Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1224634

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 # 34192
Name: SandRidge Exploration and Production LLC
Address 1: 123 ROBERT S. KERR AVE
Address 2:
City: OKLAHOMA CITY State: OK Zip: 73102 + 6406
Contact Person: Wanda Ledbetter
Phone: (405) 429-5500
CONTRACTOR: License # 34740
Name: Horizontal Well Drillers, LLC
Wellsite Geologist: Trey Boardman
Purchaser: plains = Oil & Atlas = Gas

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 #:

5/28/2014	6/28/2014	7/11/2014
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-077-22051-01-00
Spot Description:
SE - NE - NW - NW Sec. 11 Twp. 33 S. R. 6 ☐ East ☑ West
400 Feet from ☑ North / ☐ South Line of Section
1080 Feet from ☐ East / ☑ West Line of Section

Footages Calculated from Nearest Outside Section Corner:
☐ NE ☑ NW ☐ SE ☐ SW

GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Harper
Lease Name: Henry 3306 Well #: 3-2H
Field Name:
Producing Formation: Mississippi
Elevation: Ground: 1313 Kelly Bushing: 1328
Total Vertical Depth: 9547 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 697 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: 33872 ppm Fluid volume: 4850 bbls
Dewatering method used: Evaporated

Location of fluid disposal if hauled offsite:

Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. ☐ East ☐ West
County: Permit #:

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

☑ **Confidentiality Requested**
Date: 09/25/2014
☑ **Confidential Release Date:** 09/24/2016
☑ **Wireline Log Received**
☐ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 10/06/2014

[redacted] 1224634

Operator Name: SandRidge Exploration and Production LLC Lease Name: Henry 3306 Well #: 3-2H

Sec. 11 Twp. 33 S. R. 6 ☐ East ☑ West County: Harper

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 ☐ Yes ☑ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☐ Yes ☑ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Compensated Neutron
Array Induction
Spectral Gamma Ray

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Base Heebner	3189	-1827
Lansing	3542	-2171
Cottage Grove	3810	-2430
Oswego	4180	-2751
Cherokee	4331	-2871
Mississippi Unconformity	4780	-3071

CASING RECORD ☑ New ☐ 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
Conductor	30	20	75	60	Grout	10	see report
Surface	12.25	9.625	36	697	65/35 POZ Class C	340	see report
Intermediate	8.75	7	26	5177	50/50 POZ Class A	330	see report

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate ___ Protect Casing ___ Plug Back TD ___ Plug Off Zone	-			
	-			

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 *(Amount and Kind of Material Used)*	Depth
Attached	Attached	Attached	Attached

TUBING RECORD: Size: 4.5 Set At: 9547 Packer At: Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. 8/20/2014

Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☑ Other *(Explain)* ESP

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	125	632	2390		

DISPOSITION OF GAS:
☐ Vented ☑ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)* _____

PRODUCTION INTERVAL:
_____
_____

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Henry 3306 3-2H
Doc ID	1224634

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
1	5258-5260		
	5429-5431		
	5641-5643		
	5854-5856		
	6025-6027		
	6281-6283		
	6491-6493		
	6703-6705		
	6873-6875		
	7125-7127		
	7296-7298		
	7546-7548		
	7757-7759		
	7927-7929		
	8141-8143		
	8395-8397		
	8607-8609		
	8776-8778		
	8985-8987	Frac: 15% HCL Acid, Fresh Slickwater	5258-9547
	9237-9239	See Frac Report	
	9445-9447		

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Henry 3306 3-2H
Doc ID	1224634

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	30	20	75	60	Grout	10	see report
Surface	12.25	9.625	36	697	65/35 POZ Class C	340	see report
Intermediate	8.75	7	26	5177	50/50 POZ Class A	330	see report

Sandridge Energy, INC.(mid-con.)

Archer
The well company

SANDRIDGE
THE POWER OF US

Project: Harper County (KS27S)
Site: Sec 11-T33S-R06W
Well: Henry 3306 3-2H/Job #04830-431-22/HWD 8
Plan: Plan 052314 A0 (Henry 3306 3-2H/Job #04830-431-22/HWD 8/Wellbore #1)

Projection to TD
9,580.0' MD & 4,411.4' TVD
5,328.2 N & 765.3' W
334' FNL & 423' FWL

WELL DETAILS: Henry 3306 3-2H/Job #04830-431-22/HWD 8			
Ground Level: 1313.0			
Northing	Easting	Latittude	Longitude
192959.80	2161901.60	37° 11' 43.005 N	97° 56' 39.113 W

SECTION DETAILS

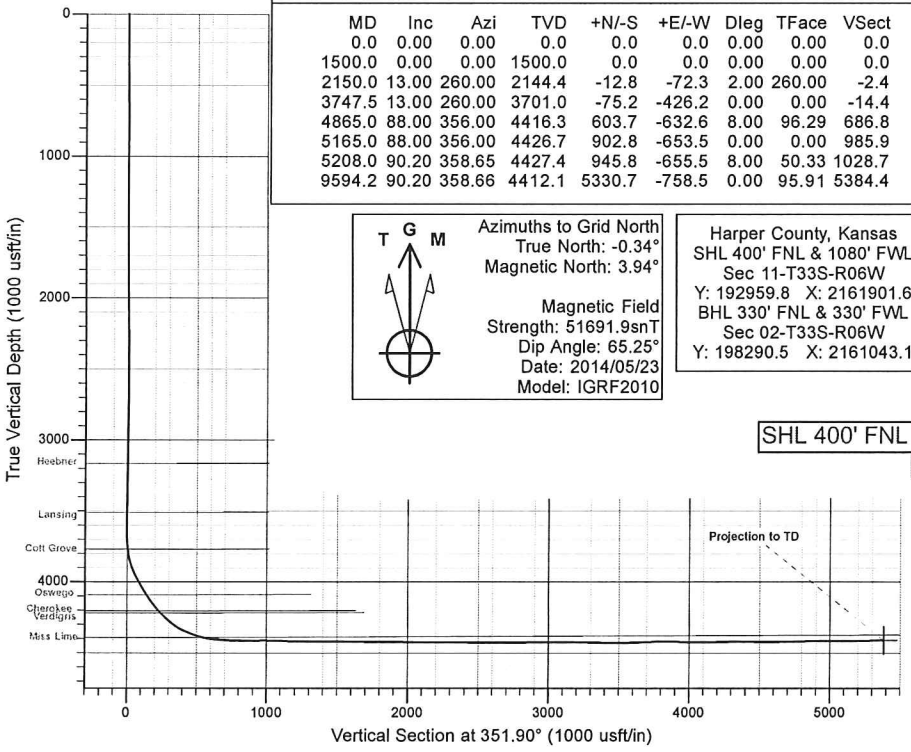
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0
2150.0	13.00	260.00	2144.4	-12.8	-72.3	2.00	260.00	-2.4
3747.5	13.00	260.00	3701.0	-75.2	-426.2	0.00	0.00	-14.4
4865.0	88.00	356.00	4416.3	603.7	-632.6	8.00	96.29	686.8
5165.0	88.00	356.00	4426.7	902.8	-653.5	0.00	0.00	985.9
5208.0	90.20	358.65	4427.4	945.8	-655.5	8.00	50.33	1028.7
9594.2	90.20	358.66	4412.1	5330.7	-758.5	0.00	95.91	5384.4

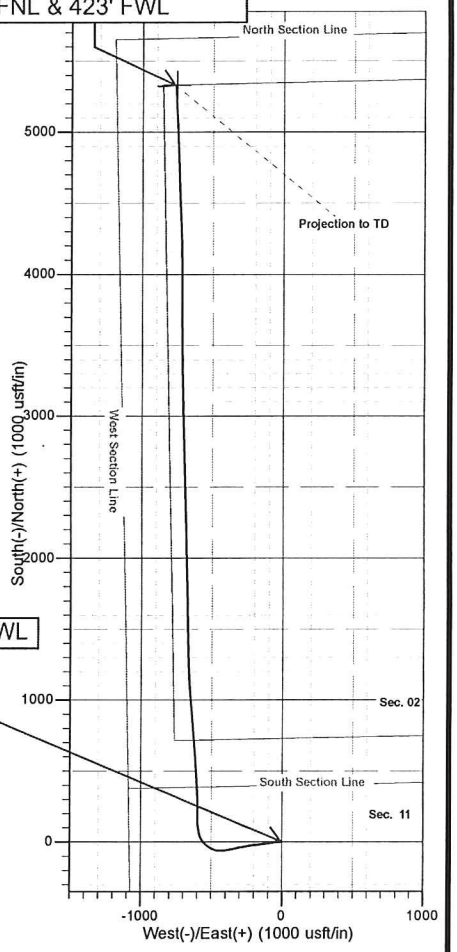
T G M

Azimuths to Grid North
True North: -0.34°
Magnetic North: 3.94°

Magnetic Field
Strength: 51691.9snT
Dip Angle: 65.25°
Date: 2014/05/23
Model: IGRF2010

Harper County, Kansas
SHL 400' FNL & 1080' FWL
Sec 11-T33S-R06W
Y: 192959.8 X: 2161901.6
BHL 330' FNL & 330' FWL
Sec 02-T33S-R06W
Y: 198290.5 X: 2161043.1





Sandridge Energy, INC.(mid-con.)

Harper County (KS27S)
Sec 11-T33S-R06W
Henry 3306 3-2H/Job #04830-431-22/HWD 8

Wellbore #1

Design: Wellbore #1

Standard Survey Report

02 July, 2014

ARCHER
Survey Report

Company:	Sandridge Energy, INC.(mid-con.)	**Local Co-ordinate Reference:**	Well Henry 3306 3-2H/Job #04830-431-22/HWD 8
Project:	Harper County (KS27S)	**TVD Reference:**	WELL @ 1328.0usft (Original Well Elev)
Site:	Sec 11-T33S-R06W	**MD Reference:**	WELL @ 1328.0usft (Original Well Elev)
Well:	Henry 3306 3-2H/Job #04830-431-22/HWD 8	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	EDM 5000.1 Single User Db

Project	Harper County (KS27S)		
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 11-T33S-R06W				
Site Position:		**Northing:**	192,959.80 usft	**Latitude:**	37° 11' 43.005 N
From:	Map	**Easting:**	2,161,901.60 usft	**Longitude:**	97° 56' 39.113 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.34 °

Well	Henry 3306 3-2H/Job #04830-431-22/HWD 8					
Well Position	**+N/-S**	0.0 usft	**Northing:**	192,959.80 usfl	**Latitude:**	37° 11' 43.005 N
	+E/-W	0.0 usft	**Easting:**	2,161,901.60 usfl	**Longitude:**	97° 56' 39.113 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usfl	**Ground Level:**	1,313.0 usfl

Wellbore	Wellbore #1			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	2014/05/23	4.28	65.25	51,692

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	351.90

Survey Program **Date** 2014/07/02

From (usft)	**To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
270.0	9,580.0	Archer 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
270.0	0.20	319.70	270.0	0.4	-0.3	0.4	0.07	0.07	0.00
First Single Shot Survey									
542.0	0.90	319.70	542.0	2.4	-2.0	2.6	0.26	0.26	0.00
697.0	0.40	319.70	697.0	3.7	-3.1	4.1	0.32	-0.32	0.00
Last Single Shot Survey									
751.0	0.30	319.70	751.0	3.9	-3.3	4.4	0.19	-0.19	0.00
First Archer MWD Survey									
997.0	0.10	138.90	997.0	4.3	-3.6	4.7	0.16	-0.08	72.85
1,220.0	0.20	215.40	1,220.0	3.8	-3.7	4.3	0.09	0.04	34.30

ARCHER
Survey Report

Company:	Sandridge Energy, INC.(mid-con.)	**Local Co-ordinate Reference:**	Well Henry 3306 3-2H/Job #04830-431-22/HWD 8
Project:	Harper County (KS27S)	**TVD Reference:**	WELL @ 1328.0usft (Original Well Elev)
Site:	Sec 11-T33S-R06W	**MD Reference:**	WELL @ 1328.0usft (Original Well Elev)
Well:	Henry 3306 3-2H/Job #04830-431-22/HWD 8	**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)
1,441.0	0.10	186.10	1,441.0	3.3	-4.0	3.8	0.06	-0.05	-13.26
1,486.0	0.50	248.60	1,486.0	3.2	-4.1	3.7	1.03	0.89	138.89
1,531.0	2.20	256.60	1,531.0	2.9	-5.2	3.6	3.79	3.78	17.78
1,575.0	3.10	256.40	1,574.9	2.4	-7.1	3.4	2.05	2.05	-0.45
1,619.0	4.00	260.80	1,618.8	1.9	-9.8	3.3	2.14	2.05	10.00
1,663.0	5.40	263.50	1,662.7	1.4	-13.4	3.3	3.22	3.18	6.14
1,705.0	6.30	263.50	1,704.5	1.0	-17.6	3.4	2.14	2.14	0.00
1,750.0	6.70	265.00	1,749.2	0.4	-22.7	3.6	0.97	0.89	3.33
1,789.0	7.30	263.80	1,787.9	0.0	-27.4	3.8	1.58	1.54	-3.08
1,834.0	8.30	263.10	1,832.5	-0.7	-33.5	4.0	2.23	2.22	-1.56
1,878.0	9.00	264.70	1,876.0	-1.4	-40.1	4.2	1.68	1.59	3.64
1,923.0	9.50	264.30	1,920.4	-2.1	-47.3	4.6	1.12	1.11	-0.89
1,965.0	9.90	262.30	1,961.8	-2.9	-54.3	4.7	1.25	0.95	-4.76
2,010.0	10.80	262.60	2,006.0	-4.0	-62.3	4.8	2.00	2.00	0.67
2,054.0	11.50	264.20	2,049.2	-5.0	-70.8	5.0	1.74	1.59	3.64
2,099.0	12.00	262.90	2,093.3	-6.0	-79.9	5.3	1.26	1.11	-2.89
2,185.0	12.10	262.00	2,177.4	-8.4	-97.7	5.5	0.25	0.12	-1.05
2,274.0	13.00	262.30	2,264.2	-11.0	-116.8	5.6	1.01	1.01	0.34
2,364.0	12.00	261.20	2,352.1	-13.8	-136.1	5.5	1.14	-1.11	-1.22
2,453.0	12.70	262.60	2,439.0	-16.5	-155.0	5.5	0.86	0.79	1.57
2,542.0	13.10	263.60	2,525.8	-18.9	-174.7	5.9	0.51	0.45	1.12
2,631.0	12.40	264.20	2,612.6	-20.9	-194.2	6.6	0.80	-0.79	0.67
2,720.0	13.10	260.10	2,699.4	-23.6	-213.7	6.7	1.28	0.79	-4.61
2,808.0	11.60	259.90	2,785.4	-26.9	-232.2	6.1	1.71	-1.70	-0.23
2,898.0	11.40	257.00	2,873.6	-30.5	-249.8	5.0	0.68	-0.22	-3.22
2,989.0	12.20	259.50	2,962.6	-34.3	-268.0	3.8	1.04	0.88	2.75
3,078.0	12.10	263.40	3,049.7	-37.1	-286.5	3.7	0.93	-0.11	4.38
3,168.0	13.40	258.70	3,137.4	-40.2	-306.1	3.3	1.85	1.44	-5.22
3,256.0	12.40	256.90	3,223.2	-44.3	-325.3	1.9	1.22	-1.14	-2.05
3,346.0	13.00	260.60	3,311.0	-48.2	-344.7	0.9	1.12	0.67	4.11
3,436.0	13.40	258.90	3,398.6	-51.8	-364.9	0.1	0.62	0.44	-1.89
3,524.0	11.30	254.10	3,484.6	-56.2	-383.2	-1.6	2.65	-2.39	-5.45
3,613.0	13.30	263.80	3,571.6	-59.7	-401.8	-2.5	3.22	2.25	10.90
3,659.0	14.10	264.60	3,616.3	-60.7	-412.6	-2.0	1.79	1.74	1.74
3,704.0	13.10	264.10	3,660.0	-61.8	-423.2	-1.6	2.24	-2.22	-1.11
3,748.0	15.40	270.30	3,702.6	-62.3	-434.0	-0.5	6.27	5.23	14.09
3,791.0	18.80	276.00	3,743.7	-61.5	-446.6	2.0	8.81	7.91	13.26
3,835.0	21.60	281.90	3,785.0	-59.1	-461.6	6.5	7.86	6.36	13.41
3,880.0	25.30	290.50	3,826.3	-54.0	-478.7	13.9	11.18	8.22	19.11
3,925.0	28.20	296.20	3,866.5	-46.0	-497.2	24.5	8.60	6.44	12.67
3,969.0	31.10	302.00	3,904.7	-35.3	-516.2	37.7	9.27	6.59	13.18
4,014.0	31.60	309.40	3,943.2	-21.7	-535.2	53.9	8.62	1.11	16.44
4,058.0	32.80	318.80	3,980.4	-5.4	-551.9	72.4	11.70	2.73	21.36

ARCHER
Survey Report

Company:	Sandridge Energy, INC.(mid-con.)	**Local Co-ordinate Reference:**	Well Henry 3306 3-2H/Job #04830-431-22/HWD 8
Project:	Harper County (KS27S)	**TVD Reference:**	WELL @ 1328.0usft (Original Well Elev)
Site:	Sec 11-T33S-R06W	**MD Reference:**	WELL @ 1328.0usft (Original Well Elev)
Well:	Henry 3306 3-2H/Job #04830-431-22/HWD 8	**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)
4,100.0	32.80	327.40	4,015.8	12.7	-565.6	92.3	11.08	0.00	20.48
4,145.0	33.20	336.00	4,053.5	34.3	-577.2	115.2	10.44	0.89	19.11
4,190.0	33.60	344.60	4,091.1	57.6	-585.5	139.5	10.55	0.89	19.11
4,234.0	35.60	351.90	4,127.3	82.0	-590.5	164.4	10.45	4.55	16.59
4,279.0	38.50	354.70	4,163.3	108.9	-593.7	191.5	7.45	6.44	6.22
4,321.0	41.20	356.80	4,195.5	135.7	-595.6	218.3	7.18	6.43	5.00
4,365.0	45.50	358.30	4,227.5	165.9	-596.9	248.3	10.05	9.77	3.41
4,410.0	49.50	0.50	4,257.9	199.1	-597.2	281.2	9.59	8.89	4.89
4,455.0	52.80	0.30	4,286.1	234.1	-597.0	315.9	7.34	7.33	-0.44
4,500.0	57.50	0.20	4,311.8	271.0	-596.8	352.4	10.45	10.44	-0.22
4,544.0	62.50	359.30	4,333.8	309.1	-597.0	390.1	11.50	11.36	-2.05
4,588.0	66.30	356.60	4,352.8	348.8	-598.4	429.6	10.26	8.64	-6.14
4,633.0	70.70	357.00	4,369.3	390.6	-600.8	471.3	9.81	9.78	0.89
4,675.0	74.50	356.60	4,381.9	430.6	-603.0	511.2	9.09	9.05	-0.95
4,720.0	78.20	355.90	4,392.5	474.2	-605.9	554.8	8.36	8.22	-1.56
4,764.0	81.30	355.60	4,400.3	517.4	-609.1	598.0	7.08	7.05	-0.68
4,807.0	83.50	355.90	4,406.0	559.9	-612.2	640.5	5.16	5.12	0.70
4,851.0	86.40	356.50	4,409.9	603.6	-615.2	684.2	6.73	6.59	1.36
4,896.0	87.70	356.10	4,412.2	648.4	-618.1	729.0	3.02	2.89	-0.89
4,940.0	88.20	355.60	4,413.8	692.3	-621.2	772.9	1.61	1.14	-1.14
4,985.0	88.80	355.40	4,414.9	737.1	-624.8	817.8	1.41	1.33	-0.44
5,030.0	89.80	355.20	4,415.5	782.0	-628.5	862.7	2.27	2.22	-0.44
5,075.0	90.60	354.70	4,415.3	826.8	-632.4	907.7	2.10	1.78	-1.11
5,117.0	91.30	354.90	4,414.6	868.6	-636.2	949.6	1.73	1.67	0.48
5,162.0	91.30	354.70	4,413.6	913.4	-640.3	994.5	0.44	0.00	-0.44
5,273.0	87.10	355.80	4,415.2	1,024.0	-649.5	1,105.3	3.91	-3.78	0.99
5,363.0	88.40	356.60	4,418.7	1,113.8	-655.4	1,195.0	1.70	1.44	0.89
5,451.0	90.10	356.90	4,419.9	1,201.6	-660.4	1,282.7	1.96	1.93	0.34
5,543.0	89.50	358.30	4,420.2	1,293.5	-664.3	1,374.2	1.66	-0.65	1.52
5,634.0	89.50	359.40	4,421.0	1,384.5	-666.1	1,464.5	1.21	0.00	1.21
5,724.0	89.90	359.00	4,421.4	1,474.5	-667.4	1,553.8	0.63	0.44	-0.44
5,816.0	89.20	358.70	4,422.2	1,566.5	-669.2	1,645.1	0.83	-0.76	-0.33
5,907.0	90.20	357.60	4,422.6	1,657.4	-672.2	1,735.6	1.63	1.10	-1.21
5,998.0	89.10	359.40	4,423.2	1,748.4	-674.5	1,826.0	2.32	-1.21	1.98
6,090.0	89.40	359.10	4,424.4	1,840.4	-675.7	1,917.2	0.46	0.33	-0.33
6,180.0	89.60	358.70	4,425.2	1,930.3	-677.5	2,006.5	0.50	0.22	-0.44
6,270.0	89.70	358.10	4,425.7	2,020.3	-680.0	2,095.9	0.68	0.11	-0.67
6,360.0	90.20	359.40	4,425.8	2,110.3	-681.9	2,185.3	1.55	0.56	1.44
6,452.0	88.50	358.30	4,426.9	2,202.2	-683.8	2,276.6	2.20	-1.85	-1.20
6,543.0	89.50	358.40	4,428.4	2,293.2	-686.4	2,367.0	1.10	1.10	0.11
6,636.0	90.40	358.40	4,428.5	2,386.2	-689.0	2,459.4	0.97	0.97	0.00
6,727.0	90.30	358.80	4,428.0	2,477.1	-691.2	2,549.8	0.45	-0.11	0.44

ARCHER
Survey Report

Company:	Sandridge Energy, INC.(mid-con.)	**Local Co-ordinate Reference:**	Well Henry 3306 3-2H/Job #04830-431-22/HWD 8
Project:	Harper County (KS27S)	**TVD Reference:**	WELL @ 1328.0usft (Original Well Elev)
Site:	Sec 11-T33S-R06W	**MD Reference:**	WELL @ 1328.0usft (Original Well Elev)
Well:	Henry 3306 3-2H/Job #04830-431-22/HWD 8	**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)
6,819.0	89.50	358.80	4,428.1	2,569.1	-693.2	2,641.1	0.87	-0.87	0.00
6,911.0	90.10	358.20	4,428.5	2,661.1	-695.6	2,732.5	0.92	0.65	-0.65
7,003.0	91.60	359.30	4,427.1	2,753.0	-697.6	2,823.9	2.02	1.63	1.20
7,095.0	91.00	358.80	4,425.0	2,845.0	-699.1	2,915.1	0.85	-0.65	-0.54
7,187.0	89.50	358.60	4,424.6	2,937.0	-701.2	3,006.5	1.64	-1.63	-0.22
7,279.0	91.40	358.20	4,423.9	3,028.9	-703.8	3,097.9	2.11	2.07	-0.43
7,371.0	88.20	358.40	4,424.2	3,120.9	-706.5	3,189.3	3.49	-3.48	0.22
7,462.0	88.40	358.70	4,426.9	3,211.8	-708.8	3,279.6	0.40	0.22	0.33
7,554.0	89.00	358.10	4,429.0	3,303.7	-711.3	3,371.0	0.92	0.65	-0.65
7,646.0	89.70	359.20	4,430.0	3,395.7	-713.5	3,462.4	1.42	0.76	1.20
7,738.0	90.70	359.30	4,429.7	3,487.7	-714.7	3,553.6	1.09	1.09	0.11
7,830.0	92.80	359.10	4,426.9	3,579.6	-716.0	3,644.8	2.29	2.28	-0.22
7,922.0	91.20	358.80	4,423.7	3,671.6	-717.7	3,736.1	1.77	-1.74	-0.33
8,014.0	92.40	0.30	4,420.8	3,763.5	-718.4	3,827.2	2.09	1.30	1.63
8,106.0	86.70	0.20	4,421.5	3,855.5	-718.0	3,918.2	6.20	-6.20	-0.11
8,198.0	88.70	359.60	4,425.2	3,947.4	-718.2	4,009.2	2.27	2.17	-0.65
8,289.0	90.80	0.00	4,425.6	4,038.4	-718.5	4,099.3	2.35	2.31	0.44
8,381.0	91.30	359.50	4,423.9	4,130.4	-718.9	4,190.5	0.77	0.54	-0.54
8,471.0	91.60	358.40	4,421.6	4,220.3	-720.5	4,279.7	1.27	0.33	-1.22
8,562.0	88.90	358.10	4,421.2	4,311.3	-723.3	4,370.2	2.99	-2.97	-0.33
8,654.0	89.00	357.30	4,422.9	4,403.2	-727.0	4,461.7	0.88	0.11	-0.87
8,746.0	89.70	357.30	4,424.0	4,495.1	-731.3	4,553.3	0.76	0.76	0.00
8,838.0	91.90	358.70	4,422.7	4,587.0	-734.6	4,644.7	2.83	2.39	1.52
8,930.0	91.10	358.30	4,420.3	4,678.9	-737.0	4,736.1	0.97	-0.87	-0.43
9,022.0	90.60	357.80	4,418.9	4,770.9	-740.1	4,827.6	0.77	-0.54	-0.54
9,114.0	90.70	357.50	4,417.9	4,862.8	-743.9	4,919.1	0.34	0.11	-0.33
9,206.0	89.80	356.80	4,417.5	4,954.7	-748.4	5,010.7	1.24	-0.98	-0.76
9,298.0	90.40	357.60	4,417.3	5,046.6	-752.9	5,102.3	1.09	0.65	0.87
9,389.0	91.70	357.00	4,415.6	5,137.4	-757.2	5,192.9	1.57	1.43	-0.66
9,481.0	91.20	357.60	4,413.3	5,229.3	-761.5	5,284.4	0.85	-0.54	0.65
9,534.0	91.10	357.90	4,412.3	5,282.3	-763.6	5,337.2	0.60	-0.19	0.57
Last Archer MWD Survey									
9,580.0	91.10	357.90	4,411.4	5,328.2	-765.3	5,382.9	0.00	0.00	0.00
Projection to TD									

Company:	Sandridge Energy, INC.(mid-con.)	**Local Co-ordinate Reference:**	Well Henry 3306 3-2H/Job #04830-431-22/HWD 8
Project:	Harper County (KS27S)	**TVD Reference:**	WELL @ 1328.0usft (Original Well Elev)
Site:	Sec 11-T33S-R06W	**MD Reference:**	WELL @ 1328.0usft (Original Well Elev)
Well:	Henry 3306 3-2H/Job #04830-431-22/HWD 8	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	EDM 5000.1 Single User Db

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
270.0	270.0	0.4	-0.3	First Single Shot Survey
697.0	697.0	3.7	-3.1	Last Single Shot Survey
751.0	751.0	3.9	-3.3	First Archer MWD Survey
9,534.0	4,412.3	5,282.3	-763.6	Last Archer MWD Survey
9,580.0	4,411.4	5,328.2	-765.3	Projection to TD

Checked By: _____ Approved By: _____ Date: _____

JOB SUMMARY

PROJECT NUMBER	TICKET DATE
SOK 3838	06/13/14

COUNTY	State	COMPANY	CUSTOMER REP
Harper	Kansas	Sandridge Exploration & Production	Carlos Rendon

LEASE NAME	Well No.	JOB TYPE	EMPLOYEE NAME
Henry 3306	3-2H	Intermediate	marcos quintana

EMP NAME							
Marcos Quintana		0					
Wallace Berry							
rj s							
David Settlemier							

Form. Name _____ Type: _____

Packer Type _____ Set At 0

Bottom Hole Temp. 155 Pressure _____

Retainer Depth _____ Total Depth 5177

	Called Out	On Location	Job Started	Job Completed
Date	6/13/2014	6/13/2014	6/13/2014	6/13/2014
Time	0100	0730	0910	1112

Tools and Accessories

Type and Size	Qty	Make
Auto Fill Tube	0	IR
Insert Float Val	0	IR
Centralizers	0	IR
Top Plug	0	IR
HEAD	0	IR
Limit clamp	0	IR
Weld-A	0	IR
Texas Pattern Guide Shoe	0	IR
Cement Basket	0	IR

Well Data

	New/Used	Weight	Size	Grade	From	To	Max. Allow
Casing		26#	7"		Surface		5,000
Liner							
Liner							
Tubing			0				
Drill Pipe							
Open Hole			8¾"		Surface	5,208	Shots/Ft.
Perforations							
Perforations							
Perforations							

Materials

Mud Type	WBM	Density 9	Lb/Gal	
Disp. Fluid	Fresh Water	Density 8.33	Lb/Gal	
Spacer type	resh Wate	BBL. 20		8.33
Spacer type	Caustic	BBL. 10		8.40
Acid Type		Gal.	%	
Acid Type		Gal.	%	
Surfactant		Gal.	In	
NE Agent		Gal.	In	
Fluid Loss		Gal/Lb	In	
Gelling Agent		Gal/Lb	In	
Fric. Red.		Gal/Lb	In	
MISC.		Gal/Lb	In	

Perfpac Balls _____ Qty. _____

Other _____

Other _____

Other _____

Other _____

Other _____

Hours On Location

Date	Hours
6/13	5.0
Total	5.0

Operating Hours

Date	Hours
6/13	2.0
Total	2.0

Description of Job

Intermediate

Pressures

MAX 5,000 PSI AVG. 500

Average Rates in BPM

MAX 8 BPM AVG 5

Cement Left in Pipe

Feet 43 Reason SHOE JOINT

Cement Data

Stage	Sacks	Cement	Additives	W/Rq.	Yield	Lbs/Gal
1	220	50/50 POZ PREMIUM	4% Gel - 0.2% FL-17 - 0.1% C-51 - 0.2% C-20 - 0.1% C-37 - 0.4% C-41P	6.93	1.43	13.60
2	110	Premium	0.2% FL-17 - 0.1% C-51 - 0.1% C-20 - 0.4% C-41P	5.19	1.19	15.60
3	0	0	0	0.00	0.00	0.00

Summary

Preflush	10	Type:	Caustic	Preflush:	BBl	30.00	Type: Gel Spacer
Breakdown		MAXIMUM	5,000 PSI	Load & Bkdn:	Gal - BBl	N/A	Pad:Bbl -Gal N/A
		Lost Returns-N	NO/FULL	Excess /Return	BBl	N/A	Calc.Disp Bbl 196
		Actual TOC		Calc. TOC:		2,396	Actual Disp. 195.00
Average		Bump Plug PSI:	1,000	Final Circ.	PSI:	500	Disp:Bbl
ISIP _____	5 Min. _____	10 Min _____	15 Min _____	Cement Slurry:	BBl	79.0	
				Total Volume	BBl	304.00	

CUSTOMER REPRESENTATIVE _____ SIGNATURE

JOB SUMMARY

PROJECT NUMBER	TICKET DATE
SOK3803	06/03/14

COUNTY	State	COMPANY	CUSTOMER REP
Harper	Kansas	dridge Exploration & Produc	Jase

LEASE NAME	Well No.	JOB TYPE	EMPLOYEE NAME
Henry 3306	3-2H	Surface	marcos quintana

EMP NAME							
Marcos Quintana		0					
Wallace Berry							
David Thomas							
0.00							

Form. Name _____ Type: _____

Packer Type _____ Set At 0

Bottom Hole Temp. 80 Pressure _____

Retainer Depth _____ Total Depth 700'

	Called Out	On Location	Job Started	Job Completed
Date	6/3/2014	6/3/2014	6/3/2014	6/3/2014
Time	0700	1400	1800	1905

Tools and Accessories

Type and Size	Qty	Make
Auto Fill Tube	0	IR
Insert Float Val	0	IR
Centralizers	0	IR
Top Plug	0	IR
HEAD	0	IR
Limit clamp	0	IR
Weld-A	0	IR
Texas Pattern Guide Shoe	0	IR
Cement Basket	0	IR

Well Data

	New/Used	Weight	Size Grade	From	To	Max. Allow
Casing		36#	9⅝"	Surface	700'	1,500
Liner						
Liner						
Tubing			0			
Drill Pipe						
Open Hole			12¼"	Surface	700'	Shots/Ft.
Perforations						
Perforations						
Perforations						

Materials

Mud Type	WBM	Density 9		Lb/Gal
Disp. Fluid	Fresh Water	Density 8.33		Lb/Gal
Spacer type	resh Wate	BBL. 10		8.33
Spacer type		BBL.		
Acid Type		Gal.	%	
Acid Type		Gal.	%	
Surfactant		Gal.	In	
NE Agent		Gal.	In	
Fluid Loss		Gal/Lb	In	
Gelling Agent		Gal/Lb	In	
Fric. Red.		Gal/Lb	In	
MISC.		Gal/Lb	In	

Perfpac Balls _____ Qty. _____

Other _____

Other _____

Other _____

Other _____

Other _____

Hours On Location

Date	Hours
6/3	6.0
Total	6.0

Operating Hours

Date	Hours
6/3	1.0
Total	1.0

Description of Job

Surface

Pressures

MAX 1,500 PSI AVG 100

Average Rates in BPM

MAX 6 BPM AVG 4.5

Cement Left in Pipe

Feet 43 Reason SHOE JOINT

Cement Data

Stage	Sacks	Cement	Additives	W/Rq.	Yield	Lbs/Gal
1	175	Tex Lite 65/35 Poz: Class	6% Total Gel - 2% Calcium Chloride - 0.4% C-41P - ¼pps Cello-Flake	11.11	2.01	12.40
2	165	Premium Plus (Class C)	2% Calcium Chloride - ¼pps Cello-Flake	6.32	1.32	14.80
3	*100	Premium Plus (Class C)	*2% Calcium Chloride on side to use if necessary	*6.32	*1.32	*14.8

Summary

Preflush		Type:		Preflush:	BBl	10.00	Type: Fresh Water
Breakdown		MAXIMUM	1,500 PSI	Load & Bkdn:	Gal - BBl	N/A	Pad:Bbl -Gal N/A
		Lost Returns-N	NO/FULL	Excess /Return	BBl	50	Calc.Disp Bbl 51
		Actual TOC	SURFACE	Calc. TOC:		SURFACE	Actual Disp. 50.00
Average		Bump Plug PSI:	600	Final Circ.	PSI:	150	Disp:Bbl
ISIP _____	5 Min. _____	10 Min _____	15 Min _____	Cement Slurry:	BBl	102.0	
				Total Volume	BBl	162.00	

CUSTOMER REPRESENTATIVE _____ SIGNATURE

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/8/2014
Job End Date:	7/9/2014
State:	Kansas
County:	Harper
API Number:	15-077-22051-01-00
Operator Name:	SandRidge Energy
Well Name and Number:	Henry 3306 3-2H
Longitude:	-97.94419800
Latitude:	37.19527900
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	4,421
Total Base Water Volume (gal):	2,111,928
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	94.50756	None
Sand (Proppant)	Archer	Proppant					
			Silica Substrate	NA	100.00000	4.58391	None
Hydrochloric Acid (15%)	Archer	Acidizing					
			Hydrochloric Acid	7647-01-0	15.00000	0.11896	None
			NONYL PHENOL, 4 MOL	104-40-5	10.00000	0.00418	None
			Methyl Alcohol	67-56-1	80.00000	0.00095	None
			thiourea-formaldehyde copolymer	68527-49-1	15.00000	0.00018	None
AIC	Archer	Liquid Acid Iron Control					
			Acetic Acid	64-19-7	50.00000	0.00209	None
			Citric Acid	77-92-9	30.00000	0.00125	None
Chemflush	Archer	Enviro-Friendly Chemical Flush					
			Hydrotreated Petroleum Distillate	64742-47-8	99.00000	0.00096	None
			Alcohol Ethoxylate Surfactants	NA	10.00000	0.00010	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		0.03281	
			WATER	7732-18-5		0.02508	
			TRADE SECRET	N/A		0.01672	
			Aliphatic Hydrocarbon	64742-47-8		0.01640	
			Anionic Polymer	N/A		0.01640	
			Water	7732-18-5		0.01140	
			ISOPROPANOL	67-63-0		0.00418	
			METHANOL	67-56-1		0.00418	
			Polyol Ester	N/A		0.00273	
			Oxyalkylated Alcohol	68002-97-1		0.00273	
			Sodium Salt of Phosphate Ester	68131-72-6		0.00190	
			Acrylic Polymer	28205-96-1		0.00190	
			Water	7732-18-5		0.00146	
			Polyglycol Ester	N/A		0.00055	
			Alcohol Ethoxylate Surfactants	N/A		0.00018	
			n-olefins	N/A		0.00010	
			Propargyl Alcohol	107-19-7		0.00007	
			Tetrasodium Ethylenediaminetetraacetate	64-02-8		0.00005	
			Acetic Acid	64-19-7			
			Buffer	N/A			
			Surfactant	N/A			
			Water	7732-18-5			
			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)