Peck

510 ORPHEUM BLDG.
WICHITA 2, KANSAS
AMherst 5-4881

walters drilling co.

September 11th, 1961

G E O L O G I C A L R E P O R T

WALTERS DRILLING CO., AND BENEDICT OIL ASSOCIATES
#1 LATIMER
NE NW SW Section 19-17S-20W
Rush County, Kansas

CONTRACTOR: Walters Drilling Co.

ELEVATION: 2205 KB
2202 DF
2200 GL

COMMENCED: August 30th, 1961
COMPLETED: September 10th, 1961

CASING RECORD: 8-5/8" set @ 220' with 160 sacks cement
4-1/2" set @ 4106' with 100 sacks cement

DRILL STEM TESTS:
#1 4095-4105 Cherokee Sand
#2 4096-4108 Cherokee Sand
#3 4096-4110 Cherokee Sand

ELECTRICAL SURVEYS: None

SAMPLES: Samples were examined and drilling time was logged from 3500' to 4110', Rotary Total Depth.

MEASUREMENTS: All measurements below are based on kelly bushing elevation.

Structural comparison is made below with the subject well and its nearest offset, Natural Gas and Oil Co.'s #1 Latimer, located in the NW NW SW of Section 19-17S-20W, Rush County, Kansas.

FORMATION	WALTERS' Latimer #1 2205 KB	NATURAL GAS Latimer #1 2190 KB
Anhydrite	1458 (747)	1441 (749)
Heebner	3605 (-1400)	3587 (-1397)
Lansing	3642 (-1437)	3644 (-1434)
Base Kansas City	3923 (-1718)	3904 (-1714)
Marmaton	3961 (-1756)	3940 (-1750)
Pawnee	4018 (-1813)	4006 (-1816)
Fort Scott	4089 (-1884)	4077 (-1887)
Cherokee Sand	4103 (-1898)	4092 (-1902)
Total Depth	4110	4175

ZONES OF INTEREST

Lansing @ 3642

3644-52 Limestone, white to cream, finely crystalline to dense, siliceous, mostly fossiliferous, having occasional thin streaks finely vugular, white chalky lime with no shows of oil or gas. Poor reservoir.

3676-80 Limestone, white-light buff, finely to medium crystalline, part micro-crystalline, soft and chalky, mostly fairly dense, fossiliferous, with some vugular and intercrystalline porosity, having no shows of oil or gas. Poor to fair reservoir.

3690-94 Limestone, white to cream, medium crystalline, oolitic, fossiliferous, with fair vugular and fossil-cast porosity and no shows of oil or gas. Fair reservoir.

3723-30 Limestone, white to light buff, finely crystalline, oolitic, vaguely oolicastic, fossiliferous, with fair vugular and intercrystalline porosity, no shows. Poor to fair reservoir.

3748-52 Limestone, light buff, very finely to medium crystalline, fairly dense, slightly fossiliferous, with fine pinpoint porosity and no shows. Poor reservoir.

3854-61 Limestone, light buff to brown, very finely to finely crystalline, fairly dense, oolitic and oolicastic, fossiliferous, having good vugular and oocastic porosity, with no shows of oil or gas. Good reservoir.

3906-10 Limestone, white-light buff, mostly soft and chalky, some fairly dense and slightly cherty, having trace fine vugular and pinpoint porosity, with no shows of oil or gas. Poor reservoir.

Cherokee Sand @ 4103

4103-05 Sandstone, white to gray and yellow-orange, medium to coarse grained, poorly sorted, sub-angular and faceted to well rounded and frosted for most part; occasional trace fresh, translucent amber chert fragments. Having no shows of oil or gas in wet or dry samples. No fluorescence.

4105-07 Sandstone as above, part becoming discolored pale green and slightly shaley, some green shale with abundant medium rounded sand grains; having no shows of oil or gas in wet or dry samples.

4107-10 Sandstone, white to clear and glassy, medium to coarse grained, poorly sorted, sub-angular and faceted to rounded and frosted, having no shows of oil or gas in wet or dry samples and no fluorescence.

D.S.T. #1, 4095-4105, Open 30 minutes, very weak blow for 1 minute, flushed tool @ 15 minutes, weak blow for 1 minute, Recovered 10 feet mud.

Initial Shut In Pressure in 15"	145#
Initial Flow Pressure	25#
Final Flow Pressure	25#
Final Shut In Pressure in 15"	28#

D.S.T. #2, 4096-4108, Open 2 hours, weak blow throughout, recovered 60 ft. gas in pipe, 200 ft. very heavily oil-cut mud, no water.

Initial Shut In Pressure in 20"	1255#
Initial Flow Pressure	42#
Final Flow Pressure	120#
Final Shut In Pressure in 30"	1240#

D.S.T. #3, 4096-4110, Open 1 hour, strong blow throughout, recovered 240 ft. of gas in pipe, 30 ft. heavily oil and gas-cut mud, 120 ft. gas cut muddy oil, 960 ft. clean slightly gassy oil and 120 ft. oil-cut salt water.

Initial Shut In Pressure in 20"	1255#
Initial Flow Pressure	103#
Final Flow Pressure	440#
Final Shut In Pressure in 20"	1205#

Because the bottom 730 ft. of drill pipe is flex-weight pipe and of smaller diameter than standard drill pipe, volumetric calculations of the above recovery are as follows:

10 Barrels Oil
1 Barrel Salt Water
1 Barrel Mud
12 Barrels of fluid in 1 hour

CONCLUSIONS AND RECOMMENDATIONS

In the Latimer #1, the only shows of oil and gas occurred in the Cherokee Sand. The Sand was topped at a datum 4 ft. higher than Natural Gas & Oil Co.'s #1 Latimer and 3 ft. higher than Aurora's #1 Young, located in the SW SW NW of Section 19-17S-20W, however, the top 3 ft. were non-productive as shown by D.S.T. #1 and #2.

Because of the structural position, good pressures, and recovery of 10 barrels of oil with only a small percentage of water, there is good probability that the Latimer #1 will make a commercial well.

In view of the above, recommendation was made that 4-1/2" casing be set at 4106 ft., 4 ft. off bottom, September 9th, 1961.

Respectfully submitted,

Don W. Beauchamp

DON W. BEAUCHAMP, Geologist

DWB:vp