

Sandridge Energy, INC.(mid-con.)

Ness County (KS27S)

Sec 35-T17S-R25W

Krug 1725 1-35H/ Job #04099-431-22/ Lariat 3

Wellbore #1

Design: Wellbore #1

Standard Survey Report

27 February, 2013

Archer Survey Report

Company: Sandridge Energy, INC.(mid-con.)	Local Co-ordinate Reference: Well Krug 1725 1-35H/ Job #04099-431-22/ Lariat 3
Project: Ness County (KS27S)	TVD Reference: WELL @ 2410.0usft (Original Well Elev)
Site: Sec 35-T17S-R25W	MD Reference: WELL @ 2410.0usft (Original Well Elev)
Well: Krug 1725 1-35H/ Job #04099-431-22/ Lariat 3	North Reference: Grid
Wellbore: Wellbore #1	Survey Calculation Method: Minimum Curvature
Design: Wellbore #1	Database: EDM 5000.1 Single User Db

Project Ness 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 35-T17S-R25W					
Site Position:		Northing:	679,545.00 usft	Latitude:	38° 31' 21.302 N
From: Map		Easting:	1,552,287.00 usft	Longitude:	100° 3' 53.614 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.96 °

Well Krug 1725 1-35H/ Job #04099-431-22/ Lariat 3					
Well Position	+N/-S	0.0 usft	Northing:	679,709.43 usft	Latitude: 38° 31' 23.146 N
	+E/-W	0.0 usft	Easting:	1,553,611.81 usft	Longitude: 100° 3' 36.982 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level: 2,392.0 usft

Wellbore Wellbore #1					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	02/08/13	5.81	66.16	52,410

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		0.82

Survey Program Date 02/27/13					
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
1,629.0	6,236.0	Archer MWD Survey (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	
1,629.0	0.30	130.40	1,629.0	-2.8	3.2	-2.7	0.02	0.02	0.00	
First Archer MWD Survey										
2,099.0	0.40	96.80	2,099.0	-3.8	5.8	-3.7	0.05	0.02	-7.15	
2,568.0	0.60	93.30	2,568.0	-4.1	9.9	-3.9	0.04	0.04	-0.75	
3,033.0	0.80	110.90	3,032.9	-5.4	15.4	-5.2	0.06	0.04	3.78	
3,500.0	0.40	80.00	3,499.9	-6.3	20.0	-6.0	0.11	-0.09	-6.62	
3,688.0	0.40	51.60	3,687.9	-5.7	21.2	-5.4	0.10	0.00	-15.11	
3,718.0	0.50	24.00	3,717.9	-5.6	21.3	-5.3	0.79	0.33	-92.00	
3,750.0	0.10	54.40	3,749.9	-5.4	21.4	-5.1	1.30	-1.25	95.00	

Archer

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Site:	Sec 35-T17S-R25W	MD Reference:	WELL @ 2410.0usft (Original Well Elev)
Well:	Krug 1725 1-35H/ Job #04099-431-22/ Lariat 3	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)
3,780.0	1.80	355.00	3,779.9	-4.9	21.4	-4.6	5.84	5.67	-198.00
3,811.0	4.50	356.00	3,810.8	-3.2	21.2	-2.9	8.71	8.71	3.23
3,843.0	7.30	358.20	3,842.7	0.0	21.1	0.4	8.78	8.75	6.88
3,875.0	9.80	357.00	3,874.3	4.8	20.9	5.1	7.83	7.81	-3.75
3,906.0	12.40	356.60	3,904.7	10.8	20.5	11.1	8.39	8.39	-1.29
3,938.0	15.30	354.30	3,935.8	18.4	19.9	18.7	9.22	9.06	-7.19
3,970.0	17.90	353.40	3,966.5	27.5	18.9	27.7	8.16	8.13	-2.81
4,000.0	21.10	353.00	3,994.7	37.4	17.7	37.7	10.68	10.67	-1.33
4,029.0	23.60	353.10	4,021.6	48.4	16.4	48.6	8.62	8.62	0.34
4,061.0	25.90	353.80	4,050.6	61.7	14.9	61.9	7.25	7.19	2.19
4,091.0	28.90	354.90	4,077.2	75.4	13.5	75.6	10.14	10.00	3.67
4,123.0	31.80	355.90	4,104.9	91.5	12.2	91.7	9.20	9.06	3.13
4,153.0	34.50	357.00	4,130.0	107.9	11.2	108.1	9.22	9.00	3.67
4,183.0	37.50	357.50	4,154.2	125.5	10.4	125.6	10.05	10.00	1.67
4,214.0	40.60	357.50	4,178.3	145.0	9.5	145.1	10.00	10.00	0.00
4,246.0	43.80	357.60	4,202.0	166.5	8.6	166.6	10.00	10.00	0.31
4,277.0	47.00	357.70	4,223.8	188.5	7.7	188.6	10.33	10.32	0.32
4,308.0	50.20	357.80	4,244.3	211.8	6.8	211.9	10.33	10.32	0.32
4,339.0	53.30	358.40	4,263.5	236.1	6.0	236.2	10.11	10.00	1.94
4,370.0	56.40	358.60	4,281.3	261.4	5.3	261.5	10.01	10.00	0.65
4,401.0	59.70	359.10	4,297.7	287.7	4.8	287.8	10.73	10.65	1.61
4,433.0	62.90	0.10	4,313.1	315.8	4.6	315.8	10.37	10.00	3.13
4,465.0	66.30	0.40	4,326.8	344.7	4.7	344.7	10.66	10.63	0.94
4,497.0	69.90	360.00	4,338.7	374.4	4.8	374.4	11.31	11.25	-1.25
4,528.0	73.10	359.80	4,348.6	403.8	4.8	403.8	10.34	10.32	-0.65
4,559.0	76.40	359.60	4,356.7	433.7	4.6	433.7	10.66	10.65	-0.65
4,590.0	80.00	359.30	4,363.1	464.0	4.3	464.0	11.65	11.61	-0.97
4,621.0	83.10	359.20	4,367.6	494.7	3.9	494.7	10.01	10.00	-0.32
4,644.0	85.50	359.80	4,369.9	517.6	3.7	517.6	10.75	10.43	2.61
4,686.0	88.90	0.40	4,372.0	559.5	3.8	559.5	8.22	8.10	1.43
4,717.0	89.50	0.90	4,372.4	590.5	4.2	590.5	2.52	1.94	1.61
4,748.0	89.80	1.30	4,372.6	621.5	4.8	621.5	1.61	0.97	1.29
4,780.0	90.10	0.80	4,372.6	653.5	5.4	653.5	1.82	0.94	-1.56
4,811.0	90.50	1.10	4,372.4	684.5	5.9	684.5	1.61	1.29	0.97
4,873.0	91.00	0.40	4,371.6	746.5	6.7	746.5	1.39	0.81	-1.13
4,905.0	91.50	359.70	4,370.9	778.5	6.7	778.5	2.69	1.56	-2.19
4,968.0	92.10	359.10	4,369.0	841.4	6.0	841.4	1.35	0.95	-0.95
4,997.0	92.50	359.00	4,367.8	870.4	5.6	870.4	1.42	1.38	-0.34
5,060.0	91.30	359.70	4,365.7	933.4	4.9	933.3	2.20	-1.90	1.11
5,092.0	91.60	0.40	4,364.9	965.4	4.9	965.3	2.38	0.94	2.19
5,153.0	90.80	0.90	4,363.6	1,026.3	5.6	1,026.3	1.55	-1.31	0.82
5,183.0	90.70	1.10	4,363.2	1,056.3	6.1	1,056.3	0.75	-0.33	0.67

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Survey										
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5,244.0	89.80	2.40	4,363.0	1,117.3	8.0	1,117.3	2.59	-1.48	2.13	
5,275.0	89.80	2.00	4,363.1	1,148.3	9.1	1,148.3	1.29	0.00	-1.29	
5,339.0	90.20	1.90	4,363.1	1,212.2	11.3	1,212.3	0.64	0.63	-0.16	
5,370.0	90.20	2.00	4,363.0	1,243.2	12.4	1,243.3	0.32	0.00	0.32	
5,433.0	90.20	2.20	4,362.7	1,306.2	14.7	1,306.3	0.32	0.00	0.32	
5,465.0	89.30	2.40	4,362.9	1,338.2	16.0	1,338.2	2.88	-2.81	0.63	
5,497.0	87.40	2.00	4,363.8	1,370.1	17.2	1,370.2	6.07	-5.94	-1.25	
5,560.0	87.70	2.30	4,366.5	1,433.0	19.6	1,433.1	0.67	0.48	0.48	
5,622.0	88.50	2.70	4,368.5	1,494.9	22.3	1,495.1	1.44	1.29	0.65	
5,653.0	89.10	3.30	4,369.2	1,525.9	23.9	1,526.1	2.74	1.94	1.94	
5,715.0	89.40	3.50	4,370.0	1,587.8	27.6	1,588.0	0.58	0.48	0.32	
5,747.0	88.60	2.40	4,370.6	1,619.7	29.2	1,620.0	4.25	-2.50	-3.44	
5,778.0	89.50	2.60	4,371.1	1,650.7	30.6	1,650.9	2.97	2.90	0.65	
5,841.0	88.20	2.00	4,372.3	1,713.6	33.1	1,713.9	2.27	-2.06	-0.95	
5,873.0	88.20	2.20	4,373.3	1,745.6	34.3	1,745.9	0.62	0.00	0.63	
5,937.0	88.50	2.40	4,375.2	1,809.5	36.8	1,809.8	0.56	0.47	0.31	
5,999.0	89.00	1.70	4,376.5	1,871.4	39.0	1,871.8	1.39	0.81	-1.13	
6,030.0	89.40	1.80	4,377.0	1,902.4	40.0	1,902.8	1.33	1.29	0.32	
6,062.0	89.80	1.70	4,377.2	1,934.4	41.0	1,934.8	1.29	1.25	-0.31	
6,124.0	90.50	2.20	4,377.0	1,996.4	43.1	1,996.8	1.39	1.13	0.81	
6,190.0	92.20	1.90	4,375.5	2,062.3	45.4	2,062.7	2.62	2.58	-0.45	
Last Archer MWD Survey										
6,236.0	93.30	1.60	4,373.3	2,108.2	46.8	2,108.7	2.48	2.39	-0.65	
Projection to TD - PBHL Krug 1-35H										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
1,629.0	1,629.0	-2.8	3.2	First Archer MWD Survey	
6,190.0	4,375.5	2,062.3	45.4	Last Archer MWD Survey	
6,236.0	4,373.3	2,108.2	46.8	Projection to TD	

Checked By: _____ Approved By: _____ Date: _____