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Computer Inventoried

GEOLOGISTS REPORT

for

John Zacharia #1-84
330' FSL, 660' FEL, SW⁴, Sec. 9, T9S, R20E
Jefferson County, Kansas

July 1984

by

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

DEACON GEOLOGY INC.



professional geologists

GEOLOGISTS REPORT

John Zacharia #1-84

July 28, 1984: On location at 6:30 AM.

July 29, 1984: Off location 2 AM.

Elevation: 1026.3 GL (All measurements from GL)

Formation Tops:	Depth(GL)	Datum	Thickness
Base Kansas City Gp.	734	+292	
Marmaton Gp.	872	+154	95
Cherokee Sh.	967	+59	525
McLouth Sd.	1438	-412	32
Base McLouth Sd.	1470	-444	
Mississippian Lm.	1492	-466	
LTD & RTD	1531		

Sample returns were examined from a drilled depth of 900' to 1531' 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 visible evidence of the presence of producible hydrocarbons in any of the geologic units above the Cherokee Group.

CHEROKEE GROUP:

Several sand zones were observed in the samples and on the logs in the upper and middle Cherokee Group but there were no indications that hydrocarbons were present in any of these zones.

The Sand located from 1366 to 1379 had a small interval between 1375-77 where the logs indicates a possibility of gas. This zone should be tested before abandonment of the well.

The top of the "McLouth Sand" was reached at a drilled depth of 1438'. The total thickness of the unit in this well is 32'. The sand varied from a medium grained, dirty appearing sand in the upper portion to a medium to coarse grained sand in the lower part. The entire zone appeared much dirtier in both the samples

and on the logs than in the previously drilled wells. A good to excellent show of free oil and a good odor were noted in samples throughout the entire interval. The oil exhibited good fluorescence under black light. Visible porosity appeared quite good. Cross overs were noted between 1454-56 and 1468-70 on the Neutron Density-Porosity Log. It appears that this well will more likely produce oil initially with some small quantities of gas present in the oil.

Log calculations for this interval were prepared by Mr. Bill Saric of Great Guns using the following values: $R_w=.2$, $M=1.8$.

Interval	ϕ	Rt	Sw
1438-40	19	8	70
40-42	22	8	60
42-44	11	8	100
44-46	13	8	100
46-48	17	8	70
48-50	16	8	82
50-52	16	8	82
52-54	19	10	62
54-56	19	11	60
56-58	18	10	68
58-60	20	11	57
60-62	16	11	70
62-64	20	10	58
64-66	20	11	57
66-68	21	11	57
68-1470	25	100	20

The "McLouth Sand" will need to be tested to fully evaluate the zone as to whether it will produce oil, gas or both.

MISSISSIPPIAN LIME:

The top of the Mississippian was reached at a drilled depth of 1492' (-466). A very heavy asphalt like residue was observed on many of the dense, light tan, semi-lithographic limestone fragments. There was a fair to good odor and good fluorescence

in the samples but there does not appear to be significant quantities of movable hydrocarbons present.

There is no potential for economically producible hydrocarbons from the drilled portion of the Mississippian in this well. Log information indicates very limited porosity in this interval.

CONCLUSIONS AND RECOMMENDATIONS:

This well appears to sit in a structurally low area between the McLouth Oil and Gas Field to the south and an apparent structural high to the north or northwest. Comparative tops for the Joseph Noll #1-84 and this well are listed here for comparison purposes.

<u>Formation</u>	<u>J. Noll #1-84</u>	<u>J. Zacharia #1-84</u>
Cherokee Sh.	+60	+59
McLouth Sd.	-409	-412
Mississippain		
Lime	-449	-446

The structural position of this well in relation to the Joseph Noll #1-84 will help in selecting further drilling sites on this lease and adjoining leases. It seems as though any locations located between the J, Noll #1-84 and this well should produce economical quantities of oil and gas. Should other information be required, please contact me.

Respectfully submitted,

George E. Petersen C.P.G.S.
DEACON GEOLOGY INC.

mrp/GEP