

# **O'Brien Energy Resources, Inc.**

**Vail No. 6-30**

**Section 30, T33S, R29W**

Meade County, Kansas

December, 2013

## **Well Summary**

The O'Brien Energy Resources, Corporation, Vale No. 6-30 was drilled to a total depth of 6360' in the Mississippian St. Louis Formation without any problems. It offset the Vail Offset No. 3-30 by approximately 1000' to the South. The Cherokee and Atoka ran 2' and 4' low relative to this offset. The Morrow came in 8' high and the Morrow "B" Sandstone 3' high. The Mississippian Chester and Ste. Genevieve came in 2' low and the St. Louis 10' low. The Vail No. 6-30 ran 5' to 14' low relative to the Vale offset No. 4-30 from the Heebner to the Atoka. The Morrow came in 5' high and the Morrow "B" Sandstone, 9' high.

Excellent reservoir conditions were noted in the Morrow "B" Sandstone in samples and on logs(5846'5858') – Sandstone in up to 40% of the samples: Light brown with matrix oil staining, Salt and pepper, speckled green, hard to very friable in part, very fine upper to fine lower, well sorted subround grains, siliceous cement, slightly calcareous, glauconitic, pyritic, tight to excellent intergranular porosity, vuggy porosity, bright light yellow hydrocarbon fluorescence(all Sandstone), good streaming cut, light live oil and oil odor when crushed, good even light oil stain, some light gray to green clay infill and inclusions, excellent show. A 360 Unit gas increase occurred on the hotwire.

An additional characteristic hydrocarbon show occurred in the Lower Chester(attached mudlog) and with an additional 320 Unit gas increase.

4 ½ production casing was run on the Vale No. 6-30 for Morrow "B" Sandstone oil production. Appreciation to Duke Rig 6 hands.

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: Vail No. 6-30, Singley Field

Location: 1976' FSL & 681' FEL, Section 30, T33S, R29W, Meade County, Kansas  
– Southeast of Plains.

Elevation: Ground Level 2647', Kelly Bushing 2659'

Contractor: Duke Drilling Rig No. 6, Type: Double jacknife, triple stand, Toolpusher  
Terry Sorter, Drillers: Saul Garcia, Richard TaFaya, Darryl LaRoche

Company Man: Roger Pearson – Liberal, Kansas

Spud Date: 12/13/13

Total Depth: 12/22/13, Driller 5360', Logger 5356', Mississippi St. Louis

Casing Program: 35 joints of 8 5/8", J55, 24Lbs/ft, set at 1474'. 4 1/2" production casing to  
TD.

Mud Program: Mud Co./Service Mud Inc., Engineer Justin Whiting, Terry Ison, displaced  
2600' with Chemical Gel/LCM.

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

Samples: 20' to 4700', 10' to TD. Zones of interest saved.

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

Status: 4 1/2" production casing set to TD on 12/13/13.

## WELL CHRONOLOGY

<u>6 AM</u> <u>DATE</u>	<u>DEPTH</u>	<u>FOOTAGE</u>	<u>RIG ACTIVITY</u>
12/11			Move to rig up rotary tools. Set in sub and derrick.
12/12			Rig up and service. Change out clutch on 1 and 2. Service floor motor.
12/13	280'	280'	Mix spud mud. Finish rig up and install cathead boom. Drill rat and mouse holes. Drill 12 1/4" surface hole to 280'.
12/14	1486'	1206'	Trip for plugged bit at 280' and 979'. To 1486' and clean suction and mix mud and LCM and trip out for surface casing.
12/15	1690'	204'	Run and cement 35 joints of 8 5/8" casing set at 1474' and wait on cement. Rig up 1" line and tap off cement with 177 sacks cement(250') and wait on cement. Nipple up BOP and test blind rams. Trip in and test pipe rams. Drill plug and cement and 7 7/8" to 1690'.
12/16	2950'	1260'	To 1698' and trip for Bit No. 3. Displace hole at 2541. To 2950'.
12/17	4060'	1110'	Service rig and survey(3/4 deg.).
12/18	4465'	405'	Survey(3/4 deg.).
12/19	5560'	1095'	To 5024' and run 28 stand wiper trip. To 5560'.
12/20	6110'	550'	Survey(1 deg.) and drill.
12/21	6360'TD	250'	To 6360'TD and circulate and condition mud. Cold, windy and snowing.
12/22	TD		Circulate. Run 42 stand wiper trip and circulate and condition mud. Cold and 5" of snow. Circulate on bottom and wait on Weatherford for logs. Run logs. Trip in and circulate.

12/23 TD  
casing to TD and rig down.

Trip out laying down. Runand cement 4 1/2" production

**BIT RECORD**

<u>NO.</u>	<u>MAKE</u> <u>HOURS</u>	<u>TYPE</u>	<u>SIZE</u>	<u>OUT</u>	<u>FOOTAGE</u>	
1	J2	GA1PGC	12 1/4"	1486'	1486'	21 1/4
2	J2	GX-20	7 7/8"	1698'	212'	5
3	Logic	PLT516	7 7/8"	6360'	4662	131 1/4
Total Rotating Hours:						157 1/2
Average:						40.4
Ft/hr						

**DEVIATION RECORD - degree**

252' 1/4, 730' 1/4, 979' 1/4, 1486' 1, 2541' 1, 3012' 1, 4013' 3/4, 5619' 1,

**MUD PROPERTIES**

<u>DATE</u>	<u>DEPTH</u> <u>LCM-LBS/BBL</u>	<u>WT</u>	<u>VIS</u>	<u>PV</u>	<u>YP</u>	<u>pH</u>	<u>WL</u>	<u>CL</u>
12/14	979'	10.0	32			7.0	--	110 2
12/16	2376'	9.5	29			7.0	--	90k 0
12/17	3536'	9.15	47	14	15	8.5	16.8	12k 2
12/18	4564'	9.3	40	14	15	8.5	12.4	8.8k 2.5
12/19	5326'	9.3	66	22	24	11.0	7.2	2.4K 2
12/20	5797'	9.3	46	14	15	10.5	8.0	3.8K 1
12/21	6291'	9.2	47	14	14	10.0	7.2	1.4K 3 1/2

**ELECTRIC LOG FORMATION TOPS- KB Elev. 2679'**

<u>FORMATION</u>	<u>DEPTH</u>	<u>DATUM</u>	<u>*Singley West No. 3-30</u> <u>DATUM</u>	<u>POSITION</u>
Surface Casing	1485'			
Heebner	4482'	-1823'	-1811'	-12'
Toronto	4510'	-1851'	-1841'	-10'
Lansing	4648'	-1989'	-1969'	-20'
Marmaton	5274'	-2615'	-1615'	0'
Cherokee	5432'	-2773'	-2771'	-2'

Atoka	5722'	-3063'	-3059'	-4'
Morrow	5776'	-3105'	-3113'	+8'
"B" SS	5846'	-3187'	-3190'	+3'
Mississippi Chester	5912'	-3263'	-3261'	-2'
Ste. Genevieve	6169'	-3501'	-3499'	-2'
St. Louis	6262'	-3603'	-3593'	-10'
TD	6360'			

\*Singley West No. 3-30, 2308'FNL & 335'FEL, Sec. 30 – approximately 1000' to the South. .