

# Status Report



**Total Records: 45**

| Top 3 County Records |    | Top 3 Log Type Records |    | Top 3 Coal Records |    | Top 3 Member Records      |    |
|----------------------|----|------------------------|----|--------------------|----|---------------------------|----|
| Kankakee             | 45 | Drillers Log           | 45 | HOUCHIN CREEK      | 27 | HOUCHIN CREEK COAL        | 27 |
|                      |    |                        |    | COLCHESTER         | 16 | COLCHESTER COAL           | 16 |
|                      |    |                        |    | CARDIFF            | 3  | FRANCIS CREEK SANDY SHALE | 5  |

## 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 |
|---------------|-----------|------------|------------|-----------------|-------------|----------|----------|
| EXCELLO       | SHALE     | 61.4       | 52.8       | 70.0            | 5.5         | 5.0      | 6.0      |
| HOUCHIN CREEK | COAL      | 93.3       | 38.3       | 131.2           | 3.2         | 1.0      | 5.1      |
| LOWELL        | COAL      | 69.5       | 59.2       | 79.7            | 2.5         | 1.5      | 3.5      |
| FRANCIS CREEK | SANDSTONE | 70.3       | 63.6       | 89.1            | 23.9        | 0.0      | 61.0     |
| CARDIFF       | COAL      | 73.6       | 63.2       | 83.9            | 4.3         | 4.1      | 4.6      |
| COLCHESTER    | COAL      | 149.4      | 65.9       | 198.0           | 3.2         | 1.5      | 7.4      |
|               |           |            |            | <b>Net Coal</b> | <b>13.2</b> |          |          |

## Coal Logs

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

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

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

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

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

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

**MAPID:** 09190000000C    **VERSION:** 1    **PROJECT:** NCRDS02  
**COUNTY:** KANKAKEE    **TWP/RNG:** 30N 9E    **SECTION:** 5    **QUARTERS/FOOTAGES:** 1' S line, 1' E line of SE SW SW SE  
**QUADRANGLE:** BUCKINGHAM    **LONGITUDE:** -88.218186    **GEOLOGIST:** STRAAYER  
**CONFIDENTIAL:** N    **LATITUDE:** 41.097934    **DATE COLLECTED:** 1 / 24 / 1971  
**SURFACE ELEVATION (FT.):** 611.0    **LOGGED (FT.):** 150.0    **LOG TYPE:** Drillers Log  
**SOURCE:** AYRSHIRE    RB4    **WELL TYPE:** Coal Test  
**COMMENT:** BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER | LITHOLOGY   | THICKNESS (FT.) |                                    |
|------------------------|-------------|--------|-------------|-----------------|------------------------------------|
|                        |             |        |             | UNIT            | OVERBURDEN COMMENT                 |
| 611.0                  | PLEISTOCENE |        | CLAY        | 14.0            | 0.0                                |
| 597.0                  |             |        | SANDY SHALE | 38.0            | 14.0                               |
| 559.0                  |             |        | ROCK        | 1.0             | 52.0 DRILLER REPORTS PEA<br>GRAVEL |
| 558.0                  |             |        | SHALE       | 5.0             | 53.0                               |
| 553.0                  |             |        | SANDY SHALE | 4.0             | 58.0                               |
| 549.0                  |             |        | LIMESTONE   | 3.0             | 62.0                               |
| 546.0                  |             |        | SANDY SHALE | 6.0             | 65.0                               |
| 540.0                  |             |        | LIMESTONE   | 1.0             | 71.0                               |
| 539.0                  |             |        | SHALE       | 12.0            | 72.0                               |
| 527.0                  |             |        | BLACK SHALE | 2.0             | 84.0                               |
| 525.0                  |             |        | SILTY SHALE | 3.0             | 86.0                               |
| 522.0                  |             |        | SANDSTONE   | 5.0             | 89.0                               |
| 517.0                  |             |        | SANDY SHALE | 56.0            | 94.0                               |

MAPID: 09190001000C    VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE    TWP/RNG: 30N 9E    SECTION: 5    QUARTERS/FOOTAGES: 1' N line, 1' E line of NE NW SE

QUADRANGLE: BUCKINGHAM    LONGITUDE: -88.216035    GEOLOGIST: STRAAYER

CONFIDENTIAL: N    LATITUDE: 41.106365    DATE COLLECTED:

SURFACE ELEVATION (FT.): 609.0    LOGGED (FT.): 176.0    LOG TYPE: Drillers Log

SOURCE: AYRSHIRE    RB21    WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER | LITHOLOGY           | THICKNESS (FT.) |                      |
|------------------------|-------------|--------|---------------------|-----------------|----------------------|
|                        |             |        |                     | UNIT            | OVERBURDEN COMMENT   |
| 609.0                  | PLEISTOCENE |        | CLAY                | 15.0            | 0.0                  |
| 594.0                  |             |        | SHALE & SANDSTONE   | 27.0            | 15.0                 |
| 567.0                  |             |        | ROCK                | 1.0             | 42.0                 |
| 566.0                  |             |        | SHALE & SANDSTONE   | 14.0            | 43.0                 |
| 552.0                  |             |        | ROCK                | 1.0             | 57.0                 |
| 551.0                  |             |        | SHALE               | 16.0            | 58.0                 |
| 535.0                  |             |        | SANDSTONE/SHALE     | 11.0            | 74.0                 |
| 524.0                  |             |        | SHALE               | 10.0            | 85.0                 |
| 514.0                  |             |        | SANDSTONE/SHALE     | 8.0             | 95.0                 |
| 506.0                  | CARBONDALE  |        | SHALE               | 7.0             | 103.0                |
| 499.0                  | CARBONDALE  |        | SANDSTONE           | 10.0            | 110.0                |
| 489.0                  | CARBONDALE  |        | SANDSTONE/LIMESTONE | 5.0             | 120.0                |
| 484.0                  | CARBONDALE  |        | SHALE               | 2.0             | 125.0                |
| 482.0                  | CARBONDALE  |        | LIMESTONE           | 9.0             | 127.0                |
| 473.0                  | CARBONDALE  |        | GRAY SHALE          | 0.5             | 136.0                |
| 472.5                  | CARBONDALE  |        | COAL                | 1.5             | 136.5    LOWELL OR 2 |
| 471.0                  | CARBONDALE  |        | UNDERCLAY           | 4.0             | 138.0                |
| 467.0                  | CARBONDALE  |        | LIMESTONE           | 3.0             | 142.0                |
| 464.0                  | CARBONDALE  |        | SHALE               | 14.0            | 145.0                |
| 450.0                  | CARBONDALE  |        | SANDSTONE           | 2.0             | 159.0    HARD        |
| 448.0                  | CARBONDALE  |        | SHALE               | 7.0             | 161.0    HARD        |
| 441.0                  | CARBONDALE  |        | SHALE & SANDSTONE   | 8.0             | 168.0                |

MAPID: 09190002000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 5 QUARTERS/FOOTAGES: 1' N line, 1' W line of NW NE NE

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.216291 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.114703 DATE COLLECTED:

SURFACE ELEVATION (FT.): 609.0 LOGGED (FT.): 97.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB22 WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER | LITHOLOGY   | THICKNESS (FT.) |                    |
|------------------------|-------------|--------|-------------|-----------------|--------------------|
|                        |             |        |             | UNIT            | OVERBURDEN COMMENT |
| 609.0                  | PLEISTOCENE |        | CLAY        | 17.0            | 0.0                |
| 592.0                  | PLEISTOCENE |        | SAND        | 14.0            | 17.0               |
| 578.0                  |             |        | SHALE       | 11.0            | 31.0               |
| 567.0                  |             |        | SILTY SHALE | 17.0            | 42.0               |
| 550.0                  |             |        | SHALE       | 1.0             | 59.0               |
| 549.0                  |             |        | LIMESTONE   | 18.0            | 60.0               |
| 531.0                  |             |        | SHALE       | 8.0             | 78.0               |
| 523.0                  |             |        | LIMESTONE   | 11.0            | 86.0               |

MAPID: 09190003000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 5 QUARTERS/FOOTAGES: 1' N line, 1' W line of NW SW NW

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.230786 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.110281 DATE COLLECTED: 5 / 14 / 1971

SURFACE ELEVATION (FT.): 602.0 LOGGED (FT.): 140.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB38 WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY      | THICKNESS (FT.) |                    |
|------------------------|-------------|---------------|----------------|-----------------|--------------------|
|                        |             |               |                | UNIT            | OVERBURDEN COMMENT |
| 602.0                  | PLEISTOCENE |               | UNCONSOLIDATED | 3.0             | 0.0                |
| 599.0                  | PLEISTOCENE |               | CLAY           | 7.0             | 3.0                |
| 592.0                  | CARBONDALE  |               | GRAY SHALE     | 52.0            | 10.0 AND DRIFT     |
| 540.0                  | CARBONDALE  |               | SHALE          | 9.0             | 62.0               |
| 531.0                  | CARBONDALE  |               | BLACK SHALE    | 6.0             | 71.0               |
| 525.0                  | CARBONDALE  | HOUCHIN CREEK | COAL           | 5.0             | 77.0               |
| 520.0                  | CARBONDALE  |               | CLAYSTONE      | 5.0             | 82.0               |
| 515.0                  | CARBONDALE  |               | SANDSTONE      | 38.0            | 87.0               |
| 477.0                  | CARBONDALE  |               | DARK SHALE     | 15.0            | 125.0              |

MAPID: 09190004000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 5 QUARTERS/FOOTAGES: 1' N line, 1' W line of NW NW NW

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.23097 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.114572 DATE COLLECTED: 5 / 15 / 1971

SURFACE ELEVATION (FT.): 601.0 LOGGED (FT.): 137.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB40 WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY      | THICKNESS (FT.) |            | COMMENT   |
|------------------------|-------------|---------------|----------------|-----------------|------------|-----------|
|                        |             |               |                | UNIT            | OVERBURDEN |           |
| 601.0                  | PLEISTOCENE |               | UNCONSOLIDATED | 3.0             | 0.0        |           |
| 598.0                  | PLEISTOCENE |               | CLAY           | 5.0             | 3.0        |           |
| 593.0                  | CARBONDALE  |               | GRAY SHALE     | 41.0            | 8.0        | AND DRIFT |
| 552.0                  | CARBONDALE  |               | DARK SHALE     | 17.0            | 49.0       |           |
| 535.0                  | CARBONDALE  |               | BROWN SHALE    | 2.0             | 66.0       |           |
| 533.0                  | CARBONDALE  |               | SHALE          | 2.0             | 68.0       | GREEN     |
| 531.0                  | CARBONDALE  | EXCELLO       | BLACK SHALE    | 5.0             | 70.0       |           |
| 526.0                  | CARBONDALE  | HOUCHIN CREEK | COAL           | 3.0             | 75.0       |           |
| 523.0                  | CARBONDALE  |               | GRAY SHALE     | 2.0             | 78.0       |           |
| 521.0                  | CARBONDALE  |               | LIMESTONE      | 6.0             | 80.0       |           |
| 515.0                  | CARBONDALE  |               | SANDSTONE      | 51.0            | 86.0       | SHALY     |

MAPID: 09190005000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 5 QUARTERS/FOOTAGES: 1' N line, 1' W line of NW SE NW

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.225912 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.110365 DATE COLLECTED: 5 / 16 / 1971

SURFACE ELEVATION (FT.): 605.0 LOGGED (FT.): 121.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB42 WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER | LITHOLOGY      | THICKNESS (FT.) |            | COMMENT   |
|------------------------|-------------|--------|----------------|-----------------|------------|-----------|
|                        |             |        |                | UNIT            | OVERBURDEN |           |
| 605.0                  | PLEISTOCENE |        | UNCONSOLIDATED | 2.0             | 0.0        |           |
| 603.0                  | PLEISTOCENE |        | CLAY           | 8.0             | 2.0        |           |
| 595.0                  | CARBONDALE  |        | GRAY SHALE     | 55.0            | 10.0       | AND DRIFT |
| 540.0                  | CARBONDALE  |        | SANDSTONE      | 10.0            | 65.0       | HARD      |
| 530.0                  | CARBONDALE  |        | BROWN SHALE    | 2.0             | 75.0       |           |
| 528.0                  | CARBONDALE  |        | SANDSTONE      | 2.0             | 77.0       |           |
| 526.0                  | CARBONDALE  |        | SHALE          | 6.0             | 79.0       |           |
| 520.0                  | CARBONDALE  |        | SANDSTONE      | 36.0            | 85.0       | SHALY     |

MAPID: 09190006000C    VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE    TWP/RNG: 30N 9E    SECTION: 6    QUARTERS/FOOTAGES: 1' N line, 1' W line of NW SE NE SE

QUADRANGLE: BUCKINGHAM    LONGITUDE: -88.233112    GEOLOGIST: STRAAYER

CONFIDENTIAL: N    LATITUDE: 41.10376    DATE COLLECTED: 2 / 3 / 1971

SURFACE ELEVATION (FT.): 602.0    LOGGED (FT.): 176.5    LOG TYPE: Drillers Log

SOURCE: AYRSHIRE    RB5    WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY        | THICKNESS (FT.) |                    |
|------------------------|-------------|---------------|------------------|-----------------|--------------------|
|                        |             |               |                  | UNIT            | OVERBURDEN COMMENT |
| 602.0                  | PLEISTOCENE |               | CLAY             | 12.0            | 0.0                |
| 590.0                  | PLEISTOCENE |               | CLAY & SHALE     | 45.0            | 12.0               |
| 545.0                  | PLEISTOCENE |               | GRAVEL           | 6.0             | 57.0               |
| 539.0                  | CARBONDALE  |               | SHALE            | 7.0             | 63.0               |
| 532.0                  | CARBONDALE  |               | LIMESTONE        | 5.0             | 70.0               |
| 527.0                  | CARBONDALE  |               | SHALE            | 13.0            | 75.0               |
| 514.0                  | CARBONDALE  |               | LIMESTONE        | 3.0             | 88.0               |
| 511.0                  | CARBONDALE  |               | SHALE            | 3.0             | 91.0               |
| 508.0                  | CARBONDALE  | HOUCHIN CREEK | COAL             | 1.0             | 94.0               |
| 507.0                  | CARBONDALE  |               | SHALE            | 3.0             | 95.0               |
| 504.0                  | CARBONDALE  |               | BLACK SHALE      | 1.0             | 98.0               |
| 503.0                  | CARBONDALE  |               | BLACK SHALE      | 6.0             | 99.0               |
| 497.0                  | CARBONDALE  |               | GRAY SHALE       | 5.0             | 105.0              |
| 492.0                  | CARBONDALE  |               | SANDSTONE/SHALE  | 13.0            | 110.0              |
| 479.0                  | CARBONDALE  |               | LIMESTONE        | 2.0             | 123.0              |
| 477.0                  | CARBONDALE  |               | SHALE            | 8.0             | 125.0              |
| 469.0                  | CARBONDALE  |               | SANDSTONE/SHALE  | 6.0             | 133.0              |
| 463.0                  | CARBONDALE  |               | LIMESTONE        | 3.0             | 139.0              |
| 460.0                  | CARBONDALE  |               | SANDSTONE/SHALE  | 23.0            | 142.0              |
| 437.0                  | CARBONDALE  |               | CALCAREOUS SHALE | 3.0             | 165.0              |
| 434.0                  | CARBONDALE  |               | SHALE            | 4.0             | 168.0              |
| 430.0                  | CARBONDALE  |               | LIMESTONE        | 1.0             | 172.0              |
| 429.0                  | CARBONDALE  |               | SHALE            | 3.5             | 173.0              |

MAPID: 09190007000C    VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE    TWP/RNG: 30N 9E    SECTION: 6    QUARTERS/FOOTAGES: 1' N line, 1' W line of NW SE NE SE

QUADRANGLE: BUCKINGHAM    LONGITUDE: -88.233112    GEOLOGIST: STRAAYER

CONFIDENTIAL: N    LATITUDE: 41.10376    DATE COLLECTED:

SURFACE ELEVATION (FT.): 602.0    LOGGED (FT.): 167.8    LOG TYPE: Drillers Log

SOURCE: AYRSHIRE    RB6    WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY       | THICKNESS (FT.) |                    |
|------------------------|-------------|---------------|-----------------|-----------------|--------------------|
|                        |             |               |                 | UNIT            | OVERBURDEN COMMENT |
| 602.0                  | PLEISTOCENE |               | CLAY            | 10.8            | 0.0                |
| 591.2                  | CARBONDALE  |               | SANDSTONE/SHALE | 58.0            | 10.8               |
| 533.2                  | CARBONDALE  |               | GRAY SHALE      | 6.0             | 68.8               |
| 527.2                  | CARBONDALE  |               | COAL            | 0.3             | 74.8    IN DRIFT   |
| 526.9                  | CARBONDALE  |               | SHALE           | 7.8             | 75.1               |
| 519.2                  | CARBONDALE  |               | SILTSTONE       | 3.0             | 82.8               |
| 516.2                  | CARBONDALE  |               | SANDSTONE/SHALE | 8.0             | 85.8               |
| 508.2                  | CARBONDALE  |               | SHALE           | 13.0            | 93.8               |
| 495.2                  | CARBONDALE  |               | BLACK SHALE     | 9.0             | 106.8              |
| 486.2                  | CARBONDALE  | HOUCHIN CREEK | COAL            | 3.3             | 115.8              |
| 482.9                  | CARBONDALE  |               | UNDERCLAY       | 5.8             | 119.1              |
| 477.2                  | CARBONDALE  |               | SANDSTONE/SHALE | 43.0            | 124.8              |

MAPID: 09190008000C    VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE    TWP/RNG: 30N 9E    SECTION: 6    QUARTERS/FOOTAGES: 1' S line, 1' E line of SE SE SE

QUADRANGLE: BUCKINGHAM    LONGITUDE: -88.230243    GEOLOGIST: STRAAYER

CONFIDENTIAL: N    LATITUDE: 41.097416    DATE COLLECTED:

SURFACE ELEVATION (FT.): 617.0    LOGGED (FT.): 173.2    LOG TYPE: Drillers Log

SOURCE: AYRSHIRE    RB7    WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY           | THICKNESS (FT.) |            | COMMENT                         |
|------------------------|-------------|---------------|---------------------|-----------------|------------|---------------------------------|
|                        |             |               |                     | UNIT            | OVERBURDEN |                                 |
| 617.0                  | PLEISTOCENE |               | CLAY                | 10.2            | 0.0        |                                 |
| 606.8                  | CARBONDALE  |               | SHALE               | 34.0            | 10.2       |                                 |
| 572.8                  | CARBONDALE  |               | CALCAREOUS SHALE    | 2.0             | 44.2       |                                 |
| 570.8                  | CARBONDALE  |               | SANDSTONE/SHALE     | 12.0            | 46.2       |                                 |
| 558.8                  | CARBONDALE  |               | UNKNOWN             | 2.0             | 58.2       | DRILLER REPORTS SAND AND GRAVEL |
| 556.8                  | CARBONDALE  |               | SANDSTONE/SHALE     | 15.0            | 60.2       |                                 |
| 541.9                  | CARBONDALE  |               | DARK SHALE          | 12.0            | 75.1       |                                 |
| 529.9                  | CARBONDALE  |               | BLACK SHALE         | 6.1             | 87.1       |                                 |
| 523.8                  | CARBONDALE  | HOUCHIN CREEK | COAL                | 4.1             | 93.2       |                                 |
| 519.7                  | CARBONDALE  |               | UNDERCLAY           | 1.9             | 97.3       |                                 |
| 517.9                  | CARBONDALE  |               | SANDSTONE/SHALE     | 14.0            | 99.1       |                                 |
| 503.8                  | CARBONDALE  |               | SANDSTONE           | 40.0            | 113.2      |                                 |
| 463.8                  | CARBONDALE  | COLCHESTER    | COAL                | 2.6             | 153.2      |                                 |
| 461.2                  | CARBONDALE  |               | UNDERCLAY           | 1.9             | 155.8      |                                 |
| 459.4                  | CARBONDALE  |               | SHALE               | 5.0             | 157.6      |                                 |
| 454.4                  | CARBONDALE  |               | LIMESTONE           | 5.0             | 162.6      |                                 |
| 449.4                  | CARBONDALE  |               | COAL                | 0.9             | 167.6      |                                 |
| 448.5                  | CARBONDALE  |               | LIMESTONE/UNDERCLAY | 1.9             | 168.5      |                                 |
| 446.7                  | CARBONDALE  |               | COAL                | 0.4             | 170.3      |                                 |
| 446.3                  | CARBONDALE  |               | UNDERCLAY           | 2.5             | 170.7      |                                 |



MAPID: 09190009000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 6 QUARTERS/FOOTAGES: 1' S line, 1' W line of SW SE SW

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.245886 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.09674 DATE COLLECTED:

SURFACE ELEVATION (FT.): 607.0 LOGGED (FT.): 201.3 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB9 WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY                  | THICKNESS (FT.) |                    |
|------------------------|-------------|---------------|----------------------------|-----------------|--------------------|
|                        |             |               |                            | UNIT            | OVERBURDEN COMMENT |
| 607.0                  | PLEISTOCENE |               | CLAY                       | 11.2            | 0.0                |
| 595.8                  | CARBONDALE  |               | SHALE                      | 57.0            | 11.2               |
| 538.8                  | CARBONDALE  |               | LIMESTONE                  | 4.5             | 68.2               |
| 534.3                  | CARBONDALE  |               | SHALE                      | 1.5             | 72.7               |
| 532.8                  | CARBONDALE  |               | LIMESTONE & SHALE          | 3.0             | 74.2               |
| 529.8                  | CARBONDALE  |               | SHALE                      | 12.0            | 77.2               |
| 517.8                  | CARBONDALE  |               | LIMESTONE AND<br>SANDSTONE | 3.0             | 89.2               |
| 514.8                  | CARBONDALE  |               | SANDSTONE/SHALE            | 2.0             | 92.2               |
| 512.8                  | CARBONDALE  |               | SANDY SHALE                | 9.0             | 94.2               |
| 503.8                  | CARBONDALE  |               | DARK SHALE                 | 12.0            | 103.2              |
| 491.8                  | CARBONDALE  |               | BLACK SHALE                | 9.0             | 115.2              |
| 482.8                  | CARBONDALE  |               | GRAY SHALE                 | 7.0             | 124.2              |
| 475.8                  | CARBONDALE  | HOUCHIN CREEK | COAL                       | 4.2             | 131.2              |
| 471.6                  | CARBONDALE  |               | UNDERCLAY                  | 2.5             | 135.4              |
| 469.1                  | CARBONDALE  |               | SHALE                      | 4.0             | 137.9              |
| 465.1                  | CARBONDALE  |               | BLACK SHALE                | 4.0             | 141.9              |
| 461.1                  | CARBONDALE  |               | COAL                       | 4.3             | 145.9 #2?          |
| 456.8                  | CARBONDALE  |               | SHALE/COAL                 | 1.3             | 150.2              |
| 455.5                  | CARBONDALE  |               | COAL                       | 3.3             | 151.5              |
| 452.3                  | CARBONDALE  |               | UNDERCLAY                  | 1.0             | 154.7              |
| 451.3                  | CARBONDALE  |               | CALCAREOUS SHALE           | 1.0             | 155.7              |
| 450.3                  | CARBONDALE  |               | SHALE                      | 4.0             | 156.7              |
| 446.3                  | CARBONDALE  |               | LIMESTONE                  | 4.0             | 160.7              |
| 442.3                  | CARBONDALE  |               | CALCAREOUS SHALE           | 1.0             | 164.7              |
| 441.3                  | CARBONDALE  |               | SANDSTONE/SHALE            | 4.0             | 165.7              |
| 437.3                  | CARBONDALE  |               | SANDSTONE                  | 1.0             | 169.7              |
| 436.3                  | CARBONDALE  |               | SHALE & SANDSTONE          | 4.0             | 170.7              |
| 432.3                  | CARBONDALE  |               | SHALE                      | 10.0            | 174.7              |
| 422.3                  | CARBONDALE  |               | SANDSTONE/SHALE            | 3.0             | 184.7              |
| 419.3                  | CARBONDALE  |               | DARK SHALE                 | 7.0             | 187.7              |
| 412.3                  | CARBONDALE  |               | SHALE & SANDSTONE          | 6.6             | 194.7              |

MAPID: 09190011000C    VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE    TWP/RNG: 30N 9E    SECTION: 6    QUARTERS/FOOTAGES: 1' N line, 1' W line of NW SE NE SE

QUADRANGLE: BUCKINGHAM    LONGITUDE: -88.233112    GEOLOGIST: STRAAYER

CONFIDENTIAL: N    LATITUDE: 41.10376    DATE COLLECTED:

SURFACE ELEVATION (FT.): 602.0    LOGGED (FT.): 126.0    LOG TYPE: Drillers Log

SOURCE: AYRSHIRE    RB10    WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY        | THICKNESS (FT.) |                    |
|------------------------|-------------|---------------|------------------|-----------------|--------------------|
|                        |             |               |                  | UNIT            | OVERBURDEN COMMENT |
| 602.0                  | PLEISTOCENE |               | CLAY             | 12.0            | 0.0                |
| 590.0                  | PLEISTOCENE |               | CLAY & SHALE     | 42.0            | 12.0               |
| 548.0                  | PLEISTOCENE |               | SAND & GRAVEL    | 7.0             | 54.0               |
| 541.0                  | CARBONDALE  |               | SHALE            | 10.0            | 61.0               |
| 531.0                  | CARBONDALE  |               | SANDY SHALE      | 7.0             | 71.0               |
| 524.0                  | CARBONDALE  |               | SHALE            | 9.0             | 78.0               |
| 515.0                  | CARBONDALE  |               | LIMESTONE        | 3.0             | 87.0               |
| 512.0                  | CARBONDALE  |               | SHALE            | 3.0             | 90.0               |
| 509.0                  | CARBONDALE  |               | CALCAREOUS SHALE | 4.0             | 93.0               |
| 505.0                  | CARBONDALE  |               | LIMESTONE        | 1.0             | 97.0               |
| 504.0                  | CARBONDALE  |               | BLACK SHALE      | 2.5             | 98.0               |
| 501.5                  | CARBONDALE  | HOUCHIN CREEK | COAL WITH SHALE  | 1.5             | 100.5              |
| 500.0                  | CARBONDALE  | HOUCHIN CREEK | COAL             | 2.0             | 102.0              |
| 498.0                  | CARBONDALE  |               | UNDERCLAY        | 5.0             | 104.0              |
| 493.0                  | CARBONDALE  |               | SANDSTONE/SHALE  | 17.0            | 109.0              |

MAPID: 09190012000C    VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE    TWP/RNG: 30N 9E    SECTION: 6    QUARTERS/FOOTAGES: 1' S line, 1' W line of SW NW NW

QUADRANGLE: CAMPUS    LONGITUDE: -88.251575    GEOLOGIST: STRAAYER

CONFIDENTIAL: N    LATITUDE: 41.10979    DATE COLLECTED: 5 / 18 / 1971

SURFACE ELEVATION (FT.): 602.0    LOGGED (FT.): 120.0    LOG TYPE: Drillers Log

SOURCE: AYRSHIRE    RB47    WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY         | THICKNESS (FT.) |            | COMMENT |
|------------------------|-------------|---------------|-------------------|-----------------|------------|---------|
|                        |             |               |                   | UNIT            | OVERBURDEN |         |
| 602.0                  | PLEISTOCENE |               | CLAY              | 15.0            | 0.0        |         |
| 587.0                  | CARBONDALE  |               | SHALE             | 35.0            | 15.0       |         |
| 552.0                  | CARBONDALE  |               | ROCK              | 1.0             | 50.0       |         |
| 551.0                  | CARBONDALE  |               | SHALE             | 9.0             | 51.0       |         |
| 542.0                  | CARBONDALE  |               | SHALE & SANDSTONE | 2.0             | 60.0       |         |
| 540.0                  | CARBONDALE  |               | SANDSTONE         | 4.0             | 62.0       | HARD    |
| 536.0                  | CARBONDALE  |               | SHALE             | 9.0             | 66.0       |         |
| 527.0                  | CARBONDALE  |               | BLACK SHALE       | 4.0             | 75.0       |         |
| 523.0                  | CARBONDALE  |               | DARK SHALE        | 1.0             | 79.0       |         |
| 522.0                  | CARBONDALE  |               | GRAY SHALE        | 6.0             | 80.0       |         |
| 516.0                  | CARBONDALE  | HOUCHIN CREEK | COAL              | 3.5             | 86.0       |         |
| 512.5                  | CARBONDALE  |               | UNDERCLAY         | 3.5             | 89.5       |         |
| 509.0                  | CARBONDALE  |               | SANDSTONE/SHALE   | 2.0             | 93.0       |         |
| 507.0                  | CARBONDALE  |               | LIMESTONE         | 0.5             | 95.0       |         |
| 506.5                  | CARBONDALE  |               | SILTY SHALE       | 2.5             | 95.5       |         |
| 504.0                  | CARBONDALE  |               | SANDSTONE/SHALE   | 22.0            | 98.0       |         |

MAPID: 09190013000C    VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE    TWP/RNG: 30N 9E    SECTION: 8    QUARTERS/FOOTAGES: 1' S line, 1' W line of SW NW NW

QUADRANGLE: BUCKINGHAM    LONGITUDE: -88.230104    GEOLOGIST: STRAAYER

CONFIDENTIAL: N    LATITUDE: 41.093689    DATE COLLECTED:

SURFACE ELEVATION (FT.): 612.0    LOGGED (FT.): 183.0    LOG TYPE: Drillers Log

SOURCE: AYRSHIRE    RB11    WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY           | THICKNESS (FT.) |            | COMMENT            |
|------------------------|-------------|---------------|---------------------|-----------------|------------|--------------------|
|                        |             |               |                     | UNIT            | OVERBURDEN |                    |
| 612.0                  | PLEISTOCENE |               | CLAY                | 15.0            | 0.0        |                    |
| 597.0                  | PLEISTOCENE |               | SAND                | 5.0             | 15.0       |                    |
| 592.0                  | CARBONDALE  |               | SANDSTONE/SHALE     | 27.0            | 20.0       |                    |
| 565.0                  | CARBONDALE  |               | SANDSTONE/LIMESTONE | 6.0             | 47.0       |                    |
| 559.0                  | CARBONDALE  |               | SHALE               | 2.0             | 53.0       |                    |
| 557.0                  | CARBONDALE  |               | ROCK                | 4.0             | 55.0       | GRAVEL<br>REPORTED |
| 553.0                  | CARBONDALE  |               | SHALE               | 2.0             | 59.0       |                    |
| 551.0                  | CARBONDALE  |               | ROCK                | 3.0             | 61.0       | GRAVEL<br>REPORTED |
| 548.0                  | CARBONDALE  |               | SANDSTONE/SHALE     | 9.0             | 64.0       |                    |
| 539.0                  | CARBONDALE  |               | SHALE               | 2.5             | 73.0       |                    |
| 536.5                  | CARBONDALE  |               | LIMESTONE           | 1.5             | 75.5       |                    |
| 535.0                  | CARBONDALE  |               | SHALE               | 2.0             | 77.0       |                    |
| 533.0                  | CARBONDALE  |               | SANDY SHALE         | 8.0             | 79.0       |                    |
| 525.0                  | CARBONDALE  |               | SHALE               | 4.0             | 87.0       |                    |
| 521.0                  | CARBONDALE  |               | LIMESTONE           | 1.5             | 91.0       |                    |
| 519.5                  | CARBONDALE  |               | GRAY SHALE          | 4.5             | 92.5       |                    |
| 515.0                  | CARBONDALE  |               | BLACK SHALE         | 3.0             | 97.0       |                    |
| 512.0                  | CARBONDALE  |               | GRAY SHALE          | 2.0             | 100.0      |                    |
| 510.0                  | CARBONDALE  |               | BLACK SHALE         | 1.0             | 102.0      |                    |
| 509.0                  | CARBONDALE  | HOUCHIN CREEK | COAL                | 4.3             | 103.0      |                    |
| 504.7                  | CARBONDALE  |               | UNDERCLAY           | 7.8             | 107.3      |                    |
| 497.0                  | CARBONDALE  |               | SANDY SHALE         | 20.0            | 115.0      |                    |
| 477.0                  | CARBONDALE  |               | SHALE               | 2.0             | 135.0      |                    |
| 475.0                  | CARBONDALE  |               | SANDSTONE/SHALE     | 24.0            | 137.0      |                    |
| 451.0                  | CARBONDALE  |               | SHALE               | 2.0             | 161.0      |                    |
| 449.0                  | CARBONDALE  |               | BLACK SHALE         | 1.0             | 163.0      |                    |
| 448.0                  | CARBONDALE  | COLCHESTER    | COAL                | 2.0             | 164.0      |                    |
| 446.0                  | CARBONDALE  |               | SHALE               | 2.0             | 166.0      |                    |
| 444.0                  | CARBONDALE  |               | BLACK SHALE         | 1.0             | 168.0      |                    |
| 443.0                  | CARBONDALE  |               | GRAY SHALE          | 4.0             | 169.0      |                    |
| 439.0                  | CARBONDALE  |               | LIMESTONE           | 4.5             | 173.0      |                    |
| 434.5                  | CARBONDALE  |               | SHALE               | 1.5             | 177.5      |                    |
| 433.0                  | CARBONDALE  |               | COAL                | 1.3             | 179.0      |                    |
| 431.7                  | CARBONDALE  |               | UNDERCLAY           | 2.8             | 180.3      |                    |

MAPID: 09190015000C    VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE    TWP/RNG: 30N 9E    SECTION: 8    QUARTERS/FOOTAGES: 1' N line, 1' E line of NE SE NW NW

QUADRANGLE: BUCKINGHAM    LONGITUDE: -88.225359    GEOLOGIST: STRAAYER

CONFIDENTIAL: N    LATITUDE: 41.095754    DATE COLLECTED:

SURFACE ELEVATION (FT.): 608.0    LOGGED (FT.): 176.0    LOG TYPE: Drillers Log

SOURCE: AYRSHIRE    RB12    WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY        | THICKNESS (FT.) |            | COMMENT |
|------------------------|-------------|---------------|------------------|-----------------|------------|---------|
|                        |             |               |                  | UNIT            | OVERBURDEN |         |
| 608.0                  | PLEISTOCENE |               | CLAY             | 15.0            | 0.0        |         |
| 593.0                  | PLEISTOCENE |               | GRAVEL           | 4.0             | 15.0       |         |
| 589.0                  | CARBONDALE  |               | SANDSTONE/SHALE  | 47.0            | 19.0       |         |
| 542.0                  | CARBONDALE  |               | LIMESTONE        | 4.0             | 66.0       |         |
| 538.0                  | CARBONDALE  |               | SHALE            | 1.0             | 70.0       |         |
| 537.0                  | CARBONDALE  |               | ROCK             | 2.0             | 71.0       |         |
| 535.0                  | CARBONDALE  |               | SHALE            | 4.0             | 73.0       |         |
| 531.0                  | CARBONDALE  |               | SANDSTONE        | 0.5             | 77.0       |         |
| 530.5                  | CARBONDALE  |               | SHALE            | 10.0            | 77.5       |         |
| 520.5                  | CARBONDALE  |               | SANDSTONE        | 2.5             | 87.5       |         |
| 518.0                  | CARBONDALE  |               | SHALE            | 5.0             | 90.0       |         |
| 513.0                  | CARBONDALE  |               | CALCAREOUS SHALE | 2.0             | 95.0       |         |
| 511.0                  | CARBONDALE  |               | GRAY SHALE       | 1.5             | 97.0       | LIMY    |
| 509.5                  | CARBONDALE  |               | BLACK SHALE      | 3.5             | 98.5       | LIMY    |
| 506.0                  | CARBONDALE  | HOUCHIN CREEK | COAL             | 3.3             | 102.0      |         |
| 502.7                  | CARBONDALE  |               | UNDERCLAY        | 2.7             | 105.3      |         |
| 500.0                  | CARBONDALE  |               | SANDSTONE        | 7.0             | 108.0      |         |
| 493.0                  | CARBONDALE  |               | SANDY SHALE      | 6.0             | 115.0      |         |
| 487.0                  | CARBONDALE  |               | SILTY SHALE      | 10.0            | 121.0      |         |
| 477.0                  | CARBONDALE  |               | SANDY SHALE      | 4.0             | 131.0      |         |
| 473.0                  | CARBONDALE  |               | SHALE            | 3.0             | 135.0      |         |
| 470.0                  | CARBONDALE  |               | SANDSTONE        | 4.0             | 138.0      |         |
| 466.0                  | CARBONDALE  |               | SHALE            | 4.0             | 142.0      |         |
| 462.0                  | CARBONDALE  |               | SANDSTONE        | 9.0             | 146.0      |         |
| 453.0                  | CARBONDALE  |               | LIMESTONE        | 2.0             | 155.0      |         |
| 451.0                  | CARBONDALE  |               | SANDY SHALE      | 6.0             | 157.0      |         |
| 445.0                  | CARBONDALE  | COLCHESTER    | COAL             | 1.5             | 163.0      |         |
| 443.5                  | CARBONDALE  |               | UNDERCLAY        | 1.5             | 164.5      |         |
| 442.0                  | CARBONDALE  |               | LIMESTONE        | 1.0             | 166.0      |         |
| 441.0                  | CARBONDALE  |               | SILTY SHALE      | 8.0             | 167.0      |         |
| 433.0                  | CARBONDALE  |               | LIMESTONE        | 1.0             | 175.0      |         |

MAPID: 09190016000C    VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE    TWP/RNG: 30N 9E    SECTION: 8    QUARTERS/FOOTAGES: 1' S line, 1' E line of SE SE SW

QUADRANGLE: BUCKINGHAM    LONGITUDE: -88.220135    GEOLOGIST: STRAAYER

CONFIDENTIAL: N    LATITUDE: 41.082936    DATE COLLECTED:

SURFACE ELEVATION (FT.): 615.0    LOGGED (FT.): 159.0    LOG TYPE: Drillers Log

SOURCE: AYRSHIRE    RB29    WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER | LITHOLOGY            | THICKNESS (FT.) |            | COMMENT                     |
|------------------------|-------------|--------|----------------------|-----------------|------------|-----------------------------|
|                        |             |        |                      | UNIT            | OVERBURDEN |                             |
| 615.0                  | PLEISTOCENE |        | CLAY                 | 14.0            | 0.0        |                             |
| 601.0                  | CARBONDALE  |        | SHALE                | 26.0            | 14.0       |                             |
| 575.0                  | CARBONDALE  |        | ROCK                 | 1.0             | 40.0       |                             |
| 574.0                  | CARBONDALE  |        | SHALE                | 7.0             | 41.0       |                             |
| 567.0                  | CARBONDALE  |        | ROCK                 | 1.0             | 48.0       |                             |
| 566.0                  | CARBONDALE  |        | SHALE                | 6.0             | 49.0       |                             |
| 560.0                  | CARBONDALE  |        | SHALE & SANDSTONE    | 8.0             | 55.0       |                             |
| 552.0                  | CARBONDALE  |        | CALCAREOUS SHALE     | 1.0             | 63.0       |                             |
| 551.0                  | CARBONDALE  |        | SILTY SHALE          | 2.0             | 64.0       |                             |
| 549.0                  | CARBONDALE  |        | UNKNOWN              | 3.0             | 66.0       | SAND AND GRAVEL<br>REPORTED |
| 546.0                  | CARBONDALE  |        | SHALE & SANDSTONE    | 7.0             | 69.0       |                             |
| 539.0                  | CARBONDALE  |        | SHALE WITH LIMESTONE | 5.0             | 76.0       |                             |
| 534.0                  | CARBONDALE  |        | SANDSTONE/SHALE      | 9.0             | 81.0       |                             |
| 525.0                  | CARBONDALE  |        | SANDSTONE            | 3.0             | 90.0       |                             |
| 522.0                  | CARBONDALE  |        | SHALE & SANDSTONE    | 3.0             | 93.0       |                             |
| 519.0                  | CARBONDALE  |        | SANDSTONE            | 12.0            | 96.0       | HARD                        |
| 507.0                  | CARBONDALE  |        | SHALY SANDSTONE      | 3.0             | 108.0      |                             |
| 504.0                  | CARBONDALE  |        | SHALE & SANDSTONE    | 44.0            | 111.0      |                             |
| 460.0                  | CARBONDALE  |        | SHALE                | 4.0             | 155.0      |                             |

MAPID: 09190017000C    VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE    TWP/RNG: 30N 9E    SECTION: 8    QUARTERS/FOOTAGES: 1' S line, 1' E line of SE SW SW SW

QUADRANGLE: BUCKINGHAM    LONGITUDE: -88.227326    GEOLOGIST: STRAAYER

CONFIDENTIAL: N    LATITUDE: 41.082607    DATE COLLECTED:

SURFACE ELEVATION (FT.): 617.0    LOGGED (FT.): 157.0    LOG TYPE: Drillers Log

SOURCE: AYRSHIRE    RB30    WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER | LITHOLOGY         | THICKNESS (FT.) |                    |
|------------------------|-------------|--------|-------------------|-----------------|--------------------|
|                        |             |        |                   | UNIT            | OVERBURDEN COMMENT |
| 617.0                  | PLEISTOCENE |        | CLAY              | 15.0            | 0.0                |
| 602.0                  | PLEISTOCENE |        | CLAY & SHALE      | 36.0            | 15.0               |
| 566.0                  | PLEISTOCENE |        | CLAY & GRAVEL     | 2.0             | 51.0               |
| 564.0                  | CARBONDALE  |        | SHALE & SANDSTONE | 1.0             | 53.0               |
| 563.0                  | CARBONDALE  |        | SHALE             | 3.0             | 54.0               |
| 560.0                  | CARBONDALE  |        | SHALE & SANDSTONE | 1.0             | 57.0               |
| 559.0                  | CARBONDALE  |        | SHALE             | 2.0             | 58.0               |
| 557.0                  | CARBONDALE  |        | ROCK              | 2.0             | 60.0               |
| 555.0                  | CARBONDALE  |        | SHALE             | 11.0            | 62.0               |
| 544.0                  | CARBONDALE  |        | CALCAREOUS SHALE  | 1.0             | 73.0               |
| 543.0                  | CARBONDALE  |        | SHALE & SANDSTONE | 13.0            | 74.0               |
| 530.0                  | CARBONDALE  |        | LIMESTONE & SHALE | 10.5            | 87.0               |
| 519.5                  | CARBONDALE  |        | BLACK SHALE       | 2.5             | 97.5               |
| 517.0                  | CARBONDALE  |        | COAL              | 3.0             | 100.0              |
| 514.0                  | CARBONDALE  |        | UNDERCLAY         | 8.0             | 103.0              |
| 506.0                  | CARBONDALE  |        | SHALE             | 1.0             | 111.0              |
| 505.0                  | CARBONDALE  |        | LIMESTONE         | 2.5             | 112.0              |
| 502.5                  | CARBONDALE  |        | SHALE & SANDSTONE | 2.5             | 114.5              |
| 500.0                  | CARBONDALE  |        | SANDSTONE         | 9.0             | 117.0              |
| 491.0                  | CARBONDALE  |        | SILTY SHALE       | 10.5            | 126.0              |
| 480.5                  | CARBONDALE  |        | SANDSTONE/SHALE   | 20.5            | 136.5              |

MAPID: 09190018000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 8 QUARTERS/FOOTAGES: 1' S line, 1' E line of SE NE SW

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.220248 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.086661 DATE COLLECTED: 4 / 22 / 1971

SURFACE ELEVATION (FT.): 610.0 LOGGED (FT.): 116.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB31 WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY         | THICKNESS (FT.) |                    |
|------------------------|-------------|---------------|-------------------|-----------------|--------------------|
|                        |             |               |                   | UNIT            | OVERBURDEN COMMENT |
| 610.0                  | PLEISTOCENE |               | CLAY              | 14.0            | 0.0                |
| 596.0                  | CARBONDALE  |               | SHALE             | 39.0            | 14.0               |
| 557.0                  | CARBONDALE  |               | ROCK              | 2.0             | 53.0               |
| 555.0                  | CARBONDALE  |               | SHALE             | 14.0            | 55.0               |
| 541.0                  | CARBONDALE  |               | CALCAREOUS SHALE  | 1.0             | 69.0               |
| 540.0                  | CARBONDALE  |               | SHALE             | 1.0             | 70.0               |
| 539.0                  | CARBONDALE  |               | CALCAREOUS SHALE  | 1.0             | 71.0               |
| 538.0                  | CARBONDALE  |               | SHALE             | 5.0             | 72.0               |
| 533.0                  | CARBONDALE  |               | LIMESTONE & SHALE | 8.0             | 77.0               |
| 525.0                  | CARBONDALE  | HOUCHIN CREEK | SHALE/COAL        | 1.0             | 85.0               |
| 524.0                  | CARBONDALE  |               | BLACK LIMESTONE   | 1.0             | 86.0               |
| 523.0                  | CARBONDALE  | HOUCHIN CREEK | COAL              | 3.0             | 87.0               |
| 520.0                  | CARBONDALE  |               | UNDERCLAY         | 4.0             | 90.0               |
| 516.0                  | CARBONDALE  |               | LIMESTONE & SHALE | 1.0             | 94.0               |
| 515.0                  | CARBONDALE  |               | SILTY SHALE       | 8.0             | 95.0               |
| 507.0                  | CARBONDALE  |               | SANDSTONE         | 13.0            | 103.0              |



MAPID: 09190019000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 9 QUARTERS/FOOTAGES: 1' S line, 1' W line of SW SW NW

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.210739 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.09081 DATE COLLECTED:

SURFACE ELEVATION (FT.): 614.0 LOGGED (FT.): 174.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB8 WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER     | LITHOLOGY         | THICKNESS (FT.) |            | COMMENT                         |
|------------------------|-------------|------------|-------------------|-----------------|------------|---------------------------------|
|                        |             |            |                   | UNIT            | OVERBURDEN |                                 |
| 614.0                  | PLEISTOCENE |            | CLAY              | 9.2             | 0.0        |                                 |
| 604.8                  | CARBONDALE  |            | SHALE             | 35.0            | 9.2        |                                 |
| 569.8                  | CARBONDALE  |            | UNKNOWN           | 2.0             | 44.2       | DRILLER REPORTS SAND AND GRAVEL |
| 567.8                  | CARBONDALE  |            | SHALE             | 10.0            | 46.2       |                                 |
| 557.8                  | CARBONDALE  |            | CALCAREOUS SHALE  | 6.0             | 56.2       |                                 |
| 551.8                  | CARBONDALE  |            | SANDSTONE/SHALE   | 4.0             | 62.2       |                                 |
| 547.9                  | CARBONDALE  |            | LIMESTONE & SHALE | 10.0            | 66.1       |                                 |
| 537.9                  | CARBONDALE  |            | SHALE             | 11.0            | 76.1       |                                 |
| 526.9                  | CARBONDALE  |            | BLACK SHALE       | 8.0             | 87.1       |                                 |
| 518.9                  | CARBONDALE  |            | SHALE             | 7.3             | 95.1       |                                 |
| 511.5                  | CARBONDALE  |            | COAL              | 4.7             | 102.5      |                                 |
| 506.8                  | CARBONDALE  |            | SHALE/UNDERCLAY   | 1.8             | 107.2      |                                 |
| 505.0                  | CARBONDALE  |            | SHALE             | 18.0            | 109.0      |                                 |
| 487.0                  | CARBONDALE  |            | SANDSTONE/SHALE   | 41.5            | 127.0      |                                 |
| 445.5                  | CARBONDALE  | COLCHESTER | COAL              | 3.5             | 168.5      |                                 |
| 442.0                  | CARBONDALE  |            | UNDERCLAY         | 2.0             | 172.0      |                                 |

MAPID: 09190020000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 17 QUARTERS/FOOTAGES: 1' N line, 1' E line of NE SE SE

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.210375 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.072309 DATE COLLECTED:

SURFACE ELEVATION (FT.): 662.0 LOGGED (FT.): 173.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB2 WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER | LITHOLOGY   | THICKNESS (FT.) |            | COMMENT |
|------------------------|-------------|--------|-------------|-----------------|------------|---------|
|                        |             |        |             | UNIT            | OVERBURDEN |         |
| 662.0                  | PLEISTOCENE |        | CLAY        | 14.0            | 0.0        |         |
| 648.0                  | PLEISTOCENE |        | SAND/CLAY   | 74.5            | 14.0       | SHALY   |
| 573.5                  | PLEISTOCENE |        | BOULDER     | 0.5             | 88.5       |         |
| 573.0                  | PLEISTOCENE |        | CLAY        | 3.0             | 89.0       |         |
| 570.0                  | PLEISTOCENE |        | GRAVEL      | 16.0            | 92.0       |         |
| 554.0                  | CARBONDALE  |        | SANDY SHALE | 65.0            | 108.0      |         |

MAPID: 09190021000C    VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE    TWP/RNG: 30N 9E    SECTION: 17    QUARTERS/FOOTAGES: 1' S line, 1' W line of SW SE SW

QUADRANGLE: BUCKINGHAM    LONGITUDE: -88.2246    GEOLOGIST: STRAAYER

CONFIDENTIAL: N    LATITUDE: 41.068    DATE COLLECTED:

SURFACE ELEVATION (FT.): 620.0    LOGGED (FT.): 214.0    LOG TYPE: Drillers Log

SOURCE: AYRSHIRE    RB16    WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY       | THICKNESS (FT.) |            | COMMENT |
|------------------------|-------------|---------------|-----------------|-----------------|------------|---------|
|                        |             |               |                 | UNIT            | OVERBURDEN |         |
| 620.0                  | PLEISTOCENE |               | UNCONSOLIDATED  | 15.0            | 0.0        |         |
| 605.0                  | CARBONDALE  |               | SHALE           | 5.0             | 15.0       |         |
| 600.0                  | CARBONDALE  |               | SANDSTONE       | 4.0             | 20.0       |         |
| 596.0                  | CARBONDALE  |               | SHALE           | 16.0            | 24.0       |         |
| 580.0                  | CARBONDALE  |               | SANDSTONE/SHALE | 12.0            | 40.0       |         |
| 568.0                  | CARBONDALE  |               | SHALE           | 2.0             | 52.0       |         |
| 566.0                  | CARBONDALE  |               | SANDSTONE       | 7.0             | 54.0       |         |
| 559.0                  | CARBONDALE  |               | SHALE           | 4.0             | 61.0       |         |
| 555.0                  | CARBONDALE  |               | SANDSTONE       | 4.0             | 65.0       |         |
| 551.0                  | CARBONDALE  |               | SHALE           | 2.0             | 69.0       |         |
| 549.0                  | CARBONDALE  |               | SANDSTONE       | 22.0            | 71.0       | HARD    |
| 527.0                  | CARBONDALE  |               | SHALE           | 7.0             | 93.0       |         |
| 520.0                  | CARBONDALE  |               | SANDY SHALE     | 5.0             | 100.0      |         |
| 515.0                  | CARBONDALE  |               | LIMESTONE       | 1.0             | 105.0      |         |
| 514.0                  | CARBONDALE  |               | SHALE           | 1.0             | 106.0      |         |
| 513.0                  | CARBONDALE  |               | DARK SHALE      | 8.0             | 107.0      |         |
| 505.0                  | CARBONDALE  | HOUCHIN CREEK | COAL            | 3.0             | 115.0      |         |
| 502.0                  | CARBONDALE  |               | SHALE/UNDERCLAY | 9.0             | 118.0      |         |
| 493.0                  | CARBONDALE  |               | SANDSTONE/SHALE | 28.0            | 127.0      |         |
| 465.0                  | CARBONDALE  |               | SHALE           | 2.0             | 155.0      |         |
| 463.0                  | CARBONDALE  |               | SANDSTONE       | 16.0            | 157.0      |         |
| 447.0                  | CARBONDALE  |               | SHALE           | 7.0             | 173.0      |         |
| 440.0                  | CARBONDALE  |               | LIMESTONE       | 2.0             | 180.0      |         |
| 438.0                  | CARBONDALE  |               | SHALE           | 6.0             | 182.0      |         |
| 432.0                  | CARBONDALE  |               | LIMESTONE       | 1.0             | 188.0      |         |
| 431.0                  | CARBONDALE  |               | SHALE           | 9.0             | 189.0      |         |
| 422.0                  | CARBONDALE  | COLCHESTER    | COAL            | 3.0             | 198.0      |         |
| 419.0                  | CARBONDALE  |               | UNDERCLAY       | 3.0             | 201.0      |         |
| 416.0                  | CARBONDALE  | COLCHESTER    | COAL            | 0.5             | 204.0      |         |
| 415.5                  | CARBONDALE  |               | UNDERCLAY       | 5.5             | 204.5      |         |
| 410.0                  | CARBONDALE  |               | LIMESTONE       | 4.0             | 210.0      |         |

MAPID: 09190022000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 17 QUARTERS/FOOTAGES: 1' S line, 1' E line of SE SW SE

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.21508 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.068417 DATE COLLECTED: 3 / 21 / 1971

SURFACE ELEVATION (FT.): 621.0 LOGGED (FT.): 170.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB17 WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY                  | THICKNESS (FT.) |            | COMMENT                   |
|------------------------|-------------|---------------|----------------------------|-----------------|------------|---------------------------|
|                        |             |               |                            | UNIT            | OVERBURDEN |                           |
| 621.0                  | PLEISTOCENE |               | CLAY                       | 9.0             | 0.0        |                           |
| 612.0                  | PLEISTOCENE |               | SAND                       | 4.0             | 9.0        |                           |
| 608.0                  | CARBONDALE  |               | SHALE                      | 6.0             | 13.0       |                           |
| 602.0                  | CARBONDALE  |               | SANDSTONE                  | 4.0             | 19.0       |                           |
| 598.0                  | CARBONDALE  |               | SHALE                      | 8.0             | 23.0       |                           |
| 590.0                  | CARBONDALE  |               | SANDSTONE                  | 2.0             | 31.0       |                           |
| 588.0                  | CARBONDALE  |               | SHALE                      | 4.0             | 33.0       |                           |
| 584.0                  | CARBONDALE  |               | SANDSTONE                  | 3.0             | 37.0       |                           |
| 581.0                  | CARBONDALE  |               | SHALE                      | 2.0             | 40.0       |                           |
| 579.0                  | CARBONDALE  |               | SANDSTONE/SHALE            | 7.0             | 42.0       |                           |
| 572.0                  | CARBONDALE  |               | SHALE                      | 8.0             | 49.0       |                           |
| 564.0                  | CARBONDALE  |               | SANDSTONE/LIMESTONE        | 3.0             | 57.0       |                           |
| 561.0                  | CARBONDALE  |               | SANDSTONE                  | 6.0             | 60.0       |                           |
| 555.0                  | CARBONDALE  |               | SHALE                      | 7.0             | 66.0       |                           |
| 548.0                  | CARBONDALE  |               | SANDSTONE/SHALE            | 17.0            | 73.0       |                           |
| 531.0                  | CARBONDALE  |               | LIMESTONE AND<br>SANDSTONE | 6.0             | 90.0       |                           |
| 525.0                  | CARBONDALE  |               | ROCK                       | 16.0            | 96.0       | DRILLER REPORTS<br>GRAVEL |
| 509.0                  | CARBONDALE  |               | SHALE                      | 6.0             | 112.0      |                           |
| 503.0                  | CARBONDALE  | HOUCHIN CREEK | COAL                       | 1.0             | 118.0      |                           |
| 502.0                  | CARBONDALE  |               | SHALE                      | 4.0             | 119.0      |                           |
| 498.0                  | CARBONDALE  |               | SANDSTONE                  | 7.0             | 123.0      |                           |
| 491.0                  | CARBONDALE  |               | SHALE                      | 3.0             | 130.0      |                           |
| 488.0                  | CARBONDALE  |               | SANDSTONE                  | 5.0             | 133.0      |                           |
| 483.0                  | CARBONDALE  |               | SHALE                      | 2.0             | 138.0      |                           |
| 481.0                  | CARBONDALE  |               | SANDSTONE                  | 8.5             | 140.0      |                           |
| 472.5                  | CARBONDALE  |               | SHALE                      | 1.5             | 148.5      |                           |
| 471.0                  | CARBONDALE  |               | SHALE & SANDSTONE          | 8.0             | 150.0      |                           |
| 463.0                  | CARBONDALE  |               | SANDSTONE                  | 3.0             | 158.0      |                           |
| 460.0                  | CARBONDALE  |               | SHALE                      | 3.0             | 161.0      |                           |
| 457.0                  | CARBONDALE  |               | SANDSTONE                  | 1.0             | 164.0      |                           |
| 456.0                  | CARBONDALE  |               | SHALE                      | 5.0             | 165.0      |                           |

MAPID: 09190023000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 17 QUARTERS/FOOTAGES: 1' N line, 1' W line of NW SW SW

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.229449 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.071461 DATE COLLECTED: 4 / 29 / 1971

SURFACE ELEVATION (FT.): 622.0 LOGGED (FT.): 132.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB35 WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY           | THICKNESS (FT.) |            | COMMENT |
|------------------------|-------------|---------------|---------------------|-----------------|------------|---------|
|                        |             |               |                     | UNIT            | OVERBURDEN |         |
| 622.0                  | PLEISTOCENE |               | CLAY                | 15.0            | 0.0        |         |
| 607.0                  | CARBONDALE  |               | SHALE               | 40.0            | 15.0       |         |
| 567.0                  | CARBONDALE  |               | SHALE               | 3.0             | 55.0       | GRAVELY |
| 564.0                  | CARBONDALE  |               | CALCAREOUS SHALE    | 2.0             | 58.0       |         |
| 562.0                  | CARBONDALE  |               | SHALE               | 15.0            | 60.0       |         |
| 547.0                  | CARBONDALE  |               | ROCK                | 2.0             | 75.0       |         |
| 545.0                  | CARBONDALE  |               | SHALE               | 5.0             | 77.0       |         |
| 540.0                  | CARBONDALE  |               | CALCAREOUS SHALE    | 1.0             | 82.0       |         |
| 539.0                  | CARBONDALE  |               | SHALE               | 12.0            | 83.0       |         |
| 527.0                  | CARBONDALE  |               | LIMESTONE           | 1.0             | 95.0       |         |
| 526.0                  | CARBONDALE  |               | SHALE               | 8.0             | 96.0       |         |
| 518.0                  | CARBONDALE  |               | LIMESTONE           | 1.0             | 104.0      |         |
| 517.0                  | CARBONDALE  |               | GRAY SHALE          | 2.0             | 105.0      |         |
| 515.0                  | CARBONDALE  |               | BLACK SHALE         | 0.3             | 107.0      | LIMY    |
| 514.7                  | CARBONDALE  |               | BLACK SHALE         | 2.8             | 107.3      |         |
| 512.0                  | CARBONDALE  | HOUCHIN CREEK | COAL                | 2.0             | 110.0      |         |
| 510.0                  | CARBONDALE  |               | UNDERCLAY           | 7.0             | 112.0      |         |
| 503.0                  | CARBONDALE  |               | SHALE & SANDSTONE   | 8.0             | 119.0      |         |
| 495.0                  | CARBONDALE  |               | SANDSTONE/LIMESTONE | 2.0             | 127.0      |         |
| 493.0                  | CARBONDALE  |               | SANDSTONE           | 1.0             | 129.0      | HARD    |
| 492.0                  | CARBONDALE  |               | SANDSTONE/SHALE     | 2.0             | 130.0      |         |

MAPID: 09190024000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 18 QUARTERS/FOOTAGES: 1' N line, 1' W line of NW NE NE

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.234801 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.082305 DATE COLLECTED: 1 / 14 / 1971

SURFACE ELEVATION (FT.): 612.0 LOGGED (FT.): 166.1 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB1 WELL TYPE: Coal Test

COMMENT: CARDIFF (REDDICK) BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY    | THICKNESS (FT.) |            | COMMENT                   |
|------------------------|-------------|---------------|--------------|-----------------|------------|---------------------------|
|                        |             |               |              | UNIT            | OVERBURDEN |                           |
| 612.0                  | PLEISTOCENE |               | CLAY         | 11.1            | 0.0        |                           |
| 600.9                  | PLEISTOCENE |               | CLAY & SHALE | 7.0             | 11.1       |                           |
| 593.9                  | PLEISTOCENE |               | GRAVEL       | 4.0             | 18.1       |                           |
| 589.9                  | PLEISTOCENE |               | SAND/CLAY    | 9.0             | 22.1       |                           |
| 580.9                  | PLEISTOCENE |               | SAND         | 14.0            | 31.1       |                           |
| 566.9                  | PLEISTOCENE |               | GRAVEL       | 1.0             | 45.1       |                           |
| 565.9                  | PLEISTOCENE |               | CLAY & SHALE | 3.0             | 46.1       |                           |
| 562.9                  | PLEISTOCENE |               | GRAVEL       | 1.0             | 49.1       |                           |
| 561.9                  | CARBONDALE  |               | SHALE        | 3.0             | 50.1       |                           |
| 558.9                  | CARBONDALE  |               | SANDY SHALE  | 3.0             | 53.1       |                           |
| 556.0                  | CARBONDALE  |               | SHALE        | 2.0             | 56.0       |                           |
| 554.0                  | CARBONDALE  |               | SANDY SHALE  | 6.0             | 58.0       |                           |
| 547.9                  | CARBONDALE  |               | GRAY SHALE   | 3.0             | 64.1       |                           |
| 544.9                  | CARBONDALE  |               | SANDY SHALE  | 2.0             | 67.1       |                           |
| 542.9                  | CARBONDALE  |               | UNKNOWN      | 0.2             | 69.1       | DRILLER REPORTS<br>GRAVEL |
| 542.7                  | CARBONDALE  |               | SHALE        | 1.8             | 69.3       |                           |
| 540.9                  | CARBONDALE  |               | SANDY SHALE  | 4.0             | 71.1       |                           |
| 536.9                  | CARBONDALE  |               | SANDSTONE    | 6.0             | 75.1       |                           |
| 530.9                  | CARBONDALE  |               | SHALE        | 4.0             | 81.1       |                           |
| 526.9                  | CARBONDALE  |               | SANDY SHALE  | 6.0             | 85.1       |                           |
| 520.9                  | CARBONDALE  |               | LIMESTONE    | 2.0             | 91.1       |                           |
| 518.9                  | CARBONDALE  |               | SHALE        | 7.0             | 93.1       |                           |
| 511.9                  | CARBONDALE  | HOUCHIN CREEK | COAL         | 3.3             | 100.1      |                           |
| 508.7                  | CARBONDALE  |               | UNDERCLAY    | 5.8             | 103.3      |                           |
| 502.9                  | CARBONDALE  |               | LIMESTONE    | 1.0             | 109.1      |                           |
| 501.9                  | CARBONDALE  |               | SHALE        | 2.0             | 110.1      |                           |
| 499.9                  | CARBONDALE  |               | LIMESTONE    | 8.0             | 112.1      |                           |
| 491.9                  | CARBONDALE  |               | SILTY SHALE  | 45.0            | 120.1      |                           |
| 446.9                  | CARBONDALE  |               | LIMESTONE    | 1.0             | 165.1      |                           |

MAPID: 09190025000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 18 QUARTERS/FOOTAGES: 1' N line, 1' W line of NW NE NE

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.234801 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.082305 DATE COLLECTED: 3 / 10 / 1971

SURFACE ELEVATION (FT.): 616.0 LOGGED (FT.): 170.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB13 WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY       | THICKNESS (FT.) |                    |
|------------------------|-------------|---------------|-----------------|-----------------|--------------------|
|                        |             |               |                 | UNIT            | OVERBURDEN COMMENT |
| 616.0                  | PLEISTOCENE |               | CLAY            | 15.0            | 0.0                |
| 601.0                  | PLEISTOCENE |               | CLAY & SHALE    | 20.0            | 15.0               |
| 581.0                  | PLEISTOCENE |               | SAND/CLAY       | 11.0            | 35.0               |
| 570.0                  | PLEISTOCENE |               | SAND & GRAVEL   | 2.0             | 46.0               |
| 568.0                  | CARBONDALE  |               | SHALE           | 3.0             | 48.0               |
| 565.0                  | CARBONDALE  |               | LIMESTONE       | 1.0             | 51.0               |
| 564.0                  | CARBONDALE  |               | SANDSTONE       | 5.0             | 52.0               |
| 559.0                  | CARBONDALE  |               | SHALE           | 11.0            | 57.0               |
| 548.0                  | CARBONDALE  |               | SANDY CLAYSTONE | 4.0             | 68.0               |
| 544.0                  | CARBONDALE  |               | SANDSTONE/SHALE | 6.0             | 72.0               |
| 538.0                  | CARBONDALE  |               | LIMESTONE       | 0.5             | 78.0               |
| 537.5                  | CARBONDALE  |               | SHALE           | 3.5             | 78.5               |
| 534.0                  | CARBONDALE  |               | SANDSTONE       | 0.5             | 82.0               |
| 533.5                  | CARBONDALE  |               | SANDSTONE/SHALE | 3.5             | 82.5               |
| 530.0                  | CARBONDALE  |               | SHALE           | 5.0             | 86.0               |
| 525.0                  | CARBONDALE  |               | SANDSTONE       | 0.5             | 91.0               |
| 524.5                  | CARBONDALE  |               | SANDSTONE       | 0.5             | 91.5               |
| 524.0                  | CARBONDALE  |               | SANDSTONE/SHALE | 9.0             | 92.0               |
| 515.0                  | CARBONDALE  |               | LIMESTONE       | 1.0             | 101.0              |
| 514.0                  | CARBONDALE  |               | GRAY SHALE      | 2.5             | 102.0              |
| 511.5                  | CARBONDALE  |               | BLACK SHALE     | 0.5             | 104.5              |
| 511.0                  | CARBONDALE  |               | DARK SHALE      | 2.0             | 105.0              |
| 509.0                  | CARBONDALE  | HOUCHIN CREEK | COAL            | 3.0             | 107.0              |
| 506.0                  | CARBONDALE  |               | UNDERCLAY       | 3.0             | 110.0              |
| 503.0                  | CARBONDALE  |               | SANDSTONE/SHALE | 19.0            | 113.0              |
| 484.0                  | CARBONDALE  |               | SANDSTONE       | 21.0            | 132.0              |
| 463.0                  | CARBONDALE  |               | LIMESTONE       | 2.0             | 153.0              |
| 461.0                  | CARBONDALE  |               | SANDY SHALE     | 15.0            | 155.0              |

MAPID: 09190026000C    VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE    TWP/RNG: 30N 9E    SECTION: 18    QUARTERS/FOOTAGES: 1' S line, 1' W line of SW NW NW

QUADRANGLE: BUCKINGHAM    LONGITUDE: -88.249995    GEOLOGIST: STRAAYER

CONFIDENTIAL: N    LATITUDE: 41.078093    DATE COLLECTED: 3 / 12 / 1971

SURFACE ELEVATION (FT.): 614.0    LOGGED (FT.): 177.0    LOG TYPE: Drillers Log

SOURCE: AYRSHIRE    RB14    WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER     | LITHOLOGY           | THICKNESS (FT.) |                    |
|------------------------|-------------|------------|---------------------|-----------------|--------------------|
|                        |             |            |                     | UNIT            | OVERBURDEN COMMENT |
| 614.0                  | PLEISTOCENE |            | CLAY                | 15.0            | 0.0                |
| 599.0                  | CARBONDALE  |            | SHALE               | 10.0            | 15.0               |
| 589.0                  | CARBONDALE  |            | SANDSTONE           | 15.0            | 25.0               |
| 574.0                  | CARBONDALE  |            | SHALE               | 5.0             | 40.0               |
| 569.0                  | CARBONDALE  |            | SANDSTONE           | 5.0             | 45.0               |
| 564.0                  | CARBONDALE  |            | SHALE & SANDSTONE   | 8.0             | 50.0               |
| 556.0                  | CARBONDALE  |            | SHALE               | 3.0             | 58.0               |
| 553.0                  | CARBONDALE  |            | SANDSTONE/SHALE     | 16.0            | 61.0               |
| 537.0                  | CARBONDALE  |            | SHALE               | 8.0             | 77.0               |
| 529.0                  | CARBONDALE  |            | SANDSTONE           | 1.0             | 85.0               |
| 528.0                  | CARBONDALE  |            | SHALE               | 1.0             | 86.0               |
| 527.0                  | CARBONDALE  |            | BLACK SHALE         | 2.0             | 87.0               |
| 525.0                  | CARBONDALE  |            | COAL                | 4.5             | 89.0               |
| 520.5                  | CARBONDALE  |            | UNDERCLAY           | 4.5             | 93.5               |
| 516.0                  | CARBONDALE  |            | SANDSTONE/SHALE     | 6.0             | 98.0               |
| 510.0                  | CARBONDALE  |            | SANDSTONE/LIMESTONE | 5.0             | 104.0              |
| 505.0                  | CARBONDALE  |            | SHALE & SANDSTONE   | 4.0             | 109.0              |
| 501.0                  | CARBONDALE  |            | SANDSTONE           | 2.0             | 113.0              |
| 499.0                  | CARBONDALE  |            | SHALE               | 8.0             | 115.0              |
| 491.0                  | CARBONDALE  |            | SANDY SHALE         | 42.0            | 123.0              |
| 449.0                  | CARBONDALE  |            | SHALE               | 5.0             | 165.0              |
| 444.0                  | CARBONDALE  |            | LIMESTONE           | 0.5             | 170.0              |
| 443.5                  | CARBONDALE  |            | SHALE               | 3.5             | 170.5              |
| 440.0                  | CARBONDALE  | COLCHESTER | COAL                | 2.5             | 174.0              |
| 437.5                  | CARBONDALE  |            | UNDERCLAY           | 0.5             | 176.5              |

MAPID: 09190027000C    VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE    TWP/RNG: 30N 9E    SECTION: 18    QUARTERS/FOOTAGES: 1' N line, 1' W line of NW SW SW

QUADRANGLE: BUCKINGHAM    LONGITUDE: -88.249876    GEOLOGIST: STRAAYER

CONFIDENTIAL: N    LATITUDE: 41.07076    DATE COLLECTED: 3 / 14 / 1971

SURFACE ELEVATION (FT.): 619.0    LOGGED (FT.): 194.0    LOG TYPE: Drillers Log

SOURCE: AYRSHIRE    RB15    WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY         | THICKNESS (FT.) |                    |
|------------------------|-------------|---------------|-------------------|-----------------|--------------------|
|                        |             |               |                   | UNIT            | OVERBURDEN COMMENT |
| 619.0                  | PLEISTOCENE |               | CLAY              | 15.0            | 0.0                |
| 604.0                  | CARBONDALE  |               | SHALE             | 10.0            | 15.0               |
| 594.0                  | CARBONDALE  |               | ROCK              | 1.0             | 25.0               |
| 593.0                  | CARBONDALE  |               | SHALE             | 1.0             | 26.0               |
| 592.0                  | CARBONDALE  |               | SANDSTONE         | 10.0            | 27.0               |
| 582.0                  | CARBONDALE  |               | SHALE             | 10.0            | 37.0               |
| 572.0                  | CARBONDALE  |               | SANDY SHALE       | 8.0             | 47.0               |
| 564.0                  | CARBONDALE  |               | SHALE & SANDSTONE | 7.0             | 55.0               |
| 557.0                  | CARBONDALE  |               | ROCK              | 1.0             | 62.0               |
| 556.0                  | CARBONDALE  |               | SHALE             | 3.0             | 63.0               |
| 553.0                  | CARBONDALE  |               | ROCK              | 2.0             | 66.0               |
| 551.0                  | CARBONDALE  |               | SHALE & SANDSTONE | 17.0            | 68.0               |
| 534.0                  | CARBONDALE  |               | SANDSTONE         | 5.0             | 85.0               |
| 529.0                  | CARBONDALE  |               | SHALE & SANDSTONE | 11.0            | 90.0               |
| 518.0                  | CARBONDALE  |               | BLACK SHALE       | 2.0             | 101.0              |
| 516.0                  | CARBONDALE  | HOUCHIN CREEK | COAL              | 1.5             | 103.0              |
| 514.5                  | CARBONDALE  |               | UNDERCLAY         | 13.5            | 104.5              |
| 501.0                  | CARBONDALE  |               | SANDSTONE/SHALE   | 12.0            | 118.0              |
| 489.0                  | CARBONDALE  |               | SANDSTONE         | 1.0             | 130.0              |
| 488.0                  | CARBONDALE  |               | SANDSTONE/SHALE   | 21.0            | 131.0              |
| 467.0                  | CARBONDALE  |               | SHALE             | 6.0             | 152.0              |
| 461.0                  | CARBONDALE  |               | SANDSTONE         | 6.0             | 158.0              |
| 455.0                  | CARBONDALE  |               | SHALE             | 10.0            | 164.0              |
| 445.0                  | CARBONDALE  |               | SHALE             | 12.5            | 174.0              |
| 432.5                  | CARBONDALE  | COLCHESTER    | COAL              | 2.5             | 186.5              |
| 430.0                  | CARBONDALE  |               | UNDERCLAY         | 5.0             | 189.0              |



MAPID: 09190028000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 18 QUARTERS/FOOTAGES: 1' N line, 1' E line of NE NE SE SW

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.239672 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.071111 DATE COLLECTED: 6 / 11 / 1971

SURFACE ELEVATION (FT.): 620.2 LOGGED (FT.): 146.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB66 WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY            | THICKNESS (FT.) |                    |
|------------------------|-------------|---------------|----------------------|-----------------|--------------------|
|                        |             |               |                      | UNIT            | OVERBURDEN COMMENT |
| 620.2                  | PLEISTOCENE |               | CLAY                 | 15.0            | 0.0                |
| 605.2                  | CARBONDALE  |               | SHALE                | 46.0            | 15.0               |
| 559.2                  | CARBONDALE  |               | SILTY SHALE          | 29.0            | 61.0               |
| 530.2                  | CARBONDALE  |               | SHALE WITH LIMESTONE | 1.0             | 90.0               |
| 529.2                  | CARBONDALE  |               | SHALE                | 4.0             | 91.0               |
| 525.2                  | CARBONDALE  |               | LIMESTONE            | 1.0             | 95.0               |
| 524.2                  | CARBONDALE  |               | GRAY SHALE           | 8.5             | 96.0               |
| 515.7                  | CARBONDALE  | HOUCHIN CREEK | COAL                 | 3.5             | 104.5              |
| 512.2                  | CARBONDALE  |               | UNDERCLAY            | 3.0             | 108.0              |
| 509.2                  | CARBONDALE  |               | LIMESTONE            | 1.0             | 111.0              |
| 508.2                  | CARBONDALE  |               | SILTY SHALE          | 17.0            | 112.0              |
| 491.2                  | CARBONDALE  |               | LIMESTONE            | 1.0             | 129.0              |
| 490.2                  | CARBONDALE  |               | SILTY SHALE          | 16.0            | 130.0              |

MAPID: 09190029000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 19 QUARTERS/FOOTAGES: 1' S line, 1' W line of SW SW SW

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.249181 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.052446 DATE COLLECTED:

SURFACE ELEVATION (FT.): 631.0 LOGGED (FT.): 137.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB26 WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY           | THICKNESS (FT.) |                    |
|------------------------|-------------|---------------|---------------------|-----------------|--------------------|
|                        |             |               |                     | UNIT            | OVERBURDEN COMMENT |
| 631.0                  | PLEISTOCENE |               | CLAY                | 15.0            | 0.0                |
| 616.0                  | PLEISTOCENE |               | SAND                | 1.0             | 15.0               |
| 615.0                  | CARBONDALE  |               | SHALE               | 9.0             | 16.0               |
| 606.0                  | CARBONDALE  |               | SANDSTONE/SHALE     | 36.0            | 25.0               |
| 570.0                  | CARBONDALE  |               | SANDSTONE/LIMESTONE | 36.0            | 61.0               |
| 534.0                  | CARBONDALE  |               | SHALE & SANDSTONE   | 8.0             | 97.0               |
| 526.0                  | CARBONDALE  |               | SANDSTONE           | 5.0             | 105.0              |
| 521.0                  | CARBONDALE  |               | SANDY SHALE         | 10.0            | 110.0              |
| 511.0                  | CARBONDALE  |               | GRAY SHALE          | 7.0             | 120.0              |
| 504.0                  | CARBONDALE  |               | BLACK SHALE         | 1.0             | 127.0              |
| 503.0                  | CARBONDALE  | HOUCHIN CREEK | COAL                | 2.0             | 128.0              |
| 501.0                  | CARBONDALE  |               | UNDERCLAY           | 2.0             | 130.0              |
| 499.0                  | CARBONDALE  |               | SHALE               | 5.0             | 132.0              |

MAPID: 09190030000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 19 QUARTERS/FOOTAGES: 1' N line, 1' E line of NE NE SW

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.239446 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.060136 DATE COLLECTED:

SURFACE ELEVATION (FT.): 620.0 LOGGED (FT.): 139.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB34 WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY         | THICKNESS (FT.) |                    |
|------------------------|-------------|---------------|-------------------|-----------------|--------------------|
|                        |             |               |                   | UNIT            | OVERBURDEN COMMENT |
| 620.0                  | PLEISTOCENE |               | CLAY              | 14.0            | 0.0                |
| 606.0                  | CARBONDALE  |               | SHALE             | 10.0            | 14.0               |
| 596.0                  | CARBONDALE  |               | CALCAREOUS SHALE  | 1.0             | 24.0               |
| 595.0                  | CARBONDALE  |               | SHALE & SANDSTONE | 60.0            | 25.0               |
| 535.0                  | CARBONDALE  |               | ROCK              | 2.0             | 85.0               |
| 533.0                  | CARBONDALE  |               | SHALE             | 6.0             | 87.0               |
| 527.0                  | CARBONDALE  |               | CALCAREOUS SHALE  | 8.0             | 93.0               |
| 519.0                  | CARBONDALE  |               | LIMESTONE         | 1.0             | 101.0              |
| 518.0                  | CARBONDALE  |               | SHALE             | 2.0             | 102.0              |
| 516.0                  | CARBONDALE  |               | BLACK SHALE       | 0.5             | 104.0              |
| 515.5                  | CARBONDALE  |               | COAL              | 1.5             | 104.5              |
| 514.0                  | CARBONDALE  |               | SHALE             | 2.0             | 106.0              |
| 512.0                  | CARBONDALE  |               | LIMESTONE         | 1.0             | 108.0              |
| 511.0                  | CARBONDALE  |               | SHALE             | 9.0             | 109.0              |
| 502.0                  | CARBONDALE  | HOUCHIN CREEK | COAL              | 3.0             | 118.0              |
| 499.0                  | CARBONDALE  |               | UNDERCLAY         | 5.0             | 121.0              |
| 494.0                  | CARBONDALE  |               | LIMESTONE         | 1.0             | 126.0              |
| 493.0                  | CARBONDALE  |               | CALCAREOUS SHALE  | 8.0             | 127.0              |
| 485.0                  | CARBONDALE  |               | LIMESTONE         | 0.5             | 135.0              |
| 484.5                  | CARBONDALE  |               | SANDSTONE/SHALE   | 3.5             | 135.5              |

MAPID: 09190031000C    VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE    TWP/RNG: 30N 9E    SECTION: 19    QUARTERS/FOOTAGES: 1' N line, 1' W line of NW NW SW

QUADRANGLE: BUCKINGHAM    LONGITUDE: -88.2495    GEOLOGIST: STRAAYER

CONFIDENTIAL: N    LATITUDE: 41.05977    DATE COLLECTED: 5 / 13 / 1971

SURFACE ELEVATION (FT.): 629.0    LOGGED (FT.): 150.0    LOG TYPE: Drillers Log

SOURCE: AYRSHIRE    RB37    WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER        | LITHOLOGY            | THICKNESS (FT.) |            | COMMENT |
|------------------------|-------------|---------------|----------------------|-----------------|------------|---------|
|                        |             |               |                      | UNIT            | OVERBURDEN |         |
| 629.0                  | PLEISTOCENE |               | SOIL                 | 15.0            | 0.0        |         |
| 614.0                  | CARBONDALE  |               | SHALE                | 9.0             | 15.0       |         |
| 605.0                  | CARBONDALE  |               | ROCK                 | 2.0             | 24.0       |         |
| 603.0                  | CARBONDALE  |               | SHALE                | 24.0            | 26.0       |         |
| 579.0                  | CARBONDALE  |               | ROCK                 | 3.0             | 50.0       |         |
| 576.0                  | CARBONDALE  |               | SHALE & SANDSTONE    | 15.0            | 53.0       |         |
| 561.0                  | CARBONDALE  |               | LIMESTONE            | 1.0             | 68.0       |         |
| 560.0                  | CARBONDALE  |               | ROCK                 | 2.0             | 69.0       |         |
| 558.0                  | CARBONDALE  |               | SHALE WITH LIMESTONE | 1.0             | 71.0       |         |
| 557.0                  | CARBONDALE  |               | SILTY SHALE          | 16.0            | 72.0       |         |
| 541.0                  | CARBONDALE  |               | SANDSTONE/SHALE      | 7.0             | 88.0       |         |
| 534.0                  | CARBONDALE  |               | SHALE                | 6.0             | 95.0       |         |
| 528.0                  | CARBONDALE  |               | BLACK SHALE          | 2.0             | 101.0      |         |
| 526.0                  | CARBONDALE  | HOUCHIN CREEK | COAL                 | 1.5             | 103.0      |         |
| 524.5                  | CARBONDALE  |               | SHALE/UNDERCLAY      | 5.5             | 104.5      |         |
| 519.0                  | CARBONDALE  |               | LIMESTONE            | 0.5             | 110.0      |         |
| 518.5                  | CARBONDALE  |               | SHALE                | 3.5             | 110.5      |         |
| 515.0                  | CARBONDALE  |               | BLACK SHALE          | 1.0             | 114.0      | GUMMY   |
| 514.0                  | CARBONDALE  |               | GRAY SHALE           | 5.0             | 115.0      |         |
| 509.0                  | CARBONDALE  |               | COAL                 | 2.8             | 120.0      |         |
| 506.2                  | CARBONDALE  |               | UNDERCLAY            | 3.3             | 122.8      |         |
| 503.0                  | CARBONDALE  |               | LIMESTONE            | 1.0             | 126.0      |         |
| 502.0                  | CARBONDALE  |               | SILTY SHALE          | 23.0            | 127.0      |         |

MAPID: 09190032000C    VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE    TWP/RNG: 30N 9E    SECTION: 20    QUARTERS/FOOTAGES: 1' S line, 1' W line of SW SW SW

QUADRANGLE: BUCKINGHAM    LONGITUDE: -88.229392    GEOLOGIST: STRAAYER

CONFIDENTIAL: N    LATITUDE: 41.053234    DATE COLLECTED:

SURFACE ELEVATION (FT.): 631.0    LOGGED (FT.): 206.0    LOG TYPE: Drillers Log

SOURCE: AYRSHIRE    RB23    WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER     | LITHOLOGY         | THICKNESS (FT.) |                    |
|------------------------|-------------|------------|-------------------|-----------------|--------------------|
|                        |             |            |                   | UNIT            | OVERBURDEN COMMENT |
| 631.0                  | PLEISTOCENE |            | CLAY              | 13.0            | 0.0                |
| 618.0                  | CARBONDALE  |            | SHALE & SANDSTONE | 36.0            | 13.0               |
| 582.0                  | CARBONDALE  |            | SHALE             | 3.0             | 49.0               |
| 579.0                  | CARBONDALE  |            | SANDSTONE/SHALE   | 10.0            | 52.0               |
| 569.0                  | CARBONDALE  |            | LIMESTONE         | 1.0             | 62.0               |
| 568.0                  | CARBONDALE  |            | SANDSTONE/SHALE   | 21.0            | 63.0               |
| 547.0                  | CARBONDALE  |            | ROCK              | 1.0             | 84.0               |
| 546.0                  | CARBONDALE  |            | SHALE & SANDSTONE | 8.0             | 85.0               |
| 538.0                  | CARBONDALE  |            | LIMESTONE         | 3.0             | 93.0               |
| 535.0                  | CARBONDALE  |            | SHALE & SANDSTONE | 13.0            | 96.0               |
| 522.0                  | CARBONDALE  |            | LIMESTONE         | 1.0             | 109.0              |
| 521.0                  | CARBONDALE  |            | SHALE             | 7.0             | 110.0              |
| 514.0                  | CARBONDALE  |            | COAL              | 2.5             | 117.0              |
| 511.5                  | CARBONDALE  |            | UNDERCLAY         | 4.5             | 119.5              |
| 507.0                  | CARBONDALE  |            | SANDSTONE         | 8.0             | 124.0              |
| 499.0                  | CARBONDALE  |            | LIMESTONE         | 2.0             | 132.0              |
| 497.0                  | CARBONDALE  |            | SANDSTONE         | 22.0            | 134.0              |
| 475.0                  | CARBONDALE  |            | SHALE & SANDSTONE | 24.0            | 156.0              |
| 451.0                  | CARBONDALE  |            | SHALE             | 17.0            | 180.0              |
| 434.0                  | CARBONDALE  | COLCHESTER | COAL              | 3.5             | 197.0              |
| 430.5                  | CARBONDALE  |            | UNDERCLAY         | 5.5             | 200.5              |

MAPID: 09190033000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 20 QUARTERS/FOOTAGES: 1' S line, 1' W line of SW SW NE

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.219765 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.060888 DATE COLLECTED: 4 / 25 / 1971

SURFACE ELEVATION (FT.): 630.0 LOGGED (FT.): 140.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB33 WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER | LITHOLOGY         | THICKNESS (FT.) |                    |
|------------------------|-------------|--------|-------------------|-----------------|--------------------|
|                        |             |        |                   | UNIT            | OVERBURDEN COMMENT |
| 630.0                  | PLEISTOCENE |        | CLAY              | 14.0            | 0.0                |
| 616.0                  | CARBONDALE  |        | SHALE             | 3.0             | 14.0               |
| 613.0                  | CARBONDALE  |        | LIMESTONE & SHALE | 1.0             | 17.0               |
| 612.0                  | CARBONDALE  |        | SHALE             | 7.0             | 18.0               |
| 605.0                  | CARBONDALE  |        | ROCK              | 1.0             | 25.0               |
| 604.0                  | CARBONDALE  |        | SHALE             | 36.0            | 26.0               |
| 568.0                  | CARBONDALE  |        | ROCK              | 3.0             | 62.0               |
| 565.0                  | CARBONDALE  |        | LIMESTONE         | 1.0             | 65.0               |
| 564.0                  | CARBONDALE  |        | SANDSTONE/SHALE   | 4.0             | 66.0               |
| 560.0                  | CARBONDALE  |        | SHALE             | 4.0             | 70.0               |
| 556.0                  | CARBONDALE  |        | LIMESTONE         | 1.0             | 74.0               |
| 555.0                  | CARBONDALE  |        | SILTY SHALE       | 2.0             | 75.0               |
| 553.0                  | CARBONDALE  |        | ROCK              | 1.0             | 77.0               |
| 552.0                  | CARBONDALE  |        | CALCAREOUS SHALE  | 2.0             | 78.0               |
| 550.0                  | CARBONDALE  |        | SHALE             | 4.0             | 80.0               |
| 546.0                  | CARBONDALE  |        | CALCAREOUS SHALE  | 1.0             | 84.0               |
| 545.0                  | CARBONDALE  |        | SHALE & SANDSTONE | 11.0            | 85.0               |
| 534.0                  | CARBONDALE  |        | LIMESTONE         | 1.0             | 96.0               |
| 533.0                  | CARBONDALE  |        | SHALE             | 1.5             | 97.0               |
| 531.5                  | CARBONDALE  |        | LIMESTONE         | 1.0             | 98.5               |
| 530.5                  | CARBONDALE  |        | CALCAREOUS SHALE  | 1.0             | 99.5               |
| 529.5                  | CARBONDALE  |        | LIMESTONE         | 1.5             | 100.5              |
| 528.0                  | CARBONDALE  |        | CALCAREOUS SHALE  | 3.0             | 102.0              |
| 525.0                  | CARBONDALE  |        | ROCK              | 3.0             | 105.0              |
| 522.0                  | CARBONDALE  |        | SHALE             | 11.0            | 108.0              |
| 511.0                  | CARBONDALE  |        | COAL              | 3.3             | 119.0              |
| 507.7                  | CARBONDALE  |        | UNDERCLAY         | 7.7             | 122.3              |
| 500.0                  | CARBONDALE  |        | SHALE             | 2.0             | 130.0              |
| 498.0                  | CARBONDALE  |        | CALCAREOUS SHALE  | 1.0             | 132.0              |
| 497.0                  | CARBONDALE  |        | SHALE             | 3.0             | 133.0              |
| 494.0                  | CARBONDALE  |        | LIMESTONE         | 3.0             | 136.0              |
| 491.0                  | CARBONDALE  |        | SHALE             | 1.0             | 139.0              |

MAPID: 09190034000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 21 QUARTERS/FOOTAGES: 1' S line, 1' W line of SW SW SW

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.210001 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.053904 DATE COLLECTED: 1 / 23 / 1971

SURFACE ELEVATION (FT.): 641.0 LOGGED (FT.): 156.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB3 WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER | LITHOLOGY           | THICKNESS (FT.) |            | COMMENT |
|------------------------|-------------|--------|---------------------|-----------------|------------|---------|
|                        |             |        |                     | UNIT            | OVERBURDEN |         |
| 641.0                  | PLEISTOCENE |        | CLAY                | 15.0            | 0.0        |         |
| 626.0                  | CARBONDALE  |        | SAND                | 2.0             | 15.0       | SOFT    |
| 624.0                  | CARBONDALE  |        | CLAY & SHALE        | 10.0            | 17.0       |         |
| 614.0                  | PLEISTOCENE |        | GRAVEL              | 2.0             | 27.0       |         |
| 612.0                  | CARBONDALE  |        | SAND/CLAY           | 1.0             | 29.0       |         |
| 611.0                  | CARBONDALE  |        | CLAY & SHALE        | 7.0             | 30.0       |         |
| 604.0                  | CARBONDALE  |        | SAND                | 1.0             | 37.0       |         |
| 603.0                  | CARBONDALE  |        | SAND                | 9.0             | 38.0       | SOFT    |
| 594.0                  | CARBONDALE  |        | CLAY & SHALE        | 13.0            | 47.0       |         |
| 581.0                  | PLEISTOCENE |        | SAND                | 3.0             | 60.0       |         |
| 578.0                  | PLEISTOCENE |        | CLAY & SHALE        | 3.0             | 63.0       |         |
| 575.0                  | PLEISTOCENE |        | SAND                | 4.0             | 66.0       | SOFT    |
| 571.0                  | PLEISTOCENE |        | GRAVEL              | 7.0             | 70.0       |         |
| 564.0                  | CARBONDALE  |        | LIMESTONE           | 1.0             | 77.0       |         |
| 563.0                  | CARBONDALE  |        | SHALE               | 4.0             | 78.0       |         |
| 559.0                  | CARBONDALE  |        | SANDSTONE           | 3.0             | 82.0       |         |
| 556.0                  | CARBONDALE  |        | SHALE               | 15.0            | 85.0       |         |
| 541.0                  | CARBONDALE  |        | SANDSTONE           | 2.0             | 100.0      |         |
| 539.0                  | CARBONDALE  |        | SANDY SHALE         | 8.0             | 102.0      |         |
| 531.0                  | CARBONDALE  |        | LIMESTONE           | 2.0             | 110.0      |         |
| 529.0                  | CARBONDALE  |        | SHALE               | 3.0             | 112.0      |         |
| 526.0                  | CARBONDALE  |        | LIMESTONE           | 2.0             | 115.0      |         |
| 524.0                  | CARBONDALE  |        | SHALE               | 8.0             | 117.0      |         |
| 516.0                  | CARBONDALE  |        | SANDSTONE/LIMESTONE | 1.0             | 125.0      |         |
| 515.0                  | CARBONDALE  |        | SANDY SHALE         | 15.0            | 126.0      |         |
| 500.0                  | CARBONDALE  |        | LIMESTONE           | 1.0             | 141.0      |         |
| 499.0                  | CARBONDALE  |        | SHALE               | 12.0            | 142.0      |         |
| 487.0                  | CARBONDALE  |        | SANDSTONE           | 1.5             | 154.0      |         |
| 485.5                  | CARBONDALE  |        | LIMESTONE           | 0.5             | 155.5      |         |

MAPID: 09190035000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 21 QUARTERS/FOOTAGES: 1' S line, 1' E line of SE SE SW

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.200411 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.054297 DATE COLLECTED: 3 / 23 / 1971

SURFACE ELEVATION (FT.): 643.0 LOGGED (FT.): 201.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB18 WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER     | LITHOLOGY         | THICKNESS (FT.) |                    |
|------------------------|-------------|------------|-------------------|-----------------|--------------------|
|                        |             |            |                   | UNIT            | OVERBURDEN COMMENT |
| 643.0                  | PLEISTOCENE |            | CLAY              | 15.0            | 0.0                |
| 628.0                  | CARBONDALE  |            | SHALE             | 38.0            | 15.0               |
| 590.0                  | CARBONDALE  |            | SANDSTONE         | 3.0             | 53.0               |
| 587.0                  | CARBONDALE  |            | SHALE             | 6.0             | 56.0               |
| 581.0                  | CARBONDALE  |            | SANDSTONE/SHALE   | 13.0            | 62.0               |
| 568.0                  | CARBONDALE  |            | SANDSTONE         | 15.0            | 75.0               |
| 553.0                  | CARBONDALE  |            | SHALE & SANDSTONE | 12.0            | 90.0               |
| 541.0                  | CARBONDALE  |            | LIMESTONE         | 2.0             | 102.0              |
| 539.0                  | CARBONDALE  |            | SHALE             | 5.0             | 104.0              |
| 534.0                  | CARBONDALE  |            | SANDSTONE         | 3.0             | 109.0              |
| 531.0                  | CARBONDALE  |            | SANDSTONE/SHALE   | 15.0            | 112.0              |
| 516.0                  | CARBONDALE  |            | SANDSTONE/SHALE   | 8.0             | 127.0              |
| 508.0                  | CARBONDALE  |            | SHALE             | 12.0            | 135.0              |
| 496.0                  | CARBONDALE  |            | SANDSTONE/SHALE   | 10.0            | 147.0              |
| 486.0                  | CARBONDALE  |            | SILTY SHALE       | 16.0            | 157.0              |
| 470.0                  | CARBONDALE  |            | SANDSTONE         | 4.0             | 173.0              |
| 466.0                  | CARBONDALE  |            | SHALE             | 6.0             | 177.0              |
| 460.0                  | CARBONDALE  |            | SHALE             | 5.0             | 183.0              |
| 455.0                  | CARBONDALE  | COLCHESTER | COAL              | 3.0             | 188.0              |
| 452.0                  | CARBONDALE  |            | SHALE             | 9.0             | 191.0              |
| 443.0                  | CARBONDALE  |            | LIMESTONE         | 1.0             | 200.0              |

MAPID: 09190036000C    VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE    TWP/RNG: 30N 9E    SECTION: 21    QUARTERS/FOOTAGES: 1' S line, 1' E line of SE SE SE

QUADRANGLE: BUCKINGHAM    LONGITUDE: -88.190812    GEOLOGIST: STRAAYER

CONFIDENTIAL: N    LATITUDE: 41.054689    DATE COLLECTED: 4 / 8 / 1971

SURFACE ELEVATION (FT.): 645.0    LOGGED (FT.): 156.0    LOG TYPE: Drillers Log

SOURCE: AYRSHIRE    RB24    WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER | LITHOLOGY         | THICKNESS (FT.) |            | COMMENT                   |
|------------------------|-------------|--------|-------------------|-----------------|------------|---------------------------|
|                        |             |        |                   | UNIT            | OVERBURDEN |                           |
| 645.0                  | PLEISTOCENE |        | CLAY              | 14.0            | 0.0        |                           |
| 631.0                  | CARBONDALE  |        | SHALE & SANDSTONE | 21.0            | 14.0       |                           |
| 610.0                  | CARBONDALE  |        | SANDSTONE         | 1.0             | 35.0       | HARD                      |
| 609.0                  | CARBONDALE  |        | ROCK              | 4.0             | 36.0       | DRILLER REPORTS<br>GRAVEL |
| 605.0                  | CARBONDALE  |        | SHALE & SANDSTONE | 15.0            | 40.0       |                           |
| 590.0                  | CARBONDALE  |        | SHALE             | 6.0             | 55.0       |                           |
| 584.0                  | CARBONDALE  |        | SANDSTONE         | 11.0            | 61.0       |                           |
| 573.0                  | CARBONDALE  |        | ROCK              | 4.0             | 72.0       | DRILLER REPORTS<br>GRAVEL |
| 569.0                  | CARBONDALE  |        | SANDSTONE/SHALE   | 5.0             | 76.0       |                           |
| 564.0                  | CARBONDALE  |        | SHALE             | 4.0             | 81.0       |                           |
| 560.0                  | CARBONDALE  |        | SHALE & SANDSTONE | 11.0            | 85.0       |                           |
| 549.0                  | CARBONDALE  |        | LIMESTONE         | 11.0            | 96.0       |                           |
| 538.0                  | CARBONDALE  |        | SHALE             | 5.0             | 107.0      |                           |
| 533.0                  | CARBONDALE  |        | SHALE & SANDSTONE | 8.0             | 112.0      |                           |
| 525.0                  | CARBONDALE  |        | SHALE & SANDSTONE | 30.0            | 120.0      |                           |
| 495.0                  | CARBONDALE  |        | SILTY SHALE       | 6.0             | 150.0      |                           |



MAPID: 09190037000C    VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE    TWP/RNG: 30N 9E    SECTION: 21    QUARTERS/FOOTAGES: 1' N line, 1' W line of NW NW SE

QUADRANGLE: BUCKINGHAM    LONGITUDE: -88.200476    GEOLOGIST: STRAAYER

CONFIDENTIAL: N    LATITUDE: 41.061649    DATE COLLECTED:

SURFACE ELEVATION (FT.): 633.0    LOGGED (FT.): 184.0    LOG TYPE: Drillers Log

SOURCE: AYRSHIRE    RB27    WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER | LITHOLOGY                  | THICKNESS (FT.) |            | COMMENT |
|------------------------|-------------|--------|----------------------------|-----------------|------------|---------|
|                        |             |        |                            | UNIT            | OVERBURDEN |         |
| 633.0                  | PLEISTOCENE |        | CLAY                       | 15.0            | 0.0        |         |
| 618.0                  | CARBONDALE  |        | SANDSTONE/SHALE            | 15.0            | 15.0       |         |
| 603.0                  | CARBONDALE  |        | SHALE                      | 8.0             | 30.0       |         |
| 595.0                  | CARBONDALE  |        | SANDSTONE/SHALE            | 4.0             | 38.0       |         |
| 591.0                  | CARBONDALE  |        | SHALE                      | 19.0            | 42.0       |         |
| 572.0                  | CARBONDALE  |        | SANDSTONE                  | 2.0             | 61.0       |         |
| 570.0                  | CARBONDALE  |        | SHALE                      | 3.0             | 63.0       |         |
| 567.0                  | CARBONDALE  |        | SANDSTONE/SHALE            | 19.0            | 66.0       |         |
| 548.0                  | CARBONDALE  |        | SHALE & SANDSTONE          | 8.0             | 85.0       |         |
| 540.0                  | CARBONDALE  |        | ROCK                       | 2.0             | 93.0       |         |
| 538.0                  | CARBONDALE  |        | SANDSTONE                  | 1.0             | 95.0       | HARD    |
| 537.0                  | CARBONDALE  |        | SHALE                      | 4.0             | 96.0       |         |
| 533.0                  | CARBONDALE  |        | SANDSTONE                  | 5.0             | 100.0      |         |
| 528.0                  | CARBONDALE  |        | SILTY SANDSTONE            | 3.0             | 105.0      |         |
| 525.0                  | CARBONDALE  |        | LIMESTONE AND<br>SANDSTONE | 9.0             | 108.0      |         |
| 516.0                  | CARBONDALE  |        | SILTY SHALE                | 6.5             | 117.0      |         |
| 509.5                  | CARBONDALE  |        | SANDSTONE                  | 1.0             | 123.5      | HARD    |
| 508.5                  | CARBONDALE  |        | SHALE                      | 2.5             | 124.5      |         |
| 506.0                  | CARBONDALE  |        | SANDSTONE/SHALE            | 4.0             | 127.0      |         |
| 502.0                  | CARBONDALE  |        | SHALE                      | 4.0             | 131.0      |         |
| 498.0                  | CARBONDALE  |        | SHALE & SANDSTONE          | 17.0            | 135.0      |         |
| 481.0                  | CARBONDALE  |        | SHALE                      | 5.0             | 152.0      |         |
| 476.0                  | CARBONDALE  |        | SHALE & SANDSTONE          | 15.0            | 157.0      |         |
| 461.0                  | CARBONDALE  |        | SHALE                      | 5.0             | 172.0      |         |
| 456.0                  | CARBONDALE  |        | SANDSTONE/SHALE            | 7.0             | 177.0      |         |

MAPID: 09190038000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 21 QUARTERS/FOOTAGES: 1' N line, 1' W line of NE NE NW

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.202989 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.068908 DATE COLLECTED:

SURFACE ELEVATION (FT.): 635.0 LOGGED (FT.): 135.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB28 WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER | LITHOLOGY         | THICKNESS (FT.) |                    |
|------------------------|-------------|--------|-------------------|-----------------|--------------------|
|                        |             |        |                   | UNIT            | OVERBURDEN COMMENT |
| 635.0                  | PLEISTOCENE |        | CLAY              | 14.0            | 0.0                |
| 621.0                  | CARBONDALE  |        | SHALE             | 5.0             | 14.0               |
| 616.0                  | CARBONDALE  |        | LIMESTONE         | 1.0             | 19.0               |
| 615.0                  | CARBONDALE  |        | SHALE             | 6.0             | 20.0               |
| 609.0                  | CARBONDALE  |        | LIMESTONE & SHALE | 1.0             | 26.0               |
| 608.0                  | CARBONDALE  |        | SHALE             | 24.0            | 27.0               |
| 584.0                  | CARBONDALE  |        | CALCAREOUS SHALE  | 1.0             | 51.0               |
| 583.0                  | CARBONDALE  |        | SHALE             | 8.0             | 52.0               |
| 575.0                  | CARBONDALE  |        | CALCAREOUS SHALE  | 12.0            | 60.0               |
| 563.0                  | CARBONDALE  |        | SHALE             | 14.0            | 72.0               |
| 549.0                  | CARBONDALE  |        | ROCK              | 1.0             | 86.0               |
| 548.0                  | CARBONDALE  |        | SHALE             | 2.0             | 87.0               |
| 546.0                  | CARBONDALE  |        | SANDSTONE/SHALE   | 11.0            | 89.0               |
| 535.0                  | CARBONDALE  |        | LIMESTONE         | 1.0             | 100.0              |
| 534.0                  | CARBONDALE  |        | SHALE             | 3.0             | 101.0              |
| 531.0                  | CARBONDALE  |        | LIMESTONE         | 0.4             | 104.0              |
| 530.5                  | CARBONDALE  |        | SHALE             | 1.5             | 104.5              |
| 529.0                  | CARBONDALE  |        | SILTY SHALE       | 24.0            | 106.0              |
| 505.0                  | CARBONDALE  |        | SHALY SANDSTONE   | 5.0             | 130.0              |

MAPID: 09190039000C VERSION: 1

PROJECT: NCRDS02

COUNTY: KANKAKEE TWP/RNG: 30N 9E SECTION: 22 QUARTERS/FOOTAGES: 1' S line, 1' E line of SE SE SW

QUADRANGLE: BUCKINGHAM LONGITUDE: -88.181163 GEOLOGIST: STRAAYER

CONFIDENTIAL: N LATITUDE: 41.055091 DATE COLLECTED: 3 / 25 / 1971

SURFACE ELEVATION (FT.): 650.0 LOGGED (FT.): 120.0 LOG TYPE: Drillers Log

SOURCE: AYRSHIRE RB19 WELL TYPE: Coal Test

COMMENT: BOX 44

| ELEVATION<br>TOP (FT.) | FORMATION   | MEMBER | LITHOLOGY         | THICKNESS (FT.) |                    |
|------------------------|-------------|--------|-------------------|-----------------|--------------------|
|                        |             |        |                   | UNIT            | OVERBURDEN COMMENT |
| 650.0                  | PLEISTOCENE |        | CLAY              | 18.0            | 0.0                |
| 632.0                  | CARBONDALE  |        | SANDSTONE/SHALE   | 17.0            | 18.0               |
| 615.0                  | CARBONDALE  |        | SHALE             | 10.0            | 35.0               |
| 605.0                  | CARBONDALE  |        | SANDSTONE         | 5.0             | 45.0               |
| 600.0                  | CARBONDALE  |        | SHALE & SANDSTONE | 12.0            | 50.0               |
| 588.0                  | CARBONDALE  |        | SANDSTONE         | 5.0             | 62.0               |
| 583.0                  | CARBONDALE  |        | SHALE             | 8.0             | 67.0               |
| 575.0                  | CARBONDALE  |        | SANDSTONE/SHALE   | 3.0             | 75.0               |
| 572.0                  | CARBONDALE  |        | SHALE             | 4.0             | 78.0               |
| 568.0                  | CARBONDALE  |        | SANDSTONE         | 3.0             | 82.0               |
| 565.0                  | CARBONDALE  |        | SHALE             | 3.0             | 85.0               |
| 562.0                  | CARBONDALE  |        | LIMESTONE         | 1.0             | 88.0               |
| 561.0                  | CARBONDALE  |        | SHALE             | 8.0             | 89.0               |
| 553.0                  | CARBONDALE  |        | LIMESTONE         | 5.0             | 97.0               |
| 548.0                  | CARBONDALE  |        | SHALE             | 1.0             | 102.0              |
| 547.0                  | CARBONDALE  |        | LIMESTONE         | 17.0            | 103.0              |

MAPID: 09100178000C VERSION: 1

PROJECT: MAZONIA

COUNTY: KANKAKEE TWP/RNG: 31N 9E SECTION: 9 QUARTERS/FOOTAGES: SW NW NW

QUADRANGLE: ESSEX LONGITUDE: -88.20356 GEOLOGIST: S. SROKA

CONFIDENTIAL: N LATITUDE: 41.185188 DATE COLLECTED: 12 / 31 / 1948

SURFACE ELEVATION (FT.): 587.0 LOGGED (FT.): 128.0 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. WELL TYPE: Coal Test

COMMENT: HUBERT LAND

| ELEVATION<br>TOP (FT.) | FORMATION  | MEMBER        | LITHOLOGY             | THICKNESS (FT.) |                    |
|------------------------|------------|---------------|-----------------------|-----------------|--------------------|
|                        |            |               |                       | UNIT            | OVERBURDEN COMMENT |
| 587.0                  |            |               | SOIL                  | 1.0             | 0.0                |
| 586.0                  |            |               | SAND                  | 7.3             | 1.0                |
| 578.7                  |            |               | UNCONSOLIDATED        | 27.9            | 8.3                |
| 550.8                  |            |               | CLAY                  | 2.2             | 36.2               |
| 548.7                  | CARBONDALE | HOUCHIN CREEK | COAL                  | 1.4             | 38.3               |
| 547.2                  | CARBONDALE |               | CLAYSTONE & SILTSTONE | 3.7             | 39.8               |
| 543.6                  | CARBONDALE |               | GRAY SHALE            | 20.2            | 43.4               |
| 523.4                  | CARBONDALE | FRANCIS CREEK | SANDY SHALE           | 57.1            | 63.6               |
| 466.3                  | MAQUOKETA  |               | LIMESTONE             | 7.3             | 120.7              |

MAPID: 09100179000C VERSION: 1

PROJECT: MAZONIA

COUNTY: KANKAKEE TWP/RNG: 31N 9E SECTION: 17 QUARTERS/FOOTAGES: SW NE NE

QUADRANGLE: ESSEX LONGITUDE: -88.207845 GEOLOGIST: S. SROKA

CONFIDENTIAL: N LATITUDE: 41.170644 DATE COLLECTED: 1 / 4 / 1956

SURFACE ELEVATION (FT.): 580.5 LOGGED (FT.): 45.0 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 43 WELL TYPE: Coal Test

COMMENT: KIRKINBANCK LAND

| ELEVATION<br>TOP (FT.) | FORMATION | MEMBER | LITHOLOGY     | THICKNESS (FT.) |            | COMMENT |
|------------------------|-----------|--------|---------------|-----------------|------------|---------|
|                        |           |        |               | UNIT            | OVERBURDEN |         |
| 580.5                  |           |        | SOIL          | 1.0             | 0.0        |         |
| 579.5                  |           |        | SAND          | 7.0             | 1.0        |         |
| 572.5                  |           |        | CLAY & GRAVEL | 19.3            | 8.0        |         |
| 553.2                  |           |        | SANDSTONE     | 17.7            | 27.3       |         |

MAPID: 09100436000C VERSION: 1

PROJECT: MAZONIA

COUNTY: KANKAKEE TWP/RNG: 31N 9E SECTION: 18 QUARTERS/FOOTAGES:

QUADRANGLE: ESSEX LONGITUDE: -88.232757 GEOLOGIST: S. SROKA

CONFIDENTIAL: N LATITUDE: 41.165674 DATE COLLECTED: 11 / 16 / 1955

SURFACE ELEVATION (FT.): LOGGED (FT.): 158.7 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. 46A WELL TYPE: Coal Test

COMMENT: LENORD SCHULTZ LAND

| ELEVATION<br>TOP (FT.) | FORMATION  | MEMBER        | LITHOLOGY             | THICKNESS (FT.) |            | COMMENT |
|------------------------|------------|---------------|-----------------------|-----------------|------------|---------|
|                        |            |               |                       | UNIT            | OVERBURDEN |         |
| -                      |            |               | SOIL                  | 1.0             | 0.0        |         |
| -                      |            |               | CLAY & GRAVEL         | 36.2            | 1.0        |         |
| -                      |            |               | CLAY                  | 2.1             | 37.2       | GRAY    |
| -                      | CARBONDALE |               | GRAY SHALE            | 5.1             | 39.3       |         |
| -                      | CARBONDALE |               | SHALE                 | 4.3             | 44.3       | "SLATE" |
| -                      | CARBONDALE | HOUCHIN CREEK | COAL                  | 3.8             | 48.6       |         |
| -                      | CARBONDALE |               | CLAYSTONE & SILTSTONE | 2.8             | 52.3       | GRAY    |
| -                      | CARBONDALE |               | GRAY SHALE            | 10.2            | 55.2       |         |
| -                      | CARBONDALE | FRANCIS CREEK | SANDY SHALE           | 60.8            | 65.3       |         |
| -                      | CARBONDALE | FRANCIS CREEK | CLOD                  | 0.3             | 126.1      |         |
| -                      | CARBONDALE | COLCHESTER    | COAL                  | 2.9             | 126.3      |         |
| -                      | SPOON      |               | CLAYSTONE & SILTSTONE | 2.3             | 129.3      | GRAY    |
| -                      | SPOON      |               | GRAY SHALE            | 10.9            | 131.5      |         |
| -                      | SPOON      |               | SANDY SHALE           | 15.7            | 142.4      |         |
| -                      | MAQUOKETA  |               | SHALE                 | 0.6             | 158.1      |         |

MAPID: 09100531000C    VERSION: 1

PROJECT: MAZONIA

COUNTY: KANKAKEE    TWP/RNG: 31N 9E    SECTION: 19    QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: ESSEX    LONGITUDE: -88.231136    GEOLOGIST: S. SROKA

CONFIDENTIAL: N    LATITUDE: 41.150052    DATE COLLECTED: 12 / 10 / 1956

SURFACE ELEVATION (FT.): 590.8    LOGGED (FT.): 74.3    LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. C2734    WELL TYPE: Coal Test

COMMENT: P. H. JOYCE LAND

| ELEVATION<br>TOP (FT.) | FORMATION  | MEMBER        | LITHOLOGY             | THICKNESS (FT.) |            | COMMENT                  |
|------------------------|------------|---------------|-----------------------|-----------------|------------|--------------------------|
|                        |            |               |                       | UNIT            | OVERBURDEN |                          |
| 590.8                  |            |               | SOIL                  | 1.0             | 0.0        |                          |
| 589.8                  |            |               | CLAY & GRAVEL         | 48.0            | 1.0        |                          |
| 541.8                  |            |               | CLAY                  | 2.7             | 49.0       | GRAY                     |
| 539.2                  | CARBONDALE | HOUCHIN CREEK | COAL                  | 4.9             | 51.6       |                          |
| 534.3                  | CARBONDALE |               | CLAYSTONE & SILTSTONE | 2.6             | 56.5       | GRAY                     |
| 531.8                  | CARBONDALE |               | SANDY SHALE           | 2.3             | 59.0       |                          |
| 529.4                  | CARBONDALE |               | GRAY SHALE            | 0.3             | 61.4       | DARK                     |
| 529.1                  | CARBONDALE |               | COAL                  | 0.2             | 61.7       | UNCERTAIN<br>CORRELATION |
| 528.9                  | CARBONDALE |               | CLAYSTONE & SILTSTONE | 0.2             | 61.9       | GRAY                     |
| 528.8                  | CARBONDALE |               | LIMESTONE             | 0.3             | 62.0       |                          |
| 528.4                  | CARBONDALE |               | GRAY SHALE            | 0.3             | 62.4       |                          |
| 528.2                  | CARBONDALE |               | CLAYSTONE & SILTSTONE | 0.1             | 62.6       | GRAY                     |
| 528.1                  | CARBONDALE |               | COAL                  | 1.0             | 62.7       | UNCERTAIN<br>CORRELATION |
| 527.1                  | CARBONDALE |               | SHALE                 | 1.7             | 63.7       | "SLATE"                  |
| 525.4                  | CARBONDALE |               | CLAYSTONE & SILTSTONE | 0.1             | 65.4       | GRAY                     |
| 525.4                  | CARBONDALE |               | LIMESTONE             | 0.3             | 65.4       |                          |
| 525.0                  | CARBONDALE |               | CLAYSTONE & SILTSTONE | 0.2             | 65.8       | DARK; GRAY               |
| 524.9                  | CARBONDALE | FRANCIS CREEK | SANDY SHALE           | 0.0             | 65.9       |                          |
| 524.9                  | CARBONDALE | COLCHESTER    | COAL                  | 4.1             | 65.9       |                          |
| 520.8                  | CARBONDALE | COLCHESTER    | SANDSTONE/COAL        | 0.5             | 70.0       | SS MAY BE SANDY<br>SH    |
| 520.3                  | CARBONDALE | COLCHESTER    | COAL                  | 2.9             | 70.5       |                          |
| 517.5                  | SPOON      |               | CLAYSTONE & SILTSTONE | 1.0             | 73.3       | GRAY                     |

MAPID: 09100532000C    VERSION: 1

PROJECT: MAZONIA

COUNTY: KANKAKEE    TWP/RNG: 31N 9E    SECTION: 19    QUARTERS/FOOTAGES: NE NW SE SW

QUADRANGLE: ESSEX    LONGITUDE: -88.235284    GEOLOGIST: S. SROKA

CONFIDENTIAL: N    LATITUDE: 41.146739    DATE COLLECTED: 7 / 19 / 1957

SURFACE ELEVATION (FT.): 592.0    LOGGED (FT.): 93.7    LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. C-2847    WELL TYPE: Coal Test

COMMENT: ROSE AND AGNES JOYCE

| ELEVATION<br>TOP (FT.) | FORMATION  | MEMBER        | LITHOLOGY             | THICKNESS (FT.) |            | COMMENT                           |
|------------------------|------------|---------------|-----------------------|-----------------|------------|-----------------------------------|
|                        |            |               |                       | UNIT            | OVERBURDEN |                                   |
| 592.0                  |            |               | SOIL                  | 1.0             | 0.0        |                                   |
| 591.0                  |            |               | CLAY & GRAVEL         | 50.8            | 1.0        |                                   |
| 540.2                  |            |               | CLAY                  | 0.9             | 51.8       | GRAY                              |
| 539.2                  | CARBONDALE | EXCELLO       | BLACK SHALE           | 6.0             | 52.8       | DISCREPANCY IN THICKNESS&UNDLYING |
| 533.4                  | CARBONDALE |               | GRAY SHALE            | 9.7             | 58.6       |                                   |
| 523.7                  | CARBONDALE | HOUCHIN CREEK | COAL                  | 1.6             | 68.3       |                                   |
| 522.1                  | CARBONDALE | HOUCHIN CREEK | PYRITE                | 0.1             | 69.9       | "SULPHUR"                         |
| 522.0                  | CARBONDALE | HOUCHIN CREEK | COAL                  | 3.0             | 70.0       |                                   |
| 519.1                  | CARBONDALE |               | GRAY SHALE            | 1.0             | 72.9       |                                   |
| 518.0                  | CARBONDALE |               | CLAYSTONE & SILTSTONE | 0.1             | 74.0       | GRAY                              |
| 518.0                  | CARBONDALE |               | SANDY SHALE           | 0.6             | 74.0       |                                   |
| 517.4                  | CARBONDALE |               | LIMESTONE             | 0.8             | 74.6       |                                   |
| 516.6                  | CARBONDALE |               | SANDY SHALE           | 1.7             | 75.4       |                                   |
| 514.9                  | CARBONDALE |               | GRAY SHALE            | 1.4             | 77.1       |                                   |
| 513.5                  | CARBONDALE |               | CLAYSTONE & SILTSTONE | 0.4             | 78.5       | GRAY                              |
| 513.1                  | CARBONDALE |               | GRAY SHALE            | 0.8             | 78.9       |                                   |
| 512.3                  | CARBONDALE | LOWELL        | COAL                  | 1.5             | 79.7       | UNCERTAIN CORRELATION             |
| 510.8                  | CARBONDALE |               | CLAYSTONE & SILTSTONE | 0.2             | 81.2       | GRAY                              |
| 510.6                  | CARBONDALE |               | BLACK SHALE           | 1.5             | 81.4       |                                   |
| 509.1                  | CARBONDALE |               | LIMESTONE             | 0.6             | 82.9       |                                   |
| 508.5                  | CARBONDALE |               | GRAY SHALE            | 0.5             | 83.5       |                                   |
| 508.1                  | CARBONDALE | CARDIFF       | COAL                  | 4.6             | 83.9       | UNCERTAIN CORRELATION             |
| 503.5                  | CARBONDALE |               | GRAY SHALE            | 0.4             | 88.5       | DARK                              |
| 503.1                  | CARBONDALE |               | ROCK                  | 0.1             | 88.9       |                                   |
| 502.9                  | CARBONDALE | FRANCIS CREEK | SANDY SHALE           | 0.4             | 89.1       |                                   |
| 502.5                  | CARBONDALE | COLCHESTER    | COAL                  | 2.9             | 89.5       |                                   |
| 499.7                  | CARBONDALE |               | CLAYSTONE & SILTSTONE | 1.4             | 92.3       | GRAY                              |

MAPID: 09125256000C VERSION: 1

PROJECT: MAZONIA

COUNTY: KANKAKEE TWP/RNG: 31N 9E SECTION: 19 QUARTERS/FOOTAGES: NW NW SE

QUADRANGLE: ESSEX LONGITUDE: -88.231136 GEOLOGIST: S. SROKA

CONFIDENTIAL: N LATITUDE: 41.150052 DATE COLLECTED: 12 / 4 / 1956

SURFACE ELEVATION (FT.): 517.1 LOGGED (FT.): 73.0 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. C-2732 WELL TYPE: Coal Test

COMMENT: P. H. JOYCE LAND

| ELEVATION<br>TOP (FT.) | FORMATION  | MEMBER        | LITHOLOGY             | THICKNESS (FT.) |            | COMMENT                  |
|------------------------|------------|---------------|-----------------------|-----------------|------------|--------------------------|
|                        |            |               |                       | UNIT            | OVERBURDEN |                          |
| 517.1                  |            |               | SOIL                  | 1.0             | 0.0        |                          |
| 516.1                  |            |               | CLAY & GRAVEL         | 46.8            | 1.0        |                          |
| 469.3                  |            |               | CLAY                  | 1.3             | 47.8       | GRAY                     |
| 468.0                  | CARBONDALE | HOUCHIN CREEK | COAL                  | 5.1             | 49.1       |                          |
| 462.9                  | CARBONDALE |               | SANDY SHALE           | 4.9             | 54.2       |                          |
| 457.9                  | CARBONDALE | LOWELL        | COAL WITH SHALE       | 3.5             | 59.2       | SLATE                    |
| 454.5                  | CARBONDALE |               | LIMESTONE             | 0.5             | 62.6       |                          |
| 454.0                  | CARBONDALE |               | CLAYSTONE & SILTSTONE | 0.2             | 63.1       | GRAY                     |
| 453.9                  | CARBONDALE | CARDIFF       | COAL                  | 1.9             | 63.2       | UNCERTAIN<br>CORRELATION |
| 451.9                  | CARBONDALE | CARDIFF       | PYRITE                | 0.3             | 65.2       |                          |
| 451.6                  | CARBONDALE | CARDIFF       | COAL                  | 1.8             | 65.5       |                          |
| 449.8                  | CARBONDALE |               | SHALE                 | 0.4             | 67.3       | "SLATE"                  |
| 449.4                  | CARBONDALE | FRANCIS CREEK | SANDY SHALE           | 1.0             | 67.7       |                          |
| 448.4                  | CARBONDALE | COLCHESTER    | COAL                  | 0.1             | 68.7       |                          |
| 448.3                  | CARBONDALE | COLCHESTER    | SANDY SHALE           | 0.8             | 68.8       |                          |
| 447.5                  | CARBONDALE | COLCHESTER    | COAL                  | 2.7             | 69.6       |                          |
| 444.7                  | CARBONDALE |               | CLAYSTONE & SILTSTONE | 0.6             | 72.4       | GRAY                     |

MAPID: 09100186000C VERSION: 1

PROJECT: MAZONIA

COUNTY: KANKAKEE TWP/RNG: 31N 9E SECTION: 27 QUARTERS/FOOTAGES: NW SW SW

QUADRANGLE: ESSEX LONGITUDE: -88.182739 GEOLOGIST: S. SROKA

CONFIDENTIAL: N LATITUDE: 41.132599 DATE COLLECTED: 3 / 23 / 1952

SURFACE ELEVATION (FT.): 603.0 LOGGED (FT.): 89.2 LOG TYPE: Drillers Log

SOURCE: NORTHERN ILLINOIS COAL CORP. WC-1 WELL TYPE: Coal Test

COMMENT:

| ELEVATION<br>TOP (FT.) | FORMATION | MEMBER | LITHOLOGY      | THICKNESS (FT.) |            | COMMENT |
|------------------------|-----------|--------|----------------|-----------------|------------|---------|
|                        |           |        |                | UNIT            | OVERBURDEN |         |
| 603.0                  |           |        | SOIL           | 1.0             | 0.0        |         |
| 602.0                  |           |        | UNCONSOLIDATED | 47.8            | 1.0        |         |
| 554.2                  |           |        | CLAY           | 4.1             | 48.8       | GRAY    |
| 550.1                  | SPOON     |        | GRAY SHALE     | 9.6             | 52.9       |         |
| 540.5                  | SPOON     |        | SANDY SHALE    | 24.8            | 62.5       |         |
| 515.7                  | MAQUOKETA |        | LIMESTONE      | 1.8             | 87.3       |         |