STATE OF SOUTH DAKOTA
George S. Kickelson, Governor

DEPARTMENT OF WATER AND NATURAL RESOURCES
John J. Smith, Secretary

DIVISION OF GEOLOGICAL SURVEY
Merlin J. Tipton, State Geologist

Information Pamphlet No. 38

SAND AND GRAVEL RESOURCES IN
BROOKINGS COUNTY, SOUTH DAKOTA

by

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Prepared in cooperation with the
United States Geological Survey,
East Dakota Water Development District,
South Dakota Department of Transportation,
and Brookings County

Science Center
University of South Dakota
Vermillion, South Dakota
1988
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INTRODUCTION

This pamphlet is one of a series of reports describing the geology and water resources of Brooks County. It is designed to be an uncomplicated, nontechnical aid in the search for sand and gravel deposits.

Other reports in the series include:


Report (a.) describes the availability, quality, and location of major aquifers (water-bearing deposits) in a short, easy to read, pamphlet. Report (b.) is a more technical and somewhat more exhaustive investigation of the water resources of the Counties. Report (c.) is a scientific investigation of the geology of Kingsbury and Brooks Counties.

GEOLOGIC OVERVIEW

Most of the sand and gravel deposits found in Brooks County were deposited by glacial ice or meltwater that covered the region thousands of years ago. Some sand and gravel has been deposited by streams since the retreat of the glaciers. A short description of geologic terms used in this text follows.

Glacial Till

The glaciers were large masses of ice that thousands of years ago, originated from snow accumulations to the north. These glaciers flowed southward to the area that is now Brooks County, picking up earth debris as they went. Some of this debris, a mixture of clay, silt, sand, gravel, and boulders was deposited directly from the ice. Till, the term used to describe this mixture, is also often called "blue clay" or "boulder clay." In the Brooks County area, the till 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.
Glacial Outwash

Glacial outwash is the term used to describe any deposit of glacial debris which has been washed and sorted by water flowing from melting glacier ice. The grain size of these deposits depends upon the velocity of the water which deposited them and upon the type of material. Deposits left by slow flowing streams are made up primarily of slits and clays. Very fast flowing streams may have left streambeds composed entirely of boulders. Most glacial outwash, however, is made up of an assortment of sand and gravel, with minor amounts of finer and coarser materials. Deposits of glacial outwash are a major source of sand and gravel in Brookings County.

Alluvium

Alluvium is the term used to describe the material deposited by streams since the retreat of the glaciers. Grain size of the alluvial deposits is determined by the same factors as glacial outwash. Alluvium is found in the valleys of present-day streams and can often be a good source of sand and gravel.

Terrace Deposits

Terrace deposits are flat-topped alluvial or outwash deposits that are remnants of former flood plains. The streams which made them have since cut their channels deeper and developed new flood plains at lower levels. Some of the sand and gravel found in Brookings County occurs in this type of deposit.

EXPLANATION OF TABLES

Table 1 is a list of only those test holes in which sand or gravel was encountered within 25 feet of the land surface. This table gives the location of the test hole, and the depth and description of the sand and gravel deposits. The complete logs of all the test holes drilled in Brookings county are on file at the South Dakota Geological Survey in Vermillion, South Dakota.

Table 2 is a list of sand and gravel pits on file with the South Dakota Department of Transportation, Division of Highways in Pierre, South Dakota. Where possible, this table gives the landowner and location of the pit, the thickness of overburden, the thickness of sand and gravel being mined, and the type of aggregate deposit. The actual thickness of a deposit may be greater than that which is listed in the table as being mined.
EXPLANATION OF MAP

The map shows the location of the test holes and sand and gravel pits. It also shows the towns, major highways, and major lakes, rivers, and creeks.

Test-hole data are shown on the map using four types of map symbols. A dot (•) represents a test hole in which sand or gravel was found within 25 feet of the land surface, with 0 to 5 feet of overburden. A square (□) indicates that sand or gravel was found within 25 feet of the land surface but greater than 5 feet of overburden was encountered. A large dot (○) represents an area where there are multiple test holes in which sand or gravel was encountered within 25 feet of the land surface. These three types of symbols are numbered and the pertinent test-hole information is listed in table 1. The fourth symbol is an open circle (⊙), which indicates that no sand or gravel was found within 25 feet of the land surface. Logs of these test holes are available at the South Dakota Geological Survey in Vermillion, South Dakota. Locations of the sand and gravel pits are indicated by a crossed pick and shovel (‡). The pits which are numbered are listed in table 2, and additional information is on file at the Department of Transportation, Division of Highways, in Pierre, South Dakota. No attempt was made to distinguish the inactive pits from the actively mined pits.

To aid in the delineation of the most promising areas of finding sand and gravel, the map has been divided into three area types, "good," "fair," and "poor." These three types of areas were differentiated using test-hole data, sand and gravel pit locations, soil-survey information, topographic map and aerial photo interpretation, and field observations. Areas with a "good" or "fair" probability of finding sand and gravel have been assigned a letter on the map and are discussed further in the following section.

Sand and gravel deposits found in the "good" areas are generally thick, have very little overburden, and cover a broad area. In these areas, much mining for sand and gravel has already occurred and is occurring at the present time. Sand and gravel deposits found in the "fair" areas are generally thinner, have more overburden, or are laterally discontinuous. There are sand and gravel deposits in the "poor" areas, but a very expensive and exhaustive exploration program would be needed to locate all of these deposits.

Sand and Gravel

Area "A," designated as "good," is a deposit of sands and gravels occupying a topographic low, associated with a small unnamed creek. The deposit thickens from south to north, attaining a thickness in excess of 30 feet along the County line.
Overburden thickness is predominantly 5 feet or less over the entire area.

Area "B," designated as "good," is a large body of outwash encompassing about 100 square miles within the Big Sioux River valley and three small valleys which extend west of the Big Sioux valley. Sand and gravel thicknesses in excess of 30 feet are very common over the entire area. The thickness of overburden is quite variable over the area, but seldom exceeds 5 feet.

Area "C," contains outwash deposits of sand and gravel within the Oakwood Lakes drainage area. The portion of Area "C" that has been designated as "good" has sand and gravel thicknesses of up to 79 feet, with very little overburden. The portions that are designated as "fair" have deposits which are thin and discontinuous.

Area "D," designated as "good," contains outwash deposits within the North Deer Creek valley. The deposit has an average thickness of about 12 feet for all the test holes drilled. The thickness of overburden seldom exceeded 5 feet, averaging just over 3 feet for all test holes drilled.

Area "E," designated as "good," contains about 15 square miles of outwash sand and gravel, within the valleys of two creeks, an unnamed creek to the north and Six Mile Creek to the south. A large terrace deposit connects the two valley deposits. The thickness of sand and gravel over the area is quite variable. Several test holes drilled in the downstream portions of the valley deposits, encountered in excess of 50 feet of sand and gravel. Overburden thickness averages just under 5 feet for all test holes drilled.

Area "F," designated as "fair," contains thin and discontinuous terrace remnants along the walls of the Six Mile Creek valley.

Area "G," designated as "fair," consists of several narrow melt water channels. Sand and gravel deposits are found in isolated patches along the channel floors.

Area "H," designated as "fair," contains thin and discontinuous outwash deposits within a small valley just north of Brookings.

Area "I," designated as "good," consists of outwash deposits encompassing about 25 square miles within the Deer Creek and Medary Creek valleys. The two valley deposits merge downstream to form a large outwash plain. The sand and gravel deposits found in Area "I" are very thick, and continuous over the entire area. Very coarse gravels were encountered in the upstream portion of the Deer Creek valley.
Area "J," designated as "good," is a large terrace deposit. The deposit thickens from north to south, attaining a maximum thickness of 55 feet in test hole 305.

Area "K," designated as "fair," contains thin and discontinuous deposits of sand and gravel within the valley of an unnamed creek, tributary to Medary Creek.

Area "L," designated as "fair," contains thin and discontinuous terrace remnants along the valley walls of an unnamed creek. Test hole 105 however, encountered 20 feet of sand and gravel.

Area "M," designated as "good," is a segment of a much larger outwash deposit extending into Lake and Moody Counties. Sand and gravel deposits are found in the low areas around the perimeter of Lake Campbell.

ECONOMIC CONSIDERATIONS

It should be emphasized that this study is quite general and should be used only as a guide to further exploration and development of the sand and gravel resources. The development of a specific site will depend upon material specifications for the desired use, development costs, transportation costs, and future markets.
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<tbody>
<tr>
<td></td>
<td>1.0 - 5.0</td>
<td>GRAVEL, BROWN, MEDIUM, SANDY; DRY, OXIDIZED</td>
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<td>4.0 - 37.0</td>
<td>SAND, BROWN, MEDIUM TO COARSE; DRY, OXIDIZED, SOME GRAVEL, SATURATED AT 10 FEET</td>
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<tr>
<th>TEST HOLE NUMBER:</th>
<th>3</th>
<th>LOCATION: 109N-47W-05AABB</th>
<th>LEGAL LOCATION: NW NE NE NE SEC. 05, T. 109 N., R. 47 W.</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>1.0 - 6.0</td>
<td>SAND, BROWN, MEDIUM, GRAVELLY, POORLY SORTED; DRY, OXIDIZED</td>
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<tbody>
<tr>
<td></td>
<td>1.0 - 21.0</td>
<td>SAND, BROWN, MEDIUM, SILTY; MOIST, OXIDIZED, SOME GRAVEL</td>
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<td>5.0 - 16.0</td>
<td>GRAVEL, LIGHT-BROWN, COARSE, POORLY SORTED; DRY, OXIDIZED</td>
<td></td>
</tr>
</tbody>
</table>
TEST HOLE NUMBER: 6
LOCATION: 109N-47W-08DCDD
LEGAL LOCATION: SE SE SW SE SEC. 08, T. 109 N., R. 47 W.

5.0 - 14.0 GRAVEL, BROWN, FINE TO MEDIUM, SANDY; OXIDIZED

TEST HOLE NUMBER: 7
LOCATION: 109N-47W-08DDAD
LEGAL LOCATION: SE SE SE SE SEC. 08, T. 109 N., R. 47 W.

6.6 - 15.0 GRAVEL, BROWN, FINE TO MEDIUM; SOME COARSE SAND

TEST HOLE NUMBER: 8
LOCATION: 109N-47W-08DDDB
LEGAL LOCATION: SE NW SE SE SEC. 08, T. 109 N., R. 47 W.

4.0 - 7.0 SAND, BROWN, MEDIUM, GRAVELLY
7.0 - 14.0 GRAVEL, BROWN, FINE TO MEDIUM, SANDY

TEST HOLE NUMBER: 9
LOCATION: 109N-47W-08DCOB
LEGAL LOCATION: NW SE SE SE SEC. 08, T. 109 N., R. 47 W.

3.0 - 7.0 SAND, BROWN, FINE, SILTY
7.0 - 15.0 GRAVEL, BROWN, FINE TO MEDIUM, SANDY; SOME COARSE GRAVEL

TEST HOLE NUMBER: 10
LOCATION: 109N-47W-08DDDC
LEGAL LOCATION: SW SE SE SE SEC. 08, T. 109 N., R. 47 W.

5.0 - 21.0 GRAVEL, BROWN, FINE TO MEDIUM, SANDY; OXIDIZED

TEST HOLE NUMBER: 11
LOCATION: 109N-47W-08DDDD 1
LEGAL LOCATION: SE SE SE SEC. 08, T. 109 N., R. 47 W.

3.0 - 5.0 SAND, BROWN, MEDIUM; SATURATED, OXIDIZED, SOME GRAVEL

7
8.0 - 23.0 GRAVEL, GRAY, MEDIUM; SATURATED, CLEAN, UNOXIDIZED

* * *

TEST HOLE NUMBER: 12
LOCATION: 109N-47W-09AAAA
LEGAL LOCATION: NE NE NE NE SEC. 09, T. 109 N., R. 47 W.

1.0 - 10.0 GRAVEL, MEDIUM
10.0 - 14.0 GRAVEL; WITH CLAY
14.0 - 29.0 GRAVEL, MEDIUM TO COARSE; SOME CLAY

* * *

TEST HOLE NUMBER: 13
LOCATION: 109N-47W-09BAA
LEGAL LOCATION: NE NE NW SEC. 09, T. 109 N., R. 47 W.

4.0 - 17.0 SAND AND GRAVEL

* * *

TEST HOLE NUMBER: 14
LOCATION: 109N-47W-10ABAB
LEGAL LOCATION: NW NE NW NE SEC. 10, T. 109 N., R. 47 W.

1.0 - 17.0 GRAVEL, BROWN, COARSE, VERY SANDY; DRY, OXIDIZED, SATURATED AT 8 FEET

* * *

TEST HOLE NUMBER: 15
LOCATION: 109N-47W-10CCCC
LEGAL LOCATION: SW SW SW SW SEC. 10, T. 109 N., R. 47 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE

1.0 - 25.0 SAND AND GRAVEL, MEDIUM SAND TO COARSE PEBBLES

* * *

TEST HOLE NUMBER: 16
LOCATION: 109N-47W-16BBAB
LEGAL LOCATION: NW NW NW NW SEC. 16, T. 109 N., R. 47 W.

5.0 - 14.0 GRAVEL, BROWN, FINE TO MEDIUM, SANDY; OXIDIZED

* * *

TEST HOLE NUMBER: 17
LOCATION: 109N-47W-16BBBB
LEGAL LOCATION: NW NW NW NW SEC. 16, T. 109 N., R. 47 W.
1.0 - 19.0 SAND AND GRAVEL, BROWN; GRADES FROM A FINE SAND TO A MEDIUM GRAVEL

* * *

TEST HOLE NUMBER: 18
LEGAL LOCATION: NW NW NW NW SEC. 16, T. 109 N., R. 47 W.
4.0 - 9.0 SAND, BLACKISH-BROWN, FINE TO MEDIUM, SILTY
9.0 - 16.0 GRAVEL, BROWN, FINE TO MEDIUM, SANDY; OXIDIZED

* * *

TEST HOLE NUMBER: 19
LEGAL LOCATION: NW SW NW NW SEC. 16, T. 109 N., R. 47 W.
1.0 - 14.0 SAND AND GRAVEL, BROWN; GRADES FROM A MEDIUM SAND TO A COARSE GRAVEL

* * *

TEST HOLE NUMBER: 20
LEGAL LOCATION: 109N-47W-16BBCC
2.0 - 9.0 GRAVEL, BROWN, MEDIUM TO COARSE; OXIDIZED

* * *

TEST HOLE NUMBER: 21
LEGAL LOCATION: 109N-47W-16BBBD
4.0 - 10.0 GRAVEL, BROWN, MEDIUM TO COARSE; OXIDIZED

* * *

TEST HOLE NUMBER: 22
LEGAL LOCATION: 109N-47W-16CDDD
6.0 - 20.0 GRAVEL, RED-BROWN, COARSE, SANDY; OXIDIZED, MOIST
20.0 - 30.0 GRAVEL, RED-BROWN, COARSE, SANDY; OXIDIZED, SATURATED

* * *

TEST HOLE NUMBER: 23
LOCATION: 109N-47W-17AAAC
LEGAL LOCATION: SW NE NE NE SEC. 17, T. 109 N., R. 47 W.

4.0 - 9.0 GRAVEL, BROWN, FINE TO MEDIUM, SANDY; SOME COARSE GRAVEL, OXIDIZED

* * *

TEST HOLE NUMBER: 24
LOCATION: 109N-47W-17AAAD
LEGAL LOCATION: SE NE NE NE SEC. 17, T. 109 N., R. 47 W.

4.0 - 12.0 GRAVEL, BROWN, FINE TO MEDIUM, SANDY; OXIDIZED

* * *

TEST HOLE NUMBER: 25
LOCATION: 109N-47W-17AAAD 1
LEGAL LOCATION: SE NE NE NE SEC. 17, T. 109 N., R. 47 W.

6.0 - 14.0 GRAVEL, DARK-BROWN, MEDIUM TO COARSE, SANDY; SATURATED

* * *

TEST HOLE NUMBER: 26
LOCATION: 109N-47W-17AAAD 2
LEGAL LOCATION: SE NE NE NE SEC. 17, T. 109 N., R. 47 W.

5.0 - 16.0 GRAVEL, BLACKISH-GRAY, SILTY, SANDY; SATURATED

* * *

TEST HOLE NUMBER: 27
LOCATION: 109N-47W-17AADC
LEGAL LOCATION: SW SE NE NE SEC. 17, T. 109 N., R. 47 W.

3.0 - 11.0 GRAVEL, BROWN, FINE TO MEDIUM, SANDY; SOME COARSE GRAVEL, OXIDIZED

* * *

TEST HOLE NUMBER: 28
LOCATION: 109N-47W-17DB
LEGAL LOCATION: NW SE SE SEC. 17, T. 109 N., R. 47 W.

1.0 - 6.0 SAND AND GRAVEL

* * *

TEST HOLE NUMBER: 29
LOCATION: 109N-47W-20AADC
LEGAL LOCATION: SW SE NE SEC. 26, T. 109 N., R. 47 W.
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<tr>
<td>LOCATION: 109N-47W-20ADA</td>
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<tr>
<td>LEGAL LOCATION: NE SE NE SEC. 20, T. 109 N., R. 47 W.</td>
</tr>
<tr>
<td>4.0 - 7.0 SAND, LIGHT-BROWN, COARSE, SILTY; OXIDIZED, SATURATED</td>
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<th>TEST HOLE NUMBER: 31</th>
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<td>LOCATION: 109N-47W-20DDDD</td>
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<td>LEGAL LOCATION: SE SE SE SE SEC. 20, T. 109 N., R. 47 W.</td>
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<tr>
<td>4.0 - 9.0 SAND, MEDIUM</td>
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<tr>
<td>9.0 - 14.0 GRAVEL</td>
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<tr>
<td>LOCATION: 109N-47W-21ACCC</td>
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<tr>
<td>LEGAL LOCATION: SW SW SW NE SEC. 21, T. 109 N., R. 47 W.</td>
</tr>
<tr>
<td>2.0 - 11.0 SAND, LIGHT-BROWN; OXIDIZED, MOIST</td>
</tr>
<tr>
<td>11.0 - 12.0 SAND, LIGHT-BROWN, GRAVELLY; OXIDIZED, SATURATED, POORLY SORTED</td>
</tr>
<tr>
<td>12.0 - 36.0 GRAVEL, RED-BROWN, MEDIUM; OXIDIZED, SATURATED, WITH COARSE SAND</td>
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<tr>
<td>LOCATION: 109N-47W-21BADD</td>
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<tr>
<td>LEGAL LOCATION: NW SE NW NE SEC. 21, T. 109 N., R. 47 W.</td>
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<tr>
<td>5.0 - 19.0 SAND, BROWN, COARSE, SILTY, OXIDIZED, MOIST</td>
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<tr>
<td>19.0 - 30.0 GRAVEL, BROWN, COARSE; OXIDIZED, SATURATED</td>
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<tr>
<td>LOCATION: 109N-47W-21BBAB</td>
</tr>
<tr>
<td>LEGAL LOCATION: NW NE NW NW SEC. 21, T. 109 N., R. 47 W.</td>
</tr>
<tr>
<td>6.0 - 20.0 GRAVEL, BROWN, MEDIUM, CLAYEY, SANDY, PEBBLY; OXIDIZED, MOIST, POORLY SORTED</td>
</tr>
<tr>
<td>20.0 - 31.0 GRAVEL, BROWN, MEDIUM, CLAYEY, SANDY, PEBBLY; OXIDIZED, SATURATED</td>
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<tr>
<td>LOCATION: 109N-47W-21BBAB</td>
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<tr>
<td>LEGAL LOCATION: NW NE NW NW SEC. 21, T. 109 N., R. 47 W.</td>
</tr>
<tr>
<td>3.0 - 10.0 GRAVEL, RED-BROWN, SANDY, CLAYEY; OXIDIZED, MOIST</td>
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11
10.0 - 11.0 SAND, GRAY-WHITE, MEDIUM; OXIDIZED, MOIST, VERY CLEAN, WELL SORTED
11.0 - 26.0 SAND, GRAY-WHITE, MEDIUM; OXIDIZED, SATURATED, VERY CLEAN, WELL SORTED

* * *

TEST HOLE NUMBER: 35
LOCATION: 100N-47W-21BBAC
LEGAL LOCATION: SW NE NW NW SEC. 21, T. 109 N., R. 47 W.

10.0 - 12.0 SAND, BROWN, VERY COARSE, SILTY, CLAYEY; OXIDIZED, MOIST
12.0 - 24.0 SAND, BROWN, VERY COARSE, SILTY, CLAYEY; OXIDIZED, SATURATED

* * *

TEST HOLE NUMBER: 36
LOCATION: 100N-47W-21CBAC
LEGAL LOCATION: NE SW NW SW SEC. 21, T. 109 N., R. 47 W.

5.0 - 15.0 GRAVEL, LIGHT-BROWN, SANDY, CLAYEY; OXIDIZED, DRY
15.0 - 30.0 GRAVEL, LIGHT-BROWN, SANDY, CLAYEY; OXIDIZED, SATURATED

* * *

TEST HOLE NUMBER: 37
LOCATION: 109N-47W-22BBB
LEGAL LOCATION: NW NW NW SEC. 22, T. 109 N., R. 47 W.

4.0 - 13.0 SAND AND GRAVEL

* * *

TEST HOLE NUMBER: 38
LOCATION: 109N-47W-22CCCC
LEGAL LOCATION: SW SW SW SW SEC. 22, T. 109 N., R. 47 W.

5.0 - 41.0 GRAVEL, SUBANGULAR; LARGE, WITH BOULDERS

* * *

TEST HOLE NUMBER: 39
LOCATION: 109N-47W-27AAA
LEGAL LOCATION: NE NE NE SEC. 27, T. 109 N., R. 47 W.

0 - 7.0 SAND, FINE TO COARSE, PEBBLY, COBBLY
7.0 - 20.0 GRAVEL, COARSE, PEBBLY, COBBLY
20.0 - 29.0 SAND, FINE TO COARSE

* * *

12
TEST HOLE NUMBER: 40
LOCATION: 109N-47W-27CDC
LEGAL LOCATION: SW SE SW SEC. 27, T. 109 N., R. 47 W.

4.0 - 5.0 SAND AND GRAVEL

*** ***

TEST HOLE NUMBER: 41
LOCATION: 109N-47W-31DDDD

4.0 - 5.0 GRAVEL, BROWN, COARSE; DRY
5.0 - 20.0 SAND, BROWN, MEDIUM, PEBBLY; MOIST
20.0 - 28.0 SAND, BROWN, MEDIUM; SATURATED

*** ***

TEST HOLE NUMBER: 42
LOCATION: 109N-47W-31DDDD 1
LEGAL LOCATION: SE SE SE SEC. 31, T. 109 N., R. 47 W.

4.0 - 9.0 SAND, FINE
9.0 - 29.0 SAND AND GRAVEL

*** ***

TEST HOLE NUMBER: 43
LOCATION: 109N-47W-32ABB
LEGAL LOCATION: NW NW NE SEC. 32, T. 109 N., R. 47 W.

3.0 - 29.0 SAND AND GRAVEL

*** ***

TEST HOLE NUMBER: 44
LOCATION: 109N-47W-32BBB
LEGAL LOCATION: NW NW NW SEC. 32, T. 109 N., R. 47 W.

0 - 10.0 GRAVEL, FINE; SOME COARSE SAND
10.0 - 21.0 SAND, FINE TO COARSE, CLAYEY
25.0 - 32.0 SAND, FINE, CLAYEY

*** ***

TEST HOLE NUMBER: 45
LOCATION: 109N-47W-32DDU
LEGAL LOCATION: SE SE SE SEC. 32, T. 109 N., R. 47 W.

4.0 - 26.0 SAND AND GRAVEL

*** ***

TEST HOLE NUMBER: 46

13
LOCATION: 109N-47W-33CDDD
LEGAL LOCATION: SE SE SE SW SEC. 33, T. 109 N., R. 47 W.

2.0 - 65.0 GRAVEL, MEDIUM TO VERY COARSE (ABANDONED HOLE)

* * * *

TEST HOLE NUMBER: 47
LOCATION: 109N-47W-33CDDD
LEGAL LOCATION: SE SE SE SEC. 33, T. 109 N., R. 47 W.

1.0 - 41.0 GRAVEL, MEDIUM, SANDY

* * * *

TEST HOLE NUMBER: 48
LOCATION: 109N-47W-34BBB
LEGAL LOCATION: NW NW NW SEC. 34, T. 109 N., R. 47 W.

15.0 - 42.0 SAND, FINE TO COARSE, SILTY, GRAVELLY

* * * *

TEST HOLE NUMBER: 49
LOCATION: 109N-48W-01ADD
LEGAL LOCATION: NE SE SE NE SEC. 01, T. 109 N., R. 48 W.

1.0 - 25.0 SAND, BROWN, MEDIUM TO COARSE; MOIST, OXIDIZED, SOME GRAVEL, SATURATED AT 5 FEET

* * * *

TEST HOLE NUMBER: 50
LOCATION: 109N-48W-01DDDD
LEGAL LOCATION: SE SE SE SEC. 01, T. 109 N., R. 48 W.

6.0 - 15.3 GRAVEL, BROWN, MEDIUM TO COARSE, SILTY, SANDY; DRY, OXIDIZED

* * * *

TEST HOLE NUMBER: 51
LOCATION: 109N-48W-02DAAD
LEGAL LOCATION: SE NE NE SR SEC. 02, T. 109 N., R. 48 W.

2.0 - 15.0 SAND, BROWN, FINE, CLAYEY, GRAVELLY; DRY, OXIDIZED

15.0 - 19.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; DRY, OXIDIZED

* * * *
TEST HOLE NUMBER: 52
LOCATION: 109N-48W-02DDDD
LEGAL LOCATION: SE SE SE SE SEC. 02, T. 109 N., R. 48 W.

2.0 - 9.0 GRAVEL, BROWN, COARSE, SANDY; DRY, OXIDIZED

---

TEST HOLE NUMBER: 53
LOCATION: 109N-48W-01AADD
LEGAL LOCATION: SE SE SE NE SEC. 03, T. 109 N., R. 48 W.

7.0 - 9.0 GRAVEL, BROWN, MEDIUM, SANDY; DRY, OXIDIZED
9.0 - 21.0 SAND, BROWN, MEDIUM, CLAYEY; DRY, OXIDIZED, SOME GRAVEL

---

TEST HOLE NUMBER: 54
LOCATION: 109N-48W-05ABBB
LEGAL LOCATION: NW NW NW NE SEC. 05, T. 109 N., R. 48 W.

4.0 - 17.0 GRAVEL, BROWN, MEDIUM TO COARSE, SILTY, VERY SANDY; MOIST, OXIDIZED

---

TEST HOLE NUMBER: 55
LOCATION: 109N-48W-06AAAA
LEGAL LOCATION: NE NE NE NE SEC. 06, T. 109 N., R. 48 W.

6.0 - 12.0 SAND, BROWN, MEDIUM TO COARSE, SILTY, GRAVELLY; SATURATED, OXIDIZED

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TEST HOLE NUMBER: 56
LOCATION: 109N-48W-06DAAA
LEGAL LOCATION: NE NE NE SE SEC. 06, T. 109 N., R. 48 W.

4.0 - 17.0 SAND, BROWN, MEDIUM TO COARSE; MOIST, OXIDIZED, SOME GRAVEL, SATURATED AT 8 FEET

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TEST HOLE NUMBER: 57
LOCATION: 109N-48W-12ADDD
LEGAL LOCATION: SE SE SE NE SEC. 12, T. 109 N., R. 48 W.

3.0 - 5.0 GRAVEL, BROWN, VERY COARSE; DRY, OXIDIZED
5.0 - 6.0 SAND, BROWN, MEDIUM; DRY, OXIDIZED
TEST HOLE NUMBER: 58
LOCATION: 109N-48W-21AA
LEGAL LOCATION: NE NE NE NE SEC. 21, T. 109 N., R. 48 W.
4.0 - 6.0 GRAVEL, BROWN, MEDIUM, GLAYEY, POORLY SORTED; DRY, OXIDIZED

TEST HOLE NUMBER: 59
LOCATION: 109N-48W-29AAA
LEGAL LOCATION: NE NE NE NE SEC. 29, T. 109 N., R. 48 W.
0 - 5.0 SAND, BROWN, FINE; DRY, OXIDIZED

TEST HOLE NUMBER: 60
LOCATION: 109N-48W-30ADAD
LEGAL LOCATION: SE NE SE NE SEC. 30, T. 109 N., R. 48 W.
0 - 3.0 GRAVEL, BROWN, MEDIUM, SANDY; DRY, OXIDIZED

TEST HOLE NUMBER: 61
LOCATION: 109N-49W-01DADA
LEGAL LOCATION: NE SE NE SE SEC. 01, T. 109 N., R. 49 W.
3.0 - 4.0 SAND, GRAY, MEDIUM, POORLY SORTED; MOIST
4.0 - 24.0 GRAVEL, REDDISH-BROWN, FINE, MODERATELY SORTED; SATURATED, OXIDIZED
14.0 - 39.0 SAND, GRAY, MEDIUM, WELL SORTED; SATURATED, UNOXIDIZED

TEST HOLE NUMBER: 62
LOCATION: 109N-49W-02DDDD
LEGAL LOCATION: SE SE SE SE SEC. 02, T. 109 N., R. 49 W.
8.0 - 14.0 SAND AND GRAVEL
14.0 - 29.0 SAND, FINE

TEST HOLE NUMBER: 63
LOCATION: 109N-49W-03ABDA
LEGAL LOCATION: NE SE NW NE SEC. 03, T. 109 N., R. 49 W.
2.0 - 7.0 GRAVEL, REDDISH-BROWN, COARSE; DRY,
OXIDIZED
7.0 - 50.0 GRAVEL, REDDISH-BROWN, FINE TO MEDIUM; SATURATED, OXIDIZED
* * * *

TEST HOLE NUMBER: 64
LOCATION: 109N-49W-03ABDB
LEGAL LOCATION: NW SE NW NE SEC. 03, T. 109 N., R. 49 W.
7.0 - 46.0 GRAVEL, REDDISH-BROWN, FINE TO MEDIUM, VERY SANDY; SATURATED, SOME COARSE GRAVEL
* * * *

TEST HOLE NUMBER: 65
LOCATION: 109N-49W-03ACAA 1
LEGAL LOCATION: NE NE SW NE SEC. 03, T. 109 N., R. 49 W.
4.0 - 6.0 SAND, BROWN, MEDIUM, GRAVELLY; SATURATED
6.0 - 35.0 GRAVEL, REDDISH-BROWN, FINE TO MEDIUM, SANDY; SATURATED, OXIDIZED
* * * *

TEST HOLE NUMBER: 66
LOCATION: 109N-49W-03ACAA 2
LEGAL LOCATION: NE NE SW NE SEC. 03, T. 109 N., R. 49 W.
5.0 - 13.0 GRAVEL, LIGHT-BROWN, COARSE, SILTY, PEBBLY; SATURATED, OXIDIZED
* * * *

TEST HOLE NUMBER: 67
LOCATION: 109N-49W-03ACBB
LEGAL LOCATION: NW NW SW NE SEC. 03, T. 109 N., R. 49 W.
4.0 - 30.0 SAND, REDDISH-BROWN, COARSE, GRAVELLY; SATURATED
* * * *

TEST HOLE NUMBER: 68
LOCATION: 109N-49W-03AADD
LEGAL LOCATION: SE SE SE NE SEC. 03, T. 109 N., R. 49 W.
0 - 14.0 SAND AND GRAVEL
* * * *

TEST HOLE NUMBER: 69
LOCATION: 109N-49W-03BACD 1

17
LEGAL LOCATION: SE SW NE NW SEC. 03, T. 109 N., R. 49 W.

4.0 - 13.0 GRANULAR, LIGHT-BROWN, MEDIUM, CLAYEY, SANDY; SATURATED, OXIDIZED
13.0 - 15.0 GRANULAR, LIGHT-BROWN, SANDY, COARSE AT
       13 FEET; OXIDIZED
15.0 - 51.0 GRANULAR, LIGHT-BROWN, MEDIUM; OXIDIZED
       * * * *

TEST HOLE NUMBER: 70
LOCATION: 109N-49W-03BACD 2
LEGAL LOCATION: SE SW NE NW SEC. 03, T. 109 N., R. 49 W.

5.0 - 28.0 GRANULAR, BROWN, SILTY, PEBBLY; SATURATED
       OXIDIZED
       * * * *

TEST HOLE NUMBER: 71
LOCATION: 109N-49W-03BADD
LEGAL LOCATION: SE SE NE NW SEC. 03, T. 109 N., R. 49 W.

3.0 - 6.0 GRANULAR, BROWN, SILTY, PEBBLY; OXIDIZED,
       MOIST
6.0 - 50.0 GRANULAR, BROWN, SILTY, PEBBLY; OXIDIZED,
       SATURATED
       * * * *

TEST HOLE NUMBER: 72
LOCATION: 109N-49W-03BDAA 1
LEGAL LOCATION: NE NE SE NW SEC. 03, T. 109 N., R. 49 W.

4.0 - 6.0 SAND, LIGHT-BROWN, COARSE, PEBBLY; MOIST
6.0 - 46.0 GRANULAR, LIGHT-BROWN, MEDIUM TO COARSE,
       SANDY; SATURATED, SOME CLAY
       * * * *

TEST HOLE NUMBER: 73
LOCATION: 109N-49W-03BDAA 2
LEGAL LOCATION: NE NE SE NW SEC. 03, T. 109 N., R. 49 W.

4.0 - 6.0 SAND, BROWN, SILTY, PEBBLY; OXIDIZED,
       VERY MOIST
6.0 - 23.0 SAND, BROWN, SILTY, PEBBLY; OXIDIZED,
       SATURATED
       * * * *

TEST HOLE NUMBER: 74
LOCATION: 109N-49W-03BDAB 1
LEGAL LOCATION: NW NE SE NW SEC. 03, T. 109 N., R. 49 W.
5.0 - 6.0  GRAVEL, LIGHT-BROWN, MEDIUM, SANDY, SILTY; OXIDIZED, MOIST
6.0 - 33.0  GRAVEL, LIGHT-BROWN, MEDIUM, SANDY, SILTY; OXIDIZED, SATURATED

* * *

TEST HOLE NUMBER: 75
LOCATION: 109N-49W-03BDBB 2
LEGAL LOCATION: NW NE SE NW SEC. 03, T. 109 N., R. 49 W.
5.0 - 33.0  GRAVEL, BROWN, MEDIUM; OXIDIZED, SATURATED

* * *

TEST HOLE NUMBER: 76
LOCATION: 109N-49W-03BDBB 1
LEGAL LOCATION: NW NW SE NW SEC. 03, T. 109 N., R. 49 W.
5.0 - 49.0  SAND, BROWN, SILTY, PEBBLY; OXIDIZED SATURATED

* * *

TEST HOLE NUMBER: 77
LOCATION: 109N-49W-03BDBB 2
LEGAL LOCATION: NW NW SE NW SEC. 03, T. 109 N., R. 49 W.
5.0 - 28.0  SAND, LIGHT-BROWN, GRAVELLY, POORLY SORTED; OXIDIZED, SATURATED

* * *

TEST HOLE NUMBER: 78
LOCATION: 109N-49W-03BDBC 1
LEGAL LOCATION: SW NW SE NW SEC. 03, T. 109 N., R. 49 W.
4.0 - 6.0  SAND, GRAY-BROWN, CLAYEY; VERY MOIST
6.0 - 46.0  GRAVEL, LIGHT-BROWN, MEDIUM; OXIDIZED, SATURATED, SOME SAND

* * *

TEST HOLE NUMBER: 79
LOCATION: 109N-49W-03BDBC 2
LEGAL LOCATION: SW NW SE NW SEC. 03, T. 109 N., R. 49 W.
5.0 - 28.0  GRAVEL, BROWN, COARSE, SILTY, SANDY; SATURATED

* * *

TEST HOLE NUMBER: 80

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<table>
<thead>
<tr>
<th>Test Hole Number</th>
<th>Location</th>
<th>Legal Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>81</td>
<td>109N-49W-03BDDD 1</td>
<td>SE SE SE NW SEC. 03, T. 109 N., R. 49 W.</td>
<td>6.0 - 36.0 Gravel, Brown, Silty, Oxidized, Saturated</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 82               | 109N-49W-03BDDD 2 | SE SE SE NW SEC. 03, T. 109 N., R. 49 W. | 4.0 - 7.0 Gravel, Brown, Silty, Pebble, Oxidized, Moist |
|                  |          |                | 7.0 - 28.0 Gravel, Brown, Silty, Pebble, Oxidized, Saturated |
|                  |          |                | ** ** |

|                  |          |                | 8.0 - 60.0 Sand, Coarse, Gravelly; Some Boulders |
|                  |          |                | ** ** |

| 84               | 109N-49W-04ABAAA | NE NE NE NW SEC. 04, T. 109 N., R. 49 W. | 1.0 - 6.0 Sand and Gravel |
|                  |          |                | 6.0 - 10.0 Sand, Fine to Coarse |
|                  |          |                | 10.0 - 67.0 Sand and Gravel |
|                  |          |                | ** ** |

| 85               | 109N-49W-04BBBB | NW NW NW NW SEC. 04, T. 109 N., R. 49 W. | 5.0 - 7.0 Sand, Brown, Fine |
|                  |          |                | 7.0 - 9.0 Sand, Coarse; Some Gravel |
|                  |          |                | 9.0 - 45.0 Gravel, Coarse |

20
TEST HOLE NUMBER: 86
LOCATION: 109N-49W-05CBBB
LEGAL LOCATION: NW NW NW SW SEC. 05, T. 109 N., R. 49 W.

1.0 - 7.0 SAND AND GRAVEL
7.0 - 67.0 GRAVEL AND SAND

TEST HOLE NUMBER: 87
LOCATION: 109N-49W-06AAAA
LEGAL LOCATION: NE NE NE NE SEC. 06, T. 109 N., R. 49 W.

1.0 - 3.0 SAND AND GRAVEL
3.0 - 20.0 SAND, COARSE; SOME GRAVEL

TEST HOLE NUMBER: 88
LOCATION: 109N-49W-07BAAA
LEGAL LOCATION: NE NE NE NW SEC. 07, T. 109 N., R. 49 W.

0 - 24.0 SAND AND GRAVEL
24.0 - 76.0 SAND, COARSE; SOME GRAVEL

TEST HOLE NUMBER: 89
LOCATION: 109N-49W-08ABBB
LEGAL LOCATION: NW NW NW NE SEC. 08, T. 109 N., R. 49 W.

1.0 - 53.0 SAND AND GRAVEL

TEST HOLE NUMBER: 90
LOCATION: 109N-49W-10BBBB
LEGAL LOCATION: NW NW NW NW SEC. 10, T. 109 N., R. 49 W.

3.0 - 7.0 SAND AND GRAVEL
7.0 - 65.0 SAND AND GRAVEL, COARSE; SOME BOULDERS

TEST HOLE NUMBER: 91
LOCATION: 109N-49W-11BCCC
LEGAL LOCATION: SW SW SW NW SEC. 11, T. 109 N., R. 49 W.

5.0 - 12.0 SAND, FINE TO COARSE; SOME GRAVEL
12.0 - 28.0 SAND, BROWN, FINE

21
TEST HOLE NUMBER: 92
LOCATION: 109N-49W-16AAAA
LEGAL LOCATION: NE NE NE NE SEC. 16, T. 109 N., R. 49 W.
5.0 - 7.0 SAND, FINE TO COARSE
7.0 - 14.0 SAND AND GRAVEL
14.0 - 33.0 SAND, BROWN, FINE, WELL-SORTED
* * *

TEST HOLE NUMBER: 93
LOCATION: 109N-49W-17BBBA
LEGAL LOCATION: NE NW NW NW SEC. 17, T. 109 N., R. 49 W.
4.0 - 7.0 SAND, BROWN, MEDIUM, VERY SILTY, POORLY SORTED; MOIST, OXIDIZED
7.0 - 9.0 GRAVEL, BROWN, MEDIUM, MODERATELY SORTED; SATURATED, OXIDIZED
9.0 - 66.0 SAND, LIGHT-GRAY, COARSE, MODERATELY SORTED; SATURATED, UOXIDIZED
* * *

TEST HOLE NUMBER: 94
LOCATION: 109N-49W-18CCCC
LEGAL LOCATION: SW SW SW SW SEC. 18, T. 109 N., R. 49 W.
0 - 7.0 SAND, FINE, SILTY
7.0 - 43.0 SAND AND GRAVEL
* * *

TEST HOLE NUMBER: 95
LOCATION: 109N-49W-19CCCC
LEGAL LOCATION: SW SW SW SW SEC. 19, T. 109 N., R. 49 W.
6.0 - 7.3 SAND, GRAY, COARSE, VERY CLAYEY; MOIST, UOXIDIZED
11.0 - 16.0 SAND, DARK-GRAY, COARSE, VERY CLAYEY, POORLY SORTED; SATURATED, UOXIDIZED, SOME FINE GRAVEL
* * *

TEST HOLE NUMBER: 96
LOCATION: 109N-49W-20CBBCC
LEGAL LOCATION: SW SW NW SW SEC. 20, T. 109 N., R. 49 W.
3.0 - 10.0 SAND, BROWN, FINE, MODERATELY SORTED; VERY MOIST, OXIDIZED
* * *

TEST HOLE NUMBER: 97
22
LOCATION: 109N-49W-25ADAD
LEGAL LOCATION: SE NE SE NE SEC. 25, T. 109 N., R. 49 W.

12.0 - 16.0 SAND, BROWN, FINE, VERY SILTY, POORLY SORTED; MOIST, OXIDIZED, SATURATED AT 14 FEET

* * * *

TEST HOLE NUMBER: 98
LOCATION: 109N-49W-31BBAA
LEGAL LOCATION: NE NE NW NW SEC. 31, T. 109 N., R. 49 W.

4.0 - 25.0 SAND, FINE TO MEDIUM

* * * *

TEST HOLE NUMBER: 99
LOCATION: 109N-49W-31CBB
LEGAL LOCATION: NW NW SW SEC. 31, T. 109 N., R. 49 W.

9.0 - 22.0 SAND AND GRAVEL

* * * *

TEST HOLE NUMBER: 100
LOCATION: 109N-49W-31CCCC 1
LEGAL LOCATION: SW SW SW SW SEC. 31, T. 109 N., R. 49 W.

8.0 - 14.0 SAND, COARSE, PEBBLY

* * * *

TEST HOLE NUMBER: 101
LOCATION: 109N-49W-31CCCC 2
LEGAL LOCATION: SW SW SW SW SEC. 31, T. 109 N., R. 49 W.

3.0 - 15.0 GRAVEL, COARSE

* * * *

TEST HOLE NUMBER: 102
LOCATION: 109N-49W-31DCC
LEGAL LOCATION: SW SW SE SEC. 31, T. 109 N., R. 49 W.

5.0 - 14.0 SAND AND GRAVEL
14.0 - 19.0 SAND, COARSE

* * * *

TEST HOLE NUMBER: 103
LOCATION: 109N-49W-31DDD
LEGAL LOCATION: SE SE SE SEC. 31, T. 109 N., R. 49 W.
4.0 – 14.0 SAND AND GRAVEL
14.0 – 29.0 GRAVEL, PEBBLY

** **

TEST HOLE NUMBER: 104
LEGAL LOCATION: SW SW SW NW SEC. 32, T. 109 N., R. 49 W.

6.0 – 9.0 SAND, BROWN, MEDIUM, PEBBLY; MOIST, OXIDIZED
9.0 – 14.0 SAND, BROWN, FINE; MOIST, OXIDIZED

** **

TEST HOLE NUMBER: 105
LEGAL LOCATION: SW NW NW NW SEC. 35, T. 109 N., R. 49 W.

0 – 12.0 SAND, BROWN, MEDIUM, SILTY; DRY, OXIDIZED
12.0 – 20.0 GRAVEL, BROWN, MEDIUM, SANDY; MOIST, OXIDIZED

** **

TEST HOLE NUMBER: 106
LEGAL LOCATION: SW NE NE NE NE SEC. 01, T. 109 N., R. 50 W.

5.0 – 11.0 SAND, LIGHT-BROWN, FINE, SILTY, POORLY SORTED; DRY, OXIDIZED

** **

TEST HOLE NUMBER: 107
LEGAL LOCATION: NW NW NW SW SEC. 01, T. 109 N., R. 50 W.

1.0 – 23.0 SAND AND GRAVEL

** **

TEST HOLE NUMBER: 108
LEGAL LOCATION: NW NE NE NE SEC. 01, T. 109 N., R. 50 W.

1.0 – 4.0 GRAVEL, BROWN, VERY COARSE; DRY, OXIDIZED
4.0 – 9.0 SAND, BROWN, COARSE, GRAVELLY; DRY, OXIDIZED
9.0 – 22.0 GRAVEL, BROWN, FINE TO MEDIUM, SANDY; SATURATED, OXIDIZED

** **

24
TEST HOLE NUMBER: 109
LOCATION: 109N-50W-01DBAB
LEGAL LOCATION: NW NE NW SE SEC. 01, T. 109 N., R. 50 W.

3.0 - 10.0 GRAVEL, REDDISH-BROWN, COARSE, VERY SANDY; DRY, OXIDIZED
10.0 - 19.0 GRAVEL, BROWN, FINE TO MEDIUM, SANDY; SATURATED, OXIDIZED

* * *

TEST HOLE NUMBER: 110
LOCATION: 109N-50W-01DBCA
LEGAL LOCATION: NE SW NW SE SEC. 01, T. 109 N., R. 50 W.

2.0 - 14.0 GRAVEL, BROWN, MEDIUM, SANDY; DRY

* * *

TEST HOLE NUMBER: 111
LOCATION: 109N-50W-01DBCC
LEGAL LOCATION: SW NW SE SEC. 01, T. 109 N., R. 50 W.

2.0 - 6.0 GRAVEL, MEDIUM TO COARSE, SILTY, SANDY; MOIST

* * *

TEST HOLE NUMBER: 112
LOCATION: 109N-50W-01DC 1
LEGAL LOCATION: SW SE SEC. 01, T. 109 N., R. 50 W.

1.0 - 36.0 SAND AND GRAVEL, FINE SAND AND COARSE GRAVEL

* * *

TEST HOLE NUMBER: 113
LOCATION: 109N-50W-01DC 2
LEGAL LOCATION: SW SE SEC. 01, T. 109 N., R. 50 W.

1.0 - 30.0 SAND AND GRAVEL, FINE SAND AND MEDIUM TO COARSE GRAVEL

* * *

TEST HOLE NUMBER: 114
LOCATION: 109N-50W-01DC 3
LEGAL LOCATION: SW SE SEC. 01, T. 109 N., R. 50 W.

2.0 - 6.0 GRAVEL, BROWN, SILTY, SANDY; DRY
6.0 - 8.0 SAND, RED-BROWN, GRAVELLY; MOIST
8.0 - 22.0 GRAVEL, RED-BROWN, SANDY; SATURATED
TEST HOE NUMBER: 115
LOCATION: 109N-50W-01DC 4
LEGAL LOCATION: SW SE SEC. 01, T. 109 N., R. 50 W.

5.0 - 26.0 SAND AND GRAVEL, FINE SAND AND COARSE GRAVEL

TEST HOE NUMBER: 116
LOCATION: 109N-50W-01DC 5
LEGAL LOCATION: SW SE SEC. 01, T. 109 N., R. 50 W.

0 - 1.0 SAND, BROWN, GRAVELLY; MOIST
1.0 - 10.0 SAND, BROWN, SILTY, GRAVELLY; SATURATED

TEST HOE NUMBER: 117
LOCATION: 109N-50W-01DC 6
LEGAL LOCATION: SW SE SEC. 01, T. 109 N., R. 50 W.

0 - 1.0 SAND, BROWN, GRAVELLY; MOIST
1.0 - 10.0 SAND, BROWN, GRAVELLY; SATURATED
15.0 - 27.0 SAND, BROWN, GRAVELLY; SATURATED

TEST HOE NUMBER: 118
LOCATION: 109N-50W-01DC 7
LEGAL LOCATION: SW SE SEC. 01, T. 109 N., R. 50 W.

0 - 4.0 SAND, RED-BROWN, GRAVELLY; DRY
4.0 - 10.0 SAND, BROWN, GRAVELLY; SATURATED

TEST HOE NUMBER: 119
LOCATION: 109N-50W-01DC 8
LEGAL LOCATION: SW SE SEC. 01, T. 109 N., R. 50 W.

3.0 - 6.0 SAND, BROWN, SILTY, GRAVELLY; DRY
6.0 - 9.0 SAND, BROWN, SILTY, CLAYEY, GRAVELLY; SATURATED

TEST HOE NUMBER: 120
LOCATION: 109N-50W-01DC 9
LEGAL LOCATION: SW SE SEC. 01, T. 109 N., R. 50 W.

3.0 - 7.0 SAND, RED-BROWN, GRAVELLY; DRY

26
TEST HOLE NUMBER: 121
LOCATION: 109N-50W-01DCBB
LEGAL LOCATION: NW NW SW SE SEC. 01, T. 109 N., R. 50 W.

3.0 -  7.0  SAND AND GRAVEL, LIGHT-BROWN TO TAN, SILTY
7.0 -  9.0  SAND AND GRAVEL, TAN; SOME SILT
9.0 - 18.0  SAND, FINE TO COARSE; SOME GRAVEL

TEST HOLE NUMBER: 122
LOCATION: 109N-50W-01DCDC
LEGAL LOCATION: SW SE SW SE SEC. 01, T. 109 N., R. 50 W.

1.0 -  3.0  SAND, BROWN, MEDIUM TO FINE, WELL SORTED
3.0 -  6.0  GRAVEL, BROWN, COARSE, MODERATELY SORTED; DRY
6.0 - 11.0  GRAVEL, GRAY, COARSE TO MEDIUM, WELL SORTED; SATURATED

TEST HOLE NUMBER: 123
LOCATION: 109N-50W-01DD  1
LEGAL LOCATION: SE SE SEC. 01, T. 109 N., R. 50 W.

1.0 - 40.0  SAND AND GRAVEL, FINE SAND AND COARSE GRAVEL

TEST HOLE NUMBER: 124
LOCATION: 109N-50W-01DD  2
LEGAL LOCATION: SE SE SEC. 01, T. 109 N., R. 50 W.

1.0 - 27.0  SAND AND GRAVEL, MEDIUM SAND AND COARSE GRAVEL

TEST HOLE NUMBER: 125
LOCATION: 109N-50W-01DD  3
LEGAL LOCATION: SE SE SEC. 01, T. 109 N., R. 50 W.

1.0 - 30.0  SAND AND GRAVEL, MEDIUM SAND AND COARSE GRAVEL

TEST HOLE NUMBER: 126
LOCATION: 109N-50W-01DD  4

27
LEGAL LOCATION: SE SE SEC. 01, T. 109 N., R. 50 W.

2.0 - 26.0 SAND AND GRAVEL, MEDIUM SAND AND COARSE GRAVEL

* * * *

TEST HOLE NUMBER: 127
LOCATION: 109N-50W-01DD 5
LEGAL LOCATION: SE SE SEC. 01, T. 109 N., R. 50 W.

1.0 - 28.0 SAND AND GRAVEL, LARGE SAND AND COARSE GRAVEL

* * * *

TEST HOLE NUMBER: 128
LOCATION: 109N-50W-01DD 6
LEGAL LOCATION: SE SE SEC. 01, T. 109 N., R. 50 W.

2.0 - 30.0 SAND AND GRAVEL, MEDIUM SAND AND COARSE GRAVEL

* * * *

TEST HOLE NUMBER: 129
LOCATION: 109N-50W-01DD 7
LEGAL LOCATION: SE SE SEC. 01, T. 109 N., R. 50 W.

1.0 - 30.0 SAND AND GRAVEL, MEDIUM SAND AND COARSE GRAVEL

* * * *

TEST HOLE NUMBER: 130
LOCATION: 109N-50W-01DD 8
LEGAL LOCATION: SE SE SEC. 01, T. 109 N., R. 50 W.

1.0 - 30.0 SAND AND GRAVEL, COARSE SAND AND COARSE GRAVEL

* * * *

TEST HOLE NUMBER: 131
LOCATION: 109N-50W-01DD 9
LEGAL LOCATION: SE SE SEC. 01, T. 109 N., R. 50 W.

0 - 5.0 SAND AND GRAVEL
5.0 - 24.0 SAND AND GRAVEL; SATURATED

* * * *

TEST HOLE NUMBER: 132
LOCATION: 109N-50W-01DD 10
LEGAL LOCATION: SE SE SEC. 01, T. 109 N., R. 50 W.

0 - 6.0 SAND, RED-BROWN, SILTY, GRAVELLY; DRY
6.0 - 22.0 SAND, BROWN, GRAVELLY; SATURATED

* * *

TEST HOLE NUMBER: 133
LOCATION: 109N-50W-01DD 11
LEGAL LOCATION: SE SE SEC. 01, T. 109 N., R. 50 W.

0 - 9.0 GRAVEL, BROWN, MEDIUM, SANDY; DRY
9.0 - 19.0 GRAVEL, BROWN, MEDIUM, SANDY; SATURATED
25.0 - 28.0 SAND

* * *

TEST HOLE NUMBER: 134
LOCATION: 109N-50W-01DD 12
LEGAL LOCATION: SE SE SEC. 01, T. 109 N., R. 50 W.

0 - 3.0 GRAVEL, COARSE; DRY
3.0 - 11.0 SAND, RED-BROWN, GRAVELLY; MOIST
11.0 - 30.0 GRAVEL, MEDIUM, SANDY; SATURATED

* * *

TEST HOLE NUMBER: 135
LOCATION: 109N-50W-01DD 13
LEGAL LOCATION: SE SE SEC. 01, T. 109 N., R. 50 W.

0 - 2.0 GRAVEL, VERY COARSE; DRY
2.0 - 11.0 SAND, RED-BROWN, GRAVELLY; MOIST
11.0 - 29.0 GRAVEL, MEDIUM, SANDY; SATURATED

* * *

TEST HOLE NUMBER: 136
LOCATION: 109N-50W-01DD 14
LEGAL LOCATION: SE SE SEC. 01, T. 109 N., R. 50 W.

1.0 - 4.0 GRAVEL, MEDIUM TO COARSE, VERY SANDY
4.0 - 6.0 SAND, COARSE, GRAVELLY; MOIST, UNOXIDIZED
6.0 - 15.0 SAND, COARSE, GRAVELLY; SATURATED

* * *

TEST HOLE NUMBER: 137
LOCATION: 109N-50W-01DDAA
LEGAL LOCATION: NE NE SE SE SEC. 01, T. 109 N., R. 50 W.

2.0 - 33.0 GRAVEL, MEDIUM TO COARSE, SANDY; MOIST

* * *

29
TEST HOLE NUMBER: 138  
LOCATION: 109N-50W-01DDDR  
LEGAL LOCATION: NW SE SE SE Sec. 01, T. 109 N., R. 50 W.  
1.0 -  5.0  GRAVEL, BROWN, COARSE, SANDY; DRY, OXIDIZED  
5.0 -  22.0  GRAVEL, BROWN, FINE TO MEDIUM, SANDY; SATURATED, OXIDIZED  

TEST HOLE NUMBER: 139  
LOCATION: 109N-50W-01DDDC  
LEGAL LOCATION: SW SE SE SE Sec. 01, T. 109 N., R. 50 W.  
1.0 -  2.0  SAND, MEDIUM, GRAVELLY; MOIST, OXIDIZED  
2.0 -  12.0  GRAVEL, COARSE, VERY SANDY, POORLY SORTED; DRY  
12.0 -  33.0  GRAVEL, COARSE, VERY SANDY, POORLY SORTED; SATURATED  

TEST HOLE NUMBER: 140  
LOCATION: 109N-50W-01DDDC 1  
LEGAL LOCATION: SW SE SE SE Sec. 01, T. 109 N., R. 50 W.  
2.0 -  14.0  SAND, FINE TO COARSE; SOME SILT  
14.0 -  19.0  SAND, FINE TO COARSE; SOME GRAVEL  
19.0 -  29.0  SAND, TAN TO BUFF, COARSE  

TEST HOLE NUMBER: 141  
LOCATION: 109N-50W-02DDDD  
LEGAL LOCATION: SE SE SE SE Sec. 02, T. 109 N., R. 50 W.  
2.0 -  9.0  GRAVEL, BROWN, COARSE, SANDY; MOIST, OXIDIZED; SATURATED AT 6 FEET  

TEST HOLE NUMBER: 142  
LOCATION: 109N-50W-03DAAA  
LEGAL LOCATION: NE NE NE SE Sec. 03, T. 109 N., R. 50 W.  
4.0 -  16.0  SAND, BROWN, MEDIUM, PEBBLY; MOIST, OXIDIZED  

TEST HOLE NUMBER: 143  
LOCATION: 109N-50W-05CCCB  
LEGAL LOCATION: NW SW SW SW Sec. 05, T. 109 N., R. 50 W.  
50
<table>
<thead>
<tr>
<th>Test Hole Number</th>
<th>Location</th>
<th>Legal Location</th>
<th>Description</th>
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<tbody>
<tr>
<td>144</td>
<td></td>
<td></td>
<td>13.0 - 24.0 Gravel, Brown, Medium; Satuated, Clean, Oxidized</td>
</tr>
<tr>
<td>145</td>
<td></td>
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<td>6.0 - 9.0 Sand, Black, Silty</td>
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<td>9.0 - 23.0 Sand and Gravel</td>
</tr>
<tr>
<td>146</td>
<td></td>
<td></td>
<td>7.0 - 12.0 Sand, Fine to Coarse</td>
</tr>
<tr>
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<td></td>
<td></td>
<td>12.0 - 22.0 Sand, Coarse; Some Gravel</td>
</tr>
<tr>
<td>147</td>
<td></td>
<td></td>
<td>7.0 - 11.0 Sand, Dark-Brown, Very Fine, Silty</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>11.0 - 35.0 Sand, Fine to Coarse; Some Gravel</td>
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<td>148</td>
<td></td>
<td></td>
<td>1.0 - 7.0 Sand and Gravel</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7.0 - 26.0 Sand, Coarse; Some Gravel</td>
</tr>
<tr>
<td>149</td>
<td></td>
<td></td>
<td>3.0 - 7.0 Sand, Fine to Coarse</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7.0 - 21.0 Sand and Gravel</td>
</tr>
</tbody>
</table>

31
0 - 3.0 SAND AND GRAVEL
3.0 - 20.0 SAND, COARSE; SOME GRAVEL

** * * *

TEST HOLE NUMBER: 150
LOCATION: 109N-50W-11CDPU
LEGAL LOCATION: SE SE SE SW SEC. 11, T. 109 N., R. 50 W.
0 - 8.0 SAND, FINE; SOME GRAVEL
8.0 - 25.0 SAND AND GRAVEL
22.0 - 52.0 GRAVEL

** * * *

TEST HOLE NUMBER: 151
LOCATION: 109N-50W-12ADDD
LEGAL LOCATION: SE SE SE NE SEC. 12, T. 109 N., R. 50 W.
2.0 - 7.0 SAND AND GRAVEL
7.0 - 70.0 GRAVEL AND SAND

** * * *

TEST HOLE NUMBER: 152
LOCATION: 109N-50W-13CCCC 1
LEGAL LOCATION: SW SW SW SW SEC. 13, T. 109 N., R. 50 W.
1.0 - 6.0 SAND AND GRAVEL
6.0 - 22.0 SAND, COARSE; SOME GRAVEL
22.0 - 40.0 SAND, FINE TO COARSE

** * * *

TEST HOLE NUMBER: 153
LOCATION: 109N-50W-14AAAA
LEGAL LOCATION: NE NE NE NE SEC. 14, T. 109 N., R. 50 W.
1.0 - 22.0 SAND AND GRAVEL
22.0 - 68.6 GRAVEL AND SAND

** * * *

TEST HOLE NUMBER: 154
LOCATION: 109N-50W-15ABB
LEGAL LOCATION: NW NW NE NE SEC. 15, T. 109 N., R. 50 W.
1.0 - 3.0 SAND AND GRAVEL
3.0 - 12.0 SAND, FINE TO COARSE; SOME GRAVEL

** * * *

TEST HOLE NUMBER: 155
LOCATION: 109N-50W-16BBBB

32
LEGAL LOCATION: NW NW NW NW SEC. 16, T. 109 N., R. 50 W.
1.0 - 7.0 SAND, BLACK, FINE TO COARSE, SILTY
7.0 - 23.0 SAND, FINE TO COARSE
* * *

TEST HOLE NUMBER: 156
LOCATION: 109N-50W-17AAAA
LEGAL LOCATION: NE NE NE NE SEC. 17, T. 109 N., R. 50 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE
7.0 - 21.0 SAND AND GRAVEL, COARSE SAND TO COARSE PEBBLES
* * *

TEST HOLE NUMBER: 157
LOCATION: 109N-50W-18BBBB
LEGAL LOCATION: NW NW NW NW SEC. 18, T. 109 N., R. 50 W.
1.0 - 6.0 SAND AND GRAVEL
6.0 - 13.0 SAND AND GRAVEL, WELL-SORTED
13.0 - 33.0 SAND, COARSE; SOME GRAVEL
* * *

TEST HOLE NUMBER: 158
LOCATION: 109N-50W-19AABA
LEGAL LOCATION: NE NE NE NE SEC. 19, T. 109 N., R. 50 W.
4.0 - 9.0 GRAVEL, BROWN, MEDIUM TO COARSE, VERY SANDY; DRY, OXIDIZED, SATURATED AT 8 FEET
* * *

TEST HOLE NUMBER: 159
LOCATION: 109N-50W-20ABAA
LEGAL LOCATION: NE NE NW NE SEC. 20, T. 109 N., R. 50 W.
4.0 - 13.0 SAND, BROWN, MEDIUM, CLAYEY; SATURATED, OXIDIZED
* * *

TEST HOLE NUMBER: 160
LOCATION: 109N-50W-21AABB
LEGAL LOCATION: NW NW NE NE SEC. 21, T. 109 N., R. 50 W.
4.0 - 25.0 GRAVEL, BROWN, MEDIUM, SANDY; SATURATED, OXIDIZED
* * *

33
TEST HOLE NUMBER: 161
LOCATION: 109N-50W-23AAAA
LEGAL LOCATION: NE NE NE NE SEC. 23, T. 109 N., R. 50 W.

6.0 - 41.0 SAND, BROWN, MEDIUM, POORLY SORTED;
Saturated, Oxidized

** ** *

TEST HOLE NUMBER: 162
LOCATION: 109N-50W-23BBBB
LEGAL LOCATION: NW NW NW NW SEC. 23, T. 109 N., R. 50 W.

5.0 - 22.0 SAND AND GRAVEL
22.0 - 44.0 SAND, COARSE; SOME GRAVEL

** ** *

TEST HOLE NUMBER: 163
LOCATION: 109N-50W-25AAAA
LEGAL LOCATION: NE NE NE NW SEC. 25, T. 109 N., R. 50 W.

0 - 6.0 SAND AND GRAVEL
6.0 - 18.0 SAND, COARSE; SOME GRAVEL

** ** *

TEST HOLE NUMBER: 164
LOCATION: 109N-50W-25BBBB
LEGAL LOCATION: SW SW NW NW SEC. 25, T. 109 N., R. 50 W.

6.0 - 17.0 SAND, COARSE

** ** *

TEST HOLE NUMBER: 165
LOCATION: 109N-50W-25BBBB
LEGAL LOCATION: SW SW NW NW SEC. 25, T. 109 N., R. 50 W.

3.0 - 12.0 SAND AND GRAVEL

** ** *

TEST HOLE NUMBER: 166
LOCATION: 109N-50W-26AAAA
LEGAL LOCATION: NE NE NE NW SEC. 26, T. 109 N., R. 50 W.

1.0 - 13.0 SAND AND GRAVEL

** ** *

TEST HOLE NUMBER: 167
LOCATION: 109N-50W-26CCCC
LEGAL LOCATION: SE SE SW SW SEC. 26, T. 109 N., R. 50 W.

34
12.0 - 37.0 GRAVEL, BROWN, MEDIUM, SANDY; SATURATED, OXIDIZED

* * * *

TEST HOLE NUMBER: 168
LOCATION: 109N-50W-28ABAB
LEGAL LOCATION: NW NE NW NE SEC. 28, T. 109 N., R. 50 W.

5.0 - 13.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; DRY, OXIDIZED

* * * *

TEST HOLE NUMBER: 169
LOCATION: 109N-50W-31DDDD
LEGAL LOCATION: SE SE SE SE SEC. 31, T. 109 N., R. 50 W.

0 - 10.0 SAND, REDDISH-BROWN, COARSE, PEBBLY, POORLY SORTED; DRY, OXIDIZED, MOIST AT 4 FEET, CLEAN

10.0 - 19.0 SAND, BROWN, COARSE, PEBBLY, POORLY SORTED; MOIST, OXIDIZED, CLEAN

* * * *

TEST HOLE NUMBER: 170
LOCATION: 109N-50W-33DCCD
LEGAL LOCATION: SE SW SE SE SEC. 33, T. 109 N., R. 50 W.

7.0 - 17.0 GRAVEL, MEDIUM, VERY SANDY

* * * *

TEST HOLE NUMBER: 171
LOCATION: 109N-50W-34BBBA
LEGAL LOCATION: NE NW NW NW SEC. 34, T. 109 N., R. 50 W.

4.0 - 9.0 SAND, REDDISH-BROWN, MEDIUM, WELL SORTED; DRY, OXIDIZED

9.0 - 12.0 GRAVEL, DARK-BROWN, MEDIUM, POORLY SORTED; DRY, OXIDIZED

12.0 - 37.0 GRAVEL, BROWN, FINE, WELL SORTED; SATURATED, OXIDIZED

* * * *

TEST HOLE NUMBER: 172
LOCATION: 109N-50W-35DCCC 1
LEGAL LOCATION: SW SW SW SE SEC. 35, T. 109 N., R. 50 W.

10.0 - 12.0 SAND, BROWN, MEDIUM, PEBBLY; MOIST

12.0 - 14.0 GRAVEL, BROWN, COARSE; SATURATED

35
TEST HOLE NUMBER: 173
LOCATION: 109N-50W-35S
LEGAL LOCATION: SW SE SE SEC. 35, T. 109 N., R. 50 W.
4.0 - 29.0 SAND, FINE TO COARSE

TEST HOLE NUMBER: 174
LOCATION: 109N-50W-35B
LEGAL LOCATION: SW SW SE SEC. 35, T. 109 N., R. 50 W.
3.0 - 23.0 GRAVEL, MEDIUM TO VERY COARSE, SANDY

TEST HOLE NUMBER: 175
LOCATION: 109N-50W-36BAA
LEGAL LOCATION: NE NE NW SEC. 36, T. 109 N., R. 50 W.
4.0 - 14.0 SAND AND GRAVEL
14.0 - 19.0 GRAVEL

TEST HOLE NUMBER: 176
LOCATION: 109N-50W-36BC
LEGAL LOCATION: NW SW NW SEC. 36, T. 109 N., R. 50 W.
3.0 - 9.0 SAND, COARSE
9.0 - 39.0 SAND AND GRAVEL

TEST HOLE NUMBER: 177
LOCATION: 109N-51W-01C
LEGAL LOCATION: SE SE SE SW SEC. 01, T. 109 N., R. 51 W.
4.0 - 23.0 SAND, REDDISH-BROWN, MEDIUM, GRAVELLY; MOIST, OXIDIZED, SATURATED AT 15 FEET
23.0 - 34.0 SAND, BROWN, MEDIUM; SATURATED, OXIDIZED

TEST HOLE NUMBER: 178
LOCATION: 109N-51W-02D
LEGAL LOCATION: SE NE SE NE SEC. 02, T. 109 N., R. 51 W.
1.0 - 2.0 SAND, BROWN, MEDIUM, SILTY, POORLY SORTED; DRY, OXIDIZED
2.0 - 4.0 SAND, REDDISH-BROWN, FINE, WELL SORTED; DRY, OXIDIZED
4.0 - 6.0 SAND, DARK-BROWN, FINE, VERY SILTY, WELL SORTED; VERY MOIST, OXIDIZED
6.0 - 46.0 GRAVEL, DARK-BROWN, COARSE, MODERATELY SORTED; SATURATED, OXIDIZED

TEST HOLE NUMBER: 179
LEGAL LOCATION: NE NE SE NE SEC. 03, T. 109 N., R. 51 W.
16.0 - 21.0 GRAVEL, BROWN, MEDIUM, VERY CLAYEY, SILTY; MOIST, OXIDIZED
21.0 - 36.0 SAND, REDDISH-BROWN, COARSE, CLAYEY; SATURATED, OXIDIZED

TEST HOLE NUMBER: 180
LEGAL LOCATION: NW NW NE NW SEC. 11, T. 109 N., R. 51 W.
3.0 - 7.0 SAND, REDDISH-BROWN, FINE, WELL SORTED; MOIST, OXIDIZED, SATURATED AT 6 FEET
7.0 - 46.0 GRAVEL, BROWN, MEDIUM, MODERATELY SORTED; SATURATED, OXIDIZED

TEST HOLE NUMBER: 181
LOCATION: 109N-51W-11DDDD
LEGAL LOCATION: SE SE SE SE SEC. 11, T. 109 N., R. 51 W.
3.0 - 44.0 SAND AND GRAVEL, GRAY AT 9 FEET, MORE SANDY TOWARDS BOTTOM

TEST HOLE NUMBER: 182
LOCATION: 109N-51W-11DDDD 1
LEGAL LOCATION: SE SE SE SE SEC. 11, T. 109 N., R. 51 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE
3.0 - 36.0 SAND AND GRAVEL, MEDIUM SAND TO MEDIUM PEBBLES

TEST HOLE NUMBER: 183
LOCATION: 109N-51W-23ABBA
LEGAL LOCATION: NE NW NW NE SEC. 23, T. 109 N., R. 51 W.
5.0 - 21.0 SAND, BROWN, MEDIUM: DRY, OXIDIZED, SOME GRAVEL

37
24.0 - 29.0 SAND, BROWN, MEDIUM TO COARSE; SATURATED, OXIDIZED, SOME GRAVEL

***

TEST HOLE NUMBER: 184
LOCATION: 109N-51W-23BBB
LEGAL LOCATION: NW NW NW NW SEC. 23, T. 109 N., R. 51 W.
5.0 - 26.0 GRAVEL, BROWN, MEDIUM TO COARSE, SILTY, VERY SANDY; MOIST, OXIDIZED

***

TEST HOLE NUMBER: 185
LOCATION: 109N-51W-24ABAB
LEGAL LOCATION: NW NE NW NE SEC. 24, T. 109 N., R. 51 W.
4.0 - 11.0 SAND, BROWN, MEDIUM TO COARSE; DRY, OXIDIZED, SOME GRAVEL
14.0 - 22.0 SAND, GRAYISH-BROWN, MEDIUM; SATURATED, OXIDIZED

***

TEST HOLE NUMBER: 186
LOCATION: 109N-51W-29DDCD
LEGAL LOCATION: SE SW SE SE SEC. 29, T. 109 N., R. 51 W.
0 - 4.0 GRAVEL, REDDISH-BROWN, MEDIUM, MODERATELY SORTED; DRY, OXIDIZED
7.0 - 9.0 GRAVEL, BROWN, COARSE; MOIST, OXIDIZED

***

TEST HOLE NUMBER: 187
LOCATION: 109N-52W-01BCBB
LEGAL LOCATION: NW NW SW NW SEC. 01, T. 109 N., R. 52 W.
3.0 - 10.0 SAND, BROWN, MEDIUM, CLAYEY; SATURATED, SOME FINE GRAVEL, OXIDIZED

***

TEST HOLE NUMBER: 188
LOCATION: 109N-52W-36DDDD
LEGAL LOCATION: SE SE SE SE SEC. 36, T. 109 N., R. 52 W.
14.0 - 16.0 GRAVEL, RED-BROWN, MEDIUM TO COARSE

***

TEST HOLE NUMBER: 189
LOCATION: 110N-47W-07CBCB

38
LEGAL LOCATION: NW SW NW SW SEC. 07, T. 110 N., R. 47 W.

5.0 - 8.0 GRAVEL, BROWN, COARSE, CLAYEY, POORLY SORTED; SATURATED, OXIDIZED

* * *

TEST HOLE NUMBER: 190
LOCATION: 110N-47W-29CCC
LEGAL LOCATION: SW SW SW SEC. 29, T. 110 N., R. 47 W.

0 - 3.0 SAND, LIGHT-TAN, FINE, SILTY

* * *

TEST HOLE NUMBER: 191
LOCATION: 110N-47W-32AAAB
LEGAL LOCATION: NW NE NE NE SEC. 32, T. 110 N., R. 47 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE

1.0 - 7.0 SAND AND GRAVEL, FINE SAND TO VERY COARSE PEBBLES

* * *

TEST HOLE NUMBER: 192
LOCATION: 110N-48W-05AAAA
LEGAL LOCATION: NE NE NE NE SEC. 05, T. 110 N., R. 48 W.

2.0 - 3.0 GRAVEL, BROWN, MEDIUM, VERY SANDY, POORLY SORTED; MOIST, OXIDIZED
3.0 - 13.0 SAND, BROWN, MEDIUM, WELL SORTED; MOIST, OXIDIZED
22.0 - 24.0 GRAVEL, BROWN, COARSE; MOIST, OXIDIZED

* * *

TEST HOLE NUMBER: 193
LOCATION: 110N-48W-05DAD
LEGAL LOCATION: SE NE NE SE SEC. 05, T. 110 N., R. 48 W.

3.0 - 4.0 SAND, BROWN, MEDIUM; MOIST, OXIDIZED
4.0 - 11.0 GRAVEL, BROWN, VERY COARSE, SANDY; MOIST, OXIDIZED, ABANDONED HOLE

* * *

TEST HOLE NUMBER: 194
LOCATION: 110N-48W-05DC
LEGAL LOCATION: SW SW SW SE SEC. 05, T. 110 N., R. 48 W.

5.0 - 15.0 SAND, DARK-BROWN, VERY FINE; SATURATED, OXIDIZED, DIRTY
15.0 - 37.0 GRAVEL, DARK-BROWN, MEDIUM TO COARSE,
SANDY; SATURATED, OXIDIZED, VERY DIRTY

** * **

TEST HOLE NUMBER: 195
LOCATION: 110N-48W-66A8BB
LEGAL LOCATION: NW NW NW NE SEC. 06, T. 110 N., R. 48 W.
   0 - 5.0 SAND, BROWN, FINE; DRY, OXIDIZED
   5.0 - 14.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY;
        COBBLY; DRY, OXIDIZED, ABANDONED HOLE

** * **

TEST HOLE NUMBER: 196
LOCATION: 110N-48W-06ACCC
LEGAL LOCATION: SW SW SW NE SEC. 06, T. 110 N., R. 48 W.
   7.0 - 16.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY;
        DRY, OXIDIZED

** * **

TEST HOLE NUMBER: 197
LOCATION: 110N-48W-06DCCC
LEGAL LOCATION: SW SW SW SE SEC. 06, T. 110 N., R. 48 W.
   9.0 - 25.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY;
        DRY, OXIDIZED

** * **

TEST HOLE NUMBER: 198
LOCATION: 110N-48W-07CCCC
LEGAL LOCATION: SW SW SW SW SEC. 07, T. 110 N., R. 48 W.
   9.0 - 17.0 GRAVEL, BROWN, COARSE, SANDY; SATURATED,
        OXIDIZED
   17.0 - 30.0 SAND, BROWN, FINE TO MEDIUM; SATURATED,
        OXIDIZED, SOME GRAVEL

** * **

TEST HOLE NUMBER: 199
LOCATION: 110N-48W-07DAPA
LEGAL LOCATION: NE SE NE SE SEC. 07, T. 110 N., R. 48 W.
   8.0 - 21.0 SAND, FINE TO MEDIUM, GRAVELLY

** * **

TEST HOLE NUMBER: 200
LOCATION: 110N-48W-08ADDA
LEGAL LOCATION: NE SE SE NE SEC. 08, T. 110 N., R. 48 W.

40
2.0 - 10.0 GRAVEL, BROWN, MEDIUM TO COARSE; DRY, OXIDIZED
10.0 - 24.0 SAND, BROWN, MEDIUM TO COARSE, SILTY, PEBBLY; DRY, OXIDIZED

** **

TEST HOLE NUMBER: 201
LOCATION: 110N-48W-08BBBC
LEGAL LOCATION: SW NW NW NW SEC. 08, T. 110 N., R. 48 W.

5.0 - 14.0 GRAVEL, BROWN, FINE TO MEDIUM, MODERATELY SORTED; MOIST, OXIDIZED
14.0 - 25.0 GRAVEL, REDDISH-BROWN, COARSE; SATURATED, OXIDIZED

** **

TEST HOLE NUMBER: 202
LOCATION: 110N-48W-12CBB
LEGAL LOCATION: NW SW SW SW SEC. 12, T. 110 N., R. 48 W.

1.0 - 10.0 GRAVEL, BROWN, MEDIUM TO COARSE, SILTY, SANDY; MOIST, OXIDIZED, SATURATED AT 5 FEET

** **

TEST HOLE NUMBER: 203
LOCATION: 110N-48W-15ABAA
LEGAL LOCATION: NE NE NW NE SEC. 15, T. 110 N., R. 48 W.

2.0 - 6.0 GRAVEL, BROWN, MEDIUM, SANDY; DRY, OXIDIZED

** **

TEST HOLE NUMBER: 204
LOCATION: 110N-48W-15BCCB
LEGAL LOCATION: NW NW SW NW SEC. 15, T. 110 N., R. 48 W.

14.0 - 16.0 SAND, BROWN, MEDIUM, VERY SILTY, POORLY SORTED; DRY, OXIDIZED, SATURATED AT 15 FEET
19.0 - 22.0 SAND, BROWN, FINE, VERY SILTY, WELL SORTED; SATURATED, OXIDIZED

** **

TEST HOLE NUMBER: 205
LOCATION: 110N-48W-16CCBB
LEGAL LOCATION: NW NW SW SW SEC. 16, T. 110 N., R. 48 W.

4.0 - 7.0 SAND, BROWN, MEDIUM, MODERATELY SORTED;
MOIST, OXIDIZED, SOME GRAVEL
22.0 - 29.0 GRAVEL, BROWN, VERY COARSE; SATURATED, OXIDIZED

TEST HOLE NUMBER: 206
LOCATION: 110N-48W-17ADD
LEGAL LOCATION: SE SE SE NE SEC. 17, T. 110 N., R. 48 W.
5.0 - 17.0 SAND, BROWN, FINE TO MEDIUM, PEBBLY; MOIST, OXIDIZED, SATURATED AT 12 FEET

TEST HOLE NUMBER: 207
LOCATION: 110N-48W-17BCBB
LEGAL LOCATION: NW NW SW NW SEC. 17, T. 110 N., R. 48 W.
4.0 - 5.0 SAND, BROWN, MEDIUM, CLAYEY, MODERATELY SORTED; MOIST, OXIDIZED
10.0 - 16.0 SAND, BROWN, COARSE, MODERATELY SORTED; SATURATED, OXIDIZED
16.0 - 25.0 GRAVEL, BROWN, MEDIUM, SANDY; SATURATED, OXIDIZED
25.0 - 35.0 GRAVEL, BROWN, COARSE, SANDY; SATURATED, OXIDIZED

TEST HOLE NUMBER: 208
LOCATION: 110N-48W-18DĐĐĐC
LEGAL LOCATION: SE SE SE SE SEC. 18, T. 110 N., R. 48 W.
1.0 - 6.0 SAND, BROWN, FINE; DRY, OXIDIZED
8.0 - 17.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; MOIST, OXIDIZED

TEST HOLE NUMBER: 209
LOCATION: 110N-48W-20BCC
LEGAL LOCATION: SW SW NW NW SEC. 20, T. 110 N., R. 48 W.
1.0 - 2.0 SAND, BROWN, MEDIUM TO COARSE, POORLY SORTED; DRY, OXIDIZED
2.0 - 11.0 GRAVEL, BROWN, MEDIUM TO VERY COARSE, POORLY SORTED; DRY, OXIDIZED

TEST HOLE NUMBER: 210
LOCATION: 110N-48W-20CCCC
LEGAL LOCATION: SW SW SW SW SEC. 20, T. 110 N., R. 48 W.
42
18.0 - 80.0 SAND AND GRAVEL, BROWN-YELLOW TO 68 FEET, GRAY, MEDIUM TO COARSE

* * * *

TEST HOLE NUMBER: 211
LOCATION: 110N-48W-25DDDD
LEGAL LOCATION: SE SE SE SE SEC. 25, T. 110 N., R. 48 W.

1.0 - 6.0 GRAVEL, BROWN, MEDIUM, VERY SILTY, SANDY; MOIST, OXIDIZED

* * * *

TEST HOLE NUMBER: 212
LOCATION: 110N-48W-26DDDD
LEGAL LOCATION: SE SE SW SEC. 26, T. 110 N., R. 48 W.

0 - 17.0 SAND AND GRAVEL, BROWN; GRADES FROM A MEDIUM SAND TO COARSE GRAVEL

* * * *

TEST HOLE NUMBER: 213
LOCATION: 110N-48W-27ADD
LEGAL LOCATION: SE SE NE SEC. 27, T. 110 N., R. 48 W.

4.0 - 5.0 SAND, BROWN, FINE; MOIST, OXIDIZED

* * * *

TEST HOLE NUMBER: 214
LOCATION: 110N-48W-27BC
LEGAL LOCATION: SW SW NW SEC. 27, T. 110 N., R. 48 W.

1.0 - 31.0 SAND AND GRAVEL, BROWN; GRADES FROM A MEDIUM SAND TO A COARSE GRAVEL

* * * *

TEST HOLE NUMBER: 215
LOCATION: 110N-48W-27C
LEGAL LOCATION: SW NW SW SEC. 27, T. 110 N., R. 48 W.

2.0 - 45.0 SAND AND GRAVEL, BROWN; GRADES FROM A MEDIUM SAND TO A COARSE GRAVEL

* * * *

TEST HOLE NUMBER: 216
LOCATION: 110N-48W-27DD
LEGAL LOCATION: SE SE SE SEC. 27, T. 110 N., R. 48 W.

3.0 - 6.0 SAND, BROWN, MEDIUM TO COARSE, MODERATELY
SORTED; DRY, OXIDIZED

6.0 -  11.0  GRAVEL, BROWN, COARSE, SANDY, MODERATELY
SORTED; DRY, OXIDIZED

11.0 - 12.0  GRAVEL, REDDISH-BROWN, VERY COARSE; DRY,
OXIDIZED

***

TEST HOLE NUMBER: 217
LOCATION: 110N-48W-28AADA
LEGAL LOCATION: NE NE SE NE SEC. 28, T. 110 N., R. 48 W.

5.0 -  7.0  SAND, BROWN, COARSE; SATURATED, OXIDIZED

7.0 -  9.0  GRAVEL, BROWN, MEDIUM, SANDY, POORLY
SORTED; SATURATED, OXIDIZED

***

TEST HOLE NUMBER: 218
LOCATION: 110N-48W-28CCCC
LEGAL LOCATION: SW SW SW SW SEC. 28, T. 110 N., R. 48 W.

1.0 - 44.0  SAND AND GRAVEL, BROWN; GRADES FROM A
MEDIUM SAND TO A COARSE GRAVEL

***

TEST HOLE NUMBER: 219
LOCATION: 110N-48W-24CCCC 1
LEGAL LOCATION: SW SW SW SW SEC. 28, T. 110 N., R. 48 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE

3.0 - 48.0  SAND AND GRAVEL, FINE SAND TO MEDIUM
PEBBLES; SOME LENSES OF REWORKED TILL,
BASED ON E-LOG, BUT NONE REPORTED OR
SEEN

***

TEST HOLE NUMBER: 220
LOCATION: 110N-48W-28DDDA
LEGAL LOCATION: NE SE SE SE SEC. 28, T. 110 N., R. 48 W.

2.0 -  6.0  GRAVEL, REDDISH-BROWN, MEDIUM, VERY
SANDY; MOIST, OXIDIZED

6.0 - 11.0  SAND, BROWN, COARSE, GRAVELLY; SATURATED,
OXIDIZED

11.0 - 32.0  GRAVEL, BROWN, MEDIUM, SANDY; SATURATED,
OXIDIZED

***

TEST HOLE NUMBER: 221
LOCATION: 110N-48W-19CBBB

44
LEGAL LOCATION: NW NW NW SW SEC. 29, T. 110 N., R. 48 W.

4.0 - 6.0 SAND, REDDISH-BROWN, FINE, CLAYEY; MOIST, OXIDIZED
10.0 - 13.0 SAND, BROWN, MEDIUM, VERY CLAYEY, GRAVELLY; SATURATED, OXIDIZED
13.0 - 25.0 GRAVEL, BROWN, MEDIUM, SANDY; SATURATED, OXIDIZED
25.0 - 54.0 GRAVEL, GRAY, MEDIUM TO COARSE, SANDY; SATURATED, UOXIDIZED

* * * *

TEST HOLE NUMBER: 222
LOCATION: 110N-48W-29DADA
LEGAL LOCATION: NE SE NE SE SEC. 29, T. 110 N., R. 48 W.

4.0 - 7.0 SAND, BROWN, MEDIUM TO COARSE, SILTY, MODERATELY SORTED; SATURATED, OXIDIZED
20.0 - 21.0 GRAVEL, DARK-BROWN, COARSE; SATURATED, OXIDIZED

* * * *

TEST HOLE NUMBER: 223
LOCATION: 110N-48W-31AADA
LEGAL LOCATION: NE SE NE NE SEC. 31, T. 110 N., R. 48 W.

4.0 - 6.0 SAND, BROWN, FINE, CLAYEY; MOIST, OXIDIZED
9.0 - 25.0 SAND, BROWN, MEDIUM TO COARSE, SILTY; SATURATED, OXIDIZED

* * * *

TEST HOLE NUMBER: 224
LOCATION: 110N-48W-31BBB
LEGAL LOCATION: NW NW NW NW SEC. 31, T. 110 N., R. 48 W.

1.0 - 9.0 SAND AND GRAVEL, BROWN, MEDIUM TO COARSE
15.0 - 45.0 SAND AND GRAVEL, BROWN TO GRAY, MEDIUM TO COARSE

* * * *

TEST HOLE NUMBER: 225
LOCATION: 110N-48W-32DADA
LEGAL LOCATION: SE NE SE SE SEC. 32, T. 110 N., R. 48 W.

1.0 - 2.0 SAND, BROWN, FINE, SILTY; MOIST, OXIDIZED
11.0 - 17.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY, POORLY SORTED; DRY, OXIDIZED

* * * *

45
TEST HOLE NUMBER: 226
LOCATION: 110N-48W-33ADD
LEGAL LOCATION: SE SE NE NE SEC. 33, T. 110 N., R. 48 W.
 1.0 -  32.0 SAND AND GRAVEL, BROWN; GRADES FROM A MEDIUM SAND TO A COARSE GRAVEL
        * * * *

TEST HOLE NUMBER: 227
LOCATION: 110N-48W-33ABBA
LEGAL LOCATION: NE NW NW NE SEC. 33, T. 110 N., R. 48 W.
   0 -   8.0 SAND, VERY SILTY; LITTLE CLAY (LOAM) GRAVEL
   8.0 -  40.0 GRAVEL
        * * * *

TEST HOLE NUMBER: 228
LOCATION: 110N-48W-33ADDD
LEGAL LOCATION: SE SE SE NE SEC. 33, T. 110 N., R. 48 W.
  5.0 -  16.0 GRAVEL, BROWN, MEDIUM, VERY SILTY, SANDY; SATURATED, OXIDIZED
        * * * *

TEST HOLE NUMBER: 229
LOCATION: 110N-48W-33BCCB
LEGAL LOCATION: NW SW SW NW SEC. 33, T. 110 N., R. 48 W.
   4.0 -   7.0 SAND, BROWN, COARSE, CLAYEY; SATURATED, OXIDIZED, SOME GRAVEL
   7.0 -  12.0 GRAVEL, BROWN, MEDIUM; SATURATED, OXIDIZED, CLEAN
        * * * *

TEST HOLE NUMBER: 230
LOCATION: 110N-48W-33DDDD
LEGAL LOCATION: SE SE SE SE SEC. 33, T. 110 N., R. 48 W.
   0 -   6.0 GRAVEL, BROWN, COARSE, POORLY SORTED; DRY, OXIDIZED, SATURATED AT 2 FEET
        * * * *

TEST HOLE NUMBER: 231
LOCATION: 110N-48W-34ABBB
LEGAL LOCATION: NW NW NW NE SEC. 34, T. 110 N., R. 48 W.
  3.0 -  45.0 SAND AND GRAVEL, BROWN; GRADES FROM A MEDIUM SAND TO A COARSE GRAVEL

46
TEST HOLE NUMBER: 232
LOCATION: 110N-48W-34DAAA
LEGAL LOCATION: NE NE NE SE SEC. 34, T. 110 N., R. 48 W.

5.0 - 19.0 GRAVEL, BROWN, MEDIUM TO COARSE, VERY SANDY, CLAYISH; SATURATED, OXIDIZED

TEST HOLE NUMBER: 233
LOCATION: 110N-48W-34DDDD
LEGAL LOCATION: SE SE SE SE SEC. 34, T. 110 N., R. 48 W.

5.0 - 25.0 GRAVEL, BROWN, MEDIUM, SANDY; SATURATED, OXIDIZED

TEST HOLE NUMBER: 234
LOCATION: 110N-48W-35BCCB
LEGAL LOCATION: NW SW SW NW SEC. 35, T. 110 N., R. 48 W.

1.0 - 42.0 SAND AND GRAVEL, BROWN; GRADES FROM A MEDIUM SAND TO A COARSE GRAVEL

TEST HOLE NUMBER: 235
LOCATION: 110N-48W-35CCCC
LEGAL LOCATION: SW SW SW SW SEC. 35, T. 110 N., R. 48 W.

0 - 9.0 SAND AND GRAVEL, BROWN; MEDIUM SAND TO A COARSE GRAVEL

TEST HOLE NUMBER: 236
LOCATION: 110N-48W-35DAAA
LEGAL LOCATION: NE NE NE SE SEC. 35, T. 110 N., R. 48 W.

2.0 - 4.0 SAND, BROWN, COARSE, FEBBLY; DRY, OXIDIZED

TEST HOLE NUMBER: 237
LOCATION: 110N-48W-35DCCC 1
LEGAL LOCATION: SW SW SW SE SEC. 35, T. 110 N., R. 48 W.

9.0 - 29.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; SATURATED, OXIDIZED

47
TEST HOLE NUMBER: 238
LOCATION: 110N-48W-35DCCC 2
LEGAL LOCATION: SW SW SW SE SEC. 35, T. 110 N., R. 48 W.

0 - 29.0 SAND AND GRAVEL, BROWN; GRADES FROM A MEDIUM SAND TO A COARSE GRAVEL

TEST HOLE NUMBER: 239
LOCATION: 110N-48W-35DDDA
LEGAL LOCATION: NE SE SE SE SEC. 35, T. 110 N., R. 48 W.

4.0 - 24.0 GRAVEL, BROWN, COARSE, SANDY; SATURATED, OXIDIZED

TEST HOLE NUMBER: 240
LOCATION: 110N-48W-36CCCC
LEGAL LOCATION: SW SW SW SW SEC. 36, T. 110 N., R. 48 W.

1.0 - 30.0 SAND AND GRAVEL, BROWN; GRADES FROM A MEDIUM SAND TO A COARSE GRAVEL

TEST HOLE NUMBER: 241
LOCATION: 110N-49W-01AABA
LEGAL LOCATION: NE NW NE NE SEC. 01, T. 110 N., R. 49 W.

5.0 - 51.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; DRY, OXIDIZED

TEST HOLE NUMBER: 242
LOCATION: 110N-49W-01BBBB
LEGAL LOCATION: NW NW NW NW SEC. 01, T. 110 N., R. 49 W.

2.0 - 10.0 SAND, BROWN, FINE TO MEDIUM; DRY, OXIDIZED, SOME GRAVEL
10.0 - 21.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; DRY, OXIDIZED

TEST HOLE NUMBER: 243
LOCATION: 110N-49W-01CCBC
LEGAL LOCATION: SW NW SW SW SEC. 01, T. 110 N., R. 49 W.

1.0 - 17.0 SAND, BROWN, VERY FINE, SILTY; DRY,
17.0 - 42.0 OXIDIZED
GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; DRY, OXIDIZED, SATURATED AT 31 FEET

TEST HOLE NUMBER: 244
LOCATION: 110N-49W-01C00D
LEGAL LOCATION: SE SW SE SW SEC. 01, T. 110 N., R. 49 W.
0 -  2.0 SAND, BROWN, FINE; DRY, OXIDIZED, SOME GRAVEL
2.0 - 25.0 GRAVEL, BROWN, MEDIUM, VERY SANDY; DRY, OXIDIZED

TEST HOLE NUMBER: 245
LOCATION: 110N-49W-01DAAA
LEGAL LOCATION: NE NE NE SE SEC. 01, T. 110 N., R. 49 W.
0 -  6.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; DRY, OXIDIZED
6.0 - 20.0 SAND, BROWN, MEDIUM TO COARSE, GRAVELLY; DRY, OXIDIZED
20.0 - 24.0 GRAVEL, BROWN, COARSE TO VERY COARSE, SANDY; DRY, OXIDIZED, ABANDONED HOLE

TEST HOLE NUMBER: 246
LOCATION: 110N-49W-01D00C
LEGAL LOCATION: SW SE SE SE SEC. 01, T. 110 N., R. 49 W.
6.0 - 55.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; DRY, OXIDIZED, SATURATED AT 40 FEET

TEST HOLE NUMBER: 247
LOCATION: 110N-49W-02ABA0
LEGAL LOCATION: NE NW NW NE SEC. 02, T. 110 N., R. 49 W.
2.0 - 15.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; DRY, OXIDIZED, SATURATED AT 9 FEET

TEST HOLE NUMBER: 248
LOCATION: 110N-49W-05ABA0
LEGAL LOCATION: NE NE NW NE SEC. 05, T. 110 N., R. 49 W.
4.0 - 10.0 SAND, COARSE; SOME GRAVEL
10.0 - 67.0 SAND AND GRAVEL

49
<table>
<thead>
<tr>
<th>Hole Number</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>249</td>
<td>110N-49W-05ABBB NW NW NW NE Sec. 05, T. 110 N., R. 49 W.</td>
</tr>
<tr>
<td>250</td>
<td>110N-49W-05DCCC SW SW SW SE Sec. 05, T. 110 N., R. 49 W.</td>
</tr>
<tr>
<td>251</td>
<td>110N-49W-06DAAA NE NE NE SE Sec. 06, T. 110 N., R. 49 W.</td>
</tr>
<tr>
<td>252</td>
<td>110N-49W-06DDCC SW SW SE SE Sec. 06, T. 110 N., R. 49 W.</td>
</tr>
<tr>
<td>253</td>
<td>110N-49W-07AAAA NE NE NE NE Sec. 07, T. 110 N., R. 49 W.</td>
</tr>
<tr>
<td>254</td>
<td>110N-49W-07AAAA 1 NE NE NE NE Sec. 07, T. 110 N., R. 49 W.</td>
</tr>
</tbody>
</table>

### Test Hole Number 249
- **Location:** 110N-49W-05ABBB NW NW NW NE Sec. 05, T. 110 N., R. 49 W.
- **Legal Location:** NW NW NW NE Sec. 05, T. 110 N., R. 49 W.
- **Depth:** 4.0 - 34.0
  - **Sediment:** Sand and Gravel, Coarse Sand to Coarse Gravel, Angular

### Test Hole Number 250
- **Location:** 110N-49W-05DCCC SW SW SW SE Sec. 05, T. 110 N., R. 49 W.
- **Legal Location:** SW SW SW SE Sec. 05, T. 110 N., R. 49 W.
- **Depth:** 6.0 - 9.0
  - **Sediment:** Sand and Gravel
- **Depth:** 9.0 - 13.0
  - **Sediment:** Gravel; Some Sand

### Test Hole Number 251
- **Location:** 110N-49W-06DAAA NE NE NE SE Sec. 06, T. 110 N., R. 49 W.
- **Legal Location:** NE NE NE SE Sec. 06, T. 110 N., R. 49 W.
- **Depth:** 8.0 - 11.0
  - **Sediment:** Sand, Coarse; Some Gravel
- **Depth:** 11.0 - 16.0
  - **Sediment:** Sand, Fine to Coarse; Some Clay
- **Depth:** 20.0 - 31.6
  - **Sediment:** Sand, Coarse; Some Gravel

### Test Hole Number 252
- **Location:** 110N-49W-06DDCC SW SW SE SE Sec. 06, T. 110 N., R. 49 W.
- **Legal Location:** SW SW SE SE Sec. 06, T. 110 N., R. 49 W.
- **Depth:** 0 - 5.0
  - **Sediment:** Sand, Brown, Fine, Silty
- **Depth:** 5.0 - 15.0
  - **Sediment:** Gravel and Sand
- **Depth:** 15.0 - 72.0
  - **Sediment:** Sand, Coarse; Some Gravel

### Test Hole Number 253
- **Location:** 110N-49W-07AAAA NE NE NE NE Sec. 07, T. 110 N., R. 49 W.
- **Legal Location:** NE NE NE NE Sec. 07, T. 110 N., R. 49 W.
- **Depth:** 6.0 - 52.0
  - **Sediment:** Sand and Gravel, Well-Rounded

### Test Hole Number 254
- **Location:** 110N-49W-07AAAA 1 NE NE NE NE Sec. 07, T. 110 N., R. 49 W.
- **Legal Location:** NE NE NE NE Sec. 07, T. 110 N., R. 49 W.
- **Depth:** 1.0 - 3.0
  - **Sediment:** Sand
- **Depth:** 3.0 - 47.0
  - **Sediment:** Sand, Coarse; Some Gravel
TEST HOLE NUMBER: 255
LOCATION: 110N-49W-07ACCC
LEGAL LOCATION: SW SW SW NE SEC. 07, T. 110 N., R. 49 W.

1.0  -  5.0  SAND, FINE, SILTY
5.0  -  8.0  SAND AND GRAVEL
8.0  - 51.0  GRAVEL AND SAND

TEST HOLE NUMBER: 256
LOCATION: 110N-49W-07BCCC
LEGAL LOCATION: NW NW NW SW SEC. 07, T. 110 N., R. 49 W.

5.0  - 10.0  SAND AND GRAVEL
10.0  - 17.0  SAND AND GRAVEL, UNSORTED

TEST HOLE NUMBER: 257
LOCATION: 110N-49W-49DCCC
LEGAL LOCATION: SW SW SW SE SEC. 09, T. 110 W., R. 49 W.

2.0  - 21.0  SAND AND GRAVEL

TEST HOLE NUMBER: 258
LOCATION: 110N-49W-10ADAA
LEGAL LOCATION: NE NE SE NE SEC. 10, T. 110 N., R. 49 W.

5.0  - 11.0  SAND, BROWN
11.0  - 21.0  SAND AND GRAVEL
11.0  - 41.0  SAND, COARSE, WELL-SORTED; SOME GRAVEL

TEST HOLE NUMBER: 259
LOCATION: 110N-49W-11CCCC
LEGAL LOCATION: SW SW SW SW SEC. 11, T. 110 N., R. 49 W.

4.0  - 28.0  SAND AND GRAVEL, WELL-ROUNDED

TEST HOLE NUMBER: 260
LOCATION: 110N-49W-11DCCC
LEGAL LOCATION: SW SW SW SE SEC. 11, T. 110 N., R. 49 W.

6.0  -  8.0  SAND AND GRAVEL
8.0  - 38.0  GRAVEL AND SAND
** TEST HOLE NUMBER: 261
LOCATION: 110N-49W-12BCBC
LEGAL LOCATION: NW SW NW NW SEC. 12, T. 110 N., R. 49 W.

6.0 - 10.0 SAND, LIGHT-BROWN, MEDIUM TO COARSE, SILTY, PEBBLY; SATURATED, OXIDIZED

** **

** TEST HOLE NUMBER: 262
LOCATION: 110N-49W-13BCBC
LEGAL LOCATION: SW NW SW NW SEC. 13, T. 110 N., R. 49 W.

5.0 - 32.0 SAND, BROWN, VERY FINE, CLAYITY; SATURATED, OXIDIZED

** **

** TEST HOLE NUMBER: 263
LOCATION: 110N-49W-13DDDD
LEGAL LOCATION: SE SE SE SE SEC. 13, T. 110 N., R. 49 W.

1.0 - 4.0 SAND, BROWN, VERY FINE, SILTY; DRY, OXIDIZED

6.0 - 11.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; MOIST, OXIDIZED

16.0 - 22.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; MOIST, OXIDIZED, ABANDONED HOLE

** **

** TEST HOLE NUMBER: 264
LOCATION: 110N-49W-14BBB
LEGAL LOCATION: NW NW NW NW SEC. 14, T. 110 N., R. 49 W.

3.0 - 8.0 SAND AND GRAVEL

8.0 - 23.0 GRAVEL AND SAND

** **

** TEST HOLE NUMBER: 265
LOCATION: 110N-49W-14DDDD
LEGAL LOCATION: SE SE SE SE SEC. 14, T. 110 N., R. 49 W.

0 - 37.0 GRAVEL, SANDY, POORLY SORTED, SUBANGULAR

** **

** TEST HOLE NUMBER: 266
LOCATION: 110N-49W-15ABBB
LEGAL LOCATION: NW NW NW NE SEC. 15, T. 110 N., R. 49 W.

52
1.0 - 5.0 SAND, SILTY
5.0 - 24.0 SAND AND GRAVEL

** **

TEST HOLE NUMBER: 267
LOCATION: 110N-49W-15BBBB
LEGAL LOCATION: NW NW NW NW SEC. 15, T. 110 N., R. 49 W.

4.0 - 10.0 SAND AND GRAVEL, BROWN, MEDIUM TO COARSE

** **

TEST HOLE NUMBER: 268
LOCATION: 110N-49W-15DCCC
LEGAL LOCATION: SW SW SW SE SEC. 15, T. 110 N., R. 49 W.

1.0 - 6.0 SAND, FINE
6.0 - 40.0 SAND AND GRAVEL

** **

TEST HOLE NUMBER: 269
LOCATION: 110N-49W-15DDDD
LEGAL LOCATION: SE SE SE SE SEC. 15, T. 110 N., R. 49 W.

0 - 11.0 SAND
11.0 - 35.0 SAND AND GRAVEL

** **

TEST HOLE NUMBER: 270
LOCATION: 110N-49W-16CCCC
LEGAL LOCATION: SE SE SE SW SEC. 16, T. 110 N., R. 49 W.

0 - 7.0 SAND AND GRAVEL
7.0 - 18.0 GRAVEL AND SAND

** **

TEST HOLE NUMBER: 271
LOCATION: 110N-49W-18BBBB
LEGAL LOCATION: NW NW NW NW SEC. 18, T. 110 N., R. 49 W.

1.0 - 7.0 SAND
7.0 - 57.0 GRAVEL AND SAND

** **

TEST HOLE NUMBER: 272
LOCATION: 110N-49W-20AAAA
LEGAL LOCATION: NE NE NE NE SEC. 20, T. 110 N., R. 49 W.

2.0 - 18.0 SAND AND GRAVEL, VERY COARSE

53
TEST HOLE NUMBER: 273
LOCATION: 110N-49W-20AAAA 1
LEGAL LOCATION: NE NE NE NE SEC. 20, T. 110 N., R. 49 W.

5.0 - 16.0 SAND, COARSE; SOME GRAVEL
16.0 - 21.0 SAND AND GRAVEL

TEST HOLE NUMBER: 274
LOCATION: 110N-49W-21CCCC
LEGAL LOCATION: SW SW SW SW SEC. 21, T. 110 N., R. 49 W.

3.0 - 14.0 SAND AND GRAVEL
14.0 - 52.0 SAND, COARSE; SOME GRAVEL

TEST HOLE NUMBER: 275
LOCATION: 110N-49W-21DCCC
LEGAL LOCATION: SW SW SW SE SEC. 21, T. 110 N., R. 49 W.

4.0 - 50.0 GRAVEL AND SAND

TEST HOLE NUMBER: 276
LOCATION: 110N-49W-21DDDD
LEGAL LOCATION: SE SE SE SE SEC. 21, T. 110 N., R. 49 W.

2.0 - 29.0 SAND; SOME GRAVEL

TEST HOLE NUMBER: 277
LOCATION: 110N-49W-22AAAA
LEGAL LOCATION: NE NE NE NE SEC. 22, T. 110 N., R. 49 W.

2.0 - 35.0 SAND AND GRAVEL, FINE SAND TO COARSE GRAVEL; WELL ROUNDED

TEST HOLE NUMBER: 278
LOCATION: 110N-49W-25CCCC
LEGAL LOCATION: SW SW SW SW SEC. 25, T. 110 N., R. 49 W.

0 - 22.0 SAND AND GRAVEL
22.0 - 24.0 SAND AND GRAVEL, DARK-GRAY

54
TEST HOLE NUMBER: 279
LOCATION: 110N-49W-26AAAA
LEGAL LOCATION: NE NE NE NE SEC. 26, T. 110 N., R. 49 W.

0 - 11.0 SAND AND GRAVEL; COULD NOT PENETRATE

TEST HOLE NUMBER: 280
LOCATION: 110N-49W-26CCCC
LEGAL LOCATION: SW SW SW SW SEC. 26, T. 110 N., R. 49 W.

6.0 - 58.0 GRAVEL, COARSE

TEST HOLE NUMBER: 281
LOCATION: 110N-49W-26DDDD
LEGAL LOCATION: SE SE SE SE SEC. 26, T. 110 N., R. 49 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE

7.0 - 36.0 SAND AND GRAVEL; FINE SAND TO COARSE
PEBBLES

TEST HOLE NUMBER: 282
LOCATION: 110N-49W-27AAAA
LEGAL LOCATION: NE NE NE NE SEC. 27, T. 110 N., R. 49 W.

7.0 - 16.0 SAND AND GRAVEL

TEST HOLE NUMBER: 283
LOCATION: 110N-49W-28ADDD
LEGAL LOCATION: SE SE SE NE SEC. 28, T. 110 N., R. 49 W.

1.0 - 21.0 SAND, FINE TO COARSE; SOME GRAVEL
21.0 - 48.0 GRAVEL AND SAND

TEST HOLE NUMBER: 284
LOCATION: 110N-49W-28DCCC
LEGAL LOCATION: SW SW SW SE SEC. 28, T. 110 N., R. 49 W.

0 - 13.0 SAND AND GRAVEL
13.0 - 34.0 GRAVEL AND SAND

TEST HOLE NUMBER: 285
LOCATION: 110N-49W-29AAAA

55
LEGAL LOCATION: NE NE NE NE SEC. 29, T. 110 N., R. 49 W.

1.0 - 18.0 SAND AND GRAVEL; OXIDIZED
18.0 - 28.0 SAND, FINE, SILTY

* * *

TEST HOLE NUMBER: 286
LOCATION: 110N-49W-29ADD
LEGAL LOCATION: SE SE SE NE SEC. 29, T. 110 N., R. 49 W.

8.0 - 24.0 SAND AND GRAVEL
24.0 - 44.0 SAND AND GRAVEL; FINE GRAVEL

* * *

TEST HOLE NUMBER: 297
LOCATION: 110N-49W-39BAAA
LEGAL LOCATION: NE NE NE NW SEC. 29, T. 110 N., R. 49 W.

1.0 - 6.0 SAND, CLAYEY, SILTY
6.0 - 26.0 SAND AND GRAVEL

* * *

TEST HOLE NUMBER: 288
LOCATION: 110N-49W-29DCCC
LEGAL LOCATION: SW SW SW SE SEC. 29, T. 110 N., R. 49 W.

10.0 - 20.0 SAND AND GRAVEL
20.0 - 24.0 GRAVEL AND SAND
24.0 - 57.0 SAND, COARSE; SOME GRAVEL

* * *

TEST HOLE NUMBER: 289
LOCATION: 110N-49W-30DDDD
LEGAL LOCATION: SE SE SE SE SEC. 30, T. 110 N., R. 49 W.

1.0 - 6.0 SAND AND GRAVEL
6.0 - 17.0 GRAVEL AND SAND

* * *

TEST HOLE NUMBER: 290
LOCATION: 110N-49W-31DCCC
LEGAL LOCATION: SW SW SW SE SEC. 31, T. 110 N., R. 49 W.

0 - 4.0 SAND, FINE TO COARSE
4.0 - 18.0 SAND AND GRAVEL

* * *

TEST HOLE NUMBER: 291
LOCATION: 110N-49W-32AAAA
LEGAL LOCATION: NE NE NE NE SEC. 32, T. 110 N., R. 49 W.

8.0 - 14.0 SAND; SOME GRAVEL
14.0 - 29.0 GRAVEL, SORTED

* * *

TEST HOLE NUMBER: 292
LOCATION: 110N-49W-32AAB
LEGAL LOCATION: NW NE NE SEC. 32, T. 110 N., R. 49 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE

4.0 - 20.0 SAND AND GRAVEL; MOSTLY COARSE PEBBLES

* * *

TEST HOLE NUMBER: 293
LOCATION: 110N-49W-32AABB
LEGAL LOCATION: NW NW NE NE SEC. 32, T. 110 N., R. 49 W.

8.0 - 24.0 SAND AND GRAVEL
24.0 - 50.0 SAND, COARSE; SOME FINE GRAVEL

* * *

TEST HOLE NUMBER: 294
LOCATION: 110N-49W-32AAC
LEGAL LOCATION: SW SW NE NE SEC. 32, T. 110 N., R. 49 W.

7.0 - 16.0 SAND, COARSE
16.0 - 19.0 GRAVEL AND SAND
19.0 - 57.0 SAND; SOME GRAVEL

* * *

TEST HOLE NUMBER: 295
LOCATION: 110N-49W-32ACC
LEGAL LOCATION: SW SW SW NW SEC. 32, T. 110 N., R. 49 W.

0 - 20.0 SAND AND GRAVEL

* * *

TEST HOLE NUMBER: 296
LOCATION: 110N-49W-32BDDA
LEGAL LOCATION: NE SE SE NW SEC. 32, T. 110 N., R. 49 W.

7.0 - 46.0 SAND AND GRAVEL

* * *

TEST HOLE NUMBER: 297
LOCATION: 110N-49W-32DCCC

57
**LEGAL LOCATION:** SW SW SW SE SEC. 32, T. 110 N., R. 49 W.

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Sample Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>SAND AND GRAVEL; SOME BOULDERS</td>
</tr>
<tr>
<td>8.0</td>
<td>GRAVEL; SOME BOULDERS</td>
</tr>
<tr>
<td>16.0</td>
<td>SAND AND GRAVEL, NOT TOO COARSE</td>
</tr>
</tbody>
</table>

* * * *

**TEST HOLE NUMBER:** 298
**LOCATION:** 110N-49W-33AAAAA
**LEGAL LOCATION:** NE NE NE NE SEC. 33, T. 110 N., R. 49 W.

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Sample Description</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>SAND, VERY COARSE; SOME GRAVEL</td>
</tr>
<tr>
<td>18.0</td>
<td>SAND, VERY COARSE, PEBBLY</td>
</tr>
</tbody>
</table>

* * * *

**TEST HOLE NUMBER:** 299
**LOCATION:** 110N-49W-33CCCCC
**LEGAL LOCATION:** SW SW SW SW SEC. 33, T. 110 N., R. 49 W.

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Sample Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>SAND AND GRAVEL, COARSE</td>
</tr>
</tbody>
</table>

* * * *

**TEST HOLE NUMBER:** 300
**LOCATION:** 110N-49W-34AAAAA
**LEGAL LOCATION:** NE NE NE NE SEC. 34, T. 110 N., R. 49 W.

<table>
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<tr>
<th>Depth (ft)</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>SAND, COARSE; SOME GRAVEL</td>
</tr>
<tr>
<td>17.0</td>
<td>SAND, VERY COARSE; SOME GRAVEL</td>
</tr>
</tbody>
</table>

* * * *

**TEST HOLE NUMBER:** 301
**LOCATION:** 110N-49W-34BBBBB
**LEGAL LOCATION:** NW NW NW SW SEC. 34, T. 110 N., R. 49 W.

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Sample Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>SAND, FINE TO COARSE</td>
</tr>
<tr>
<td>6.0</td>
<td>SAND AND GRAVEL</td>
</tr>
<tr>
<td>16.0</td>
<td>SAND, COARSE; SOME GRAVEL</td>
</tr>
</tbody>
</table>

* * * *

**TEST HOLE NUMBER:** 302
**LOCATION:** 110N-49W-34CCCCC
**LEGAL LOCATION:** SW SW SW SW SEC. 34, T. 110 N., R. 49 W.

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Sample Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0</td>
<td>SAND AND GRAVEL</td>
</tr>
<tr>
<td>9.0</td>
<td>SAND; SOME GRAVEL</td>
</tr>
<tr>
<td>19.0</td>
<td>SAND, COARSE; SOME GRAVEL</td>
</tr>
</tbody>
</table>

* * * *

58
TEST HOLE NUMBER: 303
LOCATION: 110N-49W-35BBB
LEGAL LOCATION: NW NW NW NW SEC. 35, T. 110 N., R. 49 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE

3.0 - 48.0 SAND AND GRAVEL, COARSE SAND TO VERY
COARSE PEBBLES

* * * *

TEST HOLE NUMBER: 304
LOCATION: 110N-49W-35DDDD
LEGAL LOCATION: SE SE SE SE SEC. 35, T. 110 N., R. 49 W.

1.0 - 13.0 SAND AND GRAVEL

* * * *

TEST HOLE NUMBER: 305
LOCATION: 110N-49W-36DDDD
LEGAL LOCATION: SE SE SE SE SEC. 36, T. 110 N., R. 49 W.

4.0 - 45.0 SAND AND GRAVEL, BROWN, MEDIUM TO COARSE

* * * *

TEST HOLE NUMBER: 306
LOCATION: 110N-50W-03DDDA
LEGAL LOCATION: NE SE SE SE SEC. 03, T. 110 N., R. 50 W.

5.0 - 9.0 GRAVEL, BROWN, MEDIUM, VERY CLAYEY,
SANDY; SATURATED, OXIDIZED

* * * *

TEST HOLE NUMBER: 307
LOCATION: 110N-50W-05BBBB
LEGAL LOCATION: NW NW NW NW SEC. 05, T. 110 N., R. 50 W.

1.0 - 14.0 SAND AND GRAVEL; FINE SAND

* * * *

TEST HOLE NUMBER: 308
LOCATION: 110N-50W-05BCBB
LEGAL LOCATION: NW SW NW SW SEC. 05, T. 110 N., R. 50 W.

1.0 - 10.0 SAND, YELLOW-BROWN, MEDIUM
10.0 - 20.0 SAND, BLUE-GRAY, MEDIUM TO COARSE
20.0 - 30.0 SAND, BLUE-GRAY, COARSE

* * * *

TEST HOLE NUMBER: 309

59
LOCATION: 110N-50W-07DDDD
LEGAL LOCATION: SE SE SE Sec. 07, T. 110 N., R. 50 W.

3.0 - 22.0 SAND AND GRAVEL

***

TEST HOLE NUMBER: 310
LOCATION: 110N-50W-09DDDD
LEGAL LOCATION: SE SE Sec. 09, T. 110 N., R. 50 W.

5.0 - 10.0 GRAVEL, BROWN, MEDIUM, SILTY, SANDY; SATURATED, OXIDIZED

***

TEST HOLE NUMBER: 311
LOCATION: 110N-50W-10CCCCC
LEGAL LOCATION: SW SW SW SW Sec. 10, T. 110 N., R. 50 W.

0 - 6.0 SAND AND GRAVEL
6.0 - 27.0 GRAVEL AND SAND

***

TEST HOLE NUMBER: 312
LOCATION: 110N-50W-12A2AA
LEGAL LOCATION: NE NE NE Sec. 12, T. 110 N., R. 50 W.

4.0 - 11.0 SAND, BROWN, FINE, SILTY, POORLY SORTED; MOIST, OXIDIZED, SATURATED AT 5 FEET

***

TEST HOLE NUMBER: 313
LOCATION: 110N-50W-13ABAB
LEGAL LOCATION: NW NE NW NE Sec. 13, T. 110 N., R. 50 W.

8.0 - 30.0 GRAVEL

***

TEST HOLE NUMBER: 314
LOCATION: 110N-50W-13ADDD
LEGAL LOCATION: SE SE NE Sec. 13, T. 110 N., R. 50 W.

6.0 - 10.0 SAND
10.0 - 13.0 SAND; SOME GRAVEL

***

TEST HOLE NUMBER: 315
LOCATION: 110N-50W-13CBAB
LEGAL LOCATION: NW NE NW SW Sec. 13, T. 110 N., R. 50 W.

60
9.0 - 25.0 SAND, COARSE
25.0 - 71.0 SAND AND GRAVEL

** * * *

TEST HOLE NUMBER: 316
LOCATION: 110N-50W-13CHBC
LEGAL LOCATION: SW NW NW SW SEC. 13, T. 110 N., R. 50 W.
13.0 - 15.0 SAND, BROWN
15.0 - 64.0 SAND AND GRAVEL

** * * *

TEST HOLE NUMBER: 317
LOCATION: 110N-50W-14CCCC
LEGAL LOCATION: SW SW SW NE SEC. 14, T. 110 N., R. 50 W.
6.0 - 9.0 SAND AND GRAVEL
9.0 - 17.0 GRAVEL AND SAND
17.0 - 37.0 SAND AND GRAVEL, CLAYEY

** * * *

TEST HOLE NUMBER: 318
LOCATION: 110N-50W-14CCCD
LEGAL LOCATION: SE SW SW SW SEC. 14, T. 110 N., R. 50 W.
5.0 - 8.0 SAND; SOME GRAVEL
8.0 - 13.0 SAND AND GRAVEL
19.0 - 62.0 SAND, FINE TO COARSE

** * * *

TEST HOLE NUMBER: 319
LOCATION: 110N-50W-15AAAA
LEGAL LOCATION: NE NE NE NE SEC. 15, T. 110 N., R. 50 W.
3.0 - 10.0 SAND, BROWN, FINE TO MEDIUM, VERY CLAYEY, SILTY; MOIST, OXIDIZED

** * * *

TEST HOLE NUMBER: 320
LOCATION: 110N-50W-16CCCC
LEGAL LOCATION: SW SW SW SW SEC. 16, T. 110 N., R. 50 W.
1.0 - 18.0 SAND AND GRAVEL, FINE TO MEDIUM

** * * *

TEST HOLE NUMBER: 321
LOCATION: 110N-50W-17AAAA
LEGAL LOCATION: NE NE NE NW SEC. 17, T. 110 N., R. 50 W.

61
0.0  2.0  SAND, FINE
2.0  6.0  SAND AND GRAVEL
6.0  15.0 SAND, COARSE; SOME GRAVEL
   **  **

TEST HOLE NUMBER: 321
LOCATION: 110N-50W-17CCCC
LEGAL LOCATION: SW SW SW SW SEC. 17, T. 110 N., R. 50 W.
1.0  3.0  SAND
3.0  40.0 GRAVEL AND SAND
   **  **

TEST HOLE NUMBER: 323
LOCATION: 110N-50W-17CCCD
LEGAL LOCATION: SE SW SW SW SEC. 17, T. 110 N., R. 50 W.
1.0  7.0  SAND
7.0  16.0 SAND AND GRAVEL
   **  **

TEST HOLE NUMBER: 324
LOCATION: 110N-50W-17DAAA
LEGAL LOCATION: NE NE NE SE SEC. 17, T. 110 N., R. 50 W.
3.0  6.0  SAND; SOME GRAVEL
6.0  17.0 GRAVEL AND SAND
   **  **

TEST HOLE NUMBER: 325
LOCATION: 110N-50W-18BBBB
LEGAL LOCATION: NW NW NW NW SEC. 18, T. 110 N., R. 50 W.
1.0  24.0 SAND AND GRAVEL, COARSER TOWARDS BOTTOM
   **  **

TEST HOLE NUMBER: 326
LOCATION: 110N-50W-18BBBB 1
LEGAL LOCATION: NW NW NW NW SEC. 18, T. 110 N., R. 50 W.
1.0  4.0  SAND AND GRAVEL
4.0  25.0 SAND, COARSE; SOME GRAVEL
   **  **

TEST HOLE NUMBER: 327
LOCATION: 110N-50W-18DCBB
LEGAL LOCATION: NW NW SW SE SEC. 18, T. 110 N., R. 50 W.

62
4.0 - 18.0 GRAVEL, FINE
23.0 - 34.0 GRAVEL

* * * *

TEST HOLE NUMBER: 328
LOCATION: 110N-50W-19CCCC
LEGAL LOCATION: SW SW SW SW SEC. 19, T. 110 N., R. 50 W.
1.0 - 3.0 SAND
3.0 - 7.0 SAND, COARSE; SOME GRAVEL

* * * *

TEST HOLE NUMBER: 329
LOCATION: 110N-50W-20DDDA
LEGAL LOCATION: SE SE SE SE SEC. 20, T. 110 N., R. 50 W.
2.0 - 30.0 GRAVEL

* * * *

TEST HOLE NUMBER: 330
LOCATION: 110N-50W-20DDDD
LEGAL LOCATION: SE SE SE SE SEC. 20, T. 110 N., R. 50 W.
7.0 - 48.0 SAND AND GRAVEL

* * * *

TEST HOLE NUMBER: 331
LOCATION: 110N-50W-21BCCC
LEGAL LOCATION: SW SW SW NW SEC. 21, T. 110 N., R. 50 W.
10.0 - 17.0 SAND, FINE; SOME GRAVEL

* * * *

TEST HOLE NUMBER: 332
LOCATION: 110N-50W-21CCBB
LEGAL LOCATION: NW NW SW SW SEC. 21, T. 110 N., R. 50 W.
0 - 16.0 GRAVEL

* * * *

TEST HOLE NUMBER: 333
LOCATION: 110N-50W-22ADDD
LEGAL LOCATION: SE SE SE NE SEC. 22, T. 110 N., R. 50 W.
10.0 - 16.0 SAND, GRAY, FINE

* * * *

63
TEST HOLE NUMBER: 334
LOCATION: 110N-50W-22BDAD
LEGAL LOCATION: SE NE SE NW SEC. 22, T. 110 N., R. 50 W.

7.0 - 17.0 SAND, COARSE; SOME GRAVEL

* * *

TEST HOLE NUMBER: 335
LOCATION: 110N-50W-22CBBB
LEGAL LOCATION: NW NW NW SW SEC. 22, T. 110 N., R. 50 W.

1.0 - 5.0 SAND, FINE
5.0 - 10.0 SAND AND GRAVEL; SOME BOULDERS
10.0 - 33.0 SAND, FINE TO COARSE, POORLY SORTED

* * *

TEST HOLE NUMBER: 336
LOCATION: 110N-50W-22CCCC
LEGAL LOCATION: SW SW SW SW SEC. 22, T. 110 N., R. 50 W.

4.0 - 12.0 SAND, FINE TO MEDIUM; WITH SOME YELLOW CLAY
12.0 - 45.0 SAND, FINE TO MEDIUM; GOOD, SOME CLAY AT 30 FEET WITH MEDIUM GRAVEL

* * *

TEST HOLE NUMBER: 337
LOCATION: 110N-50W-22CDCD
LEGAL LOCATION: SE SW SE SW SEC. 22, T. 110 N., R. 50 W.

3.0 - 9.0 SAND, LIGHT-BROWN TO DARK-BROWN, FINE TO COARSE
9.0 - 16.0 SAND AND GRAVEL, BROWN
16.0 - 19.0 SAND AND GRAVEL, GRAY

* * *

TEST HOLE NUMBER: 338
LOCATION: 110N-50W-28AAAA
LEGAL LOCATION: NE NE NE NE SEC. 28, T. 110 N., R. 50 W.

7.0 - 23.0 SAND, FINE TO COARSE; SOME GRAVEL
23.0 - 29.0 SAND, FINE, WELL-SORTED

* * *

TEST HOLE NUMBER: 339
LOCATION: 110N-50W-28BCCC
LEGAL LOCATION: SW SW SW NW SEC. 28, T. 110 N., R. 50 W.

6.0 - 8.0 SAND, COARSE

64
<table>
<thead>
<tr>
<th>Depth</th>
<th>Thickness</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.0</td>
<td>24.0</td>
<td>Sand and Gravel</td>
</tr>
<tr>
<td>24.0</td>
<td>32.0</td>
<td>Sand, coarse, well-sorted</td>
</tr>
</tbody>
</table>

**TEST HOLE NUMBER:** 340  
**LOCATION:** 110N-50W-28SAAA  
**LEGAL LOCATION:** NE NE NE SE Sec. 28, T. 110 N., R. 50 W.  
<table>
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<tr>
<th>Depth</th>
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<tr>
<td>4.0</td>
<td>21.0</td>
<td>Sand, brown, fine to medium; moist, oxidized, saturated at 10 feet</td>
</tr>
</tbody>
</table>

**TEST HOLE NUMBER:** 341  
**LOCATION:** 110N-50W-29SABB  
**LEGAL LOCATION:** NW NW NW NE Sec. 29, T. 110 N., R. 50 W.  
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<tr>
<th>Depth</th>
<th>Thickness</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0</td>
<td>6.0</td>
<td>Sand and gravel, coarse</td>
</tr>
<tr>
<td>6.0</td>
<td>12.0</td>
<td>Sand, coarse; some fine gravel</td>
</tr>
</tbody>
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**TEST HOLE NUMBER:** 342  
**LOCATION:** 110N-50W-30ADD  
**LEGAL LOCATION:** SE SE SE NE Sec. 30, T. 110 N., R. 50 W.  
<table>
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<tr>
<th>Depth</th>
<th>Thickness</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0</td>
<td>11.0</td>
<td>Sand, coarse</td>
</tr>
<tr>
<td>11.0</td>
<td>16.0</td>
<td>Sand, fine to coarse</td>
</tr>
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**TEST HOLE NUMBER:** 343  
**LOCATION:** 110N-50W-31CCCC  
**LEGAL LOCATION:** SW SW SW SW Sec. 31, T. 110 N., R. 50 W.  
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<tr>
<th>Depth</th>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>14.0</td>
<td>Sand, reddish-brown, fine, well sorted; dry, oxidized, saturated at 7 feet</td>
</tr>
<tr>
<td>14.0</td>
<td>19.0</td>
<td>Gravel, dark-brown, fine, moderately sorted; saturated, oxidized</td>
</tr>
<tr>
<td>19.0</td>
<td>28.0</td>
<td>Sand, gray, fine, well sorted; saturated, unoxidized</td>
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**TEST HOLE NUMBER:** 344  
**LOCATION:** 110N-50W-32ABB  
**LEGAL LOCATION:** NW NW NE NE Sec. 32, T. 110 N., R. 50 W.  
<table>
<thead>
<tr>
<th>Depth</th>
<th>Thickness</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0</td>
<td>10.0</td>
<td>Sand, fine; some clay</td>
</tr>
<tr>
<td>10.0</td>
<td>24.0</td>
<td>Sand, fine to coarse; some gravel</td>
</tr>
</tbody>
</table>

65
TEST HOLE NUMBER: 345
LOCATION: 110N-50W-33BAAA
LEGAL LOCATION: NE NE NE NW Sec. 33, T. 110 N., R. 50 W.
   3.0 - 6.0 SAND, COARSE
   6.0 - 17.0 SAND, FINE TO COARSE

TEST HOLE NUMBER: 346
LOCATION: 110N-50W-33CCCD
LEGAL LOCATION: SE SW SW SW Sec. 33, T. 110 N., R. 50 W.
   10.0 - 22.0 SAND, FINE TO COARSE; SOME GRAVEL

TEST HOLE NUMBER: 347
LOCATION: 110N-50W-33DDDD
LEGAL LOCATION: SE SE SE SE Sec. 33, T. 110 N., R. 50 W.
   0 - 6.0 SAND AND GRAVEL
   6.0 - 9.0 SAND, FINE TO COARSE; SOME GRAVEL
   5.0 - 17.0 SAND, FINE TO COARSE

TEST HOLE NUMBER: 348
LOCATION: 110N-51W-01DDDD
LEGAL LOCATION: SE SE SE SE Sec. 01, T. 110 N., R. 51 W.
   2.0 - 8.0 SAND AND GRAVEL, BROWN, GRADING TO GRAYISH-BROWN
   8.0 - 17.0 SAND AND GRAVEL

TEST HOLE NUMBER: 349
LOCATION: 110N-51W-02CDDD
LEGAL LOCATION: SW SE SE SW Sec. 02, T. 110 N., R. 51 W.
   3.0 - 17.0 SAND, MEDIUM TO COARSE; SOME GRAVEL, SOME CLAY
   17.0 - 21.0 SAND, LIGHT-BROWN, MEDIUM TO COARSE; SOME CLAY
   21.0 - 35.0 SAND AND GRAVEL

TEST HOLE NUMBER: 350
LOCATION: 110N-51W-03AAAB
LEGAL LOCATION: NW NE NE NE Sec. 03, T. 110 N., R. 51 W.
   1.0 - 2.0 GRAVEL, BROWN, COARSE, POORLY SORTED;
<table>
<thead>
<tr>
<th>Depth</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>5.0</td>
<td>Sand, reddish-brown, fine, well sorted; dry, oxidized</td>
</tr>
<tr>
<td>5.0</td>
<td>14.0</td>
<td>Gravel, brown, coarse, poorly sorted; dry, oxidized</td>
</tr>
<tr>
<td>14.0</td>
<td>15.0</td>
<td>Gravel, black, medium, silty, poorly sorted; moist</td>
</tr>
<tr>
<td>15.0</td>
<td>18.0</td>
<td>Sand, reddish-brown, medium, moderately sorted; saturated, oxidized</td>
</tr>
<tr>
<td>18.0</td>
<td>19.0</td>
<td>Gravel, brown, very coarse; saturated, oxidized; abandoned hole</td>
</tr>
</tbody>
</table>

**TEST HOLE NUMBER: 351**
LOCATION: 110N-51W-03BBBC
LEGAL LOCATION: SW NW NW NW SEC. 03, T. 110 N., R. 51 W.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>4.0</td>
<td>Gravel, brown, medium, clayey, sandy, poorly sorted; dry, oxidized</td>
</tr>
<tr>
<td>4.0</td>
<td>20.0</td>
<td>Gravel, reddish-brown, coarse, sandy, poorly sorted; moist, oxidized</td>
</tr>
</tbody>
</table>

**TEST HOLE NUMBER: 352**
LOCATION: 110N-51W-04CCCC
LEGAL LOCATION: SW SW SW SW SEC. 04, T. 110 N., R. 51 W.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Value</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>4.0</td>
<td>25.0</td>
<td>Sand, brown, medium, silty; dry, oxidized, saturated at 14 feet</td>
</tr>
</tbody>
</table>

**TEST HOLE NUMBER: 353**
LOCATION: 110N-51W-06DADA
LEGAL LOCATION: NE SE NE SE SEC. 06, T. 110 N., R. 51 W.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>21.0</td>
<td>Gravel, brown, medium, very sandy, poorly sorted; dry, oxidized, moist at 13 feet</td>
</tr>
</tbody>
</table>

**TEST HOLE NUMBER: 354**
LOCATION: 110N-51W-06DDDD
LEGAL LOCATION: SE SE SE SE SEC. 06, T. 110 N., R. 51 W.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>16.0</td>
<td>Sand, brown, fine, silty, poorly sorted; moist, oxidized, saturated at 6 feet</td>
</tr>
</tbody>
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**TEST HOLE NUMBER: 355**

67
LOCATION: 110N-51W-10A0DD
LEGAL LOCATION: SE SE SE NE SEC. 10, T. 110 N., R. 51 W.

3.0 - 25.0 SAND AND GRAVEL, BROWN; SOME PEBBLES

** ** *

TEST HOLE NUMBER: 356
LOCATION: 110N-51W-11AAAA
LEGAL LOCATION: NE NE NE NE SEC. 11, T. 110 N., R. 51 W.

1.0 - 15.0 SAND AND GRAVEL, GRAY, COARSE AT BASE

** ** *

TEST HOLE NUMBER: 357
LOCATION: 110N-51W-11AAAA 1
LEGAL LOCATION: NE NE NE NE SEC. 11, T. 110 N., R. 51 W.

2.0 - 11.0 SAND AND GRAVEL, BROWN

** ** *

TEST HOLE NUMBER: 358
LOCATION: 110N-51W-11CCCC
LEGAL LOCATION: SW SW SW SW SEC. 11, T. 110 N., R. 51 W.

2.0 - 17.0 SAND AND GRAVEL, BROWN, FINE TO MEDIUM; OXIDIZED
20.0 - 26.0 SAND, GRAY, FINE, SILTY

** ** *

TEST HOLE NUMBER: 359
LOCATION: 110N-51W-11CCCC 1
LEGAL LOCATION: SW SW SW SW SEC. 11, T. 110 N., R. 51 W.

2.0 - 18.0 GRAVEL AND SAND
18.0 - 31.0 SAND; SOME GRAVEL, LITTLE CLAY

** ** *

TEST HOLE NUMBER: 360
LOCATION: 110N-51W-11DCAD
LEGAL LOCATION: SE NE SW SE SEC. 11, T. 110 N., R. 51 W.

6.0 - 16.0 SAND AND GRAVEL, BROWN

** ** *

TEST HOLE NUMBER: 361
LOCATION: 110N-51W-11DDDD
LEGAL LOCATION: SE SE SE SE SEC. 11, T. 110 N., R. 51 W.
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<tr>
<th>Depth</th>
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<td>14.0</td>
<td>28.0</td>
<td>SAND, BLUSH-GRAY</td>
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<td>SAND AND GRAVEL; SOME CLAY</td>
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<td>8.0</td>
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<td>SAND, GRAYISH-BROWN, MEDIUM TO COARSE</td>
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<td>SAND AND GRAVEL</td>
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</tr>
<tr>
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<td>14.0</td>
<td>SAND, GRAY, MEDIUM TO COARSE</td>
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<td>17.0</td>
<td>SAND AND GRAVEL, GRAYISH-BROWN</td>
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69
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<th>Depth</th>
<th>Description</th>
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<tr>
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<td>SAND AND GRAVEL, BROWN</td>
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<td>GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; MOIST, OXIDIZED</td>
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<td>SAND AND GRAVEL, BROWN</td>
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<td>20.0</td>
<td>SAND AND GRAVEL, BROWN; SOME CLAY</td>
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<tr>
<td>20.0</td>
<td>34.0</td>
<td>SAND AND GRAVEL, BROWN, GRADING TO</td>
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</tbody>
</table>
GRAYISH-BROWN

* * * *

TEST HOLE NUMBER: 374
LOCATION: 110N-51W-22A AAD
LEGAL LOCATION: NE NE NE NE SEC. 22, T. 110 N., R. 51 W.
2.0 - 16.0 SAND AND GRAVEL, BROWN; MUCH CLAY
16.0 - 24.0 SAND AND GRAVEL; LITTLE CLAY
24.0 - 31.0 SAND, MEDIUM TO COARSE

* * * *

TEST HOLE NUMBER: 375
LOCATION: 110N-51W-22ABA
LEGAL LOCATION: NE NW NE NE SEC. 22, T. 110 N., R. 51 W.
7.0 - 13.0 SAND, LIGHT-BROWN, MEDIUM

* * * *

TEST HOLE NUMBER: 376
LOCATION: 110N-51W-22AA CA
LEGAL LOCATION: NE SW NE NE SEC. 22, T. 110 N., R. 51 W.
3.0 - 7.0 SAND AND GRAVEL, BROWN; SOME CLAY
7.0 - 27.0 SAND AND GRAVEL, LIGHT-BROWN

* * * *

TEST HOLE NUMBER: 377
LOCATION: 110N-51W-22AACC
LEGAL LOCATION: SW SW NE NE SEC. 22, T. 110 N., R. 51 W.
4.0 - 28.0 SAND AND GRAVEL, LIGHT-BROWN, GRADING TO
GRAYISH-BROWN

* * * *

TEST HOLE NUMBER: 378
LOCATION: 110N-51W-22AADC
LEGAL LOCATION: SW SE NE NE SEC. 22, T. 110 N., R. 51 W.
6.0 - 24.0 SAND AND GRAVEL, RUSTY-BROWN
24.0 - 33.0 SAND, GRAY; LITTLE GRAVEL

* * * *

TEST HOLE NUMBER: 379
LOCATION: 110N-51W-22ACAA
LEGAL LOCATION: NE NE SW NE SEC. 22, T. 110 N., R. 51 W.
4.0 - 15.0 SAND AND GRAVEL, DARK-BROWN

71
15.0 - 26.0 SAND AND GRAVEL, GRAYISH-BROWN

***

TEST HOLE NUMBER: 380
LOCATION: 110N-51W-22ACAB
LEGAL LOCATION: NW NE SW NE SEC. 22, T. 110 N., R. 51 W.
4.0 - 14.0 SAND, RUSTY-BROWN, COARSE
14.0 - 31.0 SAND, LIGHT-GRAY, MEDIUM TO COARSE

***

TEST HOLE NUMBER: 381
LOCATION: 110N-51W-22ACCA
LEGAL LOCATION: NE SW SW NE SEC. 22, T. 110 N., R. 51 W.
3.0 - 12.0 SAND AND GRAVEL, BROWN
12.0 - 20.0 SAND AND GRAVEL, GRAYISH-BROWN
20.0 - 33.0 SAND AND GRAVEL, BROWN

***

TEST HOLE NUMBER: 382
LOCATION: 110N-51W-22ACCB
LEGAL LOCATION: NW SW SW NE SEC. 22, T. 110 N., R. 51 W.
4.0 - 26.0 SAND AND GRAVEL, BROWN

***

TEST HOLE NUMBER: 383
LOCATION: 110N-51W-22ADCB
LEGAL LOCATION: NW SW SE NE SEC. 22, T. 110 N., R. 51 W.
5.0 - 25.0 SAND AND GRAVEL, BROWN; SOME CLAY
25.0 - 38.0 SAND, LIGHT-GRAY, MEDIUM TO COARSE

***

TEST HOLE NUMBER: 384
LOCATION: 110N-51W-22ADD
LEGAL LOCATION: NE SE SE NW SEC. 22, T. 110 N., R. 51 W.
4.0 - 26.0 SAND AND GRAVEL, BROWN; SOME CLAY

***

TEST HOLE NUMBER: 385
LOCATION: 110N-51W-22BDD
LEGAL LOCATION: SE SE SE NW SEC. 22, T. 110 N., R. 51 W.
4.0 - 14.0 SAND AND GRAVEL, BROWN
14.0 - 40.0 SAND AND GRAVEL; MUCH CLAY

72
TEST HOLE NUMBER: 386
LOCATION: 110N-51W-22CACC
LEGAL LOCATION: SW SW NE SW SEC. 22, T. 110 N., R. 51 W.

3.0 - 22.0 GRAVEL, RED-BROWN, VERY SANDY; MOIST
22.0 - 28.0 GRAVEL, RED-BROWN, SANDY; SATURATED

TEST HOLE NUMBER: 387
LOCATION: 110N-51W-22CACC 1
LEGAL LOCATION: SW SW NE SW SEC. 22, T. 110 N., R. 51 W.

3.0 - 16.0 SAND AND GRAVEL; MUCH CLAY
16.0 - 44.0 SAND AND GRAVEL, BROWN, GRADING TO LIGHT-GRAY

TEST HOLE NUMBER: 388
LOCATION: 110N-51W-22CADB
LEGAL LOCATION: NW SE NE SW SEC. 22, T. 110 N., R. 51 W.

5.0 - 25.0 SAND AND GRAVEL, BROWN
25.0 - 30.0 SAND, LIGHT-GRAY, FINE TO COARSE

TEST HOLE NUMBER: 389
LOCATION: 110N-51W-22CADD
LEGAL LOCATION: SE SE NE SW SEC. 22, T. 110 N., R. 51 W.

6.0 - 16.0 SAND AND GRAVEL, BROWN
16.0 - 43.0 SAND AND GRAVEL, RUSTY-BROWN, GRADING TO GRAYISH-BROWN

TEST HOLE NUMBER: 390
LOCATION: 110N-51W-22CBBA
LEGAL LOCATION: NE NW NW SW SEC. 22, T. 110 N., R. 51 W.

4.0 - 24.0 SAND AND GRAVEL
24.0 - 29.0 SAND, GRAYISH-BROWN

TEST HOLE NUMBER: 391
LOCATION: 110N-51W-22CBBB
LEGAL LOCATION: NW NW NW SW SEC. 22, T. 110 N., R. 51 W.

2.0 - 6.0 SAND AND GRAVEL; MUCH CLAY

73
6.0 - 32.0 SAND, BROWN, GRADING TO GRAYISH-BROWN

***

TEST HOLE NUMBER: 392
LOCATION: 110N-51W-22CBCC
LEGAL LOCATION: SW SW NW SW SEC. 22, T. 110 N., R. 51 W.
3.0 - 20.0 GRAVEL, COARSE; WITH SILTY SAND
20.0 - 28.0 SAND AND GRAVEL; SATURATED

***

TEST HOLE NUMBER: 393
LOCATION: 110N-51W-22CBCC 1
LEGAL LOCATION: SW SW NW SW SEC. 22, T. 110 N., R. 51 W.
5.0 - 14.0 GRAVEL, MEDIUM
14.0 - 23.0 GRAVEL, FINE
23.0 - 45.0 GRAVEL, FINE TO MEDIUM

***

TEST HOLE NUMBER: 394
LOCATION: 110N-51W-22CECD
LEGAL LOCATION: SE SW NW SW SEC. 22, T. 110 N., R. 51 W.
3.0 - 31.0 SAND AND GRAVEL

***

TEST HOLE NUMBER: 395
LOCATION: 110N-51W-22CBDD
LEGAL LOCATION: SE SE NW SW SEC. 22, T. 110 N., R. 51 W.
3.0 - 20.0 GRAVEL, RED-BROWN, VERY SANDY, SILTY; MOIST
20.0 - 28.0 GRAVEL, RED-BROWN, VERY SANDY, SILTY; SATURATED

***

TEST HOLE NUMBER: 396
LOCATION: 110N-51W-22CCBB
LEGAL LOCATION: NW NW SW SW SEC. 22, T. 110 N., R. 51 W.
2.0 - 25.0 GRAVEL AND SAND, VERY COARSE SAND
25.0 - 28.0 SAND, COARSE TO VERY COARSE

***

TEST HOLE NUMBER: 397
LOCATION: 110N-51W-22CDDA
LEGAL LOCATION: NE SE SE SW SEC. 22, T. 110 N., R. 51 W.

74
7.0 - 21.0 SAND, GRAYISH-BROWN, MEDIUM TO COARSE

* * * *

TEST HOLE NUMBER: 398
LOCATION: 110N-51W-220AAB
LEGAL LOCATION: NW NE NE SE SEC. 22, T. 110 N., R. 51 W.
3.0 - 12.0 SAND AND GRAVEL, BROWN
12.0 - 24.0 SAND AND GRAVEL, GRAYISH-BROWN

* * * *

TEST HOLE NUMBER: 399
LOCATION: 110N-51W-222BBA
LEGAL LOCATION: NE NW NW SE SEC. 22, T. 110 N., R. 51 W.
4.0 - 17.0 GRAVEL, BROWN, SILT, SANDY, CLAYEY; DRY
17.0 - 18.0 GRAVEL, BROWN, SILTY, SANDY, CLAYEY; SATURATED

* * * *

TEST HOLE NUMBER: 400
LOCATION: 110N-51W-222BBB
LEGAL LOCATION: NW NW NW SE SEC. 22, T. 110 N., R. 51 W.
2.0 - 26.0 SAND AND GRAVEL, FINE SAND TO COARSE GRAVEL

* * * *

TEST HOLE NUMBER: 401
LOCATION: 110N-51W-23AAAA
LEGAL LOCATION: NE NE NE NE SEC. 23, T. 110 N., R. 51 W.
1.0 - 16.0 SAND AND GRAVEL, BROWN WITH GRAY LAST 4 FEET, MEDIUM TO COARSE

* * * *

TEST HOLE NUMBER: 402
LOCATION: 110N-51W-23AAAD
LEGAL LOCATION: SE NE NE NE SEC. 23, T. 110 N., R. 51 W.
2.0 - 19.0 SAND AND GRAVEL; SOME CLAY

* * * *

TEST HOLE NUMBER: 403
LOCATION: 110N-51W-23ABB
LEGAL LOCATION: NW NW NW NE SEC. 23, T. 110 N., R. 51 W.
2.0 - 17.0 SAND AND GRAVEL

75
TEST HOLE NUMBER: 404
LOCATION: 110N-51W-23BAAB
LEGAL LOCATION: NE NE NW NW SEC. 23, T. 110 N., R. 51 W.

2.0 - 11.0 SAND, MEDIUM TO COARSE
11.0 - 19.0 SAND AND GRAVEL, GRAYISH-BROWN

TEST HOLE NUMBER: 405
LOCATION: 110N-51W-23BBAA
LEGAL LOCATION: NE NE NW NW SEC. 23, T. 110 N., R. 51 W.

5.0 - 10.0 SAND, RED-BROWN, SILTY, GRAVELLY; MOIST
10.0 - 18.0 SAND, RED-BROWN, SILTY, GRAVELLY; SATURATED

TEST HOLE NUMBER: 406
LOCATION: 110N-51W-23BBAB 1
LEGAL LOCATION: NW NE NW NW SEC. 23, T. 110 N., R. 51 W.

1.0 - 26.0 SAND AND GRAVEL

TEST HOLE NUMBER: 407
LOCATION: 110N-51W-23BBAB 2
LEGAL LOCATION: NW NE NW NW SEC. 23, T. 110 N., R. 51 W.

3.0 - 10.0 SAND, RED-BROWN, SILTY, GRAVELLY; MOIST
10.0 - 18.0 SAND, RED-BROWN, SILTY, GRAVELLY; SATURATED

TEST HOLE NUMBER: 408
LOCATION: 110N-51W-23BBBA 1
LEGAL LOCATION: NW NW NW NW SEC. 23, T. 110 N., R. 51 W.

1.0 - 16.0 SAND AND GRAVEL, FINE SAND AND COARSE GRAVEL

TEST HOLE NUMBER: 409
LOCATION: 110N-51W-23BBBA 2
LEGAL LOCATION: NE NW NW NW SEC. 23, T. 110 N., R. 51 W.

2.0 - 16.0 SAND AND GRAVEL, FINE SAND TO MEDIUM GRAVEL
TEST HOLE NUMBER: 410
LOCATION: 110N-51W-23BBBA 3
LEGAL LOCATION: NE NW NW NW SEC. 23, T. 110 N., R. 51 W.

4.0 - 10.0 SAND, RED-BROWN, SILTY, PEBBLY; MOIST
10.0 - 11.0 SAND, BROWN, SILTY, PEBBLY; SATURATED

TEST HOLE NUMBER: 411
LOCATION: 110N-51W-33DAAA
LEGAL LOCATION: NE NE NE SE SEC. 23, T. 110 N., R. 51 W.

3.0 - 11.0 SAND AND GRAVEL, BROWN
11.0 - 13.0 SAND AND GRAVEL; MUCH CLAY

TEST HOLE NUMBER: 412
LOCATION: 110N-51W-24ABBA
LEGAL LOCATION: NE NW NW NE SEC. 24, T. 110 N., R. 51 W.

7.0 - 19.0 SAND AND GRAVEL, BROWN, GRADING TO GRAY

TEST HOLE NUMBER: 413
LOCATION: 110N-51W-24ABBA
LEGAL LOCATION: NE NW NW NW SEC. 24, T. 110 N., R. 51 W.

3.0 - 15.0 SAND AND GRAVEL, BROWN

TEST HOLE NUMBER: 414
LOCATION: 110N-51W-25ABBB
LEGAL LOCATION: NW NW NW NE SEC. 25, T. 110 N., R. 51 W.

3.0 - 10.0 SAND AND GRAVEL, BROWN
10.0 - 20.0 SAND, TAN, FINE TO MEDIUM

TEST HOLE NUMBER: 415
LOCATION: 110N-51W-25BBBB
LEGAL LOCATION: NW NW NW NW SEC. 25, T. 110 N., R. 51 W.

2.0 - 8.0 SAND AND GRAVEL
8.0 - 13.0 GRAVEL AND SAND; SOME BOULDERS

77
TEST HOLE NUMBER: 416
LOCATION: 110N-51W-25BBB 2
LEGAL LOCATION: NW NW NW NW SEC. 25, T. 110 N., R. 51 W.
   1.0 - 16.0 SAND AND GRAVEL

* * *

TEST HOLE NUMBER: 417
LOCATION: 110N-51W-25CCBB
LEGAL LOCATION: NW NW NW SW SEC. 25, T. 110 N., R. 51 W.
   1.0 - 12.0 SAND AND GRAVEL, BROWN

* * *

TEST HOLE NUMBER: 418
LOCATION: 110N-51W-25DDDD
LEGAL LOCATION: SE SE SW SW SEC. 25, T. 110 N., R. 51 W.
   3.0 - 19.0 SAND AND GRAVEL, BROWN; LITTLE CLAY
       19.0 - 26.0 SAND, TAN, FINE TO MEDIUM

* * *

TEST HOLE NUMBER: 419
LOCATION: 110N-51W-25DDDD
LEGAL LOCATION: SE SE SE SE SEC. 25, T. 110 N., R. 51 W.
   2.0 - 5.0 SAND AND GRAVEL
       5.0 - 23.0 SAND, FINE TO COARSE

* * *

TEST HOLE NUMBER: 420
LOCATION: 110N-51W-26CCCC
LEGAL LOCATION: SW SW SW NW SEC. 26, T. 110 N., R. 51 W.
   3.0 - 26.0 SAND AND GRAVEL, BROWN

* * *

TEST HOLE NUMBER: 421
LOCATION: 110N-51W-26CDDD
LEGAL LOCATION: SW SW SW SW SEC. 26, T. 110 N., R. 51 W.
   6.0 - 28.0 SAND AND GRAVEL, BROWN; MUCH CLAY

* * *

TEST HOLE NUMBER: 422
LOCATION: 110N-51W-27DAAA
LEGAL LOCATION: NE NE NE NE SEC. 27, T. 110 N., R. 51 W.

78
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**TEST HOLE NUMBER: 423**
**LOCATION: 110N-51W-27BAAB**
**LEGAL LOCATION: NW NE NE NW SEC. 27, T. 110 N., R. 51 W.**
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**TEST HOLE NUMBER: 424**
**LOCATION: 110N-51W-27BAAD**
**LEGAL LOCATION: SE NE NW SEC. 27, T. 110 N., R. 51 W.**
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**TEST HOLE NUMBER: 425**
**LOCATION: 110N-51W-27BACA**
**LEGAL LOCATION: NE SW NE NW SEC. 27, T. 110 N., R. 51 W.**
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**TEST HOLE NUMBER: 426**
**LOCATION: 110N-51W-27BBBBD**
**LEGAL LOCATION: SE NW NW NW SEC. 27, T. 110 N., R. 51 W.**
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**TEST HOLE NUMBER: 427**
**LOCATION: 110N-51W-27BCCA**
**LEGAL LOCATION: NE SW SW NW SEC. 27, T. 110 N., R. 51 W.**
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**TEST HOLE NUMBER: 428**
**LOCATION: 110N-51W-27BCCD**
**LEGAL LOCATION: SE SW NW NW SEC. 27, T. 110 N., R. 51 W.**
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**TEST HOLE NUMBER: 429**
LEGAL LOCATION: NE NE NE NE SEC. 28, T. 110 N., R. 51 W.
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**TEST HOLE NUMBER: 430**
LOCATION: 110N-51W-28ABB
LEGAL LOCATION: NW NW NW NE SEC. 28, T. 110 N., R. 51 W.
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**TEST HOLE NUMBER: 431**
LOCATION: 110N-51W-28ADAD
LEGAL LOCATION: SE NE SE NE SEC. 28, T. 110 N., R. 51 W.
<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Material Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>SAND AND GRAVEL, BROWN; SOME CLAY</td>
</tr>
<tr>
<td>24.0</td>
<td>SAND, GRAY, FINE TO MEDIUM; SOME CLAY</td>
</tr>
</tbody>
</table>

**TEST HOLE NUMBER: 432**
LOCATION: 110N-51W-28ADDD
LEGAL LOCATION: SE SE SE NE SEC. 28, T. 110 N., R. 51 W.
<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Material Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0</td>
<td>SAND AND GRAVEL; MUCH CLAY</td>
</tr>
<tr>
<td>8.0</td>
<td>SAND, LIGHT-BROWN, MEDIUM TO VERY COARSE</td>
</tr>
</tbody>
</table>

**TEST HOLE NUMBER: 433**
LOCATION: 110N-51W-29ABAB
LEGAL LOCATION: NW NE NW NE SEC. 29, T. 110 N., R. 51 W.
<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Material Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>SAND, BROWN, VERY FINE; DRY, OXIDIZED</td>
</tr>
</tbody>
</table>

**TEST HOLE NUMBER: 434**
LOCATION: 110N-51W-29ADDD
LEGAL LOCATION: SE SE SE NE SEC. 29, T. 110 N., R. 51 W.
<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Material Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>SAND AND GRAVEL, BROWN</td>
</tr>
</tbody>
</table>
** ** **
TEST HOLE NUMBER: 435
LOCATION: 110N-51W-29BABA
LEGAL LOCATION: NE NW NE NW SEC. 29, T. 110 N., R. 51 W.
  0 –  6.0 SAND, BROWN, MEDIUM TO COARSE; DRY, OXIDIZED, SOME MEDIUM GRAVEL
  6.0 – 11.0 SAND, BROWN, MEDIUM, CLAYEY, GRAVELLY; SATURATED, OXIDIZED
** ** **

TEST HOLE NUMBER: 436
LOCATION: 110N-51W-29DCDD
LEGAL LOCATION: SE SE SW SE SEC. 29, T. 110 N., R. 51 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE
  3.0 – 27.0 GRAVEL, FINE TO COARSE
** ** **

TEST HOLE NUMBER: 437
LOCATION: 110N-51W-30AADD
LEGAL LOCATION: SE SE NE NE SEC. 30, T. 110 N., R. 51 W.
  2.0 – 24.0 SAND, REDDISH-BROWN, MEDIUM, SILTY; MOIST, OXIDIZED, SOME GRAVEL
  24.0 – 32.0 GRAVEL, BROWN, MEDIUM, WELL SORTED; MOIST, OXIDIZED
** ** **

TEST HOLE NUMBER: 438
LOCATION: 110N-51W-30DDAA
LEGAL LOCATION: NE NE SE SE SEC. 30, T. 110 N., R. 51 W.
  16.0 – 24.0 GRAVEL, REDDISH-BROWN, COARSE, SANDY; DRY, OXIDIZED
** ** **

TEST HOLE NUMBER: 439
LOCATION: 110N-51W-32AABB
LEGAL LOCATION: NW NW NE NE SEC. 32, T. 110 N., R. 51 W.
  1.0 – 12.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; DRY, OXIDIZED
** ** **

TEST HOLE NUMBER: 440
LOCATION: 110N-51W-35ABBA
LEGAL LOCATION: NE NW NW NE SEC. 35, T. 110 N., R. 51 W.
81
1.0 - 13.0 SAND AND GRAVEL, BROWN
13.0 - 22.0 SAND AND GRAVEL, GRAYISH-BROWN

** **

TEST HOLE NUMBER: 441
LOCATION: 110N-51W-36BBBB
LEGAL LOCATION: NW NW NW NW SEC. 36, T. 110 N., R. 51 W.
1.0 - 8.0 SAND AND GRAVEL
8.0 - 36.0 SAND, COARSE; SOME GRAVEL

** **

TEST HOLE NUMBER: 442
LOCATION: 110N-51W-36BBBB 1
LEGAL LOCATION: NW NW NW NW SEC. 36, T. 110 N., R. 51 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE
4.0 - 34.0 SAND AND GRAVEL, COARSE SAND TO COARSE PEBBLES; WITH SOME FINE SAND AND VERY COARSE PEBBLES

** **

TEST HOLE NUMBER: 443
LOCATION: 110N-51W-36BCBC
LEGAL LOCATION: SW SW SW NW SEC. 36, T. 110 N., R. 51 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE
3.0 - 38.0 GRAVEL; FINE TO VERY COARSE PEBBLES; SOME SAND

** **

TEST HOLE NUMBER: 444
LOCATION: 110N-51W-36CCCC
LEGAL LOCATION: SW SW SW SW SEC. 36, T. 110 N., R. 51 W.
2.0 - 24.0 SAND AND GRAVEL, BROWN; OXIDIZED
24.0 - 32.0 SAND, GRAY, FINE TO MEDIUM

** **

TEST HOLE NUMBER: 445
LOCATION: 110N-52W-01ADDD
LEGAL LOCATION: SE SE SE NE SEC. 01, T. 110 N., R. 52 W.
0 - 1.0 GRAVEL, BROWN, VERY COARSE, VERY COBBLY; DRY, OXIDIZED
1.0 - 5.0 GRAVEL, REDDISH-BROWN, VERY COARSE, SANDY, POORLY SORTED; MOIST, OXIDIZED
16.0 - 27.0 SAND, BROWN, FINE TO MEDIUM, VERY CLAYY, POORLY SORTED; MOIST, OXIDIZED

82
TEST HOLE NUMBER: 446
LOCATION: 110N-52W-06DDD
LEGAL LOCATION: SE SE SE SE SEC. 06, T. 110 N., R. 52 W.
1.0 - 2.0 GRAVEL, BROWN, MEDIUM; OXIDIZED

TEST HOLE NUMBER: 447
LOCATION: 110N-52W-11AAA
LEGAL LOCATION: NW NE NE NE SEC. 11, T. 110 N., R. 52 W.
11.0 - 24.0 GRAVEL, BROWN, FINE, VERY SILTY, CLAYEY,
POORLY SORTED; SATURATED, OXIDIZED

TEST HOLE NUMBER: 448
LOCATION: 111N-47W-06ABB
LEGAL LOCATION: NW NW NE NE SEC. 06, T. 111 N., R. 47 W.
6.0 - 10.0 GRAVEL, BROWN, COARSE TO VERY COARSE,
Sandy; SATURATED, OXIDIZED, ABANDONED HOLE

TEST HOLE NUMBER: 449
LOCATION: 111N-47W-07AAD
LEGAL LOCATION: SE NE NE NE SEC. 07, T. 111 N., R. 47 W.
5.0 - 18.0 SAND, DARK-BROWN, MEDIUM, WELL SORTED;
SATURATED, OXIDIZED
18.0 - 25.0 GRAVEL, DARK-BROWN, COARSE, SANDY;
SATURATED, OXIDIZED

TEST HOLE NUMBER: 450
LOCATION: 111N-47W-07ABB
LEGAL LOCATION: NW NW NE NE SEC. 07, T. 111 N., R. 47 W.
0 - 2.0 GRAVEL, BROWN, MEDIUM TO COARSE, POORLY
SORTED; DRY, OXIDIZED
14.0 - 19.0 GRAVEL, DARK-BROWN, MEDIUM; SATURATED,
OXIDIZED

TEST HOLE NUMBER: 451
LOCATION: 111N-47W-08CCDC
LEGAL LOCATION: SW SW SW SW SEC. 08, T. 111 N., R. 47 W.
8.0 - 15.0 SAND, BROWN, MEDIUM; SATURATED, OXIDIZED
15.0 - 22.0 GRAVEL, BROWN, VERY COARSE; SATURATED,
OXIDIZED, ABANDONED HOLE

TEST HOLE NUMBER: 452
LOCATION: 111N-47W-20CDDD
LEGAL LOCATION: SE SE SE SW SEC. 20, T. 111 N., R. 47 W.
10.0 - 15.0 GRAVEL, BROWN, VERY COARSE; MOIST,
OXIDIZED, ABANDONED HOLE

TEST HOLE NUMBER: 453
LOCATION: 111N-47W-29BCBC
LEGAL LOCATION: SW NW SW NW SEC. 29, T. 111 N., R. 47 W.
19.0 - 25.0 GRAVEL, DARK-BROWN, COARSE, VERY SANDY;
SATURATED, OXIDIZED, ABANDONED HOLE

TEST HOLE NUMBER: 454
LOCATION: 111N-47W-30AAAB
LEGAL LOCATION: NW NE NE NE SEC. 30, T. 111 N., R. 47 W.
3.0 - 7.0 GRAVEL, BROWN, FINE TO MEDIUM, MODERATELY
SORTED; DRY, OXIDIZED
11.0 - 32.0 GRAVEL, BROWN, COARSE, SANDY, POORLY
SORTED; DRY, OXIDIZED, ABANDONED HOLE

TEST HOLE NUMBER: 455
LOCATION: 111N-47W-30BAA
LEGAL LOCATION: NE NE NW SEC. 30, T. 111 N., R. 47 W.
20.0 - 40.0 GRAVEL

TEST HOLE NUMBER: 456
LOCATION: 111N-47W-31AAAB
LEGAL LOCATION: NW NE NE NE SEC. 31, T. 111 N., R. 47 W.
1.0 - 5.0 GRAVEL, BROWN, COARSE, POORLY SORTED;
DRY, OXIDIZED
5.0 - 19.0 SAND, BROWN, MEDIUM TO COARSE, WELL
SORTED; MOIST, OXIDIZED

84
TEST HOLE NUMBER: 457
LOCATION: 111N-47W-31CBBB
LEGAL LOCATION: NW NW NW SW SEC. 31, T. 111 N., R. 47 W.
1.0 - 9.0 GRAVEL, BROWN, MEDIUM; OXIDIZED

** **

TEST HOLE NUMBER: 458
LOCATION: 111N-48W-06DDDA
LEGAL LOCATION: NE SE SE SE SEC. 06, T. 111 N., R. 48 W.
0 - 6.0 SAND, BROWN, MEDIUM, GRAVELLY; DRY, OXIDIZED

** **

TEST HOLE NUMBER: 459
LOCATION: 111N-48W-17CBBC
LEGAL LOCATION: SW NW NW SW SEC. 17, T. 111 N., R. 48 W.
14.0 - 17.0 GRAVEL, BROWN, COARSE, POORLY SORTED; SATURATED, OXIDIZED

** **

TEST HOLE NUMBER: 460
LOCATION: 111N-48W-19BABA
LEGAL LOCATION: NE NW NE NW SEC. 19, T. 111 N., R. 48 W.
1.0 - 6.0 SAND, BROWN, MEDIUM; MOIST, OXIDIZED, SOME GRAVEL
6.0 - 10.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; MOIST, OXIDIZED
10.0 - 15.0 SAND, BROWN, MEDIUM; SATURATED, OXIDIZED, SOME GRAVEL

** **

TEST HOLE NUMBER: 461
LOCATION: 111N-48W-25DDDC
LEGAL LOCATION: SW SE SE SE SEC. 25, T. 111 N., R. 48 W.
5.0 - 21.0 GRAVEL, BROWN, MEDIUM TO COARSE, SILTY, VERY SANDY; DRY, OXIDIZED

** **

TEST HOLE NUMBER: 462
LOCATION: 111N-48W-28CCCC
LEGAL LOCATION: SW SW SW SW SEC. 28, T. 111 N., R. 48 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE
17.0 - 29.0 SAND AND GRAVEL, FINE SAND TO COARSE

85
PEBBLES
*
*
*

TEST HOLE NUMBER: 463
LOCATION: 111N-48W-31ABAB
LEGAL LOCATION: NW NE NW NE SEC. 31, T. 111 N., R. 48 W.
6.0 - 19.0 GRAVEL, BROWN, MEDIUM, SANDY, CLAYEY; DRY, OXIDIZED
*
*
*

TEST HOLE NUMBER: 464
LOCATION: 111N-48W-34DAA
LEGAL LOCATION: NE NE SE SEC. 34, T. 111 N., R. 48 W.
13.0 - 28.0 SAND AND GRAVEL; SOME BOULDERS AND COBBLES, ABANDONED HOLE
*
*
*

TEST HOLE NUMBER: 465
LOCATION: 111N-48W-34DAA 2
LEGAL LOCATION: NE NE SE SEC. 34, T. 111 N., R. 48 W.
2.0 - 8.0 SAND, BROWN; SOME SILT
8.0 - 14.0 SAND AND GRAVEL
14.0 - 30.0 SAND, VERY COARSE; SOME GRAVEL
*
*
*

TEST HOLE NUMBER: 466
LOCATION: 111N-48W-34DDDA
LEGAL LOCATION: NE SE SE SEC. 34, T. 111 N., R. 48 W.
1.0 - 6.0 GRAVEL, BROWN, MEDIUM, SANDY; DRY, OXIDIZED
*
*
*

TEST HOLE NUMBER: 467
LOCATION: 111N-48W-35ABBB
LEGAL LOCATION: NW NW NW NE SEC. 35, T. 111 N., R. 48 W.
4.0 - 11.0 GRAVEL, BROWN, MEDIUM TO COARSE, SILTY, SANDY; MOIST, OXIDIZED
*
*
*

TEST HOLE NUMBER: 468
LOCATION: 111N-48W-35ADAD
LEGAL LOCATION: SE NE SE NE SEC. 35, T. 111 N., R. 48 W.
2.0 - 10.0  SAND, FINE TO MEDIUM
14.0 - 19.0  SAND, DARK-GRAY, TURNED TO LIGHT-YELLOW-
             BROWN AT 23 FEET, VERY FINE
19.0 - 38.0  SAND, GRAY-BROWN, FINE TO MEDIUM
             * * * *

TEST HOLE NUMBER: 469
LOCATION: 111N-48W-35ADD
LEGAL LOCATION: SE SE NE SEC. 35, T. 111 N., R. 48 W.

2.0 - 5.0  SAND; SOME SILT
5.0 - 8.0  SAND, BROWN, FINE
17.0 - 33.0  SAND, VERY COARSE; SOME GRAVEL
             * * * *

TEST HOLE NUMBER: 470
LOCATION: 111N-48W-35CBA
LEGAL LOCATION: NE NW SW SEC. 35, T. 111 N., R. 48 W.

2.0 - 7.0  SAND; SOME SILT
7.0 - 14.0  GRAVEL; SOME CLAY
             * * * *

TEST HOLE NUMBER: 471
LOCATION: 111N-48W-35CSA 2
LEGAL LOCATION: NE NW SW SEC. 35, T. 111 N., R. 48 W.

2.0 - 17.0  SAND AND GRAVEL
22.0 - 25.0  SAND AND GRAVEL
             * * * *

TEST HOLE NUMBER: 472
LOCATION: 111N-48W-35CBBC
LEGAL LOCATION: SW NW NW SW SEC. 35, T. 111 N., R. 48 W.

12.0 - 49.0  GRAVEL, BROWN, MEDIUM TO VERY COARSE; OXIDIZED
             * * * *

TEST HOLE NUMBER: 473
LOCATION: 111N-48W-36ADD
LEGAL LOCATION: SE SE SE NE SEC. 36, T. 111 N., R. 48 W.

10.0 - 23.0  SAND, DARK-BROWN, MEDIUM TO COARSE;
             SATURATED, OXIDIZED, VERY DIRTY
             * * * *

TEST HOLE NUMBER: 474

87
LOCATION: 111N-48W-36BBCC
LEGAL LOCATION: SW SW NW NW SEC. 36, T. 111 N., R. 48 W.

12.0 - 19.0 GRAVEL, DARK-BROWN, COARSE, SILTY, SANDY; SATURATED, OXIDIZED

* * * *

TEST HOLE NUMBER: 475
LOCATION: 111N-49W-01DDAA
LEGAL LOCATION: NE NE SE SE SEC. 01, T. 111 N., R. 49 W.

0 - 2.0 SAND, TAN, VERY FINE; DRY, OXIDIZED
2.0 - 5.0 SAND, BROWN, FINE TO MEDIUM; DRY, OXIDIZED

* * * *

TEST HOLE NUMBER: 476
LOCATION: 111N-49W-03ADD
LEGAL LOCATION: SE SE SE NE SEC. 03, T. 111 N., R. 49 W.

1.0 - 9.0 SAND, BROWN, MEDIUM, PEBBLY; DRY, OXIDIZED
9.0 - 16.0 GRAVEL, BROWN, VERY COARSE, SANDY; DRY, OXIDIZED, ABANDONED HOLE

* * * *

TEST HOLE NUMBER: 477
LOCATION: 111N-49W-06DDDA
LEGAL LOCATION: NE SE SE SE SEC. 06, T. 111 N., R. 49 W.

15.0 - 35.0 SAND, BROWN, MEDIUM TO COARSE, SILTY, PEBBLY; SATURATED, OXIDIZED

* * * *

TEST HOLE NUMBER: 478
LOCATION: 111N-49W-07CCCC
LEGAL LOCATION: SW SW SW SW SEC. 07, T. 111 N., R. 49 W.

0 - 4.0 SAND, BROWN, MEDIUM, GRAVELLY, MODERATELY SORTED; DRY, OXIDIZED
9.0 - 16.0 GRAVEL, BROWN, COARSE, SANDY, MODERATELY SORTED; SATURATED, OXIDIZED

* * * *

TEST HOLE NUMBER: 479
LOCATION: 111N-49W-07DADD
LEGAL LOCATION: SE SE NE SE SEC. 07, T. 111 N., R. 49 W.

0 - 20.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY;
DRY, OXIDIZED

TEST HOLE NUMBER: 480
LOCATION: 111N-49W-09AAAA
LEGAL LOCATION: NE NE NE NE SEC. 09, T. 111 N., R. 49 W.
5.0 - 29.0 GRAVEL, BROWN, MEDIUM, SANDY; DRY, OXIDIZED, SATURATED AT 18 FEET

TEST HOLE NUMBER: 481
LOCATION: 111N-49W-09CBCB
LEGAL LOCATION: NW SW NW SW SEC. 09, T. 111 N., R. 49 W.
0 - 21.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; MOIST, OXIDIZED

TEST HOLE NUMBER: 482
LOCATION: 111N-49W-09CCCC 1
LEGAL LOCATION: SW SW SW SW SEC. 09, T. 111 N., R. 49 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE
3.0 - 10.0 SAND AND GRAVEL, MEDIUM SAND TO FINE GRAVEL; IRON-OXIDE STAIN AND SOME FIBRILL CLAY

TEST HOLE NUMBER: 483
LOCATION: 111N-49W-09CCCC 2
LEGAL LOCATION: SW SW SW SW SEC. 09, T. 111 N., R. 49 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE
3.0 - 10.0 SAND AND GRAVEL, FINE SAND TO COARSE GRAVEL; WITH IRON-OXIDE STAIN

TEST HOLE NUMBER: 484
LOCATION: 111N-49W-10ADDA
LEGAL LOCATION: NE SE SE NE SEC. 10, T. 111 N., R. 49 W.
1.0 - 6.0 SAND, BROWN, FINE TO MEDIUM, MODERATELY SORTED; DRY, OXIDIZED
6.0 - 36.0 GRAVEL, BROWN, COARSE, WELL SORTED; DRY, OXIDIZED

89
TEST HOLE NUMBER: 485
LOCATION: 111N-49W-10CDDD
LEGAL LOCATION: SE SE SE SW SEC. 10, T. 111 N., R. 49 W.

1.0 - 5.0 GRAVEL, BROWN, MEDIUM, VERY SANDY, CLAYEY; DRY, OXIDIZED

* * * *

TEST HOLE NUMBER: 486
LOCATION: 111N-49W-11AAAA
LEGAL LOCATION: NE NE NE NE SEC. 11, T. 111 N., R. 49 W.

0 - 11.0 GRAVEL, DARK-BROWN, MEDIUM TO VERY COARSE, POORLY SORTED; DRY, OXIDIZED, ABANDONED HOLE

* * * *

TEST HOLE NUMBER: 487
LOCATION: 111N-49W-11ADDA
LEGAL LOCATION: SE SE SE NE SEC. 11, T. 111 N., R. 49 W.

1.0 - 15.0 GRAVEL, BROWN, COARSE, SANDY, POORLY SORTED; DRY, OXIDIZED, SATURATED AT 9 FEET

* * * *

TEST HOLE NUMBER: 488
LOCATION: 111N-49W-11CCCC
LEGAL LOCATION: SW SW SW SEC. 11, T. 111 N., R. 49 W.

8.0 - 13.0 GRAVEL

* * * *

TEST HOLE NUMBER: 489
LOCATION: 111N-49W-11DCCC
LEGAL LOCATION: SW SW SW SE SEC. 11, T. 111 N., R. 49 W.

1.0 - 2.0 SAND, BROWN, MEDIUM, CLAYEY, GRAVELLY; MOIST, OXIDIZED

5.0 - 14.0 GRAVEL, BROWN, MEDIUM, SANDY, MODERATELY SORTED; DRY, OXIDIZED

14.0 - 16.0 GRAVEL, BROWN, COARSE TO VERY COARSE; DRY, OXIDIZED, ABANDONED HOLE

* * * *

TEST HOLE NUMBER: 490
LOCATION: 111N-49W-11DDDD
LEGAL LOCATION: SE SE SE SE SEC. 11, T. 111 N., R. 49 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE

90
15.0 - 34.0 SAND AND GRAVEL, FINE SAND TO COARSE GRAVEL
   * * * *

TEST HOLE NUMBER: 491
LOCATION: 111N-49W-14AAAA
LEGAL LOCATION: NE NE NE SE SEC. 14, T. 111 N., R. 49 W.
   2.0 - 4.0 SAND AND GRAVEL; OXIDIZED
   11.0 - 28.0 SAND AND GRAVEL
   * * * *

TEST HOLE NUMBER: 492
LOCATION: 111N-49W-15DCCC
LEGAL LOCATION: SW SW SW SE SEC. 15, T. 111 N., R. 49 W.
   6.0 - 9.0 GRAVEL, BROWN, FINE TO MEDIUM, VERY SANDY, CLAYEY; SATURATED, OXIDIZED
   9.0 - 16.0 GRAVEL, BROWN, COARSE; SATURATED, OXIDIZED
   * * * *

TEST HOLE NUMBER: 493
LOCATION: 111N-49W-16AAAA
LEGAL LOCATION: NE NE NE NE SEC. 16, T. 111 N., R. 49 W.
   2.0 - 4.0 SAND, GRAY, MEDIUM, WELL SORTED; MOIST, UNOXIDIZED
   4.0 - 6.0 GRAVEL, GRAYISH-BROWN, MEDIUM; MOIST, OXIDIZED
   * * * *

TEST HOLE NUMBER: 494
LOCATION: 111N-49W-16DDDD
LEGAL LOCATION: SE SE SE SE SEC. 16, T. 111 N., R. 49 W.
   1.0 - 4.0 GRAVEL, BROWN, MEDIUM, SANDY, VERY CLAYEY; DRY, OXIDIZED
   4.0 - 11.0 GRAVEL, BROWN, COARSE TO VERY COARSE; DRY, OXIDIZED
   * * * *

TEST HOLE NUMBER: 495
LOCATION: 111N-49W-16CCCC
LEGAL LOCATION: SW SW SW SW SEC. 18, T. 111 N., R. 49 W.
   1.0 - 5.0 SAND, BROWN, MEDIUM, VERY CLAYEY; DRY, OXIDIZED
   5.0 - 9.0 SAND, REDDISH-BROWN, MEDIUM; MOIST,
9.0 - 12.0 gravel, reddish-brown, coarsy, sandy, poorly sorted; moist, oxidized
12.0 - 44.0 gravel, reddish-brown, fine, sandy, moderately sorted; saturated, oxidized

* * *

TEST HOLE NUMBER: 496
LOCATION: 111N-49W-19CBBB
LEGAL LOCATION: NW NW NW SW SEC. 19, T. 111 N., R. 49 W.

3.0 - 10.0 sand, reddish-brown, fine, well sorted; dry, oxidized
11.0 - 29.0 gravel, reddish-brown, coarse, silty, sandy, poorly sorted; dry, oxidized, saturated at 22 feet

* * *

TEST HOLE NUMBER: 497
LOCATION: 111N-49W-22AAA
LEGAL LOCATION: NE NE NE NE SEC. 22, T. 111 N., R. 49 W.

1.0 - 5.0 gravel, brown, medium, poorly sorted; moist, oxidized

* * *

TEST HOLE NUMBER: 498
LOCATION: 111N-49W-24CDDD
LEGAL LOCATION: SE SE SE SW SEC. 24, T. 111 N., R. 49 W.

5.0 - 12.0 gravel, brown, medium to coarse, sandy; dry, oxidized, abandoned hole

* * *

TEST HOLE NUMBER: 499
LOCATION: 111N-49W-24DDDD
LEGAL LOCATION: SE SE SE SE SEC. 24, T. 111 N., R. 49 W.

11.0 - 17.0 gravel, brown, medium, silty, poorly sorted; dry, oxidized

* * *

TEST HOLE NUMBER: 500
LOCATION: 111N-49W-25CCCC
LEGAL LOCATION: SW SW SW SW SEC. 25, T. 111 N., R. 49 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE

1.0 - 16.0 sand and gravel, fine sand to coarse pebbles

92
TEST HOLE NUMBER: 501
LOCATION: 111N-49W-25CCCD
LEGAL LOCATION: SE SW SW SW SEC. 25, T. 111 N., R. 49 W.
1.0 - 22.0 GRAVEL, BROWN, MEDIUM, SANDY; DRY, OXIDIZED

TEST HOLE NUMBER: 502
LOCATION: 111N-49W-26ABAB
LEGAL LOCATION: NW NE NW NE SEC. 26, T. 111 N., R. 49 W.
11.0 - 13.0 GRAVEL, REDDISH-BROWN, MEDIUM, SANDY, CLAYEY, POORLY SORTED; MOIST, OXIDIZED
13.0 - 16.0 GRAVEL, BROWN, COARSE, POORLY SORTED; MOIST, OXIDIZED

TEST HOLE NUMBER: 503
LOCATION: 111N-49W-261BBB
LEGAL LOCATION: NW NW NW NW SEC. 26, T. 111 N., R. 49 W.
21.0 - 24.0 GRAVEL, BROWN, COARSE; MOIST, OXIDIZED, ABANDONED HOLE

TEST HOLE NUMBER: 504
LOCATION: 111N-49W-27ABBA
LEGAL LOCATION: NE NW NW NW SEC. 27, T. 111 N., R. 49 W.
0 - 6.0 GRAVEL, BROWN, FINE TO MEDIUM, SANDY, MODERATELY SORTED; DRY, OXIDIZED
6.0 - 12.0 GRAVEL, BROWN, COARSE, MODERATELY SORTED; DRY, OXIDIZED

TEST HOLE NUMBER: 505
LOCATION: 111N-49W-27ABBB
LEGAL LOCATION: NW NW NE NW SEC. 27, T. 111 N., R. 49 W.
6.0 - 19.0 SAND, BROWN, MEDIUM, VERY CLAYEY; SATURATED, OXIDIZED, SOME GRAVEL AT 14 FEET
19.0 - 21.0 GRAVEL, BROWN, COARSE; SATURATED, OXIDIZED
TEST HOLE NUMBER:  506
LOCATION:  111N-49W-27CCDD
LEGAL LOCATION:  SE SE SW SW SEC. 27, T. 111 N., R. 49 W.
  1.0 -  14.0  SAND AND GRAVEL; OXIDIZED
  14.0 -  19.0  SAND, YELLOW-BROWN
  19.0 -  79.0  SAND AND GRAVEL, BROWN; CLEAN

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TEST HOLE NUMBER:  507
LOCATION:  111N-49W-28AABA
LEGAL LOCATION:  NE NW NE NE SEC. 28, T. 111 N., R. 49 W.
  2.0 -  6.0  GRAVEL, BROWN, COARSE, POORLY SORTED;
  DRY, OXIDIZED
  14.0 -  17.0  SAND, BROWN, FINE, WELL SORTED; VERY
  MOIST, OXIDIZED

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TEST HOLE NUMBER:  508
LOCATION:  111N-49W-28DCCC
LEGAL LOCATION:  SW SW SW SE SEC. 28, T. 111 N., R. 49 W.
  5.0 -  22.0  GRAVEL, Gray, MEDIUM, CLAYEY, SANDY;
  Saturated, UNOXIDIZED

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TEST HOLE NUMBER:  509
LOCATION:  111N-49W-29DCCC
LEGAL LOCATION:  SE SW SW SE SEC. 29, T. 111 N., R. 49 W.
  7.0 -  10.0  SAND, BROWN, MEDIUM, CLAYEY; SATURATED,
  OXIDIZED

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TEST HOLE NUMBER:  510
LOCATION:  111N-49W-30CCCD
LEGAL LOCATION:  SE SW SW SEC. 10, T. 111 N., R. 49 W.
  5.0 -  14.0  GRAVEL, BROWN, MEDIUM TO COARSE, SANDY;
  SATURATED, OXIDIZED

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TEST HOLE NUMBER:  511
LOCATION:  111N-49W-32DCCC
LEGAL LOCATION:  SW SW SW SE SEC. 32, T. 111 N., R. 49 W.
  5.0 -  9.0  GRAVEL, FINE
  9.0 -  49.0  SAND, COARSE
TEST HOLE NUMBER: 512
LOCATION: 111N-49W-34ABB
LEGAL LOCATION: NW NW NW NE SEC. 34, T. 111 N., R. 49 W.
1.0 -  7.0 SAND, REDDISH-BROWN, MEDIUM TO COARSE, PEBBLY; DRY, OXIDIZED
7.0 - 10.0 GRAVEL, REDDISH-BROWN, MEDIUM TO COARSE, SANDY; DRY, OXIDIZED
10.0 -42.0 SAND, REDDISH-BROWN, VERY CLAYEY, PEBBLY; MOIST, OXIDIZED, SOME GRAVEL

TEST HOLE NUMBER: 513
LOCATION: 111N-49W-35BBBA
LEGAL LOCATION: NE NW NW NW SEC. 35, T. 111 N., R. 49 W.
 4.0 - 19.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; DRY, OXIDIZED

TEST HOLE NUMBER: 514
LOCATION: 111N-50W-03ABB
LEGAL LOCATION: NW NW NW NE SEC. 03, T. 111 N., R. 50 W.
 6.0 - 11.0 GRAVEL, BROWN, COARSE, MODERATELY SORTED; SATURATED, OXIDIZED

TEST HOLE NUMBER: 515
LOCATION: 111N-50W-03CCCD
LEGAL LOCATION: SE SW SE SW SEC. 03, T. 111 N., R. 50 W.
10.0 - 15.0 GRAVEL, GRAY, MEDIUM TO COARSE, SANDY; SATURATED, UNOXIDIZED

TEST HOLE NUMBER: 516
LOCATION: 111N-50W-04DDDD
LEGAL LOCATION: SE SE SW SE SEC. 04, T. 111 N., R. 50 W.
 8.0 - 15.0 SAND AND GRAVEL, WHITISH; CLEAN

TEST HOLE NUMBER: 517
LOCATION: 111N-50W-09DDDD
LEGAL LOCATION: SE SE SE SE SEC. 09, T. 111 N., R. 50 W.
0 - 4.0 SAND, BROWN, FINE TO MEDIUM, PEBBLY; DRY, OXIDIZED, DIRTY

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TEST HOLE NUMBER: 518
LOCATION: 111N-50W-11BAAA
LEGAL LOCATION: NE NE NE NW SEC. 11, T. 111 N., R. 50 W.

2.0 - 4.0 GRAVEL, BROWN, FINE, SANDY, MODERATELY SORTED; DRY, OXIDIZED

6.0 - 37.0 GRAVEL, BROWN, MEDIUM, MODERATELY SORTED; SATURATED, OXIDIZED, SOME CLAY LAYERS

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TEST HOLE NUMBER: 519
LOCATION: 111N-50W-16BBAA
LEGAL LOCATION: NE NE NW NW SEC. 16, T. 111 N., R. 50 W.

5.0 - 12.0 GRAVEL, BROWN, MEDIUM, SANDY; MOIST, OXIDIZED, SATURATED AT 8 FEET

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TEST HOLE NUMBER: 520
LOCATION: 111N-50W-17DDCC
LEGAL LOCATION: SW SW SE SE SEC. 17, T. 111 N., R. 50 W.

4.0 - 9.0 SAND, DARK-BROWN, FINE; SATURATED, OXIDIZED, VERY DIRTY

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TEST HOLE NUMBER: 521
LOCATION: 111N-50W-17DDDD 1
LEGAL LOCATION: SE SE SE SE SEC. 17, T. 111 N., R. 50 W.

4.0 - 15.0 GRAVEL

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TEST HOLE NUMBER: 522
LOCATION: 111N-50W-17DDDD 2
LEGAL LOCATION: SE SE SE SE SEC. 17, T. 111 N., R. 50 W.

4.0 - 15.0 GRAVEL

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TEST HOLE NUMBER: 523
LOCATION: 111N-50W-21BAAB
LEGAL LOCATION: NW NE NE NW SEC. 21, T. 111 N., R. 50 W.

96
5.0 - 30.0 GRATELL, BROWN, MEDIUM TO COARSE, SANDY; DRY, OXIDIZED, SATURATED AT 12 FEET

TEST HOLE NUMBER: 524
LOCATION: 111N-50W-25BBAA
LEGAL LOCATION: NE NE NW NW SEC. 25, T. 111 N., R. 50 W.

4.0 - 6.0 SAND, BROWN, MEDIUM, CLAYEY; SATURATED, OXIDIZED
7.0 - 17.0 GRATELL, BROWN, MEDIUM; SATURATED, OXIDIZED

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TEST HOLE NUMBER: 525
LOCATION: 111N-50W-26BAAA
LEGAL LOCATION: NE NE NE NW SEC. 26, T. 111 N., R. 50 W.

6.0 - 10.0 SAND, REDDISH-BROWN, FINE, WELL SORTED; DRY, OXIDIZED
10.0 - 15.0 GRATELL, REDDISH-BROWN, COARSE; DRY, OXIDIZED

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TEST HOLE NUMBER: 526
LOCATION: 111N-50W-29ABBB
LEGAL LOCATION: NW NW NW NE SEC. 29, T. 111 N., R. 50 W.

5.0 - 19.0 GRATELL, BROWN, FINE TO MEDIUM, SANDY; SATURATED, OXIDIZED, SOME COARSE GRAVEL AT 14 FEET

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TEST HOLE NUMBER: 527
LOCATION: 111N-50W-30DDDD
LEGAL LOCATION: SE SE SE SE SEC. 30, T. 111 N., R. 50 W.

4.0 - 15.0 GRATELL, YELLOW-BROWN, COARSE

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TEST HOLE NUMBER: 528
LOCATION: 111N-50W-34ABBB
LEGAL LOCATION: NW NW NW NE SEC. 34, T. 111 N., R. 50 W.

4.0 - 12.0 GRATELL, GRAY, MEDIUM, WELL SORTED; SATURATED, UNOXIDIZED

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TEST HOLE NUMBER: 529
LOCATION: 111N-50W-34BCCC
LEGAL LOCATION: SW SW SW NW SEC. 34, T. 111 N., R. 50 W.

4.0 - 23.0 GRAVEL, MEDIUM, SANDY
23.0 - 40.0 SAND, VERY FINE, CLAYEY

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TEST HOLE NUMBER: 530
LOCATION: 111N-50W-35BAAA
LEGAL LOCATION: NE NE NW NW SEC. 35, T. 111 N., R. 50 W.

11.0 - 20.0 SAND, BROWN, MEDIUM, CLAYEY; SATURATED, OXIDIZED
20.0 - 24.0 GRAVEL, BROWN, COARSE; SATURATED, OXIDIZED

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TEST HOLE NUMBER: 531
LOCATION: 111N-51W-01A
LEGAL LOCATION: NE NE SEC. 01, T. 111 N., R. 51 W.

1.0 - 8.0 SAND
6.0 - 22.0 SAND, COARSE
22.0 - 38.0 SAND AND GRAVEL, COARSE

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TEST HOLE NUMBER: 532
LOCATION: 111N-51W-01ABB
LEGAL LOCATION: NW NW NW NE SEC. 01, T. 111 N., R. 51 W.

1.0 - 35.0 SAND AND GRAVEL, SILTY

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TEST HOLE NUMBER: 533
LOCATION: 111N-51W-01C
LEGAL LOCATION: SW SW SEC. 01, T. 111 N., R. 51 W.

5.0 - 10.0 SAND, FINE
10.0 - 30.0 SAND AND GRAVEL

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TEST HOLE NUMBER: 534
LOCATION: 111N-51W-04BAA
LEGAL LOCATION: NE NE NW NW SEC. 04, T. 111 N., R. 51 W.

2.0 - 6.0 SAND, FINE TO COARSE; WITH LIGHT-BROWN, SILTY CLAY

98
TEST HOLE NUMBER: 535
LOCATION: 111N-51W-04B88B
LEGAL LOCATION: NW NW NW NW SEC. 04, T. 111 N., R. 51 W.

3.0 - 7.0 GRAVEL, YELLOW-BROWN

TEST HOLE NUMBER: 536
LOCATION: 111N-51W-05CACC
LEGAL LOCATION: SW SW NE SW SEC. 05, T. 111 N., R. 51 W.

2.0 - 6.0 SAND, MEDIUM; WITH A LITTLE GRAVEL, SILT, AND CLAY

TEST HOLE NUMBER: 537
LOCATION: 111N-51W-05CADB
LEGAL LOCATION: NW SE NE SW SEC. 05, T. 111 N., R. 51 W.

3.0 - 7.0 SAND; SOME SILT AND CLAY

TEST HOLE NUMBER: 538
LOCATION: 111N-51W-05CBCD
LEGAL LOCATION: SE SW NW SW SEC. 05, T. 111 N., R. 51 W.

6.0 - 21.0 SAND AND GRAVEL, FINE TO COARSE SAND AND FINE TO MEDIUM GRAVEL
21.0 - 54.0 SAND, GRAVEL, AND CLAY, FINE TO COARSE SAND, FINE TO COARSE GRAVEL, AND GRAY, SILTY, SANDY CLAY, FINELY INTERLAYERED (VERY SILTY FROM 21 TO 24 FEET)

TEST HOLE NUMBER: 539
LOCATION: 111N-51W-05CC
LEGAL LOCATION: SW SW SEC. 05, T. 111 N., R. 51 W.

3.0 - 9.0 SAND, FINE, WELL-SORTED; STRATIFICATION EVIDENT, 3/4-INCH COARSE LAYER OF GRAVEL IN SAMPLE

TEST HOLE NUMBER: 540
LOCATION: 111N-51W-05CC
LEGAL LOCATION: SW SW SEC. 05, T. 111 N., R. 51 W.
5.0 - 14.0 SAND, COARSE AT TOP, GRADES TO FINE; THEN TO COARSE SAND AND GRAVEL, BACK TO FINE SAND, FINALLY BACK TO COARSE SAND AND GRAVEL

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TEST HOLE NUMBER: 541
LOCATION: 111N-51W-05CC
LEGAL LOCATION: SW SW SEC. 05, T. 111 N., R. 51 W.

5.0 - 14.0 SAND, COARSE AT TOP, GRADES TO FINE; THEN TO COARSE SAND AND GRAVEL, THEN BACK TO FINE SAND, FINALLY BACK TO COARSE SAND AND GRAVEL

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TEST HOLE NUMBER: 542
LOCATION: 111N-51W-05CD
LEGAL LOCATION: SE SW SEC. 05, T. 111 N., R. 51 W.

4.0 - 6.6 SAND, FINE TO MEDIUM
15.0 - 18.0 SAND, BROWN, FINE TO MEDIUM; WITH FINE GRAVEL LAYERS

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TEST HOLE NUMBER: 543
LOCATION: 111N-51W-05CDBD
LEGAL LOCATION: SE NW SE SW SEC. 05, T. 111 N., R. 51 W.

2.0 - 7.0 SAND; SOME SILT AND CLAY
7.0 - 10.0 SAND AND GRAVEL, MEDIUM TO COARSE SAND AND MEDIUM TO COARSE GRAVEL

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TEST HOLE NUMBER: 544
LOCATION: 111N-51W-05CDDB
LEGAL LOCATION: NW SE SE SW SEC. 05, T. 111 N., R. 51 W.

5.0 - 9.0 SAND, BROWN, FINE, WELL SORTED; MOIST, OXIDIZED, SOME SMALL CLAY LAYERS

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TEST HOLE NUMBER: 545
LOCATION: 111N-51W-07CBB
LEGAL LOCATION: SW SW NW SW SEC. 07, T. 111 N., R. 51 W.

6.0 - 31.0 SAND, BROWN, MEDIUM, PEPSLY; DRY, OXIDIZED, ABANDONED HOLE

100
TEST HOLE NUMBER: 546
LOCATION: 111N-51W-07CCCD
LEGAL LOCATION: SE SW SE SW SEC. 07, T. 111 N., R. 51 W.
19.0 - 24.0 SAND, BROWN, MEDIUM, MODERATELY SORTED; DRY, OXIDIZED
24.0 - 57.0 SAND, BROWN, FINE, WELL SORTED; DRY, OXIDIZED, SATURATED AT 27 FEET

TEST HOLE NUMBER: 547
LOCATION: 111N-51W-08CDBB
LEGAL LOCATION: NW NW SE SW SEC. 08, T. 111 W., R. 51 W.
13.0 - 15.0 GRAVEL, MEDIUM TO VERY COARSE, SANDY; DRY, OXIDIZED, ABANDONED HOLE

TEST HOLE NUMBER: 548
LOCATION: 111N-51W-10BBCB
LEGAL LOCATION: SW SW SW NW SEC. 10, T. 111 N., R. 51 W.
0 - 11.0 SAND, BROWN, MEDIUM TO COARSE, SILTY; MOIST, OXIDIZED

TEST HOLE NUMBER: 549
LOCATION: 111N-51W-10CCBC
LEGAL LOCATION: SW NW NW SW SEC. 10, T. 111 N., R. 51 W.
0 - 40.0 GRAVEL, FINE TO COARSE, SANDY; GRAINS ANGULAR TO SUBANGULAR CARBONATE (DOLOMITIC), BLACK CRISTALLINE, AND BLACK MUDSTONE FRAGMENTS

TEST HOLE NUMBER: 550
LOCATION: 111N-51W-10CCCC
LEGAL LOCATION: SW SW SW SW SEC. 10, T. 111 N., R. 51 W.
2.0 - 10.0 SAND, COARSE; FINE GRAVEL
22.0 - 25.0 GRAVEL

TEST HOLE NUMBER: 551
LOCATION: 111N-51W-11BCCC
LEGAL LOCATION: SW SW SW NW SEC. 11, T. 111 N., P. 51 W.

101
0 - 2.0 SAND, BROWN, MEDIUM, SILTY, PEBBLY; DRY, OXIDIZED
11.0 - 13.0 GRAVEL, BROWN, FINE TO MEDIUM, SANDY; DRY, OXIDIZED
17.0 - 32.0 SAND, BROWN, MEDIUM, PEBBLY; MOIST, OXIDIZED

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TEST HOLE NUMBER: 552
LOCATION: 111N-51W-11CC
LEGAL LOCATION: SW SW SEC. 11, T. 111 N., R. 51 W.
3.0 - 8.0 SAND; SOME CLAY AND SILT
8.0 - 40.0 SAND AND GRAVEL

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TEST HOLE NUMBER: 553
LOCATION: 111N-51W-12CDDA
LEGAL LOCATION: NE SE SE SW SEC. 12, T. 111 N., R. 51 W.
1.0 - 6.0 GRAVEL, MEDIUM TO COARSE, SOME VERY COARSE, ROUNDED
6.0 - 12.0 SAND, MEDIUM TO COARSE
12.0 - 20.0 GRAVEL, MEDIUM TO COARSE
20.0 - 25.0 SAND, MEDIUM TO COARSE

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TEST HOLE NUMBER: 554
LOCATION: 111N-51W-12CCCC 1
LEGAL LOCATION: SW SW SW SE SEC. 12, T. 111 N., R. 51 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE
1.0 - 32.0 SAND AND GRAVEL, SAND, VERY FINE TO MEDIUM, COARSENING TO FINE GRAVEL WITH DEPTH; SOME LIGHT-GRAY CLAY AT DEPTH

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TEST HOLE NUMBER: 555
LOCATION: 111N-51W-12CCCC 2
LEGAL LOCATION: SW SW SW SE SEC. 12, T. 111 N., R. 51 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE
2.0 - 43.0 SAND, FINE TO COARSE

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TEST HOLE NUMBER: 556
LOCATION: 111N-51W-13AABD
LEGAL LOCATION: NW NW NE NE SEC. 13, T. 111 N., R. 51 W.
0 - 1.0  SAND, BROWN, FINE, WELL SORTED; DRY, OXIDIZED
1.0 - 4.0  SAND, BROWN, FINE, SILTY, WELL SORTED; MOIST, OXIDIZED
4.0 - 27.0  GRAVEL, BROWN, MEDIUM, SANDY, MODERATELY SORTED; MOIST, OXIDIZED

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TEST HOLE NUMBER: 557
LOCATION: 111N-51W-13CC
LEGAL LOCATION: SW SW SEC. 13, T. 111 N., R. 51 W.

6.0 - 35.0  SAND AND GRAVEL

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TEST HOLE NUMBER: 558
LOCATION: 111N-51W-14AA
LEGAL LOCATION: NE NE SEC. 14, T. 111 N., R. 51 W.

3.0 - 7.0  SAND; SOME SILT AND CLAY
7.0 - 42.0  SAND AND GRAVEL

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TEST HOLE NUMBER: 559
LOCATION: 111N-51W-15DD
LEGAL LOCATION: SE SE SEC. 15, T. 111 N., R. 51 W.

4.0 - 24.0  SAND; SATURATED

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TEST HOLE NUMBER: 560
LOCATION: 111N-51W-16AADD
LEGAL LOCATION: SE SW NE SE SEC. 16, T. 111 N., R. 51 W.

22.0 - 37.0  GRAVEL, VERY FINE TO COARSE, SANDY; GRAINS ANGULAR TO SUBANGULAR CARBONATE (DOLOMITIC), AND BLACK SILICATE ROCK FRAGMENTS

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TEST HOLE NUMBER: 561
LOCATION: 111N-51W-16ABB8
LEGAL LOCATION: NW NW NW NE SEC. 16, T. 111 N., R. 51 W.

5.0 - 7.0  GRAVEL, VERY FINE TO COARSE, SANDY; CARBONATE (DOLOMITIC), AND VARIOUS SILICATE ROCK FRAGMENTS, HIGHLY OXIDIZED
20.0 - 73.0  SAND AND GRAVEL, SAND IS COARSE TO VERY
COARSE, GRAVEL IS VERY FINE TO COARSE; SAND IS SURROUNDED QUARTZ, GRAVEL IS ANGULAR TO SUBANGULAR CARBONATE AND BLACK CRYSTALLINE ROCK:FRAGMENTS

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TEST HOLE NUMBER: 562
LEGAL LOCATION: NE NE NE NW SEC. 16, T. 111 N., R. 51 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE

1.0 - 80.0 SAND AND GRAVEL, MEDIUM SAND TO COARSE GRAVEL, CHANGING TO GRAVEL ONLY WITH DEPTH; WITH COBBLES IN LOWEST 20 FEET; SMALL AMOUNT OF LIGHT-GRAYISH-BROWN, SILTY, SANDY, CALCAREOUS CLAY PRESENT THROUGHOUT

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TEST HOLE NUMBER: 563
LEGAL LOCATION: NE NE SE NE SEC. 17, T. 111 N., R. 51 W.

4.0 - 11.0 SAND, BROWN, MEDIUM, SILTY, VERY CLAYEY; SATURATED, OXIDIZED, SOME GRAVEL

11.0 - 29.0 SAND, BROWN, COARSE, GRAVELLY; SATURATED, OXIDIZED

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TEST HOLE NUMBER: 564
LEGAL LOCATION: NE NE SEC. 23, T. 111 N., R. 51 W.

2.0 - 7.0 SAND AND GRAVEL; DRY

7.0 - 42.0 SAND AND GRAVEL; SATURATED

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TEST HOLE NUMBER: 565
LEGAL LOCATION: NW NE SEC. 24, T. 111 N., R. 51 W.

4.0 - 9.0 GRAVEL, RED; DRY

9.0 - 37.0 SAND AND GRAVEL; SATURATED

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TEST HOLE NUMBER: 566
LEGAL LOCATION: NW NW NW NW SEC. 25, T. 111 N., R. 51 W.

104
2.0 - 27.0 SAND, BROWN, FINE, SILTY; DRY, OXIDIZED, SOME GRAVEL, SATURATED AT 11 FEET

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TEST HOLE NUMBER: 567
LOCATION: 111N-51W-25CCBC
LEGAL LOCATION: SW NW SW SW SEC. 15, T. 111 N., R. 51 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE

1.0 - 16.0 SAND AND GRAVEL, MEDIUM SAND TO COARSE GRAVEL

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TEST HOLE NUMBER: 568
LOCATION: 111N-51W-25DD
LEGAL LOCATION: SE SE SEC. 25, T. 111 N., R. 51 W.

12.0 - 22.0 SAND, FINE
22.0 - 42.0 SAND AND GRAVEL

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TEST HOLE NUMBER: 569
LOCATION: 111N-51W-26BB
LEGAL LOCATION: NW NW SEC. 26, T. 111 N., R. 51 W.

4.0 - 25.0 SAND; SATURATED

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TEST HOLE NUMBER: 570
LOCATION: 111N-51W-27AA
LEGAL LOCATION: NE NE SEC. 27, T. 111 N., R. 51 W.

6.0 - 25.0 GRAVEL, VERY COARSE; SATURATED

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TEST HOLE NUMBER: 571
LOCATION: 111N-51W-32DDDD
LEGAL LOCATION: SE SE SE SE SEC. 32, T. 111 N., R. 51 W.

2.0 - 3.0 SAND, BROWN, COARSE; MOIST, OXIDIZED
8.0 - 12.0 SAND, BROWN, COARSE, VERY CLAYEY;
12.0 - 22.0 GRAVEL, BROWN, MEDIUM, SANDY; SATURATED, OXIDIZED

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TEST HOLE NUMBER: 572
LOCATION: 111N-51W-35BA

105
LEGAL LOCATION: NE NW SEC. 35, T. 111 N., R. 51 W.

20.0 - 35.0 SAND; SATURATED

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TEST HOLE NUMBER: 573
LOCATION: 111N-51W-36BBBB
LEGAL LOCATION: NW NW NW NW SEC. 36, T. 111 N., R. 51 W.

3.0 - 18.0 GRAVEL, MEDIUM

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TEST HOLE NUMBER: 574
LOCATION: 111N-51W-36CCCC
LEGAL LOCATION: SW SW SW SW SEC. 36, T. 111 N., R. 51 W.

7.0 - 22.0 GRAVEL, GRAY, MEDIUM, SANDY; SATURATED, UNOXIDIZED

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TEST HOLE NUMBER: 575
LOCATION: 111N-51W-36DDDD
LEGAL LOCATION: SE SE SE SE SEC. 36, T. 111 N., R. 51 W.

1.0 - 9.0 SAND, BROWN, MEDIUM; SATURATED, OXIDIZED
9.0 - 17.0 GRAVEL, GRAY, MEDIUM, SANDY; SATURATED, UNOXIDIZED

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TEST HOLE NUMBER: 576
LOCATION: 111N-52W-01BCCB
LEGAL LOCATION: NW SW SW NW SEC. 01, T. 111 N., R. 52 W.

3.0 - 4.0 SAND, BROWN, MEDIUM; DRY, OXIDIZED
19.0 - 26.0 GRAVEL, BROWN, COARSE, SANDY, CLAYEY; SATURATED, OXIDIZED

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TEST HOLE NUMBER: 577
LOCATION: 111N-52W-01CCCD
LEGAL LOCATION: SE SW SE SW SEC. 01, T. 111 N., R. 52 W.

16.0 - 18.0 SAND, MEDIUM TO VERY COARSE; GRAINS MOSTLY SUBROUNDED QUARTZ, MAY BE A THIN CLAY LAYER BELOW SAND
18.0 - 24.0 GRAVEL, VERY FINE TO MEDIUM, SANDY; GRAINS ANGULAR TO SUBANGULAR, MOSTLY CARBONATE, BLACK CRYSTALLINE, AND MISCELLANEOUS CRYSTALLINE ROCK

106
TEST HOLE NUMBER: 578  
LOCATION: 111N-52W-01DCBB  
LEGAL LOCATION: NW NW SW SE SEC. 01, T. 111 N., R. 52 W.  

3.0 - 14.0 SAND, FINE TO MEDIUM; COARSESED DOWNWARD TO MEDIUM TO COARSE SAND AND GRAVEL, REDDISH-BROWN FROM 3 TO 9 FEET  

TEST HOLE NUMBER: 579  
LOCATION: 111N-52W-01DCCD  
LEGAL LOCATION: SE SW SE SE SEC. 01, T. 111 N., R. 52 W.  

1.0 - 12.0 GRAVEL, REDDISH-BROWN, COARSE, VERY SANDY; DRY, OXIDIZED  
17.0 - 26.0 SAND, GRAYISH-BROWN, COARSE, VERY CLAYEY; SATURATED, OXIDIZED, SOME CLAY LAYERS  

TEST HOLE NUMBER: 580  
LOCATION: 111N-52W-12AABA  
LEGAL LOCATION: NE NW NE NE SEC. 12, T. 111 N., R. 52 W.  

2.0 - 24.0 GRAVEL, VERY FINE TO MEDIUM, SANDY; GRAINS SUBANGULAR TO ANGULAR, MOSTLY CARBONATE, BLACK CRYSTALLINE, AND MISCELLANEOUS SILICATE ROCK FRAGMENTS; CONTAINS CLAY LAYERS FROM 13 TO 24 FEET  

TEST HOLE NUMBER: 581  
LOCATION: 111N-52W-12DDAB  
LEGAL LOCATION: NW NE SE SE SEC. 12, T. 111 N., R. 52 W.  

2.0 - 61.0 SAND AND GRAVEL, FINE TO MEDIUM SAND, MEDIUM TO COARSE GRAVEL, MOSTLY WELL-SORTED SAND; OCCASIONALLY SOME CLAY IN RETURN  

TEST HOLE NUMBER: 582  
LOCATION: 111N-52W-12DDAC  
LEGAL LOCATION: SW NE SE SE SEC. 12, T. 111 N., R. 52 W.  

3.0 - 15.0 SAND AND GRAVEL, DARK-BROWN, FINE, COARSER AT 8 FEET  

107
TEST HOLE NUMBER: 583
LOCATION: 111N-52W-12DDCB
LEGAL LOCATION: NW SW SE SE Sec. 12, T. 111 N., R. 52 W.

2.0 - 65.0 SAND AND GRAVEL, MEDIUM-GRAINED SAND THROUGHOUT; SAND WITH SOME GRAVEL AT 2 TO 35 FEET; MORE GRAVEL AT 35 TO 44 FEET

TEST HOLE NUMBER: 584
LOCATION: 111N-52W-12DDCC 1
LEGAL LOCATION: SW SW SE SE Sec. 12, T. 111 N., R. 52 W.

5.0 - 38.0 SAND, REDDISH-BROWN, COARSE, GRAVELLY; DRY, OXIDIZED, SOME SMALL CLAY LAYERS

TEST HOLE NUMBER: 585
LOCATION: 111N-52W-12DDCC 2
LEGAL LOCATION: SW SW SE SE Sec. 12, T. 111 N., R. 52 W.

9.0 - 46.0 SAND, LIGHT-BROWN AND BROWN, MEDIUM, WELL-SORTED; WET AT 43 FEET, SOME TO LITTLE GRAVEL, SOME IRON STAINING, OCCASIONAL PEBBLES AND LAYERS OF WELL-SORTED, FINE SAND; AT 35 FEET WELL-SORTED, FINE TO MEDIUM, SAND

TEST HOLE NUMBER: 586
LOCATION: 111N-52W-12DDDA 1
LEGAL LOCATION: NE SE SE SE Sec. 12, T. 111 N., R. 52 W.

1.0 - 34.0 SAND, FINE TO MEDIUM, WELL-SORTED; LITTLE GRAVEL, OCCASIONAL ALTERNATING LAYERS OF FINE SAND OR COARSER MATERIAL - GRAVEL AND/OR PEBBLES

TEST HOLE NUMBER: 587
LOCATION: 111N-52W-12DDDA 2
LEGAL LOCATION: NE SE SE SE Sec. 12, T. 111 N., R. 52 W.

12.0 - 15.0 SAND AND GRAVEL, DARK-BROWN, MEDIUM

108
TEST HOLE NUMBER: 568
LOCATION: 111N-52W-12DDDC
LEGAL LOCATION: SW SE SE SE SEC. 12, T. 111 N., R. 52 W.

2.0 - 33.0 SAND AND GRAVEL, BROWN; SOME CLAY FROM 27 TO 33 FEET

* * *

TEST HOLE NUMBER: 589
LOCATION: 111N-52W-12DDDD
LEGAL LOCATION: SE SE SE SE SEC. 12, T. 111 N., R. 52 W.

8.0 - 12.0 SAND AND GRAVEL, FINE TO COARSE; QUESTIONABLE SINCE NO SAMPLE WAS TAKEN DUE TO COBBLE

23.0 - 39.0 SAND, FINE TO MEDIUM, WELL-SORTED; SOME GRAVEL, OCCASIONAL THIN LAYERS OF SILT AND CLAY OR COARSE GRAVEL, VERY COARSE LAYER OF PEBBLES AT 31 FEET, WET AT 35 FEET

* * *

TEST HOLE NUMBER: 590
LOCATION: 112N-47W-05BCCC
LEGAL LOCATION: SW SW NW SW SEC. 05, T. 112 N., R. 47 W.

16.0 - 19.0 SAND, GRAY, FINE, VERY SILTY, POORLY SORTED; SATURATED, UNOXIDIZED

* * *

TEST HOLE NUMBER: 591
LOCATION: 112N-47W-16DCDD
LEGAL LOCATION: SE SE SW SE SEC. 16, T. 112 N., R. 47 W.

4.0 - 5.0 GRAVEL, BROWN, COARSE; DRY, OXIDIZED

* * *

TEST HOLE NUMBER: 592
LOCATION: 112N-47W-19CCDD
LEGAL LOCATION: SE SE SW SW SEC. 19, T. 112 N., R. 47 W.

6.0 - 14.0 GRAVEL, BROWN, FINE, SANDY; SATURATED, OXIDIZED

14.0 - 22.0 GRAVEL, BROWN, COARSE, SANDY; SATURATED, OXIDIZED

22.0 - 43.0 SAND, BROWN, FINE TO MEDIUM, CLAYEY; SATURATED, OXIDIZED, SOME GRAVEL

* * *
TEST HOLE NUMBER: 593
LOCATION: 112N-47W-29C
LEGAL LOCATION: SW SW SE SW SEC. 29, T. 112 N., R. 47 W.
17.0 - 31.0 GRAVEL, GRAY, MEDIUM TO COARSE, SANDY; SATURATED, UNOXIDIZED
* * *

TEST HOLE NUMBER: 594
LOCATION: 112N-48W-02CLC
LEGAL LOCATION: SW SE SW SE SEC. 02, T. 112 N., R. 48 W.
0 - 11.0 SAND, BROWN, FINE TO MEDIUM, SILTY, PEBBLY; DRY, OXIDIZED
* * *

TEST HOLE NUMBER: 595
LOCATION: 112N-48W-02ADD
LEGAL LOCATION: SE SE NE SE SEC. 02, T. 112 N., R. 48 W.
4.0 - 6.0 GRAVEL, REDDISH-BROWN, MEDIUM, VERY SANDY, POORLY SORTED; DRY, OXIDIZED
* * *

TEST HOLE NUMBER: 596
LOCATION: 112N-48W-04AAA
LEGAL LOCATION: NE NE NE NE SEC. 04, T. 112 N., R. 48 W.
5.0 - 16.0 SAND, LIGHT-BROWN, MEDIUM TO COARSE, POORLY SORTED; MOIST, OXIDIZED, SATURATED AT 7 FEET
16.0 - 21.0 GRAVEL, GRAY, COARSE; SATURATED, UNOXIDIZED
* * *

TEST HOLE NUMBER: 597
LOCATION: 112N-48W-10CDC
LEGAL LOCATION: SW SE SW SE SEC. 10, T. 112 N., R. 48 W.
6.0 - 9.0 GRAVEL, DARK-BROWN, MEDIUM, SANDY, VERY CLAYFY, POORLY SORTED; SATURATED, OXIDIZED
9.0 - 15.0 GRAVEL, BROWN, COARSE TO VERY COARSE, SANDY, POORLY SORTED; SATURATED, OXIDIZED
* * *

TEST HOLE NUMBER: 598
LOCATION: 112N-48W-13ACCC

110
LEGAL LOCATION: SW SW SW NE SEC. 13, T. 112 N., R. 48 W.

5.0 - 17.0 SAND, BROWN, MEDIUM, SILTY, PEEBLY; MOIST, OXIDIZED

***

TEST HOLE NUMBER: 599
LOCATION: 112N-48W-13BBBB
LEGAL LOCATION: NW NW NW NW SEC. 13, T. 112 N., R. 48 W.

4.0 - 6.0 GRAVEL, BROWN, COARSE, SILTY, CLAYY; DRY, OXIDIZED

***

TEST HOLE NUMBER: 600
LOCATION: 112N-48W-26ABAA
LEGAL LOCATION: NE NE SW SW SEC. 26, T. 112 N., R. 48 W.

15.0 - 48.0 GRAVEL, GRAY, MEDIUM, SILTY, POORLY SORTED; SATURATED, UNOXIDIZED

***

TEST HOLE NUMBER: 601
LOCATION: 112N-48W-28AAAA
LEGAL LOCATION: NE NE NE NE SEC. 28, T. 112 N., R. 48 W.

4.0 - 7.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; MOIST, OXIDIZED

***

TEST HOLE NUMBER: 602
LOCATION: 112N-48W-30AAAA
LEGAL LOCATION: NE NE NE NE SEC. 30, T. 112 N., R. 48 W.

0 - 4.0 GRAVEL, LIGHT-BROWN, VERY COARSE, SANDY, COBBLY; DRY, OXIDIZED

***

TEST HOLE NUMBER: 603
LOCATION: 112N-48W-31DDCC
LEGAL LOCATION: SW SW SW SE SEC. 31, T. 112 N., R. 48 W.

4.0 - 7.0 SAND, LIGHT-BROWN, FINE, SILTY; DRY, OXIDIZED

7.0 - 11.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; DRY, OXIDIZED

***

111
TEST HOLE NUMBER: 604
LOCATION: 112N-48W-32CBBB
LEGAL LOCATION: NW NW NW SW SEC. 32, T. 112 N., R. 48 W.

0 - 5.0 GRAVEL, BROWN, VERY COARSE, SANDY, COBBLY; DRY, OXIDIZED
    * * * *

TEST HOLE NUMBER: 605
LOCATION: 112N-48W-32CCCC
LEGAL LOCATION: SW SW SW SW SEC. 32, T. 112 N., R. 48 W.

3.0 - 6.0 SAND, BROWN, MEDIUM; DRY, OXIDIZED
    * * * *

TEST HOLE NUMBER: 606
LOCATION: 112N-49W-01ADD
LEGAL LOCATION: SE SE SE NE SEC. 01, T. 112 N., R. 49 W.

0 - 7.0 SAND, BROWN, FINE; DRY, OXIDIZED, SOME GRAVEL
    * * * *

TEST HOLE NUMBER: 607
LOCATION: 112N-49W-05CDDD
LEGAL LOCATION: SE SE SE SW SEC. 05, T. 112 N., R. 49 W.

5.0 - 8.0 SAND, BROWN, FINE, WELL SORTED; DRY, OXIDIZED
8.0 - 21.0 GRAVEL, BROWN, COARSE; MOIST, OXIDIZED, SATURATED AT 18 FEET
    * * * *

TEST HOLE NUMBER: 608
LOCATION: 112N-49W-06AAAA
LEGAL LOCATION: NE NE NE NE SEC. 06, T. 112 N., R. 49 W.

10.0 - 15.0 SAND AND GRAVEL, MEDIUM TO COARSE
    * * * *

TEST HOLE NUMBER: 609
LOCATION: 112N-49W-06BBBB
LEGAL LOCATION: NE NE NW NW SEC. 06, T. 112 N., R. 49 W.

0 - 4.0 GRAVEL, BROWN, MEDIUM, SANDY; DRY, OXIDIZED
9.0 - 16.0 GRAVEL, BROWN, MEDIUM, SANDY; DRY, OXIDIZED, SATURATED AT 12 FEET

112
TEST HOLE NUMBER: 610
LOCATION: 112N-49W-07ABB
LEGAL LOCATION: NW NW NW NE SEC. 07, T. 112 N., R. 49 W.

1.0 - 5.0 GRAVEL, BROWN, MEDIUM TO COARSE, VERY SILTY, SANDY, POORLY SORTED; DRY, OXIDIZED
5.0 - 11.0 SAND, REDDISH-BROWN, MEDIUM; MOIST, OXIDIZED
11.0 - 18.0 GRAVEL, BROWN, MEDIUM, SILTY, SANDY, POORLY SORTED; SATURATED, OXIDIZED
18.0 - 21.0 GRAVEL, BROWN, COARSE, SANDY; SATURATED, OXIDIZED

TEST HOLE NUMBER: 611
LOCATION: 112N-49W-08AAAA
LEGAL LOCATION: NE NE NE NE SEC. 08, T. 112 N., R. 49 W.

0 - 6.0 GRAVEL, BROWN, COARSE, SILTY, SANDY, POORLY SORTED; MOIST, OXIDIZED

TEST HOLE NUMBER: 612
LOCATION: 112N-49W-14CBCC
LEGAL LOCATION: SW SW NW SW SEC. 14, T. 112 N., R. 49 W.

9.0 - 11.0 GRAVEL, BROWN, MEDIUM, SANDY; MOIST, OXIDIZED

TEST HOLE NUMBER: 613
LOCATION: 112N-49W-15BBBB
LEGAL LOCATION: NW NW NW NW SEC. 15, T. 112 N., R. 49 W.

0 - 2.0 GRAVEL, REDDISH-BROWN, MEDIUM, SANDY, MODERATELY SORTED; MOIST, OXIDIZED
6.0 - 35.0 GRAVEL, BROWN, MEDIUM, SANDY, CLAYFY, WELL SORTED; SATURATED, OXIDIZED

TEST HOLE NUMBER: 614
LOCATION: 112N-49W-16BBBB
LEGAL LOCATION: NW NW NW NW SEC. 16, T. 112 N., R. 49 W.

2.0 - 21.0 SAND, MEDIUM TO COARSE, SUBANGULAR AND SUBBROUNDED

113
TEST HOLE NUMBER: 615
LEGAL LOCATION: NE NE NE NW SEC. 19, T. 112 N., R. 49 W.
4.0 - 17.0 SAND, BROWN, MEDIUM; SATURATED, OXIDIZED

TEST HOLE NUMBER: 616
LOCATION: 112N-49W-21AAAA
LEGAL LOCATION: NE NE NE NE SEC. 21, T. 112 N., R. 49 W.
4.0 - 16.0 SAND, DARK-BROWN, MEDIUM, MODERATELY SORTED; SATURATED, OXIDIZED

TEST HOLE NUMBER: 617
LOCATION: 112N-49W-28DDAA
LEGAL LOCATION: NE NE SE SE SEC. 28, T. 112 N., R. 49 W.
1.0 - 4.0 GRAVEL, RED; OXIDIZED

TEST HOLE NUMBER: 618
LOCATION: 112N-49W-29BBBB
LEGAL LOCATION: NE NW NW NW SEC. 29, T. 112 N., R. 49 W.
6.0 - 9.0 GRAVEL, DARK-BROWN, MEDIUM, SANDY; MOIST, OXIDIZED, DIRTY
9.0 - 21.0 SAND, BROWN, COARSE; SATURATED, OXIDIZED

TEST HOLE NUMBER: 619
LOCATION: 112N-49W-29CCDD
LEGAL LOCATION: SE SE SE SW SEC. 29, T. 112 N., R. 49 W.
3.0 - 37.0 SAND, GRAY, MEDIUM, SILTY, POORLY SORTED; SATURATED, UNOXIDIZED

TEST HOLE NUMBER: 620
LOCATION: 112N-49W-32CDDC
LEGAL LOCATION: SW SE SE SW SEC. 32, T. 112 N., R. 49 W.
0 - 4.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; MOIST, OXIDIZED
6.0 - 15.0 SAND, BROWN, MEDIUM, PEBBLY; SATURATED, OXIDIZED

114
15.0 - 19.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; SATURATED, OXIDIZED
* * * *

TEST HOLE NUMBER: 621
LOCATION: 112N-49W-33BAB
LEGAL LOCATION: NW NW NE NW SEC. 33, T. 112 N., R. 49 W.

2.0 - 6.0 SAND, GRAY, MEDIUM, POORLY SORTED; MOIST
* * * *

TEST HOLE NUMBER: 622
LOCATION: 112N-50W-05ADD
LEGAL LOCATION: SE SE SE NE SEC. 05, T. 112 N., R. 50 W.

1.0 - 11.0 SAND, GRAY, FINE TO MEDIUM, SILTY; MOIST, UNOXIDIZED, SOME PEBBLES, SATURATED AT 5 FEET
* * * *

TEST HOLE NUMBER: 623
LOCATION: 112N-50W-05CCD
LEGAL LOCATION: SE SW SW SW SEC. 05, T. 112 N., R. 50 W.

8.0 - 49.0 SAND AND GRAVEL, COARSE
* * * *

TEST HOLE NUMBER: 614
LOCATION: 112N-50W-06CCD
LEGAL LOCATION: SE SW SW SW SEC. 06, T. 112 N., R. 50 W.

3.0 - 34.0 GRAVEL, DARK-BROWN, MEDIUM, MODERATELY SORTED; SATURATED, OXIDIZED
* * * *

TEST HOLE NUMBER: 625
LOCATION: 112N-50W-12AABA
LEGAL LOCATION: NE NW NE NE SEC. 12, T. 112 N., R. 50 W.

5.0 - 8.0 SAND, GRAY, FINE, WELL SORTED; SATURATED, UNOXIDIZED
8.0 - 11.0 GRAVEL, GRAY, COARSE; SATURATED, UNOXIDIZED
* * * *

TEST HOLE NUMBER: 626
LOCATION: 112N-50W-13CDC
LEGAL LOCATION: SW SE SW SE SEC. 13, T. 112 N., R. 50 W.

115
0 - 7.0 GRAVEL, BROWN, MEDIUM, VERY SANDY; DRY, OXIDIZED, MOIST AT 4 FEET

** * * *

TEST HOLE NUMBER: 627
LOCATION: 112N-50W-13DDDD
LEGAL LOCATION: SE SE SE SE SEC. 13, T. 112 N., R. 50 W.

0 - 33.0 GRAVEL, COARSE; WITH Boulders,
SUBANGULAR; HIGH PERCENT OF SHALE AND LIMESTONE PARTICLES

** * * *

TEST HOLE NUMBER: 628
LOCATION: 112N-50W-16BCBB
LEGAL LOCATION: NW NW SW NW SEC. 16, T. 112 N., R. 50 W.

1.0 - 2.0 SAND, BROWN, MEDIUM, SILTY; SATURATED,
OXIDIZED

2.0 - 7.0 SAND, GRAY, MEDIUM, VERY CLAYEY;
SATURATED, UNOXIDIZED

7.0 - 9.0 GRAVEL, GRAY, MEDIUM, MODERATELY SORTED;
SATURATED, UNOXIDIZED, CLEAN

** * * *

TEST HOLE NUMBER: 629
LOCATION: 112N-50W-17AAAA
LEGAL LOCATION: NE NE NE NE SEC. 17, T. 112 N., R. 50 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE

0 - 30.0 SAND, FINE TO COARSE

** * * *

TEST HOLE NUMBER: 630
LOCATION: 112N-50W-18BBBB
LEGAL LOCATION: NW NW NW NW SEC. 18, T. 112 N., R. 50 W.

3.0 - 6.0 SAND, BROWN, COARSE, MODERATELY SORTED;
MOIST, OXIDIZED

6.0 - 9.0 GRAVEL, BROWN, COARSE, POORLY SORTED;
DRY, OXIDIZED

9.0 - 19.0 SAND, REDDISH-BROWN, MEDIUM TO COARSE;
MODERATELY SORTED; MOIST, OXIDIZED,
SATURATED AT 11 FEET

19.0 - 36.0 GRAVEL, REDDISH-BROWN, FINE, SANDY,
MODERATELY SORTED; SATURATED, OXIDIZED

** * * *

TEST HOLE NUMBER: 631
LOCATION: 112N-50W-18CBCC
LEGAL LOCATION: SW SW NW SW SEC. 18, T. 112 N., R. 50 W.

3.0 - 21.0 SAND, FINE TO MEDIUM; FINE TO MEDIUM GRAVEL, SUBROUNDED
21.0 - 29.0 GRAVEL, MEDIUM TO COARSE

* * *

TEST HOLE NUMBER: 632
LOCATION: 112N-50W-18CCAC
LEGAL LOCATION: SW NE SW SW SEC. 18, T. 112 N., R. 50 W.

2.0 - 12.0 SAND, MEDIUM TO COARSE
12.0 - 30.0 GRAVEL

* * *

TEST HOLE NUMBER: 633
LOCATION: 112N-50W-18DCCDC
LEGAL LOCATION: SW SE SW SE SEC. 18, T. 112 N., R. 50 W.

3.0 - 20.0 GRAVEL
20.0 - 30.0 SAND, FINE TO COARSE

* * *

TEST HOLE NUMBER: 634
LOCATION: 112N-50W-19ACCC
LEGAL LOCATION: SW NW SW NW SEC. 19, T. 112 N., R. 50 W.

2.0 - 27.0 SAND, MEDIUM TO COARSE

* * *

TEST HOLE NUMBER: 635
LOCATION: 112N-50W-19CBBB
LEGAL LOCATION: NW NW NW SW SEC. 19, T. 112 N., R. 50 W.

7.0 - 12.0 SAND, MEDIUM; SOME CLAY, SATURATED
12.0 - 17.0 SAND, MEDIUM TO COARSE; SOME GRAVEL
17.0 - 41.0 SAND AND GRAVEL, COARSE SAND, FINE GRAVEL

* * *

TEST HOLE NUMBER: 636
LOCATION: 112N-50W-19CBBB 1
LEGAL LOCATION: NW NW NW SW SEC. 19, T. 112 N., R. 50 W.

2.0 - 41.0 SAND AND GRAVEL

* * *

TEST HOLE NUMBER: 617

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<table>
<thead>
<tr>
<th>Test Hole Number</th>
<th>Location</th>
<th>Legal Location</th>
<th>Test Hole Depth</th>
<th>Description</th>
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<tbody>
<tr>
<td>638</td>
<td>112N-50W-19CCAA</td>
<td>NE NE SW SW Sec. 19, T. 112 N., R. 50 W.</td>
<td>5.0 - 37.0</td>
<td>Gravel</td>
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<td>639</td>
<td>112N-50W-19CDDD</td>
<td>SE SE SE SW Sec. 19, T. 112 N., R. 50 W.</td>
<td>3.0 - 32.0</td>
<td>Gravel</td>
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<td>640</td>
<td>112N-50W-19DDDB</td>
<td>SW SE SE SE Sec. 19, T. 112 N., R. 50 W.</td>
<td>12.0 - 22.0</td>
<td>Gravel</td>
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<td>641</td>
<td>112N-50W-19DDDC</td>
<td>SW SW NE SW Sec. 20, T. 112 N., R. 50 W.</td>
<td>1.0 - 33.0</td>
<td>Sand and Gravel</td>
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<td>642</td>
<td>112N-50W-20CDDD</td>
<td>SE SE SW SE Sec. 20, T. 112 N., R. 50 W.</td>
<td>2.0 - 20.0</td>
<td>Gravel</td>
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<td>20.0 - 33.0</td>
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<td>6.0 - 7.0</td>
<td>Sand, Medium, Slightly Clavey</td>
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<td>7.0 - 12.0</td>
<td>Sand, Clavey; Some Medium Gravel, Hard, Oxidized, Dry</td>
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<td></td>
<td>12.0 - 20.0</td>
<td>Sand; Some Fine to Medium Gravel, Some Clay, Saturated</td>
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<td>20.0 - 31.0</td>
<td>Sand, Coarse; Some Medium Gravel, Saturated</td>
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TEST HOLE NUMBER: 643
LOCATION: 112N-60W-24DCC
LEGAL LOCATION: SW SW SE SE SEC. 24, T. 112 N., R. 50 W.

6.0 - 7.0 GRAVEL, GRAY, MEDIUM, MODERATELY SORTED; MOIST, UNOXIDIZED

* * *

TEST HOLE NUMBER: 644
LOCATION: 112N-50W-25CDD
LEGAL LOCATION: SE SW SW SW SEC. 25, T. 112 N., R. 50 W.

2.0 - 27.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY; DRY, OXIDIZED, SATURATED AT 9 FEET

* * *

TEST HOLE NUMBER: 645
LOCATION: 112N-50W-26CD
LEGAL LOCATION: SE SE SE SW SEC. 26, T. 112 N., R. 50 W.

5.0 - 9.0 GRAVEL, BROWN, COARSE, VERY SANDY, SILTY; MOIST, OXIDIZED

* * *

TEST HOLE NUMBER: 646
LOCATION: 112N-50W-27DDC
LEGAL LOCATION: SE SE SW SE SEC. 27, T. 112 N., R. 50 W.

0 - 2.0 GRAVEL, BROWN, MEDIUM, SANDY, VERY CLAYEY; DRY, OXIDIZED

* * *

TEST HOLE NUMBER: 647
LOCATION: 112N-50W-29CC
LEGAL LOCATION: SW SW SW SW SEC. 29, T. 112 N., R. 50 W.

1.0 - 35.0 SAND AND GRAVEL

* * *

TEST HOLE NUMBER: 648
LOCATION: 112N-50W-29DCC
LEGAL LOCATION: SW SE SE SW SEC. 29, T. 112 N., R. 50 W.

16.0 - 22.0 SAND; SOME MEDIUM TO COARSE GRAVEL, SATURATED
22.0 - 32.0 SAND; SOME MEDIUM TO COARSE GRAVEL, SLIGHTLY CLAYEY

* * *

119
TEST HOLE NUMBER: 649
LOCATION: 112N-50W-30BBB
LEGAL LOCATION: NW NW NE NW SEC. 30, T. 112 N., R. 50 W.

5.0 - 10.0 GRAVEL, FINE
10.0 - 53.0 SAND, COARSE

* * * *

TEST HOLE NUMBER: 650
LOCATION: 112N-50W-30BBCAC
LEGAL LOCATION: SW NE NW NW SEC. 30, T. 112 N., R. 50 W.

2.0 - 4.0 SAND, MEDIUM TO COARSE
4.0 - 28.0 GRAVEL

* * * *

TEST HOLE NUMBER: 651
LOCATION: 112N-50W-30BCCC
LEGAL LOCATION: SW SW NW NW SEC. 30, T. 112 N., R. 50 W.

2.0 - 51.0 GRAVEL

* * * *

TEST HOLE NUMBER: 652
LOCATION: 112N-50W-30CBBC
LEGAL LOCATION: SW NW NW SW SEC. 30, T. 112 N., R. 50 W.

3.0 - 23.0 GRAVEL
24.0 - 29.0 GRAVEL

* * * *

TEST HOLE NUMBER: 653
LOCATION: 112N-50W-31BCCC
LEGAL LOCATION: SW SW SW NW SEC. 31, T. 112 N., R. 50 W.

1.0 - 22.0 SAND AND GRAVEL
22.0 - 34.0 SAND, VERY COARSE; SOME GRAVEL, FAST DRILLING

* * * *

TEST HOLE NUMBER: 654
LOCATION: 112N-50W-32BAAA
LEGAL LOCATION: NE NE NE NW SEC. 32, T. 112 N., R. 50 W.

0 - 32.0 SAND AND GRAVEL, BROWN; CLAY, BROWN FROM 5 FEET TO 8 FEET

* * * *

120
TEST HOLE NUMBER: 655
LOCATION: 112N-50W-35AAAA
LEGAL LOCATION: NE NE NE NE SEC. 35, T. 112 N., R. 50 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE

0 - 23.0 SAND AND GRAVEL, FINE SAND TO MEDIUM PEBBLES

* * * *

TEST HOLE NUMBER: 656
LOCATION: 112N-50W-35DDCC
LEGAL LOCATION: SW SW SE SE SEC. 35, T. 112 N., R. 50 W.

2.0 - 15.0 SAND, REDDISH-BROWN, MEDIUM TO COARSE, GRAVELY; DRY, OXIDIZED

* * * *

TEST HOLE NUMBER: 657
LOCATION: 112N-51W-01AAAA
LEGAL LOCATION: NE NE NE NE SEC. 01, T. 112 N., R. 51 W.

2.0 - 6.0 SAND, COARSE; SUBANGULAR
6.0 - 25.0 GRAVEL, RUST-COLOR, MEDIUM TO COARSE; CLEAN
25.0 - 28.0 GRAVEL, VERY COARSE; UNKNOWN SIZE
ESTIMATED 1 1/2- TO 2-INCH COBBLES

* * * *

TEST HOLE NUMBER: 658
LOCATION: 112N-51W-04ADDA
LEGAL LOCATION: NE SE SE NE SEC. 04, T. 112 N., R. 51 W.

0 - 15.0 SAND, BROWN, MEDIUM; DRY, OXIDIZED, SOME GRAVEL

* * * *

TEST HOLE NUMBER: 659
LOCATION: 112N-51W-04BBBB
LEGAL LOCATION: NW NW NW NW SEC. 04, T. 112 N., R. 51 W.

3.0 - 28.0 GRAVEL, VERY FINE TO MEDIUM, VERY SANDY;
GRAINS ANGULAR TO SUBANGULAR CARBONATE
(DOLOMITIC) BLACK CRYSTALLINE, AND LIGHTER SILICATE ROCK FRAGMENTS

* * * *

TEST HOLE NUMBER: 660
LOCATION: 112N-51W-04BCCC
LEGAL LOCATION: SW SW SW NW SEC. 04, T. 112 N., R. 51 W.

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<th>Depth</th>
<th>%</th>
<th>Description</th>
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<td>16.0</td>
<td>SAND, BROWN, MEDIUM, POORLY SORTED; DRY, OXIDIZED</td>
</tr>
<tr>
<td>16.0</td>
<td>27.0</td>
<td>GRAVEL, LIGHT-BROWN, FINE, WELL SORTED; SATURATED, OXIDIZED</td>
</tr>
</tbody>
</table>

**TEST HOLE NUMBER:** 661  
**LOCATION:** 112N-51W-05CBBB  
**LEGAL LOCATION:** NW NW NW SW SEC. 05, T. 112 N., R. 51 W.

<table>
<thead>
<tr>
<th>Depth</th>
<th>%</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>16.0</td>
<td>GRAVEL, VERY FINE TO FINE WITH SOME MEDIUM, SANDY; GRAINS ARE SUBANGULAR, MOSTLY CARBONATE (DOLOMITIC), BLACK AND MISCELLANEOUS CRYSSTALLINE ROCK FRAGMENTS</td>
</tr>
</tbody>
</table>

**TEST HOLE NUMBER:** 662  
**LOCATION:** 112N-51W-06ADD  
**LEGAL LOCATION:** SE SE SE NE SEC. 06, T. 112 N., R. 51 W.

<table>
<thead>
<tr>
<th>Depth</th>
<th>%</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>8.0</td>
<td>SAND, REDDISH-BROWN, FINE TO MEDIUM, MODERATELY SORTED; DRY, OXIDIZED</td>
</tr>
<tr>
<td>8.0</td>
<td>9.0</td>
<td>GRAVEL, BROWN, COARSE; DRY, OXIDIZED</td>
</tr>
<tr>
<td>9.0</td>
<td>15.0</td>
<td>SAND, BROWN, FINE, WELL SORTED; SATURATED, OXIDIZED</td>
</tr>
<tr>
<td>15.0</td>
<td>21.0</td>
<td>GRAVEL, BROWN, MEDIUM, MODERATELY SORTED; SATURATED, OXIDIZED</td>
</tr>
</tbody>
</table>

**TEST HOLE NUMBER:** 663  
**LOCATION:** 112N-51W-06CCCB  
**LEGAL LOCATION:** NW SW SW SW SW SEC. 06, T. 112 N., R. 51 W.

<table>
<thead>
<tr>
<th>Depth</th>
<th>%</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>26.0</td>
<td>GRAVEL, BROWN, COARSE, MODERATELY SORTED; MOIST, OXIDIZED</td>
</tr>
</tbody>
</table>

**TEST HOLE NUMBER:** 664  
**LOCATION:** 112N-51W-07CCCC  
**LEGAL LOCATION:** SW SW SW SW SW SEC. 07, T. 112 N., R. 51 W.

<table>
<thead>
<tr>
<th>Depth</th>
<th>%</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0</td>
<td>10.0</td>
<td>GRAVEL, BROWN, COARSE, CLAYEY; SATURATED, OXIDIZED</td>
</tr>
</tbody>
</table>

**TEST HOLE NUMBER:** 665  
**LOCATION:** 112N-51W-08AAAA  
**LEGAL LOCATION:** NE NE NE NE SEC. 08, T. 112 N., R. 51 W.
3.0 - 19.0 SAND AND GRAVEL, SAND IS MEDIUM TO VERY COARSE, GRAVEL IS VERY FINE TO FINE; SAND IS MOSTLY QUARTZ, GRAVEL IS MOSTLY CARBONATE AND DARK CRYSTALLINE ROCK FRAGMENTS

TEST HOLE NUMBER: 666
LOCATION: 112N-51W-08BAA
LEGAL LOCATION: NW NE NE NW SEC. 08, T. 112 N., R. 51 W.

5.0 - 8.0 SAND, BROWN, MEDIUM, MODERATELY SORTED; DRY, OXIDIZED, SOME FINE GRAVEL
8.0 - 11.0 GRAVEL, REDDISH-BROWN, FINE, VERY SANDY, POORLY SORTED; MOIST, OXIDIZED
11.0 - 24.0 GRAVEL, REDDISH-BROWN, COARSE, SANDY, POORLY SORTED; MOIST, OXIDIZED
24.0 - 29.0 GRAVEL, REDDISH-BROWN, FINE, SANDY, MODERATELY SORTED; MOIST, OXIDIZED

TEST HOLE NUMBER: 667
LOCATION: 112N-51W-08BBBB
LEGAL LOCATION: NW NW NW NW SEC. 08, T. 112 N., R. 51 W.

4.0 - 22.0 GRAVEL, VERY FINE TO FINE, SANDY; GRAINS SUBANGULAR, CARBONATE (DOLOMITIC), BLACK CRYSTALLINE, AND MISCELLANEOUS LIGHTER CRYSTALLINE ROCK FRAGMENTS

TEST HOLE NUMBER: 668
LOCATION: 112N-51W-08BCCC
LEGAL LOCATION: SW SW SW SW SEC. 08, T. 112 N., R. 51 W.

25.0 - 60.0 SAND AND GRAVEL, FINE TO COARSE SAND AND FINE TO COARSE GRAVEL; VERY SILTY GRAY CLAY (TRACE OF SAND IN SILT), FROM DRILLING APPEARS TO BE ALTERNATING LAYERS

TEST HOLE NUMBER: 669
LOCATION: 112N-51W-08DDDD
LEGAL LOCATION: SE SE SE SE SEC. 08, T. 112 N., R. 51 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE

25.0 - 82.0 SAND AND GRAVEL, FINE SAND TO MEDIUM PEBBLES; TILL STRINGERS FROM 25 TO 40 AND 62 TO 82 FEET
TEST HOLE NUMBER: 670
LOCATION: 112N-51W-09BABB
LEGAL LOCATION: NW NW NE NW SEC. 09, T. 112 N., R. 51 W.
1.0 - 11.0 SAND, BROWN, FINE
11.0 - 21.0 GRAVEL, BROWN, FINE

TEST HOLE NUMBER: 671
LOCATION: 112N-51W-09CCCD
LEGAL LOCATION: SE SW SW SW SEC. 09, T. 112 N., R. 51 W.
2.0 - 5.0 GRAVEL, BROWN, MEDIUM, CLAYEY, SANDY; VERY MOIST, OXIDIZED

TEST HOLE NUMBER: 672
LOCATION: 112N-51W-10BCCC
LEGAL LOCATION: SW SW SW NW SEC. 10, T. 112 N., R. 51 W.
5.0 - 24.0 SAND, BROWN, MEDIUM TO COARSE, SILTY; MOIST, OXIDIZED, SATURATED AT 9 FEET

TEST HOLE NUMBER: 673
LOCATION: 112N-51W-11BCCC
LEGAL LOCATION: SW SW SW NW SEC. 11, T. 112 N., R. 51 W.
2.0 - 6.0 SAND, BROWN, MEDIUM, PEBBLY: DRY, OXIDIZED

TEST HOLE NUMBER: 674
LOCATION: 112N-51W-13DDBD
LEGAL LOCATION: SE NW SE SE SEC. 13, T. 112 N., R. 51 W.
1.0 - 12.0 SAND, FINE TO MEDIUM
12.0 - 18.0 GRAVEL
18.0 - 61.0 GRAVEL AND SAND, FINE TO MEDIUM

TEST HOLE NUMBER: 675
LOCATION: 112N-51W-15DDDD
LEGAL LOCATION: SE SE SE SE SEC. 15, T. 112 N., R. 51 W.
2.0 - 7.0 SAND AND GRAVEL, MEDIUM SAND TO FINE GRAVEL
TEST HOLE NUMBER: 676
LOCATION: 112N-51W-16BAAA
LEGAL LOCATION: NE NE NE NW SEC. 16, T. 112 N., R. 51 W.
5.0 - 11.0 SAND, BROWN, MEDIUM, POORLY SORTED; VERY MOIST, OXIDIZED

TEST HOLE NUMBER: 677
LOCATION: 112N-51W-16CCDD
LEGAL LOCATION: SE SE SW SW SEC. 16, T. 112 N., R. 51 W.
21.0 - 31.0 GRAVEL, BROWN, COARSE; SATURATED

TEST HOLE NUMBER: 678
LOCATION: 112N-51W-16CDCC
LEGAL LOCATION: SW SW SE SE SEC. 16, T. 112 N., R. 51 W.
2.0 - 58.0 SAND AND GRAVEL, FINE TO COARSE SAND AND FINE TO COARSE GRAVEL, SILTY, CLAYEY; COBBLES AT 8 FEET, COARSER AFTER 30 FEET, CLAY IS LIGHT-BROWN TO GRAY

TEST HOLE NUMBER: 679
LOCATION: 112N-51W-18CBAB
LEGAL LOCATION: NW NW NW NW SEC. 18, T. 112 N., R. 51 W.
6.0 - 10.0 SAND, REDDISH-BROWN, MEDIUM, GRAVELLY, POORLY SORTED; DRY, OXIDIZED

TEST HOLE NUMBER: 680
LOCATION: 112N-51W-19BBB
LEGAL LOCATION: NW NW NW NW SEC. 19, T. 112 N., R. 51 W.
0 - 2.0 SAND

TEST HOLE NUMBER: 681
LOCATION: 112N-51W-24AAAA
LEGAL LOCATION: NE NE NE NE SEC. 24, T. 112 N., R. 51 W.
2.0 - 25.0 GRAVEL
25.0 - 41.0 SAND AND GRAVEL

125
TEST HOLE NUMBER: 682
LOCATION: 112N-51W-24ABBB
LEGAL LOCATION: NW NW NW NE SEC. 24, T. 112 N., R. 51 W.

5.0 - 25.0 SAND AND GRAVEL
25.0 - 35.0 SAND

* * * *

TEST HOLE NUMBER: 683
LOCATION: 112N-51W-24ACCC
LEGAL LOCATION: SW SW SW NE SEC. 24, T. 112 N., R. 51 W.

2.0 - 28.0 SAND, FINE TO MEDIUM

* * * *

TEST HOLE NUMBER: 684
LOCATION: 112N-51W-24ADBB
LEGAL LOCATION: NW NW SE NE SEC. 24, T. 112 N., R. 51 W.

5.0 - 18.0 SAND, VERY COARSE
18.0 - 31.0 GRAVEL

* * * *

TEST HOLE NUMBER: 685
LOCATION: 112N-51W-24BDDD
LEGAL LOCATION: SE SE NW SE SEC. 24, T. 112 N., R. 51 W.

2.0 - 7.0 SAND
7.0 - 55.0 GRAVEL

* * * *

TEST HOLE NUMBER: 686
LOCATION: 112N-51W-25AAAA
LEGAL LOCATION: NE NE NE NE SEC. 25, T. 112 N., R. 51 W.

2.0 - 25.0 SAND AND GRAVEL
25.0 - 35.0 SAND

* * * *

TEST HOLE NUMBER: 687
LOCATION: 112N-51W-25ABAB
LEGAL LOCATION: NW NE NW NE SEC. 25, T. 112 N., R. 51 W.

5.0 - 25.0 SAND AND GRAVEL
25.0 - 40.0 SAND; SOME GRAVEL

* * * *

126
TEST HOLE NUMBER: 688
LOCATION: 112N-51W-25ABDA
LEGAL LOCATION: NE SE NW NE SEC. 25, T. 112 N., R. 51 W.

2.0 - 5.0 SAND, MEDIUM TO COARSE
5.0 - 41.0 GRAVEL

** **

TEST HOLE NUMBER: 689
LOCATION: 112N-51W-28CCCC
LEGAL LOCATION: SW SW SW SW SEC. 28, T. 112 N., R. 51 W.

0 - 4.0 SAND, DARK-YELLOWISH-ORANGE, VERY COARSE, SILTY, GRAVELLY

** **

TEST HOLE NUMBER: 690
LOCATION: 112N-51W-32BBAB
LEGAL LOCATION: NW NE NW NW SEC. 32, T. 112 N., R. 51 W.

24.0 - 27.0 SAND, BROWN, MEDIUM, MODERATELY SORTED; DRY, OXIDIZED

** **

TEST HOLE NUMBER: 691
LOCATION: 112N-51W-33ABBB
LEGAL LOCATION: NW NW NW NE SEC. 33, T. 112 N., R. 51 W.

5.0 - 12.0 GRAVEL, FINE TO COARSE, SANDY; GRAINS ANGULAR TO SUBANGULAR AND CONSIST OF CARBONATE AND BLACK CRYSTALLINE ROCK FRAGMENTS, SAND, MOSTLY QUARTZ

** **

TEST HOLE NUMBER: 692
LOCATION: 112N-51W-33CBBB
LEGAL LOCATION: NW NW NW SW SEC. 33, T. 112 N., R. 51 W.

3.0 - 5.0 SAND, DUSKY-YELLOW, VERY CLAYEY

** **

TEST HOLE NUMBER: 693
LOCATION: 112N-51W-33CBBA
LEGAL LOCATION: NE SW NW SW SEC. 33, T. 112 N., R. 51 W.

3.0 - 5.0 GRAVEL, COARSE; TO FINE SAND

** **

127
TEST HOLE NUMBER: 694
LOCATION: 112N-51W-33CBCA 1
LEGAL LOCATION: NE SW NW SW SEC. 33, T. 112 N., R. 51 W.

5.0 - 10.0 SAND, POCKETS OF WELL-SORTED SAND WITHIN
COARSE SAND; SOME SILTY CLAY PIECES AND
Pebbels; SOME GRAVEl

10.0 - 12.0 SAND, LIGHT-GREENISH-BROWN, SILTY; CLAY;
GRAVEL AND PEBBLES

***

TEST HOLE NUMBER: 695
LOCATION: 112N-51W-33CBCA 2
LEGAL LOCATION: NE SW NW SW SEC. 33, T. 112 N., R. 51 W.

5.0 - 10.0 SAND, POCKETS OF WELL-SORTED SAND WITHIN
COARSE SAND; SOME SILTY CLAY PIECES AND
Pebbels; SOME GRAVEl

10.0 - 12.0 SAND, LIGHT-GREENISH-BROWN, SILTY; CLAY;
GRAVEL AND PEBBLES

***

TEST HOLE NUMBER: 696
LOCATION: 112N-51W-33CBCA 3
LEGAL LOCATION: NE SW NW SW SEC. 33, T. 112 N., R. 51 W.

5.0 - 10.0 SAND, POCKET OF WELL-SORTED SAND WITHIN
COARSE SAND; SOME SILTY CLAY PIECES AND
Pebbels; SOME GRAVEl

10.0 - 12.0 SAND, LIGHT-GREENISH-BROWN, SILTY; CLAY;
GRAVEL AND PEBBLES

***

TEST HOLE NUMBER: 697
LOCATION: 112N-51W-33CBCC 1
LEGAL LOCATION: SW SW NW SW SEC. 33, T. 112 N., R. 51 W.

11.0 - 13.0 SAND, FINE TO COARSE, POORLY SORTED;
LITTLE GRAVEL AND FINES

***

TEST HOLE NUMBER: 698
LOCATION: 112N-51W-33CBCC 2
LEGAL LOCATION: SW SW NW SW SEC. 33, T. 112 N., R. 51 W.

11.0 - 13.0 SAND, FINE TO COARSE, POORLY SORTED;
LITTLE GRAVEL AND FINES

***

128
TEST HOLE NUMBER: 699
LOCATION: 112N-51W-33CCAB 1
LEGAL LOCATION: NW NE SW SW SEC. 33, T. 112 N., R. 51 W.

2.0 - 3.0 SAND, LIGHT-BROWN, MEDIUM, FAIRLY WELL-SORTED; LITTLE PEBBLES

** * *

TEST HOLE NUMBER: 700
LOCATION: 112N-51W-33CCAB 2
LEGAL LOCATION: NW NE SW SW SEC. 33, T. 112 N., R. 51 W.

5.0 - 7.0 SAND, COARSE; GRAVEL

** * *

TEST HOLE NUMBER: 701
LOCATION: 112N-51W-33CCBB 2
LEGAL LOCATION: NW NW SW SW SEC. 33, T. 112 N., R. 51 W.

2.0 - 5.0 SAND, LIGHT-BROWN, FINE; SILT, CLAY
10.0 - 14.0 SAND, COARSE; WET
14.0 - 26.0 SAND, COARSE; GRAVEL

** * *

TEST HOLE NUMBER: 702
LOCATION: 112N-51W-33CCBB 4
LEGAL LOCATION: NW NW SW SW SEC. 33, T. 112 N., R. 51 W.

7.0 - 13.0 SAND, FINE TO COARSE, POORLY SORTED

** * *

TEST HOLE NUMBER: 703
LOCATION: 112N-51W-33CCBB 5
LEGAL LOCATION: NW NW SW SW SEC. 33, T. 112 N., R. 51 W.

7.0 - 13.0 SAND, FINE TO COARSE, POORLY SORTED

** * *

TEST HOLE NUMBER: 704
LOCATION: 112N-51W-33CCBD
LEGAL LOCATION: SE NW SW SW SEC. 33, T. 112 N., R. 51 W.

6.0 - 9.0 SAND, LIGHT-BROWN, FINE TO MEDIUM, WELL-SORTED AT 7 FEET; SOME FINE TO COARSE GRAVEL

** * *

TEST HOLE NUMBER: 705
LOCATION: 112N-51W-33CCCA
LEGAL LOCATION: NE SW SW SW SEC. 33, T. 112 N., R. 51 W.

7.0 - 8.0 SAND; SOME GRAVEL

TEST HOLE NUMBER: 706
LOCATION: 112N-51W-33CCCC
LEGAL LOCATION: SW SW SW SW SEC. 33, T. 112 N., R. 51 W.

5.0 - 12.0 SAND AND GRAVEL, FINE TO COARSE SAND AND FINE TO MEDIUM GRAVEL; 1.5 INCH FINE SAND SEAM AT 5.5 FEET, MEDIUM SAND AND TRACE GRAVEL AT 10 TO 11 FEET, COARSE SAND AND GRAVEL AT 11.5 TO 11.75 FEET; WET AT 6 FEET, RAIN FOR 2 TO 3 DAYS PRECEDING SAMPLE

TEST HOLE NUMBER: 707
LOCATION: 112N-51W-33CCDA
LEGAL LOCATION: NE SE SW SW SEC. 33, T. 112 N., R. 51 W.

3.0 - 8.0 SAND, MEDIUM TO COARSE; FINE TO MEDIUM GRAVEL

TEST HOLE NUMBER: 708
LOCATION: 112N-51W-33CCDD
LEGAL LOCATION: SE SE SW SW SEC. 33, T. 112 N., R. 51 W.

5.0 - 8.0 SAND AND GRAVEL, AT 5 TO 6 FEET FINE TO COARSE, AT 6 TO 6.5 FEET FINE TO MEDIUM SAND WITH SILT AND CLAY AND PEBBLES, AT 6.5 TO 7 FEET FINE TO COARSE SAND AND GRAVEL

TEST HOLE NUMBER: 709
LOCATION: 112N-51W-33CDDD
LEGAL LOCATION: SE SE SE SW SEC. 33, T. 112 N., R. 51 W.

4.0 - 7.0 GRAVEL, FINE TO COARSE, SANDY; GRAINS VERY ANGULAR BLACK SILICATE ROCK FRAGMENTS

TEST HOLE NUMBER: 710
LOCATION: 112N-51W-35DDDD

130
<table>
<thead>
<tr>
<th>Test Hole Number</th>
<th>Location</th>
<th>Legal Location</th>
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<tbody>
<tr>
<td>711</td>
<td>112N-51W-36GGCC</td>
<td>SW SW SW SW SE Sec. 36, T. 112 N., R. 51 W.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.0 - 6.2 Sand, Tan, Silty</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.0 - 9.0 Gravel, Tan, Clayey: Unable to Drill, Abandoned Hole</td>
</tr>
<tr>
<td>712</td>
<td>112N-51W-36DDDD</td>
<td>SE SE SE SE Sec. 36, T. 112 N., R. 51 W.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.0 - 30.0 Sand and Gravel</td>
</tr>
<tr>
<td>713</td>
<td>112N-52W-19BBBC</td>
<td>SW NW NW NW Sec. 19, T. 112 N., R. 52 W.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.0 - 9.0 Sand, Dark-Brown, Fine, Well Sorted; Moist, Oxidized</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9.0 - 17.0 Sand, Brown, Coarse, Moderately Sorted; Saturated, Oxidized</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17.0 - 24.0 Gravel, Dark-Brown, Medium, Sandy, Moderately Sorted; Saturated, Oxidized</td>
</tr>
<tr>
<td>714</td>
<td>112N-52W-34DAAD</td>
<td>SE NE NE SE Sec. 34, T. 112 N., R. 52 W.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.0 - 2.2 Gravel, Reddish-Brown, Coarse, Sandy, Poorly Sorted; Very Moist, Oxidized</td>
</tr>
<tr>
<td>715</td>
<td>112N-52W-35ABBB</td>
<td>NW NW NW NE Sec. 35, T. 112 N., R. 52 W.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.0 - 24.0 Gravel, Brown, Medium, Sandy, Poorly Sorted; Very Moist, Oxidized</td>
</tr>
</tbody>
</table>
SORTED; MOIST, OXIDIZED, SATURATED AT 11 FEET

* * *

TEST HOLE NUMBER: 716
LOCATION: 112N-52W-36BABB
LEGAL LOCATION: NW NW NE NW SEC. 36, T. 112 N., R. 52 W.

4.0 - 11.0 SAND, REDDISH-BROWN, MEDIUM, VERY GRAVELLY; DRY, OXIDIZED
11.0 - 30.0 SAND, BROWN, MEDIUM TO COARSE; SATURATED, OXIDIZED

* * *

TEST HOLE NUMBER: 717
LOCATION: 112N-52W-36BBB 1
LEGAL LOCATION: NE NW NW NW SEC. 36, T. 112 N., R. 52 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE

0 - 3.0 SAND AND GRAVEL

* * *

TEST HOLE NUMBER: 718
LOCATION: 112N-52W-36BBB 2
LEGAL LOCATION: NE NW NW NW SEC. 36, T. 112 N., R. 52 W.
PRELIMINARY LOG -- SUBJECT TO CHANGE

17.0 - 32.0 SAND AND GRAVEL, VERY FINE SAND TO COARSE PEBBLES

* * *

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TABLE 2. List of sand and gravel pits in Brookings County, South Dakota, which are on file at the Department of Transportation, Division of Highways, Pierre, South Dakota.

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pit 2</td>
<td>Landowner: unknown</td>
<td>Location: NW 1/4 sec. 9, T. 109 N., R. 47 W.</td>
<td>Aggregate type: Gravel</td>
<td>Deposit thickness (ft): ----</td>
<td>Overburden thickness (ft): ----</td>
</tr>
</tbody>
</table>
Pit 5
a. Landowner: unknown
b. Location: NW 1/4 sec. 2, T. 109 N., R. 49 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): ----
e. Overburden thickness (ft): ----

Pit 6
a. Landowner: Mannerud Construction Company
b. Location: SW 1/4 sec. 6, T. 109 N., R. 49 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): ----
e. Overburden thickness (ft): ----

Pit 7
a. Landowner: Brookings County Highway Department
b. Location: SE 1/4 SW 1/4 sec. 1, T. 139 N., R. 50 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 5.0
e. Overburden thickness (ft): 1.7

Pit 8
a. Landowner: Loren Vockrodt - Brookings
b. Location: NE 1/4 sec. 13, T. 109 N., R. 50 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 6.3
e. Overburden thickness (ft): 2.4

Pit 9
a. Landowner: Tom Martinson - Brookings
b. Location: SE 1/4 sec. 24, T. 109 N., R. 50 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 11.0
e. Overburden thickness (ft): 2.5

Pit 10
a. Landowner: Colesta Mannerud - Volga
b. Location: NE 1/4 sec. 23, T. 109 N., R. 51 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 19.0
e. Overburden thickness (ft): 3.0

Pit 11
a. Landowner: Chicago-Rock Island-Pacific RR - Chicago, IL
b. Location: NE 1/4 sec. 1, T. 110 N., R. 49 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 9.9
e. Overburden thickness (ft): 4.8
Pit 12
a. Landowner: David Wheeler - Aurora
b. Location: NE 1/4 sec. 12, T. 110 N., R. 49 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 16.0
e. Overburden thickness (ft): 2.0

Pit 13
a. Landowner: Art Benson - Volga
b. Location: NE 1/4 sec. 11, T. 110 N., R. 50 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): ----
e. Overburden thickness (ft): ----

Pit 14
a. Landowner: Holger E. Peterson - Volga
b. Location: NE 1/4 sec. 2, T. 110 N., R. 51 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): ----
e. Overburden thickness (ft): ----

Pit 15
a. Landowner: Melvin Vanderberg & Metropolitan Life Ins. - Volga
b. Location: N 1/2 NW 1/4 sec. 2, T. 110 N., R. 51 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 7.8
e. Overburden thickness (ft): 2.4

Pit 16
a. Landowner: Melvin Vandenbergs - Volga
b. Location: NE 1/4 SW 1/4 sec. 2, T. 110 N., R. 51 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 13.6
e. Overburden thickness (ft): 5.4

Pit 17
a. Landowner: Arne Nelson - Volga
b. Location: NW 1/4 sec. 27, T. 110 N., R. 51 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 11.9
e. Overburden thickness (ft): 3.4

Pit 18
a. Landowner: William Manns - Volga
b. Location: NE 1/4 sec. 29, T. 110 N., R. 51 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 7.3
e. Overburden thickness (ft): 2.9
**Pit 19**
a. Landowner: R. J. Ziegler - Volga
b. Location: NE 1/4 sec. 30, T. 110 N., R. 51 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 9.9
e. Overburden thickness (ft): 3.9

**Pit 20**
a. Landowner: Case Wagemaar
b. Location: SE 1/4 sec. 1, T. 110 N., R. 52 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 11.0
e. Overburden thickness (ft): 2.0

**Pit 21**
a. Landowner: C. E. Mannerud - Brookings
b. Location: SE 1/4 sec. 1, T. 110 N., R. 52 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 12.0
e. Overburden thickness (ft): 1.3

**Pit 22**
a. Landowner: unknown
b. Location: NW 1/4 sec. 2, T. 110 N., R. 52 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): ----
e. Overburden thickness (ft): ----

**Pit 23**
a. Landowner: Buller Estate - Hendricks, MN
b. Location: SW 1/4 sec. 5, T. 111 N., R. 47 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 13.5
e. Overburden thickness (ft): 1.5

**Pit 24**
a. Landowner: Joe Lutgen - White
b. Location: NE 1/4 sec. 6, T. 111 N., R. 47 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 14.5
e. Overburden thickness (ft): 1.0

**Pit 25**
a. Landowner: Mervyn Pierce - White
b. Location: NE 1/4 sec. 7, T. 111 N., R. 47 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 18.5
e. Overburden thickness (ft): 1.0
Pit 26

a. Landowner: Eldon Felton - Hendricks, MN
b. Location: SW 1/4 sec. 8, T. 111 N., R. 47 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 10.6
e. Overburden thickness (ft): 3.1

Pit 27

a. Landowner: Mrs. Leo Fuhr - Brookings
b. Location: SE 1/4 sec. 26, T. 111 N., R. 48 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 7.3
e. Overburden thickness (ft): 1.8

Pit 28

a. Landowner: Dean and Lois Duff - White
b. Location: NE 1/4 sec. 7, T. 111 N., R. 47 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): ----
e. Overburden thickness (ft): ----

Pit 29

a. Landowner: Dean Duff - White
b. Location: SW 1/4 sec. 7, T. 111 N., R. 49 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 13.4
e. Overburden thickness (ft): 2.5

Pit 30

a. Landowner: Winston Ullman - Brookings
b. Location: SE 1/4 sec. 7, T. 111 N., R. 49 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 7.3
e. Overburden thickness (ft): 1.0

Pit 31

a. Landowner: Richard Lucas - White
b. Location: SE 1/4 NE 1/4 sec. 10, T. 111 N., R. 49 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 16.8
e. Overburden thickness (ft): 2.2

Pit 32

a. Landowner: W. A. Tellinghuisen - White
b. Location: SE 1/4 sec. 10, T. 111 N., R. 49 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 11.0
e. Overburden thickness (ft): 2.0

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Pit 33
a. Landowner: Erwin Jerred - White
b. Location: S 1/2 sec. 11, T. 111 N., R. 49 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 12.0
e. Overburden thickness (ft): 3.5

Pit 34
a. Landowner: Marie Nelson
b. Location: NW 1/4 sec. 14, T. 111 N., R. 49 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): ----
e. Overburden thickness (ft): ----

Pit 35
a. Landowner: Richard Kendall - Brookings
b. Location: W 1/2 NW 1/4 sec. 18, T. 111 N., R. 49 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 9.2
e. Overburden thickness (ft): 3.4

Pit 36
a. Landowner: Mannerud Construction Company
b. Location: NW 1/4 sec. 18, T. 111 N., R. 49 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): ----
e. Overburden thickness (ft): ----

Pit 37
a. Landowner: R. Sloan - Aurora
b. Location: SE 1/4 sec. 27, T. 111 N., R. 49 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 9.4
e. Overburden thickness (ft): 3.7

Pit 38
a. Landowner: Marcia Eberle - Sioux Falls and Ronald E. Sears - Downey, California
b. Location: NE 1/4 SE 1/4 sec. 13, T. 111 N., R. 50 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 8.5
e. Overburden thickness (ft): 3.9

Pit 39
a. Landowner: SD Department of Game, Fish & Parks - Pierre
b. Location: NW 1/4 sec. 8, T. 111 N., R. 51 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 12.2
e. Overburden thickness (ft): 2.2
Pit 40
a. Landowner: unknown
b. Location: NW 1/4 sec. 13, T. 111 N., R. 52 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): ----
e. Overburden thickness (ft): ----

Pit 41
a. Landowner: unknown
b. Location: SE 1/4 sec. 4, T. 112 N., R. 47 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): ----
e. Overburden thickness (ft): ----

Pit 42
a. Landowner: unknown
b. Location: NE 1/4 sec. 30, T. 112 N., R. 47 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): ----
e. Overburden thickness (ft): ----

Pit 43
a. Landowner: unknown
b. Location: NW 1/4 sec. 13, T. 112 N., R. 48 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): ----
e. Overburden thickness (ft): ----

Pit 44
a. Landowner: Albert Frykman - Bruce
b. Location: NE 1/4 sec. 7, T. 112 N., R. 49 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 8.5
e. Overburden thickness (ft): 2.8

Pit 45
a. Landowner: State of South Dakota
b. Location: W 1/2 SE 1/4 sec. 7, T. 111 N., R. 50 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): ----
e. Overburden thickness (ft): ----

Pit 46
a. Landowner: unknown
b. Location: NE 1/4 sec. 24, T. 112 N., R. 50 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): ----
e. Overburden thickness (ft): ----
Pit 47
a. Landowner: George Feldhaus - Bruce
b. Location: NE 1/4 sec. 34, T. 112 N., R. 52 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 7.0
e. Overburden thickness (ft): 1.9

Pit 48
a. Landowner: George Feldhaus - Bruce
b. Location: SE 1/4 sec. 34, T. 112 N., R. 52 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 7.0
e. Overburden thickness (ft): 3.0

Pit 49
b. Location: SE 1/4 NE 1/4 sec. 36, T. 112 N., R. 52 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): ----
e. Overburden thickness (ft): ----

Pit 50
b. Location: E 1/2 sec. 36, T. 112 N., R. 52 W.
c. Aggregate type: Gravel
d. Deposit thickness (ft): 14.6
e. Overburden thickness (ft): 4.3
Good probability of finding sand or gravel deposits.

Fair probability of finding sand or gravel deposits.

Poor probability of finding sand or gravel deposits.

Letters A through M designate areas described in the text.

Test hole containing sand or gravel within 25 feet of the land surface with 0-5 feet of overburden.

Test hole containing sand or gravel within 25 feet of the land surface with greater than 5 feet of overburden.

Multiple test holes containing sand or gravel within 25 feet of the land surface.

Test hole containing no sand or gravel within 25 feet of the land surface.

Sand and gravel pits - those with a number are listed in Table 2.

Approximate boundary

Lake

Slough

Map showing test holes, sand and gravel pits, and sand and gravel deposits in Brookings County.