

GEOLOGISTS REPORT

for

O'BRYAN #1

SE 1/4, NE 1/4

sec 12, T9S, R19E

JEFFERSON COUNTY, KANSAS

March, 1985

by

George E. Petersen C.P.G.

Descon Geology Inc.

**GEN PARTS REPORT
GEOLOGICAL REPORT**

O'BRYAN #1

March 16, 1995: Arrived on location @ 3:15 P.M. Drilling @ 1170'. Released from location @ 8:15 A.M. March 17, upon completion of logging.

ELEVATION: 1077 GL (all measurements from GL)

FORMATION TOPS	SAMPLE DEPTH	LOG DEPTH	DATUM	THICKNESS
Base KC	812	816	+261	—
Marmaton	950	950	+127	94'
Cherokee	1038'	1044	+ 33	400'
Coal marker	1458	1456	-379	3'
U. McLouth Sd.	1502	1502	-425	9'
L. McLouth	1532	1532	-455	7'
Miss. Ln.	1541	1540	-463	—
RTD	1582			
LTD	1578			

Sample returns were examined microscopically from a drilled depth of 1250 feet to TD for the presence of visible hydrocarbons. Formation tops and thicknesses were picked from the drilling time log, sample returns and the Neutron Density/Porosity Log. There were no zones of interest above the 1250' depth in this well and therefore only the lower portion of the well will be discussed in detail in this report.

CHEROKEE GROUP:

The unnamed sand found between 1250 and 1272 had an indication on the Neutron Density /Porosity Log that there may be gas present in this interval. This sand had no apparent odor, and there were no visible shows of hydrocarbons in the samples. Log calculations for this interval will be given in the section where the McLouth Sand calculations are presented. Another clean sand with a very slight cross over effect was noted on the logs between 1332 and 1342. Again there was no odor observed and no visible shows of hydrocarbons in the sample returns from

this interval. Further evaluation of these two intervals is warranted before the well is eventually plugged.

The McLouth Sands were divided into an upper and lower unit in this well, and the middle sand is not present. Both the upper sand (1502-1510) and the lower sand (1532-1538) were a medium to coarse grained, clear to white, sub-rounded to rounded quartz sand. There was a slight show of medium brown free oil in both units. The application of trichloroethane yielded bright streaming cuts. There was a very slight petroleum odor present in the samples from the upper unit and a moderate odor present in the samples from the lower sand. Gas was observed on the pit during the drilling of both intervals. The lower interval contained abundant amounts of free pyrite. There was a slight gas cross over effect noted in both the upper and lower sands. A mud filter buildup was noted on the caliper log over both intervals indicating good permeability in the sands.

Log calculations were prepared on location by Mr. Butch Drylie of Log Tech inc., using the following values: M=1.8, Rw=2.

INTERVAL	POROSITY	Rt	Sw%
1250-52	15%	15	58%
52-54	11%	16	72%
1268-70	12%	19	61%
70-72	15%	20	40%
1502-04	16%	50	33%
04-06	15%	60	32%
06-08	12%	40	46%
08-10	8%	30	79%
1532-34	14%	25	50%
34-36	16%	25	45%
36-38	14%	40	40%

The upper sand appears to correlate very closely to the upper sand in the Gullinger #1 located just to the south west. This is the first interval that should be perforated in this well. The lower sand is also worthy of a completion attempt.

MISSISSIPPI LIME:

The top of the Mississippian was reached at a log depth of 1540 feet. Sample returns were initially described on the geologists log as a medium tan limestone; however, the samples were re-examined after the logs were run and the brown material was correctly identified as a brown dolomite. There was also salmon colored chert, white tripolitic chert and green and black shale. There was no evidence that hydrocarbons were present in the Mississippian interval that was penetrated.

CONCLUSIONS AND RECOMMENDATIONS:

The upper McClouth sand appears to have the potential to produce commercial quantities of gas. A production attempt should also be considered from the lower sand. The upper unnamed sands discussed previously in this report should be carefully evaluated before the well is finally abandoned. These intervals have not been tested anywhere in this area to date.

The information obtained from this well should be utilized to determine the optimum direction to continue the exploration effort. This well does not necessarily condemn the locations to the north.

DISCLOSURE:

Services rendered on the O'Bryan #1 were done without any biasing influence, intentional or unintentional, from any official of Horizontal Development and Production Inc. In this report, I am an independent Petroleum Geologist and not an employee of the referenced company. I will not receive any financial benefit from the positive completion of this well.

The enclosed Geologists Log is considered an integral part of this report and is not intended to be separated from the same.

The recommendations made herein shall not be construed as absolute and are made without assumption of liability and are statements of observation, research, training, and opinion only.

Should additional information be required, please contact me.

Respectfully submitted,

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Deacon Geology Inc.**