

April, 1941

Empire, No. 1 Hlad
SW NW SW 10-15S-13W

Elevation 1866 feet

Old well drilled deeper with cable tools. Samples badly contaminated by cavings.
Not examined above 3341 feet.

Pennsylvanian

Basal conglomerate 3329-3335 feet (Carmody)

Ordovician and Cambrian

Arbuckle top 3335 feet (Carmody), or 1469 feet subsea. Penetration 202 feet to pre-Cambrian.

3335-3380 feet Cotter, Zone I. Buff and brown dolomites, quartzose oolitic cherts, free oolites and minor sand. Trash zone 3374-3378 feet may be residual concentrate within possible fault zone.

3380-3537 feet Pre-Cotter. Subdivisions are:

3380-3446 feet Post-Boyce dolomite, sandy. Section abnormally short.

3446-3465 feet Boyce sandy and quartzitic dolomite, and quartzitic sandstone. Includes pre-Cambrian quartzite pebbles.

3465-3537 feet Pre-Boyce sandy dolomite, with Everleigh residue lithology but actually younger than normal Everleigh. Overlap facies comparable to Cambrian in Stanolind, No. 5 Riemann, 34-16S-13W.

Pre-Cambrian

3537-3578 feet TD. Quartzite with metamorphic micas.

Remarks:

The upper part of this section is abnormal in that Cotter is preserved in a section of only 202 feet of total Arbuckle, and in an area of normal pre-Cotter exposure. Aside from Cambrian shortening, commonly observed in this vicinity, the post-Boyce pre-Cotter interval is about 50 feet less than normal. Sink-hole and solutional effects are lacking. The No. 1 Hlad may be on the downthrown side of a pre-Pennsylvanian fault striking west-northwest and passing just north of the sharp quartzite high in the southeast quarter of 8-15S-13W. Fault zone material may have been drilled between 3374 and 3378 feet.

FBC