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GEOLOGISTS REPORT

for

Lloyd Noll 1-87

API No. 15-103-20867

NW, NW, SW, SEc. 3, T9S, R20E

Leavenworth County, Kansas

July 1987

by

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

DEACON GEOLOGY INC.

professional geologists

GEOLOGISTS REPORT

Lloyd Noll 1-87

July 17, 1987: Called to wellsite at 11:00 AM. on location @ 1:15 PM drlg @ 1300'. Released from location @ 1 AM July 18, 1987.

Elevation: 1060.9 GL (all measuremants from G.L.) Use 1060 G.L. due to site preparation.

FORMATION TOPS	LOG DEPTH	DATUM	THICKNESS
Base KC	775	+285	131'
Marmaton	906	+154	96'
Cherokee	1,002	+58	500'
"Coal Marker"	1,412	-352	----
"U. McLouth Sd."	1,448	-388	12'
"M. McLouth Sd."	1,460	-400	16'
"L. Mclouth Sd."	1,476	-416	18'
Mississippian Lm.	1,502	-442	----
RTD	1,530		
LTD	1,528		

Sample returns were examined from a drilled depth of 880' to TD for the presence of visible hydrocarbons. Formation tops and intervals for this report were picked from sample returns and the Neutron Density-Porosity Log.

There was no visible evidence of the presence of hydrocarbons in any of the geologic units above the "McLouth Sands"; however, there are several sand intervals on the log which need to be carefully evaluated as they may contain gas.

CHEROKEE GROUP:

There were several intervals present in the Cherokee Section above the "McLouth" which had moderate to good porosity and slightly higher than normal resistivity values. Most or all of these intervals should be considered for possible testing for gas and/or oil before eventual abandonment of the well. There were no visible indications of hydrocarbons in the samples; however, due to the very rapid drilling rate samples were very mixed and most of the zones were found above the mud up point.

Intervals which should be examined are the sands foound at the following depths; 1210-20 and 1310-40.

"McLouth Sands"

The "McLouth" interval has been divided for correlation and mapping purposes into an upper (1448-60), middle (1460-78) and lower (1478-94) sand.

The upper unit (1448-60) is a very shaly sand sequence with limited porosity and no apparent visible hydrocarbons in the samples. Due to the extreme shaliness of this zone no production attempt should be considered.

The middle unit (1460-76) is a fine to medium to coarse grained, tan to clear, subrounded, moderately sorted shaly quartz sand. There was a very slight show of medium to dark brown free oil and a slight odor in the upper (6) six feet and an increasing amount of oil until there was a very good show of free oil in the samples throughout the remainder of the middle and lower sand units. There was also a very good show of oil on the pits during the drilling of this interval. There was a strong petroleum odor present in the samples from 1465 to 1495.

The lower sand (1476-94) was a clear. coarse grained, subrounded quartz sand containing many shale partings. As previously mentioned there was a very good show and strong odor thru this interval.

Log calculations were prepared for these sands using the following values: M=1.8, Rw=.2. It should be noted that there has been no correction for the shale factor considered in these

calculations.

Interval	Ø	Rt	Sw
1468-70	12	15	76
70-72	12	15	76
72-74	12	15	76
74-76	12	15	76
76-78	19	50	27
78-80	19	20	44
80-82	22	18	42
82-84	21	20	41
84-86	14	15	66
86-88	14	15	66
88-90	13	20	63
90-92	14	20	58
92-94	10	20	58

This well should produce commercial quantities of oil and some water. There is also the probability that some quantities of gas may be present.

MISSISSIPPIAN LIME:

The top of the Mississippian Lime was reached at a log depth of 1502' (-442). Sample returns contained white, to light tan, to gray tripolitic chert and salmon colored chert. The limestone was a white to light tan fragmental limestone. The limestone became light tan and saccroidal in the 1510 sample. There were no shows or staining in any of the samples and no production attempt should be made in the drilled portion of the Mississippian in this well.

CONCLUSIONS AND RECOMMENDATIONS:

This well should produce good commercial quantities of oil from the middle and lower McLouth sections along with some gas and water.

Core analysis of similar intervals in the DeMaranville #2 and #3 indicate average permeability values of 995 md. The permeabililties range from 30 to over 1600 md. Recovery values

based on the core tests indicated that utilizing water drive, there were 449 to 469 barrels of oil per acre foot recoverable.

Care should be taken in completing these wells to keep any treatments to a minimum to prevent the fractures from penetrating down into the Mississippian and thus allowing excess water to be produced.

Due to the shaly nature of the sand and the lower gravity of the oil, 4 shots per foot will probably be needed.

Before eventual abandonment of the well, the upper sands previously discussed in the Cherokee Group, should be evaluated and tested for gas and/or oil.

Should additional information be required, please contact me.

Respectfully submitted,

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DEACON GEOLOGY INC.

mp/GEP