[redacted] 1242458

Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
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 # 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: Bob 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 #:

12/11/2014 Spud Date or Recompletion Date
12/13/2014 Date Reached TD
12/18/2014 Completion Date or Recompletion Date

API No. 15 - 15-067-21806-00-00
Spot Description:
SE - SW - SW - SW Sec. 29 Twp. 27 S. R. 38 ☐ East ☑ West
170 Feet from ☐ North / ☑ South Line of Section
600 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: S. MARSHALL Well #: A-5 ATU-174
Field Name: Hugoton-Panoma
Producing Formation: Chase & Council Grove
Elevation: Ground: 3127 Kelly Bushing: 3134
Total Vertical Depth: 3071 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 730 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: 02/12/2015
☑ **Confidential Release Date:** 02/11/2017
☑ **Wireline Log Received**
☐ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 02/13/2015

[redacted]

1242458

Operator Name: Linn Operating, Inc. Lease Name: S. MARSHALL Well #: A-5 ATU-174

Sec. 29 Twp. 27 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:

Pulse Neutron Decay Logs
PND-S Well Evaluation Log

☑ 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	730	Premium Plus Class C	450	
Production	7.875	5.50	15.50	3071	O-Tex LowDense	425	

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	Chase Perfs - 2365-2414	Frac Chase & Council Grove w/N2	
4	2518-2550	Foam 630,000 SCF & 250,277lb 16/30	
2	Council Grove Perfs - 2647-2788	brown sand	

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

Date of First, Resumed Production, SWD or ENHR. 12/22/2014

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

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
		315			

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:

Form	ACO1 - Well Completion
Operator	Linn Operating, Inc.
Well Name	S. MARSHALL A-5 ATU-174
Doc ID	1242458

Tops

Name	Top	Datum
KRIDER	2373	KB
WINDFIELD	2411	KB
TOWANDA	2475	KB
FT_RILEY	2521	KB
FUNSTON_LM	2646	KB
CROUSE	2700	KB
MORRILL	2782	KB
GRENOLA	2824	KB

Form	ACO1 - Well Completion
Operator	Linn Operating, Inc.
Well Name	S. MARSHALL A-5 ATU-174
Doc ID	1242458

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	730	Premium Plus Class C	450	
Production	7.875	5.50	15.50	3071	O-Tex LowDense	425	

JOB SUMMARY

PROJECT NUMBER	TICKET DATE
TN # 1394	12/12/2014

COUNTY	COMPANY	CUSTOMER REP
0	Linn Energy	0

LEASE NAME	Well No.	JOB TYPE	EMPLOYEE NAME
S.Marshall	A5 ATU 174	Surface	Steve Crocker

EMP NAME

Steve Crocker							
Chris Lewis							
Johnny Blackwood							
Angel Garcia							

Form. Name _____ Type: _____

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

	Called Out	On Location	Job Started	Job Completed
Date		12/11/14	12/11/14	12/11/14
Time		2000	2325	035

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	0	730	1500
Liner							
Liner							
Tubing							
Drill Pipe							
Open Hole							Shots/Ft.
Perforations							
Perforations							
Perforations							

Materials

Mud Type	0	Density	0	Lb/Gal
Disp. Fluid		Density		Lb/Gal
Spacer type		BBL.	0	
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
12/11/14	4.5
Total	4.5

Operating Hours

Date	Hours
12/11/14	1.0
Total	1.0

Description of Job

Surface
pump spacer 10bbl
pump 106bbl lead cmt
at 14.8ppg
drop plug
displace 44bbl H20

Cmt to surface 50bbls
212 sks

Pressures

MAX 1200 AVG 100

Average Rates in BPM

MAX 3.5 AVG 3

Cement Left in Pipe

Feet 44 Reason Shoe Joing

Cement Data

Stage	Sacks	Cement	Additives	W/Rq.	Yield	Lbs/Gal
1	450	Premium Plus Class C	2% Calcium Chloride, 0.25 lb/sk Cellofalke	6.34	1.32	14.8
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4						

Summary

Preflush _____ Type: _____
Breakdown _____ MAXIMUM _____
_____ Lost Returns - 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	50	Calc.Disp Bbl		
Calc. TOC:		Surface	Actual Disp	44.00	
Treatment:	Gal - BBl		Disp.Bbl		
Cement Slurry	BBl	106.0			
Total Volume	BBl	160.00			

CUSTOMER REPRESENTATIVE _____
SIGNATURE

Thank You For Using
O - TEX Pumping

JOB SUMMARY

PROJECT NUMBER	TICKET DATE
TN # 1397	12/13/2014

COUNTY	COMPANY	CUSTOMER REP
Grant	Linn Energy	Weldon Higgins

LEASE NAME	Well No.	JOB TYPE	EXPLORER NAME
S. Marshall	A5 ATU 174	Production	MARIO ABREGO

EMP NAMES

MARIO ABREGO							
SHAWN COTTON							
TYLER LEE							

Form. Name ____ Type: ____

Packer Type ____ Set At ____

Bottom Hole Temp. ____ Pressure ____

Retainer Depth ____ Total Depth ____

	Called Out	On Location	Job Started	Job Completed
Date	12/13/2014	12/13/14	12/13/14	12/13/14
Time	5:00AM	10:00AM	4:08PM	6:31PM

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	15.5	5.5	J-55	0	3071'	2000
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	SODIUM SILIC	BBL.	30		
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
12/13/14	6.0
Total	6.0

Operating Hours

Date	Hours
12/13/14	2.0
Total	2.0

Description of Job

Production

Pressures

MAX 1000 AVG 125

Average Rates in BPM

MAX 3.5 AVG 3

Cement Left in Pipe

Feet 44 Reason Shoe Joint

Cement Data

Stage	Sacks	Cement	Additives	W/Rq.	Yield	Lbs/Gal
1	425	O-Tex LowDense	2% Gyp, 2% Calcium Chloride, 2% C-45, 0.4% C-15, 0.4% C-41P, 0.2% C-51, 0.25 #/sk Celloflake	13.29	2.25	11.5
2	0	0	0	0	0	0
3						
4						

Summary

Preflush ____ Type: ____

Breakdown ____ MAXIMUM ____

____ Lost Returns / ____ 0

____ Actual TOC ____

Average ____ Frac. Gradient ____

ISIP ____ 5 Min ____ 10 Min ____ 15 Min ____

Preflush:	BBl	30.00
Load & Bkdn:	Gal - BBl	
Excess /Return	BBl	60
Calc. TOC		SURFACE
Treatment:	Gal - BBl	
Cement Slurry	BBl	170.0
Total Volume	BBl	272.00

Type SODIUM SILICATE

Pad Bbl -Gal ____

Calc Disp Bbl ____

Actual Disp 72.00

Disp Bbl ____

CUSTOMER REPRESENTATIVE Weldon Higgins SIGNATURE

Thank You For Using

O - TEX Pumping