



# CONFIDENTIAL 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: Tiffany Golay  
Phone: (405) 429-6543  
CONTRACTOR: License # 34464  
Name: Lariat Services, Inc.  
Wellsite Geologist: William Scott  
Purchaser: NCRA (oil)  
Designate Type of Completion:

- New Well     Re-Entry     Workover
- Oil     WSW     SWD     SLOW  
 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  
 Conv. to GSW  
 Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_  
 Commingled    Permit #: \_\_\_\_\_  
 Dual Completion    Permit #: \_\_\_\_\_  
 SWD    Permit #: \_\_\_\_\_  
 ENHR    Permit #: \_\_\_\_\_  
 GSW    Permit #: \_\_\_\_\_

6/8/2012    7/22/2012    7/25/2012  
Spud Date or    Date Reached TD    Completion Date or  
Recompletion Date       Recompletion Date

API No. 15 - 15-069-20378-01-00  
Spot Description: \_\_\_\_\_  
N2 N2 NE NE Sec. 21 Twp. 26 S. R. 29  East  West  
240 Feet from  North /  South Line of Section  
660 Feet from  East /  West Line of Section  
Footages Calculated from Nearest Outside Section Corner:  
 NE     NW     SE     SW  
County: Gray  
Lease Name: Toews 2629 Well #: 1-21H  
Field Name: \_\_\_\_\_  
Producing Formation: Mississippian  
Elevation: Ground: 2751 Kelly Bushing: 2771  
Total Depth: 9366 Plug Back Total Depth: \_\_\_\_\_  
Amount of Surface Pipe Set and Cemented at: 1535 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: 12000 ppm Fluid volume: 3835 bbls  
Dewatering method used: Hauled to Disposal  
Location of fluid disposal if hauled offsite: \_\_\_\_\_  
Operator Name: Chaosland Disposal  
Lease Name: SE Quarter License #: 99999  
Quarter SE Sec. 33 Twp. 29 S. R. 37  East  West  
County: Grant, OK Permit #: KDH# 890

### 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

Letter of Confidentiality Received  
Date: 10/05/2012  
 Confidential Release Date: \_\_\_\_\_  
 Wireline Log Received  
 Geologist Report Received  
 UIC Distribution  
ALT  I  II  III Approved by: NAOMI JAMES Date: 10/08/2012



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

**Gray County (KA27N)**

**Sec 21-T26S-R29W**

**Toews 2629 1-21H**

**Wellbore #1**

**Design: Wellbore #1**

## **Standard Survey Report**

**26 July, 2012**

# **Archer**



**Archer Directional Drilling Services**  
Survey Report



Company: Sandridge Energy, INC.(mid-con.)  
 Project: Gray County (KA27N)  
 Site: Sec 21-T28S-R29W  
 Well: Toews 2629 1-21H  
 Wellbore: Wellbore #1  
 Design: Wellbore #1

Local Co-ordinate Reference: Well Toews 2629 1-21H  
 TVD Reference: WELL @ 2767.0usft (Original Well Elev)  
 MD Reference: WELL @ 2767.0usft (Original Well Elev)  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
 Database: EDM 5000.1 Single User Db

<b>Project</b>	Gray County (KA27N)		
<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 21-T28S-R29W		
<b>Site Position:</b>	<b>Northing:</b>	411,490.94 usft	<b>Latitude:</b> 37° 46' 47.751 N
<b>From:</b> Map	<b>Easting:</b>	1,424,957.60 usft	<b>Longitude:</b> 100° 29' 23.400 W
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b> 13-3/16 "	<b>Grid Convergence:</b> -1.22 °

<b>Well</b>	Toews 2629 1-21H		
<b>Well Position</b>	<b>+N-S</b>	0.0 usft	<b>Latitude:</b> 37° 46' 47.751 N
	<b>+E-W</b>	0.0 usft	<b>Longitude:</b> 100° 29' 23.400 W
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	usft <b>Ground Level:</b> 2,747.0 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</b>
	IGRF2010	06/29/12	(°) 6.13	(°) 65.51	(nT) 52,037

<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)</b>	<b>+N-S</b>	<b>+E-W</b>	<b>Direction</b>	
	(usft)	(usft)	(usft)	(°)	
	0.0	0.0	0.0	181.69	

<b>Survey Program</b>	Date 07/28/12	
<b>From</b>	<b>To</b>	<b>Survey (Wellbore)</b>
(usft)	(usft)	
250.0	1,535.0	Gyro (Wellbore #1)
1,679.0	9,365.0	Archer MWD Survey (Wellbore #1)
		<b>Tool Name</b>
		MWD
		MWD
		<b>Description</b>
		MWD - Standard
		MWD - Standard

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Bulld 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	
250.0	0.40	13.80	250.0	0.8	0.2	-0.9	0.16	0.16	0.00	
500.0	0.50	13.80	500.0	2.8	0.7	-2.8	0.04	0.04	0.00	
750.0	0.30	13.80	750.0	4.4	1.1	-4.5	0.08	-0.08	0.00	
1,535.0	1.00	13.80	1,534.9	13.1	3.2	-13.2	0.09	0.09	0.00	
<b>Last Gyro</b>										
1,679.0	0.80	18.30	1,678.9	15.3	3.8	-15.4	0.15	-0.14	3.13	
2,147.0	0.60	29.30	2,146.9	20.5	8.1	-20.7	0.05	-0.04	2.35	
2,611.0	1.20	60.90	2,610.8	25.0	11.5	-25.3	0.16	0.13	6.81	
3,079.0	1.30	69.70	3,078.7	29.2	20.8	-29.8	0.05	0.02	1.88	



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 Database:

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 WELL @ 2767.0usft (Original Well Elev)  
 WELL @ 2767.0usft (Original Well Elev)  
 Grid  
 Minimum Curvature  
 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)
3,558.0	1.40	93.40	3,557.8	30.8	31.7	-31.7	0.12	0.02	4.95
3,844.0	1.10	111.90	3,843.5	29.5	37.7	-30.6	0.17	-0.10	6.47
3,939.0	1.10	108.70	3,938.5	28.9	39.4	-30.0	0.06	0.00	-3.37
4,003.0	1.00	103.60	4,002.5	28.6	40.6	-29.8	0.21	-0.16	-7.97
4,035.0	1.00	104.40	4,034.5	28.4	41.1	-29.6	0.04	0.00	2.50
4,068.0	1.10	114.30	4,065.5	28.2	41.6	-29.5	0.67	0.32	31.94
4,097.0	2.10	140.50	4,096.5	27.7	42.3	-28.9	3.92	3.23	84.52
4,129.0	3.50	154.70	4,128.4	26.3	43.1	-27.6	4.85	4.38	44.38
4,161.0	5.30	158.20	4,160.3	24.1	44.0	-25.4	5.68	5.63	10.94
4,193.0	6.50	159.00	4,192.2	21.0	45.2	-22.4	3.76	3.75	2.50
4,225.0	7.90	164.10	4,223.9	17.2	46.5	-18.6	4.81	4.38	15.94
4,257.0	10.40	167.70	4,255.5	12.3	47.7	-13.7	8.01	7.81	11.25
4,289.0	12.80	171.30	4,286.8	6.0	48.8	-7.4	7.83	7.50	11.25
4,321.0	14.70	174.30	4,317.9	-1.6	49.8	0.1	6.34	5.94	9.38
4,353.0	17.80	176.70	4,348.6	-10.5	50.5	9.0	9.91	9.69	7.50
4,385.0	20.70	179.70	4,378.8	-21.1	50.8	19.5	9.57	9.06	9.38
4,417.0	22.90	182.00	4,408.6	-32.9	50.6	31.4	7.37	6.88	7.19
4,449.0	24.40	183.20	4,437.9	-45.8	50.0	44.3	4.92	4.69	3.75
4,481.0	26.20	183.10	4,466.8	-59.4	49.3	57.9	5.63	5.63	-0.31
4,513.0	28.20	183.20	4,495.3	-74.0	48.4	72.6	6.25	6.25	0.31
4,544.0	30.40	182.80	4,522.3	-89.2	47.7	87.7	7.12	7.10	-1.29
4,576.0	33.50	182.80	4,549.4	-106.1	46.8	104.6	9.69	9.69	0.00
4,608.0	36.00	183.00	4,575.7	-124.3	45.9	122.9	7.82	7.81	0.63
4,640.0	37.20	182.70	4,601.4	-143.3	45.0	142.0	3.79	3.75	-0.94
4,672.0	38.50	183.40	4,626.7	-163.0	43.9	161.6	4.26	4.06	2.19
4,704.0	40.00	184.10	4,651.5	-183.2	42.6	181.8	4.89	4.69	2.19
4,736.0	42.50	184.80	4,675.5	-204.2	40.9	202.9	7.94	7.81	2.19
4,768.0	45.20	183.80	4,698.8	-226.3	39.3	225.0	8.66	8.44	-2.81
4,799.0	48.40	183.40	4,719.8	-248.8	37.8	247.6	10.39	10.32	-1.61
4,831.0	51.00	182.80	4,740.5	-273.2	36.5	272.0	8.21	8.13	-1.56
4,863.0	51.50	182.70	4,760.5	-298.1	35.3	297.0	1.64	1.56	-0.63
4,895.0	51.50	183.10	4,780.5	-323.1	34.0	322.0	0.98	0.00	1.25
4,927.0	51.10	182.80	4,800.5	-348.1	32.7	347.0	1.45	-1.25	-0.94
4,958.0	50.60	182.80	4,820.0	-372.1	31.5	371.0	1.61	-1.61	0.00
4,990.0	50.00	182.80	4,840.5	-396.7	30.3	395.6	1.88	-1.88	0.00
5,023.0	49.30	182.30	4,861.9	-421.8	29.2	420.6	2.42	-2.12	-1.52
5,055.0	50.90	181.90	4,882.4	-446.3	28.3	445.3	5.09	5.00	-1.25
5,088.0	53.60	182.70	4,901.4	-470.8	27.3	469.8	8.95	8.71	2.58
5,118.0	56.70	182.50	4,919.6	-497.1	26.2	496.1	9.70	9.69	-0.63
5,150.0	59.20	182.60	4,936.6	-524.2	24.9	523.2	7.82	7.81	0.31
5,182.0	62.60	181.50	4,952.2	-552.1	23.9	551.1	10.74	10.31	-3.44
5,214.0	66.00	180.20	4,966.1	-580.9	23.5	579.9	11.53	10.94	-4.06
5,245.0	69.50	179.70	4,977.8	-609.6	23.6	608.6	11.39	11.29	-1.81



# Archer Directional Drilling Services

## Survey Report



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 Project: Gray County (KA27N)  
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 Well: Toows 2829 1-21H  
 Wellbore: Wellbore #1  
 Design: Wellbore #1

Local Co-ordinate Reference: Well Toows 2829 1-21H  
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 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
 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)
5,277.0	73.20	180.10	4,988.1	-639.9	23.6	638.9	11.62	11.56	1.25
5,309.0	77.70	179.50	4,996.1	-870.9	23.7	669.9	14.18	14.08	-1.88
5,341.0	81.80	179.10	5,001.8	-702.3	24.1	701.3	12.87	12.81	-1.25
5,373.0	86.00	179.40	5,005.2	-734.2	24.5	733.1	13.16	13.13	0.94
5,389.0	88.40	179.70	5,006.0	-750.1	24.8	749.1	15.12	15.00	1.88
5,434.0	91.80	180.60	5,005.9	-795.1	24.5	794.1	7.82	7.56	2.00
5,465.0	91.70	180.80	5,005.0	-826.1	24.1	825.0	0.72	-0.32	0.85
5,497.0	91.50	180.80	5,004.1	-858.1	23.7	857.0	0.70	-0.83	0.31
5,591.0	91.10	181.80	5,001.9	-952.0	21.5	951.0	1.05	-0.43	0.98
5,685.0	91.00	181.80	5,000.2	-1,046.0	18.5	1,045.0	0.11	-0.11	0.00
5,778.0	89.10	182.40	5,000.1	-1,138.9	15.1	1,138.0	2.14	-2.04	0.65
5,872.0	88.60	181.90	5,002.0	-1,232.8	11.8	1,231.9	0.75	-0.53	-0.53
5,965.0	88.50	182.00	5,004.4	-1,325.7	8.4	1,324.9	0.15	-0.11	0.11
6,059.0	89.40	181.60	5,006.1	-1,419.7	5.5	1,418.9	1.05	0.96	-0.43
6,151.0	90.30	181.90	5,006.3	-1,511.6	2.6	1,510.9	1.03	0.98	0.33
6,244.0	89.60	181.80	5,006.4	-1,604.6	-0.4	1,603.9	0.76	-0.75	-0.11
6,275.0	89.40	181.90	5,006.7	-1,635.6	-1.4	1,634.9	0.72	-0.65	0.32
6,305.0	90.60	182.10	5,008.7	-1,665.6	-2.4	1,664.9	4.06	4.00	0.67
6,336.0	91.90	182.70	5,008.0	-1,698.5	-3.7	1,695.9	4.62	4.19	1.94
6,367.0	92.50	183.00	5,004.8	-1,727.5	-5.2	1,726.9	2.16	1.94	0.97
6,398.0	92.70	183.00	5,003.4	-1,758.4	-6.9	1,757.8	0.65	0.65	0.00
6,429.0	92.40	183.00	5,002.0	-1,789.3	-8.5	1,788.8	0.97	-0.97	0.00
6,459.0	92.00	183.20	5,000.9	-1,819.2	-10.1	1,818.7	1.49	-1.33	0.67
6,490.0	91.90	183.70	4,999.8	-1,850.2	-12.0	1,849.7	1.64	-0.32	1.61
6,521.0	91.10	183.50	4,999.0	-1,881.1	-13.9	1,880.7	2.66	-2.58	-0.65
6,551.0	90.80	183.60	4,998.5	-1,911.0	-15.6	1,910.7	1.05	-1.00	0.33
6,582.0	91.00	183.80	4,998.0	-1,942.0	-17.8	1,941.6	0.91	0.65	0.65
6,613.0	91.80	184.40	4,997.3	-1,972.9	-20.0	1,972.6	3.23	2.58	1.94
6,643.0	91.60	184.40	4,996.4	-2,002.8	-22.3	2,002.6	0.67	-0.67	0.00
6,675.0	89.80	183.90	4,996.0	-2,034.7	-24.6	2,034.5	5.84	-5.63	-1.56
6,708.0	89.30	183.80	4,996.2	-2,065.6	-26.7	2,065.5	1.64	-1.61	-0.32
6,738.0	88.70	183.80	4,996.6	-2,097.5	-28.8	2,097.5	1.88	-1.88	0.00
6,770.0	88.60	183.70	4,997.5	-2,129.5	-30.9	2,129.4	0.44	-0.31	-0.31
6,802.0	88.70	183.90	4,998.3	-2,161.4	-33.0	2,161.4	0.70	0.31	0.63
6,834.0	87.60	183.40	4,999.3	-2,193.3	-35.1	2,193.4	3.78	-3.44	-1.56
6,865.0	86.80	183.40	5,000.8	-2,224.2	-36.9	2,224.3	2.58	-2.58	0.00
6,887.0	87.40	183.40	5,002.0	-2,246.1	-38.2	2,246.3	2.73	2.73	0.00
6,919.0	88.90	183.60	5,003.0	-2,278.1	-40.1	2,278.3	4.73	4.69	0.63
6,951.0	89.50	183.90	5,003.4	-2,310.0	-42.2	2,310.2	2.10	1.88	0.94
6,983.0	89.80	184.00	5,003.6	-2,341.9	-44.4	2,342.2	0.99	0.94	0.31
7,015.0	89.60	184.30	5,003.8	-2,373.8	-46.8	2,374.2	1.13	-0.63	0.94
7,047.0	89.50	183.80	5,004.1	-2,405.8	-49.0	2,406.1	1.59	-0.31	-1.56
7,080.0	89.70	184.20	5,004.3	-2,438.7	-51.3	2,439.1	1.36	0.61	1.21



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7,112.0	89.60	183.90	5,004.5	-2,470.6	-53.6	2,471.1	0.99	-0.31	-0.94
7,144.0	89.50	183.70	5,004.7	-2,502.5	-55.7	2,503.1	0.70	-0.31	-0.63
7,175.0	89.50	183.70	5,005.0	-2,533.5	-57.7	2,534.1	0.00	0.00	0.00
7,207.0	89.90	183.40	5,005.2	-2,565.4	-59.7	2,566.0	1.56	1.25	-0.94
7,303.0	90.30	183.30	5,005.0	-2,661.2	-65.3	2,662.0	0.43	0.42	-0.10
7,398.0	89.10	183.00	5,005.5	-2,756.1	-70.5	2,757.0	1.30	-1.26	-0.32
7,493.0	89.50	182.60	5,006.7	-2,851.0	-75.1	2,851.9	0.67	0.42	-0.53
7,588.0	89.20	182.60	5,007.7	-2,945.9	-79.3	2,946.9	0.33	-0.32	0.11
7,683.0	89.80	182.20	5,008.6	-3,040.8	-83.3	3,041.9	0.76	0.63	-0.42
7,778.0	92.30	184.40	5,008.8	-3,135.8	-88.7	3,136.8	3.51	2.83	2.32
7,874.0	91.00	184.40	5,004.1	-3,231.3	-96.1	3,232.7	1.35	-1.35	0.00
7,906.0	91.20	184.90	5,003.4	-3,263.2	-98.7	3,264.6	1.68	0.63	1.56
7,938.0	89.20	184.20	5,003.3	-3,295.0	-101.2	3,296.6	6.62	-6.25	-2.19
7,970.0	87.90	184.10	5,004.1	-3,327.0	-103.6	3,328.6	4.07	-4.08	-0.31
8,002.0	87.90	184.00	5,005.3	-3,358.9	-105.8	3,360.5	0.31	0.00	-0.31
8,034.0	88.00	183.90	5,006.5	-3,390.8	-108.0	3,392.5	0.44	0.31	-0.31
8,066.0	88.00	183.80	5,007.6	-3,422.7	-110.2	3,424.4	0.31	0.00	-0.31
8,098.0	88.00	183.80	5,008.7	-3,454.6	-112.3	3,456.4	0.00	0.00	0.00
8,130.0	88.00	183.80	5,009.8	-3,486.5	-114.4	3,488.3	0.00	0.00	0.00
8,162.0	87.90	183.70	5,011.0	-3,518.4	-116.5	3,520.3	0.44	-0.31	-0.31
8,194.0	88.00	183.50	5,012.1	-3,550.3	-118.5	3,552.3	0.70	0.31	-0.63
8,226.0	88.40	183.50	5,013.1	-3,582.2	-120.5	3,584.2	1.25	1.25	0.00
8,258.0	88.40	183.50	5,014.0	-3,614.2	-122.4	3,616.2	0.00	0.00	0.00
8,354.0	88.30	183.10	5,016.8	-3,710.0	-127.9	3,712.1	0.43	-0.10	-0.42
8,449.0	89.00	181.80	5,019.0	-3,804.8	-132.0	3,807.1	1.55	0.74	-1.37
8,545.0	89.00	182.00	5,020.7	-3,900.6	-135.2	3,903.1	0.21	0.00	0.21
8,641.0	88.80	181.90	5,022.5	-3,996.7	-138.4	3,999.1	0.23	-0.21	-0.10
8,673.0	88.70	182.00	5,023.2	-4,028.7	-139.5	4,031.0	0.44	-0.31	0.31
8,705.0	88.70	182.10	5,023.9	-4,060.7	-140.7	4,063.0	0.31	0.00	0.31
8,737.0	89.00	181.80	5,024.6	-4,092.6	-141.8	4,095.0	1.33	0.94	-0.94
8,769.0	90.20	181.50	5,024.8	-4,124.6	-142.7	4,127.0	3.87	3.75	-0.94
8,801.0	90.20	181.50	5,024.7	-4,156.6	-143.5	4,159.0	0.00	0.00	0.00
8,833.0	89.90	181.50	5,024.7	-4,188.6	-144.4	4,191.0	0.94	-0.94	0.00
8,865.0	91.00	181.30	5,024.4	-4,220.6	-145.1	4,223.0	3.49	3.44	-0.63
8,897.0	91.10	181.10	5,023.8	-4,252.6	-145.8	4,255.0	0.70	0.31	-0.63
8,929.0	91.40	180.60	5,023.1	-4,284.6	-146.3	4,287.0	1.82	0.94	-1.56
8,961.0	91.30	180.40	5,022.4	-4,316.5	-146.6	4,319.0	0.70	-0.31	-0.63
8,993.0	91.30	180.30	5,021.7	-4,348.5	-146.8	4,351.0	0.31	0.00	-0.31
9,025.0	92.20	180.30	5,020.7	-4,380.5	-146.9	4,383.0	2.81	2.81	0.00
9,057.0	92.40	180.40	5,019.4	-4,412.5	-147.1	4,414.9	0.70	0.63	0.31
9,089.0	92.20	180.50	5,018.1	-4,444.5	-147.4	4,446.9	0.70	-0.63	0.31
9,121.0	92.00	179.50	5,018.9	-4,476.4	-147.4	4,478.8	3.18	-0.63	-3.13
9,153.0	92.00	179.30	5,015.8	-4,508.4	-147.0	4,510.8	0.62	0.00	-0.63
9,184.0	92.10	179.30	5,014.7	-4,539.4	-146.7	4,541.8	0.32	0.32	0.00



**Archer Directional Drilling Services**  
Survey Report

# Archer

Company: Sandridge Energy, INC.(mid-con.)  
 Project: Gray County (KA27N)  
 Site: Sec 21-T28S-R28W  
 Well: Toews 2629 1-21H  
 Wellbore: Wellbore #1  
 Design: Wellbore #1

Local Co-ordinate Reference: Well Toews 2629 1-21H  
 TVD Reference: WELL @ 2767.0usft (Original Well Elev)  
 MD Reference: WELL @ 2767.0usft (Original Well Elev)  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
 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)
9,217.0	92.10	179.40	5,013.5	-4,572.4	-146.3	4,574.7	0.30	0.00	0.30
9,248.0	92.00	179.20	5,012.4	-4,603.4	-145.9	4,605.7	0.72	-0.32	-0.65
9,280.0	92.00	179.20	5,011.3	-4,635.3	-145.5	4,637.6	0.00	0.00	0.00
9,312.0	92.10	178.80	5,010.1	-4,667.3	-144.9	4,869.6	1.29	0.31	-1.25
<b>Last Archer Survey</b>									
9,365.0	92.10	178.80	5,008.2	-4,720.3	-143.8	4,722.4	0.00	0.00	0.00
Projection to TD									

**Design Annotations**

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,835.0	1,534.9	13.1	3.2	Last Gyro
9,312.0	5,010.1	-4,667.3	-144.9	Last Archer Survey
9,365.0	5,008.2	-4,720.3	-143.8	Projection to TD

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

Section 16  
26S 29W

Section 15  
26S 29W \* MILLERSHASKI 2629 I-15H

TOEWS 2629 I-21H



Miss Entry: 4931'  
-100 37.778989

Top Perf: 5243'  
-100 37.778278

Section 21  
26S 29W

Section 22  
26S 29W

Bottom Perf: 8972'  
-100 37.768186

BHL: 9366'  
-100 37.767089

357' FSL 414' FEL

Section 28  
26S 29W

Section 27  
26S 29W



Actual Bottom-Hole Location of Toews 2629 I-21H

Gray County, Kansas

T&R: 26S 29W

Section: 21, 414' FEL & 357' FSL

Long/Lat: -100 37.767089

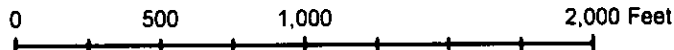
1 in = 667 ft

● Actual BH Location

\* SandRidge Wells

Perf

Sections



Draftsman:

Aaron Birk

Draft Date: 9/29/2012

Drawing Name/Number:

Addendum\_Toews\_2629\_1-21H.mxc

Coordinate System:

NAD 1927 State Plane  
Kansas South FIPS: 1502