

CONFIDENTIAL

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

Form ACO-1
June 2009
Form Must Be Typed
Form must be Signed
All blanks must be Filled

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:

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

API No. 15 - 205-27821-00-00 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/ 116 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.

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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: 9/14/2010

KCC Office Use ONLY
 Letter of Confidentiality Received Date:
 Confidential Release Date:
 Wireline Log Received
 Geologist Report Received
 UIC Distribution
ALT I II III Approved by: Date:

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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 Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Name	Top Datum
Cores Taken	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See Driller's Log	
Electric Log Run	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Electric Log Submitted Electronically <i>(If no, Submit Copy)</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

List All E. Logs Run:
**Compensated Density Neutron
 Dual Induction**

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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	11"	8.625"	24	40'	Class A	116	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				

PERFORATION RECORD - Bridge Plugs Set/Type **Acid, Fracture, Shot, Cement Squeeze Record**

Shots Per Foot Specify Footage of Each Interval Perforated (Amount and Kind of Material Used) Depth

See Attached Page		
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TUBING RECORD Size: 2-3/8" Set At: 1237' Packer At: Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR: 6/25/2010

Producing Method: Flowing Pumping Gas Lift Other (Explain) _____

Estimated Production Per 24 Hours	Oil Bbls	Gas Mcf	Water Bbls	Gas-Oil Ratio	Gravity
	<1	<1			

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"/> Dual Comp (Submit ACO-5) <input type="checkbox"/> Commingled (Submit ACO-4) <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL _____
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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	Mattiger	15-205-27221	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	8	41 1 5/8	1227	6 3/4

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-40, 1/4, MCF-18.5
308-399	SAND (WET)	909-912	LIME	1191-1192	COAL
361	WENT TO WATER	912	GAS TEST-1R, 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-3R, 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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Corrected

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 KR D

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 116 SX TYPE 1 CEMENT, DUMPED DOWN THE BACKSIDE. SDFN

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CONSOLIDATED
Oil Well Services, LLC

ENTERED

TICKET NUMBER 28780

LOCATION Eureka

FOREMAN Troy Strickler

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	Metzser 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>Sycamore</u>			<u>479</u>	<u>John</u>		
STATE <u>Ks</u>		ZIP CODE				

JOB TYPE L/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 4200 WATER gal/sk 8" CEMENT LEFT in CASING 0'
 DISPLACEMENT 20.304 DISPLACEMENT PSI 500 MIX PSI 1000 6-ppg RATE _____

REMARKS: Safety Meeting: Rig up to 4 1/2" casing. Break circulation w/ 2500 water. Wash down 3' to PATA 1279'. Pump 1000 gal Gel w/ Hulls. Pump 8000 gal water. Shut down. Rig up to Cement. Break circulation and Pump 1000 gal Caustic Soda. Pre-Flush. 500 gal water. 1000 gal dye water. Mixed 13500 Thick Set Cement w/ 8" Kol-Seal, 1/2" Phenoxal, 1/2" CFL-110 + 1/2" CAF-38 @ 13.2" gal. Wash out pump + liner. Release Aug. Displace w/ 20,000 gal water. Final Pumping Pressure 500 PSI. Pump fly to 1000 PSI. Wait 2 min. Release Pressure. Float Hold. Good Cement to surface 9000 gal slurry 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	13550	Thickset Cement	16.50	2227.50
1110A	1080	8" Kol-Seal	.40	432.00
1107A	17	1/2" Phenoxal	1.12	19.04
1135	68	1/2" CFL-110	7.26	493.68
1146	74	1/2" CAF-38	7.50	555.00
1118A	500	Gel-Flush	.17	85.00
1105	50	Hulls	.38	19.00
1103	100	Caustic Soda	1.40	140.00
5407A	7.43	Ton-miles	1.20	891.64
4401	1	4 1/2" Top Rubber Fly	49.00	49.00
		Thanks	Sub total	6113.80
			SALES TAX	196.93

Rev 3737

834461

ESTIMATED TOTAL 6310.73

AUTHORIZATION Witnessed by Jacob TITLE Co-Op 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.