

ARBUCKLE CORRELATION UNCERTAIN

January, 1935.

Phillips #1 Boyle,
Center SE $\frac{1}{4}$, 25-17S-15W,
Elevation ~~1949~~ 1982 DF_L, (Printed)

Pennsylvanian conglomerate

3500-3520	Clay shales and rare marine lime
3520-3530	No samples
3530-3535	Clay shales and rare marine limes
3535-3540	Dark red clay, sandy, cherty. Residuum.
3540-3550	No sample May be Arbuckle.

Ordovician Top not below 3550'

Sub-sea, minus 1571'

Arbuckle " " " " Penetration 400' (Samples to 85' only)

3550-3575 (4 samples) Cherty dolomite, brown, fine to medium cryst. Considerable "secondary chert" of chalcedony types, also weathered cherts of residual zone type. Criteria for correlation show oolites which may be Cotter or Miller-Purcell, but it is not clear whether these belong in the dolomite or are derived from residual zone because samples from residual zone are small and some are missing. There are three correlation possibilities:

1. Miller-Purcell
2. Cotter, basal part. The most probable.
3. Pre-Cotter

3575-3600 No samples.

3600-3635 (3 samples) Mainly sand and green sandy clay, with some fine to medium white dolomite. The dolomite and the chert types are Pre-Cotter in type. The clay is foreign to the Pre-Cotter and much of the loose sand in the sample is not Pre-Cotter, for the reason that the grains are well rounded, limpid, and show no frosting or recrystallization. They are grains of a type commonly included in shale, in this case probably from the green clay. The green clay has a few fragments of unweathered phosphate and one conodont was found which was identified as pre-Pennsylvanian by Ryniker. This sandy green clay is not from the residual zone, by caving, because of the presence of unweathered phosphate. Correlation: Pre-Cotter dolomite with crevice or cavity filling of Simpson age.

3635-3950 No samples. Arbuckle (From Price)

3950-4003 Pre Cambrian " " No samples.

1982
1968

As interpreted above, this Arbuckle section has basal Cotter at the top, with some 350' plus or Pre-Cotter below. Simpson material is included in cavities or crevices.

The interpretation that Miller-Purcell is present at the top, overlapping Pre-Cotter, should be considered. Not enough residue work has been done in this area and in the area to the south to know much of the character of Miller-Purcell in this area, nor has its occurrence been mapped closer than 21S-13W. The presence of criteria for basal Cotter and for Pre-Cotter is regarded as of more significance than the presence of Simpson material.