

KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION

1054468

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		API No. 15			
Name: Layne Energy Operating, LLC		Spot Description:			
Address 1: 1900 SHAWNEE MISSION PKV	VY	NE_NW_SE_SE Sec. 28 Twp. 30 S. R. 14 ▼ East West			
Address 2:					
City: MISSION WOODS State: KS	Zip: 66205 + 2001				
Contact Person: Victor H. Dyal		Footages Calculated from Nearest Outside Section Corner:			
Phone: (913) 748-3955		□ne □nw ☑se □sw			
CONTRACTOR: License # 33606		County: Wilson			
Thornton Air Potany LLC		Lease Name: HUMMER Well #: 16C-28			
Wellsite Geologist: N/A		Field Name:			
Purchaser:		Producing Formation: Cattleman			
Designate Type of Completion:	٠.	Elevation: Ground: 887 Kelly Bushing: 0			
✓ New Well Re-Entry	Workover	Total Depth: 1237 Plug Back Total Depth: 1203			
✓ Oil	☐ SIOW	Amount of Surface Pipe Set and Cemented at: 40 Feet			
Gas D&A ENHR		Multiple Stage Cementing Collar Used? Yes No			
□ og □ gsw	Temp. Abd.	If yes, show depth set: Feet			
CM (Coal Bed Methane)		If Alternate II completion, cement circulated from:			
Cathodic Other (Core, Expl., etc.):		feet depth to:w/sx cmt			
If Workover/Re-entry: Old Well Info as follows:	•	WOX ON			
Operator:		Delling Chaid Management Disc			
Well Name:	and the second s	Drilling Fluid Management Plan (Data must be collected from the Reserve Pit)			
Original Comp. Date: Original	I Total Depth:	Chloride content: 0 ppm Fluid volume: 0 bbls			
Deepening Re-perf. Conv	to ENHR Conv. to SWD	Dewatering method used: Evaporated			
Tanas	to GSW				
	Plug Back Total Depth	Location of fluid disposal if hauled offsite:			
	***************************************	Operator Name:			
		Lease Name: License #:			
		Quarter Sec Twp S. R			
		County: Permit #:			
_	40/40/0	1 only			
12/2/2010 · 12/3/2010	12/16/2010	·			
Spud Date or Date Reached TD	Completion Date or				

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 I III Approved by: NAOMI JAMES Date: 04/22/2011

Side Two

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_Well #: _16C-28 Operator Name: Layne Energy Operating, LLC Lease Name: HUMMER County: Wilson Sec. 28 Twp.30 S. R. 14 Fast West 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. ✓ No Log Formation (Top), Depth and Datum Sample Yes **Drill Stem Tests Taken** (Attach Additional Sheets) Name Top Datum √ No Samples Sent to Geological Survey Yes See attached ✓ No Yes Cores Taken ✓ Yes No Electric Loa Run Electric Log Submitted Electronically √ Yes No (If no, Submit Copy) List All E. Logs Run: Compensated Density Neutron CASING RECORD ✓ New Report all strings set-conductor, surface, intermediate, production, etc. Type and Percent Size Hole Size Casing Setting Type of # Sacks Purpose of String Drilled Set (In O.D.) Lbs. / Ft Depth Cement Used Additives Surface 11 8.625 24 40 Type 1 8 Production 6.75 4.5 1203 135 10.5 Thickset ADDITIONAL CEMENTING / SQUEEZE RECORD Purpose: Depth Type of Cement # Sacks Used Type and Percent Additives Top Bottom Perforate Protect Casing Plug Back TD 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) 2 Cattleman 12,000 lbs 16/30 & 12/20 sand, 300 gal 15% HCL, 396 bbls gelled water 1140 to 1150 TUBING RECORD: Size: Set At: Liner Run: Packer At: ✓ No Yes 2.375 1154 Date of First, Resumed Production, SWD or ENHR. Producing Method: 12/19/2010 Flowing **✓** Pumping Gas Lift Other (Explain) __ **Estimated Production** Oil Bbls. Mcf Water Bbls. Gas-Oil Ratio Gravity Gas Per 24 Hours 7 **DISPOSITION OF GAS:** METHOD OF COMPLETION: PRODUCTION INTERVAL: Open Hole Dually Comp. Commingled ✓ Perf. 1140 to 1150 Vented ✓ Sold Used on Lease (Submit ACO-5) (Submit ACO-4) (If vented, Submit ACO-18.) Other (Specify)

Well Report

HUMMER 16C-28

API Number: Project Area:

SYCAMORE

TD 1237"

KS Wilson

30S - 14E - 28 1005FSI - 980FEL AFE Number: G01013600900

AFE Amount: \$0.00

Activity Date	Activity Description
12/2/2010	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
12/3/2010	TIH W/ 6 3/4" BIT, HAMMER AND DRILL PIPE, DRILLED OUT FROM UNDER SURFACE TO 1237' TD, CATCHING SAMPLES AT ZONES OF INTEREST. RD DRILL RIG, RU OSAGE WIRELINE PULL LOGS FROM LOGGER DEPTH TO SURFACE. SDFN
12/6/2010	MI PU, RIH W/31 JOINTS 4-1/2" CASING, RIG UP CONSOLIDATED, BREAK CIRCULATION WITH 25 BBLS FRESH WATER WASHED DOWN 15' TO PBTD PUMP 10 SKS GEL FLUSH W/HULLS, 25 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/19.1 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, 42 BBLS SLURRY, 8 BBLS TO PIT. RD MOL.
	CSG STRING: 31 JOINTS 4-1/2" LANDED CSG @ 1202.8' PBTD - 1202.8'

12/16/2010

MOL RU Osage Wireline and Consolidated Oil Well Servicing. Osage RIH and ran CBL-CCL-VDL Log from 1193' to surface. Good Bond all depths. Osage Perfed the Cattleman sands from 1140' to 1150' with 2 spf, 180 degree phase, and 25 gm charges. Total 21 holes. Consolidated rigged up and spotted 100 gallons 15% HCL across Cattleman perfs. Pumped 200 gallons additional (300 gal

total) 15% HCL and fracked Cattleman with 83 bbls PAD (25 ppt gelled water with 2% KCL & biocide) followed with 4,000 lbs of 16/30 and 8,000 lbs of 12/20 sand @ 0.25 - 3 ppg concentrations. Flushed with 23 bbls gel.

Breakdown 1564 psig, ISIP 679 psig, 5 min 540 psig, 10 min 522 psig, 15 min 514 psig,ATP 950 psig, MTP 1020 psig, ATR 24 BPM, MTR 24 BPM. TOTAL JOB: 12,000 lbs 16/30 & 12/20 sand, 300 gallons 15% HCL, and 396 bbls gelled water SI WELL AFTER FRAC TO ALLOW GEL TO BREAK

Page 1 of 2

12/17/2010

TIH W/ TBG WASHED TO TD TIH W/ RODS SPACED ROD STRING HUNG ON JACK. WASHED 45' OF SAND

TBG STRING 36- 2 3/8 TBG 1-8',1-6',1-4'- SUBS SN @ 1154 15' OEMA @ 1169

ROD STRING 45- 3/4 RODS 1-8',1-6' PONYS 1 1/2 X 6' BHD CUP INST PMP 1 1/8 X 11' POLISH ROD Air Drilling Specialist Oil & Gas Wells

THORNTON AIR ROTARY, LLC

Office Phone: 620-879-2073

PO Box 449 Caney, KS 67333

1	Date Started	12/2/2010
	Date Completed	12/3/2010

Well No.	Operator	Lease	A.P.I #	County	State	
16C-28	Layne Energy Operating	Hummer	15-205-27889-00-00	Wilson	Kansas	
1/4	1/4	1/4	Sec.	Twp.	Rge.	

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

Formation Record

		Formation	on Record	
0-8	DIRT	911-949	SHALE	
8-50	SHALE	949-972	LIME (OSWEGO)	
50-119	LIME	972-981	BLK SHALE (SUMMIT)	
119-208	SHALE	981-989	LIME	
208-344	LMY SHALE	989-994	BLK SHALE (EXCELLO)	
344-370	SAND	994-995	COAL	
370-400	SANDY SHALE	995-997	LIME	
411	WENT TO WATER	997-1000	SHALE	
400-460	SHALE	1000-1015	SAND	
460-476	LIME	1015-1039	SHALE	
476-483	SHALE	1039-1040	COAL	
483-574	LIME	1040-1057	SHALE	
574-580	SHALE	1057-1058	LIME	
580-596	SAND	1058-1060	SHALE	
596-615	LIME	1060-1061	COAL	
615-619	SHALE	1061-1067	SAND	
619-655	LIME	1067-1097	SANDY SHALE	
655-713	SHALE	1097-1098	COAL	
713-726	LMY SHALE	1098-1118	SHALE	
726-751	SANDY SHALE	1118-1142	SANDY SHALE	
751-766	LIME	1142-1159	SAND / ODOR	
766-780	SAND	1159-1167	SANDY SHALE	
780-786	SANDY SHALE	1167-1180	SHALE	
786-825	SHALE	1180-1186	SAND / LITE ODOR	
825-857	SAND	1186-1237	SANDY SHALE	
857-8 7 3	SHALE	1237	ΤD	
873-900	LIME			
900-903	BLACK SHALE			
903-906	LIME			
906-911	BLACK SHALE			



30025 TICKET NUMBER LOCATION FOREMAN Tray Strickler

PO Box 884, Chanute, KS 66720

FIELD TICKET & TREATMENT REPORT

620-431-9210	or 800-467-8676	3		CEMENT	Γ.			
DATE	CUSTOMER#	WELL	NAME & NUM	BER	SECTION	TOWNSHIP	RANGE	COUNTY
12-6-10	4758	Hummer	ILC-28					Wilson
CUSTOMER	_		*	2.54	12.	196		· · ·
Layne	Faergy			Suff/2/2	TRUCK#	DRIVER	TRUCK#	DRIVER
MAILING ADDRE	ss			J3.	445	John		_
P.O. B	x 160			B	479	Ed		
CITY		STATE	ZIP CODE	SF	437	Shanny		
Sycamor		Ki] [
JOB TYPE	<u>s 'o </u>	HOLE SIZE	641	HOLE DEPTH	1237'	CASING BIZE & V	VEIGHT 14	
CASING DEPTH		DRILL PIPE		_TUBING			OTHER	
SLURRY WEIGH	T 18.4 "	SLURRY VOL_	42.01	WATER gal/sl	2.0	CEMENT LEFT In	CASING D'	
DISPLACEMENT		DISPLACEMEN			soft	RATE		
REMARKS: 5	afety mos	toni Ria L	<u>ልኩ 4%</u>	· Carros	Rreak C	iroulation ul	2566 Fre	sh water
Wash don	15' to	POTO OF	1203	Anno 10sk	Gel-Flut	h w/ hulle	Runs 256	al water.
Ria no to	Cement.					stal mater 4		
water 1	hixed 13.	aki Thi			-/ 1 # Ko			, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
F1-110 +	142 CAF-	38 C 13	14/501			ner Role	se Plus	Disales
W/ 19.1	BLI Fier	wate.	Final F	upry Pr	scare 600	PSI B-	o Phy to	1100 PGT.
writ 2	nins. Re		essure.		eld Good	Conont	o suctice	= XXU
Slung to	474							
_	1.	b complet	e.				•	
		T						
ACCOUNT CODE	QUANITY	or UNITS	DE	ESCRIPTION of	SERVICES or Pi	ЮВИСТ	UNIT PRICE	TOTAL
5401			PUMP CHARG	3E			925.00	925.00
5406	40		MILEAGE				3.65	146.00
1126A	13531	·	Thickse	t Cemen	+		/7.00	2295.00

CODE	QUANITY or UNITS	DESCRIPTION of SERVICES OF PRODUCT	UNIT PRICE	TOTAL
5401		PUMP CHARGE	925.00	925.00
5406	40	MILEAGE	3.65	146.00
1126A	13531/	Thick set Coment	/7.00	2275.∞
IIIOA	1080*	8# Kol-Seel Isk	.42	453.60
IIOTA	אורו	1/8 Phenoseel Ise	1.15	19.55
1135	68"	12% FZ-110	7.50	\$10.00
1146	34#	1/47 CAF-58	7.70	261.80
III8A	500#	Gel- Flush	.20	100-00
1105	,ro"	hulls	.39	19.50
1103	100 H	Caixtic Gde	1.45	145-00
SYOTA	7.43	Ton-milegre Balk Trick	1.20	35L.64
1123	300961	City Whater	14.90/100	44.70
5262C	440	808V Vac Tinch	85.00/NE	340.00
4404	<u> </u>	44 Top Rulber Ply	45.00	45.00
		and the second s		
			Short	5661.79
		that by 6.3%	SALES TAX	245.35
Vin 3737	July publ	_ 838485	ESTAMATED TOTAL	5907.19
UTHORIZTION	Jour Fluid	TITLE Veril letoline	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 the type this form are in effect for services identified on this form.