Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1199945

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 # 33999
Name: Linn Operating, Inc.
Address 1: 600 TRAVIS STE 5100
Address 2:
City: HOUSTON State: TX Zip: 77002 + 3018
Contact Person: Shawn Hildreth
Phone: (281) 840-4234
CONTRACTOR: License # 32721
Name: Eldredge Well Service LLC
Wellsite Geologist: Bill Coppedge
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 #:

12/21/2013	12/23/2013	01/06/2014
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-067-21768-00-00
Spot Description:
SW SW SW SW Sec. 27 Twp. 28 S. R. 38 ☐ East ☑ West
245 Feet from ☐ North / ☑ South Line of Section
276 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: Grant
Lease Name: LEIGH Well #: 4 ATU-151
Field Name: HUGOTON-PANOMA
Producing Formation: CHASE & COUNCIL GROVE
Elevation: Ground: 3112 Kelly Bushing: 3119
Total Vertical Depth: 3108 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 772 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: 0 ppm Fluid volume: 0 bbls
Dewatering method used: Evaporated

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: 04/15/2014
☑ **Confidential Release Date:** 04/14/2016
☑ **Wireline Log Received**
☐ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 04/16/2014

[redacted] 1199945

Operator Name: Linn Operating, Inc. Lease Name: LEIGH Well #: 4 ATU-151

Sec. 27 Twp. 28 S. R. 38 ☐ East ☑ West County: Grant

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:
Attached

☑ 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	8.625	24	772	Premium Class C	450	
PRODUCTION	7.875	5.50	15.50	3108	Premium+ Class C	300	

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
4	Chase Perfs- 2385-2613	Frac Chase & Council Grove w/N2 Foam 804,000 SCF	
4	Council Grove Perfs- 2686-2939	& 300,299 lb 16/30 brown sand	

TUBING RECORD: Size: Set At: Packer At: Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR.: 01/09/2014

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

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
		569			

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:

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

Form	ACO1 - Well Completion
Operator	Linn Operating, Inc.
Well Name	LEIGH 4 ATU-151
Doc ID	1199945

All Electric Logs Run

Ultrasonic Radial Scanner Casing Log
Ultrasonic Radial Scanner Cement Log
Pulse Neutron Decay Log
PND-S Well Evaluation Log

Form	ACO1 - Well Completion
Operator	Linn Operating, Inc.
Well Name	LEIGH 4 ATU-151
Doc ID	1199945

Tops

Name	Top	Datum
Krider	2397	KB
Winfield	2442	KB
Towanda	2515	KB
Fort Riley	2561	KB
Funston	2686	KB
Crouse	2743	KB
Morrill	2824	KB
Grenola	2863	KB

Form	ACO1 - Well Completion
Operator	Linn Operating, Inc.
Well Name	LEIGH 4 ATU-151
Doc ID	1199945

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
SURFACE	12.25	8.625	24	772	Premium Class C	450	
PRODUCTION	7.875	5.50	15.50	3108	Premium+ Class C	300	

JOB SUMMARY

COUNTY: Grant	COMPANY: Linn Energy	PROJECT NUMBER: TN # 391	TICKET DATE: 12/22/2013
LEASE NAME: Leigh	Well No.: 4 ATU 151	JOB TYPE: Surface	CUSTOMER REP: Weldon Higgins
EMP NAME			EMPLOYEE NAME: Seith Lee

Seith Lee							
Mario Abrego							
Adam Wall							

Form. Name: Chase-Council Grove Type:

Packer Type Set At

Bottom Hole Temp. Pressure

Retainer Depth Total Depth

Date	Called Out	On Location	Job Started	Job Completed
		12/22/13	12/22/13	12/22/13
Time		1015	1135	1240

Tools and Accessories

Type and Size	Qty	Make
Auto Fill Tube	0	IR
Insert Float Valve	0	IR
Centralizers	0	IR
Top Plug	0	IR
HEAD	0	IR
Limit clamp	0	IR
Weld-A	0	IR
Texas Pattern Guide Shoe	0	IR
Cement Basket	0	IR

Well Data

	New/Used	Weight	Size	Grade	From	To	Max. Allow
Casing	New	24	8.625	J-55	KB	772	1500
Liner							
Liner							
Tubing							
Drill Pipe							
Open Hole							Shots/Ft.
Perforations							
Perforations							
Perforations							

Materials

Mud Type	0	Density 0	Lb/Gal	
Disp. Fluid	H20	Density 8.33	Lb/Gal	
Spacer type	H20	BBL. 10		
Spacer type		BBL.		
Acid Type		Gal.	%	
Acid Type		Gal.	%	
Surfactant		Gal.	In	
NE Agent		Gal.	In	
Fluid Loss		Gal/Lb	In	
Gelling Agent		Gal/Lb	In	
Fric. Red.		Gal/Lb	In	
MISC.		Gal/Lb	In	

Perfpac Balls Qty.

Other

Other

Other

Other

Other

Hours On Location

Date	Hours
12/22/13	4.0
Total	4.0

Operating Hours

Date	Hours
12/22/13	2.0
Total	2.0

Description of Job: Surface

Pressures

MAX 1000 AVG. 250

Average Rates in BPM

MAX 4 AVG 3

Cement Left in Pipe

Feet 44 Reason: Shoe Joint

Cement Data

Stage	Sacks	Cement	Additives	W/Rq.	Yield	Lbs/Gal
1	450	Premium Class C	2% Calcium Chloride and .25 #/sk Celloflake	6.34	1.35	14.8
2						
3						
4						

Summary

Preflush Type:

Breakdown MAXIMUM

Lost Returns N 0

Actual TOC

Average Frac. Gradient

ISIP 5 Min 10 Min 15 Min

Preflush:	BBl	10.00	Type:	H20
Load & Bkdn:	Gal - BBl		Pad:Bbl -Gal	
Excess /Return	BBl	46	Calc.Disp Bbl	
Calc. TOC:		Surface	Actual Disp.	46.00
Treatment:	Gal - BBl		Disp:Bbl	
Cement Slurry	BBl	108.0		
Total Volume	BBl	164.00		

CUSTOMER REPRESENTATIVE SIGNATURE

Thank You For Using
O - TEX Pumping

JOB SUMMARY

COUNTY: Grant	COMPANY: Linn Energy	PROJECT NUMBER: TN # 392	TICKET DATE: 12/24/2013
LEASE NAME: Leigh	Well No.: 4 ATU 151	JOB TYPE: Production	CUSTOMER REP: Weldon Higgins
			EMPLOYEE NAME: Jason Jones

EMP NAME

Jason Jones			
Steve Crocker			
Devin Londagin			

Form. Name: Chase-Council Grove Type:

Packer Type: Set At:
Bottom Hole Temp.: Pressure:
Retainer Depth: Total Depth:

Date	Called Out	On Location	Job Started	Job Completed
		12/23/13	12/24/13	12/24/13
Time		2300	200	400

Tools and Accessories

Type and Size	Qty	Make
Auto Fill Tube	1	IR
Insert Float Valve	1	IR
Centralizers	26	IR
Top Plug	1	IR
HEAD	1	IR
Limit clamp	1	IR
Weld-A	2	IR
Guide Shoe	1	IR
Cement Basket	0	IR

Well Data

	New/Used	Weight	Size	Grade	From	To	Max. Allow
Casing	New	15.5	5.5	J-55	KB	3108	5000
Liner							
Liner							
Tubing							
Drill Pipe							
Open Hole							Shots/Ft.
Perforations							
Perforations							
Perforations							

Materials

Mud Type	0	Density 0		Lb/Gal
Disp. Fluid	H20	Density 8.33		Lb/Gal
Spacer type	dium Silic	BBL. 20		
Spacer type		BBL.		
Acid Type		Gal.	%	
Acid Type		Gal.	%	
Surfactant		Gal.	In	
NE Agent		Gal.	In	
Fluid Loss		Gal/Lb	In	
Gelling Agent		Gal/Lb	In	
Fric. Red.		Gal/Lb	In	
MISC.		Gal/Lb	In	
Perfpac Balls		Qty.		
Other				
Other				
Other				
Other				
Other				

Hours On Location

Date	Hours
12/23/13	6.0
Total	6.0

Operating Hours

Date	Hours
12/24/13	2.0
Total	2.0

Description of Job

Production

Good returns thru job
No cmt to surface
final lift was 520psi
Job was completed safely

Pressures

MAX 1150 AVG. 520

Average Rates in BPM

MAX 4 AVG 3

Cement Left in Pipe

Feet 44 Reason Shoe Joint

Cement Data

Stage	Sacks	Cement	Additives	W/Rq.	Yield	Lbs/Gal
1	205	Premium Plus Class C	0.2% C-41P, 3% Gyp, 0.25#/sk Celloflake	23.49	3.65	10.8
2	95	Premium Plus Class C	2% Gel, 0.2% C-16A, 2% Calcium Chloride	10.4	1.90	13.0
3						
4						

Summary

Preflush: Type:
Breakdown: MAXIMUM
Lost Returns-N NO
Actual TOC
Average Frac. Gradient
ISIP 5 Min 10 Min 15 Min

Preflush: BBl 20.00 Type: Sodium Silicate
Load & Bkdn: Gal - BBl Pad:Bbl -Gal
Excess /Return BBl 50 Calc.Disp Bbl 73
Calc. TOC: 50 Actual Disp. 73.00
Treatment: Gal - BBl Disp:Bbl
Cement Slurry BBl #VALUE!
Total Volume BBl #VALUE!

CUSTOMER REPRESENTATIVE Weldon Higgins

SIGNATURE

Thank You For Using
O - TEX Pumping