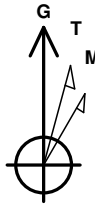
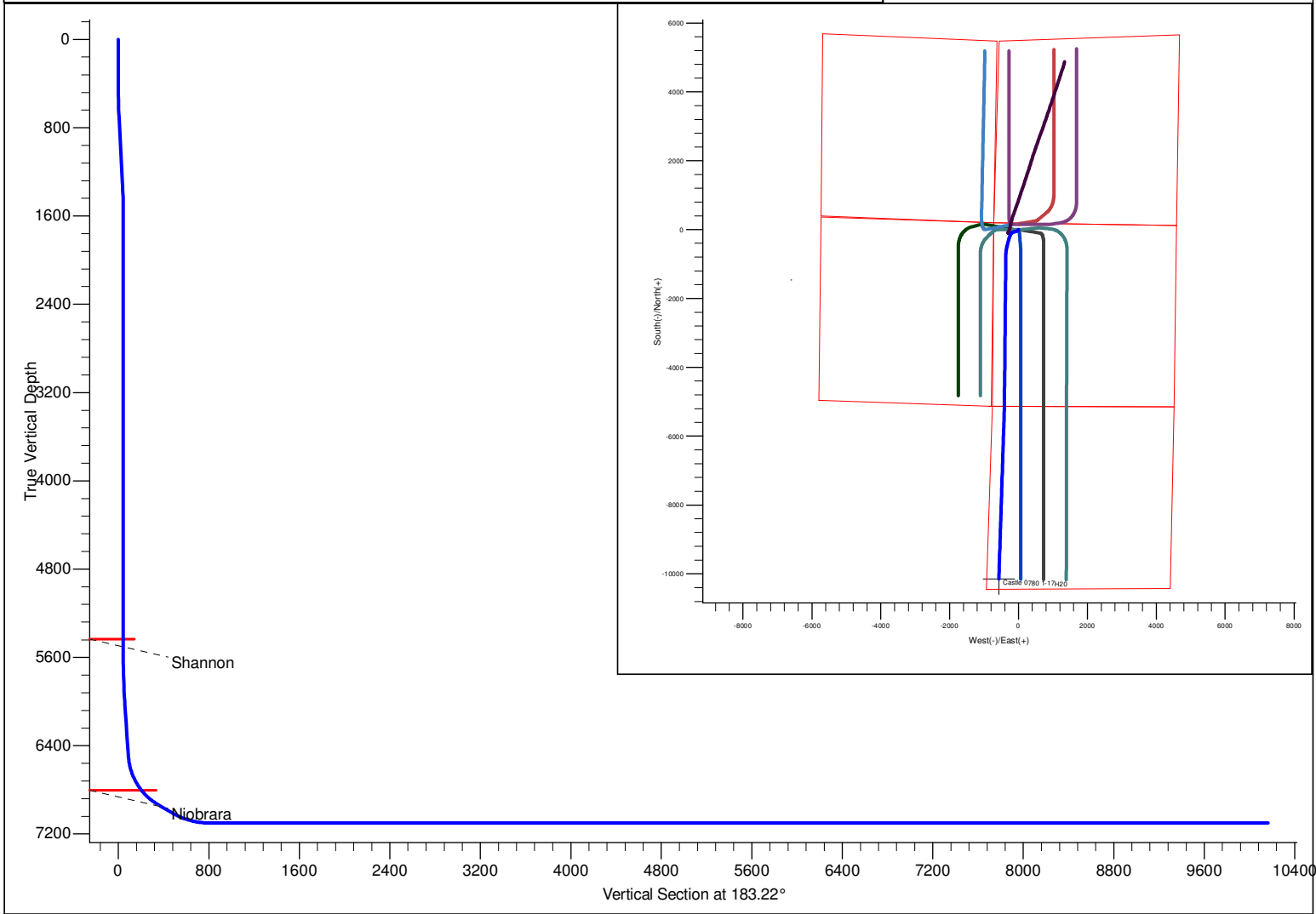


PROJECT DETAILS: North Park Basin							<div></div> <div>Azimuths to Grid North True North: 0.58° Magnetic North: 10.48° Magnetic Field Strength: 53188.9snT Dip Angle: 66.97° Date: 12/31/2009 Model: IGRF200510</div>								
Geodetic System: US State Plane 1983 Datum: North American Datum 1983 Ellipsoid: GRS 1980 Zone: Colorado Northern Zone System Datum: Mean Sea Level															
FORMATION TOP DETAILS															
<table><tr><td>TVDPathMDPath</td><td>Formation</td><td>DipAngleDipDir</td></tr><tr><td>5433.0 5434.4</td><td>Shannon</td><td>0.00</td></tr><tr><td>6803.0 6851.0</td><td>Niobrara</td><td>0.00</td></tr></table>								TVDPathMDPath	Formation	DipAngleDipDir	5433.0 5434.4	Shannon	0.00	6803.0 6851.0	Niobrara
TVDPathMDPath	Formation	DipAngleDipDir													
5433.0 5434.4	Shannon	0.00													
6803.0 6851.0	Niobrara	0.00													
							CASING DETAILS								
							No casing data is available								
DESIGN DETAILS: Design #1							<div>Project: North Park Basin Site: T7N-R80W-S17 Well: Castle 0780 1-17H20 Wellbore: Wellbore #1 Design: Design #1</div>								
0' Vertical Section coordinates															
Type	Target	Azimuth	Origin	Type	N/S	E/W From	TVD								
TD		183.22	Slot		0.0	0.0	0.0								



SECTION DETAILS												
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target		
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0			
2	500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.0			
3	673.0	3.46	216.87	672.9	-4.2	-3.1	2.00	216.87	4.3			
4	1328.4	3.46	216.87	1327.1	-35.8	-26.9	0.00	0.00	37.3			
5	1501.4	0.00	0.00	1500.0	-40.0	-30.0	2.00	180.00	41.6			
6	5500.7	0.00	0.00	5499.3	-40.0	-30.0	0.00	0.00	41.6			
7	6104.3	12.07	254.54	6098.5	-56.9	-91.1	2.00	254.54	61.9			
8	6518.7	12.07	254.54	6503.7	-80.0	-174.6	0.00	0.00	89.7			
9	7064.4	60.00	194.60	6940.5	-344.2	-298.7	10.00	-66.90	360.4			
10	7214.4	60.00	194.60	7015.5	-469.9	-331.4	0.00	0.00	487.8			
11	7543.0	90.00	180.53	7100.0	-780.4	-369.9	10.00	-26.62	799.9	Section Line		
12	11892.4	90.00	180.53	7100.0	-5129.6	-410.0	0.00	0.00	5144.5	Section Line		
13	11958.5	90.00	181.85	7100.0	-5195.6	-411.4	2.00	90.00	5210.5	Castle 1-17H20		
14	16912.3	90.00	181.85	7100.0	-10146.9	-571.4	0.00	0.00	10163.0	Castle 1-17H20		

SandRidge Energy

North Park Basin

T7N-R80W-S17

Castle 0780 1-17H20

Wellbore #1

Plan: Design #1

Standard Survey Report

16 December, 2015

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 1-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Castle 0780 1-17H20	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-S17				
Site Position:		Northing:	1,456,885.51 usft	Latitude:	40° 35' 2.501 N
From:	Lat/Long	Easting:	2,748,625.91 usft	Longitude:	106° 24' 18.140 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.58 °

Well	Castle 0780 1-17H20					
Well Position	+N/-S	0.0 usft	Northing:	1,456,962.95 usft	Latitude:	40° 35' 3.281 N
	+E/-W	0.0 usft	Easting:	2,748,770.91 usft	Longitude:	106° 24' 16.271 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,156.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	9.89	66.97	53,189

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	183.22		

Survey Tool Program	Date	12/16/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	16,912.2	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	
Start Build 2.00										
600.0	2.00	216.87	600.0	-1.4	-1.0	1.5	2.00	2.00	0.00	
673.0	3.46	216.87	672.9	-4.2	-3.1	4.3	2.00	2.00	0.00	
Start 655.4 hold at 673.0 MD										

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 1-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Castle 0780 1-17H20	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)
700.0	3.46	216.87	699.8	-5.5	-4.1	5.7	0.00	0.00	0.00
800.0	3.46	216.87	799.7	-10.3	-7.7	10.7	0.00	0.00	0.00
900.0	3.46	216.87	899.5	-15.1	-11.4	15.8	0.00	0.00	0.00
1,000.0	3.46	216.87	999.3	-20.0	-15.0	20.8	0.00	0.00	0.00
1,100.0	3.46	216.87	1,099.1	-24.8	-18.6	25.8	0.00	0.00	0.00
1,200.0	3.46	216.87	1,198.9	-29.6	-22.2	30.8	0.00	0.00	0.00
1,300.0	3.46	216.87	1,298.8	-34.5	-25.8	35.8	0.00	0.00	0.00
1,328.4	3.46	216.87	1,327.1	-35.8	-26.9	37.3	0.00	0.00	0.00
Start Drop -2.00									
1,400.0	2.03	216.87	1,398.6	-38.6	-28.9	40.1	2.00	-2.00	0.00
1,501.4	0.00	0.00	1,500.0	-40.0	-30.0	41.6	2.00	-2.00	0.00
Start 3999.3 hold at 1501.4 MD									
1,600.0	0.00	0.00	1,598.6	-40.0	-30.0	41.6	0.00	0.00	0.00
1,700.0	0.00	0.00	1,698.6	-40.0	-30.0	41.6	0.00	0.00	0.00
1,800.0	0.00	0.00	1,798.6	-40.0	-30.0	41.6	0.00	0.00	0.00
1,900.0	0.00	0.00	1,898.6	-40.0	-30.0	41.6	0.00	0.00	0.00
2,000.0	0.00	0.00	1,998.6	-40.0	-30.0	41.6	0.00	0.00	0.00
2,100.0	0.00	0.00	2,098.6	-40.0	-30.0	41.6	0.00	0.00	0.00
2,200.0	0.00	0.00	2,198.6	-40.0	-30.0	41.6	0.00	0.00	0.00
2,300.0	0.00	0.00	2,298.6	-40.0	-30.0	41.6	0.00	0.00	0.00
2,400.0	0.00	0.00	2,398.6	-40.0	-30.0	41.6	0.00	0.00	0.00
2,500.0	0.00	0.00	2,498.6	-40.0	-30.0	41.6	0.00	0.00	0.00
2,600.0	0.00	0.00	2,598.6	-40.0	-30.0	41.6	0.00	0.00	0.00
2,700.0	0.00	0.00	2,698.6	-40.0	-30.0	41.6	0.00	0.00	0.00
2,800.0	0.00	0.00	2,798.6	-40.0	-30.0	41.6	0.00	0.00	0.00
2,900.0	0.00	0.00	2,898.6	-40.0	-30.0	41.6	0.00	0.00	0.00
3,000.0	0.00	0.00	2,998.6	-40.0	-30.0	41.6	0.00	0.00	0.00
3,100.0	0.00	0.00	3,098.6	-40.0	-30.0	41.6	0.00	0.00	0.00
3,200.0	0.00	0.00	3,198.6	-40.0	-30.0	41.6	0.00	0.00	0.00
3,300.0	0.00	0.00	3,298.6	-40.0	-30.0	41.6	0.00	0.00	0.00
3,400.0	0.00	0.00	3,398.6	-40.0	-30.0	41.6	0.00	0.00	0.00
3,500.0	0.00	0.00	3,498.6	-40.0	-30.0	41.6	0.00	0.00	0.00
3,600.0	0.00	0.00	3,598.6	-40.0	-30.0	41.6	0.00	0.00	0.00
3,700.0	0.00	0.00	3,698.6	-40.0	-30.0	41.6	0.00	0.00	0.00
3,800.0	0.00	0.00	3,798.6	-40.0	-30.0	41.6	0.00	0.00	0.00
3,900.0	0.00	0.00	3,898.6	-40.0	-30.0	41.6	0.00	0.00	0.00
4,000.0	0.00	0.00	3,998.6	-40.0	-30.0	41.6	0.00	0.00	0.00
4,100.0	0.00	0.00	4,098.6	-40.0	-30.0	41.6	0.00	0.00	0.00
4,200.0	0.00	0.00	4,198.6	-40.0	-30.0	41.6	0.00	0.00	0.00
4,300.0	0.00	0.00	4,298.6	-40.0	-30.0	41.6	0.00	0.00	0.00
4,400.0	0.00	0.00	4,398.6	-40.0	-30.0	41.6	0.00	0.00	0.00
4,500.0	0.00	0.00	4,498.6	-40.0	-30.0	41.6	0.00	0.00	0.00
4,600.0	0.00	0.00	4,598.6	-40.0	-30.0	41.6	0.00	0.00	0.00
4,700.0	0.00	0.00	4,698.6	-40.0	-30.0	41.6	0.00	0.00	0.00

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 1-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Castle 0780 1-17H20	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)
4,800.0	0.00	0.00	4,798.6	-40.0	-30.0	41.6	0.00	0.00	0.00
4,900.0	0.00	0.00	4,898.6	-40.0	-30.0	41.6	0.00	0.00	0.00
5,000.0	0.00	0.00	4,998.6	-40.0	-30.0	41.6	0.00	0.00	0.00
5,100.0	0.00	0.00	5,098.6	-40.0	-30.0	41.6	0.00	0.00	0.00
5,200.0	0.00	0.00	5,198.6	-40.0	-30.0	41.6	0.00	0.00	0.00
5,300.0	0.00	0.00	5,298.6	-40.0	-30.0	41.6	0.00	0.00	0.00
5,400.0	0.00	0.00	5,398.6	-40.0	-30.0	41.6	0.00	0.00	0.00
5,500.7	0.00	0.00	5,499.3	-40.0	-30.0	41.6	0.00	0.00	0.00
Start Build 2.00									
5,600.0	1.99	254.54	5,598.6	-40.5	-31.7	42.2	2.00	2.00	0.00
5,700.0	3.99	254.54	5,698.4	-41.8	-36.7	43.8	2.00	2.00	0.00
5,800.0	5.99	254.54	5,798.1	-44.2	-45.1	46.6	2.00	2.00	0.00
5,900.0	7.99	254.54	5,897.3	-47.4	-56.8	50.5	2.00	2.00	0.00
6,000.0	9.99	254.54	5,996.1	-51.6	-71.8	55.5	2.00	2.00	0.00
6,104.3	12.07	254.54	6,098.5	-56.9	-91.1	61.9	2.00	2.00	0.00
6,200.0	12.07	254.54	6,192.0	-62.2	-110.4	68.3	0.00	0.00	0.00
6,265.4	12.07	254.54	6,255.9	-65.9	-123.5	72.7	0.00	0.00	0.00
Start 277.5 hold at 6265.4 MD									
6,300.0	12.07	254.54	6,289.8	-67.8	-130.5	75.0	0.00	0.00	0.00
6,400.0	12.07	254.54	6,387.6	-73.4	-150.7	81.7	0.00	0.00	0.00
6,500.0	12.07	254.54	6,485.4	-79.0	-170.8	88.4	0.00	0.00	0.00
6,518.7	12.07	254.54	6,503.7	-80.0	-174.6	89.7	0.00	0.00	0.00
6,542.9	13.21	244.77	6,527.3	-81.8	-179.5	91.8	10.00	4.69	-40.45
Start DLS 10.00 TFO -51.90									
6,550.0	13.60	242.22	6,534.2	-82.6	-181.0	92.6	10.00	5.57	-35.82
6,600.0	16.97	228.08	6,582.4	-90.2	-191.6	100.8	10.00	6.73	-28.28
6,650.0	20.98	218.85	6,629.7	-102.1	-202.7	113.3	10.00	8.03	-18.47
6,700.0	25.34	212.56	6,675.7	-118.1	-214.1	129.9	10.00	8.71	-12.57
6,750.0	29.88	208.05	6,720.0	-138.1	-225.7	150.6	10.00	9.09	-9.02
6,800.0	34.54	204.65	6,762.3	-162.0	-237.5	175.1	10.00	9.32	-6.81
6,850.0	39.28	201.97	6,802.3	-189.5	-249.3	203.3	10.00	9.47	-5.35
6,900.0	44.06	199.79	6,839.6	-220.6	-261.1	234.9	10.00	9.57	-4.37
6,950.0	48.88	197.95	6,874.0	-254.9	-272.8	269.8	10.00	9.64	-3.67
7,000.0	53.73	196.37	6,905.3	-292.2	-284.3	307.7	10.00	9.69	-3.16
7,039.7	57.59	195.25	6,927.7	-323.7	-293.3	339.7	10.00	9.72	-2.82
Start 150.0 hold at 7039.7 MD									
7,050.0	58.59	194.98	6,933.1	-332.2	-295.5	348.2	10.00	9.74	-2.67
7,064.4	60.00	194.60	6,940.5	-344.2	-298.7	360.4	10.00	9.75	-2.60
7,100.0	60.00	194.60	6,958.3	-374.0	-306.5	390.6	0.00	0.00	0.00
7,189.7	60.00	194.60	7,003.1	-449.2	-326.0	466.8	0.00	0.00	0.00
Start DLS 10.00 TFO -52.30									
7,200.0	60.00	194.60	7,008.3	-457.8	-328.3	475.5	0.00	0.00	0.00
7,214.4	60.00	194.60	7,015.5	-469.9	-331.4	487.8	0.00	0.00	0.00
7,250.0	63.19	192.82	7,032.4	-500.3	-338.8	518.5	10.00	8.97	-5.02

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 1-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Castle 0780 1-17H20	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)
7,300.0	67.71	190.47	7,053.2	-544.8	-348.0	563.5	10.00	9.04	-4.69
7,350.0	72.27	188.27	7,070.3	-591.1	-355.6	610.2	10.00	9.11	-4.40
7,400.0	76.84	186.18	7,083.6	-638.9	-361.7	658.2	10.00	9.15	-4.18
7,450.0	81.43	184.17	7,093.0	-687.8	-366.1	707.3	10.00	9.19	-4.03
7,500.0	86.04	182.20	7,098.5	-737.4	-368.9	757.0	10.00	9.21	-3.93
7,543.0	90.00	180.53	7,100.0	-780.4	-369.9	799.9	10.00	9.21	-3.89
7,600.0	90.00	180.53	7,100.0	-837.4	-370.4	856.9	0.00	0.00	0.00
7,623.2	90.00	180.53	7,100.0	-860.6	-370.6	880.1	0.00	0.00	0.00
Start 9355.7 hold at 7623.2 MD									
7,700.0	90.00	180.53	7,100.0	-937.4	-371.3	956.8	0.00	0.00	0.00
7,800.0	90.00	180.53	7,100.0	-1,037.4	-372.2	1,056.7	0.00	0.00	0.00
7,900.0	90.00	180.53	7,100.0	-1,137.4	-373.2	1,156.5	0.00	0.00	0.00
8,000.0	90.00	180.53	7,100.0	-1,237.4	-374.1	1,256.4	0.00	0.00	0.00
8,100.0	90.00	180.53	7,100.0	-1,337.4	-375.0	1,356.3	0.00	0.00	0.00
8,200.0	90.00	180.53	7,100.0	-1,437.3	-375.9	1,456.2	0.00	0.00	0.00
8,300.0	90.00	180.53	7,100.0	-1,537.3	-376.9	1,556.1	0.00	0.00	0.00
8,400.0	90.00	180.53	7,100.0	-1,637.3	-377.8	1,656.0	0.00	0.00	0.00
8,500.0	90.00	180.53	7,100.0	-1,737.3	-378.7	1,755.9	0.00	0.00	0.00
8,600.0	90.00	180.53	7,100.0	-1,837.3	-379.6	1,855.8	0.00	0.00	0.00
8,700.0	90.00	180.53	7,100.0	-1,937.3	-380.6	1,955.7	0.00	0.00	0.00
8,800.0	90.00	180.53	7,100.0	-2,037.3	-381.5	2,055.5	0.00	0.00	0.00
8,900.0	90.00	180.53	7,100.0	-2,137.3	-382.4	2,155.4	0.00	0.00	0.00
9,000.0	90.00	180.53	7,100.0	-2,237.3	-383.3	2,255.3	0.00	0.00	0.00
9,100.0	90.00	180.53	7,100.0	-2,337.3	-384.2	2,355.2	0.00	0.00	0.00
9,200.0	90.00	180.53	7,100.0	-2,437.3	-385.2	2,455.1	0.00	0.00	0.00
9,300.0	90.00	180.53	7,100.0	-2,537.3	-386.1	2,555.0	0.00	0.00	0.00
9,400.0	90.00	180.53	7,100.0	-2,637.3	-387.0	2,654.9	0.00	0.00	0.00
9,500.0	90.00	180.53	7,100.0	-2,737.3	-387.9	2,754.8	0.00	0.00	0.00
9,600.0	90.00	180.53	7,100.0	-2,837.3	-388.9	2,854.7	0.00	0.00	0.00
9,700.0	90.00	180.53	7,100.0	-2,937.3	-389.8	2,954.6	0.00	0.00	0.00
9,800.0	90.00	180.53	7,100.0	-3,037.3	-390.7	3,054.4	0.00	0.00	0.00
9,900.0	90.00	180.53	7,100.0	-3,137.3	-391.6	3,154.3	0.00	0.00	0.00
10,000.0	90.00	180.53	7,100.0	-3,237.3	-392.6	3,254.2	0.00	0.00	0.00
10,100.0	90.00	180.53	7,100.0	-3,337.3	-393.5	3,354.1	0.00	0.00	0.00
10,200.0	90.00	180.53	7,100.0	-3,437.3	-394.4	3,454.0	0.00	0.00	0.00
10,300.0	90.00	180.53	7,100.0	-3,537.3	-395.3	3,553.9	0.00	0.00	0.00
10,400.0	90.00	180.53	7,100.0	-3,637.3	-396.2	3,653.8	0.00	0.00	0.00
10,500.0	90.00	180.53	7,100.0	-3,737.2	-397.2	3,753.7	0.00	0.00	0.00
10,600.0	90.00	180.53	7,100.0	-3,837.2	-398.1	3,853.6	0.00	0.00	0.00
10,700.0	90.00	180.53	7,100.0	-3,937.2	-399.0	3,953.4	0.00	0.00	0.00
10,800.0	90.00	180.53	7,100.0	-4,037.2	-399.9	4,053.3	0.00	0.00	0.00
10,900.0	90.00	180.53	7,100.0	-4,137.2	-400.9	4,153.2	0.00	0.00	0.00
11,000.0	90.00	180.53	7,100.0	-4,237.2	-401.8	4,253.1	0.00	0.00	0.00

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 1-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Castle 0780 1-17H20	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)
11,100.0	90.00	180.53	7,100.0	-4,337.2	-402.7	4,353.0	0.00	0.00	0.00
11,200.0	90.00	180.53	7,100.0	-4,437.2	-403.6	4,452.9	0.00	0.00	0.00
11,300.0	90.00	180.53	7,100.0	-4,537.2	-404.6	4,552.8	0.00	0.00	0.00
11,400.0	90.00	180.53	7,100.0	-4,637.2	-405.5	4,652.7	0.00	0.00	0.00
11,500.0	90.00	180.53	7,100.0	-4,737.2	-406.4	4,752.6	0.00	0.00	0.00
11,600.0	90.00	180.53	7,100.0	-4,837.2	-407.3	4,852.5	0.00	0.00	0.00
11,700.0	90.00	180.53	7,100.0	-4,937.2	-408.2	4,952.3	0.00	0.00	0.00
11,800.0	90.00	180.53	7,100.0	-5,037.2	-409.2	5,052.2	0.00	0.00	0.00
11,892.4	90.00	180.53	7,100.0	-5,129.6	-410.0	5,144.5	0.00	0.00	0.00
11,900.0	90.00	180.68	7,100.0	-5,137.2	-410.1	5,152.1	2.00	0.00	2.00
11,958.5	90.00	181.85	7,100.0	-5,195.6	-411.4	5,210.5	2.00	0.00	2.00
12,000.0	90.00	181.85	7,100.0	-5,237.2	-412.7	5,252.1	0.00	0.00	0.00
12,100.0	90.00	181.85	7,100.0	-5,337.1	-416.0	5,352.0	0.00	0.00	0.00
12,200.0	90.00	181.85	7,100.0	-5,437.0	-419.2	5,452.0	0.00	0.00	0.00
12,300.0	90.00	181.85	7,100.0	-5,537.0	-422.4	5,552.0	0.00	0.00	0.00
12,400.0	90.00	181.85	7,100.0	-5,636.9	-425.7	5,652.0	0.00	0.00	0.00
12,500.0	90.00	181.85	7,100.0	-5,736.9	-428.9	5,751.9	0.00	0.00	0.00
12,600.0	90.00	181.85	7,100.0	-5,836.8	-432.1	5,851.9	0.00	0.00	0.00
12,700.0	90.00	181.85	7,100.0	-5,936.8	-435.3	5,951.9	0.00	0.00	0.00
12,800.0	90.00	181.85	7,100.0	-6,036.7	-438.6	6,051.8	0.00	0.00	0.00
12,900.0	90.00	181.85	7,100.0	-6,136.7	-441.8	6,151.8	0.00	0.00	0.00
13,000.0	90.00	181.85	7,100.0	-6,236.6	-445.0	6,251.8	0.00	0.00	0.00
13,100.0	90.00	181.85	7,100.0	-6,336.6	-448.3	6,351.8	0.00	0.00	0.00
13,200.0	90.00	181.85	7,100.0	-6,436.5	-451.5	6,451.7	0.00	0.00	0.00
13,300.0	90.00	181.85	7,100.0	-6,536.5	-454.7	6,551.7	0.00	0.00	0.00
13,400.0	90.00	181.85	7,100.0	-6,636.4	-457.9	6,651.7	0.00	0.00	0.00
13,500.0	90.00	181.85	7,100.0	-6,736.4	-461.2	6,751.6	0.00	0.00	0.00
13,600.0	90.00	181.85	7,100.0	-6,836.3	-464.4	6,851.6	0.00	0.00	0.00
13,700.0	90.00	181.85	7,100.0	-6,936.3	-467.6	6,951.6	0.00	0.00	0.00
13,800.0	90.00	181.85	7,100.0	-7,036.2	-470.9	7,051.6	0.00	0.00	0.00
13,900.0	90.00	181.85	7,100.0	-7,136.2	-474.1	7,151.5	0.00	0.00	0.00
14,000.0	90.00	181.85	7,100.0	-7,236.1	-477.3	7,251.5	0.00	0.00	0.00
14,100.0	90.00	181.85	7,100.0	-7,336.1	-480.6	7,351.5	0.00	0.00	0.00
14,200.0	90.00	181.85	7,100.0	-7,436.0	-483.8	7,451.4	0.00	0.00	0.00
14,300.0	90.00	181.85	7,100.0	-7,536.0	-487.0	7,551.4	0.00	0.00	0.00
14,400.0	90.00	181.85	7,100.0	-7,635.9	-490.2	7,651.4	0.00	0.00	0.00
14,500.0	90.00	181.85	7,100.0	-7,735.8	-493.5	7,751.4	0.00	0.00	0.00
14,600.0	90.00	181.85	7,100.0	-7,835.8	-496.7	7,851.3	0.00	0.00	0.00
14,700.0	90.00	181.85	7,100.0	-7,935.7	-499.9	7,951.3	0.00	0.00	0.00
14,800.0	90.00	181.85	7,100.0	-8,035.7	-503.2	8,051.3	0.00	0.00	0.00
14,900.0	90.00	181.85	7,100.0	-8,135.6	-506.4	8,151.2	0.00	0.00	0.00
15,000.0	90.00	181.85	7,100.0	-8,235.6	-509.6	8,251.2	0.00	0.00	0.00
15,100.0	90.00	181.85	7,100.0	-8,335.5	-512.8	8,351.2	0.00	0.00	0.00
15,200.0	90.00	181.85	7,100.0	-8,435.5	-516.1	8,451.2	0.00	0.00	0.00

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 1-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Castle 0780 1-17H20	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)
15,300.0	90.00	181.85	7,100.0	-8,535.4	-519.3	8,551.1	0.00	0.00	0.00
15,400.0	90.00	181.85	7,100.0	-8,635.4	-522.5	8,651.1	0.00	0.00	0.00
15,500.0	90.00	181.85	7,100.0	-8,735.3	-525.8	8,751.1	0.00	0.00	0.00
15,600.0	90.00	181.85	7,100.0	-8,835.3	-529.0	8,851.0	0.00	0.00	0.00
15,700.0	90.00	181.85	7,100.0	-8,935.2	-532.2	8,951.0	0.00	0.00	0.00
15,800.0	90.00	181.85	7,100.0	-9,035.2	-535.5	9,051.0	0.00	0.00	0.00
15,900.0	90.00	181.85	7,100.0	-9,135.1	-538.7	9,151.0	0.00	0.00	0.00
16,000.0	90.00	181.85	7,100.0	-9,235.1	-541.9	9,250.9	0.00	0.00	0.00
16,100.0	90.00	181.85	7,100.0	-9,335.0	-545.1	9,350.9	0.00	0.00	0.00
16,200.0	90.00	181.85	7,100.0	-9,435.0	-548.4	9,450.9	0.00	0.00	0.00
16,300.0	90.00	181.85	7,100.0	-9,534.9	-551.6	9,550.8	0.00	0.00	0.00
16,400.0	90.00	181.85	7,100.0	-9,634.9	-554.8	9,650.8	0.00	0.00	0.00
16,500.0	90.00	181.85	7,100.0	-9,734.8	-558.1	9,750.8	0.00	0.00	0.00
16,600.0	90.00	181.85	7,100.0	-9,834.8	-561.3	9,850.8	0.00	0.00	0.00
16,700.0	90.00	181.85	7,100.0	-9,934.7	-564.5	9,950.7	0.00	0.00	0.00
16,800.0	90.00	181.85	7,100.0	-10,034.6	-567.8	10,050.7	0.00	0.00	0.00
16,900.0	90.00	181.85	7,100.0	-10,134.6	-571.0	10,150.7	0.00	0.00	0.00
16,912.3	90.00	181.85	7,100.0	-10,146.9	-571.4	10,163.0	0.00	0.00	0.00

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									
Section Line	0.00	0.00	7,100.0	-5,129.6	-410.0	1,451,833.39	2,748,360.89	40° 34' 12.554 N	106° 24' 20.906 W
- plan hits target center									
- Point									
Castle 1-17H20	0.00	0.00	7,100.0	-10,146.9	-571.4	1,446,816.01	2,748,199.53	40° 33' 22.960 N	106° 24' 22.332 W
- plan hits target center									
- Point									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,434.4	5,433.0	Shannon		0.00	
6,851.0	6,803.0	Niobrara		0.00	

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 1-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Castle 0780 1-17H20	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)	
500	500	0	0	Start Build 2.00
673	673	-4	-3	Start 655.4 hold at 673.0 MD
1328	1327	-36	-27	Start Drop -2.00
1501	1500	-40	-30	Start 3999.3 hold at 1501.4 MD
5501	5499	-40	-30	Start Build 2.00
6265	6255	-63	-129	Start 277.5 hold at 6265.4 MD
6543	6522	-80	-202	Start DLS 10.00 TFO -51.90
7040	6922	-314	-333	Start 150.0 hold at 7039.7 MD
7190	6998	-439	-366	Start DLS 10.00 TFO -52.30
7623	7100	-849	-410	Start 9355.7 hold at 7623.2 MD
16,979				TD at 16978.9

Checked By: _____ Approved By: _____ Date: _____