9-9s-20E

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GEOLOGISTS REPORT

for

J. Zacharia #2-84

C, N2, SW4, Sec. 9, T9S, R20E

Jefferson County, Kansas

November 1984

by

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

DEACON GEOLOGY INC.

professional geologists

GEOLOGISTS REPORT

J. Zacharia #2-84

November 15, 1984: On location 2:00 PM, left location 8:00 PM.

Elevation: 1063 G.L. (Tops est'd)

Formation Tops:	Log Depth GL	Datum	Thickness
Base K.C. Group	769	+294	---
Marmaton Gp.	860	+163	141
Cherokee Gp.	1,001	+62	504
"Upper McLouth"	1,463	-400	6
"Lower McLouth"	1,479	-416	11
Mississippian Lm.	1,505	-442	---
RTD	1,563		
LTD	1,566		

Sample returns were examined from a depth of 800 feet to T.D. 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 visible hydrocarbons in any of the geologic units above the Cherokee Group.

CHEROKEE GROUP:

There were several sands in the Cherokee Group below 1200 feet GL. and above the "McLouth Sands" that appear to show a gas effect on the Neutron Density-Porosity cross-plot. These intervals warrent more detailed log analysis as many of these sands may be capable of gas production.

The "Upper McLouth Sand" which occurs from a log depth of 1463 to 1469 is a clean, medium to coarse grained quartz sandstone that had a moderate show of free oil in the samples along with a faint odor and fair fluorescence.

The "Lower McLouth Sand" was topped at a log depth of 1497 feet. The lower boundary of this sand was called at 1490 for this report due to the increasing shaley nature of the unit.

This sand is a coarse grained quartz sandstone. The samples contained a moderate show of black free oil that had faint fluorescence.

Sw calculations for both the "Upper" and "Lower McLouth Sands" were prepared on location by Great Guns personnel using the following values: M=1.8, Rw= .2.

Interval	Ø	Rt	Sw
1464-66	8	16	100
66-68	8	18	100
1480-82	13	15	70
82-84	24	50	23
84-86	28	15	37
86-88	10	9	100

The "Lower McLouth" should produce gas and possibly some oil based on the log calculations and similarities with other logs from gas wells in the area.

MISSISSIPPAIN LIME:

The Mississippian Lime was reached at a logged depth of 1505 feet (-442). The upper portion of the formation consists of a tan, semi-lithographic limestone with very little visible porosity. Sample returns from 1510 to 1525 contained a fair show of heavy free oil contained in vugular porosity. There was no fluorescence until the application of trichlorethane which also yielded streaming cuts. There was slight odor. The oil appeared to be of a rather heavy nature.

The log interval covering this zone should be evaluated carefully before eventual abandonment of the well.

CONCLUSIONS AND RECOMMENDATIONS:

The "Lower McLouth Sand" should produce gas and possibly

some oil during the initial stages of production. There are several sands from 1246 to the top of the "McLouth" interval that show evidence of a gas effect on the density-porosity cross-plot. These zones should be carefully evaluated as potential gas producing zones.

A comparison of formation tops in this well with the J. Noll #1-84 and J Zacharia #1-84 is given in the following table.

Well Name	B/KC	Marm.	Cher.	U.McLouth	L.Mclouth	Miss.
J. Zacharia #2-84	+294	+152	+62	-400	-416	-442
J. Zacharia #1-84	+292	+154	+56		-412	-466
J. Noll #1-84	+293	+156	+60		-409	-432

Should additional information be required, please contact me.

Respectfully submitted,

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DEACON GEOLOGY INC.

mrp/GEP