

# **Geological Report**

## **Bemis #1-29**

1868' FNL & 788' FEL

Sec. 29 T13s R19w

Ellis County, Kansas



**Flatland Resources Corporation**

## General Data

Well Data: Flatland Resources Corporation  
Bemis #1-29  
1868' FNL & 788' FEL  
Sec. 29 T13s R19w  
Ellis County, Kansas  
API # 15-051-26820-0000

Drilling Contractor: Discovery Drilling Co. Inc. Rig #3

Geologist: Jason T Alm

Spud Date: January 31, 2016

Completion Date: February 8, 2016

Elevation: 2154' Ground Level  
2162' Kelly Bushing

Directions: Intersection of Highway 40 and Yocemento Rd,  $\frac{3}{4}$  mi south on Yocemento Rd, West through gate 2 miles along trail to location.

Casing: 219' 8 5/8" surface casing

Samples: 10' wet and dry, 3150' to RTD

Drilling Time: 3100' to RTD

Electric Logs: Pioneer Energy Services "Dan Schmidt"  
CNL/CDL, DIL, MEL

Drillstem Tests: Four, Trilobite Testing, Inc. "Jim Svaty"

Problems: None

Remarks: Rig shut down for a day due to snow storm

## Formation Tops

| Formation | Flatland Resources Corp<br>Bemis #1-29<br>Sec. 29 T13s R19w<br>1868' FNL & 788' FEL |
|-----------|---|
| Anhydrite | 1485', +677   |
| Base      | 1528', +634   |
| Topeka    | 3208', -1046  |
| Heebner   | 3444', -1284  |
| Toronto   | 3467', -1305  |
| Lansing   | 3489', -1327  |
| BKC       | 3739', -1577  |
| Marmaton  | 3785', -1623  |
| Arbuckle  | 3837', -1675  |
| LTD       | 3913', -1751  |
| RTD       | 3920', -1758  |

## Sample Zone Descriptions

- Toronto (3467', -1305): Covered in DST #1**  
 Ls – Fine crystalline with poor inter-crystalline and scattered vuggy porosity, light oil stain in porosity, slight show of free oil when broken, no odor, very light yellow fluorescents.
- LKC “C” zone (3518', -1356): Covered in DST #1**  
 Ls – Fine crystalline, oolitic with poor to fair oomoldic and scattered poor inter-crystalline porosity, light to fair spotted oil stain, slight show of free oil, light odor, light yellow fluorescents.
- LKC “F” zone (3575', -1413): Covered in DST #2**  
 Ls – Fine to sub-crystalline with poor to fair vuggy and inter-crystalline porosity, light oil stain in porosity, fair show of free oil, light odor, dull to fair yellow fluorescents.
- LKC “H” zone (3623', -1461): Covered in DST #3**  
 Ls – Fine to sub-crystalline, oolitic with poor oomoldic and oolitic porosity, light to fair oil stain and saturation, slight show of free oil when broken, light odor, fair yellow fluorescents.

**LKC "T" zone**

**(3647', -1485): Covered in DST #3**

Ls – Fine to sub-crystalline, oolitic with poor to fair oomoldic and oolitic porosity, light brown oil stain in porosity, slight show of free oil when broken, light odor.

**Arbuckle**

**(3837', -1675): Covered in DST #4**

Dolo – Fine to medium rhombic crystalline with poor to fair inter-crystalline and vuggy porosity, light to heavy oil stain with scattered fair saturation, fair show of free oil, good odor.

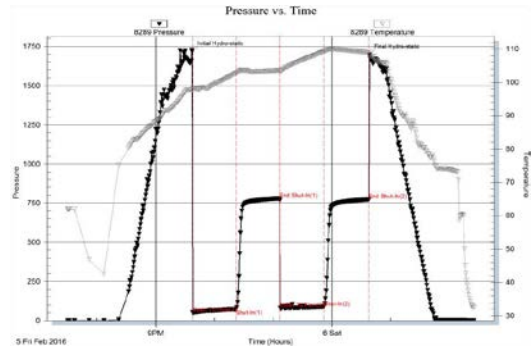
**Drill Stem Tests**  
Trilobite Testing, Inc.  
"Jim Svaty"

**DST #1 Toronto thru LKC "C"**

Interval (3446' – 3535') Anchor Length 89'

|     |                        |         |
|-----|------------------------|---------|
| IHP | - 1718 #               |         |
| IFP | - 45" – Built to 2 in. | 51-74 # |
| ISI | - 45" – Dead           | 779 #   |
| FFP | - 45" – W.S.B.         | 80-89 # |
| FSI | - 45" – Dead           | 772 #   |
| FHP | - 1697 #               |         |
| BHT | - 109°F                |         |

Recovery: 95' Oil Spotted Mud

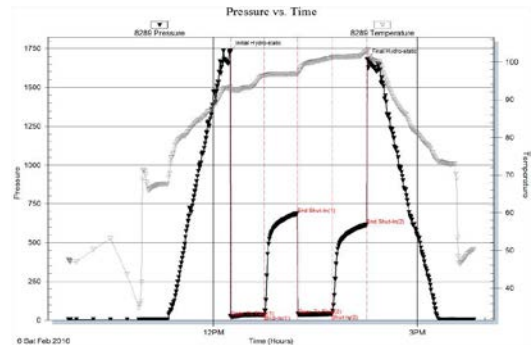


**DST #2 LKC "D-F"**

Interval (3533' – 3585') Anchor Length 52'

|     |                            |         |
|-----|----------------------------|---------|
| IHP | - 1734 #                   |         |
| IFP | - 30" – Built to 2 3/4 in. | 24-34 # |
| ISI | - 30" – Dead               | 685 #   |
| FFP | - 30" – W.S.B.             | 37-41 # |
| FSI | - 30" – Dead               | 615 #   |
| FHP | - 1682 #                   |         |
| BHT | - 103°F                    |         |

Recovery: 57' WCM w/ Oil Spots 30% Water

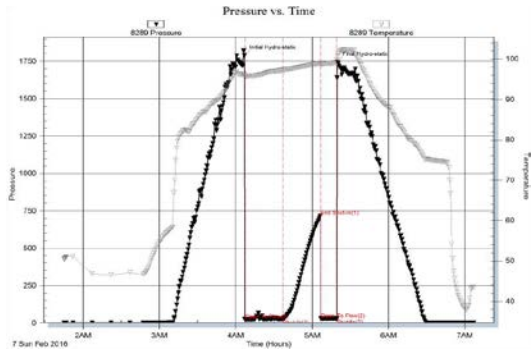


**DST #3 LKC "H-K"**

Interval (3608' – 3700') Anchor Length 92'

- IHP – 1791 #
- IFP – 30" – Built to 1 ½ in. 23-26 #
- ISI – 30" – Dead 716 #
- FFP – 10" – Dead 28-29 #
- FHP – 1745 #
- BHT – 100°F

Recovery: 10' Oil Spotted Mud

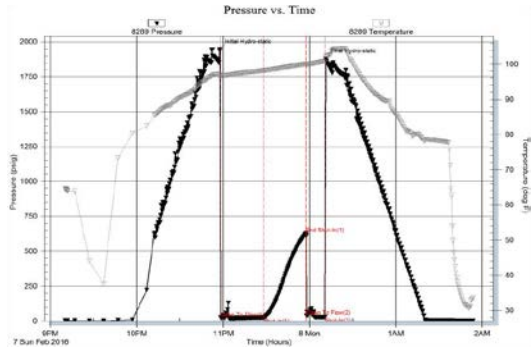


**DST #4 Arbuckle**

Interval (3798' – 3853') Anchor Length 55'

- IHP – 1944 #
- IFP – 30" – Built to ¼ in. 24-24 #
- ISI – 30" – Dead 628 #
- FFP – 10" – Dead 38-28 #
- FHP – 1878 #
- BHT – 101°F

Recovery: 5' OCM 15% Oil



**Structural Comparison**

|                  | <b>Flatland Resources Corp</b><br><b>Bemis #1-29</b><br>Sec. 29 T13s R19w<br>1868' FNL & 788' FEL | <b>Yost Oil Operations, Inc.</b><br><b>Bemis #1</b><br>Sec. 28 T13s R19w<br>990' FNL & 990' FWL |             | <b>Rains &amp; Williamson</b><br><b>Bemis #1</b><br>Sec. 20 T13s R19w<br>N2 S2 SE |              |
|------------------|---|---|-------------|---|--------------|
| <b>Formation</b> |   |   |             |   |              |
| Anhydrite        | <b>1485', +677</b>  | 1513', +679   | <b>(-2)</b> | 1416', +681   | <b>(-4)</b>  |
| Base             | <b>1528', +634</b>  | 1555', +637   | <b>(-3)</b> | 1459', +638   | <b>(-4)</b>  |
|                  |   |   |             |   |              |
| Topeka           | <b>3208', -1046</b>   | 3237', -1045  | <b>(-1)</b> | NA  | <b>NA</b>    |
| Heebner          | <b>3444', -1284</b>   | 3480', -1288  | <b>(+4)</b> | 3373', -1276  | <b>(-8)</b>  |
| Toronto          | <b>3467', -1305</b>   | 3505', -1313  | <b>(+8)</b> | 3396', -1299  | <b>(-6)</b>  |
| Lansing          | <b>3489', -1327</b>   | 3526', -1334  | <b>(+7)</b> | 3418', -1321  | <b>(-6)</b>  |
| BKC              | <b>3739', -1577</b>   | 3776', -1584  | <b>(+7)</b> | 3664', -1567  | <b>(-10)</b> |
| Marmaton         | <b>3785', -1623</b>   | 3808', -1616  | <b>(+7)</b> | 3719', -1622  | <b>(-1)</b>  |
| Arbuckle         | <b>3837', -1675</b>   | Not Reached   | <b>NR</b>   | 3773', -1676  | <b>(+1)</b>  |

## **Summary**

The location for the Bemis #1-29 was found via 3-D seismic survey. The new well ran slightly lower structurally than expected via the survey. Four Drill Stem Tests were conducted, all of which were negative. After all gathered data had been examined the decision was made to plug and abandon the Bemis #1-29 well.

Respectfully Submitted,

Jason T Alm  
Hard Rock Consulting, Inc.