

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1255091
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
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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: _____

1255091

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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

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)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Roberts 3408 1-16H
Doc ID	1255091

Tops

Name	Top	Datum
Base Heebner	3448	
Cottage Grove	4052	
Oswego	4379	
Pawnee	4423	
Cherokee	4486	
Verdigris	4499	
Red Fork	4524	
Mississippi	4632	

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Roberts 3408 1-16H
Doc ID	1255091

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Conductor	20	20	75	90	10 Sack Grout	10	None
Surface	12.25	9.625	36	765	Class A	405	2% Calcium Chloride, .25 lbs Floseal, 2% Gypsealt, 2% SMS
Intermediate	8.75	7	26	5179	Class A	295	.1% C-51, .4% FL-160, 2% Gel
Production	6.125	4.5	11.6	9174	NA	0	NA

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	4/16/2015
Job End Date:	4/18/2015
State:	Kansas
County:	Harper
API Number:	15-077-22136-01-00
Operator Name:	SandRidge Energy
Well Name and Number:	Roberts 3408 1-16H
Longitude:	-98.18658658
Latitude:	37.09341690
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	4,690
Total Base Water Volume (gal):	2,033,708
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	95.04296	None
Sand (Proppant)	Archer	Proppant					
			Silica Substrate	NA	100.00000	4.62556	None
Hydrochloric Acid (15%)	Archer	Acidizing					
			Hydrochloric Acid	7647-01-0	15.00000	0.03918	None
			Methyl Alcohol	67-56-1	80.00000	0.00032	None
			thiourea-formaldehyde copolymer	68527-49-1	15.00000	0.00006	None
			NONYL PHENOL, 4 MOL	104-40-5	10.00000	0.00002	None
Chemflush	Archer	Enviro-Friendly Chemical Flush					
			Hydrotreated Petroleum Distillate	64742-47-8	99.00000	0.00232	None
			Alcohol Ethoxylate Surfactants	NA	10.00000	0.00023	None
AIC	Archer	Liquid Acid Iron Control					
			Acetic Acid	64-19-7	50.00000	0.00072	None
			Citric Acid	77-92-9	30.00000	0.00043	None
DiKlor	Sabre Energy Services	Oxidizer					
			Chlorine Dioxide	10069-04-4	0.40000	0.00029	

		Water	7732-18-5	99.90000	0.00016
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		0.03185
		Anionic Polymer	N/A		0.01592
		Aliphatic Hydrocarbon	64742-47-8		0.01592
		Water	7732-18-5		0.01147
		Oxyalkylated Alcohol	68002-97-1		0.00265
		Polyol Ester	N/A		0.00265
		Acrylic Polymer	28205-96-1		0.00191
		Sodium Salt of Phosphate Ester	68131-72-6		0.00191
		Polyglycol Ester	N/A		0.00053
		Water	7732-18-5		0.00050
		WATER	7732-18-5		0.00014
		TRADE SECRET	N/A		0.00010
		Alcohol Ethoxylate Surfactants	N/A		0.00006
		Tetrasodium Ethylenediaminetetraacetate	64-02-8		0.00005
		n-olefins	N/A		0.00003
		Propargyl Alcohol	107-19-7		0.00002
		ISOPROPANOL	67-63-0		0.00002
		METHANOL	67-56-1		0.00002
		Water	7732-18-5		
		Buffer	N/A		
		Acetic Acid	64-19-7		
		Surfactant	N/A		
		Cinnamic Aldehyde	104-55-2		

* 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)



INVOICE

DATE	INVOICE #
3/13/2015	5555

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

REMIT TO
EDGE SERVICES, INC. PO BOX 609 WOODWARD, OK 73802

COUNTY	Start Date	End Date	Work Order	Rig Number	LEASE NAME	Terms
HARPER, KS	3/13/2015		4134	LARIAT 20	ROBERTS 3408 1-16H	Due on rec...

Description
DRILLED 100' OF 30" CONDUCTOR HOLE DRILLED 6' OF 76" HOLE FURNISHED AND SET 6' X 6' TINHORN CELLAR FURNISHED 100' OF 20" CONDUCTOR PIPE FURNISHED MUD, WATER, AND TRUCKING FURNISHED WELDER AND MATERIALS FURNISHED 10 YARDS OF 10 SACK GROUT FOR CONDUCTOR HOLE FURNISHED 4 YARDS OF 10 SACK GROUT FOR MOUSE HOLE FURNISHED GROUT PUMP DRILL MOUSE HOLE FURNISHED 80' OF 16" CONDUCTOR PIPE 8 X 8 PLATE COVER TOTAL BID \$16,900.00 AFE Number: <u>DC 14466</u> Well Name: <u>Roberts 3408 1-16H</u> Code: <u>850.010</u> Amount: <u>\$17,175.64</u> Co. Man: <u>John/Carl</u> Co. Man Sig.: <u>Billy Smith for John Fortune</u> Notes: _____

Sales Tax (6.15%) \$275.64

TOTAL \$17,175.64



Phone: 580-254-3216
 Fax: 580-254-3279
 P. O. Box 609
 Woodward, OK 73802

4134

WORK ORDER #

RIG #:	20 Lariat	STARTING DATE:	3/13
COMPANY NAME:	SD	ORDER BY:	
LEASE NAME:	Roberts 3408 1-164	PHONE #:	
LEGAL DESCRIPTION:		COUNTY:	Harper, Ks.
		EDGE RIG:	603

DIRECTIONS:

Face Rig	N	E	S	W	Pipe	Fuel - Rig:
Rat Hole					Note	Fuel - Vehicle:
Mouse Hole					Cement	Credit Card Expenses:
Conductor					Mud Truck	
Cellar					Pump Truck	
Tin Horn					Welding	

- Drilled 160' of 30" Conductor Hole.
- Drilled 6' of 76" Hole & Set 6 x 6 Tinhorn Cellar
- Furnished Backhoe _____
- Furnished 160' of 20" Conductor Pipe _____
- Furnished Shucks _____ Rat _____ Mouse
- Furnished Mud, Water, And Transport Truck
- Furnished Welder And Materials
- Furnished Grout
- Furnished Grout Pump
- Drilled Rat Hole
- Drilled Mouse Hole
- Furnish 80' of 16" Conductor Pipe for Mousehole
- Furnish 8 x 8 Plate for Well Cover

TOTAL BID \$16,900-

STATE SALES TAX _____%

COUNTY SALES TAX _____%

INSURANCE SURCHARGE _____

FUEL SURCHARGE _____

TOTAL INVOICE _____



INVOICE

PO Box 93999
Southlake, TX 76092

Invoice Number: 149045
Invoice Date: Mar 31, 2015
Page: 1

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

Federal Tax I.D.#: 20-8651475

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

Customer ID	Field Ticket #	Payment Terms	
SandR	65017	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Medicine Lodge	Mar 31, 2015	4/30/15

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	ROBERTS34081-16		
		AFE DC14466		
150.00	CEMENT MATERIALS	Class A Common	17.90	2,685.00
480.00	CEMENT MATERIALS	Chloride	1.10	528.00
64.00	CEMENT MATERIALS	Flo Seal	2.97	190.08
255.00	CEMENT MATERIALS	Multi-Density Class A	26.57	6,775.35
282.00	CEMENT MATERIALS	Calcium Chloride	1.10	310.20
38.00	CEMENT MATERIALS	Flo Seal	2.97	112.86
445.66	CEMENT SERVICE	Cubic Feet Charge	2.48	1,105.24
997.29	CEMENT SERVICE	Ton Mileage Charge	2.75	2,742.55
1.00	CEMENT SERVICE	Surface	2,058.50	2,058.50
50.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	220.00
50.00	CEMENT SERVICE	Pump Truck Mileage	7.70	385.00
1.00	CEMENT SERVICE	Manifold Head Rental	275.00	275.00
1.00	CEMENT SERVICE	Circulating Iron	1,125.00	1,125.00
1.00	EQUIPMENT SALES	9-5/8 Top Rubber Plug	185.00	185.00
1.00	CEMENT SUPERVISOR	Jason Thimesch		
1.00	OPERATOR ASSISTANT	Kindel Holiman		
1.00	EQUIPMENT OPERATOR	Sahib Henderson		
1.00	JOB DISCOUNT	Job Discount if paid within terms	6,815.67	-6,815.67

Subtotal	11,882.11
Sales Tax	663.37
Total Invoice Amount	12,545.48
Payment/Credit Applied	
TOTAL	12,545.48

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

Apr 30, 2015

ALLIED OIL & GAS SERVICES, LLC

PO Box 93999
Southlake, TX 76092

INVOICE

Invoice Number: 149166
Invoice Date: Apr 4, 2015
Page: 1

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

Duplicate

Drop Shipment

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

Ship to:
SandRidge Energy Accounts Payable P O Box 1748 Oklahoma City, OK 73102

Customer ID	Customer PO	Payment Terms	
SandR	65020	Net 30 Days	
Sales Rep ID	Shipping Method	Ship Date	Due Date
KS1-08	Medicine Lodge	4/4/15	5/4/15

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Roberts3408116H AFE DC14466		
100.00	CEMENT MATERIALS	Class A Common	17.90	1,790.00
195.00	CEMENT MATERIALS	50/50 Poz Blend Class A	17.30	3,373.50
66.00	CEMENT MATERIALS	FL-160	18.90	1,247.40
17.00	CEMENT MATERIALS	C-51	17.55	298.35
76.00	CEMENT MATERIALS	FL-160	18.90	1,436.40
19.00	CEMENT MATERIALS	CD-31	7.73	146.87
30.00	CEMENT MATERIALS	Super Flush	58.70	1,761.00
305.70	CEMENT SERVICE	Cubic Feet Charge	2.48	758.14
657.12	CEMENT SERVICE	Ton Mileage Charge	2.75	1,807.08
1.00	CEMENT SERVICE	Intermediate	3,099.25	3,099.25
50.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	220.00
50.00	CEMENT SERVICE	Heavy Vehicle Mileage	7.70	385.00
1.00	CEMENT SERVICE	Manifold Head Rental	275.00	275.00
1.00	CEMENT SERVICE	Circulating Iron	1,125.00	1,125.00
1.00	EQUIPMENT SALES	7 in Top Rubber Plug	100.00	100.00
1.00	CEMENT SUPERVISOR	Jason Thimesch		
1.00	CEMENT SUPERVISOR	Justin Bower		
1.00	OPERATOR ASSISTANT	Kindel Holiman		
1.00	JOB DISCOUNT	Job Discount if paid within terms	8,198.57	-8,198.57
Subtotal				9,624.42
Sales Tax				624.44
Total Invoice Amount				10,248.86
Payment/Credit Applied				
TOTAL				10,248.86

Check/Credit Memo No:

Sandridge Energy

Harper County (NAD-27)

Sec 16-T34S-R08W

Roberts 3408 1-16H

Wellbore #1

Design: Wellbore #1

Standard Survey Report

08 April, 2015

DrillRight

Survey Report

Company: Sandridge Energy	Local Co-ordinate Reference: Well Roberts 3408 1-16H
Project: Harper County (NAD-27)	TVD Reference: KB @ 1338.0usft
Site: Sec 16-T34S-R08W	MD Reference: KB @ 1338.0usft
Well: Roberts 3408 1-16H	North Reference: Grid
Wellbore: Wellbore #1	Survey Calculation Method: Minimum Curvature
Design: Wellbore #1	Database: EDM 5000.1 Single User Db

Project Harper County (NAD-27)		
Map System: US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum: NAD 1927 (NADCON CONUS)		
Map Zone: Kansas South 1502		

Site Sec 16-T34S-R08W			
Site Position:	Northing: 150,433.00 usft	Latitude:	37° 4' 45.929 N
From: Map	Easting: 2,087,114.00 usft	Longitude:	98° 12' 5.062 W
Position Uncertainty: 0.0 usft	Slot Radius: 13-3/16 "	Grid Convergence:	0.18 °

Well Roberts 3408 1-16H			
Well Position	+N/-S 0.0 usft	Northing: 155,542.00 usft	Latitude: 37° 5' 36.302 N
	+E/-W 0.0 usft	Easting: 2,091,420.00 usft	Longitude: 98° 11' 11.716 W
Position Uncertainty	0.0 usft	Wellhead Elevation: 0.0 usft	Ground Level: 1,320.0 usft

Wellbore Wellbore #1					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/25/2015	4.33	65.10	51,528

Design Wellbore #1					
Audit Notes:					
Version: 1.0	Phase: ACTUAL	Tie On Depth:	0.0		
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	4,682.2	0.0	0.0	179.50	

Survey Program Date 4/8/2015					
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
835.0	9,174.0	Drillright MWD Surveys (Wellbore #1)	MWD	MWD - Standard	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
835.0	0.20	339.60	835.0	1.4	-0.5	-1.4	0.02	0.02	0.00	0.00
1,118.0	1.00	359.00	1,118.0	4.3	-0.7	-4.3	0.29	0.28	6.86	6.86
1,402.0	1.00	65.40	1,401.9	7.8	1.5	-7.8	0.39	0.00	23.38	23.38
1,680.0	0.70	46.60	1,679.9	10.0	4.9	-9.9	0.15	-0.11	-6.76	-6.76
1,774.0	1.00	39.20	1,773.9	11.0	5.9	-11.0	0.34	0.32	-7.87	-7.87
1,868.0	3.20	6.60	1,867.8	14.3	6.7	-14.2	2.57	2.34	-34.68	-34.68
1,963.0	4.80	0.90	1,962.6	20.9	7.0	-20.8	1.73	1.68	-6.00	-6.00
2,058.0	5.90	359.90	2,057.2	29.7	7.1	-29.7	1.16	1.16	-1.05	-1.05
2,153.0	5.50	1.40	2,151.7	39.2	7.2	-39.1	0.45	-0.42	1.58	1.58

DrillRight

Survey Report

Company:	Sandridge Energy	Local Co-ordinate Reference:	Well Roberts 3408 1-16H
Project:	Harper County (NAD-27)	TVD Reference:	KB @ 1338.0usft
Site:	Sec 16-T34S-R08W	MD Reference:	KB @ 1338.0usft
Well:	Roberts 3408 1-16H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2,248.0	4.80	350.80	2,246.3	47.6	6.7	-47.6	1.24	-0.74	-11.16
2,342.0	5.90	5.00	2,339.9	56.3	6.5	-56.3	1.82	1.17	15.11
2,436.0	5.70	4.00	2,433.4	65.8	7.2	-65.7	0.24	-0.21	-1.06
2,530.0	4.90	356.00	2,527.0	74.5	7.3	-74.4	1.16	-0.85	-8.51
2,625.0	5.60	9.60	2,621.7	83.1	7.8	-83.0	1.50	0.74	14.32
2,719.0	5.00	6.00	2,715.3	91.7	8.9	-91.6	0.73	-0.64	-3.83
2,814.0	6.00	18.40	2,809.8	100.5	10.9	-100.4	1.63	1.05	13.05
2,909.0	5.70	20.00	2,904.3	109.6	14.1	-109.5	0.36	-0.32	1.68
3,004.0	4.70	16.60	2,998.9	117.8	16.9	-117.7	1.10	-1.05	-3.58
3,098.0	4.80	14.90	3,092.6	125.3	19.0	-125.1	0.18	0.11	-1.81
3,193.0	4.20	12.50	3,187.3	132.5	20.7	-132.4	0.66	-0.63	-2.53
3,288.0	5.60	9.80	3,282.0	140.5	22.3	-140.3	1.49	1.47	-2.84
3,382.0	4.90	6.40	3,375.6	149.0	23.5	-148.8	0.81	-0.74	-3.62
3,477.0	5.80	7.90	3,470.2	157.8	24.6	-157.6	0.96	0.95	1.58
3,571.0	5.90	18.50	3,563.7	167.1	26.8	-166.8	1.15	0.11	11.28
3,666.0	5.10	13.70	3,658.2	175.8	29.4	-175.6	0.97	-0.84	-5.05
3,697.0	4.20	29.40	3,689.1	178.1	30.2	-177.9	5.00	-2.90	50.65
3,729.0	3.00	55.50	3,721.1	179.6	31.5	-179.4	6.26	-3.75	81.56
3,760.0	3.70	82.70	3,752.0	180.2	33.2	-179.9	5.53	2.26	87.74
3,792.0	5.60	87.20	3,783.9	180.4	35.8	-180.1	6.04	5.94	14.06
3,823.0	7.60	95.40	3,814.7	180.3	39.3	-180.0	7.12	6.45	26.45
3,855.0	8.30	110.50	3,846.4	179.3	43.6	-178.9	6.86	2.19	47.19
3,886.0	8.10	127.60	3,877.1	177.2	47.4	-176.8	7.86	-0.65	55.16
3,918.0	8.70	145.50	3,908.7	173.8	50.6	-173.4	8.35	1.88	55.94
3,949.0	9.40	161.40	3,939.4	169.5	52.7	-169.0	8.35	2.26	51.29
3,981.0	10.50	171.70	3,970.9	164.1	54.0	-163.7	6.52	3.44	32.19
4,012.0	11.80	175.20	4,001.3	158.2	54.6	-157.7	4.73	4.19	11.29
4,044.0	13.40	175.00	4,032.5	151.2	55.2	-150.7	5.00	5.00	-0.63
4,075.0	15.60	176.00	4,062.5	143.5	55.8	-143.0	7.14	7.10	3.23
4,107.0	18.60	176.40	4,093.1	134.1	56.4	-133.6	9.38	9.38	1.25
4,138.0	21.80	177.80	4,122.2	123.4	57.0	-122.9	10.44	10.32	4.52
4,170.0	25.10	179.50	4,151.6	110.7	57.3	-110.2	10.53	10.31	5.31
4,201.0	28.30	179.80	4,179.3	96.7	57.3	-96.2	10.33	10.32	0.97
4,233.0	29.80	180.40	4,207.2	81.2	57.3	-80.7	4.78	4.69	1.88
4,264.0	31.80	180.80	4,233.9	65.3	57.2	-64.8	6.49	6.45	1.29
4,296.0	34.20	181.60	4,260.7	47.9	56.8	-47.4	7.62	7.50	2.50
4,328.0	36.40	181.10	4,286.8	29.4	56.3	-28.9	6.93	6.88	-1.56
4,359.0	38.00	180.80	4,311.5	10.7	56.0	-10.2	5.19	5.16	-0.97
4,391.0	40.20	180.70	4,336.3	-9.5	55.8	10.0	6.88	6.88	-0.31
4,422.0	42.90	180.20	4,359.5	-30.0	55.6	30.5	8.78	8.71	-1.61
4,454.0	46.40	180.80	4,382.3	-52.5	55.4	53.0	11.02	10.94	1.88
4,485.0	49.60	181.10	4,403.0	-75.6	55.0	76.0	10.35	10.32	0.97
4,517.0	52.30	181.10	4,423.2	-100.4	54.6	100.9	8.44	8.44	0.00
4,548.0	55.00	181.30	4,441.6	-125.4	54.0	125.8	8.73	8.71	0.65

DrillRight Survey Report

Company: Sandridge Energy	Local Co-ordinate Reference: Well Roberts 3408 1-16H
Project: Harper County (NAD-27)	TVD Reference: KB @ 1338.0usft
Site: Sec 16-T34S-R08W	MD Reference: KB @ 1338.0usft
Well: Roberts 3408 1-16H	North Reference: Grid
Wellbore: Wellbore #1	Survey Calculation Method: Minimum Curvature
Design: Wellbore #1	Database: EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,580.0	57.50	181.00	4,459.3	-152.0	53.5	152.4	7.85	7.81	-0.94
4,611.0	60.20	181.00	4,475.4	-178.5	53.0	178.9	8.71	8.71	0.00
4,643.0	62.00	181.10	4,490.8	-206.5	52.5	206.9	5.63	5.63	0.31
4,706.0	61.30	180.90	4,520.8	-261.9	51.6	262.4	1.15	-1.11	-0.32
4,800.0	59.00	179.90	4,567.5	-343.5	51.0	343.9	2.61	-2.45	-1.06
4,832.0	58.20	179.80	4,584.2	-370.8	51.0	371.2	2.51	-2.50	-0.31
4,863.0	59.90	180.30	4,600.2	-397.4	51.0	397.8	5.66	5.48	1.61
4,895.0	63.50	181.00	4,615.3	-425.5	50.7	425.9	11.41	11.25	2.19
4,926.0	67.70	180.80	4,628.1	-453.7	50.3	454.2	13.56	13.55	-0.65
4,958.0	70.90	180.90	4,639.4	-483.7	49.8	484.1	10.00	10.00	0.31
4,989.0	73.70	181.30	4,648.9	-513.2	49.2	513.6	9.12	9.03	1.29
5,021.0	76.90	181.40	4,657.0	-544.1	48.5	544.5	10.00	10.00	0.31
5,053.0	78.70	181.40	4,663.7	-575.4	47.8	575.8	5.63	5.63	0.00
5,084.0	81.00	181.60	4,669.2	-605.9	47.0	606.3	7.45	7.42	0.65
5,116.0	85.10	181.00	4,673.1	-637.7	46.2	638.0	12.95	12.81	-1.88
5,145.0	88.00	181.40	4,674.8	-666.6	45.6	667.0	10.09	10.00	1.38
5,201.0	90.80	182.20	4,675.4	-722.6	43.9	722.9	5.20	5.00	1.43
5,295.0	90.40	181.00	4,674.4	-816.5	41.2	816.8	1.35	-0.43	-1.28
5,388.0	89.80	180.60	4,674.3	-909.5	39.9	909.8	0.78	-0.65	-0.43
5,483.0	91.50	182.50	4,673.2	-1,004.4	37.4	1,004.7	2.68	1.79	2.00
5,578.0	88.90	179.30	4,672.8	-1,099.4	35.9	1,099.7	4.34	-2.74	-3.37
5,672.0	88.50	177.60	4,675.0	-1,193.4	38.4	1,193.6	1.86	-0.43	-1.81
5,763.0	89.30	177.60	4,676.7	-1,284.3	42.2	1,284.6	0.88	0.88	0.00
5,854.0	90.40	177.40	4,677.0	-1,375.2	46.2	1,375.5	1.23	1.21	-0.22
5,944.0	91.20	177.50	4,675.7	-1,465.1	50.2	1,465.5	0.90	0.89	0.11
6,035.0	90.50	178.00	4,674.4	-1,556.0	53.8	1,556.4	0.95	-0.77	0.55
6,126.0	89.80	179.00	4,674.1	-1,647.0	56.2	1,647.4	1.34	-0.77	1.10
6,217.0	89.10	180.50	4,675.0	-1,737.9	56.6	1,738.4	1.82	-0.77	1.65
6,308.0	88.30	179.90	4,677.1	-1,828.9	56.2	1,829.3	1.10	-0.88	-0.66
6,399.0	88.90	179.50	4,679.3	-1,919.9	56.7	1,920.3	0.79	0.66	-0.44
6,490.0	88.20	179.90	4,681.6	-2,010.9	57.2	2,011.3	0.89	-0.77	0.44
6,580.0	87.60	179.00	4,684.9	-2,100.8	58.1	2,101.2	1.20	-0.67	-1.00
6,672.0	88.40	179.70	4,688.1	-2,192.7	59.1	2,193.2	1.16	0.87	0.76
6,764.0	89.30	179.90	4,689.9	-2,284.7	59.4	2,285.1	1.00	0.98	0.22
6,854.0	89.60	178.00	4,690.8	-2,374.7	61.1	2,375.1	2.14	0.33	-2.11
6,946.0	90.90	178.00	4,690.4	-2,466.6	64.3	2,467.1	1.41	1.41	0.00
7,037.0	92.30	179.80	4,687.9	-2,557.6	66.0	2,558.0	2.51	1.54	1.98
7,131.0	89.30	179.60	4,686.5	-2,651.6	66.5	2,652.0	3.20	-3.19	-0.21
7,225.0	89.10	178.70	4,687.9	-2,745.5	67.9	2,746.0	0.98	-0.21	-0.96
7,320.0	90.20	179.30	4,688.4	-2,840.5	69.6	2,841.0	1.32	1.16	0.63
7,417.0	90.60	179.30	4,687.8	-2,937.5	70.8	2,938.0	0.41	0.41	0.00
7,509.0	90.60	180.10	4,686.8	-3,029.5	71.2	3,030.0	0.87	0.00	0.87
7,603.0	90.10	179.20	4,686.2	-3,123.5	71.8	3,124.0	1.10	-0.53	-0.96

DrillRight

Survey Report

Company: Sandridge Energy	Local Co-ordinate Reference: Well Roberts 3408 1-16H
Project: Harper County (NAD-27)	TVD Reference: KB @ 1338.0usft
Site: Sec 16-T34S-R08W	MD Reference: KB @ 1338.0usft
Well: Roberts 3408 1-16H	North Reference: Grid
Wellbore: Wellbore #1	Survey Calculation Method: Minimum Curvature
Design: Wellbore #1	Database: EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,698.0	90.20	181.30	4,686.0	-3,218.5	71.4	3,219.0	2.21	0.11	2.21
7,797.0	91.00	182.20	4,684.9	-3,317.4	68.4	3,317.9	1.22	0.81	0.91
7,886.0	89.10	181.10	4,684.9	-3,406.4	65.8	3,406.8	2.47	-2.13	-1.24
7,981.0	89.10	181.50	4,686.4	-3,501.4	63.7	3,501.8	0.42	0.00	0.42
8,076.0	88.80	180.90	4,688.1	-3,596.3	61.7	3,596.7	0.71	-0.32	-0.63
8,170.0	89.50	181.70	4,689.5	-3,690.3	59.5	3,690.7	1.13	0.74	0.85
8,265.0	90.80	182.80	4,689.2	-3,785.2	55.8	3,785.5	1.79	1.37	1.16
8,359.0	91.50	180.60	4,687.4	-3,879.1	53.0	3,879.4	2.46	0.74	-2.34
8,454.0	91.10	182.10	4,685.2	-3,974.1	50.8	3,974.4	1.63	-0.42	1.58
8,548.0	89.10	179.90	4,685.0	-4,068.1	49.1	4,068.3	3.16	-2.13	-2.34
8,643.0	90.60	183.50	4,685.3	-4,163.0	46.3	4,163.2	4.11	1.58	3.79
8,738.0	89.50	182.70	4,685.2	-4,257.9	41.2	4,258.1	1.43	-1.16	-0.84
8,832.0	89.10	181.30	4,686.4	-4,351.8	37.9	4,352.0	1.55	-0.43	-1.49
8,927.0	90.90	181.70	4,686.4	-4,446.8	35.4	4,446.9	1.94	1.89	0.42
9,021.0	90.70	181.00	4,685.0	-4,540.7	33.2	4,540.8	0.77	-0.21	-0.74
9,115.0	92.30	181.60	4,682.6	-4,634.7	31.1	4,634.8	1.82	1.70	0.64
9,174.0	92.30	181.60	4,680.2	-4,693.6	29.4	4,693.7	0.00	0.00	0.00

PBHL Roberts 1-16H

Checked By: _____ Approved By: _____ Date: _____

Section 9
34S 8W

ROBERTS 3408 2-16H



CATHER TRUST 3408 2-9H

CATHER TRUST 3408 1-9H



ROBERTS 3408 1-16H

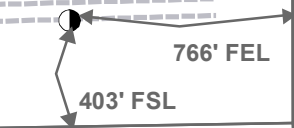
Miss Entry: 4958'
-98.186720 37.092128

Top Perf: 5424'
-98.186720 37.090970

Section 16
34S 8W

Harper County

Bottom Perf: 9155'
-98.186454 37.080839
BHL: 9174'
-98.186455 37.080678



Section 21
34S 8W



Actual Bottom-Hole Location of Roberts 3408 1-16H
T&R: 34S 8W
Section: 16, 766' FEL & 403' FSL
-98.186455 37.080678

1 in = 666 ft

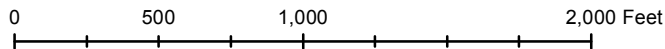


● Actual BH Location

* SandRidge Wells

--- Perf

□ Sections



Draftsman:

Dory Deines

Draft Date: 6/16/2015

Drawing Name/Number:

Addendum_Roberts 3408 1-16H.mxd

Coordinate System:

NAD 1927 State Plane
Kansas South FIPS: 1502