

GEOLOGISTS REPORT
for
ESTHER OSBORNE No. 3A

***SE ¼, SE ¼, SW ¼,
sec. 17, 22S, 14E
COFFEY COUNTY, KANSAS***

API-15-031-22178

January, 2005

By

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

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GEOLOGISTS REPORT: ESTHER OSBORNE No.3A

January 24, 2005: Arrived on location at 7:20 AM, drilling at 809'.

January 25, 2005: Arrived on location at 7:05 AM, drilling at 1422'.

Left location upon completion of logging at 11:30 PM.

All measurements were from a ground level elevation of 1180' (topo. elevation).

FORMATION TOPS	LOG DEPTH	DATUM	THICKNESS
<i>Heebner</i>	<i>337</i>	<i>+843</i>	<i>3'</i>
<i>Lansing</i>	<i>657</i>	<i>+523</i>	
<i>Stark sh</i>	<i>1056</i>	<i>+124</i>	<i>3'</i>
<i>Hushpuckney sh</i>	<i>1092</i>	<i>+ 88</i>	<i>4'</i>
<i>Base KC</i>	<i>1110</i>	<i>+ 70</i>	
<i>Altamont ls</i>	<i>1258</i>	<i>- 78</i>	
<i>Mulberry coal</i>	<i>1295</i>	<i>-115</i>	<i>2'</i>
<i>? coal</i>	<i>1318</i>	<i>-138</i>	<i>2'</i>
<i>? coal</i>	<i>1332</i>	<i>-152</i>	<i>2'</i>
<i>Lexington coal</i>	<i>1374</i>	<i>-194</i>	<i>3'</i>
<i>Summit coal</i>	<i>1412</i>	<i>-232</i>	<i>3'</i>
<i>Mulkey coal</i>	<i>1420</i>	<i>-240</i>	<i>3'</i>
<i>U Squirrel sd</i>	<i>1426</i>	<i>-246</i>	<i>12'</i>
<i>L Squirrel sd</i>	<i>1473</i>	<i>-293</i>	<i>21'</i>
<i>Bevier coal</i>	<i>1518</i>	<i>-338</i>	<i>2'</i>
<i>Crowberg coal</i>	<i>1530</i>	<i>-350</i>	<i>3'</i>
<i>Mineral coal</i>	<i>1555</i>	<i>-375</i>	<i>2'</i>
<i>Scammon coal</i>	<i>1563</i>	<i>-383</i>	<i>3'</i>
<i>Tebo coal</i>	<i>1575</i>	<i>-395</i>	<i>2'</i>
<i>Weir-Pittsburg</i>	<i>1623</i>	<i>-443</i>	<i>3'</i>
<i>Rowe coal</i>	<i>1710</i>	<i>-530</i>	<i>2'</i>
<i>Neutral coal</i>	<i>1731</i>	<i>-551</i>	<i>3'</i>
<i>AW coal</i>	<i>1744</i>	<i>-564</i>	<i>3'</i>
<i>CW coal</i>	<i>1753</i>	<i>-573</i>	<i>4'</i>
<i>Riverton coal</i>	<i>1756</i>	<i>-579</i>	<i>3'</i>
<i>? coal</i>	<i>1770</i>	<i>-590</i>	<i>2'</i>
<i>? coal</i>	<i>1774</i>	<i>-594</i>	<i>2'</i>
<i>Miss chat Wx top</i>	<i>1778</i>	<i>-598</i>	<i>10'</i>
<i>Miss. Lm.</i>	<i>1788</i>	<i>-608</i>	
<i>RTD 1862, LTD 1864</i>			

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Sample returns were examined microscopically from a drilled depth of 1000 feet to TD for the presence of visible hydrocarbons. Potential units capable of carrying oil or gas were examined under a black light for visible fluorescence. Various tops of units

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were derived from the drilling time log, sample returns, and the electric logs run on this well. A gas detector unit was operational during the drilling of this well and the gas response curves were compared with the sample returns and the electric logs.

DOUGLAS GROUP:

The various beds within the Douglas group of sediments appear to be non productive with the exception of the sand located at a log depth of 548' to 592'. The logs showed a very strong gas cross-over effect and very high porosity values averaging 26%. The dual induction logs suggest that this interval is wet. Until such time as a water sample can be obtained from this sand, it is not possible to calculate accurate Sw values. Before eventual abandonment of the well this interval should be carefully re-evaluated and tested.

LANSING and KANSAS CITY GROUPS:

The top of the Lansing Group was reached at a log depth of 657' (+523). There has been no oil or gas production from any of the limestone units in the Lansing and Kansas City units in this area. A very strong gas kick came from the Stark Shale. There have been reports that gas is being produced from the Stark Shale Member in the SE Kansas portion of the Cherokee Basin. Both the Stark and Hushpuckney units had good strong gas kicks. The Stark at log depth 1056' (+124), and the Hushpuckney at log depth 1092'(+88), need to be tested at some point to evaluate their potential to produce commercial quantities of gas.

The black shale at the base of the Kansas City Group found at a log depth of 1110' also had a good gas kick during the drilling of this well.

MARMATON GROUP:

The top of the Altamont lime was reached at a log depth of 1258' (-78). Additional coal beds have been identified in the upper Marmaton group. The first coal, which appears to be the Mulberry coal, was topped at a log depth of 1298' (-115). This coal had a moderate kick. Two un-named coal were identified at the following depths, 1318' (-138), and 1332' (-152). Although these coals appear to have limited thickness, both had moderate gas kicks.

The Lexington coal was reached at a log depth of 1374' (-194). This coal has been present in all wells to date and continues to have good gas kicks. Drilling operations were suspended at the point where the Summit and Mulkey coals were encountered. When drilling resumed the next day there was no apparent gas kick which could be tied to these two coals. This interval should be tested before abandonment of the well.

CHEROKEE GROUP:

The Cherokee section is composed of marine and non-marine sandstones and shales, marine carbonates and coal beds.

The uppermost units of interest in this area are the Squirrel sands. The upper sand was topped at a log depth of 1426' (-246). The sample returns had no petroleum

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odor but there was a very slight show of heavy black thick oil in the samples. The samples and the log both indicate that the 12 foot thick sand had very limited porosity. There was no noticeable gas kick from this interval. This interval does not warrant a completion attempt in this well.

The lower Squirrel sand was found at a log depth of 1473' (-293), and had a thickness of approximately 21 feet. This sand had limited porosity and a slight show of heavy brown oil. There was a very slight odor present in the samples. Based on the observed samples and the log response, it does not appear to be possible to produce oil from this interval. Again, as in the upper sand, no gas kicks were noted.

Many of the coals found below the lower Squirrel sand had strong shows of gas. There were thirteen different coals that were identified in this well. The composite thickness of these coals in the Cherokee Section is approximately 34 feet. The coals in the Bevier to Scammon interval were hard bright coals and the strongest kicks were generally from this sequence and in the interval where the AW, CW, and Riverton coals were found just above the Mississippian limestone.

In addition to the afore mentioned coals, the Tebo at a log depth of 1575' (-395), the Weir -Pittsburg at log depth 1623' (-443), the newly identified Rowe coal at log depth 1710' (-530), and the Neutral coal at log depth 1731' (-551), all had strong gas kicks. Two additional unnamed coals were noted at 1770', and 1774'.

It is suggested that due to the fact that production has not been established to date from any coal interval in this project, that testing begin in the lower coal sequence with the AW, CW, and Riverton coals.

MISSISSIPPIAN:

A weathered interval comprised of sharp chert, weathered, rounded tan limestone and shale was reached at a log depth of 1778' (-598). It appears that this is either the remnants of the chat section that has been found in the area, or it may be an erosional feature from an old Karst feature.

The hard Mississippian lime section was reached at a log depth of 1788' (-608). Sample returns from the drilled interval consisted of white to gray tripolitic chert, tan to brown limestone and also some brown saccroidal dolomite. There were no shows of oil from this interval, and no gas kicks were recorded.

The drilling of this lime was to provide a rat hole for completion attempts in the upper horizons of the well. The sample returns and logs indicate that the drilled interval is non productive in this well. Production from the upper Mississippian can be found to the south west of this area.

CONCLUSIONS AND RECOMMENDATIONS:

This well had good shows of gas from many of the coal and black shale intervals in this well. Until the various intervals have been tested in this well and other wells in this field, all zones should be completed starting with the Riverton, AW and CW coals.

It is becoming more important with each well that accurate well elevations be established. Using elevations from a U.S.G.S. topographic map does not allow for the

accuracy required for detailed mapping and plotting of cross sections. The coals were generally formed in a shallow water environment and for the most part are flat lying. The difference of a very few feet in elevation of the bed may determine whether commercial quantities of gas are producible. This is why accurate cross sections can help to determine where future development wells are placed.

This well is structurally high from the base of the Kansas City to the surface compared to the Esther Osborne No. 1A located to the west. The difference for each identified bed is shown on the Geologists Log. The coals below the Squirrel section are close to the same datum as in the 1A. The hard top of the Mississippian is 13 feet low to the 1A.

It is probable that there may be several erosional intervals present in the Cherokee section as well as some differential compaction of the various shale intervals.

The identification of the coal beds is based on comparison of logs from other wells in this program, and is an attempt to establish a uniform naming system. It should be noted that additional coals have been identified, although there are four that haven't yet received a formal name.

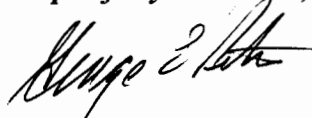
The total thickness of the coals and black shales in this well approaches 45 feet.

Should additional information be required, please contact me.

DISCLAIMER:

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

Respectfully submitted;



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