

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1252083
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: _____

1252083

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
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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> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Mary 3408 3-21H Perforations

Stage Nbr	Date	Type	Top Depth	Top Depth (TVD)	Bottom Depth	Bottom Depth (TVD)	Zone	Shot Density	Current Status	Wellbore	String Perforated	Fluid Type
15	3/21/2015	Frac Sleeve	5676	4681	5677	4681	Miss Lime - Upper	1	Active	Original Hole	Production Liner	Fresh Water
14	3/21/2015	Frac Sleeve	5853	4687	5854	4687	Miss Lime - Upper	1	Active	Original Hole	Production Liner	Fresh Water
13	3/21/2015	Frac Sleeve	6171	4697	6172	4697	Miss Lime - Upper	1	Active	Original Hole	Production Liner	Fresh Water
12	3/21/2015	Frac Sleeve	6477	4704	6478	4704	Miss Lime - Upper	1	Active	Original Hole	Production Liner	Fresh Water
11	3/21/2015	Frac Sleeve	6793	4698	6794	4698	Miss Lime - Upper	1	Active	Original Hole	Production Liner	Fresh Water
10	3/21/2015	Frac Sleeve	7107	4699	7108	4699	Miss Lime - Upper	1	Active	Original Hole	Production Liner	Fresh Water
9	3/21/2015	Frac Sleeve	7420	4697	7421	4697	Miss Lime - Upper	1	Active	Original Hole	Production Liner	Fresh Water
8	3/21/2015	Frac Sleeve	7734	4696	7735	4696	Miss Lime - Upper	1	Active	Original Hole	Production Liner	Fresh Water
7	3/21/2015	Frac Sleeve	8036	4700	8037	4700	Miss Lime - Upper	1	Active	Original Hole	Production Liner	Fresh Water
6	3/21/2015	Frac Sleeve	8360	4703	8361	4703	Miss Lime - Upper	1	Active	Original Hole	Production Liner	Fresh Water
5	3/21/2015	Frac Sleeve	8651	4696	8652	4696	Miss Lime - Upper	1	Active	Original Hole	Production Liner	Fresh Water
4	3/21/2015	Frac Sleeve	8973	4693	8974	4693	Miss Lime - Upper	1	Active	Original Hole	Production Liner	Fresh Water
3	3/21/2015	Frac Sleeve	9298	4701	9299	4701	Miss Lime - Upper	1	Active	Original Hole	Production Liner	Fresh Water
2	3/21/2015	Frac Sleeve	9572	4702	9573	4702	Miss Lime - Upper	1	Active	Original Hole	Production Liner	Fresh Water
1	3/21/2015	Frac Sleeve	9901		9902		Miss Lime - Upper	1	Active	Original Hole	Production Liner	Fresh Water



SandRidge Energy
Mary #3408 3-21H
Harper County, KS.

1.0 Executive Summary

Allied Oil & Gas Services would like to thank you, for the award of the provision of cementing products and services on the well Mary #3408 3-21H Surface Casing

A pre-job meeting was held to discuss job details, review the safety hazards, potential environmental impact and established emergency procedures.

Allied started the job testing lines to 3000 psi. After a successful test we began the job by pumping 10 bbls of preflush spacer. We then mixed and pumped the following cements:

77 Bbls (235 sacks) of 13.2 ppg Lead slurry:
Allied Multy Density Cement - 1.85 Yield
2% cc
.25# Floseal

32 Bbls (150 sacks) of 15.6 ppg Tail slurry:
Class A - 1.20 Yield
2%cc
.25# Floseal

The top plug was then released and displaced with 56.41 of fresh water. The plug bumped and pressured up to 1100 psi. Pressure was released and floats held.

All real time data is shown on the graph in the attachment section.

Allied Oil & Gas Services remains committed to provide operational excellence and superior product performance. All comments and suggestions are greatly appreciated and help us to continue to provide this level of service.

Again we want to thank you for the opportunity to perform these and your future cementing & acidizing service needs.



SandRidge Energy
Mary #3408 3-21H
Harper County, KS.

1.0 Executive Summary

Allied Oil & Gas Services would like to thank you, for the award of the provision of cementing products and services on the well Mary #3408 3-21H Intermediate Casing

A pre-job meeting was held to discuss job details, review the safety hazards, potential environmental impact and established emergency procedures.

Allied started the job testing lines to 3100 psi. After a successful test we began the job by pumping 30 bbls of preflush spacer. We then mixed and pumped the following cements:

60 Bbls (240 sacks) of 13.6 ppg Lead slurry:
50:50 Class A:Poz Blend - 1.4 Yield
2.0% Gel
0.4% FL-160
0.1% SA-51

21 Bbls (100 sacks) of 15.6 ppg Tail slurry:
Class A - 1.18 Yield
0.8% FL-160
0.2% CD-31

The top plug was then released and displaced with 209 of fresh water. The plug bumped and pressured up to 1250 psi. Pressure was released and floats held.

All real time data is shown on the graph in the attachment section.

Allied Oil & Gas Services remains committed to provide operational excellence and superior product performance. All comments and suggestions are greatly appreciated and help us to continue to provide this level of service.

Again we want to thank you for the opportunity to perform these and your future cementing & acidizing service needs.



INVOICE

DATE	INVOICE #
2/11/2015	5482

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	2/10/2015		4089	LARIAT 20	MARY 3408 3-21H	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 FOR MOUSE HOLE TOTAL BID \$17,500.00

Sales Tax (6.15%)	\$275.64
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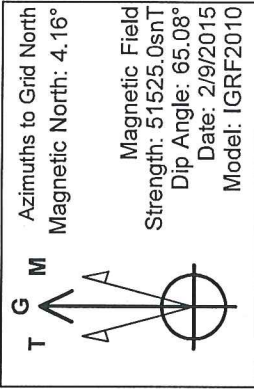
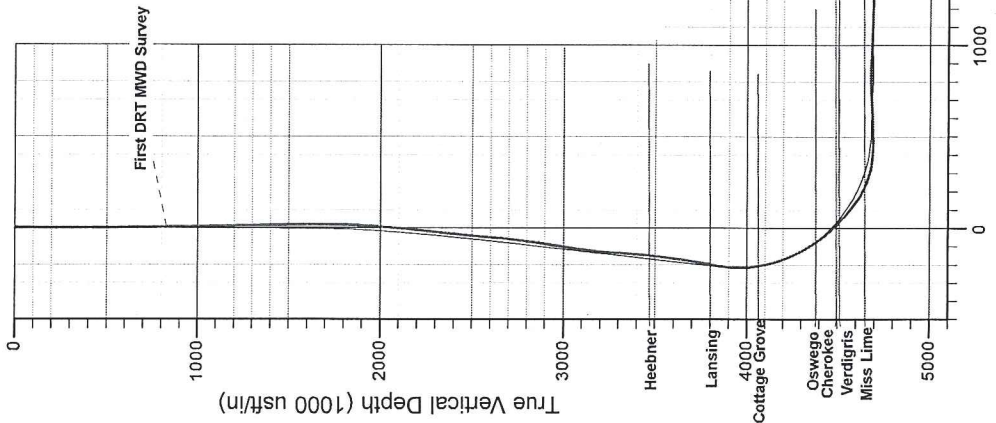
TOTAL	\$17,775.64
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SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0	Start Build 2.00
2456.0	19.12	242.13	2438.4	-73.9	-139.7	2.00	242.13	-50.8	Start 1534.5 hold at 2456.0 MD
3990.5	19.12	242.13	3888.2	-308.8	-584.0	0.00	0.00	-212.3	Start DLS 8.00 TFO 117.14
5201.7	88.00	0.00	4679.8	375.0	-818.0	8.00	117.14	500.0	Start 275.0 hold at 5201.7 MD
5476.7	88.00	0.00	4689.4	649.8	-818.0	0.00	0.00	771.4	Start Build 8.00
5506.7	90.40	0.00	4689.9	679.8	-818.0	8.00	0.00	801.0	Landing Point
9917.0	90.40	360.00	4659.0	5090.0	-818.0	0.00	-2.60	5155.3	TD at 9917.0

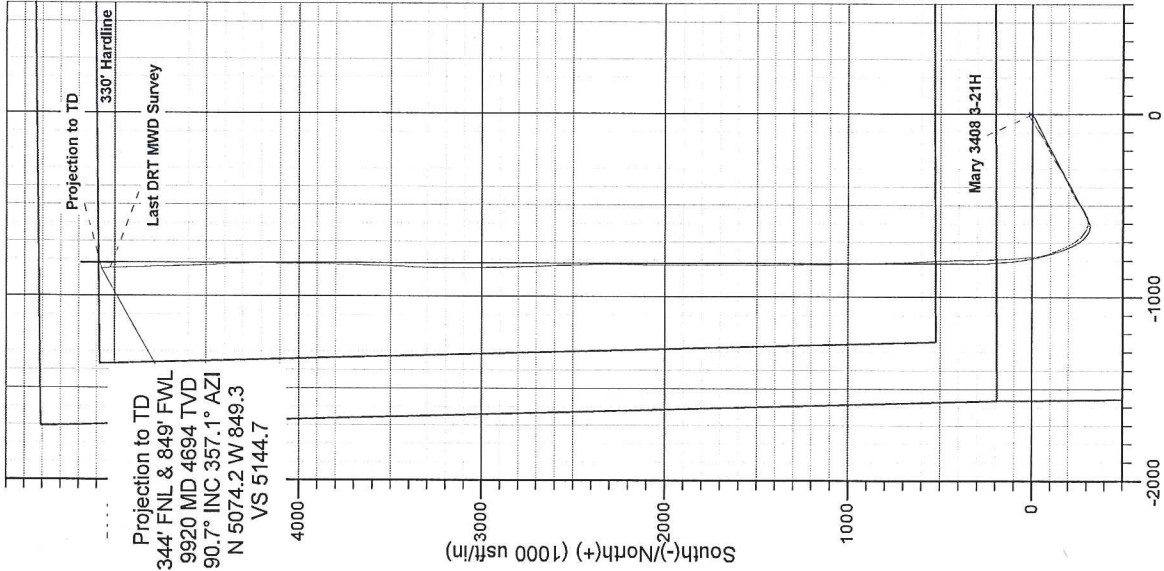
Project: Harper County (NAD-27)
Site: Sec 28-T34S-R08W
Well: Mary 3408 3-21H
Plan: Plan 020915 A0 (Mary 3408 3-21H/Wellbore #1)

WELL DETAILS: Mary 3408 3-21H		
Ground Level:	1275.0	
Northing	Easting	Latitude Longitude
145025.00	2088821.00	37° 3' 52.405 N 98° 11' 44.216 W



Target Line: 02-09-15
 4695 KBTVD @ 0' VS
 90.4° @ 350.87 AZI Plane

Projection to TD
 344' FNL & 849' FWL
 9920 MD 4694 TVD
 90.7° INC 357.1° AZI
 N 5074.2 W 849.3
 VS 5144.7



Projection to TD
 344' FNL & 849' FWL
 9920 MD 4694 TVD
 90.7° INC 357.1° AZI
 N 5074.2 W 849.3
 VS 5144.7

Survey Report

Company: Sandridge Energy	Local Co-ordinate Reference: Well Mary 3408 3-21H
Project: Harper County (NAD-27)	TVD Reference: KB @ 1293.0usft
Site: Sec 28-T34S-R08W	MD Reference: KB @ 1293.0usft
Well: Mary 3408 3-21H	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 28-T34S-R08W		
Site Position:	Northing: 139,947.00 usft	Latitude: 37° 3' 2.247 N
From: Map	Easting: 2,087,312.00 usft	Longitude: 98° 12' 3.034 W
Position Uncertainty: 0.0 usft	Slot Radius: 13-3/16 "	Grid Convergence: 0.18 °

Well Mary 3408 3-21H			
Well Position	+N/-S 0.0 usft	Northing: 145,025.00 usft	Latitude: 37° 3' 52.405 N
	+E/-W 0.0 usft	Easting: 2,088,821.00 usft	Longitude: 98° 11' 44.216 W
Position Uncertainty	0.0 usft	Wellhead Elevation: 0.0 usft	Ground Level: 1,275.0 usft

Wellbore Wellbore #1					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/9/2015	4.35	65.08	51,525

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 (°)
	0.0	0.0	0.0	350.50

Survey Program		Date 2/26/2015
From (usft)	To (usft)	Survey (Wellbore)
829.0	9,920.0	Drillright MWD Surveys (Wellbore #1)
		Tool Name MWD
		Description 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	
829.0	1.30	27.80	828.9	8.3	4.4	7.5	0.16	0.16	0.00	
First DRT MWD Survey										
1,207.0	1.30	33.20	1,206.8	15.7	8.7	14.0	0.03	0.00	1.43	
1,396.0	1.30	46.70	1,395.8	19.0	11.5	16.8	0.16	0.00	7.14	
1,491.0	1.50	312.20	1,490.8	20.5	11.3	18.4	2.17	0.21	-99.47	
1,586.0	3.50	278.70	1,585.7	21.8	7.5	20.3	2.52	2.11	-35.26	
1,680.0	5.10	263.50	1,679.4	21.8	0.6	21.4	2.08	1.70	-16.17	
1,774.0	5.90	245.80	1,773.0	19.3	-8.0	20.4	1.98	0.85	-18.83	
1,869.0	7.40	241.60	1,867.3	14.4	-17.8	17.2	1.66	1.58	-4.42	
1,963.0	8.70	234.10	1,960.4	7.4	-28.9	12.0	1.78	1.38	-7.98	

Survey Report

Company:	Sandridge Energy	Local Co-ordinate Reference:	Well Mary 3408 3-21H
Project:	Harper County (NAD-27)	TVD Reference:	KB @ 1293.0usft
Site:	Sec 28-T34S-R08W	MD Reference:	KB @ 1293.0usft
Well:	Mary 3408 3-21H	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)
2,058.0	10.50	234.60	2,054.1	-1.9	-41.8	5.1	1.90	1.89	0.53
2,152.0	12.60	237.40	2,146.2	-12.4	-57.4	-2.7	2.31	2.23	2.98
2,247.0	13.60	235.50	2,238.7	-24.3	-75.4	-11.5	1.15	1.05	-2.00
2,341.0	14.60	237.70	2,329.9	-36.9	-94.5	-20.8	1.21	1.06	2.34
2,436.0	15.40	239.50	2,421.6	-49.7	-115.5	-29.9	0.97	0.84	1.89
2,530.0	16.10	239.10	2,512.1	-62.7	-137.4	-39.1	0.75	0.74	-0.43
2,625.0	17.50	244.50	2,603.0	-75.6	-161.6	-47.9	2.21	1.47	5.68
2,720.0	20.10	244.60	2,693.0	-88.8	-189.2	-56.3	2.74	2.74	0.11
2,814.0	21.00	240.80	2,781.0	-103.9	-218.5	-66.4	1.71	0.96	-4.04
2,909.0	21.30	239.70	2,869.6	-120.9	-246.3	-78.3	0.52	0.32	-1.16
3,003.0	19.30	235.90	2,957.8	-136.2	-275.9	-90.8	2.55	-2.13	-4.04
3,098.0	17.80	230.40	3,047.8	-156.3	-300.1	-104.6	2.42	-1.58	-5.79
3,193.0	18.20	242.10	3,138.2	-172.5	-324.4	-116.6	3.82	0.42	12.32
3,287.0	17.90	245.30	3,227.6	-185.4	-350.5	-125.0	1.10	-0.32	3.40
3,382.0	18.20	250.00	3,317.9	-196.6	-377.7	-131.5	1.56	0.32	4.95
3,476.0	17.20	246.10	3,407.5	-207.2	-404.2	-137.7	1.65	-1.06	-4.15
3,571.0	19.30	243.40	3,497.7	-220.0	-431.1	-145.8	2.38	2.21	-2.84
3,665.0	21.40	236.40	3,585.8	-236.4	-459.3	-157.3	3.42	2.23	-7.45
3,759.0	18.70	232.90	3,674.1	-255.0	-485.6	-171.3	3.14	-2.87	-3.72
3,853.0	20.30	233.50	3,762.7	-273.8	-510.7	-185.7	1.72	1.70	0.64
3,916.0	21.40	238.00	3,821.6	-286.4	-529.2	-195.1	3.08	1.75	7.14
3,947.0	22.00	240.10	3,850.4	-292.3	-539.1	-199.3	3.17	1.94	6.77
3,979.0	21.60	245.00	3,880.1	-297.7	-549.6	-202.9	5.82	-1.25	15.31
4,011.0	20.30	252.00	3,910.0	-301.9	-560.2	-205.3	8.81	-4.06	21.88
4,042.0	19.70	258.90	3,939.1	-304.6	-570.5	-206.3	7.85	-1.94	22.26
4,074.0	19.00	264.90	3,969.3	-306.1	-581.0	-206.0	6.58	-2.19	18.75
4,105.0	18.80	269.50	3,998.7	-306.6	-591.0	-204.8	4.85	-0.65	14.84
4,137.0	17.40	277.60	4,029.1	-306.0	-600.9	-202.6	8.99	-4.38	25.31
4,168.0	17.60	284.70	4,058.7	-304.2	-610.0	-199.3	6.91	0.65	22.90
4,200.0	19.40	289.90	4,089.0	-301.2	-619.7	-194.7	7.63	5.63	16.25
4,231.0	21.50	295.20	4,118.1	-297.0	-629.7	-189.0	9.03	6.77	17.10
4,263.0	23.50	301.30	4,147.6	-291.2	-640.4	-181.5	9.60	6.25	19.06
4,295.0	24.80	306.20	4,176.8	-283.9	-651.3	-172.5	7.46	4.06	15.31
4,326.0	26.30	311.40	4,204.8	-275.5	-661.7	-162.5	8.70	4.84	16.77
4,358.0	27.40	316.70	4,233.3	-265.5	-672.1	-150.9	8.23	3.44	16.56
4,389.0	28.30	321.00	4,260.8	-254.6	-681.6	-138.6	7.10	2.90	13.87
4,421.0	29.50	325.60	4,288.8	-242.2	-690.8	-124.8	7.89	3.75	14.38
4,452.0	31.40	328.80	4,315.5	-229.0	-699.3	-110.4	8.06	6.13	10.32
4,484.0	33.10	330.90	4,342.6	-214.2	-707.9	-94.4	6.36	5.31	6.56
4,516.0	34.20	332.70	4,369.2	-198.6	-716.3	-77.6	4.64	3.44	5.63
4,547.0	36.20	334.30	4,394.5	-182.6	-724.2	-60.5	7.10	6.45	5.16
4,579.0	38.80	336.70	4,419.9	-164.9	-732.3	-41.7	9.32	8.13	7.50
4,610.0	40.10	337.70	4,443.9	-146.7	-739.9	-22.5	4.67	4.19	3.23

Survey Report

Company:	Sandridge Energy	Local Co-ordinate Reference:	Well Mary 3408 3-21H
Project:	Harper County (NAD-27)	TVD Reference:	KB @ 1293.0usft
Site:	Sec 28-T34S-R08W	MD Reference:	KB @ 1293.0usft
Well:	Mary 3408 3-21H	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)	
4,642.0	42.20	339.20	4,468.0	-127.1	-747.6	-2.0	7.25	6.56	4.69	
4,673.0	45.00	341.00	4,490.4	-107.0	-754.9	19.1	9.88	9.03	5.81	
4,705.0	46.10	343.70	4,512.8	-85.2	-761.8	41.7	6.93	3.44	8.44	
4,736.0	48.30	346.60	4,533.9	-63.3	-767.6	64.3	9.87	7.10	9.35	
4,768.0	49.30	350.20	4,555.0	-39.7	-772.5	88.4	9.02	3.13	11.25	
4,799.0	51.20	352.80	4,574.8	-16.1	-776.0	112.2	8.90	6.13	8.39	
4,831.0	54.60	353.80	4,594.1	9.2	-779.0	137.7	10.91	10.63	3.13	
4,862.0	57.60	354.30	4,611.4	34.8	-781.6	163.4	9.77	9.68	1.61	
4,894.0	61.10	355.00	4,627.7	62.2	-784.2	190.8	11.10	10.94	2.19	
4,925.0	64.60	356.60	4,641.8	89.7	-786.2	218.3	12.19	11.29	5.16	
4,957.0	68.40	357.50	4,654.6	119.0	-787.7	247.4	12.15	11.88	2.81	
4,989.0	72.20	357.60	4,665.4	149.1	-789.0	277.3	11.88	11.88	0.31	
5,020.0	76.00	357.80	4,673.9	178.9	-790.2	306.9	12.27	12.26	0.65	
5,052.0	79.60	357.40	4,680.6	210.1	-791.5	337.9	11.32	11.25	-1.25	
5,083.0	82.80	357.60	4,685.4	240.8	-792.8	368.3	10.34	10.32	0.65	
5,115.0	85.30	357.90	4,688.7	272.6	-794.1	399.9	7.87	7.81	0.94	
5,146.0	87.30	358.30	4,690.7	303.5	-795.1	430.6	6.58	6.45	1.29	
5,178.0	89.70	358.30	4,691.5	335.4	-796.1	462.3	7.50	7.50	0.00	
5,209.0	90.90	358.50	4,691.4	366.4	-796.9	493.0	3.92	3.87	0.65	
5,272.0	91.90	358.30	4,689.8	429.4	-798.7	555.3	1.62	1.59	-0.32	
5,367.0	93.20	357.80	4,685.6	524.2	-801.9	649.4	1.47	1.37	-0.53	
5,461.0	93.90	357.00	4,679.8	618.0	-806.2	742.6	1.13	0.74	-0.85	
5,486.0	91.90	357.20	4,678.5	642.9	-807.4	767.4	8.04	-8.00	0.80	
5,547.0	88.90	357.30	4,678.1	703.8	-810.4	827.9	4.92	-4.92	0.16	
5,579.0	89.00	357.90	4,678.7	735.8	-811.7	859.7	1.90	0.31	1.88	
5,673.0	87.90	358.90	4,681.2	829.7	-814.3	952.7	1.58	-1.17	1.06	
5,767.0	88.50	358.80	4,684.2	923.6	-816.2	1,045.7	0.65	0.64	-0.11	
5,861.0	87.90	359.30	4,687.1	1,017.6	-817.8	1,138.6	0.83	-0.64	0.53	
5,956.0	88.20	359.10	4,690.3	1,112.5	-819.1	1,232.5	0.38	0.32	-0.21	
6,047.0	88.30	358.50	4,693.1	1,203.4	-821.0	1,322.5	0.67	0.11	-0.66	
6,137.0	88.10	359.80	4,696.0	1,293.4	-822.3	1,411.4	1.46	-0.22	1.44	
6,227.0	88.40	359.30	4,698.7	1,383.3	-823.0	1,500.2	0.65	0.33	-0.56	
6,319.0	88.50	359.00	4,701.2	1,475.3	-824.4	1,591.2	0.34	0.11	-0.33	
6,411.0	89.10	359.50	4,703.1	1,567.3	-825.6	1,682.1	0.85	0.65	0.54	
6,503.0	90.00	359.40	4,703.8	1,659.3	-826.5	1,772.9	0.98	0.98	-0.11	
6,594.0	91.10	359.40	4,703.0	1,750.3	-827.5	1,862.8	1.21	1.21	0.00	
6,686.0	91.80	359.70	4,700.6	1,842.2	-828.2	1,953.7	0.83	0.76	0.33	
6,777.0	91.30	0.50	4,698.2	1,933.2	-828.0	2,043.4	1.04	-0.55	0.88	
6,867.0	89.50	1.60	4,697.5	2,023.2	-826.4	2,131.8	2.34	-2.00	1.22	
6,959.0	89.50	1.30	4,698.3	2,115.1	-824.0	2,222.1	0.33	0.00	-0.33	
7,050.0	89.70	0.70	4,699.0	2,206.1	-822.5	2,311.6	0.69	0.22	-0.66	
7,142.0	90.20	0.20	4,699.1	2,298.1	-821.7	2,402.2	0.77	0.54	-0.54	
7,232.0	90.50	359.40	4,698.5	2,388.1	-822.0	2,491.0	0.95	0.33	-0.89	

Survey Report

Company:	Sandridge Energy	Local Co-ordinate Reference:	Well Mary 3408 3-21H
Project:	Harper County (NAD-27)	TVD Reference:	KB @ 1293.0usft
Site:	Sec 28-T34S-R08W	MD Reference:	KB @ 1293.0usft
Well:	Mary 3408 3-21H	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)	
7,322.0	90.90	358.00	4,697.4	2,478.1	-824.1	2,580.1	1.62	0.44	-1.56	
7,416.0	90.00	358.30	4,696.7	2,572.0	-827.1	2,673.3	1.01	-0.96	0.32	
7,510.0	90.80	356.70	4,696.0	2,665.9	-831.2	2,766.6	1.90	0.85	-1.70	
7,605.0	90.60	357.70	4,694.9	2,760.8	-835.9	2,860.9	1.07	-0.21	1.05	
7,700.0	88.70	359.90	4,695.4	2,855.8	-837.8	2,954.9	3.06	-2.00	2.32	
7,794.0	89.60	357.80	4,696.8	2,949.7	-839.7	3,047.9	2.43	0.96	-2.23	
7,889.0	89.70	358.60	4,697.4	3,044.7	-842.7	3,142.0	0.85	0.11	0.84	
7,984.0	88.40	359.70	4,699.0	3,139.7	-844.1	3,235.9	1.79	-1.37	1.16	
8,078.0	88.60	1.40	4,701.5	3,233.6	-843.2	3,328.5	1.82	0.21	1.81	
8,172.0	89.00	2.50	4,703.4	3,327.5	-840.0	3,420.6	1.24	0.43	1.17	
8,266.0	90.20	3.10	4,704.1	3,421.4	-835.4	3,512.4	1.43	1.28	0.64	
8,361.0	90.80	1.90	4,703.2	3,516.3	-831.3	3,605.3	1.41	0.63	-1.26	
8,456.0	91.30	1.80	4,701.5	3,611.3	-828.2	3,698.4	0.54	0.53	-0.11	
8,551.0	92.40	1.50	4,698.4	3,706.2	-825.5	3,791.6	1.20	1.16	-0.32	
8,645.0	90.20	1.40	4,696.3	3,800.1	-823.1	3,883.9	2.34	-2.34	-0.11	
8,739.0	90.10	0.70	4,696.1	3,894.1	-821.4	3,976.3	0.75	-0.11	-0.74	
8,834.0	90.20	0.80	4,695.8	3,989.1	-820.1	4,069.8	0.15	0.11	0.11	
8,929.0	91.80	1.50	4,694.2	4,084.1	-818.2	4,163.1	1.84	1.68	0.74	
9,024.0	89.40	359.40	4,693.2	4,179.0	-817.5	4,256.7	3.36	-2.53	-2.21	
9,118.0	87.50	358.30	4,695.7	4,273.0	-819.4	4,349.6	2.34	-2.02	-1.17	
9,212.0	88.20	357.90	4,699.2	4,366.9	-822.5	4,442.7	0.86	0.74	-0.43	
9,306.0	89.10	357.50	4,701.4	4,460.8	-826.3	4,536.0	1.05	0.96	-0.43	
9,401.0	89.60	357.60	4,702.5	4,555.7	-830.3	4,630.2	0.54	0.53	0.11	
9,495.0	90.30	357.90	4,702.6	4,649.6	-834.0	4,723.5	0.81	0.74	0.32	
9,589.0	89.90	357.70	4,702.4	4,743.5	-837.6	4,816.7	0.48	-0.43	-0.21	
9,684.0	92.30	358.90	4,700.6	4,838.5	-840.4	4,910.8	2.82	2.53	1.26	
9,778.0	92.20	358.10	4,696.9	4,932.3	-842.9	5,003.8	0.86	-0.11	-0.85	
9,870.0	90.70	357.10	4,694.6	5,024.2	-846.8	5,095.1	1.96	-1.63	-1.09	
Last DRT MWD Survey										
9,920.0	90.70	357.10	4,694.0	5,074.2	-849.3	5,144.7	0.00	0.00	0.00	
Projection to TD - PBHL Mary 3408 3-21H										

Checked By: _____ Approved By: _____ Date: _____

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	3/20/2015
Job End Date:	3/20/2015
State:	Kansas
County:	Harper
API Number:	15-077-22132-01-00
Operator Name:	SandRidge Energy
Well Name and Number:	Mary 3408 #3-21H
Longitude:	-98.19561440
Latitude:	37.06455460
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	4,659
Total Base Water Volume (gal):	1,526,154
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	Well Operator	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	94.96213	None
40/70 Preferred Sand	CAF	Proppant, Scouring, Fill					
			Crystalline Silica (quartz)	14808-60-7	100.00000	4.61361	None
15% Uninhibited HCl Acid	CAF	Etching, Dissolving, Cleaning					
			Water	7732-18-5	85.00000	0.31271	None
			Hydrochloric Acid	7647-01-0	15.00000	0.05518	None
SI-2	CAF	Scale Inhibitor					
			Water	7732-18-5	50.00000	0.00487	None
			Hydrochloric Acid	7647-01-0	16.80000	0.00164	None
			Ethylene Glycol	107-21-1	12.70000	0.00124	None
			Methanol	67-56-1	3.60000	0.00035	None
FR-1	CAF	Friction Reducer					
			Petroleum Hydrotreated Light Distillate	64742-47-8	2.50000	0.00114	None
CIA-1	CAF	Acid Corrosion Inhibitor					
			Water	7732-18-5	24.00000	0.00015	None
			Methanol	67-56-1	9.00000	0.00005	None

			Ethoxylated Nonylphenol	68412-54-4	8.40000	0.00005	None
			Isopropyl Alcohol	67-63-0	8.40000	0.00005	None
			Triethyl Phosphate	78-40-0	8.40000	0.00005	None
			N-Dimethylformamide	68-12-2	8.40000	0.00005	None
			2-Butoxyethanol	111-76-2	8.40000	0.00005	None
			Cinnamaldehyde	104-55-2	8.40000	0.00005	None
			Ethylene Glycol	107-21-1	8.40000	0.00005	None
			Tar Bases-quinoline derivs-benzyl chloride/quaternized	72480-70-7	8.40000	0.00005	None
NE-1	CAF	Non-Emulsifier					
			Water	7732-18-5	54.50000	0.00010	None
			Water	7732-18-5	54.50000	0.00010	None
			Polyglycol Ethers	52624-57-4	13.60000	0.00003	None
			Isopropanol	67-63-0	13.60000	0.00003	None
			Glycol Ether EB	111-76-2	9.00000	0.00002	None
			Methanol	67-56-1	9.00000	0.00002	None
			Methanol	67-56-1	9.00000	0.00002	None
IC-3	CAF	Iron Control					
			Sodium Erythorbate	6381-77-7	100.00000	0.00012	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.

* 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)