

C. R. SULLIVAN  
CONSULTING GEOLOGIST  
670 FOURTH NAT'L BANK BLDG  
WICHITA, KANSAS

OFFICE HOBART 4-6366  
RES: PARKVIEW 2-4123

MULL DRILLING CO., INC.

#1 KERLEY

NE NE NW, SECTION 1-30S-1W

SUMNER COUNTY, KANSAS

By

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November 30, 1959

MULL DRILLING CO., INC.  
#1 KERLEY  
NE NE NW, Section 1-30S-1W  
Sumner County, Kansas

Elevation: 1257 (K.B.)

Spud: 11-9-59  
Completed: Drilling completed on 11-28-59

Casing: 8-7/8" Surface  
5-1/2" Oil String at 3835'

Drill Stem Test: #1 (Simpson) 3829-3935 - oil. Details included  
in lithologic log.

Electrical Surveys: No electrical surveys run.

GEOLOGICAL TOPS

Base Stalnaker Sand	2625 (Drilling Time) -1368
Kansas City	2798 (-1541)
Base Kansas City	3032 (-1775)
Cherokee	3287 (-2030)
Mississippian	3385 (-2128)
Kinderhook	3743 (-2486)
Chattanooga	3774 (-2517)
Simpson Sand	3828 (-2571)
Total Depth	3835 (-2578)

Drillers total depth 3839=35 Drill Pipe Correction.  
All tops corrected below Top Mississippian.

OIL SHOWS

(1) 3828-35 (Simpson)

This was a well developed clean porous small grained to medium grained sand with good stain, odor, fluorescence and oily taste. Most of the sand drilled up into individual grains, only a minor amount being observed in clusters, which is quite typical of the Simpson in this area. A drill stem test of the zone flowed oil, indicating possible production in the zone.

No other shows of oil were observed during the drilling of this test.

STRUCTURE

Datum top Simpson -2571, twenty-four feet higher than Beardmore dry hole in SE/4 of Section 2, and sixteen feet higher than Brunson dry hole one mile southeast in SE/4 of Section 6-30S-1E.

It appears at this time any correlations with dry holes to the north and east have no value as the pay horizon is a little lower on its structural position.

Recommendation was made to run casing and test the Simpson Sand.



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NE NE NW, Section 1-30S-1W  
Summer County, Kansas

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<u>DEPTH</u>	<u>DESCRIPTION</u>
2700-2798	Gray shale.
<u>Top KANSAS CITY 2798 (Top Corrected 2801)</u>	
2798-2803	Brownish white finely crystalline lime.
2803-2808	White mealy slightly cherty lime.
2808-2818	White finely crystalline to chalky lime.
2818-2822	Gray shale.
2822-2856	White mealy finely crystalline slightly cherty lime.
	2856 = 59 Strap Drill Pipe.
2856-2867	Buff finely crystalline lime.
2867-2881	Circulated at 2875. Buff finely crystalline pseudo oolitic lime, no show. Twisted off 2886. Samples no good to 2900.
2900-2904	Brown oolitic to oolitic lime, no show.
2904-2907	Brownish finely crystalline lime.
2907-2914	Buff white oolitic lime, no show.
2914-2922	Buff finely crystalline lime.
2922-2928	Black carbonaceous shale.
2928-2969	Buff finely crystalline lime.
2969-2980	Buff brown oolitic lime, porous.
	Circulated at 2980, no show.
2980-2995	Brownish-white finely crystalline lime.
2995-3000	Gray shale.
3000-3032	Brownish-white finely crystalline lime.

Base KANSAS CITY 3032

<u>DEPTH</u>	<u>DESCRIPTION</u>
3032-3068	Gray to black shale.
3068-3076	White finely crystalline lime.
3076-3115	Gray shale to greenish-gray shale.
3115-3123	Buff brownish finely crystalline lime.
3123-3129	Gray to dark gray shale.
3129-3135	Buff finely crystalline lime.
3135-3146	Gray to dark gray shale.
3146-3168	Buff finely crystalline lime.
3168-3172	Gray to greenish gray shale.
3172-3178	Buff finely crystalline lime.
3178-3182	Black shale.
3182-3187	Grayish-white finely crystalline lime.
3187-3210	Gray to black shale.
3210-3225	Brownish-white finely crystalline lime.
3225-3232	Black shale.
3232-3245	Grayish-white finely crystalline lime.
3245-3249	Black shale.
3249-3260	White finely crystalline, finely silty lime.
3260-3267	Gray shale.
3267-3287	Brownish-white finely crystalline, finely silty lime.
<u>Top CHEROKEE 3287</u>	
3287-3336	Soft flaky gray to greenish-gray shale to maroon shale.
3336-3341	Grayish-white finely crystalline lime, various colored chert, trace few loose sand grains.

<u>DEPTH</u>	<u>DESCRIPTION</u>
3341-3360	Gray to greenish-gray silty shale, traces maroon shale.
3360-3368	Gray to dark gray partly clayey shale, trace green shale and green chert and buff lime.
3368-3385	Gray to greenish-gray to maroon shale.
<u>Top MISSISSIPPIAN 3385</u>	
3385-3395	Mottled to glassy chert, trace grayish-white lime.
3395-3400	Milky to tripolitic to glassy chert, trace white crystalline lime.
3400-3405	Buff brown finely crystalline dolomitic lime.
3405-3422	Buff white medium crystalline lime, some grayish-white chert to buff mottled chert.
3422-3430	Grayish-white slightly cherty finely crystalline fossiliferous dolomitic lime.
3430-3445	Buff to grayish-white dolomitic lime, slightly cherty.
3445-3480	Grayish-white medium crystalline dolomitic fossiliferous lime, slightly cherty.
3480-3515	Buff fine sucrose dolomite to dolomitic lime.
3515-3520	Same - Small amount greenish-blue china mottled chert.
3520-3525	Buff fine sucrose dolomite to dolomitic lime.
3525-3535	Same - trace brown glassy chert.
3535-3540	Buff finely sucrosic dolomite, gray mottled chert.
3540-3555	Same - Some brownish medium crystalline lime to finely crystalline dolomitic lime.
3555-3605	Brown finely crystalline dolomitic lime.
3605-3625	Grayish-brown finely crystalline slightly dolomitic lime.
3625-3655	Brown finely crystalline lime, slightly dolomitic.

<u>DEPTH</u>	<u>DESCRIPTION</u>
3655-3680	Buff brown medium crystalline lime, gray mottled glassy chert.
3680-3690	Brown finely crystalline lime.
3690-3710	Buff medium crystalline lime, grayish-white mottled china chert.
3710-3715	Same - trace of glauconite.
3715-3725	Brownish dolomitic medium crystalline conoidal lime, grayish-white mottled chert.
3725-3730	Same - trace of glauconite.
3730-3747	Same - increase in glauconite, decrease in chert.

Top KINDERHOOK 3743 (Corrected)

3747-3753	Green to greenish-gray shale, partly dolomitic.
3753-3760	White very finely crystalline to semi-dense partly shaly lime.
3760-3772	Same - streaks of green shale.
3772-3778	Gray to greenish-gray shale.

Top CHATTANOOGA SHALE 3774 (Corrected)

3778-3795	Dark gray to brownish-black shale.
3795-3800	Same - spores.
3800-3832	Dark brown shale, spores, some pyrite.
	3823 = 19 Drill Pipe Correction

Top SIMPSON 3828 (Corrected)

3832-3835	Glassy small grained to medium grained porous sand. Fair stain in dry sample, good odor, taste, fluorescence.
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TOTAL DEPTH was 3839, Corrected to 3835.

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#1 Kerley (Cont.)

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DRILL STEM TEST #1, 3829-3835 (Corrected measurements).  
Open two hours, gas to surface in 22 minutes, good steady  
blow throughout, gas volume too small to measure. Flowed  
oil by heads in one hour 50 minutes. Recovered 3495' oil,  
60' muddy oil, 60' mud, 60' watery mud, 160' muddy water  
(6% salty). Initial Flow Pressure: 190# - 1080#. Bottom  
hole pressure:(30 minute): 1630# - 1410#. Temperature 119°.

MULL DRILLING CO., INC.  
 #1 Kerley  
 NE NE NW, Section 1-30S-1W  
 Sumner County, Kansas

TIME LOG

<u>DEPTH</u>	<u>FIVE FOOT DRILLING TIME</u>	<u>REMARKS</u>
2400-2450	10-14-14-17-17-13-9-10-14-11	
2450-2500	9-11-8-4-3-3-3-3-3-5	
2500-2550	5-4-3-5-7-6-5-5-7-5	
2550-2600	6-4-3-4-4-5-4-6-4-4	
2600-2650	4-3-5-4-5-8-12-14-20-17	
2650-2700	21-20-22-21-20-21-22-21-21-23	

ONE FOOT DRILLING TIME

2700-2710	3-7-6-6-6-6-6-6-6-5	
2710-2720	6-5-6-6-6-6-5-6-6-5	
2720-2730	5-6-3-2-2-2-2-2-2-3	
2730-2740	2-2-4-3-5-5-5-4-4-5	
2740-2750	4-3-4-3-3-3-5-4-6-5	
2750-2760	5-4-3-3-3-3-4-3-4-4	
2760-2770	5-4-4-4-4-4-4-4-4-4	
2770-2780	3-3-4-4-4-3-4-4-3-4	
2780-2790	5-3-3-3-5-3-4-3-3-3	
2790-2800	5-4-3-3-2-3-3-3-6-7	
2800-2810	5-7-4-3-4-4-5-5-3-4	
2810-2820	3-3-3-4-4-5-4-6-4-4	
2820-2830	2-2-4-5-3-3-4-3-3-2	
2830-2840	3-4-4-5-3-4-5-5-4-4	
2840-2850	3-4-4-4-7-8-10-10-12-11	
2850-2860	5-4-5-8-11-11- <del>*</del> - <del>*</del> - <del>*</del> -3	* 3' Corr.
2860-2870	3-3-6-6-4-5-6-5-3-2	
2870-2880	2-2-2-2-2-2-1-1-2-3	
2880-2890	3-6-4-5-3-2-2-2-1-4	
2890-2900	4-8-10-8-8-11-15-19-6-1	
2900-2910	1-1-1-2-10-14-6-2-1-1	
2910-2920	1-1-2-3-4-10-14-11-8-6	
2920-2930	7-8-3-10-16-5-3-4-7-16	
2930-2940	5-6-5-5-5-6-6-11-19-17	
2940-2950	7-6-6-4-5-6-4-6-6-8	
2950-2960	7-8-8-4-3-6-6-8-13-12	
2960-2970	8-9-5-10-20-11-8-13-9-3	
2970-2980	1-2-2-1-1-1-1-2-1-1	
2980-2990	1-2-4-4-5-5-13-13-17-17	
2990-3000	16-14-15-12-10-5-7-7-3-4	Trip @ 2996
3000-3010	5-5-3-4-4-4-4-5-4-5	
3010-3020	5-5-4-3-3-4-7-4-6-6	
3020-3030	5-6-6-6-6-6-7-7-6-6	
3030-3040	6-6-4-3-4-3-4-3-3-4	
3040-3050	4-3-5-4-3-4-3-3-3-2	

Mull Drilling Co., Inc.  
 #1 Kerley (Cont.)

<u>DEPTH</u>	<u>ONE FOOT DRILLING TIME</u>	<u>REMARKS</u>
3500-3510	7-9-7-10-6-7-7-8-6-6	
3510-3520	6-8-7-6-7-9-9-14-10-12	
3520-3530	9-14-10-14-12-14-14-14-16-10	
3530-3540	10-9-7-9-9-10-11-13-9-10	
3540-3550	9-12-13-18-20-24-17-23-17-16	Trip @ 3547
3550-3560	18-15-18-20-22-17-20-18-18-18	
3560-3570	19-19-18-18-17-17-16-17-16-22	
3570-3580	15-16-11-17-21-13-14-14-18-17	
3580-3590	19-21-21-18-19-20-20-22-22-20	
3590-3600	23-24-24-21-21-26-24-26-25-23	
3600-3610	27-25-22-11-30-12-17-15-16-15	Trip @ 3606
3610-3620	17-17-23-22-13-25-18-17-20-16	
3620-3630	17-17-19-20-18-20-23-19-24-17	
3630-3640	18-18-16-17-19-17-20-18-20-22	
3640-3650	18-20-20-20-24-17-19-25-23-23	
3650-3660	14-17-19-19-16-17-17-15-15-16	
3660-3670	14-16-19-18-16-16-22-20-20-22	
3670-3680	24-24-18-18-22-20-21-19-17-28	
3680-3690	27-27-28-30-17-24-26-13-17-6	Trip @ 3688
3690-3700	13-7-11-13-12-16-13-10-9-10	
3700-3710	10-6-8-7-6-6-7-7-6-5	
3710-3720	5-6-5-4-6-4-4-4-4-5	
3720-3730	5-5-5-5-5-4-5-8-5-5	
3730-3740	7-5-5-5-4-6-6-5-5-4	
3740-3750	7-9-7-9-8-9-9-10-10-9	
3750-3760	10-11-11-13-10-10-11-14-14-11	
3760-3770	17-18-14-16-12-14-16-15-15-18	
3770-3780	16-12-8-9-8-8-9-8-10-8	
3780-3790	9-8-9-9-9-8-7-8-8-8	
3790-3800	7-5-8-10-8-8-7-7-7-6	
3800-3810	11-16-16-17-19-17-18-20-9-8	Trip @ 3808
3810-3820	6-7-9-6-8-8-7-7-6-8	
3820-3830	6-8-5-5-5-6-7-6-6-6	
3830-3839	5-5-8-10-8-10-8-12-8	