

O'Brien Energy Resources, Inc.

Clayton No. 7-28

Section 28, T33S, R29W

Meade County, Kansas

May, 2019

Well Summary

The Clayton No. 7-28 was drilled to a total depth of 6385' in the Mississippian St. Louis. It offset the Clayton No. 6 by approximately 1000' to the Northwest. Formation tops came in high relative to this offset. The Heebner, Toronto and Lansing ran 7', 10' and 13' high respectively. The Cherokee came in 18' high and the Atoka and Morrow, 20' high.

Numerous hydrocarbon shows were documented during the drilling of this well. The Morrow "C" Sandstone(5831'-5842') consists of a Sandstone in 10% of the samples: Light brown, white, salt and pepper, speckled green, firm to very friable, fine lower to very fine upper, well sorted subround to round grains, siliceous cement, slightly calcareous, clean, glauconitic, good intergranular and occasional vuggy porosity, bright light yellow hydrocarbon fluorescence(all SS), excellent streaming cut, gas bubbles and slight oil sheen when crushed, slight gas/oil odor, excellent show. A 700 Unit gas increase was documented.

Shows were document in the Morrow "B" Sandstone also and with associated gas increases but of a much lesser quality with just a trace of very light mottled blue hydrocarbon fluorescence and weak streaming to bleeding cut in less 2% of the samples.

The primary objective Rickers Ranch Sandstone was developed(6011'-6014') and came in even with the productive zone in the Clayton No. 6. No sandstone was noted in samples due largely to the abundance of show sands still in samples from the Morrow. A 325 Unit gas increase was documented on the hotwire.

The St. Louis(6315'-6323') contained a subtle show along with an 80 Unit gas increase and consists of a Limestone: Light brown, buff, biomicrite, very brittle, clean fossiliferous, dull gold brown hydrocarbon fluorescence in less than 1% of the samples, good streaming cut, very light live oil stain and trace live oil. The porosity zone just above this interval(6299'-6312') did not contain a sample show or gas increase and consists largely of a very oomoldic Limestone.

An interesting show occurred in the Lansing from 4686' to 4691' and consists of a Limestone: Light mottled brown, microcrystalline, microsucrosic with trace intercrystalline and vuggy porosity, bright light blue to yellow hydrocarbon fluorescence in 2% of the samples, slow streaming to bleeding cut, very light mottled oil stain. A 40 Unit gas increase was noted.

Additional minor shows were documented in the Lansing and Chester.

4 ½" production casing was set on the Clayton No. 7-28 on 5/13/19.

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. 7-28, Singley Field

API No.: 15-119-21434

Location: 2121'FSL & 692'FWL, SW NE NW SW, Section 28, 33S, R29W, Meade Co., KS – South of Meade.

Elevation: Ground Level 2608', Kelly Bushing 2620'

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

Company Man: Dana Greathouse

Spud Date: 5/6/19

Total Depth: 5/13/2019, Driller 6385', Logger 6388', St. Louis Fm.

Casing Program: 39 joints of 8 5/8", J55 STC, 24Lbs/ft, set at 1575' with 375 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, displaced 2618'.

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

Logging Trailer: MBC, Meade, KS

Samples: 30' to 4700', 20' to TD.

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

Status: 4 ½" production casing set to TD on 5/13/19.

WELL CHRONOLOGY

<u>DATE</u>	<u>DEPTH</u>	<u>FOOTAGE</u>	<u>RIG ACTIVITY</u>
5/6			Move in and rig up rotary tools. Mix spud mud. Drill rathole and mousehole. Spud in 12 1/4" surface hole(8:30 PM).
5/7	1270'	1270'	To 1270'. Survey(1/4 deg.).
5/8	1810'	540'	Surveys(3/4 deg.). Drill to 1583' and circulate and pump sweep. Drop survey(3/4 deg.)and trip for surface casing. Run and cement 39 joints of 8 5/8" 24 Lbs/ft J-55 STC set at 1575'. Cement with 375 sacks Class A-Con Blend, tail with 150 sacks Premium Plus. Good returns. Wait on cement. Nipple up BOP and pressure test to 500 psi/15 min. Drill plug and cement.
5/9	3170'	1360'	7 7/8" hole to to 3170'. Displace mud system at 2618. Surveys(3/4 - 1/2 deg.).
5/10	4618'	1448'	
5/11	5350'	732'	Survey(3/4 deg.). To 5025' and circulate and pump sweep. Wiper trip to casing and circulate. To 5350'.
5/12	5915'	565'	To 5438' and trip for Bit No. 3.
5/13	6385'TD	470'	To 6385'TD and circulate. Wiper trip and circulate. Drop survey(1 deg.) and trip for logs and 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>HOURS</u>	<u>TYPE</u>	<u>SIZE</u>	<u>OUT</u>	<u>FOOTAGE</u>	
1	PL 551		12 1/4"	1583'	1583'	8 3/4
2	TX 616		7 7/8"	5438'	3855'	62 3/4
3	PL 516		7 7/8"	6385'	947'	18

Total Rotating Hours: 89 1/2
Average: 71.3 ft/hr

DEVIATION RECORD - degree

767' 1/4, 1583' 3/4, 2053' 1/2, 2618' 3/4, 3121' 1/2, 3711' 3/4, 4244' 3/4, 4743' 1/2, 5244' 3/4, 5438 3/4, 6385' 1

MUD PROPERTIES

<u>DATE</u> <u>LBS/BBL</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>
5/6	0'	Make up water							
5/7	1583'	9.0	37	4	7	7.5	nc	25.5K	3
5/8	1901'	9.0	28	1	2	10.5	nc	44.2K	0
5/9	3252'	8.7	43	12	14	11.5	7.2	2.2K	2
5/10	4719'	9.1	52	18	20	10.0	8.0	2.6K	4
5/11	4910'	9.0	44	13	14	10.5	7.6	2.4K	3
5/12	6000'	9.15	52	18	18	9.5	8.0	2.9K	4
5/13	6385'	9.15	52	16	17	11.0	5.6	2.5K	6

ELECTRIC LOG FORMATION TOPS- KB Elev. 2620'

<u>FORMATION</u>	<u>DEPTH</u>	<u>DATUM</u>	<u>*Clayton No. 6</u>	
			<u>DATUM</u>	<u>POSITION</u>
Surface casing	1576'			
Heebner	4428'	-1808'	-1815'	+7'
Toronto	4458'	-1838'	-1841'	+10'
Lansing	4582'	-1962'	-1968'	+6'
Marmaton	4260'	-2640'	-2648'	+8'
Cherokee	5448'	-2828'	-2839'	+11'
Atoka	5640'	-3020'	-3033'	+13'
Morrow	5773'	-3153'	-3166'	+13'
"B" SS	5815'	-3195'		
"C" SS	5832'	-3212'		
Mississippi Chester	5900'	-3280'	-3280'	0'
Basal Chester	6112'	-3492'	-3503'	+11'
Richers Ranch SS	6011'	-3391'	-3391'	0'
Ste. Genevieve	6168'	-3548'	-3567'	+19'
St. Louis	6298'	-3678'	-3668'	+5'
TD	6385'			

*O'Brien Energy, Clayton No. 6, 1450'FSL & 1450'FWL, Section 28, 33S, 29W, K.B.
Elevation 2607', app. 1000' to the SE.