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GEOLOGISTS REPORT

for

Joe Noll #1-86

API# 115-087-20,227

C, S2, SW4, NW4, Sec. 9, T9S, R20E

Jefferson County, Kansas

January 1986

by

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

DEACON GEOLOGY INC.

professional geologists

GEOLOGISTS REPORT

Joseph Noll #1-86

January 17, 1986: Checked wellsite @ 9:30 am, returned to location 4 PM.
January 18, 1986: Released from location @ 3:25 PM.

Elevation: 1007 G.L. (est'd from topo)

FORMATION TOPS(E. Log)	DEPTH(GL)	DATUM	THICKNESS
Base KC	720	+287	-
Marmaton Gp.	857	+150	91'
Cherokee Sh.	948	+59	507'
"U. McLouth Sd."	1,411	-404	4'
"M. McLouth Sd."	1,415	-408	6'
"L. McLouth Sd."	1,421	-414	23'
Miss. Lm.	1,455	-448	-
RTD	1,474		
LTD	1,476		

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

CHEROKEE GROUP:

Several thick clean sand intervals were noted in the sample returns and on the Neutron Density-Porosity Logs between 1190 and the top of the McLouth Sands. The uppermost of these sands had a thickness of 30 feet and was found between 1190 and 1220. This sand was slightly shaly in the upper two-thirds of the interval to clean in the lower third. The sand was a clear, medium to coarse grained, subrounded quartz sand. The second sand interval was found between 1246 and1270. This interval had excellent porosity. It was made up of a medium to coarse grained, well rounded quartz sand. The third sand was found

from 1294 to 1330. This interval was somewhat shaly in nature, contained abundant pyrite fragments, and was a clear subrounded coarse grained quartz sand. A fourth sand, located between 1359 and 1367, was a clean white, medium to coarse grained sand.

None of these four sand bodies had any shows of oil or oil staining in the sample returns; however, calculations were run to determine water saturations of these sands. These calculations indicate possible Sw values from 58% to 100%. The sand interval between 1246 and 1270 had Sw values falling between 58 and 74% Due to the fact that the LCM material was not in the mud system during the drilling of this interval, it is very likely that there was some invasion of these zones by drilling fluid. All of these sands should be carefully re-examined and tested before eventual abandonment of the well. At such time a more detailed set of calculations can be prepared from the logs.

The "McLouth Sands" were reached at a log depth of 1411 feet (-404). These sands were divided into an upper, middle, and lower unit for correlation purposes with other wells in the area. The upper has a thickness of 4', the middle 6' and the lower 23'.

The upper and middle sands were shaly in nature and were composed of a fine to medium grained, tan quartz sand that exhibited a slight stain and a very light show of medium brown free oil. There was a faint odor, and the application of trichlor-ethane yielded a bright yellow fluorescence and streaming cuts.

The upper portion of the lower sand found between 1421 and 1432 was a medium to coarse grained, tan, subrounded, quartz sand that contained a slight show of free medium brown oil. There was a faint petroleum odor. The application of trichlorethane yielded a bright yellow fluorescence and good streaming cuts. The remainder of the lower sand was a coarse grained clear quartz sand that contained dark brown free oil. There was a strong odor from the samples from this interval.

It should be noted that although the oil shows were very slight, this sand has very high porosities and the samples were badly flushed on their way to the surface.

Log calculations for this sand were prepared using the following values: Rw=.2, M=1.8.

INTERVAL	Ø	Rt	Sw
1420-22	19	14	53
22-24	26	70	18
24-26	25	70	19
26-28	23	40	27
28-30	23	60	22
30-32	20	60	25
32-34	22	50	25
34-36	19	20	45

A good cross-over effect was noted on the density-porosity cross plot between 1422 and 1432. This indicates the strong presence of gas in this interval. Based on log comparisons with the Joe Noll #1-84, this well should be a good commercial gas well.

MISSISSIPPIAN LIME:

The top of the Mississippian was reached at a log depth of 1455 (-448). The sample returns consisted of a medium to

coarsely crystalline, white to tan limestone that became somewhat grainy near the bottom of the drilled interval. There were no shows of oil in the samples. There is no potential for the production of oil from this interval in this well.

CONCLUSIONS AND RECOMMENDATIONS:

Although the McLouth Sand was the primary objective in this well, the thick sand intervals found in the middle Cherokee Section warrant further testing when the "McLouth Sands" are no longer productive. Consideration should be given to beginning the mud up process at a shallower depth so that no drilling fluids can invade sands such as were found in this well. This invasion of the sands can effect the log results to a great degree.

As has been stated in the reports submitted for wells drilled prior to this well, it is very important that a surveyed location and elevation be obtained on each well site. Without this accurate information, the detailed maps required in a successful exploration program cannot be prepared with the degree of accuracy that is necessary.

Consideration should also be given to setting a longer string of surface pipe to prevent the re-occurance of the washing out of the surface pipe as happened on this well. This condition can endanger the sucessful completion of the hole and when a well with the potential of this one occurs, a few extra feet of surface pipe is much cheaper than drilling a new well.

Should additional information be required please contact me.

Respectfully submitted,

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DEACON GEOLOGY INC.

mrp/GEP