

Computer Inventoried

GEOLOGISTS REPORT

for

TERRY #2

3536 ' FEL, 4078 ' FSL

sec 12, T9S, R19E

JEFERSON COUNTY, KANSAS

May, 1996

by

George E. Petersen C.P.G.

Deacon Geology Inc.

GEOLOGISTS REPORT

TERRY #2

3536' FEL, 4078' F8L, Sec 12, T9S, R19E , Jefferson Co. Ks

**May 23,1996: Arrived on loc. @ 7:00 AM. Drig at 1502'. Left loc. @ 4PM
May 23,1996 upon completion of logging.**

ELEVATION: 1098 GL (all measurements from 1098 GL)

FORMATION TOPS SAMPLE DEPTH LOG DEPTH DATUM THICKNESS

Base KC	840	840	+258	
Marmaton	971	979	+119	92'
Cherokee	1072	1071	+ 27	515 '
Coal Marker	1484	1486	-388	4'
L. McLouth	1571	1570	-472	27'
Miss. Lm.	1596	1597	-499	
RTD	1622			
LTD	1623			

Sample returns were examined microscopically from a drilled depth of 1160 feet to TD for the presence of visible hydrocarbons. Formation tops and thicknesses were picked from the drilling time log , sample returns and the Neutron Density/Porosity Log. There were no zones of interest above the 1285' depth in this well and therefore , only the lower portion of the Cherokee section will be discussed in detail in this report.

CHEROKEE GROUP:

The unnamed sands found between 1285 and 1292, and 1420 to 1424 all exhibited a gas effect on th Neutron Density /Porosity log. Although this well was plugged and abandoned, these upper sands should continue to be observed and evaluated in future wells drilled in this area.

The McLouth Sand interval was reached at a logged depth of 1570 feet. The sand body is the lower McLouth Sand at the well site.

The McLouth sand is a clean , medium to coarse grained, clear, quartz sand that had good visible porosity. There was a fair show of medium brown free oil . There was no odor present in the fresh samples. The application of trichlorethane yielded bright streaming fluorescent cuts. There was a slight show of gas observed on the pits .

The samples from the lower portion of the sand body had a slight show of very heavy tar like material in the pore spaces. This has been noted in other wells in the area .

Log calculations were prepared on location by Mr. Drylle of Log Tech Inc. using the following values; M=1.8, Rw =.2.

INTERVAL	POROSITY	Rt	Sw%
1570-72	18%	10	65%
1572-74	19%	30	35%
1574-76	20%	16	45%
1576-78	20%	7.5	69%
1578-80	21%	6	70%
1580-82	21%	5	79%
1582-84	21%	5	79%
1584-86	21%	5	79%
1586-88	20%	5	82%

The Sw values calculated in the Mcclouth Sand indicate that there is approximately 5 feet that is above the water contact. Based on the completion and production history of the Terry #1 , this well would undoubtedly make a fair amount of water..

MISSISSIPPI LIME:

The top of the lime was reached at a logged depth of 1597 feet. Sample returns consisted of a light to medium tan , very coarsely crystalline to fragmental limestone along with white chert. There were no shows of hydrocarbons present in the sample returns from this interval. This portion of the Mississippi is considered nonproductive in this well.

CONCLUSIONS AND RECOMMENDATIONS;

The Mcclouth Sands do not appear to have the potential to produce quantities of commercial gas without producing water from this well. Based on the production history of the Terry #1 and the very limited thickness of sand that had favorable Sw values , it was recommended that this well be plugged. The availability of a disposal well on the lease that water could be disposed by gravity drainage would have made this well a candidate for completion.

It is recommended that when there is already established production nearby and a well is found to be non-productive , that the well be deepened to the Burlington-Keokuk and converted into a disposal well. Consideration should be given to planning for disposal wells in future drilling programs.

DISCLOSURE:

Services rendered on the Terry #2 were done without any biasing influence, intentional or unintentional, from any official of Horizontal Development and Production Inc. In this report I am an independent Petroleum Geologist and not an employee of the referenced company. I will not receive any financial benefit from the positive completion of this well.

The enclosed Geologic Log is considered an integral part of this report and is not intended to be separated from the same.

The recommendations made herein shall not be construed as absolute and are made without assumption of liability and are statements of observation, research, training, and opinion only.

Should additional information be required, please contact me.

Respectfully submitted,

**George E. Petersen C.P.G.
Deacon Geology Inc**