

# **SandRidge Energy**

**North Park Basin**

**T7N-R80W-S18**

**Coalmont 0781 2-13H**

**Wellbore #1**

**Plan: Design #1**

## **Standard Survey Report**

**15 July, 2016**

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Coalmont 0781 2-13H
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8222.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S18	<b>MD Reference:</b>	WELL @ 8222.0usft (Original Well Elev)
<b>Well:</b>	Coalmont 0781 2-13H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	EDMProd

<b>Project</b>	North Park Basin		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

<b>Site</b>	T7N-R80W-S18		
<b>Site Position:</b>		<b>Northing:</b>	1,456,963.79 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,745,723.26 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	40° 35' 2.980 N
		<b>Longitude:</b>	106° 24' 55.770 W
		<b>Grid Convergence:</b>	-0.59 °

<b>Well</b>	Coalmont 0781 2-13H		
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	0.0 usft
		<b>Latitude:</b>	40° 34' 17.742 N
		<b>Longitude:</b>	106° 25' 28.307 W
		<b>Ground Level:</b>	8,206.0 usft

<b>Wellbore</b>	Wellbore #1		
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>
			(°)
	IGRF200510	12/31/2009	9.90
			<b>Dip Angle</b>
			(°)
			66.96
			<b>Field Strength</b>
			(nT)
			53,179

<b>Design</b>	Design #1		
<b>Audit Notes:</b>			
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>
			0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			<b>Direction</b>
			(°)
			0.00

<b>Survey Tool Program</b>	<b>Date</b>	7/7/2016		
<b>From</b>	<b>To</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
(usft)	(usft)			
0.0	11,438.3	Design #1 (Wellbore #1)	Sperry MWD	Fixed:v2:standard declination

<b>Planned Survey</b>									
<b>Measured</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Vertical</b>	<b>Dogleg</b>	<b>Build</b>	<b>Turn</b>
<b>Depth</b>	<b>(°)</b>	<b>(°)</b>	<b>Depth</b>	<b>(usft)</b>	<b>(usft)</b>	<b>Section</b>	<b>Rate</b>	<b>Rate</b>	<b>Rate</b>
<b>(usft)</b>			<b>(usft)</b>			<b>(usft)</b>	<b>(°/100usft)</b>	<b>(°/100usft)</b>	<b>(°/100usft)</b>
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00

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<b>Site:</b>	T7N-R80W-S18	<b>MD Reference:</b>	WELL @ 8222.0usft (Original Well Elev)
<b>Well:</b>	Coalmont 0781 2-13H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	EDMProd

### Planned 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)
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>Start Build 2.00</b>									
2,800.0	2.00	245.22	2,800.0	-0.7	-1.6	-0.7	2.00	2.00	0.00
2,900.0	4.00	245.22	2,899.8	-2.9	-6.3	-2.9	2.00	2.00	0.00
3,000.0	6.00	245.22	2,999.5	-6.6	-14.2	-6.6	2.00	2.00	0.00
3,100.0	8.00	245.22	3,098.7	-11.7	-25.3	-11.7	2.00	2.00	0.00
3,200.0	10.00	245.22	3,197.5	-18.2	-39.5	-18.2	2.00	2.00	0.00
3,300.0	12.00	245.22	3,295.6	-26.2	-56.8	-26.2	2.00	2.00	0.00
3,400.0	14.00	245.22	3,393.1	-35.7	-77.3	-35.7	2.00	2.00	0.00
3,411.8	14.24	245.22	3,404.5	-36.9	-79.9	-36.9	2.00	2.00	0.00
<b>Start 2553.4 hold at 3411.8 MD</b>									
3,500.0	14.24	245.22	3,490.0	-46.0	-99.6	-46.0	0.00	0.00	0.00
3,600.0	14.24	245.22	3,586.9	-56.3	-121.9	-56.3	0.00	0.00	0.00
3,700.0	14.24	245.22	3,683.8	-66.6	-144.2	-66.6	0.00	0.00	0.00
3,800.0	14.24	245.22	3,780.8	-76.9	-166.6	-76.9	0.00	0.00	0.00
3,900.0	14.24	245.22	3,877.7	-87.2	-188.9	-87.2	0.00	0.00	0.00
4,000.0	14.24	245.22	3,974.6	-97.5	-211.2	-97.5	0.00	0.00	0.00
4,100.0	14.24	245.22	4,071.6	-107.8	-233.5	-107.8	0.00	0.00	0.00
4,200.0	14.24	245.22	4,168.5	-118.1	-255.9	-118.1	0.00	0.00	0.00
4,300.0	14.24	245.22	4,265.4	-128.4	-278.2	-128.4	0.00	0.00	0.00
4,400.0	14.24	245.22	4,362.4	-138.7	-300.5	-138.7	0.00	0.00	0.00
4,500.0	14.24	245.22	4,459.3	-149.0	-322.8	-149.0	0.00	0.00	0.00
4,600.0	14.24	245.22	4,556.2	-159.3	-345.2	-159.3	0.00	0.00	0.00
4,700.0	14.24	245.22	4,653.1	-169.6	-367.5	-169.6	0.00	0.00	0.00
4,800.0	14.24	245.22	4,750.1	-179.9	-389.8	-179.9	0.00	0.00	0.00
4,900.0	14.24	245.22	4,847.0	-190.2	-412.2	-190.2	0.00	0.00	0.00
5,000.0	14.24	245.22	4,943.9	-200.5	-434.5	-200.5	0.00	0.00	0.00

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<b>Design:</b>	Design #1	<b>Database:</b>	EDMProd

### Planned 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)
5,100.0	14.24	245.22	5,040.9	-210.8	-456.8	-210.8	0.00	0.00	0.00
5,200.0	14.24	245.22	5,137.8	-221.1	-479.1	-221.1	0.00	0.00	0.00
5,300.0	14.24	245.22	5,234.7	-231.4	-501.5	-231.4	0.00	0.00	0.00
5,400.0	14.24	245.22	5,331.6	-241.8	-523.8	-241.8	0.00	0.00	0.00
5,500.0	14.24	245.22	5,428.6	-252.1	-546.1	-252.1	0.00	0.00	0.00
5,600.0	14.24	245.22	5,525.5	-262.4	-568.5	-262.4	0.00	0.00	0.00
5,700.0	14.24	245.22	5,622.4	-272.7	-590.8	-272.7	0.00	0.00	0.00
5,800.0	14.24	245.22	5,719.4	-283.0	-613.1	-283.0	0.00	0.00	0.00
5,900.0	14.24	245.22	5,816.3	-293.3	-635.4	-293.3	0.00	0.00	0.00
5,965.2	14.24	245.22	5,879.5	-300.0	-650.0	-300.0	0.00	0.00	0.00
<b>Start DLS 8.00 TFO 89.37</b>									
6,000.0	14.53	256.38	5,913.2	-302.8	-658.1	-302.8	8.00	0.85	32.08
6,050.0	15.81	270.92	5,961.5	-304.2	-671.0	-304.2	8.00	2.55	29.07
6,100.0	17.89	282.75	6,009.3	-302.4	-685.3	-302.4	8.00	4.16	23.66
6,150.0	20.53	291.92	6,056.6	-297.4	-701.0	-297.4	8.00	5.28	18.33
6,200.0	23.54	298.95	6,102.9	-289.3	-717.8	-289.3	8.00	6.02	14.07
6,250.0	26.80	304.42	6,148.2	-278.1	-735.9	-278.1	8.00	6.52	10.93
6,300.0	30.22	308.76	6,192.1	-263.8	-755.0	-263.8	8.00	6.85	8.67
6,350.0	33.76	312.27	6,234.5	-246.6	-775.1	-246.6	8.00	7.08	7.03
6,400.0	37.39	315.18	6,275.2	-226.5	-796.1	-226.5	8.00	7.25	5.83
6,450.0	41.07	317.65	6,313.9	-203.6	-817.9	-203.6	8.00	7.37	4.93
6,496.5	44.54	319.63	6,348.0	-179.9	-838.7	-179.9	8.00	7.46	4.27
<b>Niobrara</b>									
6,500.0	44.80	319.77	6,350.5	-178.0	-840.3	-178.0	8.00	7.49	3.98
6,550.0	48.57	321.63	6,384.8	-149.8	-863.3	-149.8	8.00	7.53	3.72
6,600.0	52.36	323.29	6,416.6	-119.2	-886.8	-119.2	8.00	7.58	3.31
6,650.0	56.17	324.78	6,445.8	-86.4	-910.6	-86.4	8.00	7.62	2.99
6,700.0	60.00	326.15	6,472.3	-51.4	-934.7	-51.4	8.00	7.66	2.73
<b>Start 150.0 hold at 6700.0 MD</b>									
6,800.0	60.00	326.15	6,522.3	20.5	-982.9	20.5	0.00	0.00	0.00
6,850.0	60.00	326.15	6,547.3	56.5	-1,007.1	56.5	0.00	0.00	0.00
<b>Start DLS 10.00 TFO 53.26</b>									
6,900.0	63.06	330.64	6,571.1	93.9	-1,030.0	93.9	10.00	6.13	8.99
6,950.0	66.27	334.89	6,592.5	134.1	-1,050.7	134.1	10.00	6.40	8.50
7,000.0	69.58	338.93	6,611.3	176.7	-1,068.8	176.7	10.00	6.62	8.09
7,050.0	72.98	342.80	6,627.3	221.4	-1,084.3	221.4	10.00	6.80	7.74
7,100.0	76.45	346.53	6,640.5	267.9	-1,097.1	267.9	10.00	6.94	7.46
7,150.0	79.98	350.16	6,650.7	315.8	-1,107.0	315.8	10.00	7.05	7.24
7,200.0	83.54	353.70	6,657.9	364.8	-1,113.9	364.8	10.00	7.13	7.09
7,250.0	87.13	357.19	6,662.0	414.5	-1,117.8	414.5	10.00	7.18	6.99
7,289.9	90.00	359.96	6,663.0	454.3	-1,118.8	454.3	10.00	7.20	6.95
<b>Start 4148.5 hold at 7289.9 MD</b>									
7,300.0	90.00	359.96	6,663.0	464.4	-1,118.8	464.4	0.00	0.00	0.00
7,400.0	90.00	359.96	6,663.0	564.4	-1,118.9	564.4	0.00	0.00	0.00

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<b>Design:</b>	Design #1	<b>Database:</b>	EDMProd

### Planned 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)
7,500.0	90.00	359.96	6,663.0	664.4	-1,119.0	664.4	0.00	0.00	0.00
7,600.0	90.00	359.96	6,663.0	764.4	-1,119.0	764.4	0.00	0.00	0.00
7,700.0	90.00	359.96	6,663.0	864.4	-1,119.1	864.4	0.00	0.00	0.00
7,800.0	90.00	359.96	6,663.0	964.4	-1,119.2	964.4	0.00	0.00	0.00
7,900.0	90.00	359.96	6,663.0	1,064.4	-1,119.2	1,064.4	0.00	0.00	0.00
8,000.0	90.00	359.96	6,663.0	1,164.4	-1,119.3	1,164.4	0.00	0.00	0.00
8,100.0	90.00	359.96	6,663.0	1,264.4	-1,119.4	1,264.4	0.00	0.00	0.00
8,200.0	90.00	359.96	6,663.0	1,364.4	-1,119.4	1,364.4	0.00	0.00	0.00
8,300.0	90.00	359.96	6,663.0	1,464.4	-1,119.5	1,464.4	0.00	0.00	0.00
8,400.0	90.00	359.96	6,663.0	1,564.4	-1,119.6	1,564.4	0.00	0.00	0.00
8,500.0	90.00	359.96	6,663.0	1,664.4	-1,119.6	1,664.4	0.00	0.00	0.00
8,600.0	90.00	359.96	6,663.0	1,764.4	-1,119.7	1,764.4	0.00	0.00	0.00
8,700.0	90.00	359.96	6,663.0	1,864.4	-1,119.8	1,864.4	0.00	0.00	0.00
8,800.0	90.00	359.96	6,663.0	1,964.4	-1,119.8	1,964.4	0.00	0.00	0.00
8,900.0	90.00	359.96	6,663.0	2,064.4	-1,119.9	2,064.4	0.00	0.00	0.00
9,000.0	90.00	359.96	6,663.0	2,164.4	-1,119.9	2,164.4	0.00	0.00	0.00
9,100.0	90.00	359.96	6,663.0	2,264.4	-1,120.0	2,264.4	0.00	0.00	0.00
9,200.0	90.00	359.96	6,663.0	2,364.4	-1,120.1	2,364.4	0.00	0.00	0.00
9,300.0	90.00	359.96	6,663.0	2,464.4	-1,120.1	2,464.4	0.00	0.00	0.00
9,400.0	90.00	359.96	6,663.0	2,564.4	-1,120.2	2,564.4	0.00	0.00	0.00
9,500.0	90.00	359.96	6,663.0	2,664.4	-1,120.3	2,664.4	0.00	0.00	0.00
9,600.0	90.00	359.96	6,663.0	2,764.4	-1,120.3	2,764.4	0.00	0.00	0.00
9,700.0	90.00	359.96	6,663.0	2,864.4	-1,120.4	2,864.4	0.00	0.00	0.00
9,800.0	90.00	359.96	6,663.0	2,964.4	-1,120.5	2,964.4	0.00	0.00	0.00
9,900.0	90.00	359.96	6,663.0	3,064.4	-1,120.5	3,064.4	0.00	0.00	0.00
10,000.0	90.00	359.96	6,663.0	3,164.4	-1,120.6	3,164.4	0.00	0.00	0.00
10,100.0	90.00	359.96	6,663.0	3,264.4	-1,120.7	3,264.4	0.00	0.00	0.00
10,200.0	90.00	359.96	6,663.0	3,364.4	-1,120.7	3,364.4	0.00	0.00	0.00
10,300.0	90.00	359.96	6,663.0	3,464.4	-1,120.8	3,464.4	0.00	0.00	0.00
10,400.0	90.00	359.96	6,663.0	3,564.4	-1,120.9	3,564.4	0.00	0.00	0.00
10,500.0	90.00	359.96	6,663.0	3,664.4	-1,120.9	3,664.4	0.00	0.00	0.00
10,600.0	90.00	359.96	6,663.0	3,764.4	-1,121.0	3,764.4	0.00	0.00	0.00
10,700.0	90.00	359.96	6,663.0	3,864.4	-1,121.1	3,864.4	0.00	0.00	0.00
10,800.0	90.00	359.96	6,663.0	3,964.4	-1,121.1	3,964.4	0.00	0.00	0.00
10,900.0	90.00	359.96	6,663.0	4,064.4	-1,121.2	4,064.4	0.00	0.00	0.00
11,000.0	90.00	359.96	6,663.0	4,164.4	-1,121.3	4,164.4	0.00	0.00	0.00
11,100.0	90.00	359.96	6,663.0	4,264.4	-1,121.3	4,264.4	0.00	0.00	0.00
11,200.0	90.00	359.96	6,663.0	4,364.4	-1,121.4	4,364.4	0.00	0.00	0.00
11,300.0	90.00	359.96	6,663.0	4,464.4	-1,121.4	4,464.4	0.00	0.00	0.00
11,400.0	90.00	359.96	6,663.0	4,564.4	-1,121.5	4,564.4	0.00	0.00	0.00
11,438.3	90.00	359.96	6,663.0	4,602.8	-1,121.5	4,602.8	0.00	0.00	0.00
TD at 11438.3									

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Coalmont 0781 2-13H
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8222.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S18	<b>MD Reference:</b>	WELL @ 8222.0usft (Original Well Elev)
<b>Well:</b>	Coalmont 0781 2-13H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	EDMProd

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
Coalmont 2-13H	0.00	360.00	6,663.0	4,602.8	-1,121.5	1,457,014.82	2,742,043.75	40° 35' 3.106 N	106° 25' 43.465 W
- plan hits target center									
- Point									

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(usft)	(usft)			(°)	(°)
6,496.5	6,348.0	Niobrara		0.00	

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
2700	2700	0	0	Start Build 2.00
3412	3404	-37	-80	Start 2553.4 hold at 3411.8 MD
5965	5880	-300	-650	Start DLS 8.00 TFO 89.37
6700	6472	-51	-935	Start 150.0 hold at 6700.0 MD
6850	6547	56	-1007	Start DLS 10.00 TFO 53.26
7290	6663	454	-1119	Start 4148.5 hold at 7289.9 MD
11,438	6663	4603	-1122	TD at 11438.3

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