MASTER

SAMPLE DESCRIPTIONS AND SUMMARY LOGS
OF SELECTED WELLS
WITHIN THE HANFORD RESERVATION

(Four Volumes)

VOLUME IV

W. K. Summers
R. T. Hanson

W. K. Summers and Associates
Consultants

January 1977

NOTICE

This report was prepared as an account of work sponsored by the United States Government. Neither the United States nor the United States Department of Energy, nor any of their employees, nor any of their contractors, subcontractors, or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness or usefulness of any information, apparatus, product or process disclosed, or represents that its use would not infringe privately owned rights.

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.

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency Thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

DISCLAIMER

Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 058859

W 057763

Altitude 496

Other Data used in
Interpretation

(1) Driller's Log

(2) E - Logs

Well 699 - 59 - 58

brownish tan

greyish brown

brownish grey
greyish white
greyish brown

brownish grey

brownish grey

brownish grey
brownish grey

greyish tan

greyish black

DEPTH
(FT.)

0

TO

10

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	80	vfp-vcrp	1	w rnd
sand	8	vfs-vcrs	1	sb rnd
OTHER > gravel	0			
sand	9	vfs-vcrs	m	rnd
SILT AND CLAY	3			

REMARKS

color Brownish Tan

HCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

10

TO

30

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	78	vfp-vcrp	1	rnd
sand	10	vfs-vcrs	1	sb rnd
OTHER > gravel	1	vfp-crps	m	w rnd
sand	6	vfs-vcrs	m	rnd
SILT AND CLAY	5			

REMARKS

color Greyish Brown

HCL -

Slightly Micaceous Compacted by silt & clay

Immature

DEPTH
(FT.)

30

TO

35

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	80	vfp-crp	1	w rnd
	sand	9	vfs-vcrs	1	sb rnd
OTHER	>gravel	0			
	sand	7	vfs-vcrs	1	rnd
SILT AND CLAY		4			

REMARKS

color Brownish Grey
HCL +

Slightly Micaceous Lithified by silt & clay

Immature

DEPTH
(FT.)

35

TO

40

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	18	vfp-mp	1	rnd
	sand	36	vfs-vcrs	1	sb ang
OTHER	>gravel	17	vfp-mp	1	rnd
	sand	8	vfs-vcrs	1	sb rnd
SILT AND CLAY		21			

REMARKS

color Greyish White
HCL -

Lithified by silt & clay

Immature

DEPTH
(FT.)

40

TO

50

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	18	vfp-mp	1	rnd
	sand	45	vfs-vcrs	1	sb rnd
OTHER	> gravel	17	vfp-mp	1	rnd
	sand	7	vfs-vcrs	m	sb rnd
SILT AND CLAY		13			

REMARKS

color Greyish Brown
HCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

50

TO

65

ROCK CLASSIFICATION

Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	1	vfp-fp	m	sb rnd
	sand	9	vfs-ms	1	sb rnd
OTHER	> gravel	1	vfp-fp	m	sb rnd
	sand	9	vfs-ms	m	sb rnd
SILT AND CLAY		80			

REMARKS

color Brownish Grey
HCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

65

TO

75

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>36</u>	<u>vfp-crp</u>	<u>1</u>	<u>rnd</u>
sand	<u>9</u>	<u>vfs-crs</u>	<u>1</u>	<u>sb rnd</u>
OTHER > gravel	<u>36</u>	<u>vfp-crp</u>	<u>1</u>	<u>rnd</u>
sand	<u>11</u>	<u>vfs-crs</u>	<u>1</u>	<u>rnd</u>
SILT AND CLAY	<u>8</u>			

REMARKS

color Brownish GreyHCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

75

TO

80

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>58</u>	<u>vfp-crp</u>	<u>1</u>	<u>sb rnd</u>
sand	<u>16</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>sb rnd</u>
OTHER > gravel	<u>7</u>	<u>vfp-crp</u>	<u>1</u>	<u>w rnd</u>
sand	<u>12</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>7</u>			

REMARKS

color Brownish GreyHCL -

Slightly Micaceous

Immature

WELL NUMBER

699-59-58

DEPTH
(FT.)

80

TO

85

ROCK CLASSIFICATION

silty Sand

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

REMARKS

color Brownish Grey
HCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

85

TO

104

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	55	vfs-crs	l	sb rnd
OTHER	>gravel	0			
	sand	40	vfs-crs	m	sb rnd
SILT AND CLAY		5			

REMARKS

color Greyish Tan
HCL -

Micaceous Frosted Quartz

Mature

WELL NUMBER

699-59-58

DEPTH
(FT.)

104

TO

110

ROCK CLASSIFICATION

Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	2	vfp-mp	1	rnd
sand	45	vfs-crs	1	sb rnd
OTHER > gravel	0			
sand	50	vfs-crs	m	sb rnd
SILT AND CLAY	3			

REMARKS

color Greyish Black ("salt & pepper")
HCL -

Slightly Micaceous Frosted Quartz

Mature

Total Drilled Depth reported as 110'

DEPTH
(FT.)

TO

ROCK CLASSIFICATION

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

REMARKS

color
HCL

WELL NUMBER

699-59-80B

DEPTH
(FT.)

0

TO

10

ROCK CLASSIFICATION

silty Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	30	vfp-crp	m	sb rnd
	sand	12	vfs-vcrs	l	sb rnd
OTHER	> gravel	10	vfp-crp	m	rnd
	sand	18	vfs-vcrs	m	sb rnd
SILT AND CLAY		30			

REMARKS

color Greyish Tan

HCL +

Slightly Micaceous

Immature

DEPTH
(FT.)

10

TO

25

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

699-59-80B

DEPTH
(FT.)

25

TO

30

ROCK CLASSIFICATION

slightly silty Sand

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

REMARKS

color
HCL

Dark Grey

-

Slightly Micaceous

Frosted Quartz

Immature

DEPTH
(FT.)

30

TO

35

ROCK CLASSIFICATION

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

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

35

TO

55

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>60</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>sb rnd</u>
OTHER >gravel	<u>8</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
sand	<u>13</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>sb rnd</u>
SILT AND CLAY	<u>2</u>			

REMARKS

color Greyish Black
HCL -

Sample interval 40'-50' missing

Immature

DEPTH
(FT.)

55

TO

60

ROCK CLASSIFICATION

slightly gravelly Sand

	<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>rnd</u>
sand	<u>61</u>	<u>vfs-crs</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>28</u>	<u>vfs-crs</u>	<u>1</u>	<u>sb rnd</u>
SILT AND CLAY	<u>5</u>			

REMARKS

color Greyish Black
HCL -

Immature

DEPTH
(FT.)

60 TO 70

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	70	vfp-mp	m	rnd
	sand	14	vfs-vcrs	l	sb rnd
OTHER	> gravel	10	vfp-mp	m	rnd
	sand	5	vfs-vcrs	m	sb rnd
SILT AND CLAY		1			

REMARKS

color Greyish Brown
HCL -

Frosted Quartz

Immature

DEPTH
(FT.)

70 TO 75

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	1	-vfp-	1	rnd
	sand	16	vfs-ms	1	sb rnd
OTHER	> gravel	1	-vfp-	1	rnd
	sand	78	vfs-ms	1	sb rnd
SILT AND CLAY		4			

REMARKS

color Brownish Buff
HCL -

Slightly Micaceous Frosted Quartz

Mature

WELL NUMBER

699-59-80B

DEPTH
(FT.)

75

TO

85

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	25	vfp-mp	m	rnd
	sand	20	vfs-vcrs	l	sb rnd
OTHER	>gravel	25	vfp-mp	m	rnd
	sand	25	vfs-vcrs	l	rnd
SILT AND CLAY		5			

REMARKS

color Brownish Buff
HCL +

Slightly Micaceous

Immature

DEPTH
(FT.)

85

TO

95

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	20	vfp-mp	m	rnd
	sand	11	vfs-vcrs	m	sb rnd
OTHER	>gravel	19	vfp-mp	m	rnd
	sand	46	vfs-vcrs	m	rnd
SILT AND CLAY		4			

REMARKS

color Brownish Buff
HCL -

Slightly Micaceous Frosted Quartz

Immature

WELL NUMBER

699-59-80B

DEPTH
(FT.)

95

TO

105

ROCK CLASSIFICATION

gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>15</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
	sand	<u>19</u>	<u>vfs-vcrs</u>	<u>l</u>	<u>sb rnd</u>
OTHER	>gravel	<u>15</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
	sand	<u>50</u>	<u>vfs-vcrs</u>	<u>l</u>	<u>rnd</u>
SILT AND CLAY		<u>1</u>			

REMARKS

color Greyish Buff
HCL -

Frosted Quartz

Immature

DEPTH
(FT.)

105

TO

125

ROCK CLASSIFICATION

Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	45	vfp-crp	m	rnd
	sand	5	vfs-vcrs	l	sb rnd
OTHER	>gravel	37	vfp-crp	m	rnd
	sand	11	vfs-vcrs	l	sb rnd
SILT AND CLAY		2			

REMARKS

color Greyish Buff
HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

125

TO

135

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	36	vfp-crp	1	rnd
sand	4	vfs-vcrs	1	sb rnd
OTHER > gravel	30	vfp-crp	m	rnd
sand	27	vfs-vcrs	m	sb rnd
SILT AND CLAY	3			

REMARKS

color Greyish BrownHCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

135

TO

165

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	23	vfp-crp	m	rnd
sand	14	vfs-vcrs	1	sb ang
OTHER > gravel	21	vfp-crp	1	rnd
sand	36	vfs-vcrs	m	sb rnd
SILT AND CLAY	6			

REMARKS

color Greyish BrownHCL - (135'-155'), + (155'-165')

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

165

TO

170

ROCK CLASSIFICATION

silty Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>>gravel</u>	<u>40</u>	<u>vfp-mp</u>	<u>m</u>	<u>w rnd</u>
<u>sand</u>	<u>7</u>	<u>vfs-vcrs</u>	<u>l</u>	<u>sb rnd</u>
OTHER <u>>gravel</u>	<u>15</u>	<u>vfp-mp</u>	<u>m</u>	<u>w rnd</u>
<u>sand</u>	<u>14</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY	<u>24</u>			

REMARKS

color Greyish TanHCL +Frosted Quartz Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

170

TO

173

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-mp</u>	<u>l</u>	<u>rnd</u>
<u>sand</u>	<u>11</u>	<u>vfs-vcrs</u>	<u>l</u>	<u>sb rnd</u>
OTHER <u>>gravel</u>	<u>10</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
<u>sand</u>	<u>19</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>rnd</u>
SILT AND CLAY	<u>25</u>			

REMARKS

color Whitish TanHCL -

Slightly Micaceous Compacted by silt & clay

Immature

DEPTH
(FT.)

173

TO

175

ROCK CLASSIFICATION

slightly gravelly sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	4	vfp-mp	m	sb rnd
	sand	5	vfs-vcrs	l	rnd
OTHER	>gravel	5	vfp-mp	m	sb rnd
	sand	36	vfs-vcrs	h	rnd
SILT AND CLAY		50			

REMARKS

color Greyish White
HCL +

Abundant Caliche (15% fragments) Slightly Micaceous

Unfrosted Quartz Compacted by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

175

TO

180

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	40	vfp-fp	l	sb rnd
	sand	28	vfs-vcrs	l	sb ang
OTHER	>gravel	3	-vfp-	m	rnd
	sand	23	vfs-vcrs	l	rnd
SILT AND CLAY		6			

REMARKS

color Greyish Black
HCL +

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

Immature

WELL NUMBER

699-59-80B

DEPTH
(FT.)

180 TO 185

ROCK CLASSIFICATION

slightly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	3	-fp-	1	rnd
sand	59	vfs-ms	1	sb ang
OTHER > gravel	0			
sand	19	vfs-ms	1	rnd
SILT AND CLAY	19			

REMARKS

color Dark Grey
HCL +

Caliche (pebbles & sand present)

Immature

DEPTH
(FT.)

185 TO 190

ROCK CLASSIFICATION

Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	92	vfp-mp	1	sb ang-sb rnd
sand	6	vfs-vcrs	1	sb rnd-ang
OTHER > gravel	0			
sand	1	vfs-vcrs	h	sb rnd
SILT AND CLAY	1			

REMARKS

color Blackish Grey
HCL +

Caliche (sand & fragments present)

Submature

WELL NUMBER

699-59-80B

DEPTH
(FT.)

190

TO

195

ROCK CLASSIFICATION

slightly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	80	vfs-ms	1	sb rnd-ang
OTHER > gravel	0			
sand	10	vfs-ms	1	sb rnd
SILT AND CLAY	10			

REMARKS

color Black
HCL -

Immature

Total Drilled Depth reported as 198'

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

Well 699-60-32

N 060390

W 032032

Altitude 423

Other Data used in
Interpretation

Driller's Log

blackish grey
blackish grey
brownish grey
grey

brownish grey

greyish tan
brown

DEPTH
(FT.)

0

TO

5

ROCK CLASSIFICATION

slightly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	2	-fp-	m	sb rnd
	sand	48	vfs-vcrs	m	rnd
OTHER	> gravel	2	-fp-	m	sb rnd
	sand	34	vfs-vcrs	l	rnd
SILT AND CLAY		14			

REMARKS

color Blackish GreyHCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

5

TO

15

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	41	vfs-vcrs	l	sb rnd
OTHER	> gravel	7	vfp-crp	l	w rnd
	sand	32	vfs-vcrs	l	sb rnd
SILT AND CLAY		6			

REMARKS

color Blackish GreyHCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

15

TO

25

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	21	vfp-crp	1	w rnd
	sand	29	vfs-vcrs	1	sb rnd
OTHER	> gravel	21	vfp-crp	1	w rnd
	sand	22	vfs-vcrs	1	rnd
SILT AND CLAY		7			

REMARKS

color Brownish Grey

HCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

25

TO

35

ROCK CLASSIFICATION

slightly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	2	vfp-fp	m	sb rnd
	sand	48	vfs-crs	m	rnd
OTHER	> gravel	2	vfp-fp	m	sb rnd
	sand	38	vfs-crs	1	rnd
SILT AND CLAY		10			

REMARKS

color Grey

HCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

35

TO

65

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	35	vfp-crp	1	rnd
	sand	21	vfs-vcrs	1	sb rnd
OTHER	> gravel	26	vfp-crp	1	w rnd
	sand	16	vfs-vcrs	1	sb rnd
SILT AND CLAY		2			

REMARKS

color Brownish GreyHCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

65

TO

70

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	35	vfp-mp	1	sb rnd
	sand	33	vfs-vcrs	1	sb ang
OTHER	> gravel	5	vfp-mp	1	rnd
	sand	15	vfs-vcrs	1	sb rnd
SILT AND CLAY		12			

REMARKS

color Greyish TanHCL -

Lithified

Immature

WELL NUMBER

699-60-32

DEPTH
(FT.)

70

TO

80

ROCK CLASSIFICATION

gravelly sandy silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	13	vfp-mp	1	sb rnd
	sand	19	vfs-vcrs	m	sb rnd
OTHER	>gravel	13	vfp-mp	1	sb rnd
	sand	15	vfs-vcrs	1	sb rnd
SILT AND CLAY		40			

REMARKS

color
HCL

Brown

-

Slightly Micaceous

Immature

DEPTH
(FT.)

80

TO

85

ROCK CLASSIFICATION

Sand & Basalt Flow

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	60	vfp-mp	m	ang
	sand	38	vfs-vcrs	1	sb rnd
OTHER	>gravel	0			
	sand	0			
SILT AND CLAY		2			

REMARKS

color
HCL

Brownish Black

-

Immature

Total Drilled Depth reported as 85'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 061467

W 015673

Altitude 411

Other Data used in
Interpretation

(1) Driller's Log

(2) Descriptive Log

from Newcomb, et al,
1972, p. 75-76

Well 699 - 61 - 16A

tan

greenish grey

whitish grey

greyish tan

whitish tan

reddish tan

buff

whitish tan

tan

greyish tan

brownish tan

tan grey

buff

brownish white

brownish tan

whitish tan

greyish white

greyish buff

grey; TRACE DIATOMITE

brownish buff; TRACE DIATOMITE

black; TRACE DIATOMITE

greyish black

greyish black

grey

brownish grey

grey

greyish pink

grey

pinkish tan

tan grey

W. K. Summers & Associates

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

Well 699 - 61 - 16A cont

grey

grey

whitish tan

whitish tan

greyish tan

greyish tan

Altitude

Other Data used in Interpretation

DEPTH
(FT.)

0

TO

50

ROCK CLASSIFICATION

silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel sand	1	-vfp-	m	rnd
		3	vfs-crs	m	rnd
OTHER	>gravel sand	1	-vfp-	m	rnd
		70	vfs-crs	m	rnd
SILT AND CLAY		25			

REMARKS

color Tan
HCL +

Caliche (pebbles & sand present)

Slightly Micaceous

Immature

DEPTH
(FT.)

50

TO

67

ROCK CLASSIFICATION

Silt

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

REMARKS

color Greenish Grey
HCL +

Abundant Caliche (25%, pebbles & sand)

Slightly Micaceous

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

67

TO

70

ROCK CLASSIFICATION

Silt

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

REMARKS

color Whitish Grey
HCL +

Abundant Caliche (45%, fragments)

Slightly Micaceous

Lithified by silt, clay & CaCO₃

Submature

DEPTH
(FT.)

70

TO

80

ROCK CLASSIFICATION

Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	3	vfs-vcrs	l	sb rnd
OTHER	>gravel	0			
	sand	10	vfs-vcrs	m	sb rnd
SILT AND CLAY		87			

REMARKS

color Greyish Tan
HCL +

Abundant Caliche (30%, fragments)

Slightly Micaceous

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

80

TO

100

ROCK CLASSIFICATION

sandy Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	2	vfs-crs	l	rnd
OTHER > gravel	0			
sand	30	vfs-crs	m	sb rnd
SILT AND CLAY	68			

REMARKS

color Whitish Tan
HCL +

Caliche (pebbles & sand present)

Slightly Micaceous Unfrosted Quartz

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

100

TO

120

ROCK CLASSIFICATION

sandy Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	1	vfs-crs	l	sb rnd
OTHER > gravel	0			
sand	35	vfs-crs	m	sb rnd
SILT AND CLAY	64			

REMARKS

color Reddish Tan
HCL +

Caliche (pebbles & sand present)

Micaceous

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

120

TO

145

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	3	vfs-crs	l	rnd
OTHER	>gravel	0			
	sand	92	vfs-crs	m	sb ang
SILT AND CLAY		5			

REMARKS

color Buff
HCL +

Caliche (pebbles & sand present)

Micaceous

Unfrosted Quartz

Mature

DEPTH
(FT.)

145

TO

145.5

ROCK CLASSIFICATION

silty Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	60	-smcb-	l	w rnd
	sand	2	vfs-ms	l	rnd
OTHER	>gravel	0			
	sand	6	vfs-ms	m	sb ang
SILT AND CLAY		12			

REMARKS

color Tanned White
HCL +

Abundant Caliche (20%, fragments)

Slightly Micaceous

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

145.5

TO

150

ROCK CLASSIFICATION

sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	4	-vfp-	1	rnd
	sand	1	vfs-crs	1	rnd
OTHER	> gravel	0			
	sand	34	vfs-crs	1	ang
SILT AND CLAY		61			

REMARKS

color Whitish Tan

HCL +

Slightly Micaceous Unfrosted Quartz

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

150

TO

190

ROCK CLASSIFICATION

silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	0			
	sand	2	vfs-crs	m	sb rnd
OTHER	> gravel	0			
	sand	78	vfs-crs	m	sb rnd
SILT AND CLAY		20			

REMARKS

color Tan

HCL +

Caliche (pebbles & sand present)

Micaceous

Frosted Quartz

Immature

DEPTH
(FT.)

190

TO

195

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	35	vfp-mp	l	w rnd
	sand	6	vfs-vcrs	m	rnd
OTHER	> gravel	10	vfp-mp	m	w rnd
	sand	35	vfs-vcrs	m	sb rnd
SILT AND CLAY		14			

REMARKS

color Greyish Tan
HCL +

Abundant Caliche (>10%) Slightly Micaceous

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

195

TO

205

ROCK CLASSIFICATION

silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	0			
	sand	3	vfs-crs	l	rnd
OTHER	> gravel	0			
	sand	67	vfs-crs	m	sb rnd
SILT AND CLAY		30			

REMARKS

color Brownish Tan
HCL +

Caliche (pebbles & sand present)

Micaceous

Frosted Quartz

Immature

DEPTH
(FT.)

205

TO

225

ROCK CLASSIFICATION

silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	2	vfp-mp	m	rnd
	sand	3	vfs-vcrs	l	sb rnd
OTHER	> gravel	0			
	sand	49	vfs-vcrs	m	sb rnd
SILT AND CLAY		46			

REMARKS

color
HCL

Tan-Grey

+

Abundant Caliche (>36%, pebbles, sand & fragments)

Slightly Micaceous

Unfrosted Quartz

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

225

TO

230

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	0			
	sand	3	vfs-ms	l	sb rnd
OTHER	> gravel	0			
	sand	92	vfs-ms	m	sb rnd
SILT AND CLAY		5			

REMARKS

color
HCL

Buff

+

Caliche (sand & fragments present)

Slightly Micaceous

Frosted Quartz

Mature

DEPTH
(FT.)

230

TO

250

ROCK CLASSIFICATION

gravelly sandy silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	7	vfp-crp	m	rnd
sand	2	vfs-vcrs	l	sb rnd
OTHER > gravel	4	vfp-crp	l	w rnd
sand	34	vfs-vcrs	m	sb rnd
SILT AND CLAY	53			

REMARKS

color
HCL

Brownish White

+

Abundant Caliche (25%)

Micaceous

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

250

TO

260

ROCK CLASSIFICATION

silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	1	vfp-mp	m	rnd
sand	2	vfs-vcrs	l	sb rnd
OTHER > gravel	1	vfp-mp	m	rnd
sand	62	vfs-vcrs	m	sb rnd
SILT AND CLAY	34			

REMARKS

color
HCL

Brownish Tan

+

Caliche (pebbles present)

Slightly Micaceous

Unfrosted Quartz

Lithified (?)

Immature

WELL NUMBER

699-61-16 A

DEPTH
(FT.)

260

TO

285

ROCK CLASSIFICATION

silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	1	-mp-	m	rnd
sand	2	vfs-crs	m	rnd
OTHER > gravel	0			
sand	69	vfs-crs	m	sb rnd
SILT AND CLAY	28			

REMARKS

color Whitish Tan

HCL -

Slightly Micaceous Lithified by silt & clay

Sample interval 270'-275' missing

Immature

DEPTH
(FT.)

285

TO

295

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.)

295

TO

300

ROCK CLASSIFICATION

sandy Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	1	vfs-ms	m	sb rnd
OTHER > gravel	0			
sand	25	vfs-ms	m	sb rnd
SILT AND CLAY	74			

REMARKS

color Greyish White

HCL -

Lithified by silt & clay Slightly Micaceous

Immature

DEPTH
(FT.)

300

TO

310

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	10	vfs-vcrs	m	rnd
OTHER > gravel	0			
sand	88	vfs-vcrs	m	sb ang
SILT AND CLAY	2			

REMARKS

color Greyish Buff

HCL -

Slightly Micaceous Unfrosted Quartz

Mature

DEPTH
(FT.)

310

TO

315

ROCK CLASSIFICATION

gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel sand	20	vfp-fp	l	sb ang.
		45	ms-vcrs	m	sb ang
OTHER	>gravel sand	0			
		35	ms-vcrs	m	ang
SILT AND CLAY		0			

REMARKS

color Grey
HCL -

Slightly Diatomaceous (? sand) Slightly Micaceous Unfrosted Quartz
Immature

DEPTH
(FT.)

315

TO

330

ROCK CLASSIFICATION

gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel sand	13	vfp-mp	l	sb ang
		10	vfs-vcrs	m	sb ang
OTHER	>gravel sand	0			
		73	vfs-vcrs	m	sb rnd
SILT AND CLAY		4			

REMARKS

color Brownish Buff
HCL -

Slightly Diatomaceous Micaceous Unfrosted Quartz
Immature

WELL NUMBER

699-61-16 A

DEPTH
(FT.)

330

TO

335

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	35	vfp-mp	l	sb rnd
	sand	49	vfs-vcrs	m	sb rnd
OTHER	>gravel	0			
	sand	13	vfs-vcrs	m	sb rnd
SILT AND CLAY		3			

REMARKS

color Black
HCL -

Slightly Diatomaceous (?)

Slightly Micaceous

Immature

DEPTH
(FT.)

335

TO

345

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.)

345

TO

350

ROCK CLASSIFICATION

gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	15	vfp-fp	l	ang
	sand	48	vfs-vcrs	m	sb rnd
OTHER	>gravel	0			
	sand	20	vfs-vcrs	m	rnd
SILT AND CLAY		17			

REMARKS

color Greyish Black

HCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

350

TO

375

ROCK CLASSIFICATION

gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	19	vfp-fp	l	ang
	sand	41	vfs-vcrs	m	sb rnd
OTHER	>gravel	0			
	sand	32	vfs-vcrs	m	rnd
SILT AND CLAY		8			

REMARKS

color Grey

HCL -

Micaceous Unfrosted Quartz

Immature

WELL NUMBER

699-61-16 A

DEPTH
(FT.)

375

TO

385

ROCK CLASSIFICATION

slightly gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	8	-vfp-	l	ang
	sand	46	vfs-vcrs	m	sb ang
OTHER	>gravel	0			
	sand	37	vfs-vcrs	m	rnd
SILT AND CLAY		9			

REMARKS

color Greyish Black

HCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

385

TO

395

ROCK CLASSIFICATION

slightly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	5	-vfp-	l	ang
	sand	36	vfs-vcrs	m	sb ang
OTHER	>gravel	0			
	sand	49	vfs-vcrs	m	sb rnd
SILT AND CLAY		10			

REMARKS

color Grey

HCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

395

TO

410

ROCK CLASSIFICATION

slightly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	5	vfp-fp	1	ang
	sand	36	vfs-vcrs	m	sb ang
OTHER	>gravel	0			
	sand	47	vfs-vcrs	m	sb rnd
SILT AND CLAY		12			

REMARKS

color Brownish Grey

HCL -

Micaceous

Immature

DEPTH
(FT.)

410

TO

435

ROCK CLASSIFICATION

silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	1	vfp-fp	1	ang
	sand	30	vfs-vcrs	1	sb rnd
OTHER	>gravel	0			
	sand	50	vfs-vcrs	m	rnd
SILT AND CLAY		19			

REMARKS

color Grey

HCL +

Caliche (pebbles & sand present)

Slightly Micaceous

Immature

DEPTH
(FT.)

435

TO

438

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	20	vfp-mp	l	rnd
	sand	6	vfs-vcrs	m	sb rnd
OTHER	>gravel	50	vfp-mp	l	rnd
	sand	15	vfs-vcrs	m	sb rnd
SILT AND CLAY		9			

REMARKS

color Greyish Pink
HCL +

Abundant Caliche (>20%, pebbles & sand) Slightly Micaceous

Ash (pebbles present) Unfrosted Quartz

Immature

DEPTH
(FT.)

438

TO

480

ROCK CLASSIFICATION

slightly gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	9	-vfp-	l	ang
	sand	36	vfs-vcrs	m	sb rnd
OTHER	>gravel	0			
	sand	32	vfs-vcrs	m	sb rnd
SILT AND CLAY		23			

REMARKS

color Grey
HCL +

Caliche (pebbles & sand present) Slightly Micaceous Unfrosted Quartz

Sample intervals 440'-445', 455'-460' & 465'-470' missing

Immature

DEPTH
(FT.)

480

TO

485

ROCK CLASSIFICATION

slightly gravelly Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	3	ms-crs	m	rnd
OTHER	>gravel	10	-mp-	l	v ang
	sand	7	ms-crs	m	sb rnd
SILT AND CLAY		80			

REMARKS

color
HCL

Pinkish Tan

-

Immature

DEPTH
(FT.)

485

TO

500

ROCK CLASSIFICATION

slightly silty gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	25	-vfp-	l	sb ang
	sand	30	vfs-vcrs	m	sb rnd
OTHER	>gravel	0			
	sand	34	vfs-vcrs	m	sb rnd
SILT AND CLAY		11			

REMARKS

color
HCL

Tan Grey

+

Caliche (sand present)

Slightly Micaceous

Frosted Quartz

Immature

DEPTH
(FT.)

500

TO

510

ROCK CLASSIFICATION

slightly silty gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	25	vfp-mp	l	sb ang
	sand	56	vfs-vcrs	m	rnd
OTHER	> gravel	0			
	sand	11	vfs-vcrs	m	rnd
SILT AND CLAY		8			

REMARKS

color Grey
HCL -

Caliche (sand present) Slightly Micaceous

Immature

DEPTH
(FT.)

510

TO

520

ROCK CLASSIFICATION

Basalt Flow

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	90	vfp-crp	l	ang
	sand	0			
OTHER	> gravel	10	vfp-crp	l	w rnd
	sand	0			
SILT AND CLAY		0			

REMARKS

color Black
HCL +

Abundant Caliche (pebbles & fragments)

Mature

DEPTH
(FT.)

520

TO

560

ROCK CLASSIFICATION

slightly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	1	vfp-fp	l	ang
	sand	35	vfs-vcrs	m	sb ang
OTHER	>gravel	0			
	sand	49	vfs-vcrs	m	rnd
SILT AND CLAY		15			

REMARKS

color
HCL

Grey

+

Micaceous

Unfrosted Quartz

Sample interval 530'-535' missing

Immature

DEPTH
(FT.)

560

TO

585

ROCK CLASSIFICATION

Sand & Basalt Flow

		<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	77	vfs-vcrs	m	sb ang
SILT AND CLAY		15			

REMARKS

color
HCL

Whitish Tan

+

Abundant Caliche

Slightly Micaceous

Unfrosted Quartz

Flow Layer between 570' & 575'

Immature

DEPTH
(FT.)

585

TO

595

ROCK CLASSIFICATION

silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	1	-vfp-	l	ang
	sand	5	vfs-vcrs	m	rnd
OTHER	> gravel	0			
	sand	65	vfs-vcrs	m	rnd
SILT AND CLAY		29			

REMARKS

color Greyish Tan
HCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

595

TO

605

ROCK CLASSIFICATION

sandy Silt

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

REMARKS

color Greyish Tan
HCL +

Caliche (pebbles present) Slightly Micaceous

Sample interval 605'-607' missing Immature

Total Drilled Depth reported as 607'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

Well 699 - 61 - 66

N 061062
W 065626
Altitude 523

Other Data used in
Interpretation

(1) Driller's Log
(2) E-Log

brownish black
black
brownish black
greyish black
greyish black
tan
greyish black
greyish buff
greyish buff
buff grey
grey (salt & pepper)
greyish buff
greyish black

DEPTH
(FT.)

0

TO

15

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	65	vfp-crp	m	rnd
	sand	20	vfs-vcrs	m	sb ang
OTHER	>gravel	5	vfp-fp	m	rnd
	sand	3	vfs-vcrs	m	sb rnd
SILT AND CLAY		7			

REMARKS

color Brownish Black

HCL -

Immature

DEPTH
(FT.)

15

TO

20

ROCK CLASSIFICATION

Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	90	vfp-crp	m	rnd
	sand	0			
OTHER	>gravel	10	vfp-mp	m	sb ang
	sand	0			
SILT AND CLAY		0			

REMARKS

color Black

HCL -

Mature

DEPTH
(FT.)

20

TO

50

ROCK CLASSIFICATION

Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	85	vfp-crp	m	rnd
	sand	6	vfs-vcrs	m	sb ang
OTHER	> gravel	2	vfp-fp	m	rnd
	sand	2	vfs-vcrs	m	sb rnd
SILT AND CLAY		5			

REMARKS

color Brownish Black
HCL -

Immature

DEPTH
(FT.)

50

TO

80

ROCK CLASSIFICATION

Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	90	vfp-smcb	m	w rnd
	sand	3	vfs-vcrs	m	sb ang
OTHER	> gravel	5	vfp-smcb	m	sb rnd
	sand	1	vfs-vcrs	m	sb rnd
SILT AND CLAY		1			

REMARKS

color Greyish Black
HCL -

Submature

DEPTH
(FT.)

80

TO

100

ROCK CLASSIFICATION

Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	80	vfp-vcrp	m	rnd
	sand	3	vfs-vcrs	m	sb ang
OTHER	>gravel	15	vfp-fp	m	sb rnd
	sand	1	vfs-vcrs	m	sb rnd
SILT AND CLAY		1			

REMARKS

color Greyish Black
HCL -

Unfrosted Quartz

Submature

DEPTH
(FT.)

100

TO

140

ROCK CLASSIFICATION

Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	85	vfp-smcb	l	w rnd
	sand	3	vfs-vcrs	m	sb ang
OTHER	>gravel	10	vfp-smcb	l	sb rnd
	sand	2	vfs-vcrs	m	sb rnd
SILT AND CLAY		0			

REMARKS

color Greyish Black
HCL -

Submature

DEPTH
(FT.)

140

TO

145

ROCK CLASSIFICATION

slightly gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	8	vfp-crp	l	w rnd
	sand	30	vfs-vcrs	m	sb rnd
OTHER	> gravel	0			
	sand	30	vfs-vcrs	m	sb rnd
SILT AND CLAY		32			

REMARKS

color Tan
HCL +

Slightly Micaceous

Immature

DEPTH
(FT.)

145

TO

160

ROCK CLASSIFICATION

Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	≥ gravel	65	vfp-smcb	l	w rnd
	sand	6	vfs-vcrs	m	sb ang
OTHER	≥ gravel	20	vfp-smcb	l	sb rnd
	sand	7	vfs-vcrs	m	sb ang
SILT AND CLAY		2			

REMARKS

color Greyish Black
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

160

TO

165

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	0			
	sand	8	vfs-crs	h	sb rnd
OTHER	> gravel	75	vcrp-smcb	m	w rnd
	sand	17	vfs-crs	h	sb rnd
SILT AND CLAY		0			

REMARKS

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

Unfrosted Quartz

Immature

DEPTH
(FT.)

165

TO

170

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	0			
	sand	40	vfs-crs	h	sb rnd
OTHER	> gravel	0			
	sand	60	vfs-crs	h	sb rnd
SILT AND CLAY		0			

REMARKS

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

Unfrosted Quartz

Mature

DEPTH
(FT.)

170

TO

180

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	55	vfp-smcb	l	w rnd
	sand	5	vfs-vcrs	m	sb rnd
OTHER	>gravel	25	vfp-smcb	l	w rnd
	sand	15	vfs-vcrs	m	sb rnd
SILT AND CLAY		0			

REMARKS

color Buff Grey

HCL -

Unfrosted Quartz

Immature

DEPTH
(FT.)

180

TO

185

ROCK CLASSIFICATION

Sand

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

REMARKS

color Grey ("salt & pepper")

HCL -

Unfrosted Quartz

Mature

DEPTH
(FT.)

185

TO

215

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	40	vfp-smcb	l	w rnd
	sand	9	vfs-vcrs	m	sb rnd
OTHER	> gravel	40	vfp-smcb	l	w rnd
	sand	11	vfs-vcrs	h	sb rnd
SILT AND CLAY		0			

REMARKS

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

Unfrosted Quartz

Immature

DEPTH
(FT.)

215

TO

225

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	0			
	sand	40	vfs-crs	h	sb rnd
OTHER	> gravel	0			
	sand	60	vfs-crs	h	sb rnd
SILT AND CLAY		0			

REMARKS

color Greyish Black ("salt & pepper")
HCL -

Slightly Micaceous Flow Layer fragments present Frosted Quartz

Mature

Total Drilled Depth reported as 225'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 063312

W 024806

Altitude 394

Other Data used in
Interpretation

Driller's Log

Well 699 - 63 - 25A

black

black

tan

buff tan

WELL NUMBER

699-63-25

DEPTH
(FT.)

0

TO

15

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

DEPTH
(FT.)

15

TO

35

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

699-63-25

DEPTH
(FT.)

35

TO

40

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	35	vfp-mp	l	sb rnd
sand	50	vfs-vcrs	m	sb rnd
OTHER > gravel	0			
sand	2	vfs-vcrs	m	sb rnd
SILT AND CLAY	13			

REMARKS

color	Black
HCL	+

Immature

DEPTH
(FT.)

40

TO

45

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

699-63-25

DEPTH
(FT.)

45

TO

55

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	42	vfp-mp	l	sb rnd
	sand	44	vfs-vcrs	m	sb ang
OTHER	> gravel	3	vfp-mp	l	sb rnd
	sand	4	vfs-vcrs	l	sb ang
SILT AND CLAY		7			

REMARKS

color Black

HCL +

Immature

DEPTH
(FT.)

55

TO

60

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.)

60

TO

100

ROCK CLASSIFICATION

sandy Silt

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

REMARKS

color
HCL

Tan

+

Sample interval 75'-80' missing

Immature

DEPTH
(FT.)

100

TO

105

ROCK CLASSIFICATION

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	50	vfs-ms	h	sb rnd
SILT AND CLAY	25			

REMARKS

color
HCL

Buff Tan

-

Slightly Micaceous

Immature

WELL NUMBER

699-63-25

DEPTH
(FT.)

105

TO

110

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 110'

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.)

0

TO

5

ROCK CLASSIFICATION

gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	12	vfp-crp	1	rnd
	sand	62	vfs-ms	m	sb rnd
OTHER	> gravel	5	vfp-mp	1	w rnd
	sand	18	vfs-ms	1	sb rnd
SILT AND CLAY		3			

REMARKS

color Brownish GreyHCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

5

TO

38

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	42	vfp-crp	1	rnd
	sand	40	vfs-vcrs	m	rnd
OTHER	> gravel	10	vfp-crp	1	w rnd
	sand	5	vfs-vcrs	m	rnd
SILT AND CLAY		3			

REMARKS

color Greyish BlackHCL -

Slightly Micaceous

Immature

WELL NUMBER

699-63-55

DEPTH
(FT.)

38

TO

64

ROCK CLASSIFICATION

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT $\geq$ gravel				
sand				
OTHER $\geq$ gravel				
sand				
SILT AND CLAY				

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

64

TO

68

ROCK CLASSIFICATION

sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT $>$ gravel	30	vfp-mp	m	rnd
sand	57	vfs-vcrs	m	sb rnd
OTHER $>$ gravel	5	vfp-mp	m	rnd
sand	8	vfs-vcrs	l	sb ang
SILT AND CLAY	0			

REMARKS

color
HCL

Black

-

Slightly Gypsiferous (sand present)

Unfrosted Quartz

Immature

DEPTH
(FT.)

68

TO

76

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>sb rnd</u>
sand	<u>45</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>sb rnd</u>
OTHER > gravel	<u>3</u>	<u>vfp-fp</u>	<u>m</u>	<u>sb rnd</u>
sand	<u>43</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>3</u>			

REMARKS

color Greyish Buff
HCL -

Frosted Quartz

Immature

DEPTH
(FT.)

76

TO

98

ROCK CLASSIFICATION

silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>1</u>	<u>-vfp-</u>	<u>1</u>	<u>sb rnd</u>
sand	<u>20</u>	<u>vfs-crs</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>1</u>	<u>-vfp-</u>	<u>1</u>	<u>sb rnd</u>
sand	<u>58</u>	<u>vfs-crs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY	<u>20</u>			

REMARKS

color Greyish Tan
HCL -

Slightly Micaceous Sieved (?)

Immature

WELL NUMBER

699-63-55

DEPTH
(FT.)

98

TO

112

ROCK CLASSIFICATION

slightly silty
slightly gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	8	vfp-mp	l	sb rnd
sand	26	vfs-crs	m	rnd
OTHER > gravel	2	vfp-fp	m	rnd
sand	50	vfs-crs	m	rnd
SILT AND CLAY	14			

REMARKS

color Light GreyHCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

112

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.)

Graphic Log

Sample Description

Plant Coordinates

Well 699 - 63 - 58

N 062691

W 057789

Altitude 490

Other Data used in
Interpretation

(1) Driller's Log

(2) Sieve analyses

Rockson rept.

brownish buff
light brown
greyish brown

greyish brown

greyish brown

greyish black

greyish buff

tan
greyish buff

whitish dark grey

whitish dark grey
tan

DEPTH
(FT.)

0

TO

5

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	45	vfp-vcrp	m	w rnd
	sand	23	vfs-vcrs	l	rnd
OTHER	>gravel	8	vfp-mp	m	w rnd
	sand	19	vfs-vcrs	m	rnd
SILT AND CLAY		5			

REMARKS

color Brownish Buff
HCL -

Immature

DEPTH
(FT.)

5

TO

15

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	62	vfp-crp	m	w rnd
	sand	16	vfs-vcrs	l	rnd
OTHER	>gravel	7	vfp-mp	m	w rnd
	sand	9	vfs-vcrs	l	rnd
SILT AND CLAY		6			

REMARKS

color Light Brown
HCL +

Lithified by silt, clay & CaCO₃

Immature

WELL NUMBER

699-63-58

DEPTH
(FT.)

15

TO

25

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	75	vfp-vcrp	m	w rnd
	sand	14	vfs-vcrs	l	rnd
OTHER	>gravel	8	vfp-vcrp	m	w rnd
	sand	1	vfs-vcrs	m	sb rnd
SILT AND CLAY		2			

REMARKS

color Greyish Brown

HCL -

Immature

DEPTH
(FT.)

25

TO

72

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	52	vfp-smcb	m	w rnd
	sand	25	vfs-vcrs	l	rnd
OTHER	>gravel	13	vfp-vcrp	m	w rnd
	sand	5	vfs-vcrs	l	rnd
SILT AND CLAY		5			

REMARKS

color Greyish Brown

HCL -

Sample interval 60'-65' missing

Immature

DEPTH
(FT.)

72

TO

80

ROCK CLASSIFICATION

Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	80	vfp-crp	m	w rnd
sand	8	vfs-vcrs	l	sb rnd
OTHER > gravel	10	vfp-crp	m	w rnd
sand	1	vfs-vcrs	l	rnd
SILT AND CLAY	1			

REMARKS

color Greyish Brown

HCL -

Immature

DEPTH
(FT.)

80

TO

130

ROCK CLASSIFICATION

sandy Gravel.

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	54	vfp-smcb	l	rnd
sand	22	vfs-vcrs	l	sb rnd
OTHER > gravel	12	vfp-crp	m	w rnd
sand	10	vfs-vcrs	m	rnd
SILT AND CLAY	2			

REMARKS

color Greyish Black

HCL -

Frosted Quartz Sample interval 94'-96' missing

Immature

DEPTH
(FT.)

130

TO

155

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	1	vfp-mp	m	rnd
sand	25	vfs-vcrs	m	sb rnd
OTHER > gravel	1	vfp-mp	m	rnd
sand	69	vfs-vcrs	m	rnd
SILT AND CLAY	4			

REMARKS

color Greyish Buff
HCL +

Slightly Micaceous Frosted Quartz

Mature

DEPTH
(FT.)

155

TO

160

ROCK CLASSIFICATION

sandy Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	5	vfs-ms	1	sb rnd
OTHER > gravel	0			
sand	45	vfs-ms	1	sb rnd
SILT AND CLAY	50			

REMARKS

color Tan
HCL +

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

160

TO

170

ROCK CLASSIFICATION

slightly gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	3	vfp-mp	m	rnd
	sand	21	vfs-vcrs	l	sb rnd
OTHER	> gravel	3	vfp-mp	m	rnd
	sand	66	vfs-vcrs	m	sb rnd
SILT AND CLAY		7			

REMARKS

color Greyish Buff
HCL +

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

170

TO

205

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	20	vfp-mp	m	rnd
	sand	21	vfs-vcrs	l	rnd
OTHER	> gravel	21	vfp-smcb	m	rnd
	sand	35	vfs-vcrs	l	sb rnd
SILT AND CLAY		3			

REMARKS

color Whitish Dark Grey
HCL +

Slightly Micaceous Frosted Quartz

Immature

WELL NUMBER

699-63-58

DEPTH
(FT.)

205

TO

215

ROCK CLASSIFICATION

slightly gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	4	-vfp-	1	rnd
	sand	44	vfs-vcrs	1	rnd
OTHER	> gravel	4	-vfp-	1	rnd
	sand	44	vfs-vcrs	1	sb rnd
SILT AND CLAY		4			

REMARKS

color Whitish Dark Grey
HCL +

Frosted Quartz

Immature

DEPTH
(FT.)

215

TO

225

ROCK CLASSIFICATION

Silt

		<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	9	vfs-crs	1	rnd
SILT AND CLAY		85			

REMARKS

color Tan
HCL +

Slightly Micaceous Compacted

Immature

Total Drilled Depth reported as 225'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

Well

N 063786

W 061746

Altitude 498

699 - 64

- 62

Other Data used in
Interpretation

Driller's Log

DEPTH
(FT.)

0

TO

5

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	65	vfp-vcrp	1	w rnd
	sand	4	vfs-vcrs	1	sb rnd
OTHER	> gravel	0			
	sand	23	vfs-vcrs	1	sb rnd
SILT AND CLAY		8			

REMARKS

color Light BrownHCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

5

TO

15

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	55	vfp-vcrp	1	w rnd
	sand	18	vfs-vcrs	1	rnd
OTHER	> gravel	0			
	sand	18	vfs-vcrs	m	rnd
SILT AND CLAY		9			

REMARKS

color Brownish GreyHCL -

Micaceous

Immature

WELL NUMBER

699-64-62

DEPTH
(FT.)

15

TO

20

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>60</u>	<u>vfp-vcrp</u>	<u>1</u>	<u>w rnd</u>
	sand	<u>19</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>rnd</u>
OTHER	>gravel	<u>5</u>	<u>-mp-</u>	<u>m</u>	<u>w rnd</u>
	sand	<u>14</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY		2			

REMARKS

color Whitish Tan
HCL -

Micaceous

Immature

DEPTH
(FT.)

20

TO

45

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	57	vfp-vcrp	1	w rnd
	sand	17	vfs-vcrs	m	rnd
OTHER	>gravel	9	vfp-vcrp	1	w rnd
	sand	12	vfs-vcrs	m	rnd
SILT AND CLAY		5			

REMARKS

color Brownish Grey
HCL -

Micaceous

Immature

DEPTH
(FT.)

45

TO

50

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	40	vfp-vcrp	l	w rnd
	sand	21	vfs-vcrs	m	sb rnd
OTHER	>gravel	25	vfp-vcrp	l	w rnd
	sand	12	vfs-vcrs	m	rnd
SILT AND CLAY		2			

REMARKS

color Whitish Grey

HCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

50

TO

80

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	41	vfp-smcb	l	w rnd
	sand	19	vfs-vcrs	m	sb rnd
OTHER	>gravel	13	vfp-smcb	l	w rnd
	sand	18	vfs-vcrs	m	sb rnd
SILT AND CLAY		9			

REMARKS

color Brownish Grey

HCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

80

TO

100

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	33	vfp-crp	1	w rnd
	sand	13	vfs-vcrs	1	sb rnd
OTHER	> gravel	39	vfp-vcrp	1	w rnd
	sand	14	vfs-vcrs	m	sb rnd
SILT AND CLAY		1			

REMARKS

color Greyish Brown
HCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

100

TO

116

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	23	vfp-vcrp	1	w rnd
	sand	23	vfs-vcrs	1	sb rnd
OTHER	> gravel	35	vfp-crp	m	w rnd
	sand	17	vfs-vcrs	1	sb rnd
SILT AND CLAY		2			

REMARKS

color Light Grey
HCL -

Slightly Micaceous

Immature

Total Drilled Depth reported as 116'

Plant Coordinates

N 064699

W 050146

Altitude 465

Other Data used in Interpretation

(i) Driller's Log

(2) E-Log

(3) Sieve analyses in
McHenry, 1957, p. 60

Well 699 - 65 - 50

brownish grey

greyish black

greyish black

brownish grey
greyish buff
greyish buff
brown

light brown

greyish tan

brownish tan

brownish tan

tannish brown

tannish brown

whitish grey

greyish tan
tan

tannish brown

tan

tan

buff

buff

tan

dark brown;

PEBBLES

W. K. Summers & Associates

Sample Description

dark brown; ASH PEBBLES

greenish grey

grey

grey

greenish tan
brownish grey

brownish grey
black

Plant Coordinates

Altitude _____

Other Data used in
Interpretation

Well 699 - 65 - 50 cont

WELL NUMBER

699-65-50

DEPTH
(FT.)

0

TO

35

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>40</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER	>gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
	sand	<u>55</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY		<u>5</u>			

REMARKS

color Brownish Grey
HCL +

Slightly Micaceous Unfrosted Quartz

DEPTH
(FT.)

35

TO

40

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.)

40

TO

60

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	36	vfp-crp	l	rnd
	sand	46	vfs-vcrs	m	rnd
OTHER	> gravel	10	vfp-crp	m	rnd
	sand	7	vfs-vcrs	m	sb ang
SILT AND CLAY		1			

REMARKS

color
HCL

Greyish Black

+ (40'-45'), - (45'-60')

Slightly Micaceous

Unfrosted Quartz

Immature

DEPTH
(FT.)

60

TO

85

ROCK CLASSIFICATION

Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	75	vfp-smcb	l	w rnd
	sand	4	ms-vcrs	m	rnd
OTHER	> gravel	20	vfp-vcrp	l	w rnd
	sand	1	ms-vcrs	m	sb rnd
SILT AND CLAY		0			

REMARKS

color
HCL

Greyish Black

-

Mature

DEPTH (FT.) 85 TO 90 ROCK CLASSIFICATION sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>40</u>	<u>vfp-mp</u>	<u>l</u>	<u>rnd</u>
	sand	<u>7</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER	>gravel	<u>40</u>	<u>vfp-mp</u>	<u>m</u>	<u>w rnd</u>
	sand	<u>13</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY		<u>0</u>			

REMARKS

color Brownish Grey
HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH (FT.) 90 TO 95 ROCK CLASSIFICATION sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>35</u>	<u>vfp-smcb</u>	<u>l</u>	<u>rnd</u>
	sand	<u>4</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER	>gravel	<u>30</u>	<u>vfp-crp</u>	<u>m</u>	<u>w rnd</u>
	sand	<u>31</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY		<u>0</u>			

REMARKS

color Greyish Buff
HCL +

Caliche (sand present) Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

95

TO

101

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	24	vfp-smcb	l	w rnd
	sand	13	vfs-vcrs	m	rnd
OTHER	>gravel	13	vfp-smcb	m	w rnd
	sand	50	vfs-vcrs	m	sb rnd
SILT AND CLAY		0			

REMARKS

color Greyish Buff

HCL -

Slightly Micaceous Slightly Gypsiferous (sand) Unfrosted Quartz
Immature

DEPTH
(FT.)

101

TO

105

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	35	vfp-mp	l	rnd
	sand	2	vfs-vcrs	l	rnd
OTHER	>gravel	35	vfp-mp	m	w rnd
	sand	23	vfs-vcrs	m	sb rnd
SILT AND CLAY		5			

REMARKS

color Brown

HCL +

Slightly Micaceous Frosted Quartz
Immature

DEPTH
(FT.)

105

TO

110

ROCK CLASSIFICATION

BASALT >gravel
sand%SIZE RANGESPHERICITYROUNDNESSOTHER >gravel
sand

SILT AND CLAY

REMARKS

color

HCL

Sample missing

DEPTH
(FT.)

110

TO

135

ROCK CLASSIFICATION

sandy Silt

BASALT >gravel
sand%SIZE RANGESPHERICITYROUNDNESSOTHER >gravel
sand

SILT AND CLAY

REMARKS

color

HCL

Light Brown

+ (110'-125'), - (125'-135')

Slightly Micaceous Lithified by silt & clay

Immature

DEPTH
(FT.)

135

TO

140

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.)

140

TO

150

ROCK CLASSIFICATION

sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	0	_____	_____	_____
	sand	1	vfs-ms	m	rnd
OTHER	> gravel	0	_____	_____	_____
	sand	24	vfs-ms	h	sb rnd
SILT AND CLAY		75			

REMARKS

color
HCL

Greyish Tan

-

Slightly Micaceous Lithified by silt & clay

Immature

DEPTH
(FT.)

150

TO

185

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>m</u>	<u>sb rnd</u>
	<u>sand</u>	<u>3</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER	<u>> gravel</u>	<u>0</u>			
	<u>sand</u>	<u>64</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY		32			

REMARKS

color Brownish TanHCL -

Slightly Micaceous Sample intervals 160'-170' & 175'-180' missing

Immature

DEPTH
(FT.)

185

TO

210

ROCK CLASSIFICATION

silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	<u>> gravel</u>	<u>3</u>	<u>-fp-</u>	<u>m</u>	<u>rnd</u>
	<u>sand</u>	<u>5</u>	<u>vfs-crs</u>	<u>m</u>	<u>rnd</u>
OTHER	<u>> gravel</u>	<u>1</u>	<u>-fp-</u>	<u>m</u>	<u>rnd</u>
	<u>sand</u>	<u>67</u>	<u>vfs-crs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY		24			

REMARKS

color Brownish TanHCL +

Caliche (fragments & sand present) Slightly Micaceous Frosted Quartz

Lithified by silt, clay & CaCO₃ Sample interval 195'-200' missing

Immature

WELL NUMBER

699-65-50

DEPTH
(FT.)

210

TO

235

ROCK CLASSIFICATION

silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	8	vfs-crs	m	rnd
OTHER > gravel	0			
sand	50	vfs-crs	m	sb rnd
SILT AND CLAY	42			

REMARKS

color Tannish Brown
HCL +

Abundant Caliche (>15%, pebbles) Slightly Micaceous Unfrosted Quartz

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

235

TO

240

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.)

240

TO

260

ROCK CLASSIFICATION

Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT ≥ gravel	2	vfp-mp	1	rnd
sand	5	vfs-crs	1	rnd
OTHER ≥ gravel	2	vfp-mp	1	rnd
sand	14	vfs-crs	m	rnd
SILT AND CLAY	77			

REMARKS

color Tannish Brown

HCL +

Caliche (pebbles & sand present)

Slightly Micaceous

Frosted Quartz

Lithified (?)

Immature

DEPTH
(FT.)

260

TO

285

ROCK CLASSIFICATION

Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT ≥ gravel	0			
sand	2	vfs-crs	m	rnd
OTHER ≥ gravel	0			
sand	13	vfs-crs	m	sb ang
SILT AND CLAY	85			

REMARKS

color Whitish Grey

HCL +

Caliche (pebbles & sand present)

Lithified (?)

Immature

DEPTH (FT.) 285 TO 290 ROCK CLASSIFICATION silty 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>rnd</u>
sand	<u>10</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER ≥gravel	<u>10</u>	<u>vfp-mp</u>	<u>m</u>	<u>w rnd</u>
sand	<u>39</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY	<u>16</u>			

REMARKS

color Greyish Tan
HCL +

Micaceous Frosted Quartz Lithified by silt, clay & CaCO₃

Immature

DEPTH (FT.) 290 TO 295 ROCK CLASSIFICATION slightly gravelly sandy Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT ≥gravel	<u>5</u>	<u>-fp-</u>	<u>l</u>	<u>rnd</u>
sand	<u>9</u>	<u>vfs-vcrs</u>	<u>l</u>	<u>rnd</u>
OTHER ≥gravel	<u>5</u>	<u>-fp-</u>	<u>l</u>	<u>rnd</u>
sand	<u>14</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY	<u>67</u>			

REMARKS

color Tan
HCL +

Abundant Caliche Slightly Micaceous Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

295

TO

310

ROCK CLASSIFICATION

gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>6</u>	<u>-fp-</u>	<u>l</u>	<u>rnd</u>
	sand	<u>9</u>	<u>vfs-crs</u>	<u>m</u>	<u>sb rnd</u>
OTHER	>gravel	<u>6</u>	<u>-fp-</u>	<u>l</u>	<u>rnd</u>
	sand	<u>44</u>	<u>vfs-crs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY		<u>35</u>			

REMARKS

color Tannish Brown
HCL +

Slightly Micaceous Frosted Quartz Lithified by silt, clay & CaCO₃

Sample interval 300'-305' missing

Immature

DEPTH
(FT.)

310

TO

315

ROCK CLASSIFICATION

sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>1</u>	<u>-mp-</u>	<u>m</u>	<u>sb rnd</u>
	sand	<u>9</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>15</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY		<u>75</u>			

REMARKS

color Tan
HCL +

Abundant Caliche Slightly Micaceous Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

315

TO

365

ROCK CLASSIFICATION

slightly gravelly sandy Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>>gravel</u>	<u>8</u>	<u>vfp-mp</u>	<u>1</u>	<u>rnd</u>
<u>sand</u>	<u>9</u>	<u>vfs-crs</u>	<u>1</u>	<u>sb rnd</u>
OTHER <u>>gravel</u>	<u>0</u>			
<u>sand</u>	<u>19</u>	<u>vfs-crs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>64</u>			

REMARKS

color Tan
HCL +

Abundant Caliche (between 335' & 340', 345' & 355', 360' & 365')

Caliche (pebbles present between 340' & 345')

Slightly Micaceous Frosted Quartz Lithified by silt, clay & CaCO₃

Sample intervals 325'-330' & 355'-360' missing

Immature

DEPTH
(FT.)

365

TO

370

ROCK CLASSIFICATION

Sand

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

REMARKS

color Buff
HCL -

Caliche Present Frosted Quartz

Mature

DEPTH
(FT.)

370

TO

400

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	1	vfp-fp	m	rnd
sand	5	vfs-ms	m	rnd
OTHER > gravel	1	vfp-fp	m	rnd
sand	92	vfs-ms	m	sb ang
SILT AND CLAY	1			

REMARKS

color Brownish Buff
HCL +

Slightly Micaceous Unfrosted Quartz

Mature

DEPTH
(FT.)

400

TO

465

ROCK CLASSIFICATION

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	65	vfs-crs	m	rnd
SILT AND CLAY	25			

REMARKS

color Tan
HCL + (400'-425'), -(430'-435'), + (435'-440'), - (440'-465')

Slightly Micaceous Frosted Quartz

Immature Sample interval 452'-430' missing

WELL NUMBER

699-65-50

DEPTH
(FT.)

465

TO

485

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.)

485

TO

520

ROCK CLASSIFICATION

Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>>gravel</u>	<u>1</u>	<u>-vfp-</u>	<u>1</u>	<u>rnd</u>
<u>sand</u>	<u>2</u>	<u>vfs-ms</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>13</u>	<u>vfs-ms</u>	<u>h</u>	<u>rnd</u>
SILT AND CLAY	<u>84</u>			

REMARKS

color
HCL

Dark Brown

-

Slightly Micaceous Slightly Gypsiferous (sand) Ash (pebbles present)

Lithified by silt & clay Sample interval 505'-510' missing

Immature

DEPTH
(FT.)

520

TO

530

ROCK CLASSIFICATION

Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	0			
sand	2	vfs-ms	1	sb rnd
OTHER > gravel	0			
sand	10	vfs-ms	m	sb rnd
SILT AND CLAY	88			

REMARKS

color Greenish Grey
HCL +

Caliche (pebbles & sand present)

Slightly Micaceous

Unfrosted Quartz

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

530

TO

540

ROCK CLASSIFICATION

gravelly sandy Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	0			
sand	1	vfs-vcrs	m	sb rnd
OTHER > gravel	0			
sand	19	vfs-vcrs	m	sb ang
SILT AND CLAY	60			

REMARKS

color Grey
HCL +

Abundant Caliche (20%, pebbles & sand)

Slightly Micaceous

Unfrosted Quartz

Lithified by silt, clay & CaCO₃

Immature

WELL NUMBER

699-65-50

DEPTH
(FT.)

540

TO

545

ROCK CLASSIFICATION

silty Gravel

		<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>0</u>	<u></u>	<u></u>	<u></u>
OTHER	>gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
	sand	<u>3</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY		<u>62</u>			

REMARKS

color Grey
HCL +

Abundant Caliche (35%, pebbles & sand)

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

545

TO

550

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.)

550

TO

555

ROCK CLASSIFICATION

silty Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	1	vfs-vcrs	1	sb rnd
OTHER	>gravel	0			
	sand	1	vfs-vcrs	m	sb ang
SILT AND CLAY		63			

REMARKS

color Greenish Tan
HCL +

Abundant Caliche (35%, pebbles & sand) Slightly Micaceous

Unfrosted Quartz Lithified by silt, clay & CaCO₃

DEPTH
(FT.)

555

TO

565

ROCK CLASSIFICATION

silty Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	1	vfs-vcrs	m	sb rnd
OTHER	>gravel	0			
	sand	1	vfs-vcrs	m	sb ang
SILT AND CLAY		63			

REMARKS

color Brownish Grey
HCL +

Abundant Caliche (35%, pebbles & sand) Slightly Micaceous

Lithified by silt, clay & CaCO₃

Immature

WELL NUMBER

699-65-50

DEPTH
(FT.)

565

TO

575

ROCK CLASSIFICATION

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

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

575

TO

580

ROCK CLASSIFICATION

sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT ≥ gravel sand	30 37	vfp-mp vfs-vcrs	l m	sb rnd rnd
OTHER ≥ gravel sand	0 17	 vfs-vcrs	 m	 sb ang
SILT AND CLAY	1			

REMARKS

color
HCL

Brownish Grey ("salt & pepper")

+

Abundant Caliche (15%, pebbles & sand)

Unfrosted Quartz

Immature

WELL NUMBER

699-65-50

DEPTH
(FT.)

580

TO

585

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>88</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>12</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>ang</u>
SILT AND CLAY	<u>0</u>			

REMARKS

color Black
HCL -

Unfrosted Quartz

Mature

Total Drilled Depth reported as 585'

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 065050

W 058931

Altitude 505

Other Data used in
Interpretation

Driller's Log

Well 699 - 65 - 59

brownish black

blackish brown

blackish brown

greyish black

greyish black

greyish black

brownish buff

greyish black

brownish tan

TD 200

DEPTH
(FT.)

TO

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	35	vfp-mp	l	sb rnd
	sand	35	vfs-vcrs	m	sb rnd
OTHER	>gravel	5	vfp-crp	m	sb rnd
	sand	5	vfs-vcrs	h	sb rnd
SILT AND CLAY		20			

REMARKS

color Brownish Black

HCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

TO

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	45	vfp-mp	l	sb rnd
	sand	25	vfs-vcrs	m	sb rnd
OTHER	>gravel	10	vfp-crp	m	sb rnd
	sand	4	vfs-vcrs	h	sb rnd
SILT AND CLAY		16			

REMARKS

color Blackish Brown

HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

105

TO

125

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	45	vfp-mp	l	sb rnd
	sand	25	vfs-vcrs	m	sb rnd
OTHER	>gravel	10	vfp-crp	m	sb rnd
	sand	14	vfs-vcrs	h	sb rnd
SILT AND CLAY		6			

REMARKS

color Blackish Brown

HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

125

TO

150

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	1	vfp-fp	m	sb rnd
	sand	55	vfs-crs	h	sb rnd
OTHER	>gravel	1	vfp-fp	m	sb rnd
	sand	40	vfs-crs	h	sb rnd
SILT AND CLAY		3			

REMARKS

color Greyish Black ("salt & pepper")

HCL -

Unfrosted Quartz

Mature

DEPTH (FT.) 150 TO 165 ROCK CLASSIFICATION Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	<u>80</u>	<u>vfp-crp</u>	<u>m</u>	<u>sb rnd</u>
	sand	<u>5</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER	> gravel	<u>10</u>	<u>vfp-crp</u>	<u>m</u>	<u>sb rnd</u>
	sand	<u>3</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY		<u>2</u>			

REMARKS

color Blackish Grey
HCL -

Slightly Micaceous

Immature

DEPTH (FT.) 165 TO 175 ROCK CLASSIFICATION Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	<u>0</u>			
	sand	<u>45</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER	> gravel	<u>0</u>			
	sand	<u>55</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY		<u>0</u>			

REMARKS

color Greyish Black ("salt & pepper")
HCL -

Unfrosted Quartz

Mature

WELL NUMBER

699-65-59

DEPTH
(FT.)

175

TO

180

ROCK CLASSIFICATION

silty sandy Gravel

		%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT	>gravel	38	-vfp-	m	ang
	sand	10	vfs-vcrs	m	sb rnd
OTHER	>gravel	37	-vfp-	m	ang
	sand	12	vfs-vcrs	m	rnd
SILT AND CLAY		3			

REMARKS

color Brownish Buff

HCL -

Immature

DEPTH
(FT.)

180

TO

185

ROCK CLASSIFICATION

Sand

		%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT	>gravel	0			
	sand	35	vfs-crs	m	sb rnd
OTHER	>gravel	0			
	sand	65	vfs-crs	h	sb rnd
SILT AND CLAY		0			

REMARKS

color Greyish Black ("salt & pepper")

HCL -

Slightly Micaceous Unfrosted Quartz

Immature

WELL NUMBER

699-65-59

DEPTH
(FT.)

185

TO

190

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.)

190

TO

195

ROCK CLASSIFICATION

Silt

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

REMARKS

color
HCL

Brownish Tan

-

Slightly Micaceous

Mature

WELL NUMBER

699-65-59

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

Total Drilled Depth reported as 200'

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 064944

W 082961

Altitude 484

Other Data used in
Interpretation

Driller's Log

Well 699 - 65 - 83

brownish black

green brownish black
brownish black

grey-black

black

WELL NUMBER

699-65-83

DEPTH
(FT.)

0

TO

40

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	47	vfp-crp	m	sb rnd
	sand	30	vfs-vcrs	m	sb rnd
OTHER	>gravel	3	vfp-mp	m	sb rnd
	sand	2	vfs-vcrs	m	sb rnd
SILT AND CLAY		18			

REMARKS

color Brownish Black
HCL -

Immature

DEPTH
(FT.)

40

TO

50

ROCK CLASSIFICATION

gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	6	-vfp-	l	sb ang
	sand	53	vfs-vcrs	m	sb ang
OTHER	>gravel	6	-vfp-	l	sb ang
	sand	3	vfs-vcrs	m	sb rnd
SILT AND CLAY		32			

REMARKS

color Green Brownish Black
HCL -

Immature

WELL NUMBER

699-65-83

DEPTH
(FT.)

50

TO

60

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	60	vfp-crp	m	sb ang
sand	20	vfs-vcrs	m	sb ang
OTHER > gravel	10	vfp-mp	m	sb rnd
sand	3	vfs-vcrs	m	sb rnd
SILT AND CLAY	7			

REMARKS

color Brownish Black

HCL -

Immature

DEPTH
(FT.)

60

TO

105

ROCK CLASSIFICATION

sandy Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0			
sand	30	vfs-ms	m	sb ang
OTHER > gravel	0			
sand	10	vfs-ms	m	sb ang
SILT AND CLAY	60			

REMARKS

color Grey-Black

HCL -

Slightly Micaceous

Sample intervals 65'-80', 90'-100' missing

Immature

WELL NUMBER

699-65-83

DEPTH
(FT.)

105

TO

115

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.)

115

TO

120

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel sand	0 83	vfs-ms	m	sb ang
OTHER > gravel sand	0 15	vfs-ms	m	sb ang
SILT AND CLAY	2			

REMARKS

color
HCL

Unfrosted Quartz

Mature

Total Drilled Depth reported as 121'

Depth
(ft.)

Graphic Log

Sample Description

greyish buff
greyish buff
greyish buff
greyish green tan
greenish tan
tan
reddish tan

Plant Coordinates

N 065994
W 022997
Altitude 387

Other Data used in
Interpretation

Driller's Log

Well 699 - 66 - 23

WELL NUMBER

699-66-23

DEPTH
(FT.)

0

TO

20

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	35	vfp-crp	m	rnd
	sand	8	vfs-vcrs	m	sb ang
OTHER	>gravel	35	vfp-crp	l	rnd
	sand	14	vfs-vcrs	m	sb rnd
SILT AND CLAY		8			

REMARKS

color Greyish Buff
HCL +

Unfrosted Quartz

Immature

DEPTH
(FT.)

20

TO

30

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	60	vfp-vcrp	m	rnd
	sand	9	vfs-vcrs	m	sb rnd
OTHER	>gravel	20	vfp-crp	l	rnd
	sand	8	vfs-vcrs	m	sb rnd
SILT AND CLAY		3			

REMARKS

color Greyish Buff
HCL +

Unfrosted Quartz Lithified by silt, clay & CaCO₃

Immature

WELL NUMBER

699-66-23

DEPTH
(FT.)

30

TO

35

ROCK CLASSIFICATION

Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	75	vfp-mp	m	rnd
sand	9	vfs-vcrs	m	sb rnd
OTHER > gravel	10	vfp-mp	l	rnd
sand	5	vfs-vcrs	m	sb rnd
SILT AND CLAY	1			

REMARKS

color Greyish Buff
HCL -

Unfrosted Quartz

Immature

DEPTH
(FT.)

35

TO

40

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	60	vfp-crp	m	rnd
sand	12	vfs-vcrs	m	rnd
OTHER > gravel	10	vfp-mp	l	rnd
sand	10	vfs-vcrs	h	sb rnd
SILT AND CLAY	8			

REMARKS

color Greyish Green Tan
HCL +

Caliche Present Lithified by silt & clay

Immature

DEPTH
(FT.)

40

TO

60

ROCK CLASSIFICATION

Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	5	vfp-fp	m	rnd
	sand	3	vfs-ms	h	sb rnd
OTHER	> gravel	0			
	sand	12	vfs-ms	h	sb rnd
SILT AND CLAY		80			

REMARKS

color Greenish Tan
HCL +

Caliche Present Lithified by silt & clay

Immature

DEPTH
(FT.)

60

TO

80

ROCK CLASSIFICATION

Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	2	-vfp-	l	sb rnd
	sand	2	vfs-ms	h	sb rnd
OTHER	> gravel	0			
	sand	16	vfs-ms	h	sb rnd
SILT AND CLAY		80			

REMARKS

color Tan
HCL +

Caliche Present Lithified by silt & clay

Immature

WELL NUMBER

699-66-23

DEPTH
(FT.)

80

TO

100

ROCK CLASSIFICATION

Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT ≥ gravel	0			
sand	0			
OTHER ≥ gravel	0			
sand	20	vfs-fs	h	sb rnd
SILT AND CLAY	80			

REMARKS

color Reddish Tan
HCL +

Caliche Present Slightly Micaceous Lithified by silt & clay

Immature

Total Drilled Depth reported as 100'

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

N 066000

W 038000

Altitude 434

Other Data used in
Interpretation

Driller's Log

blackish tan

brownish tan; ASH FRAGMENTS

light reddish brown

reddish tan

pinkish tan

brownish tan

brownish tan

brownish tan

50-

100-

150-

TD 150

Well 699 - 66 - 38

DEPTH
(FT.)

0

TO

25

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	35	vfp-crp	1	rnd
	sand	27	vfs-vcrs	1	rnd
OTHER	>gravel	30	vfp-crp	m	w rnd
	sand	4	vfs-vcrs	1	rnd
SILT AND CLAY		4			

REMARKS

color Blackish Tan

HCL -

Frosted Quartz

Immature

DEPTH
(FT.)

25

TO

45

ROCK CLASSIFICATION

silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	6	vfp-mp	1	rnd
	sand	5	vfs-ms	1	rnd
OTHER	>gravel	0			
	sand	56	vfs-ms	m	sb rnd
SILT AND CLAY		33			

REMARKS

color Brownish Tan

HCL -

Slightly Micaceous Ash fragments between 30' and 35'

Immature

WELL NUMBER

699-66-38

DEPTH
(FT.)

45

TO

65

ROCK CLASSIFICATION

%SIZE RANGESPHERICITYROUNDNESSBASALT >gravel
sandOTHER >gravel
sand

SILT AND CLAY

REMARKS

color

HCL

Sample missing

DEPTH
(FT.)

65

TO

75

ROCK CLASSIFICATION

Silt

%SIZE RANGESPHERICITYROUNDNESSBASALT >gravel
sandOTHER >gravel
sand

SILT AND CLAY

REMARKS

color

HCL

Gypsiferous

Submature

Light Reddish Brown

Lithified

DEPTH
(FT.)

75

TO

80

ROCK CLASSIFICATION

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

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

80

TO

85

ROCK CLASSIFICATION

slightly gravelly Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	8	vfp-mp	1	sb rnd
sand	3	vfs-crs	1	rnd
OTHER > gravel	0			
sand	2	vfs-crs	m	rnd
SILT AND CLAY	87			

REMARKS

color
HCL

Reddish Tan

-

Slightly Micaceous Lithified

Immature

WELL NUMBER

699-66-38

DEPTH
(FT.)

85

TO

100

ROCK CLASSIFICATION

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

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

100

TO

105

ROCK CLASSIFICATION

Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT ≥ gravel sand	2	vfp-fp	1	rnd
	2	vfs-crs	1	rnd
OTHER ≥ gravel sand	0			
	10	vfs-crs	1	rnd
SILT AND CLAY	86			

REMARKS

color
HCL

Pinkish Tan

-

Slightly Micaceous

Lithified

Immature

DEPTH
(FT.)

105

TO

110

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.)

110

TO

115

ROCK CLASSIFICATION

slightly gravelly silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	12	vfp-mp	1	w rnd
	sand	4	vfs-crs	1	rnd
OTHER	>gravel	0			
	sand	9	vfs-crs	1	rnd
SILT AND CLAY		75			

REMARKS

color

HCL

Brownish Tan

-

Slightly Micaceous

Lithified

Immature

WELL NUMBER

699-66-38

DEPTH (FT.) 115 TO 120 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>
sand	<u> </u>	<u> </u>	<u> </u>	<u> </u>
OTHER <u>> gravel</u>	<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.) 120 TO 125 ROCK CLASSIFICATION slightly gravelly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>10</u>	<u>vfp-mp</u>	<u>1</u>	<u>rnd</u>
sand	<u>18</u>	<u>vfs-crs</u>	<u>1</u>	<u>rnd</u>
OTHER <u>> gravel</u>	<u>0</u>			
sand	<u>20</u>	<u>vfs-crs</u>	<u>1</u>	<u>rnd</u>
SILT AND CLAY	<u>27</u>			

REMARKS

color Brownish Tan
HCL +

Abundant Caliche (25%, pebbles) Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

125

TO

130

ROCK CLASSIFICATION

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

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

130

TO

145

ROCK CLASSIFICATION

slightly gravelly sandy Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	6	vfp-mp	1	rnd
sand	4	vfs-ms	1	rnd
OTHER > gravel	0			
sand	38	vfs-ms	m	sb rnd
SILT AND CLAY	52			

REMARKS

color Brownish Tan
HCL +

Abundant Caliche (25%, pebbles)

Compacted by silt, clay & CaCO₃

Sample interval 135'-140' missing

Immature

WELL NUMBER

699-66-38

DEPTH
(FT.)

145

TO

150

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 150'

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

Well 699 - 66 - 64

N 066483

W 064249

Altitude 504

Other Data used in
Interpretation

Driller's Log

greyish brown

brownish grey

blackish grey

blackish grey

greyish buff

50 -

100 -

TD 120

150 -

WELL NUMBER

699-66-64

DEPTH
(FT.)

0

TO

5

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	60	vfp-crp	l	w rnd
	sand	14	vfs-ms	m	rnd
OTHER	> gravel	0			
	sand	18	vfs-ms	m	rnd
SILT AND CLAY		8			

REMARKS

color Greyish BrownHCL -

Immature

DEPTH
(FT.)

5

TO

25

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	62	vfp-vcrp	l	w rnd
	sand	14	vfs-vcrs	m	sb rnd
OTHER	> gravel	2	vfp-crp	m	w rnd
	sand	16	vfs-vcrs	m	rnd
SILT AND CLAY		6			

REMARKS

color Brownish GreyHCL + (5'-10'), - (10'-25')

Caliche Present (sand & fragments)

Lithified by CaCO₃, silt & clay

Immature

Slightly Micaceous

DEPTH
(FT.)

25

TO

55

ROCK CLASSIFICATION

gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	11	vfp-crp	l	w rnd
	sand	60	vfs-vcrs	m	rnd
OTHER	>gravel	3	vfp-vcrp	m	rnd
	sand	21	vfs-vcrs	h	sb rnd
SILT AND CLAY		5			

REMARKS

color Blackish GreyHCL -

Slightly Micaceous Compacted (?) by silt & clay

Immature

DEPTH
(FT.)

55

TO

106

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>53</u>	<u>vfp-crp</u>	<u>l</u>	<u>rnd</u>
	sand	<u>24</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER	>gravel	<u>14</u>	<u>vfp-crp</u>	<u>l</u>	<u>w rnd</u>
	sand	<u>7</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY		2			

REMARKS

color Blackish GreyHCL -

Slightly Micaceous

Immature

WELL NUMBER

699-66-64

DEPTH
(FT.)

TO

106

116

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	<u>19</u>	<u>vfp-crp</u>	<u>1</u>	<u>rnd</u>
	sand	<u>10</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>sb rnd</u>
OTHER	> gravel	<u>31</u>	<u>vfp-smcb</u>	<u>1</u>	<u>w rnd</u>
	sand	<u>38</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY		<u>2</u>			

REMARKS

color Greyish Buff
HCL + (106'-108'), - (108'-116')

Unfrosted Quartz

Immature

DEPTH
(FT.)

TO

116

120

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

Total Drilled Depth reported as 120'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 067103

W 051490

Altitude 523

Other Data used in
Interpretation

Driller's Log

Well 699 - 67 - 51

black

greyish brown

greyish brown

brownish tan
tan

DEPTH
(FT.)

0

TO

10

ROCK CLASSIFICATION

slightly gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	6	vfp-mp	m	rnd
	sand	90	vfs-vcrs	m	sb rnd
OTHER	> gravel	1	vfp-mp	m	rnd
	sand	2	vfs-vcrs	m	sb ang
SILT AND CLAY		1			

REMARKS

color
HCL

Black

-

Mature

DEPTH
(FT.)

10

TO

130

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.)

130

TO

185

ROCK CLASSIFICATION

silty Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	32	vfp-mp	m	sb rnd
	sand	15	vfs-vcrs	m	sb rnd
OTHER	> gravel	13	vfp-mp	m	sb rnd
	sand	5	vfs-vcrs	m	sb ang
SILT AND CLAY		35			

REMARKS

color Greyish Brown

HCL -

Slightly Micaceous Lithified

Immature

DEPTH
(FT.)

185

TO

230

ROCK CLASSIFICATION

gravelly sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	11	vfp-crp	l	sb rnd
	sand	15	vfs-vcrs	m	sb rnd
OTHER	> gravel	7	vfp-mp	l	sb rnd
	sand	5	vfs-vcrs	m	sb ang
SILT AND CLAY		62			

REMARKS

color Greyish Brown

HCL -

Slightly Micaceous Lithified Sample interval 200'-205' missing

Immature

DEPTH
(FT.)

230

TO

240

ROCK CLASSIFICATION

gravelly Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	7	vfp-fp	1	sb rnd
sand	10	vfs-crs	m	sb rnd
OTHER > gravel	7	vfp-fp	1	sb rnd
sand	6	vfs-vcrs	m	sb ang
SILT AND CLAY	70			

REMARKS

color Brownish Tan
HCL -

Slightly Micaceous Lithified

Immature

DEPTH
(FT.)

240

TO

250

ROCK CLASSIFICATION

gravelly Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	7	vfp-fp	1	sb rnd
sand	3	vfs-crs	m	sb rnd
OTHER > gravel	7	vfp-fp	1	sb rnd
sand	13	vfs-crs	m	sb ang
SILT AND CLAY	70			

REMARKS

color Tan
HCL +

Caliche (abundant between 240' & 250') Slightly Micaceous

Unfrosted Quartz Lithified

Immature Total Drilled Depth reported as 250'

Graphic Log

Sample Description

Plant Coordinates

N 069000

W 045000

Altitude 485

Other Data used in Interpretation

Driller's Log

Well 699 - 69 - 45

greyish black

black (salt & pepper)

blackish grey

grey brown
light greyish brown

greyish tan
brownish tan

brownish tan

light grey

tan

greyish tan

greyish tan

yellowish grey
brownish tan

tan
yellowish tan

DEPTH
(FT.)

0

TO

35

ROCK CLASSIFICATION

Sand

	<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>
sand	<u>85</u>	<u>vfs-vcrs</u>	<u>l</u>	<u>rnd</u>
OTHER <u>> gravel</u>	<u>0</u>			
sand	<u>8</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY	<u>4</u>			

REMARKS

color Greyish BlackHCL +

Slightly Micaceous Unfrosted Quartz

Submature

DEPTH
(FT.)

35

TO

50

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-crp</u>	<u>m</u>	<u>rnd</u>
sand	<u>79</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>w rnd</u>
sand	<u>14</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>ang</u>
SILT AND CLAY	<u>0</u>			

REMARKS

color Black ("salt & pepper")HCL -

Slightly Micaceous Unfrosted Quartz

Submature

WELL NUMBER

699-69-45

DEPTH
(FT.)

50

TO

80

ROCK CLASSIFICATION

silty sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	61	vfp-crp	m	rnd
sand	18	vfs-vcrs	m	rnd
OTHER > gravel	12	vfp-smcb	m	rnd
sand	5	vfs-vcrs	m	sb ang
SILT AND CLAY	4			

REMARKS

color Blackish Grey
HCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

80

TO

90

ROCK CLASSIFICATION

silty sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	47	vfp-crp	m	rnd
sand	23	vfs-vcrs	m	sb ang
OTHER > gravel	6	vfp-mp	m	rnd
sand	14	vfs-vcrs	m	sb rnd
SILT AND CLAY	10			

REMARKS

color Grey Brown
HCL +

Caliche (sand present)

Lithified by silt, clay & very fine sand & CaCO_3

Immature

DEPTH
(FT.)

90

TO

95

ROCK CLASSIFICATION

gravelly sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>28</u>	<u>vfp-mp</u>	<u>m</u>	<u>rnd</u>
	sand	<u>21</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER	>gravel	<u>2</u>	<u>vfp-fp</u>	<u>m</u>	<u>rnd</u>
	sand	<u>14</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY		<u>35</u>			

REMARKS

color Light Greyish Brown
HCL +

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

95

TO

110

ROCK CLASSIFICATION

silty 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>16</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER	>gravel	<u>5</u>	<u>vfp-mp</u>	<u>l</u>	<u>rnd</u>
	sand	<u>11</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY		<u>18</u>			

REMARKS

color Greyish Tan
HCL +

Lithified by silt, clay & CaCO₃

Immature

DEPTH (FT.) 110 TO 115 ROCK CLASSIFICATION Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	<u>2</u>	<u>-vfp-</u>	<u>m</u>	<u>rnd</u>
sand	<u>6</u>	<u>vfs-vcrs</u>	<u>l</u>	<u>sb ang</u>
OTHER > gravel	<u>0</u>			
sand	<u>9</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY	<u>83</u>			

REMARKS

color Brownish Tan
HCL -

Lithified by silt & clay

Immature

DEPTH (FT.) 115 TO 135 ROCK CLASSIFICATION silty sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	<u>30</u>	<u>vfp-mp</u>	<u>l</u>	<u>rnd</u>
sand	<u>10</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>39</u>	<u>vfs-vcrs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY	<u>16</u>			

REMARKS

color Grey-Brownish Tan
HCL +

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

135

TO

145

ROCK CLASSIFICATION

gravelly sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	20	vfp-mp	m	rnd
	sand	2	vfs-vcrs	m	sb rnd
OTHER	> gravel	0			
	sand	18	vfs-vcrs	h	sb rnd
SILT AND CLAY		60			

REMARKS

color Light Grey
HCL +

Slightly Micaceous Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

145

TO

170

ROCK CLASSIFICATION

sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	4	vfp-mp	m	rnd
	sand	2	vfs-vcrs	m	rnd
OTHER	> gravel	0			
	sand	36	vfs-vcrs	h	sb rnd
SILT AND CLAY		58			

REMARKS

color Tan
HCL + (145'-155'), - (155'-170')

Slightly Micaceous Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

170

TO

185

ROCK CLASSIFICATION

sandy Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	0			
sand	2	vfs-vcrs	m	rnd
OTHER > gravel	0			
sand	35	vfs-vcrs	m	sb ang
SILT AND CLAY	63			

REMARKS

color Greyish Tan
HCL -

Slightly Micaceous

Unfrosted Quartz

Lithified by silt, clay &
very fine sand

Immature

DEPTH
(FT.)

185

TO

210

ROCK CLASSIFICATION

silty Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	1	-vfp-	m	sb rnd
sand	1	vfs-vcrs	m	rnd
OTHER > gravel	0			
sand	67	vfs-vcrs	h	sb rnd
SILT AND CLAY	31			

REMARKS

color Greyish Tan
HCL +

Caliche (pebbles present)

Slightly Micaceous

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)TO
210 220

ROCK CLASSIFICATION

slightly gravelly silty Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	8	vfp-mp	1	rnd
sand	3	vfs-vcrs	m	w rnd
OTHER > gravel	0			
sand	62	vfs-vcrs	m	sb rnd
SILT AND CLAY	27			

REMARKS

color Yellowish Grey
HCL +

Abundant Caliche (pebbles & sand)

Slightly Micaceous

Frosted Quartz

Lithified by silt & clay

Immature

DEPTH
(FT.)TO
220 230

ROCK CLASSIFICATION

silty Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	1	vfp-mp	1	w rnd
sand	5	vfs-vcrs	m	sb rnd
OTHER > gravel	1	vfp-mp	1	w rnd
sand	64	vfs-vcrs	m	sb ang
SILT AND CLAY	29			

REMARKS

color Brownish Tan
HCL +

Abundant Caliche (pebbles)

Unfrosted Quartz

Lithified (?)

Immature

WELL NUMBER

699-69-45

DEPTH
(FT.)

230

TO

285

ROCK CLASSIFICATION

silty Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT ≥ gravel	1	-mp-	m	sb rnd
sand	3	vfs-ms	l	rnd
OTHER ≥ gravel	0			
sand	74	vfs-ms	h	sb rnd
SILT AND CLAY	22			

REMARKS

color Tan
HCL +

Slightly Micaceous Lithified (?)

Immature

DEPTH
(FT.)

285

TO

290

ROCK CLASSIFICATION

silty Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT ≥ gravel	1	-vfp-	m	sb rnd
sand	2	vfs-ms	m	rnd
OTHER ≥ gravel	0			
sand	69	vfs-ms	h	sb rnd
SILT AND CLAY	28			

REMARKS

color Tan
HCL +

Slightly Micaceous Lithified by silt, clay & CaCO₃

Immature

WELL NUMBER

699-69-45

DEPTH
(FT.)

290

TO

300

ROCK CLASSIFICATION

sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	5	vfp-fp	m	rnd
	sand	7	vfs-vcrs	m	rnd
OTHER	>gravel	0			
	sand	22	vfs-vcrs	h	sb rnd
SILT AND CLAY		66			

REMARKS

color Yellowish Tan
HCL +

Slightly Micaceous Lithified by silt, clay & CaCO₃

Immature

Total Drilled Depth reported as 300'

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 070123

W 068657

Altitude 524

Other Data used in
Interpretation

Driller's Log

Well 699 - 70 - 68

greyish buff

DEPTH
(FT.)

0

TO

130

ROCK CLASSIFICATION

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

REMARKS

color _____
HCL _____

Sample sieved

DEPTH
(FT.)

130

TO

145

ROCK CLASSIFICATION

sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	44	vfp-smcb	l	sb rnd
sand	10	fs-vcrs	m	sb ang
OTHER > gravel	31	vfp-vcrp	m	sb rnd
sand	15	fs-vcrs	m	sb rnd
SILT AND CLAY	0			

REMARKS

color _____ Greyish Buff ("salt & pepper")
HCL _____ -

Unfrosted Quartz

Immature

Total Drilled Depth reported as 149'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 071300

W 030400

Altitude 399

Other Data used in
Interpretation

Driller's Log

Well 699 - 71 - 30

grey

greyish tan-brown

greyish tan

tan

greyish tan

DEPTH
(FT.)

0

TO

30

ROCK CLASSIFICATION

BASALT

>gravel
sand%SIZE RANGESPHERICITYROUNDNESS

OTHER

>gravel
sand

SILT AND CLAY

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

30

TO

35

ROCK CLASSIFICATION

slightly silty gravelly Sand

BASALT

>gravel
sand%SIZE RANGESPHERICITYROUNDNESS

15

vfp-fp

l

sb rnd

62

vfs-vcrs

m

sb ang

OTHER

>gravel
sand

0

vfs-vcrs

m

sb rnd

8

SILT AND CLAY

15

REMARKS

color
HCL

Grey

-

Unfrosted Quartz

Immature

DEPTH
(FT.)

35

TO

65

ROCK CLASSIFICATION

silty Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	42	vfp-mp	1	rnd
	sand	4	vfs-vcrs	m	sb rnd
OTHER	> gravel	7	vfp-fp	1	w rnd
	sand	16	vfs-vcrs	m	sb rnd
SILT AND CLAY		31			

REMARKS

color Greyish Tan-Brown
HCL - (35'-45'), + (45'-55'), - (55'-65')

Caliche (present between 45' & 50')

Lithified by silt & clay

Unfrosted Quartz

Immature

DEPTH
(FT.)

65

TO

115

ROCK CLASSIFICATION

silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	2	vfp-fp	m	rnd
	sand	30	vfs-crs	m	sb rnd
OTHER	> gravel	0			
	sand	20	vfs-crs	m	sb rnd
SILT AND CLAY		48			

REMARKS

color Greyish Tan
HCL -

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

115

TO

140

ROCK CLASSIFICATION

gravelly sandy Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	10	vfp-mp	l	w rnd
sand	20	vfs-vcrs	m	sb rnd
OTHER > gravel	1	vfp-mp	l	w rnd
sand	10	vfs-vcrs	m	sb rnd
SILT AND CLAY	59			

REMARKS

color Tan
HCL + (115'-120'), - (120'-140')

Abundant Caliche (between 115' & 120') Slightly Micaceous

Lithified by silt & clay

Immature

DEPTH
(FT.)

140

TO

150

ROCK CLASSIFICATION

silty sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	55	vfp-mp	m	w rnd
sand	15	vfs-vcrs	m	sb rnd
OTHER > gravel	0			
sand	10	vfs-vcrs	m	sb rnd
SILT AND CLAY	20			

REMARKS

color Greyish Tan
HCL -

Lithified by silt & clay

Immature

Total Drilled Depth reported as 150'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 071310

W 052368

Altitude 521

Well 699 - 71 - 52

Other Data used in
Interpretation

Driller's Log.

samples sieved

greyish brown

greyish tan

WELL NUMBER

699-71-52

DEPTH
(FT.)

0

TO

120

ROCK CLASSIFICATION

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

REMARKS

 color
HCL

Sample sieved

DEPTH
(FT.)

120

TO

165

ROCK CLASSIFICATION

silty sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	23	vfp-crp	l	sb rnd
sand	18	vfs-vcrs	m	sb rnd
OTHER > gravel	16	vfp-crp	l	sb rnd
sand	26	vfs-vcrs	h	sb rnd
SILT AND CLAY	17			

REMARKS

 color
HCL

Greyish Brown

-

Unfrosted Quartz

Lithified by silt

Sample interval 135'-140'
missing

Immature

WELL NUMBER

699-71-52

DEPTH
(FT.)

165

TO

210

ROCK CLASSIFICATION

Silt

	<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	8	vfs-ms	h	sb rnd
SILT AND CLAY	90			

REMARKS

color Greyish Tan
HCL -

Caliche (present, sand) Slightly Micaceous Unfrosted Quartz

Lithified by silt & clay Sample interval 185'-195' missing

Immature Total Drilled Depth reported as 210'

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

Plant Coordinates

N 071000

W 077000

Altitude 470

Other Data used in Interpretation

Driller's Log

$$\underline{\text{well}} \quad \underline{699} - \underline{71} - \underline{77}$$

grey

greyish buff

yellowish buff

light buff
brownish buff

brownish buff

tan

WELL NUMBER

699-71-77

DEPTH
(FT.)

0

TO

15

ROCK CLASSIFICATION

BASALT > gravel
sand%SIZE RANGESPHERICITYROUNDNESSOTHER > gravel
sand

SILT AND CLAY

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

15

TO

20

ROCK CLASSIFICATION

silty sandy Gravel

BASALT > gravel
sand%SIZE RANGESPHERICITYROUNDNESS

30

vfp-mp

1

ang

47

vfs-vcrs

m

sb ang

OTHER > gravel
sand

15

vfp-mp

1

sb ang

0

SILT AND CLAY

8

REMARKS

color
HCL

Grey

-

Immature

WELL NUMBER

699-71-77

DEPTH
(FT.)

20

TO

60

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.)

60

TO

175

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	35	vfp-vcrp	l	sb rnd
	sand	11	vfs-vcrs	m	sb rnd
OTHER	>gravel	30	vfp-smcb	l	rnd
	sand	17	vfs-vcrs	m	sb rnd
SILT AND CLAY		7			

REMARKS

color
HCL

Greyish Buff

-

Slightly Micaceous Unfrosted Quartz Interval 135'-145' lithified
by silt & clay

Sample intervals 120'-130', 145'-150', 155'-160', 165'-170' missing

Immature

DEPTH (FT.) 175 TO 200 ROCK CLASSIFICATION silty Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	<u>1</u>	<u>-vfp-</u>	<u>1</u>	<u>rnd</u>
sand	<u>7</u>	<u>vfs-ms</u>	<u>1</u>	<u>ang</u>
OTHER > gravel	<u>0</u>			
sand	<u>67</u>	<u>vfs-ms</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>25</u>			

REMARKS

color Yellowish Buff
HCL -

Slightly Micaceous Unfrosted Quartz Lithified by clay

Sample interval 185'-190' missing

Immature

DEPTH (FT.) 200 TO 210 ROCK CLASSIFICATION gravelly sandy Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	<u>5</u>	<u>vfp-mp</u>	<u>m</u>	<u>w rnd</u>
sand	<u>2</u>	<u>vfs-crs</u>	<u>1</u>	<u>sb ang</u>
OTHER > gravel	<u>10</u>	<u>vfp-mp</u>	<u>1</u>	<u>w rnd</u>
sand	<u>23</u>	<u>vfs-crs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>60</u>			

REMARKS

color Light Buff
HCL +

Unfrosted Quartz Lithified by clay & CaCO₃

Immature

WELL NUMBER

699-71-77

DEPTH
(FT.)

210

TO

215

ROCK CLASSIFICATION

slightly silty Sand

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

REMARKS

color Brownish BuffHCL -

Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

215

TO

225

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.)

225

TO

235

ROCK CLASSIFICATION

slightly gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	2	vfp-fp	l	sb rnd
	sand	23	vfs-crs	m	sb rnd
OTHER	>gravel	4	vfp-mp	l	rnd
	sand	68	vfs-crs	h	sb rnd
SILT AND CLAY		3			

REMARKS

color Brownish Buff
HCL +

Slightly Micaceous Unfrosted Quartz

Mature

DEPTH
(FT.)

235

TO

265

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

699-71-77

DEPTH
(FT.)

265

TO

275

ROCK CLASSIFICATION

sandy Silt

	<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-crs</u>	<u>m</u>	<u>sb rnd</u>
OTHER <u>></u> gravel	<u>0</u>			
sand	<u>30</u>	<u>vfs-crs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY	<u>60</u>			

REMARKS

color Tan
HCL +

Slightly Micaceous Unfrosted Quartz Cemented by CaCO₃
Immature

DEPTH
(FT.)

275

TO

300

ROCK CLASSIFICATION

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

Total Drilled Depth reported as 300'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 072000

W 073000

Altitude 481

Other Data used in
Interpretation

Driller's Log

Well 699 - 72 - 73

greyish buff
buff

buff tan

DEPTH
(FT.)

0

TO

155

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.)

155

TO

160

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>>gravel</u>	25	vfp-mp	m	sb ang
sand	11	fs-vcrs	l	sb rnd
OTHER <u>>gravel</u>	25	vfp-mp	m	rnd
sand	38	fs-vcrs	m	sb rnd
SILT AND CLAY	1			

REMARKS

color
HCL

Greyish Buff

-

Frosted Quartz

Immature

DEPTH
(FT.)

160

TO

170

ROCK CLASSIFICATION

slightly silty gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	17	-vfp-	m	sb rnd
	sand	21	fs-vcrs	l	sb ang
OTHER	>gravel	0			
	sand	49	fs-vcrs	m	sb rnd
SILT AND CLAY		13			

REMARKS

color Buff
HCL -

Unfrosted Quartz

Immature

DEPTH
(FT.)

170

TO

200

ROCK CLASSIFICATION

gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	10	vfp-mp	l	sb rnd
	sand	13	vfs-vcrs	m	sb ang
OTHER	>gravel	1	vfp-fp	l	rnd
	sand	54	vfs-vcrs	h	sb rnd
SILT AND CLAY		22			

REMARKS

color Buff-Tan
HCL -

Unfrosted Quartz

Immature

Total Drilled Depth reported as 200'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

Well 699 - 72 - 92

N 072000
W 092000
Altitude 450

Other Data used in
Interpretation

Driller's Log

black

black

salt & pepper

greyish brown

brownish buff

brownish buff

greyish tan

DEPTH
(FT.)

0

TO

40

ROCK CLASSIFICATION

BASALT > gravel
sandOTHER > gravel
sand

SILT AND CLAY

REMARKS

color
HCL

Sample sieved

%SIZE RANGESPHERICITYROUNDNESSBASALT > gravel
sandOTHER > gravel
sand

SILT AND CLAY

REMARKS

color
HCL

Frosted Quartz

Immature

%SIZE RANGESPHERICITYROUNDNESS

75

vfp-fp

m

sb ang

9

vfs-vcrs

m

v ang

10

vfp-fp

m

sb ang

4

vfs-vcrs

m

sb rnd

2

ROCK CLASSIFICATION

Gravel

DEPTH
(FT.)

40

TO

45

DEPTH
(FT.)

45

TO

65

ROCK CLASSIFICATION

gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	6	vfp-mp	m	sb ang
	sand	53	vfs-crs	m	sb ang
OTHER	>gravel	6	vfp-mp	m	sb ang
	sand	35	vfs-crs	m	sb rnd
SILT AND CLAY		0			

REMARKS

color Black ("salt & pepper")
HCL -

Unfrosted Quartz

Immature

DEPTH
(FT.)

65

TO

95

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	40	vfp-crp	m	sb ang
	sand	20	vfs-vcrs	m	sb ang
OTHER	>gravel	20	vfp-mp	m	sb ang
	sand	19	vfs-vcrs	m	sb rnd
SILT AND CLAY		1			

REMARKS

color "Salt & Pepper"
HCL -

Unfrosted Quartz

Immature

DEPTH
(FT.)

95

TO

145

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	28	vfp-crp	m	sb ang
	sand	26	vfs-vcrs	m	sb ang
OTHER	>gravel	15	vfp-crp	m	sb ang
	sand	29	vfs-vcrs	m	sb rnd
SILT AND CLAY		2			

REMARKS

color Greyish Brown
HCL -

Unfrosted Quartz Sample interval 105'-110' missing

Immature

DEPTH
(FT.)

145

TO

155

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	2	-vfp-	l	sb ang
	sand	32	vfs-crs	m	sb ang
OTHER	>gravel	0			
	sand	58	vfs-crs	m	sb rnd
SILT AND CLAY		8			

REMARKS

color Brownish Buff
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

155

TO

185

ROCK CLASSIFICATION

slightly silty gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>19</u>	<u>vfp-mp</u>	<u>1</u>	<u>sb ang</u>
	sand	<u>18</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
OTHER	>gravel	<u>11</u>	<u>vfp-mp</u>	<u>m</u>	<u>sb ang</u>
	sand	<u>42</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY		<u>10</u>			

REMARKS

color Brownish BuffHCL -

Unfrosted Quartz

Immature

DEPTH
(FT.)

185

TO

200

ROCK CLASSIFICATION

gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>7</u>	<u>vfp-fp</u>	<u>m</u>	<u>sb ang</u>
	sand	<u>26</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
OTHER	>gravel	<u>7</u>	<u>vfp-fp</u>	<u>m</u>	<u>sb ang</u>
	sand	<u>53</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY		<u>7</u>			

REMARKS

color Greyish TanHCL -

Unfrosted Quartz

Immature

Total Drilled Depth reported as 200'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 074200

W 044200

Altitude 443

Other Data used in
Interpretation

Driller's Log

Well 699 - 74 - 44

samples sieved

yellowish tan

brownish tan

brownish tan

tan

WELL NUMBER

699-74-44

DEPTH
(FT.)

0

TO

55

ROCK CLASSIFICATION

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

REMARKS

color

HCL

Sample sieved

DEPTH
(FT.)

55

TO

80

ROCK CLASSIFICATION

slightly gravelly sandy Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT >gravel	7	vfp-vcrp	l	rnd
sand	13	vfs-vcrs	m	sb rnd
OTHER >gravel	0			
sand	10	vfs-vcrs	m	sb rnd
SILT AND CLAY	70			

REMARKS

color

HCL

Yellowish Tan

Slightly Micaceous

Lithified by silt & clay

Immature

DEPTH (FT.) 80 TO 115 ROCK CLASSIFICATION Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	<u>3</u>	<u>vfp-vcrp</u>	<u>l</u>	<u>rnd</u>
	sand	<u>3</u>	<u>vfs-crs</u>	<u>m</u>	<u>sb rnd</u>
OTHER	> gravel	<u>2</u>	<u>vfp-vcrp</u>	<u>l</u>	<u>rnd</u>
	sand	<u>1</u>	<u>vfs-crs</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY		<u>91</u>			

REMARKS

color Brownish Tan
HCL -

Lithified by silt & clay

Submature

DEPTH (FT.) 115 TO 130 ROCK CLASSIFICATION Silt

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

REMARKS

color Brownish Tan
HCL -

Lithified by silt & clay

Submature

WELL NUMBER

699-74-44

DEPTH
(FT.)

130

TO

150

ROCK CLASSIFICATION

Silt

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

REMARKS

color Tan
HCL +

Slightly Micaceous Lithified by silt & clay

Mature

Total Drilled Depth reported as 150'

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

Well 699 - 74 - 48

DEPTH
(FT.)

0

TO

80

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	40	vfp-crp	l	sb rnd
	sand	47	vfs-vcrs	m	sb ang
OTHER	>gravel	4	vfp-crp	l	sb rnd
	sand	6	vfs-vcrs	m	sb ang
SILT AND CLAY		3			

REMARKS

color
HCL

Brownish Black

-

Slightly Micaceous

Unfrosted Quartz

Immature

DEPTH
(FT.)

80

TO

120

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	40	vfp-crp	l	sb rnd
	sand	21	vfs-vcrs	m	sb ang
OTHER	>gravel	15	vfp-crp	l	sb rnd
	sand	21	vfs-vcrs	m	sb ang
SILT AND CLAY		3			

REMARKS

color
HCL

Greyish Brown-Greyish Buff

-

Slightly Micaceous

Unfrosted Quartz

Sample intervals 95'-100' & 110'-115' missing

Immature

DEPTH
(FT.)

120

TO

150

ROCK CLASSIFICATION

slightly gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	4	vfp-mp	1	rnd
	sand	5	vfs-vcrs	m	sb ang
OTHER	>gravel	4	vfp-mp	1	rnd
	sand	79	vfs-vcrs	h	sb rnd
SILT AND CLAY		8			

REMARKS

color Tan-Greyish Tan
HCL -

Slightly Micaceous Sample interval 125'-140' missing

Immature

Total Drilled Depth reported as 150'

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 074000

W 060000

Altitude 530

Other Data used in
Interpretation

Driller's Log

Well 699 - 74 - 60

brownish black

greyish tan

greyish buff
greyish buff

DEPTH
(FT.)

0

TO

115

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	35	vfs-vcrs	m	sb rnd
OTHER	> gravel	5	vfp-crp	m	sb rnd
	sand	15	vfs-vcrs	m	sb rnd
SILT AND CLAY		10			

REMARKS

color Brownish black

HCL -

Frosted Quartz

Immature

DEPTH
(FT.)

115

TO

140

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	23	vfp-mp	l	rnd
	sand	21	vfs-vcrs	m	sb rnd
OTHER	> gravel	16	vfp-mp	l	sb rnd
	sand	30	vfs-vcrs	h	sb rnd
SILT AND CLAY		10			

REMARKS

color Greyish Tan

HCL -

Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

140

TO

145

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	60	vfp-crp	l	rnd
	sand	10	vfs-vcrs	m	sb rnd
OTHER	>gravel	15	vfp-mp	l	rnd
	sand	13	vfs-vcrs	h	sb rnd
SILT AND CLAY		2			

REMARKS

color Greyish Buff
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

145

TO

150

ROCK CLASSIFICATION

Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	23	vfs-vcrs	m	sb rnd
OTHER	>gravel	5	vfp-fp	l	rnd
	sand	71	vfs-vcrs	h	sb rnd
SILT AND CLAY		1			

REMARKS

color Greyish Buff
HCL -

Mature

Total Drilled Depth reported as 150'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 076700

W 054100

Altitude 479

Well 699 - 77 - 54

Other Data used in
Interpretation

(1) Driller's Log

(2) E-Log

samples sieved

greyish brown

WELL NUMBER

699-77-54

DEPTH
(FT.)

0

TO

80

ROCK CLASSIFICATION

%SIZE RANGESPHERICITYROUNDNESSBASALT gravel
sandOTHER gravel
sand

SILT AND CLAY

REMARKS

color
HCL

Sample sieved

DEPTH
(FT.)

80

TO

100

ROCK CLASSIFICATION

%SIZE RANGESPHERICITYROUNDNESSBASALT gravel
sandOTHER gravel
sand

SILT AND CLAY

REMARKS

color
HCL

Sample missing

WELL NUMBER

699-77-54

DEPTH
(FT.)

100

TO

150

ROCK CLASSIFICATION

slightly silty gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	17	vfp-mp	m	sb ang
	sand	22	vfs-vcrs	l	sb ang
OTHER	>gravel	9	vfp-crp	m	sb rnd
	sand	44	vfs-vcrs	m	sb rnd
SILT AND CLAY		8			

REMARKS

color Greyish Brown

HCL -

Slightly Micaceous Sampled intervals 110'-115', 120'-125', 130'-135'
missing

Immature

Total Drilled Depth reported as 150'

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

none given

Altitude 403

Other Data used in
Interpretation

Well 699 - 77 - 36

samples sieved

greyish brown

brownish tan

brownish tan

tan

yellowish tan

WELL NUMBER

699-77-36

DEPTH
(FT.)

0

TO

35

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

DEPTH
(FT.)

35

TO

45

ROCK CLASSIFICATION

sandy Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	0	_____	_____	_____
sand	10	vfs-crs	1	sb ang
OTHER > gravel	0	_____	_____	_____
sand	20	vfs-crs	m	sb rnd
SILT AND CLAY	70			

REMARKS

color
HCL

Slightly Micaceous

Immature

WELL NUMBER

699-77-36

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

60

ROCK CLASSIFICATION

slightly gravelly Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel sand	6	vfp-fp	m	sb rnd
	5	vfs-ms	l	sb rnd
OTHER > gravel sand	0			
	2	vfs-ms	m	sb rnd
SILT AND CLAY	87			

REMARKS

 color
HCL

 Brownish Tan
 -

Lithified by silt & clay

Immature

WELL NUMBER

699-77-36

DEPTH
(FT.)

60

TO

65

ROCK CLASSIFICATION

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

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

65

TO

90

ROCK CLASSIFICATION

Silt

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

REMARKS

color
HCL

Brownish Tan

-

Unfrosted Quartz Lithified by silt & clay

Mature

WELL NUMBER

699-77-36

DEPTH
(FT.)

90

TO

95

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.)

95

TO

110

ROCK CLASSIFICATION

sandy Silt

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel sand	1 10	vfp-fp vfs-crs	1 1	rnd sb rnd
OTHER > gravel sand	1 10	vfp-fp vfs-crs	1 m	rnd sb rnd
SILT AND CLAY	78			

REMARKS

color
HCL

Tan

-

Lithified by silt & clay

Immature

WELL NUMBER

699-77-36

DEPTH
(FT.)

110

TO

115

ROCK CLASSIFICATION

BASALT > gravel
sand%SIZE RANGESPHERICITYROUNDNESSOTHER > gravel
sand

SILT AND CLAY

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

115

TO

150

ROCK CLASSIFICATION

sandy Silt

BASALT > gravel
sand%SIZE RANGESPHERICITYROUNDNESSOTHER > gravel
sand

SILT AND CLAY

REMARKS

color
HCL

Yellowish Tan

-

Frosted Quartz

Lithified by silt & clay

Immature

Total Drilled Depth reported as 150'?

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 077750

W 062300

Altitude 468

Other Data used in
Interpretation

(1) Driller's Log

(2) E-Log

Well 699 - 78 - 62

greyish buff

greyish buff

tan

WELL NUMBER

699-78-62

DEPTH
(FT.)

0

TO

70

ROCK CLASSIFICATION

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

REMARKS

color
HCL

Sample

DEPTH
(FT.)

70

TO

90

ROCK CLASSIFICATION

slightly silty gravelly Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel sand	12	vfp-crp	1	sb ang
	30	vfs-vcrs	m	sb ang
OTHER > gravel sand	12	vfp-crp	1	sb ang
	37	vfs-vcrs	h	sb rnd
SILT AND CLAY	9			

REMARKS

color
HCL

Greyish Buff

Frosted Quartz

Immature

WELL NUMBER

699-78-62

DEPTH
(FT.)

90

TO

125

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	39	vfp-vcrp	l	rnd
sand	11	vfs-vcrs	m	sb ang
OTHER > gravel	25	vfp-crps	l	rnd
sand	23	vfs-vcrs	h	sb rnd
SILT AND CLAY	2			

REMARKS

color Greyish Buff
HCL -

Slightly Micaceous Unfrosted Quartz Sample interval 95'-100' missing
Immature

DEPTH
(FT.)

125

TO

135

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

699-78-62

DEPTH
(FT.)

135

TO

140

ROCK CLASSIFICATION

silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>2</u>	<u>vfp-fp</u>	<u>l</u>	<u>rnd</u>
sand	<u>7</u>	<u>vfs-crs</u>	<u>m</u>	<u>sb ang</u>
OTHER > gravel	<u>0</u>			
sand	<u>66</u>	<u>vfs-crs</u>	<u>h</u>	<u>sb rnd</u>
SILT AND CLAY	<u>25</u>			

REMARKS

color TanHCL -

Slightly Micaceous Unfrosted Quartz

Immature

Total Drilled Depth reported as 150'

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

none given

Altitude 772

N.E. 1/4 SW 1/4 Sec. 3 T.14 N., R.25 E.

Other Data used in
Interpretation

- (1) Descriptive Log
from Newcomb
et al, 1972, p.76-77
- (2) Driller's Log
- (3) E-Log

brownish grey - light grey

light grey

light grey

light grey

greyish tan

Depth Graphic Log

Sample Description

Plant Coordinates

well 699 - 79 - 104 cont

Geological log for TD 699, showing depth in feet (ft.) on the left axis (500 to 700) and stratigraphic units on the right axis (UN, UN, UN, FN, FS).

The log is divided into sections by horizontal lines. The top section (500-550 ft) is labeled 'UN' and contains a core sample (black bar) and a lithological description (white bar). The middle section (550-600 ft) is labeled 'UN' and contains a core sample (black bar) and a lithological description (white bar). The bottom section (600-650 ft) is labeled 'FN' and contains a core sample (black bar) and a lithological description (white bar). The bottom-most section (650-700 ft) is labeled 'FS' and contains a core sample (black bar) and a lithological description (white bar).

The log also includes a vertical scale on the left (500 to 700 ft) and a horizontal scale at the bottom (0 to 100 ft). The text 'TD 699' is written at the bottom of the log.

greyish white
greyish tan

greyish tan

greyish tan

greyish tan

Altitude _____

Other Data used in Interpretation

W. K. Summers & Associates

WELL NUMBER

699-79-104

DEPTH
(FT.)

0

TO

85

ROCK CLASSIFICATION

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

REMARKS

color

HCL

Sample missing

DEPTH
(FT.)

85

TO

150

ROCK CLASSIFICATION

silty sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT ≥ gravel	35	vfp-crp	m	rnd
sand	24	vfs-vcrs	m	rnd
OTHER ≥ gravel	21	vfp-crp	m	rnd
sand	11	vfs-vcrs	m	rnd
SILT AND CLAY	9			

REMARKS

color

HCL

Brownish Grey-Light Grey

-

Slightly Micaceous

Frosted Quartz

Lithified by silt & clay (?)

Sample intervals 90'-95', 100'-105', 110'-115', 120'-125', 130'-135',
140'-145' missing

Immature

DEPTH
(FT.)

150

TO

155

ROCK CLASSIFICATION

BASALT > gravel
sand%SIZE RANGESPHERICITYROUNDNESSOTHER > gravel
sand

SILT AND CLAY

REMARKS

color

HCL

Sample missing

DEPTH
(FT.)

155

TO

170

ROCK CLASSIFICATION

gravelly Sand

BASALT > gravel
sand%SIZE RANGESPHERICITYROUNDNESSOTHER > gravel
sand

SILT AND CLAY

REMARKS

color

HCL

Light Grey

Slightly Micaceous

Sample interval 160'-165' missing

Immature

DEPTH
(FT.)

170

TO

215

ROCK CLASSIFICATION

BASALT >gravel
sand%SIZE RANGESPHERICITYROUNDNESSOTHER >gravel
sand

SILT AND CLAY

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

215

TO

220

ROCK CLASSIFICATION

gravelly Sand

BASALT >gravel
sand%SIZE RANGESPHERICITYROUNDNESS

15

vfp-fp

l

rnd

13

vfs-vcrs

m

rnd

OTHER >gravel
sand

0

vfs-vcrs

m

rnd

68

SILT AND CLAY

4

REMARKS

color Light Grey
HCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

220

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

360

ROCK CLASSIFICATION

silty sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	29	vfp-mp	l	w rnd
sand	13	vfs-vcrs	m	rnd
OTHER > gravel	24	vfp-mp	m	w rnd
sand	28	vfs-vcrs	m	rnd
SILT AND CLAY	6			

REMARKS

color

HCL

Light Grey

Slightly Micaceous

Frosted Quartz

Immature

DEPTH (FT.) 360 TO 425 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.) 425 TO 500 ROCK CLASSIFICATION silty Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	20	vfp-crp	l	rnd
sand	6	vfs-vcrs	m	rnd
OTHER > gravel	30	vfp-crp	m	w rnd
sand	41	vfs-vcrs	m	rnd
SILT AND CLAY	3			
REMARKS				
color	Greyish Tan			
HCL	-			
Slightly Micaceous Frosted Quartz				
Sample intervals 430'-455', 460'-495' missing				
Immature				

WELL NUMBER

699-79-104

DEPTH
(FT.)

500

TO

510

ROCK CLASSIFICATION

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

REMARKS

color

HCL

Sample missing

DEPTH
(FT.)

510

TO

515

ROCK CLASSIFICATION

sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT ≥ gravel	25	vfp-mp	m	w rnd
sand	10	fs-vcrs	m	sb rnd
OTHER ≥ gravel	25	vfp-mp	m	w rnd
sand	40	fs-vcrs	m	sb rnd
SILT AND CLAY	0			

REMARKS

color

HCL

Greyish White

Slightly Micaceous

Unfrosted Quartz

Immature

WELL NUMBER

699-79-104

DEPTH
(FT.)

515

TO

520

ROCK CLASSIFICATION

sandy Gravel

		%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT	> gravel	25	vfp-mp	m	w rnd
	sand	10	vfs-vcrs	m	sb rnd
OTHER	> gravel	25	vfp-mp	m	w rnd
	sand	38	vfs-vcrs	m	rnd
SILT AND CLAY		2			

REMARKS

color Greyish Tan
HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

520

TO

535

ROCK CLASSIFICATION

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

REMARKS

color _____
HCL _____

Sample missing

DEPTH
(FT.)

535

TO

541

ROCK CLASSIFICATION

gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	12	vfp-mp	l	w rnd
sand	6	vfs-vcrs	m	sb rnd
OTHER > gravel	8	vfp-mp	m	w rnd
sand	70	vfs-vcrs	m	rnd
SILT AND CLAY	4			

REMARKS

color Greyish Tan

HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

541

TO

555

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

699-79-104

DEPTH
(FT.)

555

TO

640

ROCK CLASSIFICATION

silty sandy Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	20	vfp-mp	l	sb rnd
sand	17	vfs-vcrs	m	sb rnd
OTHER > gravel	20	vfp-mp	m	w rnd
sand	36	vfs-vcrs	m	rnd
SILT AND CLAY	7			

REMARKS

color Greyish Tan
HCL -

Slightly Micaceous Frosted Quartz

Sample intervals 560'-585', 590'-600', 607'-635' missing

Immature

DEPTH
(FT.)

640

TO

670

ROCK CLASSIFICATION

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

REMARKS

color _____
HCL _____

Sample missing

WELL NUMBER

699-79-104

DEPTH
(FT.)

670

TO

677

ROCK CLASSIFICATION

Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	40	vfp-vcrp	m	sb rnd
sand	1	vfs-vcrs	m	sb rnd
OTHER > gravel	55	vfp-crp	l	w rnd
sand	3	vfs-vcrs	m	rnd
SILT AND CLAY	1			

REMARKS

color Greyish Tan

HCL -

Micaceous Frosted Quartz

Submature

DEPTH
(FT.)

677

TO

699

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 699'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 079538

W 043176

Altitude 412

Other Data used in
Interpretation

Well 699 - 80 - 43P

greyish brown

greyish-red brown

tan

brownish grey

light grey

brownish grey
brownish black

DEPTH
(FT.)

0

TO

15

ROCK CLASSIFICATION

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT $\geq$ gravel				
sand				
OTHER $\geq$ gravel				
sand				
SILT AND CLAY				

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

15

TO

42

ROCK CLASSIFICATION

Gravel

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT $\geq$ gravel	54	vfp-vcrp	1	rnd
sand	2	vfs-vcrs	m	sb rnd
OTHER $\geq$ gravel	39	vfp-vcrp	m	rnd
sand	3	vfs-vcrs	m	sb ang
SILT AND CLAY	2			

REMARKS

color
HCL

Greyish Brown

+

Unfrosted Quartz

Submature

DEPTH
(FT.)

42

TO

60

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	37	vfp-crp	l	sb rnd
	sand	10	vfs-vcrs	m	sb rnd
OTHER	> gravel	37	vfp-vcrp	l	sb rnd
	sand	14	vfs-vcrs	m	sb ang
SILT AND CLAY		2			

REMARKS

color Greyish-Red Brown
HCL +

Unfrosted Quartz Lithified by silt & clay

Immature

DEPTH
(FT.)

60

TO

380

ROCK CLASSIFICATION

gravelly sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	7	vfp-vcrp	l	sb rnd
	sand	13	vfs-vcrs	m	sb rnd
OTHER	> gravel	7	vfp-vcrp	l	sb rnd
	sand	18	vfs-vcrs	m	sb ang
SILT AND CLAY		55			

REMARKS

color Tan
HCL +

Lithified by silt, clay & CaCO₃ Abundant Caliche (30%, 120'-380')

Sample interval 90'-95' missing

Immature

DEPTH
(FT.)

380

TO

415

ROCK CLASSIFICATION

gravelly sandy Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	10	vfp-mp	m	sb rnd
sand	10	vfs-vcrs	m	sb rnd
OTHER > gravel	5	vfp-mp	m	sb rnd
sand	25	vfs-vcrs	m	sb ang
SILT AND CLAY	50			

REMARKS

color Brownish Grey
HCL +

Caliche Present Slightly Micaceous Lithified by silt, clay & CaCO₃
Immature

DEPTH
(FT.)

415

TO

435

ROCK CLASSIFICATION

gravelly silty Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	7	vfp-mp	m	sb rnd
sand	16	vfs-vcrs	m	sb rnd
OTHER ≥ gravel	7	vfp-mp	m	sb rnd
sand	40	vfs-vcrs	m	sb ang
SILT AND CLAY	30			

REMARKS

color Light Grey
HCL +

Caliche Present Frosted Quartz Lithified by silt, clay & CaCO₃
Immature

DEPTH
(FT.)

435

TO

440

ROCK CLASSIFICATION

gravelly silty Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>6</u>	<u>vfp-mp</u>	<u>m</u>	<u>sb rnd</u>
sand	<u>26</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb rnd</u>
OTHER <u>> gravel</u>	<u>6</u>	<u>vfp-mp</u>	<u>m</u>	<u>sb rnd</u>
sand	<u>42</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY	<u>20</u>			

REMARKS

color Brownish GreyHCL +

Caliche Present

Immature

DEPTH
(FT.)

440

TO

445

ROCK CLASSIFICATION

slightly silty
slightly gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT <u>> gravel</u>	<u>5</u>	<u>vfp-fp</u>	<u>m</u>	<u>sb ang</u>
sand	<u>60</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>sb ang</u>
sand	<u>15</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
SILT AND CLAY	<u>15</u>			

REMARKS

color Brownish BlackHCL -

Immature

Total Drilled Depth reported as 447'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 081004

W 057993

Altitude 438

Other Data used in
Interpretation

Driller's Log

Well 699 - 81 - 58

greyish black

greyish tan

greyish buff

brownish tan-yellowish tan

DEPTH
(FT.)

0

TO

25

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	54	vfp-mp	m	sb rnd
	sand	20	vfs-vcrs	m	sb rnd
OTHER	> gravel	13	vfp-mp	m	rnd
	sand	5	vfs-vcrs	m	sb rnd
SILT AND CLAY		8			

REMARKS

color Greyish Brown-Black

HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

25

TO

45

ROCK CLASSIFICATION

gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	12	vfp-mp	l	rnd
	sand	25	vfs-vcrs	m	sb rnd
OTHER	> gravel	5	vfp-mp	l	rnd
	sand	33	vfs-vcrs	h	sb rnd
SILT AND CLAY		25			

REMARKS

color Greyish Tan

HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

45

TO

90

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	24	vfp-crp	m	sb rnd
	sand	21	vfs-vcrs	l	sb rnd
OTHER	> gravel	28	vfp-crp	l	rnd
	sand	22	vfs-vcrs	m	sb rnd
SILT AND CLAY		5			

REMARKS

color Greyish Buff

HCL -

Unfrosted Quartz

Immature

DEPTH
(FT.)

90

TO

150

ROCK CLASSIFICATION

Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	3	vfp-mp	m	sb rnd
	sand	4	vfs-vcrs	m	sb rnd
OTHER	> gravel	2	vfp-mp	m	ang
	sand	6	vfs-vcrs	h	sb rnd
SILT AND CLAY		85			

REMARKS

color Brownish Tan-Yellowish Tan

HCL -

Lithified by silt & clay

Immature

Total Drilled Depth reported as 150'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 082850

W 047100

Altitude 433

Other Data used in
Interpretation

Driller's Log

Well 699 - 83 - 47

buff

greyish brown

brownish tan

brownish tan

WELL NUMBER

699-83-47

DEPTH
(FT.)

0

TO

50

ROCK CLASSIFICATION

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

 color
HCL

Sample sieved

DEPTH
(FT.)

50

TO

60

ROCK CLASSIFICATION

Sand

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

REMARKS

 color
HCL

Buff

 Slightly Micaceous Unfrosted Quartz
 Very Mature

DEPTH
(FT.)

60

TO

105

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel sand	19	vfp-vcrp	1	sb ang
		10	vfs-vcrs	1	sb ang
OTHER	> gravel sand	15	vfp-vcrp	1	sb rnd
		49	vfs-vcrs	m	sb rnd
SILT AND CLAY		7			

REMARKS

color
HCL

Greyish Brown

Slightly Micaceous

Unfrosted Quartz

Lithified by clay

Sample interval 85'-90' missing

Immature

DEPTH
(FT.)

105

TO

130

ROCK CLASSIFICATION

gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel sand	6	vfp-mp	m	sb rnd
		8	vfs-ms	1	sb rnd
OTHER	> gravel sand	6	vfp-mp	m	sb rnd
		45	vfs-ms	h	sb rnd
SILT AND CLAY		35			

REMARKS

color
HCL

Brownish Tan

Caliche (present between 105' & 110', 125' & 130')

Unfrosted Quartz

Sample interval 110'-115' missing

Immature

DEPTH
(FT.)

130

TO

150

ROCK CLASSIFICATION

silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	1	vfp-mp	m	rnd
	sand	32	vfs-ms	m	sb rnd
OTHER	> gravel	1	vfp-mp	m	rnd
	sand	32	vfs-ms	h	sb rnd
SILT AND CLAY		34			

REMARKS

color Brownish Tan
HCL +

Caliche (present between 135' & 150')

Unfrosted Quartz

Immature

Total Drilled Depth reported as 150'

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 084000

W 035000

Altitude 398

Other Data used in
Interpretation

Driller's Log

Well 699 - 84 - 35A

tan

tannish yellow

greyish brown

greyish brown

brownish tan

tan

greyish brown; ASH FRAGMENTS

light grey
grey; TRACE DIATOMITE
greyish white
greyish brown

DEPTH
(FT.)

0

TO

20

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	27	vfp-crp	m	sb rnd
	sand	23	vfs-vcrs	m	sb rnd
OTHER	> gravel	8	vfp-crp	m	sb rnd
	sand	36	vfs-vcrs	m	sb ang
SILT AND CLAY		6			

REMARKS

color Greyish Brown

HCL +

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

20

TO

35

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	30	vfp-crp	m	sb rnd
	sand	27	vfs-vcrs	m	rnd
OTHER	> gravel	10	vfp-crp	m	sb rnd
	sand	27	vfs-vcrs	m	sb ang
SILT AND CLAY		6			

REMARKS

color Brownish Grey

HCL +

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

35

TO

45

ROCK CLASSIFICATION

slightly gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>10</u>	<u>vfp-mp</u>	<u>1</u>	<u>sb ang</u>
	sand	<u>18</u>	<u>vfs-vcrs</u>	<u>1</u>	<u>rnd</u>
OTHER	>gravel	<u>0</u>			
	sand	<u>36</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY		<u>36</u>			

REMARKS

color Brown
HCL +

Slightly Micaceous Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

45

TO

55

ROCK CLASSIFICATION

silty Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	<u>10</u>	<u>vfp-mp</u>	<u>m</u>	<u>sb rnd</u>
	sand	<u>6</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
OTHER	>gravel	<u>0</u>	<u></u>	<u></u>	<u></u>
	sand	<u>24</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>rnd</u>
SILT AND CLAY		<u>30</u>			

REMARKS

color Greyish Brown
HCL +

Abundant Caliche (30%, pebbles & sand) Slightly Micaceous

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

55

TO

175

ROCK CLASSIFICATION

gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	<u>> gravel</u> sand	11	vfp-mp	m	rnd
		11	vfs-vcrs	m	rnd
OTHER	<u>> gravel</u> sand	2	vfp-mp	m	rnd
		37	vfs-vcrs	m	rnd
SILT AND CLAY		39			

REMARKS

color
HCL

Tan

+

Slightly Micaceous Lithified

Immature

DEPTH
(FT.)

175

TO

195

ROCK CLASSIFICATION

gravelly Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	<u>> gravel</u> sand	15	vfp-mp	m	rnd
		2	vfs-vcrs	m	rnd
OTHER	<u>> gravel</u> sand	5	vfp-mp	m	rnd
		8	vfs-vcrs	h	sb rnd
SILT AND CLAY		70			

REMARKS

color
HCL

Tannish Yellow

+

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

195

TO

215

ROCK CLASSIFICATION

gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	20	vfp-crp	m	sb rnd
	sand	11	vfs-vcrs	m	rnd
OTHER	> gravel	5	vfp-crp	m	sb rnd
	sand	38	vfs-vcrs	m	sb rnd
SILT AND CLAY		26			

REMARKS

color Greyish Brown

HCL +

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

DEPTH
(FT.)

215

TO

225

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	12	vfp-mp	l	w rnd
	sand	9	vfs-vcrs	m	sb rnd
OTHER	> gravel	0			
	sand	42	vfs-vcrs	m	rnd
SILT AND CLAY		17			

REMARKS

color Greyish Brown

HCL +

Abundant Caliche (20%, pebbles & sand) Slightly Micaceous
 Frosted Quartz Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.)

225

TO

285

ROCK CLASSIFICATION

gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	15	vfp-mp	l	w rnd
	sand	4	vfs-vcrs	m	rnd
OTHER	> gravel	5	vfp-mp	m	w rnd
	sand	60	vfs-vcrs	m	sb rnd
SILT AND CLAY		16			

REMARKS

color Brownish Tan
HCL +

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

DEPTH
(FT.)

285

TO

295

ROCK CLASSIFICATION

sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	1	-fp-	l	sb ang
	sand	1	vfs-ms	m	rnd
OTHER	> gravel	0			
	sand	23	vfs-ms	h	sb rnd
SILT AND CLAY		75			

REMARKS

color Tan
HCL -

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

DEPTH
(FT.)

295

TO

335

ROCK CLASSIFICATION

sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	3	vfp-mp	1	rnd
	sand	5	vfs-vcrs	1	sb rnd
OTHER	>gravel	0			
	sand	24	vfs-vcrs	m	sb ang
SILT AND CLAY		68			

REMARKS

color Greyish Brown
HCL -

Caliche (sand present) Slightly Micaceous Slightly Gypsiferous (sand)

Ash (fragments present) Lithified by silt & clay

Immature

DEPTH
(FT.)

335

TO

340

ROCK CLASSIFICATION

Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	2	vfp-mp	1	w rnd
	sand	1	vfs-crs	m	sb rnd
OTHER	>gravel	0			
	sand	4	vfs-crs	h	rnd
SILT AND CLAY		93			

REMARKS

color Light Grey
HCL -

Slightly Micaceous Lithified by silt & clay

Submature

DEPTH
(FT.)

340

TO

350

ROCK CLASSIFICATION

sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	5	vfp-mp	l	w rnd
	sand	7	vfs-vcrs	m	rnd
OTHER	>gravel	0			
	sand	22	vfs-vcrs	m	rnd
SILT AND CLAY		66			

REMARKS

color Grey

HCL -

Slightly Diatomaceous (sand)

Slightly Gypsiferous (sand)

Lithified by silt & clay

Immature

DEPTH
(FT.)

350

TO

355

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	30	vfp-mp	m	sb rnd
	sand	21	vfs-vcrs	m	sb rnd
OTHER	>gravel	9			
	sand	30	vfs-vcrs	m	rnd
SILT AND CLAY		10			

REMARKS

color Greyish White

HCL +

Abundant Caliche (30%, pebbles & sand)

Slightly Micaceous

Lithified by silt, clay & CaCO₃

Immature

DEPTH
(FT.) 36

BASALT > gravel
sand

OTHER > gravel
sand

SILT AND CLAY

REMARKS

color
HCL

Slightly Micaceous

Immature

Total Drilled Depth

DEPTH
(FT.) 355 TO 360

ROCK CLASSIFICATION

sandy Gravel & Basalt Flow

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	80	vfp-fp	m-l	sb rnd-v ang
sand	16	vfs-vcrs	m	sb ang
OTHER > gravel	0			
sand	4	vfs-vcrs	m	sb ang
SILT AND CLAY	0			

REMARKS

color Black
HCL +

Caliche (sand present) Unfrosted Quartz

Immature

ROCK CLASSIFICATION

slightly silty Sand
& Basalt Flow

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel	10	vfp-fp	m-l	sb rnd-v ang
sand	36	vfs-vcrs	m	sb ang
OTHER > gravel	0			
sand	45	vfs-vcrs	m	sb rnd
SILT AND CLAY	9			

REMARKS

color Greyish Brown
HCL +

Caliche (sand present) Slightly Micaceous Frosted Quartz

Immature

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

none given

Altitude 635

Other Data used in
Interpretation

Well 699 - 93 - 93

TD 520

W. K. Summers & Associates

DEPTH
(FT.)

0

TO

78

ROCK CLASSIFICATION

silty Sand

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

REMARKS

color Tan
HCL +

Slightly Micaceous Frosted Quartz

Immature

DEPTH
(FT.)

78

TO

120

ROCK CLASSIFICATION

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	35	vfs-ms	h	sb rnd
SILT AND CLAY		40			

REMARKS

color Brownish Tan
HCL +

Slightly Micaceous

Immature

DEPTH
(FT.)

120

TO

195

ROCK CLASSIFICATION

slightly silty 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>w rnd</u>
sand	<u>19</u>	<u>vfs-ms</u>	<u>m</u>	<u>sb rnd</u>
OTHER > gravel	<u>0</u>			
sand	<u>65</u>	<u>vfs-ms</u>	<u>m</u>	<u>sb rnd</u>
SILT AND CLAY	<u>15</u>			

REMARKS

color Brownish BuffHCL -

Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

195

TO

225

ROCK CLASSIFICATION

slightly silty gravelly Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	<u>7</u>	<u>vfp-fp</u>	<u>m</u>	<u>sb rnd</u>
sand	<u>24</u>	<u>vfs-vcrs</u>	<u>m</u>	<u>sb ang</u>
OTHER > gravel	<u>4</u>	<u>vfp-fp</u>	<u>m</u>	<u>sb 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 Grey Brownish BuffHCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

225

TO

250

ROCK CLASSIFICATION

slightly silty gravelly Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	15	vfp-mp	m	sb rnd
	sand	20	vfs-vcrs	m	sb ang
OTHER	> gravel	8	vfp-mp	m	w rnd
	sand	42	vfs-vcrs	h	sb rnd
SILT AND CLAY		15			

REMARKS

color Greyish Buff

HCL -

Slightly Micaceous

Immature

DEPTH
(FT.)

250

TO

342

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	10	vfp-fp	m	v ang
	sand	5	vfs-vcrs	m	sb rnd
OTHER	> gravel	55	vfp-mp	m	w rnd
	sand	25	vfs-vcrs	m	sb rnd
SILT AND CLAY		5			

REMARKS

color Greyish Buff

HCL -

Slightly Micaceous Unfrosted Quartz

Immature

DEPTH
(FT.)

342

TO

400

ROCK CLASSIFICATION

silty sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	29	vfp-mp	m	sb rnd
	sand	4	vfs-vcrs	m	sb rnd
OTHER	>gravel	37	vfp-mp	m	sb rnd
	sand	20	vfs-vcrs	m	sb rnd
SILT AND CLAY		10			

REMARKS

color Brownish Buff

HCL -

Unfrosted Quartz

Immature

DEPTH
(FT.)

400

TO

450

ROCK CLASSIFICATION

gravelly sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	8	vfp-fp	m	sb rnd
	sand	4	vfs-vcrs	m	sb rnd
OTHER	>gravel	12	vfp-mp	m	sb rnd
	sand	16	vfs-vcrs	m	sb rnd
SILT AND CLAY		60			

REMARKS

color Orange Buff

HCL -

Lithified by silt & clay

Immature

DEPTH
(FT.)

450

TO

460

ROCK CLASSIFICATION

sandy Silt

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	0			
	sand	8	vfs-crs	m	rnd
OTHER	>gravel	0			
	sand	20	vfs-crs	h	sb rnd
SILT AND CLAY		72			

REMARKS

color Brown
HCL -

Slightly Micaceous

Lithified by silt & clay

Frosted Quartz

Immature

DEPTH
(FT.)

460

TO

465

ROCK CLASSIFICATION

Sand

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

REMARKS

color Buff
HCL -

Frosted Quartz

Immature

DEPTH
(FT.)

465

TO

470

ROCK CLASSIFICATION

silty Sand

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

REMARKS

color Greyish GreenHCL -

Slightly Micaceous

Frosted Quartz

Lithified by silt & clay

Immature

DEPTH
(FT.)

470

TO

520

ROCK CLASSIFICATION

slightly gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	> gravel	5	vfp-fp	m	sb ang
	sand	15	vfs-vcrs	m	sb rnd
OTHER	> gravel	5	vfp-fp	m	sb ang
	sand	50	vfs-vcrs	m	sb rnd
SILT AND CLAY		25			

REMARKS

color Yellow Greyish TanHCL -

Slightly Micaceous

Frosted Quartz

Immature

Total Drilled Depth reported as 520'

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

N 097143

W 043241

Altitude 420

Other Data used in
Interpretation

Driller's Log

Well 699 - 97 - 43

greyish brown

tan

DEPTH
(FT.)

0

TO

45

ROCK CLASSIFICATION

sandy Gravel

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	32	vfp-crp	1	sb rnd
	sand	31	fs-vcrs	m	sb ang
OTHER	>gravel	16	vfp-mp	m	sb rnd
	sand	16	fs-vcrs	m	sb rnd
SILT AND CLAY		5			

REMARKS

color Greyish Brown
HCL -

Frosted Quartz

Immature

DEPTH
(FT.)

45

TO

60

ROCK CLASSIFICATION

slightly gravelly silty Sand

		<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT	>gravel	5	vfp-mp	1	sb rnd
	sand	12	vfs-ms	h	sb ang
OTHER	>gravel	5	vfp-mp	1	sb rnd
	sand	48	vfs-ms	h	sb rnd
SILT AND CLAY		30			

REMARKS

color Tan
HCL -

Unfrosted Quartz

Immature

DEPTH
(FT.)

60

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

Total Drilled Depth reported as 100'

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 107000

W 078890

Altitude 657

Other Data used in
Interpretation

Driller's Log

Well 699 - 107 - 79

greyish black
greyish brown
reddish brown

W. K. Summers & Associates

Depth
(ft.)

Graphic Log

Sample Description

Plant Coordinates

Well 699 - 107 - 19 cont

Altitude _____

Other Data used in
Interpretation

DEPTH
(FT.)

0

TO

465

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.)

465

TO

470

ROCK CLASSIFICATION

sandy Gravel

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel sand	40 42	vfp-fp fs-vcrs	1 1	sb ang sb ang
OTHER > gravel sand	0 18	 vfs-vcrs	 1	 rnd
SILT AND CLAY	0			

REMARKS

color _____ Greyish Black
HCL _____ -

Immature

DEPTH
(FT.)

470

TO

475

ROCK CLASSIFICATION

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

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

475

TO

480

ROCK CLASSIFICATION

gravelly silty Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT >gravel sand	20 31	vfp-mp vfs-vcrs	l m	sb ang sb rnd
OTHER >gravel sand	2 31	vfp-fp vfs-vcrs	l m	sb ang rnd
SILT AND CLAY	16			

REMARKS

color
HCL

Greyish Brown

+

Immature

DEPTH
(FT.)

480

TO

485

ROCK CLASSIFICATION

BASALT > gravel
sand%SIZE RANGESPHERICITYROUNDNESSOTHER > gravel
sand

SILT AND CLAY

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

485

TO

489

ROCK CLASSIFICATION

gravelly silty Sand

BASALT > gravel
sand%SIZE RANGESPHERICITYROUNDNESS

20

vfp-mp

1

sb ang

23

vfs-vcrs

1

rnd

OTHER > gravel
sand

2

vfp-fp

1

sb ang

39

vfs-vcrs

1

rnd

SILT AND CLAY

16

REMARKS

color
HCL

Reddish Brown

-

Immature

DEPTH
(FT.)

489

TO

620

ROCK CLASSIFICATION

BASALT > gravel
sand%SIZE RANGESPHERICITYROUNDNESSOTHER > gravel
sand

SILT AND CLAY

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

620

TO

627

ROCK CLASSIFICATION

slightly silty Sand

BASALT > gravel
sand%SIZE RANGESPHERICITYROUNDNESSOTHER > gravel
sand

SILT AND CLAY

REMARKS

color
HCL

Greyish Buff

Immature

DEPTH
(FT.)

627

TO

645

ROCK CLASSIFICATION

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

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

645

TO

650

ROCK CLASSIFICATION

Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT >gravel sand	0 5	vfs-ms	1	rnd
OTHER >gravel sand	0 10	vfs-ms	m	rnd
SILT AND CLAY	85			

REMARKS

color
HCL

Reddish Tan

Immature

DEPTH
(FT.)

650

TO

760

ROCK CLASSIFICATION

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

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

760

TO

768

ROCK CLASSIFICATION

sandy Silt

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT > gravel sand	0 15	vfs-vcrs	1	sb rnd
OTHER > gravel sand	0 35	vfs-vcrs	1	sb rnd
SILT AND CLAY	50			

REMARKS

color
HCL

Greyish Brown

-

Slightly Micaceous Unfrosted Quartz Compacted

Immature

WELL NUMBER

699-107-79

DEPTH
(FT.)

768

TO

805

ROCK CLASSIFICATION

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

REMARKS

color
HCL

Sample missing

DEPTH
(FT.)

805

TO

809

ROCK CLASSIFICATION

Sand

	%	SIZE RANGE	SPHERICITY	ROUNDNESS
BASALT >gravel sand	0 4	vfs-vcrs	1	sb rnd
OTHER >gravel sand	2 85	-fp- vfs-vcrs	1 m	sb rnd rnd
SILT AND CLAY	9			

REMARKS

color
HCL

Tan

Slightly Micaceous

Immature

WELL NUMBER

699-107-79

DEPTH
(FT.)

809

TO

895

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.)

895

TO

900

ROCK CLASSIFICATION

Sand

	<u>%</u>	<u>SIZE RANGE</u>	<u>SPHERICITY</u>	<u>ROUNDNESS</u>
BASALT > gravel	2	-vfp-	m	rnd
sand	10	fs-crs	l	sb rnd
OTHER > gravel	2	-vfp-	m	rnd
sand	86	fs-crs	m	rnd
SILT AND CLAY	0			

REMARKS

color Buff
HCL -

Frosted Quartz

Mature

WELL NUMBER

699-107-79

DEPTH
(FT.)

900

TO

938

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 938'

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