Butte Cil Go. of Oregon, Inc. Cowan No. 1 (Permit 55) Sec. 8, T. 1 S., R. 3 W. Washington County

DESCRIPTIONS OF WELL CUTTINGS

- 0' 20' Sand; whitish gray, fine, feldspathic, loose, approximately 20% mafic minerals and a few fine mica flakes.
- 20' 40' Clay and silt; tan, firm clay, tan firm, tuffaceous silt with medium to coarse size, subangular pieces of black basalt, some pieces of milky white quartz and zeolite, probably amygdaloidal material from the basalt.
- 40' 60' Silt; rust colored, friable-firm and light gray tuffaceous silt with small subangular pebbles of weathered basalt. Occasional pebble of reddish brown chert.
- 50' 80' Silty clay; tan, firm, with scattered subangular pebbles of black baselt, some milky quartz and zeolite, amygdaloidal material from baselt?
- 80' 100' Argillaceous silt; pinkish and yellowish tan, firm with subangular pebbles of partly weathered basalt, occasional fragment of olivine.
- 100° 120° Clay and clayer silt; light green, firm to friable, may contain basalt pebbles. The clay and silt layer is underlain by a pebble gravel composed of subrounded pieces of partly weathered basalt, medium gray-brown chert and occasional pieces of white ash. Pebbles are approximately 1/4" to 3/8" in size. The gravel is probably a good aquifer.
- 120' 140' Gravel; composed of pebbles of subrounded <u>basalt</u>, chert and hard brown siliceous tuff, some fragments of milky quartz.

 Pebble size between 1/4" and 3/8". Probably a good aquifer.
- 140' 160' Gravel; as above, mostly 3/8" size.
- 160' 130' Silt; pinkish gray, firm, coarse sandy to pebble gravel.

 Pebbles are composed of subrounded to round pieces of black basalt, brown chert and silicified tuff, some glauconite, occasional piece of white ash.
- 180' 200' Silt; rust red, argillaceous, firm with scattered subrounded pieces of black basalt, some chert, a little white ash, coarse sand size pieces.
- 200' 220' Silt; as above but more fragments and the size of the fragments is a little larger.

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2201 - 2401

380. - 300.

97x)1 = 1201

scattered subrounded pieces of black basalt and some glaucomits. 240: - 260: Clay and silt; as above but with coarser pieces of basalt. 2601 - 2801 Clay: whitish and greenish, firm, tuffaceous, containing scattered subrounded pieces of partly weathered basalt, some

> Silt; medium brown, firm, tuffaceous, with scattered cherse fragments of basalt, some white ash, grayish dert, reddish brown, hard tuff and some glaucomits. A few small pieces of black carbonized wood.

small black pieces of carbonized wood, some milky white quarta

Clay and silt; reddish brown and light green, tuffaceous with

Siltatone; medium gray, tuffaceous, firm and medium gray to greenish gray, very firm tuff.

Described by: Vernon C. Newton, Jr.

Petroleum Engineer