

15-065-03340

September, 1935.

Gulf Coast, #5 St. John,  
SE NE SW 27-8-25S,  
Elevation 2502'

- 4372-4450 Still puzzled about this but believe it to be all Mississippian.  
Unit 3 ?
- 4450-4457 Probably Fern Glen. Unit 4
- 4457-4505 Kinderhook. Contact in question.
- 4505-4555 Probably Upper Simpson or lower Tranton.
- 4555-4570 Unconformity sand.
- 4570-4610 Probably Cotter. Difficult to correlate because of cavings.  
Arbuckle without question.
- 4610-4692 Cotter. 4610' correlates with 4583' in <sup>other</sup> Marmaton #1, Kline,  
19-14S-24W. This is a clean-cut correlation supported by  
both sequences and specific criteria.
- 4692-5030 Pre-Cotter.
- 5030-5052 Probably pre-Cambrian.
- The changes are mainly on the Miller-Purcell and on the possible pre-Cambrian.

Extract from letter Max Littlefield, Sept. 12, 1935.

This sheet replaces the sheet of July, 1934.

November, 1935.

Gulf States #5 St. John.  
SE NE SW SE, 27-8S-25W,  
Elevation 2503' (approx.)

Pre-Pennsylvanian

Mississippian	Top 4360'	Sub-sea, minus 1857'
Unit 4	4360-4395'	Thickness 35'
Kinderhook	4395-4456'	" 61'
		96'

The top of the Mississippian may be a few feet too high. Formerly it was placed at 4372', where pipe was set, but it is certainly above that point. The boundary between Unit 4 and the Kinderhook is arbitrary. Both Unit 4 and the Kinderhook contain some shales, which are increased in percentage in this well by the fact that bit samples were collected from 4395-4460'.

The Mississippian chert in this well has been confused with a chert zone in the Penn. in wells to the southeast.

Ordovician	Top 4456'	Sub-sea, minus 1953'
Post-Decorah Ordovician	4456-4548'	Dolomite, highly cherty at top and slightly sandy throughout. Residues check fairly well with the regional section except that sand is more abundant.

Decorah or Unconformity sand. (4548-4570') Sand and green shale which is Decorah in type except for a considerable dolomite content. Compared with the well in 11-9S-25W, which had 14' of similar material, the section is more nearly Decorah in type. In neither well does it appear to contain solid shale beds, and it is interpreted as interbedded sand and dolomite with shale lenses and partings. Lumped with the Arbuckle.

Arbuckle	Top 4548'	Penetration 482'	Sub-sea, minus 2045'
4548-4570	Unconformity sand.	See above description.	22'
4570-4710	Cotter dolomite		140'
4710-5030	Pre-Cotter dolomite		320'

Pre-Cambrian	Top 5030'	Sub-sea, minus 2527'
5030-5052	Quartzite.	This material was formerly considered as basal Pre-Cotter sand but comparison with the quartzite in the well in 19-14S-24W indicates that it is Pre-Cambrian. The top is placed too low rather than too high, as it might be as high as 5013'

May, 1941

Gulf Coast, No. 5 St. John  
SE NE SW SE 27-8S-25W

*Rotary to 4361 Set 8 1/4 @ 4361*

Elevation 2502 feet

Cable-tool dry hole. Residues checked against sample set borrowed from Cities Service Wichita office. Numerous gaps; overlapping samples in upper part of Arbuckle.

Ordovician and Cambrian

Arbuckle top 4570 feet, or 2068 feet subsea. Penetration 467 feet. Simpson cover. Seven feet of Reagan (?) included at base.

4570-4742 feet Cotter. Subdivisible as follows:

4570-4643 feet Zone II. Dolomites with slight porosity and minor amounts of chert.

4643-4742 feet Zone I. Highly cherty in upper portion, with quartzose and oolitic cherts well developed. Lower portion contains interbedded sandstones, with minor amounts chert of same type as above.

4742-5137 feet Pre-Cotter. Subdivisible as follows:

4742-4800 feet Post-Boyce dolomites.

4800-4813 feet Boyce sandy zone. May extend lower into range covered by long succeeding sample.

4813-4880 feet Pre-Boyce dolomites, buff and brown, uniformly fine-textured, persistent traces of barite.

4880-4932 feet Weigel cherty dolomite, with dead buff-white doloclastic chert well sampled.

4932-4948 feet Pre-Weigel dolomite, with break of probable formational significance at base. Finely granular and sandy.

4948-4964 feet Post-Everleigh glauconitic medium-crystalline dolomites, with minor amounts frosted sand.

4964-5030 feet Everleigh dolomitc sandstone and sandy dolomites. Sands increase progressively in size from very fine at top to medium and medium-coarse at 5008 feet, then become finer.

5030-5037 feet Reagan (?) sand. Coarse quartz sandstone, regenerated from frosted sand, with black platy inclusion. Friable, probably water-bearing. Includes very coarse grains and granules.



Gulf Coast, No. 5 St. John, Continued

Pre-Cambrian  
Quartzite

5037  
2503  

---

2534

5037-5052 feet TD Quartzite of probable pre-Cambrian age, white, coarse-textured where granularity preserved.

Remarks:

Useful control section. Compares with SW SW NW 10-9S-27W.

FBC