

SandRidge Energy

North Park Basin

T7N-R80W-S7

Marr 0780 2-6H

Wellbore #1

Plan: Design #1

Standard Survey Report

28 April, 2016

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Marr 0780 2-6H
Project:	North Park Basin	TVD Reference:	KB @ 8145.0usft
Site:	T7N-R80W-S7	MD Reference:	KB @ 8145.0usft
Well:	Marr 0780 2-6H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDMProd

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

Site		T7N-R80W-S7			
Site Position:		Northing:	1,462,096.65 usft	Latitude:	40° 35' 53.698 N
From:	Map	Easting:	2,745,719.49 usft	Longitude:	106° 24' 56.506 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.59 °

Well	Marr 0780 2-6H					
Well Position	+N/-S	0.0 usft	Northing:	1,462,110.28 usft	Latitude:	40° 35' 53.833 N
	+E/-W	0.0 usft	Easting:	2,745,725.67 usft	Longitude:	106° 24' 56.428 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,129.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	9.90	66.98	53,195

Design	Design #1					
Audit Notes:						
Version:	Phase:	PROTOTYPE			Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)		
	0.0	0.0	0.0	360.00		

Survey Tool Program	Date	4/28/2016			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	12,839.6	Design #1 (Wellbore #1)	Sperry MWD	Fixed:v2:standard declination	

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)	
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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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	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
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
3,000.0	2.00	265.03	3,000.0	-0.2	-1.7	-0.2	2.00	2.00	0.00
3,100.0	4.00	265.03	3,099.8	-0.6	-7.0	-0.6	2.00	2.00	0.00
3,200.0	6.00	265.03	3,199.5	-1.4	-15.6	-1.4	2.00	2.00	0.00
3,300.0	8.00	265.03	3,298.7	-2.4	-27.8	-2.4	2.00	2.00	0.00
3,400.0	10.00	265.03	3,397.5	-3.8	-43.4	-3.8	2.00	2.00	0.00
3,500.0	12.00	265.03	3,495.6	-5.4	-62.4	-5.4	2.00	2.00	0.00
3,600.0	14.00	265.03	3,593.1	-7.4	-84.8	-7.4	2.00	2.00	0.00
3,611.2	14.22	265.03	3,603.9	-7.6	-87.5	-7.6	2.00	2.00	0.00
Start 1991.5 hold at 3611.2 MD									
3,700.0	14.22	265.03	3,690.0	-9.5	-109.2	-9.5	0.00	0.00	0.00
3,800.0	14.22	265.03	3,786.9	-11.6	-133.7	-11.6	0.00	0.00	0.00
3,900.0	14.22	265.03	3,883.9	-13.8	-158.2	-13.8	0.00	0.00	0.00
4,000.0	14.22	265.03	3,980.8	-15.9	-182.7	-15.9	0.00	0.00	0.00
4,100.0	14.22	265.03	4,077.7	-18.0	-207.1	-18.0	0.00	0.00	0.00
4,200.0	14.22	265.03	4,174.7	-20.1	-231.6	-20.1	0.00	0.00	0.00
4,300.0	14.22	265.03	4,271.6	-22.3	-256.1	-22.3	0.00	0.00	0.00
4,400.0	14.22	265.03	4,368.5	-24.4	-280.6	-24.4	0.00	0.00	0.00
4,500.0	14.22	265.03	4,465.5	-26.5	-305.1	-26.5	0.00	0.00	0.00
4,600.0	14.22	265.03	4,562.4	-28.7	-329.5	-28.7	0.00	0.00	0.00
4,700.0	14.22	265.03	4,659.3	-30.8	-354.0	-30.8	0.00	0.00	0.00
4,800.0	14.22	265.03	4,756.3	-32.9	-378.5	-32.9	0.00	0.00	0.00
4,900.0	14.22	265.03	4,853.2	-35.0	-403.0	-35.0	0.00	0.00	0.00
5,000.0	14.22	265.03	4,950.1	-37.2	-427.5	-37.2	0.00	0.00	0.00

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	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	14.22	265.03	5,047.1	-39.3	-451.9	-39.3	0.00	0.00	0.00
5,200.0	14.22	265.03	5,144.0	-41.4	-476.4	-41.4	0.00	0.00	0.00
5,300.0	14.22	265.03	5,240.9	-43.6	-500.9	-43.6	0.00	0.00	0.00
5,400.0	14.22	265.03	5,337.9	-45.7	-525.4	-45.7	0.00	0.00	0.00
5,500.0	14.22	265.03	5,434.8	-47.8	-549.9	-47.8	0.00	0.00	0.00
5,602.7	14.22	265.03	5,534.4	-50.0	-575.0	-50.0	0.00	0.00	0.00
Start DLS 8.00 TFO 0.00									
5,650.0	18.00	265.03	5,579.8	-51.1	-588.1	-51.1	8.00	8.00	0.00
5,700.0	22.00	265.03	5,626.8	-52.6	-605.1	-52.6	8.00	8.00	0.00
5,750.0	26.00	265.03	5,672.4	-54.4	-625.4	-54.4	8.00	8.00	0.00
5,800.0	30.00	265.03	5,716.6	-56.4	-648.7	-56.4	8.00	8.00	0.00
5,850.0	34.00	265.03	5,759.0	-58.7	-675.1	-58.7	8.00	8.00	0.00
5,900.0	38.00	265.03	5,799.4	-61.3	-704.4	-61.3	8.00	8.00	0.00
5,950.0	42.00	265.03	5,837.7	-64.0	-736.4	-64.0	8.00	8.00	0.00
6,000.0	46.00	265.03	5,873.7	-67.0	-771.0	-67.0	8.00	8.00	0.00
6,050.0	50.00	265.03	5,907.1	-70.3	-808.0	-70.3	8.00	8.00	0.00
6,100.0	54.00	265.03	5,937.9	-73.7	-847.3	-73.7	8.00	8.00	0.00
6,150.0	58.00	265.03	5,965.8	-77.3	-888.6	-77.3	8.00	8.00	0.00
6,174.9	60.00	265.03	5,978.7	-79.1	-909.9	-79.1	8.00	8.00	0.00
Start 150.0 hold at 6174.9 MD									
6,200.0	60.00	265.03	5,991.2	-81.0	-931.5	-81.0	0.00	0.00	0.00
6,300.0	60.00	265.03	6,041.2	-88.5	-1,017.8	-88.5	0.00	0.00	0.00
6,324.9	60.00	265.03	6,053.7	-90.4	-1,039.3	-90.4	0.00	0.00	0.00
Start DLS 10.00 TFO 97.42									
6,335.6	59.87	266.25	6,059.0	-91.1	-1,048.5	-91.1	10.00	-1.24	11.47
Niobrara									
6,350.0	59.71	267.91	6,066.3	-91.7	-1,060.9	-91.7	10.00	-1.11	11.50
6,400.0	59.31	273.69	6,091.6	-91.1	-1,104.0	-91.1	10.00	-0.79	11.57
6,450.0	59.18	279.51	6,117.2	-86.2	-1,146.6	-86.2	10.00	-0.27	11.63
6,500.0	59.30	285.33	6,142.8	-76.9	-1,188.6	-76.9	10.00	0.25	11.63
6,550.0	59.69	291.11	6,168.2	-63.5	-1,229.5	-63.5	10.00	0.76	11.57
6,600.0	60.32	296.84	6,193.2	-45.9	-1,269.0	-45.9	10.00	1.27	11.45
6,650.0	61.20	302.48	6,217.7	-24.3	-1,306.9	-24.3	10.00	1.75	11.28
6,700.0	62.31	308.02	6,241.3	1.1	-1,342.8	1.1	10.00	2.22	11.07
6,750.0	63.63	313.43	6,264.1	30.2	-1,376.5	30.2	10.00	2.65	10.83
6,800.0	65.15	318.72	6,285.7	62.6	-1,407.8	62.6	10.00	3.04	10.56
6,850.0	66.85	323.86	6,306.1	98.3	-1,436.3	98.3	10.00	3.40	10.29
6,900.0	68.72	328.87	6,325.0	136.8	-1,462.0	136.8	10.00	3.73	10.02
6,950.0	70.73	333.76	6,342.3	177.9	-1,484.4	177.9	10.00	4.02	9.76
7,000.0	72.86	338.51	6,357.9	221.4	-1,503.6	221.4	10.00	4.27	9.52
7,050.0	75.11	343.16	6,371.7	266.7	-1,519.4	266.7	10.00	4.49	9.30
7,100.0	77.44	347.71	6,383.6	313.7	-1,531.6	313.7	10.00	4.67	9.10
7,150.0	79.86	352.18	6,393.4	362.0	-1,540.1	362.0	10.00	4.82	8.94
7,200.0	82.33	356.58	6,401.2	411.1	-1,545.0	411.1	10.00	4.94	8.80

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7,239.3	84.30	0.00	6,405.8	450.1	-1,546.1	450.1	10.00	5.02	8.71
Start 5600.3 hold at 7239.3 MD									
7,300.0	84.30	0.00	6,411.8	510.5	-1,546.1	510.5	0.00	0.00	0.00
7,400.0	84.30	0.00	6,421.7	610.0	-1,546.1	610.0	0.00	0.00	0.00
7,500.0	84.30	0.00	6,431.7	709.6	-1,546.1	709.6	0.00	0.00	0.00
7,600.0	84.30	0.00	6,441.6	809.1	-1,546.1	809.1	0.00	0.00	0.00
7,700.0	84.30	0.00	6,451.5	908.6	-1,546.1	908.6	0.00	0.00	0.00
7,800.0	84.30	0.00	6,461.5	1,008.1	-1,546.1	1,008.1	0.00	0.00	0.00
7,900.0	84.30	0.00	6,471.4	1,107.6	-1,546.1	1,107.6	0.00	0.00	0.00
8,000.0	84.30	0.00	6,481.3	1,207.1	-1,546.1	1,207.1	0.00	0.00	0.00
8,100.0	84.30	0.00	6,491.3	1,306.6	-1,546.1	1,306.6	0.00	0.00	0.00
8,200.0	84.30	0.00	6,501.2	1,406.1	-1,546.1	1,406.1	0.00	0.00	0.00
8,300.0	84.30	0.00	6,511.1	1,505.6	-1,546.1	1,505.6	0.00	0.00	0.00
8,400.0	84.30	0.00	6,521.0	1,605.1	-1,546.0	1,605.1	0.00	0.00	0.00
8,500.0	84.30	0.00	6,531.0	1,704.6	-1,546.0	1,704.6	0.00	0.00	0.00
8,600.0	84.30	0.00	6,540.9	1,804.1	-1,546.0	1,804.1	0.00	0.00	0.00
8,700.0	84.30	0.00	6,550.8	1,903.6	-1,546.0	1,903.6	0.00	0.00	0.00
8,800.0	84.30	0.00	6,560.8	2,003.1	-1,546.0	2,003.1	0.00	0.00	0.00
8,900.0	84.30	0.00	6,570.7	2,102.6	-1,546.0	2,102.6	0.00	0.00	0.00
9,000.0	84.30	0.00	6,580.6	2,202.1	-1,546.0	2,202.1	0.00	0.00	0.00
9,100.0	84.30	0.00	6,590.6	2,301.6	-1,546.0	2,301.6	0.00	0.00	0.00
9,200.0	84.30	0.00	6,600.5	2,401.1	-1,546.0	2,401.1	0.00	0.00	0.00
9,300.0	84.30	0.00	6,610.4	2,500.7	-1,546.0	2,500.7	0.00	0.00	0.00
9,400.0	84.30	0.00	6,620.4	2,600.2	-1,546.0	2,600.2	0.00	0.00	0.00
9,500.0	84.30	0.00	6,630.3	2,699.7	-1,546.0	2,699.7	0.00	0.00	0.00
9,600.0	84.30	0.00	6,640.2	2,799.2	-1,546.0	2,799.2	0.00	0.00	0.00
9,700.0	84.30	0.00	6,650.2	2,898.7	-1,545.9	2,898.7	0.00	0.00	0.00
9,800.0	84.30	0.00	6,660.1	2,998.2	-1,545.9	2,998.2	0.00	0.00	0.00
9,900.0	84.30	0.00	6,670.0	3,097.7	-1,545.9	3,097.7	0.00	0.00	0.00
10,000.0	84.30	0.00	6,680.0	3,197.2	-1,545.9	3,197.2	0.00	0.00	0.00
10,100.0	84.30	0.00	6,689.9	3,296.7	-1,545.9	3,296.7	0.00	0.00	0.00
10,200.0	84.30	0.00	6,699.8	3,396.2	-1,545.9	3,396.2	0.00	0.00	0.00
10,300.0	84.30	0.00	6,709.8	3,495.7	-1,545.9	3,495.7	0.00	0.00	0.00
10,400.0	84.30	0.00	6,719.7	3,595.2	-1,545.9	3,595.2	0.00	0.00	0.00
10,500.0	84.30	0.00	6,729.6	3,694.7	-1,545.9	3,694.7	0.00	0.00	0.00
10,600.0	84.30	0.00	6,739.6	3,794.2	-1,545.9	3,794.2	0.00	0.00	0.00
10,700.0	84.30	0.00	6,749.5	3,893.7	-1,545.9	3,893.7	0.00	0.00	0.00
10,800.0	84.30	0.00	6,759.4	3,993.2	-1,545.9	3,993.2	0.00	0.00	0.00
10,900.0	84.30	0.00	6,769.3	4,092.7	-1,545.9	4,092.7	0.00	0.00	0.00
11,000.0	84.30	0.00	6,779.3	4,192.2	-1,545.9	4,192.2	0.00	0.00	0.00
11,100.0	84.30	0.00	6,789.2	4,291.8	-1,545.8	4,291.8	0.00	0.00	0.00
11,200.0	84.30	0.00	6,799.1	4,391.3	-1,545.8	4,391.3	0.00	0.00	0.00
11,300.0	84.30	0.00	6,809.1	4,490.8	-1,545.8	4,490.8	0.00	0.00	0.00
11,400.0	84.30	0.00	6,819.0	4,590.3	-1,545.8	4,590.3	0.00	0.00	0.00

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Marr 0780 2-6H
Project:	North Park Basin	TVD Reference:	KB @ 8145.0usft
Site:	T7N-R80W-S7	MD Reference:	KB @ 8145.0usft
Well:	Marr 0780 2-6H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	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)
11,500.0	84.30	0.00	6,828.9	4,689.8	-1,545.8	4,689.8	0.00	0.00	0.00
11,600.0	84.30	0.00	6,838.9	4,789.3	-1,545.8	4,789.3	0.00	0.00	0.00
11,700.0	84.30	0.00	6,848.8	4,888.8	-1,545.8	4,888.8	0.00	0.00	0.00
11,800.0	84.30	0.00	6,858.7	4,988.3	-1,545.8	4,988.3	0.00	0.00	0.00
11,900.0	84.30	0.00	6,868.7	5,087.8	-1,545.8	5,087.8	0.00	0.00	0.00
12,000.0	84.30	0.00	6,878.6	5,187.3	-1,545.8	5,187.3	0.00	0.00	0.00
12,100.0	84.30	0.00	6,888.5	5,286.8	-1,545.8	5,286.8	0.00	0.00	0.00
12,200.0	84.30	0.00	6,898.5	5,386.3	-1,545.8	5,386.3	0.00	0.00	0.00
12,300.0	84.30	0.00	6,908.4	5,485.8	-1,545.8	5,485.8	0.00	0.00	0.00
12,400.0	84.30	0.00	6,918.3	5,585.3	-1,545.8	5,585.3	0.00	0.00	0.00
12,500.0	84.30	0.00	6,928.3	5,684.8	-1,545.7	5,684.8	0.00	0.00	0.00
12,600.0	84.30	0.00	6,938.2	5,784.3	-1,545.7	5,784.3	0.00	0.00	0.00
12,700.0	84.30	0.00	6,948.1	5,883.8	-1,545.7	5,883.8	0.00	0.00	0.00
12,800.0	84.30	0.00	6,958.1	5,983.3	-1,545.7	5,983.3	0.00	0.00	0.00
12,839.6	84.30	0.00	6,962.0	6,022.7	-1,545.7	6,022.7	0.00	0.00	0.00
TD at 12839.6									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Marr 2-6H	0.00	0.00	6,962.0	6,022.7	-1,545.7	1,468,133.02	2,744,179.95	40° 36' 53.186 N	106° 25' 17.276 W
- plan hits target center									
- Point									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,335.6	6,059.0	Niobrara		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
2900	2900	0	0	Start Build 2.00
3611	3604	-8	-87	Start 1991.5 hold at 3611.2 MD
5603	5534	-50	-575	Start DLS 8.00 TFO 0.00
6175	5979	-79	-910	Start 150.0 hold at 6174.9 MD
6325	6054	-90	-1039	Start DLS 10.00 TFO 97.42
7239	6406	450	-1546	Start 5600.3 hold at 7239.3 MD
12,840	6962	6023	-1546	TD at 12839.6

Checked By: _____ Approved By: _____ Date: _____