.0	5.0	
692.0			SANDY CLAY	20.0	8.0	
672.0			CLAY	8.0	28.0	
664.0			SAND	14.0	36.0	
650.0			CLAY	3.0	50.0	
647.0			GRAVEL	9.0	53.0	
638.0			GRAVEL	2.0	62.0	
636.0			LIMESTONE	7.0	64.0	
629.0			CALCAREOUS SHALE	3.0	71.0	
626.0			LIMESTONE	8.5	74.0	
617.5			DARK SHALE	11.5	82.5	
606.0			COAL	0.3	94.0	
605.7			UNDERCLAY	7.8	94.3	
598.0			CALCAREOUS SHALE	13.0	102.0	
585.0			CALCAREOUS SHALE	6.0	115.0	
579.0			CALCAREOUS SHALE	2.0	121.0	
577.0			CALCAREOUS SHALE	3.0	123.0	
574.0			CALCAREOUS SHALE	4.0	126.0	
570.0			SHALE	3.0	130.0	
567.0			CALCAREOUS SHALE	4.0	133.0	
563.0			CALCAREOUS SHALE	2.0	137.0	
561.0			CALCAREOUS SHALE	5.0	139.0	
556.0			CALCAREOUS SHALE	2.0	144.0	
554.0			CALCAREOUS SHALE	6.0	146.0	
548.0			CALCAREOUS SHALE	12.0	152.0	
536.0			LIMESTONE	1.6	164.0	
534.4			SHALE	7.4	165.6	
527.0			CALCAREOUS SHALE	10.0	173.0	
517.0			SANDY SHALE	48.0	183.0	
469.0			DARK SHALE	13.8	231.0	
455.2			BLACK SHALE	2.2	244.8	
453.0			DARK SHALE	0.9	247.0	
452.1			COAL	3.9	247.9	
448.2			UNDERCLAY	13.2	251.8	
435.0			SANDY SHALE	11.0	265.0	
424.0			SANDSTONE	11.0	276.0	
413.0			CALCAREOUS SHALE	7.8	287.0	

405.2	COAL	2.7	294.8
402.5	PYRITE	0.1	297.5
402.4	COAL	3.3	297.6
399.2	UNDERCLAY	3.2	300.8
396.0	CALCAREOUS SHALE	5.0	304.0
391.0	CALCAREOUS SHALE	2.0	309.0
389.0	CALCAREOUS SHALE	60.0	311.0
329.0	BLACK SHALE	3.0	371.0
326.0	CALCAREOUS SHALE	15.0	374.0
311.0	BLACK SHALE	3.0	389.0
308.0	CALCAREOUS SHALE	3.2	392.0
304.8	LIMESTONE	2.1	395.2
302.7	SANDSTONE	17.8	397.3
285.0	DARK SHALE	25.0	415.0
260.0	BLACK SHALE	3.0	440.0
257.0	DARK SHALE	9.7	443.0
247.3	COAL	3.1	452.7
244.2	SANDY SHALE	1.3	455.8

MAPID: 01100110000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 27 NWSE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LADD LONGITUDE: -89.207543

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.428206

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 700.0 LOGGED (FT.): 462.0

LOG TYPE: Drillers Log

SOURCE: ST. PAUL COAL CO. 26

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
700.0			UNCONSOLIDATED	2.5	0.0	TOP SOIL
697.5			CLAY	2.5	2.5	
695.0			SAND	3.0	5.0	
692.0			SANDY CLAY	20.0	8.0	
672.0			CLAY	8.0	28.0	
664.0			SAND	14.0	36.0	
650.0			CLAY	3.0	50.0	
647.0			GRAVEL	11.3	53.0	
635.7			LIMESTONE	5.2	64.3	
630.5			CALCAREOUS SHALE	5.5	69.5	
625.0			LIMESTONE	8.0	75.0	
617.0			DARK SHALE	2.0	83.0	
615.0			COAL	0.3	85.0	
614.7			CALCAREOUS SHALE	18.8	85.3	
596.0			SHALE	10.0	104.0	
586.0			CALCAREOUS SHALE	11.0	114.0	
575.0			CALCAREOUS SHALE	9.0	125.0	
566.0			CALCAREOUS SHALE	7.0	134.0	
559.0			CALCAREOUS SHALE	2.0	141.0	
557.0			SHALE	7.0	143.0	
550.0			CALCAREOUS SHALE	2.0	150.0	
548.0			CALCAREOUS SHALE	5.0	152.0	
543.0			SHALE	7.4	157.0	
535.6			LIMESTONE	1.6	164.4	
534.0			SHALE	8.0	166.0	
526.0			CALCAREOUS SHALE	6.0	174.0	
520.0			CALCAREOUS SHALE	2.0	180.0	
518.0			SANDSTONE	48.0	182.0	
470.0			CALCAREOUS SHALE	14.0	230.0	
456.0			BLACK SHALE	2.0	244.0	
454.0			CALCAREOUS SHALE	2.7	246.0	
451.3			COAL	3.8	248.7	
447.6			UNDERCLAY	2.6	252.4	
445.0			CALCAREOUS SHALE	2.0	255.0	
443.0			CALCAREOUS SHALE	12.0	257.0	
431.0			SANDY SHALE	15.0	269.0	
416.0			SANDY SHALE	3.0	284.0	
413.0			CALCAREOUS SHALE	8.0	287.0	
405.0			COAL	6.0	295.0	

399.0	UNDERCLAY	3.0	301.0
396.0	CALCAREOUS SHALE	5.0	304.0
391.0	CALCAREOUS SHALE	5.0	309.0
386.0	SANDY SHALE	13.0	314.0
373.0	CALCAREOUS SHALE	50.5	327.0
322.5	BLACK SHALE	2.5	377.5
320.0	CALCAREOUS SHALE	17.0	380.0
303.0	LIMESTONE	2.0	397.0
301.0	LIMESTONE	6.0	399.0
295.0	SANDY SHALE	13.0	405.0
282.0	CALCAREOUS SHALE	34.8	418.0
247.2	COAL	2.7	452.8
244.5	SANDSTONE	5.2	455.5
239.3	UNDERCLAY	1.3	460.7

MAPID: 01100111000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 27 SWNW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LADD LONGITUDE: -89.217265

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.431753

DATE COLLECTED: 10 / 0 / 1904

SURFACE ELEVATION (FT.): LOGGED (FT.): 500.0

LOG TYPE: Drillers Log

SOURCE: ST. PAUL COAL CO.

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
-			SHALE	2.0	266.0	
-			BLACK SHALE	3.0	268.0	
-			COAL	3.0	271.0	
-			UNDERCLAY	1.0	274.0	
-			UNDERCLAY	3.0	275.0	
-			UNDERCLAY	2.0	278.0	
-			CALCAREOUS SHALE	3.0	280.0	
-			CALCAREOUS SHALE	3.0	283.0	
-			CALCAREOUS SHALE	1.0	286.0	
-			CALCAREOUS SHALE	2.0	287.0	
-			CALCAREOUS SHALE	3.0	289.0	
-			CALCAREOUS SHALE	4.0	292.0	
-			CALCAREOUS SHALE	1.0	296.0	
-			SANDSTONE	2.0	297.0	
-			SANDSTONE	3.0	299.0	
-			SANDSTONE	3.0	302.0	
-			SHALE	1.0	305.0	
-			SHALE	1.0	306.0	
-			SHALE	3.0	307.0	
-			SHALE	3.0	310.0	
-			SHALE	1.0	313.0	
-			BLACK SHALE	3.0	314.0	
-			COAL	3.0	317.0	
-			COAL	3.0	320.0	
-			CALCAREOUS SHALE	3.0	323.0	
-			CALCAREOUS SHALE	3.0	326.0	
-			CALCAREOUS SHALE	2.0	329.0	
-			CALCAREOUS SHALE	6.0	331.0	
-			CALCAREOUS SHALE	5.0	337.0	
-			CALCAREOUS SHALE	4.0	342.0	
-			CALCAREOUS SHALE	2.0	346.0	
-			SHALE	30.0	348.0	
-			SHALE	22.0	378.0	
-			BLACK SHALE	4.0	400.0	
-			LIMESTONE	9.0	404.0	
-			BLACK SHALE	8.0	413.0	
-			CALCAREOUS SHALE	3.0	421.0	
-			CALCAREOUS SHALE	2.0	424.0	
-			SANDSTONE	21.0	426.0	

-	SHALE	22.0	447.0	
-	BLACK SHALE	7.0	469.0	
-	SHALE	4.0	476.0	
-	COAL	4.0	480.0	
-	UNDERCLAY	2.0	484.0	
-	SANDSTONE	14.0	486.0	
-	UNCONSOLIDATED	4.5	0.0	
-	UNCONSOLIDATED	1.5	4.5	
-	CLAY	4.0	6.0	
-	CLAY	4.0	10.0	
-	CLAY	2.0	14.0	
-	CLAY	4.0	16.0	
-	CLAY	2.0	20.0	
-	GRAVEL	3.0	22.0	GRAVEL W/ SOME CLY
-	GRAVEL	3.0	25.0	GRAVEL W/ SOME CLY
-	GRAVEL	3.0	28.0	GRAVEL W/ SOME CLY
-	GRAVEL	4.0	31.0	GRAVEL W/ SOME CLY
-	GRAVEL	4.0	35.0	GRAVEL W/ SOME CLY
-	GRAVEL	3.0	39.0	GRAVEL W/ SOME CLY
-	GRAVEL	4.0	42.0	GRAVEL W/ SOME CLY
-	GRAVEL	3.0	46.0	GRAVEL W/ SOME CLY
-	CLAY	3.0	49.0	
-	CLAY	3.0	52.0	
-	SANDY CLAY	3.0	55.0	
-	UNCONSOLIDATED	3.0	58.0	SILT
-	UNCONSOLIDATED	3.0	61.0	SILT
-	CLAY	4.0	64.0	
-	CLAY	2.0	68.0	
-	CLAY	3.0	70.0	
-	CLAY	2.0	73.0	
-	GRAVEL	2.0	75.0	GRAVEL AND CLAY
-	GRAVEL	1.0	77.0	GRAVEL AND CLAY
-	GRAVEL	3.0	78.0	GRAVEL AND CLAY
-	GRAVEL	2.0	81.0	
-	LIMESTONE	2.0	83.0	
-	LIMESTONE	4.0	85.0	
-	SHALE	2.0	89.0	
-	SHALE	2.0	91.0	
-	SHALE	3.0	93.0	
-	SHALE	3.0	96.0	
-	LIMESTONE	3.0	99.0	
-	LIMESTONE	3.0	102.0	
-	BLACK SHALE	2.0	105.0	
-	BLACK SHALE	3.0	107.0	
-	BLACK SHALE	4.0	110.0	
-	CALCAREOUS SHALE	5.0	114.0	
-	CALCAREOUS SHALE	4.0	119.0	
-	CALCAREOUS SHALE	3.0	123.0	

-	LIMESTONE	4.0	126.0
-	LIMESTONE	2.0	130.0
-	LIMESTONE	2.0	132.0
-	LIMESTONE	3.0	134.0
-	CALCAREOUS SHALE	3.0	137.0
-	CALCAREOUS SHALE	2.0	140.0
-	CALCAREOUS SHALE	4.0	142.0
-	CALCAREOUS SHALE	2.0	146.0
-	CALCAREOUS SHALE	4.0	148.0
-	UNDERCLAY	4.0	152.0
-	CALCAREOUS SHALE	3.0	156.0
-	SHALE	6.0	159.0
-	CALCAREOUS SHALE	5.0	165.0
-	CALCAREOUS SHALE	5.0	170.0
-	SHALE	2.0	175.0
-	CALCAREOUS SHALE	5.0	177.0
-	SHALE	3.0	182.0
-	SHALE	4.0	185.0
-	SHALE	2.0	189.0
-	SHALE	5.0	191.0
-	CALCAREOUS SHALE	4.0	196.0
-	CALCAREOUS SHALE	3.0	200.0
-	CALCAREOUS SHALE	3.0	203.0
-	SANDSTONE	3.0	206.0
-	SANDSTONE	2.0	209.0
-	SANDSTONE	4.0	211.0
-	SANDSTONE	3.0	215.0
-	SANDSTONE	2.0	218.0
-	SANDSTONE	2.0	220.0
-	SANDSTONE	3.0	222.0
-	SANDSTONE	2.0	225.0
-	SANDSTONE	2.0	227.0
-	SANDSTONE	3.0	229.0
-	SANDSTONE	3.0	232.0
-	LIMESTONE	1.0	235.0
-	SANDSTONE	2.0	236.0
-	SANDSTONE	3.0	238.0
-	SANDSTONE	3.0	241.0
-	SANDSTONE	2.0	244.0
-	SANDSTONE	2.0	246.0
-	SANDSTONE	3.0	248.0
-	SANDSTONE	3.0	251.0
-	SANDSTONE	3.0	254.0
-	SHALE	3.0	257.0
-	SHALE	3.0	260.0
-	SHALE	3.0	263.0

MAPID: 01100114000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 29 SWNW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: MALDEN LONGITUDE: -89.255609

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.431423

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 681.5 LOGGED (FT.): 420.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 6

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
681.5			CLAY	15.0	0.0
666.5			GRAVEL	20.0	15.0
646.5			SANDY CLAY	17.0	35.0
629.5			SAND	3.0	52.0
626.5			CLAY	5.0	55.0
621.5			GRAVEL	25.0	60.0
596.5			CLAY	15.0	85.0
581.5			CLAY	18.0	100.0
563.5			LIMESTONE	1.0	118.0
562.5			SANDY SHALE	20.0	119.0
542.5			LIMESTONE	2.0	139.0
540.5			SANDY SHALE	29.0	141.0
511.5			SANDY SHALE	14.0	170.0
497.5			SANDSTONE	10.0	184.0
487.5			SANDY SHALE	18.0	194.0
469.5			CALCAREOUS SHALE	9.0	212.0
460.5			COAL	3.5	221.0
457.0			SANDY SHALE	17.0	224.5
440.0			SANDSTONE	1.5	241.5
438.5			SANDY SHALE	12.0	243.0
426.5			LIMESTONE	1.0	255.0
425.5			BLACK SHALE	6.0	256.0
419.5			COAL	5.5	262.0
414.0			SANDY SHALE	0.5	267.5
413.5			SANDY SHALE	1.0	268.0
412.5			LIMESTONE	6.0	269.0
406.5			LIMESTONE	2.0	275.0
404.5			SANDY SHALE	19.0	277.0
385.5			SHALE	17.0	296.0
368.5			SHALE	32.0	313.0
336.5			BLACK SHALE	3.0	345.0
333.5			SANDSTONE	10.0	348.0
323.5			BLACK SHALE	2.0	358.0
321.5			SANDSTONE	14.0	360.0
307.5			SANDY SHALE	15.0	374.0
292.5			CALCAREOUS SHALE	22.0	389.0
270.5			BLACK SHALE	5.0	411.0
265.5			COAL	3.0	416.0
262.5			SANDY SHALE	1.0	419.0



MAPID: 01100117000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 30 SESW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: MALDEN LONGITUDE: -89.270065

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.424109

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): LOGGED (FT.): 452.0

LOG TYPE: Drillers Log

SOURCE: ST. PAUL & BRACVILLE COAL CO. 35

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			CLAY	10.0	0.0
-			SAND	5.0	10.0
-			SANDY CLAY	22.0	15.0
-			SAND	35.0	37.0
-			GRAVEL	3.0	72.0
-			SANDY CLAY	29.0	75.0
-			SANDY CLAY	10.0	104.0
-			SAND	19.0	114.0
-			SANDY CLAY	31.0	133.0
-			SAND	46.0	164.0
-			SAND	20.0	210.0
-			SANDSTONE	2.0	230.0
-			UNDERCLAY	4.0	232.0
-	CARBONDALE	DANVILLE	COAL	3.6	236.0
-	CARBONDALE		UNDERCLAY	11.4	239.6
-	CARBONDALE		SANDSTONE	10.0	251.0
-	CARBONDALE		GRAY SHALE	7.0	261.0
-	CARBONDALE		UNDERCLAY	2.0	268.0
-	CARBONDALE		BLACK SHALE	9.7	270.0
-	CARBONDALE	HERRIN	COAL	4.8	279.7
-	CARBONDALE		UNDERCLAY	3.5	284.5
-	CARBONDALE		LIMESTONE	13.0	288.0
-	CARBONDALE		UNDERCLAY	6.0	301.0
-	CARBONDALE		DARK SHALE	28.0	307.0
-	CARBONDALE		DARK SHALE	19.0	335.0
-	CARBONDALE		CALCAREOUS SHALE	8.0	354.0
-	CARBONDALE		BLACK SHALE	3.0	362.0
-	CARBONDALE		GRAY SHALE	7.0	365.0
-	CARBONDALE		CALCAREOUS SHALE	3.0	372.0
-	CARBONDALE		BLACK SHALE	3.0	375.0
-	CARBONDALE		LIMESTONE	7.0	378.0
-	CARBONDALE		SANDY SHALE	14.0	385.0
-	CARBONDALE		CALCAREOUS SHALE	26.0	399.0
-	CARBONDALE		CALCAREOUS SHALE	3.0	425.0
-	CARBONDALE		BLACK SHALE	2.0	428.0
-	CARBONDALE		CALCAREOUS SHALE	10.0	430.0
-	CARBONDALE	COLCHESTER	COAL	3.5	440.0
-			SANDSTONE	8.5	443.5

MAPID: 01100118000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 33 NWSE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LADD LONGITUDE: -89.226769

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.413304

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): LOGGED (FT.): 472.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 2

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
-			CLAY	7.0	0.0
-			SANDY CLAY	5.0	7.0
-			GRAVEL	80.0	12.0
-			CLAY	36.0	92.0
-			SANDY SHALE	2.0	128.0
-			SANDSTONE	3.0	130.0
-			SANDY SHALE	4.0	133.0
-			LIMESTONE	3.0	137.0
-			SANDY SHALE	7.0	140.0
-			LIMESTONE	6.0	147.0
-			SANDY SHALE	9.0	153.0
-			SANDSTONE	2.0	162.0
-			LIMESTONE	3.5	164.0
-			SANDY SHALE	1.5	167.5
-			LIMESTONE	6.0	169.0
-			SANDY SHALE	17.0	175.0
-			SANDSTONE	54.0	192.0
-			CALCAREOUS SHALE	17.0	246.0
-	CARBONDALE	DANVILLE	COAL	1.8	263.0
-	CARBONDALE		SANDY SHALE	5.2	264.8
-	CARBONDALE		SANDSTONE	27.0	270.0
-	CARBONDALE		LIMESTONE	2.0	297.0
-	CARBONDALE		CALCAREOUS SHALE	3.0	299.0
-	CARBONDALE	HERRIN	COAL	6.2	302.0
-	CARBONDALE		UNDERCLAY	0.8	308.2
-	CARBONDALE		LIMESTONE	3.0	309.0
-	CARBONDALE		SANDSTONE	3.0	312.0
-	CARBONDALE		SANDY SHALE	29.0	315.0
-	CARBONDALE		CALCAREOUS SHALE	7.0	344.0
-	CARBONDALE		CALCAREOUS SHALE	39.0	351.0
-	CARBONDALE		SANDY SHALE	4.0	390.0
-	CARBONDALE		CALCAREOUS SHALE	3.0	394.0
-	CARBONDALE		LIMESTONE	1.0	397.0
-	CARBONDALE		BLACK SHALE	7.0	398.0
-	CARBONDALE		CALCAREOUS SHALE	5.0	405.0
-	CARBONDALE		SANDY SHALE	22.0	410.0
-	CARBONDALE		BLACK SHALE	2.0	432.0
-	CARBONDALE		DARK SHALE	22.0	434.0
-	CARBONDALE		DARK SHALE	11.0	456.0

-	CARBONDALE	COLCHESTER	COAL	3.5	467.0
-			UNDERCLAY	0.5	470.5
-			SANDSTONE	1.0	471.0

MAPID: 01100119000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 33 SWNE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LADD LONGITUDE: -89.226784

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.416988

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 665.0 LOGGED (FT.): 509.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 51

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
665.0			UNCONSOLIDATED	151.0	0.0	CLY, SAND, AND GRAVEL
514.0			CALCAREOUS SHALE	1.0	151.0	
513.0			LIMESTONE	1.5	152.0	
511.5			CALCAREOUS SHALE	1.0	153.5	
510.5			LIMESTONE	0.5	154.5	
510.0			SHALE	13.0	155.0	
497.0			SHALE	2.0	168.0	
495.0			LIMESTONE	4.0	170.0	
491.0			SHALE	19.0	174.0	
472.0			SANDY SHALE	17.0	193.0	
455.0			SHALE	23.0	210.0	
432.0			SANDSTONE	27.0	233.0	
405.0			DARK SHALE	3.0	260.0	
402.0	CARBONDALE	DANVILLE	COAL	3.8	263.0	
398.2	CARBONDALE		DARK SHALE	8.2	266.8	
390.0	CARBONDALE		SANDY SHALE	2.0	275.0	
388.0	CARBONDALE		SANDSTONE	13.0	277.0	
375.0	CARBONDALE		SHALE	7.0	290.0	
368.0	CARBONDALE		LIMESTONE	0.5	297.0	
367.5	CARBONDALE		DARK SHALE	0.5	297.5	
367.0	CARBONDALE		LIGHT SHALE	7.0	298.0	
360.0	CARBONDALE	HERRIN	COAL	2.2	305.0	
357.8	CARBONDALE	HERRIN	UNCLASSIFIED	0.1	307.2	SULPHUR
357.7	CARBONDALE	HERRIN	COAL	1.8	307.3	
355.9	CARBONDALE	HERRIN	SHALE	0.2	309.1	
355.7	CARBONDALE	HERRIN	COAL	0.5	309.3	
355.2			UNDERCLAY	2.3	309.8	
353.0			LIMESTONE	10.0	312.0	
343.0			SANDY SHALE	14.0	322.0	
329.0			SANDY SHALE	9.0	336.0	
320.0			LIGHT SHALE	46.0	345.0	
274.0			LIGHT SHALE	2.0	391.0	
272.0			LIGHT SHALE	5.0	393.0	
267.0			DARK SHALE	11.0	398.0	
256.0			LIMESTONE	10.0	409.0	
246.0			LIGHT SHALE	1.0	419.0	
245.0			SANDSTONE	9.0	420.0	
236.0			SANDY SHALE	11.0	429.0	
225.0			DARK SHALE	3.0	440.0	

222.0	LIGHT SHALE	34.0	443.0
188.0	SANDY SHALE	2.0	477.0
186.0	DARK SHALE	11.0	479.0
175.0	GRAY SHALE	1.0	490.0
174.0	LIGHT SHALE	11.0	491.0
163.0	UNDERCLAY	7.0	502.0

MAPID: 01100120000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 33 SESEWNSE

FOOT (NS): 0 S FOOT (EW): 0 E

QUADRANGLE: LADD LONGITUDE: -89.224352

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.411473

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 656.0 LOGGED (FT.): 327.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 52

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
656.0			UNCONSOLIDATED	123.0	0.0	CLY, GRAVEL, AND SAND
533.0			LIGHT SHALE	7.0	123.0	
526.0			LIMESTONE	2.0	130.0	
524.0			CALCAREOUS SHALE	2.0	132.0	
522.0			LIGHT SHALE	8.0	134.0	
514.0			LIMESTONE	1.0	142.0	
513.0			CALCAREOUS SHALE	5.0	143.0	
508.0			LIMESTONE	4.0	148.0	
504.0			DARK SHALE	7.0	152.0	
497.0			LIMESTONE	4.0	159.0	
493.0			CALCAREOUS SHALE	0.5	163.0	
492.5			LIMESTONE	1.5	163.5	
491.0			CALCAREOUS SHALE	2.0	165.0	
489.0			LIMESTONE	5.0	167.0	
484.0			SHALE	11.0	172.0	
473.0			LIGHT SHALE	5.0	183.0	
468.0			SHALE	6.0	188.0	
462.0			SANDSTONE	63.0	194.0	
399.0			DARK SHALE	16.0	257.0	
383.0	CARBONDALE	DANVILLE	COAL	3.5	273.0	
379.5	CARBONDALE		UNDERCLAY	11.5	276.5	
368.0	CARBONDALE		LIMESTONE	0.5	288.0	
367.5	CARBONDALE		LIGHT SHALE	1.5	288.5	
366.0	CARBONDALE		SANDSTONE	14.0	290.0	
352.0	CARBONDALE		LIGHT SHALE	14.0	304.0	
338.0	CARBONDALE		BLACK SHALE	3.0	318.0	
335.0	CARBONDALE		SANDSTONE	1.0	321.0	
334.0	CARBONDALE	HERRIN	COAL	0.5	322.0	
333.5			SANDSTONE	1.5	322.5	
332.0			UNDERCLAY	1.5	324.0	
330.5			LIMESTONE	1.5	325.5	

MAPID: 01100122000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 34 NWSW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LADD LONGITUDE: -89.217118

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.413384

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 655.0 LOGGED (FT.): 461.0

LOG TYPE: Drillers Log

SOURCE: ST. PAUL & BRACVILLE COAL CO. 23

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)	
				UNIT	OVERBURDEN COMMENT
655.0			UNCONSOLIDATED	2.0	0.0
653.0			CLAY	3.0	2.0
650.0			SAND	5.0	5.0
645.0			GRAVEL	2.0	10.0
643.0			SAND	32.0	12.0
611.0			SANDY CLAY	16.0	44.0
595.0			SAND	23.0	60.0
572.0			SANDY CLAY	2.0	83.0
570.0			SAND	8.0	85.0
562.0			GRAVEL	5.0	93.0
557.0			CLAY	3.0	98.0
554.0			CLAY	8.0	101.0
546.0			CALCAREOUS SHALE	7.0	109.0
539.0			CALCAREOUS SHALE	2.3	116.0
536.7			CALCAREOUS SHALE	8.7	118.3
528.0			LIMESTONE	4.0	127.0
524.0			LIMESTONE	6.0	131.0
518.0			CALCAREOUS SHALE	4.0	137.0
514.0			SHALE	9.0	141.0
505.0			CALCAREOUS SHALE	1.0	150.0
504.0			LIMESTONE	3.5	151.0
500.5			SHALE	16.5	154.5
484.0			CALCAREOUS SHALE	5.0	171.0
479.0			SANDY SHALE	8.0	176.0
471.0			SANDSTONE	45.0	184.0
426.0			CALCAREOUS SHALE	9.0	229.0
417.0			CALCAREOUS SHALE	8.2	238.0
408.8	CARBONDALE	DANVILLE	COAL	1.2	246.2
407.7	CARBONDALE		UNDERCLAY	5.7	247.3
402.0	CARBONDALE		CALCAREOUS SHALE	5.0	253.0
397.0	CARBONDALE		LIMESTONE	2.5	258.0
394.5	CARBONDALE		SANDSTONE	8.5	260.5
386.0	CARBONDALE		SANDY SHALE	13.0	269.0
373.0	CARBONDALE		BLACK SHALE	3.0	282.0
370.0	CARBONDALE	HERRIN	COAL	4.2	285.0
365.8	CARBONDALE	HERRIN	SHALE	0.2	289.2
365.7	CARBONDALE	HERRIN	COAL	0.9	289.3
364.7	CARBONDALE		UNDERCLAY	0.8	290.3
364.0	CARBONDALE		CALCAREOUS SHALE	1.0	291.0

363.0	CARBONDALE		LIMESTONE	1.0	292.0
362.0	CARBONDALE		SANDY SHALE	29.0	293.0
333.0	CARBONDALE		CALCAREOUS SHALE	49.0	322.0
284.0	CARBONDALE		BLACK SHALE	4.0	371.0
280.0	CARBONDALE		LIMESTONE	5.0	375.0
275.0	CARBONDALE		BLACK SHALE	7.5	380.0
267.5	CARBONDALE		CALCAREOUS SHALE	5.0	387.5
262.5	CARBONDALE		LIMESTONE	3.2	392.5
259.3	CARBONDALE		SANDSTONE	11.3	395.7
248.0	CARBONDALE		SANDY SHALE	9.0	407.0
239.0	CARBONDALE		CALCAREOUS SHALE	28.0	416.0
211.0	CARBONDALE		BLACK SHALE	4.3	444.0
206.7	CARBONDALE		CALCAREOUS SHALE	2.6	448.3
204.2	CARBONDALE	COLCHESTER	COAL	3.6	450.8
200.6			UNDERCLAY	5.6	454.4
195.0			CALCAREOUS SHALE	1.0	460.0

MAPID: 01100123000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 17N 11E SECTION: 34 NW

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LADD LONGITUDE: -89.214728

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.418962

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 665.0 LOGGED (FT.): 444.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. 53

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
665.0			UNCONSOLIDATED	92.0	0.0	CLY, GRAVEL, AND SAND
573.0			LIMESTONE	2.0	92.0	
571.0			SHALE	9.0	94.0	
562.0			CALCAREOUS SHALE	15.0	103.0	
547.0			CALCAREOUS SHALE	27.0	118.0	
520.0			SHALE	17.0	145.0	
503.0			CALCAREOUS SHALE	9.0	162.0	
494.0			SANDSTONE	57.0	171.0	
437.0			DARK SHALE	11.0	228.0	
426.0	CARBONDALE	DANVILLE	COAL	3.7	239.0	
422.3	CARBONDALE		UNDERCLAY	1.3	242.7	
421.0	CARBONDALE		LIGHT SHALE	12.0	244.0	
409.0	CARBONDALE		SANDSTONE	12.0	256.0	
397.0	CARBONDALE		LIGHT SHALE	9.0	268.0	
388.0	CARBONDALE		DARK SHALE	3.0	277.0	
385.0	CARBONDALE	HERRIN	COAL	5.6	280.0	
379.4	CARBONDALE		UNDERCLAY	1.4	285.6	
378.0	CARBONDALE		LIMESTONE	2.0	287.0	
376.0	CARBONDALE		LIGHT SHALE	24.0	289.0	
352.0	CARBONDALE		DARK SHALE	52.0	313.0	
300.0	CARBONDALE		LIMESTONE	1.0	365.0	
299.0	CARBONDALE		LIGHT SHALE	4.0	366.0	
295.0	CARBONDALE		DARK SHALE	3.0	370.0	
292.0	CARBONDALE		BLACK SHALE	5.0	373.0	
287.0	CARBONDALE		LIGHT SHALE	4.0	378.0	
283.0	CARBONDALE		LIMESTONE	10.0	382.0	
273.0	CARBONDALE		SANDSTONE	11.0	392.0	
262.0	CARBONDALE		DARK SHALE	27.0	403.0	
235.0	CARBONDALE		GRAY SHALE	9.0	430.0	
226.0	CARBONDALE	COLCHESTER	COAL	3.2	439.0	
222.8			CALCAREOUS SHALE	1.8	442.2	

MAPID: 01100124000C VERSION: 1

PROJECT: NCRDS94

COUNTY: BUREAU TWP/RNG: 18N 10E SECTION: 36 NWNWNE

FOOT (NS): 0 FOOT (EW): 0

QUADRANGLE: LA MOILLE LONGITUDE: -89.284894

GEOLOGIST: HOKE

CONFIDENTIAL: N LATITUDE: 41.508956

DATE COLLECTED: 0 / 0 / 0

SURFACE ELEVATION (FT.): 769.0 LOGGED (FT.): 358.0

LOG TYPE: Drillers Log

SOURCE: WHITEBREAST FUEL CO. C

WELL TYPE: Coal Test

COMMENT:

ELEVATION TOP (FT.)	FORMATION	MEMBER	LITHOLOGY	THICKNESS (FT.)		COMMENT
				UNIT	OVERBURDEN	
769.0			UNCONSOLIDATED	4.0	0.0	LOAM
765.0			CLAY	7.0	4.0	
758.0			GRAVEL	2.5	11.0	
755.5			CLAY	8.5	13.5	BLU CLY; BLU
747.0			SANDY CLAY	5.0	22.0	
742.0			SAND	19.0	27.0	
723.0			CLAY	3.0	46.0	
720.0			GRAVEL	0.5	49.0	
719.5			CLAY	1.5	49.5	
718.0			HARD PAN	7.5	51.0	
710.5			HARD PAN	13.5	58.5	
697.0			SANDY CLAY	12.0	72.0	
685.0			CLAY	28.0	84.0	
657.0			CLAY	8.0	112.0	
649.0			SAND	9.0	120.0	
640.0			CLAY	12.0	129.0	
628.0			SANDY CLAY	9.0	141.0	
619.0			SAND	17.0	150.0	
602.0			SAND	8.0	167.0	
594.0			SANDY CLAY	5.0	175.0	
589.0			SAND	9.0	180.0	
580.0			SANDY CLAY	2.5	189.0	
577.5			SAND	11.0	191.5	
566.5			SAND	6.5	202.5	SD & GRAVEL
560.0			SANDY CLAY	3.5	209.0	
556.5			SANDY CLAY	10.0	212.5	
546.5			GRAVEL	1.5	222.5	GRAVEL & SD
545.0			SAND	9.5	224.0	GRAVEL & SD
535.5			SAND	15.0	233.5	GRAVEL & SD
520.5			SAND	3.5	248.5	SD & GRAVEL
517.0			CLAY	0.5	252.0	
516.5			SAND	13.0	252.5	
503.5			SAND	6.5	265.5	
497.0			SAND	10.5	272.0	
486.5			SAND	18.0	282.5	SD & GRAVEL
468.5			SAND	5.0	300.5	
463.5			GRAVEL	3.0	305.5	
460.5			SHALE	1.0	308.5	
459.5			DARK SHALE	2.5	309.5	

457.0	CALCAREOUS SHALE	7.0	312.0
450.0	SHALE	1.5	319.0
448.5	CALCAREOUS SHALE	6.5	320.5
442.0	BLACK SHALE	3.0	327.0
439.0	GRAY SHALE	0.7	330.0
438.3	COAL	3.5	330.7
434.8	SANDSTONE	0.3	334.2
434.5	CALCAREOUS SHALE	9.5	334.5
425.0	BLACK SHALE	6.0	344.0
419.0	LIMESTONE	3.0	350.0
416.0	LIMESTONE	0.5	353.0
415.5	LIMESTONE	4.5	353.5
