

November, 1934.

Phillips #1 Dapita,
Center NW 34, 51-83-17W,
Elevation 2003'

Pennsylvanian conglomerate. 3409-3410'

3409-3410 Lime nodules with included sand. No conglomerate proper.

Ordovician Top 3410'

Sub-sea, minus 1407'

Arbuckle Top 3410' Penetration 9'

" " " "

3410-3419 Pre-Cotter dolomite. Oil.

Considerable attention was given this short section as it is both high and productive. The dolomite is normally white but is in part stained brown with oil. Some fragments are pink as is normal to the dolomite near exposed surfaces. No chert is present. Dolomite of this type may be either Miller-Purcell or Pre-Cotter. The presence of included sand in the dolomite suggests pre-Cotter for the sand in the Miller-Purcell tends to be concentrated in beds along parting planes. Lack of shale also indicates Pre-Cotter. Interstitial green clay and tiny fragments of glauconite are present and the latter is, as far as my experience goes, characteristic of the Pre-Cotter only.

The Pre-Cotter characteristics of this dolomite are important economically, as it shows that the ~~main~~ oil is trapped in structurally high dolomite capped by marine Pennsylvanian sediments. It is a pool of the type found along the axis of the uplift, as in 15N-13W. Had this dolomite been of Miller-Purcell type, it would have been significant of a Decorah-border pool of the type of Chase.

If the aggal, oolitic limes of the basal Pennsylvanian be considered as oil source beds, this oil may well be derived from them, as the limes are in contact with the dolomite. This oil pool is more related to the overlap of the Pennsylvanian than to the edge of the Decorah.