

SandRidge Energy

North Park Basin

T7N-R80W-S9

Gregory 0780 1-9H

Wellbore #1

Plan: Intermediate Csg

Standard Survey Report

21 January, 2016

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	
Project:	North Park Basin	TVD Reference:	WELL @ 8137.0usft (Original Well Elev)
Site:	T7N-R80W-S9	MD Reference:	WELL @ 8137.0usft (Original Well Elev)
Well:	Gregory 0780 1-9H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Intermediate Csg	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-S9		
Site Position:		Northing:	1,457,270.18 usft
From:	Map	Easting:	2,753,429.57 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	40° 35' 6.782 N
		Longitude:	106° 23' 15.932 W
		Grid Convergence:	-0.57 °

Well	Gregory 5-09H		
Well Position	+N/-S	0.0 usft	Northing: 1,457,270.18 usft
	+E/-W	0.0 usft	Easting: 2,753,429.57 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
		Latitude:	40° 35' 6.782 N
		Longitude:	106° 23' 15.932 W
		Ground Level:	8,118.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF200510	12/31/2009	9.88
			Dip Angle
			(°)
			66.98
			Field Strength
			(nT)
			53,192

Design	Intermediate Csg		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			4.11

Survey Tool Program	Date 1/21/2016		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
0.0	12,414.6	Intermediate Csg (Wellbore #1)	Sperry MWD
			Description
			Fixed:v2:standard declination

Planned Survey									
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/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

SandRidge Energy

Survey Report

Company: SandRidge Energy
Project: North Park Basin
Site: T7N-R80W-S9
Well: Gregory 0780 1-9H
Wellbore: Wellbore #1
Design: Intermediate Csg

Local Co-ordinate Reference:
TVD Reference: WELL @ 8137.0usft (Original Well Elev)
MD Reference: WELL @ 8137.0usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	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:	Intermediate Csg	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)
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,703.7	0.00	0.00	6,703.7	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 8.00									
6,750.0	3.70	55.70	6,750.0	0.8	1.2	0.9	8.00	8.00	0.00
6,800.0	7.70	55.70	6,799.7	3.6	5.3	4.0	8.00	8.00	0.00
6,850.0	11.70	55.70	6,849.0	8.4	12.3	9.3	8.00	8.00	0.00
6,900.0	15.70	55.70	6,897.6	15.1	22.1	16.6	8.00	8.00	0.00
6,950.0	19.70	55.70	6,945.2	23.6	34.6	26.1	8.00	8.00	0.00
7,000.0	23.70	55.70	6,991.6	34.0	49.9	37.5	8.00	8.00	0.00
7,050.0	27.70	55.70	7,036.7	46.3	67.8	51.0	8.00	8.00	0.00
7,078.7	30.00	55.70	7,061.8	54.1	79.3	59.6	8.00	8.00	0.00
Start 150.0 hold at 7078.7 MD									
7,100.0	30.00	55.70	7,080.2	60.1	88.1	66.2	0.00	0.00	0.00
7,200.0	30.00	55.70	7,166.8	88.2	129.4	97.3	0.00	0.00	0.00
7,228.7	30.00	55.70	7,191.7	96.3	141.2	106.2	0.00	0.00	0.00
Start DLS 8.00 TFO -59.42									
7,250.0	30.90	52.84	7,210.1	102.6	150.0	113.1	8.00	4.22	-13.42
7,300.0	33.23	46.72	7,252.4	119.8	170.2	131.7	8.00	4.67	-12.25
7,350.0	35.83	41.35	7,293.6	140.2	189.8	153.4	8.00	5.20	-10.74
7,400.0	38.64	36.63	7,333.5	163.7	208.8	178.3	8.00	5.62	-9.43
7,450.0	41.61	32.48	7,371.7	190.2	227.1	206.0	8.00	5.95	-8.31
7,500.0	44.72	28.80	7,408.2	219.7	244.5	236.6	8.00	6.21	-7.37
7,550.0	47.93	25.50	7,442.7	251.9	260.9	269.9	8.00	6.43	-6.59
7,600.0	51.23	22.53	7,475.1	286.6	276.4	305.7	8.00	6.60	-5.95
7,650.0	54.60	19.82	7,505.3	323.8	290.8	343.8	8.00	6.73	-5.42
7,700.0	58.02	17.33	7,533.0	363.2	304.0	384.1	8.00	6.85	-4.98
7,750.0	61.49	15.02	7,558.2	404.7	316.0	426.3	8.00	6.94	-4.62
7,800.0	64.99	12.86	7,580.7	448.0	326.8	470.3	8.00	7.01	-4.32
7,850.0	68.52	10.82	7,600.4	493.0	336.2	515.8	8.00	7.07	-4.08
7,900.0	72.08	8.87	7,617.3	539.4	344.2	562.7	8.00	7.11	-3.89
7,950.0	75.66	7.01	7,631.2	586.9	350.8	610.6	8.00	7.15	-3.73
8,000.0	79.25	5.20	7,642.0	635.5	356.0	659.4	8.00	7.18	-3.62

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	
Project:	North Park Basin	TVD Reference:	WELL @ 8137.0usft (Original Well Elev)
Site:	T7N-R80W-S9	MD Reference:	WELL @ 8137.0usft (Original Well Elev)
Well:	Gregory 0780 1-9H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Intermediate Csg	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)
8,050.0	82.85	3.43	7,649.8	684.7	359.7	708.7	8.00	7.20	-3.53
8,100.0	86.45	1.70	7,654.5	734.4	362.0	758.5	8.00	7.21	-3.48
8,149.1	90.00	0.00	7,656.0	783.5	362.7	807.5	8.00	7.22	-3.45
Start 4265.5 hold at 8149.1 MD									
8,200.0	90.00	0.00	7,656.0	834.4	362.7	858.2	0.00	0.00	0.00
8,300.0	90.00	0.00	7,656.0	934.4	362.7	958.0	0.00	0.00	0.00
8,400.0	90.00	0.00	7,656.0	1,034.4	362.7	1,057.7	0.00	0.00	0.00
8,500.0	90.00	0.00	7,656.0	1,134.4	362.7	1,157.5	0.00	0.00	0.00
8,600.0	90.00	0.00	7,656.0	1,234.4	362.7	1,257.2	0.00	0.00	0.00
8,700.0	90.00	0.00	7,656.0	1,334.4	362.7	1,357.0	0.00	0.00	0.00
8,800.0	90.00	0.00	7,656.0	1,434.4	362.7	1,456.7	0.00	0.00	0.00
8,900.0	90.00	0.00	7,656.0	1,534.4	362.7	1,556.4	0.00	0.00	0.00
9,000.0	90.00	0.00	7,656.0	1,634.4	362.7	1,656.2	0.00	0.00	0.00
9,100.0	90.00	0.00	7,656.0	1,734.4	362.8	1,755.9	0.00	0.00	0.00
9,200.0	90.00	0.00	7,656.0	1,834.4	362.8	1,855.7	0.00	0.00	0.00
9,300.0	90.00	0.00	7,656.0	1,934.4	362.8	1,955.4	0.00	0.00	0.00
9,400.0	90.00	0.00	7,656.0	2,034.4	362.8	2,055.2	0.00	0.00	0.00
9,500.0	90.00	0.00	7,656.0	2,134.4	362.8	2,154.9	0.00	0.00	0.00
9,600.0	90.00	0.00	7,656.0	2,234.4	362.8	2,254.6	0.00	0.00	0.00
9,700.0	90.00	0.00	7,656.0	2,334.4	362.8	2,354.4	0.00	0.00	0.00
9,800.0	90.00	0.00	7,656.0	2,434.4	362.8	2,454.1	0.00	0.00	0.00
9,900.0	90.00	0.00	7,656.0	2,534.4	362.8	2,553.9	0.00	0.00	0.00
10,000.0	90.00	0.00	7,656.0	2,634.4	362.8	2,653.6	0.00	0.00	0.00
10,100.0	90.00	0.00	7,656.0	2,734.4	362.8	2,753.4	0.00	0.00	0.00
10,200.0	90.00	0.00	7,656.0	2,834.4	362.8	2,853.1	0.00	0.00	0.00
10,300.0	90.00	0.00	7,656.0	2,934.4	362.8	2,952.8	0.00	0.00	0.00
10,400.0	90.00	0.00	7,656.0	3,034.4	362.8	3,052.6	0.00	0.00	0.00
10,500.0	90.00	0.00	7,656.0	3,134.4	362.8	3,152.3	0.00	0.00	0.00
10,600.0	90.00	0.00	7,656.0	3,234.4	362.8	3,252.1	0.00	0.00	0.00
10,700.0	90.00	0.00	7,656.0	3,334.4	362.8	3,351.8	0.00	0.00	0.00
10,800.0	90.00	0.00	7,656.0	3,434.4	362.9	3,451.6	0.00	0.00	0.00
10,900.0	90.00	0.00	7,656.0	3,534.4	362.9	3,551.3	0.00	0.00	0.00
11,000.0	90.00	0.00	7,656.0	3,634.4	362.9	3,651.0	0.00	0.00	0.00
11,100.0	90.00	0.00	7,656.0	3,734.4	362.9	3,750.8	0.00	0.00	0.00
11,200.0	90.00	0.00	7,656.0	3,834.4	362.9	3,850.5	0.00	0.00	0.00
11,300.0	90.00	0.00	7,656.0	3,934.4	362.9	3,950.3	0.00	0.00	0.00
11,400.0	90.00	0.00	7,656.0	4,034.4	362.9	4,050.0	0.00	0.00	0.00
11,500.0	90.00	0.00	7,656.0	4,134.4	362.9	4,149.8	0.00	0.00	0.00
11,600.0	90.00	0.00	7,656.0	4,234.4	362.9	4,249.5	0.00	0.00	0.00
11,700.0	90.00	0.00	7,656.0	4,334.4	362.9	4,349.2	0.00	0.00	0.00
11,800.0	90.00	0.00	7,656.0	4,434.4	362.9	4,449.0	0.00	0.00	0.00
11,900.0	90.00	0.00	7,656.0	4,534.4	362.9	4,548.7	0.00	0.00	0.00
12,000.0	90.00	0.00	7,656.0	4,634.4	362.9	4,648.5	0.00	0.00	0.00

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Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	
Project:	North Park Basin	TVD Reference:	WELL @ 8137.0usft (Original Well Elev)
Site:	T7N-R80W-S9	MD Reference:	WELL @ 8137.0usft (Original Well Elev)
Well:	Gregory 0730 1-9H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Intermediate Csg	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)
12,100.0	90.00	0.00	7,656.0	4,734.4	362.9	4,748.2	0.00	0.00	0.00
12,200.0	90.00	0.00	7,656.0	4,834.4	362.9	4,848.0	0.00	0.00	0.00
12,300.0	90.00	0.00	7,656.0	4,934.4	362.9	4,947.7	0.00	0.00	0.00
12,400.0	90.00	0.00	7,656.0	5,034.4	362.9	5,047.5	0.00	0.00	0.00
12,414.6	90.00	0.00	7,656.0	5,049.0	362.9	5,062.0	0.00	0.00	0.00
TD at 12414.6									

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									
Gregory Target	0.00	360.00	7,656.0	5,049.0	362.9	1,462,319.14	2,753,792.52	40° 35' 56.707 N	106° 23' 11.883 W
- plan hits target center									
- Point									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,500.0	1,500.0	13 3/8" Surface Casing	13-3/8	17-1/2
5,600.0	5,600.0	9 5/8" Intermediate Casing	9-5/8	12-1/4
12,315.0	7,656.0	5 1/2" Production Casing	5-1/2	8-3/4

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,259.3	-919.0	Niobrara		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
6704	6704	0	0	Start Build 8.00
7079	7062	54	79	Start 150.0 hold at 7078.7 MD
7229	7192	96	141	Start DLS 8.00 TFO -59.42
8149	7656	783	363	Start 4265.5 hold at 8149.1 MD
12,415	7656	5049	363	TD at 12414.6

Checked By: _____ Approved By: _____ Date: _____