

MUSGROVE PETROLEUM CORPORATION, INC.

810 Union Center
Wichita, Kansas

October 2, 1956

Musgrove Petroleum Corporation, Inc.
801 Union Center
Wichita, Kansas

Re: Geological Report
Musgrove's Mantel No. 1
C SW SE Sec. 33-18S-36W
Wichita County, Kansas

Gentlemen:

Ten-foot samples were saved on the subject test from beneath the surface casing to the total depth. Five-foot drilling time was kept from beneath the surface casing to 3500 feet, and one-foot drilling time was kept from 3500 feet to the total depth.

One drill stem test was taken and a Schlumberger laterolog survey (gamma-ray, laterolog, and microlaterolog) was run upon completion of the test.

A baroid portable gas detector was in use from 2300 feet to the total depth, and drilling was witnessed by the undersigned from 2300 feet to the total depth.

Listed below are sample and electric log tops, along with a sample description of the more interesting zones:

Elevations: Kelly Bushing 3266'
Derrick Floor 3264'
Ground Level 3262'

<u>Formation</u>	<u>Sample</u>	<u>Schlumberger</u>
Blaine	1575	1562 (#1691)
Anhydrite	2344	2343 (# 923)
Wellington Group	2548	2538 (# 728)
Herington	2845	2840 (# 426)
Wreford	3104	3102 (# 164)
Wabaunsee	3531	3525 (- 259)
Topeka	3733	3730 (- 464)
Reebner	3927	3925 (- 659)
Lansing	3995	4001 (- 735)
Marmaton	4425	4423 (-1157)
Morrow ?	4770	4764 (-1499)
Mississippian	4940	4939 (-1673)
Drillers Total Depth	5040	5035

Geological Report - Mantel No. 1

10-2-56

DRILL STEM TEST NO. 1 - 2757 to 2787

Tool open one hour. Shut in 20 minutes. Fair blow increasing first half hour, decreasing next half hour. Recovered 70' gas cut watery mud. Initial flow pressure, 45#. Final flow pressure, 40#. No bottom hole pressure recorded due to mechanical trouble.

This test was taken in a white, finely crystalline sandy dolomite. There was no show in the samples, but a 16-unit methane kick was recorded by the gas detector.

No other shows were recorded by the gas detector, nor were there any shows in the cuttings.

The Morrow section had a basal sand development from 4902 to 4939. This sand was white, fine to medium grain, slightly glauconitic, and calcareous in part. The upper part of the Morrow consisted mainly of shale with several dense thin limestone beds.

The Mississippian section consisted of a white, finely crystalline, slightly sandy limestone with abundant scattered oolitic streaks.

STRUCTURAL COMPARISON WITH NEARBY TESTS

	Musgrove's	Jones'	Rooney-Siegfried	Woodward & Co.'s
	"Mantel"	"Freeland"	& Thomas'	"Lehner"
Formation	33-18-36	25-18-37	"Lindberg"	6-20-36
			12-17-37	
Heebner	- 659	- 620	- 678	- 741
Lansing	- 735	- 690	- 726	- 781
Morrow	-1499	-1465	-1490	-1543
Mississippian	-1673	-1616	-1609	-1665

CONCLUSION

There were no shows in the samples. The only show recorded by the gas detector was drill stem tested with negative results.

It was, therefore, recommended that the subject test be plugged and abandoned.

Yours very truly,

Robert E. McCann

Robert E. McCann
Geologist

REM: dh

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Depth		(Five-Foot)	REMARKS
From	To	DRILLING TIME	
2400	to 2410	5-6	
	2420	6-5	
	2430	5-4	
	2440	4-7	
	2450	5-5	
	2460	5-6	
	2470	7-4	
	2480	6-4	
	2490	4-8	
	2500	6-10	
2500	to 2510	6-4	
	2520	5-6	
	2530	5-4	
	2540	3-14	
	2550	9-14	
	2560	10-12	
	2570	25-14	
	2580	9-11	
	2590	8-15	
	2600	19-18	
2600	to 2610	15-24	
	2620	25-16	
	2630	17-13	
	2640	10-10	
	2650	20-25	
	2660	17-9	Trip for bit.
	2670	9-9	
	2680	16-8	
	2690	8-7	
	2700	9-9	
2700	to 2710	8-7	
	2720	9-9	
	2730	8-6	
	2740	8-12	
	2750	11-7	
	2760	8-7	
	2770	8-10	
	2780	11-11	
	2790	10-7	
	2800	6-6	

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DEPTH		(Five-Foot)	REMARKS
From	To	DRILLING TIME	
2800 to	2810	6-6	Vis 37 WT 10.1.
	2820	7-6	
	2830	4-5	
	2840	7-12	
	2850	17-18	
	2860	14-16	
	2870	19-10	
	2880	11-8	
	2890	16-22	
	2900	12-19	
2900 to	2910	20-21	
	2920	17-15	
	2930	7-3	
	2940	9-6	
	2950	8-15	
	2960	15-11	
	2970	6-10	
	2980	6-8	
	2990	8-10	
	3000	9-7	
3000 to	3010	8-13	
	3020	13-16	
	3030	16-16	
	3040	20-12	
	3050	13-9	
	3060	9-11	
	3070	14-10	
	3080	11-11	
	3090	8-11	
	3100	16-19	
3100 to	3110	16-18	
	3120	28-26	
	3130	18-23	
	3140	22-20	
	3150	25-22	
	3160	13-13	
	3170	21-17	
	3180	35-19	
	3190	19-20	
	3200	20-20	

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DEPTH		(One-Foot)	REMARKS
From	To	DRILLING TIME	
4300 to 4310		4-5-5-5-6-4-2-2-2-5	
	4320	6-3-6-6-4-5-4-7-6-4	
	4330	6-6-5-5-3-2-3-4-4-5	
	4340	5-6-5-5-5-6-3-3-6-5	
	4350	4-5-8-7-3-3-5-6-5-6	
	4360	6-6-7-3-3-5-7-7-8-7	
	4370	8-10-9-3-3-3-3-4-4-4	
	4380	6-5-6-5-4-3-3-3-4-4	
	4390	3-4-3-4-2-2-4-3-4-5	Cir. ½ hr. @ 4390'.
	4400	3-5-6-6-8-4-4-4-4-4	
4400 to 4410		3-3-3-2-2-2-1-3-3-4	
	4420	3-2-4-4-4-10-7-6-10-11	
	4430	14-9-6-5-3-2-3-4-5-5	
	4440	5-5-6-7-7-8-8-7-8-6	
	4450	6-8-6-10-6-10-5-6-5-6	
	4460	6-7-7-8-7-6-4-8-5-3	
	4470	6-6-7-7-5-5-6-5-4-4	
	4480	7-8-9-5-5-7-4-6-7-10	
	4490	7-6-6-5-5-5-9-6-7-5	4 min. on pump.
	4500	4-5-3-4-7-7-5-5-6-4	
4500 to 4510		7-6-5-5-14-10-9-4-4-6	Slope test. Work on pump.
	4520	5-7-6-11-5-5-5-4-3-2	
	4530	4-8-9-9-10-7-9-10-12-11	
	4540	9-6-3-3-5-8-12-8-10-9	
	4550	10-10-8-8-2-2-3-6-4-4	N/B & lost cir.
	4560	4-5-5-5-3-5-7-6-8-10	
	4570	7-6-4-3-3-4-5-7-7-8	
	4580	9-9-8-6-7-9-6-6-8-8	
	4590	6-5-6-3-4-6-8-10-7-7-	
	4600	6-5-5-5-5-4-2-3-4-3	
4600 to 4610		6-6-5-4-7-5-5-3-6-4	
	4620	4-6-4-6-3-5-5-5-8-5	Hook up Diesel fuel.
	4630	3-5-7-7-3-3-5-7-5-4	
	4640	6-2-1-4-3-3-4-5-5-6	
	4650	8-10-5-4-4-3-4-5-6-6	Vis 45 WT 9.3.
	4660	8-8-8-5-4-4-4-3-6-7	
	4663	9-6-5-----	Lost cir.
Corrected Measurement 9' (4663 = 4672).			Cir. 4 hr. When back on bottom - Clean trough. Plug in trap motor.
4672 to 4680		----4-4-5-5-5-4-4-6	Worked on pump.
	4690	7-7-4-6-3-7-3-10-5-6	
	4700	5-5-3-5-8-9-6-7-5-9	

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DEPTH		(One-Foot)	
From	To	DRILLING TIME	REMARKS
4700 to	4710	4-5-5-9-6-5-8-8-8-6	
	4720	10-10-11-8-11-10-10-10-8-10	Vis 42 WT 9.3.
	4730	10-9-11-8-10-5-7-12-9-7	Vis 42 WT 9.3.
	4740	9-9-11-9-10-10-10-8-8-8	
	4750	12-11-11-9-8-12-14-6-5-7	Vis 43 WT 9.3. Trip
	4760	5-8-5-7-6-5-6-8-6-5	
	4770	5-7-5-7-6-10-5-5-6-5	
	4780	4-5-5-3-3-3-4-5-4-4	
	4790	5-3-5-10-5-6-5-5-5-5	
	4800	5-5-4-6-6-6-6-5-5-5	
4800 to	4810	4-5-5-5-7-10-6-3-4-5	
	4820	4-4-5-5-4-5-6-4-5-4	
	4830	5-6-3-4-3-4-4-5-8-8	Mix mud.
	4840	4-7-12-8-12-4-5-4-5-6	Vis 44 WT 9.2.
	4850	5-4-6-8-8-8-7-7-5-5	Vis 44 WT 9.2.
	4860	5-5-5-9-11-8-7-7-8-8	Work on propane line to back motor.
			Vis 44 WT 9.3.
	4870	10-12-18-1-1-1-2-2-1-1	Trip for bit. Vis 43 WT 9.3.
	4880	2-2-2-2-2-2-1-2-2	
	4890	2-3-3-3-3-4-3-2-3-2	
	4900	2-3-1-2-2-2-2-2-2-2	Vis 44 WT 9.2.
4900 to	4910	3-2-3-3-4-6-5-10-10-9	
	4920	12-6-6-4-5-9-10-9-14-28	
	4930	6-5-3-5-5-6-7-9-9-12	
	4940	15-12-5-5-4-5-2-4-4-4	
	4950	9-11-7-8-7-10-8-8-8-8	
	4960	11-10-10-10-8-8-9-9-8-10	
	4970	8-10-8-9-8-7-9-11-10-12	Vis 43 WT 9.1.
	4980	13-11-11-11-10-10-10-14-10-7	Vis 40 WT 9.2.
	4990	10-10-10-9-7-7-7-8-7-8	
	5000	9-6-5-7-8-9-8-9-9-7	
5000 to	5010	9-9-9-9-10-7-8-7-6-7	
	5020	8-6-6-8-8-8-8-9-7-7	
	5030	5-5-4-7-7-6-7-9-9-9	
	5040	8-5-----	
	5040	Total Depth	