

SandRidge Energy

North Park Basin

T7N-R80W-S7

Marr 0780 3-6H

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 3-6H
Project:	North Park Basin	TVD Reference:	KB @ 8145.0usft
Site:	T7N-R80W-S7	MD Reference:	KB @ 8145.0usft
Well:	Marr 0780 3-6H	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
From:	Map	Easting:	2,745,719.49 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	40° 35' 53.698 N
		Longitude:	106° 24' 56.506 W
		Grid Convergence:	-0.59 °

Well	Marr 0780 3-6H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
		Latitude:	40° 35' 53.968 N
		Longitude:	106° 24' 56.348 W
		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	0.00	

Survey Tool Program	Date	4/28/2016			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	12,335.7	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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Well:	Marr 0780 3-6H	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)
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
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,150.0	0.00	0.00	3,150.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
3,200.0	1.00	260.54	3,200.0	-0.1	-0.4	-0.1	2.00	2.00	0.00
3,300.0	3.00	260.54	3,299.9	-0.6	-3.9	-0.6	2.00	2.00	0.00
3,400.0	5.00	260.54	3,399.7	-1.8	-10.8	-1.8	2.00	2.00	0.00
3,500.0	7.00	260.54	3,499.1	-3.5	-21.1	-3.5	2.00	2.00	0.00
3,600.0	9.00	260.54	3,598.2	-5.8	-34.8	-5.8	2.00	2.00	0.00
3,700.0	11.00	260.54	3,696.6	-8.7	-51.9	-8.7	2.00	2.00	0.00
3,800.0	13.00	260.54	3,794.4	-12.1	-72.4	-12.1	2.00	2.00	0.00
3,900.0	15.00	260.54	3,891.5	-16.0	-96.3	-16.0	2.00	2.00	0.00
3,960.1	16.20	260.54	3,949.3	-18.7	-112.2	-18.7	2.00	2.00	0.00
Start 1772.4 hold at 3960.1 MD									
4,000.0	16.20	260.54	3,987.7	-20.5	-123.2	-20.5	0.00	0.00	0.00
4,100.0	16.20	260.54	4,083.7	-25.1	-150.7	-25.1	0.00	0.00	0.00
4,200.0	16.20	260.54	4,179.7	-29.7	-178.3	-29.7	0.00	0.00	0.00
4,300.0	16.20	260.54	4,275.7	-34.3	-205.8	-34.3	0.00	0.00	0.00
4,400.0	16.20	260.54	4,371.8	-38.9	-233.3	-38.9	0.00	0.00	0.00
4,500.0	16.20	260.54	4,467.8	-43.5	-260.8	-43.5	0.00	0.00	0.00
4,600.0	16.20	260.54	4,563.8	-48.1	-288.3	-48.1	0.00	0.00	0.00
4,700.0	16.20	260.54	4,659.9	-52.6	-315.9	-52.6	0.00	0.00	0.00
4,800.0	16.20	260.54	4,755.9	-57.2	-343.4	-57.2	0.00	0.00	0.00
4,900.0	16.20	260.54	4,851.9	-61.8	-370.9	-61.8	0.00	0.00	0.00

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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)
5,000.0	16.20	260.54	4,948.0	-66.4	-398.4	-66.4	0.00	0.00	0.00
5,100.0	16.20	260.54	5,044.0	-71.0	-425.9	-71.0	0.00	0.00	0.00
5,200.0	16.20	260.54	5,140.0	-75.6	-453.5	-75.6	0.00	0.00	0.00
5,300.0	16.20	260.54	5,236.0	-80.2	-481.0	-80.2	0.00	0.00	0.00
5,400.0	16.20	260.54	5,332.1	-84.8	-508.5	-84.8	0.00	0.00	0.00
5,500.0	16.20	260.54	5,428.1	-89.3	-536.0	-89.3	0.00	0.00	0.00
5,600.0	16.20	260.54	5,524.1	-93.9	-563.6	-93.9	0.00	0.00	0.00
5,700.0	16.20	260.54	5,620.2	-98.5	-591.1	-98.5	0.00	0.00	0.00
5,732.4	16.20	260.54	5,651.3	-100.0	-600.0	-100.0	0.00	0.00	0.00
Start DLS 8.00 TFO 91.89									
5,750.0	16.21	265.57	5,668.2	-100.6	-604.9	-100.6	8.00	0.07	28.67
5,800.0	16.89	279.45	5,716.1	-99.9	-619.0	-99.9	8.00	1.34	27.75
5,850.0	18.40	291.70	5,763.8	-95.8	-633.5	-95.8	8.00	3.03	24.50
5,900.0	20.57	301.80	5,810.9	-88.3	-648.3	-88.3	8.00	4.34	20.21
5,950.0	23.21	309.88	5,857.3	-77.3	-663.3	-77.3	8.00	5.28	16.15
6,000.0	26.18	316.30	5,902.8	-63.0	-678.5	-63.0	8.00	5.94	12.85
6,050.0	29.38	321.46	5,947.0	-45.5	-693.8	-45.5	8.00	6.40	10.31
6,100.0	32.75	325.66	5,989.8	-24.7	-709.1	-24.7	8.00	6.73	8.41
6,150.0	36.23	329.15	6,031.0	-0.8	-724.3	-0.8	8.00	6.96	6.98
6,185.2	38.73	331.27	6,059.0	17.8	-734.9	17.8	8.00	7.11	6.03
Niobrara									
6,200.0	39.79	332.10	6,070.4	26.0	-739.3	26.0	8.00	7.18	5.57
6,250.0	43.42	334.63	6,107.8	55.7	-754.2	55.7	8.00	7.26	5.07
6,300.0	47.10	336.85	6,143.0	88.1	-768.8	88.1	8.00	7.36	4.43
6,350.0	50.81	338.81	6,175.8	123.0	-783.0	123.0	8.00	7.43	3.93
6,400.0	54.56	340.57	6,206.1	160.3	-796.8	160.3	8.00	7.49	3.53
6,450.0	58.33	342.18	6,233.8	199.8	-810.1	199.8	8.00	7.54	3.22
6,472.1	60.00	342.85	6,245.1	217.8	-815.7	217.8	8.00	7.57	3.03
Start 150.0 hold at 6472.1 MD									
6,500.0	60.00	342.85	6,259.0	240.9	-822.9	240.9	0.00	0.00	0.00
6,600.0	60.00	342.85	6,309.0	323.7	-848.4	323.7	0.00	0.00	0.00
6,622.1	60.00	342.85	6,320.1	342.0	-854.1	342.0	0.00	0.00	0.00
Start DLS 10.00 TFO 37.00									
6,650.0	62.24	344.75	6,333.6	365.4	-860.9	365.4	10.00	8.04	6.80
6,700.0	66.32	347.96	6,355.3	409.2	-871.5	409.2	10.00	8.16	6.43
6,750.0	70.46	350.98	6,373.7	454.9	-879.9	454.9	10.00	8.28	6.03
6,800.0	74.65	353.84	6,388.7	502.2	-886.2	502.2	10.00	8.37	5.73
6,850.0	78.87	356.59	6,400.1	550.6	-890.3	550.6	10.00	8.45	5.50
6,900.0	83.12	359.27	6,407.9	600.0	-892.1	600.0	10.00	8.49	5.35
6,913.9	84.30	360.00	6,409.5	613.8	-892.1	613.8	10.00	8.52	5.28
Start 5422.5 hold at 6913.9 MD									
7,000.0	84.30	360.00	6,418.0	699.5	-892.1	699.5	0.00	0.00	0.00
7,100.0	84.30	360.00	6,428.0	799.0	-892.1	799.0	0.00	0.00	0.00
7,200.0	84.30	360.00	6,437.9	898.5	-892.1	898.5	0.00	0.00	0.00

SandRidge Energy

Survey Report

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Project:	North Park Basin	TVD Reference:	KB @ 8145.0usft
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Well:	Marr 0780 3-6H	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)
7,300.0	84.30	360.00	6,447.8	998.0	-892.1	998.0	0.00	0.00	0.00
7,400.0	84.30	360.00	6,457.7	1,097.5	-892.1	1,097.5	0.00	0.00	0.00
7,500.0	84.30	360.00	6,467.7	1,197.0	-892.1	1,197.0	0.00	0.00	0.00
7,600.0	84.30	360.00	6,477.6	1,296.5	-892.1	1,296.5	0.00	0.00	0.00
7,700.0	84.30	360.00	6,487.5	1,396.0	-892.1	1,396.0	0.00	0.00	0.00
7,800.0	84.30	360.00	6,497.5	1,495.5	-892.1	1,495.5	0.00	0.00	0.00
7,900.0	84.30	360.00	6,507.4	1,595.0	-892.1	1,595.0	0.00	0.00	0.00
8,000.0	84.30	360.00	6,517.3	1,694.5	-892.1	1,694.5	0.00	0.00	0.00
8,100.0	84.30	360.00	6,527.3	1,794.0	-892.1	1,794.0	0.00	0.00	0.00
8,200.0	84.30	360.00	6,537.2	1,893.5	-892.1	1,893.5	0.00	0.00	0.00
8,300.0	84.30	360.00	6,547.1	1,993.0	-892.1	1,993.0	0.00	0.00	0.00
8,400.0	84.30	360.00	6,557.1	2,092.5	-892.1	2,092.5	0.00	0.00	0.00
8,500.0	84.30	360.00	6,567.0	2,192.1	-892.1	2,192.1	0.00	0.00	0.00
8,600.0	84.30	360.00	6,576.9	2,291.6	-892.1	2,291.6	0.00	0.00	0.00
8,700.0	84.30	360.00	6,586.9	2,391.1	-892.1	2,391.1	0.00	0.00	0.00
8,800.0	84.30	360.00	6,596.8	2,490.6	-892.1	2,490.6	0.00	0.00	0.00
8,900.0	84.30	360.00	6,606.7	2,590.1	-892.1	2,590.1	0.00	0.00	0.00
9,000.0	84.30	360.00	6,616.7	2,689.6	-892.2	2,689.6	0.00	0.00	0.00
9,100.0	84.30	360.00	6,626.6	2,789.1	-892.2	2,789.1	0.00	0.00	0.00
9,200.0	84.30	360.00	6,636.5	2,888.6	-892.2	2,888.6	0.00	0.00	0.00
9,300.0	84.30	360.00	6,646.5	2,988.1	-892.2	2,988.1	0.00	0.00	0.00
9,400.0	84.30	360.00	6,656.4	3,087.6	-892.2	3,087.6	0.00	0.00	0.00
9,500.0	84.30	360.00	6,666.3	3,187.1	-892.2	3,187.1	0.00	0.00	0.00
9,600.0	84.30	360.00	6,676.3	3,286.6	-892.2	3,286.6	0.00	0.00	0.00
9,700.0	84.30	360.00	6,686.2	3,386.1	-892.2	3,386.1	0.00	0.00	0.00
9,800.0	84.30	360.00	6,696.1	3,485.6	-892.2	3,485.6	0.00	0.00	0.00
9,900.0	84.30	360.00	6,706.0	3,585.1	-892.2	3,585.1	0.00	0.00	0.00
10,000.0	84.30	360.00	6,716.0	3,684.6	-892.2	3,684.6	0.00	0.00	0.00
10,100.0	84.30	360.00	6,725.9	3,784.1	-892.2	3,784.1	0.00	0.00	0.00
10,200.0	84.30	360.00	6,735.8	3,883.6	-892.2	3,883.6	0.00	0.00	0.00
10,300.0	84.30	360.00	6,745.8	3,983.2	-892.2	3,983.2	0.00	0.00	0.00
10,400.0	84.30	360.00	6,755.7	4,082.7	-892.2	4,082.7	0.00	0.00	0.00
10,500.0	84.30	360.00	6,765.6	4,182.2	-892.2	4,182.2	0.00	0.00	0.00
10,600.0	84.30	360.00	6,775.6	4,281.7	-892.2	4,281.7	0.00	0.00	0.00
10,700.0	84.30	360.00	6,785.5	4,381.2	-892.2	4,381.2	0.00	0.00	0.00
10,800.0	84.30	360.00	6,795.4	4,480.7	-892.2	4,480.7	0.00	0.00	0.00
10,900.0	84.30	360.00	6,805.4	4,580.2	-892.2	4,580.2	0.00	0.00	0.00
11,000.0	84.30	360.00	6,815.3	4,679.7	-892.2	4,679.7	0.00	0.00	0.00
11,100.0	84.30	360.00	6,825.2	4,779.2	-892.2	4,779.2	0.00	0.00	0.00
11,200.0	84.30	360.00	6,835.2	4,878.7	-892.2	4,878.7	0.00	0.00	0.00
11,300.0	84.30	360.00	6,845.1	4,978.2	-892.2	4,978.2	0.00	0.00	0.00
11,400.0	84.30	360.00	6,855.0	5,077.7	-892.2	5,077.7	0.00	0.00	0.00
11,500.0	84.30	360.00	6,865.0	5,177.2	-892.2	5,177.2	0.00	0.00	0.00
11,600.0	84.30	360.00	6,874.9	5,276.7	-892.2	5,276.7	0.00	0.00	0.00

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Project:	North Park Basin	TVD Reference:	KB @ 8145.0usft
Site:	T7N-R80W-S7	MD Reference:	KB @ 8145.0usft
Well:	Marr 0780 3-6H	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)
11,700.0	84.30	360.00	6,884.8	5,376.2	-892.2	5,376.2	0.00	0.00	0.00
11,800.0	84.30	360.00	6,894.8	5,475.7	-892.2	5,475.7	0.00	0.00	0.00
11,900.0	84.30	360.00	6,904.7	5,575.2	-892.2	5,575.2	0.00	0.00	0.00
12,000.0	84.30	360.00	6,914.6	5,674.7	-892.2	5,674.7	0.00	0.00	0.00
12,100.0	84.30	360.00	6,924.6	5,774.3	-892.2	5,774.3	0.00	0.00	0.00
12,200.0	84.30	360.00	6,934.5	5,873.8	-892.2	5,873.8	0.00	0.00	0.00
12,300.0	84.30	360.00	6,944.4	5,973.3	-892.2	5,973.3	0.00	0.00	0.00
12,336.4	84.30	360.00	6,948.0	6,009.5	-892.2	6,009.5	0.00	0.00	0.00

TD at 12336.4

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 3-6H	0.00	360.00	6,948.0	6,009.5	-892.2	1,468,133.36	2,744,839.80	40° 36' 53.257 N	106° 25' 8.721 W
- plan hits target center									
- Point									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,185.2	6,059.0	Niobrara		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
3150	3150	0	0	Start Build 2.00
3960	3949	-19	-112	Start 1772.4 hold at 3960.1 MD
5732	5651	-100	-600	Start DLS 8.00 TFO 91.89
6472	6245	218	-816	Start 150.0 hold at 6472.1 MD
6622	6320	342	-854	Start DLS 10.00 TFO 37.00
6914	6409	614	-892	Start 5422.5 hold at 6913.9 MD
12,336	6948	6009	-892	TD at 12336.4

Checked By: _____ Approved By: _____ Date: _____