Soils and Geology Report

Southern Colorado Rail Park

Fountain, Colorado

March 2024

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Contents

Appendices

1 Purpose and Scope

This Soils and Geology Report (Report) presents the results of HDR Engineering, Inc.'s (HDR's) geological research for the proposed rail spur outside the city of Fountain, Colorado. The work completed has been performed under HDR's Scope of Work agreement with Edw. C. Levy Co. (Client), of Detroit, Michigan, executed on May 10, 2023. The purpose of this report is to support the Client's pursuit of obtaining a Sketch Plan approval in El Paso County, Colorado. As such, HDR has prepared this Report in accordance with El Paso County Code 8.4.9, Geology and Soils Standards Reports.

The following Scope of Work (SOW) was executed by HDR as part of this report development:

- Perform a desktop review of existing information for the project area,
- Perform a site visit to evaluate the on site conditions,
- Prepare this report.

2 Project Description

The project is located south of the City of Fountain and west of Interstate I-25 in El Paso County, Colorado. To the west of the site lies Fort Carson, and to the east is the Colorado Springs Utilities (CSU) Nixon Power Plant (Nixon). The objective of the project is to provide rail access for the Fort Carson Military Reservation and adjacent areas via an existing rail spur that services Nixon. The existing spur is served by both the Burlington Northern Santa Fe (BNSF) and Union Pacific Railroad (UPRR) main tracks.

The current design includes approximately 4.35 miles of new track, and includes cuts and fills throughout the alignment. In general, the current alignment includes approximately 3.0 miles of cut with maximum slope angles of approximately 2(Horizontal):1(Vertical). Additionally, the alignment includes approximately 0.3 miles of fill section with maximum side slopes of 2H:1V.

3 Information Search and Findings

3.1 Physiographic Location

The project site is located east of the Southern Rocky Mountains Province, and on the western edge of the Colorado Piedmont Subprovince of the Great Plains Physiographic Province. The area is along the base of the foothills of the Front Range and consists of a broad hilly valley generally under El. 5500. The area stretches north and northeast from Denver along the South Platte River, and southward along the Arkansas River from Colorado Springs. Major landforms include valleys, lowlands, outwash plains, alluvial fans, and terraces. Little Fountain Creek traverses the property east to west along the southern portion of the project site. This feature is typically dry throughout the year.

3.2 Soils

A review of the local soils per the United States Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) web soil survey, the project area contains approximately 14 soil types, broken down generally into the following five (5) main soils types:

- Heldt Clay Loam, 0-3% slopes – Found on alluvial fans and stream terraces, well drained, with low runoff,
- Razor-Midway Complex – Found on hills, well drained, with medium runoff,
- Shamber-Razor Complex, 8-50% slopes – Found on breaks, well drained, with medium runoff,
- Fort Loam, 1-5% slopes – Found on interfluves and fans, well drained with low runoff,
- Mananzola Silt Clay Loam, 0-2% slopes – Found on fan remnants, interfluves, terraces, and drainageways, well drained.

3.3 Geology

According to the Colorado Geologic Map Data from the United States Geological Survey, the project site is underlain by the Pierre Shale Middle Unit of Cretaceous Age, and the Modern Alluvium of Quaternary Age.

The Pierre Shale (Kpm) consists of dark-gray to olive-gray fossiliferous marine shale and was deposited during the transgression of the Middle to Late Cretaceous Western Interior Seaway. Thickness of the formation is approximately 5,000 feet, though neither upper nor basal contact of the formation occurs locally. The shale is characterized by an abundance of marine invertebrate fossils and expansive clays. Swelling soils and bedrock exposures are common hazards for development. The formation includes moderately inclined slopes, such as mesa bluffs and river banks, and is prone to slope instability.

The Alluvium Three formation consists of Modern Alluvium, Older Gravels, and Alluvium and includes dark-brownish gray to tan-gray, occasionally mottled, stratified, poorly to occasionally well sorted sand and clayey to silty sands. The unit can contain clean, medium-grained, well sorted sand layers and sporadic gravel lenses with clasts up to small cobbles. Gravels are generally from crystalline protoliths from conglomerates of the Dawson Formation.

3.4 Water Wells

Utilizing the Colorado Department of Water Resources (DWR's) DWR Well Permit Research tool, a total of four (4) constructed water wells were identified in the immediate vicinity of the proposed project area. The Well Construction and Test Reports are included in Appendix A. In general, the well logs consist of sandy clay overburden, with bedrock encountered between 19 and 38 feet below grade. A summary of the well logs is provided in the table below.

Table 1 – Summary of Well Information

Well Identification	Northing	Easting	Overburden Material	Depth to Bedrock (ft.)	Total Depth (ft.)
4974-F	4277323.05950	522681.16839	Unknown	Not Recorded	28
208846	4276836.81190	523033.63223	Clay, Rock and Gravel	38	60
267182	4276705.08	525136.18	Sandy Clay, Clayey Sand	22	30
267183	4276755.49	525394.88	Clay and Sand	19	21

3.5 Site Hazards

According to the Colorado Earthquake and Fault Map Server mapping system, the Ute Pass Fault zone is located to the west of the project location. Additionally, two mapped earthquake epicenters are located west in the foothills, with a maximum magnitude of 3.5, and a depth of 5 km.

Per Colorado Geological Survey Collapsible Soil Susceptibility Map of Colorado, the project site is located within the Sedimentary Formations (Cretaceous and Tertiary) zone. The soils in this area are poorly indurated, bedrock formations with high percentages of clay and silt and are easily eroded. Collapsibility is a result of both the composition and softness of the soils. Often located in arid to semiarid climates, these collapsible soils are often associated with alluvial fans, alluvium, colluvium and eolian depositions.

In accordance with the Colorado Geological Survey Map ON-006-12, the project site is located immediately east of mapped potentially dangerous debris flow regions. Debris flows are characterized by moving mass of loose mud, sand, soil, rock, vegetation, or water that travels down a slope under the influence of gravity. Debris flows can reach speeds approaching 100 miles per hour, though most commonly are slow and move only a few feet per year. Often initiated by heavy rainfalls and flash floods on steep slopes, flows can result in significant slope instability if not protected.

Radon levels of the underlying geologic units have been reported by the Colorado Geologic survey in the Open File Report No. 91-4. Based on this report, the project site lies within the Tertiary Valley Fill region. A total of 378 samples were collected from this area. Below is a summary of the radon results in the area, and the percentages of various concentration ranges.

- Average Radon Level – 3.97 pCi/l
  - 0 < 4 pCi/l – 68.52%
  - 4 < 10 pCi/l – 25.66%
  - 10 < 20 pCi/l – 4.50%
  - >20 pCi/l – 1.32%

3.6 Economic Considerations

The sand deposits along the Fountain Creek corridor contain known quantities of coarse-grained quartz sands used for the petroleum industry throughout the country according to the Sand, Gravel, and Quarry Aggregate Resources, published in 1974 by the Colorado Geological Survey. Extent of the resource areas were not delineated in the publication; however, based on the field reconnaissance and known surface quarrying activities, the site is known to have value for construction materials.

4 Field Reconnaissance

A field reconnaissance was performed by HDR personnel on June 12, 2023 and February 23, 2024. The project location was reviewed for existing and potential constructability concerns, as well as potential issues and requirements for an upcoming drilling program. Below is a brief description of the onsite geology, hydrology, and existing features.

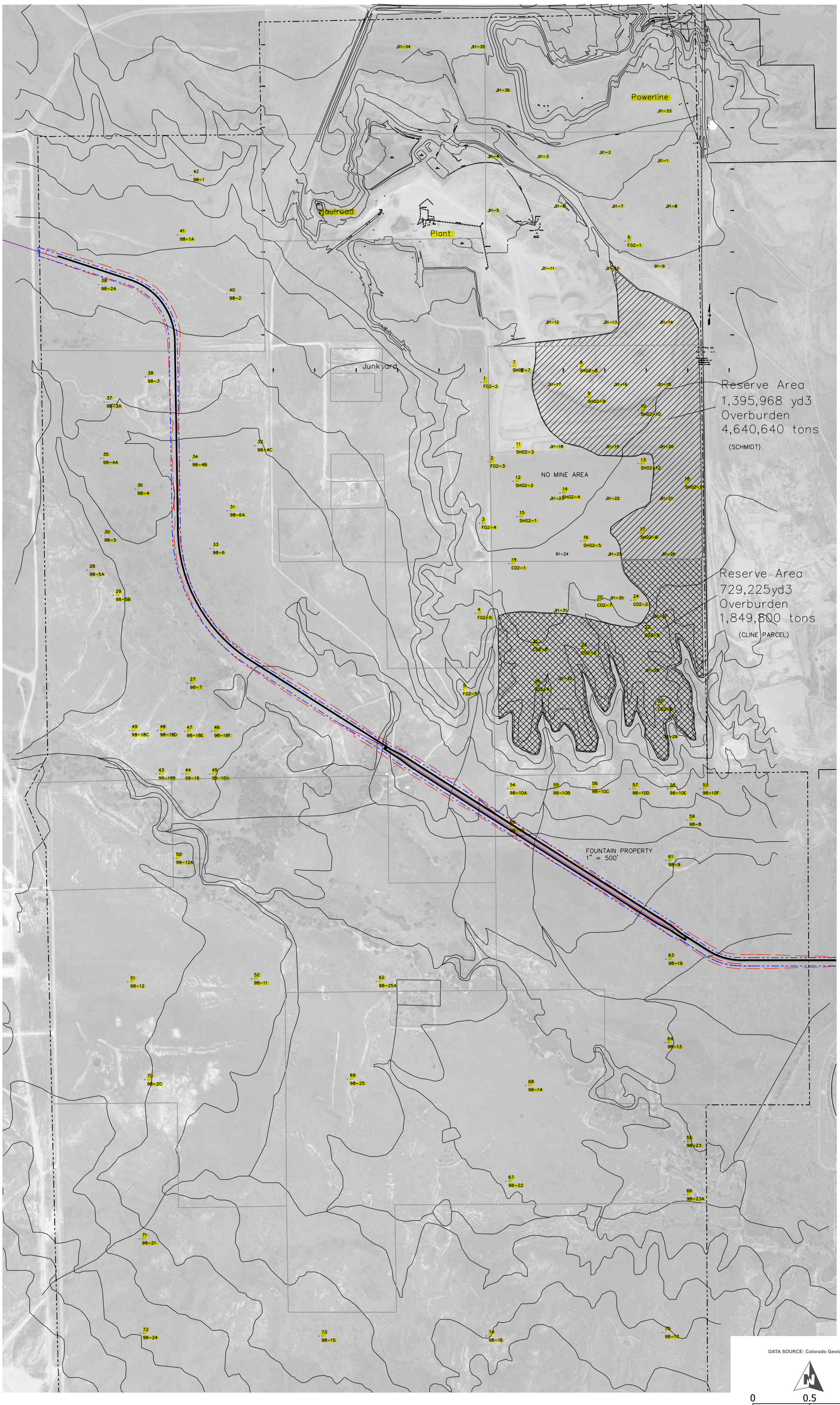
The eastern portion of the project site is located immediately north of the existing rail loop utilized by the power plant. Topography generally consisted of small mesas with steep, approximately 2H:1V sideslopes, and was generally vegetated with small scrub grass. Soils appeared to be a sandy loam with significant amounts of gravels and cobbles. No bedrock exposures were noted in this area. To the south, Little Fountain Creek was viewed. During the 2024 site visit, the channel was dry, with very steep slopes experiencing intermittent failures into the creek section.

After reviewing the eastern portion of the site, the extension of the corridor to the northwest was viewed. The area moved off of the existing bluff, and into a lower valley. The valley soils appeared to consist of a significant percentage of clays, with some standing water. No bedrock outcrops were noted in the valley, though portions of the area had been previously worked and therefore limited the availability of native soil and rock exposures. Atop a nearby bluff, in route to evaluate the valley, ponding water was present on the surface, suggesting the soils were less free draining than to the east. Prairie dog towns were identified in the northern portion of the project site. These areas will be further discussed in the environmental submissions.

5 Subsurface Explorations

5.1 Historic Subsurface Explorations

During the review of existing information for the project site, boring and test pit logs from the initial evaluation of materials for the mining operations were provided by the Owner for incorporation into this report. The previous boring program included a total of 51 test locations, and included 25 test pits performed by backhoe, and 26 geotechnical borings. The test pits were performed by Schmidt Construction, and the geotechnical borings were performed by Spectrum Exploration, Inc. All subsurface testing was performed in August of 2002. Below is a Boring Location Map, a table summarizing the results of the explorations, and the logs are included in Appendix C.



BORING LOCATION MAP

SOUTHERN RAIL SPUR
EL PASO COUNTY, COLORADO

Table 2 – Summary of Test Pits

Test Pit	Elevation	Depth to Bedrock (ft.)	Total Depth (ft.)
98-1	5687	0.0	25.0
98-2	5627	4.0	14.0
98-3	5608	12.0	20.0
98-4	5585	N/E	25.0
98-5	5579	19.0	25.0
98-6	5572	N/E	20.0
98-7	5570	N/E	20.0
98-8	5535	N/E	25.0
98-9	5522	N/E	25.0
98-10	5539	N/E	29.0
98-11	5546	N/E	25.0
98-12	5565	N/E	25.0
98-13	5502	N/E	25.0
98-14	5510	N/E	25.0
98-15	5550	0.0	24.0
98-16	5540	0.0	24.0
98-17	5540	0.0	24.0
98-18	5560	N/E	20.0
98-19	5560	N/E	25.0
98-20	5560	N/E	25.0
98-21	5560	12.0	25.0
98-22	5560	N/E	25.0
98-23	5560	N/E	25.0
98-24	5560	0.0	25.0
98-25	5560	N/E	25.0

N/E – Not Encountered

Table 3 – Summary of Test Borings

Test Pit	Elevation	Depth to Bedrock (ft.)	Total Depth (ft.)
C-02-1	5674	26.0	29.0
C-02-2	5672	N/E	24.0
C-02-3	5643	28.5	29.0
C-02-4	5645	N/E	29.0
C-02-5	5657	N/E	24.0
C-02-6	5638	N/E	24.0
C-02-7	5660	13.0	17.0
C-02-8	5658	N/E	34.0
F-02-1	5703	N/E	29.0
F-02-2	5690	8.0	19.0
F-02-3	5688	4.0	19.0
F-02-4	5682	4.0	14.0
F-02-5	5610	12.0	14.0
F-02-6	5650	N/E	14.0
SH-02-1	5685	21.0	29.0
SH-02-2	5687	N/E	34.0
SH-02-3	5692	N/E	29.0
SH-02-4	5684	32.0	34.0
SH-02-5	5677	16.0	19.0
SH-02-6	5670	27.0	29.0
SH-02-7	5695	N/E	39.0
SH-02-8	5695	N/E	54.0
SH-02-9	5692	N/E	49.0
SH-02-10	5683	N/E	49.0
SH-02-11	5670	N/E	39.0
SH-02-12	5678	N/E	44.0

N/E – Not Encountered

In general, the subsurface evaluation encountered sand and gravel overburden overlying shale bedrock. Intermittent clay was encountered sporadically throughout the site, indicative of likely weathered bedrock seams. No density testing was performed. Additionally, groundwater was not encountered throughout the project area. Some mottling was noted on the borings logs but were not pervasive.

Laboratory testing results from the previously performed borings were provided to HDR for review. Testing methodology was not provided; however, standard ASTM gradation analyses appear to be most likely based on the data provided. The results were previously utilized to determine reserves for the open pit sand and gravel mining, and in general confirm the anticipated materials at the site. Sand and gravel is predominant, while intermittent layers of clay were identified throughout.

5.2 Proposed Subsurface Exploration

In order to support the forthcoming final design and construction of the corridor, HDR recommends performing additional geotechnical borings to further evaluate the subsurface condition. Based on the existing alignment and cross sections, HDR recommends performing borings at approximately 1,000-foot intervals along the alignment, adjusting from the centerline to intercept proposed side slopes, as needed. Therefore, a total of approximately 23 borings are recommended. For cut locations, borings shall be performed to a minimum depth of 15 feet below final grade, and for fill borings, borings shall be performed to a minimum of 10 feet below existing grade. Borings shall include Standard Penetration Test (SPT) sampling at 2.5-foot intervals, and if auger refusal is encountered, NQ (minimum) size rock coring shall be performed to confirm bedrock presence. If needed, depending on soil conditions, modified California sampling shall be performed to collect adequate sample material. Groundwater elevations shall be collected at completion of the borings, and at 24-hours after completion, to better understand the local groundwater conditions. Shelby tube samples should be collected if soft, cohesive soils are encountered.

A laboratory testing program is recommended upon completion of the borings. It is anticipated that the testing program will consist of full soil classifications to verify field descriptions (ASTM D2487), direct shear tests (ASTM D3080) to determine in situ soil strengths, and unconfined compressive strength of rock, if encountered (ASTM D7012C). Swell testing (ASTM D4546) shall be performed to assist in developing shrink/swell characteristics. Final laboratory testing will be determined based on the conditions encountered during the subsurface exploration.

6 Conclusions and Development Recommendations

The project area of concern was evaluated for potential concerns associated with further development of the property. Based on our evaluation, the proposed property is suitable for the anticipated development. However, a subsurface evaluation should be performed prior to further design to evaluate the potential geologic and engineering constraints. Through the use of typical engineering design and construction practices, these concerns can be mitigated. Upon completion of the subsurface evaluation, a follow up report summarizing the geologic conditions and engineering concerns should be prepared to support future design.

Debris flows were identified through the available published data, as represented on Figure 4. These areas are minimal and constrained to the northwest and northwest corners of the property. During future design and construction, these hazards should be accounted for, including the potential use of debris flow barriers, if needed.

The site currently includes permitted sand and gravel mines, as represented on Figure 4. These areas should not pose a danger to future development in the area, as the existing highwalls and quarry operations are set back from the proposed development. As design

progresses or expands, an update to the minimum setback distances in relation to these areas should be evaluated.

During the performed site visits, the primary hazard identified at the site consisted of steepened slopes associated with the bluffs in the area. Future development should consider slope stability in determining setbacks from areas of concern. Current designs for the area require a minimum of 2(Horizontal):1(Vertical) to account for slope stability. Further refinement after the proposed boring program and laboratory testing program should be performed, including refining the soil parameters based on direct shear data.

For the identified prairie dog towns, future design and construction shall be performed according to local and federal regulations.

7 Limitations

The recommendations submitted in this report were based on the information revealed by our data review, published information research, and a review of historical data and reports prepared by previous entities pertaining to the project location. This report has been prepared to aid in determining the recommended geotechnical evaluation for the site development. We based our recommendations on information on the site and proposed linework as provided. Substantial changes in configuration, locations, or grades should be brought to our attention so we can modify our recommendations as needed.

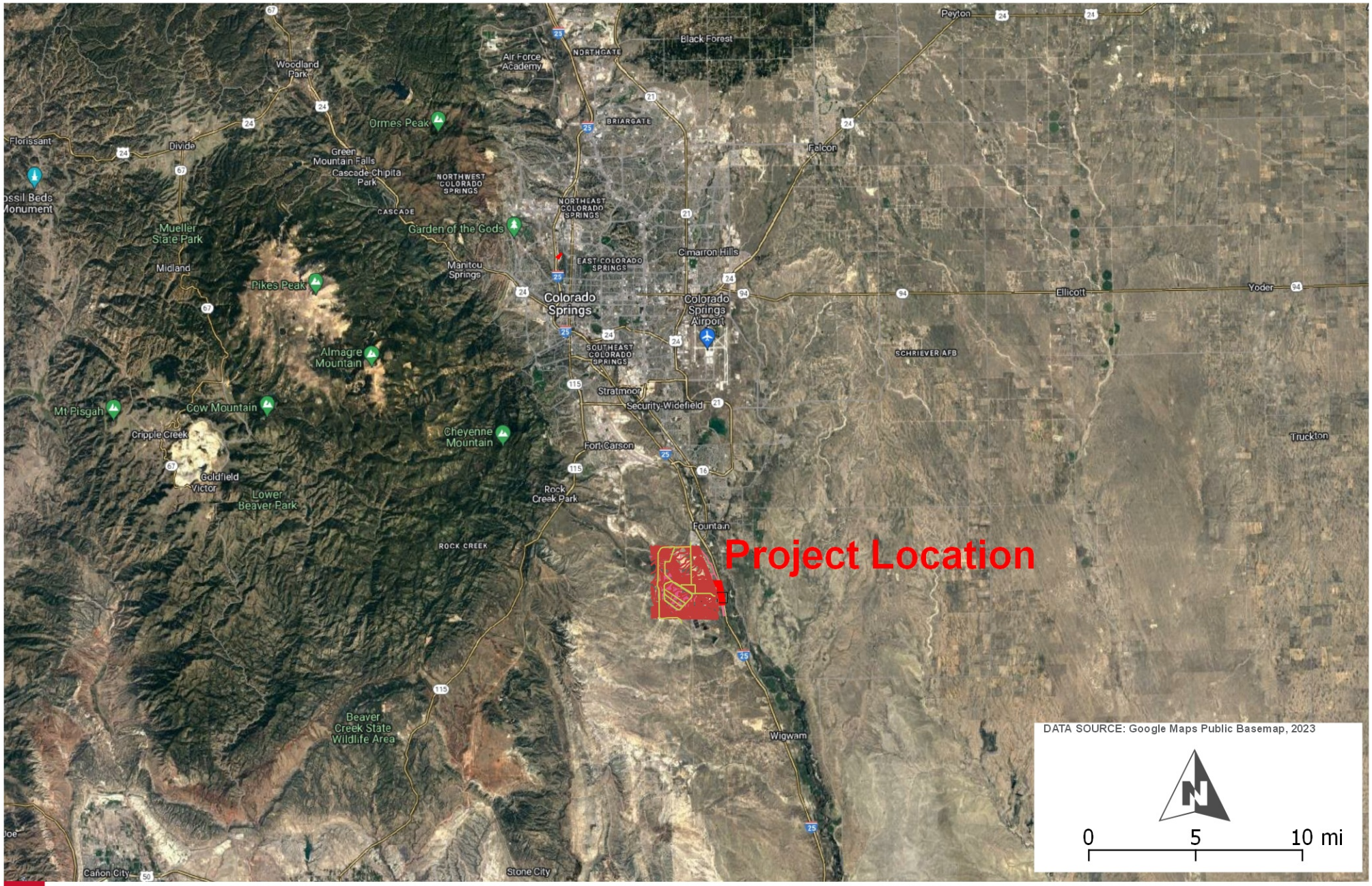
We have endeavored to complete the services identified herein in a manner consistent with that care and skill ordinarily exercised by members of the profession currently practicing in the same locality and under similar conditions as this project. No other representation, express or implied, is included or intended, and no warranty or guarantee is included or intended in this report, or other instrument of service.

8 References

- Natural Resource Conservation Service, June 4, 2023. "Web Soil Survey". United States Department of Agriculture, http://websoilsurvey.sc.egov.usds.gov
- United States Department of Agriculture Soil Conservation Service. June 4, 2023. "Soil Survey of El Paso County Area, Colorado".
- Colorado Department of Water Resources. July 20, 2023. "DWR Well Permit Research".
- Colorado Geological Survey (1991). "Results of the 1987-88 EPA Supported Radon Study in Colorado". Open File Report 91-4.
- Schwochow, S.D., Shroba, R.R., and Wicklein, P.C. (1974). "Atlas of Sand, Gravel, and Quarry Aggregate Resources, Colorado Front Range Counties". Colorado Geological Survey, Special Publication 5-B.
- Keller, J., TerBest, H, and Garrison, R. (2003). "Evaluation of Minerla and Mineral Fuel Potential of El Pason County State Mineral Lands Administered by the Colorado State Land Board". Colorado Geological Survey, Open File Report 03-07.

Appendix A

Figures

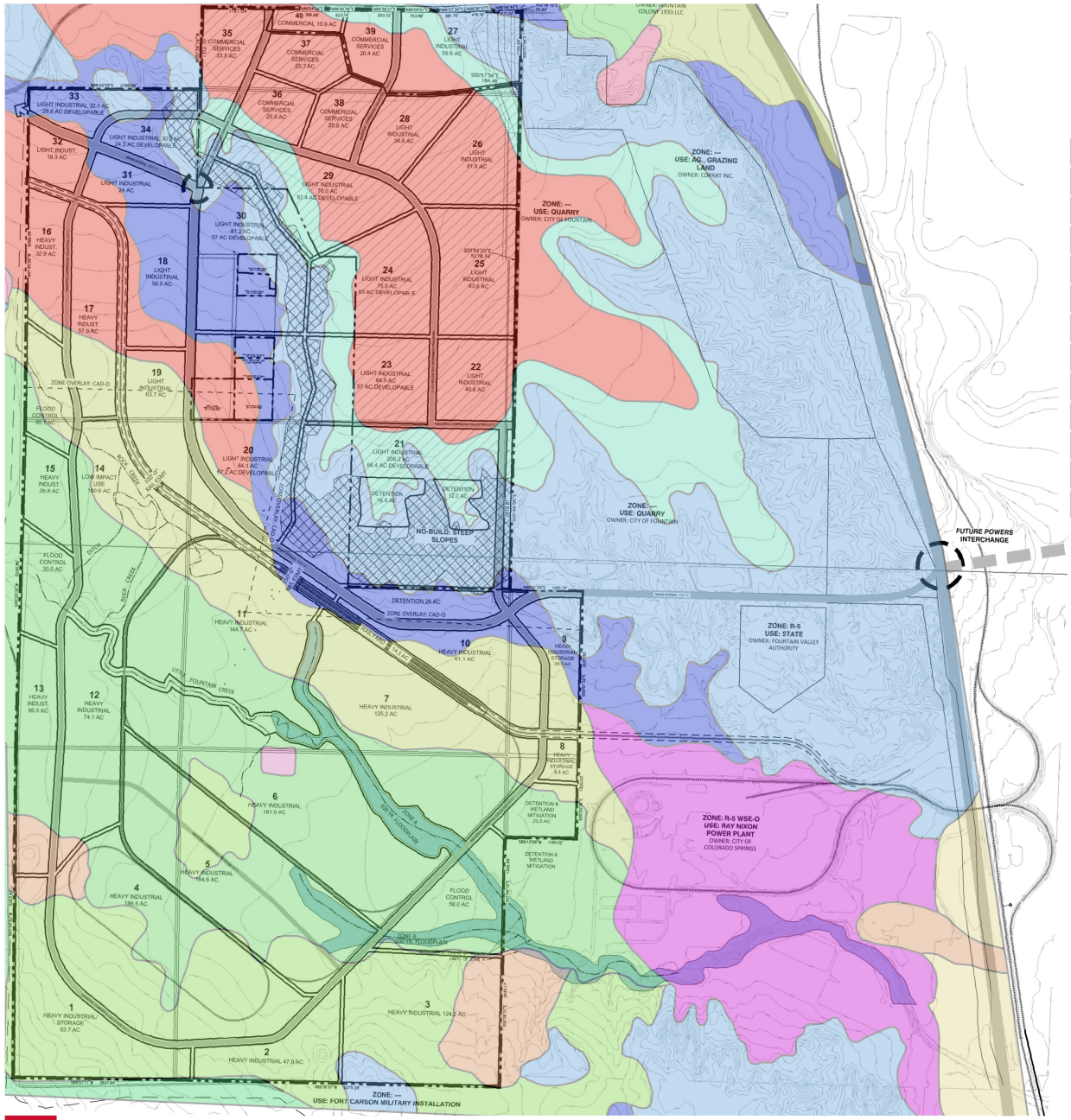


PROJECT LOCATION MAP

SOUTHERN RAIL SPUR

EL PASO COUNTY, COLORADO

FIGURE 1



LEGEND

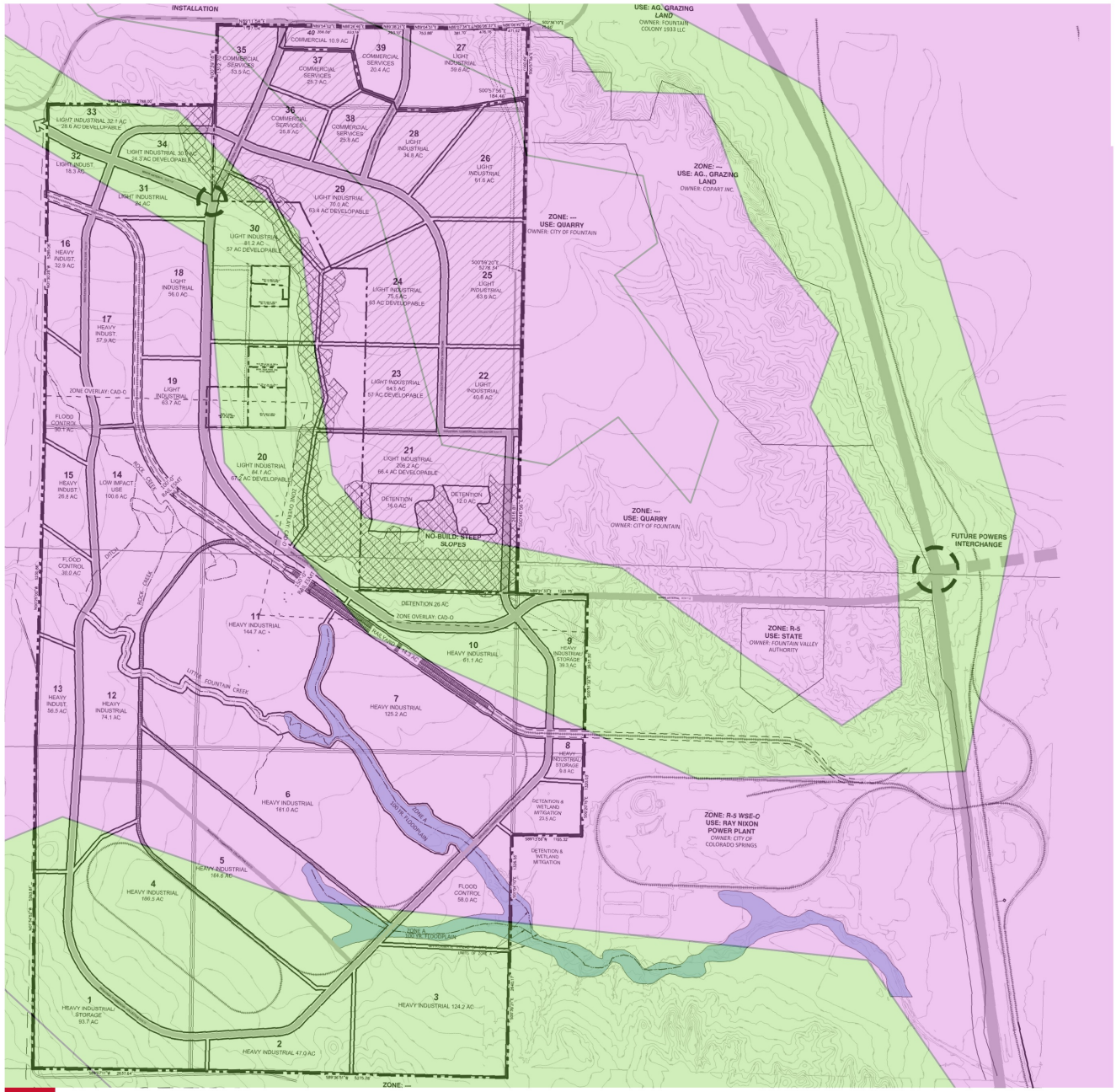
Projects
Colorado
Southern Rail Park
Soil Survey
Clipped Soil Survey

- 101: Ustic Torriflvents, Loamy
- 107: Wilid Silt Loam, 0 to 3 percent slopes
- 111: Water
- 118: Fort Loam, 1 to 5 percent slopes, Cool
- 119: Fort Sandy Loam, 1 to 8 percent slopes, Cool
- 126: Midway Clay Loam, Dry, 1 to 15 percent slopes
- 127: Midway-Razor Clay Loams, Dry, 1 to 18 percent slopes
- 33: Heldt Clay Loam, 0 to 3 percent slopes
- 43: Kim Loam, 1 to 8 percent slopes
- 47: Limon Clay, 0 to 3 percent slopes
- 78: Sampson Loam, 0 to 3 percent slopes
- 82: Schamber-Razor Complex, 8 to 50 percent slopes
- MzA: Manzanola Silty Clay Loam, Saline, 0 to 2 percent slopes

DATA SOURCE: Web Soil Survey, SSURGO, 2023

0 0.5 1 mi

SOILS MAP
SOUTHERN RAIL SPUR
EL PASO COUNTY, COLORADO
FIGURE 2



LEGEND

Colorado Geology

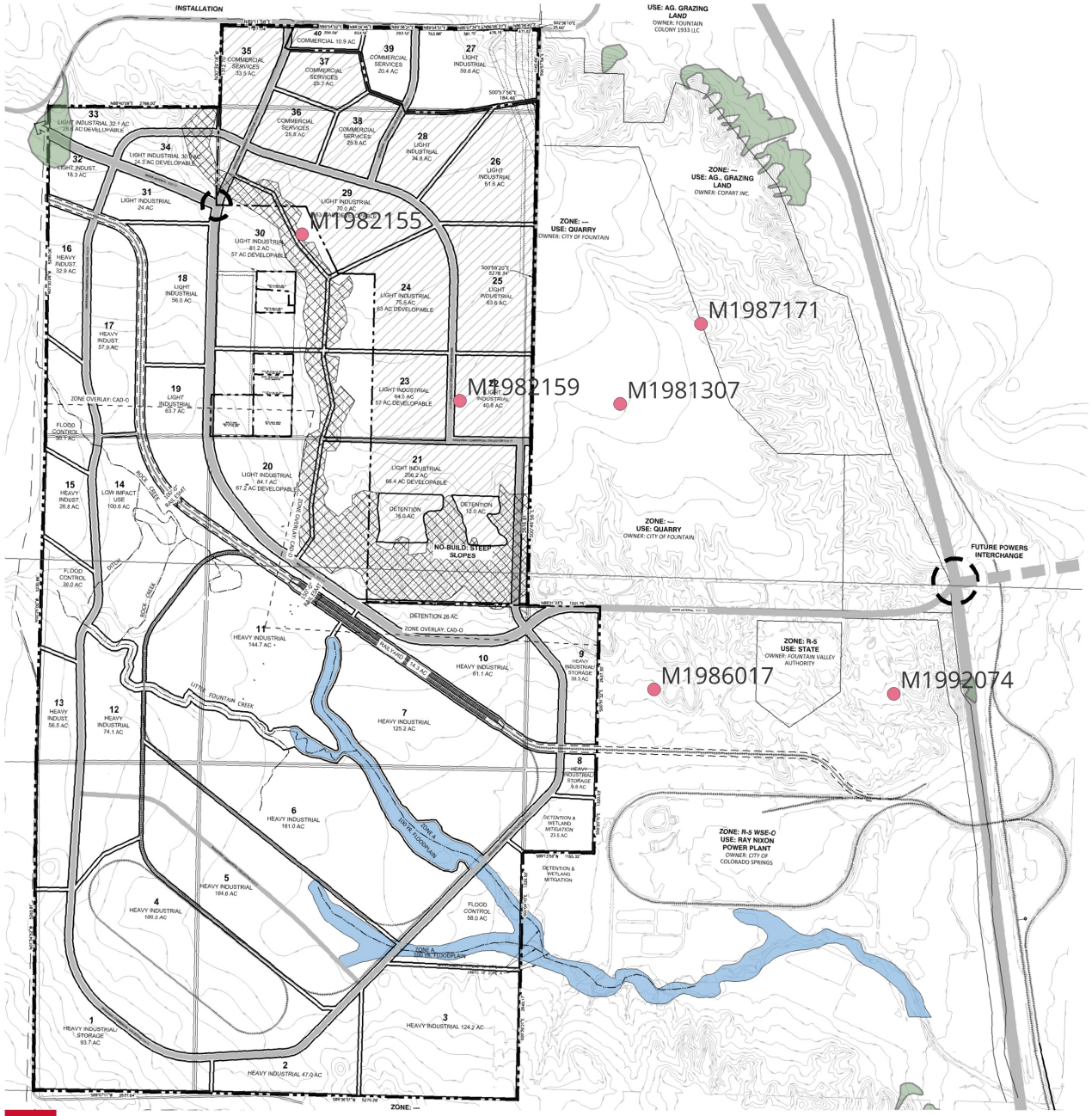
CO_geol_poly

- Sedimentary, clastic
- Unconsolidated, undifferentiated

DATA SOURCE: Colorado Geologic Survey

0 0.5 1 mi

GEOLOGIC MAP
SOUTHERN RAIL SPUR
EL PASO COUNTY, COLORADO
FIGURE 3



LEGEND

Projects

Colorado Southern Rail Park

Permitted Mines

- Permitted Mines

Debris Flow

- OF_18_11_El_Paso_Polygons

DATA SOURCE: Colorado Geologic Survey

0 0.5 1 mi

ECONOMIC CONSIDERATIONS

SOUTHERN RAIL SPUR

EL PASO COUNTY, COLORADO

FIGURE 4

Appendix B

Well Construction and Test Reports

Form C Rev.
9-62/10M

STATE OF COLORADO

APPLICATION FOR: [X] A PERMIT TO USE GROUND WATER
[X] A PERMIT TO CONSTRUCT A WELL

RECEIVED
DEC 30 1963
GROUND WATER SEC
COLORADO
STATE ENGINEER

Applicant William J Christian

P.O. Address Box 294 Fountain Colo

Quantity applied for [redacted] gpm or 1400 to 2000 AF Storage

Used for Irrigation Purposes

on/at SW 1/4 NW 1/4 Sec 24 - 16 - 66
(legal description of land site)

560 Acres Martin Christian Ditch
Total acreage irrigated and other rts.

ESTIMATED DATA OF WELL

Hole size: ~~in. to ft.~~ Depth
~~in. to ft.~~ 50 ft of 100 ft aquifer
28 ft Desp.

Casing Plain ___ in. from ___ to ___ ft.
___ in. from ___ to ___ ft.
Open or Perf. ___ in. from ___ to ___ ft.
___ in. from ___ to ___ ft.

PUMP DATA: Type Centrif. HP 50 Size 12" Outlet

Use initiation date Jan 15 1964.
(Use Supplemental pages for additional data)

Driller to furnish Log and History (Form E) within 30 days after completion of well.

LOCATION OF WELL

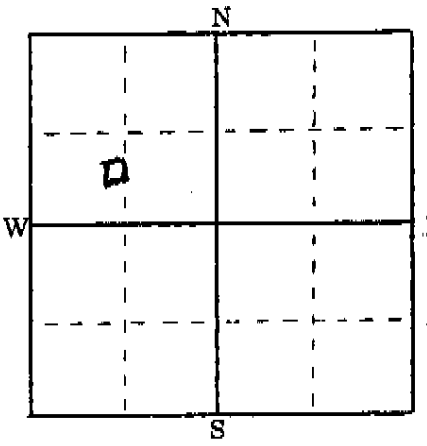
County El Paso

SW 1/4 of NW 1/4 of Sect. 24, Twp. 16,

Rge. 66, ____ P.M. OR

Street Address or Lot & Block No.

Town or Subdivision



Locate well in 40 acre (small) square as near as possible. Large square is one section.

$25.00 fee required for uses other than Domestic or Livestock.

THIS APPLICATION APPROVED

PERMIT NO. 4974-F

ISSUED: DATE DEC 30 1963 19___

Applicant William J Christian

Agent or Driller ____ No. ____

Address Box 294, Fountain, Colorado

NOTE — SATISFACTORY COMPLETION REQUIRED FOR APPROVAL OF APPLICATION

Form E (Rev.) 1965

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF THE STATE ENGINEER
GROUND WATER SECTION

RECEIVED
JUN 8 1964
GROUND WATER SECT.
COLORADO
STATE ENGINEER

Permit No. 1550
IDWD 2-10
Use P
Registered 6/8/64
(For State Engineer's Use)

LOG AND HISTORY OF WELL

PERM[redacted]

Driller Self Lic. No.

Owner William J. Christian

Street Box 294 City Fountain Colo

Tenant

Use of Water Irrigation

On or By NE¼SW¼ Sec 24-16S-66W No. Acres 10
(description of site or land)

Date Started Feb 22, 1964

Date Completed May 6, 1964

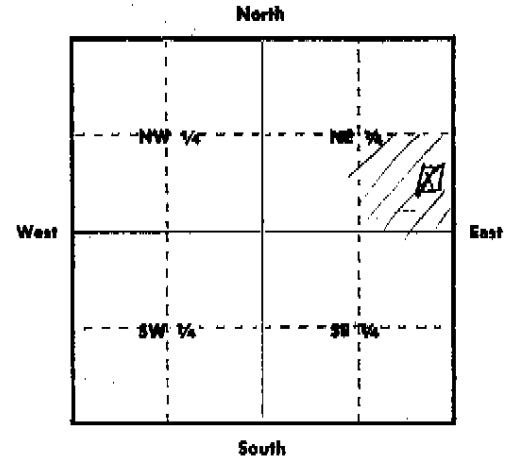
Yield 250 GPM or CFS

WELL LOCATION

El Paso County

SE ¼ of NE ¼ of Sect. 23 OK

Twp. 16S, Rge. 66W, 6 PM



ABOVE DIAGRAM REPRESENTS ONE FULL SECTION. LOCATE WELL ACCURATELY IN SMALL SQUARE REPRESENTING 40 ACRES.

or

If the above is not applicable fill in:

No. Street

City or Town

or

Lot , Block

Subdivision
(Include filing or number)

WELL DESCRIPTION:

Depth to Water 22 ft. Total Depth 28 ft.
(measured from ground surface)

Sump / ~~Hole~~ Diameter
from 50 ft. to 100 ft., in.
from ft. to ft., in.
from ft. to ft., in.

TEST DATA:

How Tested by Pump or Bailed

Date Tested 5/6, 1964 Length 3 hrs.

Rate GPM Drawn Down ft.

PUMP DATA:

Pump Type Centrif Outlet Size 6 in.

Driven by Diesel HP 50

CASING RECORD:

No Casing **Plain Casing**

Size , Kind from ft. to ft.

Size , Kind from ft. to ft.

Size , Kind from ft. to ft.

Perforated Casing

Size , Kind from ft. to ft.

Size , Kind from ft. to ft.

Size , Kind from ft. to ft.

TO BE MADE OUT IN QUADRUPLICATE:

Original Blue and Duplicate Green Copy must be filed with the State Engineer within 30 days after well is completed. White copy is for the Owner and Yellow copy for the Driller. **SIGN BLUE COPY**

FOR WELL LOG SEE REVERSE SIDE

FORM NO. GWS-31 10/94

WELL CONSTRUCTION AND TEST REPORT
STATE OF COLORADO, OFFICE OF THE STATE ENGINEER

For Office Use only
RECEIVED
APR 27 1998
WATER RESOURCES STATE ENGINEER COLO
208846

1. **WELL PERMIT NUMBER** ~~MH-32505~~ 208846

2. OWNER NAME(S) Christian Ranches
Mailing Address 136 Steven Dr.
City, St. Zip Security, CO 80911
Phone ( )

3. WELL LOCATION AS DRILLED: NW 1/4 SW 1/4, Sec. 24 Twp. 16 S, Range 66 W 6th.
DISTANCES FROM SEC. LINES:
1584 ft. from South (north or south) Sec. line. and 550 ft. from West (east or west) Sec. line. OR
SUBDIVISION: LOT BLOCK FILING(UNIT)
STREET ADDRESS AT WELL LOCATION:

4. GROUND SURFACE ELEVATION ft. DRILLING METHOD Mud Rotary
Date Drilled 2/10/98
DATE COMPLETED 4/14/98 TOTAL DEPTH 60 ft. DEPTH COMPLETED 60 ft.

5. GEOLOGIC LOG:

Depth	Description of Material (Type, Size, Color, Water Location)
0-2	Clay
2-5	Rock & gravel
5-11	Clay
11-14	Rock & gravel
14-38	Clay & gravel
38-40	S.S. soft
40-60	Blue shale
60	Bottom

REMARKS:

6. HOLE DIAM. (in.)

From (ft)	To (ft)
0	10
10	60

7. PLAIN CASING

OD (in)	Kind	Wall Size	From(ft)	To(ft)
6 5/8	Steel	.188	+1	11

PERF. CASING: Screen Slot Size:

4.5	PVC	.227	6	60

8. FILTER PACK:
Material Gravel
Size 1/4" Rock
Interval 10-0&10-60

9. PACKER PLACEMENT:
Type
Depth

10. GROUTING RECORD:

Material	Amount	Density	Interval	Placement
Cement	#94x6gal.		11-5	Poured
Cement	3 3/3x6"		Around	Steel Casing

11. DISINFECTION: Type HTH Amt. Used 8 oz.

12. WELL TEST DATA: ☐ Check box if Test Data is submitted on Form No. GWS 39 Supplemental Well Test.
TESTING METHOD Bailed
Static Level 13.5 ft. Date/Time measured 04/09/98, Production Rate 7 gpm.
Pumping level 55 ft. Date/Time measured 04/09/98, Test length (hrs.) 4
Remarks

13. I have read the statements made herein and know the contents thereof, and that they are true to my knowledge. [Pursuant to Section 24-4-104 (13)(a) C.R.S., the making of false statements herein constitutes perjury in the second degree and is punishable as a class 1 misdemeanor.]

CONTRACTOR Can-America Drilling, Inc. Phone (719) 541-2967 Lic. No. 1149
Mailing Address Box 416 Simla, CO 80835

Name/Title (Please type or print)	Signature	Date
Wayne Arde V.P.	Wayne Arde	4/14/98

FORM NO. GWS-31 04/2005

WELL CONSTRUCTION AND TEST REPORT

STATE OF COLORADO, OFFICE OF THE STATE ENGINEER
1313 Sherman St., Room 818, Denver, CO 80203
Phone – Info (303) 866-3587 Main (303) 866-3581
Fax (303) 866-3589 http://www.water.state.co.us

For Office Use Only

RECEIVED

DEC 20 2005

WATER RESOURCES STATE ENGINEER COLO.

1. **WELL PERMIT NUMBER:** 267182

2. **WELL OWNER INFORMATION**
NAME OF WELL OWNER: Colorado Springs Utilities
MAILING ADDRESS: P.O. Box 1103, Mail Code 940
CITY: Colorado Springs STATE: CO ZIP CODE: 80947
TELEPHONE NUMBER: (719) 668-8672

3. WELL LOCATION AS DRILLED: ____ 1/4, ____ 1/4, Sec. ____, Twp. ____ ☐ N or ☐ S, Range ____ ☐ E or ☐ W
DISTANCES FROM SEC. LINES: ____ ft. from ☐ N or ☐ S section line and ____ ft. from ☐ E or ☐ W section line.
SUBDIVISION: ____, LOT ____, BLOCK ____, FILING (UNIT) ____
Optional GPS Location: GPS Unit must use the following settings: Format must be **UTM**, Units must be **meters**, Datum must be **NAD83**, Unit must be set to **true N**, ☐ Zone 12 or ☒ Zone 13
Owner's Well Designation: GP-7
Easting: 525136.18
STREET ADDRESS AT WELL LOCATION: Clear Spring Ranch, Fountain, Colorado
Northing: 4276705.08

4. GROUND SURFACE ELEVATION 5,480 feet DRILLING METHOD Hollow stem auger
DATE COMPLETED 11/14/05 TOTAL DEPTH 30.50 feet DEPTH COMPLETED 30.20 feet

5. GEOLOGIC LOG:

Depth	Type	Grain Size	Color	Water Loc.
0	CL- alluvium	f-m	lt. brown	n/a
4	SC	f	lt. brown	n/a
5	Sandy CL	f-m	brown	n/a
11	Sandy CL	f-c	brown	n/a
16	CL-shale	n/a	olive-brwn	n/a
22	Shale	n/a	olive-brwn	26.20
30	EOB			

6. HOLE DIAM (in.)

	From (ft)	To (ft)
8-1/2	0	30.50

7. PLAIN CASING:

OD (in)	Kind	Wall Size (in)	From (ft)	To (ft)
2	PVC	Sched 40	0	15.20

PERFORATED CASING: Screen Slot Size (in): ____

2	PVC	.020	15.20	30.20

8. FILTER PACK:
Material Silica
Size 8-12
Interval 13-30.20

9. PACKER PLACEMENT:
Type Bentonite chips
Depth 2-13

10. GROUTING RECORD

Material	Amount	Density	Interval	Placement
Conc		n/a	0-2	Hand

Remarks:

11. DISINFECTION: Type n/a Amt. Used n/a

12. WELL TEST DATA: ☐ Check box if Test Data is submitted on Form Number GWS 39 Supplemental Well Test.
TESTING METHOD
Static Level 26.20 ft. Date/Time measured: 11/21/05, Production Rate ____ gpm.
Pumping Level ____ ft. Date/Time measured ____, Test Length (hrs) ____.
Remarks:

13. I have read the statements made herein and know the contents thereof, and they are true to my knowledge. This document is signed and certified in accordance with Rule 17.4 of the Water Well Construction Rules, 2 CCR 402-2. [The filing of a document that contains false statements is a violation of section 37-91-108(1)(e), C.R.S., and is punishable by fines up to $5000 and/or revocation of the contracting license.]

Company Name:	Phone:	License Number:
Colorado Springs Utilities, Enviro Services Dept.	(719)668-8672	P.E.

Mailing Address: P.O. Box 1103, Mail Code 940, Colorado Springs, CO 80947

Signature:	Print Name and Title	Date
Rebecca Davies	Rebecca Davies, Staff Engineer	9 Dec 2005

FORM NO. GWS-31 04/2005

WELL CONSTRUCTION AND TEST REPORT

STATE OF COLORADO, OFFICE OF THE STATE ENGINEER
1313 Sherman St., Room 818, Denver, CO 80203
Phone – Info (303) 866-3587 Main (303) 866-3581
Fax (303) 866-3589 http://www.water.state.co.us

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DEC 20 2005

WATER RESOURCES STATE ENGINEER COLO.

1. WELL PERMIT NUMBER: 267183

2. WELL OWNER INFORMATION

NAME OF WELL OWNER: Colorado Springs Utilities

MAILING ADDRESS: P.O. Box 1103, Mail Code 940

CITY: Colorado Springs STATE: CO ZIP CODE: 80947

TELEPHONE NUMBER: (719) 668-8672

3. WELL LOCATION AS DRILLED: ____1/4, ____1/4, Sec. ____, Twp. ____ ☐ N or ☐ S, Range ____ ☐ E or ☐ W

DISTANCES FROM SEC. LINES: ____ ft. from ☐ N or ☐ S section line and ____ ft. from ☐ E or ☐ W section line.

SUBDIVISION: ____, LOT ____, BLOCK ____, FILING (UNIT) ____

Optional GPS Location: GPS Unit must use the following settings: Format must be **UTM**, Units must be **meters**, Datum must be **NAD83**, Unit must be set to **true N**, ☐ Zone 12 or ☒ Zone 13

Owner's Well Designation: GP-8

Easting: 525394.88

STREET ADDRESS AT WELL LOCATION: Clear Spring Ranch, Fountain, Colorado

Northing: 4276755.49

4. GROUND SURFACE ELEVATION 5,480 feet DRILLING METHOD Hollow stem auger

DATE COMPLETED 11/16/05 TOTAL DEPTH 21.50 feet DEPTH COMPLETED 20.79 feet

5. GEOLOGIC LOG:

Depth	Type	Grain Size	Color	Water Loc.
0	CL	n/a	brown	n/a
6	CL-gravell	f-c	brown	n/a
8	SW	f-c	brown	10.80
11.5	CL	n/a	brown	n/a
16.5	SP	f-c	brown	n/a
19	CL-shale	n/a	brown	n/a
21.5	EOB			

6. HOLE DIAM (in.)

	From (ft)	To (ft)
8-1/2	0	21.50

7. PLAIN CASING:

OD (in)	Kind	Wall Size (in)	From (ft)	To (ft)
2	PVC	Sched 40	0	10.79

PERFORATED CASING: Screen Slot Size (in): ____

2	PVC	.020	10.79	20.79

8. FILTER PACK:

Material Silica
Size 8-12
Interval 9-20.79

9. PACKER PLACEMENT:

Type Bentonite chips
Depth 2-9

10. GROUTING RECORD

Material	Amount	Density	Interval	Placement
Conc		n/a	0-2	Hand

Remarks: ____

11. DISINFECTION: Type n/a Amt. Used n/a

12. WELL TEST DATA: ☐ Check box if Test Data is submitted on Form Number GWS 39 Supplemental Well Test.

TESTING METHOD ____

Static Level 10.80 ft. Date/Time measured: 11/21/05, Production Rate ____ gpm.

Pumping Level ____ ft. Date/Time measured ____, Test Length (hrs) ____.

Remarks:

13. I have read the statements made herein and know the contents thereof, and they are true to my knowledge. This document is signed and certified in accordance with Rule 17.4 of the Water Well Construction Rules, 2 CCR 402-2. [The filing of a document that contains false statements is a violation of section 37-91-108(1)(e), C.R.S., and is punishable by fines up to $5000 and/or revocation of the contracting license.]

Company Name:	Phone:	License Number:
Colorado Springs Utilities, Enviro Services Dept.	(719)668-8672	P.E.

Mailing Address: P.O. Box 1103, Mail Code 940, Colorado Springs, CO 80947

Signature:	Print Name and Title	Date
Rebecca Davies	Rebecca Davies, Staff Engineer	9Dec2005

WELL LOG

Ground Elevation _____ (if known) How Drilled Cornyard

FROM FEET	TO FEET	TYPE OF MATERIAL	REMARKS (such as Cementing, Packing, Shut off, etc.)	Indicate Water Bearing Formation	Indicate Perforated Casing Location
0	8	Top Soil			
8	18	Mixed Sand & Gravel w/clay			
18	25	Gravel			

(if more space is required use additional sheet)

WELL DRILLER'S STATEMENT

This well was drilled under my supervision and the above information is true and correct to the best of my knowledge and belief.

Signed W J Christian

By _____

Dated 6-2, 1964

Appendix C

Historical Subsurface Information

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-1		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5687	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	25'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Shale	zero	25	25					
26		T.D. 25"								

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-2		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5627	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	14'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Overburden	zero	4	4					
2										
4										
		Shale	4	14	10					
6										
8										
10										
12										
14										
		T.D. 14'								
16										
18										
20										
22										
24										
26										
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-3		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5608	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	20'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Overburden	zero	7	7					
2										
4										
6										
8		Gravel	7	12	5					
10										
12										
14		Shale	12	20	8					
16										
18										
20										
22		T.D. 20'								
24										
26										
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-4		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5585	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	25'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Overburden	zero	17	17					
18		Gravel and Rock	17	25	8					
26		T.D. 25'								

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-5		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5579	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	25'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Overburden	zero	19	19					
20		Rock	19	25	6					
26		T.D. 25'								

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-6		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5572	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	20'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Overburden	zero	6	6					
2										
4										
6										
		Gravel	6	12	6					
8										
10										
12										
		Dirt(sand)	12	20	8					
14										
16										
18										
20										
		T.D. 20'								
22										
24										
26										
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-7		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5570	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	20'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Overburden	zero	12	12					
2										
4										
6										
8										
10										
12										
		Gravel	12	14	2					
14										
		Dirt(sand)	14	20	6					
16										
18										
20										
		T.D. 20'								
22										
24										
26										
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-8		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5535	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	25'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Dirt(sand)	zero	25	25					
26		T.D. 25'								

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-9		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5522	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	25'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Dirt(sand)	zero	24	24					
2										
4										
6										
8										
10										
12										
14										
16										
18										
20										
22										
24										
		Gravel	24	25	1					
26		T.D. 25'								
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-10		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5539	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	29'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Dirt(sand)	zero	24	24					
2										
4										
6										
8										
10										
12										
14										
16										
18										
20										
22										
24										
		Gravel	24	29	5					
26										
28										
30		T.D. 29'								
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-11		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5546	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	25'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Dirt(sand)	zero	25	25					
26		T.D. 25'								

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-12		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5565	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	25'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Dirt(sand)	zero	25	25					
26		T.D. 25'								

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-13		
Date	Aug. 2002	Parcel	Christian	Sheet 1	Of	1	
Start Time		Hole Location		Surface Elev.	5502		
Finish Time		Logged By	EC	Water Depth	None		
Total Depth	25'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Dirt(sand)	zero	25	25					
26		T.D. 25'								

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-14		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5510	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	25'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Dirt(sand)	zero	25	25					
26		T.D. 25'								

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-15		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5550	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	24'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Shale	zero	24	24					
2										
4										
6										
8										
10										
12										
14										
16										
18										
20										
22										
24										
		T.D. 24'								
26										
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-16		
Date	Aug. 2002	Parcel	Christian	Sheet 1	Of	1	
Start Time		Hole Location		Surface Elev.	5540		
Finish Time		Logged By	EC	Water Depth	None		
Total Depth	24'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Shale	zero	24	24					
2										
4										
6										
8										
10										
12										
14										
16										
18										
20										
22										
24										
		T.D. 24'								
26										
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-17		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5540	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	24'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Shale	zero	24	24					
2										
4										
6										
8										
10										
12										
14										
16										
18										
20										
22										
24										
		T.D. 24'								
26										
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-18		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5560	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	20'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Dirt	zero	3	3					
2										
4		Gravel	3	20	17					
6										
8										
10										
12										
14										
16										
18										
20										
		T.D. 20'								
22										
24										
26										
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-19		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5560	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	25'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Dirt	zero	24	24					
2										
4										
6										
8										
10										
12										
14										
16										
18										
20										
22										
24										
		Gravely Dirt	24	25	1					
26		T.D. 25'								
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-20		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5560	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	25'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Dirt	zero	25	25					
26		T.D. 25'								

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-21		
Date	Aug. 2002	Parcel	Christian	Sheet 1	Of	1	
Start Time		Hole Location		Surface Elev.	5560		
Finish Time		Logged By	EC	Water Depth	None		
Total Depth	25'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Dirt	zero	12	12					
2										
4										
6										
8										
10										
12										
		Shale	12	25	13					
14										
16										
18										
20										
22										
24										
26		T.D. 25'								
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-22		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5560	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	25'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Dirt	zero	25	25					
26		T.D. 25'								

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-23		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5560	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	25'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Dirt	zero	25	25					
26		T.D. 25'								

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-24		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5560	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	25'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Shale	zero	25	25					
2										
4										
6										
8										
10										
12										
14										
16										
18										
20										
22										
24										
26		T.D. 25'								
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Schmidt Construction	Property	Christian	Hole #	98-25		
Date	Aug. 2002	Parcel	Christian	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5560	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	25'	Drill Method	Backhoe				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Dirt	zero	25	25					
26		T.D. 25'								

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	C-02-1		
Date	8/19/2002	Parcel	Cline	Sheet 1	Of	1	
Start Time	2:00 PM	Hole Location		Surface Elev.	5674		
Finish Time	3:15 PM	Logged By	EC	Water Depth	None		
Total Depth	29	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
2		Silt, dark brown, sandy, loess	zero	1.5	1.5					
4		Silt, sandy, tan, mottled w/gray clay 4-9 OVB	1.5	10	8.5					
6										
8										
10										
12		SAND, reddish-pink, very gravelly	10	19.5	9.5					
14										
16						14 to 19.5	4.5	2.98	35.2	S&G
18										
20		CLAY, dark yellow brown, silty	19.5	26	6.5					
22										
24										
26										
28		SHALE, weathered, olive green, claystone	26	29	3					
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	C-02-2		
Date	Aug. 19, 2002	Parcel	Cline	Sheet 1		Of	1
Start Time	3:30 AM	Hole Location		Surface Elev.		5672	
Finish Time	4:30 AM	Logged By	EC	Water Depth		None	
Total Depth	24	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
2		Silt, light yellow brown, clayey, loess	zero	9	9					
10		Silt, dark brown	9	11	2	9 to 11	15.5	1.91	25.6	S&G
12		Sand and Gravel, reddish pink, med-coarse sand, gravel 20%	11	17	6	11 to 17	4.9	3.01	38.6	S&G
18		Clay, silty, greenish brown, possibly weathered bedrock	17	24	7					
26		Total Depth 24								

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	C-02-3		
Date	Aug. 19, 2002	Parcel	Cline	Sheet 1	Of	1	
Start Time	5:00 PM	Hole Location		Surface Elev.	5643		
Finish Time	6:00 PM	Logged By	EC	Water Depth	None		
Total Depth	29	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Silt, clayey, yellow brown, loess	zero	7	7					
8		Clay, red/brown, hard, compact	7	9	2					
10		Sand, reddish orange, very gravelly, sand is med-coarse, some 3-4" rocks present	9	19	10	9 to 19	4.8	2.78	49.7	S&G
20		As above, less gravel, cleaner, esp. 19-22	19	28.5	9.5	19 to 28.5	4.3	2.95	44.8	S&G
28		Weathered Shale	28.5	29	0.5					
30		Total Depth 29								

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	C-02-4		
Date	Aug. 20, 2002	Parcel	Cline	Sheet 1	1 Of	1	
Start Time	7:30 AM	Hole Location		Surface Elev.	5645		
Finish Time	8:30 AM	Logged By	EC	Water Depth	None		
Total Depth	29	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
2		Topsoil, loess, clayey silt	zero	1.5	1.5					
4		Sand & gravel, red-pink, med-coarse sd.	1.5	14	12.5	1.5 to 14	3.1	3.13	49.4	S&G
6										
8										
10										
12										
14										
16		Clay, greenish brwn, weathered bedrock	14	29	15					
18										
20										
22										
24										
26										
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	C-02-5		
Date	Aug. 21, 2002	Parcel	Cline	Sheet 1	Of	1	
Start Time		Hole Location		Surface Elev.	5657		
Finish Time		Logged By	EC	Water Depth	None		
Total Depth	24	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Silt, yellow/brown, loess	zero	4	4					
2										
4										
		Clay, dark greenish brown	4	8	4					
6										
8										
		Sand & Gravel, dirty, rusty brown	8	11	3	8 to 11	6.1	2.61	31.5	S&G
10		sand is fine to medium								
12		Sand and gravel, cleaner than above,	11	19	8	11 to 19	5.4	2.69	25.7	S&G
		rusty-red, sand is medium								
14										
16										
18										
20		Sand, fine, rusty-red	19	20	1	19 to 20	32.4	0.86	0.1	CL
		Clay, greenish brown	20	24	4					
22										
24										
26		Total Depth 24'								
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	C-02-6		
Date	Aug. 21, 2002	Parcel	Cline	Sheet 1	Of	1	
Start Time		Hole Location		Surface Elev.	5638		
Finish Time		Logged By	EC	Water Depth	None		
Total Depth	24	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
2		Topsoil, very rocky, brown	zero	1.5	1.5					
4		Sand & Gravel, dirty, reddish pink, very rocky, sand is fine	1.5	9	7.5	1.5 to 9	91.5	2.99	36.3	CL
6										
8										
10		Sand & Gravel, rusty brown, medium sand not very rocky, cleaner than above	9	20	11	9 to 20	3.6	3.02	31.4	S&G
12										
14										
16										
18										
20										
22		Clay, greenish brown	20	24	4					
24										
26		Total Depth 24'								
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	C-02-7		
Date	Aug. 21, 2002	Parcel	Cline	Sheet 1	Of	1	
Start Time		Hole Location		Surface Elev.	5660		
Finish Time		Logged By	EC	Water Depth	None		
Total Depth	17	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Silt, yellow brown, loess	zero	7	7					
2										
4										
6										
8		Clay, dark yellow brown	7	12	5					
10										
12										
		Sand & Gravel, dirty	12	13	1	12 to 13	5.8	2.86	54.7	G
14		Shale, weatherd, greenish brown	13	17	4					
16										
18		Total Depth 17'								
20										
22										
24										
26										
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	C-02-8		
Date	Aug. 21, 2002	Parcel	Cline	Sheet 1	Of	1	
Start Time		Hole Location		Surface Elev.	5658		
Finish Time		Logged By	EC	Water Depth	None		
Total Depth	34	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Silt, light yellow brown, loess	zero	7	7					
8		Clay, dark brown, sandy	7	8	1					
		Clay, as above	8	9	1					
10		Sand & Gravel, rusty brown/dirty fine to medium sand	9	19	10	9 to 19	6.3	2.86	37.8	S&G
20		Sand & gravel, rusty brown cleaner than above, coarse sand	19	30	11	19 to 30	5.3	2.93	33.7	S&G
30		Clay, greenish brown	30	34	4					
36		Total Depth 34'								

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	F-02-1		
Date	Aug. 22, 2002	Parcel	Fountain	Sheet 1	Of	1	
Start Time		Hole Location		Surface Elev.	5703		
Finish Time		Logged By	EC	Water Depth	None		
Total Depth	29	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Silt, light yellow brown	zero	6.5	6.5					
2										
4										
6										
		Clay, rusty red, silty	6.5	8.5	2					
8										
		Sand and gravel, very dirty. Caliche, rock is rotten, lots of fines	8.5	14	5.5	8.5 to 14	6.8	2.92	28.1	S&G
10										
12										
14										
		Clay, dark greenish brown	14	29	15					
16										
18										
20										
22										
24										
26										
28										
30		Total depth 29'								
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	F-02-2		
Date	Aug. 22, 2002	Parcel	Fountain	Sheet 1		Of	1
Start Time		Hole Location	W. of SH parcel	Surface Elev.		5690	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	19	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Silt, light yellow brown	zero	1	1					
2		Clay, greenish brown	1	8	7					
4										
6										
8										
		Claystone-shale, weathered bedrock	8	19	11					
10										
12										
14										
16										
18										
20		Total Depth: 19'								
22										
24										
26										
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	F-02-3		
Date	Aug. 23, 2002	Parcel	Fountain	Sheet 1		Of	1
Start Time		Hole Location	W. of SH parcel	Surface Elev.		5688	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	19	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Silt, yellow brown	zero	1	1					
2		Sand and gravel, rusty, fine-medium sand	1	4	3	1 to 4	7.8	2.68	14.4	2NS
4										
		Clay, weathered bedrock, greenish brown	4	19	15					
6										
8										
10										
12										
14										
16										
18										
20		Total Depth 19'								
22										
24										
26										
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	F-02-4		
Date	Aug. 23, 2002	Parcel	Fountain	Sheet 1	Of	1	
Start Time		Hole Location		Surface Elev.	5682		
Finish Time		Logged By	EC	Water Depth	None		
Total Depth	14	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
2		Silt, greenish/yellow	zero	4	4					
4										
6		Shale, weathered, greenish	4	14	10					
8										
10										
12										
14										
16		Total Depth 14'								
18										
20										
22										
24										
26										
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	F-02-5		
Date	Aug. 23, 2002	Parcel	Fountain	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5610	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	14	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Silt, light yellow brown	zero	1	1					
2		Sand and gravel, fine, dirty	1	2	1					
		Clay, greenish yellow, silty	2	12	10					
4										
6										
8										
10										
12										
		Shale, greenish, weathered bedrock	12	14	2					
14										
16		Total depth: 14'								
18										
20										
22										
24										
26										
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	F-02-6		
Date	Aug. 23, 2002	Parcel	Fountain	Sheet 1	Of	1	
Start Time		Hole Location		Surface Elev.	5650		
Finish Time		Logged By	EC	Water Depth	None		
Total Depth	14	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Topsoil, rusty red, very sandy	zero	1	1					
2		Clay, greenish/yellow, thin bans of fine sand (4") throughout, primarily clay	1	4	3					
4										
		Clay, green, mottled, weathered bedrock	4	14	10					
6										
8										
10										
12										
14										
		Total depth 14'								
16										
18										
20										
22										
24										
26										
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	SH-02-1		
Date	Aug. 20, 2002	Parcel	Schmidt-Holland	Sheet 1		Of	1
Start Time	9:00 AM	Hole Location		Surface Elev.		5685	
Finish Time	9:45 AM	Logged By	EC	Water Depth		None	
Total Depth	29	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
2		Silt, yellow brown, loess	zero	3.5	3.5					
4										
6		Clay, greenish brown, compact	3.5	7	3.5					
8		Sand & gravel, red/pink, med/coarse sd gravel to 4"	7	19.5	12.5	7 to 19.5	5.8	2.8	40.3	S&G
10										
12										
14										
16										
18										
20										
		Clay, greenish	19.5	21	1.5					
22		Shale, weathered, greenish brown	21	29	8					
24										
26										
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	SH-02-2		
Date	Aug. 20, 2002	Parcel	Schmidt/Holland	Sheet 1		Of	1
Start Time	10:15 AM	Hole Location		Surface Elev.		5687	
Finish Time	11:00 AM	Logged By	EC	Water Depth		None	
Total Depth	34	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
2		Clay, dark brown, silty, mottled	zero	13	13					
14		S&G, dirty, med/coarse sand	13	14	1	13 to 14	8.4	2.62	41.3	S&G
16		Sand & gravel, cleaner than above orange-brown, med/coarse sand	14	24	10	14 to 24	3.7	2.92	40	S&G
26		Sand, clean, medium	24	26	2	24 to 26	7.4	2.22	7.1	MSD
28		Clay, reddish/brown	26	28	2					
34		Clay, greenish brown, weath. Bedrock	28	34	6					
50										

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	SH-02-3		
Date	Aug. 20, 2002	Parcel	Schmidt/Holland	Sheet 1		Of	1
Start Time	11:30 AM	Hole Location		Surface Elev.	5692		
Finish Time	12:30 PM	Logged By	EC	Water Depth	None		
Total Depth	29	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Clay, silty, dark brown	zero	12	12					
2										
4										
6										
8										
10										
12										
		Sand & Gravel, dirty, cobbles, med/cse sd	12	14	2	12 to 14	5.2	2.68	47.5	S&G
14										
		Sand & gravel, cleaner than above	14	24	10	14 to 24	5.2	2.8	35.4	S&G
16										
18										
20										
22										
24										
		Clay, dark greenish, weathered bedrock	24	29	5					
26										
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	SH-02-4		
Date	Aug. 20, 2002	Parcel	Schmidt/Holland	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5684	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	34	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Silt, yellow brown, loess	zero	6	6					
2										
4										
6										
		Clay, hard, compact, greenish brwn	6	8	2					
8										
		Clay, compacted, reddish brown	8	13.5	5.5					
10										
12										
14										
		Sand, reddish/orange, dirty, sand is fine	13.5	19	5.5	13.5 to 19	3.4	3.03	38.8	S&G
16										
18										
20		Sand, coarse, clean	19	26	7	19 to 26	2.9	3.06	32.1	S&G
22										
24										
26										
		Sand, fine red/orange	26	28.5	2.5	26 to 28.5	31	0.83	1.5	CL
28										
30		Clay, green, sandy	28.5	32	3.5					
32										
		Shale, green, weathered	32	34	2					
34										
36		Total Depth: 34								
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	SH-02-5		
Date	Aug. 20, 2002	Parcel	Schmidt/Holland	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5677	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	19	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
2		Silt, yellow-brown, loess	zero	5	5					
4										
6		Clay, brownish green, sandy	5	7	2					
8		Clay, reddish brown, sandy	7	10	3					
10										
12		Sand & gravel, fine/medium sand	10	16	6	10 to 16	4.2	2.81	40.3	S&G
14										
16										
18		Greenish weathered shale	16	19	3					
20		Total Depth 19								
22										
24										
26										
28										
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	SH-02-6		
Date	Aug. 21, 2002	Parcel	Schmidt-Holland	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5670	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	29	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Silt, dark brown	zero	1	1					
2		Silt, yellow brown, loess	1	4	3					
4										
		Silt, brown, soft	4	9	5					
6										
8										
10		Clay, reddish/orange, sandy	9	12	3	9 to 12	20.6	1.96	31	CL
12										
		Sand & gravel, reddish pink, clean	12	26	14	12 to 26	3.4	2.85	31.3	S&G
14										
16										
18										
20										
22										
24										
26										
		Clay, greenish	26	27	1					
28		Shale, weathered, mottled	27	29	2					
30		Total Depth: 29'								
32										
34										
36										
38										
40										
42										
44										
46										
48										
50										

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	SH-02-7		
Date	Aug. 21, 2002	Parcel	Cline	Sheet 1	Of	1	
Start Time		Hole Location		Surface Elev.	5695		
Finish Time		Logged By	EC	Water Depth	None		
Total Depth	39	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Silt, light yellow brown, loess	zero	6	6					
2										
4										
6										
		Clay, medium yellow brown silty clay	6	11.5	5.5					
8										
10										
12		Sand & gravel, rusty red, dirty rocky 11.5-15'	11.5	21	9.5	11.5 to 21	3.4	2.79	19.6	2NS
14										
16										
18										
20										
22		Silt, rusty brown, sandy	21	29	8	21 to 29	37.8	0.72	O	CL
24										
26										
28										
30		Sand, rusty brown, fine, silty	29	35	6	29 to 35	24.5	0.91	2.1	CL
32										
34										
36		Sand and gravel, coarse	35	39	4	35 to 39	3.5	3.23	39.6	S&G
38										
40		Total depth 39'								
42										
44										
46										
48										
50										

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	SH-02-8		
Date	Aug. 22, 2002	Parcel	Schmidt/Holland	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5695	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	54	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Silt, yellow brown, loess	zero	12	12					
2										
4										
6										
8										
10										
12										
		Sand & Gravel, reddish brown, sand is coarse	12	25	13	12 to 25	9.2	2.66	18.9	2NS
14										
16										
18										
20										
22										
24										
26		Clay, silty	25	26	1	25 to 26	29	1.34	14	CL
		Sand and gravel, sand is coarse small gravel	26	41	15	26 to 41	4.8	3.11	21.8	S&G
28										
30										
32										
34										
						34 to 41	5.3	2.87	27.1	S&G
36										
38										
40										
42		Sand, fine/medium	41	45	4	41 to 45	4.6	2.82	23.7	S&G
44										
46		Sand & gravel, clayey, rocky sand is coarse, clay is greenish	45	53	8	45 to 53	9.8	2.85	24.1	S&G
48										
50		Clay, greenish brown	53	54	1					

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	SH-02-9		
Date	Aug. 22, 2002	Parcel	Schmidt/Holland	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5692	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	49	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Silt, yellow brown, loess	zero	7	7					
2		moderately compacted								
4										
6										
8		Silt, dark yellow brown, clayey	7	10	3					
10										
		Clay, dark rusty red, gravelley	10	10.5	0.5					
12		Sand and gravel, pinkish to rusty red	10.5	19	8.5	10.5 to 19	4.6	2.91	29.6	S&G
		med to coarse sand								
14										
16										
18										
20		Sand, medium to coarse, rusty red, clean	19	28	9	19 to 28	4.3	3.05	24.5	S&G
22										
24										
26										
28										
		Sand, fine to medium, rusty brown	28	29	1	28 to 29	7.2	2.79	16.6	2NS
30		Sand & gravel, clean, rusty brown	29	32	3	29 to 32	2.5	3.42	32.8	S&G
32										
		Silt, sandy	32	33	1	32 to 33	15.9	1.43	10.4	ST
34		Sand & gravel	33	39	6	33 to 39	5.4	2.67	40.4	S&G
36										
38										
40		Sand & gravel, rusty, very coarse	39	44	5	39 to 44	3.6	3.46	43.2	S&G
42										
44										
		Clay, greenish brown	44	47	3					
46										
48		Sand & gravel, very dirty, clayey, rocky	47	49	2	47 to 49	5.7	2.96	51.7	G
50		Total Depth 49'								

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	SH-02-10		
Date	Aug. 22, 2002	Parcel	Schmidt/Holland	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.	5683		
Finish Time		Logged By	EC	Water Depth	None		
Total Depth	49	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Silt, light yellow brown	zero	7	7					
2										
4										
6										
8		Silt, dark yellow brown, clayey	7	10	3					
10										
12		Silt, rusty brown, clayey	10	13	3	10 to 13	29.3	1.3	12.7	CL
14		Sand and gravel, dirty, fine sand	13	22	9	13 to 22	6.6	2.6	30.1	S&G
16										
18										
20										
22										
24		Sand, fine to medium, rusty, no gravel	22	24	2	22 to 24	9.6	1.99	11.8	FSD
26		Sand and gravel, coarse sand, gravelley, rusty red	24	34	10	24 to 34	3.9	3.19	27.9	S&G
28										
30										
32										
34										
36		Sand and gravel as above	34	38	4	34 to 38	5.6	2.75	40.8	S&G
38										
40		Sand, very rocky, fine sand band 39-40	38	44	6	38 to 44	7.2	2.5	36.5	S&G
42										
44										
46		As above, very hard drilling	44	49	5	44 to 49	11.2	2.43	26.8	S&G
48										
50		Total depth: 49'								

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	SH-02-11		
Date	Aug. 23, 2002	Parcel	Fountain	Sheet 1		Of	1
Start Time		Hole Location		Surface Elev.		5670	
Finish Time		Logged By	EC	Water Depth		None	
Total Depth	39	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Silt, yellow-brown	zero	8	8					
2										
4										
6										
8										
		Clay, reddish brown, silty	8	11	3					
10										
12		Silt with very fine sand	11	12	1	11 to 12	18.9	1.91	32.7	S&G
		Sand & gravel, rusty red, sand is medium	12	14	2	12 to 14	6.6	2.73	40.3	S&G
14		to coarse, dirty, rocky								
		Sand & gravel, rusty red, sand is medium	14	24	10	14 to 24	4.1	2.78	27.8	S&G
16		to coarse, cleaner than above, not as								
		rocky								
18										
20										
22										
24										
		As above, coarseer, clay band 28-28.2	24	34	10	24 to 34	5.4	3.11	29	S&G
26		and 34-34.2								
28										
30										
32										
34										
		Clay, mottled green/red	34.2	39	4.8					
36										
38										
40		Total depth : 39'								
42										
44										
46										
48										
50										

Drilling Co.	Spectrum Exploration Inc.	Property	Fountain	Hole #	SH-02-12		
Date	Aug. 23, 2002	Parcel	S/H	Sheet 1	Of	1	
Start Time		Hole Location		Surface Elev.	5678		
Finish Time		Logged By	EC	Water Depth	None		
Total Depth	44	Drill Method	Cont. Sampler				

Comments:

Graphical log		Description	From	To	Interval	Sample	Lab Analysis			
Depth	Litho.		(feet)	(feet)	Thickness	Interval	LBW	FM	%Gr.	Note
		Silt, yellow brown	zero	5	5					
2										
4										
6		Clay, silty, dark greenish/yellow	5	9	4					
8										
10		Silt, dark rusty brown	9	12	3	9 to 12	33.9	1.55	19.9	CL
12										
		Sand, fine, silty, rusty red	12	13	1	12 to 13	12.2	2.22	24.2	S&G
14		Sand & gravel, dirty, very gravelley, pinkish	13	14	1	13 to 14	4.7	2.77	36.5	S&G
		Sand & gravel, coarse sand, cleaner than	14	23	9	14 to 23	5.2	2.81	27.7	S&G
16		above, very gravelley 14-16'								
18										
20										
22										
24		Silt, sandy, reddish brown w/very fine	23	28	5	23 to 28	60.8	0.28	O	CL
26		sand band 23-23.2;								
28										
		Fine sand, silty, rust colored	28	30	2	28 to 30	26.4	0.95	O	CL
30										
		Silt, rusty brown, sandy	30	31	1	30 to 31	37.3	0.68	O	CL
32		Claystone, weathered bedrock, greenish	31	38	7					
34		mottled with yellow clay								
36										
38										
		Sand & gravel, coarse	38	43	5	38 to 43	4.4	2.7	37.4	S&G
40										
42										
44		Clay, greenish	43	44	1					
46		Total depth 44'								
48										
50										

Aggregate Analysis

Borehole No.	C-02-1				
Project	Fountain				
From:	10.0				
To:	14.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	368.0	18.3		18.3	81.7
0.75"	145.3	7.2		25.5	74.5
0.5"	150.9	7.5		33.1	66.9
0.375"	106.0	5.3		38.3	61.7
No.4	245.4	12.2		50.5	49.5
No.8	201.9	10.0	20.3	20.3	79.7
No.16	179.0	8.9	18.0	38.3	61.7
No.30	163.7	8.1	16.5	54.8	45.2
No.50	168.5	8.4	17.0	71.8	28.2
No.100	131.5	6.5	13.2	85.0	15.0
No.200	59.8	3.0	6.0	91.0	9.0
Pan	89.4	4.4	9.0	100.0	0.0
% sand retained		49.5			
Dry Wt.	2009.4	Moist. Wet	1668.7	1652.2	16.5
Wash Wt.	1920.5	%Mositure	0.99		
L.B.W.%	4.4				
FM	2.70				
Gravel%	50.5				
Del.					
Lithologic unit	G				

Aggregate Analysis

Borehole No.	C-02-1				
Project	Fountain				
From:	14.0				
To:	19.5				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	133.0	6.7		6.7	93.3
0.75"	46.0	2.3		9.0	91.0
0.5"	140.0	7.0		16.0	84.0
0.375"	112.1	5.6		21.7	78.3
No.4	268.5	13.5		35.2	64.8
No.8	308.6	15.5	23.9	23.9	76.1
No.16	272.1	13.7	21.1	45.0	55.0
No.30	231.1	11.6	17.9	62.9	37.1
No.50	189.7	9.5	14.7	77.6	22.4
No.100	141.4	7.1	11.0	88.6	11.4
No.200	58.3	2.9	4.5	93.1	6.9
Pan	88.9	4.5	6.9	100.0	0.0
% sand retained		64.8			
Dry Wt.	1989.7	Moist. Wet	1935.2	1912.1	23.1
Wash Wt.	1900.7	%Mositure	1.19		
L.B.W.%	4.5				
FM	2.98				
Gravel%	35.2				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	C-02-2				
Project	Fountain				
From:	9.0				
To:	11.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	60.1	8.9		8.9	91.1
0.75"	0.0	0.0		8.9	91.1
0.5"	25.4	3.7		12.6	87.4
0.375"	15.2	2.2		14.9	85.1
No.4	72.6	10.7		25.6	74.4
No.8	74.1	10.9	14.7	14.7	85.3
No.16	56.9	8.4	11.3	26.0	74.0
No.30	48.7	7.2	9.6	35.6	64.4
No.50	63.5	9.4	12.6	48.2	51.8
No.100	93.7	13.8	18.6	66.8	33.2
No.200	62.6	9.2	12.4	79.2	20.8
Pan	105.2	15.5	20.8	100.0	0.0
% sand retained		74.4			
Dry Wt.	678.0	Moist. Wet	652.2	636.2	16.0
Wash Wt.	572.9	%Mositure	2.45		
L.B.W.%	15.5				
FM	1.91				
Gravel%	25.6				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	C-02-4				
Project	Fountain				
From:	1.5				
To:	14.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	64.9	5.0		5.0	95.0
0.75"	150.5	11.6		16.6	83.4
0.5"	144.5	11.1		27.7	72.3
0.375"	84.4	6.5		34.2	65.8
No.4	198.9	15.3		49.4	50.6
No.8	176.0	13.5	26.8	26.8	73.2
No.16	143.2	11.0	21.8	48.5	51.5
No.30	122.4	9.4	18.6	67.2	32.8
No.50	89.9	6.9	13.7	80.8	19.2
No.100	60.0	4.6	9.1	89.9	10.1
No.200	25.0	1.9	3.8	93.8	6.3
Pan	41.1	3.2	6.3	100.0	0.0
% sand retained		50.6			
Dry Wt.	1300.8	Moist. Wet	1027.5	1015.1	12.4
Wash Wt.	1260.1	%Mositure	1.21		
L.B.W.%	3.1				
FM	3.13				
Gravel%	49.4				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	C-02-5				
Project	Fountain				
From:	11.0				
To:	19.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	70.5	3.4		3.4	96.6
0.75"	69.8	3.4		6.8	93.2
0.5"	73.0	3.5		10.3	89.7
0.375"	85.2	4.1		14.4	85.6
No.4	234.1	11.3		25.7	74.3
No.8	272.2	13.1	17.7	17.7	82.3
No.16	278.6	13.5	18.1	35.8	64.2
No.30	284.9	13.8	18.5	54.3	45.7
No.50	304.7	14.7	19.8	74.1	25.9
No.100	206.3	10.0	13.4	87.5	12.5
No.200	80.3	3.9	5.2	92.7	7.3
Pan	111.6	5.4	7.3	100.0	0.0
% sand retained		74.3			
Dry Wt.	2071.2	Moist. Wet	1985.7	1957.2	28.5
Wash Wt.	1959.5	%Mositure	1.44		
L.B.W.%	5.4				
FM	2.69				
Gravel%	25.7				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	C-02-5				
Project	Fountain				
From:	19.0				
To:	20.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	0.0	0.0		0.0	100.0
0.5"	0.0	0.0		0.0	100.0
0.375"	0.0	0.0		0.0	100.0
No.4	0.2	0.1		0.1	99.9
No.8	0.9	0.4	0.4	0.4	99.6
No.16	4.7	1.9	1.9	2.2	97.8
No.30	15.7	6.3	6.3	8.6	91.4
No.50	42.7	17.1	17.1	25.7	74.3
No.100	58.0	23.3	23.3	49.0	51.0
No.200	46.1	18.5	18.5	67.5	32.5
Pan	81.0	32.5	32.5	100.0	0.0
% sand retained		99.9			
Dry Wt.	249.3	Moist. Wet	222.9	210.9	12.0
Wash Wt.	168.5	%Mositure	5.38		
L.B.W.%	32.4				
FM	0.86				
Gravel%	0.1				
Del.					
Lithologic unit	CL				

Aggregate Analysis

Borehole No.	C-02-6				
Project	Fountain				
From:	1.5				
To:	9.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	99.6	5.0		5.0	95.0
0.75"	122.4	6.2		11.2	88.8
0.5"	152.4	7.7		18.8	81.2
0.375"	119.4	6.0		24.9	75.1
No.4	228.1	11.5		36.3	63.7
No.8	290.7	14.6	23.0	23.0	77.0
No.16	300.8	15.1	23.8	46.8	53.2
No.30	229.2	11.5	18.1	64.9	35.1
No.50	158.2	8.0	12.5	77.4	22.6
No.100	121.5	6.1	9.6	87.0	13.0
No.200	57.4	2.9	4.5	91.5	8.5
Pan	107.3	5.4	8.5	100.0	0.0
% sand retained		63.7			
Dry Wt.	1987.0	Moist. Wet	1645.0	1627.9	17.1
Wash Wt.	168.5	%Mositure	1.04		
L.B.W.%	91.5				
FM	2.99				
Gravel%	36.3				
Del.					
Lithologic unit	CL				

Aggregate Analysis

Borehole No.	C-02-6				
Project	Fountain				
From:	9.0				
To:	20.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	133.1	5.1		5.1	94.9
0.75"	94.0	3.6		8.7	91.3
0.5"	103.5	4.0		12.7	87.3
0.375"	111.1	4.3		17.0	83.0
No.4	374.2	14.4		31.4	68.6
No.8	392.8	15.1	22.0	22.0	78.0
No.16	381.4	14.7	21.4	43.4	56.6
No.30	358.7	13.8	20.1	63.6	36.4
No.50	314.7	12.1	17.7	81.2	18.8
No.100	178.1	6.9	10.0	91.2	8.8
No.200	61.6	2.4	3.5	94.7	5.3
Pan	94.7	3.6	5.3	100.0	0.0
% sand retained		68.6			
Dry Wt.	2597.9	Moist. Wet	2354.5	2322.6	31.9
Wash Wt.	2504.4	%Mositure	1.35		
L.B.W.%	3.6				
FM	3.02				
Gravel%	31.4				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	C-02-7				
Project	Fountain				
From:	12.0				
To:	13.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	119.1	16.4		16.4	83.6
0.75"	48.8	6.7		23.2	76.8
0.5"	66.8	9.2		32.4	67.6
0.375"	55.6	7.7		40.1	59.9
No.4	105.8	14.6		54.7	45.3
No.8	77.1	10.6	23.5	23.5	76.5
No.16	66.8	9.2	20.3	43.8	56.2
No.30	57.0	7.9	17.4	61.2	38.8
No.50	43.3	6.0	13.2	74.4	25.6
No.100	27.8	3.8	8.5	82.8	17.2
No.200	14.8	2.0	4.5	87.3	12.7
Pan	41.6	5.7	12.7	100.0	0.0
% sand retained		45.3			
Dry Wt.	724.5	Moist. Wet	727.4	724.5	2.9
Wash Wt.	682.8	%Mositure	0.40		
L.B.W.%	5.8				
FM	2.86				
Gravel%	54.7				
Del.					
Lithologic unit	G				

Aggregate Analysis

Borehole No.	C-02-8				
Project	Fountain				
From:	9.0				
To:	19.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	65.3	2.9		2.9	97.1
0.75"	156.4	6.9		9.7	90.3
0.5"	150.4	6.6		16.3	83.7
0.375"	154.0	6.8		23.1	76.9
No.4	334.1	14.7		37.8	62.2
No.8	321.5	14.1	22.7	22.7	77.3
No.16	292.8	12.9	20.7	43.3	56.7
No.30	241.9	10.6	17.1	60.4	39.6
No.50	195.6	8.6	13.8	74.2	25.8
No.100	153.9	6.8	10.9	85.0	15.0
No.200	68.5	3.0	4.8	89.9	10.1
Pan	143.6	6.3	10.1	100.0	0.0
% sand retained		62.2			
Dry Wt.	2278.0	Moist. Wet	1820.4	1809.7	10.7
Wash Wt.	2134.5	%Mositure	0.59		
L.B.W.%	6.3				
FM	2.86				
Gravel%	37.8				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	C-02-8				
Project	Fountain				
From:	19.0				
To:	30.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	127.7	7.2		7.2	92.8
0.75"	89.5	5.1		12.3	87.7
0.5"	129.9	7.4		19.7	80.3
0.375"	55.1	3.1		22.8	77.2
No.4	191.7	10.9		33.7	66.3
No.8	258.6	14.7	22.1	22.1	77.9
No.16	247.9	14.1	21.2	43.3	56.7
No.30	220.9	12.5	18.9	62.3	37.7
No.50	183.3	10.4	15.7	77.9	22.1
No.100	114.0	6.5	9.8	87.7	12.3
No.200	49.8	2.8	4.3	92.0	8.0
Pan	94.0	5.3	8.0	100.0	0.0
% sand retained		66.3			
Dry Wt.	1762.4	Moist. Wet	1599.1	1576.1	23.0
Wash Wt.	1668.9	%Mositure	1.44		
L.B.W.%	5.3				
FM	2.93				
Gravel%	33.7				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	CPBH-1				
Project	Fountain				
From:	4.0				
To:	19.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	86.1	6.1		6.1	93.9
0.5"	62.7	4.5		10.6	89.4
0.375"	53.4	3.8		14.4	85.6
No.4	184.9	13.1		27.5	72.5
No.8	252.2	17.9	24.7	24.7	75.3
No.16	294.5	20.9	28.9	53.6	46.4
No.30	234.0	16.6	22.9	76.5	23.5
No.50	119.1	8.5	11.7	88.2	11.8
No.100	40.9	2.9	4.0	92.2	7.8
No.200	13.0	0.9	1.3	93.5	6.5
Pan	66.4	4.7	6.5	100.0	0.0
% sand retained		72.5			
Dry Wt.	1407.2	Moist. Wet	1230.2	1203.8	26.4
Wash Wt.	1341.5	%Mositure	2.15		
L.B.W.%	4.7				
FM	3.35				
Gravel%	27.5				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	F-02-1				
Project	Fountain				
From:					
To:					
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	39.8	3.7		3.7	96.3
0.5"	79.8	7.5		11.2	88.8
0.375"	49.9	4.7		15.9	84.1
No.4	129.7	12.2		28.1	71.9
No.8	170.9	16.0	22.3	22.3	77.7
No.16	167.6	15.7	21.9	44.2	55.8
No.30	142.3	13.4	18.6	62.8	37.2
No.50	109.6	10.3	14.3	77.1	22.9
No.100	68.4	6.4	8.9	86.0	14.0
No.200	34.6	3.2	4.5	90.5	9.5
Pan	72.8	6.8	9.5	100.0	0.0
% sand retained		71.9			
Dry Wt.	1065.4	Moist. Wet	1077.9	1060.6	17.3
Wash Wt.	993.0	%Mositure	1.60		
L.B.W.%	6.8				
FM	2.92				
Gravel%	28.1				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	F-02-2				
Project	Fountain				
From:	1.0				
To:	4.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	0.0	0.0		0.0	100.0
0.5"	11.3	0.8		0.8	99.2
0.375"	37.2	2.7		3.6	96.4
No.4	147.7	10.9		14.4	85.6
No.8	205.0	15.1	17.6	17.6	82.4
No.16	218.0	16.0	18.7	36.4	63.6
No.30	224.7	16.5	19.3	55.7	44.3
No.50	201.9	14.8	17.4	73.0	27.0
No.100	139.9	10.3	12.0	85.1	14.9
No.200	67.6	5.0	5.8	90.9	9.1
Pan	106.3	7.8	9.1	100.0	0.0
% sand retained		85.6			
Dry Wt.	1359.6	Moist. Wet	1374.6	1359.6	15.0
Wash Wt.	1253.8	%Mositure	1.09		
L.B.W.%	7.8				
FM	2.68				
Gravel%	14.4				
Del.					
Lithologic unit	2NS				

Aggregate Analysis

Borehole No.	bh-08				
Project	sundance				
From:					
To:					
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	12.0	12.0		12.0	88.0
0.75"	3.0	3.0		15.0	85.0
0.5"	4.0	4.0		19.0	81.0
0.375"	3.0	3.0		22.0	78.0
No.4	8.0	8.0		30.0	70.0
No.8	15.0	15.0	22.5	22.5	77.5
No.16	22.0	22.0	33.0	55.6	44.4
No.30	15.0	15.0	22.5	78.1	21.9
No.50	8.0	8.0	12.0	90.1	9.9
No.100	5.0	5.0	7.5	97.6	2.4
No.200	1.6	1.6	2.4	100.0	0.0
Pan	0.0	0.0	0.0	100.0	0.0
% sand retained	5.0	66.6			
Dry Wt.	100.0	Moist. Wet	1027.5	1015.1	12.4
Wash Wt.	100.0	%Mositure	1.21		
L.B.W.%	0.0				
FM	3.44				
Gravel%	30.0				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-1				
Project	Fountain				
From:	7.0				
To:	19.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	155.6	6.8		6.8	93.2
0.75"	136.8	6.0		12.8	87.2
0.5"	187.5	8.2		21.0	79.0
0.375"	139.2	6.1		27.1	72.9
No.4	303.0	13.3		40.3	59.7
No.8	302.8	13.2	22.2	22.2	77.8
No.16	261.0	11.4	19.1	41.3	58.7
No.30	231.2	10.1	17.0	58.3	41.7
No.50	205.7	9.0	15.1	73.4	26.6
No.100	154.9	6.8	11.4	84.8	15.2
No.200	74.9	3.3	5.5	90.2	9.8
Pan	133.0	5.8	9.8	100.0	0.0
% sand retained		59.7			
Dry Wt.	2285.6	Moist. Wet	266.3	253.2	13.1
Wash Wt.	2153.0	%Mositure	0.9		
L.B.W.%	5.8				
FM	2.80				
Gravel%	40.3				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-2				
Project	Fountain	Fountain			
From:	13.0				
To:	14.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	103.3	10.7		10.7	89.3
0.75"	45.5	4.7		15.4	84.6
0.5"	72.5	7.5		23.0	77.0
0.375"	46.8	4.9		27.8	72.2
No.4	130.0	13.5		41.3	58.7
No.8	123.7	12.8	21.9	21.9	78.1
No.16	97.4	10.1	17.2	39.1	60.9
No.30	81.4	8.4	14.4	53.5	46.5
No.50	81.4	8.4	14.4	67.9	32.1
No.100	67.9	7.0	12.0	79.9	20.1
No.200	33.6	3.5	5.9	85.8	14.2
Pan	80.4	8.3	14.2	100.0	0.0
% sand retained		58.7			
Dry Wt.	963.9	Moist. Wet	266.3	253.2	13.1
Wash Wt.	882.9	%Mositure	5.2		
L.B.W.%	8.4				
FM	2.62				
Gravel%	41.3				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-2				
Project	Fountain	Fountain			
From:	14.0				
To:	24.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	402.0	17.4		17.4	82.6
0.75"	52.7	2.3		19.7	80.3
0.5"	102.5	4.4		24.1	75.9
0.375"	88.8	3.8		28.0	72.0
No.4	277.7	12.0		40.0	60.0
No.8	299.1	13.0	21.6	21.6	78.4
No.16	283.8	12.3	20.5	42.1	57.9
No.30	262.0	11.4	18.9	61.0	39.0
No.50	229.0	9.9	16.5	77.6	22.4
No.100	162.9	7.1	11.8	89.3	10.7
No.200	62.8	2.7	4.5	93.9	6.1
Pan	84.9	3.7	6.1	100.0	0.0
% sand retained		60.0			
Dry Wt.	2308.3	Moist. Wet	266.3	253.2	13.1
Wash Wt.	2223.8	%Mositure	5.2		
L.B.W.%	3.7				
FM	2.92				
Gravel%	40.0				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-2				
Project	Fountain	Fountain			
From:	24.0				
To:	26.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	0.0	0.0		0.0	100.0
0.5"	0.0	0.0		0.0	100.0
0.375"	8.9	0.9		0.9	99.1
No.4	57.9	6.1		7.1	92.9
No.8	108.4	11.5	12.3	12.3	87.7
No.16	123.7	13.1	14.1	26.4	73.6
No.30	144.0	15.2	16.4	42.8	57.2
No.50	158.6	16.8	18.1	60.9	39.1
No.100	162.5	17.2	18.5	79.4	20.6
No.200	111.1	11.8	12.6	92.0	8.0
Pan	70.1	7.4	8.0	100.0	0.0
% sand retained		92.9			
Dry Wt.	945.2	Moist. Wet	266.3	253.2	13.1
Wash Wt.	875.6	%Mositure	5.2		
L.B.W.%	7.4				
FM	2.22				
Gravel%	7.1				
Del.					
Lithologic unit	msd				

Aggregate Analysis

Borehole No.	SH-02-3	
Project	Fountain	Fountain
From:	12.0	
To:	14.0	

Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	275.0	27.8		27.8	72.2
0.75"	35.7	3.6		31.4	68.6
0.5"	40.4	4.1		35.5	64.5
0.375"	28.0	2.8		38.3	61.7
No.4	90.8	9.2		47.5	52.5
No.8	102.1	10.3	19.7	19.7	80.3
No.16	99.6	10.1	19.2	38.9	61.1
No.30	87.7	8.9	16.9	55.8	44.2
No.50	75.7	7.7	14.6	70.3	29.7
No.100	67.6	6.8	13.0	83.4	16.6
No.200	35.1	3.5	6.8	90.1	9.9
Pan	51.3	5.2	9.9	100.0	0.0
% sand retained		52.5			

Dry Wt.	989.0	Moist. Wet	266.3	253.2	13.1
Wash Wt.	937.8	%Mositure	5.2		

L.B.W.%	5.2
FM	2.68
Gravel%	47.5
Del.	
Lithologic unit	S&G

Aggregate Analysis

Borehole No.	SH-02-3				
Project	Fountain	Fountain			
From:	14.0				
To:	24.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	386.1	14.6		14.6	85.4
0.75"	100.4	3.8		18.4	81.6
0.5"	113.3	4.3		22.7	77.3
0.375"	84.9	3.2		25.9	74.1
No.4	253.0	9.6		35.4	64.6
No.8	324.8	12.3	19.0	19.0	81.0
No.16	348.6	13.2	20.4	39.4	60.6
No.30	324.0	12.2	19.0	58.4	41.6
No.50	294.5	11.1	17.2	75.6	24.4
No.100	199.9	7.6	11.7	87.3	12.7
No.200	78.6	3.0	4.6	91.9	8.1
Pan	138.1	5.2	8.1	100.0	0.0
% sand retained		64.6			
Dry Wt.	2646.2	Moist. Wet	266.3	253.2	13.1
Wash Wt.	2509.0	%Mositure	5.2		
L.B.W.%	5.2				
FM	2.80				
Gravel%	35.4				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-4				
Project	Fountain	Fountain			
From:	13.5				
To:	19.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	106.3	9.0		9.0	91.0
0.75"	21.3	1.8		10.8	89.2
0.5"	88.2	7.5		18.3	81.7
0.375"	66.4	5.6		24.0	76.0
No.4	175.0	14.9		38.8	61.2
No.8	171.8	14.6	23.8	23.8	76.2
No.16	155.3	13.2	21.6	45.4	54.6
No.30	132.0	11.2	18.3	63.7	36.3
No.50	114.3	9.7	15.9	79.6	20.4
No.100	76.7	6.5	10.6	90.2	9.8
No.200	29.5	2.5	4.1	94.3	5.7
Pan	40.8	3.5	5.7	100.0	0.0
% sand retained		61.2			
Dry Wt.	1177.6	Moist. Wet	266.3	253.2	13.1
Wash Wt.	1137.0	%Mositure	5.2		
L.B.W.%	3.4				
FM	3.03				
Gravel%	38.8				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-4				
Project	Fountain	Fountain			
From:	19.0				
To:	26.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	36.5	3.2		3.2	96.8
0.5"	80.8	7.1		10.3	89.7
0.375"	64.1	5.6		16.0	84.0
No.4	182.4	16.1		32.1	67.9
No.8	181.5	16.0	23.5	23.5	76.5
No.16	167.2	14.7	21.7	45.2	54.8
No.30	151.1	13.3	19.6	64.8	35.2
No.50	119.0	10.5	15.4	80.3	19.7
No.100	88.9	7.8	11.5	91.8	8.2
No.200	31.0	2.7	4.0	95.8	4.2
Pan	32.2	2.8	4.2	100.0	0.0
% sand retained		67.9			
Dry Wt.	1134.7	Moist. Wet	266.3	253.2	13.1
Wash Wt.	1101.9	%Mositure	5.2		
L.B.W.%	2.9				
FM	3.06				
Gravel%	32.1				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-4				
Project	Fountain	Fountain			
From:	26.0				
To:	28.5				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	0.0	0.0		0.0	100.0
0.5"	0.0	0.0		0.0	100.0
0.375"	0.0	0.0		0.0	100.0
No.4	9.9	1.5		1.5	98.5
No.8	15.5	2.3	2.3	2.3	97.7
No.16	25.8	3.8	3.9	6.2	93.8
No.30	38.5	5.7	5.8	12.0	88.0
No.50	63.2	9.4	9.5	21.5	78.5
No.100	129.2	19.2	19.5	41.0	59.0
No.200	183.1	27.2	27.6	68.5	31.5
Pan	208.9	31.0	31.5	100.0	0.0
% sand retained		98.5			
Dry Wt.	674.1	Moist. Wet	266.3	253.2	13.1
Wash Wt.	465.3	%Mositure	8.0		
L.B.W.%	31.0				
FM	0.83				
Gravel%	1.5				
Del.					
Lithologic unit	Clay				

Aggregate Analysis

Borehole No.	SH-02-5				
Project	Fountain	Fountain			
From:	10.0				
To:	16.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	107.5	7.9		7.9	92.1
0.75"	0.0	0.0		7.9	92.1
0.5"	178.8	13.2		21.1	78.9
0.375"	77.9	5.7		26.8	73.2
No.4	182.8	13.5		40.3	59.7
No.8	157.8	11.6	19.5	19.5	80.5
No.16	166.5	12.3	20.6	40.1	59.9
No.30	149.4	11.0	18.5	58.5	41.5
No.50	134.1	9.9	16.6	75.1	24.9
No.100	101.2	7.5	12.5	87.6	12.4
No.200	44.0	3.2	5.4	93.0	7.0
Pan	56.6	4.2	7.0	100.0	0.0
% sand retained		59.7			
Dry Wt.	1356.6	Moist. Wet	266.3	253.2	13.1
Wash Wt.	1300.3	%Mositure	0.5		
L.B.W.%	4.2				
FM	2.81				
Gravel%	40.3				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-6				
Project	Fountain				
From:	9.0				
To:	12.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	39.0	8.5		8.5	91.5
0.75"	19.0	4.1		12.6	87.4
0.5"	29.0	6.3		18.9	81.1
0.375"	11.0	2.4		21.3	78.7
No.4	45.0	9.8		31.0	69.0
No.8	53.0	11.5	16.8	16.8	83.2
No.16	39.0	8.5	12.4	29.2	70.8
No.30	33.0	7.2	10.5	39.7	60.3
No.50	33.0	7.2	10.5	50.2	49.8
No.100	32.0	6.9	10.2	60.3	39.7
No.200	30.0	6.5	9.5	69.9	30.1
Pan	94.9	20.6	30.1	100.0	0.0
% sand retained		68.3			
Dry Wt.	460.8	Moist. Wet	425.1	415.4	9.7
Wash Wt.	365.8	%Mositure	2.28		
L.B.W.%	20.6				
FM	1.96				
Gravel%	31.0				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-6				
Project	Fountain				
From:	12.0				
To:	26.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	144.8	6.9		6.9	93.1
0.75"	49.1	2.4		9.3	90.7
0.5"	131.6	6.3		15.6	84.4
0.375"	90.7	4.3		19.9	80.1
No.4	237.9	11.4		31.3	68.7
No.8	272.3	13.0	19.0	19.0	81.0
No.16	285.7	13.7	19.9	38.9	61.1
No.30	285.9	13.7	20.0	58.9	41.1
No.50	263.3	12.6	18.4	77.3	22.7
No.100	188.9	9.1	13.2	90.5	9.5
No.200	65.9	3.2	4.6	95.1	4.9
Pan	70.8	3.4	4.9	100.0	0.0
% sand retained		68.7			
Dry Wt.	2086.9	Moist. Wet	1815.2	1805.2	10.0
Wash Wt.	2015.6	%Mositure	0.55		
L.B.W.%	3.4				
FM	2.85				
Gravel%	31.3				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-7				
Project	Fountain				
From:	11.5				
To:	21.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	42.8	2.1		2.1	97.9
0.75"	63.9	3.1		5.1	94.9
0.5"	113.7	5.4		10.6	89.4
0.375"	60.6	2.9		13.5	86.5
No.4	127.8	6.1		19.6	80.4
No.8	158.5	7.6	19.2	19.2	80.8
No.16	168.0	8.1	20.3	39.5	60.5
No.30	155.9	7.5	18.8	58.3	41.7
No.50	137.2	6.6	16.6	74.9	25.1
No.100	100.7	4.8	12.2	87.0	13.0
No.200	42.9	2.1	5.2	92.2	7.8
Pan	64.3	3.1	7.8	100.0	0.0
% sand retained		39.7			
Dry Wt.	2086.9	Moist. Wet	1037.2	1026.6	10.6
Wash Wt.	2015.6	%Mositure	1.02		
L.B.W.%	3.4				
FM	2.79				
Gravel%	19.6				
Del.					
Lithologic unit	2NS				

Aggregate Analysis

Borehole No.	SH-02-7
Project	Fountain
From:	21.0
To:	29.0

Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	0.0	0.0		0.0	100.0
0.5"	0.0	0.0		0.0	100.0
0.375"	0.0	0.0		0.0	100.0
No.4	0.0	0.0		0.0	100.0
No.8	1.3	0.2	0.2	0.2	99.8
No.16	13.7	1.6	1.6	1.8	98.2
No.30	48.6	5.7	5.7	7.5	92.5
No.50	111.2	13.1	13.1	20.7	79.3
No.100	178.7	21.1	21.1	41.8	58.2
No.200	172.7	20.4	20.4	62.2	37.8
Pan	319.9	37.8	37.8	100.0	0.0
% sand retained		100.0			

Dry Wt.	846.1	Moist. Wet	776.0	726.3	49.7
Wash Wt.	526.5	%Mositure	6.40		

L.B.W.%	37.8
FM	0.72
Gravel%	0.0
Del.	
Lithologic unit	CL

Aggregate Analysis

Borehole No.	SH-02-7
Project	Fountain
From:	29.0
To:	35.0

Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	0.0	0.0		0.0	100.0
0.5"	10.1	2.0		2.0	98.0
0.375"	0.0	0.0		2.0	98.0
No.4	0.4	0.1		2.1	97.9
No.8	1.2	0.2	0.2	0.2	99.8
No.16	10.2	2.0	2.1	2.3	97.7
No.30	31.7	6.3	6.4	8.7	91.3
No.50	90.6	18.0	18.4	27.1	72.9
No.100	127.6	25.4	25.9	53.0	47.0
No.200	108.1	21.5	21.9	75.0	25.0
Pan	123.4	24.5	25.0	100.0	0.0
% sand retained		97.9			

Dry Wt.	503.3	Moist. Wet	455.3	433.1	22.2
Wash Wt.	380.2	%Mositure	4.88		

L.B.W.%	24.5
FM	0.91
Gravel%	2.1
Del.	
Lithologic unit	CL

Aggregate Analysis

Borehole No.	SH-02-7
Project	Fountain
From:	35.0
To:	37.0

Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	51.2	13.3		13.3	86.7
0.75"	11.4	3.0		16.2	83.8
0.5"	23.6	6.1		22.3	77.7
0.375"	8.1	2.1		24.4	75.6
No.4	58.8	15.2		39.6	60.4
No.8	62.2	16.1	26.7	26.7	73.3
No.16	54.6	14.1	23.4	50.1	49.9
No.30	47.5	12.3	20.4	70.5	29.5
No.50	32.6	8.4	14.0	84.4	15.6
No.100	15.7	4.1	6.7	91.2	8.8
No.200	7.0	1.8	3.0	94.2	5.8
Pan	13.6	3.5	5.8	100.0	0.0
% sand retained		60.4			

Dry Wt.	386.3	Moist. Wet	387.9	386.3	1.6
Wash Wt.	372.6	%Mositure	0.41		

L.B.W.%	3.5
FM	3.23
Gravel%	39.6
Del.	
Lithologic unit	S&G

Aggregate Analysis

Borehole No.	SH-02-8				
Project	Fountain				
From:	12.0				
To:	25.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	66.9	3.7		3.7	96.3
0.5"	32.0	1.8		5.5	94.5
0.375"	33.7	1.9		7.4	92.6
No.4	205.3	11.5		18.9	81.1
No.8	258.5	14.5	17.9	17.9	82.1
No.16	283.5	15.9	19.6	37.4	62.6
No.30	279.8	15.7	19.3	56.8	43.2
No.50	215.5	12.1	14.9	71.7	28.3
No.100	156.3	8.8	10.8	82.5	17.5
No.200	90.2	5.1	6.2	88.7	11.3
Pan	163.8	9.2	11.3	100.0	0.0
% sand retained		81.1			
Dry Wt.	1785.5	Moist. Wet	1644.5	1631.4	13.1
Wash Wt.	1622.0	%Mositure	0.80		
L.B.W.%	9.2				
FM	2.66				
Gravel%	18.9				
Del.					
Lithologic unit	2NS				

Aggregate Analysis

Borehole No.	SH-02-8				
Project	Fountain				
From:	25.0				
To:	26.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	0.0	0.0		0.0	100.0
0.5"	36.7	6.3		6.3	93.7
0.375"	9.7	1.7		8.0	92.0
No.4	34.5	6.0		14.0	86.0
No.8	34.2	5.9	6.9	6.9	93.1
No.16	41.3	7.1	8.3	15.1	84.9
No.30	50.2	8.7	10.1	25.2	74.8
No.50	56.2	9.7	11.3	36.5	63.5
No.100	70.9	12.2	14.2	50.7	49.3
No.200	77.6	13.4	15.6	66.3	33.7
Pan	168.1	29.0	33.7	100.0	0.0
% sand retained		86.0			
Dry Wt.	579.4	Moist. Wet	587.9	567.2	20.7
Wash Wt.	411.1	%Mositure	3.52		
L.B.W.%	29.0				
FM	1.34				
Gravel%	14.0				
Del.					
Lithologic unit	CL				

Aggregate Analysis

Borehole No.	SH-02-8				
Project	Fountain				
From:	26.0				
To:	34.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	41.8	2.0		2.0	98.0
0.75"	15.4	0.7		2.7	97.3
0.5"	54.4	2.6		5.3	94.7
0.375"	46.8	2.2		7.5	92.5
No.4	301.3	14.3		21.8	78.2
No.8	408.5	19.3	24.7	24.7	75.3
No.16	369.4	17.5	22.4	47.1	52.9
No.30	322.1	15.3	19.5	66.6	33.4
No.50	254.6	12.1	15.4	82.0	18.0
No.100	142.7	6.8	8.6	90.6	9.4
No.200	53.5	2.5	3.2	93.9	6.1
Pan	101.4	4.8	6.1	100.0	0.0
% sand retained		78.2			
Dry Wt.	2111.9	Moist. Wet	2060.3	2051.5	8.8
Wash Wt.	2010.3	%Mositure	0.43		
L.B.W.%	4.8				
FM	3.11				
Gravel%	21.8				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-8				
Project	Fountain				
From:	34.0				
To:	41.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	98.4	8.0		8.0	92.0
0.75"	16.2	1.3		9.3	90.7
0.5"	46.6	3.8		13.0	87.0
0.375"	30.4	2.5		15.5	84.5
No.4	142.9	11.6		27.1	72.9
No.8	186.3	15.1	20.7	20.7	79.3
No.16	173.6	14.1	19.3	39.9	60.1
No.30	179.1	14.5	19.9	59.8	40.2
No.50	163.4	13.2	18.1	78.0	22.0
No.100	94.1	7.6	10.4	88.4	11.6
No.200	38.3	3.1	4.3	92.7	7.3
Pan	66.2	5.4	7.3	100.0	0.0
% sand retained		72.9			
Dry Wt.	1235.5	Moist. Wet	1165.9	1155.6	10.3
Wash Wt.	1170.1	%Mositure	0.88		
L.B.W.%	5.3				
FM	2.87				
Gravel%	27.1				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-8
Project	Fountain
From:	41.0
To:	45.0

Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	0.0	0.0		0.0	100.0
0.5"	36.5	4.5		4.5	95.5
0.375"	38.5	4.7		9.2	90.8
No.4	118.2	14.5		23.7	76.3
No.8	140.1	17.2	22.5	22.5	77.5
No.16	102.5	12.6	16.5	38.9	61.1
No.30	103.0	12.6	16.5	55.5	44.5
No.50	126.5	15.5	20.3	75.8	24.2
No.100	84.9	10.4	13.6	89.4	10.6
No.200	28.1	3.4	4.5	93.9	6.1
Pan	37.9	4.6	6.1	100.0	0.0
% sand retained		76.3			

Dry Wt.	816.2	Moist. Wet	722.2	715.0	7.2
Wash Wt.	778.3	%Mositure	1.00		

L.B.W.%	4.6
FM	2.82
Gravel%	23.7
Del.	
Lithologic unit	S&G

Aggregate Analysis

Borehole No.	SH-02-8				
Project	Fountain				
From:	45.0				
To:	51.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	73.9	5.9		5.9	94.1
0.5"	41.9	3.4		9.3	90.7
0.375"	52.8	4.2		13.6	86.4
No.4	131.1	10.5		24.1	75.9
No.8	180.5	14.5	19.1	19.1	80.9
No.16	228.1	18.4	24.2	43.3	56.7
No.30	193.4	15.6	20.5	63.8	36.2
No.50	113.1	9.1	12.0	75.8	24.2
No.100	69.4	5.6	7.4	83.2	16.8
No.200	36.8	3.0	3.9	87.1	12.9
Pan	121.7	9.8	12.9	100.0	0.0
% sand retained		75.9			
Dry Wt.	1242.7	Moist. Wet	1249.5	1231.1	18.4
Wash Wt.	1120.5	%Mositure	1.47		
L.B.W.%	9.8				
FM	2.85				
Gravel%	24.1				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-9				
Project	Fountain				
From:	10.5				
To:	19.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	45.6	2.7		2.7	97.3
0.75"	43.7	2.6		5.3	94.7
0.5"	74.6	4.5		9.8	90.2
0.375"	76.9	4.6		14.4	85.6
No.4	254.1	15.2		29.6	70.4
No.8	260.2	15.5	22.1	22.1	77.9
No.16	228.4	13.6	19.4	41.5	58.5
No.30	229.9	13.7	19.5	61.0	39.0
No.50	200.1	12.0	17.0	77.9	22.1
No.100	130.7	7.8	11.1	89.0	11.0
No.200	53.1	3.2	4.5	93.5	6.5
Pan	76.2	4.6	6.5	100.0	0.0
% sand retained		70.4			
Dry Wt.	1673.5	Moist. Wet	1840.4	1817.3	23.1
Wash Wt.	1597.2	%Mositure	1.26		
L.B.W.%	4.6				
FM	2.91				
Gravel%	29.6				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-9				
Project	Fountain				
From:	19.0				
To:	28.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	43.8	2.7		2.7	97.3
0.75"	38.0	2.3		5.0	95.0
0.5"	91.9	5.6		10.6	89.4
0.375"	50.6	3.1		13.7	86.3
No.4	177.4	10.8		24.5	75.5
No.8	245.6	15.0	19.9	19.9	80.1
No.16	306.2	18.7	24.8	44.7	55.3
No.30	276.9	16.9	22.4	67.1	32.9
No.50	191.4	11.7	15.5	82.6	17.4
No.100	105.3	6.4	8.5	91.1	8.9
No.200	39.4	2.4	3.2	94.3	5.7
Pan	70.4	4.3	5.7	100.0	0.0
% sand retained		75.5			
Dry Wt.	1636.9	Moist. Wet	1321.6	1296.6	25.0
Wash Wt.	1566.1	%Mositure	1.89		
L.B.W.%	4.3				
FM	3.05				
Gravel%	24.5				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-9				
Project	Fountain				
From:	28.0				
To:	29.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	26.2	5.4		5.4	94.6
0.5"	2.8	0.6		6.0	94.0
0.375"	2.4	0.5		6.5	93.5
No.4	48.5	10.1		16.6	83.4
No.8	86.8	18.0	21.6	21.6	78.4
No.16	70.9	14.7	17.6	39.2	60.8
No.30	73.1	15.2	18.2	57.4	42.6
No.50	69.6	14.4	17.3	74.7	25.3
No.100	46.3	9.6	11.5	86.2	13.8
No.200	21.1	4.4	5.2	91.4	8.6
Pan	34.6	7.2	8.6	100.0	0.0
% sand retained		83.4			
Dry Wt.	482.3	Moist. Wet	390.4	388.1	2.3
Wash Wt.	447.7	%Mositure	0.59		
L.B.W.%	7.2				
FM	2.79				
Gravel%	16.6				
Del.					
Lithologic unit	2NS				

Aggregate Analysis

Borehole No.	SH-02-9
Project	Fountain
From:	29.0
To:	32.0

Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	44.1	8.7		8.7	91.3
0.5"	23.6	4.7		13.4	86.6
0.375"	23.0	4.5		17.9	82.1
No.4	75.1	14.9		32.8	67.2
No.8	89.2	17.6	26.3	26.3	73.7
No.16	94.4	18.7	27.8	54.0	46.0
No.30	80.4	15.9	23.7	77.7	22.3
No.50	39.6	7.8	11.7	89.3	10.7
No.100	16.7	3.3	4.9	94.3	5.7
No.200	6.9	1.4	2.0	96.3	3.7
Pan	12.6	2.5	3.7	100.0	0.0
% sand retained		67.2			

Dry Wt.	505.6	Moist. Wet	435.1	430.3	4.8
Wash Wt.	492.9	%Mositure	1.10		

L.B.W.%	2.5
FM	3.42
Gravel%	32.8
Del.	
Lithologic unit	S&G

Aggregate Analysis

Borehole No.	SH-02-9				
Project	Fountain				
From:	32.0				
To:	33.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	18.3	3.9		3.9	96.1
0.5"	11.4	2.4		6.3	93.7
0.375"	6.8	1.4		7.7	92.3
No.4	12.7	2.7		10.4	89.6
No.8	27.4	5.8	6.5	6.5	93.5
No.16	29.9	6.3	7.0	13.5	86.5
No.30	34.8	7.3	8.2	21.7	78.3
No.50	63.5	13.4	15.0	36.7	63.3
No.100	118.9	25.1	28.0	64.7	35.3
No.200	75.2	15.9	17.7	82.4	17.6
Pan	74.8	15.8	17.6	100.0	0.0
% sand retained		89.6			
Dry Wt.	473.7	Moist. Wet	475.0	455.5	19.5
Wash Wt.	398.5	%Mositure	4.11		
L.B.W.%	15.9				
FM	1.43				
Gravel%	10.4				
Del.					
Lithologic unit	ST				

Aggregate Analysis

Borehole No.	SH-02-9				
Project	Fountain				
From:	33.0				
To:	39.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	19.2	1.2		1.2	98.8
0.75"	131.5	7.9		9.1	90.9
0.5"	182.1	11.0		20.1	79.9
0.375"	106.3	6.4		26.5	73.5
No.4	230.3	13.9		40.4	59.6
No.8	199.9	12.1	20.2	20.2	79.8
No.16	173.3	10.4	17.5	37.7	62.3
No.30	160.1	9.7	16.2	53.9	46.1
No.50	168.1	10.1	17.0	70.9	29.1
No.100	135.0	8.1	13.6	84.6	15.4
No.200	62.2	3.8	6.3	90.9	9.1
Pan	90.5	5.5	9.1	100.0	0.0
% sand retained		59.6			
Dry Wt.	1658.5	Moist. Wet	1462.6	1455.5	7.1
Wash Wt.	1569.0	%Mositure	0.49		
L.B.W.%	5.4				
FM	2.67				
Gravel%	40.4				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-9				
Project	Fountain				
From:	39.0				
To:	44.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	79.5	7.0		7.0	93.0
0.75"	36.3	3.2		10.2	89.8
0.5"	109.5	9.6		19.8	80.2
0.375"	86.1	7.6		27.4	72.6
No.4	179.7	15.8		43.2	56.8
No.8	201.3	17.7	31.1	31.1	68.9
No.16	192.1	16.9	29.7	60.8	39.2
No.30	107.8	9.5	16.7	77.5	22.5
No.50	52.4	4.6	8.1	85.6	14.4
No.100	33.7	3.0	5.2	90.8	9.2
No.200	18.8	1.7	2.9	93.7	6.3
Pan	40.5	3.6	6.3	100.0	0.0
% sand retained		56.8			
Dry Wt.	1137.7	Moist. Wet	1026.5	1022.4	4.1
Wash Wt.	1096.9	%Mositure	0.40		
L.B.W.%	3.6				
FM	3.46				
Gravel%	43.2				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-9				
Project	Fountain				
From:	47.0				
To:	49.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	189.7	23.2		23.2	76.8
0.75"	36.2	4.4		27.6	72.4
0.5"	62.8	7.7		35.3	64.7
0.375"	52.6	6.4		41.7	58.3
No.4	81.8	10.0		51.7	48.3
No.8	106.1	13.0	26.8	26.8	73.2
No.16	85.0	10.4	21.5	48.3	51.7
No.30	56.3	6.9	14.2	62.5	37.5
No.50	48.7	5.9	12.3	74.8	25.2
No.100	35.6	4.3	9.0	83.8	16.2
No.200	17.3	2.1	4.4	88.2	11.8
Pan	46.6	5.7	11.8	100.0	0.0
% sand retained		48.3			
Dry Wt.	818.7	Moist. Wet	624.6	600.1	24.5
Wash Wt.	771.9	%Mositure	3.92		
L.B.W.%	5.7				
FM	2.96				
Gravel%	51.7				
Del.					
Lithologic unit	G				

Aggregate Analysis

Borehole No.	SH-02-10				
Project	Fountain				
From:	10.0				
To:	13.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	0.0	0.0		0.0	100.0
0.5"	21.4	5.3		5.3	94.7
0.375"	9.1	2.3		7.6	92.4
No.4	20.8	5.2		12.7	87.3
No.8	23.7	5.9	6.7	6.7	93.3
No.16	26.6	6.6	7.6	14.3	85.7
No.30	32.4	8.0	9.2	23.5	76.5
No.50	41.6	10.3	11.8	35.3	64.7
No.100	53.1	13.2	15.1	50.4	49.6
No.200	56.4	14.0	16.0	66.4	33.6
Pan	118.5	29.4	33.6	100.0	0.0
% sand retained		87.3			
Dry Wt.	403.6	Moist. Wet	410.7	388.6	22.1
Wash Wt.	285.3	%Mositure	5.38		
L.B.W.%	29.3				
FM	1.30				
Gravel%	12.7				
Del.					
Lithologic unit	CL				

Aggregate Analysis

Borehole No.	SH-02-10				
Project	Fountain				
From:	13.0				
To:	22.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	57.7	4.1		4.1	95.9
0.75"	46.3	3.3		7.5	92.5
0.5"	87.2	6.3		13.7	86.3
0.375"	63.2	4.5		18.3	81.7
No.4	163.9	11.8		30.1	69.9
No.8	174.4	12.5	17.9	17.9	82.1
No.16	174.6	12.6	18.0	35.9	64.1
No.30	171.8	12.4	17.7	53.5	46.5
No.50	155.4	11.2	16.0	69.5	30.5
No.100	131.6	9.5	13.5	83.0	17.0
No.200	72.4	5.2	7.4	90.5	9.5
Pan	92.5	6.6	9.5	100.0	0.0
% sand retained		69.9			
Dry Wt.	1391.0	Moist. Wet	1137.3	1130.0	7.3
Wash Wt.	1299.4	%Mositure	0.64		
L.B.W.%	6.6				
FM	2.60				
Gravel%	30.1				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-10				
Project	Fountain				
From:	22.0				
To:	24.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	23.0	3.2		3.2	96.8
0.5"	3.3	0.5		3.6	96.4
0.375"	20.1	2.8		6.4	93.6
No.4	39.8	5.5		11.8	88.2
No.8	62.1	8.5	9.7	9.7	90.3
No.16	73.0	10.0	11.4	21.0	79.0
No.30	86.8	11.9	13.5	34.5	65.5
No.50	141.0	19.4	22.0	56.5	43.5
No.100	132.3	18.2	20.6	77.1	22.9
No.200	77.4	10.6	12.1	89.1	10.9
Pan	69.7	9.6	10.9	100.0	0.0
% sand retained		88.2			
Dry Wt.	728.5	Moist. Wet	680.1	671.2	8.9
Wash Wt.	658.9	%Mositure	1.31		
L.B.W.%	9.6				
FM	1.99				
Gravel%	11.8				
Del.					
Lithologic unit	FSD				

Aggregate Analysis

Borehole No.	SH-02-10				
Project	Fountain				
From:	24.0				
To:	34.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	72.6	3.7		3.7	96.3
0.5"	119.0	6.1		9.8	90.2
0.375"	84.7	4.3		14.2	85.8
No.4	268.2	13.7		27.9	72.1
No.8	358.7	18.4	25.5	25.5	74.5
No.16	327.8	16.8	23.3	48.8	51.2
No.30	289.5	14.8	20.6	69.4	30.6
No.50	207.8	10.6	14.8	84.1	15.9
No.100	105.8	5.4	7.5	91.7	8.3
No.200	41.7	2.1	3.0	94.6	5.4
Pan	75.5	3.9	5.4	100.0	0.0
% sand retained		72.1			
Dry Wt.	1951.3	Moist. Wet	1768.6	1759.3	9.3
Wash Wt.	1875.7	%Mositure	0.53		
L.B.W.%	3.9				
FM	3.19				
Gravel%	27.9				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-10				
Project	Fountain				
From:	34.0				
To:	38.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	105.1	10.2		10.2	89.8
0.75"	31.0	3.0		13.2	86.8
0.5"	96.5	9.4		22.6	77.4
0.375"	45.5	4.4		27.0	73.0
No.4	142.3	13.8		40.8	59.2
No.8	127.8	12.4	21.0	21.0	79.0
No.16	108.7	10.6	17.8	38.8	61.2
No.30	100.5	9.8	16.5	55.3	44.7
No.50	112.1	10.9	18.4	73.6	26.4
No.100	75.3	7.3	12.3	86.0	14.0
No.200	27.3	2.6	4.5	90.5	9.5
Pan	58.2	5.6	9.5	100.0	0.0
% sand retained		59.2			
Dry Wt.	1030.3	Moist. Wet	1017.5	1011.5	6.0
Wash Wt.	972.6	%Mositure	0.59		
L.B.W.%	5.6				
FM	2.75				
Gravel%	40.8				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-10
Project	Fountain
From:	38.0
To:	44.0

Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	139.5	12.8		12.8	87.2
0.75"	10.5	1.0		13.8	86.2
0.5"	91.2	8.4		22.2	77.8
0.375"	43.4	4.0		26.2	73.8
No.4	112.8	10.4		36.5	63.5
No.8	124.3	11.4	18.0	18.0	82.0
No.16	105.4	9.7	15.3	33.3	66.7
No.30	91.0	8.4	13.2	46.5	53.5
No.50	154.5	14.2	22.4	68.8	31.2
No.100	101.9	9.4	14.8	83.6	16.4
No.200	34.0	3.1	4.9	88.5	11.5
Pan	79.1	7.3	11.5	100.0	0.0
% sand retained		63.5			

Dry Wt.	1087.6	Moist. Wet	914.1	896.2	17.9
Wash Wt.	1008.8	%Mositure	1.96		

L.B.W.%	7.2
FM	2.50
Gravel%	36.5
Del.	
Lithologic unit	S&G

Aggregate Analysis

Borehole No.	SH-02-10				
Project	Fountain				
From:	44.0				
To:	49.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	86.0	7.4		7.4	92.6
0.75"	21.8	1.9		9.2	90.8
0.5"	38.1	3.3		12.5	87.5
0.375"	49.6	4.2		16.7	83.3
No.4	118.0	10.1		26.8	73.2
No.8	149.4	12.8	17.5	17.5	82.5
No.16	155.8	13.3	18.2	35.7	64.3
No.30	133.3	11.4	15.6	51.3	48.7
No.50	104.6	8.9	12.2	63.5	36.5
No.100	102.8	8.8	12.0	75.5	24.5
No.200	78.0	6.7	9.1	84.6	15.4
Pan	131.5	11.2	15.4	100.0	0.0
% sand retained		73.2			
Dry Wt.	1168.9	Moist. Wet	1028.9	995.4	33.5
Wash Wt.	1037.8	%Mositure	3.26		
L.B.W.%	11.2				
FM	2.43				
Gravel%	26.8				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-11				
Project	Fountain				
From:	11.0				
To:	12.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	136.9	11.0		11.0	89.0
0.5"	62.4	5.0		16.0	84.0
0.375"	53.7	4.3		20.3	79.7
No.4	153.6	12.3		32.7	67.3
No.8	139.6	11.2	16.7	16.7	83.3
No.16	92.1	7.4	11.0	27.7	72.3
No.30	79.8	6.4	9.5	37.2	62.8
No.50	91.3	7.3	10.9	48.1	51.9
No.100	108.9	8.8	13.0	61.1	38.9
No.200	89.5	7.2	10.7	71.8	28.2
Pan	236.2	19.0	28.2	100.0	0.0
% sand retained		67.3			
Dry Wt.	1244.0	Moist. Wet	1040.2	1000.7	39.5
Wash Wt.	1008.3	%Mositure	3.80		
L.B.W.%	18.9				
FM	1.91				
Gravel%	32.7				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-11
Project	Fountain
From:	12.0
To:	14.0

Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	127.0	15.1		15.1	84.9
0.5"	53.6	6.4		21.5	78.5
0.375"	41.7	5.0		26.5	73.5
No.4	115.7	13.8		40.3	59.7
No.8	105.8	12.6	21.1	21.1	78.9
No.16	97.3	11.6	19.4	40.6	59.4
No.30	83.2	9.9	16.6	57.2	42.8
No.50	69.3	8.3	13.9	71.1	28.9
No.100	58.1	6.9	11.6	82.7	17.3
No.200	30.6	3.7	6.1	88.8	11.2
Pan	56.0	6.7	11.2	100.0	0.0
% sand retained		59.7			

Dry Wt.	838.3	Moist. Wet	710.8	708.3	2.5
Wash Wt.	782.9	%Mositure	0.35		

L.B.W.%	6.6
FM	2.73
Gravel%	40.3
Del.	
Lithologic unit	S&G

Aggregate Analysis

Borehole No.	SH-02-11				
Project	Fountain				
From:	14.0				
To:	24.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	51.9	2.5		2.5	97.5
0.75"	51.4	2.5		5.0	95.0
0.5"	146.3	7.1		12.2	87.8
0.375"	90.4	4.4		16.6	83.4
No.4	229.2	11.2		27.8	72.2
No.8	279.8	13.7	18.9	18.9	81.1
No.16	258.3	12.6	17.5	36.4	63.6
No.30	296.3	14.5	20.0	56.4	43.6
No.50	301.2	14.7	20.4	76.8	23.2
No.100	190.2	9.3	12.9	89.6	10.4
No.200	68.3	3.3	4.6	94.2	5.8
Pan	85.2	4.2	5.8	100.0	0.0
% sand retained		72.2			
Dry Wt.	2048.5	Moist. Wet	1886.9	1877.8	9.1
Wash Wt.	1964.0	%Mositure	0.48		
L.B.W.%	4.1				
FM	2.78				
Gravel%	27.8				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-11				
Project	Fountain				
From:	24.0				
To:	34.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	34.6	2.5		2.5	97.5
0.75"	0.0	0.0		2.5	97.5
0.5"	64.5	4.6		7.1	92.9
0.375"	66.5	4.7		11.8	88.2
No.4	241.9	17.2		29.0	71.0
No.8	264.7	18.9	26.6	26.6	73.4
No.16	219.8	15.7	22.1	48.6	51.4
No.30	179.6	12.8	18.0	66.7	33.3
No.50	141.4	10.1	14.2	80.9	19.1
No.100	77.2	5.5	7.8	88.6	11.4
No.200	36.4	2.6	3.7	92.3	7.7
Pan	76.8	5.5	7.7	100.0	0.0
% sand retained		71.0			
Dry Wt.	1403.4	Moist. Wet	1279.7	1263.2	16.5
Wash Wt.	1327.4	%Mositure	1.29		
L.B.W.%	5.4				
FM	3.11				
Gravel%	29.0				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-12
Project	Fountain
From:	9.0
To:	12.0

Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	0.0	0.0		0.0	100.0
0.5"	27.5	10.6		10.6	89.4
0.375"	2.8	1.1		11.7	88.3
No.4	21.2	8.2		19.9	80.1
No.8	24.8	9.6	12.0	12.0	88.0
No.16	20.2	7.8	9.8	21.7	78.3
No.30	19.0	7.4	9.2	30.9	69.1
No.50	20.0	7.7	9.7	40.6	59.4
No.100	18.3	7.1	8.8	49.4	50.6
No.200	16.6	6.4	8.0	57.5	42.5
Pan	88.0	34.1	42.5	100.0	0.0
% sand retained		80.1			

Dry Wt.	258.4	Moist. Wet	243.7	234.8	8.9
Wash Wt.	170.7	%Mositure	3.65		

L.B.W.%	33.9
FM	1.55
Gravel%	19.9
Del.	
Lithologic unit	CL

Aggregate Analysis

Borehole No.	SH-02-12				
Project	Fountain				
From:	12.0				
To:	13.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	7.5	3.5		3.5	96.5
0.5"	15.0	7.0		10.5	89.5
0.375"	5.3	2.5		13.0	87.0
No.4	23.8	11.1		24.2	75.8
No.8	26.4	12.4	16.3	16.3	83.7
No.16	22.6	10.6	14.0	30.2	69.8
No.30	22.3	10.4	13.8	44.0	56.0
No.50	23.4	11.0	14.4	58.5	41.5
No.100	23.9	11.2	14.8	73.2	26.8
No.200	17.8	8.3	11.0	84.2	15.8
Pan	25.6	12.0	15.8	100.0	0.0
% sand retained		75.8			
Dry Wt.	213.6	Moist. Wet	215.1	213.6	1.5
Wash Wt.	187.5	%Mositure	0.70		
L.B.W.%	12.2				
FM	2.22				
Gravel%	24.2				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-12				
Project	Fountain				
From:	13.0				
To:	14.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	57.9	7.6		7.6	92.4
0.75"	37.2	4.9		12.5	87.5
0.5"	29.3	3.8		16.3	83.7
0.375"	46.6	6.1		22.4	77.6
No.4	107.2	14.1		36.5	63.5
No.8	94.4	12.4	19.5	19.5	80.5
No.16	97.2	12.7	20.1	39.5	60.5
No.30	85.9	11.3	17.7	57.3	42.7
No.50	81.0	10.6	16.7	74.0	26.0
No.100	63.5	8.3	13.1	87.1	12.9
No.200	27.4	3.6	5.7	92.7	7.3
Pan	35.3	4.6	7.3	100.0	0.0
% sand retained		63.5			
Dry Wt.	762.9	Moist. Wet	692.0	688.6	3.4
Wash Wt.	727.2	%Mositure	0.49		
L.B.W.%	4.7				
FM	2.77				
Gravel%	36.5				
Del.					
Lithologic unit	S&G				

Aggregate Analysis

Borehole No.	SH-02-12				
Project	Fountain				
From:	23.0				
To:	28.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	0.0	0.0		0.0	100.0
0.5"	0.0	0.0		0.0	100.0
0.375"	0.0	0.0		0.0	100.0
No.4	0.0	0.0		0.0	100.0
No.8	0.6	0.2	0.2	0.2	99.8
No.16	2.1	0.5	0.5	0.7	99.3
No.30	6.9	1.8	1.8	2.5	97.5
No.50	17.4	4.5	4.5	7.0	93.0
No.100	39.0	10.1	10.1	17.1	82.9
No.200	84.9	22.1	22.1	39.2	60.8
Pan	234.1	60.8	60.8	100.0	0.0
% sand retained		100.0			
Dry Wt.	385.0	Moist. Wet	398.6	356.8	41.8
Wash Wt.	151.0	%Mositure	10.49		
L.B.W.%	60.8				
FM	0.28				
Gravel%	0.0				
Del.					
Lithologic unit	CL				

Aggregate Analysis

Borehole No.	SH-02-12				
Project	Fountain				
From:	28.0				
To:	30.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	0.0	0.0		0.0	100.0
0.5"	0.0	0.0		0.0	100.0
0.375"	0.0	0.0		0.0	100.0
No.4	0.0	0.0		0.0	100.0
No.8	0.0	0.0	0.0	0.0	100.0
No.16	2.4	0.4	0.4	0.4	99.6
No.30	31.1	5.5	5.5	5.9	94.1
No.50	145.9	25.9	25.9	31.8	68.2
No.100	140.5	24.9	24.9	56.7	43.3
No.200	95.4	16.9	16.9	73.6	26.4
Pan	148.9	26.4	26.4	100.0	0.0
% sand retained		100.0			
Dry Wt.	564.2	Moist. Wet	571.3	537.6	33.7
Wash Wt.	415.5	%Mositure	5.90		
L.B.W.%	26.4				
FM	0.95				
Gravel%	0.0				
Del.					
Lithologic unit	CL				

Aggregate Analysis

Borehole No.	SH-02-12
Project	Fountain
From:	30.0
To:	31.0

Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	0.0	0.0		0.0	100.0
0.75"	0.0	0.0		0.0	100.0
0.5"	0.0	0.0		0.0	100.0
0.375"	0.0	0.0		0.0	100.0
No.4	0.0	0.0		0.0	100.0
No.8	0.0	0.0	0.0	0.0	100.0
No.16	2.9	0.6	0.6	0.6	99.4
No.30	20.0	4.5	4.5	5.1	94.9
No.50	68.9	15.4	15.4	20.5	79.5
No.100	94.6	21.1	21.1	41.6	58.4
No.200	94.1	21.0	21.0	62.6	37.4
Pan	167.3	37.4	37.4	100.0	0.0
% sand retained		100.0			

Dry Wt.	447.8	Moist. Wet	521.6	478.1	43.5
Wash Wt.	280.7	%Mositure	8.34		

L.B.W.%	37.3
FM	0.68
Gravel%	0.0
Del.	
Lithologic unit	CL

Aggregate Analysis

Borehole No.	SH-02-12				
Project	Fountain				
From:	38.0				
To:	43.0				
Sieve Size	Weight	% Retained	%sand retained	Acc. Retained	Acc. Passing
1.0"	65.7	11.3		11.3	88.7
0.75"	38.0	6.5		17.8	82.2
0.5"	42.8	7.3		25.1	74.9
0.375"	22.6	3.9		29.0	71.0
No.4	49.0	8.4		37.4	62.6
No.8	59.0	10.1	16.1	16.1	83.9
No.16	70.2	12.0	19.2	35.3	64.7
No.30	78.0	13.4	21.3	56.7	43.3
No.50	65.8	11.3	18.0	74.7	25.3
No.100	45.8	7.8	12.5	87.2	12.8
No.200	21.3	3.6	5.8	93.0	7.0
Pan	25.6	4.4	7.0	100.0	0.0
% sand retained		62.6			
Dry Wt.	583.8	Moist. Wet	509.5	504.0	5.5
Wash Wt.	557.9	%Mositure	1.08		
L.B.W.%	4.4				
FM	2.70				
Gravel%	37.4				
Del.					
Lithologic unit	S&G				