Confidentiality Requested: Yes No

# KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION

1217144

Form ACO-1 August 2013 Form must be Typed Form must be Signed All blanks must be Filled

## WELL COMPLETION FORM

WELL HISTOR	RY - DES	CRIPTION	OF WEI	LL & LEASE

OPERATOR: License #			API No. 15	
Name:			Spot Description:	
Address 1:				East West
Address 2:			Feet from Dorth / S	outh Line of Section
City: Sta	ate: Zip	:+	Feet from Deast / DW	Vest Line of Section
Contact Person:			Footages Calculated from Nearest Outside Section Co	rner:
Phone: ()				
CONTRACTOR: License #			GPS Location: Lat:, Long:	
Name:			(e.g. xx.xxxx)	(e.gxxx.xxxxx)
Wellsite Geologist:			Datum: NAD27 NAD83 WGS84	
Purchaser:			County:	
Designate Type of Completion:			Lease Name: Wel	#:
New Well Re-	Entry [	Workover	Field Name:	
		SIOW	Producing Formation:	
			Elevation: Ground: Kelly Bushing:	
		Temp. Abd.	Total Vertical Depth: Plug Back Total Depth:	pth:
CM (Coal Bed Methane)			Amount of Surface Pipe Set and Cemented at:	Feet
Cathodic Other (Core,	Expl., etc.):		Multiple Stage Cementing Collar Used? Yes	No
If Workover/Re-entry: Old Well Info			If yes, show depth set:	Feet
Operator:			If Alternate II completion, cement circulated from:	
Well Name:			feet depth to:w/	sx cmt.
Original Comp. Date:	Original Tot	tal Depth:		
Deepening Re-perf.	Conv. to EN	HR Conv. to SWD	Drilling Fluid Management Plan	
Plug Back	Conv. to GS	W Conv. to Producer	(Data must be collected from the Reserve Pit)	
	De mesit #1		Chloride content: ppm Fluid volume: _	bbls
Commingled  Dual Completion			Dewatering method used:	
			Location of fluid disposal if hauled offsite:	
GSW	Permit #:		Operator Name:	
			Lease Name: License #:	
Spud Date or Date Read	ched TD	Completion Date or	QuarterSecTwpS. R	East West
Recompletion Date		Recompletion Date	County: Permit #:	

#### AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

### Submitted Electronically

KCC Office Use ONLY						
Confidentiality Requested						
Date:						
Confidential Release Date:						
Wireline Log Received						
Geologist Report Received						
UIC Distribution						
ALT I II Approved by: Date:						

	Page Two	1217144
Operator Name:	Lease Name:	Well #:
Sec TwpS. R □ East □ West	County:	
INSTRUCTIONS: Show important tops of formations populated	Detail all cores Beport all final	conjes of drill stems tests giving interval tested, time tool

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken (Attach Additional She	eets)	Yes No	L	og Formatio	on (Top), Depth ar	nd Datum	Sample
Samples Sent to Geolog	jical Survey	Yes No	Nam	e		Тор	Datum
Cores Taken Electric Log Run		☐ Yes ☐ No ☐ Yes ☐ No					
List All E. Logs Run:							
		CASING Report all strings set-o	RECORD Ne		ion, etc.		
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
		ADDITIONAL	. CEMENTING / SQL	IEEZE RECORD			
Purpose: Perforate	Depth Top Bottom	Type of Cement	# Sacks Used		Type and F	Percent Additives	
Protect Casing							

Perforate     Protect Casing     Plug Back TD     Plug Off Zone	Top Bottom				
Did you perform a hydraulic	c fracturing treatment	on this well?	Yes	No	(If No, skip questions 2 and 3)

No

Did you perform a hydraulic fracturing treatment on this well?	Yes
Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?	Yes
Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?	Yes

No	(If No, skip questions 2 and 3)
No	(If No, skip question 3)

(If No, fill out Page Three of the ACO-1)

Shots Per Foot		PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated				А		ement Squeeze Record I of Material Used)	Depth	
TUBING RECORD:	Siz	ze:	Set At:		Packe	r At:	Liner Ru	un:	No	
Date of First, Resumed	Product	ion, SWD or ENHF	<b>}</b> .	Producing N		ping	Gas Lift	Other (Explain)		
Estimated Production Per 24 Hours		Oil Bb	ls.	Gas	Mcf	Wate	er	Bbls.	Gas-Oil Ratio	Gravity
									1	
DISPOSITIO	ON OF G	GAS:	_					_	PRODUCTION INT	ERVAL:
Vented Sold	l [] l	Used on Lease		Open Hole	Perf.	Uually (Submit )	Comp.	Commingled (Submit ACO-4)		
(If vented, Sul	bmit ACC	D-18.)		Other (Specify)	)	(Oublinit /	,	(000/11/ 100-4)		

Form	ACO1 - Well Completion
Operator	O'Brien Energy Resources Corp.
Well Name	Larrabee 4-4
Doc ID	1217144

# Tops

Name	Тор	Datum
Heebner	4430'	-1889'
Toronto	4455'	-1914'
Lansing	4592'	-2051'
Marmaton	5216'	-2675'
Cherokee	5422'	-2881'
Atoka	5613'	-3072'
Morrow	5742'	-3201'
Mississippi Chester	5855'	-3314'
Ste. Genevieve	6178'	-3637'
St. Louis	6266'	-3725'

Form	ACO1 - Well Completion
Operator	O'Brien Energy Resources Corp.
Well Name	Larrabee 4-4
Doc ID	1217144

# Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
2	6104-6124 CIBP @ 6080'	acidize w/ 12000 gal 15% HCl & 500 bbl 3% kcl wtr	perfs
2	5978-5982 RBP @ 5875'	acidize w/ 600 gals RE AXE & 3% Hcl & 500 gal 7% kcl	perfs
2	5798-5810	squeezed 5770-5810 w/ 50 sks cmt	perfs
2	5787-5790	squeezed 5770-5810 w/ 50 sks cmt	perfs
2	5770-5776	acidize w/ 2000 gals NEFE 71/2% HCI	perfs
		squeezed 5770-5810 w/ 50 sks cmt	

Form	ACO1 - Well Completion
Operator	O'Brien Energy Resources Corp.
Well Name	Larrabee 4-4
Doc ID	1217144

# Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement		Type and Percent Additives
SURFACE	12.25	8.625	24	1494	aconn		2%CaCl &1/4# floseal
PRODUC TION	7.875	4.5	10.5	6413	AA2	188	

Customer	Brien	SERVICE: I, Kansas		Lease No.				Cement F		
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Casing Q	10- 10-	Death	187							
Job Type	97 Sor		Formation	1 101	2000	Legal Description	4-34-	29	······································	
	1 - 507	Pipe [	Data		1	Perforating		Cement	Data	
Casing size	81/8		Tubing Size		1	Shots/F				
Depth 14	94		Depth 55 42		From	Т		2.95FF1-5	DSKA Con	
Volume 9	3610		Volume		From	Te	,	BILDIA	111/1	
Max Press	1800		Max Press		From	Ta		Tail in 13	2 <u>11.9#</u> 105K Closs L Sh <sup>R</sup> 14, 8#	
Nell Conne	ction g-5/g		Annulus Vol.		From	To	)	1:3487-	SIL	
Plug Depth			Packer Depth		From	Т	)	-4.3762-50	E 14.8#	
	Casing	Tubing				·····			<u> </u>	
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Roser **Customer Representative** 

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	ra bee			9-				95835
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Job Type Z	42 has	Story	Formation			escription $\mathcal{U}$ -		
		Pipe [			Perfo	orating Dat	ta	Cement Data
Casing size	41/2		Tubing Size			hots/Ft		Lead 505/2 ClassH
Depth 640	09		Depth gr. 42		From	То		Patt mise
Volume 10	1615		Volume		From	То		
Max Press	1600		Max Press		From	То		Tail in 1855/ AA2
Well Connec	tion 4/1-		Annulus Vol.		From	То		1,51F+25K
Plug Depth	1.31.9		Packer Depth	5.	From	То		6.6461.5K 14.8#
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Roger Jensbert TrzyChavoz

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Packer Depth     Packer Depth 5705     From     To       Time     Casing Pressure     Tubing Pressure     Bbls. Pumbed     Rate     Service Log.       [2:15]     Onlocation/Service     Onlocation/Service     Service Log.       [2:15]     Onlocation/Service     Service       [3:00]     510psi     418BL     Instant       [3:14]     Instant     Instant     Service       [3:20]     Instant     Get Injection Rate     Napressure       [3:20]     Instant     Get Injection Rate     Napressure       [3:20]     Instant     Get Injection Rate     Napressure       [3:20]     Instant     Service     Injection Rate       [3:20]     Instant     Service     Injection Rate       [3:20]     Instant     Instant     Injection Rate       [3:20]     Instant     Service     Service       [3:20]     Instant     Service     Service       [3:21]     Instant     Service     Service       [3:26]     Instant     Service     Service <t< td=""><td>Vell Connec</td><td>ction Scila</td><td>00</td><td></td><td></td><td>From</td><td>То</td><td></td></t<>	Vell Connec	ction Scila	00			From	То	
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4

# O'Brien Energy Resources, Inc. Larrabee No. 4-4 Section 4, T34S, R29W Meade County, Kansas May, 2014 <u>Well Summary</u>

The O'Brien Energy Resources, Corporation, Larrabee No. 4-4 was drilled to a total depth of 6415' in the Mississippian St. Louis. One of the closest offsets is the Larrabee No. 1-4 – approximately 1200' to the NW. The Heebner and Toronto came in 6' low relative to this offset. The Lansing ran 1' low. Thinning occurred as the Marmaton, Cherokee, Atoka and Morrow ran 10', 11', 13' and 19' high respectively. The Chester and Ste. Genevieve came in 22' low and 15' low.

Excellent hydrocarbon shows were documented in several Morrow Sandstones(5770'-5790') and consists of Sandstone in 30% of the samples – Speckled green, white to light brown, buff, friable, fine upper to very fine lower, well sorted subround grains, calcite cement, clean to slightly argillaceous, very glauconitic, carbonaceous inclusions, pyritic in part, good intergranular and occasional vuggy porosity, dull goldbrown to pale yellow hydrocarbon fluorescence in most the sandstone with a weak to excellent streaming cut, occasional good brown matrix oil staining and speckled black solid oil residue, traces of live oil and gas bubbles when crushed and with an interbedded Shale: Black, firm, fissile, carbonaceous, and with traces of a Sandstone as above and with no show documented. A 220 Unit gas increase was documented from the upper Sand and 160 Units from the lower.

A lower Morrow Sandstone(5798'-5812') consists of a sandstone in 40% of the samples – Medium to light brown, salt and pepper, speckled green with glauconite, firm to friable. very fine well sorted subround to round grains, calcareous cement, good to excellent visible intergranular porosity, dull to bright gold hydrocarbon fluorescence and brown matrix oil stain with live oil and gas bubbles when crushed, black speckled gilsonite inclusions. 140 to 160 Units of gas were recorded.

An excellent show was noted in the Rickers Ranch sand equivalent - Sandstone(5977'-5982'), Medium to dark brown, gray, graygreen, hard to friable, very fine upper, well sorted subround grains, calcite cement, good intergranular porosity, medium orange to pale blue hydrocarbon fluorescence(15% spl), excellent streaming cut, dark brown oil stain and trace live black oil and gas bubbles. A 320 Unit gas kick occurred on the hotwire.

Additional shows occurred in the lower Basal Chester(6103-6150') and with associated 640 to 340 Unit gas increases: Limestone-Mottled brown to redbrown, dark speckled brown, graygreen, mottled brown with oil staining, microsucrosic to sucrosic, brittle, argillaceous to marly in part, sandy, very fine isolated vugs and oomoldic porosity and with abundant live oil, stain and excellent cut, dull goldbrown hydrocarbon fluorescence.

Additional shows were documented in the Marmaton(5320'-5344') attached mudlog and in several Chester Limestones.

4 <sup>1</sup>/<sub>2</sub>" production casing was set to TD on 5/26/14. 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:	Larrabee No. 4-4, Mohler Field
Location:	1220' FNL & 335' FEL, Section 4, T34S, R29W, Meade County, Kansas – South of Meade.
Elevation:	Ground Level 2530', Kelly Bushing 2541'
Contractor:	Duke Drilling Rig No. 6, Type: Double jacknife, triple stand, T.P. Allen Cain, Drillers Richard TaFaya, Saul Garcia, Darryl LaRoche,
Company Man:	Roger Pearson – Liberal, Kansas
Spud Date:	5/19/14
Total Depth:	5/26/14, Driller 6415', Logger 6408', St. Louis
Casing Program:	35 joints of 8 5/8", J55, 24Lbs/ft, set at 1479'. 4 $\frac{1}{2}$ " production casing to TD.
Mud Program:	Winter Mud, engineer Nate Agee, Type WBM, displaced 2614'.
Wellsite Consultant:	Peter Debenham with mudlogging trailer, Box 350, Drake, CO 80515, 720/220-4860.
Samples:	30' to 4700', 20' to 6000' and 10' to TD. Dry sample cut sent to KGS
	Sample log library, Wichita.
Electric Logs:	

#### WELL CHRONOLOGY

### DATE DEPTH FOOTAGE RIG ACTIVITY

6 AM

5/19 815' 815' Move to location and rig up. Mix spud mud and dig ditches. Blow down mouse hole and rat hole and spud in  $12 \frac{1}{4}$ " surface hole to 815'. Survey(1/4 deg.).

5/20 1494' 679' Survey(1/4 deg.) and service rig. To 1494' and circulate and trip for surface casing and run and cement 35 joints 8 5/8" set at 1479' – did circulate. Plug down 4:30 pm. Wait on cement and back off and nipple up BOP and test.

5/21 2540' 1046' Nipple up and pressure test BOP. Drill plug and cement and 7 7/8" to 1707' and circulate and trip for Bit No. 3. To 2540' and work on pump.

5/22	3720'	1180'	Displace mud system at 2614'. Service and survey(1 deg.).
5/23	4860'	1140'	Clean suction and suvey(1 deg.). Good rains.
5/24	5490'	630'	To 4997' and trip for plugged jet.
5/25	6275'	785'	Break circulation and drill.
5/26	6415'TD	140'	Service and circulate. Wiper trip 42 stands and circulate.

Drop survey(1 deg.) and trip for logs. Run Elogs and trip in and circulate.

5/27 TD Trip out laying down and run and cement 4 <sup>1</sup>/<sub>2</sub>" production casing to TD. Rig down.

#### **BIT RECORD**

<u>NO.</u>	<u>MAKE</u> HOURS	<u>TYPE</u>	<u>SIZE</u>	<u>OUT</u>	<b>FOOTAGE</b>	
1 2 3	HC HC	GAIPGC HA25TL DP506	12 ¼" 7 7/8" 7 7/8"	1494' 1707' 6414'	1494' 213' 4707'	26 ½ 3 ½ 105
				Total Rotati	ing Hours:	135

Average:

Ft/hr

### **DEVIATION RECORD – deg.**

522' ¼, 1206' ¼, 1494' 2, 1707' 1 ¼, 2614' 1, 4274' 1, 4997' 1, 5591' 1, TD 1

#### **MUD PROPERTIES**

<u>DATE</u> LBS/BBL	<u>DEPTH</u>	<u>WT</u>	<u>VIS</u>	<u>PV</u>	<u>YP</u>	<u>рН</u>	<u>WL</u>	<u>CL</u>	<u>LCM-</u>
5/19 5/20 5/21 5/22 5/23 5/24 5/25 5/26	120' 1401' 1745' 3117' 4274' 5005' 5961' 6414'	9.3 9.7 8.7 8.9 9.2 9.4 9.3 9.4	46 30 30 54 48 40 57 60	15 5 4 20 15 15 22 30	10 7 2 11 10 5 16 22	nc nc 11.2 12.0 6.0 8.4 8.0	7.0 7.0 7.0 10.0 11.0 10.0 11.0 9.0	1500 29K 29K 3.7K 3.2K 3.0K 6.0K 2.0K	12 6 0 4 6 4 6 14

#### ELECTRIC LOG FORMATION TOPS- KB Elev. 2550'

			<u>*Larrabee N</u>	0.1-4
<b>FORMATION</b>	DEPTH	DATUM	DATUM	<b>POSITION</b>
Casing	1492'			
Heebner	4430'	-1889'	-1882'	-7'
Toronto	4455'	-1914'	-1908'	-7'
Lansing	4592'	-2051'	-2050'	-1
Marmaton	5216'	-2675'	-2682'	+10'
Cherokee	5422'	-2881'	-2892'	+11'
Atoka	5613'	-3072'	-3085'	+13'
Morrow	5742'	-3201'	-3220'	+13'
Mississippi Chester	5855'	-3314'	-3219'	-22'
Ste. Genevieve	6178'	-3637'	-3622'	-15'
St. Louis	6266'	-3725'		
TD	6415			

47.5

\*O'Brien Energy, Larrabee No. 1-4, 330'FNL & 1320'FEL, Sec. 4 – Approximately 1200' the SE, K.B. Elevation 2550'.