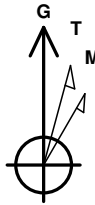
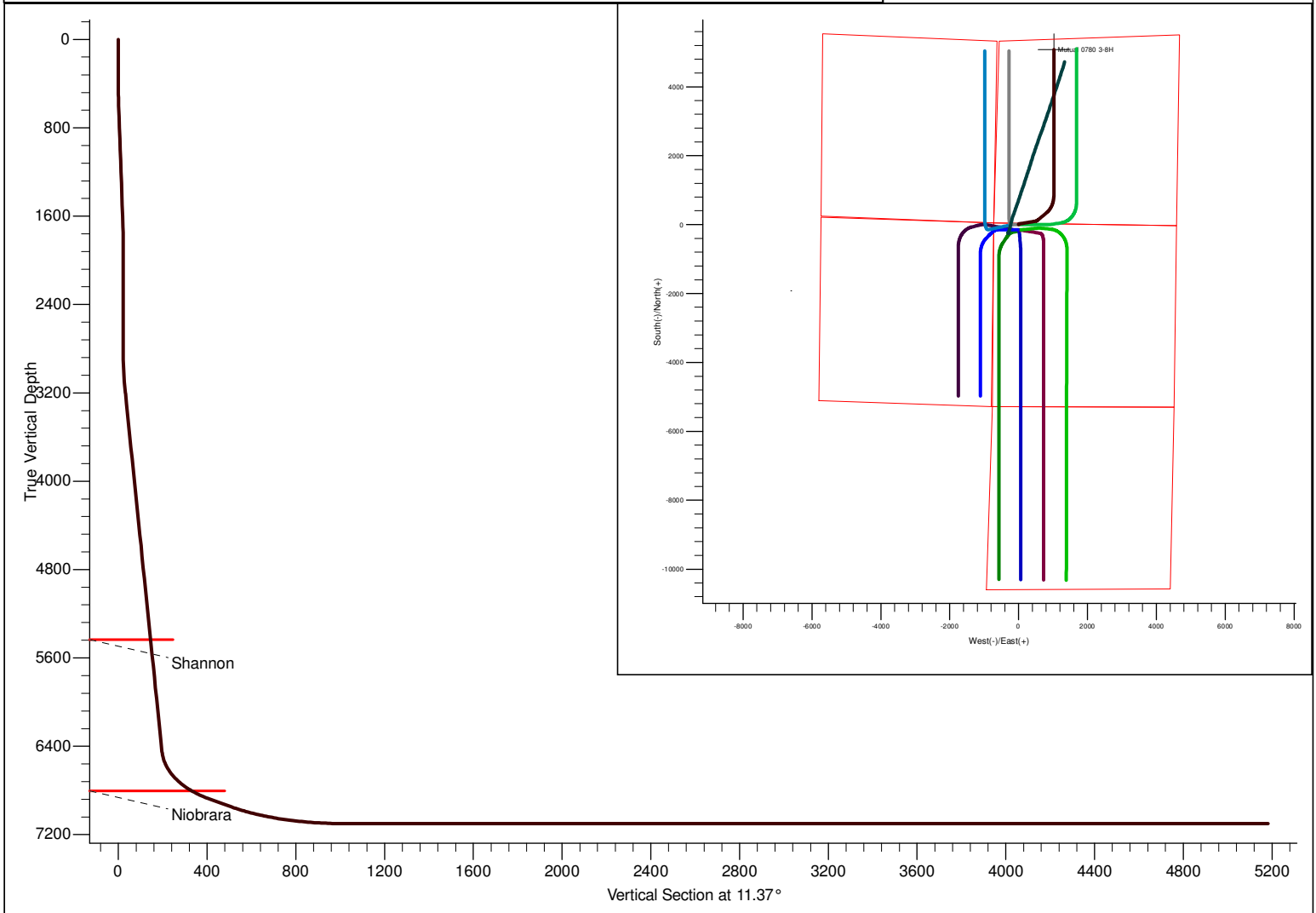


PROJECT DETAILS: North Park Basin								Azimuths to Grid North True North: 0.58° Magnetic North: 10.48°	
Geodetic System: US State Plane 1983 Datum: North American Datum 1983 Ellipsoid: GRS 1980 Zone: Colorado Northern Zone  System Datum: Mean Sea Level								Magnetic Field Strength: 53189.1nT Dip Angle: 66.97° Date: 12/31/2009 Model: IGRF200510	
FORMATION TOP DETAILS								CASING DETAILS	
TVDPathMDPath 5433.0 5457.6 6803.0 6892.2 Formation Shannon Niobrara DipAngleDipDir 0.00 0.00							No casing data is available		
DESIGN DETAILS: Design #1							Project: North Park Basin Site: T7N-R80W-S17 Well: Mutual 0780 3-8H Wellbore: Wellbore #1 Design: Design #1		
0' Vertical Section coordinates									
Type	Target	Azimuth	Origin	Type	N/S	E/W	From	TVD	
TD		11.37	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	551.3	1.03	26.57	551.3	0.4	0.2	2.00	26.57	0.4		
4	1748.9	1.03	26.57	1748.7	19.6	9.8	0.00	0.00	21.1		
5	1800.2	0.00	0.00	1800.0	20.0	10.0	2.00	180.00	21.6		
6	2799.9	0.00	0.00	2799.7	20.0	10.0	0.00	0.00	21.6		
7	3210.2	8.21	80.73	3208.6	24.7	38.9	2.00	80.73	31.9		
8	6483.2	8.21	80.73	6448.1	100.0	500.0	0.00	0.00	196.6		
9	7014.6	60.00	48.90	6874.9	269.7	727.3	10.00	-34.81	407.8		
10	7164.6	60.00	48.90	6949.9	355.1	825.2	0.00	0.00	510.8		
11	7717.5	90.00	0.00	7100.0	826.1	1021.1	10.00	-66.43	1011.2	Mutual 3-8H	
12	11971.9	90.00	0.00	7100.0	5080.4	1021.3	0.00	0.00	5182.1	Mutual 3-8H	

# **SandRidge Energy**

**North Park Basin**

**T7N-R80W-S17**

**Mutual 0780 3-8H**

**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 Mutual 0780 3-8H
<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>	Mutual 0780 3-8H	<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	Mutual 0780 3-8H					
Well Position	+N/-S	0.0 usft	Northing:	1,457,112.95 usft	Latitude:	40° 35' 4.763 N
	+E/-W	0.0 usft	Easting:	2,748,773.26 usft	Longitude:	106° 24' 16.260 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

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	11.37	

<b>Survey Tool Program</b>	<b>Date</b>	12/14/2015			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
0.0	11,971.9	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 Mutual 0780 3-8H
<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>	Mutual 0780 3-8H	<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	26.57	525.0	0.1	0.0	0.1	2.00	2.00	0.00
550.0	1.00	26.57	550.0	0.4	0.2	0.4	2.00	2.00	0.00
551.3	1.03	26.57	551.3	0.4	0.2	0.4	2.00	2.00	0.00
Start 1197.6 hold at 551.3 MD									
575.0	1.03	26.57	575.0	0.8	0.4	0.9	0.00	0.00	0.00
600.0	1.03	26.57	600.0	1.2	0.6	1.3	0.00	0.00	0.00
625.0	1.03	26.57	625.0	1.6	0.8	1.7	0.00	0.00	0.00
650.0	1.03	26.57	650.0	2.0	1.0	2.1	0.00	0.00	0.00
675.0	1.03	26.57	675.0	2.4	1.2	2.6	0.00	0.00	0.00
700.0	1.03	26.57	700.0	2.8	1.4	3.0	0.00	0.00	0.00
725.0	1.03	26.57	725.0	3.2	1.6	3.4	0.00	0.00	0.00
750.0	1.03	26.57	750.0	3.6	1.8	3.9	0.00	0.00	0.00
775.0	1.03	26.57	775.0	4.0	2.0	4.3	0.00	0.00	0.00
800.0	1.03	26.57	800.0	4.4	2.2	4.7	0.00	0.00	0.00
825.0	1.03	26.57	825.0	4.8	2.4	5.2	0.00	0.00	0.00
850.0	1.03	26.57	849.9	5.2	2.6	5.6	0.00	0.00	0.00
875.0	1.03	26.57	874.9	5.6	2.8	6.0	0.00	0.00	0.00
900.0	1.03	26.57	899.9	6.0	3.0	6.5	0.00	0.00	0.00
925.0	1.03	26.57	924.9	6.4	3.2	6.9	0.00	0.00	0.00
950.0	1.03	26.57	949.9	6.8	3.4	7.3	0.00	0.00	0.00
975.0	1.03	26.57	974.9	7.2	3.6	7.8	0.00	0.00	0.00
1,000.0	1.03	26.57	999.9	7.6	3.8	8.2	0.00	0.00	0.00
1,025.0	1.03	26.57	1,024.9	8.0	4.0	8.6	0.00	0.00	0.00
1,050.0	1.03	26.57	1,049.9	8.4	4.2	9.1	0.00	0.00	0.00
1,075.0	1.03	26.57	1,074.9	8.8	4.4	9.5	0.00	0.00	0.00
1,100.0	1.03	26.57	1,099.9	9.2	4.6	9.9	0.00	0.00	0.00
1,125.0	1.03	26.57	1,124.9	9.6	4.8	10.4	0.00	0.00	0.00
1,150.0	1.03	26.57	1,149.9	10.0	5.0	10.8	0.00	0.00	0.00
1,175.0	1.03	26.57	1,174.9	10.4	5.2	11.2	0.00	0.00	0.00
1,200.0	1.03	26.57	1,199.9	10.8	5.4	11.7	0.00	0.00	0.00
1,225.0	1.03	26.57	1,224.9	11.2	5.6	12.1	0.00	0.00	0.00
1,250.0	1.03	26.57	1,249.9	11.6	5.8	12.5	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Mutual 0780 3-8H
<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>	Mutual 0780 3-8H	<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)
1,275.0	1.03	26.57	1,274.9	12.0	6.0	12.9	0.00	0.00	0.00
1,300.0	1.03	26.57	1,299.9	12.4	6.2	13.4	0.00	0.00	0.00
1,325.0	1.03	26.57	1,324.9	12.8	6.4	13.8	0.00	0.00	0.00
1,350.0	1.03	26.57	1,349.9	13.2	6.6	14.2	0.00	0.00	0.00
1,375.0	1.03	26.57	1,374.9	13.6	6.8	14.7	0.00	0.00	0.00
1,400.0	1.03	26.57	1,399.9	14.0	7.0	15.1	0.00	0.00	0.00
1,425.0	1.03	26.57	1,424.9	14.4	7.2	15.5	0.00	0.00	0.00
1,450.0	1.03	26.57	1,449.9	14.8	7.4	16.0	0.00	0.00	0.00
1,475.0	1.03	26.57	1,474.8	15.2	7.6	16.4	0.00	0.00	0.00
1,500.0	1.03	26.57	1,499.8	15.6	7.8	16.8	0.00	0.00	0.00
1,525.0	1.03	26.57	1,524.8	16.0	8.0	17.3	0.00	0.00	0.00
1,550.0	1.03	26.57	1,549.8	16.4	8.2	17.7	0.00	0.00	0.00
1,575.0	1.03	26.57	1,574.8	16.8	8.4	18.1	0.00	0.00	0.00
1,600.0	1.03	26.57	1,599.8	17.2	8.6	18.6	0.00	0.00	0.00
1,625.0	1.03	26.57	1,624.8	17.6	8.8	19.0	0.00	0.00	0.00
1,650.0	1.03	26.57	1,649.8	18.0	9.0	19.4	0.00	0.00	0.00
1,675.0	1.03	26.57	1,674.8	18.4	9.2	19.9	0.00	0.00	0.00
1,700.0	1.03	26.57	1,699.8	18.8	9.4	20.3	0.00	0.00	0.00
1,725.0	1.03	26.57	1,724.8	19.2	9.6	20.7	0.00	0.00	0.00
1,748.9	1.03	26.57	1,748.7	19.6	9.8	21.1	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
1,750.0	1.00	26.57	1,749.8	19.6	9.8	21.2	2.00	-2.00	0.00
1,775.0	0.50	26.57	1,774.8	19.9	10.0	21.5	2.00	-2.00	0.00
1,800.0	0.00	26.57	1,799.8	20.0	10.0	21.6	2.00	-2.00	0.00
1,800.2	0.00	0.00	1,800.0	20.0	10.0	21.6	2.00	-2.00	0.00
<b>Start 999.7 hold at 1800.2 MD</b>									
1,825.0	0.00	0.00	1,824.8	20.0	10.0	21.6	0.00	0.00	0.00
1,850.0	0.00	0.00	1,849.8	20.0	10.0	21.6	0.00	0.00	0.00
1,875.0	0.00	0.00	1,874.8	20.0	10.0	21.6	0.00	0.00	0.00
1,900.0	0.00	0.00	1,899.8	20.0	10.0	21.6	0.00	0.00	0.00
1,925.0	0.00	0.00	1,924.8	20.0	10.0	21.6	0.00	0.00	0.00
1,950.0	0.00	0.00	1,949.8	20.0	10.0	21.6	0.00	0.00	0.00
1,975.0	0.00	0.00	1,974.8	20.0	10.0	21.6	0.00	0.00	0.00
2,000.0	0.00	0.00	1,999.8	20.0	10.0	21.6	0.00	0.00	0.00
2,025.0	0.00	0.00	2,024.8	20.0	10.0	21.6	0.00	0.00	0.00
2,050.0	0.00	0.00	2,049.8	20.0	10.0	21.6	0.00	0.00	0.00
2,075.0	0.00	0.00	2,074.8	20.0	10.0	21.6	0.00	0.00	0.00
2,100.0	0.00	0.00	2,099.8	20.0	10.0	21.6	0.00	0.00	0.00
2,125.0	0.00	0.00	2,124.8	20.0	10.0	21.6	0.00	0.00	0.00
2,150.0	0.00	0.00	2,149.8	20.0	10.0	21.6	0.00	0.00	0.00
2,175.0	0.00	0.00	2,174.8	20.0	10.0	21.6	0.00	0.00	0.00
2,200.0	0.00	0.00	2,199.8	20.0	10.0	21.6	0.00	0.00	0.00
2,225.0	0.00	0.00	2,224.8	20.0	10.0	21.6	0.00	0.00	0.00
2,250.0	0.00	0.00	2,249.8	20.0	10.0	21.6	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Mutual 0780 3-8H
<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>	Mutual 0780 3-8H	<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	0.00	2,274.8	20.0	10.0	21.6	0.00	0.00	0.00
2,300.0	0.00	0.00	2,299.8	20.0	10.0	21.6	0.00	0.00	0.00
2,325.0	0.00	0.00	2,324.8	20.0	10.0	21.6	0.00	0.00	0.00
2,350.0	0.00	0.00	2,349.8	20.0	10.0	21.6	0.00	0.00	0.00
2,375.0	0.00	0.00	2,374.8	20.0	10.0	21.6	0.00	0.00	0.00
2,400.0	0.00	0.00	2,399.8	20.0	10.0	21.6	0.00	0.00	0.00
2,425.0	0.00	0.00	2,424.8	20.0	10.0	21.6	0.00	0.00	0.00
2,450.0	0.00	0.00	2,449.8	20.0	10.0	21.6	0.00	0.00	0.00
2,475.0	0.00	0.00	2,474.8	20.0	10.0	21.6	0.00	0.00	0.00
2,500.0	0.00	0.00	2,499.8	20.0	10.0	21.6	0.00	0.00	0.00
2,525.0	0.00	0.00	2,524.8	20.0	10.0	21.6	0.00	0.00	0.00
2,550.0	0.00	0.00	2,549.8	20.0	10.0	21.6	0.00	0.00	0.00
2,575.0	0.00	0.00	2,574.8	20.0	10.0	21.6	0.00	0.00	0.00
2,600.0	0.00	0.00	2,599.8	20.0	10.0	21.6	0.00	0.00	0.00
2,625.0	0.00	0.00	2,624.8	20.0	10.0	21.6	0.00	0.00	0.00
2,650.0	0.00	0.00	2,649.8	20.0	10.0	21.6	0.00	0.00	0.00
2,675.0	0.00	0.00	2,674.8	20.0	10.0	21.6	0.00	0.00	0.00
2,700.0	0.00	0.00	2,699.8	20.0	10.0	21.6	0.00	0.00	0.00
2,725.0	0.00	0.00	2,724.8	20.0	10.0	21.6	0.00	0.00	0.00
2,750.0	0.00	0.00	2,749.8	20.0	10.0	21.6	0.00	0.00	0.00
2,775.0	0.00	0.00	2,774.8	20.0	10.0	21.6	0.00	0.00	0.00
2,799.9	0.00	0.00	2,799.7	20.0	10.0	21.6	0.00	0.00	0.00
<b>Start Build 2.00</b>									
2,800.0	0.00	80.73	2,799.8	20.0	10.0	21.6	0.00	0.00	0.00
2,825.0	0.50	80.73	2,824.8	20.0	10.1	21.6	2.01	2.01	0.00
2,850.0	1.00	80.73	2,849.8	20.1	10.4	21.7	2.00	2.00	0.00
2,875.0	1.50	80.73	2,874.8	20.2	11.0	21.9	2.00	2.00	0.00
2,900.0	2.00	80.73	2,899.8	20.3	11.7	22.2	2.00	2.00	0.00
2,925.0	2.50	80.73	2,924.8	20.4	12.7	22.5	2.00	2.00	0.00
2,950.0	3.00	80.73	2,949.7	20.6	13.9	23.0	2.00	2.00	0.00
2,975.0	3.50	80.73	2,974.7	20.9	15.3	23.5	2.00	2.00	0.00
3,000.0	4.00	80.73	2,999.6	21.1	16.9	24.0	2.00	2.00	0.00
3,025.0	4.50	80.73	3,024.6	21.4	18.7	24.7	2.00	2.00	0.00
3,050.0	5.00	80.73	3,049.5	21.8	20.8	25.4	2.00	2.00	0.00
3,075.0	5.50	80.73	3,074.4	22.1	23.0	26.2	2.00	2.00	0.00
3,100.0	6.00	80.73	3,099.3	22.5	25.5	27.1	2.00	2.00	0.00
3,125.0	6.50	80.73	3,124.1	23.0	28.2	28.1	2.00	2.00	0.00
3,150.0	7.00	80.73	3,148.9	23.4	31.1	29.1	2.00	2.00	0.00
3,175.0	7.50	80.73	3,173.7	24.0	34.2	30.2	2.00	2.00	0.00
3,200.0	8.00	80.73	3,198.5	24.5	37.5	31.4	2.00	2.00	0.00
3,210.2	8.21	80.73	3,208.6	24.7	38.9	31.9	2.00	2.00	0.00
<b>Start 3273.0 hold at 3210.2 MD</b>									
3,225.0	8.21	80.73	3,223.2	25.1	41.0	32.7	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Mutual 0780 3-8H
<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>	Mutual 0780 3-8H	<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)
3,250.0	8.21	80.73	3,248.0	25.6	44.6	33.9	0.00	0.00	0.00
3,275.0	8.21	80.73	3,272.7	26.2	48.1	35.2	0.00	0.00	0.00
3,300.0	8.21	80.73	3,297.5	26.8	51.6	36.4	0.00	0.00	0.00
3,325.0	8.21	80.73	3,322.2	27.4	55.1	37.7	0.00	0.00	0.00
3,350.0	8.21	80.73	3,347.0	27.9	58.6	39.0	0.00	0.00	0.00
3,375.0	8.21	80.73	3,371.7	28.5	62.2	40.2	0.00	0.00	0.00
3,400.0	8.21	80.73	3,396.5	29.1	65.7	41.5	0.00	0.00	0.00
3,425.0	8.21	80.73	3,421.2	29.7	69.2	42.7	0.00	0.00	0.00
3,450.0	8.21	80.73	3,445.9	30.2	72.7	44.0	0.00	0.00	0.00
3,475.0	8.21	80.73	3,470.7	30.8	76.2	45.2	0.00	0.00	0.00
3,500.0	8.21	80.73	3,495.4	31.4	79.8	46.5	0.00	0.00	0.00
3,525.0	8.21	80.73	3,520.2	32.0	83.3	47.8	0.00	0.00	0.00
3,550.0	8.21	80.73	3,544.9	32.5	86.8	49.0	0.00	0.00	0.00
3,575.0	8.21	80.73	3,569.7	33.1	90.3	50.3	0.00	0.00	0.00
3,600.0	8.21	80.73	3,594.4	33.7	93.9	51.5	0.00	0.00	0.00
3,625.0	8.21	80.73	3,619.2	34.3	97.4	52.8	0.00	0.00	0.00
3,650.0	8.21	80.73	3,643.9	34.8	100.9	54.0	0.00	0.00	0.00
3,675.0	8.21	80.73	3,668.6	35.4	104.4	55.3	0.00	0.00	0.00
3,700.0	8.21	80.73	3,693.4	36.0	107.9	56.6	0.00	0.00	0.00
3,725.0	8.21	80.73	3,718.1	36.6	111.5	57.8	0.00	0.00	0.00
3,750.0	8.21	80.73	3,742.9	37.1	115.0	59.1	0.00	0.00	0.00
3,775.0	8.21	80.73	3,767.6	37.7	118.5	60.3	0.00	0.00	0.00
3,800.0	8.21	80.73	3,792.4	38.3	122.0	61.6	0.00	0.00	0.00
3,825.0	8.21	80.73	3,817.1	38.9	125.6	62.8	0.00	0.00	0.00
3,850.0	8.21	80.73	3,841.9	39.4	129.1	64.1	0.00	0.00	0.00
3,875.0	8.21	80.73	3,866.6	40.0	132.6	65.4	0.00	0.00	0.00
3,900.0	8.21	80.73	3,891.3	40.6	136.1	66.6	0.00	0.00	0.00
3,925.0	8.21	80.73	3,916.1	41.2	139.6	67.9	0.00	0.00	0.00
3,950.0	8.21	80.73	3,940.8	41.7	143.2	69.1	0.00	0.00	0.00
3,975.0	8.21	80.73	3,965.6	42.3	146.7	70.4	0.00	0.00	0.00
4,000.0	8.21	80.73	3,990.3	42.9	150.2	71.7	0.00	0.00	0.00
4,025.0	8.21	80.73	4,015.1	43.5	153.7	72.9	0.00	0.00	0.00
4,050.0	8.21	80.73	4,039.8	44.0	157.2	74.2	0.00	0.00	0.00
4,075.0	8.21	80.73	4,064.5	44.6	160.8	75.4	0.00	0.00	0.00
4,100.0	8.21	80.73	4,089.3	45.2	164.3	76.7	0.00	0.00	0.00
4,125.0	8.21	80.73	4,114.0	45.8	167.8	77.9	0.00	0.00	0.00
4,150.0	8.21	80.73	4,138.8	46.3	171.3	79.2	0.00	0.00	0.00
4,175.0	8.21	80.73	4,163.5	46.9	174.9	80.5	0.00	0.00	0.00
4,200.0	8.21	80.73	4,188.3	47.5	178.4	81.7	0.00	0.00	0.00
4,225.0	8.21	80.73	4,213.0	48.1	181.9	83.0	0.00	0.00	0.00
4,250.0	8.21	80.73	4,237.8	48.6	185.4	84.2	0.00	0.00	0.00
4,275.0	8.21	80.73	4,262.5	49.2	188.9	85.5	0.00	0.00	0.00
4,300.0	8.21	80.73	4,287.2	49.8	192.5	86.7	0.00	0.00	0.00
4,325.0	8.21	80.73	4,312.0	50.4	196.0	88.0	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Mutual 0780 3-8H
<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>	Mutual 0780 3-8H	<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)
4,350.0	8.21	80.73	4,336.7	50.9	199.5	89.3	0.00	0.00	0.00
4,375.0	8.21	80.73	4,361.5	51.5	203.0	90.5	0.00	0.00	0.00
4,400.0	8.21	80.73	4,386.2	52.1	206.5	91.8	0.00	0.00	0.00
4,425.0	8.21	80.73	4,411.0	52.7	210.1	93.0	0.00	0.00	0.00
4,450.0	8.21	80.73	4,435.7	53.2	213.6	94.3	0.00	0.00	0.00
4,475.0	8.21	80.73	4,460.5	53.8	217.1	95.5	0.00	0.00	0.00
4,500.0	8.21	80.73	4,485.2	54.4	220.6	96.8	0.00	0.00	0.00
4,525.0	8.21	80.73	4,509.9	55.0	224.2	98.1	0.00	0.00	0.00
4,550.0	8.21	80.73	4,534.7	55.5	227.7	99.3	0.00	0.00	0.00
4,575.0	8.21	80.73	4,559.4	56.1	231.2	100.6	0.00	0.00	0.00
4,600.0	8.21	80.73	4,584.2	56.7	234.7	101.8	0.00	0.00	0.00
4,625.0	8.21	80.73	4,608.9	57.3	238.2	103.1	0.00	0.00	0.00
4,650.0	8.21	80.73	4,633.7	57.8	241.8	104.4	0.00	0.00	0.00
4,675.0	8.21	80.73	4,658.4	58.4	245.3	105.6	0.00	0.00	0.00
4,700.0	8.21	80.73	4,683.1	59.0	248.8	106.9	0.00	0.00	0.00
4,725.0	8.21	80.73	4,707.9	59.6	252.3	108.1	0.00	0.00	0.00
4,750.0	8.21	80.73	4,732.6	60.1	255.9	109.4	0.00	0.00	0.00
4,775.0	8.21	80.73	4,757.4	60.7	259.4	110.6	0.00	0.00	0.00
4,800.0	8.21	80.73	4,782.1	61.3	262.9	111.9	0.00	0.00	0.00
4,825.0	8.21	80.73	4,806.9	61.9	266.4	113.2	0.00	0.00	0.00
4,850.0	8.21	80.73	4,831.6	62.4	269.9	114.4	0.00	0.00	0.00
4,875.0	8.21	80.73	4,856.4	63.0	273.5	115.7	0.00	0.00	0.00
4,900.0	8.21	80.73	4,881.1	63.6	277.0	116.9	0.00	0.00	0.00
4,925.0	8.21	80.73	4,905.8	64.2	280.5	118.2	0.00	0.00	0.00
4,950.0	8.21	80.73	4,930.6	64.7	284.0	119.4	0.00	0.00	0.00
4,975.0	8.21	80.73	4,955.3	65.3	287.5	120.7	0.00	0.00	0.00
5,000.0	8.21	80.73	4,980.1	65.9	291.1	122.0	0.00	0.00	0.00
5,025.0	8.21	80.73	5,004.8	66.5	294.6	123.2	0.00	0.00	0.00
5,050.0	8.21	80.73	5,029.6	67.0	298.1	124.5	0.00	0.00	0.00
5,075.0	8.21	80.73	5,054.3	67.6	301.6	125.7	0.00	0.00	0.00
5,100.0	8.21	80.73	5,079.1	68.2	305.2	127.0	0.00	0.00	0.00
5,125.0	8.21	80.73	5,103.8	68.8	308.7	128.2	0.00	0.00	0.00
5,150.0	8.21	80.73	5,128.5	69.3	312.2	129.5	0.00	0.00	0.00
5,175.0	8.21	80.73	5,153.3	69.9	315.7	130.8	0.00	0.00	0.00
5,200.0	8.21	80.73	5,178.0	70.5	319.2	132.0	0.00	0.00	0.00
5,225.0	8.21	80.73	5,202.8	71.1	322.8	133.3	0.00	0.00	0.00
5,250.0	8.21	80.73	5,227.5	71.6	326.3	134.5	0.00	0.00	0.00
5,275.0	8.21	80.73	5,252.3	72.2	329.8	135.8	0.00	0.00	0.00
5,300.0	8.21	80.73	5,277.0	72.8	333.3	137.1	0.00	0.00	0.00
5,325.0	8.21	80.73	5,301.7	73.4	336.8	138.3	0.00	0.00	0.00
5,350.0	8.21	80.73	5,326.5	73.9	340.4	139.6	0.00	0.00	0.00
5,375.0	8.21	80.73	5,351.2	74.5	343.9	140.8	0.00	0.00	0.00
5,400.0	8.21	80.73	5,376.0	75.1	347.4	142.1	0.00	0.00	0.00



# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Mutual 0780 3-8H
<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>	Mutual 0780 3-8H	<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)
5,425.0	8.21	80.73	5,400.7	75.7	350.9	143.3	0.00	0.00	0.00
5,450.0	8.21	80.73	5,425.5	76.2	354.5	144.6	0.00	0.00	0.00
5,475.0	8.21	80.73	5,450.2	76.8	358.0	145.9	0.00	0.00	0.00
5,500.0	8.21	80.73	5,475.0	77.4	361.5	147.1	0.00	0.00	0.00
5,525.0	8.21	80.73	5,499.7	78.0	365.0	148.4	0.00	0.00	0.00
5,550.0	8.21	80.73	5,524.4	78.5	368.5	149.6	0.00	0.00	0.00
5,575.0	8.21	80.73	5,549.2	79.1	372.1	150.9	0.00	0.00	0.00
5,600.0	8.21	80.73	5,573.9	79.7	375.6	152.1	0.00	0.00	0.00
5,625.0	8.21	80.73	5,598.7	80.3	379.1	153.4	0.00	0.00	0.00
5,650.0	8.21	80.73	5,623.4	80.8	382.6	154.7	0.00	0.00	0.00
5,675.0	8.21	80.73	5,648.2	81.4	386.2	155.9	0.00	0.00	0.00
5,700.0	8.21	80.73	5,672.9	82.0	389.7	157.2	0.00	0.00	0.00
5,725.0	8.21	80.73	5,697.7	82.6	393.2	158.4	0.00	0.00	0.00
5,750.0	8.21	80.73	5,722.4	83.1	396.7	159.7	0.00	0.00	0.00
5,775.0	8.21	80.73	5,747.1	83.7	400.2	160.9	0.00	0.00	0.00
5,800.0	8.21	80.73	5,771.9	84.3	403.8	162.2	0.00	0.00	0.00
5,825.0	8.21	80.73	5,796.6	84.9	407.3	163.5	0.00	0.00	0.00
5,850.0	8.21	80.73	5,821.4	85.4	410.8	164.7	0.00	0.00	0.00
5,875.0	8.21	80.73	5,846.1	86.0	414.3	166.0	0.00	0.00	0.00
5,900.0	8.21	80.73	5,870.9	86.6	417.8	167.2	0.00	0.00	0.00
5,925.0	8.21	80.73	5,895.6	87.2	421.4	168.5	0.00	0.00	0.00
5,950.0	8.21	80.73	5,920.4	87.7	424.9	169.8	0.00	0.00	0.00
5,975.0	8.21	80.73	5,945.1	88.3	428.4	171.0	0.00	0.00	0.00
6,000.0	8.21	80.73	5,969.8	88.9	431.9	172.3	0.00	0.00	0.00
6,025.0	8.21	80.73	5,994.6	89.5	435.5	173.5	0.00	0.00	0.00
6,050.0	8.21	80.73	6,019.3	90.0	439.0	174.8	0.00	0.00	0.00
6,075.0	8.21	80.73	6,044.1	90.6	442.5	176.0	0.00	0.00	0.00
6,100.0	8.21	80.73	6,068.8	91.2	446.0	177.3	0.00	0.00	0.00
6,125.0	8.21	80.73	6,093.6	91.8	449.5	178.6	0.00	0.00	0.00
6,150.0	8.21	80.73	6,118.3	92.3	453.1	179.8	0.00	0.00	0.00
6,175.0	8.21	80.73	6,143.0	92.9	456.6	181.1	0.00	0.00	0.00
6,200.0	8.21	80.73	6,167.8	93.5	460.1	182.3	0.00	0.00	0.00
6,225.0	8.21	80.73	6,192.5	94.1	463.6	183.6	0.00	0.00	0.00
6,250.0	8.21	80.73	6,217.3	94.6	467.1	184.8	0.00	0.00	0.00
6,275.0	8.21	80.73	6,242.0	95.2	470.7	186.1	0.00	0.00	0.00
6,300.0	8.21	80.73	6,266.8	95.8	474.2	187.4	0.00	0.00	0.00
6,325.0	8.21	80.73	6,291.5	96.4	477.7	188.6	0.00	0.00	0.00
6,350.0	8.21	80.73	6,316.3	96.9	481.2	189.9	0.00	0.00	0.00
6,375.0	8.21	80.73	6,341.0	97.5	484.8	191.1	0.00	0.00	0.00
6,400.0	8.21	80.73	6,365.7	98.1	488.3	192.4	0.00	0.00	0.00
6,425.0	8.21	80.73	6,390.5	98.7	491.8	193.6	0.00	0.00	0.00
6,450.0	8.21	80.73	6,415.2	99.2	495.3	194.9	0.00	0.00	0.00
6,475.0	8.21	80.73	6,440.0	99.8	498.8	196.2	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Mutual 0780 3-8H
<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>	Mutual 0780 3-8H	<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)
6,483.2	8.21	80.73	6,448.1	100.0	500.0	196.6	0.00	0.00	0.00
<b>Start DLS 10.00 TFO -34.81</b>									
6,500.0	9.63	74.99	6,464.7	100.6	502.5	197.6	10.00	8.49	-34.17
6,525.0	11.88	69.07	6,489.2	102.0	507.0	199.9	10.00	8.98	-23.69
6,550.0	14.21	65.03	6,513.6	104.2	512.1	203.1	10.00	9.32	-16.14
6,575.0	16.59	62.12	6,537.7	107.2	518.1	207.2	10.00	9.51	-11.63
6,600.0	18.99	59.93	6,561.5	110.9	524.8	212.1	10.00	9.64	-8.77
6,625.0	21.42	58.22	6,585.0	115.3	532.2	218.0	10.00	9.72	-6.85
6,650.0	23.87	56.84	6,608.0	120.5	540.3	224.6	10.00	9.77	-5.51
6,675.0	26.32	55.71	6,630.7	126.4	549.1	232.1	10.00	9.81	-4.54
6,700.0	28.78	54.75	6,652.8	133.0	558.6	240.5	10.00	9.84	-3.82
6,725.0	31.25	53.94	6,674.5	140.3	568.7	249.6	10.00	9.87	-3.26
6,750.0	33.72	53.23	6,695.6	148.3	579.6	259.6	10.00	9.88	-2.83
6,775.0	36.19	52.61	6,716.1	156.9	591.0	270.3	10.00	9.90	-2.48
6,800.0	38.67	52.06	6,735.9	166.2	603.0	281.8	10.00	9.91	-2.21
6,825.0	41.15	51.56	6,755.1	176.1	615.6	294.0	10.00	9.92	-1.98
6,850.0	43.63	51.11	6,773.5	186.6	628.8	306.9	10.00	9.93	-1.79
6,875.0	46.12	50.70	6,791.3	197.8	642.5	320.5	10.00	9.93	-1.64
6,900.0	48.60	50.33	6,808.2	209.5	656.6	334.8	10.00	9.94	-1.51
6,925.0	51.09	49.98	6,824.3	221.7	671.3	349.7	10.00	9.94	-1.40
6,950.0	53.57	49.65	6,839.6	234.5	686.4	365.1	10.00	9.95	-1.30
6,975.0	56.06	49.35	6,854.0	247.7	702.0	381.2	10.00	9.95	-1.22
7,000.0	58.55	49.06	6,867.5	261.5	717.9	397.8	10.00	9.95	-1.15
7,014.6	60.00	48.90	6,874.9	269.7	727.3	407.8	10.00	9.95	-1.10
<b>Start 150.0 hold at 7014.6 MD</b>									
7,025.0	60.00	48.90	6,880.2	275.6	734.1	414.9	0.00	0.00	0.00
7,050.0	60.00	48.90	6,892.7	289.9	750.5	432.1	0.00	0.00	0.00
7,075.0	60.00	48.90	6,905.2	304.1	766.8	449.3	0.00	0.00	0.00
7,100.0	60.00	48.90	6,917.7	318.3	783.1	466.4	0.00	0.00	0.00
7,125.0	60.00	48.90	6,930.2	332.6	799.4	483.6	0.00	0.00	0.00
7,150.0	60.00	48.90	6,942.7	346.8	815.7	500.8	0.00	0.00	0.00
7,164.6	60.00	48.90	6,949.9	355.1	825.2	510.8	0.00	0.00	0.00
<b>Start DLS 10.00 TFO -66.43</b>									
7,175.0	60.42	47.80	6,955.1	361.1	832.0	518.0	10.00	4.04	-10.54
7,200.0	61.47	45.20	6,967.3	376.2	847.8	535.9	10.00	4.19	-10.39
7,225.0	62.56	42.66	6,979.0	392.1	863.2	554.5	10.00	4.38	-10.18
7,250.0	63.70	40.17	6,990.3	408.8	877.9	573.8	10.00	4.56	-9.98
7,275.0	64.89	37.72	7,001.1	426.3	892.1	593.7	10.00	4.73	-9.78
7,300.0	66.11	35.32	7,011.5	444.6	905.6	614.3	10.00	4.89	-9.59
7,325.0	67.37	32.97	7,021.4	463.6	918.5	635.5	10.00	5.03	-9.41
7,350.0	68.66	30.66	7,030.8	483.3	930.7	657.2	10.00	5.17	-9.23
7,375.0	69.98	28.40	7,039.6	503.6	942.2	679.4	10.00	5.29	-9.07
7,400.0	71.33	26.17	7,047.9	524.6	953.0	702.1	10.00	5.41	-8.92
7,425.0	72.71	23.97	7,055.6	546.1	963.1	725.2	10.00	5.51	-8.77

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Mutual 0780 3-8H
<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>	Mutual 0780 3-8H	<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)
7,450.0	74.11	21.81	7,062.7	568.2	972.4	748.7	10.00	5.60	-8.64
7,475.0	75.53	19.68	7,069.3	590.8	981.0	772.5	10.00	5.69	-8.52
7,500.0	76.97	17.58	7,075.2	613.8	988.7	796.6	10.00	5.76	-8.41
7,525.0	78.43	15.50	7,080.5	637.2	995.7	820.9	10.00	5.83	-8.32
7,550.0	79.90	13.44	7,085.2	661.0	1,001.8	845.4	10.00	5.89	-8.23
7,575.0	81.39	11.40	7,089.3	685.1	1,007.1	870.1	10.00	5.94	-8.15
7,600.0	82.88	9.38	7,092.7	709.4	1,011.6	894.9	10.00	5.98	-8.09
7,625.0	84.39	7.37	7,095.5	734.0	1,015.2	919.7	10.00	6.02	-8.04
7,650.0	85.90	5.37	7,097.6	758.7	1,018.0	944.5	10.00	6.04	-8.00
7,675.0	87.41	3.38	7,099.1	783.6	1,019.9	969.2	10.00	6.06	-7.97
7,700.0	88.93	1.39	7,099.9	808.6	1,020.9	993.9	10.00	6.08	-7.95
7,717.5	90.00	0.00	7,100.0	826.1	1,021.1	1,011.2	10.00	6.08	-7.94
Start 4254.3 hold at 7717.5 MD									
7,725.0	90.00	0.00	7,100.0	833.6	1,021.1	1,018.5	0.00	0.00	0.00
7,750.0	90.00	0.00	7,100.0	858.6	1,021.1	1,043.0	0.00	0.00	0.00
7,775.0	90.00	0.00	7,100.0	883.6	1,021.1	1,067.5	0.00	0.00	0.00
7,800.0	90.00	0.00	7,100.0	908.6	1,021.1	1,092.0	0.00	0.00	0.00
7,825.0	90.00	0.00	7,100.0	933.6	1,021.1	1,116.5	0.00	0.00	0.00
7,850.0	90.00	0.00	7,100.0	958.6	1,021.1	1,141.0	0.00	0.00	0.00
7,875.0	90.00	0.00	7,100.0	983.6	1,021.1	1,165.5	0.00	0.00	0.00
7,900.0	90.00	0.00	7,100.0	1,008.6	1,021.1	1,190.0	0.00	0.00	0.00
7,925.0	90.00	0.00	7,100.0	1,033.6	1,021.1	1,214.6	0.00	0.00	0.00
7,950.0	90.00	0.00	7,100.0	1,058.6	1,021.1	1,239.1	0.00	0.00	0.00
7,975.0	90.00	0.00	7,100.0	1,083.6	1,021.1	1,263.6	0.00	0.00	0.00
8,000.0	90.00	0.00	7,100.0	1,108.6	1,021.1	1,288.1	0.00	0.00	0.00
8,025.0	90.00	0.00	7,100.0	1,133.6	1,021.1	1,312.6	0.00	0.00	0.00
8,050.0	90.00	0.00	7,100.0	1,158.6	1,021.1	1,337.1	0.00	0.00	0.00
8,075.0	90.00	0.00	7,100.0	1,183.6	1,021.1	1,361.6	0.00	0.00	0.00
8,100.0	90.00	0.00	7,100.0	1,208.6	1,021.1	1,386.1	0.00	0.00	0.00
8,125.0	90.00	0.00	7,100.0	1,233.6	1,021.1	1,410.6	0.00	0.00	0.00
8,150.0	90.00	0.00	7,100.0	1,258.6	1,021.1	1,435.1	0.00	0.00	0.00
8,175.0	90.00	0.00	7,100.0	1,283.6	1,021.1	1,459.7	0.00	0.00	0.00
8,200.0	90.00	0.00	7,100.0	1,308.6	1,021.1	1,484.2	0.00	0.00	0.00
8,225.0	90.00	0.00	7,100.0	1,333.6	1,021.1	1,508.7	0.00	0.00	0.00
8,250.0	90.00	0.00	7,100.0	1,358.6	1,021.1	1,533.2	0.00	0.00	0.00
8,275.0	90.00	0.00	7,100.0	1,383.6	1,021.1	1,557.7	0.00	0.00	0.00
8,300.0	90.00	0.00	7,100.0	1,408.6	1,021.1	1,582.2	0.00	0.00	0.00
8,325.0	90.00	0.00	7,100.0	1,433.6	1,021.1	1,606.7	0.00	0.00	0.00
8,350.0	90.00	0.00	7,100.0	1,458.6	1,021.1	1,631.2	0.00	0.00	0.00
8,375.0	90.00	0.00	7,100.0	1,483.6	1,021.1	1,655.7	0.00	0.00	0.00
8,400.0	90.00	0.00	7,100.0	1,508.6	1,021.1	1,680.2	0.00	0.00	0.00
8,425.0	90.00	0.00	7,100.0	1,533.6	1,021.1	1,704.8	0.00	0.00	0.00
8,450.0	90.00	0.00	7,100.0	1,558.6	1,021.2	1,729.3	0.00	0.00	0.00
8,475.0	90.00	0.00	7,100.0	1,583.6	1,021.2	1,753.8	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Mutual 0780 3-8H
<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>	Mutual 0780 3-8H	<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)
8,500.0	90.00	0.00	7,100.0	1,608.6	1,021.2	1,778.3	0.00	0.00	0.00
8,525.0	90.00	0.00	7,100.0	1,633.6	1,021.2	1,802.8	0.00	0.00	0.00
8,550.0	90.00	0.00	7,100.0	1,658.6	1,021.2	1,827.3	0.00	0.00	0.00
8,575.0	90.00	0.00	7,100.0	1,683.6	1,021.2	1,851.8	0.00	0.00	0.00
8,600.0	90.00	0.00	7,100.0	1,708.6	1,021.2	1,876.3	0.00	0.00	0.00
8,625.0	90.00	0.00	7,100.0	1,733.6	1,021.2	1,900.8	0.00	0.00	0.00
8,650.0	90.00	0.00	7,100.0	1,758.6	1,021.2	1,925.3	0.00	0.00	0.00
8,675.0	90.00	0.00	7,100.0	1,783.6	1,021.2	1,949.9	0.00	0.00	0.00
8,700.0	90.00	0.00	7,100.0	1,808.6	1,021.2	1,974.4	0.00	0.00	0.00
8,725.0	90.00	0.00	7,100.0	1,833.6	1,021.2	1,998.9	0.00	0.00	0.00
8,750.0	90.00	0.00	7,100.0	1,858.6	1,021.2	2,023.4	0.00	0.00	0.00
8,775.0	90.00	0.00	7,100.0	1,883.6	1,021.2	2,047.9	0.00	0.00	0.00
8,800.0	90.00	0.00	7,100.0	1,908.6	1,021.2	2,072.4	0.00	0.00	0.00
8,825.0	90.00	0.00	7,100.0	1,933.6	1,021.2	2,096.9	0.00	0.00	0.00
8,850.0	90.00	0.00	7,100.0	1,958.6	1,021.2	2,121.4	0.00	0.00	0.00
8,875.0	90.00	0.00	7,100.0	1,983.6	1,021.2	2,145.9	0.00	0.00	0.00
8,900.0	90.00	0.00	7,100.0	2,008.6	1,021.2	2,170.4	0.00	0.00	0.00
8,925.0	90.00	0.00	7,100.0	2,033.6	1,021.2	2,194.9	0.00	0.00	0.00
8,950.0	90.00	0.00	7,100.0	2,058.6	1,021.2	2,219.5	0.00	0.00	0.00
8,975.0	90.00	0.00	7,100.0	2,083.6	1,021.2	2,244.0	0.00	0.00	0.00
9,000.0	90.00	0.00	7,100.0	2,108.6	1,021.2	2,268.5	0.00	0.00	0.00
9,025.0	90.00	0.00	7,100.0	2,133.6	1,021.2	2,293.0	0.00	0.00	0.00
9,050.0	90.00	0.00	7,100.0	2,158.6	1,021.2	2,317.5	0.00	0.00	0.00
9,075.0	90.00	0.00	7,100.0	2,183.6	1,021.2	2,342.0	0.00	0.00	0.00
9,100.0	90.00	0.00	7,100.0	2,208.6	1,021.2	2,366.5	0.00	0.00	0.00
9,125.0	90.00	0.00	7,100.0	2,233.6	1,021.2	2,391.0	0.00	0.00	0.00
9,150.0	90.00	0.00	7,100.0	2,258.6	1,021.2	2,415.5	0.00	0.00	0.00
9,175.0	90.00	0.00	7,100.0	2,283.6	1,021.2	2,440.0	0.00	0.00	0.00
9,200.0	90.00	0.00	7,100.0	2,308.6	1,021.2	2,464.6	0.00	0.00	0.00
9,225.0	90.00	0.00	7,100.0	2,333.6	1,021.2	2,489.1	0.00	0.00	0.00
9,250.0	90.00	0.00	7,100.0	2,358.6	1,021.2	2,513.6	0.00	0.00	0.00
9,275.0	90.00	0.00	7,100.0	2,383.6	1,021.2	2,538.1	0.00	0.00	0.00
9,300.0	90.00	0.00	7,100.0	2,408.6	1,021.2	2,562.6	0.00	0.00	0.00
9,325.0	90.00	0.00	7,100.0	2,433.6	1,021.2	2,587.1	0.00	0.00	0.00
9,350.0	90.00	0.00	7,100.0	2,458.6	1,021.2	2,611.6	0.00	0.00	0.00
9,375.0	90.00	0.00	7,100.0	2,483.6	1,021.2	2,636.1	0.00	0.00	0.00
9,400.0	90.00	0.00	7,100.0	2,508.6	1,021.2	2,660.6	0.00	0.00	0.00
9,425.0	90.00	0.00	7,100.0	2,533.6	1,021.2	2,685.1	0.00	0.00	0.00
9,450.0	90.00	0.00	7,100.0	2,558.6	1,021.2	2,709.7	0.00	0.00	0.00
9,475.0	90.00	0.00	7,100.0	2,583.6	1,021.2	2,734.2	0.00	0.00	0.00
9,500.0	90.00	0.00	7,100.0	2,608.6	1,021.2	2,758.7	0.00	0.00	0.00
9,525.0	90.00	0.00	7,100.0	2,633.6	1,021.2	2,783.2	0.00	0.00	0.00
9,550.0	90.00	0.00	7,100.0	2,658.6	1,021.2	2,807.7	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Mutual 0780 3-8H
<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>	Mutual 0780 3-8H	<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)
9,575.0	90.00	0.00	7,100.0	2,683.6	1,021.2	2,832.2	0.00	0.00	0.00
9,600.0	90.00	0.00	7,100.0	2,708.6	1,021.2	2,856.7	0.00	0.00	0.00
9,625.0	90.00	0.00	7,100.0	2,733.6	1,021.2	2,881.2	0.00	0.00	0.00
9,650.0	90.00	0.00	7,100.0	2,758.6	1,021.2	2,905.7	0.00	0.00	0.00
9,675.0	90.00	0.00	7,100.0	2,783.6	1,021.2	2,930.2	0.00	0.00	0.00
9,700.0	90.00	0.00	7,100.0	2,808.6	1,021.2	2,954.8	0.00	0.00	0.00
9,725.0	90.00	0.00	7,100.0	2,833.6	1,021.2	2,979.3	0.00	0.00	0.00
9,750.0	90.00	0.00	7,100.0	2,858.6	1,021.2	3,003.8	0.00	0.00	0.00
9,775.0	90.00	0.00	7,100.0	2,883.6	1,021.2	3,028.3	0.00	0.00	0.00
9,800.0	90.00	0.00	7,100.0	2,908.6	1,021.2	3,052.8	0.00	0.00	0.00
9,825.0	90.00	0.00	7,100.0	2,933.6	1,021.2	3,077.3	0.00	0.00	0.00
9,850.0	90.00	0.00	7,100.0	2,958.6	1,021.2	3,101.8	0.00	0.00	0.00
9,875.0	90.00	0.00	7,100.0	2,983.6	1,021.2	3,126.3	0.00	0.00	0.00
9,900.0	90.00	0.00	7,100.0	3,008.6	1,021.2	3,150.8	0.00	0.00	0.00
9,925.0	90.00	0.00	7,100.0	3,033.6	1,021.2	3,175.3	0.00	0.00	0.00
9,950.0	90.00	0.00	7,100.0	3,058.6	1,021.2	3,199.9	0.00	0.00	0.00
9,975.0	90.00	0.00	7,100.0	3,083.6	1,021.2	3,224.4	0.00	0.00	0.00
10,000.0	90.00	0.00	7,100.0	3,108.6	1,021.2	3,248.9	0.00	0.00	0.00
10,025.0	90.00	0.00	7,100.0	3,133.6	1,021.2	3,273.4	0.00	0.00	0.00
10,050.0	90.00	0.00	7,100.0	3,158.6	1,021.2	3,297.9	0.00	0.00	0.00
10,075.0	90.00	0.00	7,100.0	3,183.6	1,021.2	3,322.4	0.00	0.00	0.00
10,100.0	90.00	0.00	7,100.0	3,208.6	1,021.2	3,346.9	0.00	0.00	0.00
10,125.0	90.00	0.00	7,100.0	3,233.6	1,021.2	3,371.4	0.00	0.00	0.00
10,150.0	90.00	0.00	7,100.0	3,258.6	1,021.2	3,395.9	0.00	0.00	0.00
10,175.0	90.00	0.00	7,100.0	3,283.6	1,021.2	3,420.4	0.00	0.00	0.00
10,200.0	90.00	0.00	7,100.0	3,308.6	1,021.2	3,445.0	0.00	0.00	0.00
10,225.0	90.00	0.00	7,100.0	3,333.6	1,021.2	3,469.5	0.00	0.00	0.00
10,250.0	90.00	0.00	7,100.0	3,358.6	1,021.2	3,494.0	0.00	0.00	0.00
10,275.0	90.00	0.00	7,100.0	3,383.6	1,021.2	3,518.5	0.00	0.00	0.00
10,300.0	90.00	0.00	7,100.0	3,408.6	1,021.2	3,543.0	0.00	0.00	0.00
10,325.0	90.00	0.00	7,100.0	3,433.6	1,021.2	3,567.5	0.00	0.00	0.00
10,350.0	90.00	0.00	7,100.0	3,458.6	1,021.2	3,592.0	0.00	0.00	0.00
10,375.0	90.00	0.00	7,100.0	3,483.6	1,021.2	3,616.5	0.00	0.00	0.00
10,400.0	90.00	0.00	7,100.0	3,508.6	1,021.2	3,641.0	0.00	0.00	0.00
10,425.0	90.00	0.00	7,100.0	3,533.6	1,021.2	3,665.5	0.00	0.00	0.00
10,450.0	90.00	0.00	7,100.0	3,558.6	1,021.2	3,690.1	0.00	0.00	0.00
10,475.0	90.00	0.00	7,100.0	3,583.6	1,021.2	3,714.6	0.00	0.00	0.00
10,500.0	90.00	0.00	7,100.0	3,608.6	1,021.2	3,739.1	0.00	0.00	0.00
10,525.0	90.00	0.00	7,100.0	3,633.6	1,021.2	3,763.6	0.00	0.00	0.00
10,550.0	90.00	0.00	7,100.0	3,658.6	1,021.2	3,788.1	0.00	0.00	0.00
10,575.0	90.00	0.00	7,100.0	3,683.6	1,021.2	3,812.6	0.00	0.00	0.00
10,600.0	90.00	0.00	7,100.0	3,708.6	1,021.2	3,837.1	0.00	0.00	0.00
10,625.0	90.00	0.00	7,100.0	3,733.6	1,021.2	3,861.6	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Mutual 0780 3-8H
<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>	Mutual 0780 3-8H	<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)
10,650.0	90.00	0.00	7,100.0	3,758.6	1,021.2	3,886.1	0.00	0.00	0.00
10,675.0	90.00	0.00	7,100.0	3,783.6	1,021.2	3,910.6	0.00	0.00	0.00
10,700.0	90.00	0.00	7,100.0	3,808.6	1,021.2	3,935.1	0.00	0.00	0.00
10,725.0	90.00	0.00	7,100.0	3,833.6	1,021.2	3,959.7	0.00	0.00	0.00
10,750.0	90.00	0.00	7,100.0	3,858.6	1,021.2	3,984.2	0.00	0.00	0.00
10,775.0	90.00	0.00	7,100.0	3,883.6	1,021.2	4,008.7	0.00	0.00	0.00
10,800.0	90.00	0.00	7,100.0	3,908.6	1,021.2	4,033.2	0.00	0.00	0.00
10,825.0	90.00	0.00	7,100.0	3,933.6	1,021.2	4,057.7	0.00	0.00	0.00
10,850.0	90.00	0.00	7,100.0	3,958.6	1,021.2	4,082.2	0.00	0.00	0.00
10,875.0	90.00	0.00	7,100.0	3,983.6	1,021.2	4,106.7	0.00	0.00	0.00
10,900.0	90.00	0.00	7,100.0	4,008.6	1,021.2	4,131.2	0.00	0.00	0.00
10,925.0	90.00	0.00	7,100.0	4,033.6	1,021.2	4,155.7	0.00	0.00	0.00
10,950.0	90.00	0.00	7,100.0	4,058.6	1,021.2	4,180.2	0.00	0.00	0.00
10,975.0	90.00	0.00	7,100.0	4,083.6	1,021.2	4,204.8	0.00	0.00	0.00
11,000.0	90.00	0.00	7,100.0	4,108.6	1,021.2	4,229.3	0.00	0.00	0.00
11,025.0	90.00	0.00	7,100.0	4,133.6	1,021.2	4,253.8	0.00	0.00	0.00
11,050.0	90.00	0.00	7,100.0	4,158.6	1,021.2	4,278.3	0.00	0.00	0.00
11,075.0	90.00	0.00	7,100.0	4,183.6	1,021.2	4,302.8	0.00	0.00	0.00
11,100.0	90.00	0.00	7,100.0	4,208.6	1,021.2	4,327.3	0.00	0.00	0.00
11,125.0	90.00	0.00	7,100.0	4,233.6	1,021.2	4,351.8	0.00	0.00	0.00
11,150.0	90.00	0.00	7,100.0	4,258.6	1,021.2	4,376.3	0.00	0.00	0.00
11,175.0	90.00	0.00	7,100.0	4,283.6	1,021.2	4,400.8	0.00	0.00	0.00
11,200.0	90.00	0.00	7,100.0	4,308.6	1,021.2	4,425.3	0.00	0.00	0.00
11,225.0	90.00	0.00	7,100.0	4,333.6	1,021.2	4,449.9	0.00	0.00	0.00
11,250.0	90.00	0.00	7,100.0	4,358.6	1,021.2	4,474.4	0.00	0.00	0.00
11,275.0	90.00	0.00	7,100.0	4,383.6	1,021.2	4,498.9	0.00	0.00	0.00
11,300.0	90.00	0.00	7,100.0	4,408.6	1,021.2	4,523.4	0.00	0.00	0.00
11,325.0	90.00	0.00	7,100.0	4,433.6	1,021.2	4,547.9	0.00	0.00	0.00
11,350.0	90.00	0.00	7,100.0	4,458.6	1,021.2	4,572.4	0.00	0.00	0.00
11,375.0	90.00	0.00	7,100.0	4,483.6	1,021.2	4,596.9	0.00	0.00	0.00
11,400.0	90.00	0.00	7,100.0	4,508.6	1,021.2	4,621.4	0.00	0.00	0.00
11,425.0	90.00	0.00	7,100.0	4,533.6	1,021.2	4,645.9	0.00	0.00	0.00
11,450.0	90.00	0.00	7,100.0	4,558.6	1,021.2	4,670.4	0.00	0.00	0.00
11,475.0	90.00	0.00	7,100.0	4,583.6	1,021.2	4,695.0	0.00	0.00	0.00
11,500.0	90.00	0.00	7,100.0	4,608.6	1,021.2	4,719.5	0.00	0.00	0.00
11,525.0	90.00	0.00	7,100.0	4,633.6	1,021.2	4,744.0	0.00	0.00	0.00
11,550.0	90.00	0.00	7,100.0	4,658.6	1,021.2	4,768.5	0.00	0.00	0.00
11,575.0	90.00	0.00	7,100.0	4,683.6	1,021.2	4,793.0	0.00	0.00	0.00
11,600.0	90.00	0.00	7,100.0	4,708.6	1,021.2	4,817.5	0.00	0.00	0.00
11,625.0	90.00	0.00	7,100.0	4,733.6	1,021.2	4,842.0	0.00	0.00	0.00
11,650.0	90.00	0.00	7,100.0	4,758.6	1,021.2	4,866.5	0.00	0.00	0.00
11,675.0	90.00	0.00	7,100.0	4,783.6	1,021.3	4,891.0	0.00	0.00	0.00
11,700.0	90.00	0.00	7,100.0	4,808.6	1,021.3	4,915.5	0.00	0.00	0.00
11,725.0	90.00	0.00	7,100.0	4,833.6	1,021.3	4,940.1	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Mutual 0780 3-8H
<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>	Mutual 0780 3-8H	<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)
11,750.0	90.00	0.00	7,100.0	4,858.6	1,021.3	4,964.6	0.00	0.00	0.00
11,775.0	90.00	0.00	7,100.0	4,883.6	1,021.3	4,989.1	0.00	0.00	0.00
11,800.0	90.00	0.00	7,100.0	4,908.6	1,021.3	5,013.6	0.00	0.00	0.00
11,825.0	90.00	0.00	7,100.0	4,933.6	1,021.3	5,038.1	0.00	0.00	0.00
11,850.0	90.00	0.00	7,100.0	4,958.6	1,021.3	5,062.6	0.00	0.00	0.00
11,875.0	90.00	0.00	7,100.0	4,983.6	1,021.3	5,087.1	0.00	0.00	0.00
11,900.0	90.00	0.00	7,100.0	5,008.6	1,021.3	5,111.6	0.00	0.00	0.00
11,925.0	90.00	0.00	7,100.0	5,033.6	1,021.3	5,136.1	0.00	0.00	0.00
11,950.0	90.00	0.00	7,100.0	5,058.6	1,021.3	5,160.6	0.00	0.00	0.00
11,971.9	90.00	0.00	7,100.0	5,080.4	1,021.3	5,182.1	0.00	0.00	0.00
TD at 11971.9									

### 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
Mutual 3-8H - plan hits target center - Point	0.00	0.00	7,100.0	5,080.4	1,021.3	1,462,193.39	2,749,794.52	40° 35' 55.066 N	106° 24' 3.693 W

### Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,457.6	5,433.0	Shannon		0.00	
6,892.2	6,803.0	Niobrara		0.00	

### 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
551	551	0	0	Start 1197.6 hold at 551.3 MD
1749	1749	20	10	Start Drop -2.00
1800	1800	20	10	Start 999.7 hold at 1800.2 MD
2800	2800	20	10	Start Build 2.00
3210	3209	25	39	Start 3273.0 hold at 3210.2 MD
6483	6448	100	500	Start DLS 10.00 TFO -34.81
7015	6875	270	727	Start 150.0 hold at 7014.6 MD
7165	6950	355	825	Start DLS 10.00 TFO -66.43
7718	7100	826	1021	Start 4254.3 hold at 7717.5 MD
11,972	7100	5080	1021	TD at 11971.9

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