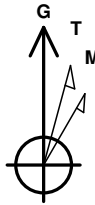
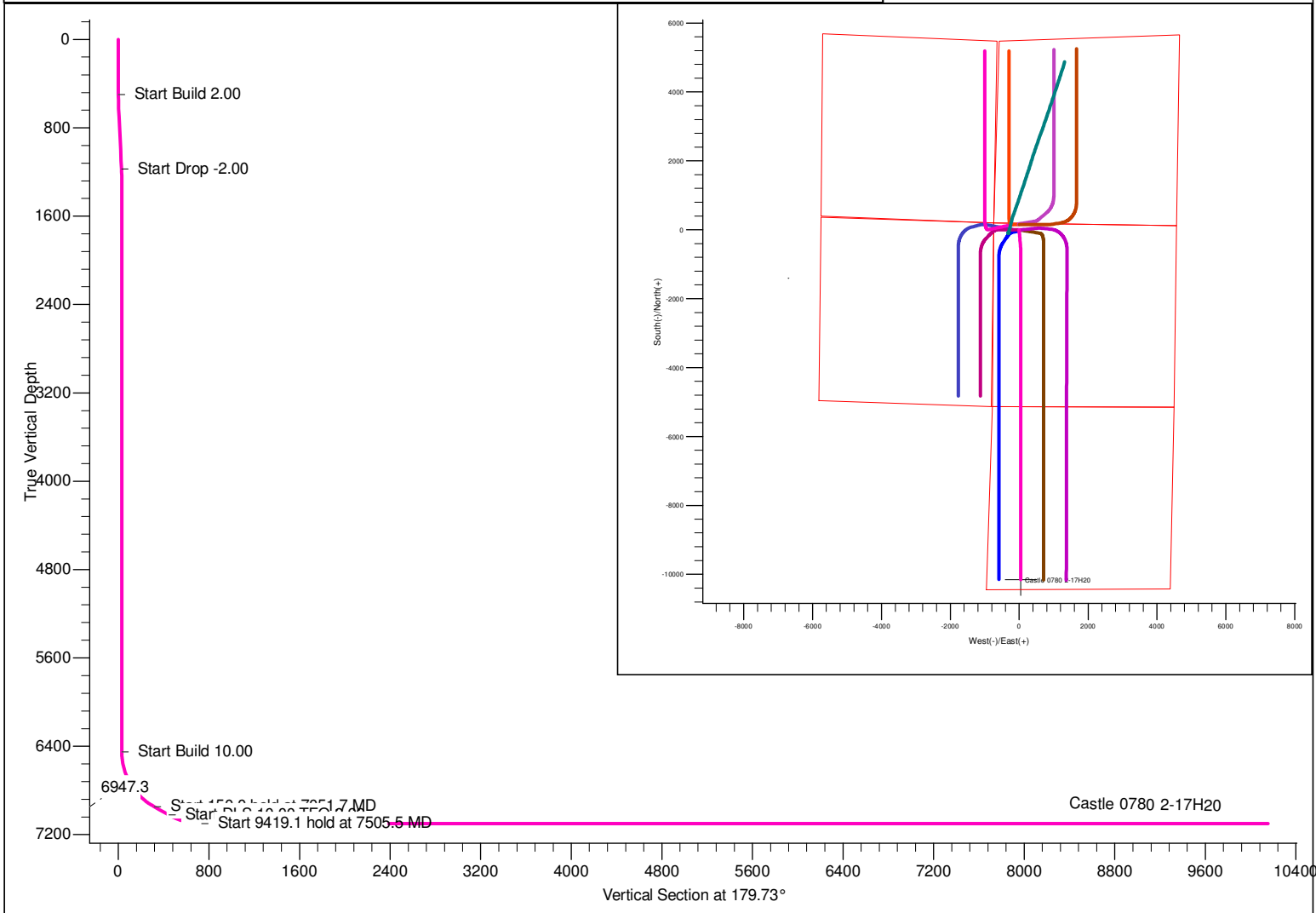


PROJECT DETAILS: North Park Basin								Azimuths to Grid North True North: 0.58° Magnetic North: 10.48°
Geodetic System: US State Plane 1983 Datum: North American Datum 1983 Ellipsoid: GRS 1980 Zone: Colorado Northern Zone  System Datum: Mean Sea Level								Magnetic Field Strength: 53188.9snT Dip Angle: 66.97° Date: 12/31/2009 Model: IGRF200510
FORMATION TOP DETAILS								CASING DETAILS
No formation data is available								No casing data is available
DESIGN DETAILS: Design #1								Project: North Park Basin Site: T7N-R80W-S17 Well: Castle 0780 2-17H20 Wellbore: Wellbore #1 Design: Design #1
0' Vertical Section coordinates								
Type	Target	Azimuth	Origin	Type	N/S	E/W	From	TVD
Target	Castle	2797.420	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	627.8	2.56	180.00	627.7	-2.8	0.0	2.00	180.00	2.8		
4	1172.9	2.56	180.00	1172.3	-27.2	0.0	0.00	0.00	27.2		
5	1300.6	0.00	0.00	1300.0	-30.0	0.0	2.00	180.00	30.0		
6	6451.7	0.00	360.00	6451.1	-30.0	0.0	0.00	360.00	30.0		
7	7051.7	60.00	175.00	6947.3	-315.4	25.0	10.00	175.00	315.5		
8	7201.7	60.00	175.00	7022.3	-444.8	36.3	0.00	0.00	445.0		
9	7505.5	90.00	180.00	7100.0	-734.5	48.0	10.00	9.92	734.7	Castle 2-17H20	
10	16924.5	90.00	180.00	7100.0	-10153.6	48.5	0.00	0.00	10153.7	Castle 2-17H20	

# **SandRidge Energy**

**North Park Basin**

**T7N-R80W-S17**

**Castle 0780 2-17H20**

**Wellbore #1**

**Plan: Design #1**

## **Standard Survey Report**

**14 December, 2015**

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Castle 0780 2-17H20
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S17	<b>MD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Well:</b>	Castle 0780 2-17H20	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	EDMProd

<b>Project</b>	North Park Basin		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	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 2-17H20					
Well Position	+N/-S	0.0 usft	Northing:	1,456,962.66 usft	Latitude:	40° 35' 3.280 N
	+E/-W	0.0 usft	Easting:	2,748,790.84 usft	Longitude:	106° 24' 16.013 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,156.0 usft

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

<b>Design</b>	Design #1				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0	
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	179.73	

<b>Survey Tool Program</b>	<b>Date</b>	12/11/2015			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
0.0	16,924.1	Design #1 (Wellbore #1)	Sperry MWD	Fixed:v2:standard declination	

<b>Planned Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
25.0	0.00	0.00	25.0	0.0	0.0	0.0	0.00	0.00	0.00	
50.0	0.00	0.00	50.0	0.0	0.0	0.0	0.00	0.00	0.00	
75.0	0.00	0.00	75.0	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	
125.0	0.00	0.00	125.0	0.0	0.0	0.0	0.00	0.00	0.00	
150.0	0.00	0.00	150.0	0.0	0.0	0.0	0.00	0.00	0.00	
175.0	0.00	0.00	175.0	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	
225.0	0.00	0.00	225.0	0.0	0.0	0.0	0.00	0.00	0.00	

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Castle 0780 2-17H20
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S17	<b>MD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Well:</b>	Castle 0780 2-17H20	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	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)
250.0	0.00	0.00	250.0	0.0	0.0	0.0	0.00	0.00	0.00
275.0	0.00	0.00	275.0	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
325.0	0.00	0.00	325.0	0.0	0.0	0.0	0.00	0.00	0.00
350.0	0.00	0.00	350.0	0.0	0.0	0.0	0.00	0.00	0.00
375.0	0.00	0.00	375.0	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
425.0	0.00	0.00	425.0	0.0	0.0	0.0	0.00	0.00	0.00
450.0	0.00	0.00	450.0	0.0	0.0	0.0	0.00	0.00	0.00
475.0	0.00	0.00	475.0	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									
525.0	0.50	180.00	525.0	-0.1	0.0	0.1	2.00	2.00	0.00
550.0	1.00	180.00	550.0	-0.4	0.0	0.4	2.00	2.00	0.00
575.0	1.50	180.00	575.0	-1.0	0.0	1.0	2.00	2.00	0.00
600.0	2.00	180.00	600.0	-1.7	0.0	1.7	2.00	2.00	0.00
625.0	2.50	180.00	625.0	-2.7	0.0	2.7	2.00	2.00	0.00
627.8	2.56	180.00	627.7	-2.8	0.0	2.8	2.00	2.00	0.00
Start 545.1 hold at 627.8 MD									
650.0	2.56	180.00	649.9	-3.8	0.0	3.8	0.00	0.00	0.00
675.0	2.56	180.00	674.9	-5.0	0.0	5.0	0.00	0.00	0.00
700.0	2.56	180.00	699.9	-6.1	0.0	6.1	0.00	0.00	0.00
725.0	2.56	180.00	724.9	-7.2	0.0	7.2	0.00	0.00	0.00
750.0	2.56	180.00	749.8	-8.3	0.0	8.3	0.00	0.00	0.00
775.0	2.56	180.00	774.8	-9.4	0.0	9.4	0.00	0.00	0.00
800.0	2.56	180.00	799.8	-10.5	0.0	10.5	0.00	0.00	0.00
825.0	2.56	180.00	824.8	-11.6	0.0	11.6	0.00	0.00	0.00
850.0	2.56	180.00	849.7	-12.8	0.0	12.8	0.00	0.00	0.00
875.0	2.56	180.00	874.7	-13.9	0.0	13.9	0.00	0.00	0.00
900.0	2.56	180.00	899.7	-15.0	0.0	15.0	0.00	0.00	0.00
925.0	2.56	180.00	924.7	-16.1	0.0	16.1	0.00	0.00	0.00
950.0	2.56	180.00	949.6	-17.2	0.0	17.2	0.00	0.00	0.00
975.0	2.56	180.00	974.6	-18.3	0.0	18.3	0.00	0.00	0.00
1,000.0	2.56	180.00	999.6	-19.4	0.0	19.4	0.00	0.00	0.00
1,025.0	2.56	180.00	1,024.6	-20.6	0.0	20.6	0.00	0.00	0.00
1,050.0	2.56	180.00	1,049.5	-21.7	0.0	21.7	0.00	0.00	0.00
1,075.0	2.56	180.00	1,074.5	-22.8	0.0	22.8	0.00	0.00	0.00
1,100.0	2.56	180.00	1,099.5	-23.9	0.0	23.9	0.00	0.00	0.00
1,125.0	2.56	180.00	1,124.5	-25.0	0.0	25.0	0.00	0.00	0.00
1,150.0	2.56	180.00	1,149.4	-26.1	0.0	26.1	0.00	0.00	0.00
1,172.9	2.56	180.00	1,172.3	-27.2	0.0	27.2	0.00	0.00	0.00
Start Drop -2.00									
1,175.0	2.51	180.00	1,174.4	-27.2	0.0	27.2	2.00	-2.00	0.00
1,200.0	2.01	180.00	1,199.4	-28.2	0.0	28.2	2.00	-2.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Castle 0780 2-17H20
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S17	<b>MD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Well:</b>	Castle 0780 2-17H20	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	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)
1,225.0	1.51	180.00	1,224.4	-29.0	0.0	29.0	2.00	-2.00	0.00
1,250.0	1.01	180.00	1,249.4	-29.6	0.0	29.6	2.00	-2.00	0.00
1,275.0	0.51	180.00	1,274.4	-29.9	0.0	29.9	2.00	-2.00	0.00
1,300.0	0.01	180.00	1,299.4	-30.0	0.0	30.0	2.00	-2.00	0.00
1,300.6	0.00	0.00	1,300.0	-30.0	0.0	30.0	2.00	-2.00	-28,720.31
<b>Start 5151.1 hold at 1300.6 MD</b>									
1,325.0	0.00	0.00	1,324.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,350.0	0.00	0.00	1,349.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,375.0	0.00	0.00	1,374.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,400.0	0.00	360.00	1,399.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,425.0	0.00	360.00	1,424.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,450.0	0.00	360.00	1,449.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,475.0	0.00	360.00	1,474.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,500.0	0.00	360.00	1,499.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,525.0	0.00	360.00	1,524.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,550.0	0.00	360.00	1,549.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,575.0	0.00	360.00	1,574.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,600.0	0.00	360.00	1,599.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,625.0	0.00	360.00	1,624.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,650.0	0.00	360.00	1,649.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,675.0	0.00	360.00	1,674.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,700.0	0.00	360.00	1,699.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,725.0	0.00	360.00	1,724.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,750.0	0.00	360.00	1,749.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,775.0	0.00	360.00	1,774.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,800.0	0.00	360.00	1,799.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,825.0	0.00	360.00	1,824.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,850.0	0.00	360.00	1,849.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,875.0	0.00	360.00	1,874.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,900.0	0.00	360.00	1,899.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,925.0	0.00	360.00	1,924.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,950.0	0.00	360.00	1,949.4	-30.0	0.0	30.0	0.00	0.00	0.00
1,975.0	0.00	360.00	1,974.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,000.0	0.00	360.00	1,999.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,025.0	0.00	360.00	2,024.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,050.0	0.00	360.00	2,049.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,075.0	0.00	360.00	2,074.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,100.0	0.00	360.00	2,099.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,125.0	0.00	360.00	2,124.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,150.0	0.00	360.00	2,149.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,175.0	0.00	360.00	2,174.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,200.0	0.00	360.00	2,199.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,225.0	0.00	360.00	2,224.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,250.0	0.00	360.00	2,249.4	-30.0	0.0	30.0	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Castle 0780 2-17H20
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S17	<b>MD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Well:</b>	Castle 0780 2-17H20	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	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)
2,275.0	0.00	360.00	2,274.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,300.0	0.00	360.00	2,299.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,325.0	0.00	360.00	2,324.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,350.0	0.00	360.00	2,349.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,375.0	0.00	360.00	2,374.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,400.0	0.00	360.00	2,399.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,425.0	0.00	360.00	2,424.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,450.0	0.00	360.00	2,449.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,475.0	0.00	360.00	2,474.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,500.0	0.00	360.00	2,499.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,525.0	0.00	360.00	2,524.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,550.0	0.00	360.00	2,549.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,575.0	0.00	360.00	2,574.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,600.0	0.00	360.00	2,599.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,625.0	0.00	360.00	2,624.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,650.0	0.00	360.00	2,649.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,675.0	0.00	360.00	2,674.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,700.0	0.00	360.00	2,699.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,725.0	0.00	360.00	2,724.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,750.0	0.00	360.00	2,749.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,775.0	0.00	360.00	2,774.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,800.0	0.00	360.00	2,799.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,825.0	0.00	360.00	2,824.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,850.0	0.00	360.00	2,849.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,875.0	0.00	360.00	2,874.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,900.0	0.00	360.00	2,899.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,925.0	0.00	360.00	2,924.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,950.0	0.00	360.00	2,949.4	-30.0	0.0	30.0	0.00	0.00	0.00
2,975.0	0.00	360.00	2,974.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,000.0	0.00	360.00	2,999.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,025.0	0.00	360.00	3,024.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,050.0	0.00	360.00	3,049.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,075.0	0.00	360.00	3,074.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,100.0	0.00	360.00	3,099.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,125.0	0.00	360.00	3,124.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,150.0	0.00	360.00	3,149.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,175.0	0.00	360.00	3,174.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,200.0	0.00	360.00	3,199.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,225.0	0.00	360.00	3,224.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,250.0	0.00	360.00	3,249.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,275.0	0.00	360.00	3,274.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,300.0	0.00	360.00	3,299.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,325.0	0.00	360.00	3,324.4	-30.0	0.0	30.0	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Castle 0780 2-17H20
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S17	<b>MD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Well:</b>	Castle 0780 2-17H20	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	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)
3,350.0	0.00	360.00	3,349.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,375.0	0.00	360.00	3,374.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,400.0	0.00	360.00	3,399.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,425.0	0.00	360.00	3,424.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,450.0	0.00	360.00	3,449.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,475.0	0.00	360.00	3,474.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,500.0	0.00	360.00	3,499.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,525.0	0.00	360.00	3,524.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,550.0	0.00	360.00	3,549.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,575.0	0.00	360.00	3,574.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,600.0	0.00	360.00	3,599.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,625.0	0.00	360.00	3,624.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,650.0	0.00	360.00	3,649.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,675.0	0.00	360.00	3,674.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,700.0	0.00	360.00	3,699.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,725.0	0.00	360.00	3,724.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,750.0	0.00	360.00	3,749.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,775.0	0.00	360.00	3,774.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,800.0	0.00	360.00	3,799.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,825.0	0.00	360.00	3,824.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,850.0	0.00	360.00	3,849.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,875.0	0.00	360.00	3,874.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,900.0	0.00	360.00	3,899.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,925.0	0.00	360.00	3,924.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,950.0	0.00	360.00	3,949.4	-30.0	0.0	30.0	0.00	0.00	0.00
3,975.0	0.00	360.00	3,974.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,000.0	0.00	360.00	3,999.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,025.0	0.00	360.00	4,024.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,050.0	0.00	360.00	4,049.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,075.0	0.00	360.00	4,074.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,100.0	0.00	360.00	4,099.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,125.0	0.00	360.00	4,124.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,150.0	0.00	360.00	4,149.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,175.0	0.00	360.00	4,174.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,200.0	0.00	360.00	4,199.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,225.0	0.00	360.00	4,224.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,250.0	0.00	360.00	4,249.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,275.0	0.00	360.00	4,274.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,300.0	0.00	360.00	4,299.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,325.0	0.00	360.00	4,324.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,350.0	0.00	360.00	4,349.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,375.0	0.00	360.00	4,374.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,400.0	0.00	360.00	4,399.4	-30.0	0.0	30.0	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Castle 0780 2-17H20
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S17	<b>MD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Well:</b>	Castle 0780 2-17H20	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	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)
4,425.0	0.00	360.00	4,424.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,450.0	0.00	360.00	4,449.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,475.0	0.00	360.00	4,474.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,500.0	0.00	360.00	4,499.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,525.0	0.00	360.00	4,524.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,550.0	0.00	360.00	4,549.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,575.0	0.00	360.00	4,574.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,600.0	0.00	360.00	4,599.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,625.0	0.00	360.00	4,624.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,650.0	0.00	360.00	4,649.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,675.0	0.00	360.00	4,674.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,700.0	0.00	360.00	4,699.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,725.0	0.00	360.00	4,724.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,750.0	0.00	360.00	4,749.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,775.0	0.00	360.00	4,774.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,800.0	0.00	360.00	4,799.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,825.0	0.00	360.00	4,824.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,850.0	0.00	360.00	4,849.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,875.0	0.00	360.00	4,874.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,900.0	0.00	360.00	4,899.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,925.0	0.00	360.00	4,924.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,950.0	0.00	360.00	4,949.4	-30.0	0.0	30.0	0.00	0.00	0.00
4,975.0	0.00	360.00	4,974.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,000.0	0.00	360.00	4,999.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,025.0	0.00	360.00	5,024.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,050.0	0.00	360.00	5,049.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,075.0	0.00	360.00	5,074.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,100.0	0.00	360.00	5,099.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,125.0	0.00	360.00	5,124.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,150.0	0.00	360.00	5,149.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,175.0	0.00	360.00	5,174.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,200.0	0.00	360.00	5,199.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,225.0	0.00	360.00	5,224.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,250.0	0.00	360.00	5,249.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,275.0	0.00	360.00	5,274.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,300.0	0.00	360.00	5,299.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,325.0	0.00	360.00	5,324.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,350.0	0.00	360.00	5,349.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,375.0	0.00	360.00	5,374.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,400.0	0.00	360.00	5,399.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,425.0	0.00	360.00	5,424.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,450.0	0.00	360.00	5,449.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,475.0	0.00	360.00	5,474.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,500.0	0.00	360.00	5,499.4	-30.0	0.0	30.0	0.00	0.00	0.00



# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Castle 0780 2-17H20
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S17	<b>MD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Well:</b>	Castle 0780 2-17H20	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	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)
5,525.0	0.00	360.00	5,524.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,550.0	0.00	360.00	5,549.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,575.0	0.00	360.00	5,574.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,600.0	0.00	360.00	5,599.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,625.0	0.00	360.00	5,624.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,650.0	0.00	360.00	5,649.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,675.0	0.00	360.00	5,674.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,700.0	0.00	360.00	5,699.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,725.0	0.00	360.00	5,724.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,750.0	0.00	360.00	5,749.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,775.0	0.00	360.00	5,774.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,800.0	0.00	360.00	5,799.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,825.0	0.00	360.00	5,824.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,850.0	0.00	360.00	5,849.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,875.0	0.00	360.00	5,874.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,900.0	0.00	360.00	5,899.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,925.0	0.00	360.00	5,924.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,950.0	0.00	360.00	5,949.4	-30.0	0.0	30.0	0.00	0.00	0.00
5,975.0	0.00	360.00	5,974.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,000.0	0.00	360.00	5,999.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,025.0	0.00	360.00	6,024.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,050.0	0.00	360.00	6,049.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,075.0	0.00	360.00	6,074.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,100.0	0.00	360.00	6,099.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,125.0	0.00	360.00	6,124.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,150.0	0.00	360.00	6,149.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,175.0	0.00	360.00	6,174.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,200.0	0.00	360.00	6,199.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,225.0	0.00	360.00	6,224.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,250.0	0.00	360.00	6,249.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,275.0	0.00	360.00	6,274.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,300.0	0.00	360.00	6,299.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,325.0	0.00	360.00	6,324.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,350.0	0.00	360.00	6,349.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,375.0	0.00	360.00	6,374.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,400.0	0.00	360.00	6,399.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,425.0	0.00	360.00	6,424.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,450.0	0.00	360.00	6,449.4	-30.0	0.0	30.0	0.00	0.00	0.00
6,451.7	0.00	360.00	6,451.1	-30.0	0.0	30.0	0.00	0.00	0.00
Start Build 10.00									
6,475.0	2.33	175.00	6,474.4	-30.5	0.0	30.5	10.00	10.00	0.00
6,500.0	4.83	175.00	6,499.3	-32.0	0.2	32.0	10.00	10.00	0.00
6,525.0	7.33	175.00	6,524.2	-34.7	0.4	34.7	10.00	10.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Castle 0780 2-17H20
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S17	<b>MD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Well:</b>	Castle 0780 2-17H20	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	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)
6,550.0	9.83	175.00	6,548.9	-38.4	0.7	38.4	10.00	10.00	0.00
6,575.0	12.33	175.00	6,573.4	-43.2	1.2	43.2	10.00	10.00	0.00
6,600.0	14.83	175.00	6,597.7	-49.0	1.7	49.0	10.00	10.00	0.00
6,625.0	17.33	175.00	6,621.7	-55.9	2.3	55.9	10.00	10.00	0.00
6,650.0	19.83	175.00	6,645.4	-63.8	3.0	63.9	10.00	10.00	0.00
6,675.0	22.33	175.00	6,668.8	-72.8	3.7	72.8	10.00	10.00	0.00
6,700.0	24.83	175.00	6,691.7	-82.8	4.6	82.8	10.00	10.00	0.00
6,725.0	27.33	175.00	6,714.1	-93.7	5.6	93.7	10.00	10.00	0.00
6,750.0	29.83	175.00	6,736.1	-105.6	6.6	105.7	10.00	10.00	0.00
6,775.0	32.33	175.00	6,757.5	-118.5	7.7	118.5	10.00	10.00	0.00
6,800.0	34.83	175.00	6,778.3	-132.3	8.9	132.3	10.00	10.00	0.00
6,825.0	37.33	175.00	6,798.5	-146.9	10.2	147.0	10.00	10.00	0.00
6,850.0	39.83	175.00	6,818.1	-162.4	11.6	162.5	10.00	10.00	0.00
6,875.0	42.33	175.00	6,836.9	-178.8	13.0	178.9	10.00	10.00	0.00
6,900.0	44.83	175.00	6,855.0	-196.0	14.5	196.0	10.00	10.00	0.00
6,925.0	47.33	175.00	6,872.4	-213.9	16.1	214.0	10.00	10.00	0.00
6,950.0	49.83	175.00	6,888.9	-232.6	17.7	232.7	10.00	10.00	0.00
6,975.0	52.33	175.00	6,904.6	-252.0	19.4	252.1	10.00	10.00	0.00
7,000.0	54.83	175.00	6,919.4	-272.0	21.2	272.1	10.00	10.00	0.00
7,025.0	57.33	175.00	6,933.4	-292.7	23.0	292.8	10.00	10.00	0.00
7,050.0	59.83	175.00	6,946.4	-313.9	24.8	314.0	10.00	10.00	0.00
7,051.7	60.00	175.00	6,947.3	-315.4	25.0	315.5	10.00	10.00	0.00
Start 150.0 hold at 7051.7 MD									
7,075.0	60.00	175.00	6,958.9	-335.5	26.7	335.6	0.00	0.00	0.00
7,100.0	60.00	175.00	6,971.4	-357.1	28.6	357.2	0.00	0.00	0.00
7,125.0	60.00	175.00	6,983.9	-378.6	30.5	378.8	0.00	0.00	0.00
7,150.0	60.00	175.00	6,996.4	-400.2	32.4	400.3	0.00	0.00	0.00
7,175.0	60.00	175.00	7,008.9	-421.8	34.3	421.9	0.00	0.00	0.00
7,200.0	60.00	175.00	7,021.4	-443.3	36.2	443.5	0.00	0.00	0.00
7,201.7	60.00	175.00	7,022.3	-444.8	36.3	445.0	0.00	0.00	0.00
Start DLS 10.00 TFO 9.92									
7,225.0	62.30	175.45	7,033.5	-465.1	38.0	465.3	10.00	9.85	1.95
7,250.0	64.76	175.92	7,044.7	-487.4	39.7	487.6	10.00	9.86	1.86
7,275.0	67.23	176.37	7,054.8	-510.2	41.2	510.4	10.00	9.87	1.79
7,300.0	69.70	176.80	7,064.0	-533.4	42.6	533.6	10.00	9.87	1.72
7,325.0	72.16	177.21	7,072.2	-557.0	43.8	557.2	10.00	9.87	1.67
7,350.0	74.63	177.62	7,079.3	-581.0	44.9	581.2	10.00	9.88	1.62
7,375.0	77.10	178.02	7,085.4	-605.2	45.8	605.4	10.00	9.88	1.59
7,400.0	79.57	178.41	7,090.5	-629.7	46.6	629.9	10.00	9.88	1.56
7,425.0	82.05	178.79	7,094.5	-654.3	47.2	654.6	10.00	9.89	1.53
7,450.0	84.52	179.17	7,097.4	-679.2	47.6	679.4	10.00	9.89	1.51
7,475.0	86.99	179.54	7,099.2	-704.1	47.9	704.3	10.00	9.89	1.50
7,500.0	89.46	179.92	7,100.0	-729.1	48.0	729.3	10.00	9.89	1.49
7,505.5	90.00	180.00	7,100.0	-734.5	48.0	734.7	10.00	9.89	1.49

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Castle 0780 2-17H20
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S17	<b>MD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Well:</b>	Castle 0780 2-17H20	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	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)
Start 9419.1 hold at 7505.5 MD									
7,525.0	90.00	180.00	7,100.0	-754.1	48.0	754.3	0.00	0.00	0.00
7,550.0	90.00	180.00	7,100.0	-779.1	48.0	779.3	0.00	0.00	0.00
7,575.0	90.00	180.00	7,100.0	-804.1	48.0	804.3	0.00	0.00	0.00
7,600.0	90.00	180.00	7,100.0	-829.1	48.0	829.3	0.00	0.00	0.00
7,625.0	90.00	180.00	7,100.0	-854.1	48.0	854.3	0.00	0.00	0.00
7,650.0	90.00	180.00	7,100.0	-879.1	48.0	879.3	0.00	0.00	0.00
7,675.0	90.00	180.00	7,100.0	-904.1	48.0	904.3	0.00	0.00	0.00
7,700.0	90.00	180.00	7,100.0	-929.1	48.0	929.3	0.00	0.00	0.00
7,725.0	90.00	180.00	7,100.0	-954.1	48.0	954.3	0.00	0.00	0.00
7,750.0	90.00	180.00	7,100.0	-979.1	48.1	979.3	0.00	0.00	0.00
7,775.0	90.00	180.00	7,100.0	-1,004.1	48.1	1,004.3	0.00	0.00	0.00
7,800.0	90.00	180.00	7,100.0	-1,029.1	48.1	1,029.3	0.00	0.00	0.00
7,825.0	90.00	180.00	7,100.0	-1,054.1	48.1	1,054.3	0.00	0.00	0.00
7,850.0	90.00	180.00	7,100.0	-1,079.1	48.1	1,079.3	0.00	0.00	0.00
7,875.0	90.00	180.00	7,100.0	-1,104.1	48.1	1,104.3	0.00	0.00	0.00
7,900.0	90.00	180.00	7,100.0	-1,129.1	48.1	1,129.3	0.00	0.00	0.00
7,925.0	90.00	180.00	7,100.0	-1,154.1	48.1	1,154.3	0.00	0.00	0.00
7,950.0	90.00	180.00	7,100.0	-1,179.1	48.1	1,179.3	0.00	0.00	0.00
7,975.0	90.00	180.00	7,100.0	-1,204.1	48.1	1,204.3	0.00	0.00	0.00
8,000.0	90.00	180.00	7,100.0	-1,229.1	48.1	1,229.3	0.00	0.00	0.00
8,025.0	90.00	180.00	7,100.0	-1,254.1	48.1	1,254.3	0.00	0.00	0.00
8,050.0	90.00	180.00	7,100.0	-1,279.1	48.1	1,279.3	0.00	0.00	0.00
8,075.0	90.00	180.00	7,100.0	-1,304.1	48.1	1,304.3	0.00	0.00	0.00
8,100.0	90.00	180.00	7,100.0	-1,329.1	48.1	1,329.3	0.00	0.00	0.00
8,125.0	90.00	180.00	7,100.0	-1,354.1	48.1	1,354.3	0.00	0.00	0.00
8,150.0	90.00	180.00	7,100.0	-1,379.1	48.1	1,379.3	0.00	0.00	0.00
8,175.0	90.00	180.00	7,100.0	-1,404.1	48.1	1,404.3	0.00	0.00	0.00
8,200.0	90.00	180.00	7,100.0	-1,429.1	48.1	1,429.3	0.00	0.00	0.00
8,225.0	90.00	180.00	7,100.0	-1,454.1	48.1	1,454.3	0.00	0.00	0.00
8,250.0	90.00	180.00	7,100.0	-1,479.1	48.1	1,479.3	0.00	0.00	0.00
8,275.0	90.00	180.00	7,100.0	-1,504.1	48.1	1,504.3	0.00	0.00	0.00
8,300.0	90.00	180.00	7,100.0	-1,529.1	48.1	1,529.3	0.00	0.00	0.00
8,325.0	90.00	180.00	7,100.0	-1,554.1	48.1	1,554.3	0.00	0.00	0.00
8,350.0	90.00	180.00	7,100.0	-1,579.1	48.1	1,579.3	0.00	0.00	0.00
8,375.0	90.00	180.00	7,100.0	-1,604.1	48.1	1,604.3	0.00	0.00	0.00
8,400.0	90.00	180.00	7,100.0	-1,629.1	48.1	1,629.3	0.00	0.00	0.00
8,425.0	90.00	180.00	7,100.0	-1,654.1	48.1	1,654.3	0.00	0.00	0.00
8,450.0	90.00	180.00	7,100.0	-1,679.1	48.1	1,679.3	0.00	0.00	0.00
8,475.0	90.00	180.00	7,100.0	-1,704.1	48.1	1,704.3	0.00	0.00	0.00
8,500.0	90.00	180.00	7,100.0	-1,729.1	48.1	1,729.3	0.00	0.00	0.00
8,525.0	90.00	180.00	7,100.0	-1,754.1	48.1	1,754.3	0.00	0.00	0.00
8,550.0	90.00	180.00	7,100.0	-1,779.1	48.1	1,779.3	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Castle 0780 2-17H20
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S17	<b>MD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Well:</b>	Castle 0780 2-17H20	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	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)
8,575.0	90.00	180.00	7,100.0	-1,804.1	48.1	1,804.3	0.00	0.00	0.00
8,600.0	90.00	180.00	7,100.0	-1,829.1	48.1	1,829.3	0.00	0.00	0.00
8,625.0	90.00	180.00	7,100.0	-1,854.1	48.1	1,854.3	0.00	0.00	0.00
8,650.0	90.00	180.00	7,100.0	-1,879.1	48.1	1,879.3	0.00	0.00	0.00
8,675.0	90.00	180.00	7,100.0	-1,904.1	48.1	1,904.3	0.00	0.00	0.00
8,700.0	90.00	180.00	7,100.0	-1,929.1	48.1	1,929.3	0.00	0.00	0.00
8,725.0	90.00	180.00	7,100.0	-1,954.1	48.1	1,954.3	0.00	0.00	0.00
8,750.0	90.00	180.00	7,100.0	-1,979.1	48.1	1,979.3	0.00	0.00	0.00
8,775.0	90.00	180.00	7,100.0	-2,004.1	48.1	2,004.3	0.00	0.00	0.00
8,800.0	90.00	180.00	7,100.0	-2,029.1	48.1	2,029.3	0.00	0.00	0.00
8,825.0	90.00	180.00	7,100.0	-2,054.1	48.1	2,054.3	0.00	0.00	0.00
8,850.0	90.00	180.00	7,100.0	-2,079.1	48.1	2,079.3	0.00	0.00	0.00
8,875.0	90.00	180.00	7,100.0	-2,104.1	48.1	2,104.3	0.00	0.00	0.00
8,900.0	90.00	180.00	7,100.0	-2,129.1	48.1	2,129.3	0.00	0.00	0.00
8,925.0	90.00	180.00	7,100.0	-2,154.1	48.1	2,154.3	0.00	0.00	0.00
8,950.0	90.00	180.00	7,100.0	-2,179.1	48.1	2,179.3	0.00	0.00	0.00
8,975.0	90.00	180.00	7,100.0	-2,204.1	48.1	2,204.3	0.00	0.00	0.00
9,000.0	90.00	180.00	7,100.0	-2,229.1	48.1	2,229.3	0.00	0.00	0.00
9,025.0	90.00	180.00	7,100.0	-2,254.1	48.1	2,254.3	0.00	0.00	0.00
9,050.0	90.00	180.00	7,100.0	-2,279.1	48.1	2,279.3	0.00	0.00	0.00
9,075.0	90.00	180.00	7,100.0	-2,304.1	48.1	2,304.3	0.00	0.00	0.00
9,100.0	90.00	180.00	7,100.0	-2,329.1	48.1	2,329.3	0.00	0.00	0.00
9,125.0	90.00	180.00	7,100.0	-2,354.1	48.1	2,354.3	0.00	0.00	0.00
9,150.0	90.00	180.00	7,100.0	-2,379.1	48.1	2,379.3	0.00	0.00	0.00
9,175.0	90.00	180.00	7,100.0	-2,404.1	48.1	2,404.3	0.00	0.00	0.00
9,200.0	90.00	180.00	7,100.0	-2,429.1	48.1	2,429.3	0.00	0.00	0.00
9,225.0	90.00	180.00	7,100.0	-2,454.1	48.1	2,454.3	0.00	0.00	0.00
9,250.0	90.00	180.00	7,100.0	-2,479.1	48.1	2,479.3	0.00	0.00	0.00
9,275.0	90.00	180.00	7,100.0	-2,504.1	48.1	2,504.3	0.00	0.00	0.00
9,300.0	90.00	180.00	7,100.0	-2,529.1	48.1	2,529.3	0.00	0.00	0.00
9,325.0	90.00	180.00	7,100.0	-2,554.1	48.1	2,554.3	0.00	0.00	0.00
9,350.0	90.00	180.00	7,100.0	-2,579.1	48.1	2,579.3	0.00	0.00	0.00
9,375.0	90.00	180.00	7,100.0	-2,604.1	48.1	2,604.3	0.00	0.00	0.00
9,400.0	90.00	180.00	7,100.0	-2,629.1	48.1	2,629.3	0.00	0.00	0.00
9,425.0	90.00	180.00	7,100.0	-2,654.1	48.1	2,654.3	0.00	0.00	0.00
9,450.0	90.00	180.00	7,100.0	-2,679.1	48.1	2,679.3	0.00	0.00	0.00
9,475.0	90.00	180.00	7,100.0	-2,704.1	48.1	2,704.3	0.00	0.00	0.00
9,500.0	90.00	180.00	7,100.0	-2,729.1	48.1	2,729.3	0.00	0.00	0.00
9,525.0	90.00	180.00	7,100.0	-2,754.1	48.1	2,754.3	0.00	0.00	0.00
9,550.0	90.00	180.00	7,100.0	-2,779.1	48.1	2,779.3	0.00	0.00	0.00
9,575.0	90.00	180.00	7,100.0	-2,804.1	48.1	2,804.3	0.00	0.00	0.00
9,600.0	90.00	180.00	7,100.0	-2,829.1	48.1	2,829.3	0.00	0.00	0.00
9,625.0	90.00	180.00	7,100.0	-2,854.1	48.1	2,854.3	0.00	0.00	0.00
9,650.0	90.00	180.00	7,100.0	-2,879.1	48.1	2,879.3	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Castle 0780 2-17H20
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S17	<b>MD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Well:</b>	Castle 0780 2-17H20	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	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)
9,675.0	90.00	180.00	7,100.0	-2,904.1	48.2	2,904.3	0.00	0.00	0.00
9,700.0	90.00	180.00	7,100.0	-2,929.1	48.2	2,929.3	0.00	0.00	0.00
9,725.0	90.00	180.00	7,100.0	-2,954.1	48.2	2,954.3	0.00	0.00	0.00
9,750.0	90.00	180.00	7,100.0	-2,979.1	48.2	2,979.3	0.00	0.00	0.00
9,775.0	90.00	180.00	7,100.0	-3,004.1	48.2	3,004.3	0.00	0.00	0.00
9,800.0	90.00	180.00	7,100.0	-3,029.1	48.2	3,029.3	0.00	0.00	0.00
9,825.0	90.00	180.00	7,100.0	-3,054.1	48.2	3,054.3	0.00	0.00	0.00
9,850.0	90.00	180.00	7,100.0	-3,079.1	48.2	3,079.3	0.00	0.00	0.00
9,875.0	90.00	180.00	7,100.0	-3,104.1	48.2	3,104.3	0.00	0.00	0.00
9,900.0	90.00	180.00	7,100.0	-3,129.1	48.2	3,129.3	0.00	0.00	0.00
9,925.0	90.00	180.00	7,100.0	-3,154.1	48.2	3,154.3	0.00	0.00	0.00
9,950.0	90.00	180.00	7,100.0	-3,179.1	48.2	3,179.3	0.00	0.00	0.00
9,975.0	90.00	180.00	7,100.0	-3,204.1	48.2	3,204.3	0.00	0.00	0.00
10,000.0	90.00	180.00	7,100.0	-3,229.1	48.2	3,229.3	0.00	0.00	0.00
10,025.0	90.00	180.00	7,100.0	-3,254.1	48.2	3,254.3	0.00	0.00	0.00
10,050.0	90.00	180.00	7,100.0	-3,279.1	48.2	3,279.3	0.00	0.00	0.00
10,075.0	90.00	180.00	7,100.0	-3,304.1	48.2	3,304.3	0.00	0.00	0.00
10,100.0	90.00	180.00	7,100.0	-3,329.1	48.2	3,329.3	0.00	0.00	0.00
10,125.0	90.00	180.00	7,100.0	-3,354.1	48.2	3,354.3	0.00	0.00	0.00
10,150.0	90.00	180.00	7,100.0	-3,379.1	48.2	3,379.3	0.00	0.00	0.00
10,175.0	90.00	180.00	7,100.0	-3,404.1	48.2	3,404.3	0.00	0.00	0.00
10,200.0	90.00	180.00	7,100.0	-3,429.1	48.2	3,429.3	0.00	0.00	0.00
10,225.0	90.00	180.00	7,100.0	-3,454.1	48.2	3,454.3	0.00	0.00	0.00
10,250.0	90.00	180.00	7,100.0	-3,479.1	48.2	3,479.3	0.00	0.00	0.00
10,275.0	90.00	180.00	7,100.0	-3,504.1	48.2	3,504.3	0.00	0.00	0.00
10,300.0	90.00	180.00	7,100.0	-3,529.1	48.2	3,529.3	0.00	0.00	0.00
10,325.0	90.00	180.00	7,100.0	-3,554.1	48.2	3,554.3	0.00	0.00	0.00
10,350.0	90.00	180.00	7,100.0	-3,579.1	48.2	3,579.3	0.00	0.00	0.00
10,375.0	90.00	180.00	7,100.0	-3,604.1	48.2	3,604.3	0.00	0.00	0.00
10,400.0	90.00	180.00	7,100.0	-3,629.1	48.2	3,629.3	0.00	0.00	0.00
10,425.0	90.00	180.00	7,100.0	-3,654.1	48.2	3,654.3	0.00	0.00	0.00
10,450.0	90.00	180.00	7,100.0	-3,679.1	48.2	3,679.3	0.00	0.00	0.00
10,475.0	90.00	180.00	7,100.0	-3,704.1	48.2	3,704.3	0.00	0.00	0.00
10,500.0	90.00	180.00	7,100.0	-3,729.1	48.2	3,729.3	0.00	0.00	0.00
10,525.0	90.00	180.00	7,100.0	-3,754.1	48.2	3,754.3	0.00	0.00	0.00
10,550.0	90.00	180.00	7,100.0	-3,779.1	48.2	3,779.3	0.00	0.00	0.00
10,575.0	90.00	180.00	7,100.0	-3,804.1	48.2	3,804.3	0.00	0.00	0.00
10,600.0	90.00	180.00	7,100.0	-3,829.1	48.2	3,829.3	0.00	0.00	0.00
10,625.0	90.00	180.00	7,100.0	-3,854.1	48.2	3,854.3	0.00	0.00	0.00
10,650.0	90.00	180.00	7,100.0	-3,879.1	48.2	3,879.3	0.00	0.00	0.00
10,675.0	90.00	180.00	7,100.0	-3,904.1	48.2	3,904.3	0.00	0.00	0.00
10,700.0	90.00	180.00	7,100.0	-3,929.1	48.2	3,929.3	0.00	0.00	0.00
10,725.0	90.00	180.00	7,100.0	-3,954.1	48.2	3,954.3	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Castle 0780 2-17H20
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S17	<b>MD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Well:</b>	Castle 0780 2-17H20	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	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)
10,750.0	90.00	180.00	7,100.0	-3,979.1	48.2	3,979.3	0.00	0.00	0.00
10,775.0	90.00	180.00	7,100.0	-4,004.1	48.2	4,004.3	0.00	0.00	0.00
10,800.0	90.00	180.00	7,100.0	-4,029.1	48.2	4,029.3	0.00	0.00	0.00
10,825.0	90.00	180.00	7,100.0	-4,054.1	48.2	4,054.3	0.00	0.00	0.00
10,850.0	90.00	180.00	7,100.0	-4,079.1	48.2	4,079.3	0.00	0.00	0.00
10,875.0	90.00	180.00	7,100.0	-4,104.1	48.2	4,104.3	0.00	0.00	0.00
10,900.0	90.00	180.00	7,100.0	-4,129.1	48.2	4,129.3	0.00	0.00	0.00
10,925.0	90.00	180.00	7,100.0	-4,154.1	48.2	4,154.3	0.00	0.00	0.00
10,950.0	90.00	180.00	7,100.0	-4,179.1	48.2	4,179.3	0.00	0.00	0.00
10,975.0	90.00	180.00	7,100.0	-4,204.1	48.2	4,204.3	0.00	0.00	0.00
11,000.0	90.00	180.00	7,100.0	-4,229.1	48.2	4,229.2	0.00	0.00	0.00
11,025.0	90.00	180.00	7,100.0	-4,254.1	48.2	4,254.2	0.00	0.00	0.00
11,050.0	90.00	180.00	7,100.0	-4,279.1	48.2	4,279.2	0.00	0.00	0.00
11,075.0	90.00	180.00	7,100.0	-4,304.1	48.2	4,304.2	0.00	0.00	0.00
11,100.0	90.00	180.00	7,100.0	-4,329.1	48.2	4,329.2	0.00	0.00	0.00
11,125.0	90.00	180.00	7,100.0	-4,354.1	48.2	4,354.2	0.00	0.00	0.00
11,150.0	90.00	180.00	7,100.0	-4,379.1	48.2	4,379.2	0.00	0.00	0.00
11,175.0	90.00	180.00	7,100.0	-4,404.1	48.2	4,404.2	0.00	0.00	0.00
11,200.0	90.00	180.00	7,100.0	-4,429.1	48.2	4,429.2	0.00	0.00	0.00
11,225.0	90.00	180.00	7,100.0	-4,454.1	48.2	4,454.2	0.00	0.00	0.00
11,250.0	90.00	180.00	7,100.0	-4,479.1	48.2	4,479.2	0.00	0.00	0.00
11,275.0	90.00	180.00	7,100.0	-4,504.1	48.2	4,504.2	0.00	0.00	0.00
11,300.0	90.00	180.00	7,100.0	-4,529.1	48.2	4,529.2	0.00	0.00	0.00
11,325.0	90.00	180.00	7,100.0	-4,554.1	48.2	4,554.2	0.00	0.00	0.00
11,350.0	90.00	180.00	7,100.0	-4,579.1	48.2	4,579.2	0.00	0.00	0.00
11,375.0	90.00	180.00	7,100.0	-4,604.1	48.2	4,604.2	0.00	0.00	0.00
11,400.0	90.00	180.00	7,100.0	-4,629.1	48.2	4,629.2	0.00	0.00	0.00
11,425.0	90.00	180.00	7,100.0	-4,654.1	48.2	4,654.2	0.00	0.00	0.00
11,450.0	90.00	180.00	7,100.0	-4,679.1	48.2	4,679.2	0.00	0.00	0.00
11,475.0	90.00	180.00	7,100.0	-4,704.1	48.2	4,704.2	0.00	0.00	0.00
11,500.0	90.00	180.00	7,100.0	-4,729.1	48.2	4,729.2	0.00	0.00	0.00
11,525.0	90.00	180.00	7,100.0	-4,754.1	48.2	4,754.2	0.00	0.00	0.00
11,550.0	90.00	180.00	7,100.0	-4,779.1	48.2	4,779.2	0.00	0.00	0.00
11,575.0	90.00	180.00	7,100.0	-4,804.1	48.3	4,804.2	0.00	0.00	0.00
11,600.0	90.00	180.00	7,100.0	-4,829.1	48.3	4,829.2	0.00	0.00	0.00
11,625.0	90.00	180.00	7,100.0	-4,854.1	48.3	4,854.2	0.00	0.00	0.00
11,650.0	90.00	180.00	7,100.0	-4,879.1	48.3	4,879.2	0.00	0.00	0.00
11,675.0	90.00	180.00	7,100.0	-4,904.1	48.3	4,904.2	0.00	0.00	0.00
11,700.0	90.00	180.00	7,100.0	-4,929.1	48.3	4,929.2	0.00	0.00	0.00
11,725.0	90.00	180.00	7,100.0	-4,954.1	48.3	4,954.2	0.00	0.00	0.00
11,750.0	90.00	180.00	7,100.0	-4,979.1	48.3	4,979.2	0.00	0.00	0.00
11,775.0	90.00	180.00	7,100.0	-5,004.1	48.3	5,004.2	0.00	0.00	0.00
11,800.0	90.00	180.00	7,100.0	-5,029.1	48.3	5,029.2	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Castle 0780 2-17H20
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S17	<b>MD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Well:</b>	Castle 0780 2-17H20	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	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)
11,825.0	90.00	180.00	7,100.0	-5,054.1	48.3	5,054.2	0.00	0.00	0.00
11,850.0	90.00	180.00	7,100.0	-5,079.1	48.3	5,079.2	0.00	0.00	0.00
11,875.0	90.00	180.00	7,100.0	-5,104.1	48.3	5,104.2	0.00	0.00	0.00
11,900.0	90.00	180.00	7,100.0	-5,129.1	48.3	5,129.2	0.00	0.00	0.00
11,925.0	90.00	180.00	7,100.0	-5,154.1	48.3	5,154.2	0.00	0.00	0.00
11,950.0	90.00	180.00	7,100.0	-5,179.1	48.3	5,179.2	0.00	0.00	0.00
11,975.0	90.00	180.00	7,100.0	-5,204.1	48.3	5,204.2	0.00	0.00	0.00
12,000.0	90.00	180.00	7,100.0	-5,229.1	48.3	5,229.2	0.00	0.00	0.00
12,025.0	90.00	180.00	7,100.0	-5,254.1	48.3	5,254.2	0.00	0.00	0.00
12,050.0	90.00	180.00	7,100.0	-5,279.1	48.3	5,279.2	0.00	0.00	0.00
12,075.0	90.00	180.00	7,100.0	-5,304.1	48.3	5,304.2	0.00	0.00	0.00
12,100.0	90.00	180.00	7,100.0	-5,329.1	48.3	5,329.2	0.00	0.00	0.00
12,125.0	90.00	180.00	7,100.0	-5,354.1	48.3	5,354.2	0.00	0.00	0.00
12,150.0	90.00	180.00	7,100.0	-5,379.1	48.3	5,379.2	0.00	0.00	0.00
12,175.0	90.00	180.00	7,100.0	-5,404.1	48.3	5,404.2	0.00	0.00	0.00
12,200.0	90.00	180.00	7,100.0	-5,429.1	48.3	5,429.2	0.00	0.00	0.00
12,225.0	90.00	180.00	7,100.0	-5,454.1	48.3	5,454.2	0.00	0.00	0.00
12,250.0	90.00	180.00	7,100.0	-5,479.1	48.3	5,479.2	0.00	0.00	0.00
12,275.0	90.00	180.00	7,100.0	-5,504.1	48.3	5,504.2	0.00	0.00	0.00
12,300.0	90.00	180.00	7,100.0	-5,529.1	48.3	5,529.2	0.00	0.00	0.00
12,325.0	90.00	180.00	7,100.0	-5,554.1	48.3	5,554.2	0.00	0.00	0.00
12,350.0	90.00	180.00	7,100.0	-5,579.1	48.3	5,579.2	0.00	0.00	0.00
12,375.0	90.00	180.00	7,100.0	-5,604.1	48.3	5,604.2	0.00	0.00	0.00
12,400.0	90.00	180.00	7,100.0	-5,629.1	48.3	5,629.2	0.00	0.00	0.00
12,425.0	90.00	180.00	7,100.0	-5,654.1	48.3	5,654.2	0.00	0.00	0.00
12,450.0	90.00	180.00	7,100.0	-5,679.1	48.3	5,679.2	0.00	0.00	0.00
12,475.0	90.00	180.00	7,100.0	-5,704.1	48.3	5,704.2	0.00	0.00	0.00
12,500.0	90.00	180.00	7,100.0	-5,729.1	48.3	5,729.2	0.00	0.00	0.00
12,525.0	90.00	180.00	7,100.0	-5,754.1	48.3	5,754.2	0.00	0.00	0.00
12,550.0	90.00	180.00	7,100.0	-5,779.1	48.3	5,779.2	0.00	0.00	0.00
12,575.0	90.00	180.00	7,100.0	-5,804.1	48.3	5,804.2	0.00	0.00	0.00
12,600.0	90.00	180.00	7,100.0	-5,829.1	48.3	5,829.2	0.00	0.00	0.00
12,625.0	90.00	180.00	7,100.0	-5,854.1	48.3	5,854.2	0.00	0.00	0.00
12,650.0	90.00	180.00	7,100.0	-5,879.1	48.3	5,879.2	0.00	0.00	0.00
12,675.0	90.00	180.00	7,100.0	-5,904.1	48.3	5,904.2	0.00	0.00	0.00
12,700.0	90.00	180.00	7,100.0	-5,929.1	48.3	5,929.2	0.00	0.00	0.00
12,725.0	90.00	180.00	7,100.0	-5,954.1	48.3	5,954.2	0.00	0.00	0.00
12,750.0	90.00	180.00	7,100.0	-5,979.1	48.3	5,979.2	0.00	0.00	0.00
12,775.0	90.00	180.00	7,100.0	-6,004.1	48.3	6,004.2	0.00	0.00	0.00
12,800.0	90.00	180.00	7,100.0	-6,029.1	48.3	6,029.2	0.00	0.00	0.00
12,825.0	90.00	180.00	7,100.0	-6,054.1	48.3	6,054.2	0.00	0.00	0.00
12,850.0	90.00	180.00	7,100.0	-6,079.1	48.3	6,079.2	0.00	0.00	0.00
12,875.0	90.00	180.00	7,100.0	-6,104.1	48.3	6,104.2	0.00	0.00	0.00
12,900.0	90.00	180.00	7,100.0	-6,129.1	48.3	6,129.2	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Castle 0780 2-17H20
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S17	<b>MD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Well:</b>	Castle 0780 2-17H20	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	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)
12,925.0	90.00	180.00	7,100.0	-6,154.1	48.3	6,154.2	0.00	0.00	0.00
12,950.0	90.00	180.00	7,100.0	-6,179.1	48.3	6,179.2	0.00	0.00	0.00
12,975.0	90.00	180.00	7,100.0	-6,204.1	48.3	6,204.2	0.00	0.00	0.00
13,000.0	90.00	180.00	7,100.0	-6,229.1	48.3	6,229.2	0.00	0.00	0.00
13,025.0	90.00	180.00	7,100.0	-6,254.1	48.3	6,254.2	0.00	0.00	0.00
13,050.0	90.00	180.00	7,100.0	-6,279.1	48.3	6,279.2	0.00	0.00	0.00
13,075.0	90.00	180.00	7,100.0	-6,304.1	48.3	6,304.2	0.00	0.00	0.00
13,100.0	90.00	180.00	7,100.0	-6,329.1	48.3	6,329.2	0.00	0.00	0.00
13,125.0	90.00	180.00	7,100.0	-6,354.1	48.3	6,354.2	0.00	0.00	0.00
13,150.0	90.00	180.00	7,100.0	-6,379.1	48.3	6,379.2	0.00	0.00	0.00
13,175.0	90.00	180.00	7,100.0	-6,404.1	48.3	6,404.2	0.00	0.00	0.00
13,200.0	90.00	180.00	7,100.0	-6,429.1	48.3	6,429.2	0.00	0.00	0.00
13,225.0	90.00	180.00	7,100.0	-6,454.1	48.3	6,454.2	0.00	0.00	0.00
13,250.0	90.00	180.00	7,100.0	-6,479.1	48.3	6,479.2	0.00	0.00	0.00
13,275.0	90.00	180.00	7,100.0	-6,504.1	48.3	6,504.2	0.00	0.00	0.00
13,300.0	90.00	180.00	7,100.0	-6,529.1	48.3	6,529.2	0.00	0.00	0.00
13,325.0	90.00	180.00	7,100.0	-6,554.1	48.3	6,554.2	0.00	0.00	0.00
13,350.0	90.00	180.00	7,100.0	-6,579.1	48.3	6,579.2	0.00	0.00	0.00
13,375.0	90.00	180.00	7,100.0	-6,604.1	48.3	6,604.2	0.00	0.00	0.00
13,400.0	90.00	180.00	7,100.0	-6,629.1	48.3	6,629.2	0.00	0.00	0.00
13,425.0	90.00	180.00	7,100.0	-6,654.1	48.3	6,654.2	0.00	0.00	0.00
13,450.0	90.00	180.00	7,100.0	-6,679.1	48.3	6,679.2	0.00	0.00	0.00
13,475.0	90.00	180.00	7,100.0	-6,704.1	48.3	6,704.2	0.00	0.00	0.00
13,500.0	90.00	180.00	7,100.0	-6,729.1	48.4	6,729.2	0.00	0.00	0.00
13,525.0	90.00	180.00	7,100.0	-6,754.1	48.4	6,754.2	0.00	0.00	0.00
13,550.0	90.00	180.00	7,100.0	-6,779.1	48.4	6,779.2	0.00	0.00	0.00
13,575.0	90.00	180.00	7,100.0	-6,804.1	48.4	6,804.2	0.00	0.00	0.00
13,600.0	90.00	180.00	7,100.0	-6,829.1	48.4	6,829.2	0.00	0.00	0.00
13,625.0	90.00	180.00	7,100.0	-6,854.1	48.4	6,854.2	0.00	0.00	0.00
13,650.0	90.00	180.00	7,100.0	-6,879.1	48.4	6,879.2	0.00	0.00	0.00
13,675.0	90.00	180.00	7,100.0	-6,904.1	48.4	6,904.2	0.00	0.00	0.00
13,700.0	90.00	180.00	7,100.0	-6,929.1	48.4	6,929.2	0.00	0.00	0.00
13,725.0	90.00	180.00	7,100.0	-6,954.1	48.4	6,954.2	0.00	0.00	0.00
13,750.0	90.00	180.00	7,100.0	-6,979.1	48.4	6,979.2	0.00	0.00	0.00
13,775.0	90.00	180.00	7,100.0	-7,004.1	48.4	7,004.2	0.00	0.00	0.00
13,800.0	90.00	180.00	7,100.0	-7,029.1	48.4	7,029.2	0.00	0.00	0.00
13,825.0	90.00	180.00	7,100.0	-7,054.1	48.4	7,054.2	0.00	0.00	0.00
13,850.0	90.00	180.00	7,100.0	-7,079.1	48.4	7,079.2	0.00	0.00	0.00
13,875.0	90.00	180.00	7,100.0	-7,104.1	48.4	7,104.2	0.00	0.00	0.00
13,900.0	90.00	180.00	7,100.0	-7,129.1	48.4	7,129.2	0.00	0.00	0.00
13,925.0	90.00	180.00	7,100.0	-7,154.1	48.4	7,154.2	0.00	0.00	0.00
13,950.0	90.00	180.00	7,100.0	-7,179.1	48.4	7,179.2	0.00	0.00	0.00
13,975.0	90.00	180.00	7,100.0	-7,204.1	48.4	7,204.2	0.00	0.00	0.00



# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Castle 0780 2-17H20
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S17	<b>MD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Well:</b>	Castle 0780 2-17H20	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	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)
14,000.0	90.00	180.00	7,100.0	-7,229.1	48.4	7,229.2	0.00	0.00	0.00
14,025.0	90.00	180.00	7,100.0	-7,254.1	48.4	7,254.2	0.00	0.00	0.00
14,050.0	90.00	180.00	7,100.0	-7,279.1	48.4	7,279.2	0.00	0.00	0.00
14,075.0	90.00	180.00	7,100.0	-7,304.1	48.4	7,304.2	0.00	0.00	0.00
14,100.0	90.00	180.00	7,100.0	-7,329.1	48.4	7,329.2	0.00	0.00	0.00
14,125.0	90.00	180.00	7,100.0	-7,354.1	48.4	7,354.2	0.00	0.00	0.00
14,150.0	90.00	180.00	7,100.0	-7,379.1	48.4	7,379.2	0.00	0.00	0.00
14,175.0	90.00	180.00	7,100.0	-7,404.1	48.4	7,404.2	0.00	0.00	0.00
14,200.0	90.00	180.00	7,100.0	-7,429.1	48.4	7,429.2	0.00	0.00	0.00
14,225.0	90.00	180.00	7,100.0	-7,454.1	48.4	7,454.2	0.00	0.00	0.00
14,250.0	90.00	180.00	7,100.0	-7,479.1	48.4	7,479.2	0.00	0.00	0.00
14,275.0	90.00	180.00	7,100.0	-7,504.1	48.4	7,504.2	0.00	0.00	0.00
14,300.0	90.00	180.00	7,100.0	-7,529.1	48.4	7,529.2	0.00	0.00	0.00
14,325.0	90.00	180.00	7,100.0	-7,554.1	48.4	7,554.2	0.00	0.00	0.00
14,350.0	90.00	180.00	7,100.0	-7,579.1	48.4	7,579.2	0.00	0.00	0.00
14,375.0	90.00	180.00	7,100.0	-7,604.1	48.4	7,604.2	0.00	0.00	0.00
14,400.0	90.00	180.00	7,100.0	-7,629.1	48.4	7,629.2	0.00	0.00	0.00
14,425.0	90.00	180.00	7,100.0	-7,654.1	48.4	7,654.2	0.00	0.00	0.00
14,450.0	90.00	180.00	7,100.0	-7,679.1	48.4	7,679.2	0.00	0.00	0.00
14,475.0	90.00	180.00	7,100.0	-7,704.1	48.4	7,704.2	0.00	0.00	0.00
14,500.0	90.00	180.00	7,100.0	-7,729.1	48.4	7,729.2	0.00	0.00	0.00
14,525.0	90.00	180.00	7,100.0	-7,754.1	48.4	7,754.2	0.00	0.00	0.00
14,550.0	90.00	180.00	7,100.0	-7,779.1	48.4	7,779.2	0.00	0.00	0.00
14,575.0	90.00	180.00	7,100.0	-7,804.1	48.4	7,804.2	0.00	0.00	0.00
14,600.0	90.00	180.00	7,100.0	-7,829.1	48.4	7,829.2	0.00	0.00	0.00
14,625.0	90.00	180.00	7,100.0	-7,854.1	48.4	7,854.2	0.00	0.00	0.00
14,650.0	90.00	180.00	7,100.0	-7,879.1	48.4	7,879.2	0.00	0.00	0.00
14,675.0	90.00	180.00	7,100.0	-7,904.1	48.4	7,904.2	0.00	0.00	0.00
14,700.0	90.00	180.00	7,100.0	-7,929.1	48.4	7,929.2	0.00	0.00	0.00
14,725.0	90.00	180.00	7,100.0	-7,954.1	48.4	7,954.2	0.00	0.00	0.00
14,750.0	90.00	180.00	7,100.0	-7,979.1	48.4	7,979.2	0.00	0.00	0.00
14,775.0	90.00	180.00	7,100.0	-8,004.1	48.4	8,004.2	0.00	0.00	0.00
14,800.0	90.00	180.00	7,100.0	-8,029.1	48.4	8,029.2	0.00	0.00	0.00
14,825.0	90.00	180.00	7,100.0	-8,054.1	48.4	8,054.2	0.00	0.00	0.00
14,850.0	90.00	180.00	7,100.0	-8,079.1	48.4	8,079.2	0.00	0.00	0.00
14,875.0	90.00	180.00	7,100.0	-8,104.1	48.4	8,104.2	0.00	0.00	0.00
14,900.0	90.00	180.00	7,100.0	-8,129.1	48.4	8,129.2	0.00	0.00	0.00
14,925.0	90.00	180.00	7,100.0	-8,154.1	48.4	8,154.2	0.00	0.00	0.00
14,950.0	90.00	180.00	7,100.0	-8,179.1	48.4	8,179.2	0.00	0.00	0.00
14,975.0	90.00	180.00	7,100.0	-8,204.1	48.4	8,204.2	0.00	0.00	0.00
15,000.0	90.00	180.00	7,100.0	-8,229.1	48.4	8,229.2	0.00	0.00	0.00
15,025.0	90.00	180.00	7,100.0	-8,254.1	48.4	8,254.2	0.00	0.00	0.00
15,050.0	90.00	180.00	7,100.0	-8,279.1	48.4	8,279.2	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Castle 0780 2-17H20
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S17	<b>MD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Well:</b>	Castle 0780 2-17H20	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	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)
15,075.0	90.00	180.00	7,100.0	-8,304.1	48.4	8,304.2	0.00	0.00	0.00
15,100.0	90.00	180.00	7,100.0	-8,329.1	48.4	8,329.2	0.00	0.00	0.00
15,125.0	90.00	180.00	7,100.0	-8,354.1	48.4	8,354.2	0.00	0.00	0.00
15,150.0	90.00	180.00	7,100.0	-8,379.1	48.4	8,379.2	0.00	0.00	0.00
15,175.0	90.00	180.00	7,100.0	-8,404.1	48.4	8,404.2	0.00	0.00	0.00
15,200.0	90.00	180.00	7,100.0	-8,429.1	48.4	8,429.2	0.00	0.00	0.00
15,225.0	90.00	180.00	7,100.0	-8,454.1	48.4	8,454.2	0.00	0.00	0.00
15,250.0	90.00	180.00	7,100.0	-8,479.1	48.4	8,479.2	0.00	0.00	0.00
15,275.0	90.00	180.00	7,100.0	-8,504.1	48.4	8,504.2	0.00	0.00	0.00
15,300.0	90.00	180.00	7,100.0	-8,529.1	48.4	8,529.2	0.00	0.00	0.00
15,325.0	90.00	180.00	7,100.0	-8,554.1	48.4	8,554.2	0.00	0.00	0.00
15,350.0	90.00	180.00	7,100.0	-8,579.1	48.4	8,579.2	0.00	0.00	0.00
15,375.0	90.00	180.00	7,100.0	-8,604.1	48.4	8,604.2	0.00	0.00	0.00
15,400.0	90.00	180.00	7,100.0	-8,629.1	48.5	8,629.2	0.00	0.00	0.00
15,425.0	90.00	180.00	7,100.0	-8,654.1	48.5	8,654.2	0.00	0.00	0.00
15,450.0	90.00	180.00	7,100.0	-8,679.1	48.5	8,679.2	0.00	0.00	0.00
15,475.0	90.00	180.00	7,100.0	-8,704.1	48.5	8,704.2	0.00	0.00	0.00
15,500.0	90.00	180.00	7,100.0	-8,729.1	48.5	8,729.2	0.00	0.00	0.00
15,525.0	90.00	180.00	7,100.0	-8,754.1	48.5	8,754.2	0.00	0.00	0.00
15,550.0	90.00	180.00	7,100.0	-8,779.1	48.5	8,779.2	0.00	0.00	0.00
15,575.0	90.00	180.00	7,100.0	-8,804.1	48.5	8,804.2	0.00	0.00	0.00
15,600.0	90.00	180.00	7,100.0	-8,829.1	48.5	8,829.2	0.00	0.00	0.00
15,625.0	90.00	180.00	7,100.0	-8,854.1	48.5	8,854.2	0.00	0.00	0.00
15,650.0	90.00	180.00	7,100.0	-8,879.1	48.5	8,879.2	0.00	0.00	0.00
15,675.0	90.00	180.00	7,100.0	-8,904.1	48.5	8,904.2	0.00	0.00	0.00
15,700.0	90.00	180.00	7,100.0	-8,929.1	48.5	8,929.2	0.00	0.00	0.00
15,725.0	90.00	180.00	7,100.0	-8,954.1	48.5	8,954.2	0.00	0.00	0.00
15,750.0	90.00	180.00	7,100.0	-8,979.1	48.5	8,979.2	0.00	0.00	0.00
15,775.0	90.00	180.00	7,100.0	-9,004.1	48.5	9,004.2	0.00	0.00	0.00
15,800.0	90.00	180.00	7,100.0	-9,029.1	48.5	9,029.2	0.00	0.00	0.00
15,825.0	90.00	180.00	7,100.0	-9,054.1	48.5	9,054.2	0.00	0.00	0.00
15,850.0	90.00	180.00	7,100.0	-9,079.1	48.5	9,079.2	0.00	0.00	0.00
15,875.0	90.00	180.00	7,100.0	-9,104.1	48.5	9,104.2	0.00	0.00	0.00
15,900.0	90.00	180.00	7,100.0	-9,129.1	48.5	9,129.2	0.00	0.00	0.00
15,925.0	90.00	180.00	7,100.0	-9,154.1	48.5	9,154.2	0.00	0.00	0.00
15,950.0	90.00	180.00	7,100.0	-9,179.1	48.5	9,179.2	0.00	0.00	0.00
15,975.0	90.00	180.00	7,100.0	-9,204.1	48.5	9,204.2	0.00	0.00	0.00
16,000.0	90.00	180.00	7,100.0	-9,229.1	48.5	9,229.2	0.00	0.00	0.00
16,025.0	90.00	180.00	7,100.0	-9,254.1	48.5	9,254.2	0.00	0.00	0.00
16,050.0	90.00	180.00	7,100.0	-9,279.1	48.5	9,279.2	0.00	0.00	0.00
16,075.0	90.00	180.00	7,100.0	-9,304.1	48.5	9,304.2	0.00	0.00	0.00
16,100.0	90.00	180.00	7,100.0	-9,329.1	48.5	9,329.2	0.00	0.00	0.00
16,125.0	90.00	180.00	7,100.0	-9,354.1	48.5	9,354.2	0.00	0.00	0.00
16,150.0	90.00	180.00	7,100.0	-9,379.1	48.5	9,379.2	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Castle 0780 2-17H20
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S17	<b>MD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Well:</b>	Castle 0780 2-17H20	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	EDMPProd

### 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)
16,175.0	90.00	180.00	7,100.0	-9,404.1	48.5	9,404.2	0.00	0.00	0.00
16,200.0	90.00	180.00	7,100.0	-9,429.1	48.5	9,429.2	0.00	0.00	0.00
16,225.0	90.00	180.00	7,100.0	-9,454.1	48.5	9,454.2	0.00	0.00	0.00
16,250.0	90.00	180.00	7,100.0	-9,479.1	48.5	9,479.2	0.00	0.00	0.00
16,275.0	90.00	180.00	7,100.0	-9,504.1	48.5	9,504.2	0.00	0.00	0.00
16,300.0	90.00	180.00	7,100.0	-9,529.1	48.5	9,529.2	0.00	0.00	0.00
16,325.0	90.00	180.00	7,100.0	-9,554.1	48.5	9,554.2	0.00	0.00	0.00
16,350.0	90.00	180.00	7,100.0	-9,579.1	48.5	9,579.2	0.00	0.00	0.00
16,375.0	90.00	180.00	7,100.0	-9,604.1	48.5	9,604.2	0.00	0.00	0.00
16,400.0	90.00	180.00	7,100.0	-9,629.1	48.5	9,629.2	0.00	0.00	0.00
16,425.0	90.00	180.00	7,100.0	-9,654.1	48.5	9,654.2	0.00	0.00	0.00
16,450.0	90.00	180.00	7,100.0	-9,679.1	48.5	9,679.2	0.00	0.00	0.00
16,475.0	90.00	180.00	7,100.0	-9,704.1	48.5	9,704.2	0.00	0.00	0.00
16,500.0	90.00	180.00	7,100.0	-9,729.1	48.5	9,729.2	0.00	0.00	0.00
16,525.0	90.00	180.00	7,100.0	-9,754.1	48.5	9,754.2	0.00	0.00	0.00
16,550.0	90.00	180.00	7,100.0	-9,779.1	48.5	9,779.2	0.00	0.00	0.00
16,575.0	90.00	180.00	7,100.0	-9,804.1	48.5	9,804.2	0.00	0.00	0.00
16,600.0	90.00	180.00	7,100.0	-9,829.1	48.5	9,829.2	0.00	0.00	0.00
16,625.0	90.00	180.00	7,100.0	-9,854.1	48.5	9,854.2	0.00	0.00	0.00
16,650.0	90.00	180.00	7,100.0	-9,879.1	48.5	9,879.2	0.00	0.00	0.00
16,675.0	90.00	180.00	7,100.0	-9,904.1	48.5	9,904.2	0.00	0.00	0.00
16,700.0	90.00	180.00	7,100.0	-9,929.1	48.5	9,929.2	0.00	0.00	0.00
16,725.0	90.00	180.00	7,100.0	-9,954.1	48.5	9,954.2	0.00	0.00	0.00
16,750.0	90.00	180.00	7,100.0	-9,979.1	48.5	9,979.2	0.00	0.00	0.00
16,775.0	90.00	180.00	7,100.0	-10,004.1	48.5	10,004.2	0.00	0.00	0.00
16,800.0	90.00	180.00	7,100.0	-10,029.1	48.5	10,029.2	0.00	0.00	0.00
16,825.0	90.00	180.00	7,100.0	-10,054.1	48.5	10,054.2	0.00	0.00	0.00
16,850.0	90.00	180.00	7,100.0	-10,079.1	48.5	10,079.2	0.00	0.00	0.00
16,875.0	90.00	180.00	7,100.0	-10,104.1	48.5	10,104.2	0.00	0.00	0.00
16,900.0	90.00	180.00	7,100.0	-10,129.1	48.5	10,129.2	0.00	0.00	0.00
16,924.5	90.00	180.00	7,100.0	-10,153.6	48.5	10,153.7	0.00	0.00	0.00
TD at 16924.5									

### Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Castle 2-17H20 - plan hits target center - Point	0.00	360.00	7,100.0	-10,153.6	48.5	1,446,809.06	2,748,839.37	40° 33' 22.956 N	106° 24' 14.042 W

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Castle 0780 2-17H20
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Site:</b>	T7N-R80W-S17	<b>MD Reference:</b>	WELL @ 8172.0usft (Original Well Elev)
<b>Well:</b>	Castle 0780 2-17H20	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	EDMProd

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
500	500	0	0	Start Build 2.00	
628	628	-3	0	Start 545.1 hold at 627.8 MD	
1173	1172	-27	0	Start Drop -2.00	
1301	1300	-30	0	Start 5151.1 hold at 1300.6 MD	
6452	6451	-30	0	Start Build 10.00	
7052	6947	-315	25	Start 150.0 hold at 7051.7 MD	
7202	7022	-445	36	Start DLS 10.00 TFO 9.92	
7505	7100	-735	48	Start 9419.1 hold at 7505.5 MD	
16,925	7100	-10,154	49	TD at 16924.5	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_