## RECEIVED AUG 2 5 2005 KCC WICHITA

# ORIGINAL

## **GEOLOGISTS REPORT**

For

BEYER - 2A

NW ¼, SW ¼, SE1/4,NE ¼, (3250' FSL, 1100' FEL) Sec. 29, T22S, R14E COFFEY COUNTY, KANSAS

API-031-22099-00-00

May, 2005

By

George E. Petersen, C.P.G., R.G. DEACON GEOLOGY INC.

29 -22-14 E

#### GEOLOGISTS REPORT

#### BEYER 2A

May 10, 2005: Arrived on location at 7:45 AM. Left location at 8:30 PM.

May 11, 2005: Arrived on location at 7:45 AM, left location at 6PM.

All measurements were measured from the rounded off elevation of 1181 GL

FORMATION TOPS	LOG DEPTH	DATUM	THICKNESS
Heebner	305	+876	3'
Lansing Fm.	628	+553	
Stark Sh.	1026	+155	3'
Hushpuckney Sh	1057	+124	4'
Base KC Fm.	1077	+104	
Lexington Coal	1348	-167	3'
Summit Coal	1384	-203	3'
Mulkey Coal	1393	-212	3'
U Squirrel Sd.	1398	-217	6'
L Squirrel Sd.	1436	-255	16'
Bevier Coal	1482	-307	2'
Crowberg Coal	1494	-313	4'
Mineral Coal	1526	-345	3'
Scammon Coal	1548	<b>-367</b>	3'
Tebo Coal	1573	-392	3'
Wier-Pittsburg Coal	1604	-423	2'
AW Coal	1723	-542	3'
CW Coal	1731	-550	3'
Riverton Coal	1754	-573	3'
Miss Chat	1771	-590	9'
Miss Lm	1780	-599	
RTD 1862			
LTD 1865			

Sample returns were examined microscopically from a drilled depth of 1040 feet to TD for the presence of visible hydrocarbons. Potential beds capable of carrying oil were examined under a black light for visible fluorescence. Various tops of beds and formations were derived from log responses on the Compensated Density Neutron curves. A gas detector was operational during the drilling of this well and the gas response curves are with the operator of this well. Beds to be tested should be correlated with the gas curve responses.

#### LANSING GROUP:

The top of the Lansing Group was reached at a log depth of 628' (+553). Several of the black shales in this unit exhibited gas kicks with the most notable amounts associated with the Stark and Hushpuckney Shales. It is reported that gas has been commercially produced from these intervals in this area.

Other gas kicks observed on the logs and on the gas charts need to be evaluated before eventual abandonment of the well.

A gas effect was noted on the Neutron Density curve between a log depth of 648-653. This should be compared to gas kicks noted on the chart record. Sample returns indicated black fissle shale. These intervals need to be tested at some point before the eventual abandonment of the well. There is some question as to whether this observed log response for this interval accurately portrays a true gas show or not.

#### MARMATON GROUP:

The apparent top of the Marmaton group was reached at a log depth of 1229' (-48). The Lexington, Summit, and Mulkey coals should all be tested as they had good gas kicks and gas was being carried to the pit in the mud return stream. The Summit and Mulkey Coals at the base of the Marmaton Group had strong gas shows on the gas chart and gas was observed in the samples.

#### CHROKEE GROUP:

The portion of the Cherokee found in this well is a cyclothemic unit composed of marine and terrestrial sandstones and shales, marine carbonates and associated coal beds.

The uppermost bed of the Cherokee in this well was the upper Squirrel sand. This unit had an approximate thickness of 6 feet. The sand was medium grained, sub-rounded to rounded quartz sand. There was a show of oil on the pits and in the samples. A moderate odor was noted. The oil was a medium brown in color. It is probable that this interval can produce oil in unknown quantities.

The various coals found in the Cherokee all had strong shows of gas as noted by the gas detector. The Lexington coal samples had a strong visible show of gas escaping from the coal.

The lower sequence of the AW, CW, and Riverton coals in the lower Cherokee should be the first intervals to be tested. It would appear that these coal intervals might yield commercial quantities of gas.

#### **MISSISSIPPIAN:**

The Mississippian chat was reached at a logged depth of 1771 (-590). This interval contained abundant white to gray tripolitic chert and gray to green shale. The Mississippian lime interval was topped at a log depth of 1780 (-599). The sample returns contained white to light tan fragmental limestone along with green and gray shale and white to gray tripolitic chert.

There were no visible shows of hydrocarbons in the drilled portion of the Mississippian in this well.

### CONCLUSIONS AND RECOMMENDATIONS;

While some thirty two coal beds with a thickness of more than one foot have been identified in the middle Pennsylvanian stratigraphic column in eastern Kansas there are about 14 beds of coal and black shale that have a thickness that may warrant testing in the area of this lease.

Detailed mapping utilizing e-logs information as well as drillers logs will be necessary to fully evaluate this area. Much of the existing well information for the surrounding area is marginal as in many cases no logs were run.

Based on personal conversations with staff at the Kansas Geological Survey in Lawrence on Monday April 25, 2005, it is thought that the coal beds will be at a fairly uniform subsea datum on the majority of this lease. The underlying Mississippian surface may yield some clue as to the regional depositional environment for the lower Cherokee.

It may be possible to develop isopach maps if sufficient accurate identification of the individual beds can be determined. It became apparent during conversations with the KGS staff members that many of the coals can be readily identified and named; however, there may be intermittent coal beds that were deposited over areas of limited areal extent. These beds have not been named.

It is becoming apparent from the well logs now available on this project area that there are variations in thickness through out the drilled interval. This difference in the Lansing, Kansas City, and Marmaton sequences does not appear to affect the Cherokee interval. It does appear that some of the coals, most of which are not identified do appear and disappear throughout the area.

There is a difference of 3.1 feet between the reported drilled depth and the log depth. When the completion attempt is undertaken, care should be exercised to closely correlate the log responses. There is no explanation for the different depth values at this time. Having worked with this drilling contractor for over 200 wells, there has only been one occasion prior to this where there was a difference of this magnitude between RTD and LTD.

There were areas on the logs where the neutron density curves seemed to be off set from the gamma curves. These areas were noted on the 25" High Resolution

ORIGINAL

Density Log. These intervals such as between 1216-19, 1393-97, 1495-1500, and 1525-28 can not be explained at this time.

These areas may have been due to washed out areas in the hole; however conversations with personnel at the Kansas Geological Survey offices suggest the there may be some problem with either the logging tool or the program that prints out the logs. This issue needs to be resolved to insure that the data from these wells is as accurate as possible.

#### **DISCLAMER:**

The author of this report has no working or overriding interest in this or any other well on this lease.

ORIGINAL

Density Log. These intervals such as between 1216-19, 1393-97, 1495-1500, and 1525-28 can not be explained at this time.

These areas may have been due to washed out areas in the hole; however conversations with personnel at the Kansas Geological Survey offices suggest the there may be some problem with either the logging tool or the program that prints out the logs. This issue needs to be resolved to insure that the data from these wells is as accurate as possible.

## DISCLAMER:

The author of this report has no working or overriding interest in this or any other well on this lease.

Respectfully submitted;

George E Petersen, C.P.G., R.G. DEACON GEOLOGY INC.

#166
#166

