

- 1000'-1060'
(60 ft.) Samples consist of fine sand and gravel. Gravel fragments are angular, semi-rounded and rounded.
- Mineral and rock constituents: basalt, quartzite, pumice, lava. Many of the rounded pebbles are quartz.
- 1060'-1080'
(20 ft.) Pronounced increase of coarse fragments. High percent of small quartz pebbles. Some very small hexagonal bipyramidal crystals (12 faces). These are high temperature quartz, formed between 573° C. and 870° C, known as B-quartz, generally formed in rhyrtite, or dacite.
- 1106'-1120'
(14 ft.) Predominantly fresh basalt.
- 1200'-1280'
(80 ft.) Heterogeneous mixture: Black basalt, andesite, a high percent deep red basalt, high percent quartz, some kaolinized material.
- 1300'-1340'
(40 ft.) A heterogeneous mixture: Some fresh unaltered basalt, a high percent of fine granular material, yellowish gray to light yellowish brown. Some fragments contain glass. Considerable of the material is partially altered basalt, or andesite. Some fragments contain a zeolite.
- 1300'-1340'
(40 ft.) The zeolite mineral occurs as small, rounded, colorless, transparent to translucent granules.
- 1340'-1405'
(65 ft.) A heterogeneous mixture: A high percent of deep reddish brown amygdaloidal basalt, some green slightly altered basalt. Some secondary quartz, some recrystallized calcite.
- With increase in depth there is an increase in dark basalt and a decrease in the percent of reddish brown basalt. Some calcareous basalt. Some kaolinization of basalt.
- 1405'-1425'
(20 ft.) A high percent of fine granular, medium gray calcareous basalt. An appreciable percent of partially kaolinized basalt. Amygdaloidal basalt; cavities filled with quartz and with calcite.
- 1425'-1605'
(80 ft.) A high percent of deep reddish brown amygdaloidal basalt. Some dark green slightly altered basalt. Some kaolinization of basalt. Recrystallized calcite. Low percent of secondary quartz. An appreciable percent of basalt is partly disintegrated.

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Summary of Sample Analysis

Sample

- 1605'-1770'
(65 ft.) Dark gray, grayish black, to black basalt. An appreciable percent of the basalt indicated some disintegration. Magnetite occurs finely disseminated in the basalt. Considerable secondary basalt. Veinlets of chalcedony occur in basalt.
- 1770'-1850'
(80 ft.) Basalt is getting fresher practically no disintegration.
- 2260'-2400'
(140 ft.) Basalt is quite similar to that of the above 230 feet. However, associated with it is a highly shiny black mineral. As indicated by well defined optical properties, the mineral is a definite mineral species. Its index of refraction is 1.543 ± 0.0002 , pronounced birefringence, sharp extinction. The mineral has not been identified at this time. Samples contain an appreciable percent of quartz, crystalline and chalcedony. With increase in depth the shiny black mineral becomes scarce.
- 2400'-2410'
(10 ft.) Basalt is faded, dull luster, yellowish color. Samples contain a high percent of crystalline quartz and chalcedony. Some calcite.
- 2410'-2420'
(10 ft.) Sample contains a high percent material, light gray in color, shiny luster, soft-hardness rates 1 to 2 - identified as serpentine. This is formed by hydrothermal alteration of shale. 2415 feet is about the beginning of sedimentary rock and the end of the basalt.
- 2420'-2470'
(50 ft.) The samples, 2420'-2470', contain a high percent of serpentine, described under 2410'-2420'.
- 2470'-2480'
(10 ft.) The sample taken between 2470'-2480' indicates a sharp change in rock classification. It contains over 50% of very fine grained material, which was determined, petrographically, to be shale. It is uniform texture with an abundance of minute interstices. In other words, finely porous. It is light gray, grayish brown and medium brown color.
- 2480'-2520'
(40 ft.) Samples predominate in the type of shale first encountered with samples of 2470'-2480'.

Summary of Sample Analysis

Sample

- 2520'-2530'
(10 ft.) This sample contains over 90% of soft coal. At this location there was a constant showing of gas and oil.
- 2530'-2673'
(143 ft.) The samples for the entire distance 2530' through 2673' (143 ft.) predominate in shale. Fragment of different samples vary in color from light gray to dark gray to light brown, medium brown to dark brown. Many fragments indicate alterations to a very soft substance resembling steatite. Many fragments of the shale have been leached and altered to a clay mineral.

The occurrence of the shale from 2470 feet through 2673 feet, is significant in that the present showing of coal, gas and oil is in this formation.

Note: Total depth of loose material and solid basalt is 2415 feet.

Total depth of sedimentary rock penetrated to date is 258 feet.