



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1233836  
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: \_\_\_\_\_

1233836

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:  
 Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <i>(Submit ACO-4)</i>	<b>PRODUCTION INTERVAL:</b> _____ _____
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# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	10/14/2014
Job End Date:	10/15/2014
State:	Kansas
County:	Harper
API Number:	15-077-22083-00-00
Operator Name:	SandRidge Energy
Well Name and Number:	Albert 3405 2-12H
Longitude:	-97.81499732
Latitude:	37.10985806
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	4,454
Total Base Water Volume (gal):	143,304
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	55.52499	None
Sand (Proppant)	Archer	Proppant					
			Silica Substrate	NA	100.00000	31.87736	None
Hydrochloric Acid (15%)	Archer	Acidizing					
			Hydrochloric Acid	7647-01-0	15.00000	1.65432	None
			NONYL PHENOL, 4 MOL	104-40-5	10.00000	0.05274	None
			Methyl Alcohol	67-56-1	80.00000	0.01389	None
			thiourea-formaldehyde copolymer	68527-49-1	15.00000	0.00260	None
AIC	Archer	Liquid Acid Iron Control					
			Acetic Acid	64-19-7	50.00000	0.03063	None
			Citric Acid	77-92-9	30.00000	0.01838	None
Chemflush	Archer	Enviro-Friendly Chemical Flush					
			Hydrotreated Petroleum Distillate	64742-47-8	99.00000	0.02793	None
			Alcohol Ethoxylate Surfactants	NA	10.00000	0.00282	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		0.49314
		WATER	7732-18-5		0.31645
		Aliphatic Hydrocarbon	64742-47-8		0.24657
		Anionic Polymer	N/A		0.24657
		TRADE SECRET	N/A		0.21097
		Water	7732-18-5		0.10141
		ISOPROPANOL	67-63-0		0.05274
		METHANOL	67-56-1		0.05274
		Oxyalkylated Alcohol	68002-97-1		0.04110
		Polyol Ester	N/A		0.04110
		Water	7732-18-5		0.02144
		Acrylic Polymer	28205-96-1		0.01690
		Sodium Salt of Phosphate Ester	68131-72-6		0.01690
		Polyglycol Ester	N/A		0.00822
		Alcohol Ethoxylate Surfactants	N/A		0.00260
		n-olefins	N/A		0.00139
		Propargyl Alcohol	107-19-7		0.00104
		Tetrasodium Ethylenediaminetetraacetate	64-02-8		0.00082
		Cinnamic Aldehyde	104-55-2		
		Water	7732-18-5		
		Surfactant	N/A		
		Buffer	N/A		
		Acetic Acid	64-19-7		

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

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

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

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

**JOB SUMMARY**

COUNTY: **Harper** STATE: **Kansas** PROJECT NUMBER: **SOK 4202** TICKET DATE: **09/16/14**

CLIENT: **Bridge Exploration & Product** CUSTOMER REP: **Bill Tomlinson**

LEASE NAME: **Albert 3405** WELL NO.: **2-12H** JOB TYPE: **Misc Pumping** EMPLOYEE NAME: **marcos quintana**

BHP NAME: **Marcos Quintana**

Form Name: \_\_\_\_\_ Type: \_\_\_\_\_

Bottom Hole Temp: **150** Set At: **0**

Retainer Depth: \_\_\_\_\_ Total Depth: **0**

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
I-HEAD	0	IR
Limit clamp	0	IR
Weld-A	0	IR
Texas Pattern Guide Shoe	0	IR
Cement Basket	0	IR

Material	WBM	Density	9	Lb/Gal
Mud Type				
Disp. Fluid				
Fresh Water		8.33		
Fresh Water (BBL)	10			8.33
Spacer Type				
Acid Type			%	
Surfactant			%	
NE Agent			in	
Fluid Loss			in	
Gelling Agent			Gal/Lb	
Fric. Red.			Gal/Lb	
MISC.			Gal/Lb	

Perforac Balls	Qty.
Other	
Other	
Other	
Other	

Stage	Sacks	Cement	Additives
1	0	0	
2	0	0	
3	0	0	

Stage	W/Rq.	Yield	Lbs/Gal
1	0	0.00	0.00
2	0	0.00	0.00
3	0	0.00	0.00
Total	0	0.00	0.00

MAX	1,500 PSI	Pressures
Average	6 BPM <td>Average Rates in BPM</td>	Average Rates in BPM
Reason	SHOE JOINT <td></td>	

Called Out	On Location	Job Started	Job Completed
9/15/2014	9/15/2014	9/16/2014	9/16/2014
Time	1300	0630	0800

Date	Weight	Size	Grade	From	To	Max. Allow
9/15	11.5#	4 1/2"		Surface	0	1,500
9/16		4"		Surface	0	
9/17		6 7/8"		Surface	8,974	Shots/FL

Operating Hours	Description of Job
9/15	Misc Pumping
9/16	Misc Pumping
9/17	Misc Pumping
Total	2.0

MAX 1,500 PSI Pressures

Average 6 BPM Average Rates in BPM

Reason SHOE JOINT

Summary

Preflush: BBI 10.00 Type: 0

MAXIMUM: 1,500 PSI Gal - BBI

NOIFULL: SURFACE Gal - BBI

Actual TOC: SURFACE

Bump Plug PSI: 10 Min 15 Min Cement Slurry: BBI

Total Volume: BBI 127.00

CUSTOMER REPRESENTATIVE: *[Signature]* SIGNATURE

**JOB SUMMARY**

COUNTY: **Harper** STATE: **Kansas** PROJECT NUMBER: **SOK 4134** TICKET DATE: **09/01/14**  
 COMPANY: **Sandridge Exploration & Production** CUSTOMER REP: **Carlos Rendon**  
 LEASE NAME: **Albert 3405** WORKING: **2-12H** JOB TYPE: **Intermediate** EMPLOYEE NAME: **Bryan Douglas**  
 SUP NAME: **Intermediate**

Form Name: \_\_\_\_\_ Type: \_\_\_\_\_  
 Packer Type: \_\_\_\_\_ Set At: **0**  
 Bottom Hole Temp: **155** Pressure \_\_\_\_\_  
 Retainer Depth: \_\_\_\_\_ Total Depth: **5312**

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

Materials	WBW	Density	9	Lb/Gal
Mud Type				
Disp. Fluid				
Fresh Water				
Spacer type				
Acid Type				
Surfactant				
NE Agent				
Fluid Loss				
Gelling Agent				
Fric. Red.				
MISC.				

Perforac Balls	Qty.
Other	
Other	
Other	
Other	

Stage	Sacks	Cement	Additives	W/Rcd.	Yield	Lbs/Gal
1	235	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	6.95	1.43	13.60
2	120	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		0.00	0.00	0.00
Total						

Pressure	AVG	300
MAX	5,000 PSI	
AVG	3 BPM	
MAX	3 BPM	
AVG	5	
Feet	39	
Reason	SHOE JOINT	

Stage	Sacks	Cement	Additives	W/Rcd.	Yield	Lbs/Gal
1	235	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	6.95	1.43	13.60
2	120	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		0.00	0.00	0.00
Total						

Perforac Balls	Qty.
Other	
Other	
Other	
Other	

Stage	Sacks	Cement	Additives	W/Rcd.	Yield	Lbs/Gal
1	235	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	6.95	1.43	13.60
2	120	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		0.00	0.00	0.00
Total						

Perforac Balls	Qty.
Other	
Other	
Other	
Other	

CUSTOMER REPRESENTATIVE \_\_\_\_\_ SIGNATURE \_\_\_\_\_

# Albert 3405 2-12H

## Perforations

Perforations			
Date	Top (ftKB)	Blm (ftKB)	Zone
10/15/2014	5,273.0	5,275.0	Miss Lime, Original Hole
10/15/2014	5,373.0	5,375.0	Miss Lime, Original Hole
10/15/2014	5,472.0	5,474.0	Miss Lime, Original Hole
10/15/2014	5,562.0	5,564.0	Miss Lime, Original Hole
10/15/2014	5,652.0	5,654.0	Miss Lime, Original Hole
10/15/2014	5,745.0	5,747.0	Miss Lime, Original Hole
10/15/2014	5,838.0	5,840.0	Miss Lime, Original Hole
10/15/2014	5,931.0	5,933.0	Miss Lime, Original Hole
10/15/2014	6,031.0	6,033.0	Miss Lime, Original Hole
10/15/2014	6,125.0	6,127.0	Miss Lime, Original Hole
10/15/2014	6,222.0	6,224.0	Miss Lime, Original Hole
10/15/2014	6,368.0	6,370.0	Miss Lime, Original Hole
10/15/2014	6,467.0	6,469.0	Miss Lime, Original Hole
10/14/2014	6,566.0	6,568.0	Miss Lime, Original Hole
10/14/2014	6,657.0	6,659.0	Miss Lime, Original Hole
10/14/2014	6,799.0	6,801.0	Miss Lime, Original Hole
10/14/2014	6,895.0	6,897.0	Miss Lime, Original Hole
10/14/2014	6,991.0	6,993.0	Miss Lime, Original Hole
10/14/2014	7,081.0	7,083.0	Miss Lime, Original Hole
10/14/2014	7,174.0	7,176.0	Miss Lime, Original Hole
10/14/2014	7,270.0	7,272.0	Miss Lime, Original Hole
10/14/2014	7,368.0	7,370.0	Miss Lime, Original Hole
10/14/2014	7,467.0	7,469.0	Miss Lime, Original Hole
10/14/2014	7,612.0	7,614.0	Miss Lime, Original Hole
10/14/2014	7,710.0	7,712.0	Miss Lime, Original Hole
10/14/2014	7,853.0	7,855.0	Miss Lime, Original Hole
10/14/2014	7,949.0	7,951.0	Miss Lime, Original Hole
10/14/2014	8,045.0	8,047.0	Miss Lime, Original Hole
10/14/2014	8,187.0	8,189.0	Miss Lime, Original Hole
10/14/2014	8,284.0	8,286.0	Miss Lime, Original Hole
10/14/2014	8,381.0	8,383.0	Miss Lime, Original Hole
10/14/2014	8,523.0	8,525.0	Miss Lime, Original Hole
10/14/2014	8,621.0	8,623.0	Miss Lime, Original Hole



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



Project: Harper County (KS27S)

Site: Sec 12-T34S-R05W

Well: Albert 3405 2-12H/Job #04945-431-22/Horizon 12

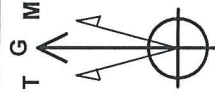
Plan: Plan 090414 A1 (Albert 3405 2-12H/Job #04945-431-22/Horizon 12/Wellbore #1)

WELL DETAILS: Albert 3405 2-12H/Job #04945-431-22/Horizon 12

Ground Level:	1259.0		
Northing	Easting	Latitude	Longitude
162108.99	2199764.00	37° 6' 35.494 N	97° 48' 54.001 W

### SECTION DETAILS

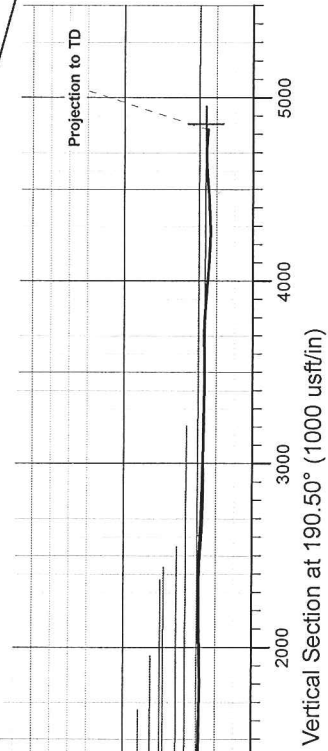
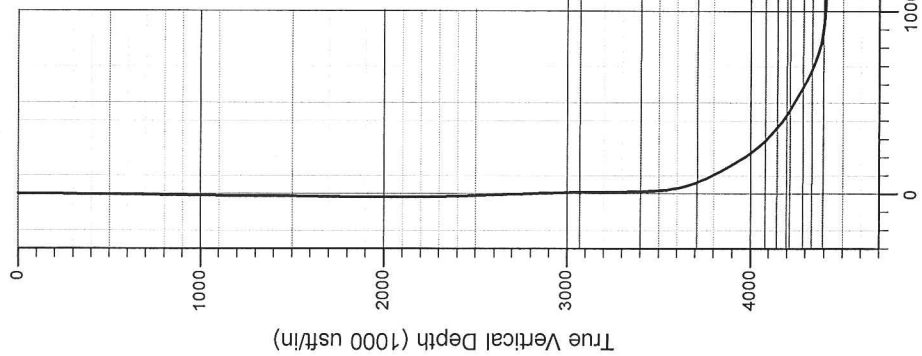
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
6341.0	90.40	178.30	4412.4	-2119.2	-842.5	0.00	0.00	2237.3
6600.4	86.00	181.05	4420.5	-2378.4	-841.0	2.00	148.04	2491.8
6740.4	86.00	181.05	4430.3	-2518.0	-843.6	0.00	0.00	2629.6
6932.9	89.85	181.05	4437.3	-2710.3	-847.1	2.00	0.00	2819.3
8997.9	89.85	181.05	4442.6	-4775.0	-885.0	0.00	50.78	4856.3



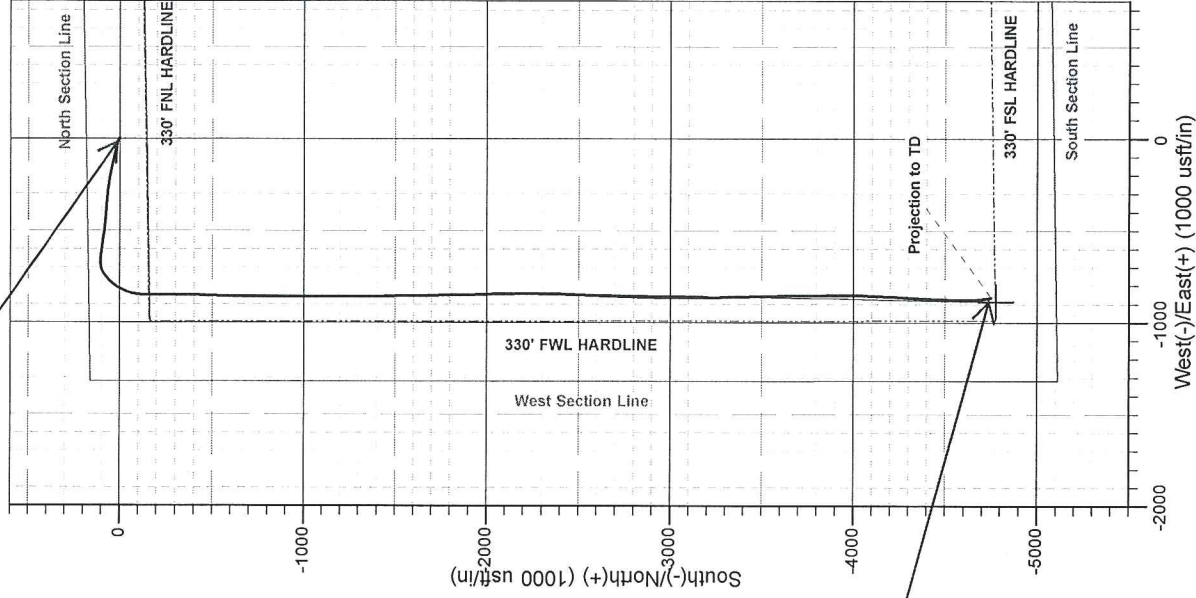
**Azimuths to Grid North**  
 True North: -0.42°  
 Magnetic North: 3.75°  
**Magnetic Field**  
 Strength: 51627.4snT  
 Dip Angle: 65.18°  
 Date: 2014/08/12  
 Model: IGRF2010

Harper Co., Kansas  
 SHL 185' FNL & 1320' FWL  
 Sec 12-T34S-R05W  
 Y: 162109 X: 2199764  
 BHL 330' FSL & 430' FWL  
 Sec 12-T34S-R05W  
 Y: 157334 X: 2198879

**Projection to TD:**  
 8,974' MD & 4,454.2' TVD  
 4,747.9' S & 863.8' W  
 356' FSL & 453' FWL



SHL 185' FNL & 1,320' FWL



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

**Harper County (KS27S)**

**Sec 12-T34S-R05W**

**Albert 3405 2-12H/Job #04945-431-22/Horizon 12**

**Wellbore #1**

**Design: Wellbore #1**

## **Standard Survey Report**

**12 September, 2014**

# ARCHER

## Survey Report

<b>Company:</b>	Sandridge Energy, INC.(mid-con.)	<b>Local Co-ordinate Reference:</b>	Well Albert 3405 2-12H/Job #04945-431-22/Horizon 12
<b>Project:</b>	Harper County (KS27S)	<b>TVD Reference:</b>	WELL @ 1274.0usft (Original Well Elev)
<b>Site:</b>	Sec 12-T34S-R05W	<b>MD Reference:</b>	WELL @ 1274.0usft (Original Well Elev)
<b>Well:</b>	Albert 3405 2-12H/Job #04945-431-22/Horizon 12	<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 County (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 12-T34S-R05W				
<b>Site Position:</b>	<b>Northing:</b>	162,109.00 usft	<b>Latitude:</b>	37° 6' 35.494 N	
<b>From:</b> Map	<b>Easting:</b>	2,199,764.00 usft	<b>Longitude:</b>	97° 48' 54.001 W	
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.42 °

<b>Well</b>	Albert 3405 2-12H/Job #04945-431-22/Horizon 12				
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	162,108.99 usft	
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	2,199,764.00 usft	
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	1,259.0 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>
	IGRF2010	2014/08/12	4.17	65.18	51,627

<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	190.50	

<b>Survey Program</b>	Date 2014/09/12			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
244.0	8,974.0	Archer MWD Surveys (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	
244.0	0.40	352.90	244.0	0.8	-0.1	-0.8	0.16	0.16	0.00	
<b>First Archer MWD Survey</b>										
562.0	0.70	352.90	562.0	3.9	-0.5	-3.7	0.09	0.09	0.00	
592.0	0.50	352.90	592.0	4.2	-0.5	-4.0	0.67	-0.67	0.00	
684.0	0.40	347.80	684.0	4.9	-0.6	-4.7	0.12	-0.11	-5.54	
775.0	0.40	352.90	775.0	5.5	-0.7	-5.3	0.04	0.00	5.60	
868.0	0.70	340.60	868.0	6.4	-1.0	-6.1	0.34	0.32	-13.23	
930.0	0.80	334.20	930.0	7.1	-1.3	-6.8	0.21	0.16	-10.32	

# ARCHER

## Survey Report

<b>Company:</b>	Sandridge Energy, INC.(mid-con.)	<b>Local Co-ordinate Reference:</b>	Well Albert 3405 2-12H/Job #04945-431-22/Horizon 12
<b>Project:</b>	Harper County (KS27S)	<b>TVD Reference:</b>	WELL @ 1274.0usft (Original Well Elev)
<b>Site:</b>	Sec 12-T34S-R05W	<b>MD Reference:</b>	WELL @ 1274.0usft (Original Well Elev)
<b>Well:</b>	Albert 3405 2-12H/Job #04945-431-22/Horizon 12	<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)
1,023.0	3.50	299.70	1,022.9	9.1	-4.0	-8.2	3.09	2.90	-37.10
1,116.0	3.70	298.80	1,115.7	12.0	-9.1	-10.1	0.22	0.22	-0.97
1,211.0	5.40	298.40	1,210.4	15.6	-15.8	-12.4	1.79	1.79	-0.42
1,303.0	6.30	285.30	1,301.9	19.0	-24.4	-14.2	1.74	0.98	-14.24
1,396.0	8.70	275.20	1,394.1	21.0	-36.4	-14.0	2.93	2.58	-10.86
1,486.0	9.80	280.30	1,483.0	22.9	-50.7	-13.3	1.52	1.22	5.67
1,576.0	11.40	282.40	1,571.4	26.2	-66.9	-13.6	1.83	1.78	2.33
1,665.0	12.40	282.70	1,658.5	30.2	-84.8	-14.2	1.13	1.12	0.34
1,752.0	14.90	283.30	1,743.0	34.8	-104.8	-15.2	2.88	2.87	0.69
1,840.0	16.40	281.90	1,827.8	40.0	-128.0	-16.0	1.76	1.70	-1.59
1,929.0	17.50	282.50	1,912.9	45.5	-153.3	-16.8	1.25	1.24	0.67
2,019.0	18.90	281.20	1,998.4	51.2	-180.8	-17.4	1.62	1.56	-1.44
2,109.0	17.60	280.10	2,083.9	56.5	-208.5	-17.5	1.49	-1.44	-1.22
2,199.0	18.70	278.60	2,169.4	61.0	-236.2	-16.9	1.33	1.22	-1.67
2,288.0	17.50	278.10	2,254.0	65.0	-263.6	-15.9	1.36	-1.35	-0.56
2,376.0	19.10	275.60	2,337.5	68.3	-291.0	-14.1	2.02	1.82	-2.84
2,465.0	18.20	275.70	2,421.9	71.1	-319.3	-11.7	1.01	-1.01	0.11
2,555.0	19.80	274.00	2,507.0	73.6	-348.5	-8.8	1.88	1.78	-1.89
2,642.0	18.70	273.70	2,589.1	75.5	-377.1	-5.5	1.27	-1.26	-0.34
2,730.0	16.90	272.70	2,672.9	77.0	-404.0	-2.1	2.07	-2.05	-1.14
2,819.0	18.20	276.00	2,757.7	79.1	-430.7	0.8	1.84	1.46	3.71
2,909.0	19.30	276.70	2,843.0	82.3	-459.5	2.8	1.25	1.22	0.78
2,998.0	16.40	274.50	2,927.7	85.0	-486.6	5.1	3.34	-3.26	-2.47
3,087.0	16.80	277.00	3,013.0	87.5	-511.9	7.2	0.92	0.45	2.81
3,176.0	18.10	278.40	3,097.9	91.1	-538.4	8.5	1.53	1.46	1.57
3,265.0	18.90	278.80	3,182.3	95.3	-566.3	9.5	0.91	0.90	0.45
3,352.0	18.50	278.20	3,264.7	99.5	-593.9	10.4	0.51	-0.46	-0.69
3,442.0	18.30	275.80	3,350.1	102.9	-622.1	12.2	0.87	-0.22	-2.67
3,529.0	19.60	273.10	3,432.4	105.1	-650.2	15.2	1.80	1.49	-3.10
3,573.0	19.50	271.30	3,473.8	105.7	-664.9	17.3	1.39	-0.23	-4.09
3,615.0	20.00	269.80	3,513.4	105.8	-679.1	19.7	1.70	1.19	-3.57
3,661.0	22.10	260.70	3,556.3	104.4	-695.5	24.1	8.43	4.57	-19.78
3,706.0	23.60	250.90	3,597.8	100.0	-712.4	31.5	9.08	3.33	-21.78
3,750.0	24.10	242.70	3,638.0	93.0	-728.7	41.3	7.61	1.14	-18.64
3,794.0	24.90	235.00	3,678.1	83.6	-744.3	53.4	7.48	1.82	-17.50
3,839.0	26.50	229.40	3,718.6	71.6	-759.7	68.0	6.46	3.56	-12.44
3,884.0	27.80	223.60	3,758.7	57.5	-774.5	84.6	6.55	2.89	-12.89
3,928.0	29.70	218.20	3,797.3	41.5	-788.4	102.9	7.31	4.32	-12.27
3,973.0	31.40	213.40	3,836.0	23.0	-801.7	123.5	6.61	3.78	-10.67
4,018.0	30.90	208.40	3,874.5	3.0	-813.7	145.3	5.85	-1.11	-11.11
4,063.0	32.00	203.30	3,912.9	-18.1	-823.9	168.0	6.40	2.44	-11.33
4,108.0	33.20	198.50	3,950.8	-40.8	-832.5	191.8	6.33	2.67	-10.67

# ARCHER

## Survey Report

<b>Company:</b>	Sandridge Energy, INC.(mid-con.)	<b>Local Co-ordinate Reference:</b>	Well Albert 3405 2-12H/Job #04945-431-22/Horizon 12
<b>Project:</b>	Harper County (KS27S)	<b>TVD Reference:</b>	WELL @ 1274.0usft (Original Well Elev)
<b>Site:</b>	Sec 12-T34S-R05W	<b>MD Reference:</b>	WELL @ 1274.0usft (Original Well Elev)
<b>Well:</b>	Albert 3405 2-12H/Job #04945-431-22/Horizon 12	<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)
4,152.0	34.60	193.70	3,987.4	-64.3	-839.3	216.2	6.86	3.18	-10.91
4,196.0	37.10	188.20	4,023.0	-89.6	-844.1	241.9	9.26	5.68	-12.50
4,241.0	40.40	184.30	4,058.1	-117.6	-847.2	270.0	9.12	7.33	-8.67
4,286.0	44.50	182.20	4,091.3	-147.9	-848.9	300.1	9.64	9.11	-4.67
4,331.0	48.50	180.10	4,122.3	-180.5	-849.5	332.3	9.51	8.89	-4.67
4,375.0	51.60	179.80	4,150.6	-214.3	-849.5	365.5	7.06	7.05	-0.68
4,420.0	55.80	180.10	4,177.2	-250.5	-849.4	401.1	9.35	9.33	0.67
4,465.0	59.60	180.60	4,201.2	-288.6	-849.7	438.6	8.50	8.44	1.11
4,509.0	59.80	180.40	4,223.4	-326.5	-850.0	476.0	0.60	0.45	-0.45
4,554.0	59.70	180.50	4,246.1	-365.4	-850.3	514.3	0.29	-0.22	0.22
4,599.0	59.60	180.80	4,268.8	-404.2	-850.8	552.5	0.62	-0.22	0.67
4,643.0	59.50	180.90	4,291.1	-442.2	-851.3	589.9	0.30	-0.23	0.23
4,688.0	62.80	181.70	4,312.9	-481.6	-852.2	628.8	7.50	7.33	1.78
4,730.0	66.20	182.30	4,330.9	-519.4	-853.5	666.3	8.20	8.10	1.43
4,772.0	68.10	182.60	4,347.2	-558.1	-855.2	704.6	4.57	4.52	0.71
4,817.0	70.60	182.40	4,363.1	-600.2	-857.0	746.3	5.57	5.56	-0.44
4,862.0	75.00	181.50	4,376.4	-643.1	-858.5	788.8	9.96	9.78	-2.00
4,904.0	79.40	179.80	4,385.7	-684.1	-858.9	829.2	11.19	10.48	-4.05
4,949.0	82.00	179.20	4,393.0	-728.5	-858.6	872.7	5.93	5.78	-1.33
4,994.0	84.80	179.40	4,398.2	-773.2	-858.0	916.6	6.24	6.22	0.44
5,039.0	85.40	179.60	4,402.0	-818.0	-857.6	960.6	1.40	1.33	0.44
5,083.0	85.80	180.10	4,405.4	-861.9	-857.5	1,003.7	1.45	0.91	1.14
5,128.0	86.50	180.40	4,408.4	-906.8	-857.7	1,047.9	1.69	1.56	0.67
5,173.0	86.90	180.60	4,411.0	-951.7	-858.1	1,092.1	0.99	0.89	0.44
5,207.0	87.30	180.50	4,412.7	-985.7	-858.4	1,125.6	1.21	1.18	-0.29
5,290.0	89.10	181.30	4,415.3	-1,068.6	-859.7	1,207.4	2.37	2.17	0.96
5,351.0	90.80	179.00	4,415.4	-1,129.6	-859.9	1,267.4	4.69	2.79	-3.77
5,410.0	90.60	178.10	4,414.6	-1,188.6	-858.4	1,325.1	1.56	-0.34	-1.53
5,471.0	91.00	180.10	4,413.8	-1,249.5	-857.4	1,384.9	3.34	0.66	3.28
5,533.0	91.10	180.00	4,412.7	-1,311.5	-857.5	1,445.8	0.23	0.16	-0.16
5,592.0	90.60	179.40	4,411.8	-1,370.5	-857.2	1,503.8	1.32	-0.85	-1.02
5,653.0	87.90	179.20	4,412.6	-1,431.5	-856.4	1,563.6	4.44	-4.43	-0.33
5,714.0	88.40	178.70	4,414.6	-1,492.5	-855.3	1,623.3	1.16	0.82	-0.82
5,775.0	88.20	179.40	4,416.4	-1,553.4	-854.3	1,683.1	1.19	-0.33	1.15
5,837.0	89.20	179.40	4,417.8	-1,615.4	-853.7	1,743.9	1.61	1.61	0.00
5,898.0	90.30	179.30	4,418.0	-1,676.4	-853.0	1,803.8	1.81	1.80	-0.16
5,959.0	91.60	178.10	4,417.0	-1,737.4	-851.6	1,863.5	2.90	2.13	-1.97
6,021.0	91.10	178.50	4,415.6	-1,799.3	-849.7	1,924.1	1.03	-0.81	0.65
6,082.0	90.60	178.70	4,414.7	-1,860.3	-848.3	1,983.7	0.88	-0.82	0.33
6,157.0	91.30	178.00	4,413.4	-1,935.3	-846.1	2,057.1	1.32	0.93	-0.93
6,249.0	89.80	179.60	4,412.5	-2,027.2	-844.2	2,147.1	2.38	-1.63	1.74
6,341.0	90.40	178.30	4,412.4	-2,119.2	-842.5	2,237.3	1.56	0.65	-1.41
6,433.0	91.00	180.10	4,411.2	-2,211.2	-841.2	2,327.5	2.06	0.65	1.96

# ARCHER

## Survey Report

<b>Company:</b>	Sandridge Energy, INC.(mid-con.)	<b>Local Co-ordinate Reference:</b>	Well Albert 3405 2-12H/Job #04945-431-22/Horizon 12
<b>Project:</b>	Harper County (KS27S)	<b>TVD Reference:</b>	WELL @ 1274.0usft (Original Well Elev)
<b>Site:</b>	Sec 12-T34S-R05W	<b>MD Reference:</b>	WELL @ 1274.0usft (Original Well Elev)
<b>Well:</b>	Albert 3405 2-12H/Job #04945-431-22/Horizon 12	<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)
6,525.0	89.70	181.70	4,410.7	-2,303.2	-842.6	2,418.2	2.24	-1.41	1.74
6,617.0	86.70	181.80	4,413.6	-2,395.1	-845.4	2,509.1	3.26	-3.26	0.11
6,709.0	87.70	181.60	4,418.1	-2,486.9	-848.2	2,599.9	1.11	1.09	-0.22
6,801.0	87.50	181.00	4,421.9	-2,578.8	-850.3	2,690.6	0.69	-0.22	-0.65
6,893.0	87.80	181.60	4,425.7	-2,670.7	-852.3	2,781.3	0.73	0.33	0.65
6,985.0	88.60	182.80	4,428.6	-2,762.6	-855.9	2,872.3	1.57	0.87	1.30
7,076.0	90.40	182.40	4,429.4	-2,853.5	-860.0	2,962.5	2.03	1.98	-0.44
7,168.0	87.30	181.10	4,431.2	-2,945.4	-862.8	3,053.4	3.65	-3.37	-1.41
7,259.0	90.20	180.30	4,433.2	-3,036.4	-863.9	3,143.0	3.31	3.19	-0.88
7,352.0	88.70	178.70	4,434.1	-3,129.4	-863.1	3,234.3	2.36	-1.61	-1.72
7,444.0	89.00	179.40	4,435.9	-3,221.4	-861.6	3,324.4	0.83	0.33	0.76
7,536.0	88.70	178.70	4,437.8	-3,313.3	-860.1	3,414.6	0.83	-0.33	-0.76
7,627.0	89.90	177.90	4,438.9	-3,404.3	-857.4	3,503.5	1.58	1.32	-0.88
7,719.0	91.60	179.10	4,437.7	-3,496.2	-855.0	3,593.5	2.26	1.85	1.30
7,811.0	90.30	178.70	4,436.2	-3,588.2	-853.2	3,683.6	1.48	-1.41	-0.43
7,903.0	87.20	179.40	4,438.2	-3,680.1	-851.7	3,773.7	3.45	-3.37	0.76
7,995.0	86.40	179.40	4,443.3	-3,772.0	-850.7	3,863.9	0.87	-0.87	0.00
8,087.0	85.50	179.00	4,449.8	-3,863.8	-849.4	3,953.9	1.07	-0.98	-0.43
8,151.0	85.30	180.50	4,454.9	-3,927.6	-849.1	4,016.5	2.36	-0.31	2.34
8,243.0	85.50	180.60	4,462.3	-4,019.3	-850.0	4,106.9	0.24	0.22	0.11
8,345.0	87.70	182.50	4,468.4	-4,121.0	-852.8	4,207.4	2.85	2.16	1.86
8,437.0	91.90	183.40	4,468.7	-4,212.9	-857.5	4,298.6	4.67	4.57	0.98
8,529.0	92.60	183.30	4,465.1	-4,304.7	-862.9	4,389.8	0.77	0.76	-0.11
8,621.0	94.60	182.00	4,459.3	-4,396.4	-867.1	4,480.8	2.59	2.17	-1.41
8,713.0	94.20	183.00	4,452.3	-4,488.0	-871.1	4,571.6	1.17	-0.43	1.09
8,805.0	91.40	182.20	4,447.8	-4,579.8	-875.3	4,662.6	3.16	-3.04	-0.87
8,897.0	86.90	175.50	4,449.1	-4,671.7	-873.5	4,752.6	8.77	-4.89	-7.28
8,929.0	86.00	172.10	4,451.1	-4,703.4	-870.0	4,783.2	10.97	-2.81	-10.63
<b>Last Archer MWD Survey</b>									
8,974.0	86.00	172.10	4,454.2	-4,747.9	-863.8	4,825.8	0.00	0.00	0.00
<b>Projection to TD</b>									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
244.0	244.0	0.8	-0.1	First Archer MWD Survey
8,929.0	4,451.1	-4,703.4	-870.0	Last Archer MWD Survey
8,974.0	4,454.2	-4,747.9	-863.8	Projection to TD

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