

SandRidge Energy

North Park Basin

T7N-R80W-S9

Castle 0780 6-17H20

Wellbore #1

Plan: Design #1

Standard Survey Report

29 August, 2016

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 6-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8136.0usft (Original Well Elev)
Site:	T7N-R80W-S9	MD Reference:	WELL @ 8136.0usft (Original Well Elev)
Well:	Castle 0780 6-17H20	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-S9				
Site Position:		Northing:	1,457,270.18 usft	Latitude:	40° 35' 6.782 N	
From:	Map	Easting:	2,753,429.57 usft	Longitude:	106° 23' 15.932 W	
Position Uncertainty:		0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.57 °

Well	Castle 0780 6-17H20					
Well Position	+N/-S	0.0 usft	Northing:	1,457,421.19 usft	Latitude:	40° 35' 8.280 N
	+E/-W	0.0 usft	Easting:	2,753,494.22 usft	Longitude:	106° 23' 15.114 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,118.0 usft

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

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	190.49	

Survey Tool Program	Date	8/10/2016			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	18,371.9	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
2,650.0	0.00	0.00	2,650.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
2,700.0	1.00	272.39	2,700.0	0.0	-0.4	0.1	2.00	2.00	0.00
2,800.0	3.00	272.39	2,799.9	0.2	-3.9	0.6	2.00	2.00	0.00
2,900.0	5.00	272.39	2,899.7	0.5	-10.9	1.5	2.00	2.00	0.00
3,000.0	7.00	272.39	2,999.1	0.9	-21.3	3.0	2.00	2.00	0.00
3,100.0	9.00	272.39	3,098.2	1.5	-35.2	5.0	2.00	2.00	0.00
3,200.0	11.00	272.39	3,196.6	2.2	-52.6	7.4	2.00	2.00	0.00
3,300.0	13.00	272.39	3,294.4	3.1	-73.4	10.4	2.00	2.00	0.00
3,400.0	15.00	272.39	3,391.5	4.1	-97.5	13.8	2.00	2.00	0.00
3,500.0	17.00	272.39	3,487.6	5.2	-125.1	17.6	2.00	2.00	0.00
3,539.8	17.80	272.39	3,525.6	5.7	-137.0	19.3	2.00	2.00	0.00
Start 3481.2 hold at 3539.8 MD									
3,600.0	17.80	272.39	3,582.9	6.5	-155.3	21.9	0.00	0.00	0.00
3,700.0	17.80	272.39	3,678.1	7.7	-185.9	26.2	0.00	0.00	0.00
3,800.0	17.80	272.39	3,773.3	9.0	-216.4	30.5	0.00	0.00	0.00
3,900.0	17.80	272.39	3,868.5	10.3	-247.0	34.8	0.00	0.00	0.00
4,000.0	17.80	272.39	3,963.7	11.6	-277.5	39.2	0.00	0.00	0.00
4,100.0	17.80	272.39	4,059.0	12.8	-308.0	43.5	0.00	0.00	0.00
4,200.0	17.80	272.39	4,154.2	14.1	-338.6	47.8	0.00	0.00	0.00
4,300.0	17.80	272.39	4,249.4	15.4	-369.1	52.1	0.00	0.00	0.00
4,400.0	17.80	272.39	4,344.6	16.7	-399.6	56.4	0.00	0.00	0.00
4,500.0	17.80	272.39	4,439.8	17.9	-430.2	60.7	0.00	0.00	0.00
4,600.0	17.80	272.39	4,535.0	19.2	-460.7	65.0	0.00	0.00	0.00
4,700.0	17.80	272.39	4,630.2	20.5	-491.2	69.3	0.00	0.00	0.00
4,800.0	17.80	272.39	4,725.5	21.7	-521.8	73.6	0.00	0.00	0.00
4,900.0	17.80	272.39	4,820.7	23.0	-552.3	77.9	0.00	0.00	0.00

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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)
5,000.0	17.80	272.39	4,915.9	24.3	-582.9	82.3	0.00	0.00	0.00
5,100.0	17.80	272.39	5,011.1	25.6	-613.4	86.6	0.00	0.00	0.00
5,200.0	17.80	272.39	5,106.3	26.8	-643.9	90.9	0.00	0.00	0.00
5,300.0	17.80	272.39	5,201.5	28.1	-674.5	95.2	0.00	0.00	0.00
5,400.0	17.80	272.39	5,296.8	29.4	-705.0	99.5	0.00	0.00	0.00
5,500.0	17.80	272.39	5,392.0	30.6	-735.5	103.8	0.00	0.00	0.00
5,600.0	17.80	272.39	5,487.2	31.9	-766.1	108.1	0.00	0.00	0.00
5,700.0	17.80	272.39	5,582.4	33.2	-796.6	112.4	0.00	0.00	0.00
5,800.0	17.80	272.39	5,677.6	34.5	-827.1	116.7	0.00	0.00	0.00
5,900.0	17.80	272.39	5,772.8	35.7	-857.7	121.0	0.00	0.00	0.00
6,000.0	17.80	272.39	5,868.0	37.0	-888.2	125.3	0.00	0.00	0.00
6,100.0	17.80	272.39	5,963.3	38.3	-918.8	129.7	0.00	0.00	0.00
6,200.0	17.80	272.39	6,058.5	39.6	-949.3	134.0	0.00	0.00	0.00
6,300.0	17.80	272.39	6,153.7	40.8	-979.8	138.3	0.00	0.00	0.00
6,400.0	17.80	272.39	6,248.9	42.1	-1,010.4	142.6	0.00	0.00	0.00
6,500.0	17.80	272.39	6,344.1	43.4	-1,040.9	146.9	0.00	0.00	0.00
6,600.0	17.80	272.39	6,439.3	44.6	-1,071.4	151.2	0.00	0.00	0.00
6,700.0	17.80	272.39	6,534.5	45.9	-1,102.0	155.5	0.00	0.00	0.00
6,800.0	17.80	272.39	6,629.8	47.2	-1,132.5	159.8	0.00	0.00	0.00
6,900.0	17.80	272.39	6,725.0	48.5	-1,163.0	164.1	0.00	0.00	0.00
7,000.0	17.80	272.39	6,820.2	49.7	-1,193.6	168.4	0.00	0.00	0.00
7,021.0	17.80	272.39	6,840.2	50.0	-1,200.0	169.3	0.00	0.00	0.00
Start DLS 8.00 TFO -32.45									
7,050.0	19.79	268.71	6,867.6	50.1	-1,209.3	171.0	8.00	6.88	-12.68
7,100.0	23.37	263.82	6,914.1	48.8	-1,227.7	175.5	8.00	7.15	-9.77
7,150.0	27.06	260.19	6,959.4	45.8	-1,248.7	182.3	8.00	7.38	-7.27
7,200.0	30.82	257.37	7,003.1	41.1	-1,272.4	191.3	8.00	7.52	-5.63
7,250.0	34.63	255.12	7,045.2	34.6	-1,298.7	202.4	8.00	7.62	-4.50
7,300.0	38.48	253.27	7,085.3	26.5	-1,327.3	215.6	8.00	7.69	-3.71
7,350.0	42.34	251.70	7,123.4	16.7	-1,358.2	230.9	8.00	7.74	-3.13
7,400.0	46.23	250.36	7,159.2	5.4	-1,391.2	248.1	8.00	7.78	-2.70
7,450.0	50.13	249.17	7,192.5	-7.5	-1,426.2	267.1	8.00	7.80	-2.37
7,468.2	51.56	248.78	7,204.0	-12.6	-1,439.3	274.5	8.00	7.82	-2.18
Niobrara									
7,500.0	54.05	248.12	7,223.2	-21.9	-1,462.9	287.9	8.00	7.83	-2.07
7,550.0	57.97	247.16	7,251.2	-37.7	-1,501.2	310.4	8.00	7.84	-1.91
7,575.9	60.00	246.70	7,264.5	-46.4	-1,521.6	322.7	8.00	7.85	-1.79
Start 150.0 hold at 7575.9 MD									
7,600.0	60.00	246.70	7,276.6	-54.6	-1,540.8	334.3	0.00	0.00	0.00
7,700.0	60.00	246.70	7,326.6	-88.9	-1,620.4	382.5	0.00	0.00	0.00
7,725.9	60.00	246.70	7,339.5	-97.8	-1,640.9	394.9	0.00	0.00	0.00
Start DLS 10.00 TFO -77.85									
7,750.0	60.54	243.99	7,351.5	-106.5	-1,660.0	407.0	10.00	2.22	-11.23
7,800.0	61.82	238.47	7,375.6	-127.6	-1,698.4	434.7	10.00	2.56	-11.03

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Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 6-17H20
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Site:	T7N-R80W-S9	MD Reference:	WELL @ 8136.0usft (Original Well Elev)
Well:	Castle 0780 6-17H20	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)
7,850.0	63.31	233.10	7,398.6	-152.5	-1,735.0	465.9	10.00	2.99	-10.75
7,900.0	65.01	227.87	7,420.5	-181.2	-1,769.7	500.4	10.00	3.39	-10.46
7,950.0	66.88	222.79	7,440.8	-213.2	-1,802.2	537.8	10.00	3.74	-10.16
8,000.0	68.90	217.86	7,459.7	-248.6	-1,832.1	578.0	10.00	4.06	-9.87
8,050.0	71.07	213.06	7,476.8	-286.8	-1,859.3	620.6	10.00	4.33	-9.59
8,100.0	73.36	208.39	7,492.1	-327.7	-1,883.6	665.2	10.00	4.57	-9.34
8,150.0	75.75	203.83	7,505.4	-371.0	-1,904.8	711.6	10.00	4.78	-9.12
8,200.0	78.22	199.37	7,516.7	-416.3	-1,922.8	759.4	10.00	4.95	-8.92
8,250.0	80.76	194.99	7,525.8	-463.2	-1,937.3	808.2	10.00	5.08	-8.76
8,300.0	83.36	190.68	7,532.7	-511.5	-1,948.3	857.7	10.00	5.19	-8.63
8,350.0	85.99	186.41	7,537.3	-560.7	-1,955.6	907.4	10.00	5.26	-8.54
8,400.0	88.64	182.16	7,539.7	-610.5	-1,959.4	957.1	10.00	5.31	-8.49
8,425.6	90.00	180.00	7,540.0	-636.1	-1,959.9	982.3	10.00	5.32	-8.47
Start 9946.3 hold at 8425.6 MD									
8,500.0	90.00	180.00	7,540.0	-710.5	-1,959.9	1,055.5	0.00	0.00	0.00
8,600.0	90.00	180.00	7,540.0	-810.5	-1,959.9	1,153.8	0.00	0.00	0.00
8,700.0	90.00	180.00	7,540.0	-910.5	-1,959.9	1,252.1	0.00	0.00	0.00
8,800.0	90.00	180.00	7,540.0	-1,010.5	-1,959.9	1,350.5	0.00	0.00	0.00
8,900.0	90.00	180.00	7,540.0	-1,110.5	-1,959.9	1,448.8	0.00	0.00	0.00
9,000.0	90.00	180.00	7,540.0	-1,210.5	-1,959.8	1,547.1	0.00	0.00	0.00
9,100.0	90.00	180.00	7,540.0	-1,310.5	-1,959.8	1,645.5	0.00	0.00	0.00
9,200.0	90.00	180.00	7,540.0	-1,410.5	-1,959.8	1,743.8	0.00	0.00	0.00
9,300.0	90.00	180.00	7,540.0	-1,510.5	-1,959.8	1,842.1	0.00	0.00	0.00
9,400.0	90.00	180.00	7,540.0	-1,610.5	-1,959.8	1,940.4	0.00	0.00	0.00
9,500.0	90.00	180.00	7,540.0	-1,710.5	-1,959.8	2,038.8	0.00	0.00	0.00
9,600.0	90.00	180.00	7,540.0	-1,810.5	-1,959.8	2,137.1	0.00	0.00	0.00
9,700.0	90.00	180.00	7,540.0	-1,910.5	-1,959.8	2,235.4	0.00	0.00	0.00
9,800.0	90.00	180.00	7,540.0	-2,010.5	-1,959.8	2,333.7	0.00	0.00	0.00
9,900.0	90.00	180.00	7,540.0	-2,110.5	-1,959.8	2,432.1	0.00	0.00	0.00
10,000.0	90.00	180.00	7,540.0	-2,210.5	-1,959.8	2,530.4	0.00	0.00	0.00
10,100.0	90.00	180.00	7,540.0	-2,310.5	-1,959.8	2,628.7	0.00	0.00	0.00
10,200.0	90.00	180.00	7,540.0	-2,410.5	-1,959.8	2,727.1	0.00	0.00	0.00
10,300.0	90.00	180.00	7,540.0	-2,510.5	-1,959.8	2,825.4	0.00	0.00	0.00
10,400.0	90.00	180.00	7,540.0	-2,610.5	-1,959.8	2,923.7	0.00	0.00	0.00
10,500.0	90.00	180.00	7,540.0	-2,710.5	-1,959.8	3,022.0	0.00	0.00	0.00
10,600.0	90.00	180.00	7,540.0	-2,810.5	-1,959.8	3,120.4	0.00	0.00	0.00
10,700.0	90.00	180.00	7,540.0	-2,910.5	-1,959.8	3,218.7	0.00	0.00	0.00
10,800.0	90.00	180.00	7,540.0	-3,010.5	-1,959.8	3,317.0	0.00	0.00	0.00
10,900.0	90.00	180.00	7,540.0	-3,110.5	-1,959.8	3,415.4	0.00	0.00	0.00
11,000.0	90.00	180.00	7,540.0	-3,210.5	-1,959.8	3,513.7	0.00	0.00	0.00
11,100.0	90.00	180.00	7,540.0	-3,310.5	-1,959.8	3,612.0	0.00	0.00	0.00
11,200.0	90.00	180.00	7,540.0	-3,410.5	-1,959.8	3,710.3	0.00	0.00	0.00
11,300.0	90.00	180.00	7,540.0	-3,510.5	-1,959.8	3,808.7	0.00	0.00	0.00
11,400.0	90.00	180.00	7,540.0	-3,610.5	-1,959.8	3,907.0	0.00	0.00	0.00

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 6-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8136.0usft (Original Well Elev)
Site:	T7N-R80W-S9	MD Reference:	WELL @ 8136.0usft (Original Well Elev)
Well:	Castle 0780 6-17H20	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	90.00	180.00	7,540.0	-3,710.5	-1,959.8	4,005.3	0.00	0.00	0.00
11,600.0	90.00	180.00	7,540.0	-3,810.5	-1,959.8	4,103.6	0.00	0.00	0.00
11,700.0	90.00	180.00	7,540.0	-3,910.5	-1,959.8	4,202.0	0.00	0.00	0.00
11,800.0	90.00	180.00	7,540.0	-4,010.5	-1,959.8	4,300.3	0.00	0.00	0.00
11,900.0	90.00	180.00	7,540.0	-4,110.5	-1,959.8	4,398.6	0.00	0.00	0.00
12,000.0	90.00	180.00	7,540.0	-4,210.5	-1,959.8	4,497.0	0.00	0.00	0.00
12,100.0	90.00	180.00	7,540.0	-4,310.5	-1,959.8	4,595.3	0.00	0.00	0.00
12,200.0	90.00	180.00	7,540.0	-4,410.5	-1,959.8	4,693.6	0.00	0.00	0.00
12,300.0	90.00	180.00	7,540.0	-4,510.5	-1,959.8	4,791.9	0.00	0.00	0.00
12,400.0	90.00	180.00	7,540.0	-4,610.5	-1,959.8	4,890.3	0.00	0.00	0.00
12,500.0	90.00	180.00	7,540.0	-4,710.5	-1,959.8	4,988.6	0.00	0.00	0.00
12,600.0	90.00	180.00	7,540.0	-4,810.5	-1,959.8	5,086.9	0.00	0.00	0.00
12,700.0	90.00	180.00	7,540.0	-4,910.5	-1,959.8	5,185.3	0.00	0.00	0.00
12,800.0	90.00	180.00	7,540.0	-5,010.5	-1,959.8	5,283.6	0.00	0.00	0.00
12,900.0	90.00	180.00	7,540.0	-5,110.5	-1,959.8	5,381.9	0.00	0.00	0.00
13,000.0	90.00	180.00	7,540.0	-5,210.5	-1,959.8	5,480.2	0.00	0.00	0.00
13,100.0	90.00	180.00	7,540.0	-5,310.5	-1,959.8	5,578.6	0.00	0.00	0.00
13,200.0	90.00	180.00	7,540.0	-5,410.5	-1,959.8	5,676.9	0.00	0.00	0.00
13,300.0	90.00	180.00	7,540.0	-5,510.5	-1,959.8	5,775.2	0.00	0.00	0.00
13,400.0	90.00	180.00	7,540.0	-5,610.5	-1,959.8	5,873.6	0.00	0.00	0.00
13,500.0	90.00	180.00	7,540.0	-5,710.5	-1,959.8	5,971.9	0.00	0.00	0.00
13,600.0	90.00	180.00	7,540.0	-5,810.5	-1,959.8	6,070.2	0.00	0.00	0.00
13,700.0	90.00	180.00	7,540.0	-5,910.5	-1,959.8	6,168.5	0.00	0.00	0.00
13,800.0	90.00	180.00	7,540.0	-6,010.5	-1,959.8	6,266.9	0.00	0.00	0.00
13,900.0	90.00	180.00	7,540.0	-6,110.5	-1,959.8	6,365.2	0.00	0.00	0.00
14,000.0	90.00	180.00	7,540.0	-6,210.5	-1,959.8	6,463.5	0.00	0.00	0.00
14,100.0	90.00	180.00	7,540.0	-6,310.5	-1,959.8	6,561.8	0.00	0.00	0.00
14,200.0	90.00	180.00	7,540.0	-6,410.5	-1,959.8	6,660.2	0.00	0.00	0.00
14,300.0	90.00	180.00	7,540.0	-6,510.5	-1,959.8	6,758.5	0.00	0.00	0.00
14,400.0	90.00	180.00	7,540.0	-6,610.5	-1,959.8	6,856.8	0.00	0.00	0.00
14,500.0	90.00	180.00	7,540.0	-6,710.5	-1,959.7	6,955.2	0.00	0.00	0.00
14,600.0	90.00	180.00	7,540.0	-6,810.5	-1,959.7	7,053.5	0.00	0.00	0.00
14,700.0	90.00	180.00	7,540.0	-6,910.5	-1,959.7	7,151.8	0.00	0.00	0.00
14,800.0	90.00	180.00	7,540.0	-7,010.5	-1,959.7	7,250.1	0.00	0.00	0.00
14,900.0	90.00	180.00	7,540.0	-7,110.5	-1,959.7	7,348.5	0.00	0.00	0.00
15,000.0	90.00	180.00	7,540.0	-7,210.5	-1,959.7	7,446.8	0.00	0.00	0.00
15,100.0	90.00	180.00	7,540.0	-7,310.5	-1,959.7	7,545.1	0.00	0.00	0.00
15,200.0	90.00	180.00	7,540.0	-7,410.5	-1,959.7	7,643.5	0.00	0.00	0.00
15,300.0	90.00	180.00	7,540.0	-7,510.5	-1,959.7	7,741.8	0.00	0.00	0.00
15,400.0	90.00	180.00	7,540.0	-7,610.5	-1,959.7	7,840.1	0.00	0.00	0.00
15,500.0	90.00	180.00	7,540.0	-7,710.5	-1,959.7	7,938.4	0.00	0.00	0.00
15,600.0	90.00	180.00	7,540.0	-7,810.5	-1,959.7	8,036.8	0.00	0.00	0.00
15,700.0	90.00	180.00	7,540.0	-7,910.5	-1,959.7	8,135.1	0.00	0.00	0.00

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 6-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8136.0usft (Original Well Elev)
Site:	T7N-R80W-S9	MD Reference:	WELL @ 8136.0usft (Original Well Elev)
Well:	Castle 0780 6-17H20	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)
15,800.0	90.00	180.00	7,540.0	-8,010.5	-1,959.7	8,233.4	0.00	0.00	0.00
15,900.0	90.00	180.00	7,540.0	-8,110.5	-1,959.7	8,331.7	0.00	0.00	0.00
16,000.0	90.00	180.00	7,540.0	-8,210.5	-1,959.7	8,430.1	0.00	0.00	0.00
16,100.0	90.00	180.00	7,540.0	-8,310.5	-1,959.7	8,528.4	0.00	0.00	0.00
16,200.0	90.00	180.00	7,540.0	-8,410.5	-1,959.7	8,626.7	0.00	0.00	0.00
16,300.0	90.00	180.00	7,540.0	-8,510.5	-1,959.7	8,725.1	0.00	0.00	0.00
16,400.0	90.00	180.00	7,540.0	-8,610.5	-1,959.7	8,823.4	0.00	0.00	0.00
16,500.0	90.00	180.00	7,540.0	-8,710.5	-1,959.7	8,921.7	0.00	0.00	0.00
16,600.0	90.00	180.00	7,540.0	-8,810.5	-1,959.7	9,020.0	0.00	0.00	0.00
16,700.0	90.00	180.00	7,540.0	-8,910.5	-1,959.7	9,118.4	0.00	0.00	0.00
16,800.0	90.00	180.00	7,540.0	-9,010.5	-1,959.7	9,216.7	0.00	0.00	0.00
16,900.0	90.00	180.00	7,540.0	-9,110.5	-1,959.7	9,315.0	0.00	0.00	0.00
17,000.0	90.00	180.00	7,540.0	-9,210.5	-1,959.7	9,413.4	0.00	0.00	0.00
17,100.0	90.00	180.00	7,540.0	-9,310.5	-1,959.7	9,511.7	0.00	0.00	0.00
17,200.0	90.00	180.00	7,540.0	-9,410.5	-1,959.7	9,610.0	0.00	0.00	0.00
17,300.0	90.00	180.00	7,540.0	-9,510.5	-1,959.7	9,708.3	0.00	0.00	0.00
17,400.0	90.00	180.00	7,540.0	-9,610.5	-1,959.7	9,806.7	0.00	0.00	0.00
17,500.0	90.00	180.00	7,540.0	-9,710.5	-1,959.7	9,905.0	0.00	0.00	0.00
17,600.0	90.00	180.00	7,540.0	-9,810.5	-1,959.7	10,003.3	0.00	0.00	0.00
17,700.0	90.00	180.00	7,540.0	-9,910.5	-1,959.7	10,101.7	0.00	0.00	0.00
17,800.0	90.00	180.00	7,540.0	-10,010.5	-1,959.7	10,200.0	0.00	0.00	0.00
17,900.0	90.00	180.00	7,540.0	-10,110.5	-1,959.7	10,298.3	0.00	0.00	0.00
18,000.0	90.00	180.00	7,540.0	-10,210.5	-1,959.7	10,396.6	0.00	0.00	0.00
18,100.0	90.00	180.00	7,540.0	-10,310.5	-1,959.7	10,495.0	0.00	0.00	0.00
18,200.0	90.00	180.00	7,540.0	-10,410.5	-1,959.7	10,593.3	0.00	0.00	0.00
18,300.0	90.00	180.00	7,540.0	-10,510.5	-1,959.7	10,691.6	0.00	0.00	0.00
18,371.9	90.00	180.00	7,540.0	-10,582.4	-1,959.7	10,762.3	0.00	0.00	0.00
TD at 18371.9									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Castle 6	0.00	0.00	7,540.0	-10,582.4	-1,959.7	1,446,838.83	2,751,534.54	40° 33' 23.520 N	106° 23' 39.130 W
- hit/miss target									
- Shape									
- plan hits target center									
- Point									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,468.2	7,204.0	Niobrara		0.00	

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 6-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8136.0usft (Original Well Elev)
Site:	T7N-R80W-S9	MD Reference:	WELL @ 8136.0usft (Original Well Elev)
Well:	Castle 0780 6-17H20	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDMProd

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2650	2650	0	0	Start Build 2.00
3540	3526	6	-137	Start 3481.2 hold at 3539.8 MD
7021	6840	50	-1200	Start DLS 8.00 TFO -32.45
7576	7265	-46	-1522	Start 150.0 hold at 7575.9 MD
7726	7340	-98	-1641	Start DLS 10.00 TFO -77.85
8426	7540	-636	-1960	Start 9946.3 hold at 8425.6 MD
18,372	7540	-10,582	-1960	TD at 18371.9

Checked By: _____ Approved By: _____ Date: _____