



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1157161  
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: \_\_\_\_\_



1157161

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
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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: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Clifford 3306 1-31H
Doc ID	1157161

All Electric Logs Run

Boresight
Final Mud Log
Prizm Log
Induction
Nuclear

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Clifford 3306 1-31H
Doc ID	1157161

#### Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
5	8644-8896	36 bbls 15% HCL acid; 5739 bbls slickwater; TLTR 6077 bbls	
5	8286-8576	36 bbls 15% HCL acid; 5520 bbls slickwater; TLTR 11993 bbls	
5	7956-8192	36 bbls 15% HCL acid; 5760 bbls slickwater; TLTR 17949 bbls	
5	7568-7882	36 bbls 15% HCL acid; 5733 bbls slickwater; TLTR 23841 bbls	
5	7166-7478	36 bbls 15% HCL acid; 5797 bbls slickwater; TLTR 27558 bbls	
5	6834-7100	36 bbls 15% HCL acid; 5706 bbls slickwater; TLTR 32763 bbls	
5	6371-6736	36 bbls 15% HCL acid; 5667 bbls slickwater; TLTR 37797 bbls	
5	6053-6301	36 bbls 15% HCL acid; 5734 bbls slickwater; TLTR 42936 bbls	

Form	ACO1 - Well Completion
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Well Name	Clifford 3306 1-31H
Doc ID	1157161

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
5	5772-5987	36 bbls 15% HCL acid; 5654 bbls slickwater; TLTR 47948 bbls	
5	5344-5649	36 bbls 15% HCL acid; 5636 bbls slickwater; TLTR 52862 bbls	

Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



Phone: 316-337-6200  
Fax: 316-337-6211  
<http://kcc.ks.gov/>

Mark Sievers, Chairman  
Thomas E. Wright, Commissioner  
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

September 04, 2013

Tiffany Golay  
SandRidge Exploration and Production LLC  
123 ROBERT S. KERR AVE  
OKLAHOMA CITY, OK 73102-6406

Re: ACO1  
API 15-077-21961-01-00  
Clifford 3306 1-31H  
SW/4 Sec.31-33S-06W  
Harper County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
Tiffany Golay

# **Sandridge Energy, INC.(mid-con.)**

**Harper Co. (KS27S)**

**Sec 31-T33S-R06W**

**Clifford 3306 1-31H/ Job #04411-431-22/Horizon 15**

**Wellbore #1**

**Design: Wellbore #1**

## **Standard Survey Report**

**03 September, 2013**

# Archer Survey Report

<b>Company:</b> Sandridge Energy, INC.(mid-con.)	<b>Local Co-ordinate Reference:</b> Well Clifford 3306 1-31H/ Job #04411-431-22/Horizon 15
<b>Project:</b> Harper Co. (KS27S)	<b>TVD Reference:</b> WELL @ 1316.0usft (Original Well Elev)
<b>Site:</b> Sec 31-T33S-R06W	<b>MD Reference:</b> WELL @ 1316.0usft (Original Well Elev)
<b>Well:</b> Clifford 3306 1-31H/ Job #04411-431-22/Horizon 15	<b>North Reference:</b> Grid
<b>Wellbore:</b> Wellbore #1	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> Wellbore #1	<b>Database:</b> EDM 5000.1 Single User Db

<b>Project</b> Harper Co. (KS27S)	
<b>Map System:</b> US State Plane 1927 (Exact solution)	<b>System Datum:</b> Mean Sea Level
<b>Geo Datum:</b> NAD 1927 (NADCON CONUS)	
<b>Map Zone:</b> Kansas South 1502	

<b>Site</b> Sec 31-T33S-R06W		
<b>Site Position:</b>	<b>Northing:</b> 166,581.00 usft	<b>Latitude:</b> 37° 7' 23.413 N
<b>From:</b> Map	<b>Easting:</b> 2,139,760.00 usft	<b>Longitude:</b> 98° 1' 14.424 W
<b>Position Uncertainty:</b> 0.0 usft	<b>Slot Radius:</b> 13-3/16 "	<b>Grid Convergence:</b> 0.29 °

<b>Well</b> Clifford 3306 1-31H/ Job #04411-431-22/Horizon 15		
<b>Well Position</b> <b>+N/-S</b> 0.0 usft	<b>Northing:</b> 166,823.00 usft	<b>Latitude:</b> 37° 7' 25.691 N
<b>+E/-W</b> 0.0 usft	<b>Easting:</b> 2,142,009.00 usft	<b>Longitude:</b> 98° 0' 46.641 W
<b>Position Uncertainty</b> 0.0 usft	<b>Wellhead Elevation:</b> usft	<b>Ground Level:</b> 1,298.0 usft

<b>Wellbore</b> Wellbore #1					
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	08/19/13	4.41	65.24	51,739

<b>Design</b> Wellbore #1					
<b>Audit Notes:</b>					
<b>Version:</b> 1.0	<b>Phase:</b> ACTUAL	<b>Tie On Depth:</b> 0.0			
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	359.84	

<b>Survey Program</b>		<b>Date</b> 09/03/13		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
250.0	667.0	Single Shot MWD Surveys (Wellbore #1)	MWD	MWD - Standard
767.0	8,991.0	Archer MWD Survey (Wellbore #1)	MWD	MWD - Standard

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
250.0	0.40	91.60	250.0	0.0	0.9	0.0	0.16	0.16	0.00	
<b>First Single Shot MWD Survey</b>										
667.0	0.50	91.60	667.0	-0.1	4.1	-0.1	0.02	0.02	0.00	
<b>Last Single Shot MWD Survey</b>										
767.0	0.50	91.60	767.0	-0.1	5.0	-0.2	0.00	0.00	0.00	
<b>First Archer MWD Survey</b>										
949.0	0.40	134.50	949.0	-0.6	6.3	-0.6	0.19	-0.05	23.57	



# Archer

## Survey Report

<b>Company:</b>	Sandridge Energy, INC.(mid-con.)	<b>Local Co-ordinate Reference:</b>	Well Clifford 3306 1-31H/ Job #04411-431-22/Horizon 15
<b>Project:</b>	Harper Co. (KS27S)	<b>TVD Reference:</b>	WELL @ 1316.0usft (Original Well Elev)
<b>Site:</b>	Sec 31-T33S-R06W	<b>MD Reference:</b>	WELL @ 1316.0usft (Original Well Elev)
<b>Well:</b>	Clifford 3306 1-31H/ Job #04411-431-22/Horizon 15	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)
1,406.0	0.70	159.00	1,406.0	-4.3	8.4	-4.4	0.08	0.07	5.36
1,878.0	0.70	167.10	1,877.9	-9.8	10.1	-9.9	0.02	0.00	1.72
2,354.0	0.70	155.00	2,353.9	-15.3	12.0	-15.3	0.03	0.00	-2.54
2,827.0	0.70	133.10	2,826.9	-19.9	15.3	-19.9	0.06	0.00	-4.63
3,300.0	0.70	73.80	3,299.8	-21.1	20.2	-21.1	0.15	0.00	-12.54
3,742.0	1.00	307.30	3,741.8	-18.0	19.7	-18.0	0.34	0.07	-28.62
3,773.0	1.10	318.80	3,772.8	-17.6	19.3	-17.6	0.75	0.32	37.10
3,805.0	2.70	342.80	3,804.8	-16.6	18.9	-16.7	5.48	5.00	75.00
3,837.0	5.10	352.70	3,836.7	-14.5	18.5	-14.6	7.76	7.50	30.94
3,870.0	7.40	357.80	3,869.5	-10.9	18.2	-11.0	7.16	6.97	15.45
3,902.0	10.20	0.90	3,901.1	-6.0	18.2	-6.1	8.87	8.75	9.69
3,934.0	13.50	2.40	3,932.4	0.5	18.4	0.5	10.36	10.31	4.69
3,965.0	16.30	3.10	3,962.4	8.5	18.7	8.4	9.05	9.03	2.26
3,997.0	18.50	4.50	3,992.9	18.0	19.4	18.0	7.00	6.88	4.38
4,029.0	20.60	4.50	4,023.1	28.7	20.2	28.7	6.56	6.56	0.00
4,060.0	22.10	4.40	4,051.9	40.0	21.1	39.9	4.84	4.84	-0.32
4,092.0	23.60	2.40	4,081.4	52.4	21.8	52.3	5.28	4.69	-6.25
4,124.0	25.40	358.70	4,110.6	65.6	21.9	65.6	7.39	5.63	-11.56
4,155.0	27.00	356.70	4,138.4	79.3	21.4	79.2	5.89	5.16	-6.45
4,186.0	29.10	356.10	4,165.7	93.9	20.5	93.8	6.83	6.77	-1.94
4,219.0	31.30	356.90	4,194.2	110.4	19.5	110.4	6.78	6.67	2.42
4,250.0	33.10	357.90	4,220.5	126.9	18.7	126.9	6.06	5.81	3.23
4,282.0	35.50	358.10	4,246.9	144.9	18.1	144.9	7.51	7.50	0.63
4,313.0	38.20	359.10	4,271.7	163.5	17.6	163.5	8.92	8.71	3.23
4,345.0	41.50	359.00	4,296.3	184.0	17.3	184.0	10.31	10.31	-0.31
4,376.0	44.80	359.30	4,318.9	205.2	17.0	205.2	10.67	10.65	0.97
4,408.0	47.30	0.00	4,341.1	228.3	16.8	228.2	7.97	7.81	2.19
4,440.0	48.70	359.90	4,362.5	252.0	16.8	252.0	4.38	4.38	-0.31
4,471.0	50.30	359.50	4,382.6	275.6	16.7	275.6	5.25	5.16	-1.29
4,503.0	51.60	0.00	4,402.8	300.5	16.6	300.4	4.24	4.06	1.56
4,534.0	54.00	358.80	4,421.5	325.1	16.3	325.1	8.33	7.74	-3.87
4,566.0	57.80	359.00	4,439.5	351.6	15.8	351.6	11.89	11.88	0.63
4,597.0	61.90	358.60	4,455.0	378.4	15.3	378.4	13.27	13.23	-1.29
4,629.0	65.10	358.80	4,469.3	407.1	14.6	407.0	10.02	10.00	0.63
4,661.0	68.10	359.70	4,482.0	436.4	14.2	436.4	9.72	9.38	2.81
4,693.0	70.70	1.00	4,493.3	466.4	14.4	466.3	8.97	8.13	4.06
4,724.0	73.00	1.50	4,502.9	495.8	15.1	495.8	7.58	7.42	1.61
4,756.0	75.40	1.90	4,511.7	526.6	16.0	526.5	7.60	7.50	1.25
4,788.0	78.50	1.90	4,518.9	557.7	17.0	557.7	9.69	9.69	0.00
4,820.0	80.50	1.60	4,524.7	589.2	18.0	589.1	6.32	6.25	-0.94
4,851.0	82.00	1.60	4,529.4	619.8	18.8	619.8	4.84	4.84	0.00
4,883.0	83.30	1.60	4,533.5	651.5	19.7	651.5	4.06	4.06	0.00
4,914.0	84.10	1.70	4,536.9	682.3	20.6	682.3	2.60	2.58	0.32

# Archer

## Survey Report

<b>Company:</b>	Sandridge Energy, INC.(mid-con.)	<b>Local Co-ordinate Reference:</b>	Well Clifford 3306 1-31H/ Job #04411-431-22/Horizon 15
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<b>Well:</b>	Clifford 3306 1-31H/ Job #04411-431-22/Horizon 15	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)	
4,946.0	85.10	2.40	4,539.9	714.2	21.7	714.1	3.81	3.13	2.19	
4,978.0	86.10	2.60	4,542.4	746.1	23.1	746.0	3.19	3.13	0.63	
5,009.0	87.20	2.70	4,544.2	777.0	24.6	776.9	3.56	3.55	0.32	
5,040.0	88.10	3.00	4,545.5	807.9	26.1	807.8	3.06	2.90	0.97	
5,072.0	88.70	3.50	4,546.4	839.8	27.9	839.8	2.44	1.88	1.56	
5,104.0	88.70	3.10	4,547.1	871.8	29.8	871.7	1.25	0.00	-1.25	
5,135.0	89.10	3.40	4,547.7	902.7	31.5	902.6	1.61	1.29	0.97	
5,167.0	89.90	3.20	4,548.0	934.7	33.4	934.6	2.58	2.50	-0.63	
5,198.0	90.50	2.90	4,547.9	965.6	35.0	965.5	2.16	1.94	-0.97	
5,230.0	91.10	2.20	4,547.4	997.6	36.4	997.5	2.88	1.88	-2.19	
5,261.0	90.90	1.00	4,546.9	1,028.6	37.3	1,028.5	3.92	-0.65	-3.87	
5,293.0	91.50	0.50	4,546.2	1,060.6	37.7	1,060.5	2.44	1.88	-1.56	
5,385.0	91.20	0.10	4,544.0	1,152.5	38.2	1,152.4	0.54	-0.33	-0.43	
5,479.0	90.20	358.70	4,542.9	1,246.5	37.2	1,246.4	1.83	-1.06	-1.49	
5,573.0	89.40	358.50	4,543.2	1,340.5	34.9	1,340.4	0.88	-0.85	-0.21	
5,667.0	89.80	358.50	4,543.9	1,434.5	32.4	1,434.4	0.43	0.43	0.00	
5,762.0	90.80	358.20	4,543.4	1,529.4	29.7	1,529.3	1.10	1.05	-0.32	
5,857.0	89.70	358.00	4,543.0	1,624.4	26.6	1,624.3	1.18	-1.16	-0.21	
5,952.0	90.50	357.80	4,542.8	1,719.3	23.1	1,719.2	0.87	0.84	-0.21	
6,036.5	90.32	359.04	4,542.2	1,803.7	20.8	1,803.7	1.49	-0.21	1.47	
<b>McKee 1-31H OFFSET</b>										
6,047.0	90.30	359.20	4,542.1	1,814.3	20.6	1,814.2	1.49	-0.21	1.47	
6,141.0	90.80	358.80	4,541.2	1,908.2	19.0	1,908.2	0.68	0.53	-0.43	
6,236.0	90.30	358.50	4,540.3	2,003.2	16.7	2,003.2	0.61	-0.53	-0.32	
6,330.0	91.20	358.10	4,539.1	2,097.2	13.9	2,097.1	1.05	0.96	-0.43	
6,425.0	90.10	359.10	4,538.0	2,192.1	11.6	2,192.1	1.56	-1.16	1.05	
6,520.0	89.20	359.70	4,538.6	2,287.1	10.6	2,287.1	1.14	-0.95	0.63	
6,615.0	89.80	359.50	4,539.4	2,382.1	9.9	2,382.1	0.67	0.63	-0.21	
6,710.0	90.60	359.40	4,539.1	2,477.1	9.0	2,477.1	0.85	0.84	-0.11	
6,805.0	91.10	0.90	4,537.7	2,572.1	9.3	2,572.0	1.66	0.53	1.58	
6,900.0	90.90	1.60	4,536.0	2,667.0	11.4	2,667.0	0.77	-0.21	0.74	
6,993.0	89.80	0.70	4,535.5	2,760.0	13.2	2,760.0	1.53	-1.18	-0.97	
7,088.0	90.80	1.10	4,535.0	2,855.0	14.7	2,855.0	1.13	1.05	0.42	
7,184.0	90.00	1.60	4,534.3	2,951.0	17.0	2,950.9	0.98	-0.83	0.52	
7,278.0	90.10	1.40	4,534.2	3,044.9	19.4	3,044.9	0.24	0.11	-0.21	
7,372.0	91.30	1.90	4,533.1	3,138.9	22.1	3,138.8	1.38	1.28	0.53	
7,467.0	88.80	1.50	4,533.0	3,233.8	25.0	3,233.8	2.67	-2.63	-0.42	
7,562.0	88.90	0.20	4,534.9	3,328.8	26.4	3,328.7	1.37	0.11	-1.37	
7,656.0	88.90	359.50	4,536.7	3,422.8	26.1	3,422.7	0.74	0.00	-0.74	
7,751.0	90.20	358.70	4,537.4	3,517.8	24.6	3,517.7	1.61	1.37	-0.84	
7,847.0	92.00	357.30	4,535.6	3,613.7	21.3	3,613.6	2.38	1.88	-1.46	
7,941.0	92.10	358.00	4,532.2	3,707.6	17.4	3,707.5	0.75	0.11	0.74	

# Archer Survey Report

<b>Company:</b> Sandridge Energy, INC.(mid-con.)	<b>Local Co-ordinate Reference:</b> Well Clifford 3306 1-31H/ Job #04411-431-22/Horizon 15
<b>Project:</b> Harper Co. (KS27S)	<b>TVD Reference:</b> WELL @ 1316.0usft (Original Well Elev)
<b>Site:</b> Sec 31-T33S-R06W	<b>MD Reference:</b> WELL @ 1316.0usft (Original Well Elev)
<b>Well:</b> Clifford 3306 1-31H/ Job #04411-431-22/Horizon 15	<b>North Reference:</b> Grid
<b>Wellbore:</b> Wellbore #1	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> Wellbore #1	<b>Database:</b> 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)	
8,036.0	91.70	357.40	4,529.1	3,802.4	13.6	3,802.4	0.76	-0.42	-0.63	
8,131.0	92.00	356.50	4,526.0	3,897.2	8.6	3,897.2	1.00	0.32	-0.95	
8,226.0	91.70	357.30	4,522.9	3,992.1	3.4	3,992.0	0.90	-0.32	0.84	
8,321.0	91.10	359.40	4,520.6	4,087.0	0.7	4,087.0	2.30	-0.63	2.21	
8,414.0	89.90	0.40	4,519.8	4,180.0	0.5	4,180.0	1.68	-1.29	1.08	
8,509.0	90.60	0.90	4,519.4	4,275.0	1.6	4,274.9	0.91	0.74	0.53	
8,604.0	88.40	1.80	4,520.2	4,369.9	3.9	4,369.9	2.50	-2.32	0.95	
8,698.0	87.30	1.00	4,523.7	4,463.8	6.2	4,463.8	1.45	-1.17	-0.85	
8,792.0	90.00	0.80	4,526.0	4,557.8	7.6	4,557.8	2.88	2.87	-0.21	
8,887.0	91.50	1.00	4,524.7	4,652.8	9.1	4,652.7	1.59	1.58	0.21	
8,936.0	91.60	1.10	4,523.4	4,701.7	10.0	4,701.7	0.29	0.20	0.20	
<b>Last Archer MWD Survey</b>										
8,991.0	91.60	1.10	4,521.9	4,756.7	11.1	4,756.7	0.00	0.00	0.00	
<b>Projection to TD - PBHL Clifford 1-31H</b>										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
250.0	250.0	0.0	0.9	First Single Shot MWD Survey	
667.0	667.0	-0.1	4.1	Last Single Shot MWD Survey	
767.0	767.0	-0.1	5.0	First Archer MWD Survey	
8,936.0	4,523.4	4,701.7	10.0	Last Archer MWD Survey	
8,991.0	4,521.9	4,756.7	11.1	Projection to TD	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



				Customer Sandridge Energy Inc.			Job Number 1023209											
Well Clifford 3306-1-31H			Location (legal) Anthony			Schlumberger Location El Reno, Oklahoma			Job Start Aug/26/2013									
Field			Formation Name/Type			Deviation deg		Bit Size 12.3 in		Well MD 685.0 ft		Well TVD 685.0 ft						
County Harper			State/Province Kansas			BHP psi		BHST degF		BHCT degF		Pore Press. Gradient lb/gal						
Well Master SEC 31 - 33S - 6W			API/UWI															
Rig Name Horizon #15		Drilled For Oil & Gas		Service Via Land		Casing/Liner												
						Depth, ft		Size, in		Weight, lb/ft		Grade		Thread				
Offshore Zone		Well Class New		Well Type Development		692.0		9.6		36.0		K55		8RD				
						0.0		0.0		0.0								
Drilling Fluid Type			Max. Density lb/gal		Plastic Viscosity cP		Tubing/Drill Pipe											
							T/D		Depth, ft		Size, in		Weight, lb/ft		Grade		Thread	
Service Line Cementing			Job Type Cem Surface Casing															
Max. Allowed Tub. Press psi			Max. Allowed Ann. Press psi		WH Connection Single Cement head		Perforations/Open Hole											
							Top, ft		Bottom, ft		shot/ft		No. of Shots		Total Interval ft			
Service Instructions							ft		ft						Diameter in			
							ft		ft									
							Treat Down Casing		Displacement 50.2 bbl		Packer Type		Packer Depth ft					
							Tubing Vol. bbl		Casing Vol. 53.5 bbl		Annular Vol. bbl		Openhole Vol. bbl					
Casing/Tubing Secured <input type="checkbox"/>			1 Hole Vol. Circulated prior to Cement <input checked="" type="checkbox"/>			Casing Tools				Squeeze Job								
Lift Pressure 250 psi			Pipe Rotated <input type="checkbox"/>			Pipe Reciprocated <input type="checkbox"/>		Shoe Type Guide		Shoe Depth 692.0 ft		Squeeze Type		Tool Type				
No. Centralizers 5			Top Plugs 1		Bottom Plugs		Stage Tool Type		Stage Tool Depth ft		Tail Pipe Size in		Tool Depth ft					
Cement Head Type Single			Job Scheduled For Aug/26/2013			Arrived on Location Aug/26/2013		Leave Location Aug/26/2013		Collar Type Float		Collar Depth 649.0 ft		Tail Pipe Depth ft		Sqz. Total Vol. bbl		
Date		Time 24-hr clock		Treating Pressure PSI		Flow Rate B/M		Density LB/G		Volume BBL		Message						
08/26/2013		06:54:56		2		0.1		8.73		0.0		Start Job						
08/26/2013		06:55:31		3		0.1		8.73		0.1								
08/26/2013		06:56:06		3		0.1		8.72		0.2								
08/26/2013		06:56:41		0		0.1		8.71		0.2								
08/26/2013		06:57:16		3		0.1		8.71		0.3								
08/26/2013		06:57:51		11		0.1		8.72		0.4								
08/26/2013		06:58:26		15		0.1		8.72		0.4								
08/26/2013		06:59:01		17		0.0		8.71		0.5								
08/26/2013		06:59:36		19		0.1		8.55		0.5								
08/26/2013		07:00:11		20		0.1		8.55		0.5								
08/26/2013		07:00:46		21		0.1		8.55		0.6								
08/26/2013		07:01:21		22		0.1		8.55		0.6								
08/26/2013		07:01:56		22		0.0		8.55		0.6								
08/26/2013		07:02:31		21		0.0		8.55		0.6								
08/26/2013		07:03:06		19		0.0		8.55		0.6								
08/26/2013		07:03:41		18		0.0		8.55		0.6								
08/26/2013		07:04:16		17		0.0		8.55		0.6								
08/26/2013		07:04:51		56		2.3		8.55		1.6								
08/26/2013		07:05:26		87		3.6		8.55		3.4								
08/26/2013		07:06:01		88		3.9		8.55		5.5								
08/26/2013		07:06:36		19		0.0		8.55		5.9								



Well		Field		Job Start		Customer		Job Number	
Clifford 3306-1-31H				Aug/26/2013		Sandridge Energy Inc.		1023209	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message			
08/26/2013	07:07:11	2270	0.0	8.55	5.9				
08/26/2013	07:07:46	2110	0.0	8.55	5.9				
08/26/2013	07:08:21	2047	0.0	8.55	5.9				
08/26/2013	07:08:56	2004	0.0	8.55	5.9				
08/26/2013	07:09:31	4660	0.0	8.55	5.9				
08/26/2013	07:10:06	5151	0.0	8.55	5.9				
08/26/2013	07:10:41	5059	0.0	8.55	5.9				
08/26/2013	07:11:16	5000	0.0	8.55	5.9				
08/26/2013	07:11:51	5007	0.0	8.55	5.9				
08/26/2013	07:12:26	4973	0.0	8.54	5.9				
08/26/2013	07:13:01	4924	0.0	8.55	5.9				
08/26/2013	07:13:36	8	0.0	8.55	5.9				
08/26/2013	07:14:11	8	0.0	8.55	5.9				
08/26/2013	07:14:46	88	4.7	8.53	7.5				
08/26/2013	07:15:21	92	4.7	10.34	10.2				
08/26/2013	07:15:27	105	4.7	11.12	10.7	End Spacer			
08/26/2013	07:15:29	100	4.7	11.22	10.9	Start Mixing Lead Slurry			
08/26/2013	07:15:32	118	4.7	11.32	11.1	Reset Total, Vol = 11.09 bbl			
08/26/2013	07:15:56	126	4.6	12.08	13.0				
08/26/2013	07:16:31	130	4.7	12.98	15.7				
08/26/2013	07:17:06	120	4.7	12.83	18.4				
08/26/2013	07:17:41	108	4.7	12.53	21.1				
08/26/2013	07:18:16	102	4.7	12.59	23.8				
08/26/2013	07:18:51	97	4.7	12.47	26.6				
08/26/2013	07:19:26	92	4.6	12.41	29.3				
08/26/2013	07:20:01	94	4.7	12.45	32.0				
08/26/2013	07:20:36	94	4.7	12.45	34.8				
08/26/2013	07:21:11	93	4.7	12.41	37.5				
08/26/2013	07:21:46	91	4.7	12.38	40.2				
08/26/2013	07:22:21	89	4.7	12.38	42.9				
08/26/2013	07:22:56	88	4.7	12.37	45.7				
08/26/2013	07:23:31	85	4.7	12.21	48.4				
08/26/2013	07:24:06	90	4.7	12.64	51.1				
08/26/2013	07:24:41	100	4.6	12.95	53.8				
08/26/2013	07:25:16	95	4.6	12.67	56.6				
08/26/2013	07:25:51	90	4.7	12.28	59.3				
08/26/2013	07:26:26	90	4.7	12.33	62.0				
08/26/2013	07:27:01	95	4.7	12.74	64.7				
08/26/2013	07:27:36	102	4.7	12.81	67.5				
08/26/2013	07:28:11	116	4.7	12.91	70.2				
08/26/2013	07:28:46	100	4.7	12.96	72.9				
08/26/2013	07:29:21	109	4.7	13.13	75.6				
08/26/2013	07:29:56	97	4.7	12.55	78.4				
08/26/2013	07:30:31	92	4.7	12.65	81.1				
08/26/2013	07:31:06	106	4.7	12.94	83.8				
08/26/2013	07:31:41	106	4.7	12.80	86.5				
08/26/2013	07:32:16	89	4.7	12.16	89.3				
08/26/2013	07:32:51	96	4.7	12.68	92.0				
08/26/2013	07:33:26	90	4.7	12.58	94.7				
08/26/2013	07:34:01	95	4.7	12.57	97.4				
08/26/2013	07:34:36	93	4.7	12.19	100.2				
08/26/2013	07:35:11	95	4.7	12.39	102.9				
08/26/2013	07:35:46	88	4.6	12.30	105.6				
08/26/2013	07:36:21	104	4.7	12.79	108.4				

Well		Field		Job Start		Customer		Job Number	
Clifford 3306-1-31H				Aug/26/2013		Sandridge Energy Inc.		1023209	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message			
08/26/2013	07:37:31	110	4.7	12.54	113.8				
08/26/2013	07:38:06	114	4.7	12.52	116.6				
08/26/2013	07:38:41	111	4.6	12.30	119.3				
08/26/2013	07:39:16	108	4.7	12.32	122.0				
08/26/2013	07:39:23	112	4.7	12.22	122.6	End Lead Slurry			
08/26/2013	07:39:25	110	4.7	12.24	122.7	Start Mixing Tail Slurry			
08/26/2013	07:39:27	110	4.6	12.36	122.9	Reset Total, Vol = 111.79 bbl			
08/26/2013	07:39:51	138	4.7	13.41	124.8				
08/26/2013	07:40:26	123	4.7	13.84	127.5				
08/26/2013	07:41:01	114	4.7	14.04	130.2				
08/26/2013	07:41:36	97	2.8	14.47	132.4				
08/26/2013	07:42:11	143	4.3	14.75	135.1				
08/26/2013	07:42:46	159	4.4	14.81	137.6				
08/26/2013	07:43:21	152	4.2	14.85	140.1				
08/26/2013	07:43:56	133	4.4	14.86	142.7				
08/26/2013	07:44:31	157	4.4	14.92	145.2				
08/26/2013	07:45:06	135	4.3	14.93	147.7				
08/26/2013	07:45:41	149	4.3	14.96	150.2				
08/26/2013	07:46:16	149	4.2	15.01	152.8				
08/26/2013	07:46:51	155	4.3	14.97	155.3				
08/26/2013	07:47:26	141	4.4	14.94	157.8				
08/26/2013	07:48:01	133	4.4	14.72	160.4				
08/26/2013	07:48:36	11	0.6	14.56	160.9				
08/26/2013	07:49:11	11	0.1	14.25	161.2				
08/26/2013	07:49:22	11	0.1	14.67	161.2	End Tail Slurry			
08/26/2013	07:49:23	11	0.1	14.67	161.2	Drop Top Plug			
08/26/2013	07:49:24	11	0.1	14.68	161.2	Start Displacement			
08/26/2013	07:49:27	11	0.1	14.69	161.2	Reset Total, Vol = 38.35 bbl			
08/26/2013	07:49:46	11	0.1	14.78	161.3				
08/26/2013	07:50:21	96	4.3	10.73	162.1				
08/26/2013	07:50:56	82	4.4	9.35	164.6				
08/26/2013	07:51:31	87	4.5	9.14	167.2				
08/26/2013	07:52:06	75	4.5	8.95	169.8				
08/26/2013	07:52:41	74	4.6	8.82	172.5				
08/26/2013	07:53:16	74	4.6	8.75	175.1				
08/26/2013	07:53:51	75	4.6	8.67	177.8				
08/26/2013	07:54:26	78	4.5	8.62	180.4				
08/26/2013	07:55:01	79	4.5	8.60	183.1				
08/26/2013	07:55:36	89	4.3	8.59	185.7				
08/26/2013	07:56:11	100	4.4	8.57	188.3				
08/26/2013	07:56:46	124	4.3	8.56	190.8				
08/26/2013	07:57:21	133	4.1	8.57	193.2				
08/26/2013	07:57:56	136	4.1	8.52	195.7				
08/26/2013	07:58:31	177	4.1	8.32	198.1				
08/26/2013	07:59:06	199	4.1	8.35	200.5				
08/26/2013	07:59:41	218	4.1	8.35	202.9				
08/26/2013	08:00:16	206	4.1	8.49	205.3				
08/26/2013	08:00:51	197	2.0	8.44	206.7				
08/26/2013	08:01:26	198	2.0	8.36	207.8				
08/26/2013	08:02:01	203	2.0	8.53	209.0				
08/26/2013	08:02:36	248	1.9	8.49	210.2				
08/26/2013	08:03:11	243	2.0	8.45	211.4				
08/26/2013	08:03:46	1023	0.0	8.34	212.2				
08/26/2013	08:04:21	1001	0.0	8.53	212.2				

Well		Field		Job Start		Customer		Job Number	
Clifford 3306-1-31H				Aug/26/2013		Sandridge Energy Inc.		1023209	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message			
08/26/2013	08:05:31	972	0.0	8.50	212.2				
08/26/2013	08:06:06	5	0.0	8.49	212.2				
08/26/2013	08:06:41	5	0.0	8.47	212.2				
08/26/2013	08:07:16	5	0.0	8.45	212.2				
08/26/2013	08:07:51	5	0.0	8.43	212.2				
08/26/2013	08:08:26	5	0.0	0.31	212.2				
08/26/2013	08:09:01	5	0.0	0.30	212.2				
08/26/2013	08:09:36	5	0.0	0.30	212.2				
08/26/2013	08:10:11	5	0.0	0.30	212.2				
08/26/2013	08:10:46	5	0.0	0.29	212.2				
08/26/2013	08:11:21	5	0.0	0.28	212.2				
08/26/2013	08:11:56	5	0.0	0.27	212.2				
08/26/2013	08:12:31	5	0.0	0.27	212.2				
08/26/2013	08:13:06	5	0.0	0.27	212.2				
08/26/2013	08:13:41	5	0.0	0.26	212.2				
08/26/2013	08:14:16	2	0.0	0.26	212.2				
08/26/2013	08:14:40	3	0.0	0.25	212.2	Bump Top Plug			
08/26/2013	08:14:41	2	0.0	0.25	212.2	End Displacement			

### Post Job Summary

Average Pump Rates, bbl/min				Volume of Fluid Injected, bbl			
Slurry	N2	Mud	Maximum Rate	Total Slurry	Mud	Spacer	N2
3.5			7.0	125.0	0.0	10.7	
Treating Pressure Summary, psi				Breakdown Fluid			
Maximum	Final	Average	Bump Plug to	Breakdown	Type	Volume	Density
5283	2	398	1000			bbl	lb/gal
Avg. N2 Percent %	Designed Slurry Volume		Displacement	Mix Water Temp	Cement Circulated to Surface?	Volume	
	0.0 bbl		50.9 bbl	degF	<input checked="" type="checkbox"/>	20.0 bbl	
Customer or Authorized Representative			Schlumberger Supervisor		Washed Thru Perfs	To	
Mr. Cody Davis			Daniel Myers		<input type="checkbox"/>	ft	
					Circulation Lost	Job Completed	
					<input type="checkbox"/>	<input checked="" type="checkbox"/>	
					-	-	





# Cementing Service Report

Customer Sandridge Energy Inc				Job Number 1842578				
Well Clifford 3306, 1-31H 3306, 1-31H			Location (legal) Anthony			Schlumberger Location El Reno, Oklahoma		Job Start Aug/30/2013
Field		Formation Name/Type		Deviation deg	Bit Size in	Well MD 5347.0 ft	Well TVD ft	
County Harper		State/Province Kansas		BHP psi	BHST degF	BHCT degF	Pore Press. Gradient lb/gal	
Well Mas# SEC. 31 - 33S - 6W		API/UWI		Casing/Liner				
Rig Name Horizon 15	Drilled For Oil & Gas	Service Via Land	Depth, ft 5327.6	Size, in 7.0	Weight, lb/ft 26.0	Grade P110	Thread 8RD	
Offshore Zone	Well Class New	Well Type Exploration	0.0	0.0	0.0			
Drilling Fluid Type		Max. Density lb/gal	Plastic Viscosity cP	Tubing/Drill Pipe				
Service Line Cementing	Job Type Cem Interm Casing	T/D	Depth, ft	Size, in	Weight, lb/ft	Grade	Thread	
Max. Allowed Tub. Press psi	Max. Allowed Ann. Press psi	WH Connection Single Cement head	Perforations/Open Hole					
Service Instructions	Top, ft	Bottom, ft	shot/ft	No. of Shots	Total Interval ft			
	ft	ft			Diameter in			
	ft	ft						
Treat Down Casing	Displacement 200.0 bbl	Packer Type	Packer Depth ft	Tubing Vol. bbl	Casing Vol. 203.8 bbl	Annular Vol. bbl	Openhole Vol. bbl	
Casing/Tubing Secured <input type="checkbox"/>	1 Hole Vol. Circulated prior to Cement <input checked="" type="checkbox"/>	Casing Tools	Squeeze Job					
Lift Pressure 680 psi	Shoe Type Float	Shoe Depth 5327.6 ft	Squeeze Type	Pipe Rotated <input type="checkbox"/>	Pipe Reciprocated <input type="checkbox"/>	Tool Type	Tool Depth ft	
No. Centralizers 8	Top Plugs 1	Bottom Plugs	Stage Tool Type	Stage Tool Depth ft	Tail Pipe Size in	Cement Head Type Single	Collar Type Float	
Job Scheduled For Aug/30/2013	Arrived on Location Aug/30/2013	Leave Location Aug/30/2013	Collar Depth 5249.1 ft	Tail Pipe Depth ft	Sqz. Total Vol. bbl			
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message		
08/30/2013	21:30:05	1	0.1	0.09	0.0	Started Acquisition		
08/30/2013	21:30:07	1	0.1	0.09	0.0	Start Job		
08/30/2013	21:30:10	2	0.1	0.09	0.0	Start Pumping Spacer		
08/30/2013	21:30:40	1	0.1	0.09	0.1			
08/30/2013	21:31:15	1	0.1	0.09	0.2			
08/30/2013	21:31:50	1	0.1	0.09	0.2			
08/30/2013	21:32:25	1	0.1	0.09	0.3			
08/30/2013	21:33:00	1	0.0	0.09	0.4			
08/30/2013	21:33:35	3	0.1	0.09	0.4			
08/30/2013	21:34:10	1	0.1	0.09	0.5			
08/30/2013	21:34:45	48	0.2	0.09	0.6			
08/30/2013	21:35:20	296	4.2	8.49	2.5			
08/30/2013	21:35:55	94	0.0	0.48	4.4			
08/30/2013	21:36:30	32	0.0	0.10	4.4			
08/30/2013	21:37:05	7	0.0	0.10	4.4			
08/30/2013	21:37:40	1	0.0	0.09	4.4			
08/30/2013	21:38:15	2	0.0	0.09	4.4			
08/30/2013	21:38:50	2	0.0	0.09	4.4			
08/30/2013	21:39:25	2	0.0	0.09	4.4			
08/30/2013	21:40:00	2	0.0	0.09	4.4			
08/30/2013	21:40:35	2	0.0	0.09	4.4			

Well		Field		Job Start		Customer		Job Number	
Clifford 3306, 1-31H 3306, 1-31H				Aug/30/2013		Sandridge Energy Inc		1842578	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/H	Density LB/G	Volume BBL	Message			
08/30/2013	21:41:45	3	0.0	0.09	4.4				
08/30/2013	21:42:20	356	4.1	8.33	4.8				
08/30/2013	21:42:55	90	0.0	0.46	6.5				
08/30/2013	21:43:10	90	0.0	0.10	6.5	End Spacer			
08/30/2013	21:43:16	90	0.0	0.10	6.5	Pressure Test Lines			
08/30/2013	21:43:30	89	0.0	0.10	6.5				
08/30/2013	21:44:05	1570	0.0	0.10	6.5				
08/30/2013	21:44:40	1394	0.0	0.10	6.5				
08/30/2013	21:45:15	2507	0.0	0.10	6.5				
08/30/2013	21:45:50	5306	0.0	0.09	6.5				
08/30/2013	21:46:25	5240	0.0	0.10	6.5				
08/30/2013	21:47:00	5185	0.0	0.09	6.5				
08/30/2013	21:47:35	57	0.0	0.09	6.5				
08/30/2013	21:48:10	58	0.0	0.10	6.5				
08/30/2013	21:48:20	57	0.0	0.09	6.5	Start Pumping Spacer			
08/30/2013	21:48:23	57	0.0	0.09	6.5	Reset Total, Vol = 6.49 bbl			
08/30/2013	21:48:45	57	0.0	0.09	6.5				
08/30/2013	21:49:20	58	0.0	0.09	6.5				
08/30/2013	21:49:55	57	0.0	0.09	6.5				
08/30/2013	21:50:30	95	1.0	0.34	6.5				
08/30/2013	21:51:05	358	5.9	8.53	8.8				
08/30/2013	21:51:40	276	5.8	8.47	12.3				
08/30/2013	21:52:15	308	5.8	8.47	15.7				
08/30/2013	21:52:50	314	5.9	8.53	19.1				
08/30/2013	21:53:25	346	5.9	8.46	22.5				
08/30/2013	21:54:00	335	5.8	8.50	25.9				
08/30/2013	21:54:35	361	5.8	8.50	29.3				
08/30/2013	21:55:10	364	5.8	8.51	32.7				
08/30/2013	21:55:36	368	5.9	9.37	35.3	End Spacer			
08/30/2013	21:55:39	399	5.9	9.35	35.6	Start Mixing Lead Slurry			
08/30/2013	21:55:41	396	5.8	9.34	35.8	Reset Total, Vol = 29.29 bbl			
08/30/2013	21:55:45	405	5.8	9.32	36.2				
08/30/2013	21:56:20	586	5.9	12.26	39.6				
08/30/2013	21:56:55	559	5.8	13.51	43.0				
08/30/2013	21:57:30	462	5.8	13.36	46.4				
08/30/2013	21:58:05	547	5.9	13.60	49.8				
08/30/2013	21:58:40	494	5.9	13.68	53.2				
08/30/2013	21:59:15	504	5.9	13.70	56.6				
08/30/2013	21:59:50	550	5.9	13.74	60.1				
08/30/2013	22:00:25	425	5.8	13.68	63.5				
08/30/2013	22:01:00	458	6.2	13.70	67.0				
08/30/2013	22:01:35	404	5.8	13.66	70.7				
08/30/2013	22:02:10	386	5.9	13.62	74.0				
08/30/2013	22:02:45	385	5.8	13.68	77.4				
08/30/2013	22:03:20	346	5.9	13.64	80.9				
08/30/2013	22:03:55	347	5.8	13.60	84.3				
08/30/2013	22:04:30	296	5.8	13.64	87.7				
08/30/2013	22:05:05	274	5.9	13.62	91.1				
08/30/2013	22:05:40	272	5.8	13.41	94.5				
08/30/2013	22:06:12	163	5.7	12.82	97.6	End Lead Slurry			
08/30/2013	22:06:14	162	5.9	12.75	97.8	Reset Total, Vol = 62.02 bbl			
08/30/2013	22:06:15	166	5.8	12.70	97.9				
08/30/2013	22:06:25	73	4.2	12.44	98.7	Start Mixing Tail Slurry			
08/30/2013	22:06:50	1	0.0	11.94	99.0				



Well		Field		Job Start	Customer	Job Number
Clifford 3306, 1-31H 3306, 1-31H				Aug/30/2013	Sandridge Energy Inc	1842578
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
08/30/2013	22:08:00	75	3.5	13.83	100.8	
08/30/2013	22:08:35	99	2.3	15.17	102.4	
08/30/2013	22:09:10	205	4.5	15.62	104.8	
08/30/2013	22:09:45	350	6.4	15.57	107.6	
08/30/2013	22:10:20	400	6.1	15.60	111.3	
08/30/2013	22:10:55	417	6.2	15.58	115.0	
08/30/2013	22:11:30	23	2.6	15.07	118.5	
08/30/2013	22:12:05	13	0.0	15.39	118.6	
08/30/2013	22:12:08	13	0.0	15.45	118.6	End Tail Slurry
08/30/2013	22:12:09	13	0.0	15.46	118.6	Drop Top Plug
08/30/2013	22:12:10	13	0.0	15.39	118.6	Start Displacement
08/30/2013	22:12:12	13	0.0	15.44	118.6	Reset Total, Vol = 20.84 bbl
08/30/2013	22:12:40	11	0.0	16.21	118.6	
08/30/2013	22:13:15	11	0.0	16.59	118.6	
08/30/2013	22:13:50	11	0.0	16.64	118.6	
08/30/2013	22:14:25	10	0.0	16.69	118.6	
08/30/2013	22:15:00	10	0.2	16.63	118.7	
08/30/2013	22:15:35	133	1.2	16.67	118.8	
08/30/2013	22:16:10	160	5.8	9.54	121.7	
08/30/2013	22:16:45	120	6.1	7.98	125.3	
08/30/2013	22:17:20	135	6.4	8.59	129.0	
08/30/2013	22:17:55	126	6.2	8.53	132.7	
08/30/2013	22:18:30	122	6.2	8.53	136.3	
08/30/2013	22:19:05	118	6.2	8.50	140.0	
08/30/2013	22:19:40	119	6.2	8.50	143.7	
08/30/2013	22:20:15	122	6.1	8.49	147.4	
08/30/2013	22:20:50	116	6.2	8.51	151.0	
08/30/2013	22:21:25	122	6.2	8.47	154.7	
08/30/2013	22:22:00	126	6.2	8.50	158.4	
08/30/2013	22:22:35	113	6.4	8.49	162.0	
08/30/2013	22:23:10	114	6.2	8.51	165.7	
08/30/2013	22:23:45	120	6.4	8.50	169.4	
08/30/2013	22:24:20	120	6.2	8.51	173.1	
08/30/2013	22:24:55	119	6.4	8.49	176.7	
08/30/2013	22:25:30	116	6.2	8.48	180.4	
08/30/2013	22:26:05	119	6.4	8.50	184.1	
08/30/2013	22:26:40	119	6.4	8.06	187.8	
08/30/2013	22:27:15	126	6.2	8.52	191.5	
08/30/2013	22:27:50	111	6.4	8.49	195.1	
08/30/2013	22:28:25	120	6.2	8.52	198.8	
08/30/2013	22:29:00	127	6.4	8.54	202.5	
08/30/2013	22:29:35	101	6.2	8.54	206.2	
08/30/2013	22:30:10	122	6.2	8.54	209.8	
08/30/2013	22:30:45	124	6.4	8.54	213.5	
08/30/2013	22:31:20	126	6.2	8.54	217.2	
08/30/2013	22:31:55	130	6.4	8.54	220.8	
08/30/2013	22:32:30	123	6.4	8.54	224.5	
08/30/2013	22:33:05	132	6.4	8.54	228.2	
08/30/2013	22:33:40	135	6.2	8.54	231.9	
08/30/2013	22:34:15	128	6.4	8.54	235.5	
08/30/2013	22:34:50	171	6.2	8.54	239.2	
08/30/2013	22:35:25	187	6.4	8.54	242.9	
08/30/2013	22:36:00	215	6.2	8.54	246.6	
08/30/2013	22:36:35	256	6.5	8.54	250.3	

Well		Field		Job Start		Customer		Job Number	
Clifford 3306, 1-31H 3306, 1-31H				Aug/30/2013		Sandridge Energy Inc		1842578	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message			
08/30/2013	22:37:45	313	6.4	8.54	257.6				
08/30/2013	22:38:20	359	6.4	8.54	261.3				
08/30/2013	22:38:55	382	6.4	8.54	265.0				
08/30/2013	22:39:30	427	6.4	8.54	268.6				
08/30/2013	22:40:05	429	6.4	8.54	272.3				
08/30/2013	22:40:40	478	6.2	8.54	276.0				
08/30/2013	22:41:15	320	6.2	8.54	279.7				
08/30/2013	22:41:50	391	6.2	8.54	283.4				
08/30/2013	22:42:25	573	5.4	8.54	286.9				
08/30/2013	22:43:00	619	5.4	8.54	290.1				
08/30/2013	22:43:35	646	5.3	8.54	293.2				
08/30/2013	22:44:10	683	5.4	8.54	296.4				
08/30/2013	22:44:45	710	5.3	8.54	299.5				
08/30/2013	22:45:20	721	5.4	8.54	302.7				
08/30/2013	22:45:55	756	5.3	8.54	305.9				
08/30/2013	22:46:30	776	5.4	8.54	309.0				
08/30/2013	22:47:05	668	2.9	8.54	312.0				
08/30/2013	22:47:40	617	2.6	8.54	313.6				
08/30/2013	22:48:15	640	2.7	8.54	315.2				
08/30/2013	22:48:50	657	2.6	8.54	316.7				
08/30/2013	22:49:25	675	2.6	8.54	318.2				
08/30/2013	22:50:00	734	2.6	8.54	319.8				
08/30/2013	22:50:35	1175	2.0	8.54	321.3				
08/30/2013	22:51:10	1078	0.0	8.54	321.3				
08/30/2013	22:51:45	1066	0.0	8.54	321.3				
08/30/2013	22:52:20	0	0.0	8.54	321.3				
08/30/2013	22:52:55	1	0.0	8.54	321.3				
08/30/2013	22:53:30	1	0.0	8.54	321.3				
08/30/2013	22:54:05	0	0.0	8.54	321.3				
08/30/2013	22:54:40	-2	0.0	8.54	321.3				
08/30/2013	22:55:15	-2	0.0	8.54	321.3				
08/30/2013	22:55:35	-2	0.0	8.54	321.3	End Displacement			
08/30/2013	22:55:36	-2	0.0	8.54	321.3	Bump Top Plug			

### Post Job Summary

Average Pump Rates, bbl/min				Volume of Fluid Injected, bbl			
Slurry	N2	Mud	Maximum Rate	Total Slurry	Mud	Spacer	N2
5.0			8.7	80.6	0.0	35.2	
Treating Pressure Summary, psi				Breakdown Fluid			
Maximum	Final	Average	Bump Plug to	Breakdown	Type	Volume	Density
5374	-2	387	1140			bbl	lb/gal
Avg. N2 Percent	Designed Slurry Volume	Displacement	Mix Water Temp	Cement Circulated to Surface?	<input type="checkbox"/>	Volume	bbl
%	0.0 bbl	200.0 bbl	degF	Washed Thru Perfs	<input type="checkbox"/>	To	ft
Customer or Authorized Representative	Schlumberger Supervisor			Circulation Lost	<input type="checkbox"/>	Job Completed	<input checked="" type="checkbox"/>
Mr. Cody Davis	Daniel Myers			-		-	

Section 28  
33S 7W

Section 30  
33S 6W

354' FNL

BHL: 8991'

-98.013603 37.136762

2127' FWL

Bottom Perf: 8896'  
-98.013602 37.136479

STEWARD 1-31



Section 30  
33S 7W

Section 31  
33S 6W

Harper County

MCKEE 1-31



Top Perf: 5344'  
-98.013245 37.126962

Miss Entry: 4746'  
-98.013275 37.125258

MCKEE SWD 1-31



CLIFFORD 3306 1-31H



Section 1  
34S 7W

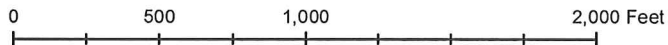
Section 6  
34S 6W



Actual Bottom-Hole Location of Clifford 3306 1-31H  
Harper County, Kansas

T&R: 33S 6W  
Section: 31, 2127' FWL & 354' FNL  
-98.013603 37.136762

1 in = 624 ft



● Actual BH Location

\* SandRidge Wells

Perf

Sections

Draftsman:

Aaron Birk

Draft Date: 12/16/2013

Drawing Name/Number:

Addendum\_Clifford 3306 1-31H.mxd

Coordinate System:

NAD 1927 State Plane  
Kansas South FIPS: 1502