

When deepened to 2000, operation renamed well 78-26

LITHOLOGIC LOG
ANA 26

8/8/78 (6L to 500 FEET)

9/23/78 (500 FEET - TD)

Depth
Interval,
Feet

0-40

100% angular fairly well sorted ALLUVIAL gravel (.1" - 1 inch, modal size .8 inch) of mixed VOLCANIC LITHOLOGY ^{CONSISTING PRIMARILY} OF MAINLY TUFFS AND Rhyolite, often WITH SECONDARY QUARTZ replacement in vug fillings.

40-50

90% gravel as in interval 0-40 but with modal size of .5 inch ; 10% Fines.

50-80

100% gravel as in interval 0-40 but with modal size of 1 inch.

~~70-80~~

80-90

100% gravel as in interval 0-40.

90-100

95% gravel as in interval 0-40 ; 5% clayey fines.

100-110

90% ^{moderately sorted} SANDY GRAVEL (up to .7 inch) with modal size of .5 inch ; 10% clayey fines.

110-120

80% gravel as in interval 100-110 ; 10% clayey fines ; 10% SAND of mixed lithology

120-130

80% gravel as in interval 100-110 but with size mode of .4 inch ; 20% SAND AS IN INTERVAL 110-120.

130-150

80% ^{alluvial} gravel (.1 to .8 inch, modal size .4 inch) ; 10% sand as in interval 110-120 ; 10% clayey fines.

ANA 26 - (Contd.)

150-160
~~140-150~~

90% gravel as in interval 130-150 ;
10% sand as in interval 110-120 .

CONDUCTIVITY SAMPLE TAKEN.

160-170

80% ^{angular} alluvial gravel of mixed volcanic lithology (.1 to 1 inch, modal size .5 inch) ; 20% clayey fines.

170-190

80% angular chips of alluvial material (up to .6 inch, modal size .4 inch), probably boulders ; 10% alluvial sand as in interval 110-120 ; 10% clayey fines.

190-200

100% chips and angular grains of alluvial gravel (up to .6 inch, modal size .3 inch) of mixed volcanic lithology of primarily phylolites and tuffs, and ~~and~~ 10% dark fine grained basalt.

²⁴⁰
200-~~210~~

80% ^{90%} chips and gravel as in interval 190-200 ;
0-20% clayey fines. with fine counting in 2.0 mm

¹⁰⁻²²⁰
~~220-230~~

90% chips and gravel as in interval 190-200 ;
10% clayey fines.

~~220-230~~
~~230-240~~

SAME AS INTERVAL 200-210.

230-240

90% AS IN INTERVAL 190-200
~~but~~ but more rounded, 10% clayey fines.

240-250

SAME AS INTERVAL ²⁰⁰⁻²⁴⁰ ~~230-240~~ but gravel now contains equal amounts of rhyolite and basalt.

²⁷⁰
250-~~260~~

80-90% angular to sub-rounded gravel and chips (.05 to .3 inch with .1 inch modal) of primarily basalt and rhyolite ;
10% ~~20%~~ clayey fines.

ANA 26 (cont'd)

- 260-270 80% alluvial gravel and chips as in interval 250-260; but with size ranges of .05 - .6 and size mode of .15 inch, 20% clayey fines.
- 270-280 50% ALLUVIAL gravel as in interval 250-~~260~~²⁷⁰; 50% SANDY CLAYEY FINES.
- 280-290 70% SANDY CLAYEY FINES; 30% ^{angular to} ~~semi~~-rounded to rounded angular ²⁵⁰⁻²⁶⁰ alluvial gravel as in interval ~~260-270~~²⁷⁰.
- 290-300 SAME AS ~~THE~~ INTERVAL 280-290 but gravel is sub-rounded to well-rounded.
- 300-310 70% ANGULAR to sub-rounded chips and gravel (.05 - .5 inch, .3 inch mode) of mixed volcanic lithologic including ^{mainly} ~~mostly~~ basalt and rhyolite; 30% SANDY CLAY. CONDUCTIVITY SAMPLE TAKEN.
- 310-340 50% ~~alluvial~~ gravel as in interval 300-310; 50% SANDY CLAY.
- 340-350 50% clay; ^{50%_{SD}} 40% basalt boulders; ^{basalt boulders} 10% volcanic detritus.
- 350-360 SAME AS INTERVAL 340-350, but basalt not as predominant.
- 360-370 80% clay; 20% subrounded to rounded mixed alluvial volcanics (.05 - .3 inches, .15 inch mode). ^{SANDY GRAVEL.}
- 370-380 50% alluvial gravel as in interval 360-370; 50% clay.
- 380-400 80% SANDY CLAY; 20% ANGULAR to rounded volcanic alluvial ^{volc} gravel (.05 to .2 inch, .1 inch mode)

ADA 26 (Contd)

of predominantly basaltic composition.

400-420 ⁸⁰⁻ 90% clay; 10% ²⁰ mixed volcanic alluvium as in interval 380-400, but predominantly sand-sized.

420-430 80% clay; 20% alluvium as in interval 380-400.

430-440 ⁴⁷⁰ 70-75% clay; 25% ⁻³⁰ alluvium as in interval 380-400

440-470 70% clay; 30% alluvium as in interval 380-400

CONDUCTIVITY SAMPLE TAKEN AT INTERVAL
450-460.

480-500 60% clay; 40% angular to rounded mixed volcanic alluvium (.05 to .2 inch).

500-510 ~~30% brown clay~~; 70% ~~sand and gravel~~ well-rounded to angular sand and gravel (up to .5 inch) of mixed Lithology consisting of Light gray and reddish-brown Rhyolites (?) with quartz and Feldspar phenocrysts; Black fine-grained basalt with slight Iron OXIDE STAINING; TAN TO BROWN CHERTS and BRECCIATED WELL-LITHIFIED TUFFS WITH SECONDARY QUARTZ AND CHALCEDON; 30% brown clay.

510-520 30% brown clay; 70% sand and gravel as in interval 500-510 with addition of hard GREEN ROCK (Rhyolite tuff?). 30% brown clay

530-540 ~~20% light brown clay~~; 80% sand and gravel as in interval 500-510 with addition of brown well-lithified sedimentary rock. 80% of rock fragments are up to 1/4 inch.; 20% Light brown clay.

540-~~550~~ ⁵⁹⁰ (30% light brown clay); 70% ⁶⁰ sand and gravel (as in interval 500-510. subrounded to angular.

ANA 26 (contd)

550-590 80% sand and gravel as in interval 500-510;
20% light brown clay.

590-610 80% light brown clay; 20% sand and gravel as in interval 500-510.

610-620 70% light brown clay; 30% sand and gravel as in interval 500-510 with 50% basaltic rock fragments.

620-640 70% brown clay; 30% sand and gravel as in interval 500-510 with addition of friable brown sedimentary rock.

640-650 50% brown clay; 50% sand and gravel as in interval 500-510 with addition of soft brown sedimentary rock and clear quartz fragments.

650-690 (40% brown clay); 60% sand and gravel as in interval 500-510 with 70% basaltic composition.

690-740 (40% brown clay); 60% sand and gravel (subrounded to angular up to .5 inch) of mixed lithology consisting of 60% black basalt and remaining rocks of reddish-brown and greenish-gray rhyolites, soft brown sedimentary rock and clear and white quartz.

740-780 (30% brown clay); 70% sand and gravel as in interval 690-740 with size diameter up to .3 inch and trace zeolites(?).

780-790 (subrounded to angular) 80% sand and gravel (1/8 to 1/4 inch) of mixed lithology consisting of 80% black fine grained basalt with iron-oxide staining, reddish-brown flow-banded rhyolite(?) clear and white quartz or chaledony, soft white mineral with some green alteration (zeolite?), minor calcite; 20% brown clay.

ANA 26 (cont'd)

790 - 900

SAME AS INTERVAL 780-790 WITH ADDITION OF SOFT BROWN FINE-GRAINED ROCK FRAGMENTS.

900 - 960

80% subangular to angular ~~SUBANGULAR~~ GRAVEL ($\frac{1}{8}$ to $\frac{1}{4}$ inch) composed of 90% IRON-STAINED basalt with ZEOLITE AND CALCITE VOID-FILLING, clear ^{and} white quartz, zeolites (?), minor flow-banded rhyolites, soft brown sedimentary (?) rock fragments; 20% brown clay.

960 - 1020

80% subangular rock fragments (up to $\frac{1}{4}$ inch) of predominantly weathered basalts, some with zeolites and calcite filling VOIDS AND FRACTURES, minor clear and white quartz on chalcedony, ^{hard} brown fine-grained rock with mafic phenocrysts and brown biotite flakes showing faint flow lines, and soft green mineral (OLIVINE?) ; 20% brown clay.

1020 - 1060

SAME AS IN INTERVAL 960-1020 with some basaltic rock fragments showing green alteration of feldspar phenocrysts.

1060 - 1070

80% SAND AND GRAVEL SIZE ROCK FRAGMENTS OF basalts in various ~~STAGES~~ ^{STATES} of weathering, & some have voids ~~filled~~ and fractures filled with zeolites and calcite, minor white and clear quartz or chalcedony and soft green mineral (OLIVINE?) ; 20% brown clay.

1070 - 1150

SAME AS IN INTERVAL 1060-1070 WITH ADDITION OF REDDISH-BROWN ROCK WITH SMALL MAFIC ~~PHENOCRYSTS~~ PHENOCRYSTS, AND FLOW-BANDING ^{ING} (ANDESITE?).

1150 - 1180

SAME AS IN INTERVAL 1070-1150 WITH INCREASING amounts (5%) of reddish-brown flow-banded rock with mafic phenocrysts (ANDESITE?)
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ANA 26 (cont'd)

790 - 900

SAME AS INTERVAL 780-790 WITH ADDITION OF SOFT BROWN FINE-GRAINED ROCK FRAGMENTS.

900 - 960

80% subangular to angular ~~SANDSTONE~~ GRAVEL ($\frac{1}{8}$ to $\frac{1}{4}$ inch) composed of 90% IRON-STAINED basalt with ZEOLITE AND CALCITE VOID-FILLING, clear ^{and} white quartz, zeolites (?), minor flow-banded rhyolites, soft brown sedimentary (?) rock fragments; 20% brown clay.

960 - 1020

80% subangular rock fragments (up to $\frac{1}{4}$ inch) of predominantly weathered basalts, some with zeolites and calcite filling VOIDS AND FRACTURES, minor clear and white quartz or chalcedony, ^{hard} brown fine-grained rock with mafic phenocrysts and brown biotite flakes showing faint flow lines, and soft green mineral (OLIVINE?) ; 20% brown clay.

1020 - 1060

SAME AS IN INTERVAL 960-1020 with some basaltic rock fragments showing green alteration of feldspar phenocrysts.

1060 - 1070

80% SAND AND GRAVEL SIZE ROCK FRAGMENTS OF basalts in various ~~STAGES~~ ^{STATES} of weathering, ~~to~~ Some have voids ~~voids~~ and fractures filled with zeolites and calcite, minor white and clear quartz or chalcedony and soft green mineral (OLIVINE?) ; 20% brown clay.

1070 - 1150

SAME AS IN INTERVAL 1060-1070 WITH ADDITION OF REDDISH-BROWN ROCK WITH SMALL MAFIC ~~AND~~ PHENOCRYSTS, AND FLOW-BANDING ^{ING} (ANDESITE?).

1150 - 1180

SAME AS IN INTERVAL 1070-1150 WITH INCREASING amounts (5%) of reddish-brown flow-banded ROCK WITH MAFIC PHENOCRYSTS (ANDESITE?)
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ANA 26 (contd)

- 1180-1190 90% coarse sand of dark gray basalt with mafic phenocrysts, weathered basalt, reddish brown flow-banded ~~andesites~~ andesites, minor clear and white quartz; 10% brown clay.
- 1190-1220 SAME AS INTERVAL 1180-1190 WITH ADDITION OF MINOR ZEOLITES AND CALCITE.
- 1220-1270 95% SAND AND GRAVEL ($\frac{1}{8}$ - $\frac{1}{4}$ inch) CONSISTING OF GRAY-BLACK FELSIC BASALT WITH SOME PHENOCRYSTS SHOWING GREEN ALTERATION HALOES, IRON-OXIDE STAINED BASALTS, SOFT GREEN ALTERED TUFFS ^{AND} MINOR WHITE QUARTZ OR CHALCEDONY; 5% brown clay.
- 1270-1280 SAME AS INTERVAL 1220-1270 WITH ADDITION OF SOFT WHITE MINERAL, ~~ZEOLITES~~ ^{AND} CALCITE.
- ~~1280-1290~~ ^{95%} 100% GRAVELS CONSISTING OF BASALT, PINKISH-BROWN ANDESITE, GREEN TUFF AND MINOR QUARTZ, ZEOLITES AND CALCITE
- 1420-1450 ~~1450-1510~~ ^{mixed} 100% gravels consisting of purple-gray flow-banded andesite, basalt, green tuff, pinkish brown andesite and quartz.
- ~~1520-~~ 1450-1570 100% gravels consisting of white tuff, ^{weathered} basalt, pinkish brown andesite, purple andesite and minor quartz.
- 1570-1800 80-95% gravels consisting of weathered basalt, white tuff, pinkish-brown flow-banded andesite, purple andesite, hard green altered rock and minor quartz; 5-20% grayish green clay.

ANA 26 (contd)

1000-2000 TD

100% ~~gravel~~ gravels with subangular to angular fragments of weathered basalt, white tuff, purple and pinkish-brown andesite, green tuff and minor quartz.