SAND AND GRAVEL RESOURCES IN SPINK COUNTY, SOUTH DAKOTA

by

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CONTENTS

INTRODUCTION ........................................................................................................ 1
GEOLOGIC OVERVIEW ........................................................................................ 1
   Till .................................................................................................................... 1
   End moraine ................................................................................................... 1
   Outwash ......................................................................................................... 2
   Collapsed outwash ......................................................................................... 2
   Disintegration ridge ....................................................................................... 2
   Valley train ................................................................................................... 2
   Terrace deposits ............................................................................................ 2
   Outwash plain ............................................................................................... 3
   Alluvium ........................................................................................................ 7
   Lacustrine deposits ....................................................................................... 3

EXPLANATION OF APPENDICES ................................................................. 3
EXPLANATION OF THE ILLUSTRATION .................................................... 3
   Sand and gravel ............................................................................................ 4
ECONOMIC CONSIDERATIONS ....................................................................... 6

APPENDICES
A. List of test holes in Spink County, South Dakota, which contain
   sand or gravel within 25 feet of the land surface ............................................ 7
B. List of land tracts in Spink County, South Dakota, which have been
   bonded with the intent to mine sand and gravel ......................................... 103

ILLUSTRATION

Plate (Plate is in pocket)
1. Locations of test holes, sand and gravel pits, numbered land tracts, and
   sand and gravel deposits in Spink County, South Dakota
INTRODUCTION

Spink County covers approximately 1,512 square miles in north-central South Dakota. Although Spink County covers a large area, the county has a limited supply of sand and gravel resources. This pamphlet is designed to aid in the exploration for sand and gravel deposits. Specific areas have been delineated by the use of test drilling, sand and gravel pit locations, soil-survey information, topographic-map and aerial-photograph interpretation, and field observations.

Other reports in this series which discuss the geology and hydrology of Spink County include:


Report (a) describes the yield, quality, and location of major aquifers (water-bearing deposits) in a short, nontechnical pamphlet. Report (b) presents a more technical and exhaustive discussion of the water resources of the county. Report (c) is a detailed description of the overall geology of Spink County. All basic data used to compile these publications are available at the offices of the South Dakota Geological Survey in Vermillion, South Dakota, and the U.S. Geological Survey in Huron, South Dakota.

GEOLOGIC OVERVIEW

Most of the sand and gravel deposits found in Spink County were deposited either directly or indirectly by glacial ice that covered the area thousands of years ago. Other deposits have resulted from stream deposition since the retreat of the glaciers. A short description of geologic terms used to describe glacial deposits in this text follows.

Till

The glaciers were large masses of ice that carried with them debris that was picked up earlier in their routes. Some of this debris, a mixture of clay, silt, sand, gravel, and boulders, were deposited directly from the ice and not subjected to the action of running water. Till, the term used to describe this mixture, is locally called "blue clay" or "boulder clay." A large portion of Spink County is covered by till which is made up primarily of clay and is not considered a source of sand and gravel. However, small isolated sand and gravel hills or lenses may occur within till deposits.

End Moraine

An actively flowing glacier brings debris to its terminus or lower margin. If the terminus remains stationary for a period of years, a distinct end moraine, or ridge of till, is piled up along the front
edge of the ice. These ridges are generally large and irregular in shape and may show some lineation. When the debris brought to the terminus is composed mainly of sand and gravel, these end moraines may be a source for coarse aggregate.

**Outwash**

Outwash is the term used to describe any deposit of glacial debris that has been washed and sorted by flowing meltwater. The material type and grain size of these deposits depend on the velocity of the water that sorted them. Deposits left by slow-flowing streams are made up primarily of silts and clays. Very fast flowing streams may have left streambeds composed entirely of boulders. Most outwash is made up of an assortment of sand and gravel with minor amounts of silt, clay, and boulders. Outwash occurs in Spink County as several different landforms which include collapsed outwash, valley train, terrace deposits, an outwash plain, and disintegration ridges.

**Collapsed Outwash**

Collapsed outwash is glacial debris that has been washed and sorted by meltwater and was originally deposited on a thin layer of ice. As the underlying ice melts, these deposits collapse or are let down into their positions.

**Disintegration Ridge**

A disintegration ridge forms from glacial debris that has been washed into crevasses on and in glacial ice. This debris, or crevasse fill, is composed of a poorly sorted mixture of sand and gravel with minor amounts of clay and silt. When the surrounding ice melts, the debris collapses and forms a ridge.

**Valley Train**

Valley-train deposits are long, narrow bodies of outwash confined within the valleys of meltwater streams beyond the margin of an active glacier.

**Terrace Deposits**

Terrace deposits are flat-topped alluvial or outwash deposits that are remnants of former flood plains or valley-train deposits. The streams which originally deposited the material have since cut their channels deeper and developed new flood plains at lower levels.
Outwash Plain

Outwash plains are composed of material that has been washed from a glacier. The material type is typically a mixture of silt, sand, and gravel that is deposited by meltwater beyond the margins of active ice. These deposits generally have a smooth, flat surface.

Alluvium

Alluvium consists of a mixture of clay, silt, sand, and gravel that has been deposited by present-day streams since the retreat of the glaciers. The grain size of the material deposited is dependent on the same factors that govern the grain size in outwash deposits and may vary from place to place within the stream valley. Where these deposits consist primarily of sand and gravel, they may be mined for coarse aggregate.

Lacustrine Deposits

Lacustrine deposits consist mainly of fine silt, clay, and sand that have been deposited in lake environments. The deposit is characterized by a relatively smooth, flat surface. A large portion of the surficial deposits in central Spink County is lacustrine. This area is known as the Ancient Lake Dakota plain and extends north into Brown County.

EXPLANATION OF APPENDICES

Appendix A is a compilation of test holes which encountered sand or gravel within 25 feet of land surface. This appendix lists locations of the test holes and depths and descriptions of sand and gravel intervals. The test holes are numbered and correspond to the index map on plate 1. The complete set of drill logs is on file at the office of the South Dakota Geological Survey in Vermillion, South Dakota. The South Dakota Geological Survey, U.S. Geological Survey, South Dakota Water Rights Program, U.S. Bureau of Reclamation, and private drillers contributed to this list.

Appendix B is a compilation of land tracts that have been bonded with the intent to mine sand and gravel. This information is on file at the office of the Minerals and Mining Program, Department of Environment and Natural Resources in Pierre, South Dakota. The name and address of the operator(s) are listed along with the location of the land tract. Each land tract has been numbered and appears on plate 1.

EXPLANATION OF THE ILLUSTRATION

Plate 1, found in the pocket at the end of this report, shows the locations of test holes listed in appendix A, numbered land tracts listed in appendix B, and sand and gravel pits. It also shows towns, major highways, major lakes, rivers, and creeks.

Test holes on plate 1 are represented by three different symbols. A filled circle (●) represents a location in which sand or gravel was encountered within 25 feet of land surface with overburden
thickness of 5 feet or less. A filled square (□) indicates a location at which sand or gravel was encountered within 25 feet of land surface, but the overburden thickness exceeds 5 feet. An unfilled circle (○) indicates a location where no sand or gravel was encountered within the upper 25 feet. The test holes representing filled circles and squares have been assigned a number which are listed in appendix A. An index map of Spink County has been provided and lists the test-hole numbers found within each township. The numbers on the index map correspond to the test-hole numbers found in appendix A. The unfilled circles do not have an assigned number and do not appear in the appendix.

Sand or gravel pits are designated by a crossed pick and shovel (X). Land tracts are designated by (a), numbers refer to appendix B. Additional information is on file at the Department of Transportation and the office of the Minerals and Mining Program, Department of Environment and Natural Resources, both located at Pierre, South Dakota. No attempt has been made to differentiate the active pits from inactive pits.

To illustrate the areas of highest probability for locating sand and gravel, the map has been divided into three area types indicating a “good,” “fair,” or “poor” probability of locating sand and gravel. Areas with “good” and “fair” probability of finding sand and gravel have been assigned a letter on plate 1 and are described in the following section.

Sand and gravel deposits in areas labeled as “good” are generally thick with thin overburden. Areas designated as “fair” are comparatively thinner, have more overburden, or are laterally discontinuous. Some sand and gravel occurs in the area labeled as “poor” as indicated by the test-hole data and numbered land tracts on the map. Although some of these deposits may be present in mineable quantities, they are generally limited and difficult to locate.

Sand and Gravel

The following is a brief discussion of the potential (designation of good or fair) for mining of sand and gravel in certain areas of Spink County. Refer to plate 1 for locations of specifically mentioned areas.

Area A (designated good)

Sand and gravel in this area occurs as collapsed outwash deposits. The area covers approximately 10 square miles with the majority of the mining activities located in sec. 3, T. 115 N., R. 64 W. The overburden is generally less than 5 feet thick, but is variable throughout. The thickness of the sand and gravel deposits is also variable and ranges from less than 10 feet to greater than 50 feet.

Area B (designated good and fair)

The deposits in area B consist of valley-train and alluvial deposits occupying the low areas between the topographically higher hills and knobs. The area south of Cottonwood Lake along Turtle Creek, Medicine Creek, and Wolf Creek has been designated as good. This area has an average overburden thickness of 3 feet. The average thickness is 17 feet and ranges from less than 5 feet to over 40 feet along the Spink and Beadle County line. The
remainder of area B has been designated as fair because the deposits here are relatively thin.

**Area C (designated good and fair)**

Deposits in area C consist of alluvial deposits and remnant terrace deposits of sand and gravel. Two portions of area C have been designated as good. One is located within the stream valley of Dove Creek and extends southeast from the Spink and Faulk County line. The other lies within the stream valley of the South Fork of Snake Creek and extends southeast from the Spink and Faulk County line. In both of these areas, the sand and gravel deposits occur as remnant terrace deposits along the valley walls. Numerous pits have been developed in these two areas. The remainder of area C has been designated as fair due to the discontinuous nature of these deposits.

**Area D (designated good)**

This area, located in the northwest corner of Spink County, consists of alluvial deposits and remnant terrace deposits of sand and gravel within the stream valley of Snake Creek. The terrace deposits are generally small in size but have thicknesses that exceed 30 feet. Four pits have been developed in this area.

**Area E (designated fair)**

Area E is a remnant of a collapsed feature known as a disintegration ridge. The ridge is narrow in width and extends from just west of Doland and trends northward toward Conde. Test hole data reveal that much of the ridge is composed of till with small pockets of sand and gravel dispersed intermittently along the axis.

**Area F (designated fair)**

Deposits in this area consist of alluvium, outwash, and a few small terrace deposits of sand and gravel. The sand and gravel is generally located along the stream valleys of the numerous unnamed creeks that cross the area. The overburden thickness is generally greater than 10 feet with a total thickness that ranges from 4 feet to greater than 30 feet.

**Area G (designated fair)**

The sand and gravel that has been deposited in this area is part of an outwash plain that extends along Foster Creek in the north and then trends south into Beadle County toward Lake Byron. The east half of area G has some mining activity due to the thin overburden. The thickness of the sand and gravel is variable and ranges from less than 5 feet to around 20 feet.

**Area H (designated fair)**

Underlying much of south-central Spink County is a large outwash deposit. Area H generally represents the portion of this large deposit that is near land surface (within 25 feet). This area has been designated as fair due to the thickness of overburden which
generally exceeds 10 feet. Some pits have been developed in this area. One example is in sec. 14, T. 114 N., R. 62 W. These scattered pits are usually small in areal extent.

The remainder of Spink County has been designated as "poor" although isolated areas of sand and gravel deposits occur. Two areas in Spink County that have been designated as "poor" have many test holes that encountered sand and gravel within 25 feet of land surface and warrant a brief discussion. The first is located in northwestern Spink County in Tps. 119 and 120 N., R. 65 W. Test-hole data, a numbered land tract, and small pits indicate scattered sand and gravel deposits outside the boundary of area D. The deposits here represent small, isolated pockets of sand and gravel that are laterally discontinuous. The second area extends from Atol, generally south toward Redfield, and then southwest toward Cottonwood Lake. Again, the test-hole data and scattered pits indicate sand and gravel deposits. The material type in this area is generally fine, silty sand deposited as lacustrine sediments. Due to the random occurrence and unsuitable material type of such features, exploration efforts should be concentrated in areas designated as "good" and "fair."

ECONOMIC CONSIDERATIONS

It should be emphasized that this study is quite general and should be used only as a guide for further exploration and development of the sand and gravel resources in Spink County. The development of a specific site will depend upon material specifications for the desired use, development costs, transportation costs, and future markets.
APPENDIX A: List of test holes in Spink County, South Dakota, which contain sand or gravel within 25 feet of the land surface.

Lithologic descriptions, as listed, have been condensed from data contained in logs on file at the South Dakota Geological Survey Office, Vermillion, South Dakota, and contain only information which has been deemed most useful for this study. Numerical values indicate depth in feet below land surface.

TEST HOLE NUMBER: 1
LOCATION: 114N-60W-03ABB
LEGAL LOCATION: NW NW NW NE sec. 03, T. 114 N., R. 60 W.
4  - 11 Sand, orange-brown, fine to medium, slightly silty; oxidized
11  - 14 Sand, dark-brown, fine to coarse, clayey, silty; oxidized
14  - 18 Sand, orange-brown, fine to medium, clayey, silty, pebbly; oxidized, wet

TEST HOLE NUMBER: 2
LOCATION: 114N-60W-02ADA
LEGAL LOCATION: NE SE NE SE sec. 04, T. 114 N., R. 60 W.
3  -  6 Sand and gravel, red-brown, fine sand, medium gravel, clayey, silty; oxidized

TEST HOLE NUMBER: 3
LOCATION: 114N-60W-15DCC
LEGAL LOCATION: SW NW SW NW sec. 12, T. 114 N., R. 60 W.
6  - 16 Sand and gravel, yellow-brown, medium to coarse sand, fine to medium gravel, clayey, silty; oxidized, saturated
16  - 20 Gravel, yellow-brown, medium to coarse, clayey, very sandy; oxidized, saturated
20  - 23 Gravel, yellow-brown, medium, clayey, silty, sandy, well-sorted, subrounded, oxidized, saturated

TEST HOLE NUMBER: 4
LOCATION: 114N-60W-21DCC
LEGAL LOCATION: SW SW SW SW sec. 25, T. 114 N., R. 60 W.
6  - 11 Sand and gravel, orange-tan-brown, fine to coarse sand, fine to medium gravel, clayey, silty; oxidized, saturated

TEST HOLE NUMBER: 5
LOCATION: 114N-60W-56DCDC
LEGAL LOCATION: SW SE SW SE sec. 36, T. 114 N., R. 60 W.
9  - 14 Sand, tan-brown, medium to coarse, rounded; oxidized, saturated, some silt, some gravel
14  - 23 Sand, tan-brown, fine to medium, silty; oxidized, some clay, some gravel
23  - 35 Sand and gravel, grey-brown, medium to coarse sand, fine to medium gravel, silty; saturated

TEST HOLE NUMBER: 6
LOCATION: 114N-61W-00DDDC
LEGAL LOCATION: SE SE SE SE sec. 08, T. 114 N., R. 61 W.
15  - 20 Sand, tan-brown, fine to medium, clayey, silty, gravelly; oxidized, saturated

TEST HOLE NUMBER: 7
LOCATION: 114N-61W-09BBA
LEGAL LOCATION: NE NW NW NW sec. 05, T. 114 N., R. 61 W.
20  - 25 Sand and gravel, brown, fine to coarse sand, fine to coarse gravel, clayey, silty, rounded; oxidized

7
<table>
<thead>
<tr>
<th>TEST HOLE NUMBER</th>
<th>LOCATION</th>
<th>LEGAL LOCATION</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>114N-61W-05AAAA</td>
<td>NE NE NE NE sec. 05, T. 114 N., R. 61 W.</td>
<td>Sand, brown, fine to coarse, clayey, very silty, well-rounded; oxidized, becoming subangular with clayen</td>
</tr>
<tr>
<td>9</td>
<td>114N-61W-12CCDC</td>
<td>SW SE SW SE sec. 12, T. 114 N., R. 61 W.</td>
<td>Sand, fine to medium</td>
</tr>
<tr>
<td>10</td>
<td>114N-61W-13CCCC</td>
<td>SW SW SW SW sec. 13, T. 114 N., R. 61 W.</td>
<td>Sand, brown, fine from 7 to 8 feet, medium to coarse from 8 to 10 feet, clayey, silty, pebbly; oxidized, saturated at 8 feet</td>
</tr>
<tr>
<td>11</td>
<td>114N-61W-16BBBB</td>
<td>NW NW NW NW sec. 16, T. 114 N., R. 61 W.</td>
<td>Sand, medium to coarse</td>
</tr>
<tr>
<td>12</td>
<td>114N-61W-17ADDD</td>
<td>SE SE SE NE sec. 17, T. 114 N., R. 61 W.</td>
<td>Sand, red-brown, fine, clayey, silty, pebbly; oxidized, moist</td>
</tr>
<tr>
<td>13</td>
<td>114N-61W-18CCCC</td>
<td>SW SW SW SW sec. 18, T. 114 N., R. 61 W.</td>
<td>Sand, yellow-brown, very clayey, silty; some pebbles; oxidized, moist</td>
</tr>
<tr>
<td>14</td>
<td>114N-61W-22AAAA</td>
<td>NE NE NE NE sec. 22, T. 114 N., R. 61 W.</td>
<td>Gravel, poor return</td>
</tr>
<tr>
<td>15</td>
<td>114N-61W-22BCBB</td>
<td>NW NW NW NW sec. 22, T. 114 N., R. 61 W.</td>
<td>Sand and gravel, medium to coarse; clean</td>
</tr>
</tbody>
</table>

8
TEST HOLE NUMBER: 15
LOCATION: 114N-61W-25CCDD
LEGAL LOCATION: SE SE SE sec. 22, T. 114 N., R. 61 W.
5 - 14 Sand, gray-brown, medium to coarse, very clayey, silty, wet, becoming fine to medium grained from 12 to 14 feet, more clay content with depth
14 - 25 Sand, gray, fine to medium, coarse from 20 to 25 feet, very clayey, silty; unoxidized, saturated

TEST HOLE NUMBER: 17
LOCATION: 114N-61W-24CBBC
LEGAL LOCATION: SW NW NW sec. 24, T. 114 N., R. 61 W.
1 - 7 Gravel, brown, fine to medium, clayey, well-rounded, some coarse gravel
7 - 11 Sand, gray-brown, fine to coarse, very clayey, silty; saturated

TEST HOLE NUMBER: 18
LOCATION: 114N-61W-24CCDD
LEGAL LOCATION: SE SE SE SW sec. 24, T. 114 N., R. 61 W.
3 - 4 Gravel, coarse; little return
4 - 6 Sand, red-brown, medium, gravelly; oxidized, moist
6 - 11 Sand and gravel, dark-red-brown, medium sand, coarse gravel; oxidized

TEST HOLE NUMBER: 19
LOCATION: 114N-61W-25CBSC
LEGAL LOCATION: SW NW SW NW sec. 25, T. 114 N., R. 61 W.
0 - 2 Sand and gravel, orange-brown, fine to medium sand, fine to medium gravel, clayey, silty; oxidized

TEST HOLE NUMBER: 20
LOCATION: 114N-61W-5CCDD
LEGAL LOCATION: SE SE SE sec. 25, T. 114 N., R. 61 W.
3 - 9 Sand, clayey
9 - 10 Sand, poorly sorted

TEST HOLE NUMBER: 21
LOCATION: 114N-61W-1BBAB
LEGAL LOCATION: NW NE NW NW sec. 31, T. 114 N., R. 61 W.
8 - 48 Sand, red-brown, fine to coarse, clayey, silty; pebbly; oxidized, saturated at 36 feet; bit sample shows a gray clay

TEST HOLE NUMBER: 22
LOCATION: 114N-61W-34DADD
LEGAL LOCATION: SE SE NE SE sec. 34, T. 114 N., R. 61 W.
1 - 4 Sand, brown, very fine, silty; oxidized
8 - 9 Sand, red-brown, medium to coarse, clayey, silty; oxidized, moist

TEST HOLE NUMBER: 23
LOCATION: 114N-61W-35DADA
LEGAL LOCATION: NE SE NE SE sec. 35, T. 114 N., R. 61 W.
4 - 18 Sand, gray-brown, fine to coarse, clayey, silty; saturated, some coal fragments

TEST HOLE NUMBER: 24
LOCATION: 114N-61W-56DA
1
LEGAL LOCATION: NE SE sec. 36, T. 114 N., R. 61 W.

22  -  35  Sand and clay, blue clay

TEST HOLE NUMBER: 25
LOCATION: 114N-62W-02DDDD
LEGAL LOCATION: SE SE SE sec. 02, T. 114 N., R. 62 W.

26  -  61  Sand, medium to coarse; coal

TEST HOLE NUMBER: 26
LOCATION: 114N-62W-05BAAA
LEGAL LOCATION: NW NE NE NW sec. 05, T. 114 N., R. 62 W.

7  -  20  Sand, reddish-brown, fine to medium, slightly silty; oxidized, saturated 12 feet
20  -  26  Sand, black-brown, fine to medium, slightly silty; organic(?), saturated, silt clay
26  -  45  Sand, olive-brown to olive-gray, fine, fine to coarse from 36 to 41 feet; clayey, silty, organic(?), saturated, many coal fragments and shale pebbles

TEST HOLE NUMBER: 27
LOCATION: 114N-62W-05BBBB
LEGAL LOCATION: NW NW NW NW sec. 05, T. 114 N., R. 62 W.

6  -  14  Sand, brown (10 YR 5/3); loose, clear
14  -  16  Sand, brown (10 YR 5/5); loose, loamy, slightly moist to very moist

TEST HOLE NUMBER: 28
LOCATION: 114N-62W-07B8BB
LEGAL LOCATION: NW NW NW NW sec. 07, T. 114 N., R. 62 W.

4  -  64  Sand, fine to medium

TEST HOLE NUMBER: 29
LOCATION: 114N-62W-08BAAA
LEGAL LOCATION: NE NE NE NW sec. 08, T. 114 N., R. 62 W.

5  -  6  Sand, red-brown, fine, slightly clayey, silty, oxidized
7  -  48  Sand, silt-brown to gray, very silty, very clayey; saturated at 8 feet; some coal fragments

TEST HOLE NUMBER: 30
LOCATION: 114N-62W-08BBCC
LEGAL LOCATION: SW SW SW NW sec. 08, T. 114 N., R. 62 W.

8  -  35  Sand, red-brown, fine, very clayey, silty; oxidized, saturated at 26 feet; coal fragments at 20 feet

TEST HOLE NUMBER: 31
LOCATION: 114N-62W-09BCCD
LEGAL LOCATION: SE SW SE sec. 09, T. 114 N., R. 62 W.

12  -  15  Sand, orange-tan-brown, fine to medium; very clayey; oxidized, saturated
16  -  24  Sand, orange-tan-gray, fine, slightly clayey, silty; oxidized, saturated; some coal fragments
24  -  34  Sand, olive-gray, fine to medium, silty; saturated; some clay stringers

TEST HOLE NUMBER: 32
LOCATION: 114N-62W-10B8BB
LEGAL LOCATION: NW NW NW NW sec. 10, T. 114 N., R. 62 W.

10  -  15  Sand, reddish-orange-brown, fine to medium, clayey, silty, oxidized, moist
15  -  21  Sand, brown, fine to coarse, very clayey, oxidized, moist, some shale pebbles, some gravel
| TEST HOLE NUMBER: | 33 |
| LOCATION: | 114N-62W-11BAB |
| LEGAL LOCATION: | NE NW NE NW sec. 11, T. 114 N., R. 62 W. |
| 1 - 6 | Sand, red-brown, fine to coarse, very silty; oxidized, moist |
| 6 - 7 | Sand, dark-brown, fine to medium, very silty; oxidized, moist |
| 7 - 15 | Sand, black, fine to medium, very silty; organic; gravel stringer from 8 to 9 feet; moist |
| 15 - 48 | Sand, dark-brown, fine to medium, very silty; some pebbles at 26 feet; saturated; becoming more coarse with depth |

| TEST HOLE NUMBER: | 34 |
| LOCATION: | 114N-62W-11CBBC |
| LEGAL LOCATION: | SW NW NW SW sec. 11, T. 114 N., R. 62 Wv. |
| 7 - 9 | Sand, orange-brown, fine to medium, clayey, silty; oxidized |
| 9 - 15 | Sand, dark-brown, fine to coarse, slightly clayey, slightly silty; oxidized, dry |
| 15 - 21 | Sand, orange-brown, fine to coarse, clayey, silty; oxidized, dry |
| 21 - 29 | Sand, dark-brown, fine to coarse, clayey, silty; oxidized, saturated |

| TEST HOLE NUMBER: | 35 |
| LOCATION: | 114N-62W-11CCC |
| LEGAL LOCATION: | SW SW SW sec. 11, T. 114 N., R. 62 W. |
| 13 - 17 | Sand, dark-brown, fine to medium, very clayey; oxidized, moist |
| 17 - 21 | Sand, dark-brown, fine to medium; some clay, oxidized, moist |
| 21 - 23 | Sand, brown, fine to medium; some clay, oxidized, saturated |

| TEST HOLE NUMBER: | 36 |
| LOCATION: | 114N-62W-13BAB |
| LEGAL LOCATION: | NE NW NE NW sec. 13, T. 114 N., R. 62 W. |
| 20 - 30 | Sand, dark-brown, medium, clayey; some gravel, oxidized, moist |

| TEST HOLE NUMBER: | 37 |
| LOCATION: | 114N-62W-14ABB |
| LEGAL LOCATION: | NW NW NE NW sec. 14, T. 114 N., R. 62 W. |
| 10 - 17 | Sand, dark-brown, fine to medium, very clayey, slightly silty; oxidized, moist; gravel stringer from 15 to 17 feet |
| 20 - 30 | Sand, dark-brown, fine to medium, slightly clayey, slightly silty; oxidized, moist |

| TEST HOLE NUMBER: | 38 |
| LOCATION: | 114N-62W-14BCC |
| LEGAL LOCATION: | SW SW NW sec. 14, T. 114 N., R. 62 W. |
| 8 - 9 | Gravel, brown, fine to coarse, clayey, sandy; dry to moist, oxidized |
| 9 - 13 | Gravel, brown, fine to fine-sand, clayey, sandy; dry to moist, oxidized |
| 13 - 15 | Gravel, brown, fine to medium, very clayey, sandy; dry to moist, oxidized |
| 15 - 17 | Gravel, brown, fine to coarse, clayey, sandy; moist, oxidized |
| 22 - 25 | Sand, dark-brown to black, fine to medium, very clayey; unoxidized, quartzose |
| 25 - 28 | Sand, dark-brown to black, fine to medium, very clayey; saturated, unoxidized, quartzose |

| TEST HOLE NUMBER: | 39 |
| LOCATION: | 114N-62W-14BDA |
| LEGAL LOCATION: | NE SE NW sec. 14, T. 114 N., R. 62 W. |
| 16 - 18 | Sand, light-brown, fine, clayey; moist, oxidized |
| 18 - 21 | Sand, dark-brown, fine to medium, clayey; moist, oxidized |
| 21 - 24 | Sand, black, fine to medium, clayey; moist |
24 - 33 Sand, dark-brown, fine to medium, clayey; oxidized, saturated at 30 feet

TEST HOLE NUMBER: 40
LOCATION: 114N-62W-14BDB
LEGAL LOCATION: NW SE NW sec. 14, T. 114 N., R. 62 W.

0 - 5 Sand, reddish-brown, fine to medium, some coarse sand; dry, highly quartzose and feldspathic
5 - 18 Sand, brown, fine to coarse; saturated, highly quartzose (westem derived?)
18 - 55 Sand, gray, medium to coarse, coarse by 23 feet; saturated, unoxidized

TEST HOLE NUMBER: 41
LOCATION: 114N-62W-14CAD
LEGAL LOCATION: SE NE SW sec. 14, T. 114 N., R. 62 W.

7 - 10 Sand and gravel; coarse sand, fine to medium gravel, clayey to very clayey; dry, oxidized

TEST HOLE NUMBER: 42
LOCATION: 114N-62W-14CBA
LEGAL LOCATION: NE NW SW sec. 14, T. 114 N., R. 62 W.

7 - 11 Gravel, brown, fine to coarse, sandy, very clayey
11 - 18 Gravel, brown, fine to medium, very clayey
18 - 26 Sand, brown, fine to medium, clayey to almost 50 percent clay; dry to moist, oxidized

TEST HOLE NUMBER: 43
LOCATION: 114N-62W-14CCB
LEGAL LOCATION: NW SW SW sec. 14, T. 114 N., R. 62 W.

6 - 23 Gravel, dark-reddish-brown, medium to coarse, clayey; sandy, poorly sorted; dry, oxidized
23 - 33 Sand, dark-reddish-brown, clayey; few pebbles, saturated, oxidized, quartzose

TEST HOLE NUMBER: 44
LOCATION: 114N-62W-14CBA
LEGAL LOCATION: NE SE SW sec. 14, T. 114 N., R. 62 W.

7 - 18 Sand and gravel; brown, coarse sand to coarse gravel, clayey to very clayey; becomes coarse gravel at 9 to 12 feet, abandoned hole at 18 feet, rocks too coarse to continue

TEST HOLE NUMBER: 45
LOCATION: 114B-62W-16CCCC
LEGAL LOCATION: SW SW SW SW sec. 18, T. 114 N., R. 62 W.

6 - 39 Sand, medium clay layer from 28 to 30 feet

TEST HOLE NUMBER: 46
LOCATION: 114N-62W-16CCCC 1
LEGAL LOCATION: SW SW SW SW sec. 18, T. 114 N., R. 62 W.

6 - 9 Sand, medium to coarse
9 - 10 Sand
10 - 28 Sand, fine to coarse
28 - 33 Sand, silty

TEST HOLE NUMBER: 47
LOCATION: 114N-62W-16CDD
LEGAL LOCATION: SE SW SW SE sec. 16, T. 114 N., R. 62 W.

19 - 20 Gravel, tan-brown, coarse; oxidized, moist
20 - 30 Sand, dark-brown, fine to medium, very clayey, pebbly; moist
TEST HOLE NUMBER: 48
LOCATION: 114N-42W-17CCCC
LEGAL LOCATION: SW SW SW SW sec. 17, T. 114 N., R. 62 W.
7 - 28 Sand, fine to medium; some silt

TEST HOLE NUMBER: 49
LOCATION: 114N-3W-18CCCC
LEGAL LOCATION: SW SW SW SW sec. 18, T. 114 N., R. 62 W.
14 - 18 Sand, brown, fine, very clayey; oxidized, moist
16 - 32 Sand, dark-brown, fine, clayey; oxidized, wet

TEST HOLE NUMBER: 50
LOCATION: 114N-42W-18CCCD
LEGAL LOCATION: SE SE SE SE sec. 18, T. 114 N., R. 62 W
8 - 13 Sand, yellow-brown (10 YR 6/4); loose, slightly moist, hard to drill, loamy
13 - 18 Sand, yellow-brown (10 YR 5/4); loose, slightly moist

TEST HOLE NUMBER: 51
LOCATION: 114N-42W-19CCCC
LEGAL LOCATION: SW SW SW SW sec. 19, T. 114 N., R. 62 W
11 - 42 Sand, gray, medium to coarse; lots of coal fragments

TEST HOLE NUMBER: 52
LOCATION: 114N-42W-20CCCC
LEGAL LOCATION: SW SW SW SW sec. 20, T. 114 N., R. 62 W.
11 - 12 Sand, orange-brown, fine, silty; oxidized, moist
17 - 18 Sand, gray-brown, fine, silty; oxidized, moist
20 - 21 Sand, gray-brown, fine, silty; moist
21 - 30 Sand, gray, fine, very clayey, very silty; saturated, less clay content from 20 to 30 feet, some coal fragments from 26 to 30 feet

TEST HOLE NUMBER: 53
LOCATION: 114N-42W-21CBCS
LEGAL LOCATION: NW NW NW NW sec. 21, T. 114 N., R. 62 W.
21 - 27 Sand, brown, medium, clayey; moist
27 - 35 Sand, dark-brown, fine to medium, clayey; saturated

TEST HOLE NUMBER: 54
LOCATION: 114N-42W-22AAAA
LEGAL LOCATION: NE NE NE NE sec. 22, T. 114 N., R. 62 W.
8 - 73 Sand and gravel; clean coarse sand to fine gravel, last 40 feet excellent material

TEST HOLE NUMBER: 55
LOCATION: 114N-42W-23ABAA
LEGAL LOCATION: NE NE NW NE sec. 23, T. 114 N., R. 62 W.
4 - 11 Gravel, brown, fine to medium, clayey, sandy; dry, unable to penetrate past 11 feet, abandoned hole

TEST HOLE NUMBER: 56
LOCATION: 114N-42W-23AAAAB
LEGAL LOCATION: NW NE NE NW sec. 23, T. 114 N., R. 62 W.
<table>
<thead>
<tr>
<th>Test Hole Number</th>
<th>Location</th>
<th>Legal Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>58</td>
<td>114N-42W-23BBC</td>
<td>NW NW sec. 23, T. 114 N., R. 62 W.</td>
</tr>
<tr>
<td>60</td>
<td>114N-42W-24'C'C'C'C</td>
<td>SW SW SW sec. 24, T. 114 N., R. 62 W.</td>
</tr>
<tr>
<td>61</td>
<td>114N-42W-29'AC'</td>
<td>SW NE sec. 29, T. 114 N., R. 62 W.</td>
</tr>
<tr>
<td>63</td>
<td>114N-42W-31'B'B'B'C</td>
<td>SW SW NE sec. 31, T. 114 N., R. 62 W.</td>
</tr>
<tr>
<td>64</td>
<td>114N-42W-31'R'ADA</td>
<td>NE SE NE sec. 31, T. 114 N., R. 62 W.</td>
</tr>
<tr>
<td>65</td>
<td>114N-42W-31'B'B'B'B</td>
<td>NW NW sec. 31, T. 114 N., R. 62 W.</td>
</tr>
</tbody>
</table>

- **5 - 6**: Sand and gravel, dark-brown, fine to coarse sand, fine to medium gravel, clayey, silty; oxidized
- **6 - 17**: Sand, yellow-olive-gray to dark-brown, very fine to coarse, clayey, silty; wet, partially oxidized
- **17 - 24**: Sand, brown-black, fine to coarse, silty, clayey; some fine gravel; may be organic, moist
- **24 - 32**: Sand and gravel, brown-black, fine to coarse sand, fine gravel, clayey, silty; organic (?)
25 - 36 Sand and gravel

TEST HOLE NUMBER: 66
LOCATION: 114N-42W-35ABB
LEGAL LOCATION: NW NW NW sec. 33, T. 114 N., R. 62 W.
12 - 13 Sand, orange-brown, fine, silty; oxidized
16 - 23 Sand, gray-brown, fine, clayey, silty; saturated at 11 feet
23 - 26 Sand, brown, clayey, silty; oxidized, saturated, many coal fragments
26 - 39 Sand, dark-brown, fine to medium, clayey, silty; saturated, many coal fragments

TEST HOLE NUMBER: 67
LOCATION: 114N-42W-33CCCC
LEGAL LOCATION: SW SW SW SW sec. 33, T. 114 N., R. 62 W.
22 - 60 Sand and gravel, coarse below 45 feet, with coal fragments

TEST HOLE NUMBER: 68
LOCATION: 114N-42W-34DDDD
LEGAL LOCATION: SE SE SE SE sec. 34, T. 114 N., R. 62 W.
2 - 33 Sand and gravel, medium to coarse

TEST HOLE NUMBER: 69
LOCATION: 114N-42W-35BB
LEGAL LOCATION: NW NW sec. 35, T. 114 N., R. 62 W.
25 - 58 Sand and gravel; dirty

TEST HOLE NUMBER: 70
LOCATION: 114N-42W-35CCDC
LEGAL LOCATION: SW SE SW SE sec. 35, T. 114 N., R. 62 W.
10 - 19 Sand, dark-red-brown, fine, well-sorted, poorly to well-rounded; dry, streaks sandy, gravelly clay between 10 and 12 feet, sand, dark-brown and a little coarser, medium to fine below 15 feet

TEST HOLE NUMBER: 71
LOCATION: 114N-43W-01AAAA
LEGAL LOCATION: NE NE NE NE sec. 01, T. 114 N., R. 63 W.
11 - 13 Sand, orange-brown, fine, clayey, very silty; oxidized
13 - 16 Sand, dark-brown, fine, clayey, very silty; many coal fragments
16 - 34 Sand, brown, fine, clayey, silty; oxidized, saturated

TEST HOLE NUMBER: 72
LOCATION: 114N-43W-01BABB
LEGAL LOCATION: NW NW NE NE sec. 01, T. 114 N., R. 63 W.
14 - 17 Sand, orange-tan-brown to brown, fine to medium, slightly silty; oxidized, moist
17 - 19 Sand, yellow-olive gray, fine to medium, slightly silty; oxidized, moist
19 - 26 Sand, orange-tan-brown, fine to medium, slightly silty; oxidized, saturated
25 - 40 Sand, yellow-olive-gray, fine to coarse, slightly silty; much coal, saturated

TEST HOLE NUMBER: 73
LOCATION: 114N-43W-01CCCB
LEGAL LOCATION: NW SW SW SW sec. 31, T. 114 N., R. 63 W.
5 - 10 Gravel, dark-brown, fine to coarse, clayey, silty, sandy; oxidized, moist

15
20 - 48 Sand, brown to dark-brown, fine to medium, clayey, silty; oxidized, saturated at 25 feet, many coal fragments from 35 feet

TEST HOLE NUMBER: 74
LOCATION: 114N-4SW-02BBB
LEGAL LOCATION: NW NW NW NW sec. 02, T. 114 N., R. 63 W.
15 - 26 Sand, gray, fine to medium; some fine gravel with depth, unoxidized

TEST HOLE NUMBER: 75
LOCATION: 114N-4SW-04CD
LEGAL LOCATION: SE SE NE SW sec. 03, T. 114 N., R. 63 W.
5 - 9 Sand, brown, fine, silty; oxidized, same clay
9 - 12 Sand, tan-brown, fine; oxidized, moist, some kiks
12 - 18 Sand, brown, fine, silty; oxidized, saturated, little clay
18 - 24 Sand, dark-brown, fine, silty; oxidized, saturated, little clay
24 - 35 Sand, gray-brown, fine to medium, silty; partially oxidized, few pebbles

TEST HOLE NUMBER: 76
LOCATION: 114N-4SW-05AAA
LEGAL LOCATION: NE NE NE NE sec. 05, T. 114 N., R. 63 W.
10 - 45 Sand, brown, medium to coarse; great to a fine than medium gravel by 35 feet; oxidized, dirty at first

TEST HOLE NUMBER: 77
LOCATION: 114N-4SW-06ADD
LEGAL LOCATION: SE SE SE NE sec. 06, T. 114 N., R. 63 W.
8 - 16 Sand, gray, fine, very clayey, very silty; saturated
20 - 24 Sand, gray, fine, very clayey, very silty; unoxidized, saturated

TEST HOLE NUMBER: 78
LOCATION: 114N-4SW-09BC
LEGAL LOCATION: SW SW NW NW sec. 08, T. 114 N., R. 63 W.
13 - 21 Sand, brown, fine to medium; oxidized

TEST HOLE NUMBER: 79
LOCATION: 114N-4SW-08BB
LEGAL LOCATION: NW NW SW SW sec. 09, T. 114 N., R. 63 W.
0 - 2 Sand, orange-brown, fine, very clayey, silty; oxidized

TEST HOLE NUMBER: 80
LOCATION: 114N-4SW-10CD
LEGAL LOCATION: SE SE SW SE sec. 10, T. 114 N., R. 63 W.
1 - 2 Sand, yellow-brown, fine to medium, clayey, silty; oxidized
10 - 18 Sand, yellow-brown, fine, silty, oxidized, moist, some clay
18 - 48 Sand, gray-brown, fine, clayey, silty; saturated at 20 feet, many shive pebbles, clay content decreased with depth

TEST HOLE NUMBER: 81
LOCATION: 114N-4SW-13AB
LEGAL LOCATION: NW NE NE NW sec. 12, T. 114 N., R. 63 W.
14 - 15 Sand, brown, fine, silty; oxidized, little clay
19 - 26 Sand, dark-brown, fine, clayey, silty; saturated
26 - 36 Sand, brown, fine, silty, little clay, saturated

TEST HOLE NUMBER: 82
LOCATION: 114N-6SW-19CCC
LEGAL LOCATION: SW SW SW SW sec. 13, T. 114 N., R. 63 W.
10 - 29 Sand

TEST HOLE NUMBER: 83
LOCATION: 114N-6SW-13CCC
LEGAL LOCATION: SE SE SE sec. 13, T. 114 N., R. 63 W.
5 - 9 Sand, coarse
9 - 10 Sand and silt
10 - 16 Sand, coarse
16 - 27 Sand, fine; some silt

TEST HOLE NUMBER: 84
LOCATION: 114N-6SW-14CCC 1
LEGAL LOCATION: SW SW SW SW sec. 14, T. 114 N., R. 63 W.
10 - 33 Sand

TEST HOLE NUMBER: 85
LOCATION: 114N-6SW-14CCC 1
LEGAL LOCATION: SW SW SW SW SE sec. 14, T. 114 N., R. 63 W.
21 - 60 Sand, fine and very fine; with small amounts of silt, water-laid; permeable, depth of oxidation probably around 40 feet; wash sampled

TEST HOLE NUMBER: 86
LOCATION: 114N-6SW-14CCC 3
LEGAL LOCATION: SW SW SW SE sec. 14, T. 114 N., R. 63 W.
23 - 55 Sand, fine; some silt, oxidized, moderately permeable, water laid, wash sampled

TEST HOLE NUMBER: 87
LOCATION: 114N-6SW-14CCC 4
LEGAL LOCATION: SW SW SW SE sec. 14, T. 114 N., R. 63 W.
12 - 15 Sand, fine; with silt, water-laid; slightly permeable, oxidized
20 - 35 Sand, fine to medium; moderately permeable, oxidized, wash sample

TEST HOLE NUMBER: 88
LOCATION: 114N-6SW-14CCC 5
LEGAL LOCATION: SW SW SW SE sec. 14, T. 114 N., R. 63 W.
20 - 40 Sand, fine to medium, silty; water-laid, slightly to moderately permeable, carbonaceous zone from 29 to 29 feet, gray below 35 feet

TEST HOLE NUMBER: 89
LOCATION: 114N-6SW-14CCC 6
LEGAL LOCATION: SW SW SW SE sec. 14, T. 114 N., R. 63 W.
25 - 45 Sand, fine to medium, silty especially from 30 to 35 feet; slightly carbonaceous from 30 to 30.5 feet, oxidized, moderately permeable
TEST HOLE NUMBER: 90
LOCATION: 114N-6SW-14DCCC 7
LEGAL LOCATION: SW SW SW SE sec. 14, T. 114 N., R. 63 W.
19 - 55 Sand, fine to medium; some silt, a little coarse sand, slightly carbonaceous at 19.5 feet, slightly to moderately permeable, oxidized, water-laid

TEST HOLE NUMBER: 91
LOCATION: 114N-6SW-14DCCC 8
LEGAL LOCATION: SW SW SW SE sec. 14, T. 114 N., R. 63 W.
20 - 22 Sand, fine to medium, silty; moderately permeable, water-laid
22 - 28 Sand, fine, silty; oxidized, water-laid; slightly permeable
28 - 33 Sand, fine to medium, some coarse; oxidized, moderately permeable, water-laid

TEST HOLE NUMBER: 92
LOCATION: 114N-6SW-14DCCC 9
LEGAL LOCATION: SW SW SW SE sec. 14, T. 114 N., R. 63 W.
20 - 35 Sand, fine, silty; oxidized, slightly to moderately permeable

TEST HOLE NUMBER: 93
LOCATION: 114N-6SW-14DCCC 10
LEGAL LOCATION: SW SW SW SE sec. 14, T. 114 N., R. 63 W.
21 - 56 Sand, brown, fine; loose

TEST HOLE NUMBER: 94
LOCATION: 114N-6SW-15AAA
LEGAL LOCATION: NE NE NE SE sec. 15, T. 114 N., R. 63 W.
9 - 25 Sand, brown, medium to coarse; some silt, some coal fragments
25 - 70 Sand, gray, medium to coarse; with coal fragments and grains of shale

TEST HOLE NUMBER: 95
LOCATION: 114N-6SW-15DCCC 1
LEGAL LOCATION: SW SW SW SW sec. 15, T. 114 N., R. 63 W.
20 - 35 Sand, silt

TEST HOLE NUMBER: 96
LOCATION: 114N-6SW-16CCDD
LEGAL LOCATION: SE SE SW SE sec. 16, T. 114 N., R. 63 W.
0 - 2 Sand
10 - 13 Sand, fine; oxidized
20 - 23 Sand; oxidized
23 - 32 Sand, fine; unoxidized

TEST HOLE NUMBER: 97
LOCATION: 114N-6SW-16CCDD 2
LEGAL LOCATION: SE SE SW sec. 16, T. 114 N., R. 63 W.
0 - 3 Sand, very fine, very silty; with some clay, humic, water-laid, slightly permeable
6 - 9 Sand, very fine; with large amounts of clay and silt, humic 7.5 to 7.9 feet, highly oxidized from 7.9 to 8.6 feet, water-laid, impervious

TEST HOLE NUMBER: 98
LOCATION: 114N-6SW-17CCDD 1
LEGAL, LOCATION: SW SW SW SW sec. 17, T. 114 N., R. 63 W.
0 -  5  Sand, fine
  27 -  38  Sand, fine

TEST HOLE NUMBER: 99
LOCATION: 114N-36W-18CCCC 1
LEGAL LOCATION: SW SW SW SW sec. 18, T. 114 N., R. 63 W.
  1 - 15  Sand
  18 - 28  Sand, silt

TEST HOLE NUMBER: 100
LOCATION: 114N-36W-18CCCC 2
LEGAL LOCATION: SW SW SW SW sec. 18, T. 114 N., R. 63 W.
  0 - 18  Sand, fine, slightly silt; probably permeable except in upper 5 feet where there is considerable clay in samples, upper 2 feet humic zone

TEST HOLE NUMBER: 101
LOCATION: 114N-36W-18CCCC 1
LEGAL LOCATION: SE SE SW SW sec. 18, T. 114 N., R. 63 W.
  17 - 23  Gravel and sand

TEST HOLE NUMBER: 102
LOCATION: 114N-36W-19BDDD 1
LEGAL LOCATION: SE SW NW SE sec. 19, T. 114 N., R. 63 W.
  15 - 50  Sand, fine

TEST HOLE NUMBER: 103
LOCATION: 114N-36W-19DDCC
LEGAL LOCATION: SW SW SE SE sec. 19, T. 114 N., R. 63 W.
  16 - 62  Sand, fine

TEST HOLE NUMBER: 104
LOCATION: 114N-36W-21DDDD 1
LEGAL LOCATION: SE SE SE SE sec. 21, T. 114 N., R. 63 W.
  1 -  5  Sand, brown, very fine to medium

TEST HOLE NUMBER: 105
LOCATION: 114N-36W-21DDDD 2
LEGAL LOCATION: SE SE SE SE sec. 21, T. 114 N., R. 63 W.
  1 -  3  Sand, brown, very fine to medium
  20 -  67  Sand, gray, medium to coarse; w/ lots ofcoal fragments

TEST HOLE NUMBER: 106
LOCATION: 114N-36W-22DDDD
LEGAL LOCATION: SE SE SE RE sec. 22, T. 114 N., R. 63 W.
  24 - 48  Sand, gray-brown, fine, silty; saturated, many coal fragments

TEST HOLE NUMBER: 107
LOCATION: 114N-36W-23AAAA
LEGAL LOCATION: NE NE NE NE sec. 23, T. 114 N., R. 63 W.
TEST HOLE NUMBER: 108
LOCATION: 114N-63W-23AAA
LEGAL LOCATION: NE NE NE NE sec. 23, T. 114 N., R. 63 W.
5 - 10 Sand, brown, fine-grained
15 - 27 Sand, gray, fine-grained

TEST HOLE NUMBER: 109
LOCATION: 114N-63W-24CDDB
LEGAL LOCATION: NW NW SE SE sec. 22, T. 114 N., R. 69 W.
17 - 30 Sand, fine

TEST HOLE NUMBER: 110
LOCATION: 114N-63W-25AABB
LEGAL LOCATION: NW NW NE NE sec. 25, T. 114 N., R. 69 W.
12 - 17 Sand, brown to dark-brown, fine, clayey, silty; oxidized; saturated at 13 feet
17 - 19 Sand, gray-brown, fine to medium, clayey, silty; saturated
19 - 40 Sand, gray-brown, fine, very silty; saturated, some clay, many coal fragments

TEST HOLE NUMBER: 111
LOCATION: 114N-63W-25GDC
LEGAL LOCATION: SW SW SW SW sec. 25, T. 114 N., R. 69 W.
19 - 31 Sand, brown, fine to medium; moist, some clay

TEST HOLE NUMBER: 112
LOCATION: 114N-63W-28BABA
LEGAL LOCATION: NE NW NE NW sec. 29, T. 114 N., R. 69 W.
5 - 15 Sand, yellow-brown, fine, silty; loose, little clay
15 - 20 Sand, gray-brown, fine; saturated; some clay, some silt
20 - 24 Sand, brown, fine; saturated, some clay, some silt, some pebbles

TEST HOLE NUMBER: 113
LOCATION: 114N-63W-31ABB
LEGAL LOCATION: NW NW NW NE sec. 31, T. 114 N., R. 69 W.
0 - 4 Sand, gray-brown, fine, silty; little clay

TEST HOLE NUMBER: 114
LOCATION: 114N-63W-31CDD
LEGAL LOCATION: SW SE SW SE sec. 31, T. 114 N., R. 69 W.
0 - 8 Sand; terrace

TEST HOLE NUMBER: 115
LOCATION: 114N-63W-32DCCD
LEGAL LOCATION: SE SE SE SE sec. 32, T. 114 N., R. 63 W.
14 - 18 Sand, brown, fine to medium, very clayey; contains scattered coarse sand grains
18 - 35 Sand, brown, coarse to medium; fairly clean, some fine sand, contains a few thin gravel layers

TEST HOLE NUMBER: 116
LOCATION: 114N-63W-34DCAA
LEGAL LOCATION: NE NE SE SE sec. 34, T. 114 N., R. 63 W.
15 -  19  Sand, brown, fine, silty; oxidized, moist  
21 -  33  Sand, dark-brown, medium, clayey; moist  

TEST HOLE NUMBER:  117  
LOCATION:  114N-65W-56DDDD  
LEGAL LOCATION:  SE SE SE SE sec. 36, T. 114 N., R. 63 W.  
12 -  16  Sand, yellow-brown, fine, silty, moist; some clay  
16 -  20  Sand, gray, fine, clayey, very silty; moist  
20 -  26  Sand, gray-brown, fine to medium, clayey, very silty; moist  
26 -  29  Sand, gray, fine to medium, clayey, very silty, saturated  

TEST HOLE NUMBER:  118  
LOCATION:  114N-64W-55QBA  
LEGAL LOCATION:  NE NW sec. 02, T. 114 N., R. 64 W.  
2 -  40  Sand, fine  

TEST HOLE NUMBER:  119  
LOCATION:  114N-64W-52BBBB  
LEGAL LOCATION:  NW NW NW NW sec. 02, T. 114 N., R. 64 W.  
0 -  15  Sand, brown, fine to medium, well sorted  
15 -  24  Sand, gray, medium to coarse; trace of very fine gravel between 20 and 24 feet  

TEST HOLE NUMBER:  120  
LOCATION:  114N-64W-52BBED  
LEGAL LOCATION:  SE SE NW sec. 02, T. 114 N., R. 64 W.  
2 -  4  Sand and gravel  
20 -  31  Gravel  

TEST HOLE NUMBER:  121  
LOCATION:  114N-64W-50CBO  
LEGAL LOCATION:  NW SW sec. 02, T. 114 N., R. 64 W.  
0 -  15  Sand, red  
22 -  59  Sand  

TEST HOLE NUMBER:  122  
LOCATION:  114N-64W-52CBBC  
LEGAL LOCATION:  SW NW NW SW sec. 02, T. 114 N., R. 64 W.  
22 -  24  Sand, fine; with lignite, loose  
24 -  60  Sand, coarse, with some lignite and gravel, loose  

TEST HOLE NUMBER:  123  
LOCATION:  114N-64W-54C2ED  
LEGAL LOCATION:  SE SE NW sec. 04, T. 114 N., R. 64 W.  
0 -  2  Sand, fine; with silt and clay, humified  

TEST HOLE NUMBER:  124  
LOCATION:  114N-64W-54CD  
LEGAL LOCATION:  SE SW sec. 04, T. 114 N., R. 64 W.  
0 -  3  Sand, medium-brown, fine, silty; with small amounts of clay, humified in upper 1 foot, moderately permeable, water-laid
4 - 5 Sand, dark-brown, fine and very fine; dirty, somewhat organic, oxidized, moderately permeable, water-laid
6 - 9 Sand, fine; gravelly, poorly sorted; very dirty, oxidized, moderately permeable, water-laid; oxidized, lean, clay from 6.6 to 9.1 feet (32)

**TEST HOLE NUMBER: 125**
**LOCATION:** 114N-64W-04C1AA 1
**LEGAL LOCATION:** NE NE SE SW sec. 04, T. 114 N., R. 64 W.
0 - 3 Sand, fin; with silt and clay, humified
3 - 8 Sand, fine to medium; some silt and clay, permeable, water-laid

**TEST HOLE NUMBER: 126**
**LOCATION:** 114N-64W-04C2CC
**LEGAL LOCATION:** SW SW SE SW sec. 04, T. 114 N., R. 64 W.
0 - 3 Sand, very fine to fine, with some medium fine; and a small amount of silt, humified in upper 2 inches, oxidized, water-laid
10 - 12 Sand, fine to very fine in upper half; fine to medium coarse in lower half; some silt and clay irregularly distributed, small amount of gravel, oxidized, permeable, water-laid

**TEST HOLE NUMBER: 127**
**LOCATION:** 114N-64W-04C2CD
**LEGAL LOCATION:** SE SW SE SW sec. 04, T. 114 N., R. 64 W.
0 - 3 Sand and silt; some clay (topsoil)
3 - 15 Sand, fine to medium; some silt, oxidized, permeable

**TEST HOLE NUMBER: 128**
**LOCATION:** 114N-64W-06CAD0
**LEGAL LOCATION:** SE NE SW NE sec. 56, T. 114 N., R. 64 W.
2 - 9 Sand and gravel

**TEST HOLE NUMBER: 129**
**LOCATION:** 114N-64W-06ADD0
**LEGAL LOCATION:** SE SE NE sec. 06, T. 114 N., R. 64 W.
4 - 7 Sand, tan-brown, fine, silty; some gravel; oxidized

**TEST HOLE NUMBER: 130**
**LOCATION:** 114N-64W-06BBBC
**LEGAL LOCATION:** NW NW NW NW sec. 06, T. 114 N., R. 64 W.
2 - 10 Sand and gravel

**TEST HOLE NUMBER: 131**
**LOCATION:** 114N-64W-09CAD0
**LEGAL LOCATION:** SE SE SW sec. 09, T. 114 N., R. 64 W.
2 - 10 Sand and silt, poorly sorted sand; some clay, gravelly from 6 to 10 feet
25 - 27 Sand; water-laid; much silt and clay, unoxidized

**TEST HOLE NUMBER: 132**
**LOCATION:** 114N-64W-09GB 1
**LEGAL LOCATION:** NW SE sec. 09, T. 114 N., R. 64 W.
0 - 1 Sand; some silt and clay, humified
1 - 5 Sand
<table>
<thead>
<tr>
<th>TEST HOLE NUMBER</th>
<th>LOCATION</th>
<th>LEGAL LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>133</td>
<td>114N-64W-09DBCC 2</td>
<td>SW SW NW SE sec. 09, T. 114 N., R. 64 W.</td>
<td>Sand, fine to medium, some silt, permeable, water-laid</td>
</tr>
<tr>
<td>134</td>
<td>114N-64W-11BBB</td>
<td>NW NW NW NW sec. 11, T. 114 N., R. 64 W</td>
<td>Sand, medium; with fine sand, silt, and gravel (allochthon) Gravel, lost core sample</td>
</tr>
<tr>
<td>135</td>
<td>114N-64W-11DDDC</td>
<td>SW SE SE SE sec. 11, T. 114 N., P. 64 W.</td>
<td>Sand, brown, fine, silty; oxidized, dry Gravel, gray, fine, clayey, sandy; some shale pebbles</td>
</tr>
<tr>
<td>136</td>
<td>114N-64W-12AAAD</td>
<td>SE NE NE NE sec. 12, T. 114 N., R. 64 W.</td>
<td>Sand, yellow-brown-gray, fine, clayey, silty; oxidized, saturated Gravel, gray, fine, sandy, silty; unoxidized, saturated, gravel stringers at 30 and 35 feet</td>
</tr>
<tr>
<td>137</td>
<td>114N-64W-15CDDC 2</td>
<td>SW SW SW sec. 13, T. 114 N., R. 64 W.</td>
<td>Sand, medium to fine Sand, fine, oxidized</td>
</tr>
<tr>
<td>138</td>
<td>114N-64W-15DCCC 1</td>
<td>SW SW SE SW sec. 13, T. 114 N., R. 64 W.</td>
<td>Sand, fine; oxidized</td>
</tr>
<tr>
<td>139</td>
<td>114N-64W-13DCCC 1</td>
<td>SW SE SE SE sec. 13, T. 114 N., R. 64 W.</td>
<td>Sand, fine; oxidized</td>
</tr>
<tr>
<td>140</td>
<td>114N-64W-14CCCD 1</td>
<td>SW SW SW SW sec. 14, T. 114 N., R. 64 W.</td>
<td>Sand, medium</td>
</tr>
</tbody>
</table>
TEST HOLE NUMBER: 141
LOCATION: 114N-64W-14CCCD 1
LEGAL LOCATION: SW SE SW 26 sec. 14, T. 114 N., R. 64 W.
   0 - 2  Sand
   2 - 9  Sand, fine

TEST HOLE NUMBER: 142
LOCATION: 114N-64W-14DDDD 1
LEGAL LOCATION: SE SE SE SE sec. 14, T. 114 N., R. 64 W.
   26 - 47 Sand and gravel, gray, fine sand, medium gravel, many clay sizers throughout, many coal fragments.

TEST HOLE NUMBER: 143
LOCATION: 114N-64W-14DDDD 2
LEGAL LOCATION: SE SE SE SE sec. 14, T. 114 N., R. 64 W.
   26 - 27 Gravel

TEST HOLE NUMBER: 144
LOCATION: 114N-64W-15AAAA
LEGAL LOCATION: NE NE NE NE sec. 15, T. 114 N., R. 64 W.
   1 - 12 Sand, brown, medium to coarse

TEST HOLE NUMBER: 145
LOCATION: 114N-64W-15CCCC 1
LEGAL LOCATION: SW SW SW SW sec. 15, T. 114 N., R. 64 W.
   2 - 4 Sand, fine

TEST HOLE NUMBER: 146
LOCATION: 114N-64W-15DDDD 1
LEGAL LOCATION: SE SE SE SE sec. 15, T. 114 N., R. 64 W.
   4 - 8 Sand, fine, oxidized
   17 - 19 Sand, fine, oxidized
   20 - 29 Gravel and sand, fine gravel, coarse sand

TEST HOLE NUMBER: 147
LOCATION: 114N-64W-15BBBB
LEGAL LOCATION: NW NW NW NW sec. 16, T. 114 N., R. 64 W.
   0 - 4 Sand, brown, very fine, silty
   4 - 8 Sand, brown, fine to coarse

TEST HOLE NUMBER: 148
LOCATION: 114N-64W-17DDDD 1
LEGAL LOCATION: SE SE SE SW sec. 17, T. 114 N., R. 64 W.
   0 - 3 Sand, fine; some silt and clay, humic zone
   3 - 9 Sand, fine; some silt and clay, oxidized, permeable, water-laid

TEST HOLE NUMBER: 149
LOCATION: 114N-64W-18CCCC 1
LEGAL LOCATION: SW SW SW SW sec. 18, T. 114 N., R. 64 W.
   4 - 16 Sand and silt, water-laid
TEST HOLE NUMBER: 150
LOCATION: 114N-64W-180000 1
LEGAL LOCATION: SE SE SE SE sec. 18, T. 114 N., R. 64 W.
4 - 9 Sand, coarse

TEST HOLE NUMBER: 151
LOCATION: 114N-64W-240000
LEGAL LOCATION: SE SW SE SE sec. 24, T. 114 N., R. 64 W.
0 - 4 Sand, brown, silty, fine; oxidized
9 - 21 Sand, yellow-brown, fine, medium-grained from 11 to 21 feet; very clayey, very silty; oxidized, saturated

TEST HOLE NUMBER: 152
LOCATION: 114N-64W-230000 1
LEGAL LOCATION: NW NW NW NW sec. 25, T. 114 N., R. 64 W.
0 - 5 Sand

TEST HOLE NUMBER: 153
LOCATION: 114N-64W-250000 2
LEGAL LOCATION: NW NW NW NW sec. 25, T. 114 N., R. 64 W.
1 - 6 Sand, brown, fine, clayey, silty, moderately sorted; dry, oxidized

TEST HOLE NUMBER: 154
LOCATION: 114N-64W-250000 3
LEGAL LOCATION: NW NW NW NW sec. 25, T. 114 N., R. 64 W.
1 - 6 Sand, brown, fine, clayey, silty, moderately sorted; dry, oxidized

TEST HOLE NUMBER: 155
LOCATION: 114N-64W-250000 4
LEGAL LOCATION: NW NW NW NW sec. 25, T. 114 N., R. 64 W.
1 - 6 Sand, brown, fine, clayey, silty, moderately sorted; dry, oxidized

TEST HOLE NUMBER: 156
LOCATION: 114N-64W-260000
LEGAL LOCATION: NE NE SE NE sec. 26, T. 114 N., R. 64 W.
0 - 2 Sand, tan-brown, fine, silty; oxidized
2 - 5 Sand and gravel, tan-brown, fine sand, find gravel, silty; oxidized
5 - 8 Sand and gravel, gray-brown, fine to medium sand, medium to coarse gravel, clayey, silty; moist

TEST HOLE NUMBER: 157
LOCATION: 114N-64W-270000
LEGAL LOCATION: NE NE NE NE sec. 27, T. 114 N., R. 64 W.
0 - 3 Sand, dark-brown, silty
5 - 6 Sand, yellow-brown, silty
20 - 30 Gravel, medium to coarse, sandy; some fine gravel, clean, rock at 29 feet

TEST HOLE NUMBER: 158
LOCATION: 114N-64W-270000 1
LEGAL LOCATION: NE NE NE NE sec. 27, T. 114 N., R. 64 W.
26 - 40 Gravel; with blue clay
TEST HOLE NUMBER: 159
LOCATION: 114N-64W-32AAA
LEGAL LOCATION: NE NE NE NE sec. 32, T. 114 N., R. 64 W.
6 - 7 Sand, yellow-tan-brown, fine to coarse, silty, oxidized
7 - 11 Sand, orange-tan-brown, fine to coarse, some silt, some clay and gravel; oxidized, wet
11 - 14 Sand, tan-brown, fine to coarse, clayey, silty; some fine gravel; oxidized, saturated
19 - 25 Gravel, fine to medium, sandy; some clay

TEST HOLE NUMBER: 160
LOCATION: 114N-64W-32DDDD
LEGAL LOCATION: SE SE SE SE sec. 32, T. 114 N., R. 64 W.
2 - 1 Sand, yellow-brown, fine to medium

TEST HOLE NUMBER: 161
LOCATION: 114N-64W-34DDDC
LEGAL LOCATION: SW SE SE SE sec. 34, T. 114 N., R. 66 W.
0 - 8 Sand, brown, coarse to very coarse, trace of gravel
21 - 27 Sand, fine to coarse

TEST HOLE NUMBER: 162
LOCATION: 114N-64W-34DDDD 1
LEGAL LOCATION: SE SE SE SE sec. 34, T. 114 N., R. 64 W.
0 - 3 Sand, dark-brownish-black (road fill)
3 - 14 Sand, yellow to tan, very fine, clayey
20 - 35 Sand, light-brownish-gray, fine to medium, very clayey; contains scattered coarse sand and fine to medium gravel and black shoe fragments, rock at 34 feet

TEST HOLE NUMBER: 163
LOCATION: 114N-64W-34DDDD 2
LEGAL LOCATION: SE SE SE sec. 34, T. 114 N., R. 64 W.
0 - 2 Sand, dark-brown, very fine to fine
28 - 37 Sand and gravel; streaks of sandy clay, boulders from 35 to 37 feet

TEST HOLE NUMBER: 164
LOCATION: 114N-64W-34DDDD 3
LEGAL LOCATION: SE SE SE SE sec. 34, T. 114 N., R. 64 W.
0 - 10 Sand, brown, coarse to very coarse; with a trace of very fine gravel
21 - 27 Sand, fine to coarse

TEST HOLE NUMBER: 165
LOCATION: 114N-64W-38SSSSA
LEGAL LOCATION: NW NE NE NW sec. 35, T. 114 N., R. 64 W.
0 - 4 Sand, tan-brown, fine, silty; little clay, clean
20 - 27 Sand, brown, medium to coarse, clayey, silty, pebbly; oxidized, saturated, hit rock at 27 feet, abandoned hole

TEST HOLE NUMBER: 166
LOCATION: 114N-64W-39DDDD
LEGAL LOCATION: SE SE SE sec. 35, T. 114 N., R. 64 W.
0 - 5 Sand, brown, fine, silty
<table>
<thead>
<tr>
<th>TEST HOLE NUMBER: 167</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION: 114N-65W-3600CC</td>
</tr>
<tr>
<td>LEGAL LOCATION: SE SW SW SW sec. 36, T. 114 N., R. 64 W.</td>
</tr>
<tr>
<td>2 - 14: Sand, brown, fine to medium, clayey to very clayey, silty in part; contains scattered grains of fine and coarse gravel; thin layer of gravel at base</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER: 168</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION: 114N-65W-030BBB</td>
</tr>
<tr>
<td>LEGAL LOCATION: NW NW NW sec. 02, T. 114 N., R. 65 W.</td>
</tr>
<tr>
<td>5 - 8: Sand</td>
</tr>
<tr>
<td>12 - 15: Sand, clayey</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER: 169</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION: 114N-65W-040DDA</td>
</tr>
<tr>
<td>LEGAL LOCATION: NE SE NE SE sec. 04, T. 114 N., R. 65 W.</td>
</tr>
<tr>
<td>0 - 6: Gravel, tan-brown, fine to coarse, very silty; oxidized, dry</td>
</tr>
<tr>
<td>6 - 12: Gravel, orange-brown to gray-brown, very silty, sandy; oxidized</td>
</tr>
<tr>
<td>12 - 15: Sand, gray, fine, clayey, silty; saturated</td>
</tr>
<tr>
<td>15 - 19: Sand, gray-brown, fine to coarse, clayey, silty; saturated; rock at 19 feet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER: 170</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION: 114N-65W-050AAA</td>
</tr>
<tr>
<td>LEGAL LOCATION: NE NE NE NE sec. 05, T. 114 N., R. 65 W.</td>
</tr>
<tr>
<td>2 - 16: Sand and gravel; medium to coarse</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER: 171</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION: 114N-65W-070DADA</td>
</tr>
<tr>
<td>LEGAL LOCATION: NE SE NE SE sec. 07, T. 114 N., R. 65 W.</td>
</tr>
<tr>
<td>0 - 11: Sand, orange-brown, fine, silty; moist</td>
</tr>
<tr>
<td>17 - 22: Gravel, gray, medium to coarse, clayey, silty, sandy; saturated</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER: 172</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION: 114N-65W-080DDD</td>
</tr>
<tr>
<td>LEGAL LOCATION: SE SE SE SE sec. 08, T. 114 N., R. 65 W.</td>
</tr>
<tr>
<td>0 - 14: Sand and gravel, fine to medium</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER: 173</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION: 114N-65W-09000CC</td>
</tr>
<tr>
<td>LEGAL LOCATION: SE SE SE SE sec. 09, T. 114 N., R. 65 W.</td>
</tr>
<tr>
<td>2 - 7: Gravel, brown, medium, clayey, silty, sandy; less clay with depth</td>
</tr>
<tr>
<td>7 - 13: Sand and gravel, fine to medium sand; fine to medium gravel; moist</td>
</tr>
<tr>
<td>13 - 20: Sand, tan-brown, coarse; some gravel, little silt; saturated</td>
</tr>
<tr>
<td>20 - 24: Sand, gray, coarse, silty; some fine gravel, some clay; saturated</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER: 174</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION: 114N-65W-110DDD</td>
</tr>
<tr>
<td>LEGAL LOCATION: SE SE SE SE sec. 11, T. 114 N., R. 65 W.</td>
</tr>
<tr>
<td>5 - 7: Sand and gravel; orange-brown, fine to coarse sand, fine to medium gravel, very clayey, silty; oxidized, dry</td>
</tr>
<tr>
<td>9 - 11: Gravel, orange-brown, fine to medium, very clayey, sandy; oxidized</td>
</tr>
<tr>
<td>11 - 15: Gravel, tan-brown, medium to coarse; poor return; saturated at 14 feet</td>
</tr>
</tbody>
</table>

27
TEST HOLE NUMBER: 175
LOCATION: 114N-6SW-13AAA
LEGAL LOCATION: NE NE NE NE sec. 13, T. 114 N., R. 65 W.
17 - 23 Sand and gravel

TEST HOLE NUMBER: 176
LOCATION: 114N-6SW-16AAA
LEGAL LOCATION: SW NW NE NE sec. 16, T. 114 N., R. 65 W.
5 - 6 Sand and gravel; yellow-brown, fine to medium sand, fine gravel
6 - 9 Sand, orange-brown, very fine-grained
9 - 14 Sand, grey-brown, very fine, slightly silty; wet
16 - 48 Sand, grey, very fine-grained, clayey, silty; unoxidized, saturated

TEST HOLE NUMBER: 177
LOCATION: 114N-6SW-16ADD
LEGAL LOCATION: SE NE SE NE sec. 13, T. 114 N., R. 65 W.
1 - 2 Gavel, tan-brown, coarse, silty, sandy
2 - 6 Gravel, tan-brown, medium to coarse, silty, very sandy; interbedded layers of coarse gravel
6 - 20 Sand and gravel, coarse sand, fine gravel; some silt, saturated at 10 feet, more coarse gravel with depth
20 - 24 Gravel, brown, coarse, clayey, silty, sandy
24 - 50 Sand, grey, coarse, clayey, very silty; unoxidized, saturated

TEST HOLE NUMBER: 178
LOCATION: 114N-6SW-16CCDD
LEGAL LOCATION: SE SE SW SW sec. 16, T. 114 N., R. 35 W.
5 - 13 Sand, fine; oxidized
13 - 18 Sand, fine; unoxidized

TEST HOLE NUMBER: 179
LOCATION: 114N-6SW-16CCDD
LEGAL LOCATION: SE SE SW SW sec. 16, T. 114 N., R. 65 W.
13 - 50 Sand; unoxidized

TEST HOLE NUMBER: 180
LOCATION: 114N-6SW-16CCDD
LEGAL LOCATION: SE SE SW SW sec. 16, T. 114 N., R. 65 W.
8 - 13 Sand, fine; oxidized
13 - 21 Sand, fine; unoxidized
27 - 29 Sand, fine to medium

TEST HOLE NUMBER: 181
LOCATION: 114N-6SW-17CCDD
LEGAL LOCATION: SE SE SW SW sec. 17, T. 114 N., R. 65 W.
2 - 5 Sand; oxidized

TEST HOLE NUMBER: 182
LOCATION: 114N-6SW-16BBCC
LEGAL LOCATION: SW SW NW NW sec. 18, T. 114 N., R. 65 W.
5 - 8 Sand, tan-brown, very fine-grained; no pebbles (Alluvium)
8 - 11 Sand and gravel, brown, fine sand, medium gravel, very silty; oxidized

28
11 - 16 Sand and gravel, black, fine to medium sand, medium gravel, clayey; much coal, organic(?); saturated
16 - 36 Sand and gravel, grayish-brown, medium to coarse sand, medium gravel, very clayey, silty; becoming cleaner with depth

TEST HOLE NUMBER: 183
LOCATION: 114N-45S-18C-DD
LEGAL LOCATION: SE SE SW SW sec. 18, T. 114 N., R. 65 W.

0 - 8 Sand, fine; oxidized

TEST HOLE NUMBER: 184
LOCATION: 114N-45S-21B-BB
LEGAL LOCATION: NW NW NW NW sec. 21, T. 114 N., R. 65 W.

2 - 13 Sand, yellow-brown, very fine-grained, silty; oxidized, wet (alloxun)
13 - 17 Sand and gravel, gray-brown, fine to coarse sand, fine gravel, clayey, very silty
26 - 30 Sand and gravel, gray, fine to coarse sand, fine to medium gravel, clayey, very silty; saturated

TEST HOLE NUMBER: 185
LOCATION: 114N-45S-21D-DD
LEGAL LOCATION: SE SE SW SE sec. 21, T. 114 N., R. 65 W.

6 - 9 Sand, brown, clayey, silty; oxidized, saturated
9 - 23 Sand, brown to dark-brown, fine, clay, silty; oxidized, saturated

TEST HOLE NUMBER: 186
LOCATION: 114N-45S-23A-AAA
LEGAL LOCATION: NE NE NE NE sec. 23, T. 114 N., R. 65 W.

17 - 27 Gravel, orange-brown, pea-size, very clayey; oxidized, saturated
27 - 30 Gravel, gray, fine, clayey, silty, sandy; unoxidized, saturated

TEST HOLE NUMBER: 187
LOCATION: 114N-45S-26B-BBB
LEGAL LOCATION: NW NW NW NW sec. 26, T. 114 N., R. 65 W.

1 - 4 Gravel, tan-brown, fine to coarse, silty; some sand; oxidized, dry
6 - 16 Sand, tan-brown, fine, silty; very few pebbles; oxidized, saturated at 13 feet
18 - 23 Sand, dark-tan-brown, fine, silty; some pebbles, oxidized, saturated
23 - 29 Sand, brown, medium, pebbly; some silt and clay; oxidized, saturated

TEST HOLE NUMBER: 188
LOCATION: 114N-45S-30C-CCC
LEGAL LOCATION: SW SW SW SW sec. 33, T. 114 N., R. 65 W.

8 - 15 Sand, light-brown, very fine to medium, silty
15 - 23 Sand, medium-brown, fine to medium, wet, increasingly clayey with depth
23 - 35 Sand, gray, fine to medium; with 3-inch zone of gravel at about 35 feet

TEST HOLE NUMBER: 189
LOCATION: 114N-45S-33D-DDD
LEGAL LOCATION: SE SE SE SE sec. 33, T. 114 N., R. 65 W.

5 - 6 Gravel, coarse
6 - 11 Sand and gravel, brown, fine to coarse sand, medium to coarse gravel, clayey; silty
11 - 41 Gravel, brown, coarse to cobbles, well-sorted; some clay and silt

29
TEST HOLE NUMBER: 190
LOCATION: 114N-65W-35CCCD
LEGAL LOCATION: SW SW SW sec. 35, T. 114 N., R. 65 W.
0 - 9 Sand, brown, gravelly, very silty, slightly clayey
25 - 37 Sand, light- to medium-gray, very fine to fine, clayey; rock at 31 feet

TEST HOLE NUMBER: 191
LOCATION: 115N-65W-19BBBB
LEGAL LOCATION: NW NW NW NW sec. 19, T. 115 N., R. 60 W.
10 - 16 Gravel

TEST HOLE NUMBER: 192
LOCATION: 115N-65W-20BBBB
LEGAL LOCATION: NW NW NW NW sec. 20, T. 115 N., R. 60 W.
16 - 25 Sand and gravel, orange-brown, fine sand, medium gravel, very clayey, silty; oxidized, saturated

TEST HOLE NUMBER: 193
LOCATION: 115N-65W-25BBBB
LEGAL LOCATION: NE NW NW NW sec. 25, T. 115 N., R. 60 W.
16 - 21 Sand, gray, medium to coarse, very clayey, silty; unoxidized, saturated

TEST HOLE NUMBER: 194
LOCATION: 115N-65W-27CBBC
LEGAL LOCATION: SW NW NW SW sec. 27, T. 115 N., R. 60 W.
9 - 13 Sand, dark-red-brown, clayey; oxidized
13 - 18 Sand, olive-brown, clayey, silty; oxidized, saturated, some fine gravel
18 - 21 Sand, light-gray, clayey, silty; saturated, some fine gravel

TEST HOLE NUMBER: 195
LOCATION: 115N-65W-71ADAA
LEGAL LOCATION: NE NE SE NE sec. 31, T. 115 N., R. 60 W.
23 - 35 Sand, gray, medium to coarse, very clayey, silty; unoxidized, saturated

TEST HOLE NUMBER: 196
LOCATION: 115N-65W-25CDDD
LEGAL LOCATION: SE NE SW SW sec. 05, T. 115 N., R. 61 W.
8 - 23 Sand and gravel
25 - 62 Sand

TEST HOLE NUMBER: 197
LOCATION: 115N-61W-06QDDD
LEGAL LOCATION: SE SE NE NE sec. 06, T. 115 N., R. 61 W.
5 - 25 Sand, brown, medium to coarse

TEST HOLE NUMBER: 198
LOCATION: 115N-61W-06CDDD
LEGAL LOCATION: NW NW SW SW sec. 06, T. 115 N., R. 61 W.
15 - 25 Sand, yellow
28 - 85 Sand, gravel and coal
<table>
<thead>
<tr>
<th>TEST HOLE NUMBER</th>
<th>LOCATION</th>
<th>LEGAL LOCATION</th>
<th>Depth</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>199</td>
<td>115N-61W-07AABB</td>
<td>NW NW NE sec. 07, T. 115 N., R. 61 W.</td>
<td>6 - 14</td>
<td>Sand, tan-brown, fine to medium, clayey, silty; oxidized</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>14 - 20</td>
<td>Sand, dark-brown, fine to medium, clayey, silty; oxidized</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>22 - 34</td>
<td>Sand, tan-brown, fine to medium, slightly clayey, silty; oxidized, wet, becomes coarser with depth, saturated at 27 feet</td>
</tr>
<tr>
<td></td>
<td>200</td>
<td>NW NW SW SW sec. 07, T. 115 N., R. 61 W.</td>
<td>6 - 99</td>
<td>Sand, brown, medium to coarse; grades to a medium gravel with depth</td>
</tr>
<tr>
<td></td>
<td>201</td>
<td>NE NW NW sec. 12, T. 115 N., R. 61 W.</td>
<td>4 - 5</td>
<td>Sand, red-brown, medium to coarse, clayey, very silty; oxidized</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5 - 10</td>
<td>Sand, dark-brown, medium to coarse, clayey, very silty, gravelly; rocks at 10 feet</td>
</tr>
<tr>
<td></td>
<td>202</td>
<td>NE NE NE sec. 16, T. 115 N., R. 61 W.</td>
<td>16 - 23</td>
<td>Sand, light-brown, fine to medium, silty; oxidized, saturated, some clay, some pebbles</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>29 - 33</td>
<td>Sand, orange-brown, fine to medium, silty; oxidized, saturated, some clay, some pebbles, more clay content with depth</td>
</tr>
<tr>
<td></td>
<td>203</td>
<td>NE NE SE sec. 21, T. 115 N., R. 61 W.</td>
<td>10 - 29</td>
<td>Sand, dark-brown, fine to coarse, clayey, silty; some fine to medium gravel with depth; oxidized</td>
</tr>
<tr>
<td></td>
<td>204</td>
<td>SE SE SE sec. 21, T. 115 N., R. 61 W.</td>
<td>2 - 8</td>
<td>Gravel</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10 - 12B</td>
<td>Sand, fine</td>
</tr>
<tr>
<td></td>
<td>205</td>
<td>NW NW NW IV sec. 26, T. 115 N., R. 61 W.</td>
<td>71 - 16</td>
<td>Sand</td>
</tr>
<tr>
<td></td>
<td>206</td>
<td>NW NW NW IV sec. 28, T. 115 N., R. 61 W</td>
<td>20 - 50</td>
<td>Sand, coarse; fine gravel</td>
</tr>
<tr>
<td></td>
<td>207</td>
<td>NW NW NE sec. 30, T. 115 N., R. 61 W.</td>
<td></td>
<td>Sand, coarse; fine gravel</td>
</tr>
</tbody>
</table>
TEST HOLE NUMBER: 208
LOCATION: 115N-61W-30A066
LEGAL LOCATION: SW SW NW NE sec. 30, T. 115 N., R. 61 W.
  21 - 85 Sand and gravel

TEST HOLE NUMBER: 209
LOCATION: 115N-61W-30A066
LEGAL LOCATION: SW SW NW NE sec. 30, T. 115 N., R. 61 W.
  16 - 32 Sand

TEST HOLE NUMBER: 210
LOCATION: 115N-61W-30A066 C
LEGAL LOCATION: SW SW NW NE sec. 30, T. 115 N., R. 61 W.
  21 - 45 Gravel, fine to coarse

TEST HOLE NUMBER: 211
LOCATION: 115N-61W-32A02
LEGAL LOCATION: NE NE NE NE sec. 32, T. 115 N., R. 61 W.
  16 - 18 Sand, red
  18 - 23 Sand, medium
  25 - 52 Sand, medium

TEST HOLE NUMBER: 212
LOCATION: 115N-61W-32A05
LEGAL LOCATION: NE NE NE NE sec. 32, T. 115 N., R. 61 W.
  20 - 89 Sand

TEST HOLE NUMBER: 213
LOCATION: 115N-61W-32A06
LEGAL LOCATION: NE NW NE sec. 32, T. 115 N., R. 61 W.
  16 - 23 Sand, fine
  20 - 50 Sand, gravel and lignite

TEST HOLE NUMBER: 214
LOCATION: 115N-61W-32A07
LEGAL LOCATION: NE NW NE sec. 32, T. 115 N., R. 61 W.
  20 - 50 Sand

TEST HOLE NUMBER: 215
LOCATION: 115N-62W-04B002
LEGAL LOCATION: NW NW NW NW sec. 04, T. 115 N., R. 62 W.
  2 - 14 Sand and gravel
  17 - 55 Sand, coarse; with coal fragments; good clean sand to coarse gravel at the base of this interval

TEST HOLE NUMBER: 216
LOCATION: 115N-62W-04B002 B
LEGAL LOCATION: NW NW NW NW sec. 04, T. 115 N., R. 62 W.
  0 - 14 Sand and gravel; brown, coarse to very coarse sand, very fine gravel; some medium sand
TEST HOLE NUMBER: 217
LOCATION: 11S-62W-07DDDD
LEGAL LOCATION: SE SE SE SE sec. 07, T. 115 N., R. 62 W.
5 - 9 Sand and gravel, reddish-brown; heavy concentration of salt at 9 feet

TEST HOLE NUMBER: 218
LOCATION: 11S-62W-06DDDB
LEGAL LOCATION: NW SE SE SE sec. 08, T. 115 N., R. 62 W.
16 - 18 Sand, dark-brown, coarse, well-sorted, well-rounded; some clay, some gravel

TEST HOLE NUMBER: 219
LOCATION: 11S-62W-12ABBB
LEGAL LOCATION: NW NW NW NE sec. 12, T. 115 N., R. 62 W.
4 - 8 Sand, orange-brown, fine, silty, moist
6 - 29 Sand, gray-brown, fine, clayey, very silty; saturated at 22 feet

TEST HOLE NUMBER: 220
LOCATION: 11S-62W-14DDDD 1
14 - 21 Sand, gray, fine to medium-grained, very clayey, silty; wet

TEST HOLE NUMBER: 221
LOCATION: 11S-62W-14DDDD 2
12 - 14 Gravel, brown, coarse-grained; clean

TEST HOLE NUMBER: 222
LOCATION: 11S-62W-16CCCCCC
LEGAL LOCATION: SW SW SW SW sec. 16, T. 115 N., R. 62 W.
1 - 4 Gravel

TEST HOLE NUMBER: 223
LOCATION: 11S-62W-17AAAB
LEGAL LOCATION: NW NE NE NE sec. 17, T. 115 N., R. 62 W.
24 - 29 Sand, gray

TEST HOLE NUMBER: 224
LOCATION: 11S-62W-17BCCB
LEGAL LOCATION: NW SW SW NW sec. 17, T. 115 N., R. 62 W.
16 - 30 Sand, dark-gray-brown, fine to coarse, clayey, silty; partly oxidized, saturated; more clay content with depth

TEST HOLE NUMBER: 225
LOCATION: 11S-62W-21CCCCCC
LEGAL LOCATION: SW SW SW SW sec. 21, T. 115 N., R. 62 W.
8 - 11 Sand and pebbles, poorly sorted; some clay, last sample, probably water-laid, oxidized, permeable
<table>
<thead>
<tr>
<th>TEST HOLE NUMBER</th>
<th>LOCATION</th>
<th>LEGAL LOCATION</th>
<th>TEST</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>226</td>
<td>115N-42W-203040A</td>
<td>NE SE NE SE sec. 23, T. 115 N., R. 62 W.</td>
<td>14</td>
<td>Sand, brown, medium to coarse, clayey, gravelly, oxidized, dry</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>24</td>
<td>Sand, brown, medium to coarse, clayey, gravelly, oxidized, wet</td>
</tr>
<tr>
<td>227</td>
<td>115N-42W-29CCCCC</td>
<td>SW SW SW SW sec. 29, T. 115 N., R. 62 W.</td>
<td>15</td>
<td>Sand, brown, medium to coarse; oxidized, grades to grayish-brown by 25 feet</td>
</tr>
<tr>
<td>228</td>
<td>115N-42W-30BBBBB</td>
<td>NW NW NW NW sec. 30, T. 115 N., R. 62 W.</td>
<td>12</td>
<td>Sand, brown-gray, coarse; clean, abundant coal, many shale pebbles</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>27</td>
<td>Sand, brown-gray, coarse; clean, abundant coal, many shale pebbles</td>
</tr>
<tr>
<td>229</td>
<td>115N-42W-30BBBBB</td>
<td>NW NW NW NW sec. 30, T. 115 N., R. 62 W.</td>
<td>15</td>
<td>Sand, light-red-brown, fine to medium, very clayey, silty; oxidized, saturated</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>25</td>
<td>Sand, dark-brown, fine to medium, clayey, silty; some gravel, many coal and shale fragments; saturated</td>
</tr>
<tr>
<td>230</td>
<td>115N-42W-31AABB</td>
<td>NW NE NE sec. 31, T. 115 N., R. 62 W.</td>
<td>22</td>
<td>Sand, coarse</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>28</td>
<td>Sand, coarse, clayey; oxidized</td>
</tr>
<tr>
<td>231</td>
<td>115N-42W-34CCCCC</td>
<td>SW SW SW SW sec. 34, T. 115 N., R. 62 W.</td>
<td>28</td>
<td>Sand, coarse, clayey; oxidized</td>
</tr>
<tr>
<td>232</td>
<td>115N-42W-36DDDD</td>
<td>SE SE SE SW sec. 36, T. 115 N., R. 62 W.</td>
<td>7</td>
<td>Sand, red-range-brown, fine to coarse, slightly silty; oxidized</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td>Gravel, brown, fine to coarse; poor return</td>
</tr>
<tr>
<td>233</td>
<td>115N-43W-01DDDD</td>
<td>SE SE SE SE SE sec. 01, T. 115 N., R. 63 W.</td>
<td>26</td>
<td>Sand, medium</td>
</tr>
<tr>
<td>234</td>
<td>115N-43W-02CCCCC</td>
<td>SW SW SW SW sec. 02, T. 115 N., R. 63 W.</td>
<td>34</td>
<td></td>
</tr>
</tbody>
</table>
25 - 37  Sand, brown-gray, fine to medium; clean, abundant coal

TEST HOLE NUMBER: 235
LOCATION: 118N-65W-020000
LEGAL LOCATION: SE SE SE SE sec. 02, T. 115 N., R. 63 W.

19 - 30  Sand, reddish-brown to brown-gray, fine to coarse, silty; oxidized saturated at 19 feet

TEST HOLE NUMBER: 236
LOCATION: 118N-65W-031000
LEGAL LOCATION: NW NW NW NW sec. 03, T. 115 N., R. 63 W.

15 - 20  Sand, silt, clay, pebbles
20 - 34  Sand, medium to fine

TEST HOLE NUMBER: 237
LOCATION: 118N-65W-054000
LEGAL LOCATION: NE NE NE NE sec. 05, T. 115 N., R. 63 W.

3 - 6  Sand and silt, orange-brown, fine sand, clayey; oxidized, moist (lacustrine?)

TEST HOLE NUMBER: 238
LOCATION: 118N-65W-062000
LEGAL LOCATION: NE NW SE SW sec. 05, T. 115 N., R. 63 W.

25 - 95  Sand and gravel

TEST HOLE NUMBER: 239
LOCATION: 118N-65W-083000
LEGAL LOCATION: SW SW SW SW sec. 05, T. 115 N., R. 63 W.

2 - 5  Sand, yellow, fine; oxidized

TEST HOLE NUMBER: 240
LOCATION: 118N-65W-084000
LEGAL LOCATION: SE SE SW SE sec. 06, T. 115 N., R. 63 W.

25 - 40  Sand, gray, fine to medium, very clayey, very silty; unoxidized, saturated

TEST HOLE NUMBER: 241
LOCATION: 118N-65W-090000
LEGAL LOCATION: SE NE SE NE sec. 08, T. 115 N., R. 63 W.

11 - 20  Sand, dark-brown to brown, medium, clayey, silty; oxidized, saturated

TEST HOLE NUMBER: 242
LOCATION: 118N-65W-103000
LEGAL LOCATION: NW NE NW NW sec. 10, T. 115 N., R. 63 W.

19 - 26  Sand

TEST HOLE NUMBER: 243
LOCATION: 118N-65W-110000
LEGAL LOCATION: SE SE SE SE sec. 11, T. 115 N., R. 63 W.

6 - 16  Sand, brown, medium to coarse
22 - 32  Gravel, brown, medium to coarse

[End of document]
TEST HOLE NUMBER: 244
LOCATION: 115N-6SW-15CCCC
LEGAL LOCATION: SW SW SW NW sec. 12, T. 115 N., R. 63 W.
6 - 20 Sand, gray with coal
20 - 32 Sand and gravel, coarse; good

TEST HOLE NUMBER: 245
LOCATION: 115N-6SW-14BBBC
LEGAL LOCATION: SW NW NW NW sec. 14, T. 115 N., R. 63 W.
13 - 42 Sand and gravel; dark brown then gray

TEST HOLE NUMBER: 246
LOCATION: 115N-6SW-15CADD
LEGAL LOCATION: SE SW NE SW sec. 15, T. 115 N., R. 63 W.
12 - 24 Sand

TEST HOLE NUMBER: 247
LOCATION: 115N-6SW-16CCCC
LEGAL LOCATION: SW SW SW SW sec. 16, T. 115 N., R. 63 W.
12 - 15 Sand, light-brown, fine to coarse
15 - 40 Sand, gray, fine to coarse

TEST HOLE NUMBER: 248
LOCATION: 115N-6SW-16CDCD
LEGAL LOCATION: SW SE SW SW sec. 16, T. 115 N., R. 63 W.
20 - 34 Sand, tan-brown, fine, clayey, silty; oxidized (lacustrine?)

TEST HOLE NUMBER: 249
LOCATION: 115N-6SW-20AAAA
LEGAL LOCATION: NE NE NE NE sec. 20, T. 115 N., R. 63 W.
15 - 54 Sand, brown, then gray, medium; some coarse gravel

TEST HOLE NUMBER: 250
LOCATION: 115N-6SW-20CCCC
LEGAL LOCATION: SW SW SW SW sec. 30, T. 115 N., R. 63 W.
20 - 30 Sand, gray-brown; loamy, loose

TEST HOLE NUMBER: 251
LOCATION: 115N-6SW-20CCCC 1
LEGAL LOCATION: SW SW SW SW sec. 20, T. 115 N., R. 63 W.
14 - 20 Sand and silt, fine sand; some clay, slightly permeable, oxidized
20 - 26 Sand, fine to medium; some coarse sand, moderately permeable, oxidized
26 - 30 Sand, medium; some coarse sand, permeable, oxidized

TEST HOLE NUMBER: 252
LOCATION: 115N-6SW-21BBBB
LEGAL LOCATION: NW NW NW NW sec. 21, T. 115 N., R. 63 W.
15 - 55 Sand, medium; with coal fragments

TEST HOLE NUMBER: 253
LOCATION: 115N-6SW-21DDDD
LEGAL LOCATION: SE SE SE sec. 21, T. 115 N., R. 63 W.

9 - 15 Sand, brown; friable, loamy
10 - 35 Sand, brown; loose

TEST HOLE NUMBER: 254
LOCATION: 115N-45W-21DDDD
LEGAL LOCATION: SE SE SE sec. 21, T. 115 N., R. 63 W.

9 - 39 Sand, fine to 15 feet, medium-fine to medium from 18 to 35 feet, well-graded; with some fine sand medium gravel from 35 to 39 feet, large content of fawn carbonaceous material at about 31 to 25 feet, water-laid, permeable.

TEST HOLE NUMBER: 255
LOCATION: 115N-40W-23AAAA
LEGAL LOCATION: NE NE NE sec. 23, T. 115 N., R. 63 W.

13 - 39 Sand, gray, medium to coarse; unoxidized

TEST HOLE NUMBER: 256
LOCATION: 115N-45W-23SSCB
LEGAL LOCATION: NW SW SW NW sec. 23, T. 115 N., R. 63 W.

15 - 26 Sand, orange-tan-brown to brown, silty; some clay; more clay content between 20 and 26 feet; oxidized
26 - 40 Sand, loose, fine to medium, clayey, silty; moist

TEST HOLE NUMBER: 257
LOCATION: 115N-45W-23CCCC
LEGAL LOCATION: SW SW SW SW sec. 23, T. 115 N., R. 63 W.

1 - 15 Sand, fine; water-laid, permeable, wash sample
15 - 30 Sand, fine to coarse, well-graded; with some fine gravel, water-laid, oxidized, permeable, wash sample

TEST HOLE NUMBER: 258
LOCATION: 115N-45W-23CCCC
LEGAL LOCATION: SW SW SW SW sec. 23, T. 115 N., R. 63 W.

0 - 36 Sand, brown, fine to medium; clean, some coal

TEST HOLE NUMBER: 259
LOCATION: 115N-45W-23CCCC
LEGAL LOCATION: SW SW SW SW sec. 23, T. 115 N., R. 63 W.

0 - 6 Sand, brown, fine-grained; some gravel; some silt
22 - 27 Sand, brown, fine to medium; clean, some sand pebbles, some coal

TEST HOLE NUMBER: 260
LOCATION: 115N-45W-24BBCB
LEGAL LOCATION: NW SW NW NW sec. 24, T. 115 N., R. 63 W.

11 - 19 Sand, orange-brown, fine, silty; some clay; oxidized, dry
19 - 25 Sand, brown, fine to medium, clayey, silty, oxidized, saturated at 23 feet
25 - 43 Sand, dark-brown-black, fine to coarse, clayey, silty; saturated, some fine gravel from 35 to 43 feet

37
TEST HOLE NUMBER: 261
LOCATION: 115N-6SW-04CC00
LEGAL LOCATION: SE SE SE sec. 24, T. 115 N., R. 63 W.
10 - 15 Sand, orange-brown to black, fine to medium, slightly clayey, silty
15 - 23 Sand, orange-brown, fine to medium; fairly clean; some clay
23 - 27 Sand, brown-black, fine to coarse, silty; some fine gravel, organic(?), wet
27 - 43 Sand, red-brown, fine to medium, clayey, silty; saturated at 27 feet; some fine gravel from 35 to 43 feet, many shale chips

TEST HOLE NUMBER: 262
LOCATION: 115N-6SW-25BBBB
LEGAL LOCATION: NW NW NW NW sec. 25, T. 116 N., R. 63 W.
14 - 46 Sand, coarse; grading to gravel from 32 to 46 feet

TEST HOLE NUMBER: 263
LOCATION: 115N-6SW-25BBBB 1
LEGAL LOCATION: NW NW NW NW sec. 25, T. 115 N., R. 63 W.
14 - 45 Sand, brown, medium to coarse; turns to a fine gravel after 37 feet, oxidized

TEST HOLE NUMBER: 264
LOCATION: 115N-6SW-25BBBB 2
LEGAL LOCATION: NW NW NW NW sec. 25, T. 115 N., R. 63 W.
16 - 34 Sand, brown; loose, loamy

TEST HOLE NUMBER: 265
LOCATION: 115N-6SW-27DSBB
LEGAL LOCATION: NW NW NW SE sec. 27, T. 115 N., R. 63 W.
15 - 20 Sand, light-ash-gray; friable, loamy
20 - 25 Sand, light-brown; loose
25 - 26 Sand, with black, organic material
26 - 35 Sand, light-gray to grey-brown; loose

TEST HOLE NUMBER: 266
LOCATION: 115N-6SW-29AAA5
LEGAL LOCATION: NW NE NE NE sec. 29, T. 115 N., R. 63 W.
23 - 43 Sand, gray, fine to medium, very clayey, silty; many shale pebbles present; unoxidized, saturated

TEST HOLE NUMBER: 267
LOCATION: 115N-6SW-30AAA
LEGAL LOCATION: NE NE NE NW sec. 30, T. 115 N., R. 63 W.
18 - 55 Sand, yellow-brown; loamy, loose

TEST HOLE NUMBER: 268
LOCATION: 115N-6SW-30BAAA 1
LEGAL LOCATION: NE NE NE NW sec. 30, T. 115 N., R. 63 W.
18 - 25 Sand and silt, fine sand; water-laid sand, slightly permeable, wash sampled
25 - 40 Sand, fine to medium; little silt, permeable, carbonaceous from 35 to 40 feet, wash sampled

TEST HOLE NUMBER: 269
LOCATION: 115N-6SW-31CBBB
LEGAL LOCATION: NW NW NW SW sec. 31, T. 115 N., R. 63 W.
<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Sand, tan-brown, fine, clayey, silty; oxidized, some gravel, more clay content with depth</td>
</tr>
<tr>
<td>14</td>
<td>Sand, dark-brown, fine, clayey, silty; oxidized, some pebbles, saturated at 18 feet, less clay content with depth</td>
</tr>
<tr>
<td>14</td>
<td>Sand, medium; clean</td>
</tr>
<tr>
<td>14</td>
<td>Sand, brown, medium, wet sorted</td>
</tr>
<tr>
<td>14</td>
<td>Sand, gray, medium to very coarse; many quartz grains with 40 to 50 percent shale grains, some coal fragments</td>
</tr>
<tr>
<td>14</td>
<td>Sand, brown, medium, wet sorted</td>
</tr>
<tr>
<td>14</td>
<td>Sand, gray, medium to very coarse; many quartz grains with 40 to 50 percent shale grains, some coal fragments</td>
</tr>
<tr>
<td>14</td>
<td>Sand, black, clayey, silty; organic?</td>
</tr>
<tr>
<td>15</td>
<td>Sand, brown, fine to medium, slightly clayey, slightly silty; oxidized, saturated</td>
</tr>
<tr>
<td>25</td>
<td>Sand, gray-brown, fine to medium, slightly clayey, slightly silty; clean, saturated, coal fragments found at 31 feet</td>
</tr>
<tr>
<td>10</td>
<td>Sand, brown, medium to coarse; oxidized</td>
</tr>
<tr>
<td>25</td>
<td>Sand, gray, medium to coarse; grades to a fine gravel, much coal</td>
</tr>
<tr>
<td>24</td>
<td>Sand, medium; saturated, dirty, large pebbles, very coarse</td>
</tr>
<tr>
<td>25</td>
<td>Sand, medium; dirty, saturated</td>
</tr>
</tbody>
</table>
TEST HOLE NUMBER: 276
LOCATION: 115N-64W-02B14B
LEGAL LOCATION: NW NE NW NW sec. 02, T. 115 N., R. 64 W.
6 - 8 Gravel, red-brown, medium to very coarse, subrounded
8 - 20 Sand, gray, coarse, subrounded
20 - 30 Gravel to cobbles; estimate 2 to 3 inches in diameter

TEST HOLE NUMBER: 279
LOCATION: 115N-64W-02BB1A
LEGAL LOCATION: NW NE NW NW sec. 02, T. 115 N., R. 64 W.
2 - 4 Sand, red-brown, fine, rounded

TEST HOLE NUMBER: 280
LOCATION: 115N-64W-02BB3D
LEGAL LOCATION: SE NW NW NW sec. 02, T. 115 N., R. 64 W.
3 - 9 Gravel, red-brown, medium to coarse, sandy, subangular to subrounded
12 - 14 Gravel stringer, medium, subangular
14 - 26 Sand, gray, medium, rounded
26 - 32 Sand, gray, fine to silty, clayey

TEST HOLE NUMBER: 281
LOCATION: 115N-64W-02B3CA
LEGAL LOCATION: NE SW NW NW sec. 02, T. 115 N., R. 64 W.
14 - 35 Sand, gray, very fine, very silty, saturated

TEST HOLE NUMBER: 282
LOCATION: 115N-64W-02B3CB
LEGAL LOCATION: NW SW NW NW sec. 02, T. 115 N., R. 64 W.
30 - 30 Sand, brown, very fine to fine, saturated

TEST HOLE NUMBER: 283
LOCATION: 115N-64W-02BCBA
LEGAL LOCATION: NE NW SW NW sec. 02, T. 115 N., R. 64 W.
2 - 7 Gravel, medium to coarse, subrounded; clean
7 - 19 Sand, light-gray, medium to coarse, rounded
24 - 30 Sand, gray, fine to medium, rounded

TEST HOLE NUMBER: 284
LOCATION: 115N-64W-02BCCB
LEGAL LOCATION: NW SW SW NW sec. 02, T. 115 N., R. 64 W.
12 - 52 Sand, gray, very fine to fine; saturated

TEST HOLE NUMBER: 285
LOCATION: 115N-64W-02BCCD
LEGAL LOCATION: SE SW SW NW sec. 02, T. 115 N., R. 64 W.
16 - 30 Sand, very fine to fine, silty, pebbly; saturated

TEST HOLE NUMBER: 286
LOCATION: 115N-64W-02BCDB
LEGAL LOCATION: NW SE SW NW sec. 02, T. 115 N., R. 64 W.
TEST HOLE NUMBER: 287
LOCATION: 115N-64W-028CD
LEGAL LOCATION: SW SE SW NW sec. 02, T. 115 N., R. 64 W.
3 - 60 Sand, gray, very fine, silty; saturated

TEST HOLE NUMBER: 288
LOCATION: 115N-64W-028CD
LEGAL LOCATION: SE SE SW NW sec. 02, T. 115 N., R. 64 W.
3 - 8 Sand, brown, medium; saturated
8 - 55 Sand, brown, fine to medium, silty; saturated

TEST HOLE NUMBER: 289
LOCATION: 115N-64W-028BA
LEGAL LOCATION: NE NE NW SW sec. 02, T. 115 N., R. 64 W.
16 - 51 Sand, gray, very fine to fine, silty; saturated

TEST HOLE NUMBER: 290
LOCATION: 115N-64W-028CD
LEGAL LOCATION: SE SW NW SW sec. 02, T. 115 N., R. 64 W.
0 - 8 Gravel, red, medium, silty
8 - 14 Sand, medium-brown, very coarse, gravelly; very dirty
14 - 25 Sand, dark-brown, very coarse; very dirty; saturated

TEST HOLE NUMBER: 291
LOCATION: 115N-64W-03AAB
LEGAL LOCATION: NW NE NE NE sec. 03, T. 115 N., R. 64 W.
7 - 29 Sand, brown, medium, pebbly, rounded; saturated

TEST HOLE NUMBER: 292
LOCATION: 115N-64W-03AABA
LEGAL LOCATION: NE NW NE NE sec. 03, T. 115 N., R. 64 W.
3 - 25 Sand, fine to medium; saturated
25 - 41 Gravel, medium sandy; saturated

TEST HOLE NUMBER: 293
LOCATION: 115N-64W-03AABA
LEGAL LOCATION: NE NW NE NE sec. 03, T. 115 N., R. 64 W.
6 - 10 Sand, red-brown, medium to coarse, subrounded
10 - 21 Gravel, medium, subrounded
21 - 48 Gravel, medium to coarse, subrounded

TEST HOLE NUMBER: 294
LOCATION: 115N-64W-03AABC
LEGAL LOCATION: SW NW NE NE sec. 03, T. 115 N., R. 64 W.
4 - 15 Sand, brown, silty; dry
15 - 49 Sand, brown, medium; saturated

TEST HOLE NUMBER: 295
LOCATION: 115N-64W-03AABD
LEGAL LOCATION: SW NW NE NE sec. 03, T. 115 N., R. 64 W.
LEGAL LOCATION: SE NW NE NE sec. 03, T. 115 N., R. 64 W.
4 - 32 Sano, brown, medium, pebbly; saturated

TEST HOLE NUMBER: 236
LOCATION: 115N-64W-03AAB 1
LEGAL LOCATION: SE NW NE NE sec. 03, T. 115 N., R. 64 W.
2 - 20 Sand, red-brown, coarse, subrounded
22 - 44 Sand, gray, medium to coarse

TEST HOLE NUMBER: 297
LOCATION: 115N-64W-03ABAB
LEGAL LOCATION: NW NE NW NE sec. 03, T. 115 N., R. 64 W.
0 - 12 Gravel, medium subangular to subrounded

TEST HOLE NUMBER: 298
LOCATION: 115N-64W-03ABAB 1
LEGAL LOCATION: NW NE NW NE sec. 03, T. 115 N., R. 64 W.
1 - 14 Sand, reddish-brown, medium, pebbly; dry, oxidized
14 - 85 Sand, brown, medium grading to fine, silty; saturated

TEST HOLE NUMBER: 299
LOCATION: 115N-64W-03ADAAD
LEGAL LOCATION: SE NE SE NE sec. 03, T. 115 N., R. 64 W.
4 - 14 Sand, brown, medium; saturated
14 - 51 Sand, gray, very fine, silty; saturated

TEST HOLE NUMBER: 300
LOCATION: 115N-64W-03AABBA
LEGAL LOCATION: NE NW SE NE sec. 03, T. 115 N., R. 64 W.
22 - 58 Sand, gray, very fine, silty; saturated

TEST HOLE NUMBER: 301
LOCATION: 115N-64W-03AADD
LEGAL LOCATION: SW SE SE NE sec. 03, T. 115 N., R. 64 W.
0 - 3 Sand, brown, very silty and clayey
3 - 8 Gravel, very coarse, clayey
20 - 35 Sand, brown, very fine, silty

TEST HOLE NUMBER: 302
LOCATION: 115N-64W-03BAD
LEGAL LOCATION: SW SW NW SW sec. 03, T. 115 N., R. 64 W.
1 - 5 Gravel, tan-brown, coarse, clayey, silty; oxidized, dry
5 - 14 Sand and gravel, orange-tan-brown, fine to medium sand, fine to medium gravel, silty; some clay; oxidized, dry

TEST HOLE NUMBER: 303
LOCATION: 115N-64W-03CC0C
LEGAL LOCATION: SW SW SW SW sec. 03, T. 115 N., R. 64 W.
0 - 2 Sand, light-brown, fine, silty
2 - 5 Gravel, pea-sized, subangular to rounded
<table>
<thead>
<tr>
<th>Test Hole Number:</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>304</td>
<td>Sand, brownish-red, fine to medium; some pebbles</td>
</tr>
<tr>
<td></td>
<td>Shovel; coarse to very coarse, rounded; intermixed sand and silt</td>
</tr>
<tr>
<td>305</td>
<td>Sand, tan-brown, fine to medium, clayey, silty; some gravel; oxidized, saturated at 32 feet</td>
</tr>
<tr>
<td></td>
<td>Gravel; orange-tan-brown, fine to coarse, very silty, sandy; oxidized</td>
</tr>
<tr>
<td></td>
<td>Sand and gravel; orange-tan-brown, fine to coarse sand, fine to medium gravel, slightly clayey, silty; oxidized</td>
</tr>
<tr>
<td></td>
<td>Sand, orange-tan-brown, fine to medium, slightly clayey; some organics (?)</td>
</tr>
<tr>
<td></td>
<td>Sand, tan-brown to brown, fine, clayey, silty; oxidized, wet, saturated at 25 feet</td>
</tr>
<tr>
<td>306</td>
<td>Sand, brown, fine to medium, subangular; some silt</td>
</tr>
<tr>
<td></td>
<td>Sand, fine to medium, clayey, subrounded; some coal</td>
</tr>
<tr>
<td>307</td>
<td>Sand, medium</td>
</tr>
<tr>
<td></td>
<td>Sand, medium</td>
</tr>
<tr>
<td>308</td>
<td>Sand, dark-brown, fine, subrounded</td>
</tr>
<tr>
<td></td>
<td>Sand, gray, very fine to fine, very; saturated</td>
</tr>
<tr>
<td>309</td>
<td>Sand, brownish-red, fine to medium; some pebbles</td>
</tr>
<tr>
<td></td>
<td>Shovel; coarse to very coarse, rounded; intermixed sand and silt</td>
</tr>
<tr>
<td>310</td>
<td>Sand, tan-brown, fine to medium, clayey, silty; some gravel; oxidized, saturated at 32 feet</td>
</tr>
<tr>
<td></td>
<td>Gravel; orange-tan-brown, fine to coarse, very silty, sandy; oxidized</td>
</tr>
<tr>
<td></td>
<td>Sand and gravel; orange-tan-brown, fine to coarse sand, fine to medium gravel, slightly clayey, silty; oxidized</td>
</tr>
<tr>
<td></td>
<td>Sand, orange-tan-brown, fine to medium, slightly clayey; some organics (?)</td>
</tr>
<tr>
<td></td>
<td>Sand, tan-brown to brown, fine, clayey, silty; oxidized, wet, saturated at 25 feet</td>
</tr>
<tr>
<td>311</td>
<td>Sand, brown, fine to medium, subangular; some silt</td>
</tr>
<tr>
<td></td>
<td>Sand, fine to medium, clayey, subrounded; some coal</td>
</tr>
<tr>
<td>312</td>
<td>Sand, medium</td>
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<tr>
<td></td>
<td>Sand, dark-brown, fine, subrounded</td>
</tr>
<tr>
<td></td>
<td>Sand, gray, very fine to fine, very; saturated</td>
</tr>
<tr>
<td>Test Hole Number</td>
<td>Location</td>
</tr>
<tr>
<td>------------------</td>
<td>----------</td>
</tr>
<tr>
<td>313</td>
<td>11S5-6W-11ABB</td>
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<td>314</td>
<td>11S5-6W-11BBAB</td>
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<td>11S5-6W-11CCCC</td>
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<tr>
<td>316</td>
<td>11S5-6W-11CCDD</td>
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<td>317</td>
<td>11S5-6W-12BBAB</td>
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<tr>
<td>318</td>
<td>11S5-6W-12BBBB</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>319</td>
<td>11S5-6W-12BBBC</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>320</td>
<td>11S5-6W-13CCCC</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TEST HOLE NUMBER: 321
LOCATION: 115N-64W-14C0C9
LEGAL LOCATION: NW SW NW sec. 14, T. 115 N., R. 64 W.
1 - 8 Sand, tan-brown, fine to medium, silty, pebbly; oxidized
8 - 12 Sand, gray-brown; medium, well-sorted, silty, moist
12 - 36 Sand, tan-brown, fine to medium, clayey, silty; oxidized, saturated

TEST HOLE NUMBER: 322
LOCATION: 115N-64W-14CCCS
LEGAL LOCATION: NW SW Sh SW sec. 14, T. 115 N., R. 64 W.
8 - 14 Sand, fine to medium

TEST HOLE NUMBER: 323
LOCATION: 115N-64W-14DADD
LEGAL LOCATION: SE SE NE SE sec. 14, T. 115 N., R. 64 W.
2 - 16 Sand, orange-brown to brown, fine to coarse, clayey, silty, gravelly; oxidized, more clay with depth

TEST HOLE NUMBER: 324
LOCATION: 115N-64W-17AAAA
LEGAL LOCATION: NE NE NE NE sec. 17, T. 115 N., R. 64 W.
0 - 7 Sand, red, silty, very pebbly; oxidized, dry

TEST HOLE NUMBER: 325
LOCATION: 115N-64W-17AAAA I
LEGAL LOCATION: NE NE NE NE sec. 17, T. 115 N., R. 64 W.
0 - 7 Sand, red, silty, pebbly; oxidized, dry

TEST HOLE NUMBER: 326
LOCATION: 115N-64W-17ADDA
LEGAL LOCATION: NE NE NE NE sec. 17, T. 115 N., R. 64 W.
0 - 4 Sand, orange-brown, very silty; some clay, some fine gravel; oxidized, dry

TEST HOLE NUMBER: 327
LOCATION: 115N-64W-17DDDD
LEGAL LOCATION: SE SE SE SE sec. 17, T. 115 N., R. 64 W.
5 - 26 Sand and gravel, brown, fine to medium sand, fine gravel; cobbles at 10 feet, dirty, layer of black alluvial clay from 14 to 22 feet

TEST HOLE NUMBER: 328
LOCATION: 115N-64W-19DDDD
LEGAL LOCATION: SE SE SE SE sec. 19, T. 115 N., R. 64 W.
25 - 35 Sand, fine to medium, silty; carbonate at 29 feet, slightly to moderately oxidized, small amount of silt till at 29 to 30 feet, unoxidized 30 to 35 feet

TEST HOLE NUMBER: 329
LOCATION: 115N-64W-21BBC
LEGAL LOCATION: SW SW NW NW sec. 21, T. 115 N., R. 64 W.
17 - 61 Sand, gray, fine, very silty, grades to medium; clean
<table>
<thead>
<tr>
<th>TEST HOLE NUMBER</th>
<th>LOCATION</th>
<th>LEGAL LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>330</td>
<td>115N-64W-23BB</td>
<td>NW NW NW sec. 22, T. 115 N., R. 64 W.</td>
<td>0 - 12: Sand, reddish-brown, medium, subangular to rounded; clean, dry 12 - 45: Sand, brown, medium, slightly clayey; saturated</td>
</tr>
<tr>
<td>331</td>
<td>115N-64W-23BBB</td>
<td>NW NW NW sec. 23, T. 115 N., R. 64 W.</td>
<td>2 - 14: Sand, brownish-red, medium, subangular to rounded; clean 14 - 22: Sand, medium-brown, medium, silty, clayey 22 - 24: Sand, gray, silty</td>
</tr>
<tr>
<td>332</td>
<td>115N-64W-23BBDD</td>
<td>SE SE SE sec. 23, T. 115 N., R. 64 W.</td>
<td>0 - 10: Sand, fine to medium; with much silt and clay; small pebbles, humic 0 to 1 foot and 5 to 6 feet, water-laid in part (Sh) 12 - 20: Sand, well-graded; grades coarser and cleaner downward, permeable</td>
</tr>
<tr>
<td>333</td>
<td>115N-64W-24DDDC</td>
<td>SW SE SE sec. 24, T. 115 N., R. 64 W.</td>
<td>1 - 2: Sand, orange-brown, fine, silty; oxidized 8 - 13: Sand, orange-brown, fine, pebbly; oxidized 13 - 20: Sand, gray-brown, fine, clayey, silty; moist, more clay content with depth</td>
</tr>
<tr>
<td>334</td>
<td>115N-64W-26CDBC</td>
<td>SW SW SW sec. 25, T. 115 N., R. 64 W.</td>
<td>4 - 6: Sand, brown, fine to medium, slightly clayey, very silty; oxidized 6 - 11: Sand, reddish-orange-brown, fine to medium, slightly clayey, very silty; oxidized</td>
</tr>
<tr>
<td>335</td>
<td>115N-64W-26ABB</td>
<td>NE NW NE sec. 26, T. 115 N., R. 64 W.</td>
<td>25 - 34: Sand, yellow-gray-brown; loose, loamy</td>
</tr>
<tr>
<td>336</td>
<td>115N-64W-26BBB 1</td>
<td>NW NW NW sec. 26, T. 115 N., R. 64 W.</td>
<td>2 - 5: Sand, fine, silty; oxidized, slightly to moderately permeable 5 - 20: Sand, fine, silty; partly oxidized, slightly to moderately oxidized 20 - 25: Sand, fine, silty; unoxidized, slightly to moderately permeable 25 - 30: Sand, well-graded; pebbles, silt, clay-binder, very poor recovery, probably mostly water-laid, not very permeable, unoxidized</td>
</tr>
<tr>
<td>337</td>
<td>115N-64W-26BBB 2</td>
<td>NW NW NW sec. 26, T. 115 N., R. 64 W.</td>
<td>5 - 15: Sand, light-brown, fine; loose</td>
</tr>
</tbody>
</table>
15 - 25 Sand, light-gray, fine; loose

TEST HOLE NUMBER: 338
LOCATION: 115N-64W-27DD 1
LEGAL LOCATION: SE SE sec. 27, T. 115 N., R. 64 W.

19 - 35 Sand, fine to medium; loose

TEST HOLE NUMBER: 339
LOCATION: 115N-64W-27DD 2
LEGAL LOCATION: SE SE sec. 27, T. 115 N., R. 64 W.

12 - 26 Sand, fine; loose

TEST HOLE NUMBER: 340
LOCATION: 115N-64W-26W-2B 2
LEGAL LOCATION: SW NW NW sec. 28, T. 115 N., R. 64 W.

2 - 9 Sand, yellow-brown; with clay

TEST HOLE NUMBER: 341
LOCATION: 115N-64W-26CB
LEGAL LOCATION: NW SW sec. 28, T. 115 N., R. 64 W.

10 - 20 Sand

TEST HOLE NUMBER: 342
LOCATION: 115N-64W-26CCCC
LEGAL LOCATION: SW SW SW SW sec. 28, T. 115 N., R. 64 W.

24 - 35 Sand, coarse; with clay layers

TEST HOLE NUMBER: 343
LOCATION: 115N-64W-30AAAA 1
LEGAL LOCATION: NE NE NE NE sec. 30, T. 115 N., R. 64 W.

20 - 25 Sand and silt, fine sand; water-laid, very poor recovery, probably moderately permeable
25 - 55 Sand, poorly sorted; some silt and clay, slightly to moderately permeable, till from 36 to 37 feet and 49 to 50 feet; silty and clayey from 43 to 44 feet, 47 to 49 feet and 53 to 55 feet; carbonaceous from 33 to 35 feet, 53 to 55 feet, 50 to 51 feet

TEST HOLE NUMBER: 344
LOCATION: 115N-64W-30AAAA 2
LEGAL LOCATION: NE NE NE NE sec. 30, T. 115 N., R. 64 W.

0 - 2 Sand, silty; probably water deposited, oxidized
26 - 44 Sand, poorly sorted; with silt and some clay lenses, moderately permeable, partly oxidized, appears to be till in part

TEST HOLE NUMBER: 345
LOCATION: 115N-64W-30AAAA 3
LEGAL LOCATION: NE NE NE NE sec. 30, T. 115 N., R. 64 W.

0 - 5 Sand and silt; water-laid sand; some clay, humic to 2 feet
27 - 32 Sand, poorly sorted; some silt, probably slightly to moderately permeable

TEST HOLE NUMBER: 346
LOCATION: 115N-64W-30AAAA 4
LEGAL LOCATION: NE NE NE NE sec. 30, T. 115 N., R. 64 W.
TEST HOLE NUMBER: 347
LOCATION: 115N-64W-30AAAA 8
LEGAL LOCATION: NE NE NE NE sec. 30, T. 115 N., R. 64 W.
24 - 35 Sand, very little clay

TEST HOLE NUMBER: 348
LOCATION: 115N-64W-30AAAA 1
LEGAL LOCATION: SE NE NE NE sec. 3; T. 115 N., R. 64 W.
23 - 50 Sand, poorly sorted; some silt, probably slightly to moderately permeable

TEST HOLE NUMBER: 349
LOCATION: 115N-64W-90CCCA
LEGAL LOCATION: NE NE SW SW sec. 30, T. 115 N., R. 64 W.
25 - 44 Sand, medium to fine; some silt and clay, water-laid, very poor recovery, slightly to moderately permeable, few large rocks or 2.5 inches

TEST HOLE NUMBER: 350
LOCATION: 115N-64W-90CCDA
LEGAL LOCATION: NE SE SE SW sec. 30, T. 115 N., R. 64 W.
23 - 29 Sand

TEST HOLE NUMBER: 351
LOCATION: 115N-64W-90CCDA
LEGAL LOCATION: NE NE SW SE sec. 30, T. 115 N., R. 64 W.
2 - 8 Sand

TEST HOLE NUMBER: 352
LOCATION: 115N-64W-91CCCA
LEGAL LOCATION: NE NE SW SW sec. 31, T. 115 N., R. 54 W.
19 - 26 Sand

TEST HOLE NUMBER: 353
LOCATION: 115N-64W-91CCDD
LEGAL LOCATION: SE SE SE SE sec. 31, T. 115 N., R. 64 W.
0 - 6 Sand, brown, fine

TEST HOLE NUMBER: 354
LOCATION: 115N-64W-93CCCC
LEGAL LOCATION: SW SW SW SW sec. 33, T. 115 N., R. 64 W.
0 - 11 Sand, brown, medium; minor amount of very fine sand

TEST HOLE NUMBER: 355
LOCATION: 115N-65W-01CCCD
LEGAL LOCATION: SE SE SW SW sec. 01, T. 115 N., R. 05 W.
8 - 11 Sand, brown, medium, very silty, very clayey; oxidized, moist

TEST HOLE NUMBER: 356
LOCATION: 115N-65W-05AABB

48
5 - 42 Sand, brown, fine to medium; oxidized, grades to a gray unoxidized sand, gravelly som 32 to 42 feet

TEST HOLE NUMBER: 357
LOCATION: 115N-6SW-09ACCC
LEGAL LOCATION: SW SW SW NE NE sec 09, T. 115 N., R. 65 W.

0 - 3 Sand, yellow-brown, fine, very silty; some clay
5 - 8 Sand, orange-brown, medium to coarse, very silty; some fine gravel; oxidized
10 - 13 Sand, dark-brown, fine to medium, very clayey; oxidized, wet

TEST HOLE NUMBER: 358
LOCATION: 115N-6SW-10CCCC
LEGAL LOCATION: SW SW SW SW sec 09, T. 115 N., R. 65 W.

0 - 7 Sand and gravel, brown, coarse
23 - 38 Sand, gray, medium; with gravel

TEST HOLE NUMBER: 359
LOCATION: 115N-6SW-15BBB
LEGAL LOCATION: NW NW NW NW sec 15, T. 115 N., R. 65 W.

7 - 23 Sand, brown, fine-grained, slightly silty; wet at 19 feet
23 - 26 Sand, gray, fine-grained slightly silty; saturated

TEST HOLE NUMBER: 360
LOCATION: 115N-6SW-16CCCD
LEGAL LOCATION: SE SW SW SW sec 16, T. 115 N., R. 65 W.

5 - 10 Sand, yellow-brown, fine, silty; some clay; oxidized, dry, more clay content with depth

TEST HOLE NUMBER: 361
LOCATION: 115N-6SW-16DA00
LEGAL LOCATION: SE SE SE NE sec 16, T. 115 N., R. 65 W.

10 - 15 Sand, orange-brown, very fine-grained, very silty; some clay; oxidized
25 - 34 Sand, tan-brown, fine, silty, clayey; oxidized, saturated; more slt content with depth

TEST HOLE NUMBER: 362
LOCATION: 115N-6SW-18AIDA
LEGAL LOCATION: NE SE NW NE sec 18, T. 115 N., R. 65 W.

0 - 3 Sand, tan, fine, silty
20 - 23 Sand, brown, medium to coarse, very clayey, silty; saturated at 21 feet
27 - 29 Sand, gray-brown, medium to coarse, very clayey, very silty; saturated

TEST HOLE NUMBER: 363
LOCATION: 115N-6SW-18CCCD
LEGAL LOCATION: SW SW SW NE sec 18, T. 115 N., R. 65 W.

0 - 1 Sand, orange-brown, fine to coarse, silty; some fine gravel; oxidized
8 - 25 Sand, gray, coarse, very clayey, silty; some fine gravel; saturated

TEST HOLE NUMBER: 364
LOCATION: 115N-6SW-19BBBC
LEGAL LOCATION: SW NW NW NW sec 19, T. 115 N., R. 65 W.
<table>
<thead>
<tr>
<th>Test Hole Number</th>
<th>Location</th>
<th>Legal Location</th>
<th>Test Hole Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>365</td>
<td>115N-45W-18BBBC 2</td>
<td>NW NW NW sec. 19, T. 115 N., R. 65 W.</td>
<td>Sand, light-brown, fine, clayey, silty, moderately sorted; dry, oxidized</td>
</tr>
<tr>
<td>366</td>
<td>115N-45W-19DDDD 0</td>
<td>SE SE SE sec. 19, T. 115 N., R. 65 W.</td>
<td>Sand and silt, fine to very fine sand; probably slightly permeable, oxidized, water-laid</td>
</tr>
<tr>
<td>367</td>
<td>115N-45W-20CBBC</td>
<td>SW NW SW sec. 20, T. 115 N., R. 65 W.</td>
<td>Sand, orange-brown, fine, silty; some clay; oxidized</td>
</tr>
<tr>
<td>368</td>
<td>115N-45W-20CDDD 1</td>
<td>SE SE sec. 20, T. 115 N., R. 65 W.</td>
<td>Sand, dark-brown, fine, silty; some clay; few pebbles; oxidized</td>
</tr>
<tr>
<td>369</td>
<td>115N-45W-22CCCC 1</td>
<td>SW SW SW sec. 22, T. 115 N., R. 65 W.</td>
<td>Sand and gravel, dark-brown, fine to coarse sand, medium gravel, very clayey, very silty; oxidized, saturated</td>
</tr>
<tr>
<td>370</td>
<td>115N-45W-22DDCC 2</td>
<td>SW SW SW sec. 22, T. 115 N., R. 65 W.</td>
<td>Sand, medium, well-sorted; permeable, oxidized</td>
</tr>
<tr>
<td>371</td>
<td>115N-45W-22DDCC 5</td>
<td>SW SW SW sec. 22, T. 115 N., R. 65 W.</td>
<td>Sand, grey, loamy, slightly compact</td>
</tr>
</tbody>
</table>

50
TEST HOLE NUMBER: 372
LOCATION: 115N-6SW-22CC0C 6
LEGAL LOCATION: SW SW SW SW sec. 22, T. 115 N., R. 65 W.

15 - 18 Sand, yellow-gray-brown, fine to medium; loose
18 - 25 Sand and gravel, coarse

TEST HOLE NUMBER: 373
LOCATION: 115N-6SW-22CC0C 6
LEGAL LOCATION: SW SW SW SW sec. 22, T. 115 N., R. 65 W.

5 - 7 Sand, yellow-brown; loose

TEST HOLE NUMBER: 374
LOCATION: 115N-6SW-22CC10
LEGAL LOCATION: SW SW SW SW sec. 22, T. 115 N., R. 65 W.

4 - 11 Gravel, yellow-brown, sandy; loose
23 - 27 Sand, gray; friable, leamy

TEST HOLE NUMBER: 375
LOCATION: 115N-6SW-22CC11
LEGAL LOCATION: SW NW SW SW sec. 22, T. 115 N., R. 65 W.

5 - 10 Sand and gravel, brown, coarse sand; loose, iron stained
10 - 15 Sand and gravel, dark-yellow-brown; loose
20 - 25 Sand, gray, fine, leamy, slightly compact
25 - 26 Sand and gravel, dark-yellow-brown; loose, loamy, pseudo end depth

TEST HOLE NUMBER: 376
LOCATION: 115N-6SW-22CC12
LEGAL LOCATION: SW SW SW SW sec. 22, T. 115 N., R. 65 W.

3 - 6 Gravel, yellow-brown, silty; loamy, slightly cemented

TEST HOLE NUMBER: 377
LOCATION: 115N-6SW-23BBB3
LEGAL LOCATION: NW NE NW NW sec. 23, T. 115 N., R. 65 W.

3 - 10 Sand, orange-brown, fine to medium, silty, clayey; oxidized; some fine gravel
10 - 20 Sand, dark-brown, fine to medium, clayey, silty; some fine gravel; mostly oxidized, saturated
20 - 28 Sand, gray, fine to medium, very clayey, silty; unoxidized, saturated; some fine gravel

TEST HOLE NUMBER: 378
LOCATION: 115N-6SW-23BCC2
LEGAL LOCATION: SW SW SW NW sec. 23, T. 115 N., R. 65 W.

0 - 4 Sand and gravel, tan-brown, fine sand, fine to coarse gravel, very silty
4 - 5 Sand, tan-brown, medium, slightly silty, slightly clayey; oxidized

TEST HOLE NUMBER: 379
LOCATION: 115N-6SW-03CC0C 1
LEGAL LOCATION: SW SW SW SW sec. 23, T. 115 N., R. 65 W.

3 - 5 Sand, medium to coarse; silt and some clay binder, roughly stratified, not very permeable, oxidized
5 - 15 Sand, medium to coarse; very permeable
TEST HOLE NUMBER: 380
LOCATION: 115N-6SW-24CC
LEGAL LOCATION: S W SW SW sec. 24, T. 115 N., R. 65 W.
10 - 15 Sand, light-brown; loose

TEST HOLE NUMBER: 381
LOCATION: 115N-6SW-24CC
LEGAL LOCATION: S W SW SW sec. 2x, T. 115 N., R. 65 W.
5 - 10 Sand, fine; some silt; moderately permeable, oxidized
10 - 15 Sand, medium, well-sorted; some coarse sand, permeable, oxidized
15 - 16 Sand, medium to fine; some silt, moderately permeable, oxidized

TEST HOLE NUMBER: 382
LOCATION: 115N-6SW-26BB
LEGAL LOCATION: NW NW NW NW sec. 25, T. 115 N., R. 65 W.
0 - 16 Sand and gravel, brown, medium

TEST HOLE NUMBER: 383
LOCATION: 115N-6SW-26BB
LEGAL LOCATION: NW NW NW NW sec. 25, T. 115 N., R. 65 W.
4 - 6 Sand, tan, fine, silty, clayey, poorly sorted; dry, oxidized
6 - 8 Sand, brown, fine, silty, clayey, poorly sorted; dry, oxidized
8 - 13 Gravel, brown, coarse, very clayey, sandy, poorly sorted; moist, oxidized, saturated at 10 feet
13 - 31 Gravel, brown, fine, sandy, poorly sorted; saturated, oxidized

TEST HOLE NUMBER: 384
LOCATION: 115N-6SW-27AAA
LEGAL LOCATION: NW NW NW NW sec. 27, T. 115 N., R. 65 W.
3 - 9 Sand, orange-brown, fine to medium, silty; some fine gravel; oxidized, dry
9 - 15 Sand, gray-tan-brown, fine to medium, clayey, silty; some fine to medium gravel; oxidized, saturated
15 - 22 Sand, gray, medium to coarse, clayey; some fine gravel; unoxidized, saturated
22 - 24 Gravel, very coarse; poor return; could not penetrate past 24 feet; abandoned hole

TEST HOLE NUMBER: 385
LOCATION: 115N-6SW-27ABCD
LEGAL LOCATION: SE SE NW NE sec. 27, T. 115 N., R. 65 W.
2 - 9 Sand

TEST HOLE NUMBER: 386
LOCATION: 115N-6SW-27ABCD
LEGAL LOCATION: SE SE NW NE sec. 27, T. 115 N., R. 65 W.
2 - 9 Sand

TEST HOLE NUMBER: 387
LOCATION: 115N-6SW-27CBB
LEGAL LOCATION: NW NW NW SW sec. 27, T. 115 N., R. 65 W.
1 - 14 Sand and gravel; permeable, water-laid
14 - 15 Sand, fine; some silt, water-laid, permeable
15 - 20 Sand and gravel; no core recovery
TEST HOLE NUMBER: 308
LOCATION: 11SW-2SW-2
LEGAL LOCATION: SW NW NW SW sec. 27, T. 115 N., R. 65 W.
0 - 6 Sand, poorly sorted; some silt, permeable, humified 0 to 1 feet
8 - 25 Sand, fine to medium; silty, permeable
25 - 30 Sand, fine; some silt, permeable

TEST HOLE NUMBER: 309
LOCATION: 11SW-2SW-2
LEGAL LOCATION: NE NE NE NE sec. 28, T. 115 N., R. 65 W.
0 - 10 Sand, silty; humic 0 to 2.5 feet, concentration of carbonates at 4 feet, oxidized

TEST HOLE NUMBER: 310
LOCATION: 11SW-2SW-2
LEGAL LOCATION: NE NE NE NE sec. 28, T. 115 N., R. 65 W.
0 - 10 Sand, silty; humic to 4 feet, some clay, slightly permeable, oxidized
25 - 33 Sand, silty; water-laid, slightly permeable, unoxidized, poor recovery

TEST HOLE NUMBER: 311
LOCATION: 11SW-2SW-2
LEGAL LOCATION: NE NE NE NE sec. 28, T. 115 N., R. 65 W.
5 - 10 Sand, fine to medium; water-laid, moderately permeable, oxidized
10 - 16 Sand, coarse, silty 15 to 16 feet; small gravel, wash sample, permeable
21 - 24 Sand, fine to medium; some silt and clay, water-laid, slightly permeable, unoxidized

TEST HOLE NUMBER: 312
LOCATION: 11SW-2SW-2
LEGAL LOCATION: NE NE NE NE sec. 28, T. 115 N., R. 65 W.
5 - 8 Sand, poorly sorted; small pebbles, some silt, probably water-laid, slightly to moderately permeable, oxidized

TEST HOLE NUMBER: 313
LOCATION: 11SW-2SW-2
LEGAL LOCATION: NE NE NE NE sec. 28, T. 115 N., R. 65 W.
2 - 11 Sand, poorly sorted; small pebbles, probably water-laid, moderately permeable, oxidized
27 - 32 Sand, poorly sorted; some silt and clay, wash sample, slightly permeable

TEST HOLE NUMBER: 314
LOCATION: 11SW-2SW-2
LEGAL LOCATION: NE NE NE NE sec. 28, T. 115 N., R. 65 W.
11 - 15 Sand, very fine to fine; some silt, oxidized

TEST HOLE NUMBER: 315
LOCATION: 11SW-2SW-2
LEGAL LOCATION: NE NE NE NE sec. 28, T. 115 N., R. 65 W.
15 - 16 Sand, gray

TEST HOLE NUMBER: 316
LOCATION: 11SW-2SW-2
LEGAL LOCATION: NE NE NE NE sec. 28, T. 115 N., R. 65 W.

53
13 - 20 Sand, silty; some clay, laminated, probably slightly permeable, oxidized

TEST HOLE NUMBER: 397
LOCATION: 115N-6SW-28AAA26
LEGAL LOCATION: NE NE NE NE sec. 28, T. 115 N., R. 65 W.

15 - 22 Sand, light-brown; loose
22 - 25 Sand and gravel, light-gray-brown; loose

TEST HOLE NUMBER: 398
LOCATION: 115N-6SW-28ABCD
LEGAL LOCATION: NW NE NW NE sec. 28, T. 115 N., R. 65 W.

2 - 5 Sand, fine to coarse, silty, oxidized, may be water-laid, moderately permeable
15 - 19 Sand, very fine, very sticky, oxidized, water-laid, silt bed at 18 to 18.5 feet

TEST HOLE NUMBER: 399
LOCATION: 115N-6SW-28BCCC
LEGAL LOCATION: SW SW SW NW sec. 28, T. 115 N., R. 65 W.

2 - 24 Gravel; dry

TEST HOLE NUMBER: 400
LOCATION: 115N-6SW-29AAAA
LEGAL LOCATION: NE NE NE NE sec. 29, T. 115 N., R. 65 W.

0 - 14 Sand and gravel, brown, coarse

TEST HOLE NUMBER: 401
LOCATION: 115N-6SW-29AAAA
LEGAL LOCATION: NE NE NE NE sec. 29, T. 115 N., R. 65 W.

1 - 12 Sand, light-brown, medium, very clayey, moderately sorted; moist, oxidized, becomes very silty at 13 feet

TEST HOLE NUMBER: 402
LOCATION: 115N-6SW-29DDAD
LEGAL LOCATION: SE NE SE SE sec. 29, T. 115 N., R. 65 W.

1 - 6 Gravel, tan-brown, fine to very coarse, silt, oxidized, dry
6 - 8 Sand, orange-tan-brown, fine to coarse, very silty, oxidized
8 - 12 Gravel and sand, orange-tan-brown, fine to medium gravel, fine to coarse sand, silty, oxidized, dry

TEST HOLE NUMBER: 403
LOCATION: 115N-6SW-33CBBB
LEGAL LOCATION: NW NW NW SW sec. 33, T. 115 N., R. 65 W.

1 - 10 Sand, dark-orange-brown, fine to medium, silty; some gravel; oxidized
10 - 12 Sand, orange-tan-brown, fine to medium, clayey, silty, oxidized, saturated

TEST HOLE NUMBER: 404
LOCATION: 115N-6SW-33DDAA
LEGAL LOCATION: SE SE SE SE sec. 33, T. 115 N., R. 65 W.

0 - 4 Sand, tan-brown, fine
4 - 7 Sand and gravel, brown, fine sand, fine gravel; oxidized
<table>
<thead>
<tr>
<th>TEST HOLE NUMBER</th>
<th>LOCATION</th>
<th>LEGAL LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>405</td>
<td>115N-45W-35ABAB</td>
<td>NW NE NW NE sec. 35, T. 115 N., R. 65 W.</td>
<td>22 - 36 Sand, fine; with some coal layers</td>
</tr>
<tr>
<td>406</td>
<td>115N-45W-35CBBB</td>
<td>NW NW NW SW sec. 35, T. 115 N., R. 65 W.</td>
<td>2 - 6 Sand and gravel</td>
</tr>
<tr>
<td>407</td>
<td>115N-45W-35CBBB</td>
<td>NW NW NW SW sec. 35, T. 115 N., R. 65 W.</td>
<td>2 - 6 Sand and gravel</td>
</tr>
</tbody>
</table>
| 408              | 115N-45W-35CBBC | NW NW NW SW sec. 36, T. 115 N., R. 65 W. | 1 - 3 Sand and gravel, tan-brown, fine sand, fine to medium gravel, very silty; some clay; oxidized  
3 - 7 Sand and gravel, tan-brown, fine sand, medium to coarse gravel, very silty, very clayey; sand decreases in grain size with depth, higher clay content with depth |
| 410              | 116N-45W-20AABB | NW NW NE NE sec. 20, T. 116 N., R. 60 W. | 7 - 19 Sand, brown, fine to medium, very clayey; silty; oxidized, moist |
| 411              | 116N-45W-26AAAA | NE NE NE NE sec. 26, T. 116 N., R. 60 W. | 15 - 24 Sand, light-brown, fine-grained, clayey, silty; wet  
24 - 34 Sand, brown, medium to coarse, very clayey, silty, gravelly; saturated, hard layer at 35 feet, becoming coarse-grained with depth |
| 412              | 116N-45W-25CDDC | SW SE SW SW sec. 35, T. 116 N., R. 60 W. | 19 - 22 Gravel, brown, fine to medium, silty, sandy  
22 - 24 Sand, brown, fine to medium, clayey, very silty, pebbly, saturated  
24 - 26 Sand, olive-green, fine to medium, clayey, very silty, pebbly |
| 413              | 116N-45W-25BBBD | NW NW NW NW sec. 04, T. 116 N., R. 61 W. | 14 - 92 Sand and gravel, medium to coarse; with coal |
TEST HOLE NUMBER: 414
LOCATION: T11N-R61W-073BBA
LEGAL LOCATION: NE NW NW sec. 07, T. 116 N., R. 61 W.
0 - 4 Sand, orange-brown, fine to medium, slightly silty, gravelly
4 - 9 Sand, brown, medium to coarse, slightly clayey, very silty, gravelly; oxidized
9 - 14 Sand, gray-brown, fine-grained, slightly clayey, very silty, gravelly; partly oxidized, moist

TEST HOLE NUMBER: 415
LOCATION: T11N-R61W-08CDDAA
LEGAL LOCATION: NE NE SE SE sec. 06, T. 116 N., R. 61 W.
13 - 22 Sand and gravel, medium gravel
22 - 77 Sand, fine to medium

TEST HOLE NUMBER: 416
LOCATION: T11N-R61W-09DCCD 1
LEGAL LOCATION: SE SE SE SE sec. 08, T. 116 N., R. 61 W.
20 - 24 Sand, medium-grained, silty; water acid
24 - 26 Sand, very silty, clayey, poorly sorted
26 - 29 Sand, medium to fine

TEST HOLE NUMBER: 417
LOCATION: T11N-R61W-09BCCB
LEGAL LOCATION: NW SW SW NW sec. 09, T. 116 N., R. 61 W.
9 - 27 Sand, dark-red-brown, fine to coarse, silty, gravelly; some shale fragments, clay stringers between 15 and 19 feet; oxidized, moist
27 - 32 Sand, olive-brown, coarse, clayey; some shale pebbles, oxidized, saturated

TEST HOLE NUMBER: 418
LOCATION: T11N-R61W-10AAC
LEGAL LOCATION: SW SW NE NE sec. 10, T. 116 N., R. 61 W.
14 - 40 Sand; dry to 21 feet

TEST HOLE NUMBER: 419
LOCATION: T11N-R61W-16AACC
LEGAL LOCATION: SW SW NE NE sec. 16, T. 116 N., R. 61 W.
18 - 71 Sand and gravel

TEST HOLE NUMBER: 420
LOCATION: T11N-R61W-16DCDCD
LEGAL LOCATION: SE SE SW SE sec. 16, T. 116 N., R. 61 W.
14 - 21 Sand and gravel, dark-brown, coarse sand, fine to medium gravel, rounded; some clay
21 - 25 Sand and gravel, black, coarse sand, fine gravel, rounded; some clay, some silt, wet
25 - 36 Sand, dark-brown, coarse, pebbly, rounded; some clay, saturated at 31 feet, many coal fragments

TEST HOLE NUMBER: 421
LOCATION: T11N-R61W-17CBCC
LEGAL LOCATION: SW SW NW SW sec. 17, T. 116 N., R. 61 W.
22 - 28 Gravel
TEST HOLE NUMBER: 422
LOCATION: 11N-61W-18ADAD
LEGAL LOCATION: SE NE SE NE sec. 18, T. 116 N., R. 61 W.

7 - 56 Sand, red-orange-brown, fine to coarse, slightly silty; some clay, oxidized

TEST HOLE NUMBER: 423
LOCATION: 11N-61W-19AADD
LEGAL LOCATION: SE SE NE NE sec. 19, T. 116 N., R. 61 W.

14 - 23 Sand, yellow
23 - 71 Sand and gravel and light

TEST HOLE NUMBER: 424
LOCATION: 11N-61W-16DBB
LEGAL LOCATION: NW NW SE SE sec. 19, T. 116 N., R. 61 W.

16 - 17 Sand
19 - 24 Sand
25 - 50 Sand, wth lignite

TEST HOLE NUMBER: 425
LOCATION: 11N-61W-20DDD
LEGAL LOCATION: SE SE SE SE sec. 20, T. 116 N., R. 61 W.

8 - 62 Sand and gravel, medium to coarse; abundant coal

TEST HOLE NUMBER: 426
LOCATION: 11N-61W-21CDCC 1
LEGAL LOCATION: SW SW SE SW sec. 21, T. 116 N., R. 61 W.

6 - 17 Sand
17 - 18 Sand, saturated (quicksand)

TEST HOLE NUMBER: 427
LOCATION: 11N-61W-32AAA
LEGAL LOCATION: NE NE NE NE sec. 32, T. 116 N., R. 61 W.

24 - 25 Sand, olive-gray, fine, clayey, silty; unoxidized, saturated; this interval is an approximate depth
25 - 38 Sand, red-brown, fine to medium, silty, pebbly; oxidized, saturated; this interval is an approximate depth; total drill hole depth is 38 feet

TEST HOLE NUMBER: 428
LOCATION: 11N-61W-32BCCB
LEGAL LOCATION: NW NW NW sec. 32, T. 116 N., R. 61 W.

3 - 6 Sand and gravel, orange-brown, fine to coarse sand, fine to medium gravel, very clayey, silty, oxidized, moist
21 - 40 Sand, olive-gray, very fine to fine, slightly clayey, silty, clay layer at 26 feet, saturated at 21 feet

TEST HOLE NUMBER: 429
LOCATION: 11N-61W-33AABB 1
LEGAL LOCATION: NW NW NW NW sec. 33, T. 115 N., R. 61 W.

6 - 18 Sand
18 - 26 Sand, saturated

TEST HOLE NUMBER: 430
LOCATION: 11N-61W-33CCCC

57
TEST HOLE NUMBER: 431
LOCATION: 116N-62W-08AD
LEGAL LOCATION: SE NE sec. 08, T. 116 N., R. 62 W.
21 - 11 Sand, yellow-tan-brown, fine to very coarse, clayey, silty; oxidized, saturated

TEST HOLE NUMBER: 432
LOCATION: 116N-62W-09CC
LEGAL LOCATION: SW SW SW NW sec. 09, T. 116 N., R. 62 W.
25 - 35 Sand and gravel

TEST HOLE NUMBER: 433
LOCATION: 116N-62W-10ABBB
LEGAL LOCATION: NW NW NW NE sec. 10, T. 116 N., R. 62 W.
22 - 30 Sand and gravel; rocks at 30 feet

TEST HOLE NUMBER: 434
LOCATION: 116N-62W-11C3BA
LEGAL LOCATION: NE NE SW SW sec. 11, T. 116 N., R. 62 W.
24 - 26 Gravel

TEST HOLE NUMBER: 435
LOCATION: 116N-62W-12BB
LEGAL LOCATION: NW NW NW NW sec. 11, T. 116 N., R. 62 W.
6 - 9 Sand and gravel

TEST HOLE NUMBER: 436
LOCATION: 116N-62W-13BAAA
LEGAL LOCATION: NE NE NE NW sec. 13, T. 116 N., R. 62 W.
10 - 13 Sand, yellow, coarse; dirty
13 - 94 Sand, medium; clean

TEST HOLE NUMBER: 437
LOCATION: 116N-62W-12CCAA
LEGAL LOCATION: NE NE NW NE sec. 12, T. 116 N., R. 62 W.
6 - 51 Sand and gravel; coarse

TEST HOLE NUMBER: 438
LOCATION: 116N-62W-14B3BB
LEGAL LOCATION: NW NW NW NW sec. 14, T. 116 N., R. 62 W.
18 - 57 Sand and gravel

TEST HOLE NUMBER: 439
LOCATION: 116N-62W-15CCCC
LEGAL LOCATION: SW SW SW SW sec. 15, T. 116 N., R. 62 W.
9 - 21 Sand, tan-brown, medium to coarse, clayey, gravelly, oxidized, wk1; less clay content with depth
21 - 30 Sand, brown, fine to medium, slightly clayey, silty, oxidized, wet, few pebbles

58
TEST HOLE NUMBER: 440
LOCATION: 116N-62W-30-03CC
LEGAL LOCATION: SW SE SE SW sec. 17, T. 116 N., R. 62 W.
3 - 40 Sand and gravel; dark-brown, coarse to very coarse sand, very fine to medium gravel; much shale fragments.

TEST HOLE NUMBER: 441
LOCATION: 116N-62W-1900CC
LEGAL LOCATION: SW SW SE SE sec. 19, T. 116 N., R. 62 W.
18 - 35 Sand; fine

TEST HOLE NUMBER: 442
LOCATION: 116N-62W-42BBBB
LEGAL LOCATION: NW NW NW NW sec. 22, T. 116 N., R. 62 W.
19 - 30 Sand, fine

TEST HOLE NUMBER: 443
LOCATION: 116N-62W-22BCCB
LEGAL LOCATION: NW NW SW NW sec. 22, T. 116 N., R. 62 W.
17 - 41 Sand, fine

TEST HOLE NUMBER: 444
LOCATION: 116N-62W-43BBCC
LEGAL LOCATION: SW SW SW NW sec. 22, T. 116 N., R. 62 W.
16 - 53 Sand and gravel

TEST HOLE NUMBER: 445
LOCATION: 116N-62W-23AAA1
LEGAL LOCATION: NW NE NE NE sec. 2a, T. 116 N., R. 62 W.
20 - 27 Sand, gray, coarse; some fine gravel, unoxidized

TEST HOLE NUMBER: 446
LOCATION: 116N-62W-23BBB
LEGAL LOCATION: NW NW NW NW sec. 23, T. 116 N., R. 62 W.
7 - 13 Sand and gravel, medium to coarse

TEST HOLE NUMBER: 447
LOCATION: 116N-62W-25AAA
LEGAL LOCATION: NE NE NE NE sec. 2b, T. 116 N., R. 62 W.
15 - 30 Sand, medium to coarse; with coal

TEST HOLE NUMBER: 448
LOCATION: 116N-62W-25BBB2
LEGAL LOCATION: NW NW NW NW sec. 25, T. 116 N., R. 62 W.
20 - 27 Sand, fine to medium, silty, well-sorted
27 - 31 Sand, silty, poorly sorted; contains small pebbles

TEST HOLE NUMBER: 449
LOCATION: 116N-62W-250A0

59
<table>
<thead>
<tr>
<th>TEST HOLE NUMBER</th>
<th>LOCATION</th>
<th>LEGAL LOCATION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>450</td>
<td>114N-62W-259AAA</td>
<td>NE NE SE sec. 25, T. 116 N., R. 62 W.</td>
<td>Sand, brownish-gray, silty, poorly sorted; calcareous (glacial outwash)</td>
</tr>
<tr>
<td>451</td>
<td>114N-62W-26ABBA</td>
<td>NE NE SE sec. 25, T. 116 N., R. 62 W.</td>
<td>Sand, brown, medium to coarse, slightly clayey, gravelly; moist</td>
</tr>
<tr>
<td>452</td>
<td>114N-62W-29ABBA</td>
<td>NW NW NW NE sec. 26, T. 116 N., R. 62 W.</td>
<td>Sand, fine, very, silty, clayey, and pebbly from 16 to 17 feet</td>
</tr>
<tr>
<td>453</td>
<td>114N-62W-29ABBA</td>
<td>NE NW NW NE sec. 29, T. 116 N., R. 62 W.</td>
<td>Sand, fine, very silty, clayey, and pebbly from 16 to 17 feet; water-laid</td>
</tr>
<tr>
<td>454</td>
<td>114N-62W-29ABBA</td>
<td>NE NW NW NE sec. 29, T. 116 N., R. 62 W.</td>
<td>Sand, fine, water-laid, with much silt and some clay, some pebbles at 16 to 17 feet, oxidized, slightly permeable</td>
</tr>
<tr>
<td>455</td>
<td>114N-62W-30BBBA</td>
<td>NW NW NW NW sec. 30, T. 116 N., R. 62 W.</td>
<td>Sand, fine, with silt</td>
</tr>
<tr>
<td>456</td>
<td>114N-62W-30BBBA</td>
<td>NW NW NW NW sec. 30, T. 116 N., R. 62 W.</td>
<td>Sand and silt, fine sand</td>
</tr>
<tr>
<td>457</td>
<td>114N-62W-31AAAB</td>
<td>NW NE NE NE sec. 31, T. 116 N., R. 62 W.</td>
<td>Sand, tan-brown, fine, silty</td>
</tr>
<tr>
<td>458</td>
<td>114N-62W-31BBBA</td>
<td>NE NW NW NW sec. 31, T. 116 N., R. 62 W.</td>
<td>Gravel, medium; poor return</td>
</tr>
</tbody>
</table>
17 - 40 Sand, gray, fine to medium, very clayey, silty, unoxidized, saturated

TEST HOLE NUMBER: 459
LOCATION: 116N-62W-33CCC
LEGAL LOCATION: SW SW SW SW sec. 33, T. 116 N., R. 02 W.

3 - 14 Sand, orange-brown, fine-grained, slightly clayey, very silty; hard at 12 feet

TEST HOLE NUMBER: 460
LOCATION: 116N-62W-34BBCC
LEGAL LOCATION: SW SW NW NW sec. 34, T. 116 N., R. 02 W.

6 - 23 Sand, dark-brown, medium, clayey, silty; some pebbles, moist
23 - 38 Sand, red-brown, medium, clayey, silty; some pebbles

TEST HOLE NUMBER: 461
LOCATION: 116N-62W-34CBBB
LEGAL LOCATION: NW NW NW NW sec. 34, T. 116 N., R. 02 W.

14 - 24 Sand, grey, fine to medium; win gray sandy clay layers, grades to a fine gravel with much shale

TEST HOLE NUMBER: 462
LOCATION: 116N-62W-02BAB A
LEGAL LOCATION: NE NW NE NW sec. 02, T. 116 N., R. 03 W.

17 - 32 Sand, coarse; a few small pebbles, permeable, oxidized, waster-laid, wash sample

TEST HOLE NUMBER: 463
LOCATION: 116N-62W-02BAB A 1
LEGAL LOCATION: NE NW NE NW sec. 02, T. 116 N., R. 03 W.

17 - 32 Sand, coarse; with a few small pebbles

TEST HOLE NUMBER: 464
LOCATION: 116N-62W-02BAB A 2
LEGAL LOCATION: NE NW NE NW sec. 02, T. 116 N., R. 03 W.

14 - 15 Sand
15 - 67 Sand, medium to coarse

TEST HOLE NUMBER: 465
LOCATION: 116N-62W-02BBAB
LEGAL LOCATION: NW NE NW NW sec. 02, T. 116 N., R. 03 W.

25 - 20 Sand, fine to medium; with silty gravel (017)

TEST HOLE NUMBER: 466
LOCATION: 116N-62W-02BBAB 2
LEGAL LOCATION: NW NE NW NW sec. 02, T. 116 N., R. 03 W.

25 - 20 Sand and gravel, fine to medium sand, some silt, permeable, oxidized (017)

TEST HOLE NUMBER: 467
LOCATION: 116N-62W-02CCCC 2
LEGAL LOCATION: SW SW SW SE sec. 03, T. 116 N., R. 03 W.

21 - 26 Sand, light-brown; moderately compact, loamy
26 - 28 Sand, reddish-brown; moderately compact, loamy
TEST HOLE NUMBER: 468
LOCATION: 116N-4SW-13ABBB 1
LEGAL LOCATION: NW NW NW NE sec. 13, T. 116 N., R. 63 W.
9 - 12 Sand, medium; clay, yellowish-brown

TEST HOLE NUMBER: 469
LOCATION: 116N-4SW-13ABBB 2
LEGAL LOCATION: NW NW NW NE sec. 13, T. 116 N., R. 63 W.
9 - 14 Sand, medium

TEST HOLE NUMBER: 470
LOCATION: 116N-4SW-13ABBB 3
LEGAL LOCATION: NW NW NW NE sec. 13, T. 116 N., R. 63 W.
9 - 11 Sand, medium
11 - 14 Sand, medium; some clay

TEST HOLE NUMBER: 471
LOCATION: 116N-4SW-13BCBD 1
LEGAL LOCATION: SE NW SW NW sec. 13, T. 116 N., R. 63 W.
15 - 18 Sand, medium; silt
16 - 21 Sand, medium; clay, gray
27 - 28 Sand, medium; clay, pebbly

TEST HOLE NUMBER: 472
LOCATION: 116N-4SW-13BCBD 2
LEGAL LOCATION: SE NW SW NW sec. 13, T. 116 N., R. 63 W.
10 - 21 Sand, yellowish-brown; silt

TEST HOLE NUMBER: 473
LOCATION: 116N-4SW-13BCBD 3
LEGAL LOCATION: SE NW SW NW sec. 13, T. 116 N., R. 63 W.
26 - 29 Sand, clay, gray to orange, wet

TEST HOLE NUMBER: 474
LOCATION: 116N-4SW-16BBBB
LEGAL LOCATION: NW NW NW NW sec. 15, T. 116 N., R. 63 W.
7 - 70 Sand, yellow-brown, fine, very silty, very clayey, pebbly; oxidized, saturated

TEST HOLE NUMBER: 475
LOCATION: 116N-4SW-15BCDC
LEGAL LOCATION: SW SE SW NW sec. 15, T. 116 N., R. 63 W.
22 - 25 Sand

TEST HOLE NUMBER: 476
LOCATION: 116N-4SW-16ADDA
LEGAL LOCATION: NE SE NE NE sec. 18, T. 116 N., R. 63 W.
6 - 10 Sand, brown, fine to medium, clayey, siltly, well-sorted; oxidized, saturated to 9 feet; more clay content with depth
TEST HOLE NUMBER: 477
LOCATION: 116N-6SW-16BASA
LEGAL LOCATION: NE NW NE NW sec. 19, T. 116 N., R. 63 W.
17 - 50 Sand, brown, fine to medium clayey, silty, oxidized, saturated, more clay with depth

TEST HOLE NUMBER: 478
LOCATION: 116N-6SW-16BBDD
LEGAL LOCATION: SE SE NW NW sec. 19, T. 116 N., R. 63 W.
21 - 35 Sand, medium

TEST HOLE NUMBER: 479
LOCATION: 116N-6SW-16BCAA
LEGAL LOCATION: NE NE SW NW sec. 19, T. 116 N., R. 63 W.
22 - 37 Sand and gravel

TEST HOLE NUMBER: 480
LOCATION: 116N-6SW-16BCDD
LEGAL LOCATION: SE SE SW NW sec. 19, T. 116 N., R. 63 W.
25 - 33 Sand and gravel

TEST HOLE NUMBER: 481
LOCATION: 116N-6SW-16BDAA
LEGAL LOCATION: NE NE SE NW sec. 19, T. 116 N., R. 63 W.
19 - 33 Sand and gravel

TEST HOLE NUMBER: 482
LOCATION: 116N-6SW-16BDAB
LEGAL LOCATION: NW NE SE NW sec. 19, T. 116 N., R. 63 W.
25 - 35 Sand and gravel

TEST HOLE NUMBER: 483
LOCATION: 116N-6SW-16BDAA
LEGAL LOCATION: NE NW SE NW sec. 19, T. 116 N., R. 63 W.
22 - 42 Sand and gravel

TEST HOLE NUMBER: 484
LOCATION: 116N-6SW-16BDBB 1
LEGAL LOCATION: NW NW SE NW sec. 19, T. 116 N., R. 63 W.
26 - 33 Sand and gravel

TEST HOLE NUMBER: 485
LOCATION: 116N-6SW-16BDBB 2
LEGAL LOCATION: NW NW SE NW sec. 19, T. 116 N., R. 63 W.
22 - 35 Sand

TEST HOLE NUMBER: 486
LOCATION: 116N-6SW-16BDCB
LEGAL LOCATION: NW SW SE NW sec. 19, T. 116 N., R. 63 W.
22 - 42 Sand and gravel and lignite
<table>
<thead>
<tr>
<th>TEST HOLE NUMBER</th>
<th>LOCATION</th>
<th>LEGAL LOCATION</th>
<th>20' - 40'</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>487</td>
<td>116N-8SW-19BCCC</td>
<td>SW SW SE NW sec. 19, T. 116 N., R. 63 W.</td>
<td>42</td>
<td>Sand and gravel and lignite</td>
</tr>
<tr>
<td>488</td>
<td>116N-8SW-19BDO</td>
<td>SE SW SE NW sec. 19, T. 116 N., R. 63 W.</td>
<td>44</td>
<td>Sand and gravel</td>
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<tr>
<td>489</td>
<td>116N-8SW-19BDBC</td>
<td>SW NW NW SW sec. 19, T. 116 N., R. 63 W.</td>
<td>17, 25</td>
<td>Sand, tan-brown, very fine to medium, clayey, silty; oxidized, saturated</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td>Sand, gray, medium, clayey, silty, pebbly; unoxidized</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>25, 30</td>
<td>Sand, gray, medium, clayey, silty, well-sorted; unoxidized</td>
</tr>
<tr>
<td>490</td>
<td>116N-8SW-19AAA</td>
<td>NE NE NE NE NE sec. 23, T. 116 N., R. 63 W.</td>
<td>5</td>
<td>Sand, brown, fine to medium</td>
</tr>
<tr>
<td>491</td>
<td>116N-8SW-24BBBA</td>
<td>NE NW NW NW sec. 24, T. 116 N., R. 63 W.</td>
<td>20</td>
<td>Gravel, gray, fine to medium, clayey, silty, sandy</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>25, 30</td>
<td>Sand, gray, fine, very silty, clayey; saturated</td>
</tr>
<tr>
<td>492</td>
<td>116N-8SW-24BBBB</td>
<td>NW NW NW NW SW sec. 24, T. 116 N., R. 63 W.</td>
<td>6</td>
<td>Sand, orange-tan-brown, fine to coarse, very silty, gravelly; oxidized</td>
</tr>
<tr>
<td>493</td>
<td>116N-8SW-25BBBB</td>
<td>NW NW NW NW sec. 25, T. 116 N., R. 63 W.</td>
<td>27</td>
<td>Sand, light-brown, loose</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>34</td>
<td>Sand and gravel, brown, loose</td>
</tr>
<tr>
<td>494</td>
<td>116N-8SW-25BBBB</td>
<td>NW NW NW NW sec. 25, T. 116 N., R. 63 W.</td>
<td>27</td>
<td>Sand, fine to medium, silty, well sorted</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>31</td>
<td>Sand, silty, poorly sorted; contains small pebbles</td>
</tr>
<tr>
<td>495</td>
<td>116N-8SW-25BBBB</td>
<td>NW NW NW NW sec. 25, T. 116 N., R. 63 W.</td>
<td>27</td>
<td>Sand, fine to medium-grained, silty, well-sorted</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>31</td>
<td>Sand, silty, poorly sorted, contains small pebbles</td>
</tr>
</tbody>
</table>
TEST HOLE NUMBER: 496
LOCATION: 116N-6SW-268888 1
LEGAL LOCATION: NW NW NW sec. 26, T. 116 N., R. 63 W.
5 - 10  Sand, fine to medium, silty; some coarse sand
15 - 10  Gravel, fine to medium, silty, clayey

TEST HOLE NUMBER: 497
LOCATION: 116N-6SW-26888B 2
LEGAL LOCATION: NW NW NW sec. 26, T. 116 N., R. 63 W.
5 - 10  Sand, fine to medium, some coarse, silty
15 - 13  Gravel, small to medium, silty and clayey

TEST HOLE NUMBER: 498
LOCATION: 116N-6SW-27AADA
LEGAL LOCATION: NE SE NE NE sec. 27, T. 116 N., R. 63 W.
24 - 25  Sand, gray, fine
28 - 29  Sand, gray, fine

TEST HOLE NUMBER: 499
LOCATION: 116N-6SW-25AAAA
LEGAL LOCATION: NW NE NE NE sec. 28, T. 116 N., R. 63 W.
20 - 25  Sand, fine to medium; contains much charcoal(?), 6-inch till lens at 24.5 feet
25 - 30  Gravel, fine to medium; with fine to medium sand

TEST HOLE NUMBER: 500
LOCATION: 116N-6SW-25AAAA 1
LEGAL LOCATION: NW NE NE sec. 28, T. 116 N., R. 63 W.
21 - 24  Sand, fine to medium; with much charcoal
25 - 35  Sand, fine to coarse; some silt, permeable, oxidized

TEST HOLE NUMBER: 501
LOCATION: 116N-6SW-25AAAA 2
LEGAL LOCATION: NE NE NE sec. 29, T. 116 N., R. 63 W.
23 - 26  Sand and gravel, silty, clayey, poorly sorted (tilt)

TEST HOLE NUMBER: 502
LOCATION: 116N-6SW-25AAAA 3
LEGAL LOCATION: NE NE NE sec. 29, T. 116 N., R. 63 W.
23 - 28  Sand and gravel, silty and clayey, poorly sorted (tilt)

TEST HOLE NUMBER: 503
LOCATION: 116N-6SW-25BBBB
LEGAL LOCATION: SW SW sec. 31, T. 116 N., R. 63 W.
0 - 5  Sand, brown, fine to medium, silty, pebbly; some clay; oxidized
5 - 19  Sand, tan-brown to brown, fine, silty; few pebbles, more pebbles with depth; oxidized, saturated at 11 feet (lacustrine?)
10 - 24  Sand, gray, fine, silty, very clayey; few pebbles; unoxidized, saturated (lacustrine?)

TEST HOLE NUMBER: 504
LOCATION: 116N-6SW-31CCCC
LEGAL LOCATION: SW SW SW sec. 31, T. 116 N., R. 63 W.
2 8 Sand, fine, silty

TEST HOLE NUMBER: 505
LOCATION: 116N-6SW-34SWA
LEGAL LOCATION: NE NE NE NW sec. 34, T. 116 N., R. 63 W.
19 39 Sand and gravel, brown, medium to coarse sand, fine to medium gravel, clayey, silty; oxidized, saturated; more gravel content with depth

TEST HOLE NUMBER: 506
LOCATION: 116N-6SW-34SWD
LEGAL LOCATION: SW SE SE SE sec. 34, T. 116 N., R. 63 W.
25 38 Sand, brown, fine to medium, clayey, silty; oxidized, saturated; some interbedded clay; becomes more clean with depth

TEST HOLE NUMBER: 507
LOCATION: 116N-6SW-35SWB
LEGAL LOCATION: NW NW NW SW sec. 35, T. 116 N., R. 63 W.
5 20 Sand, orange-tan-brown, fine to medium, clayey, silty; oxidized
20 27 Sand, dark-gray-brown, fine to medium, very clayey, silty; partly oxidized, saturated

TEST HOLE NUMBER: 508
LOCATION: 116N-6SW-35SWBB
LEGAL LOCATION: NW NW NW SW sec. 30, T. 116 N., R. 63 W.
4 7 Sand, orange-brown, fine, silty, clayey; oxidized, gravel stringer at 6 feet
16 19 Sand and gravel, gray-brown, fine to coarse sand, fine gravel, very clayey; saturated

TEST HOLE NUMBER: 509
LOCATION: 116N-6SW-36SDD
LEGAL LOCATION: SE SE SE SE sec. 36, T. 116 N., R. 63 W.
0 1 Sand, brown, very fine
1 13 Sand, yellow-grayish-brown, very fine
16 17 Sand, reddish-brown
17 24 Sand, reddish-brown, fine

TEST HOLE NUMBER: 510
LOCATION: 116N-6SW-36SDDO
LEGAL LOCATION: SE SE SE SE sec. 36, T. 116 N., R. 63 W.
5 13 Sand, yellow-gray-brown, very fine, loamy
17 24 Sand, reddish-brown, fine, loamy

TEST HOLE NUMBER: 511
LOCATION: 116N-6SW-36SDDO 2
LEGAL LOCATION: SE SE SE SE sec. 36, T. 116 N., R. 63 W.
0 1 Sand, brown, very fine
1 13 Sand, yellow-grayish-brown, very fine
16 17 Sand, reddish-brown
17 24 Sand, reddish-brown, fine

TEST HOLE NUMBER: 512
LOCATION: 116N-6SW-36SDDD
LEGAL LOCATION: SE SE SE SE sec. 16, T. 116 N., R. 63 W.

66
TEST HOLE NUMBER: 513
LOCATION: 116N-54W-01CC
LEGAL LOCATION: SW SW SW SW sec. 01, T. 116 N., R. 64 W.
4 - 29 Sand, brown, fine to medium, clayey, silty, oxidized, moist, saturated at 1 ft

TEST HOLE NUMBER: 514
LOCATION: 116N-64W-02BB
LEGAL LOCATION: NW NW NW NW sec. 02, T. 116 N., R. 64 W.
19 - 23 Gravel, coarse, 1 to 2-in. diam.
23 - 29 Gravel, fine to coarse, subrounded

TEST HOLE NUMBER: 515
LOCATION: 116N-64W-04AD
LEGAL LOCATION: SE NE sec. 04, T. 116 N., R. 64 W.
6 - 15 Sand and gravel

TEST HOLE NUMBER: 516
LOCATION: 116N-64W-04AD
LEGAL LOCATION: SE NE sec. 04, T. 116 N., R. 64 W.
6 - 15 Sand and gravel

TEST HOLE NUMBER: 517
LOCATION: 116N-64W-05DA
LEGAL LOCATION: NE SE sec. 04, T. 116 N., R. 64 W.
0 - 15 Sand, buff, dry
15 - 20 Gravel, fine to coarse; many limonite concretions

TEST HOLE NUMBER: 518
LOCATION: 116N-64W-05AA
LEGAL LOCATION: NE NE sec. 05, T. 116 N., R. 64 W.
17 - 28 Gravel and sand, pea to nut-size gravel

TEST HOLE NUMBER: 519
LOCATION: 116N-64W-05AA
LEGAL LOCATION: NE NE NE NE sec. 05 T. 116 N., R. 64 W.
20 - 48 Sand, grey, very fine to medium, very clayey; saturated

TEST HOLE NUMBER: 520
LOCATION: 116N-64W-05ADDD
LEGAL LOCATION: SE SE NE sec. 05, T. 116 N., R. 64 W.
18 - 24 Sand, yellow-brown, very fine to medium, very clayey; saturated

TEST HOLE NUMBER: 521
LOCATION: 116N-64W-06AD
LEGAL LOCATION: SE NE sec. 06, T. 116 N., R. 64 W.
17 - 22 Sand, coarse
TEST HOLE NUMBER: 522
LOCATION: 116N-64W-09CC
LEGAL LOCATION: SE SW sec. 09, T. 116 N., R. 64 W.
0 - 8 Sand, buff, fine

TEST HOLE NUMBER: 523
LOCATION: 116N-64W-10CC
LEGAL LOCATION: SW SW sec. 10, T. 116 N., R. 64 W.
6 - 21 Sand, fine, becoming granular

TEST HOLE NUMBER: 524
LOCATION: 116N-64W-10DB
LEGAL LOCATION: NW SE sec. 10, T. 116 N., R. 64 W.
24 - 39 Sand, brown, fine- to medium-grained, clayey; water at 29 feet

TEST HOLE NUMBER: 525
LOCATION: 116N-64W-11WC
LEGAL LOCATION: SW NW sec. 11, T. 116 N., R. 64 W.
0 - 9 Sand and silt, fine sand
24 - 69 Sand, blue-gray, fine-grained, well-rounded; hard layer at 58 and 69 feet

TEST HOLE NUMBER: 526
LOCATION: 116N-64W-11CC
LEGAL LOCATION: SW SW SE sec. 11, T. 116 N., R. 64 W.
0 - 10 Sand

TEST HOLE NUMBER: 527
LOCATION: 116N-64W-11DD
LEGAL LOCATION: SE SE sec. 11, T. 116 N., R. 64 W.
0 - 54 Sand, coarse to very coarse; water table at 35 feet

TEST HOLE NUMBER: 528
LOCATION: 116N-64W-12BB 1
LEGAL LOCATION: NW NW sec. 12, T. 116 N., R. 64 W.
0 - 15 Sand, coarse; no water, some clay at 3 feet
15 - 30 Sand, coarse; water bearing

TEST HOLE NUMBER: 529
LOCATION: 116N-64W-12BCBB
LEGAL LOCATION: NW NW SW NW sec. 12, T. 116 N., R. 64 W.
0 - 6 Sand, orange-brown, fine to coarse, clayey, silty; oxidized

TEST HOLE NUMBER: 530
LOCATION: 116N-64W-14GB
LEGAL LOCATION: NW NW sec. 14, T. 116 N., R. 64 W.
7 - 29 Sand, medium-grained; saturated at 10 feet; oily

TEST HOLE NUMBER: 531
LOCATION: 116N-64W-14CD 1
LEGAL LOCATION: SE SW sec. 14, T. 116 N., R. 64 W.
TEST HOLE NUMBER: 532
LOCATION: 116N-64W-14CD 2
LEGAL LOCATION: SE SW sec. 14, T. 116 N., R. 64 W.
5 - 8 Sand, fine; to medium-grained, clayey

TEST HOLE NUMBER: 533
LOCATION: 116N-64W-14DDDC
LEGAL LOCATION: SW SE SE SE sec. 14, T. 116 N., R. 64 W.
2 - 23 Sand, reddish-brown, fine to coarse; some fine to medium gravel with depth, cemented

TEST HOLE NUMBER: 534
LOCATION: 116N-64W-16CD
LEGAL LOCATION: SE SW sec. 16, T. 116 N., R. 64 W.
5 - 10 Sand, medium-grained; water at 10 feet
10 - 27 Sand, medium-grained; saturated

TEST HOLE NUMBER: 535
LOCATION: 116N-64W-16DADB
LEGAL LOCATION: NW SE NE SE sec. 16, T. 116 N., R. 64 W.
0 - 19 Sand, coarse; composed of quartz and micas, some gravel stringers, some limonite
19 - 23 Sand, grey, fine, very clayey
23 - 35 Sand, medium to coarse; composed mostly of shale fragments

TEST HOLE NUMBER: 536
LOCATION: 116N-64W-17DC
LEGAL LOCATION: SW SE sec. 17, T. 116 N., R. 64 W.
6 - 11 Sand, fine to medium
15 - 22 Sand, clayey

TEST HOLE NUMBER: 537
LOCATION: 116N-64W-17DDDC
LEGAL LOCATION: SW SE SE sec. 17, T. 116 N., R. 64 W.
4 - 6 Sand, brown

TEST HOLE NUMBER: 538
LOCATION: 116N-64W-19DDDD 1
LEGAL LOCATION: SE SE SE SE sec. 12, T. 116 N., R. 64 W.
17 - 20 Sand, clayey, silty, poorly sorted

TEST HOLE NUMBER: 539
LOCATION: 116N-64W-19DDDD 2
LEGAL LOCATION: SE SE SE SE sec. 19, T. 116 N., R. 64 W.
17 - 20 Sand, silty, clayey, poorly sorted

TEST HOLE NUMBER: 540
LOCATION: 116N-64W-19DDDD 4
LEGAL LOCATION: SE SE SE SE sec. 19, T. 116 N., R. 64 W.
4 - 14 Sand and clay; brown clay, fine sand; saturated
TEST HOLE NUMBER: 541
LOCATION: 116N-64W-21AAAB
LEGAL LOCATION: NW NE NE NE sec. 21, T. 116 N., R. 64 W.

1 - 4 Sand, tan-brown, fine, clayey, very silty; oxidized
4 - 10 Sand, orange-brown to dark-tan-brown, fine, clayey, silty; oxidized, moist

TEST HOLE NUMBER: 542
LOCATION: 116N-64W-21DBC
LEGAL LOCATION: SW SW NW SE sec. 21, T. 116 N., R. 64 W.

5 - 20 Sand and clay

TEST HOLE NUMBER: 543
LOCATION: 116N-64W-22CA
LEGAL LOCATION: NE SW sec. 22, T. 116 N., R. 64 W.

6 - 7 Sand, dark, fine; containing some clay
7 - 15 Sand, light-colored, medium-grained
15 - 19 Sand, fine to medium, saturated
19 - 23 Sand, clayey

TEST HOLE NUMBER: 544
LOCATION: 116N-64W-23ABBA
LEGAL LOCATION: NE NW NW NE sec. 23, T. 116 N., R. 64 W.

0 - 3 Sand, brown to tan-brown, fine, silty
3 - 4 Sand, gray-brown, fine, very clayey, silty; moist

TEST HOLE NUMBER: 545
LOCATION: 116N-64W-23AD
LEGAL LOCATION: SE NE sec. 23, T. 116 N., R. 64 W.

0 - 4 Sand, light-brown, clayey; 8 inches of topsoil

TEST HOLE NUMBER: 546
LOCATION: 116N-64W-23CC
LEGAL LOCATION: SW SW sec. 23, T. 116 N., R. 64 W.

0 - 5 Sand, medium to coarse
22 - 30 Sand, medium to coarse

TEST HOLE NUMBER: 547
LOCATION: 116N-64W-23CCBB
LEGAL LOCATION: NW NW SW SW sec. 23, T. 116 N., R. 64 W.

4 - 10 Sand, brown, fine to medium, slightly clayey, silty, gravelly; oxidized
10 - 13 Sand, gray-brown, fine, silty; some gravel

TEST HOLE NUMBER: 548
LOCATION: 116N-64W-24AACC
LEGAL LOCATION: SW SW NE NE sec. 24, T. 116 N., R. 64 W.

21 - 32 Sand

TEST HOLE NUMBER: 549
LOCATION: 116N-64W-25ECCC
LEGAL LOCATION: SW SW SW NW sec. 25, T. 116 N., R. 64 W.
<table>
<thead>
<tr>
<th>Test Hole Number</th>
<th>Location</th>
<th>Legal Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>550</td>
<td>116N-64W-25CBB</td>
<td>SW SW NW SW sec. 25, T. 116 N., R. 64 W.</td>
<td>24 - 46 Sand, very fine to fine, silty, pebbly, saturated</td>
</tr>
<tr>
<td>551</td>
<td>116N-64W-25CCCB</td>
<td>NW SW SW SW sec. 25, T. 116 N., R. 64 W.</td>
<td>3 - 11 Sand, reddish-brown, very silty, oxidized</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>11 - 20 Sand, medium, silty, saturated</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 - 44 Gravel, gray, medium, silty</td>
</tr>
<tr>
<td>552</td>
<td>116N-64W-25CDD</td>
<td>SE SE SW SW sec. 25, T. 116 N., R. 64 W.</td>
<td>16 - 26 Sand, fine, very silty</td>
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<tr>
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<td></td>
<td>27 - 33 Sand, brown, medium, silty</td>
</tr>
<tr>
<td>553</td>
<td>116N-64W-26BBCC</td>
<td>SW SW NW NW sec. 25, T. 116 N., R. 64 W.</td>
<td>2 - 7 Sand, coarse, gravelly, dry</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>7 - 26 Sand, red, medium, pebbly, silty, oxidized, dry, saturated at 16 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>26 - 36 Sand, gray, fine to medium; saturated</td>
</tr>
<tr>
<td>554</td>
<td>116N-64W-26CCC</td>
<td>SW SW sec. 25, T. 116 N., R. 64 W.</td>
<td>5 - 10 Gravel, pea-size, dry</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>24 - 29 Sand, coarse, to pea-size gravel</td>
</tr>
<tr>
<td>555</td>
<td>116N-64W-27BAAA</td>
<td>NE NE NW NW sec. 27, T. 116 N., R. 64 W.</td>
<td>14 - 17 Gravel, very coarse; boulders</td>
</tr>
<tr>
<td>556</td>
<td>116N-64W-27DSSC</td>
<td>NW SE SE SE sec. 27, T. 116 N., R. 64 W.</td>
<td>20 - 38 Sand, gray, very fine, very silty; saturated</td>
</tr>
<tr>
<td>557</td>
<td>116N-64W-28AAA</td>
<td>NE NE sec. 28, T. 116 N., R. 64 W.</td>
<td>0 - 10 Sand, very fine, clayey</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 - 54 Sand, medium to coarse</td>
</tr>
<tr>
<td>558</td>
<td>116N-64W-29ABB</td>
<td>Location: 116N-64W-29ABB</td>
<td></td>
</tr>
</tbody>
</table>
LEGAL LOCATION: NW NW NE sec. 29, T. 116 N., R. 64 W.

3 - 8 Sand and gravel, reddish-brown, fine sand, medium gravel, clayey, silty; oxidized

TEST HOLE NUMBER: 559
LOCATION: 116N-64W-31BB
LEGAL LOCATION: NW NW sec. 31, T. 116 N., R. 64 W.

25 - 46 Sand

TEST HOLE NUMBER: 560
LOCATION: 116N-64W-32AABA
LEGAL LOCATION: NE NW NE NW sec. 32, T. 116 N., R. 64 W.

3 - 5 Sand, orange-tan-brown, very clayey, silty; oxidized, moist
5 - 7 Sand, dark-brown, fine, very clayey, silty; saturated
11 - 30 Sand, gray, fine, clayey, silty; unoxidized, saturated

TEST HOLE NUMBER: 561
LOCATION: 116N-64W-32DDDD
LEGAL LOCATION: SE SE SE SE sec. 32, T. 116 N., R. 64 W.

14 - 43 Sand, light-brown, medium to coarse, slightly clayey, subangular; dirty

TEST HOLE NUMBER: 562
LOCATION: 116N-64W-33BB
LEGAL LOCATION: NW NW sec. 33, T. 116 N., R. 64 W.

20 - 25 Gravel, pea- to nut-size

TEST HOLE NUMBER: 563
LOCATION: 116N-64W-33CC
LEGAL LOCATION: SW SW SW NW sec. 33, T. 116 N., R. 64 W.

2 - 15 Sand, fine, very silty, subrounded to rounded
15 - 25 Sand, dark-brown, very silty, subrounded; some clay
25 - 27 Gravel stringer, size unknown
27 - 31 Sand, fine, silty, subrounded

TEST HOLE NUMBER: 564
LOCATION: 116N-64W-33DDDD
LEGAL LOCATION: SE SE SE SE SW sec. 33, T. 116 N., R. 64 W.

20 - 21 Gravel stringer, fine subangular
24 - 25 Gravel stringer, fine, subangular
25 - 31 Sand, light-gray, medium to coarse, subrounded to subangular

TEST HOLE NUMBER: 565
LOCATION: 116N-64W-34AA
LEGAL LOCATION: NE NE sec. 34, T. 116 N., R. 64 W.

5 - 18 Sand and gravel, yellow

TEST HOLE NUMBER: 566
LOCATION: 116N-64W-34CCBC
LEGAL LOCATION: NW SW NW SW sec. 34, T. 116 N., R. 64 W.

8 - 20 Sand, red, very clayey; dry
20 - 25 Sand, medium-brown, very clayey; moist
<table>
<thead>
<tr>
<th>Test Hole Number</th>
<th>Location</th>
<th>Depth</th>
<th>Material Description</th>
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<tbody>
<tr>
<td>567</td>
<td>116N-64W-34DACC 1</td>
<td>25-41</td>
<td>Sand, medium-brown; saturated</td>
</tr>
<tr>
<td>568</td>
<td>116N-64W-34DACC 2</td>
<td>3-77</td>
<td>Sand, gray, very fine to fine, sty, pebbly</td>
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<tr>
<td>569</td>
<td>116N-64W-34DADC 1</td>
<td>2-26</td>
<td>Sand, gray, very fine to fine; unoxidized</td>
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<tr>
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<td>26-30</td>
<td>Sand, gray, medium; subrounded</td>
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<tr>
<td>570</td>
<td>116N-64W-34DACC 2</td>
<td>5-12</td>
<td>Gravel, light-brown, very silt; saturated</td>
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<tr>
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<td>1-3</td>
<td>Sand, medium to very coarse, subangular to subrounded</td>
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<tr>
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<td>3-21</td>
<td>Gravel, blackish-brown, medium to coarse, subangular to subrounded</td>
</tr>
<tr>
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<td></td>
<td>21-26</td>
<td>Sand, gray, fine to medium, clayey</td>
</tr>
<tr>
<td>571</td>
<td>116N-64W-34DEDB</td>
<td>9-25</td>
<td>Gravel, fine, clayey, subrounded</td>
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<tr>
<td>572</td>
<td>116N-64W-34DBD</td>
<td>9-19</td>
<td>Sand, gray, fine, silt, rounded</td>
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<td>19-35</td>
<td>Sand, gray, fine to medium, rounded</td>
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<tr>
<td>573</td>
<td>116N-64W-34DACC</td>
<td>9-16</td>
<td>Gravel, fine to very coarse, subangular to subrounded; unsorted</td>
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<tr>
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<td>9-39</td>
<td>Sand, gray, fine, rounded</td>
</tr>
<tr>
<td>574</td>
<td>116N-64W-34DDC</td>
<td>2-11</td>
<td>Sand, medium, very pebbly, dry</td>
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<td>17-34</td>
<td>Sand, brown, medium to coarse, very clayey, silt; saturated</td>
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<tr>
<td>575</td>
<td>116N-64W-34DDAD</td>
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<td>Test Hole Number</td>
<td>Description</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>576</td>
<td>Sand, medium, silty, subrounded to subangular</td>
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</tr>
<tr>
<td>5</td>
<td>Gravel, fine, subrounded, clean</td>
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</tr>
<tr>
<td>24</td>
<td>Sand, fine to coarse, slightly silty, interbedded, subrounded to rounded</td>
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</tr>
</tbody>
</table>

**Test Hole Number: 577**

**Location:** T116N-R64W-S4DDBC

**Legal Location:** SE NW SE SE sec. 34, T. 116 N., R. 64 W.

| 2 - 9           | Sand, dark-brown, fine to very coarse, subangular to subrounded, unsorted |
| 9 - 19          | Gravel, fine to medium, subrounded |
| 22 - 50         | Gravel, fine to medium subangular |

**Test Hole Number: 578**

**Location:** T116N-R64W-S4DDCD

**Legal Location:** SE SW SE SE sec. 34, T. 116 N., R. 64 W.

| 3 - 10          | Sand, medium to very coarse, subangular to subrounded; some fine gravel |
| 21 - 32         | Sand, grey, very fine, silty and clayey, rounded; silt |

**Test Hole Number: 579**

**Location:** T116N-R64W-S4DDCC

**Legal Location:** SW SE SE SE sec. 34, T. 116 N., R. 64 W.

| 0 - 21          | Gravel, fine to medium, subrounded to subangular |
| 21 - 24         | Sand, grey, fine, rounded |

**Test Hole Number: 580**

**Location:** T116N-R64W-S5BCCB

**Legal Location:** NW SW SW sec. 35, T. 116 N., R. 64 W.

| 0 - 10          | Sand, reddish-brown, medium, pebbly; oxidized |
| 10 - 26         | Sand, red, clayey, pebbly |
| 26 - 60         | Sand, medium, pebbly; saturated |

**Test Hole Number: 581**

**Location:** T116N-R64W-S5CBBCB

**Legal Location:** NW NW NW sec. 35, T. 116 N., R. 64 W.

| 2 - 10          | Gravel, very coarse, 1- to 1½-inch diameter; red-brown cobbles |

**Test Hole Number: 582**

**Location:** T116N-R64W-S5CBBC 1

**Legal Location:** SW SW NW sec. 35, T. 116 N., R. 64 W.

| 2 - 4           | Sand, yellow-brown, fine, silty, rounded |
| 4 - 14          | Sand, coarse to very coarse, subrounded to rounded; clean |
| 14 - 24         | Gravel, coarse; intermittent layers of light-brown clay |

**Test Hole Number: 583**

**Location:** T116N-R64W-S5CBCC 2

**Legal Location:** SW SW NW sec. 35, T. 116 N., R. 64 W.
1 - 4 Sand, very coarse, subangular to subrounded; clean
4 - 14 Gravel, medium, subrounded; clean
20 - 38 Gravel, medium, shaley, subrounded; weathered, intermittent layers of clays and compact silts, gray to black, some traces of lignite

TEST HOLE NUMBER: 594
LOCATION: 116N-64W-56CCAB
LEGAL LOCATION: NW NE SW SW sec. 35, T. 116 N., R. 64 W.
19 - 60 Gravel, fine to medium, subrounded to subangular

TEST HOLE NUMBER: 585
LOCATION: 116N-64W-55CCCC
LEGAL LOCATION: SW SW SW SW sec. 35, T. 116 N., R. 64 W.
9 - 25 Sand, brown, fine to medium, silty
25 - 54 Gravel; medium, silty, angular to highly angular

TEST HOLE NUMBER: 586
LOCATION: 116N-64W-56CCCC
LEGAL LOCATION: SW SW SW SW sec. 35, T. 116 N., R. 64 W.
9 - 7 Gravel, fine; rounded
7 - 17 Sand, coarse; rounded
17 - 52 Gravel, medium to coarse, subangular to subrounded; much lignite, some gravel up to 4 inches in diameter

TEST HOLE NUMBER: 587
LOCATION: 116N-64W-56CDD
LEGAL LOCATION: SE SW SW NW sec. 35, T. 116 N., R. 64 W.
5 - 7 Sand, fine to medium, clayey, subrounded
21 - 34 Sand, fine to medium, very silty, subrounded; with shale pebbles

TEST HOLE NUMBER: 588
LOCATION: 116N-64W-56AAB
LEGAL LOCATION: NW NE NE NE sec. 36, T. 116 N., R. 64 W.
5 - 13 Sand, brown, fine to medium, very clayey

TEST HOLE NUMBER: 589
LOCATION: 116N-64W-56AAB
LEGAL LOCATION: NW NE NE NW sec. 36, T. 116 N., R. 64 W.
16 - 21 Sand, medium, very silty; saturated

TEST HOLE NUMBER: 590
LOCATION: 116N-64W-56BBCC
LEGAL LOCATION: SW SW NW NW sec. 36, T. 116 N., R. 64 W.
20 - 30 Sand, light-brown, very clayey, very silty; oxidized; saturated

TEST HOLE NUMBER: 591
LOCATION: 116N-65W-01BB
LEGAL LOCATION: NW NW sec. 01, T. 116 N., R. 65 W.
20 - 50 Sand and gravel, very coarse sand, pea-size gravel
TEST HOLE NUMBER: 592
LOCATION: 116N-45W-04AAAD
LEGAL LOCATION: SE NE NE NE sec. 04, T. 116 N., R. 65 W.
4 - 10 Sand, orange-brown, fine to medium, clayey, silty, oxidized

TEST HOLE NUMBER: 593
LOCATION: 116N-45W-04BCCB
LEGAL LOCATION: NW SW SW NW sec. 04, T. 116 N., R. 65 W.
1 - 6 Sand, brown-gray, medium, silty, gravelly, oxidized, dry
6 - 16 Sand, brown gravelly; oxidized, saturated at 11 feet
16 - 20 Sand, gray-brown, clayey, silty, gravelly, pebbly; partly oxidized, saturated

TEST HOLE NUMBER: 594
LOCATION: 116N-45W-05BAAA
LEGAL LOCATION: NE NE NE NW sec. 05, T. 116 N., R. 65 W.
10 - 27 Sand and gravel, gray, medium to coarse sand, fine gravel

TEST HOLE NUMBER: 595
LOCATION: 116N-45W-06DD
LEGAL LOCATION: SE SE sec. 06, T. 116 N., R. 65 W.
15 - 48 Sand

TEST HOLE NUMBER: 596
LOCATION: 116N-45W-06BAAA
LEGAL LOCATION: NE NE NE NW sec. 08, T. 116 N., R. 65 W.
15 - 20 Sand, brown, fine to medium, clayey, very silty; oxidized, saturated

TEST HOLE NUMBER: 597
LOCATION: 116N-45W-06ODDA
LEGAL LOCATION: NE SE SE SE sec. 09, T. 116 N., R. 65 W.
1 - 4 Sand, tan-brown, fine, silt
4 - 6 Sand, brown, fine to medium, silty, pebbly

TEST HOLE NUMBER: 598
LOCATION: 116N-45W-10BAAA
LEGAL LOCATION: NE NE NE NW sec. 10, T. 116 N., R. 65 W.
14 - 23 Sand, brown, fine; some clay, some pebbles

TEST HOLE NUMBER: 599
LOCATION: 116N-45W-14DDDD
LEGAL LOCATION: SE SE SE SE sec. 14, T. 116 N., R. 65 W.
2 - 7 Sand, brown, medium; oxidized

TEST HOLE NUMBER: 600
LOCATION: 116N-45W-17BCCB
LEGAL LOCATION: NW NW SW NW sec. 17, T. 116 N., R. 65 W.
1 - 2 Sand and gravel, tan-brown, fine to medium sand, fine gravel, silty
15 - 90 Sand, gray-brown, fine, very silty, osseous; oxidized, mollic, saturated at 20 feet

76
TEST HOLE NUMBER: 601
LOCATION: 116N-45W-1700CC
LEGAL LOCATION: SW SE SW SE sec. 17, T. 116 N., R. 65 W.
10
- 28 Sand and gravel, brown, fine to medium; large cobble at 17 feet

TEST HOLE NUMBER: 602
LOCATION: 116N-45W-20ABB
LEGAL LOCATION: NE NE NW NE sec. 20, T. 116 N., R. 65 W.
10
- 12 Sand, yellow-tan-brown; fine to medium, very silty, clayey; oxidized, wet
12
- 20 Sand, olive-gray, fine to medium, very silty, clayey; some pebbles, unoxidized
20
- 23 Sand, olive-gray, fine to coarse, very clayey, silty; unoxidized, hit rock at 23 feet, abandoned hole

TEST HOLE NUMBER: 603
LOCATION: 116N-45W-22DDAA
LEGAL LOCATION: NE NE SE SE sec. 22, T. 116 N., R. 65 W.
1
- 8 Sand and gravel, gray-brown, fine sand, fine to coarse gravel; some clay

TEST HOLE NUMBER: 604
LOCATION: 116N-45W-24ADAO
LEGAL LOCATION: SE NE SE NE sec. 24, T. 116 N., R. 65 W.
0
- 2 Sand, tan-brown, fine, silty; oxidized

TEST HOLE NUMBER: 605
LOCATION: 116N-45W-25AAAA
LEGAL LOCATION: NE NE NE NE sec. 25, T. 116 N., R. 65 W.
0
- 10 Sand, brown, medium
23
- 34 Sand and gravel, medium to coarse sand, fine to medium gravel

TEST HOLE NUMBER: 606
LOCATION: 116N-45W-26AAAA
LEGAL LOCATION: NE NE NE NE sec. 26, T. 116 N., R. 65 W.
0
- 6 Sand, brown, medium to coarse; oxidized

TEST HOLE NUMBER: 607
LOCATION: 116N-45W-30CCCC
LEGAL LOCATION: SW SW SW SW sec. 30, T. 116 N., R. 65 W.
20
- 25 Sand, gray-brown, medium to coarse, silty, clayey; unsaturated
25
- 35 Sand and gravel, gray-brown, medium to coarse sand, fine to medium gravel, very clayey, silty; saturated

TEST HOLE NUMBER: 608
LOCATION: 116N-45W-32ABA
LEGAL LOCATION: NE NW NE NE sec. 32, T. 116 N., R. 65 W.
0
- 4 Sand, yellow-brown, fine, slightly clayey, very silty
4
- 6 Sand and gravel, orange-brown, fine to medium sand, coarse to very coarse gravel
6
- 10 Sand, brown, fine to medium, very clayey, silty; some pebbles, moist

TEST HOLE NUMBER: 609
LOCATION: 116N-45W-32DCDD
LEGAL LOCATION: SE SE SW SE sec. 32, T. 116 N., R. 65 W.
77
<table>
<thead>
<tr>
<th>Test Hole Number</th>
<th>Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>610</td>
<td>116N-4SW-34CCC</td>
<td>Sand, range-tan-brown, fine to medium, clayey, very silty; oxidized; saturated at 17 feet, gravel stringer from 25 to 27 feet</td>
</tr>
<tr>
<td>611</td>
<td>117N-6CW-01CEBB</td>
<td>Sand, yellow-tan-brown, fine to medium, clayey, silty; oxidized, saturated at 11 feet, gravel, unoxidized</td>
</tr>
<tr>
<td>612</td>
<td>117N-6OW-02CCCC</td>
<td>Sand, olive-gray, fine to coarse, clayey, silty, oxidized</td>
</tr>
<tr>
<td>613</td>
<td>117N-6OW-04AAAB</td>
<td>Sand and gravel, yellow-red, coarse</td>
</tr>
<tr>
<td>614</td>
<td>117N-6OW-09ADD</td>
<td>Sand, brown, medium to coarse, very silty, very pebbly; oxidized, moist; mostly unoxidized, saturated</td>
</tr>
<tr>
<td>615</td>
<td>117N-6SW-12BBA</td>
<td>Gravel, brown, very silty, very sandy; oxidized, moist, saturated at 36 feet</td>
</tr>
<tr>
<td>616</td>
<td>117N-6OW-12B3BB</td>
<td>Sand, gray, fine</td>
</tr>
<tr>
<td>617</td>
<td>117N-6OW-12DCCC</td>
<td>Sand and gravel, coarse</td>
</tr>
</tbody>
</table>

78
TEST HOLE NUMBER: 618
LOCATION: 117°-60W-14DDD
LEGAL LOCATION: SE NE NE SE sec. 14, T. 117 N., R. 60 W.
5 - 13 Gravel, medium to coarse; some coarse sand, much shale, highly oxidized

TEST HOLE NUMBER: 619
LOCATION: 117°-60W-16AD
LEGAL LOCATION: SE NE sec. 16, T. 117 N., R. 60 W.
12 - 37 Sand, medium

TEST HOLE NUMBER: 620
LOCATION: 117°-60W-20BBBB
LEGAL LOCATION: NW NW NW NW sec. 28, T. 117 N., R. 60 W.
4 - 24 Sand, brown, fine to medium; very silty, slightly pebbly; oxidized, dry, saturated at 20 feet

TEST HOLE NUMBER: 621
LOCATION: 117°-60W-32DDDD
LEGAL LOCATION: SE NE NE SE sec. 35, T. 117 N., R. 60 W.
15 - 31 Sand, brown, fine to medium; oxidized

TEST HOLE NUMBER: 622
LOCATION: 117°-61W-01BBB
LEGAL LOCATION: NW NW NW NW sec. 01, T. 117 N., R. 61 W.
9 - 12 Sand

TEST HOLE NUMBER: 623
LOCATION: 117°-61W-08CCBB
LEGAL LOCATION: NW NW NW sec. 08, T. 117 N., R. 61 W.
21 - 24 Sand, medium-yellowish-brown and medium-gray; lignitic, calcareous, oxidized to 24 feet
24 - 85 Sand, medium-yellowish-brown and medium-gray; lignitic, calcareous, partly oxidized 24 to 85 feet, clay layers from 34 to 34.5 and 38 feet, lignitic 37.5 to 38, 47 to 48, 54 to 54.5, 58 to 62 feet, coarse sand 61 to 63, 65 to 68, 70 to 65 feet

TEST HOLE NUMBER: 624
LOCATION: 117°-61W-08BCBB
LEGAL LOCATION: NW SW NW NW sec. 08, T. 117 N., R. c1 W.
19 - 21 Sand, coarse
21 - 63 Sand, coarse; gravel, some coal

TEST HOLE NUMBER: 625
LOCATION: 117°-61W-08OAA
LEGAL LOCATION: NE NE SE sec. 08, T. 117 N., R. 61 W.
23 - 62 Gravel

TEST HOLE NUMBER: 626
LOCATION: 117°-61W-16CCCC
LEGAL LOCATION: SW SW SW SW sec. 16, T. 117 N., R. 61 W.
20 - 30 Sand, medium
<table>
<thead>
<tr>
<th>TEST HOLE NUMBER</th>
<th>LOCATION</th>
<th>LEGAL LOCATION</th>
<th>SAND AND GRAVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>627</td>
<td>117N-61W-16CCC 2</td>
<td>SW SW SW SW sec 16, T. 117 N., R. 61 W.</td>
<td>21 - 100 Sand and gravel; coarse sand grading to a medium to coarse gravel</td>
</tr>
<tr>
<td>628</td>
<td>117N-61W-18BBBBB</td>
<td>NW NW NW NW sec 19, T. 117 N., R. 61 W.</td>
<td>20 - 78 Sand and gravel; brown then gray at 24 feet; with coal</td>
</tr>
<tr>
<td>629</td>
<td>117N-61W-19CCDD</td>
<td>SE SE SE SW sec 19, T. 117 N., R. 61 W.</td>
<td>7 - 15 Sand, brown, medium to coarse, slightly clayey, gravelly; oxidized, moist; silt layer between 9 and 10 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>15 - 48 Sand, black-brown, medium to coarse, gravelly; moist, saturated at 20 feet</td>
</tr>
<tr>
<td>630</td>
<td>117N-61W-19DDDD</td>
<td>SE SE SE SE sec 19, T. 117 N., R. 61 W.</td>
<td>16 - 60 Sand; very porous</td>
</tr>
<tr>
<td>631</td>
<td>117N-61W-20DBBB</td>
<td>NW NW SE SE sec 29, T. 117 N., R. 61 W.</td>
<td>15 - 26 Sand, yellow</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 - 88 Sand and gravel; some lignite</td>
</tr>
<tr>
<td>632</td>
<td>117N-61W-20DDDD</td>
<td>SE SE SE SE sec 29, T. 117 N., R. 61 W.</td>
<td>7 - 15 Sand, fine</td>
</tr>
<tr>
<td>633</td>
<td>117N-61W-51AAAB</td>
<td>NW NE NE NE sec 31, T. 117 N., R. 61 W.</td>
<td>3 - 40 Sand, coarse</td>
</tr>
<tr>
<td>634</td>
<td>117N-61W-32BCAA</td>
<td>NW NW sec 32, T. 117 N., R. 61 W.</td>
<td>13 - 22 Sand, fine</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>22 - 73 Gravel; some lignite</td>
</tr>
<tr>
<td>635</td>
<td>117N-61W-33BCAA</td>
<td>NE NW sec 33, T. 117 N., R. 61 W.</td>
<td>17 - 73 Sand and gravel</td>
</tr>
</tbody>
</table>
TEST HOLE NUMBER: 636
LOCATION: 17N-61W-33004D
LEGAL LOCATION: SE NE SW NW sec. 33, T. 117 N., R. 61 W.
17    73 Sand and gravel

TEST HOLE NUMBER: 637
LOCATION: 17N-61W-33004C
LEGAL LOCATION: NE NE SW SW sec. 33, T. 117 N., R. 61 W.
12    11 Sand
17    110 Sand; gravel and lignite

TEST HOLE NUMBER: 638
LOCATION: 17N-61W-33005D
LEGAL LOCATION: SE NE SE SE sec. 35, T. 117 N., R. 61 W.
2    10 Sand, brown; with coarse gravel sized shale pebbles; oxidized

TEST HOLE NUMBER: 639
LOCATION: 17N-61W-33005E
LEGAL LOCATION: NE SW SE SE sec. 36, T. 117 N., R. 61 W.
14    16 Gravel, fine to medium, very clayey, very silty, very sandy; oxidized, saturated

TEST HOLE NUMBER: 640
LOCATION: 17N-62W-01300B
LEGAL LOCATION: NW NW NW NW sec. 01, T. 117 N., R. 62 W.
19    55 Sand and gravel, brown, medium to coarse sand, fine gravel; oxidized, some coarse gravel

TEST HOLE NUMBER: 641
LOCATION: 17N-62W-02300C
LEGAL LOCATION: SW SW SW SW sec. 02, T. 117 N., R. 62 W.
10    28 Sand, dark-brown, very clayey, very silty

TEST HOLE NUMBER: 642
LOCATION: 17N-62W-13001A
LEGAL LOCATION: NE NW NE NW sec. 13, T. 117 N., R. 62 W.
15    16 Sand, medium to coarse, clayey, very lignitic
10    30 Sand, silty, clayey, bouldery, poorly sorted

TEST HOLE NUMBER: 643
LOCATION: 17N-62W-13001A
LEGAL LOCATION: NE SE NE NW sec. 13, T. 117 N., R. 62 W.
15    16 Sand, medium to coarse; much organic material, some clay
16    30 Sand, poorly sorted; some silt and clay; much silt and clay at 24.5 to 25 feet; moderately permeable, rocks

TEST HOLE NUMBER: 644
LOCATION: 17N-62W-13001B
LEGAL LOCATION: NW NW NW NW sec. 13, T. 117 N., R. 62 W.
15    18 Sand, brown to dark-brown (10 YR 4/3), mottled, coarse; loamy, loose, wet; structure: type=single grain; grade=very weak

81
<table>
<thead>
<tr>
<th>Test Hole Number</th>
<th>Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>645</td>
<td>1:77N-62W-219BBB 1</td>
<td>Sand and gravel, dark-brown (10 YR 3/3), n LOD, coarse sand and fine gravel; loamy, loose, very wet, black stains between 24 and 25 feet; structure: type=single grain, grade=very weak</td>
</tr>
<tr>
<td>646</td>
<td>115N-62W-90AAAA</td>
<td>Sand, coarse; oxidized, some fine gravel</td>
</tr>
<tr>
<td>647</td>
<td>117N-62W-31DDDA 1</td>
<td>Sand, brown</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sand, gray; with coal</td>
</tr>
<tr>
<td>648</td>
<td>117N-62W-33DDCC</td>
<td>Sand, pale-yellowish-brown, very fine, slightly clayey, silty, thinly laminated (lake deposit)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sand, medium-yellowish-brown, fine, silty, slightly pebbly (glacial outwash)</td>
</tr>
<tr>
<td>649</td>
<td>117N-62W-35CCC</td>
<td>Sand, yellowish-brown, clayey, silty, calcareous, oxidized (glacial outwash)</td>
</tr>
<tr>
<td>650</td>
<td>117N-62W-35DDD</td>
<td>Sand and gravel, medium to coarse; clean, with coal</td>
</tr>
<tr>
<td>651</td>
<td>117N-62W-35DDDD</td>
<td>Sand and gravel, brown</td>
</tr>
<tr>
<td>652</td>
<td>117N-62W-35DDDD</td>
<td>Sand and gravel, gray, coarse sand, fine to medium gravel grading to a coarse gravel; much coal</td>
</tr>
<tr>
<td>653</td>
<td>117N-62W-35DDDD</td>
<td>Sand, light-brown, medium-grained, clayey, silty; saturated</td>
</tr>
<tr>
<td>654</td>
<td>117N-62W-35DDDD</td>
<td>Sand, red-brown, clayey, very silty, gravelly; oxidized</td>
</tr>
</tbody>
</table>
TEST HOLE NUMBER: 654
LOCATION: 117N-6SW-21BBB
LEGAL LOCATION: NW NW NW NW sec. 21, T. 117 N., R. 63 W.
8 - 12 Gravel, medium to coarse

TEST HOLE NUMBER: 655
LOCATION: 117N-6SW-30CDDC
LEGAL LOCATION: SW SW SW SW sec. 30, T. 117 N., R. 62 W.
9 - 15 Sand, light-brown, fine to medium, clayey, silty, oxidized, dry
27 - 29 Sand, orange-brown, clayey, silty, oxidized, saturated

TEST HOLE NUMBER: 656
LOCATION: 117N-6SW-30CDDB
LEGAL LOCATION: NW NW SE SE sec. 30, T. 117 N., R. 63 W.
14 - 19 Sand
22 - 45 Sand

TEST HOLE NUMBER: 657
LOCATION: 117N-6SW-36DDD
LEGAL LOCATION: SE SE SE SE sec. 36, T. 117 N., R. 63 W.
17 - 95 Sand and gravel, brown, coarse sand, fine to medium gravel grading to a very coarse gravel

TEST HOLE NUMBER: 658
LOCATION: 117N-64W-04CIDD
LEGAL LOCATION: SE SE NW SW sec. 04, T. 117 N., R. 64 W.
5 - 15 Sand, fine to medium, some silt, 3-inch bed of clay and silt at 11 to 11.3 feet, 1-inch bed at 13 feet, probably slightly permeable
19 - 21 Sand, fine, silty, slightly permeable

TEST HOLE NUMBER: 659
LOCATION: 117N-64W-09BABB
LEGAL LOCATION: NW NE NW NW sec. 06, T. 117 N., R. 64 W.
5 - 19 Sand, brown, fine to medium, clayey, silty; saturated at 9 feet

TEST HOLE NUMBER: 660
LOCATION: 117N-64W-08CDDC
LEGAL LOCATION: SW SE SW SW sec. 08, T. 117 N., R. 64 W.
6 - 9 Sand; coarse, slightly moist

TEST HOLE NUMBER: 661
LOCATION: 117N-64W-09ACDC
LEGAL LOCATION: SW SE SW NE sec. 09, T. 117 N., R. 64 W.
22 - 35 Sand

TEST HOLE NUMBER: 662
LOCATION: 117N-64W-09BDDC
LEGAL LOCATION: SW SE SW NW sec. 09, T. 117 N., R. 64 W.
20 - 33 Sand
TEST HOLE NUMBER: 663
LOCATION: 117N-64W-cg8DCC 2
LEGAL LOCATION: SW SE NE sec. 09, T. 117 N., R. 64 W.

21 - 34 Sand

TEST HOLE NUMBER: 664
LOCATION: 117N-64W-00CCCC
LEGAL LOCATION: SW SW SW SW sec. 30, T. 117 N., R. 64 W.

5 - 9 Sand and gravel, medium to coarse
25 - 26 Sand and gravel

TEST HOLE NUMBER: 665
LOCATION: 117N-64W-16CCCC
LEGAL LOCATION: SE SW SW SW sec. 16, T. 117 N., R. 64 W.

4 - 7 Sand, light-brown, very fine; loamy, loose
11 - 15 Sand, gray, coarse; loamy, wet

TEST HOLE NUMBER: 666
LOCATION: 117N-64W-20BBBB
LEGAL LOCATION: NW NW NW NW sec. 20, T. 117 N., R. 64 W.

13 - 26 Sand, fine

TEST HOLE NUMBER: 667
LOCATION: 117N-64W-20DCCD
LEGAL LOCATION: SE SW SE SE sec. 20, T. 117 N., R. 64 W.

3 - 14 Sand, brown, fine to medium, clayey, very silty; oxidized, moist
20 - 29 Sand, brown, fine-grained, clayey, silty; saturated

TEST HOLE NUMBER: 668
LOCATION: 117N-64W-25BBBB
LEGAL LOCATION: NW NE NW NW sec. 25, T. 117 N., R. 64 W.

4 - 9 Sand, brown, fine to medium, clayey, silty; pebbly; oxidized

TEST HOLE NUMBER: 669
LOCATION: 117N-64W-25ARBB
LEGAL LOCATION: NW NW NW NW sec. 26, T. 117 N., R. 64 W.

3 - 5 Sand, yellowish-brown (10 YR 5/4); loose, dry; structure: type=single grain
6 - 7 Sand, yellowish-brown (10 YR 5/4); loose; damp; structure: type=single grain

TEST HOLE NUMBER: 670
LOCATION: 117N-64W-35BBBB
LEGAL LOCATION: NW NW NW NW sec. 26, T. 117 N., R. 64 W.

5 - 6 Sand, coarse
25 - 26 Sand, medium, well-sorted

TEST HOLE NUMBER: 671
LOCATION: 117N-64W-27AAAA
LEGAL LOCATION: NW NE NE NE sec. 27, T. 117 N., R. 64 W.

6 - 10 Sand, yellow, very fine; silty (loose)
20 - 25 Sand, dark-yellow, medium to coarse
TEST HOLE NUMBER: 672
LOCATION: 117N-64W-27A-1
LEGAL LOCATION: NE NW NE NE sec. 27, T. 117 N., R. 64 W.
6 - 10 Sand, very fine, silty; calcareous (loess)
20 - 25 Sand, medium to coarse; calcareous
20 - 30 Sand, brown, clayey; calcareous

TEST HOLE NUMBER: 673
LOCATION: 117N-64W-32DDDD
LEGAL LOCATION: SE SE SE SE sec. 32, T. 117 N., R. 64 W.
5 - 15 Sand, silty; oxidized (III)

TEST HOLE NUMBER: 674
LOCATION: 117N-64W-32DDDD 1
LEGAL LOCATION: SE SE SE SE sec. 32, T. 117 N., R. 64 W.
5 - 15 Sand, silty (III)

TEST HOLE NUMBER: 675
LOCATION: 117N-64W-33DD
LEGAL LOCATION: SW NW sec. 33, T. 117 N., R. 64 W.
7 - 12 Sand
12 - 16 Sand, clayey
16 - 20 Sand

TEST HOLE NUMBER: 676
LOCATION: 117N-64W-34BB
LEGAL LOCATION: NW NW sec. 34, T. 117 N., R. 64 W.
4 - 14 Sand, fine, clayey

TEST HOLE NUMBER: 677
LOCATION: 117N-64W-34CC
LEGAL LOCATION: SW SW sec. 34, T. 117 N., R. 64 W.
20 - 26 Sand, fine

TEST HOLE NUMBER: 678
LOCATION: 117N-64W-35AD
LEGAL LOCATION: SE NE sec. 35, T. 117 N., R. 64 W.
6 - 13 Sand, clayey
13 - 15 Sand
15 - 19 Sand, poorly graded

TEST HOLE NUMBER: 679
LOCATION: 117N-64W-35CC
LEGAL LOCATION: SW SE SW SE sec. 35, T. 117 N., R. 64 W.
2 - 9 Sand, brown, fine to medium, clayey, very silty; oxidized, moist

TEST HOLE NUMBER: 680
LOCATION: 117N-64W-35DDDD
LEGAL LOCATION: SE SE SE SE sec. 35, T. 117 N., R. 64 W.
7 - 17 Sand; oxidized, with some silt (0%)

TEST HOLE NUMBER: 681
LOCATION: 117N-64W-55CCDD 1
LEGAL LOCATION: SE SE SE SE sec. 35, T. 117 N., R. 64 W.
7 - 17 Sand, silty (0%)

TEST HOLE NUMBER: 682
LOCATION: 117N-64W-36CCCC
LEGAL LOCATION: SW SW SW SW sec. 36, T. 117 N., R. 64 W.
7 - 17 Sand, silty

TEST HOLE NUMBER: 683
LOCATION: 117N-65W-01CCCC
LEGAL LOCATION: SW SW SW SE sec. 01, T. 117 N., R. 65 W.
15 - 22 Sand, brown, fine to medium, clayey, silty; oxidized

TEST HOLE NUMBER: 684
LOCATION: 117N-65W-02AB
LEGAL LOCATION: NW NE sec. 02, T. 117 N., R. 65 W.
0 - 4 Sand, silty
10 - 14 Sand

TEST HOLE NUMBER: 685
LOCATION: 117N-65W-05AAAA
LEGAL LOCATION: NE NE NE NE sec. 05, T. 117 N., R. 65 W.
9 - 28 Sand, brown, fine, silty, some clay
28 - 33 Sand, gray, medium to coarse; with coal

TEST HOLE NUMBER: 686
LOCATION: 117N-65W-05AAAA 1
LEGAL LOCATION: NE NE NE NE sec. 05, T. 117 N., R. 65 W.
10 - 30 Sand, brown, fine to medium, very silty; saturated at 14 feet

TEST HOLE NUMBER: 687
LOCATION: 117N-65W-05AAAA 2
LEGAL LOCATION: NE NE NE NE sec. 05, T. 117 N., R. 65 W.
9 - 28 Sand, brown, fine, silty, some clay
25 - 33 Sand, gray, medium to coarse; with coal

TEST HOLE NUMBER: 688
LOCATION: 117N-65W-05CCCC
LEGAL LOCATION: SE SW SW SW sec. 05, T. 117 N., R. 65 W.
3 - 11 Sand, brown, fine-grained; oxidized

TEST HOLE NUMBER: 689
LOCATION: 117N-65W-09ACCC
LEGAL LOCATION: SW SW SW NE sec. 09, T. 117 N., R. 65 W.
20 - 27 Sand
TEST HOLE NUMBER: 690
LOCATION: 117N-45W-11A22D
LEGAL LOCATION: SE SE NE sec. 11, T. 117 N., R. 65 W.
4 - 15 Sand; loose, 1- to 3-inch stratified layer of loam

TEST HOLE NUMBER: 691
LOCATION: 117N-45W-12DD
LEGAL LOCATION: SE SE sec. 12, T. 117 N., R. 65 W.
10 - 13 Sand

TEST HOLE NUMBER: 692
LOCATION: 117N-45W-14DCCD
LEGAL LOCATION: SE SW SW SE sec. 14, T. 117 N., R. 65 W.
9 - 23 Sand, brown, fine to medium, clayey, silty, gravelly; saturated at 20 feet

TEST HOLE NUMBER: 693
LOCATION: 117N-45W-15DADD
LEGAL LOCATION: SE SE NE NW sec. 15, T. 117 N., R. 65 W.
10 - 43 Sand, fine

TEST HOLE NUMBER: 694
LOCATION: 117N-45W-16BBB
LEGAL LOCATION: NW NW NW NW sec. 16, T. 117 N., R. 65 W.
6 - 20 Sand, light-brown, very silty

TEST HOLE NUMBER: 695
LOCATION: 117N-45W-17DCCC
LEGAL LOCATION: SE SE SE SE sec. 17, T. 117 N., R. 65 W.
10 - 20 Sand, brown, medium to coarse; some fine gravel

TEST HOLE NUMBER: 696
LOCATION: 117N-45W-19BBBCB
LEGAL LOCATION: NW SW NW NW sec. 19, T. 117 N., R. 65 W.
6 - 20 Sand, brown, fine-grained, silty, gravelly; oxidized, saturated; some clay at 16 feet
20 - 48 Gravel, grey, very silty, sandy; oxidized, saturated

TEST HOLE NUMBER: 697
LOCATION: 117N-45W-21DCCDC
LEGAL LOCATION: SW SE SE SW sec. 21, T. 117 N., R. 65 W.
4 - 22 Sand, yellow, fine-grained
22 - 36 Sand, dark-brown, fine-grained; saturated at 25 feet, some clay from 30 to 36 feet

TEST HOLE NUMBER: 698
LOCATION: 117N-45W-27DCCDC
LEGAL LOCATION: SW SW SW SW sec. 27, T. 117 N., R. 65 W.
2 - 15 Sand, brown, fine to medium, clayey, very silty; oxidized, saturated; some coal fragments
15 - 27 Sand, gray, fine to medium, clayey, very silty; oxidized, saturated; some coal fragments; hit rocks at 27 feet, could not penetrate, abandoned hole

87
TEST HOLE NUMBER: 699
LOCATION: 11T7N-6SW-26CCDC
LEGAL LOCATION: SW SE SE SW sec. 28, T. 117 N., R. 65 W.
20 - 24 Sand, orange-brown, clayey, very silty, pebbly; oxidized, moist

TEST HOLE NUMBER: 700
LOCATION: 11T7N-6SW-30AAA
LEGAL LOCATION: NE NE NE NE sec. 30, T. 117 N., R. 65 W.
5 - 16 Sand, brown, very fine-grained, silty; oxidized, dry; some pebbles

TEST HOLE NUMBER: 701
LOCATION: 11T7N-6SW-35CCDC
LEGAL LOCATION: SW SE SE SE sec. 30, T. 117 N., R. 65 W.
1 - 7 Sand, brown, fine to medium, slightly silty; dry; clean, some mixture at 6 feet

TEST HOLE NUMBER: 702
LOCATION: 11T7N-6SW-02DODA
LEGAL LOCATION: NE SE SE SE sec. 32, T. 117 N., R. 65 W.
9 - 15 Gravel, brown, clayey, silty; oxidized, saturated
15 - 20 Sand, brown, clayey, silty; oxidized, saturated

TEST HOLE NUMBER: 702
LOCATION: 11T8N-6OW-00AAA
LEGAL LOCATION: NE NE NE NE sec. 32, T. 118 N., R. 60 W.
12 - 35 Sand, green to gray-black, fine to medium, well-sorted; much quartz, some shale pebbles, uses water

TEST HOLE NUMBER: 704
LOCATION: 11T8N-6OW-00BBBA
LEGAL LOCATION: NE NW NW NW sec. 23, T. 118 N., R. 60 W.
6 - 14 Sand, dark-brown, fine to medium, very silty, slightly clayey, very gravelly; oxidized, moist, saturated at 1.0 feet
14 - 20 Gravel, dark-brown, medium to coarse, well-rounded, very clayey, sandy; oxidized, saturated
20 - 24 Sand and gravel, gray, fine to medium sand, medium to coarse gravel, very clayey; oxidized, saturated

TEST HOLE NUMBER: 705
LOCATION: 11T8N-6OW-03BBBB
LEGAL LOCATION: NW NW NW NW sec. 33, T. 118 N., R. 60 W.
6 - 13 Sand, tan-brown, fine to medium; some silt, very clean, oxidized, dry
13 - 18 Sands, red-brown, fine to medium; some silt, oxidized, moist
16 - 32 Sand, brown, fine to medium, slightly clayey; some silt, oxidized, moist, saturations between 20 and 22 feet

TEST HOLE NUMBER: 706
LOCATION: 11T8N-6OW-35AAA
LEGAL LOCATION: NE NE NE NE sec. 35, T. 118 N., R. 60 W.
10 - 20 Sand, brown, fine-grained, clayey, silty; saturated
20 - 26 Sand, brown-gray, fine-grained, silty, gravelly

88
TEST HOLE NUMBER: 707
LOCATION: 119N-66W-20CCCC
LEGAL LOCATION: SW SW SW SW sec. 36, T. 118 N., R. 60 W.
8 - 22 Sand and gravel, brown, coarse sand, fine to medium gravel; oxidized

TEST HOLE NUMBER: 708
LOCATION: 119N-61W-02CCCC
LEGAL LOCATION: SW SW SW SE sec. 02, T. 118 N., R. 61 W.
2 - 7 Sand, brown, fine to medium, slightly clayey, very silty, very pebbly; oxidized, dry
9 - 30 Sand, brown, fine to medium, very clayey, very silty, oxidized, moist at 11 feet, saturated at 14 feet

TEST HOLE NUMBER: 709
LOCATION: 119N-61W-14CCDD
LEGAL LOCATION: SE SE SW SW sec. 14, T. 118 N., R. 61 W.
0 - 7 Sand, brown, fine to medium, slightly silty; oxidized, moist, some pebbles
16 - 24 Sand, brown, fine, very silty, oxidized, saturated, some pebbles
24 - 27 Sand, olive-green-brown, fine to medium, very silty; mostly oxidized, some pebbles; could not penetrate past 27 feet, abandoned hole

TEST HOLE NUMBER: 710
LOCATION: 119N-61W-33CDSD
LEGAL LOCATION: SE NW SE SW sec. 23, T. 118 N., R. 61 W.
8 - 25 Sand, red

TEST HOLE NUMBER: 711
LOCATION: 119N-61W-24BBBB
LEGAL LOCATION: NW NW NW NW sec 24, T. 118 N., R. 61 W.
2 - 12 Sand, brown, fine to medium, silty, clayey; oxidized
15 - 24 Sand and gravel; brown, coarse sand, fine gravel

TEST HOLE NUMBER: 712
LOCATION: 119N-61W-34CCDD
LEGAL LOCATION: SE SE SE SE sec. 34, T. 118 N., R. 61 W.
1 - 4 Sand, coarse

TEST HOLE NUMBER: 713
LOCATION: 119N-66W-16CCDD
LEGAL LOCATION: SW SW SW SW sec. 16, T. 118 N., R. 62 W.
3 - 8 Sand, dark-brown, fine to medium, clayey, very silty, pebbly; moist
6 - 15 Sand, light-brown, fine to medium, slightly silty, pebbly, oxidized, moist
15 - 30 Sand, light-brown, fine to medium, slightly clayey, very silty; some pebbles, becoming slightly more coarse with depth

TEST HOLE NUMBER: 714
LOCATION: 119N-66W-17CDDD
LEGAL LOCATION: SE SE SE SE sec. 17, T. 118 N., R. 62 W.
8 - 10 Gravel, brown
16 - 43 Sand, fine, with clay and coal
TEST HOLE NUMBER: 71A
LOCATION: 11N-62W-17DDDD 2
LEGAL LOCATION: SE SE SE SE sec. 17, T. 118 N., R. 62 W.

8 - 10 Gravel, medium; highly oxidized
24 - 44 Sand, gray, fine to medium; unoxidized, becomes more clayey with depth

TEST HOLE NUMBER: 71B
LOCATION: 11N-62W-32DDDD
LEGAL LOCATION: SE SE SE SE sec. 32, T. 118 N., R. 62 W.

17 - 20 Gravel, fine, sandy; highly oxidized
26 - 39 Sand and gravel, coarse sand grading to a coarse gravel, much quartz

TEST HOLE NUMBER: 71C
LOCATION: 11N-62W-34DDDD
LEGAL LOCATION: SE SE SE SE sec. 34, T. 118 N., R. 62 W.

20 - 75 Sand and gravel, medium to coarse, with coal, excellent material

TEST HOLE NUMBER: 71D
LOCATION: 11N-64W-12DDDD
LEGAL LOCATION: SE SE SE SE sec. 12, T. 118 N., R. 64 W.

0 - 7 Sand, fine; oxidized, some silt, water-laid (lake deposit)

TEST HOLE NUMBER: 71E
LOCATION: 11N-64W-21BCCCC
LEGAL LOCATION: SW SW SW NW sec. 21, T. 119 N., R. 64 W.

3 - 10 Sand, brown, medium; oxidized

TEST HOLE NUMBER: 720
LOCATION: 11N-64W-91DB
LEGAL LOCATION: NW SE sec. 21, T. 118 N., R. 64 W.

23 - 39 Sand and gravel

TEST HOLE NUMBER: 721
LOCATION: 11N-64W-22CC 1
LEGAL LOCATION: SW SW sec. 22, T. 118 N., R. 64 W.

11 - 27 Sand, brown, fine
28 - 39 Sand, blue, fine (silt)

TEST HOLE NUMBER: 722
LOCATION: 11N-64W-22CC 2
LEGAL LOCATION: SW SW sec. 22, T. 118 N., R. 64 W.

11 - 27 Sand, brown, very fine, silty

TEST HOLE NUMBER: 723
LOCATION: 11N-64W-32DDDD
LEGAL LOCATION: SE SE SE SE sec. 32, T. 118 N., R. 64 W.

0 - 10 Sand, yellowish-brown, fine, silty
25 - 37 Sand, gray, fine; unoxidized
<table>
<thead>
<tr>
<th>TEST HOLE NUMBER: 724</th>
<th>LOCATION: 119N-64W-33CC</th>
<th>LEGAL LOCATION: SW SW SE SE sec. 33, T. 118 N., R. 64 W.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 2 Sand, brown, clayey, very silty; some pebbles</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER: 725</th>
<th>LOCATION: 119N-65W-07CC</th>
<th>LEGAL LOCATION: NW NW SW SW sec. 07, T. 118 N., R. 65 W.</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 - 30 Sand, brown, fine to medium, slightly clayey; very silty; oxidized, saturated, becoming gravelly with depth; roots at 24 feet</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 10 Sand, fine to medium; oxidized, some silt and clay, water-laid, slightly permeable in part</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 - 15 Sand, poorly sorted; oxidized, interbedded with sandy and clayey silt, permeable in part</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 - 20 Sand, poorly sorted; unoxidized, some fine gravel and silt, moderately permeable, water-laid; 0 - 25 Sand, fine, silty, clayey; unoxidized, water-laid, peaty in part, not very permeable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 - 26 Sand, poorly sorted; silty, clayey; unoxidized, some fine gravel, slightly permeable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26 - 32 Sand and silt, fine sand, clayey; unoxidized, slightly permeable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER: 727</th>
<th>LOCATION: 119N-65W-10BB</th>
<th>LEGAL LOCATION: NE NW NW sec. 10, T. 118 N., R. 65 W</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 - 18 Sand, brown, fine-grained, slightly clayey; very silty; oxidized, moist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 - 28 Sand, brown, fine-grained, clayey; very silty; oxidized, saturated, unable to continue drilling due to machine trouble</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER: 728</th>
<th>LOCATION: 119N-65W-10CC</th>
<th>LEGAL LOCATION: SW SW SW SW sec. 10, T. 118 N., R. 65 W</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 - 14 Sand, silt; oxidized, some clay, water-laid, slightly permeable(?)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 - 25 Sand and silt; clayey silt; oxidized; water-laid sand and silt at 21.5 to 22.5 feet; oxidized (III)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 - 30 Sand, poorly sorted and angular pebbles; some silt and clay, probably permeable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER: 729</th>
<th>LOCATION: 119N-65W-10CCC 2</th>
<th>LEGAL LOCATION: SW SW SW SW sec. 10, T. 118 N., R. 65 W</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 14 Sand, silt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 - 25 Sand, clayey</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER: 730</th>
<th>LOCATION: 119N-65W-11BAA</th>
<th>LEGAL LOCATION: NE NE NE NW sec. 11, T. 118 N., R. 65 W</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 - 8 Sand, brown, fine to medium, silty, pebbly; oxidized, dry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 - 11 Sand, orange-brown, fine to medium, slightly silty; oxidized, dry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 - 16 Sand, dark brown, fine to medium, slightly silty, gravelly, pebbly, dry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 - 37 Sand, brown, fine-grained, very silty; some clay content with depth, saturated at 28 feet</td>
<td></td>
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</tr>
</tbody>
</table>

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<thead>
<tr>
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<tbody>
<tr>
<td>51</td>
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<tr>
<td>TEST HOLE NUMBER</td>
<td>LOCATION</td>
<td>LEGAL LOCATION</td>
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<td>TEST HOLE NUMBER</td>
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<td>LEGAL LOCATION</td>
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<td>TEST HOLE NUMBER</td>
<td>LOCATION</td>
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<tr>
<td>TEST HOLE NUMBER</td>
<td>740</td>
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<tr>
<td>------------------</td>
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<td></td>
</tr>
<tr>
<td>LOCATION: 119N-45W-23AAAA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEGAL LOCATION: NE NE NE sec. 23, T. 119 N., R. 60 W.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 - 14 Sand and gravel, coarse sand, coarse gravel, highly oxidized, cobbles from 13 to 14 feet</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER</th>
<th>741</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION: 119N-45W-23AAAA 2</td>
<td></td>
</tr>
<tr>
<td>LEGAL LOCATION: NE NE NE sec. 23, T. 119 N., R. 60 W.</td>
<td></td>
</tr>
<tr>
<td>6 - 7 Sand, orange-brown, slightly clayey, very silty, slightly pebbly, oxidized, dry</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER</th>
<th>742</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION: 119N-45W-04C2DC</td>
<td></td>
</tr>
<tr>
<td>LEGAL LOCATION: SW SW SW SW sec. 24, T. 119 N., R. 60 W.</td>
<td></td>
</tr>
<tr>
<td>8 - 20 Sand, medium</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER</th>
<th>743</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION: 119N-61W-02AAAA</td>
<td></td>
</tr>
<tr>
<td>LEGAL LOCATION: NE NE NE sec. 02, T. 119 N., R. 61 W.</td>
<td></td>
</tr>
<tr>
<td>0 - 12 Sand, yellow-brown, fine, silty, clayey, oxidized</td>
<td></td>
</tr>
<tr>
<td>12 - 18 Sand and gravel, coarse sand, fine gravel, oxidized</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER</th>
<th>744</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION: 119N-61W-23BBBA</td>
<td></td>
</tr>
<tr>
<td>LEGAL LOCATION: NE NW NW NW sec. 23, T. 119 N., R. 61 W.</td>
<td></td>
</tr>
<tr>
<td>4 - 6 Gravel, medium; poor return</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER</th>
<th>745</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION: 119N-61W-25CDDC</td>
<td></td>
</tr>
<tr>
<td>LEGAL LOCATION: SE SW SE SW sec. 25, T. 119 N., R. 61 W.</td>
<td></td>
</tr>
<tr>
<td>5 - 10 Sand, orange-brown, fine to medium, very clayey, very silty; oxidized, moist, some pebbles</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER</th>
<th>746</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION: 119N-61W-25BBAB</td>
<td></td>
</tr>
<tr>
<td>LEGAL LOCATION: NW NW NW NW sec. 26, T. 119 N., R. 61 W.</td>
<td></td>
</tr>
<tr>
<td>2 - 10 Sand, light-brown, fine to medium, very clayey, very silty, pebbly; oxidized, moist</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER</th>
<th>747</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION: 119N-61W-26CDDC</td>
<td></td>
</tr>
<tr>
<td>LEGAL LOCATION: SW SW SE SW sec. 26, T. 119 N., R. 61 W.</td>
<td></td>
</tr>
<tr>
<td>1 - 6 Gravel, brown, medium to coarse, silty</td>
<td></td>
</tr>
<tr>
<td>11 - 36 Sand, brown, fine to medium, very clayey, very silty; oxidized, moist, saturated at 26 feet</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER</th>
<th>748</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION: 119N-62W-31CCCC</td>
<td></td>
</tr>
<tr>
<td>LEGAL LOCATION: SW SW SW SW sec. 31, T. 119 N., R. 62 W.</td>
<td></td>
</tr>
<tr>
<td>23 - 30 Sand and gravel, brown, coarse sand, fine gravel; oxidized</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST HOLE NUMBER</th>
<th>749</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION: 119N-62W-3GCCCC</td>
<td></td>
</tr>
<tr>
<td>LEGAL LOCATION: SW SW SW SW sec. 33, T. 119 N., R. 62 W.</td>
<td></td>
</tr>
</tbody>
</table>

93
20 - 23 Sand and gravel, coarse sand, fine to coarse gravel; cobble at 22 feet

TEST HOLE NUMBER: 750
LOCATION: 119N-63W-03ABBC
LEGAL LOCATION: SW NW NW NE sec. 03, T. 119 N., R. 63 W.

4 - 8 Sand, brown, fine-grained, slightly clayey, very silty; oxidized, dry

TEST HOLE NUMBER: 751
LOCATION: 119N-63W-210ADD
LEGAL LOCATION: SE SE NE SE sec. 21, T. 119 N., R. 63 W.

16 - 19 Sand, light-brown, fine-grained, very clayey, very silty; oxidized, dry
21 - 24 Sand, light-brown, clayey, very silty; oxidized, coarse

TEST HOLE NUMBER: 752
LOCATION: 119N-44W-17AAAA
LEGAL LOCATION: NE NE NE NE sec. 17, T. 119 N., R. 64 W.

10 - 26 Sand, brown, fine to medium, slightly clayey, very silty; oxidized, saturated at 14 feet

TEST HOLE NUMBER: 753
LOCATION: 119N-64W-20ABBB
LEGAL LOCATION: NW NW NW NE sec. 30, T. 119 N., R. 64 W.

16 - 30 Sand, brown, fine-grained, very silty; oxidized, saturated at 20 feet

TEST HOLE NUMBER: 754
LOCATION: 119N-65W-02BBB
LEGAL LOCATION: NW NW NW NW sec. 02, T. 119 N., R. 65 W.

14 - 28 Sand, gray, medium to coarse; some fine gravel

TEST HOLE NUMBER: 755
LOCATION: 119N-45W-03BBBB
LEGAL LOCATION: NW NW NW NW sec. 03, T. 119 N., R. 65 W.

7 - 28 Sand, brown, coarse; some fine gravel, grades to a coarse gravel, much shale and coal; oxidized

TEST HOLE NUMBER: 756
LOCATION: 119N-45W-04BBBB
LEGAL LOCATION: NE NW NW NW sec. 04, T. 119 N., R. 65 W.

10 - 21 Sand, gray, coarse, gravelly
26 - 36 Sand, brown and gray, fine, clayey; drilled very fast

TEST HOLE NUMBER: 757
LOCATION: 119N-45W-04CAAD
LEGAL LOCATION: SE NE NE NE SW sec. 04, T. 119 N., R. 65 W.

10 - 12 Sand and gravel, brown, medium to coarse sand, fine to medium gravel, clayey; silty; oxidized, moist
12 - 14 Sand, gray-brown, fine to medium, clayey, silty, pebbly; dry
14 - 16 Sand and gravel, brown, fine to coarse sand, fine to medium gravel, silty, clayey; oxidized, moist
16 - 27 Sand, brown, fine to medium, silty, clayey, gravelly; oxidized, saturated at 17 feet
27 - 48 Sand, gray-brown, very silty, clayey; some gravel, some coal, saturated
TEST HOLE NUMBER: 758
LOCATION: 119N-6SW-04CC02A
LEGAL LOCATION: NE SE NW SW sec. 04, T. 119 N., R. 65 W.

3 - 11 Sand, brown, fine to medium; some silt, some clay; oxidized, dry
14 - 16 Sand, brown, fine to medium; very silt; very pebbly; some clay, oxidized, moist

TEST HOLE NUMBER: 755
LOCATION: 119N-6SW-04CCDD
LEGAL LOCATION: SE SE SE SW sec. 04, T. 119 N., R. 65 W.

11 - 16 Sand, brown, fine to medium; silty; gravelly; oxidized, dry
17 - 36 Sand, brown, fine to medium; very silt; oxidized; dry; more clay with depth

TEST HOLE NUMBER: 760
LOCATION: 119N-6SW-05DAAD
LEGAL LOCATION: SE NE SE SE sec. 05, T. 119 N., R. 65 W.

4 - 56 Sand, brown, fine to coarse, silty, slightly clayey, very pebbly; oxidized; saturated at 26 feet

TEST HOLE NUMBER: 761
LOCATION: 119N-6SW-06CDCC
LEGAL LOCATION: SW SW SE SW sec. 06, T. 119 N., R. 65 W.

19 - 26 Sand, brown, fine to medium; highly silty; oxidized, dry
25 - 30 Sand, dark-brown, slightly clayey, very silty, very pebbly; oxidized, moist

TEST HOLE NUMBER: 762
LOCATION: 119N-6SW-09CDCC
LEGAL LOCATION: SW SW SE SW sec. 09, T. 119 N., R. 65 W.

6 - 11 Sand, brown, fine to medium, slightly silty; some pebbles; oxidized, dry
16 - 20 Sand, brown, fine to medium, slightly clayey; very silt; oxidized, dry
27 - 23 Sand, dark-brown, fine to medium; very clayey; ven; silt; moist

TEST HOLE NUMBER: 763
LOCATION: 119N-6SW-09CD01
LEGAL LOCATION: SE SE SE SE sec. 09, T. 119 N., R. 65 W.

2 - 29 Sand, brown, fine to medium, slightly silty; oxidized, moist; saturated at 16 feet

TEST HOLE NUMBER: 764
LOCATION: 119N-6SW-12BABB
LEGAL LOCATION: NW NW NE NW sec. 12, T. 119 N., R. 65 W.

11 - 15 Sand, brown, fine to medium; very silt; some pebbles; oxidized, saturated
15 - 21 Sand, gray, fine to medium; very silt; some pebbles; unoxidized

TEST HOLE NUMBER: 765
LOCATION: 119N-6SW-15BBBB
LEGAL LOCATION: NW NW NW NW sec. 15, T. 119 N., R. 65 W.

8 - 25 Sand, fine

TEST HOLE NUMBER: 766
LOCATION: 119N-6SW-17DC
LEGAL LOCATION: SW SW sec. 17, T. 119 N., R. 65 W.

2 - 5 Sand
<table>
<thead>
<tr>
<th>TEST HOLE NUMBER</th>
<th>LOCATION</th>
<th>LEGAL LOCATION</th>
<th>Sand, clayey</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 - 11</td>
<td>767</td>
<td>NE NE NW NE sec. 15, T. 119 N., R. 65 W.</td>
<td>7 - 10 Sand, brown, fine-grained, clayey, very silty; oxidized, dry</td>
</tr>
<tr>
<td>11 - 12</td>
<td>768</td>
<td>NW NW NW NW sec. 21, T. 119 N., R. 65 W.</td>
<td>23 - 31 Sand, grey, fine to coarse; unoxidized</td>
</tr>
<tr>
<td>7 - 9</td>
<td>769</td>
<td>NE SE NE sec. 22, T. 119 N., R. 65 W.</td>
<td>24 - 45 Sand, brown, fine to medium, very silty; oxidized, moist, saturated at 36 feet</td>
</tr>
<tr>
<td>7 - 9</td>
<td>770</td>
<td>NW NW NW NW sec. 24, T. 119 N., R. 65 W.</td>
<td>4 - 10 Sand, brown, very clayey, very silty, slightly pebbly; oxidized, saturated</td>
</tr>
<tr>
<td>7 - 9</td>
<td>771</td>
<td>NW NW NW NW sec. 24, T. 119 N., R. 65 W.</td>
<td>4 - 10 Sand, brown, very clayey, very silty, slightly pebbly; oxidized, saturated</td>
</tr>
<tr>
<td>4 - 10</td>
<td>772</td>
<td>NE NE NE sec. 29, T. 119 N., R. 65 W.</td>
<td>15 - 26 Sand, brown, fine to medium, clayey, very silty; oxidized, moist, saturated at 19 feet</td>
</tr>
<tr>
<td>15 - 26</td>
<td>773</td>
<td>NW NW SW SW sec. 31, T. 119 N., R. 65 W.</td>
<td>15 - 26 Sand, brown, fine to medium, clayey, very silty; oxidized, moist, saturated at 19 feet</td>
</tr>
<tr>
<td>16 - 22</td>
<td>774</td>
<td>NE NW sec. 34, T. 119 N., R. 65 W.</td>
<td>4 - 5 Sand, clayey</td>
</tr>
<tr>
<td>10 - 15</td>
<td>775</td>
<td>SE SW SE SE sec. 34, T. 119 N., R. 65 W.</td>
<td>11 - 13 Sand</td>
</tr>
<tr>
<td>10 - 15</td>
<td>775</td>
<td>SE SW SE SE sec. 34, T. 119 N., R. 65 W.</td>
<td>10 - 15 Sand, brown, fine to medium, slightly silty; some pebbles, oxidized, moist</td>
</tr>
<tr>
<td>Test HOLE NUMBER</td>
<td>LOCATION</td>
<td>LEGAL LOCATION</td>
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</tr>
<tr>
<td>776</td>
<td>119N-65W-35DDDD</td>
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<table>
<thead>
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<th>Sample No.</th>
<th>Description</th>
<th>Color/Texture</th>
<th>Condition</th>
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<tbody>
<tr>
<td>8</td>
<td>Sand, gravel, brown, coarse sand</td>
<td>brown</td>
<td>dry</td>
</tr>
<tr>
<td>13</td>
<td>Sand and gravel, brown, coarse sand, fine to medium gravel</td>
<td>brown</td>
<td>highly oxidized</td>
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<tr>
<td>20</td>
<td>Sand, brown, fine to medium</td>
<td>brown</td>
<td>moist</td>
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<tr>
<td>22</td>
<td>Sand, orange-brown, fine-grained, clayey</td>
<td>brown</td>
<td>silty; oxidized, dry</td>
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<tr>
<td>28</td>
<td>Sand, brown, fine-grained, clayey, silty</td>
<td>brown</td>
<td>oxidized, moist</td>
</tr>
<tr>
<td>5</td>
<td>Sand, brown, fine to medium, silty, some pebbles</td>
<td>brown</td>
<td>dry</td>
</tr>
<tr>
<td>14</td>
<td>Sand, brown, fine to medium, silty, some pebbles</td>
<td>brown</td>
<td>dry</td>
</tr>
<tr>
<td>21</td>
<td>Sand, brown, fine to medium, silty, some pebbles</td>
<td>brown</td>
<td>dry</td>
</tr>
<tr>
<td>22</td>
<td>Sand, brown, fine to medium, clayey, very silty</td>
<td>brown</td>
<td>oxidized, dry</td>
</tr>
<tr>
<td>28</td>
<td>Sand, brown, fine to medium, clayey, very silty, slightly silty</td>
<td>brown</td>
<td>oxidized, saturated</td>
</tr>
<tr>
<td>20</td>
<td>Sand, brown, fine to medium, very clayey, very silty</td>
<td>brown</td>
<td>oxidized, saturated</td>
</tr>
<tr>
<td>27</td>
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<td>brown</td>
<td>oxidized, dry</td>
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<tr>
<td>48</td>
<td>Sand, gray, slightly silty, unoxidized</td>
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<td>saturated</td>
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<tr>
<td>1</td>
<td>Sand, red-brown, fine to medium, clayey, very silty</td>
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<td>oxidized, dry</td>
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<tr>
<td>7</td>
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<td>oxidized, saturated</td>
</tr>
<tr>
<td>9</td>
<td>Sand, brown, medium to coarse</td>
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<td>oxidized, saturated</td>
</tr>
<tr>
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<td>oxidized, saturated, dry</td>
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<td>23</td>
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<td>oxidized, saturated, dry</td>
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<tr>
<td>10</td>
<td>Sand, brown, fine-grained, very silty</td>
<td>brown</td>
<td>oxidized, dry</td>
</tr>
<tr>
<td>14</td>
<td>Sand, brown, fine-grained, very silty</td>
<td>brown</td>
<td>oxidized, dry</td>
</tr>
<tr>
<td>10</td>
<td>Sand, green-brown, slightly clayey</td>
<td>brown</td>
<td>oxidized, saturated</td>
</tr>
</tbody>
</table>
LEGAL LOCATION: NE SE NE NE sec. 01, T. 120 N., R. 62 W.

1 - 5 Sand, brown, fine-grained, clayey, very silty; oxidized, moist

TEST HOLE NUMBER: 785
LOCATION: 120N-62W-09AADA

LEGAL LOCATION: NE SE NE NE sec. 08, T. 120 N., R. 62 W.

6 - 16 Sand, brown, fine to medium, very silty; oxidized, saturated at 8 feet

TEST HOLE NUMBER: 786
LOCATION: 120N-62W-169BSC

LEGAL LOCATION: SW NW NW NW sec. 16, T. 120 N., R. 62 W.

6 - 12 Sand, brown fine-grained, very clayey, very silty; oxidized, dry

TEST HOLE NUMBER: 787
LOCATION: 120N-63W-069B9BB

LEGAL LOCATION: NW NW NW NW sec. 08, T. 120 N., R. 63 W.

2 - 9 Sand, yellowish-gray-brown
11 - 23 Sand, yellowish-gray-brown, very fine to fine

TEST HOLE NUMBER: 788
LOCATION: 120N-63W-22ABB

LEGAL LOCATION: NW NW NE sec. 22, T. 120 N., R. 63 W.

10 - 20 Sand, very fine, silty

TEST HOLE NUMBER: 789
LOCATION: 120N-63W-22ABB

LEGAL LOCATION: NW NW NW NE sec. 22, T. 120 N., R. 63 W.

11 - 21 Sand, yellow, fine; unoxidized and blue below 16 feet

TEST HOLE NUMBER: 790
LOCATION: 120N-63W-22ACAB

LEGAL LOCATION: NW NE SW NE sec. 26, T. 120 N., R. 62 W.

0 - 11 Sand, dark-brown, fine-grained, slightly clayey, very silty; oxidized, moist; more clay content with depth

TEST HOLE NUMBER: 791
LOCATION: 120N-49W-07AADA

LEGAL LOCATION: NE SE NE SE sec. 27, T. 120 N., R. 63 W.

6 - 10 Sand, brown, fine-grained, very silty; oxidized, dry

TEST HOLE NUMBER: 792
LOCATION: 120N-63W-31C9D2D

LEGAL LOCATION: SE SE SW SW sec. 31, T. 120 N., R. 63 W.

1 - 7 Sand, yellowish-gray-brown, silty (55)
7 - 17 Sand, yellowish-gray-brown, very fine (59)
17 - 24 Sand, yellowish-gray-brown, silty (58)

TEST HOLE NUMBER: 793
LOCATION: 120N-63W-33CDDA

LEGAL LOCATION: NE SE NE SE sec. 33, T. 120 N., R. 62 W.
<table>
<thead>
<tr>
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<th>LOCATION</th>
<th>LEGAL LOCATION</th>
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<td>796</td>
<td>120N-65W-02AB</td>
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<td>797</td>
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<td>NW NW NW NW sec 02, T. 120 N., R. 65 W.</td>
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<td>798</td>
<td>120N-65W-02CCCC</td>
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<td>SE SE SE SE sec 06, T. 120 N., R. 65 W.</td>
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<td>120N-65W-08CCBC</td>
<td>SW NW SW SW sec 08, T. 120 N., R. 65 W.</td>
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<tr>
<td>802</td>
<td>120N-65W-10CCCD</td>
<td>SW SW SW SW sec 10, T. 120 N., R. 65 W.</td>
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</table>

16 - 22 Sand, medium to coarse

15 - Sand, yellowish-gray-brown, slightly mottled, very fine, silty (VI)

16 - 23 Sand, slightly mottled yellowish-gray-brown, very fine to fine (III)

7 - 9 Sand

9 - 13 Sand, clayey

13 - 27 Sand, poorly graded

5 - 15 Sand, brown, very silty, gravely; oxidized, dry, hit rocks at 15 feet, could not penetrate, abandoned hole

24 - 40 Sand, green-brown, fine-grained, very clayey, very silty; saturated at 25 feet

15 - 35 Sand, yellow fine, silty; bedded, loess in part

3 - 34 Sand, gray-brown, fine-grained, clayey, very silty, gravely; saturated at 17 feet

0 - 5 Gravel, brown, medium to coarse, very silty, very sandy; oxidized, dry

5 - 21 Sand and gravel, brown, fine to medium sand, coarse gravel, very silty; dry

21 - 36 Sand, silty-brown, medium to coarse, slightly clayey, very silty; gravely; saturated
23 - 27 Sand, coarse; fine gravel

TEST HOLE NUMBER: 803
LOCATION: 120N-65W-14CC/CC
LEGAL LOCATION: SW SW SW NW sec. 14, T. 120 N., R. 65 W.

14 - 20 Sand, light-brown, fine-grained, clayey, very silty; some coal, saturated
20 - 43 Sand, olive-gray, fine-grained, slightly clayey, very silty; some coal, more clay content with depth

TEST HOLE NUMBER: 804
LOCATION: 120N-65W-16ADC
LEGAL LOCATION: SW SE NE sec. 16. T. 120 N., R. 65 W.

4 - 20 Sand, yellow
20 - 30 Sand

TEST HOLE NUMBER: 805
LOCATION: 120N-65W-16BBBC
LEGAL LOCATION: SW NW NW NW sec. 16. T. 120 N., R. 65 W.

10 - 21 Sand, brown, fine to medium, slightly silty; few pebbles, oxidized, dry
21 - 24 Sand, dark-brown, fine to medium, slightly silty; few pebbles, some small clay layers interbedded

TEST HOLE NUMBER: 806
LOCATION: 120N-65W-17CDDC
LEGAL LOCATION: SW SE SE SW sec. 17, T. 120 N., R. 65 W.

2 - 3 Gravel, brown, fine to medium, silty, slightly sandy; some clay; oxidized, dry
3 - 10 Sand and gravel, brown, fine to medium sand, medium to coarse gravel, very silty, slightly clayey; oxidized, dry

TEST HOLE NUMBER: 807
LOCATION: 120N-65W-17DDAD
LEGAL LOCATION: SE NE SE SE sec. 17, T. 120 N., R. 65 W.

14 - 16 Sand, brown, medium to coarse, very clayey, very silty, gravelly; oxidized, moist
23 - 46 Gravel, green-brown, coarse, slightly clayey, very silty; rocks from 39 to 41 feet, saturated, some sand

TEST HOLE NUMBER: 808
LOCATION: 120N-65W-19CDDC
LEGAL LOCATION: SW SE SW SW sec. 19, T. 120 N., R. 65 W.

12 - 14 Sand, brown, fine to medium, very silty, slightly pebbly; oxidized, dry
14 - 17 Gravel; brown, fine to medium, very silty, sandy; oxidized, dry
16 - 29 Sand, brown, fine to medium, slightly silty, pebbly; oxidized, moist

TEST HOLE NUMBER: 809
LOCATION: 120N-65W-20DDCD
LEGAL LOCATION: SE SW SE SE sec. 20, T. 120 N., R. 65 W.

15 - 21 Sand, brown, fine to medium, slightly clayey, slightly silty, gravelly; oxidized, moist
21 - 26 Gravel, brown, fine to medium, slightly clayey; oxidized, moist, more clay content with depth

TEST HOLE NUMBER: 810
LOCATION: 120N-65W-21DDDC
LEGAL LOCATION: SW SE SE SE sec. 21, T. 120 N., R. 65 W.

12 - 16 Sand, dark-brown, medium to coarse, slightly clayey, very silty; oxidized, saturated at 13 feet
21 - 24  Sand, green-brown, very silty, very pebbly; saturated

TEST HOLE NUMBER: 611
LOCATION: 120N-65W-22ARBA
LEGAL LOCATION: NE NE NW NE sec. 22, T. 120 N., R. 65 W.

14 - 56  Gravel, brown, medium to coarse, very clayey; very sandy; saturated

TEST HOLE NUMBER: 612
LOCATION: 120N-65W-23CCDC
LEGAL LOCATION: SW SE SW SW sec. 23, T. 120 N., R. 65 W.

17 - 20  Sand, dark, fine

TEST HOLE NUMBER: 613
LOCATION: 120N-65W-26BBBB
LEGAL LOCATION: NW NW NW NW sec. 26, T. 120 N., R. 65 W.

1 - 11  Sand, yellowish-gray-brown, silty, clayey (10)
13 - 24  Sand, reddish-brown and gray (10)

TEST HOLE NUMBER: 614
LOCATION: 120N-65W-26CCDC
LEGAL LOCATION: SW SW SW SW sec. 26, T. 120 N., R. 65 W.

8 - 9   Sand, silty, poorly sorted
9 - 16   Sand, fine to medium, well-sorted
16 - 26  Sand and gravel, fine gravel, poorly sorted
16 - 30  Sand, fine to medium, well-sorted; oxidized to 22 feet

TEST HOLE NUMBER: 615
LOCATION: 120N-65W-26CCDC
LEGAL LOCATION: SW SW SW SW sec. 26, T. 120 N., R. 65 W.

17 - 20  Sand, fine, silty; water-laid
20 - 25  Sand, silty, clayey poorly sorted; water-laid in part

TEST HOLE NUMBER: 616
LOCATION: 120N-65W-31CBBB
LEGAL LOCATION: SW NW NW SW sec. 31, T. 120 N., R. 65 W.

7 - 25  Sand, brown, fine-grained, slightly clayey, very silty; oxidized, moist

TEST HOLE NUMBER: 617
LOCATION: 120N-65W-32CCDC
LEGAL LOCATION: SW SW SW SW sec. 32, T. 120 N., R. 65 W.

0 - 4   Sand, clayey
16 - 19  Sand, poorly graded

TEST HOLE NUMBER: 618
LOCATION: 120N-65W-33ABAA
LEGAL LOCATION: NE NE NW NE sec. 33, T. 120 N., R. 66 W.

4 - 15  Sand, brown, fine to medium, slightly clayey, slightly silty, very pebbly; oxidized, dry

TEST HOLE NUMBER: 619
LOCATION: 120N-65W-35BBBB
LEGAL LOCATION: NW NW NW NW sec. 35, T. 120 N., R. 65 W.
TEST HOLE NUMBER: 820
LOCATION: 120N-65W-46CCCC
LEGAL LOCATION: SW SW SW SW sec. 36, T. 120 N., R. 65 W.

16 - 20 Sand, greyish-black, coarse, silty, some shale pebbles and fine gravel
26 - 32 Sand and gravel, medium

TEST HOLE NUMBER: 821
LOCATION: 120N-65W-36DDDD
LEGAL LOCATION: SE SE SE SE sec. 36, T. 120 N., R. 65 W.

3 - 5 Sand, mottled light-brown, silty, clayey (til)
5 - 15 Sand, mottled reddish-brown, very fine, silty (til)
17 - 24 Sand, dark-brown to 23 feet and slate-gray from 23 to 24 feet, very fine (til)
APPENDIX B: List of land tracts in Spink County, South Dakota, which have been bonded with the intent to mine sand and gravel.

This information is on file at the office of the Minerals and Mining Program, Department of Environment and Natural Resources in Pierre, South Dakota.

EXPLANATION:

Column Description:

a. Operator(s) name and address
b. Location - given in half and quarter sections, section number, township, and range

Land Tract 1

a. Operator(s): Dan L. Meyers – Huron
   b. Location: NE¼ sec 25, T. 114 N., R. 61 W.

Land Tract 2

a. Operator(s): Iky W. Wipf – Carpenter
   b. Location: SE¼ sec 36, T. 114 N., R. 61 W.

Land Tract 3

a. Operator(s): Iky W. Wipf – Carpenter
   b. Location: SW¼ sec 14, T. 114 N., R. 62 W.

Land Tract 4

a. Operator(s): Darrell’s Rock, Sand & Gravel – Wesington Springs
   b. Location: SE¼ sec 14, T. 114 N., R. 62 W.

Land Tract 5

a. Operator(s): Carr Towing & Construction – Clark
   b. Location: West 53½ acres NE¼ sec. 03, T. 115 N., R. 64 W.

Land Tract 6

a. Operator(s): Bower Construction Co. – Redfield
   b. Location: SE¼ sec 03, T. 115 N., R. 64 W.

Land Tract 7

a. Operator(s): Department of Transportation – Pierre
   b. Location: E½ SW¼ sec 11, T. 115 N., R. 64 W.
Land Tract 8
   a. Operator(s): Department of Transportation – Pierre
      b. Location: NW¼ sec. 21, T. 115 N., R. 65 W.

Land Tract 9
   a. Operator(s): Department of Transportation – Pierre
      b. Location: SW¼ sec. 22, T. 115 N., R. 65 W.

Land Tract 10
   a. Operator(s): Bower Construction Co. – Redfield
      b. Location: NW¼ sec. 23, T. 115 N., R. 65 W.

Land Tract 11
   a. Operator(s): Department of Transportation – Pierre
      b. Location: NW¼ sec. 27, T. 115 N., R. 65 W.

Land Tract 12
   a. Operator(s): Ily W. Wipf – Carpenter
      Spink County Highway Department – Redfield
      Department of Transportation – Pierre
      b. Location: SW¼ sec. 28, T. 115 N., R. 65 W.

Land Tract 13
   a. Operator(s): Spink County Highway Department – Redfield
      b. Location: NW¼ sec. 19, T. 117 N., R. 65 W.

Land Tract 14
   a. Operator(s): Bower Construction Co. – Redfield
      b. Location: SW¼ sec. 19, T. 117 N., R. 65 W.

Land Tract 15
   a. Operator(s): Bower Construction Co. – Redfield
      b. Location: SE¼ sec. 30, T. 117 N., R. 65 W.

Land Tract 16
   a. Operator(s): Bower Construction Co. – Redfield
      b. Location: NE¼ sec. 19, T. 119 N., R. 65 W.

Land Tract 17
   a. Operator(s): H.F. Jacobs & Son Construction, Inc. – Aberdeen
      b. Location: SW¼ sec. 08, T. 120 N., R. 65 W.