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GEOLOGISTS REPORT

for

J. Noll ~~#2-85~~ 1-85

585' FNL, 760' FEL, NW4, Sec. 9, T9S, R20E

Jefferson County, Kansas

June 1985

by

George E. Petersen C.P.G.S.

DEACON GEOLOGY INC.

professional geologists

GEOLOGISTS REPORT

J. Noll #2-85

June 20, 1985: Called to wellsite @ 2AM.
June 20, 1985: Released from wellsite @ 9 PM.

Elevation: 935 G.L. (Topo)

Formation Tops	Log Depth	Datum	Thickness
Hushpuckney Sh.	656	+279	
Marmaton Gp.	794	+141	94'
Cherokee Sh.	888	+47	484'
"L. McLouth Sd."	1,342	-407	14'
Mississippian Lm.	1,372	-437	---
1st. Break	1,401	-466	32'
Forty Foot Zone	1,466	-531	10'
LTD	1,499		
RTD	1,501		

Sample returns were examined from a drilled depth of 800 feet to TD for the presence of visible hydrocarbons. Formation tops and intervals for this report were picked from sample returns, the drilling time log and the Neutron-Density Porosity Log. There was no evidence of the presence of visible hydrocarbons in any of the geologic units above the "Lower McLouth Sand".

CHEROKEE GROUP:

As in the other wells that have been drilled in the present exploration program, there are several unnamed sands in the Cherokee section which may contain gas. One of these sands is found between 1274' and 1288' log depth. The Neutron-Density Porosity Logs does indicate that gas may be present. Calculations for this interval were prepared by Mr. Legleiter of Great Guns while on location using the following values: M=1.8, Rw= .2.

Interval	Ø	Rt	Sw
1274-76	25	10	49
76-78	25	10	49
78-80	25	10	49
80-82	26	11	45
82-84	25	11	47
84-86	27	10	46
86-88	26	11	45

This sand should be tested at some point before eventual abandonment of the well.

The "Lower McLouth Sand" was topped at a log depth of 1324' (-407). The "Upper McLouth" had not developed in this well. The sand is a coarse grained, tan to clear quartz sand containing good shows of brown free oil. There was good odor during the drilling of this interval and oil spots and rainbows were observed on the pits. Application of trichlorethane yielded streaming cuts with bright yellow fluorescence. Fluorescence was a dull yellow in air dried samples. Shale samples which were apparently from the underdeveloped "Upper McLouth" contained good shows of oil and gas was observed bubbling from the shale laminations.

Calculations for the "Lower McLouth" were also prepared by Mr. Legleiter as were all of the other calculations which follow in this report.

The following values were used; M=1.8, Rw= .2.

Interval	Ø	Rt	Sw
1342-44	15	15	64
44-46	17	13	61
46-48	20	45	28
48-50	20	9½	62
50-52	19	30	36
52-54	22	25	35

The Gamma Log response thru this zone indicated a shaly zone which in turn will cause higher Sw values and will affect the porosity values to some unknown extent. There is a partial gas effect indicated on the log. It is probable that both gas and oil may be produced from this zone.

MISSISSIPPIAN:

The Mississippian was topped at a log depth of 1372' (-437) where a white-to light tan very finely crystalline limestone was found. Approximately five feet into the lime a show of very heavy black oil was noted on fracture faces. There was a moderate odor. The logs indicate good porosity; however, this was not observed in the samples.

A very porous zone called the 1st. Break in this report was found between 1402 and 1434. Sample returns consisted of a very granular gray limestone containing some sandy zones and showing good intercrystalline porosity. There was a good show of dark brown oil and good odor thru this interval. The application of trichlorethane yielded streaming cuts and bright yellow fluorescence.

Another very porous break called the "Forty Foot Zone" was found between 1476 and 1486 (log depths). This zone consisted of two very porous zones approximately three to four feet thick separated by a tight two foot zone of very low porosity. Samples consisted of a very coarsely crystalline zone containing large calcite crystals. The intercrystalline pore space could be described as vuggy. Good shows of brown colored free oil were noted and application of trichlorethane yielded streaming cuts and bright yellow fluorescence. There was scant evidence of this oil show in the samples after twenty four hours had elapsed indicating that the oil is very mobile.

Calculations for all zones of interest in the Mississippian were calculated using the following values: M=2.0, Rw=.25.

Interval	Ø	Rt	Sw
1377-80	18	300	16
80-82	15	210	23
82-84	10	120	46
84-87	14	45	53
87-90	12	20	93
1407-10	24	8	74
10-13	24	8	74
13-16	20	9	83
16-18	26	8½	66
18-21	22	9	76
21-24	15	13	92
24-26	15	12	96
1467-70	34	7	56
74-77	32	6½	61

There are three zones in the drilled portion of the Mississippian that contained very good shows of free oil, had good porosity and favorable Sw values.

It appears that oil can be produced from all three zones in the Mississippian in this well.

CONCLUSIONS AND RECOMMENDATIONS:

The "McLouth Sand" was the primary objective in this well; however, additional drilling into the Mississippian revealed three possible zones of good porosity and a good oil show in all of the zones. This well appears to have the potential to produce oil from the lime and oil and gas from the McLouth as well as possible gas from some of the unnamed Cherokee Sands.

The actual elevations of the formation tops may be subject to change as this well follows the pattern of most of the previously drilled wells in that it is an unsurveyed location. This problem needs to be corrected to allow for the optimum information to be derived from each location.

Should additional information be required, please contact me.

Respectfully submitted,

George E. Petersen c.p.g.s.

DEACON GEOLOGY INC,

mrp/GEP