

13

**GEOLOGISTS REPORT**

**For**

**JAMISON No. 1A**

**ORIGINAL**

**SE ¼, SE ¼, NE ¼  
Sec. 26, T21S, R13E  
COFFEY COUNTY, KANSAS**

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**API-15-031-22108-00-00**

**August, 2005**

**By**

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

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## GEOLOGISTS REPORT

Jamison No. 1A

August 16, 2005: Arrived on location at 7:45 AM.

August 17, 2005: Released from location upon completion of logging at 9:45 PM.

All measurements were measured from an elevation of 1155 GL

<b>FORMATION TOPS</b>	<b>LOG DEPTH</b>	<b>DATUM</b>	<b>THICKNESS</b>
Heebner	382	+773	3'
Lansing Fm.	708	+447	
Stark Sh.	1068	+ 87	3'
Hushpuckney Sh	1104	+ 51	3'
Base KC Fm.	1120	+ 35	
Lexington Coal	1367	-212	4'
Summit Coal	1408	-253	4'
Mulkey Coal	1414	-259	4'
U Squirrel Sd.	1418	-263	14'
L Squirrel Sd.	1462	-307	10'
Bevier Coal	1510	-355	3'
Crowberg Coal	1522	-367	4'
Mineral Coal	1545	-390	3'
Scammon Coal	1563	-407	3'
Burgess Sd	1770	-615	16'
Miss Lm	1792	-637	
RTD 1882			
LTD 1883			

Sample returns were examined microscopically from a drilled depth of 1000 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.

Study of the logs after release from the well site suggests that the high point of the structure appears to be near the center of the northeast quarter of section 26. The next location will further define the structure related to the Burgess sand. Several of the lower coal beds appear to missing from the lower Cherokee section.

The drilling rate through this section caused some difficulty in seeing the thin coal seam that may be present .

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**STRANGER FORMATION:**

No samples were taken from this interval as there has been no reported production from this area in the past. The logs indicated a sand interval between 618 and 650 log depth. This appears to be the Stalnaker sandstone. The logs had a gas cross over effect from 621 to 632 and 638 to 640. Resistivity values suggest that these intervals are wet; however until such time as water samples are obtained from these sands accurate, it is not possible to calculate  $S_w$  values. This interval needs to be tested before eventual abandonment of the well.

**LANSING GROUP:**

The top of the Lansing Group was reached at a log depth of 708' (+447). 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.

These intervals need further evaluation at some point before the eventual abandonment of the well.

**MARMATON GROUP:**

The Lexington, Summit, and Mulkey coals should all be tested as they had good gas kicks. The Lexington was reached at a log depth of 1367 (-212). The Summit was reached at a log depth of 1408 (-253) and the Mulkey was topped at a log depth of 1414 (-259). All of these intervals are either a low-grade coal or black carbonaceous shale. Gas has been produced from these intervals in the Cherokee Basin and completion attempts of these intervals are warranted.

**CHEROKEE 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 found immediately under the Mulkey Coal. This unit had an approximate thickness of 14 feet and was found at a log depth of 1418 (263). The sand was medium grained, sub-rounded to rounded quartz sand. There was a show of oil in the samples. A moderate to strong odor was noted. The oil was a medium brown in color. It is probable that this interval can produce oil in unknown quantities. A good show of oil was noted on the pits. This interval appeared to continue to bleed some oil throughout the drilling of the well.

The lower Squirrel sand was reached at a log depth of 1462 feet (-307). This interval contained a medium to coarse quartz sand containing medium brown free oil. The samples had a faint petroleum odor. Log signatures indicate a moderately shaly nature to this interval. Calculated  $S_w$  values can be obtained at the time

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further interest is warranted for this sand. It appeared the lower sand had very limited porosity.

The various coals found in the Cherokee had strong shows of gas as noted by the gas detector.

The lower sequence of the AW, CW, and Riverton coals in the lower Cherokee appear to be absent from the lower interval of this well.

The Burgess sand, which had been tested by a previous operator, was a zone of prime interest in this well. This sand was reached at a log depth of 1770 (-615). The sand is composed of clear to frosted, coarse grained to crystalline quartz. There was very good intergranular porosity in the lower 5 feet of the interval. The upper eight feet of the sand appears to be somewhat shaly which accounts for porosity values of 11 to 13% where as the clean lower 5 feet has porosity values approaching 23%. The lower 5 feet had a strong gas crossover effect on the Dual Compensated Porosity log. It appears that this interval has the potential to produce commercial quantities of gas.

#### MISSISSIPPIAN:

The Mississippian was reached at a logged depth of 1792 (-637). The Mississippian lime samples contained abundant gray to white chert along with green and black shale, and tan to medium brown limestone.

There were no shows of hydrocarbons in the drilled portion of this unit.

#### CONCLUSIONS AND RECOMMENDATIONS:

The shale in the Stranger Formation that showed crossover on the log should be examined in all wells on the Jamison lease. The probability that commercial quantities of gas are present in this unit are not great; however until such time as the sand is tested, the potential for this unit can not be determined.

The coal and black shale beds found from 1000 feet to TD all appeared to yield above average gas kicks and will need to be tested from the lowermost unit upward.

The first and probably best zone to be tested is the lower Burgess sand. Early drill stem tests in the Burgess on this lease yielded large volumes of gas. Recent operators of the lease were only interested in the oil in the Viola or Simpson, Burgess and the Squirrel zones. The gas potential from the coals, shales and Burgess were ignored due to low prices and lack of understanding of the potential of coal bed methane.

The Burgess should be treated gently as there is pyrite present in the sand which can lead to the generation of hydrogen sulfide gas if excess acid is utilized in the treatment.

The Mississippian was drilled to provide a rat hole for ease of working on the Burgess with down hole tools.

It may well be advisable to re-survey all locations to establish an accurate elevation of all wells. The elevation of this well was derived from a topo elevation on

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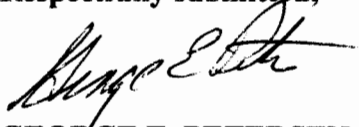
the half section line on the north south road. Other wells on the lease with the exception of the Jamison No. 3 may not have an accurate elevation as it is not known if they were surveyed in of the elevation was taken off of USGS topographic maps.

It may be possible to slow the drilling rate through the Cherokee section by reducing weight on the drill string . This might allow for easier determination of drilling breaks when the coal seams are encountered

**DISCLAIMER:**

The author of this report has no working or over riding royalty interest on wells drilled or to be drilled on this lease.

Respectfully submitted;



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