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GEOLOGISTS REPORT

for

Dale Sayler #2-86

appr. SW, SE, SE, Sec. 5, T9S, R20E

Jefferson County, Kansas

February 1986

by

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

DEACON GEOLOGY INC.

professional geologists

GEOLOGISTS REPORT

Dale Sayler #2-86

February 10, 1968: Checked Rig 3 pm.
February 11, 1986: Checked rig throughout day.
February 12, 1986: Logging completed @ 6 am.

Elevation: 985 G.L. (Topo)

FORMATION TOPS	LOG DEPTH	DATUM	THICKNESS
Base KC	699	+286	
Marmaton	838	+147	92'
Cherokee	930	+55	486'
"U. McLouth Sd."	1,394	-409	6'
"M. McLouth Sd."	1,400	-415	5'
"L. McLouth Sd."	1,405	-420	11'
Mississippian Lm.	1,416	-431	
LTD	1,437		
RTD	1,440		

Sample returns were examined microscopically from a drilled depth of 800 feet to T.D. 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 visible evidence of oil or oil staining in any of the geologic units above the "McLouth Sands"; however, there may be producable quantities of gas in some of the sands in the middle Cherokee Group and these intervals need to be thoroughly evaluated before eventual abandonment of the well.

CHEROKEE GROUP:

The sand units found above the "McLouth Sands" appeared to be rather shaly in nature. There was no noticable gas effect in any of these sands; however, a detailed log analysis should be done on each sand to fully evaluate its potential.

The "McLouth Sands" were topped at a log depth of 1394 feet (-409). The sands formed a distinct upper unit (1394-

1400), middle unit (1400-1405), and a lower unit (1405-1416). The sands were divided, based on comparisons with other logs in the area. Sample returns consisted of a coarse grained tan quartz sand which became a clear quartz sand in the lower unit. There was a show of heavy dark brown oil with no apparent odor. The application of trichlorethane yielded streaming cuts and bright fluorescence. There appeared to be a less heavy brown oil present in the lower part of the sands.

Log calculations were prepared on location by Log-Tech pesonnel using the following values; M=1.8, Rw=.2.

Interval	Ø	Rt	Sw
1394-96	16	8	80
96-98	13	12	80
1404-06	23	12	49
06-08	22	14	46
1410-12	19	12	59
12-14	19	15	51

There were traces of pyrite cementation present in some of the sand which will cause some problems in calculating a true Sw. It appears from the samples and logs that gas can be produced from these sands; however, until a test is made it is not possible to predict if the well will be of commercial vallue.

MISSISSIPPIAN LIME:

The Mississippian was reached at a log depth of 1416 feet (-431). Sample returns consisted of a white to light tan very finely crystalline limestone that contained a show of heavy dark brown oil on the fracture faces and in some pinpoint porosity.

There was a slight petroleum odor. Application of trichlorethane yielded streaming cuts and bright fluorescence.

No log calculations were prepared for this interval as there has been no production from the upper Mississippian in this immediate area.

CONCLUSIONS AND RECOMMENDATIONS:

The "McLouth Sands" appear to have the potential to produce gas. There was some pyrite cementation in the sand which can cause the Rt values to be much lower than they actually are.

The upper Cherokee Sand should also be carefully evaluated for the presence of gas. There has been no attempt to produce any of these sands in this area; however, some sands will probably produce some unknown quantities of gas.

Should additional information be required, please contact me.

Respectfully submitted,

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

DEACON GEOLOGY INC.

mrp/GEP