# O'Brien Energy Resources, Inc. Angell No. 1-18 Section 18, T32S, R29W

Meade County, Kansas December, 2014

## Well Summary

The O'Brien Energy Resources, Corporation, Angell No. 1-18 was drilled to a total depth of 6402' in the Spergen Formation. Its location is 1 <sup>3</sup>/<sub>4</sub> miles to the NE of the Angell No. 2-13. The Heebner, Toronto and Lansing ran 11', 9' and 13' low relative to this offset. The Atoka and Morrow came in 10' and 15' high. Further structure was gained as the Chester ran in 37' high. The Ste. Genevieve, St. Louis and Spergen, 30', 27' and 6' high respectively. Just minor hydrocarbon shows and gas increases occurred in the Basal Chester and St. Louis Formation (attached mudlog).

A tight 6' Morrow Sandstone (5672'-5678') was noted in a very small percentage of samples (few clusters) after logs were run and with no associated hydrocarbon show. No mud gas increase was noted on gas detection.

The Angell No. 1-18 was plugged and abandoned 1/2/15.

Respectfully Submitted,

Peter Debenham

### WELL DATA

| Operator:            | O'Brien Energy Resources, Inc., John Forma – Portsmouth, NH<br>Geologist: Paul Wiemann – Denver, CO   |  |  |  |  |  |
|----------------------|---|--|--|--|--|--|
| Prospect Geologist:  | Ed Schuett, David Ward  |  |  |  |  |  |
| Well:                | Angell No. 1-18   |  |  |  |  |  |
| Location:            | 2308' FNL & 335' FEL, Section 18, T32S, R29W, Meade County, Kansas – 3 miles east of Plains.  |  |  |  |  |  |
| Elevation:           | Ground Level 2715', Kelly Bushing 2727'   |  |  |  |  |  |
| Contractor:          | Duke Drilling Rig No. 9, Type: Double jacknife, triple stand, Toolpusher<br>Emidgio Rojas, Drillers: Victor Martinez, Alejandro V., Feraindo Juroeb |  |  |  |  |  |
| Company Man:         | Roger Pearson – Liberal, Kansas   |  |  |  |  |  |
| Spud Date:           | 12 /27/14   |  |  |  |  |  |
| Total Depth:         | 1/2/15, Driller 6402', Logger 6396', Mississippian St. Louis/Spergen.   |  |  |  |  |  |
| Casing Program:      | 35 joints of 8 5/8", J55, 24Lbs/ft, set at 1487'.   |  |  |  |  |  |
| Mud Program:         | Winter Mud, engineer Kris McCane, displace at 3585'.  |  |  |  |  |  |
| Wellsite Consultant: | Peter Debenham, Call depth 3000', Box 350, Drake, CO 80515, 720/220-4860.   |  |  |  |  |  |
| Mudlogging Trailer:  | MBC Logging and Leasing, Meade, KS.   |  |  |  |  |  |
| Samples:             | 30' to 5600', 20' to TD. One set dry cut sent to KGS Sample Log Library.  |  |  |  |  |  |
| Electric Logs:       | Weatherford, engineer Derrek Carter, 1)Dual Induction 2) Compensated Neutron Litho Density 3) Microlog 4) High Res.                                 |  |  |  |  |  |
| Status:              | Plugged and abandoned $1/2/15$ .  |  |  |  |  |  |

#### WELL CHRONOLOGY

## DATE DEPTHFOOTAGERIG ACTIVITY

12/23 Move to location and rig up. Down for Xmas.

12/27 765' 765' Rig up rotary tolls. Pump water and mix spud mud. Drill rat hole and mouse hole. Spud in 12 <sup>1</sup>/<sub>4</sub>" surface hole to 765'.

12/28 1505' 740' Survey(1 deg.). To 1505' and circulate. Drop survey(1 deg.) and out and run and cement 35 joints of 8 5/8" set at 1487'. Plug down 1:30 PM, did circulate to surface. Wait on cement. Nipple up BOP.

12/29 3000' 1495' Nipple up and pressure test BOP. Drill plug and cement and 7 7/8" to 1612' and trip for Bit No. 3. Clean pits. To 3000'.

| 12/30 4635' 1635'                                   | Displace mud at 3585'. Survey(1 ¼ deg.).                                 |
|---|--|
| 12/31 5550' 915'<br>wiper trip 45 stands. To 5550'. | Service rig and survey(1 $\frac{1}{4}$ deg.). To 5022' and circulate and |
| 1/1 6402'TD 852'<br>and trip out for logs.          | Clean pits. To 6402'TD and circulate. Short trip and circulate           |
| 1/2 TD  | Run ELogs. Trip in and circulate. Out laying down and plug and           |

abandon well. Rig down.

**10PM** 

#### **BIT RECORD**

| <u>NO.</u>  | MAKE                   | <u>TYPE</u>                | SIZE                      | <u>OUT</u>                        | FOOTAGE                | HOURS            |
|-------------|------------------------|----------------------------|---------------------------|-----------------------------------|------------------------|------------------|
| 1<br>2<br>3 | HTC<br>But. Bit<br>PDC | PH-1c<br>HA2516<br>PLT616' | 12 ¼'<br>7 7/8"<br>7 7/8" | 1505'<br>1612'<br>6402'           | 1505'<br>107'<br>4790' | 13<br>1<br>63    |
|             |                        |                            |                           | Total Rotating Hours:<br>Average: |                        | 77<br>83.1 Ft/hr |

### **DEVIATION RECORD – degree**

all recorded between 1 and 1 3/4 deg.

### MUD PROPERTIES

| DATE<br>5 | <b>DEPTH</b> | <u>WT</u> | <u>VIS</u> | <u>PV</u> | <u>YP</u> | <u>рН</u> | <u>WL</u> | <u>CL</u> | LCM-LBS/BBL |
|-----------|--------------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-------------|
| 12/27     | 151'         | 8.7       | 33         | 12        | 7         | 7.5       | 100       | 700       |             |
| 12/28     | 1505'        | 9.9       | 32         | 10        | 6         | 8         | 100       | 200       | 8           |
| 12/29     | 1928'        | 8.7       | 30         | 5         | 3         | 7.5       | 100       | 2100      |             |
| 12/30     | 3879'        | 9.2       | 45         | 17        | 13        | 9         | 13        | 5800      | 4           |
| 12/31     | 5022'        | 9.4       | 61         | 33        | 19        | 10        |           | 4200      | 8           |
| 1/1       | 6100'        | 9.3       | 52         | 26        | 16        | 11        | 5.6       | 4000      | 4           |

# ELECTRIC LOG FORMATION TOPS- KB Elev. 2727'

|                  |       |        | *Angell No. 2-13 |          |  |
|------------------|-------|--------|------------------|----------|--|
| <b>FORMATION</b> | DEPTH | DATUM  | DATUM            | POSITION |  |
|                  |       |        |                  |          |  |
| Heebner          | 4428' | -1701' | -1690'           | -11'     |  |
| Toronto          | 4452' | -1725' | -1716'           | -9'      |  |
| Lansing          | 4558' | -1831' | -1818'           | -13'     |  |
| Marmaton         | 5148' | -2421' | -2395'           | +21'     |  |
| Cherokee         | 5335' | -2608' | -2606'           | -2'      |  |
| Atoka            | 5600' | -2873' | -2884'           | +10'     |  |
| Morrow           | 5658' | -2931' | -2946'           | +15'     |  |
| Chester          | 5744' | -3017' | -3049'           | +37'     |  |
| Ste. Gen.        | 5968' | -3241' | -3271'           | +30'     |  |
| St. Louis        | 6096' | -3369' | -3396'           | +27'     |  |
| Spergen          | 6268' | -3541' | -3547'           | +6'      |  |
| TD               | 6402' |        |                  |          |  |

\*O'Brien Energy Resources, Angell No.  $2-23 - 1\frac{1}{2}$  + miles to the SW, KB Elev. 2735'.