

✓ on Dec?  
on hill

January, 1938.

Swain #1 Taylor,  
21-25S-24W,  
Elevation 2502'  
Samples below 5268' borrowed in Wichita.

|               |           |            |                      |
|---------------|-----------|------------|----------------------|
| Mississippian | Top 4880' |            | Sub-sea, minus 2378' |
| Unit 1        | 4880-5005 | 125'       |                      |
| Unit 2        | 5005-5215 | 210'       |                      |
| Unit 3        | 5215-5380 | 165'       |                      |
| Unit 4 ?      | 5380-5425 | 45'        |                      |
| Questionable  | 5425-5533 | <u>108</u> | Probably Kinderhook. |
|               |           | 653'       |                      |

Units 1, 2, and 3 are normal. Unit 4 and the 108' of beds marked "questionable" are different from any other section seen. There is even some possibility that the top of the Viola may be at 5425'. The presence of gray-green sandy shale partings, together with fine consolidated sand in dolomites from 5465-5505' suggests Kinderhook. The beds from 5425-5505' contain an unusual amount of chert for Kinderhook.

|            |  |      |                      |
|------------|--|------|----------------------|
| Ordovician | Top 5533'  |      | Sub-sea, minus 3031' |
| Viola      | 5533-5642'   | 109' |                      |
| 5533-5642  | Dolomites, white to brown, fine to medium with same chert. Small amount of slick green shale at top. |      |                      |

|           |  |     |  |
|-----------|--|-----|--|
| Decorah*  | 5642-5663'                             | 21' |  |
| 5642-5662 | Sand, fine; with from 35-70% dolomite. |     |  |
| 5662-5663 | Shale, green, sandy.                   |     |  |

|           |   |                  |                      |
|-----------|---|------------------|----------------------|
| Arbuckle  | Top 5663'   | Penetration 111' | Sub-sea, minus 3161' |
| 5663-5667 | Shale; with pink and brown dolomite containing oolitic chert. |                  |                      |
| 5667-5739 | Dolomite, brown, in part cherty. Base Miller-Purcell          |                  |                      |
| 5739-5774 | Cotter dolomite.  |                  |                      |

The Decorah is highly questionable and it is possible that it should be termed an unconformity sand between Arbuckle and Viola. The call is made largely on the shale, which is dark green, sandy, and contains included dolomite crystals. The shales in the same interval, 5595-5600', in the test in 13-23S-30W, are lighter in color. There is a marked similarity in sequence and in detailed lithology between the base of the Viola and the top of the Cotter in both tests.

Placing of the Mississippian-Viola contact at 5533' makes the Mississippian thick and the Viola unusually thin, although there is little control in the area. Bear in mind that the Viola-Miss. contact may be at 5425'.