

O'Brien Energy Resources, Inc.

Clayton No. 6

Section 28, T33S, R29W

Meade County, Kansas

September, 2017

Well Summary

The Clayton No. 6 was drilled to a total depth of 6450' in the Mississippian St. Louis. It offset the Clayton No. 2-28 by approximately 1200' to the Northwest. Formation tops ran 11' to 23' high from the Heebner to the Marmaton relative to this offset. The Cherokee, Atoka and Morrow ran 6', 3' and 1' high respectively. The primary objective Chester Rickers Ranch Sandstone did occur and came in 1' high. This 4' Sandstone(5998'-5992') consists of a Sandstone in 6% of the sample: Medium to dark brown with matrix oil stain, friable, fine lower to fine upper, well sorted subround grains, siliceous cement, slightly calcareous, good to excellent intergranular porosity, dull goldbrown hydrocarbon fluorescence(all sandstone), excellent fast streaming cut, medium brown matrix oil stain, traces live oil, oil odor. A 220 Unit gas kick was recorded, and with calcareous Siltstone with hydrocarbon fluorescence and cut.

The Upper Morrow contained sketchy shows from 5806' to 5828', Sandstone(10% spl): Medium to dark speckled green, salt and pepper, mottled gray to brown, hard to friable in part, very fine well sorted subround grains, siliceous cement, calcareous, very glauconitic, argillaceous to marly, poor visible porosity, mottled pale blueyellow hydrocarbon fluorescence, fair streaming cut, trace light mottled oil stain, weak show. 60 to 80 Unit gas increase was documented.

4 1/2" production casing was run on the Clayton No. 6 on 10/4/17 to production test the Rickers Ranch Sandstone.

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 and Dave Ward

Well: Clayton No. 6, Singley Field

API No.: 15-119-21412

Location: 1450'FSL & 1450'FWL, SW SW NE SW, Section 28, 33S, R29W, Meade Co., KS – South of Meade.

Elevation: Ground Level 2594', Kelly Bushing 2607'

Contractor: Duke Drilling Rig No. 7, Type: Double jackknife, triple stand, Toolpusher Galen Roach, Drillers: Todd Elsen, Scott Edwards, Steven Green

Company Man: Keith Clumsky, Liberal, KS

Spud Date: 9/23/17

Total Depth: 10/1/2017, Driller 6450', Logger 6452', St. Louis Fm.

Casing Program: 37 joints of 8 5/8", J55, 24Lbs/ft, set at 1572' with 385 sacks A-conblend(3%cc, ¼ lb Poly Flake), tail with 150 sacks Premium Plus(2%cc & ¼ lb PF) – did circulate. 4 ½" production casing to TD.

Mud Program: Sevice Mud engineer Justin Whiting

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

Samples: 30' to 4700', 20' to TD. Dry sample cut sent to KGS Sample Log Library – Wichita, kS.

Electric Logs: Weatherford, engineer Nicholas Rupert, 1)Array Induction, 2) Density/Neurton, 3) Microlog – High Res. repeat section.

Status: 4 1/2 " production casing to TD on 10/4/2017.

WELL CHRONOLOGY

<u>10 PM</u>			
<u>DATE</u>	<u>DEPTH</u>	<u>FOOTAGE</u>	<u>RIG ACTIVITY</u>
9/23	45'	45'	Move to location and rig up rotary tools. Cut 80' drilling line. Mix spud mud and rig up. Spud in 12 ¼" surface hole(10 pm).
9/24	1180'	1135'	Surveys(1/2 – 1 deg.). Repair rotary chain and drill to 1180'.
9/25	1575'	395'	To 1445' and pump flag and check valve in pump and trip for Bit No. 2. To 1575' and circulate and trip out and lay down 8" drill collars. Rig up and run 37 joints of 8 5/8", J55, 24Lbs/ft, set at 1572' with 385 sacks A-conblend(3%cc, ¼ lb Poly Flake), tail with 150 sacks Premium Plus(2%cc & ¼ lb PF) – did circulate. Wait on cement.
9/26	1985'	410'	Wait on cement. Trip in and pressure test BOP. Drill plug and cement and 7 7/8" hole to 1985'.
9/27	3145'	1160'	Surveys(1/2 – 1 deg.) and service rig. Clean pump screens.
9/28	4180'	1035'	Surveys(3/4 deg.). Drilling ahead.
9/29	5115'	935'	Survey(1 deg.) Circulate for samples at 5013' and wiper trip to casing and circulate. To 5115'.
9/30	6225'	1110'	Work on mud pump, rod oilers.
10/1	6450'TD	225'	To 6450'TD and circulate. Wiper trip(tight) and circulate on bottom. Trip for logs, stuck pipe at 5363'. Spot 40 bbls of oil at 11:45 pm and wait on oil. Wait on spotted oil and work pipe. Still stuck. Rig up jarring or slam hammer joint and jar pipe.
10/3	TD		Jar loose and trip out tight. Mix and condition mud and circulate. Trip out and run ELogs. Logging tool stuck logging up at 3735'. Wait on fishing tools and fish out tool.
10/4/17			Fish out tool and trip in and circulate. Trip out laying down and run and cement 4 ½" production casing to TD. Rig down.

BIT RECORD

<u>NO.</u>	<u>MAKE HOURS</u>	<u>TYPE</u>	<u>SIZE</u>	<u>OUT</u>	<u>FOOTAGE</u>	
1	Varel	RR RT	12 ¼"	1545'	1545'	28
2	Varel	J-2	12 ¼"	1575'	30'	¾
3	Varel	RR	7 7/8"	1904'	329'	4 ¾
4	HTC	DP 506	7 7/8"	6450'	4546'	74 1/4
Total Rotating Hours:						107
3/4						
Average:						59.8
ft/hr						

DEVIATION RECORD - degree

300' ½, 600' ½, 900' 1, 1500' 1, 2000' 1, 2500' 1, 3000' ½, 3500' ¾, 4000' ¾, 4500' 1, 5000' ¾,

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-</u>
<u>LBS/BBL</u>									
9/24	618'	10.1	43	8	10	7.5	nc	400	5
9/25	1473'	9.9	34	7	9	7.5	nc	750	6
9/26	1575'	Water							
9/27	2448'	9.6	31	2	3	7.0	nc	60.8K	0
9/28	3622'	9.0	53	14	18	11.6	9.5	4.8K	3
9/29	4730'	9.3	48	14	15	9.2	9.5	2.4K	2
9/30	5618'	9.6	55	17	17	7.6	9.5	3.6K	3
10/1	6450'	9.4	51	16	17	8.0	10.5	2.2K	4
10/2	6450'	8.9	68	16	22	9.5	10.0	7.7K	2
10/2	6450'	8.9	64	16	21	9.0	8.8	7.2K	4

ELECTRIC LOG FORMATION TOPS- KB Elev. 2607'

<u>FORMATION</u>	<u>DEPTH</u>	<u>DATUM</u>	<u>*Clayton No. 2-28 DATUM</u>	<u>POSITION</u>
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Surface casing	1571'			
Heebner	4422'	-1815'	-1838'	+23'
Toronto	4448'	-1841'	-1863'	+22'
Lansing	4575'	-1968'	-1985'	+17'
Marmaton	4255'	-1648'	-2656'	+11'
Cherokee	5446'	-2839'	-2842'	+6'
Atoka	5640'	-3033'	-3033'	+3'
Morrow	5773'	-3166'	-3164'	+1'
Mississippi Chester	5861'	-3254'	-3271'	-7'
Richers Ranch SS	5998'	-3391'	-3392'	+1'
Ste. Genevieve	6174'	-3567'	-3575'	+8'
St. Louis	6290'	-3683'	-3668'	-16'
TD	6452			

*O'Brien Energy, Clayton No. 2-28, 335'FNL & 2281'FWL, Section 28, 33S, 29W, K.B.
Elevation 2603', app. 1200' to the SE.