MASTER

SAMPLE DESCRIPTIONS AND SUMMARY LOGS
OF SELECTED WELLS
WITHIN THE HANFORD RESERVATION
(Four Volumes)

VOLUME I

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January 1977

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This report is based on work sponsored by Atlantic Richfield Hanford Company under United States Energy Research and Development Administration Contract EY-76-C-06-2130.

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A B S T R A C T

This report presents the description and summary logs of cuttings samples from 114 wells and test holes drilled within the Hanford Reservation.

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INTRODUCTION

Background

Well and test-hole drilling on the Hanford Reservation began shortly after the reservation was established in 1941. The first systematic drilling program seems to have begun in 1943. Since then 2200 wells and test holes have been drilled (Kipp et al, 1973).

For the most part geoscientists have relied on the limited information contained in the drillers' logs of these wells and test holes. Deju and Summers (1975), for example, used the drillers' logs in conjunction with pumping-test results to illustrate the heterogeneity of the Hanford groundwater flow continuum.

During the drilling of these wells and test holes drillers or geologists collected samples of the cuttings (particles of rock broken by the drill bit) and put them into half-pint jars. They marked each jar with the well number, date, and the depth interval represented by the sample and stored it for future reference.

Mechanical analysis revealed the particle-size distribution of a few samples. Several samples have been analyzed for their sorptive characteristics, but geologists have studied only a few in detail to learn textural characteristics or mineralogic composition (McHenry, 1957, and Newcomb et al, 1972).

Application of the Data

These descriptions and summary descriptions have several uses. They should provide a basis for interpreting drillers' logs and bore-hole geophysical surveys. The descriptive logs make pumping-test data more useful. The logs also form a base for subsurface stratigraphic correlations.

Sample Inventory

Since 1972 the samples have been stored on shelves in bins in igloos 105 and 106 located approximately 1½ miles west of the 200 West Area. A card catalogue tells where samples for a given well are stored by giving the igloo, bin(s), and shelf(ves).

From September 1 through December 15, 1975, we conducted a comprehensive inventory of the samples from wells outside the 200 areas, thereby revising and updating that part of the catalogue.

We left the 200 area samples alone, because they were in continuous use by others.

The inventory was necessary because many samples had been misplaced or used up in previous experiments. A surprising number consisted of only the less-than-200 μ fraction of the original samples. These samples were probably used in the sorption studies. We call them the sieved samples. We wanted to use only those wells for which we had complete or nearly complete suites of intact samples.

During the inventory we ordered the samples by depth sampled from top to bottom. This ordering made our systematic use of the samples easier. It also assured that every sample for a given well that was physically present in the igloo would be included in our examinations.

The card catalogue provided the information we needed to determine which sample suite would be studied.

Sample-Suite Selection

Four factors influenced our choice of sample suites. These included:

- (1) well location,
- (2) completeness of the sample suites,
- (3) interval sampled, and
- (4) availability of other data.

Well Location

One objective in looking at and describing cuttings samples from wells was to obtain an overview of the rocks that make up the flow continuum of the synthetic flow systems. For this purpose we sought a uniform areal distribution of wells. Plate 1 shows the location of the wells for which sample suite descriptions are presented here.

Completeness of Sample Suites

Ideally only complete suites of samples should have been used. Unfortunately most sample suites are incomplete because: some samples may never have been collected -- some were lost -- some were used up during particle-size analyses or sorption tests -- sample bottles were broken -- labels were lost or erased.

We also had to choose between shallow wells with relatively complete suite samples and nearby deep wells with incomplete suites.

Intervals Sampled

A few wells were sampled at intervals of one or two feet, but most were sampled at standard intervals of five or ten feet. Where choices were possible, we chose the suite with the minimum sample interval.

STUDY METHODS

To describe every sample in detail within the time and available budget was clearly impractical. Moreover lithologic units tend to occur in thicknesses that are significantly different than the intervals represented by most of the samples at our disposal. We elected, therefore, to group or "lump" together and describe collectively those intervals represented by samples with common characteristics.

Our study of the selected sample suites included four discrete steps:

- (1) sample preparation,
- (2) construction of strip logs,
- (3) macroscopic description of jar contents, and
- (4) microscopic examination of the strip logs and compilation of the descriptive logs.

Sample Preparation

Before inspection or description of any sample suite, we collected the sample jars, loosened the material in each jar, and replaced defective jars and labels.

Strip Logs

We prepared strip logs by cementing a portion of the fine (<.16 inch) fraction of each sample to a 4" x 26" 150-pound white tagboard strip. Printed on the strip is a one-inch by 24-inch column scaled at 8" = 100 feet and a blank legend. The legend provides for such information as Hanford Well number and coordinates.

To make the strip we poured a dry organic powdered resin over the area of the printed column. We then placed on top of the resin in the space representing its interval a portion of each sample. Toluene liquefied the resin and the sample fragments settled into the liquid. Almost immediately the toluene evaporated and the resin resolidified as a continuous mass bonding the sample to the tagboard.

The finished strip condenses the fine-grained portion of the sample suite to a conveniently visible format.

Figure 1.-- Classification of clastic sedimentary rocks
(PRICE and FECHT, 1976)

Microscopic Study and Detailed Logs

Microscopic examination consisted of viewing the strip log through a low magnification (10x and 20x) binocular microscope and recording the characteristics of the "fines". By combining these observations with the notes made during the macroscopic examination, we produced preliminary descriptive data sheets.

Determination of Interval to be Described

Examination of the strip logs took place as many as 90 days after their construction. We had marked on the strip the intervals that had similar macroscopic characteristics, and examined these intervals first.

The steps of microscopic examination included:

- (1) Determination of sampled interval - having common characteristics, and
- (2) Estimating for each of these intervals:
 - (a) "fines" size-range, shape, and composition;
 - (b) character of quartz grains;
 - (c) color;
 - (d) maturity;
 - (e) induration; and
 - (f) trace constituents.

By studying the "fines" we established the intervals that were used for this report. In some cases the "fines" were different enough to warrant further subdivision of a macroscopic interval. In others the "fines" did not reflect differences apparent at the macroscopic level, so we combined two or more intervals into one.

We then examined the "fines" of the strip logs and recorded their characteristics systematically.

"Fines" texture. -- For the "fines" we estimated (at 10x), three textural quantities -- (1) basalt sand, (2) "other" sand, and (3) silt and clay. As with the gravel fractions, basalt sand refers to sands made up of the sand-sized grains of basalt; whereas "other" refers to those grains of any other composition. The use of low magnification (10x and 20x) in this study prohibited identification of the clay- and silt-sized particles.

Our estimating procedure for the "fines" involved first estimating the percent of each fraction on the strip (so that the total for the three fine fractions were 100 percent); then multiplying these estimates by the quantity (100 - percent of gravel).

Shape. -- We described the sphericity and roundness of the basalt and other sands separately and noted the size range of all sand.

Quartz frosting. -- Clear quartz is a common constituent of the "other" sands. It will appear with a frosted surface on the grains if it is from wind-transported sediments or if it is leached by meteoric solutions that favor the solution of the silica. So for each "other" sand we noted the most abundant fraction of either frosted or unfrosted clear quartz. No note means that the amounts of each were not observable.

Color. -- The color we give in the description is the color on the strip log and reflects the mineral composition of the fine material. We recorded the color of each interval as it appears to the naked eye. This color is not necessarily representative of the color of jar-sample material.

Trace fragments. -- We concluded our description by noting the trace constituents -- gypsum, mica, caliche, diatomaceous earth, and pyroclastic rock particles. Their presence and abundance fall in one of the following categories:

- (1) not present,
- (2) present ($1\% < x < 10\%$), and
- (3) abundant ($x \geq 10\%$)

The occurrences of these constituents have discrete (and in some cases mutually exclusive) environmental and/or transport regimes. And though our genetic segregation between primary and secondary forms in drill cuttings may be questionable, their presence and our recognition of these forms is fairly certain.

"Primary" forms appeared to us as angular and uncoated (i.e. unweathered) pebble-sized fragments. Pyroclastic rock fragments include ash, obsidian, and rhyolite shards. Primary gypsum appeared as euhedral to subhedral, unetched, sand-sized crystals. This form of primary gypsum is consistent with Allmendinger and Titus's (1973) observation of primary gypsum forming in playa lake deposits in New Mexico.

"Secondary" forms show up as coated, rounded, and/or partially etched or dissolved pebble, sand, and silt-sized grains of gypsum, diatomaceous earth, caliche, and volcanic ash shards. We made no attempt to distinguish between secondary caliche, pebbles and those calcium carbonate pebbles that may be lacustrine algal pisoliths.

We also recorded several types of altered authigenic forms of trace constituents. These appear as coatings (for example, calcium carbonate) on gravel material, disseminated calcium carbonate and gypsum cement, and abundant deposits of calcium carbonate silt- and clay-sized material. These forms can be found alone or in combination with previously mentioned "primary" and "secondary" forms. Some of the "fines" may be derived from the crushing of large particles of these "trace" constituents during drilling.

Unless the "trace" constituents, caliche and diatomaceous earth were abundant, we ignored their particle-size distribution. In a few cases caliche or diatomaceous earth was included as a fraction of the particle sizes, along with basalt and "others". However in most cases we included abundant percentage of secondary caliche or diatomaceous earth in the "other" fractions and "primary" forms in the silt- and clay-sized fraction.

Table 1. -- List of abbreviations.

<u>Size</u>	<u>Shape</u>
vf = very fine	sp = sphericity
f = fine	h = high
m = medium	m = medium
cr = coarse	l = low
vcr = very coarse	w rnd = well rounded
sm = small	rnd = rounded
lg = large	sb rnd = subrounded
	sb ang = subangular
	ang = angular
	v ang = very angular
<u>Size Range</u>	<u>Trace constituents</u>
C = clay ¹	cl = caliche
Z = silt ¹	di = diatomaceous earth
S = sand ¹	gy = gypsum
P = pebble	
cb = cobbles	
b = boulders	
Gv = gravel	
<u>HCl Test</u>	<u>Percentages</u>
+ = positive HCl test	tr = trace (<1%)
- = negative HCl test	✓ = present (1%>x<10%)
	A = abundant ₂ (>10%)
	sl = slightly ²
<u>Clear Quartz Frosting</u>	<u>Miscellaneous</u>
F = frosted	? = missing
UF = unfrosted	- = indeterminable
	or not measured

¹ Capitalized abbreviations are nouns and small letters represent adjectives, example c = clayey.

² See percentage scheme illustrated in Figure 1.

Table 2. -- A comparison of the descriptions of the samples from well 699-2-3 with each other and Newcomb's description.

Log	Formation	Depth interval (ft)	Classification	Color	Sand roundness	Sand size range	Quartz' sand frosting	Correlation between descriptions
Newcomb	"Alluvium"	0-8	sand	buff-white	subrounded	fine-medium	frosted unfrosted	very
WKSA 1	--	0-8	sand	greyish brown	subrounded	very fine-medium	unfrosted	
WKSA 2	--	0-8	sand	brownish buff	subangular	very fine-very coarse	frosted	good
Newcomb	Glacio-fluviatile and fluviatile	8-12	gravelly sand	?	?	medium-very coarse	?	good
WKSA 1	--	8-15	gravelly sand	salt and pepper	subrounded	medium-very coarse	unfrosted	to
WKSA 2		8-56	sand	salt and pepper buff grey	subrounded	very fine-coarse	unfrosted	fair

Table 2. --- A comparison of the descriptions of the samples from well 699-2-3 with each other and Newcomb's description. (cont)

Log	Formation	Depth interval(ft)	Classification	Color	Sand roundness	Sand size range	Quartz sand frosting	Correlation between descriptions
Newcomb	Ringold	95-115 and 115-120	sandy gravel & gravelly sand	--	--	fine-medium	--	f a i r
WKSA 1	--	84-104	sandy gravel	greyish buff	subrounded	very fine -very coarse	unfrosted	t o
WKSA 2	--	84-92	gravelly sand	greyish buff	subrounded to subangular	very fine -very coarse	frosted	p o o r
Newcomb	Ringold	120-127 and 127-135	sand and sandy gravel	--	--	fine-medium	--	g o o d
WKSA 1	--	104-127	sandy gravel	greyish buff	subrounded	very fine -very coarse	unfrosted	t o
WKSA 2	--	92-136	sandy gravel	whitish buff	subrounded to very angular	very fine -very coarse	unfrosted	f a i r

Table 3. -- Comparison of texture and calcium carbonate content estimates with measured quantities for selected wells.

Particle Size	Well No.								
	299- E25-2 ¹	199- B3-2 ¹	699- 24-33 ¹	699- 40-33 ¹	699- 55-50A ¹	699- 65-50 ¹	699- 59-58 ²	699- 63-58 ²	699- 63-55 ²
Gravel	very good	good	very good	good	good	very good	very good	good	very good
Sand	very good	very good	very good	very good	fair	good	fair ⁴	very good	good
Silt and Clay	very good	very good	--	fair	fair	fair ³	fair ³	good	good
Caliche and/or Calcium carbonates ⁵	good	good	good	good	very good	very good	--	--	--

1. Compared with McHenry, 1957.

2. Compared with Rocksan, 1975.

3. Poor for silt but good for silt and clay combined.

4. Typical of estimating some silt with sand fraction.

5. Based on McHenry's analysis visual detection limit is $\geq 0.8\%$.

McHenry missed pebble-sized caliche in 199-B3-2.

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Appendix 1. -- Sample suites described and strip logged. (cont)

<u>Well number</u>	<u>Interval of intact samples (ft)</u>	<u>Drilled depth (ft)</u>	<u>Percent of drilled depth represented by intact samples</u>
699-29-78	560	660	85
699-31-31	530	640	83
699-32-62	500	501	99
699-34-39B	130	130	100
699-35-9	176	176	100
699-36-61A	390	395	99
699-37-43	482	517	93
699-37-82B	610	627	97
699-38-70	400	413	97
699-41-23	105	120	88
699-40-33	180	283	64
699-42-12	330	350	94
699-42-42	296	314	94
699-43-89	117	306	38
699-43-104	454	464	98
699-44-64	410	452	91
699-45-69	308	368	84
699-46-21	335	337	99
699-47-46	200	207	97
699-48-71	305	305	100
699-49-57	168	168	100
699-50-30	365	380	96
699-50-42	125	125	100
699-50-85	540	600	90
699-51-63	185	185	100
699-55-40	145	145	100
699-55-50A	110	110	100
699-55-76	230	238	97
699-58-24	60	60	100
699-59-58	110	110	100
699-59-80B	180	198	91
699-60-32	85	85	100
699-61-16A	575	607	95
699-61-66	225	225	100
699-63-25	60	110	55
699-63-55	86	125	69
699-63-58	218	225	97
699-64-62	116	116	100
699-65-50	505	585	86
699-65-59	190	200	95
699-65-83	111	121	92
699-66-23	100	100	100
699-66-38	85	150	57
699-66-64	116	120	97

ppendix 2. -- Sample suites from the 100, 300, 600, 1100, and 3000 areas, which were not described.

<u>Well number</u>	<u>Interval of Intact samples (ft)</u>	<u>Drilled depth (ft)</u>	<u>Percent of drilled depth represented by intact samples</u>
199-B5-1	150	151	99
199-D8-3	30	81	37
199-F7-1	150	150	100
199-H4-3	55	55	100
199-K-12	155	155	100
199-K-23	45	80	56
199-N-1	100	100	100
199-N-5	110	125	88
199-N-6	70	71	99
199-N-7	67	68	99
399-1-1	55	77	71
399-1-2	60	101	59
399-1-3	97	102	95
399-1-4	101	101	100
399-1-5	45	45	100
399-1-6	44	44	100
399-2-1	55	75	73
399-3-1	65	75	87
399-3-2	165	175	94
399-3-3	100	175	57
399-3-4	40	40	100
399-3-5	40	40	100
399-3-6	117	117	100
399-4-1	100	101	99
399-4-2	41	41	100
399-4-3	100	100	100
399-4-4	40	40	100
399-4-5	195	196	99
399-4-7	155	155	100
399-4-8	20	72	28
399-5-1	95	102	93
399-5-3	30	36	83
399-6-1	100	101	99
399-8-1	100	102	98
399-8-2	105	119	88
399-8-3	100	102	98
699-S30-E15A	80	80	100
699-S29-E12	80	80	100
699-S27-E14	143	165	87
699-S14-20	52	172	30
699-S11-E12	262	282	92
699-S11-E12A	252	282	89
699-S6-E4A	180	190	95

Appendix 2. -- Sample suites from the 100, 300, 600, 1100, and 3000 areas, which were not described. (cont)

<u>Well number</u>	<u>Interval of intact samples (ft)</u>	<u>Drilled depth (ft)</u>	<u>Percent of drilled depth represented by intact samples</u>
699-32-42	125	125	100
699-32-43	85	127	67
699-32-49	240	250	96
699-32-49B	305	305	100
699-32-70	230	350	66
699-32072	565	580	97
699-32-77	280	290	97
699-33-56	440	440	100
699-34-39A	38	167	23
699-34-51	300	385	78
699-34-88	623	688	91
699-35-27	630	630	100
699-35-61	335	335	100
699-35-66	445	450	99
699-35-70	320	325	98
699-35-78	274	279	98
699-36-61B	545	568	96
699-37-82A	415	440	94
699-38-65	495	536	92
699-39-79	85	295	29
699-40-62	325	384	85
699-43-88	200	203	99
699-45-42	195	195	100
699-47-35	96	107	90
699-47-51	165	167	99
699-47-60	270	286	94
699-49-28	165	179	92
699-49-32	75	300	25
699-49-48	165	173	95
699-49-55	93	149	62
699-49-79	290	290	100
699-50-28B	155	167	93
699-50-53	165	185	89
699-51-36	63	63	100
699-51-75	377	382	99
699-52-52	150	160	94
699-53-35	145	148	98
699-54-34	165	165	100
699-54-45	105	105	100
699-54-57	194	199	97
699-55-50B	90	95	95
699-55-50C	60	60	100
699-55-50D	100	100	100
699-55-70	205	205	100
699-55-89	200	235	85

Appendix 2. -- Sample suites from the 100, 300, 600, 1100, and 3000 areas,
which were not described. (cont)

<u>Well number</u>	<u>Interval of intact samples (ft)</u>	<u>Drilled depth (ft)</u>	<u>Percent of drilled depth represented by intact samples</u>
1199-22-16B	22	22	100
1199-22-16C	20	20	100
1199-30-14	60	75	80
1199-31-19	90	90	100
1199-32-17	65	75	87
1199-33-13B	120	120	100
1199-33-18B	125	130	96
1199-33-18D	101	101	100
1199-33-18E	80	80	100
1199-34-13	100	103	97
1199-34-15	50	120	42
1199-34-19	45	62	73
1199-39-16B	110	110	100
1199-39-16C	75	75	100
1199-39-16D	50	64	78
1199-40-15	80	88	91
1199-40-16A	125	125	100
1199-40-16B	90	90	100
1199-40-16D	65	75	87
1199-45-12	50	92	54
1199-14-14	130	131	99
3099-41-14	60	68	88
3099-45-18A	95	99	96
3099-45-18B	101	101	100
3099-47-18A	180	191	94

APPENDIX 3

SAMPLE DESCRIPTIONS AND SUMMARY LOGS OF SELECTED WELLS

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

Altitude

Other Data used in
Interpretation

% 0-100

M micaceous
A slightly micaceous
m mature
vm very mature
S sub mature
F frosted
U unfrosted

Depth
(ft.)

Graphic Log

Sample Description

Samples sieved

greyish buff
buff grey
greyish buff

Plant Coordinates

N. 071800

W. 079830

Altitude 438

Other Data used in
Interpretation

Driller's Log

Well 199 - B3 - 1
(107-8-1)

WELL NUMBER

199-B3-1

DEPTH
(FT.)

0

TO

35

ROCK CLASSIFICATION

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel				
sand				
OTHER > gravel				
sand				
SILT AND CLAY				

REMARKS

color

HCL

Sample sieved

DEPTH
(FT.)

35

TO

50

ROCK CLASSIFICATION

sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	22	vfp-smcb	m	rnd
sand	19	fs-vcrs	l	ang
OTHER > gravel	25	vfp-smcb	m	rnd
sand	34	fs-vcrs	m	sb ang
SILT AND CLAY	0			

REMARKS

color

HCL

Greyish Buff

Slightly Micaceous

Unfrosted Quartz

Immature

WELL NUMBER

199-B3-1

DEPTH
(FT.)

50

TO

60

ROCK CLASSIFICATION

Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	53	vfp-vcrp	m	w rnd
	sand	6	vfs-vcrs	m	ang
OTHER	> gravel	30	vfp-crps	m	rnd
	sand	10	vfs-vcrs	m	sb rnd
SILT AND CLAY		1			

REMARKS

color Buff Grey

HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

60

TO

63

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	25	vfp-crps	l	sb rnd
	sand	9	fs-vcrs	m	sb ang
OTHER	> gravel	30	vfp-crps	m	sb rnd
	sand	36	fs-vcrs	m	sb rnd
SILT AND CLAY		0			

REMARKS

color Greyish Buff

HCL -

Unfrosted Quartz

Immature

Total Drilled Depth reported as 63'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 071752

W 078819

Altitude 441

Other Data used in
Interpretation

(1) Driller's Log

(2) Sieve analyses in
McHenry, p.13-15

W. K. Summers & Associates

WELL NUMBER

199-B3-2

DEPTH
(FT.)

0

TO

75

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	36	vfp-smcb	m	rnd
	sand	9	vfs-vcrs	m	rnd
OTHER	> gravel	24	vfp-smcb	h	rnd
	sand	30	vfs-vcrs	m	sb ang
SILT AND CLAY		1			

REMARKS

color Grey
HCL -

Slightly Micaceous Unfrosted Quartz Sample interval 20'-25' missing
Immature

DEPTH
(FT.)

75

TO

80

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	0			
	sand	5	vfs-vcrs	m	sb rnd
OTHER	> gravel	0			
	sand	95	vfs-vcrs	m	ang
SILT AND CLAY		0			

REMARKS

color Buff
HCL -

Slightly Micaceous Unfrosted Quartz
Mature

DEPTH
(FT.)

80

TO

150

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	25	vfp-vcrp	m	rnd
sand	6	fs-vcrs	l	sb rnd
OTHER > gravel	35	vfp-smcb	l	rnd
sand	34	fs-vcrs	m	ang
SILT AND CLAY	0			

REMARKS

color
HCL

Buff Grey

-

Slightly Micaceous

Unfrosted Quartz

Immature

DEPTH
(FT.)

150

TO

160

ROCK CLASSIFICATION

slightly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	3	-vfp-	l	rnd
sand	3	vfs-crs	m	rnd
OTHER > gravel	0			
sand	84	vfs-crs	h	rnd
SILT AND CLAY	10			

REMARKS

color
HCL

Brownish Tan

-

Slightly Micaceous

Frosted Quartz

Immature

WELL NUMBER

199-B3-2

DEPTH
(FT.)

160

TO

170

ROCK CLASSIFICATION

slightly silty
slightly gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	10	fp-mp	h	w rnd
	sand	3	vfs-vcrs	m	rnd
OTHER	>gravel	0			
	sand	73	vfs-vcrs	m	sb ang
SILT AND CLAY		14			

REMARKS

color Tan
HCL +

Slightly Micaceous Compacted

Immature

DEPTH
(FT.)

170

TO

175

ROCK CLASSIFICATION

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel				
	sand				
OTHER	>gravel				
	sand				
SILT AND CLAY					

REMARKS

color
HCL

Sample missing

WELL NUMBER

199-B3-2

DEPTH
(FT.)

175

TO

180

ROCK CLASSIFICATION

Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	2	vfs-ms	l	rnd
OTHER	>gravel	0			
	sand	8	vfs-ms	m	sb ang
SILT AND CLAY		90			

REMARKS

color Reddish TanHCL +

Slightly Micaceous

Unfrosted Quartz

Lithified by silt & clay

Immature

DEPTH
(FT.)

180

TO

190

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	4	vfs-vcrs	m	rnd
OTHER	>gravel	0			
	sand	95	vfs-vcrs	m	sb ang
SILT AND CLAY		1			

REMARKS

color Brownish BuffHCL +

Slightly Micaceous

Unfrosted Quartz

Submature

WELL NUMBER

199-B3-2

DEPTH
(FT.)

190

TO

195

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	15	vfp-mp	m	sb rnd
sand	1	fs-vcrs	l	sb rnd
OTHER > gravel	55	vfp-mp	m	sb rnd
sand	29	fs-vcrs	m	sb ang
SILT AND CLAY	0			

REMARKS

color Greyish Buff
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

195

TO

200

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel				
sand				
OTHER > gravel				
sand				
SILT AND CLAY				

REMARKS

color
HCL

Sample missing

WELL NUMBER

199-B3-2

DEPTH (FT.) 200 TO 250 ROCK CLASSIFICATION silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT >gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
sand	<u>2</u>	<u>vfs-ms</u>	<u>1</u>	<u>rnd</u>
OTHER >gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
sand	<u>70</u>	<u>vfs-ms</u>	<u>h</u>	<u>sb ang</u>
SILT AND CLAY	<u>28</u>			

REMARKS

color Tan
HCL +

Slightly Micaceous

Immature

DEPTH (FT.) 250 TO 260 ROCK CLASSIFICATION Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT >gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
sand	<u>4</u>	<u>vfs-ms</u>	<u>1</u>	<u>rnd</u>
OTHER >gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
sand	<u>95</u>	<u>vfs-ms</u>	<u>m</u>	<u>ang</u>
SILT AND CLAY	<u>1</u>			

REMARKS

color Buff
HCL +

Slightly Micaceous Frosted Quartz

Mature

DEPTH
(FT.)

260

TO

275

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	20	vfp-mp	m	sb rnd
	sand	4	vfs-vcrs	l	sb rnd
OTHER	>gravel	43	vfp-smcb	m	rnd
	sand	32	vfs-vcrs	m	sb ang
SILT AND CLAY		1			

REMARKS

color Greyish Buff
HCL - (260'-265'), + (265'-270'), - (270'-275')

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

275

TO

280

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	5	vfs-vcrs	l	sb rnd
OTHER	>gravel	0			
	sand	94	vfs-vcrs	m	sb rnd
SILT AND CLAY		1			

REMARKS

color Tan
HCL +

Slightly Micaceous Frosted Quartz

Submature

WELL NUMBER

199-B3-2

DEPTH
(FT.)

280

TO

285

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
OTHER > gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

285

TO

295

ROCK CLASSIFICATION

Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	23	vfp-crp	m	sb rnd
sand	2	vfs-vcrs	l	sb rnd
OTHER > gravel	60	vfp-vcrp	m	sb rnd
sand	15	vfs-vcrs	m	sb rnd
SILT AND CLAY	0			

REMARKS

color Buff Grey
HCL -

Slightly Micaceous Frosted Quartz

Immature

WELL NUMBER

199-B3-2

DEPTH
(FT.)

295

TO

300

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT >gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
OTHER >gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

300

TO

305

ROCK CLASSIFICATION

silty Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT >gravel	0	_____	_____	_____
sand	2	vfs-vcrs	m	w rnd
OTHER >gravel	70	vcrp-smcb	h	w rnd
sand	3	vfs-vcrs	m	ang
SILT AND CLAY	25			

REMARKS

color Buff Tan
HCL -

Slightly Micaceous

Immature

WELL NUMBER

199-B3-2

DEPTH
(FT.)

305

TO

310

ROCK CLASSIFICATION

BASALT > gravel
sandOTHER > gravel
sand

SILT AND CLAY

REMARKS

color
HCL

Sample missing

%SIZE RANGESPHERICITYROUNDNESSBASALT > gravel
sandOTHER > gravel
sand

SILT AND CLAY

REMARKS

color
HCL

Slightly Micaceous

Frosted Quartz

Immature

%SIZE RANGESPHERICITYROUNDNESS

ROCK CLASSIFICATION

slightly silty Sand

0

8

vfs-ms

m

w rnd

0

82

vfs-ms

m

sb rnd

10

DEPTH
(FT.)

315

TO

350

ROCK CLASSIFICATION

Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	26	vfp-smcb	m	sb rnd
	sand	4	ms-vcrs	m	w rnd
OTHER	>gravel	55	vfp-smcb	m	rnd
	sand	15	ms-vcrs	m	ang
SILT AND CLAY		0			

REMARKS

color Greyish Buff
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

350

TO

355

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	6	fs-crs	l	w rnd
OTHER	>gravel	0			
	sand	94	fs-crs	m	sb ang
SILT AND CLAY		0			

REMARKS

color White
HCL -

Micaceous Unfrosted Quartz

Very Mature

WELL NUMBER

199-B3-2

DEPTH
(FT.)

355

TO

375

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>17</u>	<u>vfp-crp</u>	<u>m</u>	<u>rnd</u>
sand	<u>4</u>	<u>vfs-vcrs</u>	<u>l</u>	<u>sb ang</u>
OTHER > gravel	<u>45</u>	<u>vfp-smcb</u>	<u>h</u>	<u>rnd</u>
sand	<u>33</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>1</u>			

REMARKS

color Greyish Buff
HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

375

TO

378

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>0</u>			
sand	<u>4</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>0</u>			
sand	<u>96</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY	<u>0</u>			

REMARKS

color White
HCL -

Slightly Micaceous Frosted Quartz

Mature

WELL NUMBER

199-B3-2

DEPTH
(FT.)

378

TO

390

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
OTHER <u>></u> gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color

HCL

Sample missing

DEPTH
(FT.)

390

TO

395

ROCK CLASSIFICATION

Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel	0	_____	_____	_____
sand	2	vfs-vcrs	m	w rnd
OTHER <u>></u> gravel	0	_____	_____	_____
sand	5	vfs-vcrs	m	w rnd
SILT AND CLAY	93			

REMARKS

color

HCL

Tannish Yellow

+

Slightly Micaceous

Lithified by silt, clay & CaCO₃

Submature

WELL NUMBER

199-B3-2

DEPTH
(FT.)

395

TO

405

ROCK CLASSIFICATION

Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	0			
sand	3	vfs-vcrs	m	w rnd
OTHER > gravel	0			
sand	6	vfs-vcrs	m	w rnd
SILT AND CLAY	91			

REMARKS

color Reddish Tan
HCL +

Slightly Micaceous Lithified by silt, clay & CaCO₃

Submature

DEPTH
(FT.)

405

TO

410

ROCK CLASSIFICATION

Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	0			
sand	1	vfs-crs	m	sb rnd
OTHER > gravel	0			
sand	2	vfs-crs	m	ang
SILT AND CLAY	97			

REMARKS

color Bluish Grey
HCL +

Caliche (fragments present) Slightly Micaceous

Lithified by silt, clay & CaCO₃

Submature

WELL NUMBER

199-B3-2

DEPTH
(FT.)

410

TO

415

ROCK CLASSIFICATION

Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	0			
sand	0			
OTHER > gravel	0			
sand	0			
SILT AND CLAY	100			

REMARKS

color Tannish Yellow

HCL +

Caliche (fragments present) Slightly Micaceous

Lithified by silt, clay & CaCO₃

Mature

DEPTH
(FT.)

415

TO

425

ROCK CLASSIFICATION

Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	0			
sand	1	vfs-vcrs	m	w rnd
OTHER > gravel	0			
sand	1	vfs-vcrs	m	ang
SILT AND CLAY	98			

REMARKS

color Bluish Grey

HCL +

Caliche (fragments present) Slightly Micaceous Unfrosted Quartz

Lithified by silt, clay & CaCO₃

Submature

DEPTH
(FT.)

425

TO

435

ROCK CLASSIFICATION

Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	0			
	sand	1	vfs-crs	h	w rnd
OTHER	> gravel	0			
	sand	4	vfs-crs	m	sb rnd
SILT AND CLAY		95			

REMARKS

color Tannish Yellow
HCL +

Abundant Caliche (between 430' & 435') Caliche (fragments present)

Slightly Micaceous Lithified by silt, clay & CaCO₃

Submature

DEPTH
(FT.)

435

TO

475

ROCK CLASSIFICATION

Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	1	vfp-mp	m	rnd
	sand	2	vfs-vcrs	m	sb rnd
OTHER	> gravel	2	vfp-crp	m	rnd
	sand	13	vfs-vcrs	h	rnd
SILT AND CLAY		82			

REMARKS

color Reddish Tan
HCL +

Abundant Caliche (pebbles & sand present between 460' & 465')

Caliche (fragments present) Slightly Micaceous Lithified by silt,
clay & CaCO₃

Immature

DEPTH
(FT.)

475

TO

495

ROCK CLASSIFICATION

sandy Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	1	vfp-fp	m	rnd
sand	1	vfs-ms	m	w rnd
OTHER > gravel	0			
sand	28	vfs-ms	m	sb rnd
SILT AND CLAY	70			

REMARKS

color Yellowish Tan
HCL +

Abundant Caliche Caliche (pebbles present between 490' & 495')

Slightly Micaceous Compacted

Immature

DEPTH
(FT.)

495

TO

510

ROCK CLASSIFICATION

Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	1	vfs-ms	m	w rnd
OTHER > gravel	0			
sand	8	vfs-ms	h	sb rnd
SILT AND CLAY	91			

REMARKS

color Greenish Grey
HCL +

Abundant Caliche (between 495' & 500') Caliche (pebbles present)

Slightly Micaceous Lithified by silt, clay & CaCO₃

Mature

WELL NUMBER

199-B3-2

DEPTH
(FT.)

510

TO

545

ROCK CLASSIFICATION

Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	1	-fp-	m	rnd
sand	1	vfs-ms	h	w rnd
OTHER > gravel	0			
sand	1	vfs-ms	h	sb rnd
SILT AND CLAY	97			

REMARKS

color Brownish Grey

HCL +

Slightly Micaceous

Lithified by silt, clay & CaCO₃

Mature

DEPTH
(FT.)

545

TO

565

ROCK CLASSIFICATION

Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	0			
sand	0			
OTHER > gravel	0			
sand	2	vfs-fs	h	sb rnd
SILT AND CLAY	98			

REMARKS

color Light Grey

HCL +

Slightly Micaceous

Lithified by silt, clay & CaCO₃

Mature

DEPTH (FT.) 565 TO 590 ROCK CLASSIFICATION sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	0			
	sand	3	vfs-vcrs	m	w rnd
OTHER	> gravel	0			
	sand	22	vfs-vcrs	h	rnd
SILT AND CLAY		75			

REMARKS

color Light Grey
HCL +

Slightly Micaceous Lithified by silt, clay & CaCO₃

Immature

DEPTH (FT.) 590 TO 610 ROCK CLASSIFICATION silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	8	fp-smcb	h	rnd
	sand	2	vfs-vcrs	l	w rnd
OTHER	> gravel	32	fp-crp	m	rnd
	sand	51	vfs-vcrs	m	ang
SILT AND CLAY		7			

REMARKS

color Light Grey
HCL -

Slightly Micaceous Unfrosted Quartz Lithified

Immature

DEPTH
(FT.)

610

TO

620

ROCK CLASSIFICATION

gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	8	vfp-mp	m	rnd
	sand	2	vfs-vcrs	m	sb ang
OTHER	>gravel	18	vfp-mp	m	rnd
	sand	53	vfs-vcrs	m	ang
SILT AND CLAY		19			

REMARKS

color
HCL

Tannish Buff

- (610'-615'), + (615'-620')

Slightly Micaceous Lithified (?)

Immature

DEPTH
(FT.)

620

TO

630

ROCK CLASSIFICATION

slightly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	2	vfs-vcrs	m	rnd
OTHER	>gravel	0			
	sand	80	vfs-vcrs	m	v ang
SILT AND CLAY		18			

REMARKS

color
HCL

Light Grey

+

Slightly Micaceous Unfrosted Quartz

Immature

WELL NUMBER

199-B3-2

DEPTH
(FT.)

630

TO

635

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>sand</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
OTHER <u>> gravel</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>sand</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
SILT AND CLAY	<u> </u>			

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

635

TO

655

ROCK CLASSIFICATION

sandy Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>0</u>	<u> </u>	<u> </u>	<u> </u>
<u>sand</u>	<u>2</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER <u>> gravel</u>	<u>0</u>	<u> </u>	<u> </u>	<u> </u>
<u>sand</u>	<u>48</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>v ang</u>
SILT AND CLAY	<u>50</u>			

REMARKS

color
HCL

Dark Grey

-

Slightly Micaceous

Reworked Ash Present

Unfrosted Quartz

Lithified by silt & clay

Immature

WELL NUMBER

199-B3-2

DEPTH
(FT.)

655

TO

675

ROCK CLASSIFICATION

Basalt Flow

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
OTHER <u>></u> gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color
HCLDEPTH
(FT.)

675

TO

720

ROCK CLASSIFICATION

Ash & Flow Layers
Undifferentiated

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
OTHER <u>></u> gravel	_____	_____	_____	_____
sand	3	vfs-crs	m	v ang
SILT AND CLAY	2			

REMARKS

color
HCL

Brownish Black

-

Slightly Micaceous

Ash (fragments present)

Unfrosted Quartz

WELL NUMBER

199-B3-2

DEPTH
(FT.)

720

TO

735

ROCK CLASSIFICATION

Basalt Flow

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
OTHER > gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color _____ Black
HCL _____

Ash (fragments present)

DEPTH
(FT.)

735

TO

745

ROCK CLASSIFICATION

Ash Layer

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
OTHER > gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color _____ Grey
HCL _____

WELL NUMBER

199-B3-2

DEPTH
(FT.)

745

TO

765

ROCK CLASSIFICATION

Basalt Flow

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
OTHER > gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color Black
HCL _____

Ash (fragments present)

DEPTH
(FT.)

765

TO

775

ROCK CLASSIFICATION

sandy Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0	_____	_____	_____
sand	3	vfs-vcrs	m	sb rnd
OTHER > gravel	0	_____	_____	_____
sand	22	vfs-vcrs	m	rnd
SILT AND CLAY	75			

REMARKS

color Light Grey
HCL _____

Diatomaceous Frosted Quartz Lithified by silt & clay

Immature

WELL NUMBER

199-B3-2

DEPTH
(FT.)

775

TO

785

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	1	vfs-ms	h	rnd
OTHER > gravel	0			
sand	98	vfs-ms	m	v ang
SILT AND CLAY	1			

REMARKS

color Light Grey

HCL -

Slightly Micaceous Unfrosted Quartz

Mature

DEPTH
(FT.)

785

TO

790

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	1	vfs-crs	m	ang
OTHER > gravel	0			
sand	98	vfs-crs	m	ang
SILT AND CLAY	1			

REMARKS

color Pink

HCL -

Slightly Micaceous Unfrosted Quartz

Submature

Total Drilled Depth reported as 790'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

Well 199 - D2 - 5

N. 090783

W. 052638

Altitude 458

Other Data used in
Interpretation

Driller's Log

brownish black

brownish black

brownish black-greyish black

greyish tan

WELL NUMBER

199-D2-5

DEPTH
(FT.)

0

TO

60

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	86	vfs-vcrs	m	sb ang
OTHER	>gravel	0			
	sand	10	vfs-vcrs	m	sb ang
SILT AND CLAY		4			

REMARKS

color Brownish Black
HCL -

Unfrosted Quartz

Mature

DEPTH
(FT.)

60

TO

75

ROCK CLASSIFICATION

Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	80	vfp-crp	h	sb ang
	sand	13	vfs-vcrs	m	sb rnd
OTHER	>gravel	2	vfp-crp	h	sb rnd
	sand	3	vfs-vcrs	m	sb rnd
SILT AND CLAY		2			

REMARKS

color Brownish Black
HCL -

Immature

WELL NUMBER

199-D2-5

DEPTH
(FT.)

75

TO

85

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	23	vfp-crp	h	sb rnd
	sand	31	vfs-vcrs	m	sb rnd
OTHER	>gravel	14	vfp-crp	m	rnd
	sand	31	vfs-vcrs	m	sb rnd
SILT AND CLAY		1			

REMARKS

color Brownish Black-Greyish Black
HCL -

Unfrosted Quartz

Immature

DEPTH
(FT.)

85

TO

95

ROCK CLASSIFICATION

slightly gravelly sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	≥gravel	8	vfp-mp	m	sb rnd
	sand	14	vfs-vcrs	m	sb rnd
OTHER	≥gravel	0			
	sand	11	vfs-vcrs	m	rnd
SILT AND CLAY		67			

REMARKS

color Greyish Tan
HCL -

Frosted Quartz Lithified by silt

Immature

Total Drilled Depth reported as 95'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N. 080537

W. 029402

Altitude 411

Other Data used in
Interpretation

Well 199 - F5 - 6

U

Samples sieved

grayish (salt & pepper)

fossil, mammal tooth

N

yellowish tan

TD Driller's Log = 192

WELL NUMBER

199-F5-6

DEPTH
(FT.)

0

TO

30

ROCK CLASSIFICATION

%SIZE RANGESPHERICITYROUNDNESSBASALT > gravel
sandOTHER > gravel
sand

SILT AND CLAY

REMARKS

color
HCL

Sample sieved

DEPTH
(FT.)

30

TO

65

ROCK CLASSIFICATION

sandy Gravel

%SIZE RANGESPHERICITYROUNDNESSBASALT > gravel
sandOTHER > gravel
sand

SILT AND CLAY

REMARKS

color
HCL

Greyish ("salt & pepper")

-

Unfrosted Quartz

Fossil mammal tooth between 60' & 65'

Immature

WELL NUMBER

199-F5-6

DEPTH
(FT.)

65

TO

190

ROCK CLASSIFICATION

Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT >gravel	0			
sand	3	vfs-crs	m	ang
OTHER >gravel	0			
sand	3	vfs-crs	m	sb rnd
SILT AND CLAY	94			

REMARKS

color Yellowish Tan
HCL +

Slightly Micaceous

Submature

Total Drilled Depth reported as 190'

DEPTH
(FT.)

TO

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT >gravel				
sand				
OTHER >gravel				
sand				
SILT AND CLAY				

REMARKS

color
HCL

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 095200

W 038565

Altitude 416

Other Data used in
Interpretation

(1) Driller's Log

(2) Sieve analyses in
M'Henry, 1957, p.18-19

Well 199-H4-2

WELL NUMBER

199-H4-2

DEPTH
(FT.)

0

TO

40

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
OTHER <u>></u> gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color
HCL

Sample sieved

DEPTH
(FT.)

40

TO

55

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel	21	vfp-mp	m	sb rnd
sand	41	vfs-vcrs	m	sb rnd
OTHER <u>></u> gravel	12	vfp-mp	m	rnd
sand	20	vfs-vcrs	h	sb rnd
SILT AND CLAY	6			

REMARKS

color
HCL

Grey

-

Slightly Micaceous

Unfrosted Quartz

Immature

DEPTH (FT.) 55 TO 75 ROCK CLASSIFICATION Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	<u>0</u>	<u>vf-s-crs</u>	<u>m</u>	<u>sb rnd</u>
sand	<u>3</u>	<u>vf-s-crs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>0</u>	<u>vf-s-crs</u>	<u>h</u>	<u>sb rnd</u>
sand	<u>12</u>	<u>vf-s-crs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY	<u>85</u>			

REMARKS

color Tan
HCL +

Abundant Caliche Slightly Micaceous

Immature

DEPTH (FT.) 75 TO 270 ROCK CLASSIFICATION silty Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	<u>1</u>	<u>vfp-fp</u>	<u>m</u>	<u>sb ang</u>
sand	<u>25</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>0</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>sb rnd</u>
sand	<u>44</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY	<u>30</u>			

REMARKS

color Brownish Buff-Yellowish Tan
HCL -

Slightly Micaceous Unfrosted Quartz

Sample intervals 190'-195', 200'-205', 220'-225', & 255'-260' missing

Immature

DEPTH
(FT.)

270

TO

280

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT $\geq$ gravel sand	_____	_____	_____	_____
OTHER $\geq$ gravel sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

280

TO

335

ROCK CLASSIFICATION

Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT $\geq$ gravel sand	0 2	vfs-ms	m	sb rnd
OTHER $\geq$ gravel sand	0 8	vfs-ms	h	sb ang
SILT AND CLAY	90			

REMARKS

color
HCL

Brown

-

Slightly Micaceous

Sample intervals 285'-290' & 315'-320' missing

Immature

DEPTH
(FT.)

335

TO

355

ROCK CLASSIFICATION

Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
sand	<u>2</u>	<u>vfs-ms</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
sand	<u>5</u>	<u>vfs-ms</u>	<u>h</u>	<u>sb ang</u>
SILT AND CLAY	<u>93</u>			

REMARKS

color Greenish GreyHCL -

Slightly Diatomaceous (between 345' & 350')

Submature

DEPTH
(FT.)

355

TO

360

ROCK CLASSIFICATION

Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
sand	<u>2</u>	<u>vfs-fs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
sand	<u>3</u>	<u>vfs-fs</u>	<u>h</u>	<u>sb ang</u>
SILT AND CLAY	<u>95</u>			

REMARKS

color Red-Grey BrownHCL -

Slightly Diatomaceous

Mature

DEPTH
(FT.)

360

TO

370

ROCK CLASSIFICATION

Gravel & Basalt Flow

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	100	-	m-l	rnd-v ang
sand	0			
OTHER > gravel	0			
sand	0			
SILT AND CLAY	0			

REMARKS

color Black

HCL -

Slightly Diatomaceous (between 360' & 365')

DEPTH
(FT.)

370

TO

386

ROCK CLASSIFICATION

Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	0			
sand	3	vfs-ms	m	sb ang
OTHER > gravel	0			
sand	5	vfs-ms	h	sb ang
SILT AND CLAY	92			

REMARKS

color Greyish Brown

HCL -

Micaceous Unfrosted Quartz

Mature

Total Drilled Depth reported as 386'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N. 076030

W. 068733

Altitude 466

Other Data used in
Interpretation

Driller's Log

Well 199 - K - 11

50 -

100 -

150 -

200 -

blackish brown

brownish tan
grey (salt & pepper)
grey

greyish buff

buff grey

brownish tan
yellowish tan

DEPTH
(FT.)

0

TO

80

ROCK CLASSIFICATION

slightly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	50	vfs-vcrs	m	sb rnd
OTHER	>gravel	0			
	sand	35	vfs-vcrs	m	rnd
SILT AND CLAY		15			

REMARKS

color Blackish Brown
HCL -

Immature

DEPTH
(FT.)

80

TO

95

ROCK CLASSIFICATION

slightly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	45	vfs-vcrs	l	sb rnd
OTHER	>gravel	0			
	sand	40	vfs-vcrs	m	sb rnd
SILT AND CLAY		15			

REMARKS

color Brownish Tan
HCL -

Slightly Micaceous

Immature

WELL NUMBER

199-K-11

DEPTH (FT.) 95 TO 100 ROCK CLASSIFICATION Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
	sand	<u>30</u>	<u>vfs-ms</u>	<u>m</u>	<u>sb rnd</u>
OTHER	> gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
	sand	<u>70</u>	<u>vfs-ms</u>	<u>h</u>	<u>sb ang</u>
SILT AND CLAY		<u>0</u>			

REMARKS

color Grey ("salt & pepper")
HCL -

Unfrosted Quartz

Very Mature

DEPTH (FT.) 100 TO 110 ROCK CLASSIFICATION slightly gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	<u>1</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
	sand	<u>40</u>	<u>crs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER	> gravel	<u>8</u>	<u>vfp-mp</u>	<u>h</u>	<u>sb rnd</u>
	sand	<u>51</u>	<u>crs-vcrs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY		<u>0</u>			

REMARKS

color Grey
HCL -

Mature

DEPTH
(FT.)

110

TO

125

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	0			
	sand	20	vfs-ms	m	sb rnd
OTHER	> gravel	0			
	sand	79	vfs-ms	h	sb ang
SILT AND CLAY		1			

REMARKS

color Greyish BuffHCL -

Frosted Quartz

Mature

DEPTH
(FT.)

125

TO

160

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	2	vfp-vcrp	m	sb ang
	sand	19	vfs-vcrs	m	sb rnd
OTHER	> gravel	30	vfp-crp	m	rnd
	sand	47	vfs-vcrs	h	sb ang
SILT AND CLAY		2			

REMARKS

color Buff GreyHCL -

Unfrosted Quartz

Immature

DEPTH
(FT.)

160

TO

165

ROCK CLASSIFICATION

slightly silty Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	0			
sand	15	vfs-ms	m	sb rnd
OTHER > gravel	0			
sand	75	vfs-ms	h	sb ang
SILT AND CLAY	10			

REMARKS

color Brownish Tan

HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

165

TO

170

ROCK CLASSIFICATION

silty Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	0			
sand	15	vfs-crs	m	sb rnd
OTHER > gravel	0			
sand	60	vfs-crs	m	sb ang
SILT AND CLAY	25			

REMARKS

color Yellowish Tan

HCL -

Immature

Total Drilled Depth reported as 170'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

Well 199 - N - 2

N. 086577

W. 060306

Altitude 458

Other Data used in
Interpretation

Driller's Log

50-

100 -

150 -

F

brownish black

greyish buff

brownish tan to tan

WELL NUMBER

199-N-2

DEPTH
(FT.)

0

TO

25

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	60	vfp-crp	m	sb rnd
	sand	27	vfs-vcrs	m	sb rnd
OTHER	> gravel	1	vfp-mp	l	rnd
	sand	2	vfs-vcrs	m	sb ang
SILT AND CLAY		10			

REMARKS

color Brownish Black
HCL -

Immature

DEPTH
(FT.)

25

TO

95

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	35	vfp-crp	m	sb rnd
	sand	6	vfs-vcrs	m	sb rnd
OTHER	> gravel	35	vfp-crp	m	sb rnd
	sand	17	vfs-vcrs	h	sb ang
SILT AND CLAY		7			

REMARKS

color Greyish Buff
HCL -

Frosted Quartz

Immature

WELL NUMBER

199-N-2

DEPTH
(FT.)

95

TO

100

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
OTHER > gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color

HCL

Sample missing

DEPTH
(FT.)

100

TO

120

ROCK CLASSIFICATION

Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	1	vfp-mp	m	ang
sand	3	vfs-ms	m	sb rnd
OTHER > gravel	1	vfp-mp	m	ang
sand	10	vfs-ms	h	sb rnd
SILT AND CLAY	85			

REMARKS

color

HCL

Brownish Tan-Tan

-

Lithified by silt & clay

Immature

WELL NUMBER

199-N-2

DEPTH
(FT.)

120

TO

125

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
OTHER > gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color

HCL

Sample missing

Total Drilled Depth reported as 125'

DEPTH
(FT.)

TO

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
OTHER > gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color

HCL

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N. 038085

W 056023

Altitude 734

Other Data used in
Interpretation

E Logs

Well 299 - E19 - 1

DEPTH
(FT.)

0

TO

5

ROCK CLASSIFICATION

gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	10	vfp-mp	m	sb rnd
sand	58	vfs-vcrs	m	rnd
OTHER > gravel	8	vfp-mp	m	rnd
sand	16	vfs-vcrs	m	rnd
SILT AND CLAY	8			

REMARKS

color Greyish Tan
HCL +

Slightly Micaceous

Immature

DEPTH
(FT.)

5

TO

10

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT ≥ gravel	40	vfp-crp	l	rnd
sand	31	vfs-vcrs	m	rnd
OTHER ≥ gravel	25	vfp-crp	m	rnd
sand	3	vfs-vcrs	m	rnd
SILT AND CLAY	1			

REMARKS

color Greyish Tan
HCL +

Slightly Micaceous

Immature

DEPTH
(FT.)

10

TO

245

ROCK CLASSIFICATION

slightly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>2</u>	<u>vfp-mp</u>	<u>1</u>	<u>sb rnd</u>
<u>sand</u>	<u>32</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER <u>> gravel</u>	<u>1</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
<u>sand</u>	<u>53</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY	<u>12</u>			

REMARKS

color
HCL

Tan

+

Slightly Micaceous Unfrosted Quartz

Sample interval 140'-145' missing

Immature

DEPTH
(FT.)

245

TO

255

ROCK CLASSIFICATION

gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>15</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
<u>sand</u>	<u>32</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER <u>> gravel</u>	<u>10</u>	<u>vfp-mp</u>	<u>m</u>	<u>sb rnd</u>
<u>sand</u>	<u>38</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY	<u>5</u>			

REMARKS

color
HCL

Greyish Tan

+

Slightly Micaceous

Immature

DEPTH
(FT.)

255

TO

340

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	31	vfp-crp	m	rnd
	sand	28	vfs-vcrs	m	rnd
OTHER	>gravel	18	vfp-mp	m	sb rnd
	sand	13	vfs-vcrs	m	rnd
SILT AND CLAY		10			

REMARKS

color Greyish Tan
HCL + (255'-290'), - (290'-340')

Slightly Micaceous Caliche (pebbles present between 255' & 270')

Immature

DEPTH
(FT.)

340

TO

365

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	35	vfp-crp	l	rnd
	sand	15	vfs-vcrs	m	rnd
OTHER	>gravel	31	vfp-mp	m	w rnd
	sand	14	vfs-vcrs	m	rnd
SILT AND CLAY		5			

REMARKS

color Greyish Brown
HCL -

Slightly Micaceous

Immature

WELL NUMBER

299-E19-1

DEPTH
(FT.)

365

TO

370

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	<u>> gravel</u>	20	vfp-crp	m	sb rnd
	<u>sand</u>	30	vfs-vcrs	m	sb ang
OTHER	<u>> gravel</u>	18	vfp-mp	m	w rnd
	<u>sand</u>	31	vfs-vcrs	m	sb rnd
SILT AND CLAY		1			

REMARKS

color Buff Grey
HCL -

Unfrosted Quartz

Immature

Total Drilled Depth reported as 370'

DEPTH
(FT.)

TO

ROCK CLASSIFICATION

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	<u>> gravel</u>				
	<u>sand</u>				
OTHER	<u>> gravel</u>				
	<u>sand</u>				
SILT AND CLAY					

REMARKS

color
HCL

DEPTH
(FT.)

0

TO

10

ROCK CLASSIFICATION

slightly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	0			
	sand	25	vfs-ms	m	sb rnd
OTHER	> gravel	0			
	sand	65	vfs-ms	m	sb rnd
SILT AND CLAY		10			

REMARKS

color Brownish Tan
HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

10

TO

25

ROCK CLASSIFICATION

slightly silty
slightly gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	7	vfp-fp	l	rnd
	sand	28	vfs-crs	m	rnd
OTHER	> gravel	0			
	sand	51	vfs-crs	h	rnd
SILT AND CLAY		14			

REMARKS

color Brownish Tan
HCL +

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

25

TO

30

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	25	vfp-fp	1	rnd
	sand	48	fs-vcrs	m	sb rnd
OTHER	>gravel	15	vfp-fp	m	rnd
	sand	12	fs-vcrs	m	rnd
SILT AND CLAY		0			

REMARKS

color Greyish Black
HCL -

Frosted Quartz

Immature

DEPTH
(FT.)

30

TO

35

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	25	vfp-fp	1	rnd
	sand	18	vfs-vcrs	1	sb rnd
OTHER	>gravel	15	vfp-fp	m	rnd
	sand	39	vfs-vcrs	m	sb rnd
SILT AND CLAY		3			

REMARKS

color Greyish Buff
HCL +

Frosted Quartz

Immature

DEPTH (FT.) 35 TO 65 ROCK CLASSIFICATION gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>9</u>	<u>vfp-fp</u>	<u>l</u>	<u>rnd</u>
	sand	<u>26</u>	<u>vfs-vcrs</u>	<u>l</u>	<u>sb rnd</u>
OTHER	>gravel	<u>5</u>	<u>vfp-fp</u>	<u>m</u>	<u>rnd</u>
	sand	<u>56</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY		<u>4</u>			

REMARKS

color Buff Grey
HCL +

Caliche (pebbles & sand present)

Slightly Micaceous

Frosted Quartz

Immature

DEPTH (FT.) 65 TO 70 ROCK CLASSIFICATION Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>0</u>			
	sand	<u>25</u>	<u>vfs-ms</u>	<u>m</u>	<u>sb rnd</u>
OTHER	>gravel	<u>0</u>			
	sand	<u>70</u>	<u>vfs-ms</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY		<u>5</u>			

REMARKS

color Tan
HCL +

Slightly Micaceous

Frosted Quartz

Mature

WELL NUMBER

299-E25-2

DEPTH
(FT.)

70

TO

95

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>3</u>	<u>vfp-mp</u>	<u>l</u>	<u>rnd</u>
sand	<u>23</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>2</u>	<u>vfp-crp</u>	<u>m</u>	<u>rnd</u>
sand	<u>64</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>8</u>			

REMARKS

color Greyish Tan
HCL +

Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

95

TO

105

ROCK CLASSIFICATION

gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>20</u>	<u>vfp-mp</u>	<u>l</u>	<u>rnd</u>
sand	<u>25</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>10</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
sand	<u>41</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>4</u>			

REMARKS

color Tan Grey
HCL +

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

105

TO

120

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	23	vfp-mp	l	rnd
	sand	28	vfs-vcrs	m	sb rnd
OTHER	> gravel	12	vfp-mp	m	rnd
	sand	36	vfs-vcrs	m	sb rnd
SILT AND CLAY		1			

REMARKS

color Light Grey
HCL +

Frosted Quartz

Immature

DEPTH
(FT.)

120

TO

185

ROCK CLASSIFICATION

slightly gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	4	vfp-mp	m	sb rnd
	sand	28	vfs-vcrs	m	sb rnd
OTHER	> gravel	2	vfp-mp	m	rnd
	sand	58	vfs-vcrs	m	sb rnd
SILT AND CLAY		8			

REMARKS

color Greyish Tan
HCL +

Slightly Micaceous Frosted Quartz

Sample intervals 155'-170' & 175'-180' missing

Immature

WELL NUMBER

299-E25-2

DEPTH
(FT.)

185

TO

255

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel sand				
OTHER > gravel sand				
SILT AND CLAY				

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

255

TO

265

ROCK CLASSIFICATION

slightly silty gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel sand	15 29	vfp-mp vfs-vcrs	1 m	sb rnd sb rnd
OTHER > gravel sand	3 41	vfp-fp vfs-vcrs	m m	rnd rnd
SILT AND CLAY	12			

REMARKS

color
HCLGreyish Tan
+

Immature

DEPTH
(FT.)

265

TO

275

ROCK CLASSIFICATION

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel				
sand				
OTHER > gravel				
sand				
SILT AND CLAY				

REMARKS

color

HCL

Sample missing

DEPTH
(FT.)

275

TO

280

ROCK CLASSIFICATION

silty sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT ≥ gravel	45	vfp-crp	l	w rnd
sand	21	vfs-vcrs	m	sb rnd
OTHER ≥ gravel	25	vfp-crp	l	w rnd
sand	6	vfs-vcrs	m	rnd
SILT AND CLAY	3			

REMARKS

color

HCL

Greyish Tan

-

Immature

DEPTH
(FT.)

280

TO

285

ROCK CLASSIFICATION

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel				
sand				
OTHER > gravel				
sand				
SILT AND CLAY				

REMARKS

color

HCL

Sample missing

DEPTH
(FT.)

285

TO

290

ROCK CLASSIFICATION

sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	20	vfp-mp	m	sb rnd
sand	32	fs-vcrs	l	sb ang
OTHER > gravel	20	vfp-mp	m	rnd
sand	27	fs-vcrs	m	rnd
SILT AND CLAY	1			

REMARKS

color

HCL

Blackish Grey

-

Immature

WELL NUMBER

299-E25-2

DEPTH
(FT.)

290

TO

300

ROCK CLASSIFICATION

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	_____	_____	_____	_____
	sand	_____	_____	_____	_____
OTHER	>gravel	_____	_____	_____	_____
	sand	_____	_____	_____	_____
SILT AND CLAY		_____			

REMARKS

color

HCL

Sample missing

DEPTH
(FT.)

300

TO

305

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	30	vfp-mp	m	sb rnd
	sand	24	vfs-vcrs	m	sb rnd
OTHER	>gravel	25	vfp-mp	m	rnd
	sand	20	vfs-vcrs	m	rnd
SILT AND CLAY		1			

REMARKS

color

HCL

Grey

-

Immature

WELL NUMBER

299-E25-2

DEPTH
(FT.)

305

TO

325

ROCK CLASSIFICATION

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel				
sand				
OTHER > gravel				
sand				
SILT AND CLAY				

REMARKS

color

HCL

Sample missing

DEPTH
(FT.)

325

TO

330

ROCK CLASSIFICATION

Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	50	vfp-crp	l	w rnd
sand	5	fs-vcrs	m	sb ang
OTHER > gravel	40	vfp-crp	m	w rnd
sand	5	fs-vcrs	m	rnd
SILT AND CLAY	0			

REMARKS

color

HCL

Grey

-

Immature

DEPTH
(FT.)

330

TO

335

ROCK CLASSIFICATION

gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	<u>> gravel</u> <u>sand</u>	<u>8</u>	<u>vfp-crp</u>	<u>l</u>	<u>w rnd</u>
		<u>38</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER	<u>> gravel</u> <u>sand</u>	<u>12</u>	<u>vfp-crp</u>	<u>m</u>	<u>w rnd</u>
		<u>38</u>	<u>vfs-vcrs</u>	<u>l</u>	<u>sb rnd</u>
SILT AND CLAY		<u>4</u>			

REMARKS

color Greyish BuffHCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

335

TO

355

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	<u>> gravel</u> <u>sand</u>	<u>36</u>	<u>vfp-crp</u>	<u>m</u>	<u>rnd</u>
		<u>12</u>	<u>vfs-vcrs</u>	<u>l</u>	<u>sb ang</u>
OTHER	<u>> gravel</u> <u>sand</u>	<u>30</u>	<u>vfp-vcrp</u>	<u>l</u>	<u>rnd</u>
		<u>15</u>	<u>vfs-vcrs</u>	<u>l</u>	<u>sb rnd</u>
SILT AND CLAY		<u>7</u>			

REMARKS

color Greyish TanHCL -

Micaceous Sample interval 345'-350' missing

Immature

DEPTH
(FT.)

355

TO

360

ROCK CLASSIFICATION

slightly silty gravelly Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	25	vfp-mp	l	rnd
sand	29	vfs-vcrs	m	sb rnd
OTHER > gravel	2	vfp-mp	m	rnd
sand	33	vfs-vcrs	m	rnd
SILT AND CLAY	11			

REMARKS

color Reddish Brown

HCL -

Slightly Diatomaceous (? pebbles & sand present)

Immature

DEPTH
(FT.)

360

TO

375

ROCK CLASSIFICATION

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel				
sand				
OTHER > gravel				
sand				
SILT AND CLAY				

REMARKS

color

HCL

Sample missing

Total Drilled Depth reported as 375'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 046488

W 056684

Altitude 665

Other Data used in
Interpretation

Well 299 - E32 - 1

WELL NUMBER

299-E32-1

DEPTH
(FT.)

0

TO

35

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel	40	vfp-crp	l	sb rnd
sand	27	vfs-vcrs	m	rnd
OTHER <u>></u> gravel	15	vfp-mp	m	rnd
sand	9	vfs-vcrs	m	rnd
SILT AND CLAY	9			

REMARKS

color Greyish Tan
HCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

35

TO

40

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel				
sand				
OTHER <u>></u> gravel				
sand				
SILT AND CLAY				

REMARKS

color _____
HCL _____

Sample missing

WELL NUMBER

299-E32-1

DEPTH
(FT.)

40

TO

45

ROCK CLASSIFICATION

slightly silty gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	20	vfp-mp	l	sb rnd
	sand	22	vfs-vcrs	m	rnd
OTHER	>gravel	5	vfp-fp	m	rnd
	sand	45	vfs-vcrs	m	rnd
SILT AND CLAY		8			

REMARKS

color Greyish Tan
HCL +

Slightly Micaceous

Immature

DEPTH
(FT.)

45

TO

50

ROCK CLASSIFICATION

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel				
	sand				
OTHER	>gravel				
	sand				
SILT AND CLAY					

REMARKS

color _____
HCL _____

Sample missing

DEPTH
(FT.)

50

TO

105

ROCK CLASSIFICATION

gravelly Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	7	vfp-crp	l	sb rnd
sand	18	ms-vcrs	m	rnd
OTHER > gravel	4	vfp-fp	m	rnd
sand	71	ms-vcrs	m	rnd
SILT AND CLAY	0			

REMARKS

color Greyish Buff

HCL -

Caliche (present between 75' & 80')

Slightly Micaceous

Unfrosted Quartz Sample intervals 60'-65', 70'-75', 80'-85' & 90'-95' missing

Immature

DEPTH
(FT.)

105

TO

195

ROCK CLASSIFICATION

Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	3	-vfp-	l	sb rnd
sand	24	vfs-vcrs	m	rnd
OTHER > gravel	1	-vfp-	l	sb rnd
sand	65	vfs-vcrs	m	rnd
SILT AND CLAY	7			

REMARKS

color Tan

HCL +

Micaceous

Frosted Quartz

Sample intervals 130'-135' & 150'-160' missing

Immature

DEPTH
(FT.)

195

TO

205

ROCK CLASSIFICATION

sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	65	vfp-crp	1	w rnd
sand	6	vfs-vcrs	m	sb rnd
OTHER > gravel	15	vfp-mp	1	w rnd
sand	13	vfs-vcrs	m	rnd
SILT AND CLAY	1			

REMARKS

color Greyish Buff

HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

205

TO

215

ROCK CLASSIFICATION

Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	65	vfp-vcrp	1	rnd
sand	4	ms-vcrs	m	rnd
OTHER > gravel	30	vfp-vcrp	1	w rnd
sand	1	ms-vcrs	m	rnd
SILT AND CLAY	0			

REMARKS

color Greyish Black

HCL -

Mature

DEPTH
(FT.)

215

TO

225

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	40	vfp-smcb	1	w rnd
sand	24	fs-vcrs	m	sb rnd
OTHER > gravel	20	vfp-mp	1	w rnd
sand	16	fs-vcrs	1	sb rnd
SILT AND CLAY	0			

REMARKS

color Greyish Buff
HCL -

Frosted Quartz

Immature

DEPTH
(FT.)

225

TO

235

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	60	vfp-crp	1	w rnd
sand	21	ms-vcrs	m	sb rnd
OTHER > gravel	15	vfp-crp	1	w rnd
sand	4	ms-vcrs	m	rnd
SILT AND CLAY	0			

REMARKS

color Greyish Black
HCL -

Immature

DEPTH
(FT.)

235

TO

240

ROCK CLASSIFICATION

slightly gravelly Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	5	vfp-fp	m	rnd
sand	67	fs-vcrs	m	rnd
OTHER > gravel	5	vfp-fp	m	rnd
sand	23	fs-vcrs	m	sb rnd
SILT AND CLAY	0			

REMARKS

color Greyish Buff

HCL -

Unfrosted Quartz

Immature

DEPTH
(FT.)

240

TO

245

ROCK CLASSIFICATION

Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	68	vfp-crp	l	rnd
sand	1	ms-vcrs	m	sb rnd
OTHER > gravel	30	vfp-crp	m	rnd
sand	1	ms-vcrs	m	sb rnd
SILT AND CLAY	0			

REMARKS

color Buff Grey

HCL -

Mature

DEPTH
(FT.)

245

TO

270

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	30	vfp-crp	1	rnd
	sand	24	fs-vcrs	1	sb rnd
OTHER	>gravel	27	vfp-crp	m	rnd
	sand	19	fs-vcrs	1	sb rnd
SILT AND CLAY		0			

REMARKS

color Greyish Buff
HCL -

Unfrosted Quartz

Immature

DEPTH
(FT.)

270

TO

280

ROCK CLASSIFICATION

Sand & Basalt Flow

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	80	vfp-crp	m-1	v ang
	sand	18	fs-vcrs	m	sb rnd
OTHER	>gravel	0			
	sand	2	fs-vcrs	m	rnd
SILT AND CLAY		0			

REMARKS

color Black
HCL -

Frosted Quartz

Immature

WELL NUMBER

299-E32-1

DEPTH
(FT.)

280

TO

283

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	60	vfs-crs	l	sb rnd
OTHER > gravel	0			
sand	35	vfs-crs	m	sb rnd
SILT AND CLAY	5			

REMARKS

color	Black
HCL	-

Frosted Quartz

Mature

Total Drilled Depth reported as 283'

DEPTH
(FT.)

TO

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel				
sand				
OTHER > gravel				
sand				
SILT AND CLAY				

REMARKS

color	
HCL	

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 039537

W 075984

Altitude 669

Other Data used in
Interpretation

Well 299 - W15 - 5

W. K. Summers & Associates

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

UN

^

^

^

buff grey

buff grey

black; ASH FRAGMENTS

← probably basalt

greyish black (salt & pepper)

grey

grey

grey

Altitude _____

Other Data used in
Interpretation

Well 299 - W15 - 5 cont

WELL NUMBER

299-W15-5

DEPTH
(FT.)

0

TO

25

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>1</u>	<u>vfp-fp</u>	<u>1</u>	<u>sb rnd</u>
sand	<u>26</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>0</u>			
sand	<u>69</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY	<u>4</u>			

REMARKS

color Brownish Grey
HCL - (0'-15'), +(15'-25')

Slightly Micaceous Unfrosted Quartz

Submature

DEPTH
(FT.)

25

TO

60

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>41</u>	<u>vfp-mp</u>	<u>1</u>	<u>rnd</u>
sand	<u>20</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>7</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
sand	<u>31</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>w rnd</u>
SILT AND CLAY	<u>1</u>			

REMARKS

color Blackish Grey ("salt & pepper")
HCL +

Caliche (pebbles present between 50' & 55') Slightly Micaceous

Frosted Quartz

Immature

WELL NUMBER

299-W15-5

DEPTH
(FT.)

60

TO

110

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	3	vfp-mp	l	sb rnd
sand	10	vfs-vcrs	m	rnd
OTHER > gravel	2	vfp-mp	m	sb rnd
sand	81	vfs-vcrs	m	sb rnd
SILT AND CLAY	4			

REMARKS

color Brownish Buff
HCL +

Caliche (pebbles present between 70' & 110', sand) Slightly Micaceous

Frosted Quartz

Submature

DEPTH
(FT.)

110

TO

120

ROCK CLASSIFICATION

slightly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	10	vfs-crs	m	rnd
OTHER > gravel	0			
sand	75	vfs-crs	m	rnd
SILT AND CLAY	15			

REMARKS

color Brownish Tan
HCL +

Slightly Micaceous Frosted Quartz

Immature

WELL NUMBER

299-W15-5

DEPTH
(FT.)

120

TO

150

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	46	vfp-mp	1	sb rnd
sand	18	vfs-vcrs	m	sb rnd
OTHER > gravel	3	vfp-mp	m	sb rnd
sand	25	vfs-vcrs	m	sb ang
SILT AND CLAY	8			

REMARKS

color Greyish Tan

HCL +

Caliche (pebbles & sand present)

Slightly Micaceous

Unfrosted Quartz

Immature

DEPTH
(FT.)

150

TO

160

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	32	vfp-vcrp	1	rnd
sand	34	fs-vcrs	m	sb rnd
OTHER > gravel	11	vfp-crps	1	rnd
sand	23	fs-vcrs	m	sb ang
SILT AND CLAY	0			

REMARKS

color Buff Grey ("salt & pepper")

HCL -

Frosted Quartz

Immature

WELL NUMBER

299-W15-5

DEPTH
(FT.)

160

TO

200

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	48	vfp-crp	1	rnd
sand	12	vfs-vcrs	m	sb ang
OTHER > gravel	22	vfp-crp	1	rnd
sand	16	vfs-vcrs	m	sb ang
SILT AND CLAY	2			

REMARKS

color Light Grey-Brownish Grey
HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

200

TO

215

ROCK CLASSIFICATION

gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	21	vfp-crp	1	rnd
sand	16	vfs-vcrs	m	sb rnd
OTHER > gravel	8	vfp-mp	1	rnd
sand	53	vfs-vcrs	m	sb ang
SILT AND CLAY	2			

REMARKS

color Tannish Buff
HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH (FT.) 215 TO 220 ROCK CLASSIFICATION sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	40	vfp-crp	1	rnd
sand	5	vfs-vcrs	m	sb rnd
OTHER > gravel	20	vfp-mp	1	rnd
sand	34	vfs-vcrs	m	sb rnd
SILT AND CLAY	1			

REMARKS

color Tannish Buff
HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH (FT.) 220 TO 225 ROCK CLASSIFICATION slightly gravelly Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	4	vfp-fp	1	sb rnd
sand	6	vfs-vcrs	m	w rnd
OTHER > gravel	4	vfp-fp	1	sb rnd
sand	85	vfs-vcrs	m	ang
SILT AND CLAY	1			

REMARKS

color Greyish Buff
HCL -

Unfrosted Quartz

Submature

WELL NUMBER

299-W15-5

DEPTH (FT.) 225 TO 295 ROCK CLASSIFICATION gravelly Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT >gravel	16	vfp-crp	l	rnd
sand	17	vfs-vcrs	m	rnd
OTHER >gravel	10	vfp-mp	l	rnd
sand	52	vfs-vcrs	m	sb ang
SILT AND CLAY	5			

REMARKS

color Greyish Tan
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH (FT.) 295 TO 300 ROCK CLASSIFICATION sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT >gravel	50	vfp-fp	l	rnd
sand	6	vfs-vcrs	m	sb ang
OTHER >gravel	25	vfp-fp	m	rnd
sand	19	vfs-vcrs	m	sb ang
SILT AND CLAY	0			

REMARKS

color Buff Grey
HCL -

Frosted Quartz

Immature

WELL NUMBER

299-W15-5

DEPTH
(FT.)

300

TO

305

ROCK CLASSIFICATION

gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel	20	vfp-fp	1	sb rnd
sand	13	vfs-vcrs	1	sb rnd
OTHER <u>></u> gravel	10	vfp-fp	m	sb rnd
sand	56	vfs-vcrs	m	sb ang
SILT AND CLAY	1			

REMARKS

color
HCL

Buff Grey

-

Immature

DEPTH
(FT.)

305

TO

320

ROCK CLASSIFICATION

gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel	17	vfp-mp	1	sb rnd
sand	9	vfs-vcrs	m	rnd
OTHER <u>></u> gravel	8	vfp-mp	m	sb rnd
sand	64	vfs-vcrs	m	rnd
SILT AND CLAY	2			

REMARKS

color
HCL

Tannish Grey

+

Immature

DEPTH (FT.)	<div style="border: 1px solid black; padding: 2px 10px;">320</div>	TO	<div style="border: 1px solid black; padding: 2px 10px;">325</div>	ROCK CLASSIFICATION <div style="border: 1px solid black; padding: 2px 20px;">Gravel</div>
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	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>55</u>	<u>vfp-crp</u>	<u>1</u>	<u>rnd</u>
sand	<u>1</u>	<u>fs-vcrs</u>	<u>1</u>	<u>sb ang</u>
OTHER > gravel	<u>30</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
sand	<u>14</u>	<u>fs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>0</u>			

REMARKS

color Buff Grey
HCL +

Slightly Micaceous Frosted Quartz

Immature

DEPTH (FT.)	<div style="border: 1px solid black; padding: 2px 10px;">325</div>	TO	<div style="border: 1px solid black; padding: 2px 10px;">425</div>	ROCK CLASSIFICATION <div style="border: 1px solid black; padding: 2px 20px;">sandy Gravel</div>
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	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>26</u>	<u>vfp-crp</u>	<u>1</u>	<u>rnd</u>
sand	<u>12</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER > gravel	<u>24</u>	<u>vfp-crp</u>	<u>1</u>	<u>rnd</u>
sand	<u>35</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>3</u>			

REMARKS

color Greyish Brown
HCL - (325'-395'), + (395'-425')

Slightly Micaceous Slightly Gypsiferous (sand present)

Frosted Quartz

Immature

WELL NUMBER

299-W15-5

DEPTH
(FT.)

425

TO

440

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	28	vfp-mp	1	rnd
sand	8	vfs-vcrs	m	sb rnd
OTHER > gravel	15	vfp-mp	1	rnd
sand	30	vfs-vcrs	m	sb rnd
SILT AND CLAY	19			

REMARKS

color Greyish Brown
HCL -

Slightly Diatomaceous (? pebbles & sand present)

Slightly Micaceous

Lithified by silt & clay

Immature

DEPTH
(FT.)

440

TO

450

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	2	-vfp-	1	rnd
sand	12	vfs-crs	1	w rnd
OTHER > gravel	2	-vfp-	1	rnd
sand	81	vfs-crs	m	ang
SILT AND CLAY	3			

REMARKS

color Brownish Buff
HCL +

Caliche (pebbles & sand present)

Slightly Micaceous

Unfrosted Quartz

Lithified by silt, clay & CaCO₃

Submature

DEPTH
(FT.)

450

TO

460

ROCK CLASSIFICATION

slightly gravelly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT $\geq$ gravel	8	vfp-fp	l	sb rnd
sand	9	vfs-vcrs	m	rnd
OTHER $\geq$ gravel	2	vfp-fp	m	sb rnd
sand	63	vfs-vcrs	m	sb ang
SILT AND CLAY	18			

REMARKS

color Grey-Tan
HCL +

Abundant Caliche Caliche (pebbles & sand present) Slightly Micaceous
Lithified by silt, clay & CaCO₃
Immature

DEPTH
(FT.)

460

TO

470

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT $\geq$ gravel	0			
sand	2	vfs-vcrs	m	w rnd
OTHER $\geq$ gravel	0			
sand	93	vfs-vcrs	m	sb rnd
SILT AND CLAY	5			

REMARKS

color Tan
HCL +

Abundant Caliche (pebbles & sand) Slightly Micaceous
Compacted (?)
Submature

WELL NUMBER

299-W15-5

DEPTH
(FT.)

470

TO

480

ROCK CLASSIFICATION

slightly silty gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT ≥ gravel	17	vfp-mp	l	sb rnd
sand	23	vfs-vcrs	m	w rnd
OTHER ≥ gravel	8	vfp-mp	l	sb rnd
sand	41	vfs-vcrs	m	sb ang
SILT AND CLAY	11			

REMARKS

color Grey
HCL +

Abundant Caliche (10%, pebbles & sand) Slightly Micaceous

Frosted Quartz Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

480

TO

520

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT ≥ gravel	31	vfp-crp	l	rnd
sand	22	vfs-vcrs	m	w rnd
OTHER ≥ gravel	21	vfp-crp	l	rnd
sand	24	vfs-vcrs	m	sb rnd
SILT AND CLAY	2			

REMARKS

color Buff Grey
HCL - (480'-490'), + (490'-495'), - (495'-520')

Caliche (pebbles present between 490' & 495') Slightly Micaceous

Unfrosted Quartz

Immature

WELL NUMBER

299-W15-5

DEPTH
(FT.)

520

TO

525

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	50	vfp-crp	m	sb ang
sand	14	vfs-vcrs	m	sb rnd
OTHER > gravel	15	vfp-mp	m	rnd
sand	17	vfs-vcrs	m	sb ang
SILT AND CLAY	4			

REMARKS

color Buff Grey
HCL -

Slightly Micaceous Compacted

Immature

DEPTH
(FT.)

525

TO

540

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	32	vfp-mp	l	sb rnd
sand	65	fs-vcrs	m	sb ang
OTHER > gravel	1	vfp-fp	m	rnd
sand	2	fs-vcrs	m	ang
SILT AND CLAY	0			

REMARKS

color Black
HCL -

Ash (pebbles present) Unfrosted Quartz

Immature

WELL NUMBER

299-W15-5

DEPTH
(FT.)

540

TO

550

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u> sand	_____	_____	_____	_____
OTHER <u>> gravel</u> sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

550

TO

570

ROCK CLASSIFICATION

slightly gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u> sand	7 74	vfp-vcrp fs-vcrs	l m	sb ang sb ang
OTHER <u>> gravel</u> sand	0 19	 fs-vcrs	 m	 ang
SILT AND CLAY	0			

REMARKS

color
HCLGreyish Black ("salt & pepper")
-

Slightly Micaceous

Flow layer fragments present

Unfrosted Quartz

Submature

WELL NUMBER

299-W15-5

DEPTH
(FT.)

570

TO

580

ROCK CLASSIFICATION

Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	2	-fp-	m	rnd
sand	31	vfs-vcrs	m	sb rnd
OTHER > gravel	0			
sand	59	vfs-vcrs	m	ang
SILT AND CLAY	8			

REMARKS

color
HCLGrey
-

Immature

DEPTH
(FT.)

580

TO

585

ROCK CLASSIFICATION

sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	35	vfp-mp	1	w rnd
sand	14	vfs-vcrs	m	sb rnd
OTHER > gravel	25	vfp-mp	1	w rnd
sand	24	vfs-vcrs	m	rnd
SILT AND CLAY	2			

REMARKS

color
HCLGrey
-

Immature

WELL NUMBER

299-W15-5

DEPTH
(FT.)

585

TO

599

ROCK CLASSIFICATION

slightly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>1</u>	<u>vfp-mp</u>	<u>1</u>	<u>rnd</u>
	sand	<u>24</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>sb rnd</u>
OTHER	>gravel	<u>1</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
	sand	<u>64</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY		<u>10</u>			

REMARKS

color Grey
HCL -

Slightly Micaceous

Immature

Total Drilled Depth reported as 599'

DEPTH
(FT.)

TO

ROCK CLASSIFICATION

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	sand	<u> </u>	<u> </u>	<u> </u>	<u> </u>
OTHER	>gravel	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	sand	<u> </u>	<u> </u>	<u> </u>	<u> </u>
SILT AND CLAY		<u> </u>			

REMARKS

color
HCL

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 035917

W 072997

Altitude 690

Other Data used in
Interpretation

Driller's Log

0		FM	brownish buff
10		FN	greyish tan
20		FN	greyish buff
30		Umh	greyish white
40		UN	greyish tan
50		UN	greyish tan
60		UN	greyish buff
70		FN	greyish tan
80		FvmN	buff
90		FN	buff
100		FM	brownish tan
110		M	tan
120		N	tan
130		N	tan
140		N	tan
150		N	tan
160		N	tan
170		N	tan
180		N	tan
190		N	tan
200		N	tan
210		N	tan
220		N	tan
230		N	tan
240		N	tan
250		N	tan
260		N	tan
270		N	tan
280		N	tan
290		N	tan
300		N	tan
310		N	tan
320		N	tan
330		N	tan
340		N	tan
350		N	tan
360		N	tan
370		N	tan
380		N	tan
390		N	tan
400		N	tan
410		N	tan
420		N	tan
430		N	tan
440		N	tan
450		N	tan
460		N	tan
470		N	tan
480		N	tan
490		N	tan
500		N	tan

W. K. Summers & Associates

<u>Depth</u> (ft.)	<u>Graphic Log</u>
500-	

<u>Depth</u> (ft.)	<u>Graphic Log</u>
500-	

Sample Description

Plant Coordinates

<u>well</u>	<u>299</u>	<u>-w22</u>	<u>-24</u>	<u>cont</u>
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buff grey
brownish tan
greyish tan
buff grey
dark grey

Altitude _____

Other Data used in Interpretation _____

W. K. Summers & Associates

DEPTH
(FT.)

0

TO

10

ROCK CLASSIFICATION

slightly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	24	vfs-crs	h	rnd
OTHER > gravel	5	-smcb-	m	sb ang
sand	57	vfs-crs	l	sb rnd
SILT AND CLAY	14			

REMARKS

color Brownish Buff
HCL -

Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

10

TO

30

ROCK CLASSIFICATION

slightly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	1	-vfp-	m	sb rnd
sand	34	vfs-vcrs	h	rnd
OTHER > gravel	1	-vfp-	m	sb rnd
sand	49	vfs-vcrs	m	sb rnd
SILT AND CLAY	15			

REMARKS

color Greyish Tan
HCL +

Slightly Micaceous Frosted Quartz

Immature

DEPTH (FT.)	<div style="border: 1px solid black; padding: 2px 10px;">30</div>	TO	<div style="border: 1px solid black; padding: 2px 10px;">40</div>	ROCK CLASSIFICATION <div style="border: 1px solid black; padding: 2px 20px;">silty Sand</div>
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	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>3</u>	<u>vfp-crp</u>	<u>m</u>	<u>rnd</u>
sand	<u>8</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER <u>> gravel</u>	<u>0</u>			
sand	<u>57</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>32</u>			

REMARKS

color	<u>Greyish Buff</u>
HCL	<u>+</u>

Slightly Micaceous Frosted Quartz

Immature

DEPTH (FT.)	<div style="border: 1px solid black; padding: 2px 10px;">40</div>	TO	<div style="border: 1px solid black; padding: 2px 10px;">45</div>	ROCK CLASSIFICATION <div style="border: 1px solid black; padding: 2px 20px;">Sand</div>
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	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>0</u>			
sand	<u>15</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER <u>> gravel</u>	<u>0</u>			
sand	<u>81</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>4</u>			

REMARKS

color	<u>Greyish White</u>
HCL	<u>-</u>

Slightly Micaceous Unfrosted Quartz

Mature

WELL NUMBER

299-W22-24

DEPTH
(FT.)

45

TO

50

ROCK CLASSIFICATION

slightly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	7	vfs-vcrs	m	rnd
OTHER	>gravel	0			
	sand	78	vfs-vcrs	m	sb rnd
SILT AND CLAY		15			

REMARKS

color Greyish Tan
HCL +

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

50

TO

65

ROCK CLASSIFICATION

slightly gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	3	vfp-fp	l	rnd
	sand	19	vfs-vcrs	m	sb rnd
OTHER	>gravel	3	vfp-fp	l	rnd
	sand	66	vfs-vcrs	m	rnd
SILT AND CLAY		9			

REMARKS

color Greyish Tan
HCL +

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

65

TO

80

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>1</u>	<u>vfp-mp</u>	<u>1</u>	<u>rnd</u>
sand	<u>12</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER > gravel	<u>1</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
sand	<u>82</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>4</u>			

REMARKS

color Greyish Buff
HCL +

Slightly Micaceous Unfrosted Quartz

Mature

DEPTH
(FT.)

80

TO

90

ROCK CLASSIFICATION

slightly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>0</u>			
sand	<u>10</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER > gravel	<u>0</u>			
sand	<u>75</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>15</u>			

REMARKS

color Greyish Tan
HCL +

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

90

TO

115

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel	<u>0</u>			
sand	<u>4</u>	<u>vfs-ms</u>	<u>m</u>	<u>sb rnd</u>
OTHER <u>></u> gravel	<u>0</u>			
sand	<u>96</u>	<u>vfs-ms</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY	<u>0</u>			

REMARKS

color
HCL

Buff

+

Slightly Micaceous

Frosted Quartz

Very Mature

DEPTH
(FT.)

115

TO

135

ROCK CLASSIFICATION

slightly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel	<u>0</u>			
sand	<u>10</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER <u>></u> gravel	<u>0</u>			
sand	<u>78</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>12</u>			

REMARKS

color
HCL

Buff

+

Slightly Micaceous

Frosted Quartz

Immature

DEPTH
(FT.)

135

TO

150

ROCK CLASSIFICATION

silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>0</u>			
sand	<u>15</u>	<u>vfs-crs</u>	<u>m</u>	<u>rnd</u>
OTHER <u>> gravel</u>	<u>0</u>			
sand	<u>65</u>	<u>vfs-crs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>20</u>			

REMARKS

color Brownish Tan
HCL +

Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

150

TO

160

ROCK CLASSIFICATION

slightly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>0</u>			
sand	<u>20</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER <u>> gravel</u>	<u>0</u>			
sand	<u>65</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY	<u>15</u>			

REMARKS

color Tan
HCL +

Micaceous

Immature

DEPTH
(FT.)

160

TO

185

ROCK CLASSIFICATION

silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	<u>>gravel</u>	<u>0</u>			
	<u>sand</u>	<u>15</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER	<u>>gravel</u>	<u>0</u>			
	<u>sand</u>	<u>65</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY		<u>20</u>			

REMARKS

color Tan
HCL +

Slightly Micaceous

Immature

DEPTH
(FT.)

185

TO

195

ROCK CLASSIFICATION

gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	<u>>gravel</u>	<u>30</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
	<u>sand</u>	<u>21</u>	<u>vfs-crs</u>	<u>m</u>	<u>rnd</u>
OTHER	<u>>gravel</u>	<u>0</u>			
	<u>sand</u>	<u>32</u>	<u>vfs-crs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY		<u>17</u>			

REMARKS

color Tan
HCL +

Caliche (pebbles & sand present) Slightly Micaceous

Lithified (?) by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

195

TO

200

ROCK CLASSIFICATION

slightly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	<u>> gravel</u>	<u>5</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
	<u>sand</u>	<u>48</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER	<u>> gravel</u>	<u>0</u>			
	<u>sand</u>	<u>33</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY		<u>14</u>			

REMARKS

color Greyish Tan
HCL +

Slightly Micaceous

Immature

DEPTH
(FT.)

200

TO

205

ROCK CLASSIFICATION

Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	<u>> gravel</u>	<u>84</u>	<u>vfp-fp</u>	<u>m</u>	<u>w rnd</u>
	<u>sand</u>	<u>7</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER	<u>> gravel</u>	<u>5</u>	<u>vfp-fp</u>	<u>m</u>	<u>w rnd</u>
	<u>sand</u>	<u>3</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY		<u>1</u>			

REMARKS

color Greyish Tan
HCL +

Abundant Caliche (5%, pebbles) Slightly Micaceous

Immature

DEPTH
(FT.)

205

TO

215

ROCK CLASSIFICATION

gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	25	vfp-fp	m	w rnd
	sand	19	vfs-vcrs	m	rnd
OTHER	>gravel	0			
	sand	34	vfs-vcrs	m	rnd
SILT AND CLAY		22			

REMARKS

color Tan
HCL +

Slightly Micaceous

Immature

DEPTH
(FT.)

215

TO

235

ROCK CLASSIFICATION

sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	3	vfp-fp	m	w rnd
	sand	10	vfs-crs	m	rnd
OTHER	> gravel	0			
	sand	24	vfs-crs	h	sb rnd
SILT AND CLAY		63			

REMARKS

color Tan
HCL +

Slightly Micaceous

Immature

DEPTH (FT.)	<div style="border: 1px solid black; padding: 2px 10px;">235</div>	TO	<div style="border: 1px solid black; padding: 2px 10px;">240</div>	ROCK CLASSIFICATION <div style="border: 1px solid black; padding: 2px 10px;">silty sandy Gravel</div>
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	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>40</u>	<u>vfp-crp</u>	<u>l</u>	<u>rnd</u>
sand	<u>9</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>15</u>	<u>vfp-vcrp</u>	<u>m</u>	<u>rnd</u>
sand	<u>27</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>9</u>			

REMARKS

color Greyish Tan
HCL +

Slightly Micaceous

Immature

DEPTH (FT.)	<div style="border: 1px solid black; padding: 2px 10px;">240</div>	TO	<div style="border: 1px solid black; padding: 2px 10px;">255</div>	ROCK CLASSIFICATION <div style="border: 1px solid black; padding: 2px 10px;">silty sandy Gravel</div>
----------------	--	----	--	--

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>55</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
sand	<u>8</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>20</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
sand	<u>14</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY	<u>3</u>			

REMARKS

color Greyish Tan
HCL +

Slightly Micaceous Frosted Quartz

Immature

WELL NUMBER

299-W22-24

DEPTH
(FT.)

255

TO

260

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
OTHER > gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

 color _____
 HCL _____

Sample missing

DEPTH
(FT.)

260

TO

295

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	57	vfp-mp	l	w rnd
sand	5	vfs-vcrs	m	rnd
OTHER > gravel	17	vfp-vcrp	l	w rnd
sand	17	vfs-vcrs	m	rnd
SILT AND CLAY	4			

REMARKS

 color _____ Greyish Tan
 HCL _____ + (260' - 280'), - (280'-285'), + (285'-290')

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

295

TO

305

ROCK CLASSIFICATION

slightly silty gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	15	-crp-	1	w rnd
	sand	16	vfs-vcrs	m	rnd
OTHER	>gravel	5	-crp-	1	w rnd
	sand	52	vfs-vcrs	m	rnd
SILT AND CLAY		12			

REMARKS

color Tan
HCL +

Slightly Micaceous

Immature

DEPTH
(FT.)

305

TO

355

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	35	vfp-crp	1	sb rnd
	sand	23	vfs-vcrs	m	rnd
OTHER	>gravel	7	vfp-mp	m	sb rnd
	sand	29	vfs-vcrs	m	rnd
SILT AND CLAY		6			

REMARKS

color Greyish Tan
HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH (FT.)	<div style="border: 1px solid black; padding: 2px 10px;">355</div>	TO	<div style="border: 1px solid black; padding: 2px 10px;">390</div>	ROCK CLASSIFICATION	<div style="border: 1px solid black; padding: 2px 10px;">sandy Gravel</div>
----------------	--	----	--	---------------------	---

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>25</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
sand	<u>4</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>22</u>	<u>vfp-crp</u>	<u>h</u>	<u>rnd</u>
sand	<u>45</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY	<u>4</u>			

REMARKS

color Greyish Buff
HCL -

Micaceous Frosted Quartz

Immature

DEPTH (FT.)	<div style="border: 1px solid black; padding: 2px 10px;">390</div>	TO	<div style="border: 1px solid black; padding: 2px 10px;">440</div>	ROCK CLASSIFICATION	<div style="border: 1px solid black; padding: 2px 10px;">slightly gravelly Sand</div>
----------------	--	----	--	---------------------	---

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>3</u>	<u>vfp-fp</u>	<u>l</u>	<u>rnd</u>
sand	<u>4</u>	<u>vfs-crs</u>	<u>l</u>	<u>rnd</u>
OTHER > gravel	<u>6</u>	<u>vfp-crp</u>	<u>l</u>	<u>rnd</u>
sand	<u>80</u>	<u>vfs-crs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>7</u>			

REMARKS

color Brownish Buff
HCL -

Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

440

TO

450

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT $\geq$ gravel	35	vfp-mp	?	?
sand	8	ms-vcrs	m	sb rnd
OTHER $\geq$ gravel	35	vfp-mp	?	?
sand	22	ms-vcrs	m	sb rnd
SILT AND CLAY	0			

REMARKS

color Buff Grey
HCL -

Immature

DEPTH
(FT.)

450

TO

455

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT $\frac{1}{2}$ gravel	28	vfp-mp	?	?
sand	21	vfs-vcrs	m	rnd
OTHER $\geq$ gravel	12	vfp-mp	?	?
sand	33	vfs-vcrs	m	rnd
SILT AND CLAY	6			

REMARKS

color Greyish Buff
HCL -

Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

455

TO

460

ROCK CLASSIFICATION

Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	0			
sand	8	vfs-vcrs	l	rnd
OTHER > gravel	0			
sand	89	vfs-vcrs	m	sb rnd
SILT AND CLAY	3			

REMARKS

color Greyish Buff
HCL -

Micaceous Frosted Quartz

Mature

DEPTH
(FT.)

460

TO

470

ROCK CLASSIFICATION

silty sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	58	vfp-crp	m	rnd
sand	6	vfs-vcrs	m	rnd
OTHER > gravel	20	vfp-mp	m	rnd
sand	9	vfs-vcrs	m	rnd
SILT AND CLAY	7			

REMARKS

color Greyish Tan
HCL -

Slightly Micaceous (?)

Immature

DEPTH
(FT.)

470

TO

490

ROCK CLASSIFICATION

slightly gravelly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	3	vfp-fp	1	sb rnd
sand	24	vfs-vcrs	1	rnd
OTHER > gravel	3	vfp-fp	1	sb rnd
sand	28	vfs-vcrs	m	rnd
SILT AND CLAY	42			

REMARKS

color Brownish Tan
HCL +

Caliche (pebbles present) Slightly Micaceous

Immature

DEPTH
(FT.)

490

TO

495

ROCK CLASSIFICATION

gravelly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	12	vfp-mp	1	rnd
sand	7	vfs-vcrs	m	rnd
OTHER > gravel	18	vfp-mp	m	rnd
sand	38	vfs-vcrs	m	rnd
SILT AND CLAY	25			

REMARKS

color Reddish Tan
HCL +

Abundant Caliche (20%, pebbles)

Immature

DEPTH
(FT.)

495

TO

500

ROCK CLASSIFICATION

Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	0			
sand	20	fs-ms	m	rnd
OTHER > gravel	0			
sand	80	fs-ms	m	rnd
SILT AND CLAY	0			

REMARKS

color Greyish Buff
HCL +

Slightly Micaceous Frosted Quartz

Very Mature

DEPTH
(FT.)

500

TO

505

ROCK CLASSIFICATION

Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	55	vfp-mp	l	rnd
sand	7	vfs-vcrs	m	sb rnd
OTHER > gravel	30	vfp-mp	l	rnd
sand	7	vfs-vcrs	m	rnd
SILT AND CLAY	1			

REMARKS

color Buff Grey
HCL +

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

505

TO

530

ROCK CLASSIFICATION

slightly silty gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	20	vfp-mp	m	rnd
	sand	14	vfs-vcrs	m	rnd
OTHER	> gravel	8	vfp-fp	m	rnd
	sand	44	vfs-vcrs	m	rnd
SILT AND CLAY		14			

REMARKS

color Brownish Tan
HCL +

Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

530

TO

535

ROCK CLASSIFICATION

silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	0			
	sand	30	vfs-vcrs	m	rnd
OTHER	> gravel	0			
	sand	50	vfs-vcrs	m	rnd
SILT AND CLAY		20			

REMARKS

color Greyish Tan
HCL -

Micaceous

Immature

DEPTH (FT.) 535 TO 565 ROCK CLASSIFICATION slightly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>3</u>	<u>vfp-fp</u>	<u>l</u>	<u>rnd</u>
	sand	<u>24</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER	>gravel	<u>1</u>	<u>vfp-fp</u>	<u>l</u>	<u>rnd</u>
	sand	<u>58</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>w rnd</u>
SILT AND CLAY		<u>4</u>			

REMARKS

color Buff Grey
HCL - (535'-545'), + (545'-550'), - (550'-565')

Micaceous Unfrosted Quartz

Immature

DEPTH (FT.) 565 TO 575 ROCK CLASSIFICATION silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>45</u>	<u>vfp-fp</u>	<u>m-l</u>	<u>w rnd-v ang</u>
	sand	<u>37</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd-ang</u>
OTHER	>gravel	<u>2</u>	<u>vfp-fp</u>	<u>l</u>	<u>rnd</u>
	sand	<u>8</u>	<u>vfs-vcrs</u>	<u>l</u>	<u>rnd</u>
SILT AND CLAY		<u>8</u>			

REMARKS

color Dark Grey
HCL -

Slightly Micaceous

Immature

Total Drilled Depth reported as 575'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 053137

W 011393

Altitude 389

Other Data used in
Interpretation

(1) Descriptive Log from
Newcomb, et al, 1972, p.57-8

(2) Driller's Log

(3) E Log

tannish grey

greyish buff

buff tan

tannish grey
tannish buff
buff

greyish buff

buff grey

brownish grey

buff grey

grey

greyish brown

greyish brown

greyish black

grey

black

black

grey ; ASH FRAGMENTS ; TRACE DIATOMITE

grey ; TRACE DIATOMITE

light grey ; REWORKED ASH(?)

yellowish grey ; TRACE DIATOMITE

dark grey

brownish grey ; TRACE DIATOMITE

brownish grey ; TRACE DIATOMITE

TRACE DIATOMITE

DIATOMITE

S brownish grey ; ASH

TRACE DIATOMITE

TD 424

WELL NUMBER

399-5-2

DEPTH
(FT.)

0

TO

18

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	<u>> gravel</u>	<u>58</u>	<u>vfp-crp</u>	<u>1</u>	<u>sb rnd</u>
	<u>sand</u>	<u>21</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER	<u>> gravel</u>	<u>10</u>	<u>vfp-mp</u>	<u>m</u>	<u>sb rnd</u>
	<u>sand</u>	<u>8</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY		<u>3</u>			

REMARKS

color Tannish Grey
HCL +

Caliche (pebbles present between 0' & 9')

Slightly Micaceous

Immature

DEPTH
(FT.)

18

TO

24

ROCK CLASSIFICATION

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	<u>> gravel</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	<u>sand</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
OTHER	<u>> gravel</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	<u>sand</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
SILT AND CLAY		<u> </u>			

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

24

TO

66

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	41	vfp-vcrp	l	w rnd
	sand	9	vfs-vcrs	m	rnd
OTHER	> gravel	27	vfp-vcrp	l	w rnd
	sand	22	vfs-vcrs	m	sb ang
SILT AND CLAY		1			

REMARKS

color Greyish Buff
HCL - (24'-57'), + (57'-63'), - (63'-66')

Slightly Micaceous Unfrosted Quartz Sample interval 45'-48' missing

Immature

DEPTH
(FT.)

66

TO

84

ROCK CLASSIFICATION

Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	5	vfp-mp	l	w rnd
	sand	2	vfs-ms	m	rnd
OTHER	> gravel	0			
	sand	3	vfs-ms	m	rnd
SILT AND CLAY		90			

REMARKS

color Buff Tan
HCL -

Slightly Micaceous Lithified by silt & clay

Immature

DEPTH
(FT.)

84

TO

87

ROCK CLASSIFICATION

Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	55	vfp-crp	l	w rnd
sand	3	vfs-vcrs	m	sb rnd
OTHER > gravel	35	vfp-crp	m	w rnd
sand	5	vfs-vcrs	m	rnd
SILT AND CLAY	2			

REMARKS

color Tannish Grey
HCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

87

TO

90

ROCK CLASSIFICATION

gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	8	vfp-mp	m	rnd
sand	8	vfs-vcrs	m	rnd
OTHER > gravel	8	vfp-mp	m	rnd
sand	68	vfs-vcrs	m	ang
SILT AND CLAY	8			

REMARKS

color Tannish Buff
HCL -

Slightly Micaceous Unfrosted Quartz Lithified (?)

Immature

WELL NUMBER

399-5-2

DEPTH
(FT.)

90

TO

93

ROCK CLASSIFICATION

gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel sand	12	vfp-mp	m	rnd
		12	vfs-vcrs	m	rnd
OTHER	>gravel sand	8	vfp-mp	m	rnd
		64	vfs-vcrs	m	ang
SILT AND CLAY		4			

REMARKS

color
HCL

Buff

-

Slightly Micaceous

Unfrosted Quartz

Lithified (?)

Immature

DEPTH
(FT.)

93

TO

102

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel sand	33	vfp-crp	l	rnd
		8	vfs-vcrs	m	sb ang
OTHER	> gravel sand	27	vfp-crp	m	rnd
		32	vfs-vcrs	m	sb ang
SILT AND CLAY		0			

REMARKS

color
HCL

Greyish Buff

-

Slightly Micaceous

Unfrosted Quartz

Immature

DEPTH
(FT.)

102

TO

120

ROCK CLASSIFICATION

slightly gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel sand	6	vfp-crp	l	rnd
		9	vfs-vcrs	m	sb rnd
OTHER	>gravel sand	3	vfp-mp	m	rnd
		81	vfs-vcrs	m	sb ang
SILT AND CLAY		1			

REMARKS

color
HCL

Buff Grey

-

Slightly Micaceous

Unfrosted Quartz

Immature

DEPTH
(FT.)

120

TO

132

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel sand	25	vfp-crp	l	sb rnd
		11	vfs-vcrs	m	rnd
OTHER	>gravel sand	9	vfp-crp	m	rnd
		52	vfs-vcrs	m	sb ang
SILT AND CLAY		3			

REMARKS

color
HCL

Brownish Grey

- (120'-123'), + (123'-132')

Slightly Micaceous

Unfrosted Quartz

Immature

WELL NUMBER

399-5-2

DEPTH
(FT.)

132

TO

156

ROCK CLASSIFICATION

gravelly Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	8	vfp-smcb	l	rnd
sand	9	vfs-vcrs	m	sb rnd
OTHER > gravel	7	vfp-smcb	l	rnd
sand	75	vfs-vcrs	m	ang
SILT AND CLAY	1			

REMARKS

color
HCL

Buff Grey

-

Slightly Micaceous

Unfrosted Quartz

Lithified by cement (?)

Immature

DEPTH
(FT.)

156

TO

162

ROCK CLASSIFICATION

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel				
sand				
OTHER > gravel				
sand				
SILT AND CLAY				

REMARKS

color
HCL

Sample missing

WELL NUMBER

399-5-2

DEPTH
(FT.)

162

TO

165

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	45	vfp-crp	l	rnd
sand	28	vfs-vcrs	m	sb rnd
OTHER > gravel	7	vfp-fp	m	rnd
sand	19	vfs-vcrs	m	sb rnd
SILT AND CLAY	1			

REMARKS

color Grey

HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

165

TO

168

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel				
sand				
OTHER > gravel				
sand				
SILT AND CLAY				

REMARKS

color

HCL

Sample missing

DEPTH
(FT.)

168

TO

177

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	63	vfp-vcrp	l	rnd
	sand	10	vfs-vcrs	m	sb rnd
OTHER	> gravel	5	vfp-mp	m	rnd
	sand	12	vfs-vcrs	m	sb rnd
SILT AND CLAY		10			

REMARKS

color
HCL

Greyish Brown

-

Slightly Micaceous

Frosted Quartz

Lithified by silt & clay

Immature

DEPTH
(FT.)

177

TO

189

ROCK CLASSIFICATION

slightly gravelly sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	4	vfp-crp	l	sb rnd
	sand	6	vfs-vcrs	l	rnd
OTHER	> gravel	3	vfp-crp	l	sb rnd
	sand	13	vfs-vcrs	m	rnd
SILT AND CLAY		74			

REMARKS

color
HCL

Greyish Brown

+

Slightly Micaceous

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

189

TO

192

ROCK CLASSIFICATION

gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	15	vfp-fp	l	sb ang
	sand	75	vfs-vcrs	m	sb rnd
OTHER	>gravel	0			
	sand	10	vfs-vcrs	m	sb rnd
SILT AND CLAY		0			

REMARKS

color Greyish Black
HCL +

Caliche (pebbles & sand present)

Unfrosted Quartz

DEPTH
(FT.)

192

TO

195

ROCK CLASSIFICATION

gravelly Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	15	vfp-mp	l	rnd
	sand	6	vfs-vcrs	m	sb rnd
OTHER	>gravel	0			
	sand	7	vfs-vcrs	m	v ang
SILT AND CLAY		72			

REMARKS

color Grey
HCL +

Abundant Caliche (pebbles & sand)

Unfrosted Quartz

Lithified by silt, clay & CaCO₃

Immature

WELL NUMBER

399-5-2

DEPTH
(FT.)

195

TO

198

ROCK CLASSIFICATION

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel sand	_____	_____	_____	_____
OTHER > gravel sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

198

TO

204

ROCK CLASSIFICATION

slightly gravelly Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel sand	8 78	vfp-fp vfs-vcrs	1 m	sb ang sb rnd
OTHER > gravel sand	0 14	 vfs-vcrs	 m	 rnd
SILT AND CLAY	0			

REMARKS

color
HCL

Black

+

Abundant Caliche (pebbles & sand)

Frosted Quartz

Submature

DEPTH
(FT.)

204

TO

215

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	94	vfs-vcrs	m	ang
OTHER > gravel	0			
sand	6	vfs-vcrs	m	ang
SILT AND CLAY	0			

REMARKS

color
HCL

Black

+

Caliche (sand present)

Unfrosted Quartz

Mature

DEPTH
(FT.)

215

TO

240

ROCK CLASSIFICATION

Sand & Basalt Flow

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	13	vfp-mp	l-m	w rnd-v ang
sand	76	vfs-vcrs	m	sb rnd-v ang
OTHER > gravel	0			
sand	10	vfs-vcrs	m	ang
SILT AND CLAY	1			

REMARKS

color
HCL

Brownish Black

+ (215'-230'), - (230'-240')

Caliche (pebbles & sand present)

Slightly Micaceous

Unfrosted Quartz

Scoria (fragments present)

Immature

DEPTH
(FT.)

240

TO

275

ROCK CLASSIFICATION

silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	1	-vfp-	m	sb rnd
sand	25	vfs-ms	m	rnd-v ang
OTHER > gravel	0			
sand	44	vfs-ms	m	rnd
SILT AND CLAY	30			

REMARKS

color
HCL

Grey

-

Slightly Diatomaceous (? sand between 270' & 275') Ash (fragments present)

Immature

DEPTH
(FT.)

275

TO

280

ROCK CLASSIFICATION

gravelly sandy Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	20	vfp-fp	m	sb rnd
sand	16	vfs-vcrs	m	rnd
OTHER > gravel	0			
sand	8	vfs-vcrs	m	sb rnd
SILT AND CLAY	56			

REMARKS

color
HCL

Grey

-

Slightly Diatomaceous (sand present)

Lithified by silt & clay

Immature

DEPTH
(FT.)

280

TO

310

ROCK CLASSIFICATION

silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel sand	3	vfp-fp	m	sb rnd
	4	vfs-vcrs	m	sb rnd
OTHER > gravel sand	0			
	49	vfs-vcrs	m	sb ang
SILT AND CLAY	44			

REMARKS

color Light Grey
HCL -

Slightly Micaceous Reworked Ash (?)

Immature

DEPTH
(FT.)

310

TO

315

ROCK CLASSIFICATION

silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel sand	5	vfp-fp	m	sb rnd
	24	vfs-vcrs	m	sb rnd
OTHER > gravel sand	0			
	33	vfs-vcrs	m	rnd
SILT AND CLAY	38			

REMARKS

color Yellowish Grey
HCL -

Slightly Diatomaceous (pebbles & sand present) Slightly Micaceous

Lithified by silt & clay

Immature

DEPTH
(FT.)

315

TO

320

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	65	vfp-fp	m	rnd-sb ang
sand	15	vfs-vcrs	m	sb rnd
OTHER > gravel	5	vfp-fp	m	rnd
sand	6	vfs-vcrs	m	sb rnd
SILT AND CLAY	9			

REMARKS

color Dark Grey

HCL -

Caliche (pebbles & sand present)

Slightly Micaceous

Lithified by silt & clay

Immature

DEPTH
(FT.)

320

TO

330

ROCK CLASSIFICATION

gravelly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	30	vfp-fp	m	rnd-sb ang
sand	42	vfs-vcrs	m	sb rnd
OTHER > gravel	0			
sand	11	vfs-vcrs	m	sb ang
SILT AND CLAY	17			

REMARKS

color Brownish Grey

HCL -

Slightly Diatomaceous (pebbles & sand present)

Slightly Micaceous

Immature

DEPTH
(FT.)

330

TO

355

ROCK CLASSIFICATION

slightly silty gravelly Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	11	vfp-fp	l	sb rnd
sand	67	vfs-vcrs	m	ang
OTHER > gravel	0			
sand	9	vfs-vcrs	h	rnd
SILT AND CLAY	13			

REMARKS

color Brownish Grey

HCL -

Slightly Diatomaceous (sand present)

Slightly Micaceous

Immature

DEPTH
(FT.)

355

TO

370

ROCK CLASSIFICATION

Sand & Basalt Flow

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	20	vfp-vcrp	l	v ang
sand	69	vfs-vcrs	m	sb ang
OTHER > gravel	0			
sand	11	vfs-vcrs	m	rnd
SILT AND CLAY	0			

REMARKS

color Reddish Black

HCL -

Slightly Diatomaceous (sand present)

Slightly Micaceous

Ash (fragments present)

Frosted Quartz

Immature

WELL NUMBER

399-5-2

DEPTH
(FT.)

370

TO

390

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>2</u>	<u>-vfp-</u>	<u>l</u>	<u>v ang</u>
sand	<u>73</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>v ang</u>
OTHER > gravel	<u>0</u>			
sand	<u>22</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>ang</u>
SILT AND CLAY	<u>3</u>			

REMARKS

color Brownish GreyHCL -

Slightly Diatomaceous (fragments present between 370' & 375')

Ash (fragments present) sandy Silt pebbles present

Submature

DEPTH
(FT.)

390

TO

415

ROCK CLASSIFICATION

Sand & Basalt Flow

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>17</u>	<u>vfp-fp</u>	<u>l</u>	<u>v ang</u>
sand	<u>81</u>	<u>fs-vcrs</u>	<u>m</u>	<u>rnd-v ang</u>
OTHER > gravel	<u>0</u>			
sand	<u>2</u>	<u>fs-vcrs</u>	<u>m</u>	<u>v ang</u>
SILT AND CLAY	<u>0</u>			

REMARKS

color BlackHCL -

Ash (fragments present) Unfrosted Quartz

Immature

WELL NUMBER

399-5-2

DEPTH
(FT.)

415

TO

424

ROCK CLASSIFICATION

Sand & Basalt Flow

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>8</u>	<u>vfp-fp</u>	<u>l</u>	<u>v ang</u>
	sand	<u>90</u>	<u>fs-vcrs</u>	<u>m</u>	<u>rnd-v ang</u>
OTHER	>gravel	<u>0</u>			
	sand	<u>2</u>	<u>fs-vcrs</u>	<u>m</u>	<u>ang</u>
SILT AND CLAY		<u>0</u>			

REMARKS

color Dark GreyHCL -

Ash (fragments present)

Immature

Total Drilled Depth reported as 424'

DEPTH
(FT.)

TO

ROCK CLASSIFICATION

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	sand	<u> </u>	<u> </u>	<u> </u>	<u> </u>
OTHER	>gravel	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	sand	<u> </u>	<u> </u>	<u> </u>	<u> </u>
SILT AND CLAY		<u> </u>			

REMARKS

color HCL

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

S 030600

W 000725

Altitude 458

Other Data used in
Interpretation

(1) Descriptive log from

Newcomb, et al 1972, p.58-59

(2) Driller's Log

greyish buff

greyish tan

tanned grey
greyish buff

buff grey

greyish buff

buff grey

grey

grey

greyish buff
grey

light brownish grey

brownish grey

DEPTH
(FT.)

0

TO

5

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	19	vfs-crs	l	sb rnd
OTHER	>gravel	0			
	sand	80	vfs-crs	m	rnd
SILT AND CLAY		1			

REMARKS

color Greyish Buff

HCL -

Slightly Micaceous Frosted Quartz

Mature

DEPTH
(FT.)

5

TO

77

ROCK CLASSIFICATION

gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	10	vfp-crp	l	w rnd
	sand	36	vfs-vcrs	l	sb rnd
OTHER	>gravel	5	vfp-mp	l	w rnd
	sand	47	vfs-vcrs	m	sb rnd
SILT AND CLAY		2			

REMARKS

color Greyish Tan-Buff Grey

HCL - (5'-9'), + (9'-33'), -(33'-37'), +(37'-57'), -(57'-77')

Slightly Micaceous Frosted Quartz

Immature

WELL NUMBER

699-S31-1

DEPTH
(FT.)

77

TO

85

ROCK CLASSIFICATION

Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	53	vfp-crp	1	w rnd
sand	6	vfs-vcrs	1	sb rnd
OTHER > gravel	32	vfp-mp	1	w rnd
sand	8	vfs-vcrs	m	sb ang
SILT AND CLAY	1			

REMARKS

color Tanned Grey

HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

85

TO

93

ROCK CLASSIFICATION

gravelly Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	10	vfp-crp	1	w rnd
sand	5	vfs-vcrs	m	sb rnd
OTHER > gravel	15	vfp-crp	m	w rnd
sand	70	vfs-vcrs	m	sb ang
SILT AND CLAY	0			

REMARKS

color Greyish Buff

HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

93

TO

101

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel	<u>35</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
sand	<u>7</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER <u>></u> gravel	<u>30</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
sand	<u>28</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY	<u>0</u>			

REMARKS

color
HCLBuff Grey-

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

101

TO

113

ROCK CLASSIFICATION

gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel	<u>10</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
sand	<u>17</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>sb rnd</u>
OTHER <u>></u> gravel	<u>17</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
sand	<u>55</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY	<u>1</u>			

REMARKS

color
HCLGreyish Buff-

Slightly Micaceous Unfrosted Quartz

Immature

WELL NUMBER

699-S31-1

DEPTH
(FT.)

113

TO

137

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>17</u>	<u>vfp-crp</u>	<u>1</u>	<u>rnd</u>
	sand	<u>6</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER	>gravel	<u>25</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
	sand	<u>52</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY		<u>0</u>			

REMARKS

color Buff Grey
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

137

TO

149

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>30</u>	<u>vfp-crp</u>	<u>m</u>	<u>rnd</u>
	sand	<u>27</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER	>gravel	<u>19</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
	sand	<u>23</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY		<u>1</u>			

REMARKS

color Grey
HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

149

TO

165

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	34	vfp-crp	1	w rnd
	sand	12	vfs-vcrs	1	sb rnd
OTHER	>gravel	11	vfp-crp	1	w rnd
	sand	41	vfs-vcrs	m	sb rnd
SILT AND CLAY		2			

REMARKS

color Grey

HCL -

Frosted Quartz

Immature

DEPTH
(FT.)

165

TO

176

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	25	vfp-vcrp	1	rnd
	sand	6	vfs-vcrs	m	rnd
OTHER	> gravel	8	vfp-crp	1	w rnd
	sand	60	vfs-vcrs	m	sb ang
SILT AND CLAY		1			

REMARKS

color Greyish Buff

HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

176

TO

180

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT $\geq$ gravel	<u>70</u>	<u>vfp-vcrp</u>	<u>1</u>	<u>w rnd</u>
sand	<u>4</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
OTHER $\geq$ gravel	<u>10</u>	<u>vfp-crp</u>	<u>m</u>	<u>w rnd</u>
sand	<u>15</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>1</u>			

REMARKS

color
HCLGrey-

Slightly Micaceous

Frosted Quartz

Immature

DEPTH
(FT.)

180

TO

220

ROCK CLASSIFICATION

sandy Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT $\geq$ gravel	<u>2</u>	<u>vfp-crp</u>	<u>1</u>	<u>sb rnd</u>
sand	<u>5</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>sb ang</u>
OTHER $\geq$ gravel	<u>0</u>			
sand	<u>29</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>sb rnd</u>
SILT AND CLAY	<u>64</u>			

REMARKS

color
HCLLight Brownish Grey-

Slightly Micaceous

Lithified by silt & clay

Immature

DEPTH
(FT.)

220

TO

221

ROCK CLASSIFICATION

gravelly sandy Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	30	-mp-	l	sb rnd
sand	7	vfs-vcrs	l	sb rnd
OTHER > gravel	0			
sand	18	vfs-vcrs	m	sb rnd
SILT AND CLAY	45			

REMARKS

color Brownish Grey
HCL +

Caliche (pebbles & sand present)

Slightly Micaceous

Frosted Quartz

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

221

TO

228

ROCK CLASSIFICATION

Basalt Flow

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel		vfp-mp	l-m	sb ang-v ang
sand		vfs-vcrs	m-l	rnd-v ang
OTHER > gravel				
sand				
SILT AND CLAY				

REMARKS

color Black
HCL -

Slightly Micaceous

Unfrosted Quartz

Immature (?)

Total Drilled Depth reported as 228'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

Well 699 - S24 - 19

S 023965

W 018974

Altitude 420

Other Data used in
Interpretation

Driller's Log

greyish tan

greyish tan

greyish tan

tannish dark gray
greyish white

brownish grey

DEPTH
(FT.)

0

TO

5

ROCK CLASSIFICATION

BASALT $\geq$ gravel
sandOTHER $\geq$ gravel
sand

SILT AND CLAY

REMARKS

color

HCL

Sample missing

DEPTH
(FT.)

5

TO

15

ROCK CLASSIFICATION

silty sandy Gravel

BASALT $\geq$ gravel
sandOTHER $\geq$ gravel
sand

SILT AND CLAY

REMARKS

color

HCL

Slightly Micaceous

Immature

DEPTH
(FT.)

15

TO

20

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel sand	_____	_____	_____	_____
OTHER > gravel sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color

HCL

Sample missing

DEPTH
(FT.)

20

TO

30

ROCK CLASSIFICATION

slightly silty gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel sand	15 28	vfp-mp vfs-vcrs	1 1	w rnd sb rnd
OTHER > gravel sand	6 39	vfp-mp vfs-vcrs	m m	w rnd sb rnd
SILT AND CLAY	12			

REMARKS

color

HCL

Greyish Tan

-

Slightly Micaceous

Frosted Quartz

Immature

DEPTH
(FT.)

30

TO

45

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	52	vfp-mp	1	w rnd
	sand	12	vfs-vcrs	1	sb rnd
OTHER	>gravel	20	vfp-mp	m	w rnd
	sand	10	vfs-vcrs	m	sb rnd
SILT AND CLAY		6			

REMARKS

color Greyish TanHCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

45

TO

60

ROCK CLASSIFICATION

slightly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	52	vfs-crs	m	sb rnd
OTHER	>gravel	0			
	sand	30	vfs-crs	m	sb rnd
SILT AND CLAY		18			

REMARKS

color Tannish Dark GreyHCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

60

TO

65

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	0			
	sand	27	vfs-crs	1	sb rnd
OTHER	> gravel	0			
	sand	70	vfs-crs	1	sb rnd
SILT AND CLAY		3			

REMARKS

color Greyish WhiteHCL -

Slightly Micaceous Unfrosted Quartz

Mature

DEPTH
(FT.)

65

TO

87

ROCK CLASSIFICATION

silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	0			
	sand	20	vfs-ms	1	sb rnd
OTHER	> gravel	0			
	sand	55	vfs-ms	m	sb rnd
SILT AND CLAY		25			

REMARKS

color Brownish GreyHCL -

Sample interval 87'-89' missing

Immature

Total Drilled Depth reported as 89'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

S 018738

W 011013

Altitude 482

Other Data used in
Interpretation

Driller's Log

Well 699 - 519 - 11

50 -

100 -

150 -

UN

FN

N

TD 120

greyish buff

greyish buff

greyish tan

DEPTH
(FT.)

0

TO

70

ROCK CLASSIFICATION

slightly gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	5	vfp-crp	m	sb rnd
	sand	42	vfs-vcrs	m	sb rnd
OTHER	> gravel	2	vfp-vcrp	m	sb rnd
	sand	46	vfs-vcrs	h	sb rnd
SILT AND CLAY		5			

REMARKS

color Greyish Buff

HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

70

TO

90

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	35	vfp-crp	m	rnd
	sand	19	vfs-vcrs	m	sb rnd
OTHER	> gravel	14	vfp-smcb	m	rnd
	sand	28	vfs-vcrs	h	sb rnd
SILT AND CLAY		4			

REMARKS

color Greyish Buff

HCL -

Slightly Micaceous Frosted Quartz

Immature

WELL NUMBER

699-S19-11

DEPTH
(FT.)

90

TO

120

ROCK CLASSIFICATION

slightly silty
slightly gravelly Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	5	vfp-fp	1	ang
sand	39	vfs-vcrs	1	sb ang
OTHER > gravel	5	vfp-fp	1	ang
sand	40	vfs-vcrs	m	sb rnd
SILT AND CLAY	11			

REMARKS

color Greyish Tan

HCL -

Slightly Micaceous

Immature

Total Drilled Depth reported as 120'

DEPTH
(FT.)

TO

ROCK CLASSIFICATION

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT ≥ gravel				
sand				
OTHER ≥ gravel				
sand				
SILT AND CLAY				

REMARKS

color

HCL

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

S. 018500

E. 002000

Altitude 433

Other Data used in
Interpretation

Driller's Log

Well 699 - S18 - E2

WELL NUMBER

699-S18-E2

DEPTH
(FT.)

0

TO

15

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	39	vfs-ms	m	sb rnd
OTHER	>gravel	0			
	sand	60	vfs-ms	m	sb rnd
SILT AND CLAY		1			

REMARKS

color Grey
HCL -

Micaceous Unfrosted Quartz

Submature

DEPTH
(FT.)

15

TO

25

ROCK CLASSIFICATION

gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	12	vfp-vcrp	l	w rnd
	sand	33	vfs-vcrs	m	sb ang
OTHER	>gravel	5	vfp-mp	m	rnd
	sand	50	vfs-vcrs	m	sb rnd
SILT AND CLAY		0			

REMARKS

color Grey
HCL -

Micaceous Unfrosted Quartz

Immature

WELL NUMBER

699-S18-E2

DEPTH
(FT.)

25

TO

35

ROCK CLASSIFICATION

gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>10</u>	<u>vfp-vcrp</u>	<u>l</u>	<u>w rnd</u>
sand	<u>25</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
OTHER > gravel	<u>5</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
sand	<u>59</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>1</u>			

REMARKS

color Brownish Grey
HCL -

Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

35

TO

45

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>0</u>			
sand	<u>5</u>	<u>vfs-ms</u>	<u>m</u>	<u>sb ang</u>
OTHER > gravel	<u>0</u>			
sand	<u>95</u>	<u>vfs-ms</u>	<u>h</u>	<u>sb ang</u>
SILT AND CLAY	<u>0</u>			

REMARKS

color Greyish Buff
HCL -

Micaceous Unfrosted Quartz

Very Mature

WELL NUMBER

699-S18-E2

DEPTH (FT.) 45 TO 60 ROCK CLASSIFICATION sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>36</u>	<u>vfp-lqcb</u>	<u>l</u>	<u>w rnd</u>
<u>sand</u>	<u>4</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
OTHER <u>> gravel</u>	<u>35</u>	<u>vfp-lqcb</u>	<u>m</u>	<u>w rnd</u>
<u>sand</u>	<u>23</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>sb ang</u>
SILT AND CLAY	<u>2</u>			

REMARKS

color Greyish Buff
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH (FT.) 60 TO 85 ROCK CLASSIFICATION silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>35</u>	<u>vfp-vcrp</u>	<u>m</u>	<u>rnd</u>
<u>sand</u>	<u>9</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER <u>> gravel</u>	<u>1</u>	<u>vfp-crp</u>	<u>m</u>	<u>rnd</u>
<u>sand</u>	<u>35</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>20</u>			

REMARKS

color Greyish Brown
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

WELL NUMBER

699-S18- E2

DEPTH
(FT.)

85

TO

105

ROCK CLASSIFICATION

gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>17</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
sand	<u>8</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>sb rnd</u>
OTHER > gravel	<u>12</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
sand	<u>62</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY	<u>1</u>			

REMARKS

color Greyish BrownHCL -

· Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

105

TO

145

ROCK CLASSIFICATION

gravelly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>21</u>	<u>vfp-crp</u>	<u>m</u>	<u>rnd</u>
sand	<u>8</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>8</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
sand	<u>42</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY	<u>21</u>			

REMARKS

color Greyish BrownHCL -

Slightly Micaceous Unfrosted Quartz

Immature

WELL NUMBER

699-S18-E2

DEPTH
(FT.)

145

TO

160

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	41	vfp-vcrp	l	rnd
sand	18	vfs-vcrs	m	sb rnd
OTHER > gravel	8	vfp-crp	m	rnd
sand	18	vfs-vcrs	h	sb rnd
SILT AND CLAY	15			

REMARKS

color Brownish Grey

HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

160

TO

175

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	55	vfp-crp	l	rnd
sand	12	vfs-vcrs	m	sb rnd
OTHER > gravel	10	vfp-crp	m	rnd
sand	13	vfs-vcrs	h	sb rnd
SILT AND CLAY	10			

REMARKS

color Brownish Grey

HCL -

Slightly Micaceous Unfrosted Quartz

Immature

WELL NUMBER

699-S18-E2

DEPTH
(FT.)

175

TO

195

ROCK CLASSIFICATION

gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	25	vfp-crp	m	rnd
	sand	26	vfs-vcrs	m	sb rnd
OTHER	>gravel	0			
	sand	26	vfs-vcrs	h	sb rnd
SILT AND CLAY		23			

REMARKS

color Brownish Grey
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

195

TO

200

ROCK CLASSIFICATION

gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	25	-vfp-	m	sb rnd
	sand	26	vfs-vcrs	m	sb rnd
OTHER	>gravel	0			
	sand	26	vfs-vcrs	h	sb rnd
SILT AND CLAY		23			

REMARKS

color Brownish Grey
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

200

TO

205

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>75</u>	<u>vfp-crp</u>	<u>m</u>	<u>rnd</u>
<u>sand</u>	<u>10</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER <u>> gravel</u>	<u>0</u>			
<u>sand</u>	<u>10</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY	<u>5</u>			

REMARKS

color Brownish Grey
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

205

TO

215

ROCK CLASSIFICATION

silty Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>30</u>	<u>vfp-fp</u>	<u>m</u>	<u>sb rnd</u>
<u>sand</u>	<u>8</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER <u>> gravel</u>	<u>10</u>	<u>vfp-fp</u>	<u>m</u>	<u>rnd</u>
<u>sand</u>	<u>7</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>45</u>			

REMARKS

color Yellowish Brown
HCL -

Slightly Micaceous Slightly Gypsiferous

Immature Lithified by silt and clay

DEPTH
(FT.)

215

TO

240

ROCK CLASSIFICATION

sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	5	vfp-fp	m	sb rnd
	sand	11	vfs-vcrs	m	sb rnd
OTHER	> gravel	0			
	sand	9	vfs-vcrs	m	sb rnd
SILT AND CLAY		75			

REMARKS

color Yellowish Brown
HCL -

Slightly Micaceous Slightly Gypsiferous

Immature Lithified by silt and clay

Ash fragments between 215' and 220'

DEPTH
(FT.)

240

TO

250

ROCK CLASSIFICATION

gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	30	-vfp-	m	sb ang
	sand	45	vfs-vcrs	m	sb ang
OTHER	> gravel	0			
	sand	10	vfs-vcrs	m	sb rnd
SILT AND CLAY		15			

REMARKS

color Brownish Black
HCL +

Abundant Caliche

Immature

WELL NUMBER

699-S18-E2

DEPTH
(FT.)

250

TO

255

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT $\geq$ gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
OTHER $\geq$ gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

255

TO

260

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT $\geq$ gravel	0	_____	_____	_____
sand	80	vfs-vcrs	m	sb ang
OTHER $\geq$ gravel	0	_____	_____	_____
sand	20	vfs-vcrs	m	sb rnd
SILT AND CLAY	0			

REMARKS

color Black ("salt & pepper")
HCL -

Mature Unfrosted Quartz

Total Drilled Depth reported as 260'

Depth
(ft.)

Graphic Log

Sample Description

greyish brown
blackish grey
greyish buff
dark buff
greyish buff
grey
greyish buff
greyish buff
buff grey
greyish tan

Plant Coordinates

S 012325

W 002700

Altitude 434

Other Data used in
Interpretation

(1) Driller's Log

(2) Pump test

Well 699 - 512 - 3

DEPTH
(FT.)

0

TO

4

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	2	-vfp-	m	sb rnd
	sand	34	vfs-vcrs	1	rnd
OTHER	> gravel	0			
	sand	59	vfs-vcrs	1	sb rnd
SILT AND CLAY		5			

REMARKS

color Greyish Brown

HCL -

Slightly Micaceous Unfrosted Quartz

Mature

DEPTH
(FT.)

4

TO

20

ROCK CLASSIFICATION

gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	14	vfp-crp	1	sb rnd
	sand	30	fs-vcrs	1	sb ang
OTHER	> gravel	14	vfp-crp	1	sb rnd
	sand	40	fs-vcrs	1	sb rnd
SILT AND CLAY		2			

REMARKS

color Blackish Grey

HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

20

TO

40

ROCK CLASSIFICATION

gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	14	vfp-crp	1	sb rnd
	sand	26	vfs-vcrs	1	sb ang
OTHER	>gravel	7	vfp-mp	m	rnd
	sand	47	vfs-vcrs	1	sb rnd
SILT AND CLAY		6			

REMARKS

color Greyish Buff
HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

40

TO

57

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>2</u>	<u>vfp-crp</u>	<u>m</u>	<u>sb rnd</u>
	sand	<u>10</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>sb rnd</u>
OTHER	>gravel	<u>2</u>	<u>vfp-crp</u>	<u>m</u>	<u>rnd</u>
	sand	<u>83</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>sb rnd</u>
SILT AND CLAY		<u>3</u>			

REMARKS

color Dark Buff
HCL -

Slightly Micaceous Frosted Quartz

Submature

WELL NUMBER

699-S12-3

DEPTH
(FT.)

57

TO

81

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>21</u>	<u>vfp-crp</u>	<u>1</u>	<u>rnd</u>
sand	<u>6</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>rnd</u>
OTHER > gravel	<u>21</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
sand	<u>50</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>sb rnd</u>
SILT AND CLAY	<u>2</u>			

REMARKS

color Greyish BuffHCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

81

TO

88

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>37</u>	<u>vfp-crp</u>	<u>1</u>	<u>sb rnd</u>
sand	<u>15</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>sb rnd</u>
OTHER > gravel	<u>27</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
sand	<u>20</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>sb rnd</u>
SILT AND CLAY	<u>1</u>			

REMARKS

color GreyHCL -

Slightly Micaceous Unfrosted Quartz

Immature

WELL NUMBER

699-S12-3

DEPTH
(FT.)

88

TO

96

ROCK CLASSIFICATION

slightly gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	5	vfp-crp	1	w rnd
	sand	20	vfs-vcrs	1	sb ang
OTHER	>gravel	5	vfp-crp	1	w rnd
	sand	67	vfs-vcrs	1	sb rnd
SILT AND CLAY		3			

REMARKS

color Greyish Buff
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

96

TO

104

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	35	vfp-crp	1	w rnd
	sand	28	vfs-vcrs	1	sb ang
OTHER	>gravel	10	vfp-crp	1	w rnd
	sand	26	vfs-vcrs	1	sb rnd
SILT AND CLAY		1			

REMARKS

color Greyish Buff
HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

104

TO

108

ROCK CLASSIFICATION

slightly gravelly Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	3	vfp-crp	1	rnd
sand	45	vfs-vcrs	1	sb rnd
OTHER > gravel	7	vfp-crp	1	w rnd
sand	41	vfs-vcrs	m	sb rnd
SILT AND CLAY	4			

REMARKS

color Buff Grey
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

108

TO

110

ROCK CLASSIFICATION

gravelly silty Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	12	vfp-mp	1	rnd
sand	9	vfs-vcrs	1	sb rnd
OTHER > gravel	0			
sand	52	vfs-vcrs	m	sb rnd
SILT AND CLAY	27			

REMARKS

color Greyish Tan
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

Total Drilled Depth reported as 110'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

S 011694

W 029467

Altitude 486

Other Data used in
Interpretation

Driller's Log

Well 699 - 512 - 29

WELL NUMBER

699-S12-29

DEPTH
(FT.)

0

TO

10

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
OTHER > gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color

HCL

Sample missing

DEPTH
(FT.)

10

TO

45

ROCK CLASSIFICATION

silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0	_____	_____	_____
sand	45	vfs-vcrs	m	sb rnd
OTHER > gravel	0	_____	_____	_____
sand	35	vfs-vcrs	m	sb rnd
SILT AND CLAY	20			

REMARKS

color

HCL

Buff Brown

+

Caliche Present

Frosted Quartz

Immature

WELL NUMBER

699-S12-29

DEPTH
(FT.)

0

TO

10

ROCK CLASSIFICATION

BASALT > gravel
sand%SIZE RANGESPHERICITYROUNDNESSOTHER > gravel
sand

SILT AND CLAY

REMARKS

color

HCL

Sample missing

DEPTH
(FT.)

10

TO

45

ROCK CLASSIFICATION

silty Sand

BASALT > gravel
sand%SIZE RANGESPHERICITYROUNDNESSOTHER > gravel
sand

SILT AND CLAY

REMARKS

color

HCL

Buff Brown

+

Caliche Present

Frosted Quartz

Immature

WELL NUMBER

699-S12-29

DEPTH
(FT.)

45

TO

50

ROCK CLASSIFICATION

silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT $\geq$ gravel	5	vfp-mp	m	rnd
sand	40	vfs-vcrs	m	sb rnd
OTHER $\geq$ gravel	0			
sand	35	vfs-vcrs	m	sb rnd
SILT AND CLAY	20			

REMARKS

color	Buff Brown
HCL	+

Frosted Quartz

Immature

DEPTH
(FT.)

50

TO

75

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT $\geq$ gravel				
sand				
OTHER $\geq$ gravel				
sand				
SILT AND CLAY				

REMARKS

color	
HCL	

Sample missing

WELL NUMBER

699-S12-29

DEPTH
(FT.)

75

TO

80

ROCK CLASSIFICATION

Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>5</u>	<u>vfp-fp</u>	<u>m</u>	<u>rnd</u>
sand	<u>5</u>	<u>vfs-ms</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>0</u>			
sand	<u>10</u>	<u>vfs-ms</u>	<u>h</u>	<u>sb ang</u>
SILT AND CLAY	<u>80</u>			

REMARKS

color Dark BrownHCL -

Immature

DEPTH
(FT.)

80

TO

110

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u> </u>	<u> </u>	<u> </u>	<u> </u>
sand	<u> </u>	<u> </u>	<u> </u>	<u> </u>
OTHER > gravel	<u> </u>	<u> </u>	<u> </u>	<u> </u>
sand	<u> </u>	<u> </u>	<u> </u>	<u> </u>
SILT AND CLAY	<u> </u>			

REMARKS

color HCL

Sample missing

WELL NUMBER

699-S12-29

DEPTH
(FT.)

110

TO

115

ROCK CLASSIFICATION

silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	20	vfs-crs	m	sb rnd
OTHER > gravel	0			
sand	60	vfs-crs	h	sb ang
SILT AND CLAY	20			

REMARKS

color Brownish Buff
HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

115

TO

120

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel				
sand				
OTHER > gravel				
sand				
SILT AND CLAY				

REMARKS

color _____
HCL _____

Sample missing

WELL NUMBER

699-S12-29

DEPTH
(FT.)

120

TO

130

ROCK CLASSIFICATION

Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	3	vfs-ms	m	sb rnd
OTHER > gravel	0			
sand	7	vfs-ms	h	sb ang
SILT AND CLAY	90			

REMARKS

color Yellowish Buff
HCL -

Immature

DEPTH
(FT.)

130

TO

145

ROCK CLASSIFICATION

slightly gravelly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	7	vfp-crp	m	sb rnd
sand	10	vfs-vcrs	m	sb rnd
OTHER > gravel	3	vfp-mp	m	rnd
sand	40	vfs-vcrs	h	sb ang
SILT AND CLAY	10			

REMARKS

color Greyish Buff
HCL +

Abundant Caliche (30%) Frosted Quartz

Immature

DEPTH
(FT.)

145

TO

155

ROCK CLASSIFICATION

silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	3	vfp-mp	m	rnd
	sand	3	vfs-vcrs	m	sb rnd
OTHER	> gravel	2	vfp-mp	m	rnd
	sand	70	vfs-vcrs	m	sb rnd
SILT AND CLAY		22			

REMARKS

color Greyish Tan
HCL +

Abundant Caliche

Immature

DEPTH
(FT.)

155

TO

160

ROCK CLASSIFICATION

Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	<u>> gravel</u>	<u>2</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
	<u>sand</u>	<u>3</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER	<u>> gravel</u>	<u>1</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
	<u>sand</u>	<u>7</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>sb ang</u>
SILT AND CLAY		7			

REMARKS

color "Dirty" White
HCL +

Abundant Caliche (80%)

Immature

DEPTH (FT.)	<div style="border: 1px solid black; padding: 2px 10px;">160</div>	TO	<div style="border: 1px solid black; padding: 2px 10px;">175</div>	ROCK CLASSIFICATION <div style="border: 1px solid black; padding: 2px 10px;">sandy Silt</div>
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	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>2</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
sand	<u>7</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>1</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
sand	<u>30</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>sb ang</u>
SILT AND CLAY	<u>40</u>			

REMARKS

color	<u>Tan</u>
HCL	<u>+</u>

Abundant Caliche (20%) Frosted Quartz

Immature

DEPTH (FT.)	<div style="border: 1px solid black; padding: 2px 10px;">175</div>	TO	<div style="border: 1px solid black; padding: 2px 10px;">185</div>	ROCK CLASSIFICATION <div style="border: 1px solid black; padding: 2px 10px;">Gravel</div>
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	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>95</u>	<u>-</u>	<u>m</u>	<u>sb rnd-v ang</u>
sand	<u>0</u>			
OTHER > gravel	<u>0</u>			
sand	<u>3</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>sb ang</u>
SILT AND CLAY	<u>2</u>			

REMARKS

color	<u>Black</u>
HCL	<u>-</u>

Unfrosted Quartz Combination of flow layer & worked basalt pebble layer

Immature Sample interval 185'-190' missing

Total Drilled Depth reported as 190'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

S 006528

W 034449

Altitude 525

Other Data used in
Interpretation

(1) Descriptive Log
from Newcomb, et.al
1972, p. 61
(2) Driller's Log

Well 699 - 57 - 34

buff grey

buff grey

greyish buff

buff grey

greyish buff

buff grey

greyish tan

grey

greyish black

grey; ABUNDANT ASH(?)

greyish tan

greyish white

tan

tan

light grey

whitish grey; REWORKED ASH(?)

whitish grey; REWORKED ASH(?)

DEPTH
(FT.)

0

TO

21

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	<u>> gravel</u>	<u>5</u>	<u>-vfp-</u>	<u>l</u>	<u>rnd</u>
	<u>sand</u>	<u>38</u>	<u>fs-crs</u>	<u>m</u>	<u>sb rnd</u>
OTHER	<u>> gravel</u>	<u>0</u>			
	<u>sand</u>	<u>57</u>	<u>fs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY		<u>0</u>			

REMARKS

color Buff Grey
HCL - (0'-1'), + (1'-21')

Slightly Micaceous Frosted Quartz

Mature

DEPTH
(FT.)

21

TO

37

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	<u>> gravel</u>	<u>1</u>	<u>vfp-crp</u>	<u>m</u>	<u>rnd</u>
	<u>sand</u>	<u>20</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER	<u>> gravel</u>	<u>1</u>	<u>vfp-crp</u>	<u>m</u>	<u>rnd</u>
	<u>sand</u>	<u>73</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY		<u>5</u>			

REMARKS

color Buff Grey
HCL +

Slightly Micaceous Frosted Quartz

Submature

DEPTH (FT.) 37 TO 80 ROCK CLASSIFICATION Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>1</u>	<u>vfp-mp</u>	<u>1</u>	<u>sb rnd</u>
sand	<u>25</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>sb rnd</u>
OTHER > gravel	<u>1</u>	<u>vfp-mp</u>	<u>1</u>	<u>sb rnd</u>
sand	<u>68</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY	<u>5</u>			

REMARKS

color Greyish Buff
HCL +

Slightly Micaceous Unfrosted Quartz

Mature

DEPTH (FT.) 80 TO 96 ROCK CLASSIFICATION Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT ≥ gravel	<u>2</u>	<u>vfp-vcrp</u>	<u>1</u>	<u>sb rnd</u>
sand	<u>45</u>	<u>fs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER ≥ gravel	<u>1</u>	<u>vfp-mp</u>	<u>1</u>	<u>rnd</u>
sand	<u>50</u>	<u>fs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY	<u>2</u>			

REMARKS

color Buff Grey
HCL +

Caliche (pebbles & sand present between 88' & 93') Slightly Micaceous

Frosted Quartz

Submature

DEPTH
(FT.)

96

TO

112

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>2</u>	<u>vfp-mp</u>	<u>1</u>	<u>rnd</u>
sand	<u>35</u>	<u>fs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>0</u>	<u>fs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
sand	<u>60</u>	<u>fs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>3</u>			

REMARKS

color Greyish Buff
HCL +

Caliche (pebbles & sand present between 109' & 112') Slightly Micaceous

Frosted Quartz

Mature

DEPTH
(FT.)

112

TO

121

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>28</u>	<u>vfp-crp</u>	<u>m</u>	<u>sb rnd</u>
sand	<u>15</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>3</u>	<u>vfp-crp</u>	<u>1</u>	<u>rnd</u>
sand	<u>50</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>4</u>			

REMARKS

color Buff Grey
HCL +

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

121

TO

128

ROCK CLASSIFICATION

gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel sand	24	vfp-crp	l	rnd
		26	vfs-vcrs	m	rnd
OTHER	>gravel sand	3	vfp-crp	m	rnd
		40	vfs-vcrs	m	rnd
SILT AND CLAY		7			

REMARKS

color Greyish Tan
HCL +

Micaceous Frosted Quartz Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

128

TO

157

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel sand	36	vfp-mp	m	sb rnd
		22	fs-crs	m	sb rnd
OTHER	>gravel sand	6	vfp-mp	m	rnd
		35	fs-crs	m	rnd
SILT AND CLAY		1			

REMARKS

color Grey
HCL +

Slightly Micaceous Frosted Quartz Compacted (?)

Immature

WELL NUMBER

699-S7-34

DEPTH
(FT.)

157

TO

164

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
sand	<u>90</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
sand	<u>8</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>2</u>			

REMARKS

color Greyish BlackHCL -

Slightly Micaceous Frosted Quartz

Mature

DEPTH
(FT.)

164

TO

180

ROCK CLASSIFICATION

Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
sand	<u>5</u>	<u>vfs-ms</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
sand	<u>5</u>	<u>vfs-ms</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY	<u>90</u>			

REMARKS

color GreyHCL -

Slightly Micaceous Abundant Ash (?)

Immature

DEPTH
(FT.)

180

TO

188

ROCK CLASSIFICATION

slightly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	0			
	sand	8	vfs-vcrs	m	rnd
OTHER	> gravel	0			
	sand	80	vfs-vcrs	l	sb ang
SILT AND CLAY		12			

REMARKS

color Greyish Tan
HCL -

Slightly Micaceous Gypsiferous

Immature

DEPTH
(FT.)

188

TO

200

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	9	vfp-mp	l	sb rnd
	sand	14	vfs-vcrs	m	sb ang
OTHER	> gravel	22	vfp-fp	m	rnd
	sand	38	vfs-vcrs	l	sb ang
SILT AND CLAY		17			

REMARKS

color Greyish White
HCL -

Micaceous Gypsiferous

Immature

DEPTH (FT.) 200 TO 228 ROCK CLASSIFICATION slightly silty Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT >gravel	<u>1</u>	<u>-fp-</u>	<u>m</u>	<u>sb rnd</u>
sand	<u>25</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER >gravel	<u>0</u>			
sand	<u>64</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>10</u>			

REMARKS

color Tan
HCL +

Caliche Present Micaceous Lithified by silt, clay & CaCO₃

Immature

DEPTH (FT.) 228 TO 257 ROCK CLASSIFICATION silty Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT >gravel	<u>1</u>	<u>vfp-fp</u>	<u>l</u>	<u>rnd</u>
sand	<u>4</u>	<u>vfs-vcrs</u>	<u>l</u>	<u>rnd</u>
OTHER >gravel	<u>1</u>	<u>vfp-fp</u>	<u>l</u>	<u>rnd</u>
sand	<u>74</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY	<u>20</u>			

REMARKS

color Tan
HCL +

Caliche (sand & silt present) Slightly Micaceous

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

257

TO

268

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	76	vfp-mp	1	sb ang-v ang
sand	21	vfs-vcrs	m	sb ang
OTHER > gravel	0			
sand	2	vfs-vcrs	m	sb rnd
SILT AND CLAY	1			

REMARKS

color Greyish Black
HCL +

Caliche (pebbles & sand present)

Immature

DEPTH
(FT.)

268

TO

281

ROCK CLASSIFICATION

slightly silty gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	24	vfp-mp	1	sb ang
sand	38	vfs-vcrs	1	sb rnd
OTHER > gravel	0			
sand	23	vfs-vcrs	m	rnd
SILT AND CLAY	15			

REMARKS

color Blackish Grey
HCL +

Caliche (pebbles & sand present)

Slightly Micaceous

Immature

DEPTH (FT.) 281 TO 297 ROCK CLASSIFICATION silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	<u>3</u>	<u>vfp-mp</u>	<u>l</u>	<u>sb rnd-v ang</u>
	sand	<u>24</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER	> gravel	<u>0</u>			
	sand	<u>44</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY		<u>29</u>			

REMARKS

color Light Grey
HCL +

Slightly Micaceous

Immature

DEPTH (FT.) 297 TO 300 ROCK CLASSIFICATION slightly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	<u>0</u>			
	sand	<u>20</u>	<u>vfs-ms</u>	<u>l</u>	<u>sb rnd</u>
OTHER	> gravel	<u>0</u>			
	sand	<u>65</u>	<u>vfs-ms</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY		<u>15</u>			

REMARKS

color Whitish Grey
HCL +

Slightly Micaceous Reworked Ash Present (?)

Immature

WELL NUMBER

699-S7-34

DEPTH
(FT.)

300

TO

321

ROCK CLASSIFICATION

slightly silty Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	0			
sand	40	vfs-ms	1	sb rnd
OTHER > gravel	0			
sand	45	vfs-ms	m	rnd
SILT AND CLAY	15			

REMARKS

color Whitish Grey
HCL - (300'-301'), + (301'-321')

Slightly Micaceous Reworked Ash Present (?)

Immature

Total Drilled Depth reported as 321'

DEPTH
(FT.)

TO

ROCK CLASSIFICATION

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel				
sand				
OTHER > gravel				
sand				
SILT AND CLAY				

REMARKS

color
HCL

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

S 006100

E 003781

Altitude 431

Other Data used in
Interpretation

Driller's Log

Well 699-56-E4C

WELL NUMBER

699-S6-E4C

DEPTH
(FT.)

0

TO

15

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>1</u>	<u>vfp-fp</u>	<u>l</u>	<u>v ang</u>
sand	<u>73</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>1</u>	<u>vfp-fp</u>	<u>h</u>	<u>sb rnd</u>
sand	<u>24</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY	<u>1</u>			

REMARKS

color Greyish BlackHCL -

Unfrosted Quartz

Mature

DEPTH
(FT.)

15

TO

35

ROCK CLASSIFICATION

gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>14</u>	<u>vfp-mp</u>	<u>m</u>	<u>sb ang</u>
sand	<u>62</u>	<u>fs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>9</u>	<u>vfp-mp</u>	<u>m</u>	<u>sb rnd</u>
sand	<u>15</u>	<u>fs-vcrs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY	<u>0</u>			

REMARKS

color Greyish BlackHCL -

Unfrosted Quartz

Immature

WELL NUMBER

699-S6-E4C

DEPTH (FT.) 35 TO 60 ROCK CLASSIFICATION sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>25</u>	<u>vfp-mp</u>	<u>m</u>	<u>sb ang</u>
sand	<u>16</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>30</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
sand	<u>29</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY	<u>0</u>			

REMARKS

color Greyish Buff
HCL -

Caliche (present between 35' & 40')

Unfrosted Quartz

Immature

DEPTH (FT.) 60 TO 90 ROCK CLASSIFICATION silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>16</u>	<u>vfp-mp</u>	<u>m</u>	<u>sb rnd</u>
sand	<u>10</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>18</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
sand	<u>38</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>18</u>			

REMARKS

color Greyish Buff
HCL -

Slightly Micaceous

Unfrosted Quartz

Immature

WELL NUMBER

699-S6-E4C

DEPTH
(FT.)

90

TO

110

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	46	vfp-vcrp	m	rnd
	sand	10	vfs-vcrs	m	sb rnd
OTHER	>gravel	28	vfp-smcb	m	rnd
	sand	9	vfs-vcrs	m	sb rnd
SILT AND CLAY		7			

REMARKS

color Greyish Brown
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

110

TO

130

ROCK CLASSIFICATION

slightly silty
slightly gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	4	-vfp-	l	sb ang
	sand	31	vfs-vcrs	m	sb rnd
OTHER	>gravel	4	-vfp-	l	sb ang
	sand	48	vfs-vcrs	m	sb rnd
SILT AND CLAY		13			

REMARKS

color Greyish Buff
HCL -

Slightly Micaceous Unfrosted Quartz Lithified by silt & clay

Immature

DEPTH
(FT.)

130

TO

160

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	53	vfp-crp	m	sb rnd
	sand	10	vfs-vcrs	l	sb ang
OTHER	> gravel	27	vfp-crp	m	rnd
	sand	7	vfs-vcrs	m	sb rnd
SILT AND CLAY		3			

REMARKS

color Greyish Brown
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

160

TO

185

ROCK CLASSIFICATION

sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	0			
	sand	18	vfs-crs	l	sb ang
OTHER	> gravel	0			
	sand	12	vfs-crs	m	sb rnd
SILT AND CLAY		70			

REMARKS

color Greyish Brown
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

WELL NUMBER

699-S6-E4C

DEPTH
(FT.)

185

TO

205

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>30</u>	<u>vfp-crp</u>	<u>m</u>	<u>sb rnd</u>
sand	<u>21</u>	<u>vfs-vcrs</u>	<u>l</u>	<u>sb ang</u>
OTHER > gravel	<u>22</u>	<u>vfp-mp</u>	<u>m</u>	<u>sb rnd</u>
sand	<u>22</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY	<u>5</u>			

REMARKS

color Buff-Black--Greyish Buff
HCL -

Immature

DEPTH
(FT.)

205

TO

225

ROCK CLASSIFICATION

gravelly Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT ≥ gravel	<u>11</u>	<u>vfp-fp</u>	<u>l</u>	<u>ang</u>
sand	<u>7</u>	<u>vfs-vcrs</u>	<u>l</u>	<u>ang</u>
OTHER ≥ gravel	<u>1</u>	<u>vfp-fp</u>	<u>m</u>	<u>sb ang</u>
sand	<u>10</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>71</u>			

REMARKS

color Brownish Tan
HCL -

Unfrosted Quartz Lithified by silt & clay

Immature

WELL NUMBER

699-S6-E4C

DEPTH
(FT.)

225

TO

230

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
OTHER <u>></u> gravel	_____	_____	_____	_____
sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

230

TO

235

ROCK CLASSIFICATION

silty Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel	<u>60</u>	<u>vfp-crp</u>	<u>m</u>	<u>sb ang</u>
sand	<u>5</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
OTHER <u>></u> gravel	<u>10</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
sand	<u>5</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>20</u>			

REMARKS

color
HCLGreyish Brown-

Slightly Micaceous Unfrosted Quartz

Immature

WELL NUMBER

699-S6-E4C

DEPTH
(FT.)

235

TO

250

ROCK CLASSIFICATION

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel				
sand				
OTHER > gravel				
sand				
SILT AND CLAY				

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

250

TO

270

ROCK CLASSIFICATION

silty sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	49	vfp-smcb	m	rnd
sand	13	vfs-vcrs	m	ang
OTHER > gravel	5	vfp-crp	h	rnd
sand	21	vfs-vcrs	m	sb rnd
SILT AND CLAY	12			

REMARKS

color
HCL

Greyish Buff

Unfrosted Quartz

Immature

WELL NUMBER

699-S6-E4C

DEPTH
(FT.)

270

TO

300

ROCK CLASSIFICATION

gravelly silty Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	19	vfp-crp	m	rnd
sand	19	vfs-vcrs	m	ang
OTHER > gravel	5	vfp-crp	m	w rnd
sand	30	vfs-vcrs	m	sb rnd
SILT AND CLAY	27			

REMARKS

color Greyish Brown

HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

300

TO

325

ROCK CLASSIFICATION

Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT ≥ gravel	3	vfp-mp	m	rnd
sand	5	vfs-crs	l	ang
OTHER ≥ gravel	1	vfp-mp	m	w rnd
sand	14	vfs-crs	m	sb rnd
SILT AND CLAY	77			

REMARKS

color Brown

HCL -

Slightly Micaceous Unfrosted Quartz

Immature

WELL NUMBER

699-S6-E4C

DEPTH
(FT.)

325

TO

330

ROCK CLASSIFICATION

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel				
	sand				
OTHER	> gravel				
	sand				
SILT AND CLAY					

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

330

TO

345

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	58	vfp-smcb	m	w rnd
	sand	21	vfs-vcrs	l	ang
OTHER	> gravel	6	vfp-mp	m	w rnd
	sand	12	vfs-vcrs	m	sb rnd
SILT AND CLAY		3			

REMARKS

color
HCL

Grey-Yellowish Brown

-

Unfrosted Quartz

Immature

DEPTH
(FT.)

345

TO

370

ROCK CLASSIFICATION

slightly gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	7	vfp-smcb	m	sb rnd
	sand	27	vfs-vcrs	l	sb ang
OTHER	> gravel	0			
	sand	41	vfs-vcrs	h	sb rnd
SILT AND CLAY		25			

REMARKS

color Yellowish Brown
HCL -

Slightly Diatomaceous (between 365' & 370') Slightly Micaceous

Unfrosted Quartz Sample interval 355'-360' missing

Immature

DEPTH
(FT.)

370

TO

405

ROCK CLASSIFICATION

gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	23	vfp-smcb	m	sb rnd
	sand	18	vfs-vcrs	l	sb ang
OTHER	> gravel	6	vfp-mp	m	sb rnd
	sand	28	vfs-vcrs	h	sb rnd
SILT AND CLAY		25			

REMARKS

color Greyish Brown-Yellowish Tan
HCL -

Unfrosted Quartz Lithified by silt & clay (?)

Immature

WELL NUMBER

699-S6-E4C

DEPTH
(FT.)

405

TO

415

ROCK CLASSIFICATION

slightly silty gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>6</u>	<u>vfp-mp</u>	<u>m</u>	<u>sb rnd</u>
	sand	<u>60</u>	<u>vfs-vcrs</u>	<u>l</u>	<u>sb ang</u>
OTHER	>gravel	<u>8</u>	<u>vfp-crp</u>	<u>m</u>	<u>rnd</u>
	sand	<u>9</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY		<u>17</u>			

REMARKS

color Purplish Grey-Black
HCL -

Unfrosted Quartz

Immature

DEPTH
(FT.)

415

TO

425

ROCK CLASSIFICATION

sandy Gravel & Ash Flow (?)

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>67</u>	<u>vfp-crp</u>	<u>m</u>	<u>ang</u>
	sand	<u>24</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER	>gravel	<u>8</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
	sand	<u>0</u>			
SILT AND CLAY		<u>1</u>			

REMARKS

color Yellow-Yellowish Black
HCL -

Slightly Diatomaceous (between 420' & 425')

Unfrosted Quartz

Immature

WELL NUMBER

699-S6-E4C

DEPTH
(FT.)

425

TO

460

ROCK CLASSIFICATION

Basalt Flow

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel sand	_____	_____	_____	_____
OTHER > gravel sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color _____ Black with iron stain
HCL _____

Total Drilled Depth reported as 461'

DEPTH
(FT.)

TO

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel sand	_____	_____	_____	_____
OTHER > gravel sand	_____	_____	_____	_____
SILT AND CLAY	_____			

REMARKS

color _____
HCL _____

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

S 003000

E 012000

Altitude 396

Other Data used in
Interpretation

(1) Driller's Log

(2) E Logs

Well 699-S3-E12

greyish-black-greyish brown

greyish brown

brownish buff

DEPTH
(FT.)

0

TO

20

ROCK CLASSIFICATION

silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	40	vfs-crs	m	sb ang
OTHER	>gravel	0			
	sand	30	vfs-crs	m	sb rnd
SILT AND CLAY		30			

REMARKS

color Greyish Black-Greyish Brown
HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

20

TO

230

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	33	vfp-crp	m	sb rnd
	sand	19	vfs-vcrs	m	sb rnd
OTHER	>gravel	31	vfp-mp	m	sb rnd
	sand	9	vfs-vcrs	m	sb rnd
SILT AND CLAY		8			

REMARKS

color Greyish Brown
HCL + (20'-50'), - (50'-230')

Slightly Micaceous Unfrosted Quartz

Sample intervals 205'-215' & 220'-225' missing

Immature

WELL NUMBER

699-S3-E12

DEPTH
(FT.)

230

TO

255

ROCK CLASSIFICATION

silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	6	vfs-vcrs	1	sb ang
OTHER > gravel	0			
sand	60	vfs-vcrs	m	sb rnd
SILT AND CLAY	34			

REMARKS

color Brownish Buff
HCL -

Immature

DEPTH
(FT.)

255

TO

260

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel				
sand				
OTHER > gravel				
sand				
SILT AND CLAY				

REMARKS

color
HCL

Sample missing

Total Drilled Depth reported as 260'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 001420

W 017593

Altitude 536

Other Data used in
Interpretation

(1) Driller's Log

(2) E Log

50 -

100 -

150 -

200 -

250 -

300 -

350 -

UN

UN

N

FN

FN
FM

FM

FN

N

brownish black

greyish brown

greyish brown

greyish brown

brownish grey
brownish grey

brownish grey

brownish grey

greyish tan

TD 350

Well 699 - 1 - 18

WELL NUMBER

699-1-18

DEPTH (FT.) 0 TO 35 ROCK CLASSIFICATION slightly silty gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>1</u>	<u>vfp-fp</u>	<u>m</u>	<u>sb rnd</u>
sand	<u>50</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>21</u>	<u>-vfp-</u>	<u>m</u>	<u>rnd</u>
sand	<u>18</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY	<u>10</u>			

REMARKS

color Brownish Black
HCL +

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH (FT.) 35 TO 70 ROCK CLASSIFICATION slightly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>1</u>	<u>vfp-crp</u>	<u>m</u>	<u>rnd</u>
sand	<u>33</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>1</u>	<u>vfp-crp</u>	<u>m</u>	<u>rnd</u>
sand	<u>50</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY	<u>15</u>			

REMARKS

color Greyish Brown
HCL +

Caliche Present Slightly Micaceous Unfrosted Quartz

Immature

WELL NUMBER

699-1-18

DEPTH
(FT.)

70

TO

135

ROCK CLASSIFICATION

slightly silty gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	11	vfp-crp	m	rnd
sand	34	vfs-vcrs	m	sb rnd
OTHER > gravel	6	vfp-vcrp	m	rnd
sand	34	vfs-vcrs	m	sb rnd
SILT AND CLAY	15			

REMARKS

color Greyish Brown
HCL +

Caliche (present between 85' & 90')

Slightly Micaceous

Unfrosted Quartz

Immature

DEPTH
(FT.)

135

TO

215

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel				
sand				
OTHER > gravel				
sand				
SILT AND CLAY				

REMARKS

color
HCL

Sample sieved

Sample interval 185'-190' missing

DEPTH
(FT.)

215

TO

250

ROCK CLASSIFICATION

gravelly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	13	vfp-mp	m	rnd
sand	29	vfs-vcrs	m	sb rnd
OTHER > gravel	3	vfp-mp	m	rnd
sand	38	vfs-vcrs	h	sb rnd
SILT AND CLAY	17			

REMARKS

color Greyish Brown
HCL +

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

250

TO

255

ROCK CLASSIFICATION

silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	5	-vfp-	l	sb ang
sand	14	vfs-crs	m	sb rnd
OTHER > gravel	0			
sand	48	vfs-crs	h	sb rnd
SILT AND CLAY	33			

REMARKS

color Brownish Grey
HCL +

Slightly Micaceous Frosted Quartz

Immature

DEPTH (FT.) 255 TO 260 ROCK CLASSIFICATION gravelly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>20</u>	<u>vfp-crp</u>	<u>m</u>	<u>rnd</u>
sand	<u>15</u>	<u>vfs-crs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>0</u>			
sand	<u>45</u>	<u>vfs-crs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY	<u>20</u>			

REMARKS

color Brownish Grey
HCL +

Micaceous Frosted Quartz

Immature

DEPTH (FT.) 260 TO 320 ROCK CLASSIFICATION silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>5</u>	<u>vfp-fp</u>	<u>m</u>	<u>sb rnd</u>
sand	<u>17</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>0</u>			
sand	<u>48</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY	<u>30</u>			

REMARKS

color Brownish Grey
HCL +

Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

320

TO

325

ROCK CLASSIFICATION

gravelly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	20	vfp-crp	m	rnd
sand	5	vfs-ms	m	sb rnd
OTHER > gravel	5	vfp-mp	m	rnd
sand	50	vfs-ms	h	sb rnd
SILT AND CLAY	20			

REMARKS

color Brownish Grey
HCL +

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

325

TO

350

ROCK CLASSIFICATION

gravelly sandy Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	14	vfp-crp	m	rnd
sand	10	vfs-vcrs	m	sb rnd
OTHER > gravel	6	vfp-mp	m	rnd
sand	30	vfs-vcrs	m	sb rnd
SILT AND CLAY	40			

REMARKS

color Greyish Tan
HCL +

Slightly Micaceous Lithified by silt & clay

Immature

Total Drilled Depth reported as 350'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 001633

E 013573

Altitude 390

Other Data used in
Interpretation

(1) E Logs

(2) Driller's Log

greyish buff-grey

greyish tan

greyish buff

buff

buff grey

light grey

pink grey; GYPSUM (sand of gypsum grains?)

light pink; GYPSUM (sand of gypsum grains?)

light grey; GYPSUM (sand grains)

light grey; slightly DIATOMACEOUS; GYPSUM (20% sand grains)

reddish buff; GYPSUM (sand and pebble sized)

reddish grey-buff; GYPSUM (sand grains)

greyish buff

reddish grey-buff

buff grey

greyish buff

reddish brown-grey

reddish brown

brownish grey

greyish tan

greyish tan

black

NO SAMPLES
320-990
TD 990 ft.

DEPTH
(FT.)

0

TO

40

ROCK CLASSIFICATION

Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT <u>></u> gravel	71	vfp-crp	l	w rnd
sand	4	vfs-vcrs	m	rnd
OTHER <u>></u> gravel	18	vfp-crp	l	w rnd
sand	4	vfs-vcrs	m	sb rnd
SILT AND CLAY	3			

REMARKS

color Greyish Buff-Grey
HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

40

TO

45

ROCK CLASSIFICATION

silty sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT <u>></u> gravel	18	vfp-mp	l	rnd
sand	38	vfs-vcrs	l	sb rnd
OTHER <u>></u> gravel	18	vfp-mp	l	rnd
sand	18	vfs-vcrs	m	rnd
SILT AND CLAY	8			

REMARKS

color Greyish Tan
HCL +

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

45

TO

65

ROCK CLASSIFICATION

Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>41</u>	<u>vfp-crp</u>	<u>1</u>	<u>rnd</u>
	sand	<u>4</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER	>gravel	<u>40</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
	sand	<u>14</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY		<u>1</u>			

REMARKS

color Greyish Buff
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

65

TO

75

ROCK CLASSIFICATION

gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>11</u>	<u>vfp-crp</u>	<u>1</u>	<u>rnd</u>
	sand	<u>3</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER	>gravel	<u>2</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
	sand	<u>78</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY		<u>6</u>			

REMARKS

color Buff
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

75

TO

140

ROCK CLASSIFICATION

Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	71	vfp-crp	1	w rnd
	sand	2	fs-vcrs	1	sb rnd
OTHER	> gravel	13	vfp-crp	1	w rnd
	sand	14	fs-vcrs	m	sb rnd
SILT AND CLAY		0			

REMARKS

color
HCL

Buff Grey

-

Micaceous

Unfrosted Quartz

Immature

DEPTH
(FT.)

140

TO

145

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	20	vfp-mp	1	rnd
	sand	9	vfs-vcrs	1	sb rnd
OTHER	> gravel	20	vfp-mp	1	rnd
	sand	39	vfs-vcrs	1	sb ang
SILT AND CLAY		12			

REMARKS

color
HCL

Light Grey

-

Slightly Micaceous

Slightly Gypsiferous (? sand)

Unfrosted Quartz

Lithified by silt & clay

Immature

DEPTH
(FT.)

145

TO

155

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	3	vfs-ms	m	rnd
OTHER > gravel	0			
sand	95	vfs-ms	l	ang
SILT AND CLAY	2			

REMARKS

color
HCL

Pink-Grey

-

Slightly Micaceous

Abundant Gypsum (90%, sand)

Unfrosted Quartz

Compacted (?)

Mature

DEPTH
(FT.)

155

TO

160

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT ≥ gravel	0			
sand	2	vfs-ms	m	sb rnd
OTHER ≥ gravel	0			
sand	98	vfs-ms	l	ang
SILT AND CLAY	0			

REMARKS

color
HCL

Light Pink

-

Slightly Micaceous

Abundant Gypsum (90%, sand)

Frosted Quartz

Very Mature

DEPTH
(FT.)

160

TO

170

ROCK CLASSIFICATION

silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>1</u>	<u>vfp-fp</u>	<u>1</u>	<u>sb ang</u>
sand	<u>2</u>	<u>vfs-ms</u>	<u>1</u>	<u>sb rnd</u>
OTHER <u>> gravel</u>	<u>0</u>			
sand	<u>64</u>	<u>vfs-ms</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>33</u>			

REMARKS

color Light Grey
HCL -

Slightly Gypsiferous (sand) Frosted Quartz

Immature

DEPTH
(FT.)

170

TO

175

ROCK CLASSIFICATION

slightly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>0</u>			
sand	<u>3</u>	<u>vfs-ms</u>	<u>1</u>	<u>sb rnd</u>
OTHER <u>> gravel</u>	<u>0</u>			
sand	<u>85</u>	<u>vfs-ms</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY	<u>12</u>			

REMARKS

color Light Grey
HCL -

Slightly Diatomaceous (sand) Gypsiferous (20%, sand) Unfrosted Quartz

Immature

DEPTH
(FT.)

175

TO

180

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>35</u>	<u>vfp-crp</u>	<u>l</u>	<u>w rnd</u>
sand	<u>10</u>	<u>fs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>25</u>	<u>vfp-crp</u>	<u>l</u>	<u>w rnd</u>
sand	<u>30</u>	<u>fs-vcrs</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY	<u>0</u>			

REMARKS

color Reddish Buff
HCL -

Slightly Gypsiferous (pebbles & sand)

Unfrosted Quartz

Immature

DEPTH
(FT.)

180

TO

190

ROCK CLASSIFICATION

gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>11</u>	<u>vfp-crp</u>	<u>l</u>	<u>w rnd</u>
sand	<u>20</u>	<u>fs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>7</u>	<u>vfp-crp</u>	<u>l</u>	<u>w rnd</u>
sand	<u>62</u>	<u>fs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>0</u>			

REMARKS

color Reddish Grey- Buff
HCL -

Slightly Micaceous

Slightly Gypsiferous (sand)

Unfrosted Quartz

Immature

DEPTH
(FT.)

190

TO

195

ROCK CLASSIFICATION

Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT $\geq$ gravel	<u>80</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
sand	<u>0</u>			
OTHER $\geq$ gravel	<u>20</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
sand	<u>0</u>			
SILT AND CLAY	<u>0</u>			

REMARKS

color
HCLGreyish Buff-

Mature

DEPTH
(FT.)

195

TO

220

ROCK CLASSIFICATION

Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT $\geq$ gravel	<u>68</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
sand	<u>3</u>	<u>fs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER $\geq$ gravel	<u>16</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
sand	<u>13</u>	<u>fs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>0</u>			

REMARKS

color
HCLReddish Grey-Buff-

Slightly Micaceous

Unfrosted Quartz

Sample interval 200'-205'
missing

Immature

DEPTH
(FT.)

220

TO

225

ROCK CLASSIFICATION

Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	70	vfp-crp	1	w rnd
sand	0			
OTHER > gravel	30	vfp-crp	1	w rnd
sand	0			
SILT AND CLAY	0			

REMARKS

color Buff Grey
HCL -

Mature

DEPTH
(FT.)

225

TO

230

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	2	vfp-crp	1	sb rnd
sand	10	vfs-vcrs	m	sb rnd
OTHER > gravel	0			
sand	87	vfs-vcrs	m	sb rnd
SILT AND CLAY	1			

REMARKS

color Greyish Buff
HCL -

Slightly Micaceous Unfrosted Quartz

Submature

DEPTH
(FT.)

230

TO

280

ROCK CLASSIFICATION

silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>1</u>	<u>-mp-</u>	<u>1</u>	<u>rnd</u>
sand	<u>1</u>	<u>vfs-crs</u>	<u>m</u>	<u>sb rnd</u>
OTHER <u>> gravel</u>	<u>0</u>			
sand	<u>78</u>	<u>vfs-crs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY	<u>20</u>			

REMARKS

color Reddish Brown-Grey
HCL -

Micaceous

Immature

DEPTH
(FT.)

280

TO

290

ROCK CLASSIFICATION

gravelly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>30</u>	<u>vfp-mp</u>	<u>1</u>	<u>rnd</u>
sand	<u>4</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>sb rnd</u>
OTHER <u>> gravel</u>	<u>0</u>			
sand	<u>41</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY	<u>25</u>			

REMARKS

color Reddish Brown
HCL -

Slightly Diatomaceous (? pebbles)

Lithified by silt & clay

Immature

DEPTH
(FT.)

290

TO

305

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel	<u>60</u>	<u>vfp-crp</u>	<u>1</u>	<u>rnd</u>
sand	<u>32</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>sb ang</u>
OTHER <u>></u> gravel	<u>0</u>			
sand	<u>4</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY	<u>4</u>			

REMARKS

color Brownish GreyHCL -

Immature

DEPTH
(FT.)

305

TO

310

ROCK CLASSIFICATION

gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel	<u>30</u>	<u>vfp-crp</u>	<u>1</u>	<u>rnd</u>
sand	<u>35</u>	<u>crs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER <u>></u> gravel	<u>0</u>			
sand	<u>35</u>	<u>crs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY	<u>0</u>			

REMARKS

color Greyish TanHCL -

Immature

DEPTH
(FT.)

310

TO

315

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	6	vfs-crs	1	sb rnd
OTHER	>gravel	0			
	sand	85	vfs-crs	1	sb ang
SILT AND CLAY		9			

REMARKS

color Greyish Tan
HCL -

Micaceous Frosted Quartz

Mature

DEPTH
(FT.)

315

TO

320

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	55	vfp-crp	1	w rnd
	sand	34	ms-vcrs	m	sb rnd
OTHER	>gravel	5	vfp-mp	m	w rnd
	sand	6	ms-vcrs	1	rnd
SILT AND CLAY		0			

REMARKS

color Black
HCL -

Immature

Total Drilled Depth reported as 990'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

Well 699 - 2 - E19 DB-3

buff
greyish

greyish brown

brownish grey

brownish buff
greyish white
brownish buff

yellowish brown

brownish black

brownish black
greyish black; ASH FRAGMENTS

N 001962

E 018925

Altitude 383

Other Data used in
Interpretation

- (1) Driller's Log
- (2) Strips of Driller's
Log by Ledgerwood

DEPTH
(FT.)

0

TO

10

ROCK CLASSIFICATION

Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	2	vfp-crp	1	rnd
sand	3	fs-ms	m	sb rnd
OTHER > gravel	2	vfp-crp	1	w rnd
sand	93	fs-ms	1	sb rnd
SILT AND CLAY	0			

REMARKS

color Buff
HCL +

Micaceous Unfrosted Quartz

Submature

DEPTH
(FT.)

10

TO

20

ROCK CLASSIFICATION

Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT ≥ gravel	45	vfp-vcrp	1	w rnd
sand	3	vfs-vcrs	1	sb rnd
OTHER ≥ gravel	44	vfp-vcrp	1	w rnd
sand	7	vfs-vcrs	1	sb ang
SILT AND CLAY	1			

REMARKS

color Greyish Buff
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH (FT.) 20 TO 110 ROCK CLASSIFICATION Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	63	vfp-vcrp	l	w rnd
sand	4	ms-vcrs	m	sb rnd
OTHER > gravel	22	vfp-vcrp	l	w rnd
sand	10	ms-vcrs	m	sb rnd
SILT AND CLAY	1			

REMARKS

color Greyish Brown
HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH (FT.) 110 TO 135 ROCK CLASSIFICATION gravelly silty Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	6	vfp-mp	l	rnd
sand	3	vfs-crs	m	sb rnd
OTHER > gravel	6	vfp-mp	l	rnd
sand	50	vfs-crs	m	sb rnd
SILT AND CLAY	35			

REMARKS

color Brownish Grey
HCL + (110'-120'), - (120'-125'), + (125'-135')

Caliche (pebbles & sand present) Micaceous Frosted Quartz

Lithified by silt, clay & CaCO₃

Immature

DEPTH (FT.) 135 TO 170 ROCK CLASSIFICATION sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	57	vfp-vcrp	1	w rnd
sand	7	fs-vcrs	1	sb ang
OTHER > gravel	22	vfp-vcrp	1	w rnd
sand	14	fs-vcrs	m	sb rnd
SILT AND CLAY	0			

REMARKS

color Greyish Brown
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH (FT.) 170 TO 175 ROCK CLASSIFICATION slightly gravelly Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	5	vfp-mp	1	sb rnd
sand	18	fs-vcrs	1	sb ang
OTHER > gravel	5	vfp-mp	1	sb rnd
sand	67	fs-vcrs	m	sb rnd
SILT AND CLAY	5			

REMARKS

color Brownish Buff
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

175

TO

180

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>2</u>	<u>vfp-mp</u>	<u>m</u>	<u>w rnd</u>
sand	<u>3</u>	<u>fs-crs</u>	<u>1</u>	<u>sb ang</u>
OTHER > gravel	<u>2</u>	<u>vfp-mp</u>	<u>m</u>	<u>w rnd</u>
sand	<u>93</u>	<u>fs-crs</u>	<u>1</u>	<u>sb ang</u>
SILT AND CLAY	<u>0</u>			

REMARKS

color Greyish WhiteHCL -

Micaceous Unfrosted Quartz

Mature

DEPTH
(FT.)

180

TO

185

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>2</u>	<u>-mp-</u>	<u>1</u>	<u>rnd</u>
sand	<u>5</u>	<u>fs-vcrs</u>	<u>1</u>	<u>sb rnd</u>
OTHER > gravel	<u>0</u>			
sand	<u>85</u>	<u>fs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY	<u>8</u>			

REMARKS

color Brownish BuffHCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

185

TO

240

ROCK CLASSIFICATION

silty Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT ≥ gravel	1	vfp-fp	1	rnd
sand	2	vfs-ms	1	v ang
OTHER ≥ gravel	0			
sand	48	vfs-ms	h	rnd
SILT AND CLAY	49			

REMARKS

color Reddish Brown

HCL -

Micaceous

Immature

DEPTH
(FT.)

240

TO

245

ROCK CLASSIFICATION

silty sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT ≥ gravel	25	vfp-mp	1	rnd
sand	11	vfs-vcrs	1	v ang
OTHER ≥ gravel	20	vfp-mp	m	rnd
sand	19	vfs-vcrs	m	rnd
SILT AND CLAY	25			

REMARKS

color Yellowish Brown

HCL -

Slightly Micaceous Lithified by silt & clay

Immature

DEPTH
(FT.)

245

TO

275

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel	<u>58</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
sand	<u>8</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>sb ang</u>
OTHER <u>></u> gravel	<u>15</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
sand	<u>18</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>1</u>			

REMARKS

color Brownish BlackHCL -

Slightly Micaceous

Unfrosted Quartz

Lithified (?)

Immature

DEPTH
(FT.)

275

TO

280

ROCK CLASSIFICATION

Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>></u> gravel	<u>80</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
sand	<u>2</u>	<u>fs-vcrs</u>	<u>1</u>	<u>sb ang</u>
OTHER <u>></u> gravel	<u>15</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
sand	<u>3</u>	<u>fs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>0</u>			

REMARKS

color Brownish BlackHCL -

Slightly Micaceous

Unfrosted Quartz

Submature

WELL NUMBER

699-2-E19

DEPTH
(FT.)

280

TO

285

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT >gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
sand	<u>82</u>	<u>fs-crs</u>	<u>m</u>	<u>sb ang</u>
OTHER >gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
sand	<u>18</u>	<u>fs-crs</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY	<u>0</u>			

REMARKS

color Greyish Black
HCL -

Slightly Micaceous Ash (fragments present) Unfrosted Quartz

Very Mature

Total Drilled Depth reported as 288'

DEPTH
(FT.)

TO

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT >gravel	<u></u>	<u></u>	<u></u>	<u></u>
sand	<u></u>	<u></u>	<u></u>	<u></u>
OTHER >gravel	<u></u>	<u></u>	<u></u>	<u></u>
sand	<u></u>	<u></u>	<u></u>	<u></u>
SILT AND CLAY	<u></u>			

REMARKS

color
HCL

Depth
(ft.)

Graphic Log

Sample Description

greyish brown
greyish black (salt & pepper)

greyish black (salt & pepper)

grey buff

greyish buff

greyish buff

buff grey

buff grey

Plant Coordinates

N 001900

W 003325

Altitude 475

Other Data used in
Interpretation

(1) Descriptive Log

from Newcomb, et al

1972, p. 61-62

Well 699 - 2 - 3

DEPTH
(FT.)

0

TO

8

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	40	vfs-ms	1	sb rnd
OTHER > gravel	0			
sand	59	vfs-ms	m	rnd
SILT AND CLAY	1			

REMARKS

color Greyish Brown

HCL -

Slightly Micaceous Unfrosted Quartz

Mature

DEPTH
(FT.)

8

TO

15

ROCK CLASSIFICATION

gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	17	vfp-crp	m	sb rnd
sand	60	ms-vcrs	m	sb rnd
OTHER > gravel	8	vfp-mp	m	rnd
sand	15	ms-vcrs	m	sb rnd
SILT AND CLAY	0			

REMARKS

color Greyish Black ("salt & pepper")

HCL -

Unfrosted Quartz

Immature

DEPTH
(FT.)

15

TO

56

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	1	fp-mp	m	sb rnd
	sand	54	ms-crs	m	sb rnd
OTHER	> gravel	1	-fp-	m	rnd
	sand	44	ms-crs	m	sb rnd
SILT AND CLAY		0			

REMARKS

color Greyish Black ("salt & pepper")

HCL -

Unfrosted Quartz

Mature

DEPTH
(FT.)

56

TO

84

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	36	vfp-crp	l	sb rnd
	sand	21	vfs-vcrs	m	sb rnd
OTHER	> gravel	28	vfp-crp	l	w rnd
	sand	14	vfs-vcrs	m	sb rnd
SILT AND CLAY		1			

REMARKS

color Grey-Buffer

HCL -

Unfrosted Quartz

Immature

DEPTH
(FT.)

84

TO

104

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>25</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
	sand	<u>11</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER	>gravel	<u>30</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
	sand	<u>33</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY		<u>1</u>			

REMARKS

color Greyish BuffHCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

104

TO

127

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>16</u>	<u>vfp-crp</u>	<u>1</u>	<u>rnd</u>
	sand	<u>7</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>sb rnd</u>
OTHER	>gravel	<u>17</u>	<u>vfp-crp</u>	<u>1</u>	<u>rnd</u>
	sand	<u>59</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY		<u>1</u>			

REMARKS

color Greyish BuffHCL -

Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

127

TO

144

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	26	vfp-crp	l	rnd
	sand	16	vfs-vcrs	m	sb rnd
OTHER	>gravel	27	vfp-crp	m	rnd
	sand	30	vfs-vcrs	m	sb rnd
SILT AND CLAY		1			

REMARKS

color Buff Grey
HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

144

TO

147.5

ROCK CLASSIFICATION

Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	50	vfp-crp	l	rnd
	sand	0			
OTHER	>gravel	50	vfp-crp	m	rnd
	sand	0			
SILT AND CLAY		0			

REMARKS

color Buff Grey
HCL -

Mature

Total Drilled Depth reported as 147.5'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

Well 699 - 2 - 3

brownish buff

buff grey (salt & pepper)

buff grey (salt & pepper)

greyish buff

whitish buff

greyish buff
greyish buff

Altitude 475

Other Data used in
Interpretation

DEPTH (FT.) 0 TO 8 ROCK CLASSIFICATION Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	0			
sand	20	vfs-vcrs	m	sb ang
OTHER > gravel	0			
sand	80	vfs-vcrs	m	sb ang
SILT AND CLAY	0			

REMARKS

color Brownish Buff
HCL -

Slightly Micaceous Frosted Quartz #2 = duplicate description

Mature

DEPTH (FT.) 8 TO 56 ROCK CLASSIFICATION Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	1	vfp-crp	m	w rnd
sand	54	vfs-crs	m	sb rnd
OTHER > gravel	1	vfp-mp	m	w rnd
sand	44	vfs-crs	m	sb rnd
SILT AND CLAY	0			

REMARKS

color Buff Grey ("salt & pepper")
HCL -

Slightly Micaceous Unfrosted Quartz

Submature

DEPTH
(FT.)

56

TO

84

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	32	vfp-vcrp	l	rnd
	sand	25	vfs-vcrs	m	rnd
OTHER	>gravel	29	vfp-vcrp	m	w rnd
	sand	13	vfs-vcrs	m	sb rnd
SILT AND CLAY		1			

REMARKS

color Buff Grey ("salt & pepper")

HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

84

TO

92

ROCK CLASSIFICATION

gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	14	vfp-crp	l	w rnd
	sand	15	vfs-vcrs	m	sb rnd
OTHER	>gravel	13	vfp-crp	l	w rnd
	sand	57	vfs-vcrs	m	sb ang
SILT AND CLAY		1			

REMARKS

color Greyish Buff

HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH (FT.) 92 TO 136 ROCK CLASSIFICATION sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>26</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
sand	<u>4</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>25</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
sand	<u>44</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>v ang</u>
SILT AND CLAY	<u>1</u>			

REMARKS

color Whitish Buff
 HCL - (92'-96'), + (96'-108'), - (108'-136')

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH (FT.) 136 TO 143 ROCK CLASSIFICATION gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>16</u>	<u>vfp-crp</u>	<u>1</u>	<u>rnd</u>
sand	<u>6</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>11</u>	<u>vfp-crp</u>	<u>m</u>	<u>w rnd</u>
sand	<u>66</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>1</u>			

REMARKS

color Greyish Buff
 HCL -

Slightly Micaceous Frosted Quartz

Immature

WELL NUMBER

99-2-3 (#2)

DEPTH
(FT.)

143

TO

147.5

ROCK CLASSIFICATION

Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	60	vfp-crp	l	rnd
sand	3	vfs-vcrs	m	sb rnd
OTHER > gravel	30	vfp-crp	m	rnd
sand	5	vfs-vcrs	m	sb ang
SILT AND CLAY	2			

REMARKS

color Greyish Buff
HCL -

Slightly Micaceous

Immature

Total Drilled Depth reported as 147.5'

DEPTH
(FT.)

TO

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel				
sand				
OTHER > gravel				
sand				
SILT AND CLAY				

REMARKS

color
HCL

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 001813

W 032823

Altitude 534

Other Data used in
Interpretation

(1) Driller's Log

(2) E-Log

Well 699 - 2 - 33

WELL NUMBER

699-2-33

DEPTH
(FT.)

0

TO

10

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT >gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
sand	<u>37</u>	<u>vfs-crs</u>	<u>m</u>	<u>sb ang</u>
OTHER >gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
sand	<u>60</u>	<u>vfs-crs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY	<u>3</u>			

REMARKS

color Brownish Grey
HCL +

Slightly Micaceous Frosted Quartz

Submature

DEPTH
(FT.)

10

TO

20

ROCK CLASSIFICATION

gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT >gravel	<u>8</u>	<u>vfp-fp</u>	<u>m</u>	<u>sb rnd</u>
sand	<u>38</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER >gravel	<u>8</u>	<u>vfp-fp</u>	<u>m</u>	<u>sb rnd</u>
sand	<u>42</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY	<u>4</u>			

REMARKS

color Brownish Grey
HCL +

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

20

TO

30

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	0			
	sand	32	vfs-vcrs	l	rnd
OTHER	> gravel	0			
	sand	65	vfs-vcrs	m	rnd
SILT AND CLAY		3			

REMARKS

color Greyish Buff
HCL +

Slightly Micaceous Frosted Quartz

Submature

DEPTH
(FT.)

30

TO

60

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	22	vfp-mp	m	rnd
	sand	29	vfs-vcrs	m	rnd
OTHER	> gravel	10	vfp-crp	l	rnd
	sand	38	vfs-vcrs	m	sb rnd
SILT AND CLAY		1			

REMARKS

color Buff Grey
HCL +

Slightly Micaceous

Immature

WELL NUMBER

699-2-33

DEPTH
(FT.)

60

TO

100

ROCK CLASSIFICATION

slightly gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	5	vfp-mp	m	sb rnd
	sand	23	vfs-vcrs	l	rnd
OTHER	> gravel	2	vfp-mp	m	sb rnd
	sand	62	vfs-vcrs	m	rnd
SILT AND CLAY		8			

REMARKS

color Greyish Tan

HCL +

Slightly Micaceous Frosted Quartz

Immature .

DEPTH
(FT.)

100

TO

115

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	1	-fp-	m	rnd
	sand	6	vfs-vcrs	l	rnd
OTHER	> gravel	0			
	sand	92	vfs-vcrs	m	sb rnd
SILT AND CLAY		1			

REMARKS

color Greyish Buff

HCL +

Slightly Micaceous Frosted Quartz

Submature

DEPTH
(FT.)

115

TO

135

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	45	vfp-crp	m	rnd
sand	4	vfs-vcrs	m	rnd
OTHER > gravel	30	vfp-crp	m	w rnd
sand	20	vfs-vcrs	m	sb rnd
SILT AND CLAY	1			

REMARKS

color Greyish Buff
HCL +

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

135

TO

190

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	53	vfp-mp	l	rnd
sand	8	vfs-vcrs	m	rnd
OTHER > gravel	16	vfp-mp	l	rnd
sand	22	vfs-vcrs	m	sb rnd
SILT AND CLAY	1			

REMARKS

color Buff Grey
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

190

TO

220

ROCK CLASSIFICATION

sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	<u>> gravel</u>	<u>3</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
	<u>sand</u>	<u>3</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER	<u>> gravel</u>	<u>2</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
	<u>sand</u>	<u>33</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY		<u>59</u>			

REMARKS

color Tannish Brown
HCL +

Slightly Micaceous Frosted Quartz Lithified by silt, clay & CaCO₃
Immature

DEPTH
(FT.)

220

TO

235

ROCK CLASSIFICATION

slightly gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	<u>> gravel</u>	<u>6</u>	<u>vfp-fp</u>	<u>l</u>	<u>rnd</u>
	<u>sand</u>	<u>5</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER	<u>> gravel</u>	<u>3</u>	<u>vfp-mp</u>	<u>l</u>	<u>rnd</u>
	<u>sand</u>	<u>83</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY		<u>3</u>			

REMARKS

color Brownish Grey
HCL +

Slightly Micaceous Unfrosted Quartz
Immature

WELL NUMBER

699-2-33

DEPTH (FT.) 235 TO 240 ROCK CLASSIFICATION Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>0</u>			
sand	<u>3</u>	<u>fs-ms</u>	<u>1</u>	<u>rnd</u>
OTHER <u>> gravel</u>	<u>0</u>			
sand	<u>96</u>	<u>fs-ms</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY	<u>1</u>			

REMARKS

color Buff
HCL -

Slightly Micaceous Unfrosted Quartz

Mature

DEPTH (FT.) 240 TO 265 ROCK CLASSIFICATION slightly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>2</u>	<u>vfp-mp</u>	<u>1</u>	<u>rnd</u>
sand	<u>5</u>	<u>vfs-ms</u>	<u>m</u>	<u>rnd</u>
OTHER <u>> gravel</u>	<u>1</u>	<u>vfp-crp</u>	<u>1</u>	<u>rnd</u>
sand	<u>78</u>	<u>vfs-ms</u>	<u>m</u>	<u>ang</u>
SILT AND CLAY	<u>14</u>			

REMARKS

color Brownish Grey
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

WELL NUMBER

699-2-33

DEPTH
(FT.)

265

TO

300

ROCK CLASSIFICATION

slightly gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>6</u>	<u>vfp-mp</u>	<u>1</u>	<u>rnd</u>
	sand	<u>2</u>	<u>vfs-ms</u>	<u>1</u>	<u>rnd</u>
OTHER	>gravel	<u>2</u>	<u>vfp-mp</u>	<u>1</u>	<u>rnd</u>
	sand	<u>86</u>	<u>vfs-ms</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY		<u>4</u>			

REMARKS

color	<u>Brownish Buff</u>
HCL	<u>+</u>

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

300

TO

305

ROCK CLASSIFICATION

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	sand	<u> </u>	<u> </u>	<u> </u>	<u> </u>
OTHER	>gravel	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	sand	<u> </u>	<u> </u>	<u> </u>	<u> </u>
SILT AND CLAY		<u> </u>			

REMARKS

color	<u> </u>
HCL	<u> </u>

Sample missing

WELL NUMBER

699-2-33

DEPTH (FT.) 305 TO 335 ROCK CLASSIFICATION silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>38</u>	<u>vfp-crp</u>	<u>l</u>	<u>rnd</u>
	sand	<u>9</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER	>gravel	<u>2</u>	<u>vfp-mp</u>	<u>m</u>	<u>w rnd</u>
	sand	<u>45</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>ang</u>
SILT AND CLAY		<u>6</u>			

REMARKS

color Buff Brown
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH (FT.) 335 TO 345 ROCK CLASSIFICATION sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>50</u>	<u>vfp-crp</u>	<u>l</u>	<u>rnd</u>
	sand	<u>15</u>	<u>vfs-vcrs</u>	<u>l</u>	<u>sb rnd</u>
OTHER	>gravel	<u>5</u>	<u>vfp-mp</u>	<u>m</u>	<u>w rnd</u>
	sand	<u>27</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY		<u>3</u>			

REMARKS

color Greyish Brown
HCL -

Slightly Micaceous Frosted Quartz

Immature

WELL NUMBER

699-2-33

DEPTH
(FT.)

345

TO

360

ROCK CLASSIFICATION

slightly gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	8	vfp-crp	1	rnd
	sand	9	vfs-vcrs	1	sb rnd
OTHER	> gravel	0			
	sand	51	vfs-vcrs	m	sb ang
SILT AND CLAY		32			

REMARKS

color Buff Brown
HCL -

Slightly Micaceous Unfrosted Quartz Compacted

Immature

DEPTH
(FT.)

360

TO

365

ROCK CLASSIFICATION

gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	30	vfp-crp	1	rnd
	sand	10	vfs-vcrs	m	rnd
OTHER	> gravel	0			
	sand	32	vfs-vcrs	m	ang
SILT AND CLAY		28			

REMARKS

color Greyish Brown
HCL -

Slightly Micaceous Compacted

Immature

WELL NUMBER

699-2-33

DEPTH
(FT.)

365

TO

375

ROCK CLASSIFICATION

sandy Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>5</u>	<u>vfp-mp</u>	<u>m</u>	<u>sb rnd</u>
sand	<u>8</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER > gravel	<u>0</u>			
sand	<u>35</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>ang</u>
SILT AND CLAY	<u>52</u>			

REMARKS

color Buff BrownHCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

375

TO

380

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u> </u>	<u> </u>	<u> </u>	<u> </u>
sand	<u> </u>	<u> </u>	<u> </u>	<u> </u>
OTHER > gravel	<u> </u>	<u> </u>	<u> </u>	<u> </u>
sand	<u> </u>	<u> </u>	<u> </u>	<u> </u>
SILT AND CLAY	<u> </u>			

REMARKS

color HCL

Sample missing

DEPTH
(FT.)

380

TO

425

ROCK CLASSIFICATION

gravelly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	20	vfp-mp	m	sb rnd
sand	12	vfs-vcrs	1	rnd
OTHER > gravel	0			
sand	48	vfs-vcrs	m	ang
SILT AND CLAY	20			

REMARKS

color Greyish Brown
HCL -

Slightly Diatomaceous (between 385' & 400')

Slightly Micaceous

Unfrosted Quartz

Immature

DEPTH
(FT.)

425

TO

430

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	63	vfp-mp	1	sb rnd
sand	7	vfs-vcrs	m	rnd
OTHER > gravel	7	vfp-mp	m	rnd
sand	22	vfs-vcrs	m	ang
SILT AND CLAY	1			

REMARKS

color Greyish Brown
HCL -

Slightly Micaceous

Unfrosted Quartz

Immature

DEPTH
(FT.)

430

TO

450

ROCK CLASSIFICATION

Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	75	vfp-mp	l	sb rnd
	sand	2	vfs-vcrs	m	sb rnd
OTHER	> gravel	10	vfp-crp	m	rnd
	sand	12	vfs-vcrs	m	sb ang
SILT AND CLAY		1			

REMARKS

color Brownish Grey
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

450

TO

460

ROCK CLASSIFICATION

gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	12	vfp-fp	m	sb rnd
	sand	77	fs-crs	m	sb ang
OTHER	> gravel	0			
	sand	10	fs-crs	m	ang
SILT AND CLAY		1			

REMARKS

color Black
HCL -

Unfrosted Quartz Slightly Micaceous

Immature

WELL NUMBER

699-2-33

DEPTH
(FT.)

460

TO

466

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT >gravel sand	_____ _____	_____ _____	_____ _____	_____ _____
OTHER >gravel sand	_____ _____	_____ _____	_____ _____	_____ _____
SILT AND CLAY	_____			

REMARKS

color
HCL

Sample missing

Total Drilled Depth reported as 466'

DEPTH
(FT.)

TO

ROCK CLASSIFICATION

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT >gravel sand	_____ _____	_____ _____	_____ _____	_____ _____
OTHER >gravel sand	_____ _____	_____ _____	_____ _____	_____ _____
SILT AND CLAY	_____			

REMARKS

color
HCL

Location of wells for which sample suites are described.