

O'Brien Energy Resources, Inc.
Hush No. 3-16, Bruno Field
Section 16, T33S, R30W
Meade County, Kansas
February, 2017

Well Summary

The O'Brien Energy Resources, Corporation, Hush No. 3-16, Bruno Prospect, was drilled to a total depth of 6325' in the Mississippian St. Louis Formation without any problems. It offset the Hush No. 2-9 by approximately 800' to the South. The Heebner came in 4' low relative to this offset. The Lansing, Marmaton and Cherokee ran 2', 3' and 9' low respectively. The Morrow came in 1' low and the Chester 24' low. The St. Louis, 8' high.

No Morrow "A" or "B" Sandstones were noted in the Hush No. 3-16. A Lower Morrow Sandstone with show was documented(5742' to 5753') and consists of a Sandstone in up to 30% of the samples: Light brown, salt and pepper, speckled green, occasionally mottled gray, hard to friable in part, very fine upper to fine lower well sorted round grains, calcite and some clay cement with infill, glauconitic, pyritic, fair to occasionally good intergranular porosity, occasional vuggy porosity, very dull dark brown hydrocarbon fluorescence, fair bleeding to occasional good streaming cut, trace oil stain, no gas bubbles or odor, weak show relative to productive oil sands in the area, and interbedded with Shale. 220 to 450 Unit gas kicks were documented.

This interval was drill stem tested(5722'-5772') and recovered gas to surface in 48 minutes of the final flow period and was too small to measure.

A very Upper Morrow Sandstone with a slight show was noted from 5674' to 5676'. A 110 Unit gas increase was documented(attached mudlog).

Typical shows and of low quality were documented in the Basal Chester/Ste. Genevieve. The Hush No. 3-16 was plugged and abandoned 2/7/17.

Respectfully Submitted,

Peter Debenham

WELL DATA

Operator: O'Brien Energy Resources, Inc., John Forma – Portsmouth, NH
Geologist: Paul Wiemann – Denver, CO

Prospect Geologist: Ed Schuett, David Ward

Well: Hush No. 3-16, Bruno Field

Location: 700' FNL & 660' FEL, Section 16, T33S, R30W, Meade County, Kansas – 5 miles South of Plains.

Elevation: Ground Level 2730', Kelly Bushing 2743'

Contractor: Duke Drilling Rig No. 7, Type: Double jackknife, triple stand, Toolpusher Gaylen Roach, Drillers:

Company Man: Roger Pearson – Liberal, Kansas

Spud Date: 1/27/17

Total Depth: 1/5/17, Driller 5360', Logger 5356', Mississippi St. Louis

Casing Program: 35 joints of 8 5/8", J55, 24Lbs/ft, set at 1464'.

Mud Program: Winter Mud, engineer Drew Smith, Theran Hegwood, displaced 2642' with Chemical Gel/LCM.

Wellsite Consultant: Peter Debenham with mudlogging trailer, Call depth 3000', Box 350, Drake, CO 80515, 720/220-4860.

Samples: 30' samples to 5600', 20' to td.

Electric Logs: Weatherford, engineer Adam Sill, 1)Dual Induction 2) Compensated Neutron Litho Density 3) Microlog – high res. repeat.

Drillstem Testing: Trilobite Testing, Engineer Leal Cason, Straddle Test No. 1(5722'-5772'), Lower Morrow Sandstone.

Status: Plugged and abandoned 2/7/17.

WELL CHRONOLOGY

<u>DATE</u>	<u>DEPTH</u>	<u>FOOTAGE</u>	<u>RIG ACTIVITY</u>
1/27	150'	150'	Move to location and rig up rotary tools. Mix spud mud. Drill rathole and mousehole. Spud in 12 1/4" surface hole(8:30pm). to 150'.
1/28	1095'	945'	To 570' and trip for balled bit. Clean pits and service rig. Trip in with tooth bit and drill to 1095'. Surveys(1/4 – 3/4 deg.).
1/29	1490'	395'	Surveys(3/4 deg.). To 1490' and circulate, jet cellar and spot mud. Wiper trip 16 stands and circulate. Drop survey(3/4 deg.) and trip out and lay down 8" drill collars. Run and cement 35 joints of 8 5/8", 24 lbs/ft, tally at 1464'. Plug down 8pm, with Basic Services.
1/30	1995'	505'	Wait on cement. Trip in collars and pressure test BOP. Trip in and tag cement and drill plug and cement and 7 7/8" hole to 1659' and trip for Bit no. 4. Rechain BOP and work on shale shaker. Surveys(1 deg.).
1/31	2877'	882'	Surveys(3/4 – 1 deg.). Displace mud system at 2642'.
2/1	3570'	693'	Trip for hole in pipe at 2877' and replace valve seat. Jet cellar. Survey(1 1/2 deg.).
2/2	4445'	875'	Surveys(1/4 – 1/2 deg.). Service and jet.
2/3	5190'	745'	Service rig. Survey(1deg.). To 5020' and circulate and wiper trip. To 5190'.
2/4	5950'	760'	Adjust breaks. Survey(3/4 deg.).
2/5	6325'TD		To TD and circulate and wiper trip 60 stands and circulate. Drop survey(3/4 deg.) and trip for logs.
2/6	TD	375'	Trip out for logs and run ELogs. Wait on orders. Trip in and run straddle test(5722'-5772'), Lower Morrow Sandstone.
2/7	TD		Pull test tool. Trip in and circulate. Trip out laying down and plug and abandon well. Rig down.

DEVIATION RECORD - degree

316' 3/4, 680' 1/2, 901' 1/4, 1490' 3/4, 1913' 1, 2324' 3/4, 2547' 3/4, 3055' 1, 3341' 1 1/2, 3689' 1/2, 4005' 1/4, 4574' 1, 4861' 1, TD 3/4

BIT RECORD

<u>NO.</u>	<u>MAKE</u>	<u>TYPE</u>	<u>SIZE</u>	<u>OUT</u>	<u>FOOTAGE</u>	<u>HOURS</u>
1	PDC	PDC	12 ¼"	570'	570'	6
2	Tooth	PLD-RR RT	7 7/8"	1490'	920'	20
3	J2	RR BB	7 7/8"	1659'	169'	4 ¾
4	PDC	J2	7 7/8"	6325'	4666'	108 ¾
Total Rotating Hours:						138 ¾
Average:						45.6 Ft/hr

MUD PROPERTIES

<u>DATE</u>	<u>DEPTH</u>	<u>WT</u>	<u>VIS</u>	<u>PV</u>	<u>YP</u>	<u>pH</u>	<u>WL</u>	<u>CL</u>	<u>LCM-LBS/BBL</u>
1/27	0'	8.3	make up water						
1/28	610'	9.5	35	8	12	8.0	nc	2K	8
1/29	1406'	10.3	38	12	17	8.0	nc	7.5K	18
1/30	1490'	8.4	28	1	1	10.0	nc	3.5K	--
1/31	2400'	9.8	30	4	7	8.5	nc	65K	--
2/1	3119'	9.0	43	12	19	9.5	22	8.5K	4
2/2	4000'	9.3	45	12	13	9.5	16.0	6.5K	4
2/3	4861'	9.2	40	11	4	10.0	6.8	4.7K	4
2/4	5555'	9.3	45	14	8	10.0	7.6	5K	4
2/5	6201'	9.4	48	18	14	10.0	6.8	4K	6

ELECTRIC LOG FORMATION TOPS- KB Elev. 2743'

<u>FORMATION</u>	<u>DEPTH</u>	<u>DATUM</u>	<u>*Hush No. 2-9</u>	
			<u>DATUM</u>	<u>POSITION</u>
Surface Casing	1483'			
Heebner	4398'	-1655'	-1651'	-4'
Toronto	4421'	-1678'	-1676'	-2'
Lansing	4494'	-1751'	-1748'	-3'
Marmaton	5166'	-2423'	-2414'	-9'
Novinger Interval	5238'	-2495'	-2488'	-7'
Cherokee	5334'	-2591'	-2589'	-2'
Atoka	5624'	-2881'	-2881'	0'
Morrow	5669'	-2926'	-2925'	-1'
Lower Morrow SS	5742'	-2999'	na	
Mississippi Chester	5765'	-3022'	-2998'	-24'
Basal Chester	5965'	-3222'	-3226'	+4'
Ste. Genevieve	6015'	-3272'	-3271'	-1'
St. Louis	6171'	-3428'	-3436'	+8'
TD	6329'	-3586'		

*Hush No. 2-9, 100' FSL & 660' FEL, sec. 9 – app. 800' to the North, KB Elev. 2742'.

DRILL STEM DATA

DST NO.1: (5722' -5772'), Lower Morrow Sandstone

Type: Straddle Test Times: 30-60-60-120

<u>PERIOD</u>	<u>TIME</u>	<u>PSI</u>
IH		2933
IF	30	76 - 138
ISI	60	1185
FF	60	38 - 42
FSI	120	1768
FH		2911

BHT 126 deg. F.

BLOWS: IF – Fair, bottom of bucket in 20 minutes. ISI – Blowback, bottom of bucket in 46 minutes.

FF – Strong, bottom of bucket in 10 seconds, gas to surface in 48 minutes, burns – too small to measure. FSI – 1” blowback.

RECOVERY: Gas to surface in 48 minutes of FF period. 65’ of gas cut mud(5% gas, 95% mud).