

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1258471  
OIL & GAS CONSERVATION DIVISION

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 # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

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 #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

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

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ 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: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite: \_\_\_\_\_

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

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  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

1258471



Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**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 <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> 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

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> 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 <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ 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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	O'Brien Energy Resources Corp.
Well Name	Larrabee 5-4
Doc ID	1258471

Tops

Name	Top	Datum
Heebner	4402'	-1865'
Toronto	4425'	-1888'
Lansing	4561'	-2024
Marmaton	5184'	-2647
Cherokee	5394'	-2857
Atoka	5584'	-3047
Morrow	5704'	-3167
Mississippi Chester	5816'	-3279
Ste. Genevieve	6122'	-3585
St. Louis	6214'	-3677



### Cement Report

Customer	Onton Energy		Lease No.	Date 4/1/15	
Lease	Larabee		Well #	5-4	
Casing	8 5/8 24#	Depth	1487.76	County	Meade
State	KS		Service Receipt	4717-05299A	
Job Type	Surfaced		Formation	Legal Description 4/34/29	

Pipe Data		Perforating Data		Cement Data	
Casing size	8 5/8 24#	Tubing Size	Shots/Ft		Lead
Depth	1487.76	Depth	From	To	325 sk Acow @ 11.4
Volume	91.9	Volume	From	To	2.95 18.10
Max Press	2500	Max Press	From	To	Tail in 150 sk Rem @ 14.8
Well Connection	PC	Annulus Vol.	From	To	
Plug Depth	1445.76	Packer Depth	From	To	1.34 6.33

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
12:00					On loc
13:00					Spot in + <del>...</del> / Safety Mtg
13:10					Rig up
13:45					Safety Mtg w/ Rig crew
13:55					Print up
14:00					Pressure test 2500
14:02	200			6	Start counting lead
14:25	220			6	Switch to tail
14:37					Shoulder drop plug
14:39					Start disp. Washypow plug
	100		8	3	
	120		16	6	
	130		24	6	
	150		37	6	
	180		48	6	
	190		48	6	
	200		56	6	
14:55	300		64	5.8	Cement Returns
	350		72	5.8	
	380		80	2.0	Slow Rate
	400		88	2.0	
	440		91.9	0	
	1000				Loaded pressured up & release & back - Job Complete

Service Units	81573	38117/19919	30463/19564	27808/3488
Driver Names	Tommy M	Daniel B	Edgar Medina	Roselio Mesa

*Roger Pearson*  
Customer Representative

*Tyce Davis*  
Station Manager

*Tommy Marshall*  
Cementer



# Cement Report

Customer	O'Brien Energy	Lease No.		Date	4-9-15
Lease	Larabee 5-4	Well #	5-4	Service Receipt	1717-05551A
Casing	4 1/2 10.5#	Depth	6381	County	Meade
Job Type	Production	Formation		State	KS
			Legal Description	4/34/29	

Pipe Data		Perforating Data		Cement Data	
Casing size	4 1/2 10.5#	Tubing Size		Lead 150SK AAZ @ 14.8	
Depth	6381	Depth		1.51 6.64	
Volume	100.79	Volume		Tail in 170SK AAZ @ 14.8	
Max Press	2500	Max Press		1.51 6.64	
Well Connection	PC	Annulus Vol.			
Plug Depth	6339	Packer Depth			

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
03:00					Callout
05:30					On location / Rig crew running casing
05:40					Safety mtg w/ Bes Emp.
05:45					Spot in to rig up
08:170					Safety mtg w/ Rig crew
08:30					Rig up head
08:40					Mix mud flush
08:45					Pressure test 200
08:49			12 BBL		Start pumping mud flush
08:55	200		40.33	5	Start cementing lead
09:10					Shutdown / Drop plug / Washup
09:15					Start disp.
	200		13 / 13	5.9	Water
	200		6 / 19	5.9	
	200		10 / 29	5.4	
	200		10 / 39	5.9	
	200		10 / 49	6.1	
	200		10 / 59	6.5	
	200		10 / 69	6.5	
	200		10 / 79	6.5	
	380		10 / 89	6.5	Caught pressure
	420		10 / 99	2.1	Slowed Rate
9:44	600		64 / 105	0	

Service Units: \_\_\_\_\_  
 Driver Names: \_\_\_\_\_  
Roger Pearson Customer Representative     
 Tyce Davis Station Manager     
 Tommy Marcelus Cementer  
 Taylor Printing, Inc.

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

**Larrabee No. 5-4**

**Section 4, T34S, R29W**

Meade County, Kansas

April 2015

## **Well Summary**

The Larrabee No. 5-4 was drilled to a total depth of 6394' in the St. Louis Formation. It ran considerably higher relative to offsets in the area. Formation tops from the Heebner to the Cherokee came in 24' to 28' high relative to the Larrabee No. 4-4, approximately 1800' to the NE. The Atoka, Morrow and Chester ran 38', 34' and 35' high respectively. The Ste. Genevieve and St. Louis came in 52' and 48' high.

The Morrow came in 53' high relative to the Larrabee No. 1-4, to the North. The Mississippian Chester ran 40' high.

Sever lost circulation occurred in the Lansing at 4865' (1150 bbls) and necessitated mudding up with a 30+ LCM/bbl mud system prior to regaining circulation. Hydrocarbon shows were documented after regaining circulation and may have come from the lost circulation zone but likely from below it. Limestone: Light brown, microcrystalline, microsucrosic, subchalky, brittle, clean, fossiliferous, trace intercrystalline, moldic and vuggy porosity, light yellow hydrocarbon fluorescence in 1% of the samples, good streaming cut. Traces of coarse calcite crystal development in vugs and planning surfaces with very bright yellow hydrocarbon fluorescence and with excellent cut. Trace even light brown oil stain. No gas reading were recorded due to the abundance of LCM material in the mud system.

A very poor tight show occurred in the Marathon (5194'-5202') with a 70 Unit gas increase and with just a trace (<1% spl) of weak hydrocarbon fluorescence, no stain.

Minor shows occurred in the Morrow with 60 to 100 Units of gas increases (5732'-5756') and consists of a Sandstone in 5% of the samples: Medium gray to brown, translucent, very fine well sorted grains, siliceous cement, slightly calcareous, glauconitic in part, clean to argillaceous, trace visible intergranular and fine vuggy porosity, no fluorescence, no stain, very slow weak bleeding to residual ring cut.

Addition sandstones were noted from 5763' to 5790' and lacked shows or gas.

A 100 Unit gas increase was documented from 6006' to 6009'. No hydrocarbon show was noted in samples.

Poor shows occurred in the Basal Chester from 6057' to 6094'. 280 to 100 Units of gas increase were recorded.

4 ½" production casing was run on the Larrabee No. 5-4 on 4/8/15.

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 & Dave Ward

Well: Larrabee No. 5-4, Mohler Field

Location: 2100' FNL & 1550' FEL, Section 4, T34S, R29W, Meade County, Kansas – South of Meade.

Elevation: Ground Level 2525', Kelly Bushing 2537'

Contractor: Duke Drilling Rig No. 9, T.P. Emidgio Rojas, Drillers Victor Martinez, Alejandro V., Fernando Juroeb, Type: Double jackknife, double stand

Company Man: Roger Pearson – Liberal, Kansas

Spud Date: 3/31/15

Total Depth: 4/7/15, Driller 6394', Logger 6392', St. Louis Fm.

Casing Program: 35 joints of 8 5/8" J-55, 24 Lbs/ft set at 1482' with 325 sacks A Con(3% & ¼ lb/bbl floseal) and 150 sacks Class C(2% & ¼ Lb). 4 ½" production casing run to TD 4/8/15.

Mud Program: Service Mud/Mud-Co, Engineer Brad Bortz, Chemical/gel, displaced 3590'

Wellsite Consultant: Peter Debenham with mudlogging trailer, Call depth 4000', Box 350, Drake, CO 80515, 720/220-4860.

Samples: 20' to TD.

Electric Logs: Weatherford, engineer Jeff Randle and Miles Wilkins, Array Induction, Compensated Neutron/Density, Microlog, Hi Res.

Status: 4 ½" production casing run 4/8/15.



## WELL CHRONOLOGY

<b>6 AM</b>			
<u>DATE</u>	<u>DEPTH</u>	<u>FOOTAGE</u>	<u>RIG ACTIVITY</u>
3/30			Move rig.
3/31	300'	300'	Move to location and rig up rotary tools. Pump water, mix spud mud. Spud in 12 1/4" to 300'.
4/1	1493'	1193'	Survey(1/2 deg.). To 1493' and circulate and condition hole. Trip out and run and cement 35 joints of 8 5/8" J-55, 24 Lbs/ft set at 1482' with 325 sacks A Con(3% & 1/4 lb floseal) and 150 sacks Class C(2% & 1/4 Lb). Plug down 3 pm. Wait on cement and nipple up BOP. Trip in.
4/2	200'	1407'	Trip in and pressure test BOP to 300 PSI/15 min. Drill plug and cement and 7 7/8" hole to 2900'. Survey(1 1/4 deg.). Displace mud system at 2590'.
4/3	4570'	1670'	Survey(1 1/4 deg.) and drill.
4/4	4865'	295'	Survey(1 deg.). Lost circulation at 4865'(250 bbls) and 700 bbls. Mix mud and LCM and pump down the backside. Trip out and mix mud and LCM. Mix 30 Lbs/bbl LCM mud and pump same. Lost 150 bbls and regained circulation. Trip in breaking circulation and circulate on bottom. Total loss of mud – estimated 1150 bbls.
4/5	5655'	790'	Trip in with full returns and drill to 4655' with 24 to 30 Lbs/bbl LCM mudsystem. Survey(1 1/2 deg.).
4/6	6390'	735'	
4/7	6394'TD	4'	To 6394'TD and circulate. Short trip 61 stands and circulate. Drawworks clutch went out. Wait on mechanic and repair clutch. Trip to bottom and circulate and trip out for Logs. Run Elogs.
4/8	TD		Run Elogs and wait on orders. Trip in and circulate. Trip out laying down and run and cement 4 1/2" production casing to TD.

## BIT RECORD

<u>NO.</u>	<u>MAKE</u>	<u>TYPE</u>	<u>SIZE</u>	<u>OUT</u>	<u>FOOTAGE</u>	<u>HOURS</u>
1		PLS 19	12 1/4"	1493'	1493'	10 1/4
2		PL7 616	7 7/8"	6394'	4901'	75
Total Rotating Hours:						85 1/4
Average:						75 Ft/hr

**DEVIATION RECORD - degree**

2590' 1 ¼, 5560' 1 ½

**MUD PROPERTIES**

<b><u>DATE</u></b>	<b><u>DEPTH</u></b>	<b><u>WT</u></b>	<b><u>VIS</u></b>	<b><u>PV</u></b>	<b><u>YP</u></b>	<b><u>pH</u></b>	<b><u>WL</u></b>	<b><u>CL</u></b>	<b><u>LCM-LBS/BBL</u></b>
4/1	1327'	9.9	36	4	5	8.5	n/c	20K	6
4/2	1701'	9.0	27	1	2	7.0	n/c	43K	0
4/3	3886'	9.4	50	15	16	10.0	10.4	5.5K	2
4/4	4882'	8.4	42	10	12	9.5	9.6	3K	26
4/5	5140'	8.4	56	15	18	9.5	8.8	3K	27
4/6	6142'	8.7	58	14	14	9.5	9.6	4K	19
4/7	6394'TD	8.9	56	22	18	9.0	7.6	2.4K	14

**ELECTRIC LOG FORMATION TOPS- KB Elev. 2537'**

<b><u>FORMATION</u></b>	<b><u>DEPTH</u></b>	<b><u>DATUM</u></b>	<b><u>*No. 1 Vogt "B"</u></b>	
			<b><u>DATUM</u></b>	<b><u>POSITION</u></b>
Casing	1489			
Heebner	4402'	-1865'	-1889'	+24'
Toronto	4425'	-1888'	-1914'	+29'
Lansing	4561'	-2024'	-2051'	+27'
Marmaton	5184'	-2647'	-2675'	+28'
Cherokee	5394'	-2857'	-2881'	+24'
Atoka	5584'	-3047'	-3072'	+38'
Morrow	5704'	-3167'	-3201'	+34'
Mississippi Chester	5816'	-3279'	-3314'	+35'
Ste. Genevieve	6122'	-3585'	-3637'	+52'
St. Louis	6214'	-3677'	-3725'	+48'
TD	6394'			

\*O'Brien Energy, Larrabee No. 4-4, 1220'FNL & 335'FEL, Sec. 4, KB Elev. 2541' – App. 1800' to the NE.