



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1223001  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

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

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

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

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

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

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
-----------------------------------	-----------------	---

API No. 15 - \_\_\_\_\_

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

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

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

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ 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: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

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

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

1223001

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops 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.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
--	---

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

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				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

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:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  
 Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
--	---	---

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Dean 3408 2-27H
Doc ID	1223001

#### Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
1	9430-9494	20 bbls HCL Acid, 1655 bbls Fresh Slickwater, TLTR 1685 bbls	
1	9334-9430	20 bbls HCL Acid, 1873 bbls Fresh Slickwater, TLTR 3558 bbls	
1	9242-9334	20 bbls HCL Acid, 1898 bbls Fresh Slickwater, TLTR 5456 bbls	
1	9151-9242	20 bbls HCL Acid, 1790 bbls Fresh Slickwater, TLTR 7246 bbls	
1	9060-9151	20 bbls HCL Acid, 1855 bbls Fresh Slickwater, TLTR 9101 bbls	
1	8967-9060	20 bbls HCL Acid, 1847 bbls Fresh Slickwater, TLTR 10948 bbls	
1	8876-8967	20 bbls HCL Acid, 1910 bbls Fresh Slickwater, TLTR 12858 bbls	
1	8787-8876	20 bbls HCL Acid, 1875 bbls Fresh Slickwater, TLTR 14733 bbls	

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Dean 3408 2-27H
Doc ID	1223001

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
1	8696-8787	20 bbls HCL Acid, 1751 bbls Fresh Slickwater, TLTR 16484 bbls	
1	8564-8696	20 bbls HCL Acid, 1883 bbls Fresh Slickwater, TLTR 18367 bbls	
1	8428-8564	20 bbls HCL Acid, 2148 bbls Fresh Slickwater, TLTR 20515 bbls	
1	8292-8428	20 bbls HCL Acid, 2287 bbls Fresh Slickwater, TLTR 22802 bbls	
1	8162-8292	20 bbls HCL Acid, 2221 bbls Fresh Slickwater, TLTR 25023 bbls	
1	8027-8162	20 bbls HCL Acid, 2205 bbls Fresh Slickwater, TLTR 27228 bbls	
1	7892-8027	20 bbls HCL Acid, 2413 bbls Fresh Slickwater, TLTR 29641 bbls	
1	7756-7893	20 bbls HCL Acid, 2259 bbls Fresh Slickwater, TLTR 31900 bbls	

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Dean 3408 2-27H
Doc ID	1223001

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
1	7619-7756	20 bbls HCL Acid, 2129 bbls Fresh Slickwater, TLTR 34029 bbls	
1	7482-7619	20 bbls HCL Acid, 2244 bbls Fresh Slickwater, TLTR 36273 bbls	
1	7347-7482	20 bbls HCL Acid, 2103 bbls Fresh Slickwater, TLTR 38376 bbls	
1	7211-7347	20 bbls HCL Acid, 2083 bbls Fresh Slickwater, TLTR 40459 bbls	
1	7075-7211	20 bbls HCL Acid, 544 bbls Fresh Slickwater, TLTR 41003 bbls	
1	6939-7075	20 bbls HCL Acid, 471 bbls Fresh Slickwater, TLTR 41474 bbls	
1	6803-6939	20 bbls HCL Acid, 452 bbls Fresh Slickwater, TLTR 41926 bbls	
1	6667-6803	20 bbls HCL Acid, 2372 bbls Fresh Slickwater, TLTR 44298 bbls	

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Dean 3408 2-27H
Doc ID	1223001

#### Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
1	6531-6667	20 bbls HCL Acid, 1692 bbls Fresh Slickwater, TLTR 45990 bbls	
1	6396-6531	20 bbls HCL Acid, 2351 bbls Fresh Slickwater, TLTR 48341 bbls	
1	6260-6396	20 bbls HCL Acid, 2342 bbls Fresh Slickwater, TLTR 50683 bbls	
1	6124-6260	20 bbls HCL Acid, 2471 bbls Fresh Slickwater, TLTR 53154 bbls	
1	5988-6124	20 bbls HCL Acid, 2076 bbls Fresh Slickwater, TLTR 55230 bbls	
1	5853-5988	20 bbls HCL Acid, 2292 bbls Fresh Slickwater, TLTR 57522 bbls	
1	5720-5853	20 bbls HCL Acid, 2535 bbls Fresh Slickwater, TLTR 60057 bbls	
1	5597-5720	20 bbls HCL Acid, 3099 bbls Fresh Slickwater, TLTR 63156 bbls	





**INVOICE**

DATE	INVOICE #
5/30/2014	4827

<b>BILL TO</b>
SANDRIDGE ENERGY, INC. ATTN: PURCHASING MANAGER 123 ROBERT S. KERR AVENUE OKLAHOMA CITY, OK 73102

<b>REMIT TO</b>
EDGE SERVICES, INC. PO BOX 609 WOODWARD, OK 73802

COUNTY	STARTING D...	WORK ORDER	RIG NUMBER	LEASE NAME	Terms
HARPER, KS	5/30/2014	3592	HWD 14	DEAN 3408 2-27H	Due on rec...

**Description**

DRILLED 60' OF 30" CONDUCTOR HOLE  
 DRILLED 6' OF 76" HOLE  
 FURNISHED AND SET 6' X 6' TINHORN CELLAR  
 FURNISHED 60' OF 20" CONDUCTOR PIPE  
 FURNISHED MUD, WATER, AND TRUCKING  
 FURNISHED WELDER AND MATERIALS  
 FURNISHED 6 YARDS OF 10 SACK GROUT FOR CONDUCTOR HOLE  
 FURNISHED GROUT PUMP

TOTAL BID \$10,000.00

**Sales Tax (6.15%)**

\$76.38

**TOTAL**

\$10,076.38





# INVOICE

PO Box 93999  
Southlake, TX 76092

Invoice Number: 144014  
Invoice Date: Jun 26, 2014  
Page: 1

Voice: (817) 546-7282  
Fax: (817) 246-3361

<b>Bill To:</b>
SandRidge Energy Accounts Payable P O Box 1748 Oklahoma City, OK 73102

Customer ID	Field Ticket #	Payment Terms	
SandR	62834	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Medicine Lodge	Jun 26, 2014	7/26/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Dean 3408 #2-27-H AFE #DC13716		
150.00	CEMENT MATERIALS	Class A Common	17.90	2,685.00
10.00	CEMENT MATERIALS	Chloride	64.00	640.00
255.00	CEMENT MATERIALS	Light Weight Type 1 Class A	16.50	4,207.50
102.00	CEMENT MATERIALS	Flo Seal	2.97	302.94
448.31	CEMENT SERVICE	Cubic Feet Charge	2.48	1,111.81
768.86	CEMENT SERVICE	Ton Mileage Charge	2.60	1,999.04
1.00	CEMENT SERVICE	Surface	2,058.50	2,058.50
40.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	176.00
40.00	CEMENT SERVICE	Pump Truck Mileage	7.70	308.00
1.00	CEMENT SERVICE	Manifold Head Rental	275.00	275.00
4.00	CEMENT SERVICE	Waiting on Location	440.00	1,760.00
1.00	EQUIPMENT SALES	9-5/8 Rubber Plug	184.86	184.86
1.00	CEMENT SUPERVISOR	Jason Thimesch		
1.00	EQUIPMENT OPERATOR	Justin Bower		
1.00	OPERATOR ASSISTANT	Kenneth Jack		
1.00	JOB DISCOUNT	Job Discount if paid within terms	4,712.59	-4,712.59

Subtotal	10,996.06
Sales Tax	493.25
Total Invoice Amount	11,489.31
Payment/Credit Applied	
<b>TOTAL</b>	<b>11,489.31</b>

ALL PRICES ARE NET, PAYABLE  
30 DAYS FOLLOWING DATE OF  
INVOICE. 1 1/2% CHARGED  
THEREAFTER. IF ACCOUNT IS  
CURRENT, TAKE DISCOUNT OF

\$

ONLY IF PAID ON OR BEFORE  
Jul 26, 2014



# INVOICE

PO Box 93999  
Southlake, TX 76092

Invoice Number: 144251  
Invoice Date: Jul 6, 2014  
Page: 1

Voice: (817) 546-7282  
Fax: (817) 246-3361

<b>Bill To:</b>
SandRidge Energy Accounts Payable P O Box 1748 Oklahoma City, OK 73102

Customer ID	Field Ticket #	Payment Terms	
SandR	62837	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-08	Medicine Lodge	Jul 6, 2014	8/5/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Dean 3408 #2-27H AFE #DC13716		
100.00	CEMENT MATERIALS	Class A Common	17.90	1,790.00
30.00	CEMENT MATERIALS	Super Flush	58.70	1,761.00
240.00	CEMENT MATERIALS	50/50/2 Blend	14.40	3,456.00
157.00	CEMENT MATERIALS	FL-160	18.90	2,967.30
21.00	CEMENT MATERIALS	C-51	17.55	368.55
19.00	CEMENT MATERIALS	CD-31	10.30	195.70
351.84	CEMENT SERVICE	Cubic Feet Charge	2.48	872.56
603.16	CEMENT SERVICE	Ton Mileage Charge	2.60	1,568.22
1.00	CEMENT SERVICE	Intermediate	3,099.25	3,099.25
40.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	176.00
40.00	CEMENT SERVICE	Pump Truck Mileage	7.70	308.00
1.00	CEMENT SERVICE	Manifold Rental	275.00	275.00
2.00	CEMENT SERVICE	Waiting on Location	440.00	880.00
3.00	CEMENT SERVICE	Circulating Iron	450.00	1,350.00
1.00	EQUIPMENT SALES	7 in Rubber Plug	99.45	99.45
1.00	CEMENT SUPERVISOR	Jason Thimesch		
1.00	OPERATOR ASSISTANT	Thomas Gibson		
1.00	OPERATOR ASSISTANT	Robert Johnson		
1.00	JOB DISCOUNT	Job Discount if paid within terms	5,750.11	-5,750.11

Subtotal	13,416.92
Sales Tax	654.25
Total Invoice Amount	14,071.17
Payment/Credit Applied	
<b>TOTAL</b>	<b>14,071.17</b>

ALL PRICES ARE NET, PAYABLE  
30 DAYS FOLLOWING DATE OF  
INVOICE. 1 1/2% CHARGED  
THEREAFTER. IF ACCOUNT IS  
CURRENT, TAKE DISCOUNT OF

\$

ONLY IF PAID ON OR BEFORE  
Aug 5, 2014

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	8/15/2014
Job End Date:	8/17/2014
State:	Kansas
County:	Harper
API Number:	15-077-22027-01-00
Operator Name:	SandRidge Energy
Well Name and Number:	Dean 3408 2-27H
Longitude:	-98.17834194
Latitude:	37.06451546
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	4,749
Total Base Water Volume (gal):	2,672,124
Total Base Non Water Volume:	0



## Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Archer	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	95.40822	None
Sand (Proppant)	Archer	Proppant					
			Silica Substrate	NA	100.00000	3.31550	None
C102	Bosque Disposal Systems, LLC	Oxidizer					
			Chlorine Dioxide	10049-04-4	15.00000	0.20235	
Hydrochloric Acid (15%)	Archer	Acidizing					
			Hydrochloric Acid	7647-01-0	15.00000	0.14260	None
			NONYL PHENOL, 4 MOL	104-40-5	10.00000	0.00432	None
			Methyl Alcohol	67-56-1	80.00000	0.00114	None
			thiourea-formaldehyde copolymer	68527-49-1	15.00000	0.00021	None
AIC	Archer	Liquid Acid Iron Control					
			Acetic Acid	64-19-7	50.00000	0.00253	None
			Citric Acid	77-92-9	30.00000	0.00152	None
Chemflush	Archer	Enviro-Friendly Chemical Flush					
			Hydrotreated Petroleum Distillate	64742-47-8	99.00000	0.00068	None

		Alcohol Ethoxylate Surfactants	NA	10.00000	0.00007	None
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.						
		Other Chemicals				
		Water	7732-18-5		0.03488	
		WATER	7732-18-5		0.02589	
		Aliphatic Hydrocarbon	64742-47-8		0.01744	
		Anionic Polymer	N/A		0.01744	
		TRADE SECRET	N/A		0.01726	
		Water	7732-18-5		0.01337	
		METHANOL	67-56-1		0.00432	
		ISOPROPANOL	67-63-0		0.00432	
		Polyol Ester	N/A		0.00291	
		Oxyalkylated Alcohol	68002-97-1		0.00291	
		Acrylic Polymer	28205-96-1		0.00223	
		Sodium Salt of Phosphate Ester	68131-72-6		0.00223	
		Water	7732-18-5		0.00177	
		Polyglycol Ester	N/A		0.00058	
		Alcohol Ethoxylate Surfactants	N/A		0.00021	
		n-olefins	N/A		0.00011	
		Propargyl Alcohol	107-19-7		0.00009	
		Tetrasodium Ethylenediaminetetraacetate	64-02-8		0.00006	
		Water	7732-18-5			
		Buffer	N/A			
		Cinnamic Aldehyde	104-55-2			
		Surfactant	N/A			
		Acetic Acid	64-19-7			

\* Total Water Volume sources may include fresh water, produced water, and/or recycled water

\*\* Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

Directional Survey Calculations	Measured Depth (ft)	Sub-Sea Incl. (deg)	Vertical Azim. (ft)	True Vert Depth (ft)	Northings (+) Southings (-) (ft)	Eastings (+) Westings (-) (ft)	Vert Section (ft)	DLS deg/100' (deg)	FNL	FSL	FWL	FEL
	SHL	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	225	5046	1320
BHL	9494	88.02	179.30	4749.46	-4689.01	1171.44	4690.23	-1.35	4919	345	2433	2757
Miss Entry	5058	73.43	169.14	4676.86	-261.07	1088.53	262.21	10.92	491	4774	2406	2780
Top Port	5674	89.43	176.34	4708.21	-870.22	1157.40	871.43	1.68	1100	4164	2467	2720
Bottom Port	9478	88.06	179.30	4748.97	-4673.02	1171.24	4674.24	-0.95	4903	361	2433	2757

Survey Points	X		Y		Surface XY		m	
	NW Corner XY Coord	2092538	145246	SW Corner XY Coord	2092604	139968	North Line slope	0.0044359
	NE Corner XY Coord	2097723	145269	SE Corner XY Coord	2097794	140021	East Line slope	-0.013529
							South Line slope	0.0102119
							West Line slope	-0.0125047

Measured Depth (ft)	Sub-Sea Incl. (deg)	Vertical Azim. (deg)	True Vert Depth (ft)	Northings (+) Southings (-) (ft)	Eastings (+) Westings (-) (ft)	Vert Section (ft)	DLS deg/100' (deg)	FNL	FSL	FWL	FEL
0	0.0	0	0	0	0	0	0	225	5046	1320	3865
857	0.7	137.98	856.98	-3.89	3.50	3.89	0.08	229	5042	1324	3862
1338	0.91	171.06	1337.93	-9.85	6.06	9.85	0.10	235	5036	1326	3859
1425	0.69	171.25	1424.92	-11.05	6.25	11.05	0.25	236	5035	1326	3859
1513	1.26	85.07	1512.92	-11.49	7.30	11.49	1.59	236	5035	1327	3858
1600	5.46	80.79	1599.75	-10.74	12.34	10.75	4.83	236	5035	1332	3853
1662	8.5	78.69	1661.28	-9.37	19.74	9.39	4.92	234	5037	1340	3846
1724	11.46	79.44	1722.33	-7.34	30.29	7.37	4.78	232	5039	1350	3835
1787	14.39	79.03	1783.73	-4.70	44.14	4.75	4.65	230	5041	1364	3821
1848	15.77	79.78	1842.63	-1.79	59.73	1.85	2.28	227	5044	1380	3806
1910	18.04	77.92	1901.95	1.71	77.42	-1.63	3.76	223	5047	1398	3788
1973	20.07	78.47	1961.49	5.92	97.55	-5.81	3.23	219	5051	1418	3768
2066	20.8	77.89	2048.64	12.57	129.33	-12.43	0.81	213	5057	1450	3736
2159	21.57	76.34	2135.35	20.07	162.09	-19.90	1.02	206	5065	1483	3703
2252	21.21	72.27	2221.95	29.23	194.72	-29.03	1.64	197	5073	1515	3670
2346	19.93	74.81	2309.96	38.61	226.38	-38.37	1.66	187	5082	1547	3638
2439	19.7	77.5	2397.46	46.15	256.99	-45.89	1.01	180	5090	1578	3608
2532	20.4	76.37	2484.82	53.37	288.04	-53.07	0.86	173	5097	1609	3577
2625	20.33	74.63	2572.01	61.47	319.37	-61.13	0.66	165	5104	1640	3545
2718	20.73	75.76	2659.10	69.80	350.90	-69.43	0.61	157	5112	1672	3513
2812	22.92	78.04	2746.36	77.69	384.94	-77.28	2.50	149	5120	1706	3479
2905	22.73	77.68	2832.08	85.27	420.21	-84.83	0.25	141	5127	1742	3444
2999	21.63	76.88	2919.12	93.08	454.82	-92.60	1.21	134	5135	1776	3409
3086	18.98	75.62	3000.71	100.23	484.15	-99.73	3.09	127	5141	1806	3380
3174	20.28	76.93	3083.59	107.24	512.87	-106.70	1.56	120	5148	1834	3351
3261	20.93	77.69	3165.02	113.96	542.74	-113.39	0.81	113	5155	1864	3321
3348	23.19	78.75	3245.65	120.62	574.73	-120.01	2.64	107	5161	1896	3289
3436	22.16	77.58	3326.85	127.57	607.93	-126.93	1.28	100	5168	1930	3256
3523	20.87	74.55	3407.79	135.22	638.89	-134.55	1.96	92	5175	1961	3225
3611	21.38	76.28	3489.87	143.20	669.58	-142.50	0.92	85	5183	1992	3194
3698	23.37	77.13	3570.32	150.81	701.81	-150.07	2.32	77	5190	2024	3161
3785	20.14	75.89	3651.11	158.31	733.17	-157.54	3.75	70	5197	2055	3130
3873	20.64	79.07	3733.60	164.94	763.09	-164.14	1.38	63	5203	2085	3100
3960	18.94	77.04	3815.46	171.01	791.91	-170.19	2.11	57	5209	2114	3071
4048	22.06	80.13	3897.88	177.05	822.12	-176.19	3.75	51	5215	2145	3041
4091	22.82	79.32	3937.62	179.98	838.27	-179.10	1.91	49	5218	2161	3025
4135	21.73	78.27	3978.34	183.22	854.63	-182.32	2.64	45	5221	2177	3008

4179	19.36	86.94	4019.55	185.26	869.89	-184.35	8.75	43	5223	2192	2993	
High DLS please slow down	4223	17.84	98.15	4061.26	184.70	883.85	-183.77	8.81	44	5222	2206	2979
RIH speed to no greater than	4266	18.37	108.45	4102.14	181.62	896.80	-180.68	7.54	47	5219	2219	2966
16.5' per min and hook up the weight line to see any dragging	4310	20.5	116.86	4143.64	175.94	910.25	-174.99	7.98	53	5213	2233	2953
	4354	22.53	123.84	4184.58	167.77	924.13	-166.80	7.42	61	5204	2246	2939
	4397	25.04	128.99	4223.93	157.45	938.05	-156.47	7.57	72	5194	2260	2925
	4441	26.03	135.62	4263.64	144.69	952.05	-143.69	6.87	84	5181	2274	2911
	4485	27.67	142.56	4302.91	129.67	965.01	-128.66	8.03	99	5166	2287	2899
	4528	29.02	148.24	4340.76	112.87	976.58	-111.85	7.01	116	5149	2298	2887
	4572	31.51	151.97	4378.76	93.64	987.60	-92.61	7.09	136	5130	2309	2876
	4616	35.01	154.49	4415.55	72.09	998.44	-71.05	8.55	157	5108	2320	2866
	4660	38.01	157.05	4450.91	48.22	1009.16	-47.16	7.65	181	5084	2330	2855
High DLS please slow down	4703	41.29	159.62	4484.02	22.72	1019.27	-21.65	8.53	207	5058	2340	2846
RIH speed to no greater than	4747	44.62	161.94	4516.22	-5.59	1029.12	6.67	8.38	235	5030	2349	2836
16.5' per min and hook up the weight line to see any dragging	4791	48.38	163.61	4546.50	-36.07	1038.55	37.16	8.98	266	4999	2358	2827
	4835	52.2	165.51	4574.61	-68.69	1047.55	69.79	9.29	298	4967	2367	2819
	4878	55.99	166.69	4599.82	-102.50	1055.91	103.60	9.09	332	4933	2375	2811
	4922	60.21	167.76	4623.07	-138.92	1064.16	140.03	9.81	369	4896	2383	2803
	4966	64.3	168.5	4643.55	-177.02	1072.16	178.14	9.41	407	4858	2390	2796
	5010	68.19	169.11	4661.27	-216.52	1079.97	217.65	8.93	446	4819	2398	2788
	5053	72.9	169.16	4675.59	-256.33	1087.61	257.47	10.95	486	4779	2405	2781
	5097	77.59	169.02	4686.79	-298.09	1095.66	299.24	10.66	528	4737	2412	2774
	5141	82.43	169.47	4694.42	-340.65	1103.75	341.81	11.05	570	4694	2420	2766
	5184	85.45	169.96	4698.96	-382.72	1111.38	383.89	7.11	613	4652	2427	2759
	5228	86.85	172.17	4701.91	-426.09	1118.20	427.26	5.94	656	4609	2433	2753
	5272	87.9	174.36	4703.93	-469.73	1123.35	470.91	5.52	700	4565	2438	2748
Top of Tangent	5316	88.32	175.46	4705.38	-513.54	1127.25	514.72	2.67	743	4521	2441	2745



	Measured Depth (ft)	Sub-Sea Incl. (deg)	Vertical Azim. (deg)	True Vert Depth (ft)	Northings (+) Southings (-) (ft)	Eastings (+) Westings (-) (ft)	Vert Section (ft)	DLS deg/100' (deg)	FNL	FSL	FWL	FEL
<b>@ 5300'</b>	5359	88.67	174.2	4706.51	-556.34	1131.13	557.53	3.04	786	4478	2444	2742
	5403	89.16	175.35	4707.34	-600.15	1135.13	601.34	2.84	830	4434	2448	2738
	5447	89.58	175.09	4707.83	-644.00	1138.80	645.19	1.12	874	4391	2451	2735
<b>Set @</b>	<b>5490</b>	<b>89.86</b>	<b>174.9</b>	<b>4708.04</b>	<b>-686.83</b>	<b>1142.55</b>	<b>688.03</b>	<b>0.79</b>	<b>917</b>	4348	2454	2732
<b>Btm of Tangent @ 5534'</b>	5534	90.14	174.61	4708.04	-730.65	1146.57	731.85	0.92	961	4304	2458	2729
	5631	90.21	175.79	4707.74	-827.31	1154.69	828.51	1.22	1057	4207	2465	2722
	5724	88.53	176.98	4708.76	-920.11	1160.55	921.33	2.21	1150	4114	2469	2717
	5817	88.25	177.61	4711.38	-1012.97	1164.94	1014.19	0.74	1243	4021	2473	2714
	5911	87.41	178.28	4714.94	-1106.84	1168.31	1108.06	1.14	1337	3927	2475	2712
	6004	87.2	179.8	4719.31	-1199.72	1169.86	1200.95	1.65	1430	3834	2475	2712
	6097	88.53	180.12	4722.77	-1292.65	1169.93	1293.88	1.47	1523	3742	2474	2713
	6191	88.39	182.98	4725.30	-1386.58	1167.39	1387.80	3.05	1617	3648	2470	2717
	6284	89.93	181.03	4726.66	-1479.50	1164.14	1480.72	2.67	1710	3555	2466	2721
	6377	89.51	180.4	4727.12	-1572.49	1162.97	1573.71	0.81	1803	3462	2464	2724
	6470	88.25	181.25	4728.94	-1665.46	1161.64	1666.68	1.63	1895	3369	2461	2726
	6564	89.37	181.04	4730.89	-1759.42	1159.76	1760.64	1.21	1989	3275	2458	2729
	6657	90.35	180.33	4731.12	-1852.41	1158.65	1853.63	1.30	2082	3182	2456	2732
	6751	89.51	179.99	4731.23	-1946.41	1158.38	1947.62	0.96	2176	3088	2454	2733
	6838	88.6	180.22	4732.67	-2033.40	1158.22	2034.61	1.08	2263	3001	2453	2735
	6925	89.65	180.36	4733.99	-2120.39	1157.78	2121.60	1.22	2350	2914	2452	2736
	7017	90	179.85	4734.27	-2212.39	1157.62	2213.60	0.67	2442	2822	2450	2738
	7104	90.49	179.96	4733.90	-2299.39	1157.76	2300.60	0.58	2529	2735	2449	2739
	7191	90.63	179.28	4733.05	-2386.38	1158.34	2387.59	0.80	2616	2648	2449	2739
	7279	89.86	179.18	4732.68	-2474.37	1159.52	2475.58	0.88	2704	2560	2449	2739
	7366	89.23	178.95	4733.37	-2561.35	1160.94	2562.57	0.77	2791	2473	2449	2739
	7453	88.11	178.97	4735.39	-2648.32	1162.52	2649.53	1.29	2878	2386	2450	2739
	7541	88.81	179.2	4737.75	-2736.27	1163.92	2737.49	0.84	2966	2298	2450	2738
	7628	89.44	178.95	4739.08	-2823.25	1165.33	2824.47	0.78	3053	2211	2450	2738
	7715	90.84	179.14	4738.87	-2910.23	1166.78	2911.46	1.62	3140	2124	2451	2738
	7802	89.44	179.49	4738.65	-2997.23	1167.82	2998.45	1.66	3227	2037	2451	2738
	7890	89.79	180.99	4739.25	-3085.22	1167.45	3086.44	1.75	3315	1949	2449	2740
	7977	89.44	180.72	4739.83	-3172.21	1166.15	3173.43	0.51	3402	1862	2447	2742
	8064	88.88	180.5	4741.11	-3259.19	1165.22	3260.41	0.69	3489	1775	2445	2744
	8152	90.21	180.24	4741.80	-3347.19	1164.66	3348.41	1.54	3577	1687	2443	2746
	8239	90	180.76	4741.65	-3434.18	1163.90	3435.40	0.64	3664	1600	2441	2748
	8326	89.65	179.57	4741.91	-3521.18	1163.65	3522.40	1.43	3751	1513	2440	2749
	8413	91.12	180.5	4741.33	-3608.18	1163.59	3609.39	2.00	3838	1426	2439	2750
	8501	89.65	180.27	4740.74	-3696.17	1163.00	3697.39	1.69	3926	1338	2437	2752
	8588	88.81	179.82	4741.90	-3783.16	1162.93	3784.38	1.10	4013	1251	2436	2754
	8675	89.16	180.28	4743.45	-3870.15	1162.86	3871.36	0.66	4100	1164	2435	2755
	8763	90.07	179.36	4744.04	-3958.14	1163.13	3959.36	1.47	4188	1076	2434	2756
	8850	90.14	179.08	4743.88	-4045.13	1164.32	4046.35	0.33	4275	989	2434	2756
	8937	89.79	179.41	4743.93	-4132.13	1165.46	4133.34	0.55	4362	902	2434	2756
	9025	89.23	179.83	4744.68	-4220.12	1166.05	4221.34	0.80	4450	814	2434	2756
	9112	90.28	179.75	4745.06	-4307.12	1166.37	4308.34	1.21	4537	727	2433	2757
	9199	90.49	179.24	4744.47	-4394.11	1167.13	4395.33	0.63	4624	640	2432	2758
	9287	89.72	178.93	4744.31	-4482.10	1168.54	4483.32	0.94	4712	552	2433	2757
	9374	88.32	179.26	4745.80	-4569.07	1169.91	4570.30	1.65	4799	465	2433	2757

Section 22  
34S 8W

\* \* HUGHES 3408 2-22H  
HUGHES 3408 1-22H

ALDO SWD 3408 1-27

DEAN 3408 2-27H

DEAN 3408 3-27H

\* \* \*

DEAN 3408 1-27H

Miss Entry: 5058'  
-98.174899 37.063897

Top Perf: 5597'  
-98.174626 37.062362

Section 27  
34S 8W

Harper County

Bottom Perf: 9430'  
-98.174264 37.051904

BHL: 9494'  
-98.174262 37.051861

2433' FWL

345' FSL

Section 34  
34S 8W



**Actual Bottom-Hole Location of Dean 3408 2-27H**  
T&R: 34S 8W  
Section: 27, 2433' FWL & 345' FSL  
-98.174262 37.051861

1 in = 667 ft

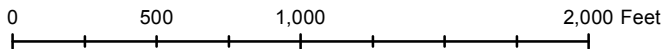


● Actual BH Location

\* SandRidge Wells

--- Perf

□ Sections



Draftsman:

Dory Deines

Draft Date: 9/16/2014

Drawing Name/Number:

Addendum\_Dean 3408 2-27H.mxd

Coordinate System:

NAD 1927 State Plane  
Kansas South FIPS: 1502