

**CONFIDENTIAL**

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

**ORIGINAL**

Form ACO-1

June 2009

Form Must Be Typed

Form must be Signed

All blanks must be Filled

**WELL COMPLETION FORM**  
**WELL HISTORY - DESCRIPTION OF WELL & LEASE**

11/15/12

OPERATOR: License # 33365  
Name: Layne Energy Operating, LLC  
Address 1: 1900 Shawnee Mission Parkway  
Address 2: \_\_\_\_\_  
City: Mission Woods State: KS Zip: 66205 + 2001  
Contact Person: Victor H. Dyal  
Phone: (913) 748-3960  
CONTRACTOR: License # 33606  
Name: Thornton Air Rotary, LLC  
Wellsite Geologist: \_\_\_\_\_  
Purchaser: \_\_\_\_\_

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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  
 Conv. to GSW  
 Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_  
 Commingled      Permit #: \_\_\_\_\_  
 Dual Completion      Permit #: \_\_\_\_\_  
 SWD      Permit #: \_\_\_\_\_  
 ENHR      Permit #: \_\_\_\_\_  
 GSW      Permit #: \_\_\_\_\_

8/20/2010	8/24/2010	9/9/2010
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 205-27858-00-00  
Spot Description: \_\_\_\_\_  
NE SW SE Sec. 34 Twp. 30 S. R. 14  East  West  
678 Feet from  North /  South Line of Section  
2,292 Feet from  East /  West Line of Section  
Footages Calculated from Nearest Outside Section Corner:  
 NE     NW     SE     SW  
County: Wilson  
Lease Name: Metzger Well #: 15L-34  
Field Name: Cherokee Basin Coal Area  
Producing Formation: Cattleman Sands  
Elevation: Ground: 914' Kelly Bushing: N/A  
Total Depth: 1236' Plug Back Total Depth: 1223'  
Amount of Surface Pipe Set and Cemented at: 42 Feet  
Multiple Stage Cementing Collar Used?  Yes  No  
If yes, show depth set: N/A Feet  
If Alternate II completion, cement circulated from: 1223  
feet depth to: Surface w/ 135 sx cmt.

**Drilling Fluid Management Plan**

(Data must be collected from the Reserve Pit)

Chloride content: N/A ppm Fluid volume: N/A bbls  
Dewatering method used: N/A - Air Drilled  
Location of fluid disposal if hauled offsite: \_\_\_\_\_  
Operator Name: N/A  
Lease Name: N/A License #: N/A  
Quarter N/A Sec. N/A Twp. N/A S. R. N/A  East  West  
County: N/A Permit #: N/A

**INSTRUCTIONS:** An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information of side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

**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.

Signature: \_\_\_\_\_  
Title: Manager of Engineering Date: 11/15/2010

**KCC Office Use ONLY**

**RECEIVED**

- Letter of Confidentiality Received  
Date: 11/15/10 - 11/15/12 **NOV 15 2010**
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: MS Date: 11-18-10

**KCC WICHITA**

Operator Name: Layne Energy Operating, LLC Lease Name: Metzger Well #: 15L-34  
 Sec. 34 Twp. 30 S. R. 14  East  West County: Wilson

**INSTRUCTIONS:** Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run: <b>Compensated Density Neutron</b> <b>Dual Induction</b>	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name _____ Top _____ Datum _____ See Driller's Log          <div style="text-align: center;"> <b>KCC</b>  <b>NOV 15 2010</b>  <b>CONFIDENTIAL</b> </div>
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CASING RECORD <input checked="" 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
Surface	11"	8.625"	24	42'	Class A	8	Type 1 Cement
Production	6.75"	4.5"	10.5	1223'	Thick Set	135	

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				

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
	See Attached Page		

TUBING RECORD: Size: <u>2-3/8"</u> Set At: <u>1210'</u> Packer At: _____ Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Date of First, Resumed Production, SWD or ENHR. <u>9/9/2010</u>	Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____
Estimated Production Per 24 Hours	Oil Bbls. <u>5</u> Gas Mcf <u>2</u> Water Bbls. <u>1</u> Gas-Oil Ratio _____ Gravity _____

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input checked="" 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 checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: <u>Cattleman Sands 1149'-1161'</u>
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# Layne Energy Operating, LLC #33365



METZGER 15L-34

NE SW SW SE 34 - 30S - 14E WILSON COUNTY, KANSAS

15-205-27858-00-00

<i>Stage #</i>	<i>Perforation Record</i>	<i>Acid, Fracture, Shot, Cement Squeeze Record</i>
Stage 1 9/8/2010	Cattleman Sand 1149' - 1161'	299 Water (bbls) 400 HCl (15%) (gal) 6000 Sand (12/20) Brown 6000 Sand (20/40) (lbs)

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# Daily Well Work Report

METZGER 15L-34  
8/23/2010

**Well Location:**  
WILSON KS  
30S-14E-34 NE SW SW SE  
678FSL / 2292FEL

**Cost Center** G01027400800  
**Lease Number** G010274  
**Property Code** KSSY30S14E3415L  
**API Number** 15-205-27858

Spud Date	RDMO Date	First Compl	First Prod	EFM Install	CygnnetID
8/20/2010	8/24/2010	9/9/2010	9/9/2010		

TD	PBTD	Sf Csg Depth	Pr Csg Depth	Tbg Size	Csg Size
1236	1223	42	1223	0	0

**Reported By** JM                      **Rig Number**                      **Date** 8/20/2010  
**Taken By** KRD                      **Down Time**  
**Present Operation** DRILL OUT SURFACE                      **Contractor** THORNTON ROTARY

## Narrative

MIRU THORNTON DRILLED 11" HOLE 42' DEEP, RIH W/2 JOINTS 8-5/8" SURFACE CASING MIXED 8 SX TYPE  
1 CEMENT, DUMPED DOWN THE BACKSIDE. SDFN

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Air Drilling Specialist  
Oil & Gas Wells

**THORNTON AIR ROTARY, LLC**  
Office Phone: 620-879-2073

PO Box 449  
Caney, KS 67333

Date Started	<b>8/20/2010</b>
Date Completed	<b>8/23/2010</b>

Well No.	Operator	Lease	A.P.I #	County	State
<b>15L-34</b>	<b>Layne Energy Operating</b>	<b>Metzger</b>	<b>15-205-27858-00-00</b>	<b>Wilson</b>	<b>Kansas</b>

1/4	1/4	1/4	Sec.	Twp.	Rge.
			<b>34</b>	<b>30</b>	<b>14E</b>

Driller	Type/Well	Cement Used	Casing Used	Depth	Size of Hole
<b>Sean</b>	<b>Oil</b>	<b>8</b>	<b>43' 8 5/8</b>	<b>1236</b>	<b>6 3/4</b>

**Formation Record**

0-1	DIRT	854-857	LIME	1101-1103	COAL
1-5	CLAY	857-858	COAL (MULBERRY)	1103-1144	SHALE
5-68	LIME	858-886	LIME (PAWNEE)	1144-1164	SAND / 1146-ODOR
68-180	SHALE	861	GAS TEST-10#,1/2",MCF-116	1164-1166	SANDY SHALE
180-295	LMY SHALE	886-888	SHALE	1166-1168	SHALE
295-414	SAND	888-891	LIME	1168-1170	COAL
335	WENT TO WATER	891-897	BLK SHALE	1170-1236	SHALE
414-418	LIME	897-909	SHALE	1236	TD
418-430	SHALE	909-921	SAND		
430-450	LIME	921-925	SANDY SHALE		
435	GAS TEST - NO GAS	925-931	SAND		
450-465	LMY SHALE	931-942	SHALE		
465-522	LIME	942-968	LIME (OSWEGO)		
522-533	SHALE	968-970	SHALE		
533-549	LIME	970-978	BLK SHALE (SUMMIT)		
549-567	SAND	978-987	LIME		
567-630	LIME	987-992	BLK SHALE (EXCELLO)		
585	GAS TEST-6#,1/2",MCF-86.3	992-993	COAL (MULKEY)		
630-668	SHALE	993-997	LIME		
668-680	SANDY SHALE	997-1004	SAND		
680-688	SHALE	1004-1037	SHALE		
688-707	LIME	1011	GAS TEST - SAME		
707-731	SHALE	1037-1038	COAL		
731-747	LIME	1038-1055	SHALE		
747-764	SAND	1055-1057	LIME		
764-791	SANDY SHALE	1057-1059	SHALE		
791-792	COAL	1059-1061	COAL		
792-800	SHALE	1061-1066	SANDY SHALE		
800-809	SAND	1066-1075	SAND		
809-854	SHALE	1075-1101	SANDY SHALE		

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**CONSOLIDATED**  
Oil Well Services, LLC



**ENTERED**

TICKET NUMBER 29085  
LOCATION Eureka  
FOREMAN Tray Strickle

**FIELD TICKET & TREATMENT REPORT**  
**CEMENT**

PO Box 884, Chanute, KS 66720  
620-431-9210 or 800-467-8676

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
8-24-10	4758	Metzger 15L-34				Wilson
CUSTOMER			TRUCK #	DRIVER	TRUCK #	DRIVER
Layne Energy			S20	Cliff	KCC	
MAILING ADDRESS			S43	Dave		NOV 15 2010
P.O. Box 160						CONFIDENTIAL
CITY	STATE	ZIP CODE				
Sycamore	Ks					

JOB TYPE L/S "0" HOLE SIZE 6 3/4 HOLE DEPTH 1236 CASING SIZE & WEIGHT 4 1/2 10.5"  
 CASING DEPTH 1223' DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT 13.4# SLURRY VOL \_\_\_\_\_ WATER gal/sk 80 CEMENT LEFT In CASING 0'  
 DISPLACEMENT 19.5 bbl DISPLACEMENT PSI 500 MIX PSI 1000 RATE \_\_\_\_\_

REMARKS: Safety Meeting: Rig up to 4 1/2" Casing. Break Circulation w/ 20 bbl water.  
Pump 10sk Gel-Fluid w/ Huller, 58W Water spacer. 20 bbl Caustic Soda Pre-Flush,  
10 bbl Dye water. Mixed 135sls Thick Set Cement w/ 8" Kol-Seal tubes  
@ 13.4# gal. Wash out Pump & lines Release Pky. Displace w/ 19.5 bbl water.  
Final Pump Pressure 500 PSI. Bump Pky to 1000 PSI. Wait 2 min. Release  
Pressure. Float Held. Good Cement to surface = 88bl slury to pt.

*Job Complete*

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401	1	PUMP CHARGE	925.00	925.00
5406	40	MILEAGE	3.65	146.00
1126A	135sls	ThickSet Cement	17.00	2295.00
1110A	1080#	8" Kol-Seal	.42#	453.60
1107A	17#	1/8" Phenoseal pipe	1.15#	19.55
1135	68#	1/2" CFL-110	7.50"	510.00
1146	34#	1/4" CAF-38	7.70"	261.80
1118B	500#	Gel-Fluid	.20#	100.00
1105	50#	Huller	.39#	19.50
1103	100#	Caustic Soda	1.45#	145.00
4404	1	4 1/2" Top Pulver Fly	45.00	45.00
5407A	7.43	Ton-mileage	NOV 15 2010 1.20	356.64
			KCC WICHITA	
			sub T-1/1	5277.09
			SALES TAX	248.53
			ESTIMATED TOTAL	5019.62

AUTHORIZATION *Tray Strickle* TITLE \_\_\_\_\_ DATE \_\_\_\_\_

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.