

8-6S-24W

MUSGROVE PETROLEUM CORPORATION, INC.  
518 Petroleum Building  
Wichita, Kansas

**JOHN R. WILSON**  
3900 SOUTH MEMORIAL  
TULSA, OKLAHOMA

Re: Geological Report  
Musgrove's Logue No. 1  
NW NW NE Sec. 8-6S-24W  
Graham County, Kansas

Musgrove Petroleum Corporation, Inc.  
518 Petroleum Building  
Wichita 2, Kansas

Well was commenced: March 14, 1956  
Well was completed: March 27, 1956  
Surface pipe: 8-5/8" @ 226  
W/175 sx cement  
Plugged: March 27, 1956

Gentlemen:

One-foot drilling time was kept on the Logue No. 1 from 3200 feet to the total depth. Ten-foot samples were saved from 3200 feet to 3600 feet, and five-foot samples were saved from 3600 feet to the total depth.

Four drill stem tests were taken and a Schlumberger electrical survey was run upon completion of the test (E.S. and microlog curves).

Drilling was observed by the undersigned from 3575 feet to the total depth. Samples were examined from 3200 feet to the total depth. Listed below are elevations and formation tops along with a sample description of interesting zones (oil datum being measured from the Kelly-bushing).

Elevations: Kelly Bushing 2475  
Lower Derrick  
floor 2471  
Ground 2470

**OWLL**

<u>Formation</u>	<u>Sample Top</u>	<u>Electric Log Top</u>	
Heebner	3593	3592	(-1117)
Toronto	3617	3618	(-1143)
Lansing	3633	3632	(-1157)
Base Kansas City	3824	3820	(-1345)
Cherty Conglomerate	4030	4029	(-1554)
Arbuckle	4102	4099	(-1624)
Total Depth	4140 (rotary)	4140	

TORONTO 3618 (-1143)

3618 to 3626, limestone, buff to white, finely crystalline to dense-mostly dense. No shows.

LANSING 3632 (-1157)

3632 to 3638, limestone, buff to white, finely crystalline; scattered pin-point to vugular porosity with stain and traces of free oil.

3638 to 3648, limestone, buff to white, finely crystalline to dense, no shows.

DRILL STEM TEST NO. 1 3625 to 3647: Open 30 minutes, shut in 15 minutes. Weak blow, dead in 2 minutes. Recovered 6 feet mud. Bottom hole pressure 440#, Flow pressures 0#.

3658 to 3668, limestone, buff, finely crystalline, scattered oolites; some vugular porosity with stain and slight show of free oil.

3674 to 3678, limestone, dolomitic, buff to white, finely crystalline to sucrose, plus white to smoky vitreous chert.

3678 to 3698, limestone, buff to white, finely crystalline to dense, no show.

DRILL STEM TEST NO. 2 3647 to 3695: Open 1 hour, shut in 20 minutes. Fair blow throughout test. Recovered 240 feet fluid (120 feet oil cut mud, 80 feet oil cut watery mud, 40 feet water). Initial flow pressure 0#; Final flow pressure 120#; Bottom hole pressure 1200#.

3703 to 3727, limestone, buff to white, finely crystalline to dense; scattered vugular to intercrystalline porosity with traces of stain and free oil.

DRILL STEM TEST NO. 3 3700 to 3727: Open 1 hour, shut in 20 minutes; fair blow throughout test. Recovered 250 feet fluid (30 feet oil, 70 feet muddy oil, 30 feet heavily oil cut watery mud, 60 feet oil cut muddy water, 60 feet water). Initial flow pressure 0#; Final flow pressure 100#; Bottom hole pressure 1100#.

3727 to 3732, limestone, buff to white, finely crystalline, no show.

3732 to 3738, limestone, buff to white, mostly dense. Abundant milky to smoky vitreous chert.

3747 to 3762, limestone, buff to white, finely crystalline to dense. Very slight trace of stain and free oil in a few pieces from the upper portion, with scattered vugular porosity.

3774 to 3784, limestone, buff to white, finely crystalline to dense, trace of dark staining in vugular porosity.

3791 to 3803, limestone, buff to white, finely crystalline to dense. Few traces of dark staining.

3806 to 3820, limestone, buff to white, finely crystalline to dense, few traces of staining in vugular porosity in the upper portion.

DRILL STEM TEST NO. 4 3750 to 3810: Open 30 minutes; shut in 20 minutes. Strong blow throughout test. Recovered 30 feet very slightly oil cut mud. Initial flow pressure 60#, Final flow pressure 350#, Bottom hole pressure 1280#.

ARBUCKLE 4099 (-1624)

4099 to 4115, dolomite, buff to white, fine to coarse crystalline. Good scattered intercrystalline to vugular porosity. No show.

4115 to 4126, dolomite, as above, with an increase in finely crystalline to sucrosic. No show.

4126 to 4140, dolomite, finely crystalline to sucrosic. No show.

STRUCTURAL COMPARISON WITH NEARBY TESTS

<u>Formation</u>	<u>Musgrove's Logue</u> NW NW NE 8-6S-24W	<u>Jones, Shelburne</u> Farmer's Hickert SW SW NE 32-5S-24W	<u>Potash Co.</u> Johnson #1 NW SE NE 7-6S-24W	<u>Harry Gore</u> Bell #1 SW SW NW 14-6S-24W
Lansing	-1157	-1152	?	-1258
B/Kansas City	-1345	-1342	-1356	-1435
Cherty Conglomerate	-1554	-1508	-1573	-1684
Arbuckle	-1624	-1568	-1656	-1719

CONCLUSION:

Electric log analysis of the subject test revealed very thin and poor porosity over the zones which yielded shows of oil and water by drill stem testing.

Shows recovered in the samples were very poor. They indicated thin zones with scattered saturation.

It was therefore recommended that the Logue No. 1 be plugged and abandoned.

Yours very truly,

Robert E. McCann  
Geologist

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