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305 ORPHEUM BUILDING
AMHERST 5-3431
WICHITA, KANSAS

ORIGINAL

Hinkle

HINKLE OIL COMPANY

BRUNGARDT "A" #3

NW NE SW, SECTION 25-13S-16W

ELLIS COUNTY, KANSAS

By

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February 1, 1960

Hinkle Oil Company
Brungardt "A" #3
NW NE SW, Section 25-13S-16W
Ellis County, Kansas

Samples were examined from 2450' to total depth. Drilling was observed from 3000' to 3434' - total depth.

A sample log and plotted time log from 2800' to total depth, showing producing zones of porosity accompany this report in cover.

A Schlumberger Laterolog and Sonic Log was run on completion of the well. Both the driller and the Schlumberger total depth were the same 3434 feet.

This well was drilled continuously without circulating for samples at the zones of porosity.

After evaluating the Schlumberger Log, wire line drill stem tests were used to evaluate the zones of porosity.

Samples were delivered to the Kansas Well Log Bureau.

Elevation: 1928 Kelly Bushing, all measurements taken from Kelly Bushing. Derrick Floor: 1925. Ground Level: 1923.

Formation tops taken from time log and electric log correlation.

FORMATION TOPS

Anhydrite	991	(+937)
Topeka	2830	(-902)
Heebner	3052	(-1124)
Toronto	3072	(-1144)
Lansing-Kansas City	3099	(-1171)
Arbuckle	3365	(-1437)
Basal Sand	3420	(-1492)
Total Depth	3434	(-1516)

Zones of porosity indicated to be productive from samples, Electric Log interpretation and wire line tests.

Samples were examined from 2450' to 2800' in order to try and find a show of oil in the Tarkio Sand. As no shows of oil were observed, I did not include the sample descriptions in this report.

The hole was not muddied up until 2750' and the sample quality was very poor. I want to have the #1 well and #2 logs examined by an Electric Log expert, as I believe the Tarkio Sand on this very sharp feature should produce oil or gas.

TOPEKA 2830 (-902)

Zone 2976-2982 Fine crystalline limestone, finely oolitic and oolicastic, spotted stain to good stain. Poor porosity.

WIRE LINE TEST #7, 2978, open 30 minutes, zero recovery. Bottom hole pressure: Zero. Does not merit testing.

HEEBNER 3052 (-1124)

TORONTO 3072 (-1144)

Zone 3076-3080 White limestone, fair to good stain, good porosity.

WIRE LINE TEST #6, 3078, open 30 minutes, recovered 550 cc oil. Bottom hole pressure 1010#. Should be tested.

Zone 3084-3087 Carries water.

LANSING-KANSAS CITY 3099 (-1171)

Top Zone

3100-3114 Finely crystalline oolicastic limestone. Good stain, fair to good porosity. Should be tested.

30' Zone

3128-3134 Fossiliferous crystalline limestone, good saturation and porosity. Should be tested.

40' Zone

3142-3144 Probably carries water.

55' to 60' Zone

3148-3152 & 3156-3160

APR

Lansing-Kansas City (Cont.)

WIRE LINE TEST #5, 3151, open 47 minutes, recovered 13,500 cc oil, 3.5 cubic feet gas. Bottom Hole Pressure 810#. The filtrate water in this test had a high content of calcium which may indicate a slight amount of formation water. Should be tested.

75' Zone

3175-3179 Medium dense limestone, vugular porosity, spotted stain. Should be tested.

90' Zone

3188-3198 Fossiliferous and crystalline oolicastic limestone. Spotted stain. Should be tested.

100' Zone

3200-3206 Oolicastic limestone, good porosity, no stain. Carries water.

120' Zone

3220-3224 White oolicastic limestone. Good porosity. Spotted stain.

WIRE LINE TEST #4, 3223, open 30 minutes, recovered trace of oil and 574 cc formation water. Bottom Hole Pressure 880#. Does not merit testing.

140' Zone

3242-3247 White medium dense limestone, spotted staining, poor porosity. Does not merit testing.

160' Zone

3262-3266 White fossiliferous limestone. Poor spotted staining. Does not merit testing.

170' Zone

3272-3275 Fossiliferous, good inter-fossiliferous porosity, spotted staining. Should be tested.

Lansing-Kansas City (Cont.)

190' Zone

3290-3296 Finely oolicastic, good saturation and porosity. This zone produces in the #1 well. Should be tested.

220' Zone

3322-3328 White medium dense limestone, some oolitic limestone porosity, spotted stain, shaly. Does not merit testing.

3340-3343 Indicated to be productive from the Electric Log. Should be tested.

3346-3348 Very fine grained sand. Very well saturated - soft. Should be tested.

This zone is only two feet thick and is not present in the #1 well. It is doubtful that it would produce much oil unless it is better developed in other locations.

ARBUCKLE 3365 (-1437)

3366-3380 Coarse crystalline dolomite, light stain, good porosity.

WIRE LINE TEST #3, 3378, open 30 minutes, recovered 50 cc oil and 60 cc water. Bottom Hole Pressure 0#. Does not merit testing.

3381-3388 Coarse crystalline dolomite, light stain.

WIRE LINE TEST #2, 3383, open 30 minutes, recovered 2100 cc oil and 286 cc water. Bottom Hole Pressure 1080#. Should be tested. However, this zone will produce some water with the oil.

3390-3399 Very coarse crystalline dolomite, very coarse grained unsorted sand, quartzitic, very good saturation and porosity.

Arbuckle (Cont.)

WIRE LINE TEST #1, 3393, open ten minutes, recovered 9500 cc oil, no water. B.H.P. 1080#. Should be tested. This zone should be water free.

3407-3420 Very coarse crystalline dolomite, very sandy. Water bearing.

BASAL SAND 3420 (-1492)

Very coarse grained quartzitic sand, rounded to sub-angular, some calcite cementation, trace of dead oil. Probably carries water.

TOTAL DEPTH 3434 (-1516)

5-1/2" Casing was cemented at 3433'.

DRILLING IN INSTRUCTIONS

The Arbuckle zone 3390-3399, should be perforated first. This zone should produce natural, however, a light mud acid treatment might be necessary.

This well is unique in that the top 15' would produce predominately water and the next eight feet would produce oil and some water. The top of the water free zone at 3390 is a -1462, the top of the Arbuckle in the #1 well was a -1427, with a total depth of -1448½, and tested 1/2 BOPH natural and 3 BOPH and 3 BWPH after 1000 gallons acid treatment.

It is quite possible that, had the #1 well been drilled to a -1452, it would have encountered this same zone.

After the #2 well is proven to be a good producer in this lower zone, I recommend that the #1 well be drilled deeper.

After all of the locations on this feature have been drilled, a very careful study should be made and plan outlined in order to produce the combined Arbuckle and Kansas City oil zones in the best ultimate and economic manner.

Respectfully submitted,

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