

**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**

9/8/12

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: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SLOW
- 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 #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
5/24/2010	5/27/2010	6/24/2010

API No. 15 - 205-27821-00-00      2nd Corrected

Spot Description: \_\_\_\_\_  
SW SW SE SE Sec. 34 Twp. 30 S. R. 14  East  West  
271 Feet from  North /  South Line of Section  
1,315 Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE     NW     SE     SW

County: Wilson  
Lease Name: Metzger Well #: 16N-34  
Field Name: Cherokee Basin Coal Area  
Producing Formation: Cattleman Sands  
Elevation: Ground: 914' Kelly Bushing: N/A  
Total Depth: 1287' Plug Back Total Depth: 1279'  
Amount of Surface Pipe Set and Cemented at: 40 Feet  
Multiple Stage Cementing Collar Used?  Yes  No  
If yes, show depth set: N/A Feet  
If Alternate II completion, cement circulated from: 1279  
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: Victor H. Dyal  
Title: Manager of Engineering Date: 11/2/2010

**KCC Office Use ONLY**

- Letter of Confidentiality Received
- Confidential Release Date: NOV 03 2010
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: [Signature] Date: 11/2/10

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Operator Name: Layne Energy Operating, LLC Lease Name: Metzger Well #: 16N-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 Wireline 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                  Dual Induction</b>	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum See Driller's Log
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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
Surface	11"	8.625"	24	40'	Class A	16	Type 1 Cement
Production	6.75"	4.5"	10.5	1279'	Thick Set	135	

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				

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
	See Attached Page		

TUBING RECORD: Size: <u>2-3/8"</u> Set At: <u>1237'</u> Packer At: _____ Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>KCC WICHITA</b>
Date of First, Resumed Production, SWD or ENHR. <u>6/25/2010</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>&lt;1</u> Gas Mcf <u>&lt;1</u> Water Bbls. _____ 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) (Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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**Layne Energy Operating, LLC #33365**



METZGER 16N-34

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

15-205-27821-00-00

<i>Stage #</i>	<i>Perforation Record</i>	<i>Acid, Fracture, Shot, Cement Squeeze Record</i>
Stage 1 6/23/2010	Cattleman Sand 1171' - 1187'	13000 Sand (12/20) Brown 280 Water (bbls) 300 HCl (15%) (gal) 3000 Sand (20/40) (lbs)

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**Daily Well Work Report**

**METZGER 16N-34  
5/24/2010**

**Well Location:**  
WILSON KS  
30S-14E-34 SW SW SE SE  
271FSL / 1315FEL

**Cost Center** G01027400400  
**Lease Number** G010274  
**Property Code** KSSY30S14E3416N  
**API Number** 15-205-27821

Spud Date	RDMO Date	First Compl	First Prod	EFM Install	CygnelID
5/24/2010	5/27/2010	6/24/2010	6/25/2010		

TD	PBTD	Sf Csg Depth	Pr Csg Depth	Tbg Size	Csg Size
1287	1279	40	1279	0	0

**Reported By** JM                      **Rig Number**                      **Date** 5/24/2010  
**Taken By** KRK                      **Down Time**  
**Present Operation** SET SURFACE                      **Contractor** THORNTON ROTARY D

**Narrative**

MIRU THORNTON DRILLED 11" HOLE 40 DEEP, RIH W/2 JOINTS 8-5/8" SURFACE CASING MIXED 16 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	5/24/2010
Date Completed	5/25/2010

Well No.	Operator	Lease	A.P.I.#	County	State
16N-34	Layne Energy Operating	Melger	15-205-27821	Wilson	Kansas

	1/4	1/4	1/4	Sec.	Twp.	Rge.
				34	30	14E

Driller	Type/Well	Cement Used	Casing Used	Depth	Size of Hole
Sean	Oil	6	41 5/8	1087	6 9/16

### Formation Record

0-2	DIRT	744-749	SHALE	1081-1082	COAL
2-8	CLAY	749-769	LIME	1082-1090	SHALE
8-75	LIME	769-788	SAND-OIL ODOR @776	1087	GAS TEST - SAME
75-79	LMY SHALE	788-796	SANDY SHALE	1090-1097	SAND
79-176	SHALE	796-821	SHALE	1097-1122	SHALE
176-212	LIME	821-880	SANDY SHALE	1122-1124	COAL
212-293	SHALE	880-881	COAL (MULBERRY)	1124-1172	SHALE
293-295	LIME	881-907	LIME (PAWNEE)	1137	GAS TEST - SAME
295-300	SHALE	887	GAS TEST-SLIGHT BLOW	1172-1191	CORE
300-308	SANDY SHALE	907-909	SHALE	1187	GAS TEST-48, 1/4, MCF-18.5
308-399	SAND (WET)	909-912	LIME	1191-1192	COAL
361	WENT TO WATER	912	GAS TEST-1M, 1/4, MCF-8.95	1192-1222	SHALE
399-421	SANDY SHALE	912-919	BLACK SHALE	1222-1250	SANDY SHALE
421-424	LIME	919-930	SHALE	1250-1287	SHALE
424-429	SHALE	930-938	SAND	1287	TD
429-431	LIME	937	GAS TEST - SAME		
431-440	SHALE	938-950	SHALE		
440-459	LIME	950-966	SANDY SHALE		
459-476	SHALE	966-990	LIME (OSWEGO)		
476-534	LIME	990-999	BLK SHALE (SUMMIT)		
534-540	BLACK SHALE	999-1010	LIME		
540-550	SHALE	1010-1013	BLACK SHALE		
550-560	LIME	1012	GAS TEST-3M, 1/4, MCF-15.7		
560-587	SAND	1013-1018	LIME		
587-610	LIME	1018-1023	SAND		
610-616	SHALE	1023-1057	SHALE		
616-650	LIME	1057-1059	COAL		
650-705	SHALE	1059-1077	SHALE		
705-730	LIME	1077-1079	LIME		
730-744	LMY SHALE	1079-1081	SHALE		

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**CONSOLIDATED**  
Oil Well Services, LLC

ENTERED

TICKET NUMBER 28780

LOCATION Eureka

FOREMAN Troy Stricker

PO Box 884, Chanute, KS 66720  
820-431-9210 or 800-467-8876

## FIELD TICKET & TREATMENT REPORT CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
5-27-10	4758	Metzsec 16N-34				Wilson
CUSTOMER <u>Layne Energy</u>			TRUCK #	DRIVER	TRUCK #	DRIVER
MAILING ADDRESS <u>P.O. Box 160</u>			<u>520</u>	<u>Rick</u>		
CITY <u>Sylamore</u>			<u>479</u>	<u>John</u>		
STATE <u>Ks</u>		ZIP CODE				

JOB TYPE 4 1/2" O HOLE SIZE 6 3/4" HOLE DEPTH 1287' CASING SIZE & WEIGHT 4 1/2" 10.5"  
 CASING DEPTH 1279' DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT 13.2" SLURRY VOL 420bl WATER gal/sk 8" CEMENT LEFT IN CASING 0'  
 DISPLACEMENT 20.104 DISPLACEMENT PSI 500 MIX PSI 1000 @ 20' / y RATE \_\_\_\_\_

REMARKS: Safety Meeting: Rig up to 4 1/2" casing. Break Circulation w/ 250bl water.  
Wash Down 3' to PWD 1279'. Pump 100bl Gel w/ Hulls. Pump 800bl water.  
shut Down. Rig up to Cement. Break Circulation and Pump 100bl Carbitic Soda  
Pre-Flush. 50bl water. 100bl Dry water. Mixed 1350lb Thickset Cement w/  
8# Kol-Seal, 1/2" Phenoseal, 1/2% CFL-110 + 1/2% CAF-38 @ 13.2"/gal. Wash out  
pump + liner. Release Aug. Displace w/ 20.80bl water. Final Pumping Pressure  
500 PSI. Pump Pkg to 1000 PSI. wait 2mins Release Pressure. Float Hold.  
Good Cement to surface 90bl Slury to pit

Job Complete

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401	1	PUMP CHARGE	900.00	900.00
5406	40	MILEAGE	3.55	142.00
1126A	1350lb	Thickset Cement	16.50	2227.50
1110A	1080#	8# Kol-Seal	.40	432.00
1107A	17#	1/2" Phenoseal	1.12	19.04
1135	68#	1/2% CFL-110	7.26	493.68
1146	34#	1/2% CAF-38	7.50	255.00
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1118A	500#	Gel-Flush	.17	85.00
1105	50#	Hulls	.38	19.00
1103	100#	Carbitic Soda	1.40	140.00
5407A	7.43	Ten-miles	1.20	89.16
4404	1	4 1/2" Top Rubber Ay	44.00	44.00
Thanks			Sub Total	6113.86
			SALES TAX	196.93
			ESTIMATED TOTAL	6310.79

Form 3737

834461

AUTHORIZATION Witnessed by Jacob

TITLE Co-Rep

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.