

# Martin K. Dubois

Consulting Geologist

432 State Bank Building • Winfield, Kansas 67156 • 316-221-0428

April 18, 1984

## GEOLOGIC REPORT

Jennings Drilling Company  
#1 Frey  
NE SW NW 18-85-22E  
Leavenworth County, Kansas

### Daily Progress:

4-13 Moved on, set 7" at 40'  
4-14 Drilled out beneath surface, 738' at 5:30 p.m.  
4-15 Drilling, RTD 1312 at 5:30 p.m.  
4-16 Ran 4 1/2 inch casing

Contractor: Snow Drilling Company (Air Rig)

### Formation Tops:

	JDC #1 Frey NE SW NW 18-85-22E	Relation to #1 Theis NEc SW/4 13-85-21E	Relation to #1 Hund NE NE NW 17-85-22E
<u>Formations</u>	<u>GL-899</u>		
B. Kansas City	505 (+394)	+11	-9
Cherokee	756 (+146)	+12	-12
Coal Marker	1122 (-223)	+ 6	-4
Cherokee SS	1133 (-234)	+ 7	-1
Upper McLouth SS	1226 (-327)	+ 1	-6
Burgess SS	1295 (-396)*	-10	-26
Miss. St. Louis	1300 (-401)*	- 5	-15
Miss. Spergen	1303 (-404)*		
Total Depth	1315 (-415)*		

\* cased hole log did not go this deep, sample tops.

### Shows:

#### E-Log Depths

1133-42 Lower Cherokee Sandstone  
Sandstone, white, medium grained, subangular, well sorted,  
good porosity, show of tarry oil.

- 1226-34 Upper McLouth Sandstone  
Sandstone, fine, increasing to medium grained downward, subangular, well sorted, pyrite, trace of mica, very good porosity, very good show of gassy oil, circulated lots of oil on pit.
- 1234-44 Sandstone, very fine grained, shale lamination, tight, slight show of oil; plus shale.
- 1244-50 Sandstone, medium and coarse grained, mostly loose sand grains, subangular, moderately sorted, good show of gassy oil, circulated oil.
- 1307-15 Miss. Spergen  
Dolomite, pale green-gray, trace of vuggy porosity with show of tar.

Summary:

Production casing was set to further test the oil shows in the Upper McLouth Sandstone in the captioned well. There are two clean, porous sands within the Upper McLouth interval, 1226-34 and 1244-50, both should be productive. The apparent discovery is 1 1/2 miles northeast of the Jennings Drilling Company Leavenworth Pool and 3/4 miles northeast of the Billy Oil #1 Theis, another recent discovery completed just last week and currently producing oil from the apparently the same sand.

A non-commercial show in a Lower Cherokee sandstone, (1133-42) which may be stratigraphically equivalent to the Lower Bartlesville, is worthy of note. Though many wells in the area have found sandstones with excellent reservoir conditions in this interval, this is the first oil show reported. The sand encountered in this well may be productive of lighter oil if found in a structurally higher position. Sands in this interval should be looked at more closely in future wells in the area.

Another point of significance in this well is the structural position of Mississippian Spergen. The elevation of the Spergen in relation to the #1 Heintzelman is +21 feet, indicating the captioned well was drilled on a Mississippi structural anomaly. It may be worthwhile to drill an offset to the Mississippi Osage, approximately 170 feet below the Spergen. The Osage was a prolific producing zone in the McLouth Pool, 20 miles to the southwest.

Respectfully Submitted,

*Daniel T. Johnson*

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# Martin K. Dubois

Consulting Geologist

132 State Bank Building • Winfield, Kansas 67156 • 316-221-0428

March 23, 1984

Snow Drilling Company

Re: Jennings Drilling Co.  
#1 Frey  
NE SW NW 18-8S-22E  
Leavenworth Co., Kansas

Gentleman:

Please adhere to the following instructions while drilling the captioned well:

Samples: Save 20' samples from 300' to 1000'; and 10' samples from 1000' to TD, washed and sacked.

Drillers Log: Keep an accurate drillers log from surface to TD.

Surface Casing: Set 7" casing at 40 feet.

Call Points: Call me when you are moving on location and then again when surface casing is set and you know when you will drill out. (office: 316-221-0428, home: 316-221-4129).

GL? 900

Actual D.P. Estimated Formation Tops: \*

Lansing Limestone	168	154
Base Kansas City	493	479
Altamont Limestone	633	619
Cherokee Shale	728	714
Coal Marker	1010	1096
Upper McLouth Sandstone	1212	1198
Lower McLouth Sandstone	1244	1230
Burgess Sandstone	1274	1260
Miss. St. Louis Limestone	1270	1284
Total Depth	1300	1300

STAKE ⇒ well sit  
893.7 (894)

\* Depths to formations for ground level elevation of -880'. Adjust when true elevation is obtained.

} Potential Pay Zones

There are no good marker beds between the Base of Kansas City and the Mississippi. Six five-foot limestones in the Marmaton section (Altamont to Cherokee) can usually be differentiated and they make fair markers. Otherwise the interval between the Base Kansas City and the Mississippi is all shale and drills fairly quickly. Be sure to accurately note the Base Kansas city and the Marmaton Limestones on your drillers logs.

Sincerely,

*Martin K. Dubois*  
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MKD:td

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## Estimated Formation Tops: \*

Lansing Limestone	154	
Base Kansas City	479	* Depths to formations for
Altamont Limestone	619	ground level elevation of
Cherokee Shale	714	880'. Adjust when true
Coal Marker	1096	elevation is obtained.
Upper McLouth Sandstone	1198	} Potential Pay Zones
Lower McLouth Sandstone	1230	
Burgess Sandstone	1260	
Miss. St. Louis Limestone	1270	
Total Depth	1300	

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