

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

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

Gas DH EOR

OG GSW

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 EOR Conv. to SWD
 Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

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 Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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 Geologist Report / Mud Logs <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				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	O'Brien Energy Resources Corp.
Well Name	KEYSTONE 5-4
Doc ID	1472899

Tops

Name	Top	Datum
Heebner	4417	-1771
Toronto	4445	-1799
Lansing	4564	-1918
Marmaton	5115	-2469
Cherokee	5362	-2716
Atoka	5610	-2964
Morrow	5664	-3018
Mississippi Chester	5767	-3121
Ste. Genevieve	6017	-3371
St. Louis	6103	-3457



Liberal Yard #1717 - Phone 620-624-2277 - 1700 S. Country Estates Road, Liberal KS 67901

PRESSURE PUMPING Job Log

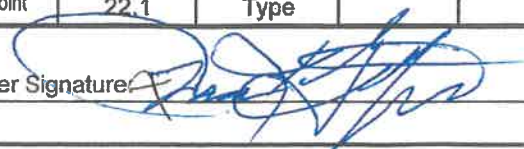
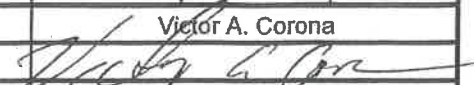
Customer:	Obrien Energy	Cement Pump No.:	37712 19572.9 HRS	Operator TRK No.:	78868
Address:	18 Congress St. Suite 207	Ticket #:	1718 19521 L	Bulk TRK No.:	30463 19578 Corey
City, State, Zip:	Portsmouth NH 03801	Job Type:	Z42 - Cement Production Casing		
Service District:	1718-Liberal KS	Well Type:	OIL		
Well Name and No.:	Keystone 5-4	Well Location:	4,33,29	County:	Meade
				State:	Ks

Type of Cmt	Sacks	Additives	Truck Loaded On		
60/40 POZ	100		30463 19578 Corey	Front	Back
AA2	185	5%W-60,10%Salt,.6%C-17,1/4#Defoamer,5#Gilonite,1/3#SK OWB	30463 19578	Front	Back
				Front	Back

Lead/Tail:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel
Lead:	12	2.08	11.89	208	TT Man Hours: 30
Tail:	14.8	1.52	6.7	281.2	# of Men on Job: 3

Time (am/pm)	(BPM)	Volume (BBLS)	Pumps		Pressure (PSI)		Description of Operation and Materials
			T	C	Tubing	Casing	
14:45pm							Arrived at location
15:00pm							Spot Trucks/Rig up
16:50pm							Safety Meeting
17:10pm						2500	Pressure test casing at 2000psi
17:11pm	3	11				100	Pump 11bbls of mud flush spacer
17:25pm	3	18.5				zero	Pump 18.5bbls for rat and mouse hole
17:37pm	3	18.5				150	Pump 18.5bbls of scavenger cement at 12lbs
17:45pm	5	50				200	Pump 50bbls of cement from 185skts at 14.8lbs
18:15pm							Shut down/drop plug/wash pump and lines to pit
18:21pm							Start displacement of 99bbls with H2O/3%KCL
18:27pm	4	20				zero	20bbls gone
18:32pm	4	40				zero	40bbls gone
18:36pm	5	60				50	60bbls gone
18:40pm	5	80				400	80bbls gone
18:42pm	5	89				500	89bbls gone/slow down rate
18:45pm	3	99				1600	Bump Plug / check if float holds
16:50pm						1600	Pressure test casing for 5 minutes at 1600psi
							Rig down
							Job Completed

Size Hole	7 7/8	Depth	6250		TYPE	Float Collar	
Size & Wt. Csg.	4 1/2 10.5#	Depth	6252	New / Used	Float Collar	6229.9	Depth
Landing Psi	1000+	Depth			Retainer		Depth
Shoe Joint	22.1	Type			Perfs		CIBP

Customer Signature: 	Basic Representative:	Victor A. Corona
	Basic Signature:	
	Date of Service:	6/21/2019

O'Brien Energy Resources, Inc.

Keystone No. 5-4

Section 4, T33S, R29W

Meade County, Kansas

June, 2019

Well Summary

The Keystone No. 5-4 was drilled to a total depth of 6250' in the St. Louis Formation. It offset the Keystone No. 3-4 by approximately 1200' to the Northeast. The Heebner, Toronto and Lansing ran 2', 3' and 4' low relative to this offset. Thinning occurred as the Cherokee, Atoka and Morrow came in 4', 6' and 11' high respectively. The Basal Chester and St. Louis came in 11' high.

A good show occurred in a Morrow sandstone section ("B" or "C" SS) and consists of a sandstone in 10% of the samples: Medium to light brown, light gray, occasionally white to buff, hard to friable, very fine upper well sorted subround grains, siliceous cement, clean to argillaceous, tight to fair intergranular porosity, very fine vuggy porosity, pale blue to bright yellow hydrocarbon fluorescence when dried, slow streaming to bleeding cut, no stain, fair show that appears fairly tight in samples. A good spike of porosity is noted on logs (5727'-5732'). A 400 Unit gas kick was documented. If this is the "B" Sandstone it is 2' high relative to the sand in the Keystone No. 3-4.

An excellent show occurred in the St Louis (6103'-6136') and consists of a Dolomite in 12% of the samples: Medium to dark brown with oil stain, salt and pepper, occasionally very dark even brown oil stain, microcrystalline, microsucrosic to sucrosic, granular in part, clean, siliceous with chert inclusions, fossiliferous with excellent moldic and vuggy porosity, excellent intercrystalline porosity, dark mottled even brown oil stain with abundant live oil, very dull orange brown hydrocarbon fluorescence, excellent fast streaming cut, oil odor, excellent show in 12% of the samples. Several Gas increases of 75 to 180 Units indicate three benches of porosity and pay with the most notable from 6111' to 6115' with the 180 Unit gas increase.

4 ½" production casing was run on the Keystone No. 5-4 for the above mentioned shows.

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: Keystone No. 5-4, Keystone Field

API: 15-119-21413

Location: 1350'FSL & 1320'FWL, Section 4, 33S, R29W, Meade Co. Kansas – Southeast of Plains.

Elevation: Ground Level 2634', Kelly Bushing 2646'

Contractor: Duke Drilling Rig No. 1, T.P. Mike Godfrey, Drillers Juan, Saul and Carlos

Company Man: Dana Geathouse

Spud Date: 6/13/19, 8 pm.

Total Depth: 6/20/19, 2 AM, Driller 6250', Logger 6245', St. Louis Formation

Casing Program: 39 joints of 8 5/8", J-55, 24Lbs/ft, set at 1570' with 385 sacks A-Con blend(3%cc & ¼ lb flake) tail with 150 sacks Pem Plus(2%cc, ¼ bl Poly Flake), cement did circulate, services by Basic. 148 joints of 4 1/2" production casing set to TD.'

Mud Program: Winter Mud, engineer Paul White, displaced 2596', Chemical gel/LCM.

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

Mudlogging trailer: MBC Logging, Meade.

Samples: 30' to 5600', 20' to TD.

Electric Logs: Weatherford, engineer Matt McGlothlin, Array Induction, Compensated Neutron/Density, Microlog, Hi Res.

Status: 4 ½" production casing run to TD on 6/21/19.

WELL CHRONOLOGY

AM Report					
<u>DATE</u>	<u>DEPTH</u>	<u>FOOTAGE</u>	<u>RIG ACTIVITY</u>		
6/13			Move to location and rig up rotary tools. Prep water and mix spud mud. Drill rat hole and mouse hole. Spud in 12 1/4" surface hole(8 PM).		
6/14	720'	720'	Surface hole to 720'.		
6/15	1580'	860'	To 1580' and circulate. Unload 39 joints of 8 5/8" casing. Drop survey(3/4 deg.) and trip and and run 39 joints of casing set at 1570' – did circulate, intense rain and mud, pull cement truck with cat.		
6/16	2690'	1110'	Wait on cement, did drop at well head, bring in gravel. Nipple up BOP and pressure test. Drill plug and cement and 7 7/8" hole to 2690'. Displace mud system at 2596'.		
6/17	3620'	930'	To 3228' and trip for bit. Found hole in pipe an stand 13. Bit balled up and 3 jets plugged. Clean bit, trip in and circulate. Drilling with 650 PSI pump pressure.		
6/18	4643'	1023'			
6/19	5286'	653'	Survey(3/4 deg.). To 4986' and circulate and wiper trip. Bit packed off from wiper trip. Clean bit, trip in and circulate and drill to 5286'.		
6/20	6250' TD	954'	To TD(2 AM) and circulate. Wiper trip to 5000' and circulate. Trip for logs.		
6/21	TD		Run in hole with Elog tools – hit bridge at 4742'. Pull tools and run wiper trip and ream tight spots. Trip out and run Elogs. Trip in and circulate. Trip out laying down and run and cement 148 joints of 4 1/2" production to TD. Plug rat hole and mouse hole. Rig down. Rig released 8:45 PM.		

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 619		12 1/4"	1530'	1530'	21
2	TX 616		7 7/8"	4986'	3406'	52
3	TX 516		7 7/8"	6250'	1264'	24
Total Rotating Hours:			97			
Average:			64.4 Ft/hr			

DEVIATION RECORD - degree

767' ¼, 1580' ¾, 2093' 1, 2596' 1, 3099' ¾, 3228' ¾, 3668' ¾, 4986' ¾, 6250'TD 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>
6/14	1030'	9	32	5	7	8.5	nc	2K	0
6/15	1580'	8.4	26	1	2	8.0	nc	2K	0
6/16	1580'	8.6	40	13	16	10.5	21	5K	2
6/17	3668'	8.75	40	12	20	10.5	18	5K	2
6/18	4705'	8.9	42	12	10	10.0	12	6K	4
6/19	5404'	8.9	50	17	12	10.0	8	4K	5
6/20	6250'TD	9.1	49	15	19	10.0	8	4K	6

ELECTRIC LOG FORMATION TOPS- KB Elev. 2646'

<u>FORMATION</u>	<u>DEPTH</u>	<u>DATUM</u>	<u>*Keystone No. 3-4</u> <u>DATUM</u>	<u>POSITION</u>
Casing	1567'			
Heebner	4417'	-1771'	-1769'	-2'
Toronto	4445'	-1799'	-1796'	-3'
Lansing	4564'	-1918'	-1914'	-4'
Marmaton	5115'	-2469'	-2550'	-19'
Cherokee	5362'	-2716'	-2720'	+4'
Atoka	5610'	-2964'	-2970'	+6'
Morrow	5664'	-3018'	-3029'	+11'
"B"/"C"	5722'	-3076'	-3078'	+2'
Mississippi Chester	5767'	-3121'	-3150'	+29'
Basal Chester	5972'	-3326'	-3337'	+11'
Ste. Genevieve	6017'	-3371'	-3368'	-3'
St. Louis	6103'	-3457'	-3468'	+11'
TD	6250'			

*O'Brien Energy Resources, Keystone No. 3-4, 380' FSL & 729' FWL, Section 4, 33 S, 29W – 1200' to the SW., K.B. Elev. 2597'.