

June 15, 1944

Helmerick & Payne #1 Penn Estate  
Section 16-2S-29W, NW SW  
Elev. 2698'

Rotary

Pennsylvanian Basal Conglomerate 4105'- 4174'

15-039-00601

- 4105-4135 Arkose. Some porosity. Coarse quartz grains, in part showing feldspar contacts, worn pink feldspar grains, and very coarse rounded pitted sand grains. Arkose is in part lime cemented. Clusters of recrystallized coarse sand grains with good porosity are present. Marine conglomerate material derived from Pre-Cambrian and from Reagan sand.
- 4135-4174 Red clay and arkosic sand. No porosity. Dark red clays with included coarse sand grains. Dark red feldspars are present. Considerable amounts of loose very coarse pitted sand grains, stained red. Black inclusions are common in sand grains. Probably land wash.

Residuum of pre-Pennsylvanian Top 4174'

Subsea -1476'

- 4174-4190 Chert. White flinty cherts, opaque to translucent. Large straight spongy spicules are present in the more translucent cherts. These are post-Arbuckle cherts, residuum of pre-Pennsylvanian. Viola? Mississippian?
- 4190-4207 Red and light green clays. Samples poor.

Arbuckle Top 4207' Penetration 97'

Subsea -1509'

- 4207-4230 Dolomite, light brown, medium, porous with abundant vugs. Some earthy glauconite and soft white doloclastic chert. Weigel member of the Pre Cotter. Possibly some post-Weigel at the very top.
- 4230-4255 Dolomites, pink, buff, red, medium and fine, granular, in part slightly shaly. Pre-Weigel.
- 4255-4290 Sandy dolomite. Coarse sand grains in top 15', medium sand grains below. Some thin beds of sand and dolomitic sand. Glauconite present but rare. Dolomites are red, brown, and white, mostly medium. Everleigh.
- 4290-4302 Glauconitic dolomite, medium and coarse, buff to red. Dolomites not sandy. Dark green glauconite pellets. Everleigh.
- 4302-4304 No sample. Possibly a measurement correction.

Remarks: Dry hole.

By correlation with the Phillips #1 Vernon, Section 22-3S-28W, the top of the Pre-Cambrian is estimated at 4343' or -1645'. No Reagan sand was present in the #1 Vernon and none is expected at this location.