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Sinclair Oil & Gas Company
Eastern Oregon Land No. 1
C SE $\frac{1}{4}$ SW $\frac{1}{4}$ 15-16S-44E
Malheur County, Oregon

Ground Elevation - 2515'

Sample log from microscopic examination of samples
by H. B. Bynum and I. D. Stephens

- 0-30 Alluvium, sandy.
- 30-150 Shale, light gray to tan, silty to sandy, soft, slightly calcareous.
- 150-153 Conglomerate, fine to medium.
- 153-190 Shale as above.
- 190-193 Basalt, olivine.
- 193-210 Shale as above.
- 210-227 Sand, fine to medium, unconsolidated, angular to sub-angular, clear and frosted, containing some basic volcanic fragments and pyrite.
- 227-340 Siltstone, light gray, sandy, soft.
- 340-346 Sand, very fine to fine, unconsolidated, angular to sub-angular, containing free, large, clear quartz grains and traces of pyrite.
- 346-390 Siltstone, light gray, and shale, dark gray, sandy, moderately hard.
- 390-392 Sand, very fine to fine, unconsolidated, angular to sub-angular, containing clear and frosted quartz, some volcanic fragments and pyrite.
- 392-408 Shale, dark gray, sandy.
- 408-452 Sandstone, light gray to white, very fine to fine, conglomeritic, clear to gray quartz, basic volcanic fragments and pyrite, siliceous cement, slight pinhole porosity.
- 452-470 Shale, light gray, sandy, moderately hard.
- 470-473 Basalt, dark gray to black, with thin quartz veining.
- 473-480 Interbedded shales and basalt.
- 480-540 Missing.

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- 540-542 Basalt.
- 542-630 Shale, gray to green, soft, non to slightly calcareous, with minor stringers of unconsolidated quartz grains.
- 630-632 Free quartz grains.
- 632-690 Shale, light to dark gray, soft, waxy, sometimes silty to sandy.
- 690-692 Sand, unconsolidated, angular, clear and frosted quartz grains.
- 692-740 Shale, light to dark gray, silty to sandy, soft.
- 740-796 Shale, bentonitic grading to tuff, light gray, sandy.
- 796-800 Basalt, olivine, dark gray to black.
- 800-826 Tuffaceous shale and tuffs, light tan, gray and green-gray, sandy; minor sandstone, very fine to fine, silty with basalt fragments.
- 826-832 Basalt.
- 832-836 Tuff and tuffaceous shale as above.
- 836-844 Basalt.
- 844-900 Tuff and tuffaceous shale as above.
- 900-930 Tuff, white, speckled with calcite crystals, volcanic lithic and glass fragments.
- 930-1116 Tuff, medium coarse grained, gray and light tan, speckled with many calcite crystals and dark lithic and glassy fragments, calcite veining, pyrite and minor gray and tan tuffaceous shales.
- 1116-1120 Dull brown cherty material with calcite inclusions.
- 1120-1305 Tuff as above, fine to very coarse grained, locally very calcareous.
- 1305-4172 Interbedded basalt flows and tuffs in varying thicknesses and ratios. Basalts, black, dark gray, rarely brown, flow textures which include: micro to finely crystalline, oxidized and weathered, scoriae, glassy facies, quartz, zeolite and calcite amygdules. Tuffs, tuffaceous shales and rhyolitic tuffs: white, gray, green, red and purple, generally fine grained and calcareous, locally containing coarse quartz grains and fine-grained calcareous cemented sandstone stringers and/or pods. Minor thin-bedded dark gray to black shales intercalated both in the basalts and tuffs. Quartz and calcite veining throughout the section.

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- 4172-4246 Interbedded shale and tuffs. Shale is black, hard, micaceous, locally sandy, grading to graywacke. Tuffs are rhyolitic, gray, green, tan and purple, occasionally finely porphyritic. Minor stringers or pods of fine-grained calcite and silica cemented sandstone.
- 4246-4250 Sandstone, coarse to very coarse, angular, minor calcareous cemented. Microlog indicates porosity and permeability (?). No staining.
- 4250-4272 Interbedded shale and tuff as above.
- 4272-4288 Basalt.
- 4288-4328 Interbedded shale and tuff as above.
- 4328-4380 Interbedded basalt flows and tuffs.
- 4380-4512 Interbedded shale and tuff as above.
- 4512-4888 Quartz diorite containing chlorite and finely disseminated pyrite, locally fractured.

Drillers T.D. 4888
Schlumberger T.D. 4889

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