

O'Brien Energy Resources, Inc.
Singley West No. 6-29, Singley West Field
Section 29, T33S, R29W
Meade County, Kansas
December, 2016

Well Summary

The O'Brien Energy Resources, Singley West No. 6-29 was drilled to a total depth of 6325' in the Mississippian St. Louis Formation without any problems and in 106.5 rotating hours.

The closest offset was the Singley West No. 4-29 approximately 1200' to the East/Northeast. The Heebner came in 8' low relative to this offset. The Toronto and Lansing came in 23' and 16' low. A fault was most likely crossed in the lower Lansing as the Marmaton came in 25' high. The Cherokee, Atoka and Morrow ran 21', 32' and 25' high respectfully. The Chester came in 22' high and the Ste. Genevieve, 1' low. The St. Louis, 7' high.

Relative to the Singley West No. 1-29, approximately 1750' to the Northeast, the Heebner, Toronto and Lansing ran 19', 29' and 30' low respectively. Structure was again gained in the lower Lansing as the Marmaton came in 11' high. The Marmaton, Cherokee and Atoka ran 11', 9' and 12' high respectively. The Morrow and Mississippian Chester came in 11' and 13' high. The Ste. Genevieve came in 17' low.

Numerous Morrow Sandstones with shows and gas increases were documented. The most notable occurred from 5793' to 5802' and consists of a Sandstone in 30% of the samples: Light brown, speckled green, salt and pepper, friable, fine upper to fine lower well sorted subround grains, siliceous cement, calcareous, glauconitic, excellent intergranular porosity, occasional vuggy porosity, bright light yellow to orange hydrocarbon fluorescence in most of the sandstone, excellent fast streaming cut, light brown bleeding live oil and gas bubbles, oil odor, excellent show, show somewhat dissipated when dried. 80 Units of gas mud gas were recorded. The Sandstone interval extends to 5814' but with a less notable show.

200 Units of gas was documented from a lower Morrow interval from 5835' to 5846'. An abundance of Sandstone was noted throughout the entire Morrow interval. Initial interpretation was thought to have been an upper upper Sandstone previously drilled. All Morrow sandstone, with the exception of the above mention oil show interval, consists predominately of a Sandstone in up to 40% of the samples: Light brown, speckled green, hard to friable, fine well sorted subround grains, siliceous cement, slightly calcareous, glauconitic, excellent intergranular and occasional vuggy porosity, very light mottled pale blue hydrocarbon fluorescence in most of the sandstone, slow weak bleeding to faint streaming cut, no stain, show dissipates when dried.

A gas kick of 250 Units may have come from the upper Morrow Sandstone from 5737' to 5745'.

An additional sandstone interval occurred from 5778' to 5782'.

Additional shows occurred in the Upper Chester(5878' to 5883') along with an 80 Unit increase and some minor shows in the St. Louis.

4 ½" production casing was run to TD on the Singley West No. 6-29 on 6/17/26.

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, Denver

Well: Singley West No. 4-29

Field: Singley West

Location: 1692' FSL & 1398' FWL, Section 29, T33S, R29W, Meade County, Kansas – 15 miles SE of Meade.

Elevation: Ground Level 2608', Kelly Bushing 2620'

Contractor: Duke Drilling Rig No. 9, Type: Double jackknife, double stand, Toolpusher
Emidgio Rojas, Drillers: Victor Martinez, Alejandro V., Fernando Jurado,

Company Man: Roger Pearson – Liberal, Kansas

Spud Date: 12/9/16

Total Depth: 12/16/16, Driller 6325', Logger 6319', Mississippi St. Louis

Casing Program: 35 joints of 8 5/8", J55, 24Lbs/ft, set at 1463'. 4 1/2" production casing to TD.

Mud Program: Mud-Co/Service Mud Inc., Engineer Justin Whiting, Type: Chemical Gel/LCM, displaced 2600'.

Wellsite Consultant: Peter Debenham, Call depth 4000', Box 350, Drake, CO 80515, 720/220-4860.

Samples: 30' 4000'-4700', 20' to TD. One set dry cut sent to KGS Log Library.

Electric Logs: Weatherford, engineer Ned Al Sudani, 1) Array Induction, 2) Neutron/Density, 3) Microlog , Hi-Res.

Status: 4 1/2 " production casing to TD on 12/17/16.

WELL CHRONOLOGY

<u>6 AM</u>	<u>DATE</u>	<u>DEPTH</u>	<u>FOOTAGE</u>	<u>RIG ACTIVITY</u>
	12/9			Move to location and rig up rotary tools.
	12/10	1475'	1475'	Rig up. Pump water and mix spud mud. Drill rat hole and mouse hole. Spud in 12 1/4" surface hole to 1475' and circulate. Drop survey(1 1/4 deg.) and trip out and run and cement 8 5/8" surface casing.
	12/11	2155'	680'	Cement surface casing set at - did circulate. Break down landing joint and nipple up BOP. Trip in and pressure test BOP to 300 PSI /15 minutes. Drill plug and cement and 7 7/8" hole to 1560' and trip for Bit No. 3. To 2155'.
	12/12	3870'	1715'	Surveys(1/2 – 1 1/4 deg.). Clean pits and displace mud system at 2600'.
	12/13	5010'	1140'	Surveys(1 1/4 deg). To 5010' and circulate and wiper trip.
	12/14	5520'	510'	Wiper trip and drill.
	12/15	6165'	645'	
	12/16	6325'TD	160'	Circulate and short trip and circulate. Unload 4 1/2" production casing. Very cold and snow. Trip out for logs.
	12/17	TD		Run ELogs. Trip in and circulate. Trip out laying down and run and cement 4 1/2" production casing to TD. Rig down.

BIT RECORD

<u>NO.</u>	<u>MAKE</u>	<u>TYPE</u>	<u>SIZE</u>	<u>OUT</u>	<u>FOOTAGE</u>	<u>HOURS</u>
1		S516D	12 1/4"	1475'	1475'	5
2		HA 28-Q	7 7/8"	1560'	85'	1 3/4
3		PLT616	7 7/8"	6325'	4765'	99 3/4
Total Rotating Hours:						106.5
Average:						59.4 Ft/hr

DEVIATION RECORD – degrees

1475' 1 1/4, 2603' 1, 3130' 1/2, 3555' 1 1/4, 4607' 1 1/4

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>
12/10	641'	10.4	60	15	18	7.0	nc	100	5
12/11	1475'	8.4	27	1	2	7.0	nc	600	0
12/12	2827'	8.7	35	4	6	8.0	nc	6.1K	2
12/13	4459'	9.1	48	16	17	11.0	8.4	2.4K	.5
12/14	5199'	9.3	64	18	21	10.0	6.8	2.4K	3.5
12/15	5725'	9.2	55	17	18	9.5	8.4	2K	3
12/16	6261'	8.9	55	17	18	10.0	6.8	2K	2.5

ELECTRIC LOG FORMATION TOPS- KB Elev. 2609'

<u>FORMATION</u>	<u>DEPTH</u>	<u>DATUM</u>	<u>*Singley West No. 4-29</u>	
			<u>DATUM</u>	<u>POSITION</u>
Heebner	4446'	-1826'	-1818'	-8'
Toronto	4486'	-1866'	-1843'	-23'
Lansing	4616'	-1996'	-1980'	-16'
Marmaton	5226'	-2606'	-2631'	+25'
Cherokee	5396'	-2776'	-2797'	+21'
Atoka	5680'	-3060'	-3083'	+32'
Morrow	5734'	-3114'	-3139'	+25'
Mississippi Chester	5866'	-3246'	-3268'	+22'
Ste Genevieve	6146'	-3526'	-3527'	-1'
St. Louis	6238'	-3618'	-3625'	+7'
TD	6325'	-3705'		

*O'Brien Energy Corp., Singley West No. 4-29, 1980'FSL & 2300'FWL, Sec. 29 – approximately 1200' to the E/NE. KB Elev. 2609'.

<u>FORMATION</u>	<u>DEPTH</u>	<u>DATUM</u>	<u>*Singley West No. 1-29</u>	
			<u>DATUM</u>	<u>POSITION</u>
Heebner	4446'	-1826'	-1807'	-19'
Toronto	4486'	-1866'	-1837'	-29'
Lansing	4616'	-1996'	-1966'	-30'
Marmaton	5226'	-2606'	-2617'	+11'
Cherokee	5396'	-2776'	-2785'	+9'
Atoka	5680'	-3060'	-3072'	+12'
Morrow	5734'	-3114'	-3125'	+11'
Mississippi Chester	5866'	-3246'	-3259'	+13'
Ste Genevieve	6146'	-3526'	-3509'	-17'
St. Louis	6238'	-3618'	NDE	
TD	6325'	-3705'		

*O'Brien Energy Corp., Singley West No. 1-29, 1980'FNL & 2310'FWL, Sec. 29 – approximately 1750' to the NE. Elev. 2633'.

