Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1078908

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

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 32211
Name: O'Brien Energy Resources Corp.
Address 1: 18 CONGRESS ST, STE 207
Address 2:
City: PORTSMOUTH State: NH Zip: 03801 + 4091
Contact Person: Joe Forma
Phone: (603) 427-2099
CONTRACTOR: License # 5929
Name: Duke Drilling Co., Inc.
Wellsite Geologist: Peter Debenham
Purchaser: DCP & NCRA

Designate Type of Completion:

☑ New Well ☐ Re-Entry ☐ Workover

☐ Oil ☐ WSW ☐ SWD ☐ SIOW
☐ Gas ☐ D&A ☐ ENHR ☐ SIGW
☑ OG ☐ GSW ☐ Temp. Abd.
☐ CM *(Coal Bed Methane)*
☐ Cathodic ☐ Other *(Core, Expl., etc.)*:

If Workover/Re-entry: Old Well Info as follows:

Operator:
Well Name:
Original Comp. Date: Original Total Depth:

☐ Deepening ☐ Re-perf. ☐ Conv. to ENHR ☐ Conv. to SWD
☐ Plug Back ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ ENHR Permit #:
☐ GSW Permit #:

2/9/2012	2/16/2012	4/18/2012
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-119-21309-00-00
Spot Description:
SW NE NE SE Sec. 8 Twp. 33 S. R. 29 ☐ East ☑ West
2271 Feet from ☐ North / ☑ South Line of Section
526 Feet from ☑ East / ☐ West Line of Section

Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☑ SE ☐ SW

GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*

Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84

County: Meade
Lease Name: Crooked Creek Offset Well #: 4-8
Field Name:
Producing Formation: Mississippian
Elevation: Ground: 2644 Kelly Bushing: 2656
Total Vertical Depth: 6323 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 1498 Feet
Multiple Stage Cementing Collar Used? ☐ Yes ☑ No
If yes, show depth set: Feet
If Alternate II completion, cement circulated from:
feet depth to: w/ sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: 2800 ppm Fluid volume: 200 bbls
Dewatering method used: Hauled to Disposal

Location of fluid disposal if hauled offsite:

Operator Name: DILLCO FLUID SERVICE
Lease Name: LIZ SMITH License #: 6652
Quarter NE Sec. 26 Twp. 30 S. R. 34 ☐ East ☑ West
County: MEADE Permit #: 15-081-20272-0002

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: 04/19/2012
☑ **Confidential Release Date:** 04/19/2014
☑ **Wireline Log Received**
☐ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 04/20/2012

[redacted] 1078908

Operator Name: O'Brien Energy Resources Corp. Lease Name: Crooked Creek Offset Well #: 4-8

Sec. 8 Twp. 33 S. R. 29 ☐ East ☑ West County: Meade

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 ☐ Yes ☑ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

MICRO RES
DUAL INDUCTION
NEUTRON DENSITY

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name: Attached Top: Attached Datum: Attached

CASING RECORD ☑ New ☐ Used
Report all strings set-conductor, surface, intermediate, production, 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
SURFACE	12.25	8.6250	24	1498	Class A	550	3% CaCl
PRODUCTION	7.8750	4.5	10.5	6313	AA2	220	99 bbl kcl wtr

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ Plug Off Zone	-			
	-			

Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☐ No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? ☐ Yes ☐ No *(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	Acid, Fracture, Shot, Cement Squeeze Record *(Amount and Kind of Material Used)*	Depth
2	5778-5797	acidize w/2000gl NeFe 7.5% HCl	Perfs
2	5769-5772		

TUBING RECORD: Size: 2 3/8 Set At: 5739 Packer At: 5735

Liner Run: ☑ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR.

Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:
☐ Vented ☑ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)*

PRODUCTION INTERVAL:
5778-5797
5769-5772

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	O'Brien Energy Resources Corp.
Well Name	Crooked Creek Offset 4-8
Doc ID	1078908

Tops

Name	Top	Datum
Heebner	4442	-1786
Toronto	4466	-1810
Lansing	4586	-1930
Marmaton	5248	-2592
Cherokee	5422	-2766
Atoka	5681	-3025
Morrow	5738	-3082
Morrow SS	5754	-3098
Mississippi Chester	5878	-3222
Ste. Genevieve	6110	-3454
St. Louis	6190	-3534

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802

Kansas
Corporation Commission

Phone: 316-337-6200
Fax: 316-337-6211
http://kcc.ks.gov/

April 19, 2012

Joe Forma
O'Brien Energy Resources Corp.
18 CONGRESS ST, STE 207
PORTSMOUTH, NH 03801-4091

Re: ACO1
API 15-119-21309-00-00
Crooked Creek Offset 4-8
SE/4 Sec.08-33S-29W
Meade County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,

Joe Forma
Vice President

BASIC ENERGY SERVICES
Liberal, Kansas

Cement Report

Customer O'Brien Energy	Lease No.	Date 2-10-12	
Lease Cranked	Well # 4-8	Service Receipt	
Casing 8 5/8" 24# / Depth 1501'	County Meade	State KS	
Job Type 742 - Surface	Formation Lower Morrow	Legal Description 8-33-29	

Pipe Data		Perforating Data		Cement Data
Casing size 8 5/8" 24#	Tubing Size	Shots/Ft		Lead 400 sk A-Con
Depth 1501'	Depth	From	To	
Volume D-0-93 bbl	Volume	From	To	
Max Press 3500#	Max Press	From	To	Tail in 150 sk Premium Plus
Well Connection D-1501'	Annulus Vol.	From	To	
Plug Depth SJ 41' (1460')	Packer Depth	From	To	

Time	Casing Pressure	Tubing Pressure	Bbls. Pumbed	Rate	Service Log
4:30					on loc. - site assessment (start csg)
4:35					spot trucks - rig up
7:30					csg on btm break circ
7:30					safety meeting / TSA
1:48					pressure test 0 3000#
7:50	300		210	5	mix + pump 400 sk A-Con w/ 3% calcium chloride, 1/4# polyflake, 2% WCA-1 @ 11.4 ppg - 2.95 cuft/sk - 18.10 gal/sk
8:30	200		36	5	switch to 150 sk Premium Plus w/ 2% calcium chloride, 1/4# polyflake @ 14.8 ppg - 1.34 cuft/sk - 6.33 gal/sk
8:45	0		0	5	drop plug - disp csg
8:50	600		73	2	slow rate to 2 bpm
8:55	1000		83	1	slow rate - 1 bpm
9:00	1100		93	0	land plug, float held
					circ cmt to surface
					job complete

Service Units	31772	25311-19916	30463-37722	19858-19883		
Driver Names	A Rivera	B Mathis	S Clinton	K Baker		

R Pearson
Customer Representative

J Bennett
Station Manager

A Rivera
Cementer

Taylor Printing, Inc.

BASIC ENERGY SERVICES
Liberal, Kansas

Cement Report

Customer		Lease No.		Date
Lease		Well #		Service Receipt
Casing	Depth	County		State
Job Type	Formation	Legal Description		

Pipe Data		Perforating Data		Cement Data
Casing size	Tubing Size	Shots/Ft		Lead
Depth	Depth	From	To	
Volume	Volume	From	To	
Max Press	Max Press	From	To	Tail in
Well Connection	Annulus Vol.	From	To	
Plug Depth	Packer Depth	From	To	

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log

Service Units						
Driver Names						

Customer Representative

Station Manager

Cementer

Taylor Printing, Inc.

O'Brien Energy Resources, Inc.
Crooked Creek Offset No. 4-8, Angell South Field
Section 8, T33S, R29W

Meade County, Kansas
February, 2012

Well Summary

The O'Brien Energy Resources, Crooked Creek Offset No. 4-8 was drilled to a total depth of 6323' in the Mississippian St. Louis Formation. It offset the Crooked Creek No. 2-8 by 1940' to the North. Formation tops ran slightly high relative to this offset. The Marmaton, Cherokee and Atoka ran even and 2' and 3' high respectively. The Morrow came in 5' high and the Morrow "B" Sandstone, 6' high. The Chester, Ste. Genevieve and St. Louis ran 4', 5' and 8' high respectively.

The "B" Sandstone(5766'-5798') consists of a Sandstone in 20% of the samples: Speckled green, light gray, occasionally clear to translucent, hard to friable, very fine well sorted subround grains, siliceous cement, calcareous, very glauconitic in part, pale blue to yellow hydrocarbon fluorescence, slow streaming cut, trace light brown oil stain. A 240 Unit gas kick was noted.

An oil show occurred in the Lower "B" Sandstone(5778'-5798) with an associated 130 to 240 Unit gas kick: Light brown, friable, very fine upper to fine lower well sorted grains, siliceous cement, calcareous, clean, slightly glauconitic, good intergranular and fine vuggy porosity, bright light yellow hydrocarbon fluorescence in 30% of the sample, light brown matrix oil stain and trace light live oil(few pieces), fair streaming cut, gas bubbles and good oil odor when crushed.

A "D" Sandstone (5824'-5833') contained a 90 to 60 Unit gas increase and consists of a Sandstone in less than 5% of the samples: Light to medium mottled gray to brown, light brown to buff, friable, very fine well sorted grains, siliceous and calcareous, slightly glauconitic, carbonaceous inclusions, fair intergranular and vuggy porosity, mottled pale blue hydrocarbon fluorescence, slow streaming cut, no visible stain.

4 ½" production casing was run on the Crooked Creek Offset No. 4-8 for the above mentioned show intervals.

Respectfully Submitted,

Peter Debenham

WELL DATA

Operator:	O'Brien Energy Resources, Inc., John Forma – Portsmouth, NH Geologist: Paul Wiemann – Denver, CO
Prospect Geologist:	David Ward, Ed Schuett, Denver
Well:	Crooked Creek No. 4-8, Angell South Field
Location:	2271' FSL & 526' FEL, Section 8, T33S, R29W, Meade County, Kansas – Southeast of Plains.
Elevation:	Ground Level 2644', Kelly Bushing 2656'
Contractor:	Duke Drilling Rig No. 6, Type: Double jacknife, triple stand, Toolpusher Rick Schollenbarger, Drillers: Terry Sorter, Danny White, Saul Garcia
Company Man:	Roger Pearson – Liberal, Kansas
Spud Date:	2/9/12
Total Depth:	2/16/12, Driller 6323', Logger 6323', St. Louis Formation
Casing Program:	40 joints of 8 5/8", J-2, 24Lbs/ft, set at 1501'.
Mud Program:	Winter Mud, engineer K.L. Rice, displaced 2800', Chem. gel/LCM.
Wellsite Consultant:	Peter Debenham with mudlogging trailer, Call depth 3000', Box 350, Drake, CO 80515, 720/220-4860.
Samples:	30' to 5800', 20' to TD and 10' through zones of interest.
Electric Logs:	Weatherford, engineer Andy Giambalvo , Array Induction, Compensated Neutron/Density, Microlog, Hi Res.
Status:	4 ½" production casing run 2/17/2012.

WELL CHRONOLOGY

DATE	6 AM DEPTH	FOOTAGE	RIG ACTIVITY
2/8			Move to and rig up rotary tools and tarps.
2/9	1100’	1100’	Mix spud mud and blow down mouse hole and rat hole. Wait on mud truck. Spud in 12 ¼” to 1100’. Survey(1/4 deg.).
2/10	1501’	401’	To 1233’ and lost circulation(300 bbls). Mix mud and 30 Lbs/bbl LCM mud pill and pump same. Trip out and fill hole. Ream to bottom and pump LCM pill and drill with returns to 1501’ with 24 Lbs/bbl LCM mud. Circulate and trip out and rig up casing crew and run and cement 40 joints of 8 5/8” set at 1501’ – did circulate. Wait on cement.
2/11	1945’	444’	Wait on cement. Back off casing and nipple up and pressure test BOP. Trip in and drill plug and cement and new 7 7/8” hole to 1726’ and trip for Bit No. 3.
2/12	3275’	1330’	Surveys(3/4 deg.) and rig service. Clean suction and displace mud system at 2800’.
2/13	4610’	1335’	
2/14	5555’	945’	To 5010’ and circulate and run wiper trip and circulate. To 5555’.
2/15	6290’	735’	Repair drum chain and drill.
2/16	6323’TD	33’	To TD and circulate and condition mud. Short trip 42 stands and circulate and condition mud. Drop survey(1 deg.) and trip for logs and run e-logs. Trip to bottom and circulate.
2/17	TD		Trip out laying down. Run and cement 4 ½” production casing to TD. Rig down.

LOST CIRCULATION

1233’ 300+ bbls

BIT RECORD

NO.	MAKE	TYPE	SIZE	OUT	FOOTAGE	HOURS
1	STC	MXCL	12 ¼”	1501’	1501’	25 1/4
2	HTC	F27I RR	7 7/8”	1726’	225’	4 1/2
3	HTC	Q506F	7 7/8”	6323’	4597’	98 ¼
				Total Rotating Hours:		128
				Average:		49.4 Ft/hr

DEVIATION RECORD - degree

508' ¼, 2008' ¾, 2572' ¾, 6323' 1

MUD PROPERTIES

DATE	DEPTH	WT	VIS	PV	YP	pH	WL	CL	LCM-LBS/BBL
2/8/12		8.3							
2/9	750'	9.8	35						2
2/10	1470'	9.1	32						15
2/11	1501'	Water							
2/12	2700'	8.6	62	15	20	9.0	30.0	10K	4
2/13	4020'	9.0	41	11	10	10.0	24.0	8K	6
2/14	5165'	9.0	58	20	20	10.5	8.0	3K	8
2/15	6010'	9.0	58	20	20	10.5	8.0	3K	8

ELECTRIC LOG FORMATION TOPS- KB Elev. 2656'

			*Crooked Creek No. 2-8	
FORMATION	DEPTH	DATUM	DATUM	POSITION
Casing	1501'			
Heebner	4442'	-1786'	-1785'	+1'
Toronto	4466'	-1810'	-1810'	0'
Lansing	4586'	-1930'	-1935'	0'
Marmaton	5248'	-2592'	-2592'	0'
Cherokee	5422'	-2766'	-2768'	+2'
Atoka	5681'	-3025'	-3028'	+3'
Morrow	5738'	-3082'	-3087'	+5'
"A" SS	5754'	-3098'		
"B" SS	5766'	-3110'	-3116'	+6'
"C" SS	5805'	-3149'		
"D" SS	5824'	-3168'		
Mississippi Chester	5878'	-3222'	-3226'	+4'
Ste. Genevieve	6110'	-3454'	-3459'	+5'
St. Louis	6190'	-3534'	-3542'	+8'
TD	6323'			

*O'Brien Energy Resources, Crooked Creek No. 2-8, 330'FSL & 660'FEL, Sec. 8 – app. 1941' to the South, K.B. Elev. 2680'.