



KANSAS CORPORATION COMMISSION 1054476  
OIL & GAS CONSERVATION DIVISION

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**

OPERATOR: License # 33365  
Name: Layne Energy Operating, LLC  
Address 1: 1900 SHAWNEE MISSION PKWY  
Address 2: \_\_\_\_\_  
City: MISSION WOODS State: KS Zip: 66205 + 2001  
Contact Person: Victoe Dyal  
Phone: ( 913 ) 748-3955  
CONTRACTOR: License # 33606  
Name: Thornton Air Rotary, LLC  
Wellsite Geologist: N/A  
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 #: \_\_\_\_\_

<u>12/3/2010</u>	<u>12/8/2010</u>	<u>12/9/2010</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-205-27888-00-00

Spot Description: \_\_\_\_\_

NW NE SE SE Sec. 28 Twp. 30 S. R. 14  East  West

1,200 Feet from  North /  South Line of Section

400 Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE     NW     SE     SW

County: Wilson

Lease Name: HUMMER Well #: 16B-28

Field Name: \_\_\_\_\_

Producing Formation: N/A

Elevation: Ground: 885 Kelly Bushing: 0

Total Depth: 1237 Plug Back Total Depth: 1220

Amount of Surface Pipe Set and Cemented at: 40 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**

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: NAOMI JAMES Date: 04/22/2011



1054476

Operator Name: Layne Energy Operating, LLC Lease Name: HUMMER Well #: 16B-28  
 Sec. 28 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run:  Compensated Density Neutron Dual Induction	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum See attached
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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	40	Type 1	8	
Production	6.75	4.5	10.5	1220	Thickset	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 <i>(Amount and Kind of Material Used)</i>	Depth

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input 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 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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# Well Report

## HUMMER 16B-28

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**API Number:**

**AFE Number:** G01013600800

**Project Area:**

SYCAMORE  
KS Wilson  
30S - 14E - 28  
1200FSL - 400FEL

**AFE Amount:** \$0.00

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Activity Date	Activity Description
12/3/2010	MIRU THORNTON DRILLED 11" HOLE 40' DEEP, RIH W/2 JOINTS 8-5/8" SURFACE CASING MIXED 8 SX TYPE 1 CEMENT, DUMPED DOWN THE BACKSIDE. SDFN
12/6/2010	TIH W/ 6 3/4" BIT, HAMMER AND DRILL PIPE, DRILLED 50' DRILL RIG BROKE DOWN SHUT DOWN WAITING FOR PARTS.
12/8/2010	RESUME DRILLING FROM 50' TO 1237TD TESTING SAMPLES FROM ZONES OF INTEREST RD DRILL RIG DRILL RIG MOVE IN OSAGE WIRELINE, PULLED LOGS FROM LOGGER DEPTH TO SURFACE RD MOL.
12/9/2010	MI PU, RIH W/31 JOINTS 4-1/2" CASING, RIG UP CONSOLIDATED, BREAK CIRCULATION WITH 30 BBLS FRESH WATER PUMP 10 SKS GEL FLUSH WITH 5 BBLS WATER SPACER W/HULLS, 20 BBLS CAUSTIC PRE-FLUSH, 10 BBLS DYE WATER, MIXED 135 SKS THKSET CMT W/8#KOL-SEAL, 1/8# PHENOSEAL PER SK., 1/2% CFL-110, 1/4% CAF-38 @ 13.4#/GAL YIELD 1.75. WASHED OUT PUMP AND LINES SHUTDOWN, RELEASE PLUG, DISPLACE W/19.6 BBLS FRESH WTR. FINAL PUMPING PRESSURE 600 PSI, BUMP PLUG TO 1100 PSI. WAIT 2 MINUTES, RELEASE PRESSURE, FLOAT HELD GOOD CEMENT RETURNS TO SURFACE, 6 BBLS TO PIT. RD MOL.  CSG STRING: 31 JOINTS 4-1/2" LANDED CSG @ 1220' PBTD - 1220' TD 1237"

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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>12/3/2010</b>
Date Completed	<b>12/8/2010</b>

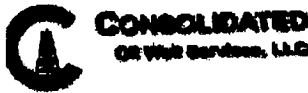
Well No.	Operator	Lease	A.P.I #	County	State
<b>16B-28</b>	<b>Layne Energy Operating</b>	<b>Hummer</b>	<b>205-27888-00-00</b>	<b>Wilson</b>	<b>Kansas</b>

1/4	1/4	1/4	Sec.	Twp.	Rge.
			<b>28</b>	<b>30</b>	<b>14E</b>

Driller	Type/Well	Cement Used	Casing Used	Depth	Size of Hole
<b>Billy/Sean</b>	<b>Oil</b>	<b>8</b>	<b>40' 8 5/8</b>	<b>1237</b>	<b>6 3/4</b>

**Formation Record**

0-8	DIRT	831-859	SANDY SHALE	1155-1165	SHALE
8-15	CLAY (WET)	859-861	LIME	1165-1170	SAND
15-35	SHALE	861-862	COAL	1170-1237	SHALE
35-62	LIME	862-900	LIME (PAWNEE)	1237	TD
62-72	SHALE	900-905	BLK SHALE (LEXINGTON)		
72-115	LIME	905-942	SHALE		
115-335	SHALE	942-964	LIME (OSWEGO)		
335-340	SANDY SHALE	964-975	BLK SHALE (SUMMIT)		
340-407	SAND (DAMP)	975-984	LIME		
407-410	LIME	984-986	SHALE		
410-446	SHALE	986-987	COAL (MULKEY)		
446-532	LIME	987-995	LIME		
532-538	SHALE	987	GAS TEST - NO GAS		
538-546	LIME	995-1032	SHALE		
546-566	LMY SHALE	1032-1033	COAL (BEVIER)		
566-574	SAND	1033-1048	SHALE		
574-577	LIME	1048-1049	LIME		
577-588	SANDY SHALE	1049-1052	SHALE		
588-607	LIME	1052-1053	COAL (CROWBERG)		
607-614	LMY SHALE	1053-1057	SHALE		
614-621	LIME	1057-1062	SAND		
611	GAS TEST - NO GAS	1062-1087	SHALE		
621-738	SHALE	1087-1088	COAL		
738-756	LIME	1088-1117	SHALE		
756-771	SHALE	1117-1126	SANDY SHALE		
771-787	SANDY SHALE	1126-1132	SHALE		
787-801	SHALE	1132-1147	SAND		
801-808	SAND	1147-1149	SANDY SHALE		
808-820	SHALE	1149-1150	COAL		
820-831	SAND / LITE OIL ODOR	1150-1155	SAND		



PO Box 864, Chanute, KS 66720  
 120-431-8210 or 800-487-8878

TICKET NUMBER 30030  
 LOCATION Eureka  
 FOREMAN Tom Strickler

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

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
12-9-10	4758	Hummer 16B-2P				Wilson
CUSTOMER			TRUCK #	DRIVER	TRUCK #	DRIVER
Layne Energy			445	John		
Mailing Address			477	Shannon		
P.O. Box 160			477	Jim		
CITY	STATE	ZIP CODE				
Sycamore	Ks					

JOB TYPE 6 1/2" HOLE SIZE 6 3/4" HOLE DEPTH 1277' CASING SIZE & WEIGHT 4 1/2"  
 CASING DEPTH 1220' DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT 12.4" SLURRY VOL 42.031 WATER 8" CEMENT LEFT IN CASING 0.1  
 DISPLACEMENT 19.451 DISPLACEMENT PSI 600 MIX PSI 1000 RATE \_\_\_\_\_

REMARKS: Rig up to 4 1/2" casing. Break circulation w/ 10 gal fresh water.  
 Pump 10 gal Gal-Fluor w/ hulls. 5 gal water spacer. 20 gal Cement. 10 gal Pre-Flush.  
 10 gal Air water. Mixed 12 gal thick set cement w/ 8" Kal-Seal 1K, 1/2"  
 Phenoxal 1K, 1/2" FL-110 + 1/2" CAF-38 @ 11.4"/gal. Workover Pump & liner.  
 Release Plug - Displace w/ 8 gal fresh water. Final Pumping Pressure 600 PSI.  
 Pump Plug to 1100 PSI. wait 2 min. Release Pressure. Float held.  
 Good Cement to surface = 6 gal. Churn to pit.

*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	1353 kg	Thick set Cement	17.00	2299.00
1110A	1080 #	8" Kal-Seal 1K	.42	453.60
1107A	17 #	1/2" Phenoxal	1.15	19.55
1135	68 #	1/2" FL-110	7.50	510.00
1146	34 #	1/2" CAF-38	7.70	261.80
1118B	500 #	Gal-Fluor	.20	100.00
1105	50 #	Hulls	.79	39.50
1103	100 #	Cement Sacks	1.45	145.00
5407A	7.43	Tom mileage	1.20	891.64
5502C	4 gal	8000 1/2" Tinec	85.00/gal	340.00
4404	1	4 1/2" Top Roller Pig	45.00	45.00
1123	300 gal	City Water	14.90/gal	4470
			Subtotal	5661.74
		Thank You!	SALES TAX	245.33
			ESTIMATED TOTAL	5907.07

Revised 8/37 AUTHORIZATION [Signature] TITLE Drill Foreman 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.