My Commission expires: 7-29-92.

Supan M. Eo Wew

MUSGROVE PETROLEUM CORPORATION, INC. 801 Union Center Wichita, Kansas

May 21, 1957

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

Re: Geological Report

Musgrove's C. E. Riedel No. 5 C W/2 SW SW Section 31-13S-19W

Ellis County, Kansas

Well Commenced: May 8, 1957 Well Completed: May 18, 1957 Surface Pipe: 8 5/8" @ 260'

w/175 Sx

Long String: 51 @ 3960.85

Gentlemen:

One-foot drilling time was kept on the subject test from 3200 feet to the total depth. Ten-foot samples were saved from 3200 feet to 3550 feet and five-foot samples from 3550 feet to the total depth.

Drilling was observed by the undersigned and Fredrick W. Stump from 3200 feet to 3678 feet and by the undersigned from 3678 to the total depth.

No drill stem tests were taken because of the favorable structural position of the test in relation to producing wells in the vicinity. A Schlumberger Laterolog Survey was taken upon completion of the test.

Listed below are elevations and formation tops, along with a sample description of the interesting zones:

ELEVATIONS: Ground Level 2287

Derrick Floor 2290

Kelly Bushing 2292 Datum

<u>Formation</u>	Sample Tops	Electric Log Tops
Topeka	3284	3287 (- 995)
Heebner	3545	3546 (-1254)
Toronto	35 66	3567 (-1275)
Lansing/Kansas City	3584	3587 (-1295)
Base Kansas City	'3826	3828 (-1536)
Conglomerate	3867	3870 (-1578)
Reworked Arbuckle	3903	3903 (-1611)
Arbuckle	3908	3906 (-1614)
Total Depth	4000	4003 (-1711)

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Wichila, Kalisas

All formation tops and zones described below are corrected to electric log measurements and depths:

TOPEKA LIMESTONE - 3287 (-995)

There were no zones of porosity development which contained shows of free oil within this zone.

LANSING/KANSAS CITY - 3587 (-1295)

3617 - 23 Limestone, tan, finely crystalline, with poorly developed vugular porosity with a show of free oil.

3765 - 79 Limestone, tan, colitic with good colicastic porosity and saturation of free oil.

3786 - 91 Limestone, white to tan, finely crystalline with poorly developed vugular porosity with a show of free oil.

3807 - 10 Limestone, tan, finely crystalline, slightly sucrosic with fair intercrystalline and poor vugular porosity. The zone is saturated with free oil.

REWORKED ARBUCKLE - 3903 (-1611)

3903 - 3906 The zone consists of course crystalline, silicified dolomite with poorly sorted, well rounded quartz grains contained within the dolomite. The zone is saturated with free oil.

ARBUCKLE - 3906 (-1614)

3906 - 4003 Dolomite, tan to white, fine to medium crystalline, with a good show of free oil to 3960 feet.

STRUCTURAL COMPARISON WITH NEARBY TESTS

Formation	Musgrove's Riedel #5 C W/2 SW SW 31-13-19W	Musgrove's Riedel #1 NE SW SW 31-13-19W	Musgrove's Riedel ∲3 C W/2 W/2 SW 31-13-19W
Lansing	-1295	-1293	-1287
Arbuckle	-1614	-1628	-1617

MAR 0 6 1990

William, Marsas