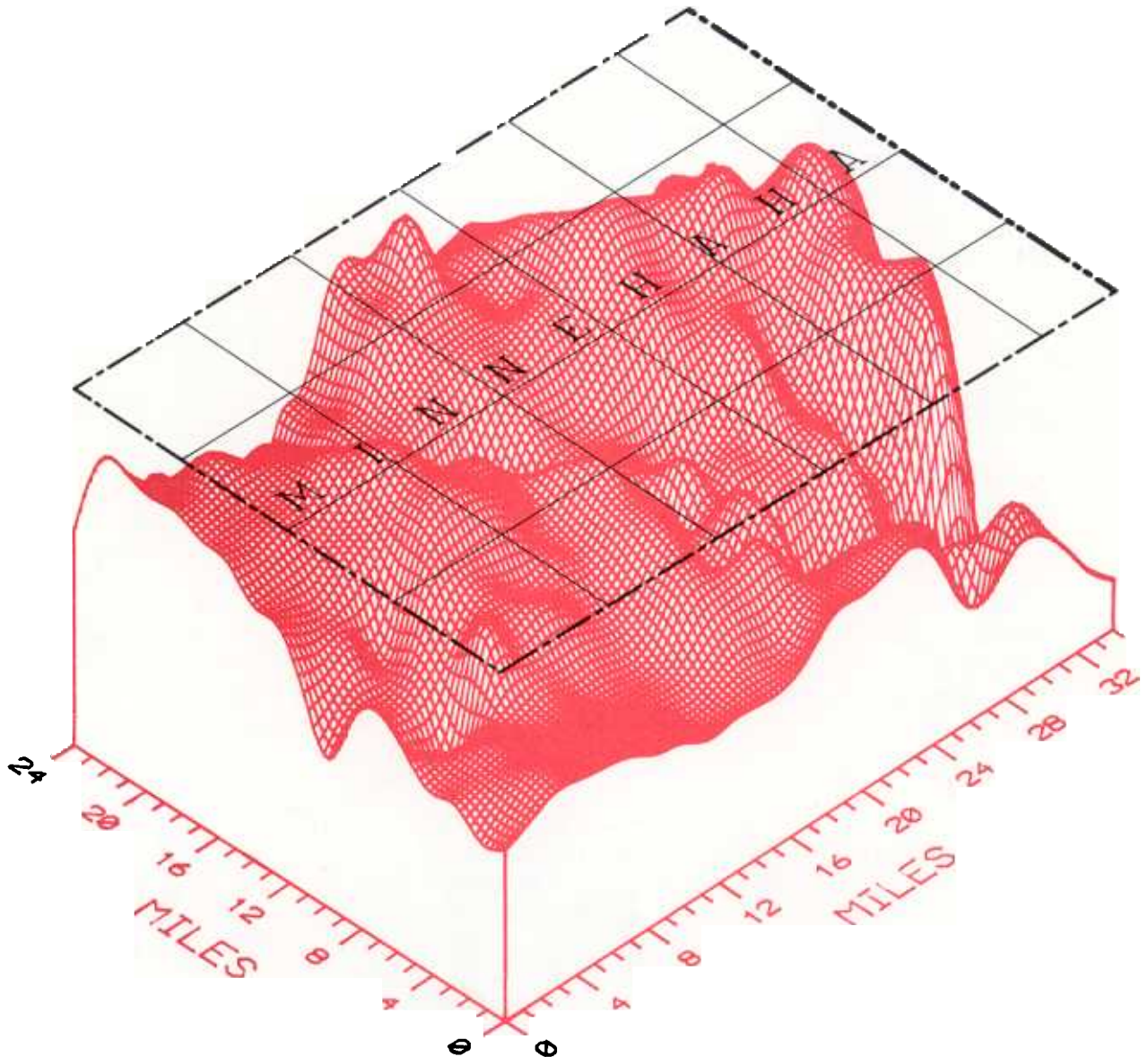


# AGGREGATE RESOURCES IN MINNEHAHA COUNTY, SOUTH DAKOTA

by

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DIVISION OF GEOLOGICAL SURVEY



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

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DEPARTMENT OF WATER AND NATURAL RESOURCES  
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Science Center  
University of South Dakota  
Vermillion, South Dakota

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## INTRODUCTION

This pamphlet is one of a series of reports describing the geology and water resources of Minnehaha County. It is designed to indicate the most promising areas in which to search for sources of coarse aggregate material. Quality of the deposits encountered was not analyzed, nor was the quantity of available reserves measured, as these would require prior knowledge of the material specifications for each intended use.

Other reports in the series include:

- a. Major aquifers in Minnehaha County, South Dakota: South Dakota Geological Survey Information Pamphlet, Lindgren, R. J., U.S. Geological Survey (in preparation).
- b. Water resources of Minnehaha County, South Dakota: U.S. Geological Survey Water Resources Investigations Report, Lindgren, R. J. (in preparation).
- c. Geology of Minnehaha County, South Dakota: South Dakota Geological Survey Bulletin, Tomhave, D. W. (in preparation).

The first report contains a generalized evaluation of the yield, quality and location of major aquifers (water-bearing deposits) in a condensed, easy-to-read pamphlet. The second and third reports are more technical and present a more comprehensive investigation of the water resources and geology within the county area. All basic data used to compile these reports are available from the South Dakota Geological Survey's open file.

It is recommended that the following publication, explaining how aggregate-bearing landforms may be recognized, be used as a companion reference to this pamphlet:

Evaluation of exploration methods for coarse aggregate in eastern South Dakota: South Dakota Geological Survey Report of Investigations 95, Bruce, R. L., and Lundberg, B. E., 1964.

## GEOLOGIC OVERVIEW

Minnehaha County lies on the gently sloping, southern flanks of the Coteau des Prairies in southeastern South Dakota. Much of the sand and gravel found in Minnehaha County is the result of the glaciers that covered this region thousands of years ago, late in the Pleistocene Epoch. The rest has been deposited by rivers and streams since the glaciers retreated. The following brief description of geologic terms should be used as an aid in further understanding the deposition of sand and gravel.

### Till

Till is the term used to define the unsorted and unstratified material either laid down by an active glacier at the base of the ice, or deposited by a glacier as the ice melted. This mixture of boulders, gravel, sand, silt, and clay is often called "boulder clay" or "blue clay." Till covers most of Minnehaha County. Although it is not considered a source of sand and gravel, a few small isolated lenses may occur within the till.

### Outwash

Outwash is a general term used to describe any deposits of clay, silt, sand, gravel or boulders that have been washed, sorted and subsequently deposited by flowing glacial meltwater. Outwash grain size depends upon material type and velocity of the water from which it was deposited. A lake or slowly flowing stream will usually deposit silts and clays, while rapidly flowing water may leave stream beds composed almost entirely of boulders. Most outwash, however, is a mixture of material between these two extremes, and is composed of an assortment of sand and gravel with minor amounts of finer and coarser materials.

### Alluvium

Alluvium is the term used to describe material deposited by streams since the retreat of the glaciers. Made up of clay, silt, sand and gravel, the grain size of any particular deposit is governed by the same factors that determine grain size in glacial outwash. Alluvium occurs in the valleys of present-day streams and rivers, and where deposits consist primarily of sand and gravel, mining for materials may take place.

### Terrace Deposits

Terrace deposits are flat topped fluvial deposits that may or may not be of glacial origin. Being remnants of former flood plains, the streams that formed them have since cut their channels deeper and developed new flood plains at lower elevations.

### Eskers and Kames

Eskers and kames are glacial landforms that were deposited directly from stagnating, melting ice. Kames usually appear as mound-like hills or short ridges. Generally, they are formed in or on the ice by the filling of crevasses or basin-like depressions. Kame terraces are short, irregular ridges of gravel, sand and silt formed by streams held high on a valley wall by glacial ice. Eskers appear as long, narrow, sinuous ridges and are formed

by streams in, on or under the ice. All these landforms can offer good possibilities for aggregate pit development.

### **Bedrock**

Bedrock is the older, consolidated rock beneath the glacial deposits. In Minnehaha County, the bedrock consists of Sioux Quartzite, Corson Diabase, Split Rock Creek Formation, and near-shore, time equivalents of the Niobrara and Pierre Formations. Of these bedrock units, the Sioux Quartzite, Corson Diabase, and Split Rock Creek Formation crop out in Minnehaha County. Although the Split Rock Creek Formation is unsuitable, the Sioux Quartzite and Corson Diabase are both potential sources of aggregate. The Corson Diabase is very limited in areal extent, the Sioux Quartzite being far more extensive and therefore of greater economic interest. The Sioux Quartzite and the Corson Diabase are discussed later in the text. Generally when bedrock is found at the ground surface, no sand or gravel exists below that point.

### **EXPLANATION OF TABLES**

Table 1 is a compilation of test holes that encountered sand and/or gravel in the upper 25 feet. This table lists:

- a. location of the test hole,
- b. depth of sand and gravel deposits, and
- c. description of aggregate encountered.

The South Dakota Geological Survey (SDGS), U.S. Geological Survey, U.S. Bureau of Reclamation, U.S. Soil Conservation Service, South Dakota Department of Transportation, South Dakota Division of Water Rights, and private engineering and drilling companies contributed to the formation of this list. The complete set of drill-hole logs is on file at the South Dakota Geological Survey office in Vermillion.

Table 2 has been compiled from a list of gravel pits on file in Pierre with either the South Dakota Department of Transportation or the Office of Surface Mining, Department of Water and Natural Resources. The owner or operator, material type, and where possible, thickness of overburden and aggregate being mined, have been listed. The actual thickness of a deposit may be greater than that mined, because depth to the water table, changing material characteristics, or available mining equipment may limit excavation.

## EXPLANATION OF PLATE 1

Plate 1 shows the location of test holes, gravel pits (proposed, active and inactive) and a few landmarks. Test holes are represented by three types of symbols. A dot (●) indicates the presence of sand or gravel within 25 feet of the land surface with 5 feet or less of overburden. A square (■) indicates that sand or gravel was encountered within 25 feet of the land surface, but that more than 5 feet of overburden exists. The above test holes are numbered and listed in table 1. An open circle (○) indicates that no sand or gravel was found in the upper 25 feet.

Gravel pits and quartzite quarries are labelled with a crossed pick and shovel (⌘), those numbered are listed in table 2. Additional information concerning the numbered gravel pits is on file with the Department of Transportation or the Office of Surface Mining, Department of Water and Natural Resources, Pierre, South Dakota.

To help illustrate the most promising areas, the map has been divided into three area types, each expressing the probability of discovering new sources of sand or gravel. Those areas designated as "good" indicate a comparatively thick deposit with thin overburden and underlying large tracts of land. Those considered "fair" lack one or more of these favorable attributes. Areas designated as "good" or "fair" have been assigned a color as well as a letter, and are discussed later in the text.

Areas designated as poor are composed mainly of till but may contain random deposits of sand and gravel. Although some of these deposits may be very productive, they are generally limited and difficult to locate.

The above three classifications evolved through an extensive test hole drilling program, the study of gravel pits, topographic map and aerial photograph interpretations, and field observations.

### Sand and Gravel

Area A (designated "fair") is composed of stratified valley floor deposits situated around and associated with the drainage of Buffalo Lake. Deposits generally have less than 5 feet of overburden, but their total thickness rarely exceeds 10 feet. Most of the deposits are below or partially below the water table.

Area B (designated "good") represents over 40 square miles of aggregate deposits associated with the Skunk Creek valley. The deposits are valley train and terrace deposits, generally with less than 5 feet of overburden. Thickness of sand and gravel in some cases exceeds 50 feet. Rothrock (1926) states, "The deposits of Skunk Creek valley are largely medium to coarse gravels. In

the northern part there is a broad, shallow channel through the fill, which leaves the gravel in terraces along the sides of the valley, but in the lower 3 miles the gravels occupy the entire valley floor." In the upper reaches of West Branch Skunk Creek and around the Buffalo Ridge area, deposits can also be found in the form of ridge-like kame terraces. The abundance of gravel combined with the area's proximity to Sioux Falls has promoted the areas development. This has resulted in the greatest density of pits to be found in Minnehaha County.

Although deposits in some parts of area "C" (designated "fair") attain 30 feet in depth, aggregate is generally fine, and thickness of overburden varies considerably. Since these deposits are found along the valley floor of Colton Creek, high water table conditions will also affect development of this area.

Area "D" (designated "fair") deposits are similar to those found in the upper reaches of West Branch Skunk Creek. The deposits to the northwest of Grass Lake are ridge-like, ice-contact kame terrace deposits. Located to the south of Grass Lake is Rocky Ridge, a prominent "ice-crack" or disintegration ridge. This is another example of an aggregate-bearing, ice-contact landform. Sand and gravel pockets found in both areas are likely to be stratified but poorly sorted.

Area "E" (designated "fair") represents small, discontinuous sand and fine gravel deposits found along the valley floor of Long Creek. Overburden is less than 5 feet, and deposits are generally less than 10 feet thick. High water table levels may inhibit pit development.

Area "F" (designated "fair") is a small kame field. Pits have been in evidence since the 1920's and much of the more desirable material may already have been removed. In any remaining deposits, there is likely to be little or no overburden, but the material is also likely to be poorly sorted; i.e., very clayey and contain much "oversize" material.

Area "G" (designated "good") encompasses those deposits found in the present-day Big Sioux valley. Generally these deposits are finer than the Skunk Creek gravels (Rothrock, 1926), though there are exceptions to this statement. Valley-train deposits are found in the wide, flat bottomed, western limb of the Big Sioux Valley. These deposits are up to 20 feet thick and are generally covered by 5 feet of silty, alluvial overburden. The finer nature of these deposits, the overburden, and the high degree of saturation has resulted in less mining of this resource, in comparison to the Skunk Creek spillway.

The southern loop of the Big Sioux River represents a dramatic change in course brought about by a combination of ice damming to the south, and the near-surface occurrence of the Sioux Quartzite. There was very little deposition of sand and gravel in this narrow channel, and what terrace deposits there were have been



removed. Enormous quantities of sand and gravel are found as terrace and valley-wall deposits immediately northeast of the City of Sioux Falls. Although deposit thickness is up to 100 feet or more, this area is already heavily developed. The remainder of the Big Sioux valley affords smaller volumes of sand and gravel, though there are terrace deposits up to 40 feet thick near the City of Brandon, and valley-floor deposits over 50 feet thick in the vicinity of East Sioux Falls.

Area "H" (designated "fair") represents sand and gravel deposits within the Slip-up Creek valley. The upper reaches of Slip-up Creek valley contain only a few, discontinuous, valley floor sand deposits. Thicker and coarser material can be found in the lower 3 miles of the creek valley, though many of the more productive terraces have already been opened.

Area "I" (designated "fair") contains terrace deposits within West Pipestone Creek valley, north of the City of Corson, and along the lower portion of Split Rock Creek. Most of the sand found in these discontinuous terrace deposits have an overburden of more than 5 feet. Much of this area has bedrock directly underlying these sands.

Area "J" (designated "fair") represents deposits found on the higher interfluvial ridges running northwest-southeast. Some of these deposits appear to be kame deposits, such as "Twin Mounds" found in the southern part of section 2, T. 104 N., R. 48 W., and others appear to be dune-sand deposits, consisting primarily of fine to medium sand.

In the northern part of area "K" (designated "fair") valley-floor deposits can be found along Pipestone Creek. Overburden averages around 5 feet, and the material found seems to be predominantly a sand unit in the upper few feet underlain occasionally by a lower gravel unit. Most of these deposits are at or under the local water table. The southern part of this area is comprised of terrace deposits found in the vicinity of the City of Sherman. These generally sandy deposits are covered by 5 feet or less of overburden, are up to 20 feet thick, and directly overlie bedrock.

Area "L" (designated "fair") is a large kame field, running northeast-southwest in eastern Minnehaha County. These intermittent ice contact deposits probably represent slumping of supraglacial fluvial deposits onto underlying till. These positive features are hill-top deposits, usually with no overburden. Generally these deposits are poorly sorted and tend to be more sand than gravel.

Area "M" (designated "fair") contains valley-floor deposits along a small unnamed tributary of Beaver Creek. A high water table and overburden averaging over 5 feet thick will make development of these deposits difficult.

Area "N" (designated "fair") represents buried outwash deposits found within Beaver Creek valley. These deposits must be considered marginal due to the 15 to 20 feet of overburden.

Area "O" (designated "fair") contains valley-floor and terrace deposits within Beaver Creek and Four Mile Creek valleys. Although overburdens are generally less than 5 feet thick, most deposits are fine, with only a few scattered terraces offering coarser material.

The remainder of Minnehaha County has been mapped as "poor," though some areas will contain sand and/or gravel deposits. Due to the randomly scattered nature of such deposits, exploration efforts should first be concentrated in those areas marked "good" and "fair."

### Corson Diabase

The Corson Diabase is found in several localized areas as remnants of small sill-like bodies intruded into the Sioux Quartzite (fig. 1). It is a very dark, medium- to coarse-grained igneous rock, and has been described as an olivine diabase (Sklar, 1982). Historically the Corson Diabase has been used as building stone, though at the present time no use is being made of this resource.

### Sioux Quartzite

The Precambrian Sioux Quartzite is a metamorphosed pink sandstone that underlies most of Minnehaha County, and crops out in stream valleys and areas where the glacial drift has been eroded (fig. 1). Consisting of 97 to 99 percent silica, the majority of the formation is characterized by a pink orthoquartzite. Minor amounts of the formation are conglomeratic and a few beds are made up of a claystone or mudstone. An example of these claystone beds can be seen in Palisades State Park, near Garretson, South Dakota. The conglomerate beds are generally confined to the lower two-thirds of the formation (Southwick and others, 1986).

The Sioux Quartzite is broken into blocks by well-developed vertical and horizontal jointing. Three distinct directional trends in the vertical jointing of the rock has been noticed (Baldwin, 1949). The spacing of the joints in conjunction with the thickness of bedding is of prime importance when considering quarrying for a specific size of stone.

Because of the hardness, uniformity and attractive appearance, the Sioux Quartzite has lent itself well to many uses. Major present-day uses for the stone include concrete aggregate, railroad ballast, road construction, rip-rap for dams and river-bank stabilization, and production of ferro-silicon for the steel

industry. Minor and historical uses include gannister, abrasives, building stone, grinding pebbles and tube mill liners, monument stone, paving blocks, filter beds for sewage lagoons, poultry grit, foundry sand, and filler in certain building and cosmetic products.

Similar deposits to the Sioux Quartzite resting on and derived from complex terrains of older metamorphic and igneous rocks have been found to contain very significant deposits of gold and uranium (Southwick and others, 1986). To date, however, there have been no documented occurrences of economic or subeconomic mineralization in conjunction with the Sioux Quartzite.

#### **ECONOMIC CONSIDERATIONS**

It should be emphasized that this study is quite general and should be used only as a guide for further exploration and development. Some general geologic and economic factors to consider in selecting any quarry or gravel-pit site include site and quality of the outcrop, any jointing that may be present, overburden thickness, local water levels, development costs, transportation costs, future markets, and material specifications.

#### **SELECTED REFERENCES**

- Baldwin, W. B., 1949, A preliminary report on the Sioux Quartzite: South Dakota Geological Survey Report of Investigations 63, 34 p.
- Rothrock, E. P., 1926, Sand and gravel deposits of Minnehaha County: South Dakota Geological Survey Circular 26, 167 p.
- Sklar, P. J., 1982, Petrologic, petrographic and paleotectonic investigation of Precambrian mafic intrusives in eastern South Dakota: Unpublished Master's thesis, University of Iowa, Iowa City, Iowa, 98 p.
- Southwick, D. L., Morey, G. B., and Mossler, J. H., 1986, Fluvial origin of the lower Proterozoic Sioux Quartzite, southwestern Minnesota: Geological Society of America Bulletin, v. 97, p. 1432-1441, 7 figs.

**Figure 1. Map illustrating potential sources of bedrock aggregate in Minnehaha County.**

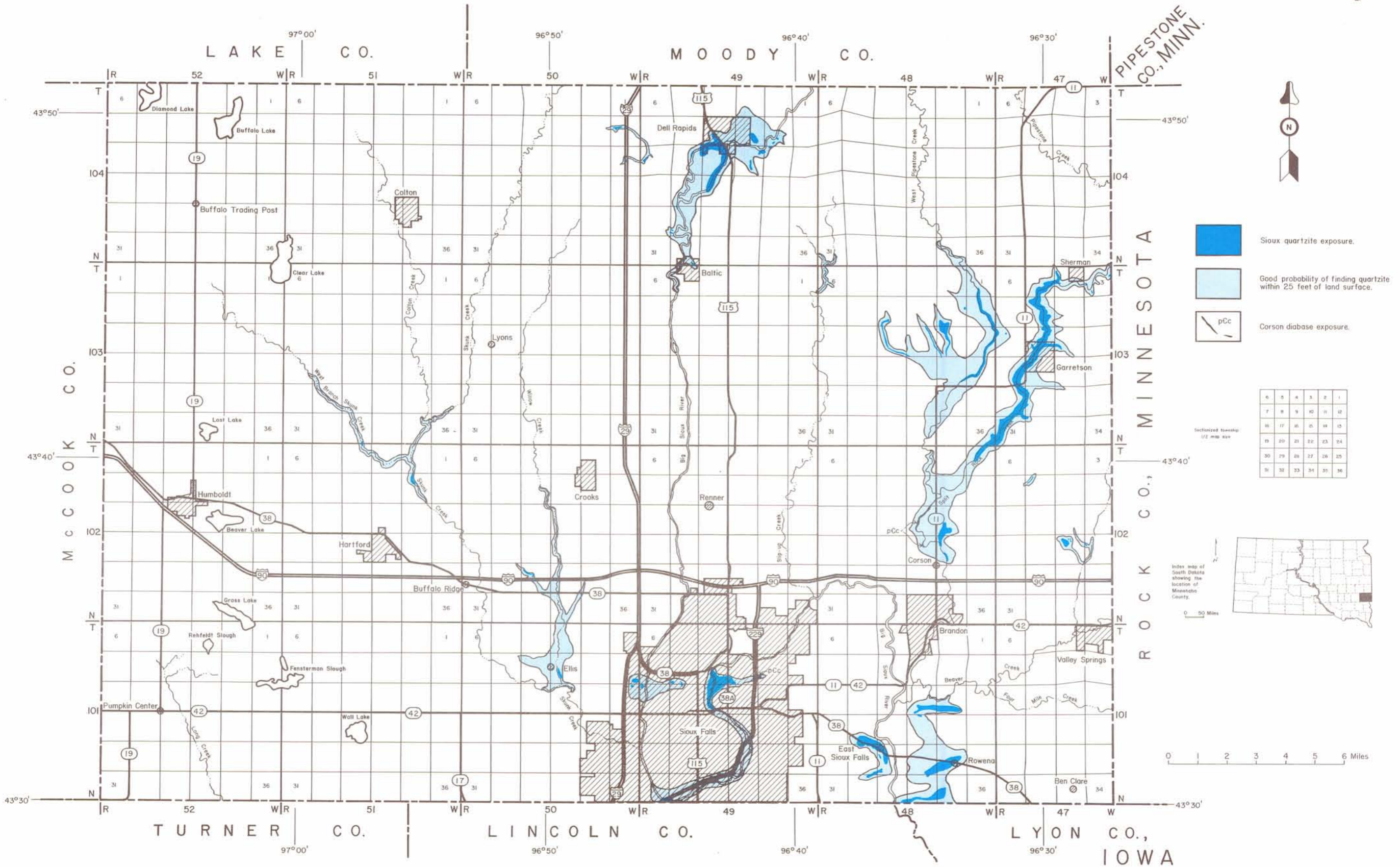


TABLE 1. LIST OF TEST HOLES IN MINNEHAHA COUNTY, SOUTH DAKOTA, WHICH CONTAIN SAND OR GRAVEL WITHIN 25 FEET OF THE LAND SURFACE.

LITHOLOGIC DESCRIPTIONS, AS LISTED, HAVE BEEN CONDENSED FROM DATA CONTAINED IN LOGS ON FILE AT THE SOUTH DAKOTA GEOLOGICAL SURVEY OFFICE, VERMILLION, SOUTH DAKOTA, AND CONTAIN ONLY INFORMATION WHICH HAS BEEN DEEMED MOST USEFUL FOR THIS STUDY. NUMERICAL VALUES INDICATE DEPTH IN FEET BELOW LAND SURFACE.

TEST HOLE NUMBER: 1  
 LOCATION: 101N-47W-04CBBB  
 LEGAL LOCATION: NW NW NW SW SEC. 04, T. 101 N., R. 47 W.

0	-	10.0	SAND, BROWN, FINE TO MEDIUM; OXIDIZED, DRY
10.0	-	12.0	GRAVEL, BROWN, COARSE; OXIDIZED, DRY

\* \* \* \*

TEST HOLE NUMBER: 2  
 LOCATION: 101N-47W-05BCCB  
 LEGAL LOCATION: NW SW SW NW SEC. 05, T. 101 N., R. 47 W.

15.0	-	21.0	SAND, TAN-BROWN, COARSE, VERY CLAYEY; OXIDIZED, MOIST
21.0	-	23.0	SAND, GRAY, COARSE, VERY CLAYEY; OXIDIZED, MOIST
23.0	-	25.0	GRAVEL, SANDY; OXIDIZED, SATURATED, LITTLE RETURN, BUT DRILLED LIKE VERY COARSE GRAVEL OR COBBLES

\* \* \* \*

TEST HOLE NUMBER: 3  
 LOCATION: 101N-47W-05CDCD  
 LEGAL LOCATION: SE SW SE SW SEC. 05, T. 101 N., R. 47 W.

2.0	-	15.0	SAND, FINE TO MEDIUM
15.0	-	19.0	SAND AND GRAVEL, FINE SAND TO MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 4  
 LOCATION: 101N-47W-06CBBB  
 LEGAL LOCATION: NW NW NW SW SEC. 06, T. 101 N., R. 47 W.

14.0	-	33.0	SAND, COARSE; WITH MEDIUM TO COARSE GRAVEL
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\* \* \* \*

TEST HOLE NUMBER: 5  
LOCATION: 101N-47W-07BBBB 1  
LEGAL LOCATION: NW NW NW NW SEC. 07, T. 101 N., R. 47 W.

20.0 - 23.0 SAND AND GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 6  
LOCATION: 101N-47W-08AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 08, T. 101 N., R. 47 W.

21.0 - 70.0 SAND, BROWN, MEDIUM TO COARSE; OXIDIZED,  
SOME FINE GRAVEL, BECOMES COARSER WITH  
DEPTH TO A VERY COARSE GRAVEL AND  
COBBLES, SOME SMALL CLAY LENSES, WITH  
SOMETHING VERY HARD AT 51 FEET

\* \* \* \*

TEST HOLE NUMBER: 7  
LOCATION: 101N-47W-08AAAA 2  
LEGAL LOCATION: NE NE NE NE SEC. 08, T. 101 N., R. 47 W.

21.0 - 70.0 SAND AND GRAVEL, BROWN, MEDIUM TO COARSE  
SAND, MEDIUM TO COARSE GRAVEL; COARSER  
WITH DEPTH

\* \* \* \*

TEST HOLE NUMBER: 8  
LOCATION: 101N-47W-08DDDD  
LEGAL LOCATION: SE SE SE SE SEC. 08, T. 101 N., R. 47 W.

18.0 - 30.0 SAND AND GRAVEL, BROWN, MEDIUM TO COARSE;  
OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 9  
LOCATION: 101N-47W-15BCCC  
LEGAL LOCATION: SW SW SW NW SEC. 15, T. 101 N., R. 47 W.

0 - 6.0 SAND, REDDISH-BROWN, FINE TO COARSE,  
SLIGHTLY PEBBLY; OXIDIZED, DRY  
6.0 - 9.0 SAND, BROWN, FINE TO COARSE; OXIDIZED,  
MOIST  
9.0 - 12.0 SAND, BROWN, FINE TO COARSE; OXIDIZED,  
SATURATED  
12.0 - 14.0 GRAVEL; NO RETURN, DRILLED LIKE COBBLES,  
HIT LARGE ROCK, BROKE BIT, ABANDONED  
HOLE

\* \* \* \*

TEST HOLE NUMBER: 10  
LOCATION: 101N-47W-15CBCC  
LEGAL LOCATION: SW SW NW SW SEC. 15, T. 101 N., R. 47 W.

3.0 - 6.0 SAND, DARK-BROWN, GRAVELLY, SILTY; MOIST  
TO DRY, OXIDIZED  
6.0 - 22.0 SAND, LIGHT-BROWN, FINE TO COARSE,  
SLIGHTLY CLAYEY; SATURATED, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 11  
LOCATION: 101N-47W-15DDAD  
LEGAL LOCATION: SE NE SE SE SEC. 15, T. 101 N., R. 47 W.

8.0 - 25.0 SAND, LIGHT-BROWN, VERY FINE, CLAYEY,  
SILTY; SATURATED, OXIDIZED (TILL)

\* \* \* \*

TEST HOLE NUMBER: 12  
LOCATION: 101N-47W-15DDDD  
LEGAL LOCATION: SE SE SE SE SEC. 15, T. 101 N., R. 47 W.

2.0 - 5.0 SAND, BROWN, FINE TO MEDIUM, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 13  
LOCATION: 101N-47W-16AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 16, T. 101 N., R. 47 W.

0 - 5.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 14  
LOCATION: 101N-47W-17ADDA  
LEGAL LOCATION: NE SE SE NE SEC. 17, T. 101 N., R. 47 W.

6.0 - 30.0 SAND, BROWN, FINE TO COARSE, SILTY;  
SATURATED, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 15  
LOCATION: 101N-47W-17DAAD  
LEGAL LOCATION: SE NE NE SE SEC. 17, T. 101 N., R. 47 W.

1.0 - 5.0 SAND, BROWN, FINE TO MEDIUM, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 16

LOCATION: 101N-47W-18ABBA

LEGAL LOCATION: NE NW NW NE SEC. 18, T. 101 N., R. 47 W.

0	-	4.0	SAND, BROWN, MEDIUM
12.0	-	17.0	SAND AND GRAVEL, COARSE, COBBLY

\* \* \* \*

TEST HOLE NUMBER: 17

LOCATION: 101N-47W-18DADD

LEGAL LOCATION: SE SE NE SE SEC. 18, T. 101 N., R. 47 W.

2.0	-	20.0	SAND, RUSTY-BROWN, FINE TO COARSE, SILTY; SATURATED, OXIDIZED
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\* \* \* \*

TEST HOLE NUMBER: 18

LOCATION: 101N-47W-18DDAA

LEGAL LOCATION: NE NE SE SE SEC. 18, T. 101 N., R. 47 W.

1.0	-	12.0	GRAVEL, BROWN, MEDIUM TO COARSE
12.0	-	22.0	SAND, GRAY, FINE TO MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 19

LOCATION: 101N-47W-34BBBB

LEGAL LOCATION: NW NW NW NW SEC. 34, T. 101 N., R. 47 W.

20.0	-	26.0	GRAVEL, COARSE; OXIDIZED, DRILLS FAST
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\* \* \* \*

TEST HOLE NUMBER: 20

LOCATION: 101N-48W-01CCCD

LEGAL LOCATION: SE SW SW SW SEC. 01, T. 101 N., R. 48 W.

0	-	4.0	SAND, BROWN, MEDIUM, SILTY, CLAYEY; OXIDIZED
22.0	-	54.0	SAND, REDDISH-BROWN, COARSE; SOME FINE TO COARSE GRAVEL, WHITISH-BROWN CLAY FROM 48 TO 51 FEET, VERY GRAVELLY BELOW 51 FEET

\* \* \* \*

TEST HOLE NUMBER: 21

LOCATION: 101N-48W-01CCCD 2

LEGAL LOCATION: SE SW SW SW SEC. 01, T. 101 N., R. 48 W.

24.0	-	52.0	SAND AND GRAVEL; SOME CLAY
------	---	------	----------------------------

\* \* \* \*



TEST HOLE NUMBER: 22  
LOCATION: 101N-48W-02BCCB  
LEGAL LOCATION: NW SW SW NW SEC. 02, T. 101 N., R. 48 W.

3.0 - 15.0 SAND, BROWN, MEDIUM; OXIDIZED  
15.0 - 38.0 SAND, BROWN, MEDIUM TO COARSE; OXIDIZED,  
SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 23  
LOCATION: 101N-48W-02CCCC  
LEGAL LOCATION: SW SW SW SW SEC. 02, T. 101 N., R. 48 W.

0 - 16.0 GRAVEL, REDDISH-BROWN, MEDIUM, SANDY,  
WELL-SORTED; ROUNDED, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 24  
LOCATION: 101N-48W-02CCCC 1  
LEGAL LOCATION: SW SW SW SW SEC. 02, T. 101 N., R. 48 W.

1.0 - 16.0 SAND, MEDIUM; SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 25  
LOCATION: 101N-48W-03AABA  
LEGAL LOCATION: NE NW NE NE SEC. 03, T. 101 N., R. 48 W.

0 - 17.0 SAND, MEDIUM TO COARSE; SOME GRAVEL  
20.0 - 23.0 SAND, GRAY; SATURATED  
25.0 - 30.0 SAND, GRAY

\* \* \* \*

TEST HOLE NUMBER: 26  
LOCATION: 101N-48W-03AABA 2  
LEGAL LOCATION: NE NW NE NE SEC. 03, T. 101 N., R. 48 W.

0 - 15.0 SAND AND GRAVEL, BROWN, COARSE SAND, FINE  
TO MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 27  
LOCATION: 101N-48W-03AABA 3  
LEGAL LOCATION: NE NW NE NE SEC. 03, T. 101 N., R. 48 W.

0 - 16.0 SAND AND GRAVEL, BROWN, FINE TO MEDIUM  
GRAVEL, COARSE SAND; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 28  
LOCATION: 101N-48W-03CBBC  
LEGAL LOCATION: SW NW NW SW SEC. 03, T. 101 N., R. 48 W.  
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\* THIS LOG CONTAINS UNVERIFIED INFORMATION \*  
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8.0 - 43.0 SAND

\* \* \* \*

TEST HOLE NUMBER: 29  
LOCATION: 101N-48W-04AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 04, T. 101 N., R. 48 W.

0 - 22.0 SAND AND GRAVEL, BROWN, COARSE SAND TO  
MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 30  
LOCATION: 101N-48W-04CDDC  
LEGAL LOCATION: SW SE SE SW SEC. 04, T. 101 N., R. 48 W.

10.0 - 22.0 GRAVEL, MEDIUM TO COARSE  
22.0 - 26.0 SAND, MEDIUM TO COARSE; COMPOSED MAINLY  
OF QUARTZ AND SOME GREEN MINERAL

\* \* \* \*

TEST HOLE NUMBER: 31  
LOCATION: 101N-48W-04DCCB  
LEGAL LOCATION: NW SW SW SE SEC. 04, T. 101 N., R. 48 W.

3.0 - 14.0 SAND, MEDIUM TO COARSE; WITH GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 32  
LOCATION: 101N-48W-04DDDD  
LEGAL LOCATION: SE SE SE SE SEC. 04, T. 101 N., R. 48 W.

2.0 - 10.0 GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 33  
LOCATION: 101N-48W-05CCCC  
LEGAL LOCATION: SW SW SW SW SEC. 05, T. 101 N., R. 48 W.

16.0 - 24.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 34  
LOCATION: 101N-48W-09ABAB  
LEGAL LOCATION: NW NE NW NE SEC. 09, T. 101 N., R. 48 W.

0	-	5.0	SAND AND GRAVEL, MEDIUM SAND TO COARSE GRAVEL; WITH SOME CLAY
5.0	-	16.0	SAND AND GRAVEL, MEDIUM SAND TO COARSE GRAVEL
22.0	-	25.0	SAND, MEDIUM TO COARSE; COMPOSED MAINLY OF QUARTZ AND SOME GREEN MINERAL

\* \* \* \*

TEST HOLE NUMBER: 35  
LOCATION: 101N-48W-09ADDD  
LEGAL LOCATION: SE SE SE NE SEC. 09, T. 101 N., R. 48 W.

8.0	-	22.0	SAND
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\* \* \* \*

TEST HOLE NUMBER: 36  
LOCATION: 101N-48W-09ADDD 2  
LEGAL LOCATION: SE SE SE NE SEC. 09, T. 101 N., R. 48 W.

7.0	-	21.0	GRAVEL, BROWN, FINE TO MEDIUM, VERY SANDY; OXIDIZED
24.0	-	27.0	SAND, BROWN, MEDIUM, GRAVELLY; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 37  
LOCATION: 101N-48W-09ADDD 3  
LEGAL LOCATION: SE SE SE NE SEC. 09, T. 101 N., R. 48 W.

7.0	-	21.0	GRAVEL, BROWN, FINE TO MEDIUM, VERY SANDY; OXIDIZED
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\* \* \* \*

TEST HOLE NUMBER: 38  
LOCATION: 101N-48W-10CDDC  
LEGAL LOCATION: SW SE SE SW SEC. 10, T. 101 N., R. 48 W.

8.0	-	19.0	SAND AND GRAVEL, MEDIUM TO COARSE; SOME ROCKS
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\* \* \* \*

TEST HOLE NUMBER: 39  
LOCATION: 101N-48W-11CCCC  
LEGAL LOCATION: SW SW SW SW SEC. 11, T. 101 N., R. 48 W.

1.0	-	21.0	SAND, MEDIUM TO COARSE
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\* \* \* \*

TEST HOLE NUMBER: 40  
LOCATION: 101N-48W-11DAAA  
LEGAL LOCATION: NE NE NE SE SEC. 11, T. 101 N., R. 48 W.

1.0 - 4.0 SAND, REDDISH-BROWN, FINE; OXIDIZED, DRY,  
CLEAN  
13.0 - 17.0 SAND AND GRAVEL, REDDISH-BROWN, MEDIUM TO  
COARSE SAND, MEDIUM GRAVEL; OXIDIZED,  
MOIST

\* \* \* \*

TEST HOLE NUMBER: 41  
LOCATION: 101N-48W-11DDDA  
LEGAL LOCATION: NE SE SE SE SEC. 11, T. 101 N., R. 48 W.

13.0 - 17.0 SAND AND GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 42  
LOCATION: 101N-48W-11DDDD  
LEGAL LOCATION: SE SE SE SE SEC. 11, T. 101 N., R. 48 W.

5.0 - 15.0 SAND AND GRAVEL, MEDIUM SAND TO COARSE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 43  
LOCATION: 101N-48W-12ABBB  
LEGAL LOCATION: NW NW NW NE SEC. 12, T. 101 N., R. 48 W.

8.0 - 30.0 SAND AND GRAVEL, MEDIUM SAND TO COARSE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 44  
LOCATION: 101N-48W-12DADD  
LEGAL LOCATION: SE SE NE SE SEC. 12, T. 101 N., R. 48 W.

18.0 - 37.0 SAND AND GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 45  
LOCATION: 101N-48W-13AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 13, T. 101 N., R. 48 W.

0 - 18.0 SAND, BROWN, MEDIUM, SILTY; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 46  
LOCATION: 101N-48W-13BAAB  
LEGAL LOCATION: NW NE NE NW SEC. 13, T. 101 N., R. 48 W.

0 - 20.0 SAND, LIGHT-BROWN, FINE TO MEDIUM, SILTY;  
SATURATED, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 47  
LOCATION: 101N-48W-14AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 14, T. 101 N., R. 48 W.

0 - 7.0 SAND, MEDIUM; WITH COARSE GRAVEL  
7.0 - 9.0 GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 48  
LOCATION: 101N-48W-15ABBB  
LEGAL LOCATION: NW NW NW NE SEC. 15, T. 101 N., R. 48 W.

1.0 - 16.0 SAND AND GRAVEL, FINE SAND TO FINE  
GRAVEL, SILTY; WELL-ROUNDED

\* \* \* \*

TEST HOLE NUMBER: 49  
LOCATION: 101N-48W-15BBBA  
LEGAL LOCATION: NE NW NW NW SEC. 15, T. 101 N., R. 48 W.

13.0 - 20.0 SAND AND GRAVEL, MEDIUM TO COARSE  
20.0 - 24.0 SAND AND GRAVEL, GRAY, MEDIUM TO COARSE;  
SOME CLAY, SOME ROCKS

\* \* \* \*

TEST HOLE NUMBER: 50  
LOCATION: 101N-48W-15BBBB  
LEGAL LOCATION: NW NW NW NW SEC. 15, T. 101 N., R. 48 W.

9.0 - 19.0 SAND AND GRAVEL, UNSORTED

\* \* \* \*

TEST HOLE NUMBER: 51  
LOCATION: 101N-48W-16AABA  
LEGAL LOCATION: NE NW NE NE SEC. 16, T. 101 N., R. 48 W.

7.0 - 15.0 SAND

\* \* \* \*

TEST HOLE NUMBER: 52  
LOCATION: 101N-48W-16ADDA  
LEGAL LOCATION: NE SE SE NE SEC. 16, T. 101 N., R. 48 W.

16.0 - 21.0 SAND, COARSE; SAMPLE TAKEN  
21.0 - 29.0 GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 53  
LOCATION: 101N-48W-21AABB  
LEGAL LOCATION: NW NW NE NE SEC. 21, T. 101 N., R. 48 W.

1.0 - 17.0 SAND, FINE TO MEDIUM  
17.0 - 23.0 SAND AND GRAVEL  
24.0 - 42.0 SAND AND GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 54  
LOCATION: 101N-48W-21DAAA  
LEGAL LOCATION: NE NE NE SE SEC. 21, T. 101 N., R. 48 W.

2.0 - 8.0 SAND, BROWN, FINE TO MEDIUM; OXIDIZED,  
MOIST AT 6 FEET  
8.0 - 32.0 SAND AND GRAVEL, BROWN, FINE TO MEDIUM  
SAND, MEDIUM TO COARSE GRAVEL; MOIST,  
OXIDIZED, HIT QUARTZITE AT 32 FEET

\* \* \* \*

TEST HOLE NUMBER: 55  
LOCATION: 101N-48W-21DCCD 1  
LEGAL LOCATION: SE SW SW SE SEC. 21, T. 101 N., R. 48 W.

0 - 12.0 SAND AND GRAVEL, FINE SAND TO COARSE  
GRAVEL  
19.0 - 77.0 SAND AND GRAVEL, FINE SAND TO COARSE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 56  
LOCATION: 101N-48W-21DCCD 2  
LEGAL LOCATION: SE SW SW SE SEC. 21, T. 101 N., R. 48 W.

0 - 90.0 SAND AND GRAVEL, FINE SAND TO COARSE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 57  
LOCATION: 101N-48W-21DCDC  
LEGAL LOCATION: SW SE SW SE SEC. 21, T. 101 N., R. 48 W.

1.0 - 8.0 SAND, BROWN, MEDIUM TO COARSE; OXIDIZED  
8.0 - 78.0 SAND AND GRAVEL, BROWN, MEDIUM TO COARSE  
SAND, MEDIUM TO VERY COARSE GRAVEL;  
OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 58  
LOCATION: 101N-48W-21DDDD  
LEGAL LOCATION: SE SE SE SE SEC. 21, T. 101 N., R. 48 W.

15.0 - 26.0 SAND AND GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 59  
LOCATION: 101N-48W-22BBBA  
LEGAL LOCATION: NE NW NW NW SEC. 22, T. 101 N., R. 48 W.

2.0 - 14.0 SAND, REDDISH-BROWN, FINE TO MEDIUM;  
OXIDIZED, DRY, HIT QUARTZITE(?)

\* \* \* \*

TEST HOLE NUMBER: 60  
LOCATION: 101N-48W-22BBBA 1  
LEGAL LOCATION: NE NW NW NW SEC. 22, T. 101 N., R. 48 W.

2.0 - 14.0 SAND, REDDISH-BROWN, FINE TO MEDIUM;  
OXIDIZED, DRY, HIT QUARTZITE AT 14  
FEET

\* \* \* \*

TEST HOLE NUMBER: 61  
LOCATION: 101N-48W-22DDDD 1  
LEGAL LOCATION: SE SE SE SE SEC. 22, T. 101 N., R. 48 W.

1.0 - 12.0 SAND AND GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 62  
LOCATION: 101N-48W-26CCCD  
LEGAL LOCATION: SE SW SW SW SEC. 26, T. 101 N., R. 48 W.

0 - 22.0 SAND, BROWN, FINE TO MEDIUM; OXIDIZED,  
MOIST AT 10 FEET  
22.0 - 25.0 GRAVEL, BROWN, COARSE; OXIDIZED, MOIST,  
HIT QUARTZITE AT 25 FEET

\* \* \* \*

TEST HOLE NUMBER: 63

LOCATION: 101N-48W-27BABB

LEGAL LOCATION: NW NW NE NW SEC. 27, T. 101 N., R. 48 W.

3.0 - 30.0 SAND AND GRAVEL, MEDIUM SAND TO COARSE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 64

LOCATION: 101N-48W-27BBAB

LEGAL LOCATION: NW NE NW NW SEC. 27, T. 101 N., R. 48 W.

2.0 - 14.0 SAND, BROWN, MEDIUM TO COARSE; OXIDIZED  
14.0 - 21.0 GRAVEL, BROWN, MEDIUM, SANDY; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 65

LOCATION: 101N-48W-27CBCC

LEGAL LOCATION: SW SW NW SW SEC. 27, T. 101 N., R. 48 W.

7.0 - 22.0 SAND AND GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 66

LOCATION: 101N-48W-27CCCC

LEGAL LOCATION: SW SW SW SW SEC. 27, T. 101 N., R. 48 W.

0 - 10.0 SAND, BROWN, FINE TO MEDIUM; OXIDIZED,  
DRY, HIT QUARTZITE AT 10 FEET

\* \* \* \*

TEST HOLE NUMBER: 67

LOCATION: 101N-48W-27DCDC

LEGAL LOCATION: SW SE SW SE SEC. 27, T. 101 N., R. 48 W.

2.0 - 17.0 SAND, REDDISH-BROWN, MEDIUM; OXIDIZED,  
DRY, SATURATED BELOW 12 FEET, HIT  
QUARTZITE AT 17 FEET

\* \* \* \*

TEST HOLE NUMBER: 68

LOCATION: 101N-48W-28ADAD

LEGAL LOCATION: SE NE SE NE SEC. 28, T. 101 N., R. 48 W.

1.0 - 49.0 SAND AND GRAVEL, MEDIUM SAND TO MEDIUM  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 69



LOCATION: 101N-48W-28ADBD 1

LEGAL LOCATION: SE NW SE NE SEC. 28, T. 101 N., R. 48 W.

1.0 - 7.0 GRAVEL, MEDIUM  
7.0 - 27.0 SAND, PEBBLY

\* \* \* \*

TEST HOLE NUMBER: 70

LOCATION: 101N-48W-28ADBD 2

LEGAL LOCATION: SE NW SE NE SEC. 28, T. 101 N., R. 48 W.

3.0 - 18.0 SAND, BROWN, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 71

LOCATION: 101N-48W-28BAAA

LEGAL LOCATION: NE NE NE NW SEC. 28, T. 101 N., R. 48 W.

10.0 - 19.0 SAND AND GRAVEL, MEDIUM SAND TO COARSE  
GRAVEL; WITH SOME CLAY  
19.0 - 21.0 GRAVEL, VERY COARSE; WITH COBBLES  
21.0 - 30.0 SAND AND GRAVEL, COARSE SAND TO COARSE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 72

LOCATION: 101N-48W-28BAAC

LEGAL LOCATION: SW NE NE NW SEC. 28, T. 101 N., R. 48 W.

3.0 - 7.0 SAND

\* \* \* \*

TEST HOLE NUMBER: 73

LOCATION: 101N-48W-28BDAD

LEGAL LOCATION: SE NE SE NW SEC. 28, T. 101 N., R. 48 W.

2.0 - 7.0 SAND AND GRAVEL, FINE SAND TO FINE  
GRAVEL, WELL ROUNDED

\* \* \* \*

TEST HOLE NUMBER: 74

LOCATION: 101N-48W-28CDDD

LEGAL LOCATION: SE SE SE SW SEC. 28, T. 101 N., R. 48 W.

11.0 - 19.0 GRAVEL, CLAYEY; QUARTZITE AT 19 FEET

\* \* \* \*

TEST HOLE NUMBER: 75

LOCATION: 101N-48W-34BCDA

LEGAL LOCATION: NE SE SW NW SEC. 34, T. 101 N., R. 48 W.

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\* THIS LOG CONTAINS UNVERIFIED INFORMATION \*

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18.0 - 24.0 SAND

\* \* \* \*

TEST HOLE NUMBER: 76

LOCATION: 101N-48W-34CBBB

LEGAL LOCATION: NW NW NW SW SEC. 34, T. 101 N., R. 48 W.

0 - 8.0 SAND

\* \* \* \*

TEST HOLE NUMBER: 77

LOCATION: 101N-49W-02AAAA

LEGAL LOCATION: NE NE NE NE SEC. 02, T. 101 N., R. 49 W.

3.0 - 35.0 SAND, MEDIUM TO COARSE; SOME MEDIUM  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 78

LOCATION: 101N-49W-02BDDD

LEGAL LOCATION: SE SE SE NW SEC. 02, T. 101 N., R. 49 W.

4.0 - 48.0 SAND, MEDIUM TO COARSE; SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 79

LOCATION: 101N-49W-02BDDD 2

LEGAL LOCATION: SE SE SE NW SEC. 02, T. 101 N., R. 49 W.

5.0 - 43.0 SAND, BROWN TO DARK-BROWN, MEDIUM TO  
COARSE; SOME FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 80

LOCATION: 101N-49W-02BDDD 3

LEGAL LOCATION: SE SE SE NW SEC. 02, T. 101 N., R. 49 W.

2.0 - 46.0 SAND, BROWN, COARSE; SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 81

LOCATION: 101N-49W-02CDBB

LEGAL LOCATION: NW NW SE SW SEC. 02, T. 101 N., R. 49 W.

23.0 - 25.0 SAND AND GRAVEL, FINE SAND TO MEDIUM  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 82

LOCATION: 101N-49W-04ADDD

LEGAL LOCATION: SE SE SE NE SEC. 04, T. 101 N., R. 49 W.

12.0 - 22.0 SAND, FINE; DRY, WITH PEBBLY YELLOW CLAY  
22.0 - 27.0 SAND, FINE; SOME CLAY

\* \* \* \*

TEST HOLE NUMBER: 83

LOCATION: 101N-49W-04BA

LEGAL LOCATION: NE NW SEC. 04, T. 101 N., R. 49 W.

10.0 - 12.0 SAND AND GRAVEL  
12.0 - 21.0 GRAVEL, COARSE  
21.0 - 25.0 GRAVEL, SANDY  
25.0 - 31.0 GRAVEL, COARSE; WITH QUARTZITE PEBBLES

\* \* \* \*

TEST HOLE NUMBER: 84

LOCATION: 101N-49W-04BDBB

LEGAL LOCATION: NW NW SE NW SEC. 04, T. 101 N., R. 49 W.

7.0 - 28.0 SAND AND GRAVEL, VERY COARSE SAND, MEDIUM  
GRAVEL; LAMINATED

\* \* \* \*

TEST HOLE NUMBER: 85

LOCATION: 101N-49W-04CBAA

LEGAL LOCATION: NE NE NW SW SEC. 04, T. 101 N., R. 49 W.

5.0 - 11.0 SAND, BROWN, FINE TO MEDIUM  
11.0 - 46.0 SAND AND GRAVEL, BROWN, MEDIUM TO COARSE  
SAND, FINE TO COARSE GRAVEL; SATURATED,  
CLEAN

\* \* \* \*

TEST HOLE NUMBER: 86

LOCATION: 101N-49W-04CDDD

LEGAL LOCATION: SE SE SE SW SEC. 04, T. 101 N., R. 49 W.

5.0 - 15.0 SAND, REDDISH-BROWN, MEDIUM; OXIDIZED  
15.0 - 25.0 SAND, VERY FINE TO COARSE  
25.0 - 30.0 SAND, FINE TO VERY COARSE; WITH VERY

FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 87  
LOCATION: 101N-49W-04DBBB  
LEGAL LOCATION: NW NW NW SE SEC. 04, T. 101 N., R. 49 W.

5.0 - 14.0 SAND, MEDIUM TO COARSE; WITH SOME GRAVEL  
14.0 - 42.0 SAND, GRAY, COARSE; TO COARSE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 88  
LOCATION: 101N-49W-05ADDD  
LEGAL LOCATION: SE SE SE NE SEC. 05, T. 101 N., R. 49 W.

2.0 - 14.0 SAND, FINE  
14.0 - 40.0 SAND AND GRAVEL, COARSE SAND TO COARSE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 89  
LOCATION: 101N-49W-05BBBD  
LEGAL LOCATION: SE NW NW NW SEC. 05, T. 101 N., R. 49 W.

6.0 - 7.0 SAND, BROWN, SILTY  
7.0 - 12.0 GRAVEL, FINE; CLEAN  
12.0 - 20.0 GRAVEL, MEDIUM; CLEAN  
20.0 - 25.0 SAND, COARSE; CLEAN  
25.0 - 35.0 SAND AND GRAVEL, COARSE SAND, MEDIUM  
GRAVEL; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 90  
LOCATION: 101N-49W-05CAAD  
LEGAL LOCATION: SE NE NE SW SEC. 05, T. 101 N., R. 49 W.

1.0 - 7.0 SAND, MEDIUM TO COARSE  
13.0 - 44.0 SAND AND GRAVEL, COARSE SAND TO COARSE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 91  
LOCATION: 101N-49W-06AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 06, T. 101 N., R. 49 W.

6.0 - 14.0 SAND, BROWN, FINE TO MEDIUM  
14.0 - 32.0 SAND AND GRAVEL, FINE TO COARSE SAND,  
FINE TO MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 92  
LOCATION: 101N-49W-06AADD  
LEGAL LOCATION: SE SE NE NE SEC. 06, T. 101 N., R. 49 W.

6.0 -	12.0	SAND AND GRAVEL, REDDISH
12.0 -	16.0	SAND AND GRAVEL
16.0 -	17.5	SAND, FINE, SILTY
17.5 -	38.0	SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 93  
LOCATION: 101N-49W-06ABA  
LEGAL LOCATION: NE NW NE SEC. 06, T. 101 N., R. 49 W.

8.0 -	14.0	SAND, MEDIUM
14.0 -	26.0	SAND AND GRAVEL, COARSE SAND TO COARSE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 94  
LOCATION: 101N-49W-06ABAB  
LEGAL LOCATION: NW NE NW NE SEC. 06, T. 101 N., R. 49 W.

6.0 -	16.0	GRAVEL; DIRTY
16.0 -	29.0	GRAVEL, COARSE; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 95  
LOCATION: 101N-49W-06ADCC  
LEGAL LOCATION: SW SW SE NE SEC. 06, T. 101 N., R. 49 W.

7.0 -	48.0	SAND AND GRAVEL, MEDIUM SAND GRADING TO A COARSE GRAVEL
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\* \* \* \*

TEST HOLE NUMBER: 96  
LOCATION: 101N-49W-06CDCC  
LEGAL LOCATION: SW SW SE SW SEC. 06, T. 101 N., R. 49 W.

9.0 -	14.0	SAND, MEDIUM
14.0 -	28.0	SAND AND GRAVEL, COARSE SAND TO COARSE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 97  
LOCATION: 101N-49W-06DBCA  
LEGAL LOCATION: NE SW NW SE SEC. 06, T. 101 N., R. 49 W.

1.0 - 10.0 SAND AND GRAVEL, MEDIUM TO COARSE SAND,  
COARSE GRAVEL  
10.0 - 18.0 GRAVEL, COARSE  
18.0 - 36.0 SAND, MEDIUM TO VERY COARSE; WITH SOME  
COARSE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 98  
LOCATION: 101N-49W-06DC 1  
LEGAL LOCATION: SW SE SEC. 06, T. 101 N., R. 49 W.

3.0 - 6.0 GRAVEL, COARSE  
6.0 - 10.0 SAND, BROWN, MEDIUM, SILTY; DRY  
10.0 - 36.0 SAND AND GRAVEL, MEDIUM BROWN SAND TO  
FINE GRAVEL; SATURATED

\* \* \* \*

TEST HOLE NUMBER: 99  
LOCATION: 101N-49W-06DC 3  
LEGAL LOCATION: SW SE SEC. 06, T. 101 N., R. 49 W.

6.0 - 9.0 GRAVEL, BROWN, COARSE, SILTY; DRY  
9.0 - 12.0 SAND, BROWN, MEDIUM; DRY  
12.0 - 37.0 SAND AND GRAVEL, MEDIUM-BROWN, MOIST  
SAND TO MEDIUM GRAVEL; SATURATED

\* \* \* \*

TEST HOLE NUMBER: 100  
LOCATION: 101N-49W-06DC 4  
LEGAL LOCATION: SW SE SEC. 06, T. 101 N., R. 49 W.

6.0 - 9.0 GRAVEL, BROWN, COARSE; DRY  
9.0 - 12.0 SAND, BROWN, MEDIUM; DRY  
12.0 - 23.0 SAND AND GRAVEL, MEDIUM-BROWN SAND TO  
FINE GRAVEL; SATURATED

\* \* \* \*

TEST HOLE NUMBER: 101  
LOCATION: 101N-49W-07AB 1  
LEGAL LOCATION: NW NE SEC. 07, T. 101 N., R. 49 W.

5.0 - 48.0 SAND AND GRAVEL, FINE SAND AND COARSE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 102  
LOCATION: 101N-49W-07AB 2  
LEGAL LOCATION: NW NE SEC. 07, T. 101 N., R. 49 W.

4.0 - 9.0 SAND, BROWN, CLAYEY, SILTY; DRY  
9.0 - 12.0 SAND, DARK-BROWN, MEDIUM, GRAVELLY,  
SILTY; MOIST  
12.0 - 14.0 GRAVEL, BROWN, FINE; SATURATED  
14.0 - 23.0 GRAVEL, GRAY-BROWN, MEDIUM; SATURATED

\* \* \* \*

TEST HOLE NUMBER: 103  
LOCATION: 101N-49W-07AC 1  
LEGAL LOCATION: SW NE SEC. 07, T. 101 N., R. 49 W.

14.0 - 45.0 SAND AND GRAVEL, FINE SAND TO COARSE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 104  
LOCATION: 101N-49W-07BA 1  
LEGAL LOCATION: NE NW SEC. 07, T. 101 N., R. 49 W.

6.0 - 33.0 SAND, COARSE

\* \* \* \*

TEST HOLE NUMBER: 105  
LOCATION: 101N-49W-07BA 2  
LEGAL LOCATION: NE NW SEC. 07, T. 101 N., R. 49 W.

10.0 - 15.0 SAND, BROWN, MEDIUM; DRY  
15.0 - 28.0 SAND, BROWN, MEDIUM, SILTY, PEBBLY;  
SATURATED

\* \* \* \*

TEST HOLE NUMBER: 106  
LOCATION: 101N-49W-07BAAB  
LEGAL LOCATION: NW NE NE NW SEC. 07, T. 101 N., R. 49 W.

17.0 - 38.0 SAND, VERY COARSE, GRAVELLY; CLAY LENSE  
AT 32 FEET, COARSE GRAVEL AT 37 FEET

\* \* \* \*

TEST HOLE NUMBER: 107  
LOCATION: 101N-49W-07BD 1  
LEGAL LOCATION: SE NW SEC. 07, T. 101 N., R. 49 W.

5.0 - 39.0 GRAVEL, MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 108  
LOCATION: 101N-49W-07BD 2

LEGAL LOCATION: SE NW SEC. 07, T. 101 N., R. 49 W.

4.0 -	9.0	SAND, FINE TO MEDIUM, PEBBLY; DRY
9.0 -	11.0	SAND, GRAY-BLACK, SILTY, CLAYEY; MOIST
11.0 -	23.0	SAND, GRAY-BLACK, SILTY, CLAYEY; SATURATED

\* \* \* \*

TEST HOLE NUMBER: 109

LOCATION: 101N-49W-07BD 3

LEGAL LOCATION: SE NW SEC. 07, T. 101 N., R. 49 W.

16.0 -	40.0	SAND AND GRAVEL, FINE SAND AND MEDIUM GRAVEL
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\* \* \* \*

TEST HOLE NUMBER: 110

LOCATION: 101N-49W-07BD 4

LEGAL LOCATION: SE NW SEC. 07, T. 101 N., R. 49 W.

0 -	16.0	GRAVEL, SILTY
16.0 -	40.0	SAND AND GRAVEL, MEDIUM SAND AND MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 111

LOCATION: 101N-49W-07BD 5

LEGAL LOCATION: SE NW SEC. 07, T. 101 N., R. 49 W.

8.0 -	28.0	SAND AND GRAVEL, FINE SAND TO MEDIUM GRAVEL
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\* \* \* \*

TEST HOLE NUMBER: 112

LOCATION: 101N-49W-07BD 6

LEGAL LOCATION: SE NW SEC. 07, T. 101 N., R. 49 W.

10.0 -	12.0	GRAVEL, COARSE, BROWN
12.0 -	13.0	SAND, BROWN, MEDIUM; MOIST
13.0 -	23.0	SAND AND GRAVEL, FINE; SATURATED

\* \* \* \*

TEST HOLE NUMBER: 113

LOCATION: 101N-49W-07BDBB

LEGAL LOCATION: NW NW SE NW SEC. 07, T. 101 N., R. 49 W.

3.0 -	9.0	SAND, COARSE
11.0 -	42.0	SAND, VERY COARSE TO COARSE, GRAVELLY; COARSE GRAVEL AT 40 FEET



\* \* \* \*

TEST HOLE NUMBER: 114  
LOCATION: 101N-49W-07CA 1  
LEGAL LOCATION: NE SW SEC. 07, T. 101 N., R. 49 W.

13.0 - 50.0 SAND AND GRAVEL, FINE SAND TO MEDIUM  
GRAVEL, SILTY

\* \* \* \*

TEST HOLE NUMBER: 115  
LOCATION: 101N-49W-07CA 2  
LEGAL LOCATION: NE SW SEC. 07, T. 101 N., R. 49 W.

10.0 - 12.0 SAND, BROWN, MEDIUM, SILTY; DRY  
12.0 - 23.0 SAND, GRAY, SILTY; SATURATED

\* \* \* \*

TEST HOLE NUMBER: 116  
LOCATION: 101N-49W-07CBB  
LEGAL LOCATION: NW NW SW SEC. 07, T. 101 N., R. 49 W.

\*\*\*\*\*  
\* THIS LOG CONTAINS UNVERIFIED INFORMATION \*  
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9.0 - 13.0 SAND, FINE  
13.0 - 35.0 SAND; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 117  
LOCATION: 101N-49W-08ABA  
LEGAL LOCATION: NE NW NE SEC. 08, T. 101 N., R. 49 W.

7.0 - 34.0 SAND AND GRAVEL, FINE TO VERY COARSE

\* \* \* \*

TEST HOLE NUMBER: 118  
LOCATION: 101N-49W-08ABAA  
LEGAL LOCATION: NE NE NW NE SEC. 08, T. 101 N., R. 49 W.

5.0 - 42.0 SAND AND GRAVEL, FINE TO VERY COARSE

\* \* \* \*

TEST HOLE NUMBER: 119  
LOCATION: 101N-49W-08ABAC  
LEGAL LOCATION: SW NE NW NE SEC. 08, T. 101 N., R. 49 W.

6.0 - 37.0 SAND AND GRAVEL, FINE TO VERY COARSE

\* \* \* \*

TEST HOLE NUMBER: 120  
LOCATION: 101N-49W-08ABAC 2  
LEGAL LOCATION: SW NE NW NE SEC. 08, T. 101 N., R. 49 W.

6.0 - 37.0 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 121  
LOCATION: 101N-49W-08ABBD  
LEGAL LOCATION: SE NW NW NE SEC. 08, T. 101 N., R. 49 W.

5.0 - 37.0 SAND AND GRAVEL, FINE TO VERY COARSE

\* \* \* \*

TEST HOLE NUMBER: 122  
LOCATION: 101N-49W-08ADCC  
LEGAL LOCATION: SW SW SE NE SEC. 08, T. 101 N., R. 49 W.

5.0 - 37.0 SAND AND GRAVEL, FINE TO VERY COARSE

\* \* \* \*

TEST HOLE NUMBER: 123  
LOCATION: 101N-49W-08BBBD  
LEGAL LOCATION: SE NW NW NW SEC. 08, T. 101 N., R. 49 W.

15.0 - 20.0 GRAVEL, FINE, CLAYEY  
20.0 - 40.0 SAND AND GRAVEL, VERY COARSE SAND, VERY  
FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 124  
LOCATION: 101N-49W-08CBAC  
LEGAL LOCATION: SW NE NW SW SEC. 08, T. 101 N., R. 49 W.

5.0 - 7.0 GRAVEL, VERY COARSE

\* \* \* \*

TEST HOLE NUMBER: 125  
LOCATION: 101N-49W-08CDAD  
LEGAL LOCATION: SE NE SE SW SEC. 08, T. 101 N., R. 49 W.

0 - 20.0 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 126  
LOCATION: 101N-49W-08DAAA

LEGAL LOCATION: NE NE NE SE SEC. 08, T. 101 N., R. 49 W.

5.0 - 26.0 SAND AND GRAVEL, FINE TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 127

LOCATION: 101N-49W-08DAAC

LEGAL LOCATION: SW NE NE SE SEC. 08, T. 101 N., R. 49 W.

7.0 - 17.0 SAND, COARSE TO VERY COARSE

\* \* \* \*

TEST HOLE NUMBER: 128

LOCATION: 101N-49W-08DABA

LEGAL LOCATION: NE NW NE SE SEC. 08, T. 101 N., R. 49 W.

0 - 1.0 SAND, GRAVEL AND CLAY

6.0 - 30.0 SAND AND GRAVEL, FINE TO MEDIUM SAND,  
FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 129

LOCATION: 101N-49W-08DABC

LEGAL LOCATION: SW NW NE SE SEC. 08, T. 101 N., R. 49 W.

0 - 1.0 GRAVEL AND CLAY

6.0 - 11.0 GRAVEL, FINE TO COARSE

11.0 - 19.0 GRAVEL AND SAND, FINE TO COARSE GRAVEL,  
COARSE SAND

19.0 - 29.0 GRAVEL AND SAND, FINE TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 130

LOCATION: 101N-49W-08DACC

LEGAL LOCATION: SW SW NE SE SEC. 08, T. 101 N., R. 49 W.

6.0 - 17.0 GRAVEL, SANDY; FEW PEBBLES, DRY

17.0 - 19.0 GRAVEL; GOOD

19.0 - 23.0 SAND AND GRAVEL

23.0 - 27.0 SAND AND CLAY; DIRTY SAND

\* \* \* \*

TEST HOLE NUMBER: 131

LOCATION: 101N-49W-09BAAA

LEGAL LOCATION: NE NE NE NW SEC. 09, T. 101 N., R. 49 W.

4.0 - 20.0 SAND, MEDIUM, SILTY, WELL-SORTED; HARD  
DRILLING

20.0 - 30.0 SAND, COARSE TO VERY COARSE, SLIGHTLY

SILTY

\* \* \* \*

TEST HOLE NUMBER: 132  
LOCATION: 101N-49W-09BB  
LEGAL LOCATION: NW NW SEC. 09, T. 101 N., R. 49 W.

0 - 15.0 SAND, BROWN, FINE  
15.0 - 33.0 SAND, GRAY, FINE TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 133  
LOCATION: 101N-49W-09BBCD  
LEGAL LOCATION: SE SW NW NW SEC. 09, T. 101 N., R. 49 W.

8.0 - 36.0 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 134  
LOCATION: 101N-49W-09BCB  
LEGAL LOCATION: NW SW NW SEC. 09, T. 101 N., R. 49 W.

3.0 - 25.0 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 135  
LOCATION: 101N-49W-09BCBC  
LEGAL LOCATION: SW NW SW NW SEC. 09, T. 101 N., R. 49 W.

4.0 - 11.0 SAND, FINE  
11.0 - 30.0 GRAVEL, MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 136  
LOCATION: 101N-49W-11ACAB  
LEGAL LOCATION: NW NE SW NE SEC. 11, T. 101 N., R. 49 W.

1.0 - 3.0 SAND, FINE TO MEDIUM  
20.0 - 46.0 SAND AND GRAVEL, COARSE; SOME ROCKS,  
COULD NOT PENETRATE, QUARTZITE(?),  
ABANDONED HOLE

\* \* \* \*

TEST HOLE NUMBER: 137  
LOCATION: 101N-49W-11ACAB 2  
LEGAL LOCATION: NW NE SW NE SEC. 11, T. 101 N., R. 49 W.

1.0 - 5.0 SAND, BROWN, MEDIUM

21.0 - 28.0 SAND, BROWN, MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 138  
LOCATION: 101N-49W-11BACB  
LEGAL LOCATION: NW SW NE NW SEC. 11, T. 101 N., R. 49 W.

0 - 2.0 GRAVEL  
13.0 - 14.0 GRAVEL, COARSE  
14.0 - 17.0 SAND, FINE TO COARSE  
20.0 - 32.0 GRAVEL, VERY COARSE; POSSIBLY WITH SOME  
CLAY LAYERS

\* \* \* \*

TEST HOLE NUMBER: 139  
LOCATION: 101N-49W-11BCDA  
LEGAL LOCATION: NE SE SW NW SEC. 11, T. 101 N., R. 49 W.

0 - 3.0 SAND, MEDIUM, SILTY  
10.0 - 22.0 SAND AND GRAVEL, FINE SAND TO MEDIUM  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 140  
LOCATION: 101N-49W-11CDDC  
LEGAL LOCATION: SW SE SE SW SEC. 11, T. 101 N., R. 49 W.

0 - 85.0 GRAVEL, FINE TO COARSE; ONE THIN CLAY  
SEAM

\* \* \* \*

TEST HOLE NUMBER: 141  
LOCATION: 101N-49W-17BCDC  
LEGAL LOCATION: SW SE SW NW SEC. 17, T. 101 N., R. 49 W.

12.0 - 20.0 SAND  
20.0 - 23.5 GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 142  
LOCATION: 101N-49W-18BBC  
LEGAL LOCATION: SW NW NW SEC. 18, T. 101 N., R. 49 W.

5.0 - 14.0 GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 143  
LOCATION: 101N-49W-18DBCD

LEGAL LOCATION: SE SW NW SE SEC. 18, T. 101 N., R. 49 W.

14.0 - 25.0 GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 144

LOCATION: 101N-49W-22DB 1

LEGAL LOCATION: NW SE SEC. 22, T. 101 N., R. 49 W.

4.0 - 13.5 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 145

LOCATION: 101N-49W-22DB 2

LEGAL LOCATION: NW SE SEC. 22, T. 101 N., R. 49 W.

2.0 - 5.0 SAND, CLAYEY

5.0 - 8.0 SAND

8.0 - 13.0 SAND, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 146

LOCATION: 101N-49W-22DB 3

LEGAL LOCATION: NW SE SEC. 22, T. 101 N., R. 49 W.

3.0 - 9.5 SAND

\* \* \* \*

TEST HOLE NUMBER: 147

LOCATION: 101N-49W-22DB 4

LEGAL LOCATION: NW SE SEC. 22, T. 101 N., R. 49 W.

2.5 - 7.0 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 148

LOCATION: 101N-49W-22DB 5

LEGAL LOCATION: NW SE SEC. 22, T. 101 N., R. 49 W.

0 - 3.5 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 149

LOCATION: 101N-49W-22DB 6

LEGAL LOCATION: NW SE SEC. 22, T. 101 N., R. 49 W.

0 - 4.5 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 150  
LOCATION: 101N-49W-22DB 7  
LEGAL LOCATION: NW SE SEC. 22, T. 101 N., R. 49 W.

7.5 - 11.0 GRAVEL, ROCKY

\* \* \* \*

TEST HOLE NUMBER: 151  
LOCATION: 101N-49W-22DB 8  
LEGAL LOCATION: NW SE SEC. 22, T. 101 N., R. 49 W.

4.0 - 9.0 GRAVEL  
9.0 - 11.0 GRAVEL, VERY COARSE; CEMENTED, VERY HARD  
DRILLING, EASIER FROM 10 TO 11 FEET

\* \* \* \*

TEST HOLE NUMBER: 152  
LOCATION: 101N-49W-25DDDC  
LEGAL LOCATION: SW SE SE SE SEC. 25, T. 101 N., R. 49 W.

23.0 - 28.0 GRAVEL; MIXED WITH SANDY, PEBBLY CLAY  
(TILL)

\* \* \* \*

TEST HOLE NUMBER: 153  
LOCATION: 101N-49W-27ACDD  
LEGAL LOCATION: SE SE SW NE SEC. 27, T. 101 N., R. 49 W.

11.0 - 13.0 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 154  
LOCATION: 101N-49W-27BABC  
LEGAL LOCATION: SW NW NE NW SEC. 27, T. 101 N., R. 49 W.

1.0 - 5.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 155  
LOCATION: 101N-49W-30BC  
LEGAL LOCATION: SW NW SEC. 30, T. 101 N., R. 49 W.

19.0 - 29.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 156

LOCATION: 101N-49W-31DA 1  
LEGAL LOCATION: NE SE SEC. 31, T. 101 N., R. 49 W.

7.5 - 12.0 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 157  
LOCATION: 101N-49W-31DC  
LEGAL LOCATION: SW SE SEC. 31, T. 101 N., R. 49 W.

2.0 - 3.5 GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 158  
LOCATION: 101N-49W-31DD  
LEGAL LOCATION: SE SE SEC. 31, T. 101 N., R. 49 W.

7.0 - 13.0 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 159  
LOCATION: 101N-49W-31DD 2  
LEGAL LOCATION: SE SE SEC. 31, T. 101 N., R. 49 W.

2.0 - 6.0 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 160  
LOCATION: 101N-49W-32ADDA  
LEGAL LOCATION: NE SE SE NE SEC. 32, T. 101 N., R. 49 W.

8.0 - 15.0 SAND (QUARTZITE WASH)

\* \* \* \*

TEST HOLE NUMBER: 161  
LOCATION: 101N-50W-01ABBB 1  
LEGAL LOCATION: NW NW NW NE SEC. 01, T. 101 N., R. 50 W.

16.0 - 23.0 SAND, FINE TO COARSE; WITH FINE TO COARSE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 162  
LOCATION: 101N-50W-01ABBB 2  
LEGAL LOCATION: NW NW NW NE SEC. 01, T. 101 N., R. 50 W.

16.0 - 26.0 SAND, FINE TO COARSE; WITH FINE TO  
MEDIUM GRAVEL



\* \* \* \*

TEST HOLE NUMBER: 163  
LOCATION: 101N-50W-01CCCC 1  
LEGAL LOCATION: SW SW SW SW SEC. 01, T. 101 N., R. 50 W.

12.0 - 14.0 SAND, FINE TO COARSE; OXIDIZED  
16.0 - 24.0 SAND, FINE TO COARSE; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 164  
LOCATION: 101N-50W-01CCCC 2  
LEGAL LOCATION: SW SW SW SW SEC. 01, T. 101 N., R. 50 W.

12.0 - 16.0 GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 165  
LOCATION: 101N-50W-03BBBA  
LEGAL LOCATION: NE NW NW NW SEC. 03, T. 101 N., R. 50 W.

22.0 - 23.0 SAND; SOME CLAY, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 166  
LOCATION: 101N-50W-03BBBB  
LEGAL LOCATION: NW NW NW NW SEC. 03, T. 101 N., R. 50 W.

17.0 - 21.0 SAND, YELLOWISH-BROWN, FINE TO MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 167  
LOCATION: 101N-50W-03CCCD  
LEGAL LOCATION: SE SW SW SW SEC. 03, T. 101 N., R. 50 W.

19.0 - 24.0 SAND, MEDIUM, SILTY

\* \* \* \*

TEST HOLE NUMBER: 168  
LOCATION: 101N-50W-06DDD  
LEGAL LOCATION: SE SE SE SEC. 06, T. 101 N., R. 50 W.

8.0 - 14.0 SAND, FINE, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 169  
LOCATION: 101N-50W-07AAB  
LEGAL LOCATION: NW NE NE SEC. 07, T. 101 N., R. 50 W.

6.0 - 9.0 GRAVEL, VERY COARSE  
9.0 - 12.0 GRAVEL, MEDIUM TO COARSE  
12.0 - 36.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 170  
LOCATION: 101N-50W-07AABB  
LEGAL LOCATION: NW NW NE NE SEC. 07, T. 101 N., R. 50 W.

12.0 - 19.0 GRAVEL, COARSE; SAMPLE TAKEN

\* \* \* \*

TEST HOLE NUMBER: 171  
LOCATION: 101N-50W-07ABAB  
LEGAL LOCATION: NW NE NW NE SEC. 07, T. 101 N., R. 50 W.

4.0 - 15.0 GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 172  
LOCATION: 101N-50W-07BAA  
LEGAL LOCATION: NE NE NW SEC. 07, T. 101 N., R. 50 W.

3.0 - 8.0 SAND, FINE, SILTY, CLAYEY  
8.0 - 10.0 SAND AND GRAVEL, COARSE GRAVEL  
17.0 - 52.0 SAND AND GRAVEL, MEDIUM SAND, COARSE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 173  
LOCATION: 101N-50W-07CCCC  
LEGAL LOCATION: SW SW SW SW SEC. 07, T. 101 N., R. 50 W.

1.0 - 7.0 SAND, MEDIUM, SILTY

\* \* \* \*

TEST HOLE NUMBER: 174  
LOCATION: 101N-50W-08BBBB  
LEGAL LOCATION: NW NW NW NW SEC. 08, T. 101 N., R. 50 W.

3.0 - 16.0 SAND AND GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 175  
LOCATION: 101N-50W-08BCBC  
LEGAL LOCATION: SW NW SW NW SEC. 08, T. 101 N., R. 50 W.

3.0 - 13.0 SAND AND GRAVEL, BROWN, MEDIUM TO COARSE

SAND, MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 176  
LOCATION: 101N-50W-08BCCC  
LEGAL LOCATION: SW SW SW NW SEC. 08, T. 101 N., R. 50 W.

4.0 - 21.0 SAND AND GRAVEL, MEDIUM TO COARSE, ROCKY;  
ROCK AT 21 FEET, COULD NOT PENETRATE

\* \* \* \*

TEST HOLE NUMBER: 177  
LOCATION: 101N-50W-09ADD  
LEGAL LOCATION: SE SE NE SEC. 09, T. 101 N., R. 50 W.

1.0 - 5.0 SAND AND GRAVEL, COARSE SAND, FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 178  
LOCATION: 101N-50W-09ADDD  
LEGAL LOCATION: SE SE SE NE SEC. 09, T. 101 N., R. 50 W.

3.0 - 5.0 SAND AND GRAVEL, REDDISH, FINE  
5.0 - 10.0 SAND AND GRAVEL, MEDIUM SAND, FINE GRAVEL  
10.0 - 18.0 GRAVEL, FINE; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 179  
LOCATION: 101N-50W-09BBC  
LEGAL LOCATION: SW NW NW SEC. 09, T. 101 N., R. 50 W.

9.0 - 14.0 SAND, MEDIUM, SILTY

\* \* \* \*

TEST HOLE NUMBER: 180  
LOCATION: 101N-50W-09DADD  
LEGAL LOCATION: SE SE NE SE SEC. 09, T. 101 N., R. 50 W.

6.0 - 17.0 GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 181  
LOCATION: 101N-50W-09DDDD  
LEGAL LOCATION: SE SE SE SE SEC. 09, T. 101 N., R. 50 W.

1.0 - 3.0 SAND, FINE TO MEDIUM  
3.0 - 9.0 SAND AND GRAVEL, MEDIUM TO COARSE SAND,  
FINE TO COARSE GRAVEL

9.0 - 18.0 SAND AND GRAVEL, MEDIUM TO COARSE SAND,  
FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 182  
LOCATION: 101N-50W-10DCDD  
LEGAL LOCATION: SE SW SW SE SEC. 10, T. 101 N., R. 50 W.

9.0 - 15.0 GRAVEL, VERY COARSE

\* \* \* \*

TEST HOLE NUMBER: 183  
LOCATION: 101N-50W-10DCDC  
LEGAL LOCATION: SW SE SW SE SEC. 10, T. 101 N., R. 50 W.

16.0 - 19.0 GRAVEL AND SAND, COARSE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 184  
LOCATION: 101N-50W-10DCDD  
LEGAL LOCATION: SE SE SW SE SEC. 10, T. 101 N., R. 50 W.

3.0 - 4.0 SAND, DARK  
10.0 - 17.0 SAND, COARSE; WITH CLAY BALLS  
17.0 - 37.5 SAND, MEDIUM TO COARSE; INCOHERENT

\* \* \* \*

TEST HOLE NUMBER: 185  
LOCATION: 101N-50W-12AAAC  
LEGAL LOCATION: SW NE NE NE SEC. 12, T. 101 N., R. 50 W.

0 - 1.0 GRAVEL, CLAYEY  
8.0 - 27.0 SAND AND GRAVEL, FINE TO VERY COARSE

\* \* \* \*

TEST HOLE NUMBER: 186  
LOCATION: 101N-50W-13CCC  
LEGAL LOCATION: SW SW SW SEC. 13, T. 101 N., R. 50 W.

3.0 - 6.0 SAND AND GRAVEL, COARSE SAND, COARSE  
GRAVEL; UNSORTED  
6.0 - 18.0 SAND AND GRAVEL, MEDIUM SAND, FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 187  
LOCATION: 101N-50W-14AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 14, T. 101 N., R. 50 W.

21.0 - 24.0 SAND, FINE TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 188  
LOCATION: 101N-50W-14DACB  
LEGAL LOCATION: NW SW NE SE SEC. 14, T. 101 N., R. 50 W.  
\*\*\*\*\*  
\* THIS LOG CONTAINS UNVERIFIED INFORMATION \*  
\*\*\*\*\*

14.0 - 22.0 SAND

\* \* \* \*

TEST HOLE NUMBER: 189  
LOCATION: 101N-50W-14DCCA  
LEGAL LOCATION: NE SW SW SE SEC. 14, T. 101 N., R. 50 W.

2.4 - 13.0 SAND AND GRAVEL, YELLOWISH-BROWN TO RED-DISH-BROWN, MEDIUM SAND TO MEDIUM PEBBLE GRAVEL, SOME VERY COARSE PEBBLE GRAVEL, CLAYEY, POORLY SORTED; OXIDIZED, SECONDARY WHITE CARBONATE, SLIGHT FUEL ODOR 5-7.5 FT, SLIGHT PAINT THINNER ODOR 10-12.5 FT, WET BELOW 7.5 FT

\* \* \* \*

TEST HOLE NUMBER: 190  
LOCATION: 101N-50W-14DCCC  
LEGAL LOCATION: SW SW SW SE SEC. 14, T. 101 N., R. 50 W.

4.5 - 8.8 SAND, BROWN, MEDIUM TO VERY COARSE; WITH SOME VERY FINE PEBBLE GRAVEL, GASOLINE ODOR  
8.8 - 17.5 SAND AND GRAVEL, GRAY-BROWN, MEDIUM SAND TO MEDIUM PEBBLE GRAVEL; PRIMARILY SAND NEAR TOP WITH AN INCREASE IN GRAVEL SIZE AND CONTENT WITH DEPTH, GASOLINE ODOR

\* \* \* \*

TEST HOLE NUMBER: 191  
LOCATION: 101N-50W-14DCCC 1  
LEGAL LOCATION: SW SW SW SE SEC. 14, T. 101 N., R. 50 W.

3.8 - 17.5 SAND AND GRAVEL, YELLOWISH-BROWN TO RED-DISH-BROWN, MEDIUM SAND TO MEDIUM PEBBLE GRAVEL, SOME COARSE TO VERY COARSE PEBBLE GRAVEL, VERY CLAYEY, POORLY SORTED; HIGHLY OXIDIZED, WATER AT 14.6 FEET, DRILLER REPORTS GAS SMELL FROM

12.5 TO 17.5 FEET  
17.5 - 19.0 SAND, BROWN, VERY FINE TO COARSE, CLAYEY,  
MODERATELY SORTED; COAL FRAGMENTS,  
DRILLER REPORTS GAS ODOR

\* \* \* \*

TEST HOLE NUMBER: 192  
LOCATION: 101N-50W-14DDAD  
LEGAL LOCATION: SE NE SE SE SEC. 14, T. 101 N., R. 50 W.

3.3 - 7.7 SAND, REDDISH-BROWN, MEDIUM  
7.7 - 8.8 SAND, BROWN, MEDIUM WITH SOME PEBBLES  
8.8 - 13.8 SAND AND GRAVEL, GRAYISH, MEDIUM SAND TO  
VERY FINE PEBBLE GRAVEL; WITH SOME VERY  
COARSE PEBBLES, PETROLEUM ODOR  
16.3 - 16.9 SAND, MEDIUM; PETROLEUM ODOR(?)

\* \* \* \*

TEST HOLE NUMBER: 193  
LOCATION: 101N-50W-14DDCA  
LEGAL LOCATION: NE SW SE SE SEC. 14, T. 101 N., R. 50 W.

3.5 - 7.0 SAND, REDDISH-BROWN, MEDIUM TO VERY  
COARSE; WITH SOME VERY FINE TO FINE  
PEBBLE GRAVEL, POSSIBLE FUEL-OIL ODOR  
AT 3.5 FEET, DEFINITE FUEL-OIL ODOR  
FROM 5 TO 7 FEET  
7.0 - 7.5 SAND, GRAY, MEDIUM TO VERY COARSE; WITH  
SOME VERY FINE TO FINE PEBBLE GRAVEL,  
FUEL-OIL ODOR  
7.5 - 13.5 SAND AND GRAVEL, REDDISH-BROWN, MEDIUM  
SAND TO MEDIUM PEBBLE GRAVEL, SLIGHTLY  
SILTY; FUEL-OIL ODOR

\* \* \* \*

TEST HOLE NUMBER: 194  
LOCATION: 101N-50W-14DDDD  
LEGAL LOCATION: SE SE SE SE SEC. 14, T. 101 N., R. 50 W.

7.5 - 10.0 SAND, GRAY, MEDIUM TO COARSE; FUEL-OIL  
ODOR  
10.0 - 12.5 SAND, GRAY, MEDIUM TO COARSE, SILTY;  
FUEL-OIL OR GASOLINE ODOR  
12.5 - 14.2 SAND, GRAY, MEDIUM TO COARSE; WITH  
PEBBLES, GASOLINE ODOR

\* \* \* \*

TEST HOLE NUMBER: 195  
LOCATION: 101N-50W-15ADDC  
LEGAL LOCATION: SW SE SE NE SEC. 15, T. 101 N., R. 50 W.

2.0 - 38.0 SAND AND GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 196

LOCATION: 101N-50W-15BBBC

LEGAL LOCATION: SW NW NW NW SEC. 15, T. 101 N., R. 50 W.

4.0 - 5.0 GRAVEL, FINE TO MEDIUM; LOOSE  
5.0 - 10.0 SAND AND GRAVEL  
10.0 - 18.0 GRAVEL, FINE TO MEDIUM; SOME PEBBLES UP  
TO ONE INCH IN WIDTH

\* \* \* \*

TEST HOLE NUMBER: 197

LOCATION: 101N-50W-15CBBB

LEGAL LOCATION: NW NW NW SW SEC. 15, T. 101 N., R. 50 W.

2.0 - 17.0 SAND AND GRAVEL, MEDIUM TO COARSE; DRY

\* \* \* \*

TEST HOLE NUMBER: 198

LOCATION: 101N-50W-15CBCC

LEGAL LOCATION: SW SW NW SW SEC. 15, T. 101 N., R. 50 W.

3.0 - 5.0 SAND AND GRAVEL, RUST COLORED  
5.0 - 10.0 GRAVEL, FINE TO MEDIUM; CLEAN  
10.0 - 15.0 SAND, GRAY, FINE TO MEDIUM  
24.0 - 25.0 SAND AND GRAVEL, MEDIUM  
25.0 - 30.0 SAND AND GRAVEL, VERY COARSE SAND, MEDIUM  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 199

LOCATION: 101N-50W-15CCC

LEGAL LOCATION: SW SW SW SEC. 15, T. 101 N., R. 50 W.

14.0 - 29.0 SAND, FINE TO MEDIUM, SILTY

\* \* \* \*

TEST HOLE NUMBER: 200

LOCATION: 101N-50W-16AAA

LEGAL LOCATION: NE NE NE SEC. 16, T. 101 N., R. 50 W.

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

\* \* \* \*

TEST HOLE NUMBER: 201

LOCATION: 101N-50W-16BAAA

LEGAL LOCATION: NE NE NE NW SEC. 16, T. 101 N., R. 50 W.

0 - 14.0 SAND AND GRAVEL, COARSE SAND TO COARSE  
GRAVEL  
20.0 - 31.0 SAND AND GRAVEL, FINE SAND TO FINE  
GRAVEL; CLAYEY(?)

\* \* \* \*

TEST HOLE NUMBER: 202

LOCATION: 101N-50W-16BBBB

LEGAL LOCATION: NW NW NW NW SEC. 16, T. 101 N., R. 50 W.

4.0 - 29.0 SAND AND GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 203

LOCATION: 101N-50W-16DAA

LEGAL LOCATION: NE NE SE SEC. 16, T. 101 N., R. 50 W.

1.0 - 18.0 SAND AND GRAVEL, COARSE SAND, COARSE  
GRAVEL; UNSORTED

\* \* \* \*

TEST HOLE NUMBER: 204

LOCATION: 101N-50W-17BBBB

LEGAL LOCATION: NW NW NW NW SEC. 17, T. 101 N., R. 50 W.

4.0 - 51.0 SAND, MEDIUM TO COARSE; SOME MEDIUM  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 205

LOCATION: 101N-50W-17BBCC

LEGAL LOCATION: SW SW NW NW SEC. 17, T. 101 N., R. 50 W.

3.0 - 23.0 SAND AND GRAVEL  
23.0 - 43.0 SAND AND GRAVEL, FINE SAND TO COARSE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 206

LOCATION: 101N-50W-17BDAB

LEGAL LOCATION: NW NE SE NW SEC. 17, T. 101 N., R. 50 W.

2.0 - 4.0 SAND, RUST-COLORED  
4.0 - 20.0 SAND, BROWN, FINE TO COARSE  
20.0 - 22.0 SAND AND GRAVEL, FINE SAND TO FINE  
GRAVEL



\* \* \* \*

TEST HOLE NUMBER: 207  
LOCATION: 101N-50W-17DDCC  
LEGAL LOCATION: SW SW SE SE SEC. 17, T. 101 N., R. 50 W.

3.0 - 41.0 SAND AND GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 208  
LOCATION: 101N-50W-20CCBB  
LEGAL LOCATION: NW NW SW SW SEC. 20, T. 101 N., R. 50 W.

16.0 - 46.0 SAND AND GRAVEL, BROWN; SOME COARSE  
GRAVEL, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 209  
LOCATION: 101N-50W-23ABAB  
LEGAL LOCATION: NW NE NW NE SEC. 23, T. 101 N., R. 50 W.

4.0 - 5.0 SAND, YELLOWISH-BROWN, MEDIUM TO VERY  
COARSE, GRAVELLY, MODERATELY SORTED;  
OXIDIZED  
5.0 - 11.5 SAND AND GRAVEL, YELLOWISH-BROWN TO RED-  
DISH-BROWN, MEDIUM SAND TO COARSE  
PEBBLE GRAVEL, CLAYEY, POORLY SORTED;  
HIGHLY OXIDIZED, HIT ROCK AT 11.5 AND  
COULD NOT PENETRATE FURTHER

\* \* \* \*

TEST HOLE NUMBER: 210  
LOCATION: 101N-50W-23ABBA  
LEGAL LOCATION: NE NW NW NE SEC. 23, T. 101 N., R. 50 W.

5.0 - 9.5 SAND, BROWN, MEDIUM TO VERY COARSE,  
CONTAINS SOME VERY FINE PEBBLE GRAVEL,  
WELL-SORTED; OXIDIZED  
9.5 - 10.5 SAND, YELLOWISH-BROWN TO REDDISH-BROWN,  
MEDIUM TO VERY COARSE; CONTAINS SOME  
VERY FINE TO FINE PEBBLE GRAVEL, WELL-  
SORTED; HIGHLY OXIDIZED, DRILLER  
REPORTS GAS ODOR  
10.5 - 17.4 SAND AND GRAVEL, YELLOWISH-BROWN, MEDIUM  
SAND TO COARSE PEBBLE GRAVEL, CLAYEY,  
MODERATELY SORTED; OXIDIZED, ROCK LAYER  
AT 10.4 FT, WHITE CLAY LAYERS AT 15 FT,  
WATER AT 16.9 FT, LARGE ROCKS AT 15.4  
AND 17.2 FT, PAINT THINNER AND ROTTEN  
GAS ODOR FROM 15 TO 17.4 FEET

\* \* \* \*

TEST HOLE NUMBER: 211  
LOCATION: 101N-50W-23ABBA 1  
LEGAL LOCATION: NE NW NW NE SEC. 23, T. 101 N., R. 50 W.

5.0 - 17.2 SAND AND GRAVEL, YELLOWISH-BROWN, MEDIUM  
SAND TO COARSE PEBBLE GRAVEL, CLAYEY,  
POORLY SORTED; OXIDIZED, FAINT PAINT  
THINNER ODOR 10-12.5 FT, ROTTEN GAS  
ODOR 12.5-15 FT, AND STRONG GAS ODOR  
15-17.2 FT, WET AT 17 FT; HIT ROCK AT  
17.2 FT, COULD NOT PENETRATE

\* \* \* \*

TEST HOLE NUMBER: 212  
LOCATION: 101N-50W-23ABBA 2  
LEGAL LOCATION: NE NW NW NE SEC. 23, T. 101 N., R. 50 W.

4.5 - 5.0 SAND, YELLOW-BROWN, MEDIUM TO VERY  
COARSE, WELL-SORTED  
5.0 - 7.5 SAND AND GRAVEL, YELLOWISH-BROWN TO RED-  
DISH-BROWN, COARSE SAND TO FINE PEBBLE  
GRAVEL, SOME MEDIUM TO COARSE PEBBLE  
GRAVEL, POORLY SORTED; OXIDIZED, HIGHLY  
OXIDIZED ZONE AT 6.4 FT, CONTAINS MANY  
FRIABLE GRANITE PEBBLES THAT CRUMBLE TO  
GIVE SAND A WHITE APPEARANCE  
7.5 - 10.0 SAND AND GRAVEL, DARK-YELLOWISH-BROWN,  
COARSE SAND TO COARSE PEBBLE GRAVEL,  
CLAYEY, POORLY SORTED; HIGHLY OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 213  
LOCATION: 101N-50W-23ABBA 3  
LEGAL LOCATION: NE NW NW NE SEC. 23, T. 101 N., R. 50 W.

4.0 - 14.7 SAND AND GRAVEL, YELLOWISH-BROWN, MEDIUM  
SAND TO COARSE PEBBLE GRAVEL, SILTY TO  
CLAYEY, POORLY SORTED; OXIDIZED, WET AT  
14.4 FEET, HIT ROCK AT 14.7 FEET, COULD  
NOT PENETRATE FURTHER

\* \* \* \*

TEST HOLE NUMBER: 214  
LOCATION: 101N-50W-23ABBA 4  
LEGAL LOCATION: NE NW NW NE SEC. 23, T. 101 N., R. 50 W.

4.0 - 14.7 SAND AND GRAVEL, YELLOWISH-BROWN, MEDIUM  
SAND TO COARSE PEBBLE GRAVEL, SILTY TO  
CLAYEY, POORLY SORTED; OXIDIZED, HIT

ROCK AT 14.7 FEET, COULD NOT PENETRATE  
FURTHER

\* \* \* \*

TEST HOLE NUMBER: 215  
LOCATION: 101N-50W-23ABBB  
LEGAL LOCATION: NW NW NW NE SEC. 23, T. 101 N., R. 50 W.

3.3 -	12.0	SAND, BROWN TO YELLOWISH-BROWN, FINE TO VERY COARSE, SILTY, GRAVELLY, WELL-SORTED; BROWN CLAY FROM 8.7 TO 8.9 AND 10.5 TO 10.6 FEET, FAINT PETROLEUM ODOR FROM 8 TO 12 FEET
12.0 -	14.0	SAND AND GRAVEL, YELLOWISH-BROWN, MEDIUM SAND TO COARSE PEBBLE GRAVEL, SILTY; CONTAINS BOULDERS, HARD DRIVING, OXIDIZED, FAINT PETROLEUM ODOR
14.0 -	16.0	GRAVEL, YELLOWISH-BROWN, VERY FINE TO MEDIUM PEBBLES, SANDY, CLAYEY; OXIDIZED, SATURATED, STRONG PETROLEUM ODOR
16.0 -	20.0	SAND AND GRAVEL, YELLOWISH-BROWN TO RED-DISH-BROWN, VERY COARSE SAND TO MEDIUM PEBBLE GRAVEL, CLAYEY; HIGHLY OXIDIZED, SATURATED, FAINT PETROLEUM ODOR FROM 18 TO 20 FEET

\* \* \* \*

TEST HOLE NUMBER: 216  
LOCATION: 101N-50W-23ABBB 1  
LEGAL LOCATION: NW NW NW NE SEC. 23, T. 101 N., R. 50 W.

4.4 -	7.0	SAND, YELLOWISH-BROWN, MEDIUM TO COARSE, GRAVELLY, CLAYEY, WELL-SORTED; OXIDIZED
7.0 -	22.5	SAND AND GRAVEL, YELLOWISH-BROWN, MEDIUM SAND TO COARSE PEBBLE GRAVEL, CLAYEY, POORLY SORTED; OXIDIZED, COBBLE GRAVEL ZONE AT 7 FT, WET AT 15 FT, NO SAMPLE 15-17.5 FT, ROTTEN GAS ODOR 17.5-20 FEET

\* \* \* \*

TEST HOLE NUMBER: 217  
LOCATION: 101N-50W-23ABBB 2  
LEGAL LOCATION: NW NW NW NE SEC. 23, T. 101 N., R. 50 W.

4.3 -	17.5	SAND AND GRAVEL, YELLOWISH-BROWN, COARSE SAND TO FINE PEBBLE GRAVEL, WITH SOME MEDIUM TO COARSE PEBBLE GRAVEL, CLAYEY, MODERATELY SORTED; OXIDIZED NOT CLAYEY FROM 5 TO 7.5 FEET, DAMP BELOW
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12.1 FEET, COBBLE GRAVEL FROM 12.1 TO  
17.5 FEET  
20.0 - 25.0 GRAVEL, YELLOWISH-BROWN, VERY FINE TO  
MEDIUM PEBBLE GRAVEL, SILTY TO SANDY,  
CLAYEY, POORLY SORTED; OXIDIZED, HIGHLY  
OXIDIZED FROM 22.5 TO 25 FEET, CONTAINS  
WATER, PAINT THINNER ODOR

\* \* \* \*

TEST HOLE NUMBER: 218  
LOCATION: 101N-50W-23ABBB 3  
LEGAL LOCATION: NW NW NW NE SEC. 23, T. 101 N., R. 50 W.

4.6 - 7.5 SAND AND GRAVEL, YELLOWISH-BROWN, MEDIUM  
SAND TO MEDIUM PEBBLE GRAVEL, SOME  
COARSE PEBBLE GRAVEL, SILTY TO CLAYEY,  
POORLY SORTED; OXIDIZED  
7.5 - 10.0 SAND, YELLOWISH-BROWN, COARSE TO VERY  
COARSE, GRAVELLY, WELL-SORTED; OXI-  
DIZED, CLEAN  
10.0 - 17.5 SAND AND GRAVEL, YELLOWISH-BROWN, MEDIUM  
SAND TO MEDIUM PEBBLE GRAVEL, SOME VERY  
COARSE PEBBLE GRAVEL, SILTY TO CLAYEY,  
POORLY SORTED; OXIDIZED, PAINT THINNER  
ODOR 12.5 TO 15 FEET, ROTTEN GAS ODOR  
FROM 15 TO 17.5 FEET, WATER BELOW 16.71  
FEET  
17.5 - 20.0 GRAVEL, YELLOWISH-BROWN, VERY FINE TO  
MEDIUM PEBBLE GRAVEL, SANDY, CLAYEY,  
MODERATELY SORTED; OXIDIZED, ROTTEN  
GAS ODOR 17.5 TO 18 FEET

\* \* \* \*

TEST HOLE NUMBER: 219  
LOCATION: 101N-50W-23ABBB 4  
LEGAL LOCATION: NW NW NW NE SEC. 23, T. 101 N., R. 50 W.

3.0 - 5.5 SAND, REDDISH-BROWN, FINE TO MEDIUM  
5.5 - 7.4 SAND AND GRAVEL; FAINT PETROLEUM ODOR  
7.4 - 13.0 SAND AND GRAVEL; WEATHERED GASOLINE ODOR  
13.0 - 18.0 SAND AND GRAVEL; STRONG GASOLINE AND  
PAINT THINNER ODOR

\* \* \* \*

TEST HOLE NUMBER: 220  
LOCATION: 101N-50W-23ABBC  
LEGAL LOCATION: SW NW NW NE SEC. 23, T. 101 N., R. 50 W.

2.8 - 6.0 SAND, BROWN, MEDIUM TO VERY COARSE,  
GRAVELLY, SILTY, MODERATELY SORTED;  
OXIDIZED

6.0 - 14.0 SAND AND GRAVEL, YELLOWISH-BROWN, MEDIUM SAND TO COARSE PEBBLE GRAVEL, CLAYEY, POORLY SORTED; OXIDIZED, DARK-RED SANDY CLAY 6.3 TO 6.4 FEET, MOIST, PETROLEUM ODOR 8 TO 10 FEET, HNU READING IN SAMPLE JAR ABOUT 15 PPM

14.0 - 19.0 GRAVEL, YELLOWISH-BROWN TO REDDISH-BROWN, VERY FINE TO COARSE PEBBLES, VERY SANDY, CLAYEY, POORLY SORTED; HIGHLY OXIDIZED, WET AT 15.4 FEET, GRAY-BROWN CLAY 18.3 TO 18.5 FEET

19.0 - 21.0 SAND AND GRAVEL, YELLOWISH-BROWN TO REDDISH-BROWN, COARSE SAND TO MEDIUM PEBBLE GRAVEL, VERY CLAYEY; HIGHLY OXIDIZED, POORLY SORTED, GRAY-BROWN CLAY LAYER 20.3 TO 20.7 FEET

\* \* \* \*

TEST HOLE NUMBER: 221  
 LOCATION: 101N-50W-23ABBC 1  
 LEGAL LOCATION: SW NW NW NE SEC. 23, T. 101 N., R. 50 W.

3.5 - 6.0 SAND AND GRAVEL, YELLOWISH-BROWN TO REDDISH-BROWN, MEDIUM SAND TO COARSE PEBBLE GRAVEL, SILTY, POORLY SORTED; HIGHLY OXIDIZED, DRY

10.0 - 12.0 SAND AND GRAVEL, YELLOWISH-BROWN, MEDIUM SAND TO VERY FINE PEBBLE GRAVEL, MODERATELY SORTED; OXIDIZED, DRY

12.0 - 14.0 SAND, YELLOWISH-BROWN, MEDIUM TO VERY COARSE SAND, SOME VERY FINE TO FINE PEBBLE GRAVEL; OXIDIZED, DRY

14.0 - 20.0 SAND AND GRAVEL, YELLOWISH-BROWN TO REDDISH-BROWN, COARSE SAND TO FINE PEBBLE GRAVEL, SOME MEDIUM TO COARSE PEBBLES, CLAYEY, MODERATELY SORTED; OXIDIZED, WET, HIT BOULDER AT 15 FT, COULD NOT PENETRATE, MOVED 10 FT WEST, DRILLED 20 FT, NO SAMPLES 15 TO 20 FEET

\* \* \* \*

TEST HOLE NUMBER: 222  
 LOCATION: 101N-50W-23ABBD  
 LEGAL LOCATION: SE NW NW NE SEC. 23, T. 101 N., R. 50 W.

2.3 - 12.5 SAND AND GRAVEL, YELLOWISH-BROWN TO REDDISH-BROWN, MEDIUM SAND TO VERY COARSE PEBBLE GRAVEL, SOME COBBLE GRAVEL, CLAYEY; HIGHLY OXIDIZED

15.0 - 25.0 SAND AND GRAVEL, YELLOWISH-BROWN, MEDIUM SAND TO VERY COARSE PEBBLE GRAVEL, CLAYEY, POORLY SORTED; YELLOWISH-BROWN

TO LIGHT-GRAY CLAY PRESENT FROM 17.5 TO  
20 FT, WET AT 16.5 FT, NO SAMPLE 19.5  
TO 22.5 FT, OXIDIZED, ROTTEN ODOR FROM  
22.5 TO 25 FEET

\* \* \* \*

TEST HOLE NUMBER: 223  
LOCATION: 101N-50W-23ABBD 1  
LEGAL LOCATION: SE NW NW NE SEC. 23, T. 101 N., R. 50 W.

4.0 - 18.0 SAND AND GRAVEL, REDDISH-BROWN TO YELLOW-  
ISH-BROWN, COARSE SAND TO VERY COARSE  
PEBBLE GRAVEL, CLAYEY, POORLY SORTED;  
OXIDIZED, DRY, NO SAMPLE FROM 6-8 AND  
12-14 FT DUE TO ROCKS, FAINT PETROLEUM  
ODOR BELOW 10 FT(?), WET AT 16 FT,  
GRAY-BROWN CLAY LAYERS 15.4-15.8 FEET

\* \* \* \*

TEST HOLE NUMBER: 224  
LOCATION: 101N-50W-23ADAA  
LEGAL LOCATION: NE NE SE NE SEC. 23, T. 101 N., R. 50 W.

10.0 - 15.0 GRAVEL, FINE TO MEDIUM; CLEAN  
15.0 - 30.0 SAND; WITH SOME GRAVEL, CLEAN

\* \* \* \*

TEST HOLE NUMBER: 225  
LOCATION: 101N-50W-23BBBA  
LEGAL LOCATION: NE NW NW NW SEC. 23, T. 101 N., R. 50 W.

9.0 - 16.0 GRAVEL, FINE TO VERY COARSE

\* \* \* \*

TEST HOLE NUMBER: 226  
LOCATION: 101N-50W-23DAA  
LEGAL LOCATION: NE NE SE SEC. 23, T. 101 N., R. 50 W.

2.0 - 18.0 SAND AND GRAVEL, COARSE SAND, COARSE  
GRAVEL; UNSORTED  
18.0 - 65.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 227  
LOCATION: 101N-50W-23DADD  
LEGAL LOCATION: SE SE NE SE SEC. 23, T. 101 N., R. 50 W.

12.0 - 64.0 SAND, FINE TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 228  
LOCATION: 101N-50W-23DADD 1  
LEGAL LOCATION: SE SE NE SE SEC. 23, T. 101 N., R. 50 W.

3.0 - 5.0 GRAVEL AND SILT, RUST-BROWN  
5.0 - 30.0 SAND AND GRAVEL, MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 229  
LOCATION: 101N-50W-23DDDD  
LEGAL LOCATION: SE SE SE SE SEC. 23, T. 101 N., R. 50 W.

5.0 - 8.0 SAND AND GRAVEL, MEDIUM TO COARSE  
8.0 - 78.0 SAND, MEDIUM TO COARSE; SOME FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 230  
LOCATION: 101N-50W-24ACDD  
LEGAL LOCATION: SE SE SW NE SEC. 24, T. 101 N., R. 50 W.

10.0 - 24.0 SAND, MEDIUM TO COARSE; SOME FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 231  
LOCATION: 101N-50W-24BBAB  
LEGAL LOCATION: NW NE NW NW SEC. 24, T. 101 N., R. 50 W.

0 - 1.0 GRAVEL, COARSE, QUARTZITE (PARKING LOT)  
12.0 - 16.0 SAND, BROWN, CLAYEY; MOIST  
16.0 - 29.0 SAND, BROWN, SILTY, CLAYEY; SATURATED

\* \* \* \*

TEST HOLE NUMBER: 232  
LOCATION: 101N-50W-24BBBB  
LEGAL LOCATION: NW NW NW NW SEC. 24, T. 101 N., R. 50 W.

5.0 - 11.0 GRAVEL, COARSE, SILTY; DRY

\* \* \* \*

TEST HOLE NUMBER: 233  
LOCATION: 101N-50W-24BBDB  
LEGAL LOCATION: NW SE NW NW SEC. 24, T. 101 N., R. 50 W.

4.0 - 10.0 SAND, RED-BROWN, GRAVELLY; DRY  
10.0 - 15.0 GRAVEL, COARSE  
15.0 - 24.0 SAND, RED-BROWN, MEDIUM; DRY TO MOIST  
24.0 - 43.0 SAND, BROWN, MEDIUM; SATURATED, GETS HARD

TO DRILL TOWARD THE BOTTOM

\* \* \* \*

TEST HOLE NUMBER: 234  
LOCATION: 101N-50W-24CBBC  
LEGAL LOCATION: SW NW NW SW SEC. 24, T. 101 N., R. 50 W.

10.0 - 15.0 SAND AND GRAVEL; CLEAN  
15.0 - 27.0 GRAVEL; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 235  
LOCATION: 101N-50W-24CDAB  
LEGAL LOCATION: NW NE SE SW SEC. 24, T. 101 N., R. 50 W.

13.0 - 61.0 GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 236  
LOCATION: 101N-50W-24DACC  
LEGAL LOCATION: SW SW NE SE SEC. 24, T. 101 N., R. 50 W.

6.0 - 10.0 GRAVEL, FINE; CLEAN  
10.0 - 20.0 SAND, COARSE; GRAVEL  
20.0 - 25.0 GRAVEL, FINE TO COARSE; SOME PEBBLES UP  
TO 4 INCHES IN DIAMETER  
25.0 - 31.0 SAND, MEDIUM; SMALL SHALE FRAGMENTS

\* \* \* \*

TEST HOLE NUMBER: 237  
LOCATION: 101N-50W-24DBBA  
LEGAL LOCATION: NE NW NW SE SEC. 24, T. 101 N., R. 50 W.

5.0 - 30.0 SAND AND GRAVEL

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TEST HOLE NUMBER: 238  
LOCATION: 101N-50W-24DDAC  
LEGAL LOCATION: SW NE SE SE SEC. 24, T. 101 N., R. 50 W.

4.0 - 5.0 GRAVEL, BROWN; DIRTY  
5.0 - 37.0 GRAVEL, FINE TO MEDIUM; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 239  
LOCATION: 101N-50W-25ADBA  
LEGAL LOCATION: NE NW SE NE SEC. 25, T. 101 N., R. 50 W.



10.0 - 30.0 GRAVEL; CLEAN

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TEST HOLE NUMBER: 240  
LOCATION: 101N-50W-25BADD  
LEGAL LOCATION: SE SE NE NW SEC. 25, T. 101 N., R. 50 W.

3.0 - 5.0 SAND AND GRAVEL, REDDISH, FINE  
5.0 - 10.0 GRAVEL, RED-BROWN, MEDIUM  
10.0 - 15.0 SAND, FINE, WELL-SORTED  
15.0 - 40.0 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 241  
LOCATION: 101N-50W-25BBB  
LEGAL LOCATION: NW NW NW SEC. 25, T. 101 N., R. 50 W.

2.0 - 7.0 SAND AND GRAVEL, COARSE SAND, FINE GRAVEL  
7.0 - 14.0 SAND, MEDIUM TO COARSE  
14.0 - 37.0 SAND, MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 242  
LOCATION: 101N-50W-25DBCA  
LEGAL LOCATION: NE SW NW SE SEC. 25, T. 101 N., R. 50 W.

8.0 - 14.0 GRAVEL, FINE TO MEDIUM; CLEAN  
19.0 - 25.0 SAND, COARSE; WITH GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 243  
LOCATION: 101N-50W-29BAAA  
LEGAL LOCATION: NE NE NE NW SEC. 29, T. 101 N., R. 50 W.

15.0 - 21.0 SAND, BROWN, FINE TO MEDIUM, VERY CLAYEY,  
SILTY; VERY FEW FINE PEBBLES, OXIDIZED,  
SATURATED

\* \* \* \*

TEST HOLE NUMBER: 244  
LOCATION: 101N-50W-30BABB  
LEGAL LOCATION: NW NW NE NW SEC. 30, T. 101 N., R. 50 W.

0 - 5.0 SAND, BROWN, FINE TO COARSE; OXIDIZED,  
DRY  
5.0 - 23.0 SAND AND GRAVEL, BROWN, FINE TO COARSE  
SAND, FINE GRAVEL, CLAYEY; OXIDIZED,  
SATURATED  
23.0 - 38.0 SAND AND GRAVEL, GRAY, MEDIUM TO COARSE

SAND, FINE TO MEDIUM GRAVEL, SLIGHTLY  
CLAYEY; UNOXIDIZED, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 245  
LOCATION: 101N-51W-16AAAA 1  
LEGAL LOCATION: NE NE NE NE SEC. 16, T. 101 N., R. 51 W.

0 - 2.0 SAND, BROWN

\* \* \* \*

TEST HOLE NUMBER: 246  
LOCATION: 101N-51W-33AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 33, T. 101 N., R. 51 W.

0 - 5.0 SAND, BROWN, FINE TO COARSE, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 247  
LOCATION: 101N-51W-35CAAA 1  
LEGAL LOCATION: NE NE NE SW SEC. 35, T. 101 N., R. 51 W.

15.0 - 36.0 SAND AND GRAVEL, CLAYEY, SUBANGULAR TO  
SUBROUND; SATURATED, ROCK 22 TO 23  
FEET, LESS THAN 30 PERCENT CLAY, GRAVEL  
1/4-INCH IN DIAMETER, GRADES TO CLAY

\* \* \* \*

TEST HOLE NUMBER: 248  
LOCATION: 101N-51W-35CAAA 3  
LEGAL LOCATION: NE NE NE SW SEC. 35, T. 101 N., R. 51 W.

1.0 - 5.0 SAND AND GRAVEL, FINE; CLAY

\* \* \* \*

TEST HOLE NUMBER: 249  
LOCATION: 101N-51W-35CAAA 4  
LEGAL LOCATION: NE NE NE SW SEC. 35, T. 101 N., R. 51 W.

5.0 - 10.0 SAND AND CLAY, FINE TO COARSE SAND, VERY  
MOIST  
10.0 - 17.0 SAND, CLAYEY; LESS THAN 40 PERCENT CLAY,  
SATURATED AT 12 TO 13 FEET  
19.0 - 20.0 GRAVELS; HEAVY

\* \* \* \*

TEST HOLE NUMBER: 250  
LOCATION: 101N-51W-35CAAA 5

LEGAL LOCATION: NE NE NE SW SEC. 35, T. 101 N., R. 51 W.

0	-	1.0	SAND AND SILT; ORGANIC MATERIAL
1.0	-	5.0	SAND AND CLAY, FINE TO COARSE SAND; VERY GRAINY, FEW FINES, VERY LITTLE MOISTURE
5.0	-	15.0	SAND, FINE TO COARSE; SOME CLAY, MORE FINES, VERY MOIST
15.0	-	41.0	SAND, FINE TO VERY COARSE; SATURATED, LESS FINES, SMALL GRAVELS

\* \* \* \*

TEST HOLE NUMBER: 251

LOCATION: 101N-51W-35CAAD 1

LEGAL LOCATION: SE NE NE SW SEC. 35, T. 101 N., R. 51 W.

8.0	-	20.0	SAND, YELLOW, FINE TO COARSE, SILTY; SATURATED
20.0	-	52.0	SAND, GRAY, FINE TO COARSE, SILTY; ALSO SOME FINE GRAVEL, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 252

LOCATION: 101N-51W-35CAAD 2

LEGAL LOCATION: SE NE NE SW SEC. 35, T. 101 N., R. 51 W.

8.0	-	20.0	SAND, GRAY, FINE TO COARSE
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\* \* \* \*

TEST HOLE NUMBER: 253

LOCATION: 101N-51W-35CAAD 5

LEGAL LOCATION: SE NE NE SW SEC. 35, T. 101 N., R. 51 W.

15.0	-	17.0	SAND LENSE(?); DRILLER REPORTED EASY DRILLING, NO CUTTINGS
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\* \* \* \*

TEST HOLE NUMBER: 254

LOCATION: 101N-51W-35CAAD 6

LEGAL LOCATION: SE NE NE SW SEC. 35, T. 101 N., R. 51 W.

10.0	-	30.0	SAND, TAN TO BROWN, VERY FINE, CLAYEY; SATURATED, VERY LOOSE, ODOR AND SHEEN ON CUTTINGS, NO CUTTINGS 20 TO 30 FEET
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\* \* \* \*

TEST HOLE NUMBER: 255

LOCATION: 101N-51W-35CAAD 7

LEGAL LOCATION: SE NE NE SW SEC. 35, T. 101 N., R. 51 W.

13.0 - 18.0 SAND, TAN TO BROWN, FINE; SATURATED, SOME  
FINES  
18.0 - 22.0 GRAVEL(?); NO CUTTINGS, DRILL CHATTER  
22.0 - 33.0 SAND, TAN TO BROWN, VERY FINE, CLAYEY;  
SATURATED, VERY LOOSE, SOME GRAVEL LESS  
THAN 1/4-INCH IN DIAMETER

\* \* \* \*

TEST HOLE NUMBER: 256  
LOCATION: 101N-51W-35CACC 2  
LEGAL LOCATION: SW SW NE SW SEC. 35, T. 101 N., R. 51 W.

2.0 - 15.0 SAND; WITH CLAY  
15.0 - 28.0 SAND, GRAY; WITH MORE CLAY THAN FROM 2 TO  
15 FEET

\* \* \* \*

TEST HOLE NUMBER: 257  
LOCATION: 101N-51W-35CACC 3  
LEGAL LOCATION: SW SW NE SW SEC. 35, T. 101 N., R. 51 W.

3.0 - 15.0 SAND, YELLOW, SILTY, VERY CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 258  
LOCATION: 101N-51W-35CACC 4  
LEGAL LOCATION: SW SW NE SW SEC. 35, T. 101 N., R. 51 W.

1.0 - 4.0 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 259  
LOCATION: 101N-51W-35CACC 7  
LEGAL LOCATION: SW SW NE SW SEC. 35, T. 101 N., R. 51 W.

7.0 - 10.0 SAND, BROWN, MEDIUM TO COARSE, CLAYEY;  
OXIDIZED, MIXED WITH GRAVEL, LOOSE TO  
SEMI-FIRM  
10.0 - 25.0 SAND, MEDIUM TO COARSE, CLAYEY; WATER  
SATURATED, EASY DRILLING

\* \* \* \*

TEST HOLE NUMBER: 260  
LOCATION: 101N-51W-35CACC 8  
LEGAL LOCATION: SW SW NE SW SEC. 35, T. 101 N., R. 51 W.

7.0 - 9.0 SAND AND GRAVEL, BROWN, MEDIUM TO COARSE  
SAND, 1/8-INCH TO 3/4-INCH GRAVEL,  
WELL-ROUNDED TO SUBANGULAR; MOIST

9.0 - 29.0 SAND, TAN TO BROWN, MEDIUM TO COARSE,  
CLAYEY; SEMI-FIRM TO VERY LOOSE SAND AT  
20 FEET, SATURATED, SOME GRAVEL BUT  
LESS THAN 10 PERCENT

\* \* \* \*

TEST HOLE NUMBER: 261  
LOCATION: 101N-51W-35CADA 1  
LEGAL LOCATION: NE SE NE SW SEC. 35, T. 101 N., R. 51 W.

3.0 - 18.0 SAND, YELLOW, FINE TO MEDIUM  
20.0 - 22.0 SAND, YELLOW, FINE TO MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 262  
LOCATION: 101N-51W-35CADA 2  
LEGAL LOCATION: NE SE NE SW SEC. 35, T. 101 N., R. 51 W.

2.0 - 6.0 SAND AND GRAVEL, RUST-COLORED

\* \* \* \*

TEST HOLE NUMBER: 263  
LOCATION: 101N-51W-35CADA 3  
LEGAL LOCATION: NE SE NE SW SEC. 35, T. 101 N., R. 51 W.

5.0 - 8.0 SAND AND GRAVEL, GRAY

\* \* \* \*

TEST HOLE NUMBER: 264  
LOCATION: 101N-51W-35CADA 6  
LEGAL LOCATION: NE SE NE SW SEC. 35, T. 101 N., R. 51 W.

0 - 6.0 SAND, REDDISH-BROWN, MEDIUM TO COARSE;  
SOME FINE GRAVEL, POORLY SORTED;  
SATURATED BELOW 5 FEET  
6.0 - 11.0 SAND AND GRAVEL, REDDISH-BROWN; MEDIUM  
SAND TO COARSE GRAVEL; SATURATED

\* \* \* \*

TEST HOLE NUMBER: 265  
LOCATION: 101N-51W-35CADA 9  
LEGAL LOCATION: NE SE NE SW SEC. 35, T. 101 N., R. 51 W.

23.0 - 30.0 SAND, DARK-TAN TO BROWN, CLAYEY;  
SATURATED, VERY LOOSE OOZE, ODOR, OILY  
SHEEN ON CUTTINGS

\* \* \* \*

TEST HOLE NUMBER: 266  
LOCATION: 101N-51W-35CADD 1  
LEGAL LOCATION: SE SE NE SW SEC. 35, T. 101 N., R. 51 W.

9.0 - 11.0 SAND, YELLOW, FINE TO MEDIUM; SATURATED

\* \* \* \*

TEST HOLE NUMBER: 267  
LOCATION: 101N-51W-35CADD 4  
LEGAL LOCATION: SE SE NE SW SEC. 35, T. 101 N., R. 51 W.

0 - 10.0 SAND AND GRAVEL, COARSE GRAVEL, 1/8-INCH  
TO 2 INCHES IN DIAMETER, SUBANGULAR TO  
WELL-ROUNDED; MIXED WITH CLAY,  
SATURATED AT 8 FEET  
10.0 - 43.0 SAND, TAN TO BROWN, FINE; 30 TO 50  
PERCENT CLAY AND FINES, VERY LOOSE OOZE  
GRADES TO MEDIUM TO COARSE DARKER  
COLORED SAND

\* \* \* \*

TEST HOLE NUMBER: 268  
LOCATION: 101N-51W-35CBAB  
LEGAL LOCATION: NW NE NW SW SEC. 35, T. 101 N., R. 51 W.

5.0 - 12.0 SAND AND GRAVEL, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 269  
LOCATION: 101N-51W-35CBAB 1  
LEGAL LOCATION: NW NE NW SW SEC. 35, T. 101 N., R. 51 W.

4.0 - 6.0 SAND, DARK-YELLOWISH-BROWN; 5 TO 15  
PERCENT GRAVEL, 55 TO 75 PERCENT MOSTLY  
MEDIUM AND FINE SAND, 20 TO 30 PERCENT  
MEDIUM PLASTICITY FINES, MOIST

\* \* \* \*

TEST HOLE NUMBER: 270  
LOCATION: 101N-51W-35CBBB 1  
LEGAL LOCATION: NW NW NW SW SEC. 35, T. 101 N., R. 51 W.

0 - 3.0 SANDS AND SILTS; ORGANIC MATTER (TOPSOIL)

\* \* \* \*

TEST HOLE NUMBER: 271  
LOCATION: 101N-51W-35CBCD 1  
LEGAL LOCATION: SE SW NW SW SEC. 35, T. 101 N., R. 51 W.

22.0 - 37.0 SAND, GRAY, SILTY; SOME CLAY (TILL?)

\* \* \* \*

TEST HOLE NUMBER: 272  
LOCATION: 101N-51W-35CBDC 4  
LEGAL LOCATION: SE SW NW SW SEC. 35, T. 101 N., R. 51 W.

6.0 - 9.0 SAND AND GRAVEL, REDDISH-BROWN, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 273  
LOCATION: 101N-51W-35CBDC 5  
LEGAL LOCATION: SE SW NW SW SEC. 35, T. 101 N., R. 51 W.

4.0 - 6.0 SAND AND GRAVEL, BROWN; WITH SOME CLAY

\* \* \* \*

TEST HOLE NUMBER: 274  
LOCATION: 101N-51W-35CBDC 1  
LEGAL LOCATION: SW SE NW SW SEC. 35, T. 101 N., R. 51 W.

3.0 - 7.0 SAND, BROWN; WITH CLAY

\* \* \* \*

TEST HOLE NUMBER: 275  
LOCATION: 101N-51W-35CBDC 4  
LEGAL LOCATION: SW SE NW SW SEC. 35, T. 101 N., R. 51 W.

6.0 - 8.0 SAND AND GRAVEL, MEDIUM TO COARSE SAND,  
1/8-INCH TO 1-INCH IN DIAMETER GRAVEL  
13.0 - 14.0 GRAVEL LENSES; NO CUTTINGS, DRILL CHATTER  
20.0 - 50.0 SAND, TAN TO BROWN, CLAYEY; OXIDIZED,  
SATURATED, LOOSE OOZE, NO CUTTINGS  
FROM 30 TO 50 FEET

\* \* \* \*

TEST HOLE NUMBER: 276  
LOCATION: 101N-51W-35CCCC 1  
LEGAL LOCATION: SW SW SW SW SEC. 35, T. 101 N., R. 51 W.

4.0 - 6.0 SAND, BROWN, MEDIUM TO COARSE; SOME FINE  
GRAVEL; SATURATED

\* \* \* \*

TEST HOLE NUMBER: 277  
LOCATION: 101N-51W-35CCCC 3  
LEGAL LOCATION: SW SW SW SW SEC. 35, T. 101 N., R. 51 W.

2.0 - 5.0 SAND, GRAYISH-BROWN, CLAYEY; 5 TO 15  
PERCENT GRAVEL, 45 TO 65 PERCENT MOSTLY  
MEDIUM AND FINE SAND, 30 TO 40 PERCENT  
MEDIUM PLASTICITY FINES, WET

\* \* \* \*

TEST HOLE NUMBER: 278  
LOCATION: 101N-51W-35DBAC 1  
LEGAL LOCATION: SW NE NW SE SEC. 35, T. 101 N., R. 51 W.

4.0 - 5.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY;  
SATURATED

\* \* \* \*

TEST HOLE NUMBER: 279  
LOCATION: 101N-51W-35DBBC  
LEGAL LOCATION: SW NW NW SE SEC. 35, T. 101 N., R. 51 W.

5.0 - 24.0 SAND, BROWN, MEDIUM TO COARSE, SLIGHTLY  
CLAYEY; SATURATED  
24.0 - 29.0 SAND AND GRAVEL(?), CLAYEY; SAND IS  
COARSER THAN INTERVAL FROM 5 TO 24  
FEET; SATURATED

\* \* \* \*

TEST HOLE NUMBER: 280  
LOCATION: 101N-51W-35DBCA 3  
LEGAL LOCATION: NE SW NW SE SEC. 35, T. 101 N., R. 51 W.

4.0 - 6.0 SAND AND GRAVEL, BROWN, MEDIUM SAND TO  
COARSE GRAVEL, CLAYEY; SATURATED

\* \* \* \*

TEST HOLE NUMBER: 281  
LOCATION: 101N-51W-35DBCA 4  
LEGAL LOCATION: NE SW NW SE SEC. 35, T. 101 N., R. 51 W.

2.0 - 5.0 GRAVEL, COARSE, ANGULAR, POORLY SORTED;  
DRY

\* \* \* \*

TEST HOLE NUMBER: 282  
LOCATION: 101N-52W-16AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 16, T. 101 N., R. 52 W.

0 - 4.0 SAND, RUST-BROWN, COARSE

\* \* \* \*



TEST HOLE NUMBER: 283  
LOCATION: 101N-52W-22AABA  
LEGAL LOCATION: NE NW NE NE SEC. 22, T. 101 N., R. 52 W.

0 - 3.0 SAND, REDDISH-BROWN, COARSE, VERY CLAYEY;  
OXIDIZED, DRY  
9.0 - 13.0 GRAVEL, REDDISH-BROWN, COBBLY, VERY  
CLAYEY; OXIDIZED, DRY  
13.0 - 32.0 GRAVEL, BROWN, COBBLY, SLIGHTLY CLAYEY;  
OXIDIZED, DRY, HIT ROCK ABANDONED HOLE

\* \* \* \*

TEST HOLE NUMBER: 284  
LOCATION: 101N-52W-22CBCC  
LEGAL LOCATION: SW SW NW SW SEC. 22, T. 101 N., R. 52 W.

3.0 - 14.0 SAND, YELLOW-BROWN, CLAYEY, GRAVELLY;  
SATURATED, COULD NOT PENETRATE FURTHER

\* \* \* \*

TEST HOLE NUMBER: 285  
LOCATION: 101N-52W-27DCCD  
LEGAL LOCATION: SE SW SW SE SEC. 27, T. 101 N., R. 52 W.

8.0 - 22.0 SAND, RUST-BROWN, MEDIUM TO COARSE,  
CLAYEY; OXIDIZED, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 286  
LOCATION: 101N-52W-34DDAD  
LEGAL LOCATION: SE NE SE SE SEC. 34, T. 101 N., R. 52 W.

10.0 - 24.0 SAND, GRAY, MEDIUM TO COARSE, CLAYEY,  
SLIGHTLY GRAVELLY; UNOXIDIZED,  
SATURATED

\* \* \* \*

TEST HOLE NUMBER: 287  
LOCATION: 101N-52W-36BBBC  
LEGAL LOCATION: SW NW NW NW SEC. 36, T. 101 N., R. 52 W.

0 - 38.0 SAND AND GRAVEL, BROWN, MEDIUM TO COARSE  
SAND, MEDIUM TO COARSE GRAVEL, SLIGHTLY  
CLAYEY; OXIDIZED, MOIST AT 16 FEET

\* \* \* \*

TEST HOLE NUMBER: 288  
LOCATION: 102N-47W-06CCDC  
LEGAL LOCATION: SW SE SW SW SEC. 06, T. 102 N., R. 47 W.

9.0 - 11.0 GRAVEL, MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 289  
LOCATION: 102N-47W-07AAAD  
LEGAL LOCATION: SE NE NE NE SEC. 07, T. 102 N., R. 47 W.

1.0 - 19.0 SAND, BROWN, MEDIUM TO COARSE; SOME  
GRAVEL, HIT ROCK AT 20 FEET  
19.0 - 25.0 GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 290  
LOCATION: 102N-47W-07DDAD  
LEGAL LOCATION: SE NE SE SE SEC. 07, T. 102 N., R. 47 W.

0 - 28.0 SAND, REDDISH-BROWN, FINE TO COARSE,  
SLIGHTLY CLAYEY; WITH SOME GRAVEL, DRY,  
OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 291  
LOCATION: 102N-47W-08ABAB  
LEGAL LOCATION: NW NE NW NE SEC. 08, T. 102 N., R. 47 W.

16.0 - 48.0 SAND, REDDISH-BROWN, MEDIUM TO COARSE,  
SLIGHTLY CLAYEY; OXIDIZED, DRY

\* \* \* \*

TEST HOLE NUMBER: 292  
LOCATION: 102N-47W-10AABB  
LEGAL LOCATION: NW NW NE NE SEC. 10, T. 102 N., R. 47 W.

10.0 - 12.0 SAND, BROWN, MEDIUM; OXIDIZED, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 293  
LOCATION: 102N-47W-10DADA  
LEGAL LOCATION: NE SE NE SE SEC. 10, T. 102 N., R. 47 W.

9.0 - 22.0 SAND AND GRAVEL, BROWN, COARSE SAND,  
MEDIUM GRAVEL, CLAYEY; OXIDIZED,  
SATURATED

\* \* \* \*

TEST HOLE NUMBER: 294  
LOCATION: 102N-47W-16AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 16, T. 102 N., R. 47 W.

25.0 - 41.0 SAND AND GRAVEL; WITH CLAY LAYERS

\* \* \* \*

TEST HOLE NUMBER: 295  
LOCATION: 102N-47W-18AABB  
LEGAL LOCATION: NW NW NE NE SEC. 18, T. 102 N., R. 47 W.

0 - 1.0 SAND AND GRAVEL, BROWN, COARSE SAND, FINE  
TO COARSE GRAVEL, CLAYEY; OXIDIZED, DRY  
13.0 - 19.0 SAND AND GRAVEL, BROWN, MEDIUM TO COARSE  
SAND, FINE TO COARSE GRAVEL, SLIGHTLY  
CLAYEY; OXIDIZED, MOIST

\* \* \* \*

TEST HOLE NUMBER: 296  
LOCATION: 102N-47W-18BBBB 1  
LEGAL LOCATION: NW NW NW NW SEC. 18, T. 102 N., R. 47 W.

21.0 - 30.0 SAND AND GRAVEL, COARSE SAND AND FINE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 297  
LOCATION: 102N-47W-18BBBB 2  
LEGAL LOCATION: NW NW NW NW SEC. 18, T. 102 N., R. 47 W.

17.0 - 26.0 SAND AND GRAVEL, MEDIUM SAND TO MEDIUM  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 298  
LOCATION: 102N-47W-22BABB  
LEGAL LOCATION: NW NW NE NW SEC. 22, T. 102 N., R. 47 W.

9.0 - 30.0 SAND, GRAY, FINE TO MEDIUM, SLIGHTLY  
CLAYEY; OXIDIZED, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 299  
LOCATION: 102N-47W-22CCBB  
LEGAL LOCATION: NW NW SW SW SEC. 22, T. 102 N., R. 47 W.

12.0 - 26.0 SAND, TAN-BROWN, MEDIUM, VERY CLAYEY;  
OXIDIZED, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 300  
LOCATION: 102N-47W-33AAAA

LEGAL LOCATION: NE NE NE NE SEC. 33, T. 102 N., R. 47 W.

6.0 - 30.0 SAND AND GRAVEL, MEDIUM SAND TO FINE  
GRAVEL; WITH CLAY

\* \* \* \*

TEST HOLE NUMBER: 301

LOCATION: 102N-47W-33DAAA

LEGAL LOCATION: NE NE NE SE SEC. 33, T. 102 N., R. 47 W.

5.0 - 15.0 SAND, LIGHT-BROWN, FINE TO COARSE,  
PEBBLY; SATURATED, OXIDIZED  
15.0 - 25.0 SAND, LIGHT-BROWN, FINE; SATURATED,  
OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 302

LOCATION: 102N-47W-34BBBB

LEGAL LOCATION: NW NW NW NW SEC. 34, T. 102 N., R. 47 W.

9.0 - 23.0 SAND AND GRAVEL, BROWN, MEDIUM SAND,  
MEDIUM TO COARSE GRAVEL; OXIDIZED, SOME  
ROCKS

\* \* \* \*

TEST HOLE NUMBER: 303

LOCATION: 102N-47W-34CCCC

LEGAL LOCATION: SW SW SW SW SEC. 34, T. 102 N., R. 47 W.

0 - 31.0 SAND AND GRAVEL, BROWN TO REDDISH-BROWN;  
OXIDIZED, GRADES FROM A FINE SAND TO A  
COARSE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 304

LOCATION: 102N-47W-34CCCC 2

LEGAL LOCATION: SW SW SW SW SEC. 34, T. 102 N., R. 47 W.

1.0 - 31.0 SAND AND GRAVEL, MEDIUM TO COARSE SAND,  
MEDIUM TO COARSE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 305

LOCATION: 102N-47W-34DAAA

LEGAL LOCATION: NE NE NE SE SEC. 34, T. 102 N., R. 47 W.

6.0 - 10.0 SAND, BROWN, FINE TO MEDIUM, SILTY;  
SATURATED, OXIDIZED  
10.0 - 24.0 SAND, GRAY, FINE TO MEDIUM, SILTY;

SATURATED, UNOXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 306  
LOCATION: 102N-48W-02DDCC  
LEGAL LOCATION: SW SW SE SE SEC. 02, T. 102 N., R. 48 W.

6.0 - 8.0 SAND AND GRAVEL, BROWN, COARSE SAND,  
COARSE GRAVEL; OXIDIZED, MOIST, HIT  
QUARTZITE AT 8 FEET

\* \* \* \*

TEST HOLE NUMBER: 307  
LOCATION: 102N-48W-03AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 03, T. 102 N., R. 48 W.

1.0 - 20.0 SAND, LIGHT-BROWN, MEDIUM TO COARSE,  
PEBBLY; SUBROUNDED

\* \* \* \*

TEST HOLE NUMBER: 308  
LOCATION: 102N-48W-03BBBB  
LEGAL LOCATION: NW NW NW NW SEC. 03, T. 102 N., R. 48 W.

15.0 - 20.0 SAND, BROWN, MEDIUM TO COARSE, POORLY  
SORTED; SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 309  
LOCATION: 102N-48W-10DDAA  
LEGAL LOCATION: NE NE SE SE SEC. 10, T. 102 N., R. 48 W.

5.0 - 11.0 SAND AND GRAVEL, BROWN, FINE TO COARSE  
SAND, MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 310  
LOCATION: 102N-48W-11BBBA  
LEGAL LOCATION: NE NW NW NW SEC. 11, T. 102 N., R. 48 W.

5.0 - 21.0 GRAVEL, GRAY, SANDY, SILTY; SATURATED,  
UNOXIDIZED  
21.0 - 23.0 GRAVEL, COARSE, SANDY, SILTY; SATURATED,  
UNOXIDIZED, HIT BEDROCK (QUARTZITE?)

\* \* \* \*

TEST HOLE NUMBER: 311  
LOCATION: 102N-48W-12DCDC

LEGAL LOCATION: SW SE SW SE SEC. 12, T. 102 N., R. 48 W.

0 - 2.0 SAND, TAN-BROWN, FINE TO MEDIUM, VERY  
CLAYEY; OXIDIZED, DRY  
2.0 - 6.0 SAND, TAN-BROWN, FINE TO MEDIUM, VERY  
CLAYEY; OXIDIZED, MOIST

\* \* \* \*

TEST HOLE NUMBER: 312

LOCATION: 102N-48W-21AAAD

LEGAL LOCATION: SE NE NE NE SEC. 21, T. 102 N., R. 48 W.

18.0 - 30.0 SAND, BROWN, MEDIUM; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 313

LOCATION: 102N-48W-21DDDD

LEGAL LOCATION: SE SE SE SE SEC. 21, T. 102 N., R. 48 W.

0 - 16.0 SAND AND GRAVEL, BROWN, MEDIUM TO COARSE  
SAND, FINE GRAVEL; OXIDIZED  
19.0 - 26.0 SAND, BROWN, MEDIUM TO COARSE; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 314

LOCATION: 102N-48W-23ADAA

LEGAL LOCATION: NE NE SE NE SEC. 23, T. 102 N., R. 48 W.

10.0 - 11.0 SAND, ORANGE-BROWN, FINE TO MEDIUM; DRY  
TO MOIST, OXIDIZED  
14.0 - 19.0 GRAVEL, BROWN, MEDIUM TO COARSE GRADING  
INTO MEDIUM TO FINE, VERY CLAYEY;  
LITTLE SAND, MOIST, OXIDIZED  
19.0 - 38.0 SAND AND GRAVEL, LIGHT-BROWN TO BROWN,  
FINE TO COARSE SAND, FINE TO MEDIUM  
GRAVEL, ROUNDED; MOIST, OXIDIZED,  
GRAVEL AND CLAY CONTENT INCREASE  
WITH DEPTH

\* \* \* \*

TEST HOLE NUMBER: 315

LOCATION: 102N-48W-23CCDD

LEGAL LOCATION: SE SE SW SW SEC. 23, T. 102 N., R. 48 W.

0 - 33.0 SAND AND GRAVEL, BROWN, MEDIUM TO COARSE  
SAND, FINE TO MEDIUM GRAVEL; SOME  
COARSE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 316  
LOCATION: 102N-48W-23DAAD  
LEGAL LOCATION: SE NE NE SE SEC. 23, T. 102 N., R. 48 W.

6.0 - 17.0 SAND AND GRAVEL, BROWN, MEDIUM SAND,  
FINE GRAVEL, SLIGHTLY CLAYEY; OXIDIZED,  
MOIST

\* \* \* \*

TEST HOLE NUMBER: 317  
LOCATION: 102N-48W-24BAAA  
LEGAL LOCATION: NE NE NE NW SEC. 24, T. 102 N., R. 48 W.

2.0 - 8.0 SAND, BROWN, FINE TO MEDIUM; LITTLE  
CLAY, DRY, OXIDIZED  
8.0 - 13.0 SAND, LIGHT-BROWN TO DARK-BROWN, FINE TO  
MEDIUM; LITTLE CLAY, SOME GRAVEL FROM  
10 FEET, DRY, OXIDIZED  
13.0 - 17.0 SAND, YELLOW-BROWN TO BROWN, FINE TO  
MEDIUM; LITTLE CLAY, SOME GRAVEL, DRY,  
OXIDIZED  
17.0 - 31.0 GRAVEL, DARK-BROWN, FINE TO MEDIUM,  
SANDY, ROUNDED; SOME CLAY, DRY TO  
MOIST, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 318  
LOCATION: 102N-48W-27CDDD  
LEGAL LOCATION: SE SE SE SW SEC. 27, T. 102 N., R. 48 W.

2.0 - 22.0 SAND, FINE TO MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 319  
LOCATION: 102N-48W-28CACB  
LEGAL LOCATION: NW SW NE SW SEC. 28, T. 102 N., R. 48 W.

2.0 - 30.0 SAND, BROWN, FINE TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 320  
LOCATION: 102N-48W-29BDDD  
LEGAL LOCATION: SE SE SE NW SEC. 29, T. 102 N., R. 48 W.

8.0 - 16.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 321  
LOCATION: 102N-48W-29DABB

LEGAL LOCATION: NW NW NE SE SEC. 29, T. 102 N., R. 48 W.

6.0 - 26.0 SAND, FINE TO COARSE; WITH SOME CLAY

\* \* \* \*

TEST HOLE NUMBER: 322

LOCATION: 102N-48W-30ADDD

LEGAL LOCATION: SE SE SE NE SEC. 30, T. 102 N., R. 48 W.

20.0 - 27.0 SAND AND GRAVEL, FINE SAND TO MEDIUM  
GRAVEL, SLIGHTLY CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 323

LOCATION: 102N-48W-30ADDD 1

LEGAL LOCATION: SE SE SE NE SEC. 30, T. 102 N., R. 48 W.

20.0 - 26.0 SAND AND GRAVEL, BROWN, FINE TO COARSE  
SAND, MEDIUM TO COARSE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 324

LOCATION: 102N-48W-30CADA

LEGAL LOCATION: NE SE NE SW SEC. 30, T. 102 N., R. 48 W.

5.0 - 22.5 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 325

LOCATION: 102N-48W-30CBBC

LEGAL LOCATION: SW NW NW SW SEC. 30, T. 102 N., R. 48 W.

0 - 12.0 SAND, MEDIUM, SILTY  
22.0 - 32.0 SAND, BRIGHT-ORANGE, MEDIUM; ALSO SOME  
PELLETS OF SAND

\* \* \* \*

TEST HOLE NUMBER: 326

LOCATION: 102N-48W-30CBBC 1

LEGAL LOCATION: SW NW NW SW SEC. 30, T. 102 N., R. 48 W.

6.0 - 8.0 SAND, MEDIUM TO COARSE; SOME ROCKS

\* \* \* \*

TEST HOLE NUMBER: 327

LOCATION: 102N-48W-30CCCB

LEGAL LOCATION: NW SW SW SW SEC. 30, T. 102 N., R. 48 W.



18.0 - 22.0 GRAVEL, COARSE; SAMPLE TAKEN, LARGE  
COBBLES PREVENTED FURTHER DRILLING

\* \* \* \*

TEST HOLE NUMBER: 328  
LOCATION: 102N-48W-30CCCC  
LEGAL LOCATION: SW SW SW SW SEC. 30, T. 102 N., R. 48 W.

1.0 - 12.0 SAND, BROWN, MEDIUM; OXIDIZED, SOME  
YELLOWISH-BROWN CLAY  
12.0 - 18.0 SAND, BROWN, MEDIUM; SOME GRAY CLAY  
18.0 - 22.0 SAND AND GRAVEL, BROWN, MEDIUM SAND,  
MEDIUM TO COARSE GRAVEL; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 329  
LOCATION: 102N-48W-30CCCC 1  
LEGAL LOCATION: SW SW SW SW SEC. 30, T. 102 N., R. 48 W.

10.0 - 11.0 GRAVEL, RUST-COLORED, COARSE  
11.0 - 15.0 SAND AND GRAVEL, GRAY, FINE SAND TO FINE  
GRAVEL, SILTY

\* \* \* \*

TEST HOLE NUMBER: 330  
LOCATION: 102N-48W-30DADC  
LEGAL LOCATION: SW SE NE SE SEC. 30, T. 102 N., R. 48 W.

7.0 - 12.0 SAND AND GRAVEL; SOME BLACK SILTSTONE

\* \* \* \*

TEST HOLE NUMBER: 331  
LOCATION: 102N-48W-30DCDC  
LEGAL LOCATION: SW SE SW SE SEC. 30, T. 102 N., R. 48 W.

5.0 - 19.5 SAND, BROWN, COARSE; SOME GRAVEL, MOIST

\* \* \* \*

TEST HOLE NUMBER: 332  
LOCATION: 102N-48W-31AADD  
LEGAL LOCATION: SE SE NE NE SEC. 31, T. 102 N., R. 48 W.

7.0 - 8.5 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 333  
LOCATION: 102N-48W-31BBBB  
LEGAL LOCATION: NW NW NW NW SEC. 31, T. 102 N., R. 48 W.

8.0 - 12.0 GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 334  
LOCATION: 102N-48W-32BCDD  
LEGAL LOCATION: SE SE SW NW SEC. 32, T. 102 N., R. 48 W.

8.5 - 31.0 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 335  
LOCATION: 102N-48W-33CABA  
LEGAL LOCATION: NE NW NE SW SEC. 33, T. 102 N., R. 48 W.

2.0 - 3.0 GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 336  
LOCATION: 102N-48W-33CBBB  
LEGAL LOCATION: NW NW NW SW SEC. 33, T. 102 N., R. 48 W.

1.0 - 18.0 SAND AND GRAVEL, MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 337  
LOCATION: 102N-48W-33DABA  
LEGAL LOCATION: NE NW NE SE SEC. 33, T. 102 N., R. 48 W.

0 - 3.0 GRAVEL  
12.0 - 24.0 SAND AND GRAVEL, FINE SAND TO MEDIUM  
GRAVEL  
24.0 - 26.0 GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 338  
LOCATION: 102N-48W-33DBBA  
LEGAL LOCATION: NE NW NW SE SEC. 33, T. 102 N., R. 48 W.

0 - 8.0 SAND, BROWN, FINE TO MEDIUM, SILTY  
8.0 - 15.0 SAND AND GRAVEL, FINE SAND TO FINE GRAVEL  
15.0 - 18.0 GRAVEL, VERY COARSE; ANGULAR

\* \* \* \*

TEST HOLE NUMBER: 339  
LOCATION: 102N-48W-33DCDD  
LEGAL LOCATION: SE SE SW SE SEC. 33, T. 102 N., R. 48 W.

12.0 - 19.0 SAND, MEDIUM TO COARSE; SATURATED AT 17

19.0 - 29.0 FEET  
SAND AND GRAVEL, COARSE SAND, FINE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 340  
LOCATION: 102N-48W-33DDDC  
LEGAL LOCATION: SW SE SE SE SEC. 33, T. 102 N., R. 48 W.  
\*\*\*\*\*  
\* THIS LOG CONTAINS UNVERIFIED INFORMATION \*  
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8.0 - 49.0 SAND

\* \* \* \*

TEST HOLE NUMBER: 341  
LOCATION: 102N-48W-34AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 34, T. 102 N., R. 48 W.

12.0 - 17.0 SAND, COARSE  
17.0 - 20.0 SAND, MEDIUM TO COARSE  
20.0 - 41.0 GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 342  
LOCATION: 102N-48W-34BCCC  
LEGAL LOCATION: SW SW SW NW SEC. 34, T. 102 N., R. 48 W.

7.0 - 32.0 SAND, FINE TO COARSE; WITH FINE TO COARSE  
GRAVEL WHICH OCCURS IN LAYERS IN THE  
SAND

\* \* \* \*

TEST HOLE NUMBER: 343  
LOCATION: 102N-48W-34BCCD  
LEGAL LOCATION: SE SW SW NW SEC. 34, T. 102 N., R. 48 W.

0 - 19.0 SAND AND GRAVEL, FINE TO COARSE SAND  
AND FINE GRAVEL  
19.0 - 41.0 SAND AND GRAVEL, FINE TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 344  
LOCATION: 102N-48W-34BCDD  
LEGAL LOCATION: SE SE SW NW SEC. 34, T. 102 N., R. 48 W.

1.0 - 46.0 SAND AND GRAVEL, MEDIUM TO COARSE SAND  
AND FINE TO COARSE GRAVEL; ROCKS AT 35  
D 45 FEET

\* \* \* \*

TEST HOLE NUMBER: 345  
LOCATION: 102N-48W-34CABA  
LEGAL LOCATION: NE NW NE SW SEC. 34, T. 102 N., R. 48 W.

1.0 -	12.0	SAND, BROWN, MEDIUM TO COARSE; OXIDIZED
12.0 -	37.0	GRAVEL, BROWN, MEDIUM TO VERY COARSE; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 346  
LOCATION: 102N-48W-34CABA 2  
LEGAL LOCATION: NE NW NE SW SEC. 34, T. 102 N., R. 48 W.

5.0 -	14.0	SAND, BROWN, MEDIUM TO COARSE; OXIDIZED
14.0 -	36.0	GRAVEL, BROWN, MEDIUM TO VERY COARSE; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 347  
LOCATION: 102N-48W-34CABA 3  
LEGAL LOCATION: NE NW NE SW SEC. 34, T. 102 N., R. 48 W.

4.0 -	7.0	SAND, BROWN, MEDIUM TO COARSE; OXIDIZED
7.0 -	36.0	GRAVEL, BROWN, MEDIUM TO COARSE; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 348  
LOCATION: 102N-48W-34CC  
LEGAL LOCATION: SW SW SEC. 34, T. 102 N., R. 48 W.

2.0 -	4.0	SAND AND GRAVEL, COARSE SAND, FINE GRAVEL
4.0 -	9.0	SAND AND GRAVEL, MEDIUM SAND, COARSE GRAVEL
9.0 -	14.0	SAND AND GRAVEL, MEDIUM SAND, MEDIUM GRAVEL
14.0 -	19.0	SAND, COARSE
19.0 -	29.0	SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 349  
LOCATION: 102N-48W-35ABBB  
LEGAL LOCATION: NW NW NW NE SEC. 35, T. 102 N., R. 48 W.

16.0 -	24.0	GRAVEL, BROWN, MEDIUM TO COARSE; OXIDIZED
24.0 -	31.0	SAND, FINE TO MEDIUM; MOSTLY QUARTZ

\* \* \* \*

TEST HOLE NUMBER: 350  
LOCATION: 102N-48W-35ABBB 2  
LEGAL LOCATION: NW NW NW NE SEC. 35, T. 102 N., R. 48 W.

15.0 - 25.0 GRAVEL, BROWN, MEDIUM TO COARSE; OXIDIZED  
25.0 - 32.0 SAND, FINE TO MEDIUM; MOSTLY QUARTZ

\* \* \* \*

TEST HOLE NUMBER: 351  
LOCATION: 102N-48W-35BAAA  
LEGAL LOCATION: NE NE NE NW SEC. 35, T. 102 N., R. 48 W.

10.0 - 32.0 SAND AND GRAVEL, FINE TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 352  
LOCATION: 102N-48W-35BBBB  
LEGAL LOCATION: NW NW NW NW SEC. 35, T. 102 N., R. 48 W.

7.0 - 9.0 SAND AND GRAVEL, MEDIUM TO COARSE  
11.0 - 34.0 SAND AND GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 353  
LOCATION: 102N-48W-35BBCC  
LEGAL LOCATION: SW SW NW NW SEC. 35, T. 102 N., R. 48 W.

22.0 - 36.0 SAND AND GRAVEL, BROWN, MEDIUM; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 354  
LOCATION: 102N-48W-35CDCC 1  
LEGAL LOCATION: SW SW SE SW SEC. 35, T. 102 N., R. 48 W.

0 - 15.0 SAND, FINE TO MEDIUM; SOME GRAVEL  
15.0 - 19.0 SAND AND GRAVEL, FINE SAND TO MEDIUM  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 355  
LOCATION: 102N-48W-35CDCC 2  
LEGAL LOCATION: SW SW SE SW SEC. 35. T. 102 N., R. 48 W.

2.0 - 17.0 SAND AND GRAVEL, MEDIUM SAND TO COARSE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 356

LOCATION: 102N-48W-36DDAA

LEGAL LOCATION: NE NE SE SE SEC. 36, T. 102 N., R. 48 W.

12.0 -	15.0	SAND, BROWN, MEDIUM TO COARSE; OXIDIZED
25.0 -	30.0	SAND, REDDISH-BROWN, MEDIUM; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 357

LOCATION: 102N-49W-01AAAB

LEGAL LOCATION: NW NE NE NE SEC. 01, T. 102 N., R. 49 W.

5.0 -	25.0	SAND, BROWN, MEDIUM TO COARSE; TURNS TO GRAY AT 15 FEET
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\* \* \* \*

TEST HOLE NUMBER: 358

LOCATION: 102N-49W-01CCCC

LEGAL LOCATION: SW SW SW SW SEC. 01, T. 102 N., R. 49 W.

2.0 -	7.0	GRAVEL, FINE TO MEDIUM; WITH CLAY
7.0 -	14.0	GRAVEL, MEDIUM TO COARSE; WITH CLAY

\* \* \* \*

TEST HOLE NUMBER: 359

LOCATION: 102N-49W-03BAAA

LEGAL LOCATION: NE NE NE NW SEC. 03, T. 102 N., R. 49 W.

0 -	6.0	SAND, BROWN, CLAYEY
6.0 -	28.0	SAND, YELLOW-BROWN, CLAYEY; SATURATED

\* \* \* \*

TEST HOLE NUMBER: 360

LOCATION: 102N-49W-03BCCC

LEGAL LOCATION: SW SW SW NW SEC. 03, T. 102 N., R. 49 W.

2.0 -	35.0	SAND AND GRAVEL, BROWN, FINE TO COARSE SAND, FINE TO COARSE GRAVEL
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\* \* \* \*

TEST HOLE NUMBER: 361

LOCATION: 102N-49W-04AAAA

LEGAL LOCATION: NE NE NE NE SEC. 04, T. 102 N., R. 49 W.

10.0 -	20.0	SAND, COARSE; DIRTY
20.0 -	25.0	SAND; AND SOME GRAVEL
25.0 -	30.0	GRAVEL, FINE, SANDY

\* \* \* \*

TEST HOLE NUMBER: 362  
LOCATION: 102N-49W-04AB  
LEGAL LOCATION: NW NE SEC. 04, T. 102 N., R. 49 W.

12.0 -	15.0	SAND, FINE
15.0 -	30.0	SAND, COARSE IN UPPER PART

\* \* \* \*

TEST HOLE NUMBER: 363  
LOCATION: 102N-49W-04BBB  
LEGAL LOCATION: NW NW NW SEC. 04, T. 102 N., R. 49 W.

10.0 -	12.0	SAND AND GRAVEL, FINE
12.0 -	15.0	SAND, COARSE; CLEAN
15.0 -	20.0	GRAVEL, COARSE
20.0 -	25.0	SAND; WOOD FRAGMENTS AT 20.5 FEET
25.0 -	28.0	SAND OR GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 364  
LOCATION: 102N-49W-04BBB 1  
LEGAL LOCATION: NW NW NW SEC. 04, T. 102 N., R. 49 W.

12.0 -	15.0	SAND, DARK-GRAY TO BLACK, COARSE, CLAYEY
15.0 -	30.0	SAND, DARK-GRAY TO BLACK, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 365  
LOCATION: 102N-49W-05AB  
LEGAL LOCATION: NW NE SEC. 05, T. 102 N., R. 49 W.

5.0 -	10.0	SAND, COARSE
12.0 -	15.0	SAND, COARSE
15.0 -	26.0	GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 366  
LOCATION: 102N-49W-05ABAB  
LEGAL LOCATION: NW NE NW NE SEC. 05, T. 102 N., R. 49 W.

2.0 -	34.0	SAND AND GRAVEL, BROWN, MEDIUM SAND, MEDIUM GRAVEL
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\* \* \* \*

TEST HOLE NUMBER: 367  
LOCATION: 102N-49W-05BBBB  
LEGAL LOCATION: NW NW NW NW SEC. 05, T. 102 N., R. 49 W.

7.0 - 12.0 SAND, YELLOW-BROWN, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 368  
LOCATION: 102N-49W-08ACDD  
LEGAL LOCATION: SE SE SW NE SEC. 08, T. 102 N., R. 49 W.

7.0 - 17.0 SAND, GRAY, MEDIUM TO FINE; SATURATED,  
WITH CLAY  
17.0 - 20.0 GRAVEL, FINE; WITH FINE TO COARSE SAND,  
10 PERCENT CLAY  
20.0 - 24.0 GRAVEL, FINE TO PEA; WITH FINE TO COARSE  
SAND, 5 PERCENT CLAY  
24.0 - 34.0 GRAVEL, FINE TO PEA; WITH FINE TO COARSE  
SAND, CLEAN

\* \* \* \*

TEST HOLE NUMBER: 369  
LOCATION: 102N-49W-08BAAB  
LEGAL LOCATION: NW NE NE NW SEC. 08, T. 102 N., R. 49 W.

\*\*\*\*\*  
\* THIS LOG CONTAINS UNVERIFIED INFORMATION \*  
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9.0 - 31.0 SAND

\* \* \* \*

TEST HOLE NUMBER: 370  
LOCATION: 102N-49W-08CC  
LEGAL LOCATION: SW SW SEC. 08, T. 102 N., R. 49 W.

9.0 - 14.0 SAND, MEDIUM TO COARSE  
14.0 - 19.0 SAND, MEDIUM; TO FINE GRAVEL  
19.0 - 24.0 SAND, COARSE; TO FINE GRAVEL  
24.0 - 29.0 SAND, MEDIUM; TO FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 371  
LOCATION: 102N-49W-08CCCD  
LEGAL LOCATION: SE SW SW SW SEC. 08, T. 102 N., R. 49 W.

\*\*\*\*\*  
\* THIS LOG CONTAINS UNVERIFIED INFORMATION \*  
\*\*\*\*\*

11.0 - 43.0 SAND

\* \* \* \*

TEST HOLE NUMBER: 372  
LOCATION: 102N-49W-08CCCD 1



LEGAL LOCATION: SE SW SW SW SEC. 08, T. 102 N., R. 49 W.

11.0 -	12.0	SAND, FINE
12.0 -	20.0	GRAVEL, FINE; CLEAN AT BASE
20.0 -	25.0	GRAVEL, FINE, MEDIUM
25.0 -	30.0	SAND, FINE; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 373

LOCATION: 102N-49W-08CDCC

LEGAL LOCATION: SW SW SE SW SEC. 08, T. 102 N., R. 49 W.

10.0 -	23.0	SAND AND GRAVEL, GREENISH, FINE SAND TO FINE GRAVEL
23.0 -	31.0	GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 374

LOCATION: 102N-49W-08CDCC 1

LEGAL LOCATION: SW SW SE SW SEC. 08, T. 102 N., R. 49 W.

10.0 -	20.0	SAND, BROWN, MEDIUM, WELL-SORTED
20.0 -	30.0	SAND AND GRAVEL, VERY COARSE SAND, VERY FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 375

LOCATION: 102N-49W-08DCDD

LEGAL LOCATION: SE SE SW SE SEC. 08, T. 102 N., R. 49 W.

14.0 -	35.0	SAND, BROWN, MEDIUM; GRADES TO A MEDIUM GRAVEL WITH DEPTH
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\* \* \* \*

TEST HOLE NUMBER: 376

LOCATION: 102N-49W-09BABA

LEGAL LOCATION: NE NW NE NW SEC. 09, T. 102 N., R. 49 W.

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\* THIS LOG CONTAINS UNVERIFIED INFORMATION \*  
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6.0 -	10.0	SAND
14.0 -	24.0	SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 377

LOCATION: 102N-49W-09BBAB

LEGAL LOCATION: NW NE NW NW SEC. 09, T. 102 N., R. 49 W.

8.0 - 14.0 SAND AND GRAVEL, COARSE SAND AND FINE  
GRAVEL  
14.0 - 35.0 GRAVEL, FINE TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 378  
LOCATION: 102N-49W-09BBAB 2  
LEGAL LOCATION: NW NE NW NW SEC. 09, T. 102 N., R. 49 W.

10.0 - 34.0 GRAVEL, GRAY, MEDIUM TO COARSE; SOME GRAY  
COARSE SAND

\* \* \* \*

TEST HOLE NUMBER: 379  
LOCATION: 102N-49W-09BBAB 3  
LEGAL LOCATION: NW NE NW NW SEC. 09, T. 102 N., R. 49 W.

4.0 - 37.0 SAND, BROWN, MEDIUM; SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 380  
LOCATION: 102N-49W-10AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 10, T. 102 N., R. 49 W.

0 - 2.0 SAND, FINE  
24.0 - 27.0 SAND, MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 381  
LOCATION: 102N-49W-12AABB  
LEGAL LOCATION: NW NW NE NE SEC. 12, T. 102 N., R. 49 W.

15.0 - 16.0 SAND, FINE

\* \* \* \*

TEST HOLE NUMBER: 382  
LOCATION: 102N-49W-14AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 14, T. 102 N., R. 49 W.

5.0 - 11.0 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 383  
LOCATION: 102N-49W-14AAB  
LEGAL LOCATION: NW NE NE NE SEC. 14, T. 102 N., R. 49 W.

2.0 - 22.0 SAND AND GRAVEL, MEDIUM SAND TO MEDIUM  
GRAVEL; WELL ROUNDED TO ANGULAR

\* \* \* \*

TEST HOLE NUMBER: 384  
LOCATION: 102N-49W-14AAAB 2  
LEGAL LOCATION: NW NE NE NE SEC. 14, T. 102 N., R. 49 W.

0 - 18.0 SAND AND GRAVEL, BROWN, COARSE SAND,  
MEDIUM TO COARSE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 385  
LOCATION: 102N-49W-14DDDA 1  
LEGAL LOCATION: NE SE SE SE SEC. 14, T. 102 N., R. 49 W.

0 - 11.0 SAND AND GRAVEL, FINE SAND TO MEDIUM  
GRAVEL; WELL ROUNDED

\* \* \* \*

TEST HOLE NUMBER: 386  
LOCATION: 102N-49W-14DDDA 2  
LEGAL LOCATION: NE SE SE SE SEC. 14, T. 102 N., R. 49 W.

0 - 8.0 GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 387  
LOCATION: 102N-49W-15CBBB  
LEGAL LOCATION: NW NW NW SW SEC. 15, T. 102 N., R. 49 W.

4.0 - 7.0 SAND, MEDIUM TO COARSE; WITH BROWN CLAY  
10.0 - 20.0 SAND AND GRAVEL, COARSE SAND AND FINE  
GRAVEL; SOME BROWN CLAY BUT NOT AS MUCH  
AS FROM 4 TO 7 FEET

\* \* \* \*

TEST HOLE NUMBER: 388  
LOCATION: 102N-49W-16ABB  
LEGAL LOCATION: NW NW NE SEC. 16, T. 102 N., R. 49 W.

9.0 - 17.0 GRAVEL, COARSE, SANDY AT TOP  
17.0 - 20.0 SAND, SILTY  
20.0 - 30.0 GRAVEL AND SAND

\* \* \* \*

TEST HOLE NUMBER: 389  
LOCATION: 102N-49W-16BB  
LEGAL LOCATION: NW NW SEC. 16, T. 102 N., R. 49 W.

9.0 - 15.0 GRAVEL, COARSE, FINE AT TOP; CLEAN

15.0 - 24.0 GRAVEL, COARSE; CLEAN, SOME SAND AT BASE  
24.0 - 26.0 GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 390  
LOCATION: 102N-49W-16CCDC  
LEGAL LOCATION: SW SE SW SW SEC. 16, T. 102 N., R. 49 W.

8.0 - 17.0 SAND, CLAYEY  
17.0 - 38.0 SAND AND GRAVEL, VERY COARSE SAND, VERY  
FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 391  
LOCATION: 102N-49W-17AB  
LEGAL LOCATION: NW NE SEC. 17, T. 102 N., R. 49 W.

0 - 10.0 SAND, COARSE  
10.0 - 20.0 GRAVEL AND SAND; CLEAN AT TOP  
20.0 - 30.0 SAND AND GRAVEL, COARSE AT BASE

\* \* \* \*

TEST HOLE NUMBER: 392  
LOCATION: 102N-49W-17CACC  
LEGAL LOCATION: SW SW NE SW SEC. 17, T. 102 N., R. 49 W.

8.0 - 20.0 SAND, MEDIUM, CLAYEY  
20.0 - 38.0 SAND AND GRAVEL, VERY COARSE SAND, VERY  
FINE GRAVEL, SILTY; CLEANER FROM 30  
FEET

\* \* \* \*

TEST HOLE NUMBER: 393  
LOCATION: 102N-49W-17CDCD  
LEGAL LOCATION: SE SW SE SW SEC. 17, T. 102 N., R. 49 W.

4.0 - 41.0 SAND, BROWN, MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 394  
LOCATION: 102N-49W-17DACC  
LEGAL LOCATION: SW SW NE SE SEC. 17, T. 102 N., R. 49 W.

14.0 - 22.0 SAND AND GRAVEL, BLACK, VERY COARSE SAND,  
FINE GRAVEL, CLAYEY  
22.0 - 33.0 SAND AND GRAVEL, VERY COARSE SAND, FINE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 395  
LOCATION: 102N-49W-20AACC  
LEGAL LOCATION: SW SW NE NE SEC. 20, T. 102 N., R. 49 W.

14.0 - 16.0 SAND, CLAYEY  
16.0 - 35.0 SAND AND GRAVEL, VERY COARSE SAND, FINE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 396  
LOCATION: 102N-49W-20ABA 1  
LEGAL LOCATION: NE NW NE SEC. 20, T. 102 N., R. 49 W.

6.0 - 16.0 SAND AND GRAVEL, BROWN, 60 PERCENT FINE  
TO COARSE SAND, 40 PERCENT FINE TO  
MEDIUM GRAVEL  
16.0 - 22.0 SAND AND GRAVEL, 60 PERCENT FINE  
TO COARSE SAND, 40 PERCENT FINE TO  
MEDIUM GRAVEL  
22.0 - 36.0 SAND AND GRAVEL, GRAY, 45 PERCENT FINE  
TO COARSE SAND, 45 PERCENT FINE TO  
MEDIUM GRAVEL, 10 PERCENT COARSE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 397  
LOCATION: 102N-49W-20ABA 2  
LEGAL LOCATION: NE NW NE SEC. 20, T. 102 N., R. 49 W.

7.0 - 18.0 SAND AND GRAVEL, BROWN, 70 PERCENT FINE  
TO COARSE SAND, 30 PERCENT FINE TO  
MEDIUM GRAVEL  
18.0 - 21.0 SAND AND GRAVEL, GRAY, 40 PERCENT FINE  
TO COARSE SAND, 60 PERCENT FINE TO  
MEDIUM GRAVEL  
21.0 - 28.0 SAND AND GRAVEL, 70 PERCENT MEDIUM TO  
COARSE SAND, 30 PERCENT FINE TO  
MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 398  
LOCATION: 102N-49W-20ABA 3  
LEGAL LOCATION: NE NW NE SEC. 20, T. 102 N., R. 49 W.

6.0 - 18.0 SAND AND GRAVEL, 40 PERCENT FINE TO  
COARSE SAND, 60 PERCENT FINE TO MEDIUM  
GRAVEL  
18.0 - 27.0 SAND AND GRAVEL, 60 PERCENT MEDIUM TO  
COARSE SAND, 40 PERCENT FINE TO MEDIUM  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 399  
LOCATION: 102N-49W-20ABAA  
LEGAL LOCATION: NE NE NW NE SEC. 20, T. 102 N., R. 49 W.

7.0 -	12.0	SAND, DARK-BROWN, GRAVELLY; VERY DIRTY, WET
12.0 -	17.0	SAND, LIGHT-BROWN, GRAVELLY; DIRTY
17.0 -	18.0	SAND AND GRAVEL, GRAY, FINE TO MEDIUM
18.0 -	20.0	SAND AND GRAVEL, GRAY, FINE TO COARSE
20.0 -	24.0	SAND AND GRAVEL, FINE TO MEDIUM
24.0 -	25.0	SAND AND GRAVEL, COARSE
25.0 -	29.0	SAND AND GRAVEL, FINE TO MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 400  
LOCATION: 102N-49W-20ABBA  
LEGAL LOCATION: NE NW NW NE SEC. 20, T. 102 N., R. 49 W.

14.0 -	17.0	SAND AND GRAVEL, GRAYISH-BROWN, MEDIUM; VERY DIRTY, WET
17.0 -	22.0	SAND AND GRAVEL, GRAY, FINE
22.0 -	25.0	SAND AND GRAVEL, MEDIUM SAND, COARSE GRAVEL
25.0 -	37.0	SAND AND GRAVEL, FINE TO MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 401  
LOCATION: 102N-49W-20ABBB  
LEGAL LOCATION: NW NW NW NE SEC. 20, T. 102 N., R. 49 W.

8.0 -	13.0	GRAVEL, FINE TO MEDIUM; WITH SAND AND BROWN CLAY, SATURATED
13.0 -	20.0	GRAVEL, FINE TO MEDIUM; WITH SAND, CLEAN
20.0 -	33.0	GRAVEL, FINE TO COARSE; WITH SAND, CLEAN

\* \* \* \*

TEST HOLE NUMBER: 402  
LOCATION: 102N-49W-20ACBB  
LEGAL LOCATION: NW NW SW NE SEC. 20, T. 102 N., R. 49 W.

11.0 -	20.0	SAND, MEDIUM TO COARSE; WITH BROWN CLAY
20.0 -	42.0	SAND, MEDIUM TO COARSE; WITH FINE TO COARSE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 403  
LOCATION: 102N-49W-20ACDB  
LEGAL LOCATION: NW SE SW NE SEC. 20, T. 102 N., R. 49 W.

9.0 - 14.0 SAND, FINE TO COARSE; WITH SOME BROWN  
CLAY  
14.0 - 19.0 SAND, MEDIUM TO COARSE; WITH GRAVEL AND  
BROWN CLAY  
19.0 - 29.0 SAND AND GRAVEL, COARSE SAND, FINE TO  
COARSE GRAVEL; WITH SOME CLAY

\* \* \* \*

TEST HOLE NUMBER: 404  
LOCATION: 102N-49W-20ACDC 1  
LEGAL LOCATION: SW SE SW NE SEC. 20, T. 102 N., R. 49 W.

8.0 - 18.0 SAND, MEDIUM TO COARSE  
18.0 - 44.0 SAND AND GRAVEL, MEDIUM TO COARSE SAND TO  
COARSE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 405  
LOCATION: 102N-49W-20ACDC 2  
LEGAL LOCATION: SW SE SW NE SEC. 20, T. 102 N., R. 49 W.

11.0 - 18.0 SAND, MEDIUM TO COARSE  
18.0 - 23.0 SAND AND GRAVEL, MEDIUM TO COARSE SAND,  
MEDIUM TO COARSE GRAVEL  
23.0 - 37.0 SAND, MEDIUM TO COARSE; WITH FINE TO  
MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 406  
LOCATION: 102N-49W-20ACDD  
LEGAL LOCATION: SE SE SW NE SEC. 20, T. 102 N., R. 49 W.

15.0 - 26.0 SAND, COARSE; WITH FINE TO COARSE GRAVEL  
AND HEAVY CLAY-SILT

\* \* \* \*

TEST HOLE NUMBER: 407  
LOCATION: 102N-49W-20BAAA  
LEGAL LOCATION: NE NE NE NW SEC. 20, T. 102 N., R. 49 W.

7.0 - 19.0 GRAVEL, COARSE; WITH SAND AND SOME CLAY  
19.0 - 38.0 GRAVEL, MEDIUM; WITH SAND, CLEAN

\* \* \* \*

TEST HOLE NUMBER: 408  
LOCATION: 102N-49W-20BACD  
LEGAL LOCATION: SE SW NE NW SEC. 20, T. 102 N., R. 49 W.

7.0 - 12.0 SAND AND CLAY

12.0 - 31.0 SAND AND GRAVEL, FINE TO COARSE SAND,  
FINE GRAVEL; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 409  
LOCATION: 102N-49W-20BDCC  
LEGAL LOCATION: SW SW SE NW SEC. 20, T. 102 N., R. 49 W.

12.0 - 19.0 SAND, FINE TO MEDIUM; WITH SILT AND CLAY  
19.0 - 33.0 GRAVEL, FINE TO MEDIUM; WITH SAND AND  
SOME CLAY

\* \* \* \*

TEST HOLE NUMBER: 410  
LOCATION: 102N-49W-20CD  
LEGAL LOCATION: SE SW SEC. 20, T. 102 N., R. 49 W.

9.0 - 15.0 SAND AND GRAVEL  
15.0 - 20.0 GRAVEL  
20.0 - 25.0 SAND  
25.0 - 45.0 GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 411  
LOCATION: 102N-49W-20DABB  
LEGAL LOCATION: NW NW NE SE SEC. 20, T. 102 N., R. 49 W.

9.0 - 19.0 SAND, MEDIUM; WITH DARK-GRAY CLAY,  
SATURATED  
23.0 - 28.0 GRAVEL, FINE; WITH SAND AND CLAY

\* \* \* \*

TEST HOLE NUMBER: 412  
LOCATION: 102N-49W-20DBDD  
LEGAL LOCATION: SE SE NW SE SEC. 20, T. 102 N., R. 49 W.

9.0 - 17.0 GRAVEL, FINE, SANDY, CLAYEY, SILTY  
17.0 - 38.0 GRAVEL, FINE

\* \* \* \*

TEST HOLE NUMBER: 413  
LOCATION: 102N-49W-20DCC  
LEGAL LOCATION: SW SW SE SEC. 20, T. 102 N., R. 49 W.

8.0 - 10.0 GRAVEL, COARSE  
10.0 - 30.0 GRAVEL AND SAND

\* \* \* \*



TEST HOLE NUMBER: 414  
LOCATION: 102N-49W-20DCD 1  
LEGAL LOCATION: SE SW SE SEC. 20, T. 102 N., R. 49 W.

12.0 - 35.0 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 415  
LOCATION: 102N-49W-20DCD 2  
LEGAL LOCATION: SE SW SE SEC. 20, T. 102 N., R. 49 W.

10.0 - 34.0 SAND AND GRAVEL, MEDIUM TO COARSE SAND,  
FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 416  
LOCATION: 102N-49W-20DCD 3  
LEGAL LOCATION: SE SW SE SEC. 20, T. 102 N., R. 49 W.

14.0 - 17.0 SAND, BROWN, FINE TO COARSE; VERY DIRTY,  
10 PERCENT MEDIUM TO COARSE GRAVEL  
17.0 - 34.0 SAND AND GRAVEL, MEDIUM TO COARSE SAND,  
FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 417  
LOCATION: 102N-49W-20DCD 4  
LEGAL LOCATION: SE SW SE SEC. 20, T. 102 N., R. 49 W.

13.0 - 16.0 SAND, FINE TO COARSE; 20 PERCENT FINE TO  
MEDIUM GRAVEL  
16.0 - 34.0 SAND AND GRAVEL, FINE TO COARSE SAND,  
FINE TO MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 418  
LOCATION: 102N-49W-20DCD 5  
LEGAL LOCATION: SE SW SE SEC. 20, T. 102 N., R. 49 W.

12.0 - 20.0 SAND AND GRAVEL, RUST-COLORED, FINE TO  
COARSE SAND, MEDIUM GRAVEL; DIRTY  
20.0 - 26.0 SAND AND GRAVEL, GRAY, MEDIUM TO COARSE  
SAND, FINE TO MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 419  
LOCATION: 102N-49W-20DCD 6  
LEGAL LOCATION: SE SW SE SEC. 20, T. 102 N., R. 49 W.

12.0 - 33.0 SAND AND GRAVEL, FINE TO COARSE SAND,  
FINE TO MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 420  
LOCATION: 102N-49W-20DCD 7  
LEGAL LOCATION: SE SW SE SEC. 20, T. 102 N., R. 49 W.

14.0 - 23.0 SAND AND GRAVEL, FINE TO COARSE SAND,  
FINE TO COARSE GRAVEL, SILTY

23.0 - 32.0 SAND AND GRAVEL, MEDIUM TO COARSE SAND,  
FINE TO MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 421  
LOCATION: 102N-49W-20DCD 8  
LEGAL LOCATION: SE SW SE SEC. 20, T. 102 N., R. 49 W.

7.0 - 36.0 SAND AND GRAVEL, FINE TO COARSE SAND,  
FINE TO MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 422  
LOCATION: 102N-49W-20DCD 9  
LEGAL LOCATION: SE SW SE SEC. 20, T. 102 N., R. 49 W.

7.0 - 23.0 SAND AND GRAVEL, FINE TO COARSE SAND,  
FINE TO MEDIUM GRAVEL

23.0 - 35.0 SAND AND GRAVEL, FINE TO COARSE SAND,  
FINE TO COARSE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 423  
LOCATION: 102N-49W-21BBA  
LEGAL LOCATION: NE NW NW SEC. 21, T. 102 N., R. 49 W.

2.0 - 15.0 GRAVEL, FINE TO COARSE, CLAYEY

15.0 - 20.0 GRAVEL, COARSE

20.0 - 27.0 SAND AND GRAVEL, FINE TO COARSE SAND,  
COARSE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 424  
LOCATION: 102N-49W-21BCAC  
LEGAL LOCATION: SW NE SW NW SEC. 21, T. 102 N., R. 49 W.

8.0 - 15.0 GRAVEL, VERY FINE, CLAYEY

15.0 - 25.0 SAND AND GRAVEL, VERY COARSE SAND, FINE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 425  
LOCATION: 102N-49W-21CCC  
LEGAL LOCATION: SW SW SW SEC. 21, T. 102 N., R. 49 W.

9.0 -	10.0	SAND AND GRAVEL
10.0 -	20.0	SAND
20.0 -	25.0	SAND, COARSE; SOME GRAVEL
25.0 -	32.0	SAND, MEDIUM; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 426  
LOCATION: 102N-49W-21CCD  
LEGAL LOCATION: SE SW SW SEC. 21, T. 102 N., R. 49 W.

6.0 -	17.0	SAND AND GRAVEL, BROWN, FINE TO COARSE SAND, FINE TO MEDIUM GRAVEL
17.0 -	30.0	SAND AND GRAVEL, GRAY, FINE TO COARSE SAND, FINE TO MEDIUM GRAVEL; LIGHT SILT AND CLAY

\* \* \* \*

TEST HOLE NUMBER: 427  
LOCATION: 102N-49W-21CDBB  
LEGAL LOCATION: NW NW SE SW SEC. 21, T. 102 N., R. 49 W.

7.0 -	12.0	SAND, COARSE, SILTY
12.0 -	27.0	SAND AND GRAVEL, VERY COARSE SAND, VERY FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 428  
LOCATION: 102N-49W-21DBDD  
LEGAL LOCATION: SE SE NW SE SEC. 21, T. 102 N., R. 49 W.

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\* THIS LOG CONTAINS UNVERIFIED INFORMATION \*  
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2.0 -	20.0	SAND
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\* \* \* \*

TEST HOLE NUMBER: 429  
LOCATION: 102N-49W-21DCC  
LEGAL LOCATION: SW SW SE SEC. 21, T. 102 N., R. 49 W.

6.0 -	13.0	GRAVEL
13.0 -	16.0	SAND, FINE
16.0 -	21.0	SAND, COARSE
21.0 -	26.0	GRAVEL, COARSE; BOULDERS AND CLAY

STREAKS

\* \* \* \*

TEST HOLE NUMBER: 430  
LOCATION: 102N-49W-21DDAB  
LEGAL LOCATION: NW NE SE SE SEC. 21, T. 102 N., R. 49 W.  
\*\*\*\*\*  
\* THIS LOG CONTAINS UNVERIFIED INFORMATION \*  
\*\*\*\*\*

15.0 - 26.0 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 431  
LOCATION: 102N-49W-22BBBB  
LEGAL LOCATION: NW NW NW NW SEC. 22, T. 102 N., R. 49 W.

6.0 - 10.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 432  
LOCATION: 102N-49W-22BBBB 1  
LEGAL LOCATION: NW NW NW NW SEC. 22, T. 102 N., R. 49 W.

1.0 - 13.0 SAND, BROWN, MEDIUM; SOME CLAY

\* \* \* \*

TEST HOLE NUMBER: 433  
LOCATION: 102N-49W-25CCDD  
LEGAL LOCATION: SE SE SW SW SEC. 25, T. 102 N., R. 49 W.

1.0 - 8.0 SAND AND GRAVEL, BROWN, MEDIUM SAND,  
MEDIUM TO COARSE GRAVEL; OXIDIZED, SOME  
COBBLES

12.0 - 16.0 SAND AND GRAVEL, BROWN, MEDIUM SAND,  
MEDIUM GRAVEL; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 434  
LOCATION: 102N-49W-25CCDD 2  
LEGAL LOCATION: SE SE SW SW SEC. 25, T. 102 N., R. 49 W.

0 - 8.0 SAND AND GRAVEL, BROWN, MEDIUM SAND,  
MEDIUM TO COARSE GRAVEL

12.0 - 16.0 SAND AND GRAVEL, BROWN, MEDIUM SAND,  
MEDIUM GRAVEL; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 435  
LOCATION: 102N-49W-28ABBB  
LEGAL LOCATION: NW NW NW NE SEC. 28, T. 102 N., R. 49 W.

2.0 - 7.0 SAND, MEDIUM  
10.0 - 20.0 SAND AND GRAVEL, COARSE SAND, FINE GRAVEL  
20.0 - 34.0 SAND AND GRAVEL, VERY COARSE SAND, FINE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 436  
LOCATION: 102N-49W-28BBAB  
LEGAL LOCATION: NW NE NW NW SEC. 28, T. 102 N., R. 49 W.

5.0 - 27.0 GRAVEL, FINE; SAND

\* \* \* \*

TEST HOLE NUMBER: 437  
LOCATION: 102N-49W-28BBDC  
LEGAL LOCATION: SW SE NW NW SEC. 28, T. 102 N., R. 49 W.

4.0 - 7.0 SAND AND GRAVEL, COARSE SAND, FINE  
GRAVEL, SILTY  
7.0 - 32.0 SAND, VERY COARSE, SILTY

\* \* \* \*

TEST HOLE NUMBER: 438  
LOCATION: 102N-49W-28BCDC  
LEGAL LOCATION: SW SE SW NW SEC. 28, T. 102 N., R. 49 W.

4.0 - 10.0 SAND, VERY COARSE, CLAYEY; GRAVEL  
10.0 - 37.0 SAND AND GRAVEL, VERY COARSE SAND, VERY  
FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 439  
LOCATION: 102N-49W-28CADD  
LEGAL LOCATION: SE SE NE SW SEC. 28, T. 102 N., R. 49 W.

6.0 - 28.0 SAND AND GRAVEL, VERY COARSE SAND, FINE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 440  
LOCATION: 102N-49W-28CBCC  
LEGAL LOCATION: SW SW NW SW SEC. 28, T. 102 N., R. 49 W.

6.0 - 9.0 SAND, FINE; WITH SILT AND CLAY  
9.0 - 14.0 GRAVEL, FINE; WITH SAND, SILT AND CLAY

14.0 - 23.0 GRAVEL, FINE TO COARSE; WITH SAND, SILT  
AND CLAY  
23.0 - 40.0 GRAVEL, FINE TO COARSE; WITH SAND

\* \* \* \*

TEST HOLE NUMBER: 441  
LOCATION: 102N-49W-28CCAC  
LEGAL LOCATION: SW NE SW SW SEC. 28, T. 102 N., R. 49 W.

7.0 - 8.0 SAND, BROWN, VERY FINE TO FINE  
15.0 - 24.0 SAND, MEDIUM TO COARSE; WITH SOME FINE  
GRAVEL  
24.0 - 30.0 SAND, VERY FINE TO COARSE; WITH FINE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 442  
LOCATION: 102N-49W-28CCC  
LEGAL LOCATION: SW SW SW SEC. 28, T. 102 N., R. 49 W.

5.0 - 23.0 GRAVEL; FINE SAND AT BASE  
23.0 - 36.0 GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 443  
LOCATION: 102N-49W-28CCD  
LEGAL LOCATION: SE SW SW SEC. 28, T. 102 N., R. 49 W.

14.0 - 31.0 SAND AND GRAVEL, FINE TO COARSE SAND,  
FINE TO COARSE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 444  
LOCATION: 102N-49W-28CCD 1  
LEGAL LOCATION: SE SW SW SEC. 28, T. 102 N., R. 49 W.

12.0 - 17.0 SAND, FINE TO COARSE; GRAVEL, FINE TO  
MEDIUM, SILTY  
17.0 - 23.0 SAND, FINE TO COARSE; GRAVEL, FINE TO  
MEDIUM, SLIGHTLY SILTY  
23.0 - 28.0 SAND AND GRAVEL, GRAY, FINE TO COARSE  
SAND, FINE TO MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 445  
LOCATION: 102N-49W-28CCD 2  
LEGAL LOCATION: SE SW SW SEC. 28, T. 102 N., R. 49 W.

9.0 - 14.0 SAND, FINE TO MEDIUM, SILTY; SCATTERED

GRAVEL

14.0 - 17.0 SAND, BROWN, FINE TO COARSE, SILTY; SOME  
FINE TO MEDIUM GRAVEL

17.0 - 28.0 SAND, GRAY, FINE TO COARSE SAND, SILTY;  
FINE TO MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 446  
LOCATION: 102N-49W-28CCD 3  
LEGAL LOCATION: SE SW SW SEC. 28, T. 102 N., R. 49 W.

13.0 - 17.0 SAND AND GRAVEL, MEDIUM TO COARSE SAND,  
FINE TO MEDIUM GRAVEL, SILTY TO VERY  
SILTY

17.0 - 21.0 SAND, MEDIUM TO COARSE, SLIGHTLY SILTY;  
SOME FINE GRAVEL

21.0 - 37.5 SAND AND GRAVEL, GRAY, FINE TO COARSE  
SAND, FINE TO MEDIUM GRAVEL, SLIGHTLY  
SILTY

\* \* \* \*

TEST HOLE NUMBER: 447  
LOCATION: 102N-49W-28CCD 4  
LEGAL LOCATION: SE SW SW SEC. 28, T. 102 N., R. 49 W.

14.0 - 19.0 SAND, BROWN, MEDIUM TO COARSE; SOME FINE  
TO MEDIUM GRAVEL

19.0 - 22.0 SAND, FINE TO COARSE; SOME SCATTERED  
FINE GRAVEL

22.0 - 31.0 SAND AND GRAVEL, FINE TO COARSE SAND,  
FINE TO MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 448  
LOCATION: 102N-49W-28CCD 5  
LEGAL LOCATION: SE SW SW SEC. 28, T. 102 N., R. 49 W.

14.0 - 23.0 SAND AND GRAVEL, FINE TO COARSE SAND,  
FINE TO MEDIUM GRAVEL, SILTY

23.0 - 26.0 SAND, MEDIUM TO COARSE, SLIGHTLY SILTY;  
SOME FINE TO MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 449  
LOCATION: 102N-49W-28CCD 6  
LEGAL LOCATION: SE SW SW SEC. 28, T. 102 N., R. 49 W.

13.0 - 28.0 SAND AND GRAVEL, FINE TO COARSE SAND,  
FINE TO MEDIUM GRAVEL, SLIGHTLY SILTY

\* \* \* \*

TEST HOLE NUMBER: 450  
LOCATION: 102N-49W-28CDCC  
LEGAL LOCATION: SW SW SE SW SEC. 28, T. 102 N., R. 49 W.

11.0 - 15.0 SAND, MEDIUM TO COARSE  
15.0 - 30.0 SAND AND GRAVEL, VERY COARSE SAND, FINE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 451  
LOCATION: 102N-49W-28CDD  
LEGAL LOCATION: SE SE SW SEC. 28, T. 102 N., R. 49 W.

9.0 - 24.0 GRAVEL  
24.0 - 28.0 GRAVEL AND SAND

\* \* \* \*

TEST HOLE NUMBER: 452  
LOCATION: 102N-49W-28DBBB  
LEGAL LOCATION: NW NW NW SE SEC. 28, T. 102 N., R. 49 W.

0 - 10.0 SAND, MEDIUM, WELL-SORTED; SILTED  
10.0 - 15.0 SAND, COARSE  
15.0 - 30.0 SAND AND GRAVEL, VERY COARSE SAND, VERY  
FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 453  
LOCATION: 102N-49W-28DDD  
LEGAL LOCATION: SE SE SE SEC. 28, T. 102 N., R. 49 W.

9.0 - 14.0 SAND, FINE  
14.0 - 34.0 SAND, MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 454  
LOCATION: 102N-49W-28DDDD  
LEGAL LOCATION: SE SE SE SE SEC. 28, T. 102 N., R. 49 W.

14.0 - 32.0 SAND, COARSE, VERY COARSE TOWARD BOTTOM

\* \* \* \*

TEST HOLE NUMBER: 455  
LOCATION: 102N-49W-29AAAB  
LEGAL LOCATION: NW NE NE NE SEC. 29, T. 102 N., R. 49 W.

9.0 - 17.0 GRAVEL AND SAND, CLAYEY



17.0 - 45.0 SAND AND GRAVEL, VERY COARSE SAND, VERY FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 456  
LOCATION: 102N-49W-29ADDC  
LEGAL LOCATION: SW SE SE NE SEC. 29, T. 102 N., R. 49 W.

14.0 - 35.0 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 457  
LOCATION: 102N-49W-29BDCD  
LEGAL LOCATION: SE SW SE NW SEC. 29, T. 102 N., R. 49 W.

11.0 - 16.0 SAND, MEDIUM  
16.0 - 18.0 GRAVEL  
18.0 - 36.0 SAND; WITH FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 458  
LOCATION: 102N-49W-29CC  
LEGAL LOCATION: SW SW SEC. 29, T. 102 N., R. 49 W.

5.0 - 14.0 SAND, GRAVELLY  
18.0 - 21.0 SAND AND GRAVEL; BOULDERS  
21.0 - 33.0 SAND, LIGHT-BROWN, COARSE; WET

\* \* \* \*

TEST HOLE NUMBER: 459  
LOCATION: 102N-49W-29CC 1  
LEGAL LOCATION: SW SW SEC. 29, T. 102 N., R. 49 W.

4.0 - 11.0 GRAVEL  
12.0 - 14.0 GRAVEL  
14.0 - 23.0 GRAVEL, VERY COARSE  
23.0 - 34.0 SAND, VERY COARSE; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 460  
LOCATION: 102N-49W-29CC 2  
LEGAL LOCATION: SW SW SEC. 29, T. 102 N., R. 49 W.

12.0 - 20.0 SAND, LIGHT-BROWN; CLEAN, MOIST  
20.0 - 28.0 SAND AND CLAY, GRAY; WET

\* \* \* \*

TEST HOLE NUMBER: 461

LOCATION: 102N-49W-29CCC 3  
LEGAL LOCATION: SW SW SW SEC. 29, T. 102 N., R. 49 W.

10.0 -	17.0	GRAVEL, COARSE; SOME CLAY AT TOP
17.0 -	25.0	GRAVEL
25.0 -	27.0	SAND, FINE

\* \* \* \*

TEST HOLE NUMBER: 462  
LOCATION: 102N-49W-29CD  
LEGAL LOCATION: SE SW SEC. 29, T. 102 N., R. 49 W.

14.0 -	19.0	SAND, FINE TO COARSE
19.0 -	24.0	SAND, MEDIUM TO COARSE
24.0 -	29.0	SAND, FINE TO MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 463  
LOCATION: 102N-49W-29DCAA  
LEGAL LOCATION: NE NE SW SE SEC. 29, T. 102 N., R. 49 W.

4.0 -	10.0	GRAVEL AND SAND, MEDIUM
10.0 -	22.0	SAND, VERY COARSE; GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 464  
LOCATION: 102N-49W-29DD  
LEGAL LOCATION: SE SE SEC. 29, T. 102 N., R. 49 W.

10.0 -	30.0	GRAVEL
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\* \* \* \*

TEST HOLE NUMBER: 465  
LOCATION: 102N-49W-29DDDA  
LEGAL LOCATION: NE SE SE SE SEC. 29, T. 102 N., R. 49 W.

0 -	3.0	SAND, MEDIUM, WELL-SORTED
3.0 -	32.0	SAND AND GRAVEL, VERY COARSE SAND, FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 466  
LOCATION: 102N-49W-30DD  
LEGAL LOCATION: SE SE SEC. 30, T. 102 N., R. 49 W.

0 -	1.0	SAND AND CLAY, BLACK; MOIST (TOPSOIL)
1.0 -	6.0	SAND, LIGHT-BROWN, GRAVELLY; MOIST
6.0 -	12.0	GRAVEL, COARSE

12.0 - 19.0 SAND, GRAVELLY

\* \* \* \*

TEST HOLE NUMBER: 467  
LOCATION: 102N-49W-30DD 1  
LEGAL LOCATION: SE SE SEC. 30, T. 102 N., R. 49 W.

1.0 - 11.0 GRAVEL, BOULDERY; VERY CLEAN  
12.0 - 21.0 GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 468  
LOCATION: 102N-49W-31BAAA  
LEGAL LOCATION: NE NE NE NW SEC. 31, T. 102 N., R. 49 W.

20.0 - 30.0 SAND, FINE TO MEDIUM; SATURATED

\* \* \* \*

TEST HOLE NUMBER: 469  
LOCATION: 102N-49W-32AACA  
LEGAL LOCATION: NE SW NE NE SEC. 32, T. 102 N., R. 49 W.

2.0 - 4.0 SAND, DARK-BROWN, CLAYEY; DRY  
4.0 - 7.0 SAND AND GRAVEL, FINE; DIRTY, DRY  
7.0 - 9.0 SAND, REDDISH-BROWN, MEDIUM; DRY  
12.0 - 22.0 GRAVEL, BROWN, MEDIUM TO COARSE, SANDY;  
VERY DIRTY  
22.0 - 25.0 SAND AND GRAVEL, GRAY, FINE

\* \* \* \*

TEST HOLE NUMBER: 470  
LOCATION: 102N-49W-32AACC  
LEGAL LOCATION: SW SW NE NE SEC. 32, T. 102 N., R. 49 W.

11.0 - 23.0 SAND AND GRAVEL, COARSE GRAVEL; FAIRLY  
CLEAN  
23.0 - 26.0 SAND AND GRAVEL, COARSE SAND, FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 471  
LOCATION: 102N-49W-32AADA  
LEGAL LOCATION: NE SE NE NE SEC. 32, T. 102 N., R. 49 W.

3.0 - 11.0 SAND, MEDIUM  
11.0 - 16.0 SAND, MEDIUM TO COARSE; WITH GRAVEL  
16.0 - 35.0 SAND AND GRAVEL, COARSE SAND TO COARSE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 472  
LOCATION: 102N-49W-32ABBB  
LEGAL LOCATION: NW NW NW NE SEC. 32, T. 102 N., R. 49 W.

15.0 - 25.0 SAND, FINE; WITH CLAY  
25.0 - 29.0 SAND AND GRAVEL; LITTLE CLAY

\* \* \* \*

TEST HOLE NUMBER: 473  
LOCATION: 102N-49W-32ABCA  
LEGAL LOCATION: NE SW NW NE SEC. 32, T. 102 N., R. 49 W.

10.0 - 17.0 SAND, FINE TO COARSE; WITH GRAVEL LENSES  
17.0 - 27.0 SAND AND GRAVEL, FINE GRAVEL; WITH SOME  
CLAY

\* \* \* \*

TEST HOLE NUMBER: 474  
LOCATION: 102N-49W-32ABCA 2  
LEGAL LOCATION: NE SW NW NE SEC. 32, T. 102 N., R. 49 W.

8.0 - 12.0 GRAVEL, FINE; WITH SAND AND BROWN CLAY  
12.0 - 25.0 GRAVEL AND SAND, FINE TO PEA-SIZE GRAVEL,  
FINE TO COARSE SAND; CLEAN  
25.0 - 29.0 GRAVEL AND SAND, FINE TO COARSE GRAVEL,  
FINE TO COARSE SAND

\* \* \* \*

TEST HOLE NUMBER: 475  
LOCATION: 102N-49W-32ABCC  
LEGAL LOCATION: SW SW NW NE SEC. 32, T. 102 N., R. 49 W.

15.0 - 37.0 SAND AND GRAVEL, VERY COARSE SAND, FINE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 476  
LOCATION: 102N-49W-32ADAC  
LEGAL LOCATION: SW NE SE NE SEC. 32, T. 102 N., R. 49 W.

15.0 - 16.0 SAND; WITH FINE TO COARSE GRAVEL  
16.0 - 20.0 SAND AND GRAVEL, MEDIUM SAND, FINE  
GRAVEL; WITH SOME CLAY  
20.0 - 24.0 SAND AND GRAVEL, MEDIUM SAND TO MEDIUM  
GRAVEL  
24.0 - 28.0 SAND, FINE TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 477

LOCATION: 102N-49W-32ADAD

LEGAL LOCATION: SE NE SE NE SEC. 32, T. 102 N., R. 49 W.

9.0 -	23.0	SAND, FINE TO COARSE; CLEAN, SATURATED
23.0 -	30.0	GRAVEL AND SAND, FINE TO COARSE GRAVEL, FINE TO COARSE SAND

\* \* \* \*

TEST HOLE NUMBER: 478

LOCATION: 102N-49W-32ADBB

LEGAL LOCATION: NW NW SE NE SEC. 32, T. 102 N., R. 49 W.

6.0 -	14.0	SAND, FINE TO MEDIUM; CLEAN
14.0 -	30.0	GRAVEL AND SAND, FINE GRAVEL, FINE TO COARSE SAND; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 479

LOCATION: 102N-49W-32BAB

LEGAL LOCATION: NW NE NW SEC. 32, T. 102 N., R. 49 W.

11.0 -	16.0	SAND, MEDIUM
16.0 -	30.0	SAND, MEDIUM TO COARSE; WITH SOME COARSE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 480

LOCATION: 102N-49W-32CDAD

LEGAL LOCATION: SE NE SE SW SEC. 32, T. 102 N., R. 49 W.

5.0 -	10.0	SAND AND GRAVEL, COARSE GRAVEL
10.0 -	15.0	GRAVEL, VERY COARSE
15.0 -	27.0	SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 481

LOCATION: 102N-49W-33ACCC

LEGAL LOCATION: SW SW SW NE SEC. 33, T. 102 N., R. 49 W.

7.0 -	12.0	SAND, FINE TO COARSE; WITH CLAY AND FINE TO MEDIUM GRAVEL
12.0 -	32.0	SAND, MEDIUM TO COARSE; WITH CLAY AND FINE TO MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 482

LOCATION: 102N-49W-33BAAA

LEGAL LOCATION: NE NE NE NW SEC. 33, T. 102 N., R. 49 W.

3.0 -	11.0	SAND, BROWN, FINE TO MEDIUM
11.0 -	23.0	SAND, MEDIUM TO COARSE; WITH FINE GRAVEL, BROWN SILT AND CLAY
23.0 -	27.0	SAND, MEDIUM TO COARSE; WITH FINE TO COARSE GRAVEL AND BROWN CLAY

\* \* \* \*

TEST HOLE NUMBER: 483  
 LOCATION: 102N-49W-33BBAA  
 LEGAL LOCATION: NE NE NW NW SEC. 33, T. 102 N., R. 49 W.

3.0 -	12.0	SAND, BROWN, VERY FINE TO FINE
12.0 -	15.0	SAND, FINE TO COARSE; WITH SOME CLAY AND FINE GRAVEL
15.0 -	30.0	SAND, MEDIUM TO COARSE; WITH FINE TO MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 484  
 LOCATION: 102N-49W-33BBBA  
 LEGAL LOCATION: NE NW NW NW SEC. 33, T. 102 N., R. 49 W.

10.0 -	12.0	SAND, BROWN, FINE TO VERY COARSE; DIRTY
12.0 -	18.0	SAND, BROWN, FINE, GRAVELLY; DIRTY
18.0 -	22.0	SAND AND GRAVEL, GRAY, FINE TO MEDIUM; SOME COARSE GRAVEL
22.0 -	27.0	SAND AND GRAVEL, GRAY, MEDIUM; SEVERAL INCHES OF CLAY AT 25 FEET, SOME COARSE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 485  
 LOCATION: 102N-49W-33BBBB  
 LEGAL LOCATION: NW NW NW NW SEC. 33, T. 102 N., R. 49 W.

10.0 -	16.0	SAND, DARK-BROWN, FINE TO VERY COARSE; WET, VERY DIRTY, SOME FINE GRAVEL
16.0 -	24.0	SAND AND GRAVEL, BROWN, FINE; DIRTY, COAL FRAGMENTS
24.0 -	32.0	SAND AND GRAVEL, GRAY, FINE TO MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 486  
 LOCATION: 102N-49W-33BBDB  
 LEGAL LOCATION: NW SE NW NW SEC. 33, T. 102 N., R. 49 W.

10.0 -	16.0	SAND, COARSE; SOME CLAY
16.0 -	18.0	SAND, COARSE; 40 PERCENT GRAVEL, DIRTY
18.0 -	41.0	SAND AND GRAVEL, COARSE SAND TO COARSE GRAVEL; WITH STREAKS OF VERY COARSE

GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 487  
LOCATION: 102N-49W-33BCBA  
LEGAL LOCATION: NE NW SW NW SEC. 33, T. 102 N., R. 49 W.

7.0 -	12.0	GRAVEL AND SAND, FINE GRAVEL, COARSE SAND, SILTY
12.0 -	18.0	GRAVEL AND SAND, FINE GRAVEL, MEDIUM TO COARSE SAND; CLEAN
18.0 -	35.0	GRAVEL AND SAND, FINE GRAVEL, VERY COARSE SAND

\* \* \* \*

TEST HOLE NUMBER: 488  
LOCATION: 102N-49W-33BDCB  
LEGAL LOCATION: NW SW SE NW SEC. 33, T. 102 N., R. 49 W.

3.0 -	7.0	SAND, ORANGISH-BROWN, VERY FINE TO FINE
7.0 -	9.0	SAND, FINE TO MEDIUM; WITH SOME GRAVEL
9.0 -	14.0	SAND, FINE TO COARSE; WITH FINE TO MEDIUM GRAVEL
14.0 -	25.0	SAND, FINE TO COARSE; WITH FINE TO COARSE GRAVEL
25.0 -	37.0	GRAVEL, FINE TO COARSE; WITH COARSE SAND

\* \* \* \*

TEST HOLE NUMBER: 489  
LOCATION: 102N-49W-33CABB  
LEGAL LOCATION: NW NW NE SW SEC. 33, T. 102 N., R. 49 W.

3.0 -	17.0	SAND, FINE TO MEDIUM; WITH SOME GRAVEL
17.0 -	24.0	SAND, MEDIUM TO COARSE; WITH SOME GRAVEL
24.0 -	36.0	SAND, COARSE; WITH FINE TO COARSE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 490  
LOCATION: 102N-49W-33CADD  
LEGAL LOCATION: SE SE NE SW SEC. 33, T. 102 N., R. 49 W.

5.0 -	7.0	SAND, MEDIUM, CLAYEY
7.0 -	9.0	SAND, MEDIUM TO COARSE
9.0 -	12.0	GRAVEL AND SAND, COARSE GRAVEL, MEDIUM TO COARSE SAND
12.0 -	33.0	SAND, VERY COARSE

\* \* \* \*

TEST HOLE NUMBER: 491

LOCATION: 102N-49W-33CDDD

LEGAL LOCATION: SE SE SE SW SEC. 33, T. 102 N., R. 49 W.

2.0 -	9.0	SAND, FINE; WITH CLAY AND SILT
9.0 -	27.0	SAND, MEDIUM TO COARSE; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 492

LOCATION: 102N-49W-33DBAA

LEGAL LOCATION: NE NE NW SE SEC. 33, T. 102 N., R. 49 W.

5.0 -	12.0	SAND, COARSE, SLIGHTLY SILTY
12.0 -	22.0	SAND, COARSE TO VERY COARSE
22.0 -	30.0	SAND AND GRAVEL, VERY COARSE SAND, VERY FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 493

LOCATION: 102N-49W-33DDCC

LEGAL LOCATION: SW SW SE SE SEC. 33, T. 102 N., R. 49 W.

4.0 -	36.0	SAND AND GRAVEL, VERY COARSE SAND, VERY FINE GRAVEL
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\* \* \* \*

TEST HOLE NUMBER: 494

LOCATION: 102N-49W-34ABB

LEGAL LOCATION: NW NW NE SEC. 34, T. 102 N., R. 49 W.

23.0 -	30.0	SAND, FINE, CLAYEY, PEBBLY
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\* \* \* \*

TEST HOLE NUMBER: 495

LOCATION: 102N-49W-36ADAB

LEGAL LOCATION: NW NE SE NE SEC. 36, T. 102 N., R. 49 W.

15.0 -	19.0	SAND, VERY COARSE
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\* \* \* \*

TEST HOLE NUMBER: 496

LOCATION: 102N-49W-36ADDC

LEGAL LOCATION: SW SE SE NE SEC. 36, T. 102 N., R. 49 W.

13.0 -	17.0	SAND, BROWN, SILTY
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\* \* \* \*

TEST HOLE NUMBER: 497

LOCATION: 102N-49W-36BBBB



LEGAL LOCATION: NW NW NW NW SEC. 36, T. 102 N., R. 49 W.

1.0 - 6.0 SAND, BROWN, MEDIUM; OXIDIZED  
20.0 - 26.0 SAND, BROWN, MEDIUM; OXIDIZED, SOME FINE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 498

LOCATION: 102N-49W-36DCCD

LEGAL LOCATION: SE SW SW SE SEC. 36, T. 102 N., R. 49 W.

4.0 - 16.0 SAND, MEDIUM TO COARSE; SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 499

LOCATION: 102N-49W-36DCCD 2

LEGAL LOCATION: SE SW SW SE SEC. 36, T. 102 N., R. 49 W.

7.0 - 10.0 SAND, BROWN, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 500

LOCATION: 102N-50W-07CCCC

LEGAL LOCATION: SW SW SW SW SEC. 07, T. 102 N., R. 50 W.

0 - 8.0 SAND AND GRAVEL, FINE SAND TO FINE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 501

LOCATION: 102N-50W-19BCDC

LEGAL LOCATION: SW SE SW NW SEC. 19, T. 102 N., R. 50 W.

1.0 - 22.0 GRAVEL, COARSE; LARGE ROCKS LAST 3 FEET

\* \* \* \*

TEST HOLE NUMBER: 502

LOCATION: 102N-50W-19CBB

LEGAL LOCATION: NW NW SW SEC. 19, T. 102 N., R. 50 W.

3.0 - 9.0 SAND, FINE TO MEDIUM, CLAYEY  
9.0 - 10.0 GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 503

LOCATION: 102N-50W-19CBBB

LEGAL LOCATION: NW NW NW SW SEC. 19, T. 102 N., R. 50 W.

0 - 20.0 SAND, BROWN, MEDIUM; OXIDIZED  
20.0 - 26.0 SAND AND GRAVEL, BROWN, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 504  
LOCATION: 102N-50W-19DBB  
LEGAL LOCATION: NW NW SE SEC. 19, T. 102 N., R. 50 W.

9.0 - 14.0 SAND, MEDIUM  
14.0 - 24.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 505  
LOCATION: 102N-50W-27CCCC  
LEGAL LOCATION: SW SW SW SW SEC. 27, T. 102 N., R. 50 W.

19.0 - 28.0 SAND AND GRAVEL, MEDIUM SAND TO COARSE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 506  
LOCATION: 102N-51W-03ABB  
LEGAL LOCATION: NW NW NE SEC. 03, T. 102 N., R. 51 W.

1.0 - 8.0 SAND AND GRAVEL, COARSE SAND  
8.0 - 20.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 507  
LOCATION: 102N-51W-03ABBB  
LEGAL LOCATION: NW NW NW NE SEC. 03, T. 102 N., R. 51 W.

4.0 - 23.0 SAND, MEDIUM TO COARSE; DRY

\* \* \* \*

TEST HOLE NUMBER: 508  
LOCATION: 102N-51W-03ADD  
LEGAL LOCATION: SE SE NE SEC. 03, T. 102 N., R. 51 W.

4.0 - 6.0 GRAVEL, COARSE  
6.0 - 23.0 SAND, BROWN, SILTY

\* \* \* \*

TEST HOLE NUMBER: 509  
LOCATION: 102N-51W-03DAAD  
LEGAL LOCATION: SE NE NE SE SEC. 03, T. 102 N., R. 51 W.

2.0 - 5.0 SAND, MEDIUM

5.0 - 10.0 GRAVEL; LOOSE; SAMPLE TAKEN AT 8 FEET

\* \* \* \*

TEST HOLE NUMBER: 510

LOCATION: 102N-51W-10AAA

LEGAL LOCATION: NE NE NE SEC. 10, T. 102 N., R. 51 W.

3.0 - 8.0 SAND AND GRAVEL, REDDISH-BROWN, CLAYEY  
8.0 - 12.0 SAND AND GRAVEL, COARSE SAND, COARSE  
GRAVEL, CLAYEY  
12.0 - 15.0 GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 511

LOCATION: 102N-51W-12CCCC

LEGAL LOCATION: SW SW SW SW SEC. 12, T. 102 N., R. 51 W.

0 - 12.0 SAND AND GRAVEL, FINE SAND TO FINE  
GRAVEL, SILTY

\* \* \* \*

TEST HOLE NUMBER: 512

LOCATION: 102N-51W-13DBBC

LEGAL LOCATION: SW NW NW SE SEC. 13, T. 102 N., R. 51 W.

14.0 - 18.0 SAND, MEDIUM TO COARSE  
18.0 - 21.0 SAND AND GRAVEL; WITH ROCKS AND CLAY

\* \* \* \*

TEST HOLE NUMBER: 513

LOCATION: 102N-51W-25BBCB

LEGAL LOCATION: NW SW NW NW SEC. 25, T. 102 N., R. 51 W.

1.0 - 7.0 SAND AND GRAVEL, FINE TO MEDIUM SAND,  
FINE TO COARSE GRAVEL, ROUNDED; DRY TO  
MOIST, SOME CLAY, OXIDIZED, ABANDONED  
SITE AFTER 3 ATTEMPTS TO PENETRATE  
BEYOND 7 FEET

\* \* \* \*

TEST HOLE NUMBER: 514

LOCATION: 102N-51W-25DDDD

LEGAL LOCATION: SE SE SE SE SEC. 25, T. 102 N., R. 51 W.

5.0 - 15.0 SAND AND GRAVEL, COARSE SAND TO COARSE  
GRAVEL; WITH WHITE ROCKS

\* \* \* \*

TEST HOLE NUMBER: 515  
LOCATION: 102N-51W-26CCCD  
LEGAL LOCATION: SE SW SW SW SEC. 26, T. 102 N., R. 51 W.

1.0 - 5.0 SAND AND GRAVEL, BROWN, MEDIUM TO COARSE  
SAND, FINE TO COARSE GRAVEL, CLAYEY;  
OXIDIZED, DRY

\* \* \* \*

TEST HOLE NUMBER: 516  
LOCATION: 102N-51W-36BBBB  
LEGAL LOCATION: NW NW NW NW SEC. 36, T. 102 N., R. 51 W.

6.0 - 16.0 SAND, ORANGE-BROWN, FINE TO MEDIUM; SOME  
FINE TO MEDIUM GRAVEL, SATURATED,  
OXIDIZED, HIT ROCK ABANDONED HOLE

\* \* \* \*

TEST HOLE NUMBER: 517  
LOCATION: 102N-52W-10AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 10, T. 102 N., R. 52 W.

15.0 - 22.0 GRAVEL, BROWN, MEDIUM TO COARSE; SOME  
CLAY

\* \* \* \*

TEST HOLE NUMBER: 518  
LOCATION: 102N-52W-27DCDC  
LEGAL LOCATION: SE SW SE SW SEC. 27, T. 102 N., R. 52 W.

7.0 - 9.0 SAND, TAN-BROWN, FINE TO MEDIUM;  
OXIDIZED, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 519  
LOCATION: 102N-52W-27DCDC  
LEGAL LOCATION: SW SE SW SE SEC. 27, T. 102 N., R. 52 W.

24.0 - 30.0 GRAVEL, GRAY; SATURATED, UNOXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 520  
LOCATION: 102N-52W-36CCDC  
LEGAL LOCATION: SW SE SW SW SEC. 36, T. 102 N., R. 52 W.

6.0 - 9.0 SAND, REDDISH-BROWN, MEDIUM TO COARSE,  
SLIGHTLY CLAYEY, SLIGHTLY GRAVELLY;  
OXIDIZED, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 521  
LOCATION: 103N-47W-04AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 04, T. 103 N., R. 47 W.

0 - 9.0 GRAVEL, BROWN, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 522  
LOCATION: 103N-47W-04ADAA  
LEGAL LOCATION: NE NE SE NE SEC. 04, T. 103 N., R. 47 W.

6.0 - 24.0 SAND, BROWN, FINE TO COARSE; CLEAN, DRY,  
OXIDIZED, SATURATED AT 12 FEET

\* \* \* \*

TEST HOLE NUMBER: 523  
LOCATION: 103N-47W-05AADD  
LEGAL LOCATION: SE SE NE NE SEC. 05, T. 103 N., R. 47 W.

5.0 - 15.0 SAND AND GRAVEL, MEDIUM SAND, MEDIUM  
GRAVEL; OXIDIZED, SOME CLAY LAYERS  
THROUGHOUT

\* \* \* \*

TEST HOLE NUMBER: 524  
LOCATION: 103N-47W-05DDDA  
LEGAL LOCATION: NE SE SE SE SEC. 05, T. 103 N., R. 47 W.

16.0 - 17.0 SAND AND GRAVEL, BROWN, FINE TO COARSE  
SAND, FINE TO MEDIUM GRAVEL, CLAYEY;  
OXIDIZED, MOIST

19.0 - 22.0 SAND AND GRAVEL, BROWN, FINE TO COARSE  
SAND, FINE TO MEDIUM GRAVEL, CLAYEY;  
OXIDIZED, MOIST

25.0 - 26.0 SAND, BROWN, FINE TO MEDIUM, SLIGHTLY  
CLAYEY; OXIDIZED, MOIST

\* \* \* \*

TEST HOLE NUMBER: 525  
LOCATION: 103N-47W-15DCCD  
LEGAL LOCATION: SE SW SW SE SEC. 15, T. 103 N., R. 47 W.

10.0 - 30.0 SAND, MEDIUM TO COARSE, SLIGHTLY CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 526  
LOCATION: 103N-47W-15DDAC

LEGAL LOCATION: SW NE SE SE SEC. 15, T. 103 N., R. 47 W.

14.0 - 29.0 SAND, REDDISH-BROWN, FINE TO MEDIUM,  
SOME COARSE TO VERY COARSE; VERY  
SLIGHTLY HARD

\* \* \* \*

TEST HOLE NUMBER: 527

LOCATION: 103N-47W-15DDAD

LEGAL LOCATION: SE NE SE SE SEC. 15, T. 103 N., R. 47 W.

11.0 - 16.0 SAND, MEDIUM TO COARSE, SLIGHTLY CLAYEY  
16.0 - 28.0 SAND, REDDISH-BROWN, MEDIUM TO VERY  
COARSE, VERY SLIGHTLY CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 528

LOCATION: 103N-47W-15DDBA

LEGAL LOCATION: NE NW SE SE SEC. 15, T. 103 N., R. 47 W.

15.0 - 24.0 SAND, REDDISH-BROWN, FINE TO COARSE,  
SOME VERY COARSE

\* \* \* \*

TEST HOLE NUMBER: 529

LOCATION: 103N-47W-15DDBD

LEGAL LOCATION: SE NW SE SE SEC. 15, T. 103 N., R. 47 W.

22.0 - 34.0 SAND, REDDISH-BROWN, FINE TO MEDIUM,  
SLIGHTLY CLAYEY; WITH SOME COARSE SAND

\* \* \* \*

TEST HOLE NUMBER: 530

LOCATION: 103N-47W-15DDCC

LEGAL LOCATION: SW SW SE SE SEC. 15, T. 103 N., R. 47 W.

11.0 - 18.0 GRAVEL, COARSE TO VERY COARSE

\* \* \* \*

TEST HOLE NUMBER: 531

LOCATION: 103N-47W-15DDDA 1

LEGAL LOCATION: NE SE SE SE SEC. 15, T. 103 N., R. 47 W.

20.0 - 35.0 SAND, BROWN, FINE TO MEDIUM, SLIGHTLY  
CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 532

LOCATION: 103N-47W-15DDDA 2

LEGAL LOCATION: NE SE SE SE SEC. 15, T. 103 N., R. 47 W.

11.0 - 16.0 SAND, BROWN, CLAYEY  
16.0 - 32.0 SAND, REDDISH-BROWN, MEDIUM TO COARSE  
SOME VERY COARSE; SLIGHTLY CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 533

LOCATION: 103N-47W-15DDDC 1

LEGAL LOCATION: SW SE SE SE SEC. 15, T. 103 N., R. 47 W.

12.0 - 16.0 SAND, REDDISH-BROWN, MEDIUM TO VERY  
COARSE

\* \* \* \*

TEST HOLE NUMBER: 534

LOCATION: 103N-47W-15DDDC 2

LEGAL LOCATION: SW SE SE SE SEC. 15, T. 103 N., R. 47 W.

14.0 - 28.0 SAND, REDDISH-BROWN, FINE TO COARSE;  
VERY SLIGHTLY HARD

\* \* \* \*

TEST HOLE NUMBER: 535

LOCATION: 103N-47W-15DDDD

LEGAL LOCATION: SE SE SE SE SEC. 15, T. 103 N., R. 47 W.

16.0 - 32.0 SAND, BROWN, COARSE TO VERY COARSE; SOME  
GRAVEL FROM 27 TO 32 FEET

\* \* \* \*

TEST HOLE NUMBER: 536

LOCATION: 103N-47W-19DDDD

LEGAL LOCATION: SE SE SE SE SEC. 19, T. 103 N., R. 47 W.

1.0 - 7.0 SAND, YELLOWISH-BROWN, VERY FINE, CLAYEY;  
OXIDIZED  
7.0 - 13.0 SAND, ORANGISH-BROWN, MEDIUM TO COARSE;  
OXIDIZED  
13.0 - 14.0 SAND, PINK, MEDIUM TO COARSE; MOSTLY  
QUARTZ

\* \* \* \*

TEST HOLE NUMBER: 537

LOCATION: 103N-47W-22BABA

LEGAL LOCATION: NE NW NE NW SEC. 22, T. 103 N., R. 47 W.

23.0 - 41.0 SAND, GRAYISH-BROWN, FINE TO MEDIUM,

VERY CLAYEY; DRILLED HARDER THAN  
INTERVAL FROM 4 TO 23 FEET

\* \* \* \*

TEST HOLE NUMBER: 538  
LOCATION: 103N-48W-01BBBB  
LEGAL LOCATION: NW NW NW NW SEC. 01, T. 103 N., R. 48 W.

5.0 - 12.0 GRAVEL, BROWN, MEDIUM TO COARSE; OXIDIZED  
13.0 - 27.0 SAND, BROWN, VERY COARSE, GRADES TO A  
FINE TO COARSE GRAVEL WITH DEPTH;  
OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 539  
LOCATION: 103N-48W-01CDDC  
LEGAL LOCATION: SW SE SE SW SEC. 01, T. 103 N., R. 48 W.

23.0 - 24.0 GRAVEL(?); NO RETURN, HIT QUARTZITE AT 24  
FEET

\* \* \* \*

TEST HOLE NUMBER: 540  
LOCATION: 103N-48W-06BABB  
LEGAL LOCATION: NW NW NE NW SEC. 06, T. 103 N., R. 48 W.

1.0 - 6.0 SAND AND GRAVEL, BROWN, MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 541  
LOCATION: 103N-48W-06BABB 1  
LEGAL LOCATION: NW NW NE NW SEC. 06, T. 103 N., R. 48 W.

4.0 - 7.0 SAND AND GRAVEL, BROWN, FINE TO COARSE  
SAND, FINE TO MEDIUM GRAVEL, CLAYEY;  
MOIST

\* \* \* \*

TEST HOLE NUMBER: 542  
LOCATION: 103N-48W-11AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 11, T. 103 N., R. 48 W.

14.0 - 16.0 GRAVEL(?), COBBLY; HIT QUARTZITE AT 16  
FEET

\* \* \* \*

TEST HOLE NUMBER: 543  
LOCATION: 103N-48W-18BBAA



LEGAL LOCATION: NE NE NW NW SEC. 18, T. 103 N., R. 48 W.

5.0 - 12.0 SAND, BROWN, MEDIUM; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 544

LOCATION: 103N-48W-19CBBB

LEGAL LOCATION: NW NW NW SW SEC. 19, T. 103 N., R. 48 W.

10.0 - 16.0 SAND, BROWN, FINE TO MEDIUM, VERY CLAYEY;  
FEW PEBBLES, OXIDIZED, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 545

LOCATION: 103N-48W-23CCDC

LEGAL LOCATION: SW SE SW SW SEC. 23, T. 103 N., R. 48 W.

19.0 - 31.0 SAND, BROWN, MEDIUM TO COARSE, VERY  
SLIGHTLY CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 546

LOCATION: 103N-48W-24ABAA

LEGAL LOCATION: NE NE NW NE SEC. 24, T. 103 N., R. 48 W.

2.0 - 10.0 SAND, LIGHT-BROWN, FINE TO COARSE; SOME  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 547

LOCATION: 103N-48W-24ABBA

LEGAL LOCATION: NE NW NW NE SEC. 24, T. 103 N., R. 48 W.

8.0 - 11.0 GRAVEL, BROWN, MEDIUM TO COARSE; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 548

LOCATION: 103N-48W-26ABAA

LEGAL LOCATION: NE NE NW NE SEC. 26, T. 103 N., R. 48 W.

4.0 - 12.0 SAND AND GRAVEL, BROWN, FINE TO COARSE  
SAND, FINE TO VERY COARSE GRAVEL;  
OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 549

LOCATION: 103N-48W-26BBBB

LEGAL LOCATION: NW NW NW NW SEC. 26, T. 103 N., R. 48 W.

15.0 - 35.0 SAND, BROWN, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 550  
LOCATION: 103N-48W-26CBBB  
LEGAL LOCATION: NW NW NW SW SEC. 26, T. 103 N., R. 48 W.

1.0 - 19.0 SAND, BROWN, COARSE TO VERY COARSE;  
SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 551  
LOCATION: 103N-48W-26CCCD  
LEGAL LOCATION: SE SW SW SW SEC. 26, T. 103 N., R. 48 W.

12.0 - 24.0 SAND, GRAYISH-BROWN, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 552  
LOCATION: 103N-48W-26CDDD  
LEGAL LOCATION: SE SE SE SW SEC. 26, T. 103 N., R. 48 W.

21.0 - 64.0 SANDSTONE, BLACK; 1/4- TO 1/8-INCH CHIPS,  
DRILLED HARD, DRIED OUT TO LIGHT-  
GRAYISH-BROWN

\* \* \* \*

TEST HOLE NUMBER: 553  
LOCATION: 103N-48W-27DDAA  
LEGAL LOCATION: NE NE SE SE SEC. 27, T. 103 N., R. 48 W.

20.0 - 28.0 SAND, ORANGISH-BROWN, MEDIUM TO COARSE;  
SOME GRAVEL, OCCASIONALLY DRILLED HARD

\* \* \* \*

TEST HOLE NUMBER: 554  
LOCATION: 103N-48W-27DDBD  
LEGAL LOCATION: SE NW SE SE SEC. 27, T. 103 N., R. 48 W.

12.0 - 20.0 SAND, BROWN, MEDIUM TO COARSE, VERY  
SLIGHTLY CLAYEY; QUARTZITE BOULDER  
AT 18 TO 19 FEET  
25.0 - 45.0 SAND, ORANGE, FINE TO MEDIUM, WELL  
SORTED

\* \* \* \*

TEST HOLE NUMBER: 555  
LOCATION: 103N-48W-27DDDC

LEGAL LOCATION: SW SE SE SE SEC. 27, T. 103 N., R. 48 W.

9.0 - 11.0 SAND, BROWN, COARSE TO VERY COARSE;  
SOME PEBBLES  
11.0 - 15.0 SAND, ORANGISH-BROWN, FINE TO MEDIUM  
15.0 - 32.0 SAND, LIGHT-BROWN, FINE TO MEDIUM; SOME  
VERY COARSE SAND AND SOME PEBBLES

\* \* \* \*

TEST HOLE NUMBER: 556  
LOCATION: 103N-48W-27DDDD  
LEGAL LOCATION: SE SE SE SE SEC. 27, T. 103 N., R. 48 W.

14.0 - 18.0 GRAVEL, MEDIUM TO COARSE; WITH ROCKS  
18.0 - 24.0 GRAVEL, MEDIUM TO COARSE; WITH MEDIUM TO  
COARSE SAND  
24.0 - 26.0 GRAVEL, FINE, WELL-SORTED; ABUNDANT  
QUARTZ PEBBLES

\* \* \* \*

TEST HOLE NUMBER: 557  
LOCATION: 103N-48W-29AACA  
LEGAL LOCATION: NE SW NE NE SEC. 29, T. 103 N., R. 48 W.

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\* THIS LOG CONTAINS UNVERIFIED INFORMATION \*  
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10.0 - 18.0 GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 558  
LOCATION: 103N-48W-34AAAD  
LEGAL LOCATION: SE NE NE NE SEC. 34, T. 103 N., R. 48 W.

7.0 - 17.0 SAND, REDDISH-BROWN AND GRAY, COARSE SAND  
TO FINE GRAVEL; SOME LAYERS OF GREEN  
CLAY

\* \* \* \*

TEST HOLE NUMBER: 559  
LOCATION: 103N-48W-35BBAB  
LEGAL LOCATION: NW NE NW NW SEC. 35, T. 103 N., R. 48 W.

5.0 - 20.0 SAND, BROWNISH-GRAY, MEDIUM TO COARSE,  
SLIGHTLY CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 560  
LOCATION: 103N-48W-35BCCC

LEGAL LOCATION: SW SW SW NW SEC. 35, T. 103 N., R. 48 W.

4.0 - 18.0 SAND, BROWN, MEDIUM TO VERY COARSE; SOME  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 561

LOCATION: 103N-49W-04ABAA

LEGAL LOCATION: NE NE NW NE SEC. 04, T. 103 N., R. 49 W.

6.0 - 16.0 SAND, BROWN, FINE, CLAYEY; OXIDIZED,  
SATURATED, CLAY CONTENT INCREASES FROM  
12 FEET ON

\* \* \* \*

TEST HOLE NUMBER: 562

LOCATION: 103N-49W-05BB

LEGAL LOCATION: NW NW SEC. 05, T. 103 N., R. 49 W.

10.0 - 20.0 SAND, COARSE; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 563

LOCATION: 103N-49W-05BBAB

LEGAL LOCATION: NW NE NW NW SEC. 05, T. 103 N., R. 49 W.

4.0 - 15.0 SAND, GRAY, FINE

\* \* \* \*

TEST HOLE NUMBER: 564

LOCATION: 103N-49W-05BBCC

LEGAL LOCATION: SW SW NW NW SEC. 05, T. 103 N., R. 49 W.

7.0 - 20.0 SAND, GRAY, FINE  
20.0 - 23.0 GRAVEL, VERY COARSE

\* \* \* \*

TEST HOLE NUMBER: 565

LOCATION: 103N-49W-06AA

LEGAL LOCATION: NE NE SEC. 06, T. 103 N., R. 49 W.

15.0 - 25.0 SAND, COARSE  
25.0 - 33.0 GRAVEL; AND SMALL AMOUNT OF SAND

\* \* \* \*

TEST HOLE NUMBER: 566

LOCATION: 103N-49W-06AABA

LEGAL LOCATION: NE NW NE NE SEC. 06, T. 103 N., R. 49 W.

15.0 - 26.0 SAND, GRAY, MEDIUM TO FINE

\* \* \* \*

TEST HOLE NUMBER: 567  
LOCATION: 103N-49W-06ABAA  
LEGAL LOCATION: NE NE NW NE SEC. 06, T. 103 N., R. 49 W.

10.0 - 38.0 SAND, GRAY, MEDIUM TO COARSE; SOME  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 568  
LOCATION: 103N-49W-06ABB  
LEGAL LOCATION: NW NW NE SEC. 06, T. 103 N., R. 49 W.

15.0 - 20.0 SAND, COARSE AND FINE  
20.0 - 25.0 SAND AND GRAVEL, COARSE SAND  
25.0 - 34.0 GRAVEL, COARSE; AND QUARTZITE BOULDERS

\* \* \* \*

TEST HOLE NUMBER: 569  
LOCATION: 103N-49W-06ACAA  
LEGAL LOCATION: NE NE SW NE SEC. 06, T. 103 N., R. 49 W.

13.0 - 33.0 SAND, GRAY; SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 570  
LOCATION: 103N-49W-06ACBA  
LEGAL LOCATION: NE NW SW NE SEC. 06, T. 103 N., R. 49 W.

15.0 - 37.0 SAND AND GRAVEL, GRAY; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 571  
LOCATION: 103N-49W-06ACDD  
LEGAL LOCATION: SE SE SW NE SEC. 06, T. 103 N., R. 49 W.

17.0 - 37.0 SAND, COARSE; SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 572  
LOCATION: 103N-49W-06BA  
LEGAL LOCATION: NE NW SEC. 06, T. 103 N., R. 49 W.

20.0 - 25.0 GRAVEL, VERY COARSE  
25.0 - 30.0 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 573  
LOCATION: 103N-49W-06BBAA  
LEGAL LOCATION: NE NE NW NW SEC. 06, T. 103 N., R. 49 W.

8.0 - 15.0 SAND, BROWN; SOME GRAVEL  
15.0 - 30.0 SAND, GRAY; SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 574  
LOCATION: 103N-49W-06BDAA  
LEGAL LOCATION: NE NE SE NW SEC. 06, T. 103 N., R. 49 W.

11.0 - 24.0 SAND, GRAY, MEDIUM  
24.0 - 27.0 GRAVEL; SOME SAND

\* \* \* \*

TEST HOLE NUMBER: 575  
LOCATION: 103N-49W-06DADD  
LEGAL LOCATION: SE SE NE SE SEC. 06, T. 103 N., R. 49 W.

11.0 - 20.0 SAND, GRAY; SOME GRAVEL  
20.0 - 22.0 GRAVEL, VERY COARSE

\* \* \* \*

TEST HOLE NUMBER: 576  
LOCATION: 103N-49W-06DBCC  
LEGAL LOCATION: SW SW NW SE SEC. 06, T. 103 N., R. 49 W.

8.0 - 20.0 SAND, BROWN, FINE  
20.0 - 36.0 SAND, GRAY, MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 577  
LOCATION: 103N-49W-07AA  
LEGAL LOCATION: NE NE SEC. 07, T. 103 N., R. 49 W.

14.0 - 19.0 SAND, MEDIUM TO COARSE  
19.0 - 34.0 SAND, COARSE; TO FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 578  
LOCATION: 103N-49W-07BAAA 1  
LEGAL LOCATION: NE NE NE NW SEC. 07, T. 103 N., R. 49 W.

10.0 - 20.0 SAND AND GRAVEL, FINE SAND TO FINE GRAVEL  
20.0 - 44.0 GRAVEL, FINE TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 579  
LOCATION: 103N-49W-07BAAA 2  
LEGAL LOCATION: NE NE NE NW SEC. 07, T. 103 N., R. 49 W.

10.0 - 13.0 SAND, FINE TO MEDIUM, SILTY; SOFT  
13.0 - 30.0 SAND AND GRAVEL, FINE SAND TO FINE  
GRAVEL, SILTY

\* \* \* \*

TEST HOLE NUMBER: 580  
LOCATION: 103N-49W-08AB  
LEGAL LOCATION: NW NE SEC. 08, T. 103 N., R. 49 W.

19.0 - 24.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 581  
LOCATION: 103N-49W-08ADD  
LEGAL LOCATION: SE SE NE SEC. 08, T. 103 N., R. 49 W.

12.0 - 17.0 GRAVEL; DIRTY, POOR SAMPLE  
17.0 - 24.0 SAND AND GRAVEL, VERY COARSE SAND TO FINE  
TO MEDIUM GRAVEL; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 582  
LOCATION: 103N-49W-08DCC  
LEGAL LOCATION: SW SW SE SEC. 08, T. 103 N., R. 49 W.

9.0 - 14.0 SAND, COARSE  
14.0 - 25.0 SAND AND GRAVEL, COARSE  
25.0 - 28.0 GRAVEL, COARSE; BOULDERS

\* \* \* \*

TEST HOLE NUMBER: 583  
LOCATION: 103N-49W-09BAA  
LEGAL LOCATION: NE NE NW SEC. 09, T. 103 N., R. 49 W.

10.0 - 15.0 SAND, FINE, SILTY; SOME CLAY, WATER-LAID

\* \* \* \*

TEST HOLE NUMBER: 584  
LOCATION: 103N-49W-16ACCC  
LEGAL LOCATION: SW SW SW NE SEC. 16, T. 103 N., R. 49 W.

4.0 - 10.0 SAND, FINE TO COARSE, SILTY  
10.0 - 14.0 SAND AND GRAVEL, FINE SAND TO FINE GRAVEL

14.0 - 31.0 GRAVEL, FINE TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 585  
LOCATION: 103N-49W-16ADDD  
LEGAL LOCATION: SE SE SE NE SEC. 16, T. 103 N., R. 49 W.

8.0 - 10.0 GRAVEL, FINE TO COARSE  
16.0 - 17.0 GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 586  
LOCATION: 103N-49W-16BCCC  
LEGAL LOCATION: SW SW SW NW SEC. 16, T. 103 N., R. 49 W.

3.0 - 12.0 SAND, FINE TO MEDIUM  
12.0 - 24.0 SAND AND GRAVEL, FINE SAND TO COARSE  
GRAVEL  
24.0 - 32.0 GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 587  
LOCATION: 103N-49W-16DBB  
LEGAL LOCATION: NW NW SE SEC. 16, T. 103 N., R. 49 W.

6.0 - 11.0 SAND; WITH MUCH SILT AND CLAY, HIGHLY  
OXIDIZED; WATER-LAID, SLIGHTLY  
PERMEABLE  
11.0 - 21.0 SAND AND GRAVEL; POOR SAMPLE

\* \* \* \*

TEST HOLE NUMBER: 588  
LOCATION: 103N-49W-17AAA  
LEGAL LOCATION: NE NE NE SEC. 17, T. 103 N., R. 49 W.

10.0 - 12.0 SAND AND SILT, FINE; SOME CLAY, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 589  
LOCATION: 103N-49W-17BA  
LEGAL LOCATION: NE NW SEC. 17, T. 103 N., R. 49 W.

15.0 - 20.0 SAND AND GRAVEL, COARSE; CLEAN  
20.0 - 28.0 GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 590  
LOCATION: 103N-49W-17DABD



LEGAL LOCATION: SE NW NE SE SEC. 17, T. 103 N., R. 49 W.

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\* THIS LOG CONTAINS UNVERIFIED INFORMATION \*

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7.0 - 25.0 GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 591

LOCATION: 103N-49W-17DBAB

LEGAL LOCATION: NW NE NW SE SEC. 17, T. 103 N., R. 49 W.

10.0 - 24.0 SAND, GRAY, FINE TO COARSE; MANY SHELLS

24.0 - 35.0 GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 592

LOCATION: 103N-49W-17DBDC

LEGAL LOCATION: SW SE NW SE SEC. 17, T. 103 N., R. 49 W.

13.0 - 34.0 GRAVEL, FINE; SAMPLE TAKEN

\* \* \* \*

TEST HOLE NUMBER: 593

LOCATION: 103N-49W-18AA

LEGAL LOCATION: NE NE SEC. 18, T. 103 N., R. 49 W.

9.0 - 15.0 SAND AND GRAVEL, COARSE SAND

15.0 - 25.0 SAND, COARSE

25.0 - 35.0 GRAVEL AND SAND

\* \* \* \*

TEST HOLE NUMBER: 594

LOCATION: 103N-49W-18ACBB

LEGAL LOCATION: NW NW SW NE SEC. 18, T. 103 N., R. 49 W.

14.0 - 16.0 SAND AND GRAVEL, FINE SAND TO FINE  
GRAVEL, SILTY

24.0 - 43.0 SAND AND GRAVEL, FINE SAND TO COARSE  
GRAVEL; VERY WELL ROUNDED

\* \* \* \*

TEST HOLE NUMBER: 595

LOCATION: 103N-49W-20DB

LEGAL LOCATION: NW SE SEC. 20, T. 103 N., R. 49 W.

15.0 - 25.0 SAND AND GRAVEL

25.0 - 30.0 SAND, FINE

\* \* \* \*

TEST HOLE NUMBER: 596  
LOCATION: 103N-49W-21CA  
LEGAL LOCATION: NE SW SEC. 21, T. 103 N., R. 49 W.

15.0 -	20.0	SAND AND GRAVEL, COARSE SAND
20.0 -	30.0	SAND; AND SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 597  
LOCATION: 103N-49W-21CB  
LEGAL LOCATION: NW SW SEC. 21, T. 103 N., R. 49 W.

0 -	10.0	SAND AND CLAY, FINE SAND
10.0 -	20.0	SAND, COARSE
20.0 -	25.0	GRAVEL, FINE
25.0 -	30.0	GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 598  
LOCATION: 103N-49W-28CDD  
LEGAL LOCATION: SE SE SW SEC. 28, T. 103 N., R. 49 W.

14.0 -	24.0	SAND, MEDIUM TO COARSE
24.0 -	28.0	SAND, MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 599  
LOCATION: 103N-49W-28DB  
LEGAL LOCATION: NW SE SEC. 28, T. 103 N., R. 49 W.

4.0 -	9.0	SAND, FINE, SILTY
9.0 -	14.0	SAND, FINE, GRADING TO COARSE SAND
14.0 -	40.0	SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 600  
LOCATION: 103N-49W-29CDD  
LEGAL LOCATION: SW SW SE SW SEC. 29, T. 103 N., R. 49 W.

24.0 -	25.0	SAND AND GRAVEL, FINE SAND TO COARSE GRAVEL; OXIDIZED
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\* \* \* \*

TEST HOLE NUMBER: 601  
LOCATION: 103N-49W-29DCCD  
LEGAL LOCATION: SE SW SW SE SEC. 29, T. 103 N., R. 49 W.

20.0 - 24.0 SAND AND GRAVEL; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 602  
LOCATION: 103N-49W-31DDA  
LEGAL LOCATION: NE SE SE SEC. 31, T. 103 N., R. 49 W.

1.0 - 14.0 SAND, BROWN, FINE, SILTY; MOIST

\* \* \* \*

TEST HOLE NUMBER: 603  
LOCATION: 103N-49W-32CCC  
LEGAL LOCATION: SW SW SW SEC. 32, T. 103 N., R. 49 W.

10.5 - 30.0 SAND AND GRAVEL, COARSE SAND

\* \* \* \*

TEST HOLE NUMBER: 604  
LOCATION: 103N-49W-33BBBA  
LEGAL LOCATION: NE NW NW NW SEC. 33, T. 103 N., R. 49 W.

13.0 - 20.0 SAND, WHITE, FINE TO COARSE; WITH FINE TO  
MEDIUM GRAVEL

21.0 - 28.0 SAND AND GRAVEL; SUBROUNDED, INTERBEDDED

\* \* \* \*

TEST HOLE NUMBER: 605  
LOCATION: 103N-49W-34BBAA  
LEGAL LOCATION: NE NE NW NW SEC. 34, T. 103 N., R. 49 W.

20.0 - 31.0 SAND AND GRAVEL, COARSE SAND TO MEDIUM  
GRAVEL; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 606  
LOCATION: 103N-50W-04BBBB  
LEGAL LOCATION: NW NW NW NW SEC. 04, T. 103 N., R. 50 W.

0 - 9.0 SAND, BROWN, SILTY

\* \* \* \*

TEST HOLE NUMBER: 607  
LOCATION: 103N-50W-05ABB  
LEGAL LOCATION: NW NW NE SEC. 05, T. 103 N., R. 50 W.

10.0 - 12.0 SAND, COARSE

12.0 - 14.0 SAND AND GRAVEL, MEDIUM SAND

14.0 - 24.0 SAND, MEDIUM TO COARSE, SILTY

24.0 - 29.0 SAND, COARSE

\* \* \* \*

TEST HOLE NUMBER: 608

LOCATION: 103N-50W-05BABB

LEGAL LOCATION: NW NW NE NW SEC. 05, T. 103 N., R. 50 W.

3.0 - 7.0 SAND AND GRAVEL, FINE SAND TO FINE  
GRAVEL, VERY SILTY

7.0 - 25.0 SAND AND GRAVEL, FINE SAND TO FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 609

LOCATION: 103N-50W-05BBB

LEGAL LOCATION: NW NW NW SEC. 05, T. 103 N., R. 50 W.

4.0 - 9.0 SAND, SILTY

9.0 - 14.0 SAND, MEDIUM TO COARSE, SILTY

14.0 - 24.0 SAND AND GRAVEL, COARSE SAND, FINE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 610

LOCATION: 103N-50W-05CCCC

LEGAL LOCATION: SW SW SW SW SEC. 05, T. 103 N., R. 50 W.

3.0 - 27.0 SAND AND GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 611

LOCATION: 103N-50W-06CCD

LEGAL LOCATION: SE SW SW SEC. 06, T. 103 N., R. 50 W.

2.0 - 14.0 SAND, MEDIUM, SILTY

14.0 - 20.0 SAND, MEDIUM TO COARSE

20.0 - 24.0 SAND AND GRAVEL, COARSE SAND, FINE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 612

LOCATION: 103N-50W-07AAA

LEGAL LOCATION: NE NE NE SEC. 07, T. 103 N., R. 50 W.

3.0 - 9.0 SAND AND GRAVEL, MEDIUM TO COARSE SAND,  
FINE GRAVEL

9.0 - 19.0 SAND, FINE TO MEDIUM

19.0 - 29.0 SAND AND GRAVEL, COARSE SAND, FINE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 613  
LOCATION: 103N-50W-07DCD  
LEGAL LOCATION: SE SW SE SEC. 07, T. 103 N., R. 50 W.

1.0 -	13.0	SAND AND GRAVEL, MEDIUM TO COARSE SAND, FINE GRAVEL
13.0 -	14.0	SAND AND GRAVEL, COARSE GRAVEL
14.0 -	24.0	SAND AND GRAVEL, MEDIUM TO COARSE SAND, FINE TO MEDIUM GRAVEL
24.0 -	36.0	SAND AND GRAVEL, COARSE SAND

\* \* \* \*

TEST HOLE NUMBER: 614  
LOCATION: 103N-50W-08BBB  
LEGAL LOCATION: NW NW NW SEC. 08, T. 103 N., R. 50 W.

2.0 -	19.0	SAND, MEDIUM, SILTY
19.0 -	24.0	SAND, MEDIUM
24.0 -	39.0	SAND, FINE, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 615  
LOCATION: 103N-50W-08CCC  
LEGAL LOCATION: SW SW SW SEC. 08, T. 103 N., R. 50 W.

2.0 -	12.0	SAND, BROWN, MEDIUM TO COARSE
12.0 -	51.0	SAND AND GRAVEL, COARSE SAND, FINE TO MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 616  
LOCATION: 103N-50W-09DDDD  
LEGAL LOCATION: SE SE SE SE SEC. 09, T. 103 N., R. 50 W.

7.0 -	24.0	SAND AND GRAVEL, FINE SAND TO FINE GRAVEL
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\* \* \* \*

TEST HOLE NUMBER: 617  
LOCATION: 103N-50W-12DDDD  
LEGAL LOCATION: SE SE SE SE SEC. 12, T. 103 N., R. 50 W.

0 -	6.0	SAND
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\* \* \* \*

TEST HOLE NUMBER: 618  
LOCATION: 103N-50W-17CCC  
LEGAL LOCATION: SW SW SW SEC. 17, T. 103 N., R. 50 W.

4.0 -	9.0	SAND, CLAYEY
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9.0 - 14.0 SAND, MEDIUM, SILTY  
14.0 - 31.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 619  
LOCATION: 103N-50W-17CCC 1  
LEGAL LOCATION: SW SW SW SEC. 17, T. 103 N., R. 50 W.

2.0 - 9.0 SAND, CLAYEY  
9.0 - 14.0 SAND, MEDIUM, SILTY  
14.0 - 28.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 620  
LOCATION: 103N-50W-17CCCC  
LEGAL LOCATION: SW SW SW SW SEC. 17, T. 103 N., R. 50 W.

2.0 - 29.0 SAND AND GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 621  
LOCATION: 103N-50W-18AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 18, T. 103 N., R. 50 W.

4.0 - 31.0 GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 622  
LOCATION: 103N-50W-18BAB  
LEGAL LOCATION: NW NE NW SEC. 18, T. 103 N., R. 50 W.

1.0 - 8.0 SAND, FINE TO MEDIUM  
8.0 - 14.0 SAND AND GRAVEL, FINE TO MEDIUM SAND,  
FINE GRAVEL  
14.0 - 20.0 GRAVEL AND SAND, FINE TO MEDIUM GRAVEL,  
COARSE SAND  
20.0 - 26.0 GRAVEL, FINE TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 623  
LOCATION: 103N-50W-19AAA  
LEGAL LOCATION: NE NE NE SEC. 19, T. 103 N., R. 50 W.

3.0 - 9.0 SAND, MEDIUM TO COARSE, SILTY  
9.0 - 14.0 SAND, MEDIUM  
14.0 - 24.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 624  
LOCATION: 103N-50W-19BAAA  
LEGAL LOCATION: NE NE NE NW SEC. 19, T. 103 N., R. 50 W.

0 - 2.0 GRAVEL; ROAD FILL  
9.0 - 27.0 SAND AND GRAVEL, FINE SAND TO COARSE  
GRAVEL, WELL ROUNDED

\* \* \* \*

TEST HOLE NUMBER: 625  
LOCATION: 103N-50W-19BBA  
LEGAL LOCATION: NE NW NW SEC. 19, T. 103 N., R. 50 W.

8.0 - 16.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 626  
LOCATION: 103N-50W-19BCCC  
LEGAL LOCATION: SW SW SW NW SEC. 19, T. 103 N., R. 50 W.

3.0 - 28.0 GRAVEL, SANDY, SUBROUNDED; LESS THAN  
1-INCH IN DIAMETER

\* \* \* \*

TEST HOLE NUMBER: 627  
LOCATION: 103N-50W-28AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 28, T. 103 N., R. 50 W.

25.0 - 27.0 SAND, FINE TO MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 628  
LOCATION: 103N-50W-30CBBB  
LEGAL LOCATION: NW NW NW SW SEC. 30, T. 103 N., R. 50 W.

3.0 - 27.0 SAND AND GRAVEL, FINE SAND TO COARSE  
GRAVEL; WELL ROUNDED

\* \* \* \*

TEST HOLE NUMBER: 629  
LOCATION: 103N-50W-31BBBB  
LEGAL LOCATION: NW NW NW NW SEC. 31, T. 103 N., R. 50 W.

6.0 - 12.0 SAND AND GRAVEL, FINE SAND TO FINE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 630

LOCATION: 103N-50W-33AAAA

LEGAL LOCATION: NE NE NE NE SEC. 33, T. 103 N., R. 50 W.

20.0 - 25.0 GRAVEL, COARSE; WITH BROWN, SILTY, SANDY  
CLAY (TILL)

\* \* \* \*

TEST HOLE NUMBER: 631

LOCATION: 103N-51W-02CBBC

LEGAL LOCATION: SW NW NW SW SEC. 02, T. 103 N., R. 51 W.

13.0 - 25.0 SAND, TAN-BROWN, MEDIUM TO COARSE, VERY  
CLAYEY; SATURATED, OXIDIZED, GRAVELLY  
FROM 22 TO 25 FEET

25.0 - 34.0 GRAVEL, TAN-BROWN, FINE TO MEDIUM, SANDY,  
CLAYEY; SATURATED, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 632

LOCATION: 103N-51W-10CCCC

LEGAL LOCATION: SW SW SW SW SEC. 10, T. 103 N., R. 51 W.

15.0 - 18.0 SAND, FINE TO COARSE; WITH SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 633

LOCATION: 103N-51W-14BBA

LEGAL LOCATION: NE NW NW SEC. 14, T. 103 N., R. 51 W.

2.0 - 26.0 SAND, BROWN, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 634

LOCATION: 103N-51W-14BBBC

LEGAL LOCATION: SW NW NW NW SEC. 14, T. 103 N., R. 51 W.

18.0 - 29.0 SAND AND GRAVEL, BROWN; SOME COARSE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 635

LOCATION: 103N-51W-14CDDC

LEGAL LOCATION: SW SE SE SW SEC. 14, T. 103 N., R. 51 W.

10.0 - 14.0 SAND, VERY COARSE; VARIOUS ROCK TYPES

\* \* \* \*

TEST HOLE NUMBER: 636



LOCATION: 103N-51W-18BBBB

LEGAL LOCATION: NW NW NW NW SEC. 18, T. 103 N., R. 51 W.

6.0 -	13.0	SAND AND GRAVEL, COARSE SAND TO COARSE GRAVEL
21.0 -	25.0	SAND AND GRAVEL, COARSE SAND TO COARSE GRAVEL, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 637

LOCATION: 103N-51W-19CCDD

LEGAL LOCATION: SE SE SW SW SEC. 19, T. 103 N., R. 51 W.

0 -	4.0	GRAVEL, REDDISH-BROWN, FINE TO COARSE, SANDY; MOIST, OXIDIZED
4.0 -	9.0	GRAVEL, TAN-BROWN, FINE TO MEDIUM, SANDY, SLIGHTLY CLAYEY; SATURATED, OXIDIZED
12.0 -	30.0	GRAVEL, REDDISH-BROWN, FINE TO COARSE, VERY SILTY, VERY SANDY; SATURATED, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 638

LOCATION: 103N-51W-19DDDD

LEGAL LOCATION: SE SE SE SE SEC. 19, T. 103 N., R. 51 W.

1.0 -	20.0	SAND AND GRAVEL, MEDIUM TO COARSE
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\* \* \* \*

TEST HOLE NUMBER: 639

LOCATION: 103N-51W-20CCC

LEGAL LOCATION: SW SW SW SEC. 20, T. 103 N., R. 51 W.

24.0 -	25.0	GRAVEL, FINE
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\* \* \* \*

TEST HOLE NUMBER: 640

LOCATION: 103N-51W-23BABB

LEGAL LOCATION: NW NW NE NW SEC. 23, T. 103 N., R. 51 W.

2.0 -	15.0	SAND, CREAMY-BROWN, MEDIUM TO COARSE, VERY CLAYEY; MOIST TO SATURATED, OXIDIZED
15.0 -	16.0	GRAVEL, BROWN, CLAYEY, SANDY; SATURATED, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 641

LOCATION: 103N-51W-25BDDC

LEGAL LOCATION: SW SE SE NW SEC. 25, T. 103 N., R. 51 W.

4.0 - 15.0 SAND, MEDIUM TO COARSE  
15.0 - 41.0 SAND AND GRAVEL, GRAY, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 642

LOCATION: 103N-51W-25CBBB 1

LEGAL LOCATION: NW NW NW SW SEC. 25, T. 103 N., R. 51 W.

15.0 - 18.0 SAND, FINE TO MEDIUM, SLIGHTLY GRAVELLY;  
OXIDIZED, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 643

LOCATION: 103N-51W-25CBBB 2

LEGAL LOCATION: NW NW NW SW SEC. 25, T. 103 N., R. 51 W.

15.0 - 19.0 SAND, BROWN, FINE TO MEDIUM, VERY CLAYEY;  
OXIDIZED, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 644

LOCATION: 103N-51W-27CDDD

LEGAL LOCATION: SE SE SE SW SEC. 27, T. 103 N., R. 51 W.

6.0 - 10.0 SAND, BROWN, MEDIUM, CLAYEY; OXIDIZED,  
UNSATURATED

\* \* \* \*

TEST HOLE NUMBER: 645

LOCATION: 103N-51W-28CBB

LEGAL LOCATION: NW NW SW SEC. 28, T. 103 N., R. 51 W.

1.0 - 5.0 SAND AND GRAVEL, FINE TO MEDIUM SAND,  
COARSE GRAVEL  
5.0 - 10.0 SAND AND GRAVEL, COARSE SAND, FINE TO  
MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 646

LOCATION: 103N-51W-28CBBB

LEGAL LOCATION: NW NW NW SW SEC. 28, T. 103 N., R. 51 W.

1.0 - 7.0 SAND AND GRAVEL, FINE SAND TO COARSE  
GRAVEL, SLIGHTLY SILTY

\* \* \* \*

TEST HOLE NUMBER: 647  
LOCATION: 103N-51W-28CCBC  
LEGAL LOCATION: SW NW SW SW SEC. 28, T. 103 N., R. 51 W.

5.0 - 10.0 SAND AND GRAVEL; SOME CLAY

\* \* \* \*

TEST HOLE NUMBER: 648  
LOCATION: 103N-51W-28CCC  
LEGAL LOCATION: SW SW SW SEC. 28, T. 103 N., R. 51 W.

9.0 - 14.0 SAND, MEDIUM TO COARSE, SILTY  
14.0 - 17.0 GRAVEL, FINE TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 649  
LOCATION: 103N-51W-30ADDA  
LEGAL LOCATION: NE SE SE NE SEC. 30, T. 103 N., R. 51 W.

0 - 18.0 GRAVEL, BROWNISH-RED, COARSE, SANDY; DRY,  
OXIDIZED  
18.0 - 33.0 GRAVEL, REDDISH-BROWN, FINE TO MEDIUM,  
SILTY; MOIST, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 650  
LOCATION: 103N-51W-32AABB  
LEGAL LOCATION: NW NW NE NE SEC. 32, T. 103 N., R. 51 W.

1.0 - 7.0 GRAVEL, REDDISH-BROWN, FINE TO COARSE,  
SANDY; DRY, OXIDIZED  
7.0 - 12.0 SAND, REDDISH-BROWN, FINE TO COARSE,  
SLIGHTLY CLAYEY, GRAVELLY; MOIST,  
OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 651  
LOCATION: 103N-51W-32AAD  
LEGAL LOCATION: SE NE NE SEC. 32, T. 103 N., R. 51 W.

3.0 - 6.0 GRAVEL, VERY COARSE

\* \* \* \*

TEST HOLE NUMBER: 652  
LOCATION: 103N-51W-33BCC  
LEGAL LOCATION: SW SW NW SEC. 33, T. 103 N., R. 51 W.

1.0 - 3.0 SAND, BROWN, SILTY  
3.0 - 8.0 SAND AND GRAVEL, BROWN

18.0 - 24.6 SAND, BROWN, SILTY; MOIST

\* \* \* \*

TEST HOLE NUMBER: 653  
LOCATION: 103N-51W-33BDD  
LEGAL LOCATION: SE SE NW SEC. 33, T. 103 N., R. 51 W.

3.9 - 12.6 GRAVEL, BROWN, FINE TO COARSE, SANDY

\* \* \* \*

TEST HOLE NUMBER: 654  
LOCATION: 103N-51W-33CDDD  
LEGAL LOCATION: SE SE SE SW SEC. 33, T. 103 N., R. 51 W.

4.0 - 6.0 SAND AND GRAVEL; HARD ROCK AT 6 FEET,  
COULD NOT PENETRATE (QUARTZITE?)

\* \* \* \*

TEST HOLE NUMBER: 655  
LOCATION: 103N-51W-33DDD  
LEGAL LOCATION: SE SE SE SEC. 33, T. 103 N., R. 51 W.

2.0 - 7.0 SAND AND GRAVEL, COARSE  
10.0 - 11.0 GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 656  
LOCATION: 103N-51W-34ACC  
LEGAL LOCATION: SW SW NE SEC. 34, T. 103 N., R. 51 W.

2.0 - 7.0 GRAVEL, FINE TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 657  
LOCATION: 103N-51W-34ADD  
LEGAL LOCATION: SE SE NE SEC. 34, T. 103 N., R. 51 W.

1.0 - 3.0 SAND, FINE TO MEDIUM  
3.0 - 5.0 GRAVEL, COARSE  
5.0 - 8.0 SAND, MEDIUM TO COARSE  
8.0 - 40.0 SAND, VERY FINE, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 658  
LOCATION: 103N-51W-34CCCC  
LEGAL LOCATION: SW SW SW SW SEC. 34, T. 103 N., R. 51 W.

1.0 - 5.0 SAND AND GRAVEL, FINE SAND TO FINE

GRAVEL, SLIGHTLY SILTY

\* \* \* \*

TEST HOLE NUMBER: 659  
LOCATION: 103N-51W-35ADC  
LEGAL LOCATION: SW SE NE SEC. 35, T. 103 N., R. 51 W.

4.2 -	13.6	SAND, SILTY
13.6 -	20.5	SAND, GRAY-GREEN, FINE TO COARSE, GRAVELLY

\* \* \* \*

TEST HOLE NUMBER: 660  
LOCATION: 103N-51W-35CCC  
LEGAL LOCATION: SW SW SW SEC. 35, T. 103 N., R. 51 W.

2.0 -	7.0	SAND AND GRAVEL, COARSE SAND, FINE GRAVEL
7.0 -	15.0	SAND AND GRAVEL, FINE TO MEDIUM SAND, FINE GRAVEL
15.0 -	26.0	SAND, BROWN, VERY FINE, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 661  
LOCATION: 103N-51W-35CCDD  
LEGAL LOCATION: SE SE SW SW SEC. 35, T. 103 N., R. 51 W.

8.0 -	9.0	GRAVEL
9.0 -	28.0	SAND, FINE; SAMPLE TAKEN

\* \* \* \*

TEST HOLE NUMBER: 662  
LOCATION: 103N-51W-35CDCC 2  
LEGAL LOCATION: SW SW SE SW SEC. 35, T. 103 N., R. 51 W.

5.0 -	33.0	SAND, BROWN, FINE TO COARSE; CLAY LAYER FROM 28 TO 29 FEET
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\* \* \* \*

TEST HOLE NUMBER: 663  
LOCATION: 103N-51W-35DCD  
LEGAL LOCATION: SE SW SE SEC. 35, T. 103 N., R. 51 W.

10.0 -	11.0	GRAVEL AND SAND, COARSE SAND
11.0 -	14.0	SAND, COARSE

\* \* \* \*

TEST HOLE NUMBER: 664

LOCATION: 103N-51W-36BCC  
LEGAL LOCATION: SW SW NW SEC. 36, T. 103 N., R. 51 W.

0 - 8.0 SAND, BROWN, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 665  
LOCATION: 103N-51W-36BCD  
LEGAL LOCATION: SE SW NW SEC. 36, T. 103 N., R. 51 W.

0 - 1.0 SAND, BLACK, SILTY  
1.0 - 3.0 SAND, BROWN, COARSE  
3.0 - 11.5 GRAVEL, SANDY  
11.5 - 15.0 SAND, GRAY, COARSE  
15.0 - 21.5 GRAVEL, SANDY

\* \* \* \*

TEST HOLE NUMBER: 666  
LOCATION: 103N-52W-03BBBB  
LEGAL LOCATION: NW NW NW NW SEC. 03, T. 103 N., R. 52 W.

6.0 - 13.0 SAND, YELLOW, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 667  
LOCATION: 103N-52W-03CCB  
LEGAL LOCATION: NW SW SW SEC. 03, T. 103 N., R. 52 W.

12.0 - 43.0 SAND AND GRAVEL, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 668  
LOCATION: 103N-52W-07CCCC  
LEGAL LOCATION: SW SW SW SW SEC. 07, T. 103 N., R. 52 W.

12.0 - 16.0 SAND, BROWN AND RED, FINE; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 669  
LOCATION: 103N-52W-10ADDA  
LEGAL LOCATION: NE SE SE NE SEC. 10, T. 103 N., R. 52 W.

16.0 - 27.0 SAND AND GRAVEL, GRAY, FINE SAND, MEDIUM  
GRAVEL, VERY CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 670  
LOCATION: 103N-52W-11DDCD

LEGAL LOCATION: SE SW SE SE SEC. 11, T. 103 N., R. 52 W.

0 - 3.0 SAND AND GRAVEL, REDDISH-BROWN, COARSE  
SAND, MEDIUM GRAVEL; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 671

LOCATION: 103N-52W-13DDCC

LEGAL LOCATION: SW SW SE SE SEC. 13, T. 103 N., R. 52 W.

1.0 - 11.0 SAND, REDDISH-BROWN, MEDIUM, CLAYEY;  
OXIDIZED  
11.0 - 21.0 SAND AND GRAVEL, REDDISH-BROWN, MEDIUM  
SAND, COARSE GRAVEL; OXIDIZED  
21.0 - 47.0 SAND AND GRAVEL, REDDISH-BROWN, MEDIUM  
SAND, MEDIUM GRAVEL, CLAYEY; OXIDIZED,  
HIT ROCK AT 47 FEET, COULD NOT  
PENETRATE

\* \* \* \*

TEST HOLE NUMBER: 672

LOCATION: 103N-52W-14ABBB

LEGAL LOCATION: NW NW NW NE SEC. 14, T. 103 N., R. 52 W.

9.0 - 13.0 SAND AND GRAVEL, MEDIUM TO COARSE SAND,  
FINE TO MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 673

LOCATION: 103N-52W-21CBB

LEGAL LOCATION: NW NW SW SEC. 21, T. 103 N., R. 52 W.

1.0 - 7.0 SAND, BROWN, SILTY

\* \* \* \*

TEST HOLE NUMBER: 674

LOCATION: 103N-52W-24AAAA

LEGAL LOCATION: NE NE NE NE SEC. 24, T. 103 N., R. 52 W.

0 - 5.0 SAND AND GRAVEL, FINE SAND TO MEDIUM  
GRAVEL  
25.0 - 34.0 SAND AND GRAVEL, FINE SAND TO FINE  
GRAVEL; POSSIBLY WITH SOME THIN OLIVE-  
COLORED CLAY LAYERS

\* \* \* \*

TEST HOLE NUMBER: 675

LOCATION: 103N-52W-25CCCC

LEGAL LOCATION: SW SW SW SW SEC. 25, T. 103 N., R. 52 W.

8.0 - 14.0 SAND AND GRAVEL, MEDIUM TO VERY COARSE;  
COBBLES, DRY, COULD NOT PENETRATE ROCKS

\* \* \* \*

TEST HOLE NUMBER: 676  
LOCATION: 103N-52W-25DDDD  
LEGAL LOCATION: SE SE SE SE SEC. 25, T. 103 N., R. 52 W.

0 - 6.0 SAND, COARSE

\* \* \* \*

TEST HOLE NUMBER: 677  
LOCATION: 103N-52W-27AAAD  
LEGAL LOCATION: SE NE NE NE SEC. 27, T. 103 N., R. 52 W.

1.0 - 3.0 GRAVEL, RED-BROWN, MEDIUM  
5.0 - 7.0 GRAVEL, RED-BROWN, MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 678  
LOCATION: 104N-47W-06DCCC  
LEGAL LOCATION: SW SW SW SE SEC. 06, T. 104 N., R. 47 W.

8.0 - 16.0 SAND, BROWN, MEDIUM, SLIGHTLY CLAYEY;  
OXIDIZED, SATURATED  
16.0 - 22.0 SAND, GRAY, MEDIUM, SLIGHTLY CLAYEY;  
UNOXIDIZED, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 679  
LOCATION: 104N-47W-08DCCC  
LEGAL LOCATION: SW SW SW SE SEC. 08, T. 104 N., R. 47 W.

3.0 - 20.0 SAND, LIGHT-BROWN, MEDIUM TO COARSE;  
WHITE CLAY LAYER AT 12 FEET, SOME  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 680  
LOCATION: 104N-47W-15CBBC  
LEGAL LOCATION: SW NW NW SW SEC. 15, T. 104 N., R. 47 W.

5.0 - 13.0 SAND AND GRAVEL, FINE TO COARSE SAND,  
MEDIUM TO COARSE GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 681  
LOCATION: 104N-47W-15CBCC



LEGAL LOCATION: SW SW NW SW SEC. 15, T. 104 N., R. 47 W.

9.0 - 13.0 SAND AND GRAVEL, FINE TO COARSE SAND,  
MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 682

LOCATION: 104N-47W-15CCBC

LEGAL LOCATION: SW NW SW SW SEC. 15, T. 104 N., R. 47 W.

5.0 - 13.0 SAND AND GRAVEL, BROWN, MEDIUM TO COARSE  
SAND, FINE TO MEDIUM GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 683

LOCATION: 104N-47W-15CCCC

LEGAL LOCATION: SW SW SW SW SEC. 15, T. 104 N., R. 47 W.

5.0 - 21.0 SAND AND GRAVEL, BROWN, MEDIUM TO COARSE  
SAND, MEDIUM GRAVEL; OXIDIZED, MOIST TO  
SATURATED

\* \* \* \*

TEST HOLE NUMBER: 684

LOCATION: 104N-47W-18DCCC

LEGAL LOCATION: SW SW SW SE SEC. 18, T. 104 N., R. 47 W.

4.0 - 16.0 SAND, BROWN, FINE TO MEDIUM, VERY CLAYEY;  
MOIST, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 685

LOCATION: 104N-47W-19DDDA

LEGAL LOCATION: NE SE SE SE SEC. 19, T. 104 N., R. 47 W.

1.0 - 5.0 SAND AND GRAVEL, BROWN, MEDIUM TO COARSE  
SAND, FINE TO COARSE GRAVEL, SLIGHTLY  
CLAYEY; DRY, OXIDIZED  
5.0 - 8.0 GRAVEL, BROWN, MEDIUM TO COARSE, VERY  
CLAYEY; MOIST, OXIDIZED, SATURATED AT  
7 FEET  
8.0 - 41.0 SAND, BROWN, FINE TO COARSE, CLAYEY; SOME  
FINE GRAVEL, SATURATED, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 686

LOCATION: 104N-47W-20BDDB

LEGAL LOCATION: NE SE SE NW SEC. 20, T. 104 N., R. 47 W.

0 - 8.0 SAND, BROWN, FINE TO COARSE, CLAYEY;  
SOME FINE TO MEDIUM GRAVEL, MOIST,  
OXIDIZED  
8.0 - 15.0 GRAVEL, FINE TO MEDIUM, CLAYEY TO VERY  
CLAYEY, SANDY; MOIST, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 687  
LOCATION: 104N-47W-29CCCC  
LEGAL LOCATION: SW SW SW SW SEC. 29, T. 104 N., R. 47 W.

7.0 - 8.0 SAND

\* \* \* \*

TEST HOLE NUMBER: 688  
LOCATION: 104N-47W-33CCCB  
LEGAL LOCATION: NW SW SW SW SEC. 33, T. 104 N., R. 47 W.

1.0 - 10.0 SAND AND GRAVEL, BROWN, FINE TO MEDIUM  
SAND, FINE TO COARSE GRAVEL, ROUNDED;  
LITTLE CLAY, OXIDIZED, DRY  
10.0 - 14.0 SAND, BROWN, FINE TO MEDIUM; LITTLE CLAY,  
DRY TO MOIST, OXIDIZED, SOME COARSE  
SAND  
14.0 - 16.0 GRAVEL; LOST BIT, UNABLE TO CONTINUE

\* \* \* \*

TEST HOLE NUMBER: 689  
LOCATION: 104N-47W-33CCCB 1  
LEGAL LOCATION: NW SW SW SW SEC. 33, T. 104 N., R. 47 W.

1.0 - 19.0 SAND, BROWN, FINE TO MEDIUM, SLIGHTLY  
CLAYEY; DRY TO MOIST, OXIDIZED, GRAVEL  
STRINGERS AT 4 TO 5 FEET, 9 TO 10 FEET  
AND 15 TO 17 FEET  
19.0 - 23.0 GRAVEL, FINE TO COARSE; LITTLE RETURN

\* \* \* \*

TEST HOLE NUMBER: 690  
LOCATION: 104N-47W-34AABA  
LEGAL LOCATION: NE NW NE NE SEC. 34, T. 104 N., R. 47 W.

23.0 - 24.0 SAND, BROWN, MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 691  
LOCATION: 104N-47W-34DDDD 1  
LEGAL LOCATION: SE SE SE SE SEC. 34, T. 104 N., R. 47 W.

4.0 - 15.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 692  
LOCATION: 104N-47W-34DDDD 2  
LEGAL LOCATION: SE SE SE SE SEC. 34, T. 104 N., R. 47 W.

5.0 - 17.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 693  
LOCATION: 104N-48W-02DAAD 1  
LEGAL LOCATION: SE NE NE SE SEC. 02, T. 104 N., R. 48 W.

2.0 - 8.0 SAND, BROWN, MEDIUM; OXIDIZED  
19.0 - 27.0 SAND, BROWN, MEDIUM TO COARSE; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 694  
LOCATION: 104N-48W-02DAAD 2  
LEGAL LOCATION: SE NE NE SE SEC. 02, T. 104 N., R. 48 W.

0 - 8.0 SAND, BROWN, MEDIUM, SILTY, CLAYEY;  
OXIDIZED  
22.0 - 32.0 SAND, BROWN, MEDIUM TO COARSE; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 695  
LOCATION: 104N-48W-02DAAD 3  
LEGAL LOCATION: SE NE NE SE SEC. 02, T. 104 N., R. 48 W.

1.0 - 13.0 SAND, BROWN, MEDIUM TO COARSE; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 696  
LOCATION: 104N-48W-02DABB  
LEGAL LOCATION: NW NW NE SE SEC. 02, T. 104 N., R. 48 W.

0 - 2.0 SAND AND GRAVEL, BROWN, FINE TO COARSE  
SAND, FINE TO COARSE GRAVEL, CLAYEY;  
OXIDIZED, DRY  
2.0 - 24.0 SAND, BROWN, FINE TO MEDIUM, SLIGHTLY  
CLAYEY; VERY FEW FINE PEBBLES, DAMP,  
OXIDIZED, CLAY CONTENT INCREASES WITH  
DEPTH

\* \* \* \*

TEST HOLE NUMBER: 697

LOCATION: 104N-48W-02DABD

LEGAL LOCATION: SE NW NE SE SEC. 02, T. 104 N., R. 48 W.

0	-	4.0	SAND, BROWN, FINE TO MEDIUM; OXIDIZED, DRY
4.0	-	25.0	SAND, LIGHT-BROWN, FINE TO MEDIUM, WELL-SORTED; VERY CLEAN, DRY, OXIDIZED, CLAY CONTENT EVIDENT AT 20 FEET AND INCREASES WITH DEPTH

\* \* \* \*

TEST HOLE NUMBER: 698

LOCATION: 104N-48W-02DCBA

LEGAL LOCATION: NE NW SW SE SEC. 02, T. 104 N., R. 48 W.

1.0	-	4.0	GRAVEL, BROWN TO BLACK, MEDIUM TO COARSE; SOME FINE TO COARSE SAND, DRY, OXIDIZED
4.0	-	9.0	SAND AND GRAVEL, TAN TO BROWN, FINE TO COARSE SAND, FINE TO COARSE GRAVEL, POORLY SORTED; DRY, OXIDIZED
9.0	-	58.0	SAND, BROWN, FINE TO MEDIUM, WELL-SORTED; VERY CLEAN, DRY, OXIDIZED, SOME SMALL CLAY LENSES AND GRAVEL STRINGERS PRESENT, SATURATED AT APPROXIMATELY 57 FEET

\* \* \* \*

TEST HOLE NUMBER: 699

LOCATION: 104N-48W-02DCBD 1

LEGAL LOCATION: SE NW SW SE SEC. 02, T. 104 N., R. 48 W.

0	-	15.0	SAND AND GRAVEL, BROWN, MEDIUM TO COARSE SAND, FINE TO MEDIUM GRAVEL, SLIGHTLY CLAYEY; DRY, OXIDIZED
15.0	-	42.0	SAND, YELLOW-BROWN, FINE TO MEDIUM, SLIGHTLY CLAYEY; DRY TO MOIST, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 700

LOCATION: 104N-48W-02DCBD 2

LEGAL LOCATION: SE NW SW SE SEC. 02, T. 104 N., R. 48 W.

0	-	4.0	SAND AND GRAVEL, RED-BROWN, FINE TO COARSE SAND, FINE GRAVEL, CLAYEY; DRY, OXIDIZED
4.0	-	9.0	SAND, TAN-BROWN, FINE TO MEDIUM, SLIGHTLY CLAYEY; OXIDIZED, MOIST
9.0	-	10.0	SAND AND GRAVEL, BROWN, FINE TO COARSE SAND, FINE GRAVEL, SLIGHTLY CLAYEY; OXIDIZED, MOIST
10.0	-	42.0	SAND, BROWN, MEDIUM, SLIGHTLY CLAYEY,

WELL-SORTED; OXIDIZED, MOIST, FEW THIN  
CLAY LENSES

\* \* \* \*

TEST HOLE NUMBER: 701  
LOCATION: 104N-48W-02DCCD  
LEGAL LOCATION: SE SW SW SE SEC. 02, T. 104 N., R. 48 W.

1.0 -	6.0	SAND, LIGHT-BROWN, FINE, VERY SILTY, CLAYEY, WELL-SORTED; DRY, OXIDIZED
6.0 -	10.0	SAND, DARK-BROWN, FINE TO MEDIUM, CLAYEY; DRY TO MOIST, OXIDIZED
10.0 -	18.0	SAND, LIGHT-BROWN, FINE, VERY SILTY; SOME CLAY, DRY, OXIDIZED
18.0 -	35.0	SAND, DARK-BROWN, MEDIUM TO COARSE, SLIGHTLY CLAYEY; SATURATED, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 702  
LOCATION: 104N-48W-11BBBB  
LEGAL LOCATION: NW NW NW NW SEC. 11, T. 104 N., R. 48 W.

17.0 -	19.0	SAND, YELLOWISH-BROWN, MEDIUM
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\* \* \* \*

TEST HOLE NUMBER: 703  
LOCATION: 104N-48W-11BBBB 1  
LEGAL LOCATION: NW NW NW NW SEC. 11, T. 104 N., R. 48 W.

1.0 -	2.0	SAND, BROWN, MEDIUM, CLAYEY; OXIDIZED, DRY
7.0 -	19.0	SAND, LIGHT-BROWN, MEDIUM TO COARSE, VERY CLAYEY; OXIDIZED, SATURATED, CLAY LENS AT 15 TO 16 FEET AND 17 TO 18 FEET
19.0 -	22.0	SAND, GRAY, MEDIUM TO COARSE, VERY CLAYEY; UNOXIDIZED, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 704  
LOCATION: 104N-48W-11BCCC  
LEGAL LOCATION: SW SW SW NW SEC. 11, T. 104 N., R. 48 W.

6.0 -	14.0	SAND, YELLOW-BROWN, FINE TO MEDIUM, CLAYEY; OXIDIZED, SATURATED
14.0 -	22.0	SAND, GRAY-BROWN, MEDIUM TO COARSE; SATURATED, UNOXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 705

LOCATION: 104N-48W-11DDAD

LEGAL LOCATION: SE NE SE SE SEC. 11, T. 104 N., R. 48 W.

6.0 - 23.0 SAND, TAN-BROWN, FINE TO MEDIUM, SLIGHTLY  
CLAYEY; OXIDIZED, SATURATED, SAND IS  
FINE BEYOND 13 FEET AND CLAY CONTENT  
INCREASES WITH DEPTH BEYOND 17 FEET

\* \* \* \*

TEST HOLE NUMBER: 706

LOCATION: 104N-48W-12DAAA

LEGAL LOCATION: NE NE NE SE SEC. 12, T. 104 N., R. 48 W.

2.0 - 5.0 SAND, BROWN, FINE TO MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 707

LOCATION: 104N-48W-13BCCC

LEGAL LOCATION: SW SW SW NW SEC. 13, T. 104 N., R. 48 W.

9.0 - 25.0 SAND, YELLOW-BROWN, FINE, SLIGHTLY  
CLAYEY; MOIST TO SATURATED, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 708

LOCATION: 104N-48W-15AADD

LEGAL LOCATION: SE SE NE NE SEC. 15, T. 104 N., R. 48 W.

8.0 - 18.0 SAND, BROWN, MEDIUM TO COARSE; OXIDIZED  
22.0 - 38.0 SAND AND GRAVEL, BROWN; FINE SAND,  
FINE TO MEDIUM GRAVEL, SOME COBBLES,  
OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 709

LOCATION: 104N-48W-15AADD 2

LEGAL LOCATION: SE SE NE NE SEC. 15, T. 104 N., R. 48 W.

8.0 - 28.0 SAND, BROWN, FINE TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 710

LOCATION: 104N-48W-15AADD 3

LEGAL LOCATION: SE SE NE NE SEC. 15, T. 104 N., R. 48 W.

9.0 - 23.0 SAND AND GRAVEL, FINE TO COARSE SAND,  
MEDIUM GRAVEL, VERY CLAYEY; SOME CLAY  
LAYERS, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 711  
LOCATION: 104N-48W-15CCCC  
LEGAL LOCATION: SW SW SW SW SEC. 15, T. 104 N., R. 48 W.

10.0 - 30.0 SAND, FINE TO MEDIUM, SILTY

\* \* \* \*

TEST HOLE NUMBER: 712  
LOCATION: 104N-48W-17DAAA  
LEGAL LOCATION: NE NE NE SE SEC. 17, T. 104 N., R. 48 W.

17.0 - 21.0 GRAVEL, BROWN, MEDIUM, SANDY

\* \* \* \*

TEST HOLE NUMBER: 713  
LOCATION: 104N-48W-21DDDD  
LEGAL LOCATION: SE SE SE SE SEC. 21, T. 104 N., R. 48 W.

16.0 - 24.0 GRAVEL, TAN-BROWN, FINE, VERY CLAYEY,  
SLIGHTLY SANDY; OXIDIZED, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 714  
LOCATION: 104N-48W-22DDDD  
LEGAL LOCATION: SE SE SE SE SEC. 22, T. 104 N., R. 48 W.

7.0 - 32.0 SAND, BROWN, FINE TO MEDIUM, CLAYEY TO  
VERY CLAYEY; OXIDIZED, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 715  
LOCATION: 104N-48W-26CDCC  
LEGAL LOCATION: SW SW SE SW SEC. 26, T. 104 N., R. 48 W.

10.0 - 27.0 SAND, DARK-BROWN, MEDIUM TO COARSE,  
CLAYEY, GRAVELLY; OXIDIZED, SATURATED  
AT 10 FEET

\* \* \* \*

TEST HOLE NUMBER: 716  
LOCATION: 104N-48W-27DAAA 1  
LEGAL LOCATION: NE NE NE SE SEC. 27, T. 104 N., R. 48 W.

7.0 - 12.0 GRAVEL, MEDIUM TO COARSE; WITH LIGHT-GRAY  
SILT

\* \* \* \*

TEST HOLE NUMBER: 717  
LOCATION: 104N-48W-27DAAA 2  
LEGAL LOCATION: NE NE NE SE SEC. 27, T. 104 N., R. 48 W.

8.0 - 12.0 SAND, FINE, CLAYEY  
12.0 - 18.0 SAND, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 718  
LOCATION: 104N-48W-27DAAB  
LEGAL LOCATION: NW NE NE SE SEC. 27, T. 104 N., R. 48 W.

1.0 - 23.0 SAND, BROWN, FINE TO MEDIUM; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 719  
LOCATION: 104N-48W-35DDC  
LEGAL LOCATION: SW SE SE SEC. 35, T. 104 N., R. 48 W.

5.0 - 9.0 SAND AND GRAVEL, MEDIUM TO COARSE SAND,  
FINE GRAVEL  
9.0 - 15.0 SAND, MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 720  
LOCATION: 104N-49W-01AABA  
LEGAL LOCATION: NE NW NE NE SEC. 01, T. 104 N., R. 49 W.

9.0 - 14.0 SAND, MEDIUM TO COARSE  
14.0 - 19.0 SAND, COARSE

\* \* \* \*

TEST HOLE NUMBER: 721  
LOCATION: 104N-49W-01ABAC  
LEGAL LOCATION: SW NE NW NE SEC. 01, T. 104 N., R. 49 W.

10.0 - 20.0 SAND, BROWN

\* \* \* \*

TEST HOLE NUMBER: 722  
LOCATION: 104N-49W-01ABAD  
LEGAL LOCATION: SE NE NW NE SEC. 01, T. 104 N., R. 49 W.

7.0 - 9.0 SAND, FINE; SOME CLAY STRINGERS  
9.0 - 22.0 SAND

\* \* \* \*

TEST HOLE NUMBER: 723



LOCATION: 104N-49W-01ABBC 1  
LEGAL LOCATION: SW NW NW NE SEC. 01, T. 104 N., R. 49 W.

5.0 - 22.0 SAND, BROWN

\* \* \* \*

TEST HOLE NUMBER: 724  
LOCATION: 104N-49W-01ABBC 2  
LEGAL LOCATION: SW NW NW NE SEC. 01, T. 104 N., R. 49 W.

4.0 - 17.0 GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 725  
LOCATION: 104N-49W-01ABCA  
LEGAL LOCATION: NE SW NW NE SEC. 01, T. 104 N., R. 49 W.

3.0 - 9.0 SAND  
9.0 - 22.0 GRAVEL; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 726  
LOCATION: 104N-49W-01ABCC  
LEGAL LOCATION: SW SW NW NE SEC. 01, T. 104 N., R. 49 W.

11.0 - 30.0 SAND

\* \* \* \*

TEST HOLE NUMBER: 727  
LOCATION: 104N-49W-01ABCD  
LEGAL LOCATION: SE SW NW NE SEC. 01, T. 104 N., R. 49 W.

11.0 - 31.0 SAND, WELL-SORTED

\* \* \* \*

TEST HOLE NUMBER: 728  
LOCATION: 104N-49W-01ABDB  
LEGAL LOCATION: NW SE NW NE SEC. 01, T. 104 N., R. 49 W.

7.0 - 9.0 SAND, RED  
9.0 - 18.0 SAND, FINE  
18.0 - 24.0 SAND; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 729  
LOCATION: 104N-49W-01ABDC  
LEGAL LOCATION: SW SE NW NE SEC. 01, T. 104 N., R. 49 W.

7.0 - 15.0 SAND AND GRAVEL  
15.0 - 22.0 SAND, FINE

\* \* \* \*

TEST HOLE NUMBER: 730  
LOCATION: 104N-49W-01ABDD  
LEGAL LOCATION: SE SE NW NE SEC. 01, T. 104 N., R. 49 W.

13.0 - 24.0 SAND; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 731  
LOCATION: 104N-49W-01ACAB  
LEGAL LOCATION: NW NE SW NE SEC. 01, T. 104 N., R. 49 W.

3.0 - 5.0 SAND, BROWN, FINE  
7.0 - 15.0 SAND  
15.0 - 25.0 SAND; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 732  
LOCATION: 104N-49W-01ACBA 1  
LEGAL LOCATION: NE NW SW NE SEC. 01, T. 104 N., R. 49 W.

14.0 - 27.0 GRAVEL, WELL-SORTED; CLEAN

\* \* \* \*

TEST HOLE NUMBER: 733  
LOCATION: 104N-49W-01ACBA 2  
LEGAL LOCATION: NE NW SW NE SEC. 01, T. 104 N., R. 49 W.

12.0 - 28.0 SAND, WELL-SORTED

\* \* \* \*

TEST HOLE NUMBER: 734  
LOCATION: 104N-49W-01ACBD  
LEGAL LOCATION: SE NW SW NE SEC. 01, T. 104 N., R. 49 W.

4.0 - 7.0 SAND  
7.0 - 27.0 SAND, WELL-SORTED

\* \* \* \*

TEST HOLE NUMBER: 735  
LOCATION: 104N-49W-01BAAA  
LEGAL LOCATION: NE NE NE NW SEC. 01, T. 104 N., R. 49 W.

5.0 - 10.0 SAND, DARK-BROWN, CLAYEY  
10.0 - 12.0 GRAVEL

12.0 - 20.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 736  
LOCATION: 104N-49W-01BBBD  
LEGAL LOCATION: SE NW NW NW SEC. 01, T. 104 N., R. 49 W.

2.0 - 9.0 SAND AND GRAVEL, MEDIUM TO COARSE  
SAND

\* \* \* \*

TEST HOLE NUMBER: 737  
LOCATION: 104N-49W-01BBCC  
LEGAL LOCATION: SW SW NW NW SEC. 01, T. 104 N., R. 49 W.

2.0 - 17.0 SAND AND GRAVEL, MEDIUM TO COARSE SAND

\* \* \* \*

TEST HOLE NUMBER: 738  
LOCATION: 104N-49W-01BCCC  
LEGAL LOCATION: SW SW SW NW SEC. 01, T. 104 N., R. 49 W.

2.0 - 13.0 SAND AND GRAVEL, MEDIUM TO COARSE SAND

\* \* \* \*

TEST HOLE NUMBER: 739  
LOCATION: 104N-49W-02ABAB  
LEGAL LOCATION: NW NE NW NE SEC. 02, T. 104 N., R. 49 W.

7.0 - 18.0 SAND, MEDIUM TO COARSE; SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 740  
LOCATION: 104N-49W-02BABB  
LEGAL LOCATION: NW NW NE NW SEC. 02, T. 104 N., R. 49 W.

6.0 - 20.0 SAND, MEDIUM TO COARSE; SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 741  
LOCATION: 104N-49W-02BBAA  
LEGAL LOCATION: NE NE NW NW SEC. 02, T. 104 N., R. 49 W.

6.0 - 20.0 SAND, MEDIUM TO COARSE; SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 742

LOCATION: 104N-49W-02BBBB

LEGAL LOCATION: NW NW NW NW SEC. 02, T. 104 N., R. 49 W.

9.0 -	14.0	GRAVEL, MEDIUM TO COARSE; SATURATED
14.0 -	19.0	GRAVEL, COARSE
19.0 -	20.0	SAND, COARSE

\* \* \* \*

TEST HOLE NUMBER: 743

LOCATION: 104N-49W-02BBBB 1

LEGAL LOCATION: NW NW NW NW SEC. 02, T. 104 N., R. 49 W.

3.0 -	5.0	SAND, FINE TO MEDIUM; SOME CLAY
5.0 -	20.0	SAND, COARSE

\* \* \* \*

TEST HOLE NUMBER: 744

LOCATION: 104N-49W-02BDBB

LEGAL LOCATION: NW NW SE NW SEC. 02, T. 104 N., R. 49 W.

4.0 -	8.0	SAND AND GRAVEL, COARSE; UNABLE TO PENETRATE
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TEST HOLE NUMBER: 745

LOCATION: 104N-49W-02CBCC

LEGAL LOCATION: SW SW NW SW SEC. 02, T. 104 N., R. 49 W.

1.0 -	8.0	SAND, VERY FINE TO MEDIUM, SILTY
8.0 -	11.0	GRAVEL, FINE TO VERY COARSE, SANDY
11.0 -	13.0	SAND, MEDIUM TO VERY COARSE; SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 746

LOCATION: 104N-49W-02DABD

LEGAL LOCATION: SE NW NE SE SEC. 02, T. 104 N., R. 49 W.

3.0 -	9.0	SAND, MEDIUM TO COARSE; SOME GRAVEL
10.0 -	11.0	SAND, COARSE(?)

\* \* \* \*

TEST HOLE NUMBER: 747

LOCATION: 104N-49W-02DBAA

LEGAL LOCATION: NE NE NW SE SEC. 02, T. 104 N., R. 49 W.

5.0 -	6.0	SAND, FINE TO MEDIUM
6.0 -	9.0	SAND, COARSE; SOME GRAVEL, UNABLE TO PENETRATE

\* \* \* \*

TEST HOLE NUMBER: 748  
LOCATION: 104N-49W-03AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 03, T. 104 N., R. 49 W.

4.0 - 20.0 SAND, MEDIUM TO COARSE; SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 749  
LOCATION: 104N-49W-03AAAB  
LEGAL LOCATION: NW NE NE NE SEC. 03, T. 104 N., R. 49 W.

4.0 - 10.0 SAND, MEDIUM; SOME CLAY  
10.0 - 15.0 SAND, MEDIUM TO COARSE; SOME CLAY  
15.0 - 20.0 SAND, COARSE; SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 750  
LOCATION: 104N-49W-03AADD  
LEGAL LOCATION: SE SE NE NE SEC. 03, T. 104 N., R. 49 W.

5.0 - 8.0 SAND, BROWN, CLAYEY  
8.0 - 20.0 SAND, MEDIUM TO COARSE; SOME CLAY; CLAY  
CONTENT DECREASING WITH DEPTH

\* \* \* \*

TEST HOLE NUMBER: 751  
LOCATION: 104N-49W-03ABBA  
LEGAL LOCATION: NE NW NW NE SEC. 03, T. 104 N., R. 49 W.

6.0 - 19.0 SAND, MEDIUM TO COARSE; SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 752  
LOCATION: 104N-49W-03ABDA  
LEGAL LOCATION: NE SE NW NE SEC. 03, T. 104 N., R. 49 W.

5.0 - 10.0 SAND, BROWN, COARSE, CLAYEY  
10.0 - 11.0 GRAVEL, FINE  
11.0 - 19.0 SAND, COARSE; SOME GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 753  
LOCATION: 104N-49W-03BDBA  
LEGAL LOCATION: NE NW SE NW SEC. 03, T. 104 N., R. 49 W.

6.0 - 13.0 GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 754  
LOCATION: 104N-49W-03DAAA  
LEGAL LOCATION: NE NE NE SE SEC. 03, T. 104 N., R. 49 W.

2.0 - 5.0 SAND, BROWN, CLAYEY  
5.0 - 12.0 SAND, MEDIUM TO COARSE; GRAVEL; SOME CLAY

\* \* \* \*

TEST HOLE NUMBER: 755  
LOCATION: 104N-49W-03DAAA 1  
LEGAL LOCATION: NE NE NE SE SEC. 03, T. 104 N., R. 49 W.

4.0 - 9.0 SAND, FINE TO MEDIUM  
9.0 - 10.0 GRAVEL, VERY COARSE

\* \* \* \*

TEST HOLE NUMBER: 756  
LOCATION: 104N-49W-03DADC  
LEGAL LOCATION: SW SE NE SE SEC. 03, T. 104 N., R. 49 W.

7.0 - 9.0 SAND, MEDIUM TO COARSE; SOME CLAY  
9.0 - 11.0 SAND AND GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 757  
LOCATION: 104N-49W-03DDCC  
LEGAL LOCATION: SW SW SE SE SEC. 03, T. 104 N., R. 49 W.

9.0 - 18.0 SAND, FINE; SAMPLE TAKEN  
18.0 - 22.0 GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 758  
LOCATION: 104N-49W-03DDCC 1  
LEGAL LOCATION: SW SW SE SE SEC. 03, T. 104 N., R. 49 W.

5.0 - 11.0 SAND, MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 759  
LOCATION: 104N-49W-07CCBB  
LEGAL LOCATION: NW NW SW SW SEC. 07, T. 104 N., R. 49 W.

2.0 - 6.0 SAND AND GRAVEL, BROWN, MEDIUM SAND,  
MEDIUM TO COARSE GRAVEL; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 760  
LOCATION: 104N-49W-10AAB  
LEGAL LOCATION: NW NE NE SEC. 10, T. 104 N., R. 49 W.

5.0 - 15.0 SAND, BROWN, COARSE; SOME CLAY

\* \* \* \*

TEST HOLE NUMBER: 761  
LOCATION: 104N-49W-10AABC  
LEGAL LOCATION: SW NW NE NE SEC. 10, T. 104 N., R. 49 W.

2.0 - 10.0 SAND, REDDISH-BROWN, CLAYEY  
10.0 - 11.0 GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 762  
LOCATION: 104N-49W-10ACCB  
LEGAL LOCATION: NW SW SW NE SEC. 10, T. 104 N., R. 49 W.

5.0 - 15.0 SAND, BROWN, CLAYEY  
15.0 - 17.0 GRAVEL, COARSE

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TEST HOLE NUMBER: 763  
LOCATION: 104N-49W-10ADDC  
LEGAL LOCATION: SW SE SE NE SEC. 10, T. 104 N., R. 49 W.

5.0 - 11.0 SAND, MEDIUM TO COARSE; SOME CLAY

\* \* \* \*

TEST HOLE NUMBER: 764  
LOCATION: 104N-49W-10DABB  
LEGAL LOCATION: NW NW NE SE SEC. 10, T. 104 N., R. 49 W.

5.0 - 9.0 SAND, BROWN; SOME CLAY  
9.0 - 10.0 GRAVEL  
10.0 - 16.0 SAND, COARSE; SOME CLAY

\* \* \* \*

TEST HOLE NUMBER: 765  
LOCATION: 104N-49W-11BBCC  
LEGAL LOCATION: SW SW NW NW SEC. 11, T. 104 N., R. 49 W.

2.0 - 13.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 766  
LOCATION: 104N-49W-11BCCB

LEGAL LOCATION: NW SW SW NW SEC. 11, T. 104 N., R. 49 W.

5.0 - 13.0 SAND, BROWN; CHANGING TO GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 767

LOCATION: 104N-49W-11BCCC

LEGAL LOCATION: SW SW SW NW SEC. 11, T. 104 N., R. 49 W.

2.0 - 10.0 SAND, MEDIUM TO COARSE; SOME GRAVEL  
10.0 - 13.0 GRAVEL, FINE TO MEDIUM, SANDY

\* \* \* \*

TEST HOLE NUMBER: 768

LOCATION: 104N-49W-11BCDB

LEGAL LOCATION: NW SE SW NW SEC. 11, T. 104 N., R. 49 W.

2.0 - 5.0 SAND, BROWN, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 769

LOCATION: 104N-49W-14CCBB

LEGAL LOCATION: NW NW SW SW SEC. 14, T. 104 N., R. 49 W.

1.0 - 5.0 SAND, GRAY, FINE TO MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 770

LOCATION: 104N-49W-17CACD

LEGAL LOCATION: SE SW NE SW SEC. 17, T. 104 N., R. 49 W.

\*\*\*\*\*  
\* THIS LOG CONTAINS UNVERIFIED INFORMATION \*  
\*\*\*\*\*

5.0 - 6.0 GRAVEL  
15.0 - 58.0 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 771

LOCATION: 104N-49W-17CADB

LEGAL LOCATION: NW SE NE SW SEC. 17, T. 104 N., R. 49 W.

\*\*\*\*\*  
\* THIS LOG CONTAINS UNVERIFIED INFORMATION \*  
\*\*\*\*\*

5.0 - 6.0 GRAVEL  
15.0 - 67.0 SAND AND GRAVEL

\* \* \* \*



TEST HOLE NUMBER: 772  
LOCATION: 104N-49W-17CCAB  
LEGAL LOCATION: NW NE SW SW SEC. 17, T. 104 N., R. 49 W.

8.0 - 12.0 SAND, BROWN, SILTY  
12.0 - 15.0 SAND AND GRAVEL, MEDIUM SAND TO MEDIUM  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 773  
LOCATION: 104N-49W-20ADAC  
LEGAL LOCATION: SW NE SE NE SEC. 20, T. 104 N., R. 49 W.

2.0 - 14.0 SAND, BROWN, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 774  
LOCATION: 104N-49W-20BBCB  
LEGAL LOCATION: NW SW NW NW SEC. 20, T. 104 N., R. 49 W.

24.0 - 30.0 SAND, MEDIUM TO COARSE; SOME CLAY

\* \* \* \*

TEST HOLE NUMBER: 775  
LOCATION: 104N-49W-20CCDD  
LEGAL LOCATION: SE SE SW SW SEC. 20, T. 104 N., R. 49 W.

1.0 - 8.0 SAND, FINE TO MEDIUM, SILTY  
8.0 - 21.0 SAND, VERY FINE TO COARSE, SILTY; SOME  
GRAVEL, THIN CLAY BEDS  
21.0 - 22.0 GRAVEL, SANDY AND SILTY  
22.0 - 26.0 SAND, VERY FINE; SOME GRAVEL, VERY SILTY  
AND CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 776  
LOCATION: 104N-49W-20CDC  
LEGAL LOCATION: SW SE SW SEC. 20, T. 104 N., R. 49 W.

0 - 10.0 SAND, FINE TO MEDIUM, SILTY  
10.0 - 17.0 SAND, FINE, SILTY AND CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 777  
LOCATION: 104N-49W-20CDCC  
LEGAL LOCATION: SW SW SE SW SEC. 20, T. 104 N., R. 49 W.

1.0 - 6.0 SAND, VERY FINE TO MEDIUM, SILTY

\* \* \* \*

TEST HOLE NUMBER: 778  
LOCATION: 104N-49W-20CDDD  
LEGAL LOCATION: SE SE SE SW SEC. 20, T. 104 N., R. 49 W.

2.0 - 15.0 SAND, DARK-BROWN, FINE, CLAYEY  
15.0 - 25.0 SAND, GRAY, FINE; GRAVEL, FINE, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 779  
LOCATION: 104N-49W-20DAAA  
LEGAL LOCATION: NE NE NE SE SEC. 20, T. 104 N., R. 49 W.

2.0 - 16.0 SAND, VERY FINE TO MEDIUM, SILTY, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 780  
LOCATION: 104N-49W-20DADA  
LEGAL LOCATION: NE SE NE SE SEC. 20, T. 104 N., R. 49 W.

5.0 - 7.0 SAND, MEDIUM TO COARSE  
7.0 - 20.0 SAND, COARSE  
20.0 - 25.0 SAND, MEDIUM; SOME CLAY  
25.0 - 35.0 GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 781  
LOCATION: 104N-49W-20DDAD  
LEGAL LOCATION: SE NE SE SE SEC. 20, T. 104 N., R. 49 W.

6.0 - 18.0 SAND, MEDIUM TO COARSE  
18.0 - 21.0 GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 782  
LOCATION: 104N-49W-20DDCC  
LEGAL LOCATION: SW SW SE SE SEC. 20, T. 104 N., R. 49 W.

2.0 - 20.0 SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 783  
LOCATION: 104N-49W-20DDDA  
LEGAL LOCATION: NE SE SE SE SEC. 20, T. 104 N., R. 49 W.

10.0 - 18.0 SAND, BROWN, FINE TO MEDIUM, SILTY  
18.0 - 27.0 SAND AND GRAVEL, FINE TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 784  
LOCATION: 104N-49W-20DDDB  
LEGAL LOCATION: NW SE SE SE SEC. 20, T. 104 N., R. 49 W.

2.0 - 15.0 SAND  
15.0 - 25.0 GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 785  
LOCATION: 104N-49W-20DDDC  
LEGAL LOCATION: SW SE SE SE SEC. 20, T. 104 N., R. 49 W.

7.0 - 25.0 SAND, MEDIUM TO COARSE  
25.0 - 29.0 GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 786  
LOCATION: 104N-49W-21CBBB  
LEGAL LOCATION: NW NW NW SW SEC. 21, T. 104 N., R. 49 W.

0 - 6.0 SAND, BROWN, FINE TO MEDIUM, SILTY; HARD  
6.0 - 11.0 SAND, MEDIUM, SLIGHTLY SILTY

\* \* \* \*

TEST HOLE NUMBER: 787  
LOCATION: 104N-49W-21CCCD  
LEGAL LOCATION: SE SW SW SW SEC. 21, T. 104 N., R. 49 W.

6.0 - 14.0 SAND, MEDIUM TO COARSE  
14.0 - 20.0 GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 788  
LOCATION: 104N-49W-25BBBB  
LEGAL LOCATION: NW NW NW NW SEC. 25, T. 104 N., R. 49 W.

13.0 - 15.0 SAND, BROWN, MEDIUM  
20.0 - 24.0 SAND, BROWN, MEDIUM, SILTY; SOME CLAY

\* \* \* \*

TEST HOLE NUMBER: 789  
LOCATION: 104N-49W-27CCDC  
LEGAL LOCATION: SW SE SW SW SEC. 27, T. 104 N., R. 49 W.

1.0 - 4.0 SAND, BROWN, MEDIUM TO COARSE, SLIGHTLY  
CLAYEY; SATURATED, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 790  
LOCATION: 104N-49W-29AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 29, T. 104 N., R. 49 W.

2.0 - 23.0 SAND, VERY FINE TO MEDIUM, SILTY AND  
CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 791  
LOCATION: 104N-49W-29ADD  
LEGAL LOCATION: SE SE NE SEC. 29, T. 104 N., R. 49 W.

5.0 - 30.0 SAND, BROWN, CLAYEY; CHANGING TO COARSE  
SAND AND CLAY

\* \* \* \*

TEST HOLE NUMBER: 792  
LOCATION: 104N-49W-31CCCC  
LEGAL LOCATION: SW SW SW SW SEC. 31, T. 104 N., R. 49 W.

4.0 - 9.0 SAND, FINE  
9.0 - 14.0 SAND, FINE TO MEDIUM; SATURATED  
19.0 - 24.0 SAND, FINE, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 793  
LOCATION: 104N-49W-31CCCC 1  
LEGAL LOCATION: SW SW SW SW SEC. 31, T. 104 N., R. 49 W.

9.0 - 43.0 SAND, FINE

\* \* \* \*

TEST HOLE NUMBER: 794  
LOCATION: 104N-49W-31CCCC 2  
LEGAL LOCATION: SW SW SW SW SEC. 31, T. 104 N., R. 49 W.

8.0 - 23.0 SAND AND GRAVEL, FINE SAND TO FINE  
GRAVEL, SILTY; WITH CLAY LAYERS  
23.0 - 24.0 GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 795  
LOCATION: 104N-49W-31CCCC 3  
LEGAL LOCATION: SW SW SW SW SEC. 31, T. 104 N., R. 49 W.

4.0 - 9.0 SAND, FINE  
9.0 - 19.0 SAND, FINE TO MEDIUM

19.0 - 34.0 SAND, FINE, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 796  
LOCATION: 104N-49W-31CDDD  
LEGAL LOCATION: SE SE SE SW SEC. 31, T. 104 N., R. 49 W.

5.0 - 35.0 SAND, DARK-BROWN, CLAYEY; CHANGING TO  
COARSE SAND AND GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 797  
LOCATION: 104N-49W-31CDDD 1  
LEGAL LOCATION: SE SE SE SW SEC. 31, T. 104 N., R. 49 W.

17.0 - 29.0 SAND, MEDIUM; SATURATED

\* \* \* \*

TEST HOLE NUMBER: 798  
LOCATION: 104N-49W-32BACB  
LEGAL LOCATION: NW SW NE NW SEC. 32, T. 104 N., R. 49 W.

2.0 - 25.0 SAND, BROWN, CLAYEY

\* \* \* \*

TEST HOLE NUMBER: 799  
LOCATION: 104N-49W-32CACC  
LEGAL LOCATION: SW SW NE SW SEC. 32, T. 104 N., R. 49 W.

12.0 - 41.0 SAND, GRAY

\* \* \* \*

TEST HOLE NUMBER: 800  
LOCATION: 104N-49W-32CBBB  
LEGAL LOCATION: NW NW NW SW SEC. 32, T. 104 N., R. 49 W.

10.0 - 25.0 SAND, GRAY, CLAYEY; CHANGING TO COARSE  
SAND, WITH SOME CLAY

\* \* \* \*

TEST HOLE NUMBER: 801  
LOCATION: 104N-49W-32CCCC  
LEGAL LOCATION: SW SW SW SW SEC. 32, T. 104 N., R. 49 W.

15.0 - 24.0 SAND, COARSE; GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 802  
LOCATION: 104N-49W-32DBBD  
LEGAL LOCATION: SE NW NW SE SEC. 32, T. 104 N., R. 49 W.

2.0 - 35.0 SAND, BLACK, FINE TO MEDIUM, CLAYEY;  
COARSER SAND AND LESS CLAY AT 15 FEET

\* \* \* \*

TEST HOLE NUMBER: 803  
LOCATION: 104N-49W-32DBCD  
LEGAL LOCATION: SE SW NW SE SEC. 32, T. 104 N., R. 49 W.

6.0 - 15.0 SAND, GRAY, FINE; SOME CLAY  
15.0 - 17.0 GRAVEL, VERY COARSE

\* \* \* \*

TEST HOLE NUMBER: 804  
LOCATION: 104N-50W-04AABA  
LEGAL LOCATION: NE NW NE NE SEC. 04, T. 104 N., R. 50 W.

7.0 - 14.0 GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 805  
LOCATION: 104N-50W-04ABBB  
LEGAL LOCATION: NW NW NW NE SEC. 04, T. 104 N., R. 50 W.

4.0 - 57.0 SAND AND GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 806  
LOCATION: 104N-50W-04DCC  
LEGAL LOCATION: SW SW SE SEC. 04, T. 104 N., R. 50 W.

2.0 - 20.0 GRAVEL, FINE  
20.0 - 30.0 GRAVEL, MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 807  
LOCATION: 104N-50W-04DCCC 1  
LEGAL LOCATION: SW SW SW SE SEC. 04, T. 104 N., R. 50 W.

2.0 - 19.0 GRAVEL, SANDY, SUBANGULAR, LESS THAN 1.5  
INCHES IN DIAMETER(?)  
20.0 - 47.0 GRAVEL, SANDY, SUBANGULAR, LESS THAN 1.5  
INCHES IN DIAMETER

\* \* \* \*

TEST HOLE NUMBER: 808  
LOCATION: 104N-50W-04DCCC 2  
LEGAL LOCATION: SW SW SW SE SEC. 04, T. 104 N., R. 50 W.

2.0 - 18.0 GRAVEL, FINE  
18.0 - 30.0 GRAVEL, MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 809  
LOCATION: 104N-50W-07CCDC  
LEGAL LOCATION: SW SE SW SW SEC. 07, T. 104 N., R. 50 W.

6.0 - 9.0 GRAVEL, BROWN, MEDIUM; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 810  
LOCATION: 104N-50W-08BAAA  
LEGAL LOCATION: NE NE NE NW SEC. 08, T. 104 N., R. 50 W.

1.0 - 6.0 GRAVEL, RED-BROWN, MEDIUM TO COARSE;  
OXIDIZED, UNSATURATED

\* \* \* \*

TEST HOLE NUMBER: 811  
LOCATION: 104N-50W-09BBA  
LEGAL LOCATION: NE NW NW SEC. 09, T. 104 N., R. 50 W.

2.0 - 10.0 GRAVEL, COARSE  
10.0 - 45.0 GRAVEL, FINE TO MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 812  
LOCATION: 104N-50W-16AABB  
LEGAL LOCATION: NW NW NE NE SEC. 16, T. 104 N., R. 50 W.

4.0 - 9.0 SAND, BLACK, SILTY  
9.0 - 32.0 SAND, MEDIUM TO COARSE, SILTY

\* \* \* \*

TEST HOLE NUMBER: 813  
LOCATION: 104N-50W-16ABBB  
LEGAL LOCATION: NW NW NW NE SEC. 16, T. 104 N., R. 50 W.

4.0 - 18.0 SAND AND GRAVEL, GRAY, MEDIUM TO COARSE;  
NOT VERY GOOD

\* \* \* \*

TEST HOLE NUMBER: 814

LOCATION: 104N-50W-16ACAA  
LEGAL LOCATION: NE NE SW NE SEC. 16, T. 104 N., R. 50 W.  
\*\*\*\*\*  
\* THIS LOG CONTAINS UNVERIFIED INFORMATION \*  
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4.0 - 8.0 GRAVEL, COARSE  
8.0 - 20.0 SAND, FINE

\* \* \* \*

TEST HOLE NUMBER: 815  
LOCATION: 104N-50W-16BBAA  
LEGAL LOCATION: NE NE NW NW SEC. 16, T. 104 N., R. 50 W.

4.0 - 9.0 GRAVEL, COARSE  
9.0 - 14.0 SAND, MEDIUM TO COARSE  
14.0 - 19.0 SAND AND GRAVEL, MEDIUM SAND, FINE GRAVEL  
19.0 - 28.0 SAND, COARSE

\* \* \* \*

TEST HOLE NUMBER: 816  
LOCATION: 104N-50W-16CAA  
LEGAL LOCATION: NE NE SW SEC. 16, T. 104 N., R. 50 W.

1.0 - 17.0 SAND, FINE TO COARSE; AND SOME PEBBLES  
17.0 - 25.0 SAND AND GRAVEL, FINE TO COARSE SAND,  
FINE GRAVEL  
25.0 - 27.0 GRAVEL AND SAND, FINE TO MEDIUM GRAVEL,  
COARSE SAND

\* \* \* \*

TEST HOLE NUMBER: 817  
LOCATION: 104N-50W-16CDA  
LEGAL LOCATION: NE SE SW SEC. 16, T. 104 N., R. 50 W.

1.0 - 3.0 GRAVEL, FINE  
3.0 - 15.0 SAND, FINE TO MEDIUM, PEBBLY  
15.0 - 25.0 SAND AND GRAVEL, FINE TO MEDIUM SAND,  
FINE GRAVEL  
25.0 - 28.0 GRAVEL, FINE TO MEDIUM

\* \* \* \*

TEST HOLE NUMBER: 818  
LOCATION: 104N-50W-20AABA  
LEGAL LOCATION: NE NW NE NE SEC. 20, T. 104 N., R. 50 W.

8.0 - 18.0 SAND, COARSE; SAMPLE TAKEN  
18.0 - 23.0 GRAVEL, COARSE

\* \* \* \*



TEST HOLE NUMBER: 819  
LOCATION: 104N-50W-20ABAA  
LEGAL LOCATION: NE NE NW NE SEC. 20, T. 104 N., R. 50 W.

4.0 - 10.0 SAND, MEDIUM TO COARSE  
10.0 - 40.0 SAND AND GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 820  
LOCATION: 104N-50W-20DCC  
LEGAL LOCATION: SW SW SE SEC. 20, T. 104 N., R. 50 W.

1.0 - 11.0 SAND; DIRTY  
11.0 - 15.0 GRAVEL, FINE  
15.0 - 35.0 GRAVEL, COARSE

\* \* \* \*

TEST HOLE NUMBER: 821  
LOCATION: 104N-50W-21CCC  
LEGAL LOCATION: SW SW SW SEC. 21, T. 104 N., R. 50 W.

1.0 - 15.0 SAND, FINE TO COARSE  
15.0 - 25.0 SAND AND GRAVEL, COARSE SAND, FINE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 822  
LOCATION: 104N-50W-21CCCC  
LEGAL LOCATION: SW SW SW SW SEC. 21, T. 104 N., R. 50 W.

3.0 - 18.0 GRAVEL, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 823  
LOCATION: 104N-50W-22BBBB  
LEGAL LOCATION: NW NW NW NW SEC. 22, T. 104 N., R. 50 W.

8.0 - 13.0 SAND AND GRAVEL, COARSE SAND TO COARSE  
GRAVEL

\* \* \* \*

TEST HOLE NUMBER: 824  
LOCATION: 104N-50W-29AAA  
LEGAL LOCATION: NE NE NE SEC. 29, T. 104 N., R. 50 W.

2.0 - 4.0 SAND, MEDIUM  
4.0 - 14.0 SAND, MEDIUM TO COARSE  
14.0 - 19.0 SAND, COARSE  
19.0 - 32.0 SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 825  
LOCATION: 104N-50W-29BAB  
LEGAL LOCATION: NW NE NW SEC. 29, T. 104 N., R. 50 W.

4.0 -	9.0	SAND, FINE, SILTY
9.0 -	14.0	SAND, FINE TO MEDIUM, SILTY
14.0 -	20.0	SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 826  
LOCATION: 104N-50W-31CDD  
LEGAL LOCATION: SE SE SW SEC. 31, T. 104 N., R. 50 W.

2.0 -	4.0	SAND AND GRAVEL, MEDIUM SAND, FINE GRAVEL
4.0 -	14.0	SAND, MEDIUM
14.0 -	19.0	SAND, MEDIUM TO COARSE
19.0 -	24.0	SAND, COARSE
24.0 -	43.0	SAND, MEDIUM TO COARSE

\* \* \* \*

TEST HOLE NUMBER: 827  
LOCATION: 104N-50W-31DDDC  
LEGAL LOCATION: SW SE SE SE SEC. 31, T. 104 N., R. 50 W.

2.0 -	18.0	GRAVEL, COARSE, SANDY, SUBROUNDED
20.0 -	32.0	GRAVEL, COARSE, SANDY, SUBROUNDED

\* \* \* \*

TEST HOLE NUMBER: 828  
LOCATION: 104N-50W-32BABA  
LEGAL LOCATION: NE NW NE NW SEC. 32, T. 104 N., R. 50 W.

2.0 -	22.0	SAND AND GRAVEL, MEDIUM TO COARSE
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\* \* \* \*

TEST HOLE NUMBER: 829  
LOCATION: 104N-50W-33AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 33, T. 104 N., R. 50 W.

0 -	7.0	SAND, RUST-BROWN, COARSE, CLAYEY
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\* \* \* \*

TEST HOLE NUMBER: 830  
LOCATION: 104N-50W-33ADDA  
LEGAL LOCATION: NE SE SE NE SEC. 33, T. 104 N., R. 50 W.

1.0 - 5.0 SAND, REDDISH-BROWN, FINE, CLAYEY; MOIST,  
OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 831  
LOCATION: 104N-51W-07BBBB  
LEGAL LOCATION: NW NW NW NW SEC. 07, T. 104 N., R. 51 W.

0 - 6.0 SAND, BROWN, FINE, CLAYEY; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 832  
LOCATION: 104N-51W-09BBBC  
LEGAL LOCATION: SW NW NW NW SEC. 09, T. 104 N., R. 51 W.

7.0 - 10.0 SAND, TAN-BROWN, MEDIUM, VERY CLAYEY,  
GRAVELLY FROM 8 TO 10 FEET; OXIDIZED,  
SATURATED

\* \* \* \*

TEST HOLE NUMBER: 833  
LOCATION: 104N-51W-09DDDD  
LEGAL LOCATION: SE SE SE SE SEC. 09, T. 104 N., R. 51 W.

9.0 - 18.0 SAND, REDDISH-BROWN, MEDIUM TO COARSE;  
SOME MEDIUM GRAVEL, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 834  
LOCATION: 104N-51W-22BAAA  
LEGAL LOCATION: NE NE NE NW SEC. 22, T. 104 N., R. 51 W.

25.0 - 28.0 GRAVEL, BROWN, COARSE; OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 835  
LOCATION: 104N-51W-22DCDC  
LEGAL LOCATION: SW SE SW SE SEC. 22, T. 104 N., R. 51 W.

0 - 3.0 SAND, REDDISH-BROWN, FINE, CLAYEY, SILTY;  
MOIST, OXIDIZED

3.0 - 10.0 GRAVEL, REDDISH-BROWN, MEDIUM, CLAYEY,  
SANDY; OXIDIZED, SATURATED AT 5 FEET

10.0 - 19.0 SAND, REDDISH-BROWN, FINE TO MEDIUM,  
CLAYEY, GRAVELLY; SATURATED, OXIDIZED

19.0 - 31.0 SAND, REDDISH-BROWN, FINE TO MEDIUM, VERY  
CLAYEY; SATURATED, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 836  
LOCATION: 104N-51W-27ABBA  
LEGAL LOCATION: NE NW NW NE SEC. 27, T. 104 N., R. 51 W.

10.0 - 28.0 SAND AND GRAVEL, BROWN, MEDIUM TO COARSE  
SAND, FINE TO MEDIUM GRAVEL; 2 FOOT  
CLAY LAYER AT 15 FEET

\* \* \* \*

TEST HOLE NUMBER: 837  
LOCATION: 104N-51W-33DDAA  
LEGAL LOCATION: NE NE SE SE SEC. 33, T. 104 N., R. 51 W.

2.0 - 44.0 SAND, LIGHT-BROWN, FINE, SILTY, CLAYEY;  
MOIST, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 838  
LOCATION: 104N-51W-33DDAA 1  
LEGAL LOCATION: NE NE SE SE SEC. 33, T. 104 N., R. 51 W.

5.0 - 22.0 SAND, BROWN, FINE TO COARSE; OXIDIZED  
24.0 - 31.0 SAND, GRAY, FINE TO COARSE; UNOXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 839  
LOCATION: 104N-51W-33DDAA 2  
LEGAL LOCATION: NE NE SE SE SEC. 33, T. 104 N., R. 51 W.

5.0 - 22.0 SAND, BROWN, FINE TO COARSE; OXIDIZED  
22.0 - 31.0 SAND, GRAY, FINE TO COARSE; UNOXIDIZED,  
INTERMITTENT THIN LAYERS OF CLAY

\* \* \* \*

TEST HOLE NUMBER: 840  
LOCATION: 104N-51W-35BBCB  
LEGAL LOCATION: NW SW NW NW SEC. 35, T. 104 N., R. 51 W.

8.0 - 17.0 SAND, BROWN, FINE TO MEDIUM, SILTY; MOIST  
TO SATURATED, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 841  
LOCATION: 104N-51W-35DDAA  
LEGAL LOCATION: NE NE SE SE SEC. 35, T. 104 N., R. 51 W.

1.0 - 21.0 SAND, BROWN, MEDIUM TO COARSE; OXIDIZED,  
CLAYEY FROM 1 TO 8 FEET  
21.0 - 25.0 SAND, GRAY, COARSE; UNOXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 842  
LOCATION: 104N-51W-35DDAA 1  
LEGAL LOCATION: NE NE SE SE SEC. 35, T. 104 N., R. 51 W.

17.0 - 21.0 SAND, TAN-BROWN, VERY FINE, VERY CLAYEY;  
OXIDIZED, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 843  
LOCATION: 104N-52W-02ADDD  
LEGAL LOCATION: SE SE SE NE SEC. 02, T. 104 N., R. 52 W.

5.0 - 13.0 SAND AND GRAVEL, BROWN, FINE TO MEDIUM  
SAND, FINE GRAVEL, CLAYEY; OXIDIZED,  
SATURATED

13.0 - 15.0 SAND AND GRAVEL, GRAY, FINE TO MEDIUM  
SAND, FINE TO COARSE GRAVEL, VERY  
CLAYEY; UNOXIDIZED, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 844  
LOCATION: 104N-52W-03DAAA  
LEGAL LOCATION: NE NE NE SE SEC. 03, T. 104 N., R. 52 W.

1.0 - 3.0 SAND AND GRAVEL, BROWN TO BLACK, FINE TO  
COARSE SAND, FINE TO MEDIUM GRAVEL

3.0 - 14.0 SAND, DARK-BROWN, FINE, CLAYEY, SILTY,  
GRAVELLY; SATURATED AT 5 FEET, GRAVEL  
CONTENT INCREASES WITH DEPTH

\* \* \* \*

TEST HOLE NUMBER: 845  
LOCATION: 104N-52W-10AAAA  
LEGAL LOCATION: NE NE NE NE SEC. 10, T. 104 N., R. 52 W.

15.0 - 20.0 GRAVEL, BROWN, MEDIUM TO COARSE, CLAYEY,  
SUBANGULAR; SATURATED, OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 846  
LOCATION: 104N-52W-11BAAA  
LEGAL LOCATION: NE NE NE NW SEC. 11, T. 104 N., R. 52 W.

3.0 - 5.0 SAND, BROWN, FINE TO MEDIUM; VERY FEW  
PEBBLES, OXIDIZED, DRY

5.0 - 7.0 SAND, BROWN, FINE TO MEDIUM, CLAYEY; VERY  
FEW PEBBLES, OXIDIZED, MOIST

7.0 - 10.0 SAND, BROWN, FINE TO MEDIUM, CLAYEY; VERY

FEW PEBBLES, OXIDIZED, SATURATED

\* \* \* \*

TEST HOLE NUMBER: 847  
LOCATION: 104N-52W-27CCCD  
LEGAL LOCATION: SE SW SW SW SEC. 27, T. 104 N., R. 52 W.

20.0 - 27.0 SAND AND GRAVEL, GRAY; COARSE SAND TO  
MEDIUM TO COARSE GRAVEL, UNOXIDIZED,  
SOME COBBLES

\* \* \* \*

TEST HOLE NUMBER: 848  
LOCATION: 104N-52W-28BCCC  
LEGAL LOCATION: SW SW SW NW SEC. 28, T. 104 N., R. 52 W.

1.0 - 9.0 GRAVEL, BROWN, FINE TO COARSE, CLAYEY,  
ROUNDED; SOME SAND, DRY, OXIDIZED  
9.0 - 11.0 SAND, ORANGE-BROWN, FINE TO MEDIUM, VERY  
CLAYEY, SILTY; MOIST TO SATURATED,  
OXIDIZED

\* \* \* \*

TEST HOLE NUMBER: 849  
LOCATION: 104N-52W-34CDDC  
LEGAL LOCATION: SW SE SE SW SEC. 34, T. 104 N., R. 52 W.

7.0 - 10.0 SAND AND GRAVEL, BROWN, FINE TO COARSE  
SAND, FINE, WITH A LITTLE MEDIUM  
GRAVEL, VERY SILTY, VERY CLAYEY;  
OXIDIZED, SATURATED

\* \* \* \*

**TABLE 2. List of sand and gravel pits and quartzite quarries in Minnehaha County, on file at the Department of Transportation, Division of Highways, Pierre, South Dakota, and at the Department of Water and Natural Resources, Office of Surface Mining, Pierre, South Dakota.**

EXPLANATION:

Column Description:

- a. Landowner and/or pit operator and address
- b. Location - given in half and quarter sections, section number, township, and range
- c. Aggregate type
- d. Average thickness of deposits in feet
- e. Average thickness of overburden in feet

Pit 1

- a. Landowner: **E. Pearson - Brandon**
- b. Location: **NW 1/4 sec. 3, T. 101 N., R. 48 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 2

- a. Landowner: **E. Pearson - Brandon**
- b. Location: **NE 1/4 NW 1/4 sec. 3, T. 101 N., R. 48 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **15**
- e. Overburden thickness (ft): **1**

Pit 3

- a. Landowner: **Brandon Tea Ready-Mix, Inc. - Brandon**
- b. Location: **NW 1/4 Sec. 3, T. 101 N., R. 48 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 4

- a. Landowner: **Department of Transportation - Pierre**
- b. Location: **NW 1/4 sec. 10, T. 101 N., R. 48 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 5

- a. Landowner: **Myrl and Roy's Paving, Inc. - Sioux Falls**
- b. Location: **Sec. 20, T. 101 N., R. 48 W.**
- c. Aggregate type: **Quartzite**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 6

- a. Landowner: **Myrl and Roy's Paving, Inc. - Sioux Falls**
- b. Location: **NW 1/4 SW 1/4 sec. 27, T. 101 N., R. 48 W.**
- c. Aggregate type: -----
- d. Deposit thickness (ft): -----
- e. Overburden thickness (ft): -----

Pit 7

- a. Landowner: **Perry Estate**
- b. Location: **NE 1/4 sec. 28, T. 101 N., R. 48 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): -----
- e. Overburden thickness (ft): -----

Pit 8

- a. Landowner: **Myrl and Roy's Paving, Inc. - Sioux Falls**
- b. Location: **SW 1/4 NE 1/4 sec. 28, T. 101 N., R. 48 W.**
- c. Aggregate type: -----
- d. Deposit thickness (ft): -----
- e. Overburden thickness (ft): -----

Pit 9

- a. Landowner: **Myrl and Roy's Paving, Inc. - Sioux Falls**
- b. Location: **NE 1/4 Sec. 29, T. 101 N., R. 48 W.**
- c. Aggregate type: **Quartzite**
- d. Deposit thickness (ft): -----
- e. Overburden thickness (ft): -----

Pit 10

- a. Landowner: **City of Sioux Falls - Sioux Falls**
- b. Location: **Sec. 1, T. 101 N., R. 49 W.**
- c. Aggregate type: -----
- d. Deposit thickness (ft): -----
- e. Overburden thickness (ft): -----

Pit 11

- a. Landowner: -----
- b. Location: **NE 1/4 sec. 2, T. 101 N., R. 49 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **11.5**
- e. Overburden thickness (ft): **2.5**

Pit 12

- a. Landowner: **Concrete Materials - Sioux Falls**
- b. Location: **S 1/2 sec. 2, T. 101 N., R. 49 W.**
- c. Aggregate type: -----
- d. Deposit thickness (ft): -----
- e. Overburden thickness (ft): -----



Pit 13

- a. Landowner: **Fred Traub - Sioux Falls**
- b. Location: **NE 1/4 sec. 3, T. 101 N., R. 49 W.**
- c. Aggregate type: **Sand**
- d. Deposit thickness (ft): **6**
- e. Overburden thickness (ft): **2**

Pit 14

- a. Landowner: **Fred Traub - Sioux Falls**
- b. Location: **SE 1/4 sec. 3, T. 101 N., R. 49 W.**
- c. Aggregate type: **Sand**
- d. Deposit thickness (ft): **12 - 18**
- e. Overburden thickness (ft): **2**

Pit 15

- a. Landowner: **Myrl and Roy's Paving, Inc. - Sioux Falls**
- b. Location: **NW 1/4 sec. 11, T. 101 N., R. 49 W.**
- c. Aggregate type: **-----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 16

- a. Landowner: **Myrl and Roy's Paving, Inc. - Sioux Falls**
- b. Location: **NE 1/4 SW 1/4 sec. 11, T. 101 N., R. 49 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 17

- a. Landowner: **Concrete Materials - Sioux Falls**
- b. Location: **SE 1/4 SW 1/4 sec. 11, T. 101 N., R. 49 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 18

- a. Landowner: **Mrs. Frank Lacey - Sioux Falls**
- b. Location: **SE 1/4 SW 1/4 sec. 11, T. 101 N., R. 49 W.**
- c. Aggregate type: **Sand and gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 19

- a. Landowner: **Myrl and Roy's Paving, Inc. - Sioux Falls**
- b. Location: **NW 1/4 SE 1/4 sec. 11, T. 101 N., R. 49 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 20

- a. Landowner: **Concrete Materials - Sioux Falls**
- b. Location: **NE 1/4 NW 1/4 sec. 14, T. 101 N., R. 49 W.**
- c. Aggregate type: -----
- d. Deposit thickness (ft): -----
- e. Overburden thickness (ft): -----

Pit 21

- a. Landowner: **Friessen Construction, Inc.**
- b. Location: **SE 1/4 NW 1/4 sec. 14, T. 101 N., R. 49 W.**
- c. Aggregate type: -----
- d. Deposit thickness (ft): -----
- e. Overburden thickness (ft): -----

Pit 22

- a. Landowner: **Concrete Materials Company - Sioux Falls**
- b. Location: **NW 1/4 sec. 18, T. 101 N., R. 49 W.**
- c. Aggregate type: **Quartzite**
- d. Deposit thickness (ft): -----
- e. Overburden thickness (ft): -----

Pit 23

- a. Landowner: **Concrete Materials Company - Sioux Falls**
- b. Location: **NE 1/4 sec. 31, T. 101 N., R. 49 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): -----
- e. Overburden thickness (ft): -----

Pit 24

- a. Landowner: **SD Department of Highways - Pierre**
- b. Location: **S 1/2 NE 1/4 sec. 31, T. 101 N., R. 49 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): -----
- e. Overburden thickness (ft): -----

Pit 25

- a. Landowner: **SD Department of Highways - Pierre**
- b. Location: **N 1/2 sec. 31, T. 101 N., R. 49 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): -----
- e. Overburden thickness (ft): -----

Pit 26

- a. Landowner: **Department of Transportation - Pierre**
- b. Location: **W 1/2 SE 1/4 sec. 31, T. 101 N., R. 49 W.**
- c. Aggregate type: -----
- d. Deposit thickness (ft): -----
- e. Overburden thickness (ft): -----

Pit 27

- a. Landowner: **SD Department of Highways - Pierre**
- b. Location: **SE 1/4 sec. 31, T. 101 N., R. 49 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): ----
- e. Overburden thickness (ft): ----

Pit 28

- a. Landowner: **Concrete Materials Company - Sioux Falls**
- b. Location: **NW 1/4 sec. 32, T. 101 N., R. 49 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): ----
- e. Overburden thickness (ft): ----

Pit 29

- a. Landowner: **Friessen Construction, Inc. - Sioux Falls**
- b. Location: **S 1/2 SW 1/4 SW 1/4 sec. 5, T. 101 N., R. 50 W.**
- c. Aggregate type: ----
- d. Deposit thickness (ft): ----
- e. Overburden thickness (ft): ----

Pit 30

- a. Landowner: **H. Beckman**
- b. Location: **W 1/2 NE 1/4 sec. 6, T. 101 N., R. 50 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): ----
- e. Overburden thickness (ft): ----

Pit 31

- a. Landowner: **Lloyd Meyer - Hartford**
- b. Location: **NW 1/4 sec. 6, T. 101 N., R. 50 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): ----
- e. Overburden thickness (ft): ----

Pit 32

- a. Landowner: **Reynolds Construction Company - Sioux Falls**
- b. Location: **E 1/2 SW 1/4 sec. 6, T. 101 N., R. 50 W.**
- c. Aggregate type: ----
- d. Deposit thickness (ft): ----
- e. Overburden thickness (ft): ----

Pit 33

- a. Landowner: **Minnehaha Co. Highway Department - Sioux Falls**
- b. Location: **E 1/2 SE 1/4 sec. 6, T. 101 N., R. 50 W.**
- c. Aggregate type: ----
- d. Deposit thickness (ft): ----
- e. Overburden thickness (ft): ----

Pit 34

- a. Landowner: **Minnehaha County - Sioux Falls**
- b. Location: **NW 1/4 SE 1/4 sec. 6, T. 101 N., R. 50 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 35

- a. Landowner: **Reynolds Construction Company - Sioux Falls**
- b. Location: **SW 1/4 SE 1/4 sec. 6, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 36

- a. Landowner: **Harold Allen - Sioux Falls**
- b. Location: **NE 1/4 sec. 8, T. 101 N., R. 50 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 37

- a. Landowner: **City of Sioux Falls - Sioux Falls**
- b. Location: **N 1/2 NW 1/4 sec. 8, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 38

- a. Landowner: **Unzelman Schultz - Sioux Falls**
- b. Location: **SW 1/4 NW 1/4 sec. 8, T. 101 N., R. 50 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 39

- a. Landowner: **Myrl and Roy's Paving, Inc. - Sioux Falls**
- b. Location: **SW 1/4 NW 1/4 sec. 8, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 40

- a. Landowner: **Soukup Construction, Inc. - Sioux Falls**
- b. Location: **SE 1/4 NW 1/4 sec. 8, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 41

- a. Landowner: **Soukup Construction, Inc. - Sioux Falls**
- b. Location: **E 1/2 SW 1/4 sec. 8, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 42

- a. Landowner: **City of Sioux Falls - Sioux Falls**
- b. Location: **NW 1/4 SW 1/4 sec. 8, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 43

- a. Landowner: **Myrl and Roy's Paving, Inc. - Sioux Falls**
- b. Location: **SW 1/4 SW 1/4 sec. 8, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 44

- a. Landowner: **Mrs. Eleanor Battles - Sioux Falls**
- b. Location: **NW 1/4 SE 1/4 sec. 8, T. 101 N., R. 50 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **6.3**
- e. Overburden thickness (ft): **3.1**

Pit 45

- a. Landowner: **Myrl and Roy's Paving, Inc. - Sioux Falls**
- b. Location: **SE 1/4 SE 1/4 sec. 8, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **---**

Pit 46

- a. Landowner: **Hagen Grading - Sioux Falls**
- b. Location: **NW 1/4 sec. 9, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 47

- a. Landowner: **Soukup Construction Inc. - Sioux Falls**
- b. Location: **NW 1/4 sec. 9, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 48

- a. Landowner: **Diadem Corporation - Sioux Falls**
- b. Location: **SW 1/4 NW 1/4 sec. 9, T. 101 N., R. 50 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 49

- a. Landowner: **Concrete Materials - Sioux Falls**
- b. Location: **SW 1/4 SE 1/4 sec. 12, T. 101 N., R. 50 W.**
- c. Aggregate type: **Quartzite**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 50

- a. Landowner: **Concrete Materials - Sioux Falls**
- b. Location: **SE 1/4 SE 1/4 sec. 12, T. 101 N., R. 50 W.**
- c. Aggregate type: **Quartzite**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 51

- a. Landowner: **Concrete Materials - Sioux Falls**
- b. Location: **NW 1/4 NE 1/4 sec. 13, T. 101 N., R. 50 W.**
- c. Aggregate type: **Quartzite**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 52

- a. Landowner: **Myrl and Roy's Paving, Inc. - Sioux Falls**
- b. Location: **NE 1/4 sec. 15, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 53

- a. Landowner: **Frank Lady - Sioux Falls**
- b. Location: **SW 1/4 NE 1/4 sec. 15, T. 101 N., R. 50 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **8.7**
- e. Overburden thickness (ft): **5**

Pit 54

- a. Landowner: **Myrl and Roy's Paving, Inc. - Sioux Falls**
- b. Location: **E 1/2 NW 1/4 sec. 15, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 55

- a. Landowner: **Beulah Oakes - Sioux Falls**
- b. Location: **W 1/2 NW 1/4 sec. 15, T. 101 N., R. 50 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **14**
- e. Overburden thickness (ft): **4**

Pit 56

- a. Landowner: **Eagle Sand and Gravel Company - Sioux Falls**
- b. Location: **SW 1/4 sec. 15, T. 101 N., R. 50 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 57

- a. Landowner: **Hagen Grading - Sioux Falls**
- b. Location: **SW 1/4 sec. 15, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 58

- a. Landowner: **Fodness Gravel - Sioux Falls**
- b. Location: **SW 1/4 sec. 15, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 59

- a. Landowner: **Beulah Oakes - Sioux Falls**
- b. Location: **E 1/2 NE 1/4 sec. 16, T. 101 N., R. 50 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **13**
- e. Overburden thickness (ft): **6**

Pit 60

- a. Landowner: **Myrl and Roy's Paving, Inc. - Sioux Falls**
- b. Location: **SE 1/4 NE 1/4 sec. 16, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 61

- a. Landowner: **Christina Weinacht - Sioux Falls**
- b. Location: **E 1/2 NW 1/4 sec. 16, T. 101 N., R. 50 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **11.6**
- e. Overburden thickness (ft): **4**

Pit 62

- a. Landowner: **Concrete Materials - Sioux Falls**
- b. Location: **NW 1/4 sec. 16, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 63

- a. Landowner: **Hagen Grading - Sioux Falls**
- b. Location: **NW 1/4 sec. 16, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 64

- a. Landowner: **Hagen Grading - Sioux Falls**
- b. Location: **NE 1/4 SE 1/4 sec. 16, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 65

- a. Landowner: **Hagen Grading - Sioux Falls**
- b. Location: **S 1/2 SE 1/4 sec. 16, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 66

- a. Landowner: **Eagle Sand and Gravel Company - Sioux Falls**
- b. Location: **SE 1/4 sec. 16, T. 101 N., R. 50 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 67

- a. Landowner: **Asphalt Surfacing Company - Sioux Falls**
- b. Location: **NE 1/4 NE 1/4 sec. 17, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 68

- a. Landowner: **D. Hylland - Sioux Falls**
- b. Location: **NE 1/4 sec. 17, T. 101 N., R. 50 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **11.8**
- e. Overburden thickness (ft): **3.3**



Pit 69

- a. Landowner: **D. Hylland - Sioux Falls**
- b. Location: **NE 1/4 sec. 17, T. 101 N., R. 50 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **17**
- e. Overburden thickness (ft): **2**

Pit 70

- a. Landowner: **Soukup Construction, Inc. - Sioux Falls.**
- b. Location: **NE 1/4 NW 1/4 sec. 17, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 71

- a. Landowner: **Myrl and Roy's Paving, Inc. - Sioux Falls**
- b. Location: **NW 1/4 NW 1/4 sec. 17, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 72

- a. Landowner: **Friessen Construction, Inc. - Sioux Falls**
- b. Location: **NE 1/4 SE 1/4 sec. 17, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 73

- a. Landowner: **Don Runge Construction, Inc. - Sioux Falls**
- b. Location: **S 1/2 NE 1/4 sec. 23, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 74

- a. Landowner: **Don Runge Construction, Inc. - Sioux Falls**
- b. Location: **SE 1/4 NW 1/4 sec. 23, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 75

- a. Landowner: **Hayward Estates - Sioux Falls**
- b. Location: **N 1/2 N 1/2 sec. 23, T. 101 N., R. 50 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **12-15**
- e. Overburden thickness (ft): **2.5-3.0**

Pit 76

- a. Landowner: **Don Runge Construction, Inc. - Sioux Falls**
- b. Location: **N 1/2 SE 1/4 sec. 23, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **---**
- e. Overburden thickness (ft): **---**

Pit 77

- a. Landowner: **Don Runge Construction, Inc. - Sioux Falls**
- b. Location: **E 1/2 SW 1/4 SW 1/4 SE 1/4 sec. 23, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 78

- a. Landowner: **C. Delbridge - Sioux Falls**
- b. Location: **SW 1/4 NW 1/4 sec. 24, T. 101 N., R. 50 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 79

- a. Landowner: **C. Delbridge - Sioux Falls**
- b. Location: **SW 1/4 SW 1/4 sec. 24, T. 101 N., R. 50 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 80

- a. Landowner: **Clarence Sherman - Sioux Falls**
- b. Location: **Sec. 25, T. 101 N., R. 50 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **9.5**
- e. Overburden thickness (ft): **3.5**

Pit 81

- a. Landowner: **Friessen Construction, Inc. - Sioux Falls**
- b. Location: **Sec. 25, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 82

- a. Landowner: **Harry Hanson - Sioux Falls**
- b. Location: **E 1/2 NE 1/4 sec. 26, T. 101 N., R. 50 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 83

- a. Landowner: **Arthur Ruud - Hartford**
- b. Location: **SW 1/4 sec. 25, T. 101 N., R. 51 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 84

- a. Landowner: **Arthur Ruud - Hartford**
- b. Location: **SE 1/4 sec. 26, T. 101 N., R. 51 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **20**
- e. Overburden thickness (ft): **2**

Pit 85

- a. Landowner: **Ralph T. Erickson - Humboldt**
- b. Location: **NW 1/4 sec. 27, T. 101 N., R. 52 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 86

- a. Landowner: **Milo Johnson - Valley Springs**
- b. Location: **W 1/2 NE 1/4 sec. 8, T. 102 N., R. 47 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 87

- a. Landowner: **Mrs. Deschepper - Garretson**
- b. Location: **SW 1/4 NE 1/4 sec. 8, T. 102 N., R. 47 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **10**
- e. Overburden thickness (ft): **2**

Pit 88

- a. Landowner: **Milo Johnson - Valley Springs**
- b. Location: **E 1/2 NW 1/4 sec. 8, T. 102 N., R. 47 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 89

- a. Landowner: **Milo Johnson - Valley Springs**
- b. Location: **SW 1/4 sec. 8, T. 102 N., R. 47 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 90

- a. Landowner: **Milo Johnson - Valley Springs**
- b. Location: **S 1/2 sec. 8, T. 102 N., R. 47 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 91

- a. Landowner: **Art Evenson - Valley Springs**
- b. Location: **E 1/2 SW 1/4 sec. 27, T. 102 N., R. 47 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 92

- a. Landowner: **Art Evenson - Valley Springs**
- b. Location: **W 1/2 SW 1/4 sec. 27, T. 102 N., R. 47 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 93

- a. Landowner: **Art Evenson - Valley Springs**
- b. Location: **E 1/2 SE 1/4 sec. 28, T. 102 N., R. 47 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 94

- a. Landowner: **J. Boersma - Valley Springs**
- b. Location: **W 1/2 SE 1/4 sec. 33, T. 102 N., R. 47 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 95

- a. Landowner: **Myrtle Jones - San Francisco, California**
- b. Location: **SW 1/4 NW 1/4 sec. 22, T. 102 N., R. 48 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 96

- a. Landowner: **Palmar Karli - Brandon**
- b. Location: **NE 1/2 sec. 23, T. 102 N., R. 48 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 97

- a. Landowner: **Eldest Swenson - Corson**
- b. Location: **NE 1/4 SE 1/4 sec. 23, T. 102 N., R. 48 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **24**
- e. Overburden thickness (ft): **4.3**

Pit 98

- a. Landowner: **Henry Thoreson - Brandon**
- b. Location: **N 1/2 NW 1/4 sec. 24, T. 102 N., R. 48 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 99

- a. Landowner: **Dewey Christopherson - Brandon**
- b. Location: **S 1/2 NW 1/4 sec. 24, T. 102 N., R. 48 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **12**
- e. Overburden thickness (ft): **5**

Pit 100

- a. Landowner: **Dewey Christopherson - Brandon**
- b. Location: **SE 1/4 SW 1/4 sec. 24, T. 102 N., R. 48 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **8**
- e. Overburden thickness (ft): **2.5**

Pit 101

- a. Landowner: **Fred Rist - Sioux Falls**
- b. Location: **NW 1/4 SW 1/4 sec. 30, T. 102 N., R. 48 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **10**
- e. Overburden thickness (ft): **2.6**

Pit 102

- a. Landowner: **Robert Bruns**
- b. Location: **NW 1/4 NW 1/4 sec. 31, T. 102 N., R. 48 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **---**

Pit 103

- a. Landowner: **Martin Graff - Brandon**
- b. Location: **SW 1/4 sec. 34, T. 102 N., R. 48 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **7.2**
- e. Overburden thickness (ft): **4.2**

Pit 104

- a. Landowner: **Clara Johnson - Sioux Falls**
- b. Location: **SW 1/4 sec. 24, T. 102 N., R. 49 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **15**
- e. Overburden thickness (ft): **2-3**

Pit 105

- a. Landowner: **Harry Eckert - Sioux Falls**
- b. Location: **E 1/2 SE 1/4 sec. 25, T. 102 N., R. 49 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **10**
- e. Overburden thickness (ft): **2.3**

Pit 106

- a. Landowner: **Krueger Excavating, Inc. - Sioux Falls**
- b. Location: **NW 1/4 NE 1/4 sec. 35, T. 102 N., R. 49 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 107

- a. Landowner: **Ray Parkham - Sioux Falls**
- b. Location: **NW 1/4 sec. 36, T. 102 N., R. 49 W.**
- c. Aggregate type: **Sand**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 108

- a. Landowner: **G. Norton - Sioux Falls**
- b. Location: **SW 1/4 sec. 36, T. 102 N., R. 49 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **9.8**
- e. Overburden thickness (ft): **3.6**

Pit 109

- a. Landowner: **G. Norton - Sioux Falls**
- b. Location: **SW 1/4 sec. 36, T. 102 N., R. 49 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **11.3**
- e. Overburden thickness (ft): **3.6**

Pit 110

- a. Landowner: **Diamond D. Construction - Hartford**
- b. Location: **NW 1/4 sec. 2, T. 102 N., R. 51 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 111

- a. Landowner: **Douglas Doggett - Hartford**
- b. Location: **NW 1/4 sec. 2, T. 102 N., R. 51 W.**
- c. Aggregate type: **Sand**
- d. Deposit thickness (ft): **6.5**
- e. Overburden thickness (ft): **2**

Pit 112

- a. Landowner: **Charles Main - Hartford**
- b. Location: **SE 1/4 sec. 11, T. 102 N., R. 51 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **5**
- e. Overburden thickness (ft): **3.1**

Pit 113

- a. Landowner: **Fred Ruback - Hartford**
- b. Location: **NW 1/4 sec. 13, T. 102 N., R. 51 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **15**
- e. Overburden thickness (ft): **3.5**

Pit 114

- a. Landowner: **Chris Sorenson - Hartford**
- b. Location: **SE 1/4 sec. 13, T. 102 N., R. 51 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **18**
- e. Overburden thickness (ft): **3.5**

Pit 115

- a. Landowner: **Zacharias Construction - Hartford**
- b. Location: **SE 1/4 sec. 13, T. 102 N., R. 51 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **---**
- e. Overburden thickness (ft): **---**

Pit 116

- a. Landowner: **Elsie Johnson - Sioux Falls**
- b. Location: **SE 1/4 sec. 24, T. 102 N., R. 51 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 117

- a. Landowner: **Herman Kriens - Watertown**
- b. Location: **NE 1/4 sec. 25, T. 102 N., R. 51 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **11**
- e. Overburden thickness (ft): **1**

Pit 118

- a. Landowner: **Ralph Tyler - Hartford**
- b. Location: **W 1/2 SW 1/4 sec. 25, T. 102 N., R. 51 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **6**
- e. Overburden thickness (ft): **3**

Pit 119

- a. Landowner: **----**
- b. Location: **SW 1/4 sec. 27, T. 102 N., R. 52 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 120

- a. Landowner: **Donald Smith - Valley Springs**
- b. Location: **NE 1/4 sec. 3, T. 103 N., R. 47 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **10**
- e. Overburden thickness (ft): **6**

Pit 121

- a. Landowner: **Anderson**
- b. Location: **NE 1/4 sec. 4, T. 103 N., R. 47 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 122

- a. Landowner: **Walter Flanagan - Garretson**
- b. Location: **NW 1/4 sec. 20, T. 103 N., R. 47 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 123

- a. Landowner: **Walter Flanagan - Garretson**
- b. Location: **SW 1/4 sec. 20, T. 103 N., R. 47 W.**
- c. Aggregate type: **Sand and Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 124

- a. Landowner: **C. Woolridge - Garretson**
- b. Location: **NE 1/4 sec. 29, T. 103 N., R. 47 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **12**
- e. Overburden thickness (ft): **2**



Pit 125

- a. Landowner: **E. Coyle - Hartford**
- b. Location: **SW 1/4 sec. 19, T. 103 N., R. 51 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 126

- a. Landowner: **D. Johnson - Brookings**
- b. Location: **SE 1/4 sec. 19, T. 103 N., R. 51 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **15**
- e. Overburden thickness (ft): **2**

Pit 127

- a. Landowner: **A & J Salvage - Colton**
- b. Location: **SE 1/4 sec. 20, T. 103 N., R. 51 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 128

- a. Landowner: **Colton Redi-Mix - Colton**
- b. Location: **SE 1/4 sec. 20, T. 103 N., R. 51 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 129

- a. Landowner: **A & J Salvage - Colton**
- b. Location: **NE 1/4 sec. 30, T. 103 N., R. 51 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 130

- a. Landowner: **Herman Hotchkiss - Humboldt**
- b. Location: **NE 1/4 sec. 10, T. 103 N., R. 52 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **7.3**
- e. Overburden thickness (ft): **2.8**

Pit 131

- a. Landowner: **Walter Ginsbach - Hartford**
- b. Location: **NE 1/4 sec. 24, T. 103 N., R. 52 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **15**
- e. Overburden thickness (ft): **4.5**

Pit 132

- a. Landowner: **Colton Redi-Mix - Colton**
- b. Location: **NE 1/4 sec. 24, T. 103 N., R. 52 W.**
- c. Aggregate type: **----**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 133

- a. Landowner: **W. Sieverding - Hartford**
- b. Location: **SW 1/4 sec. 25, T. 103 N., R. 52 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **9**
- e. Overburden thickness (ft): **3**

Pit 134

- a. Landowner: **Rekstad**
- b. Location: **SW 1/4 sec. 19, T. 104 N., R. 47 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **18**
- e. Overburden thickness (ft): **4**

Pit 135

- a. Landowner: **Laura Wicks - Dell Rapids**
- b. Location: **W 1/2 NW 1/4 sec. 1, T. 104 N., R. 49 W.**
- c. Aggregate type: **Gravel**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 136

- a. Landowner: **L. G. Everist - Dell Rapids**
- b. Location: **SE 1/4 sec. 10, T. 104 N., R. 49 W.**
- c. Aggregate type: **Crushed stone - quartzite**
- d. Deposit thickness (ft): **----**
- e. Overburden thickness (ft): **----**

Pit 137

- a. Landowner: **M. Eulberg - Dell Rapids**
- b. Location: **NE 1/4 sec. 4, T. 104 N., R. 50 W.**
- c. Aggregate type: **Sand and Gravel**
- d. Deposit thickness (ft): **8-10**
- e. Overburden thickness (ft): **2**