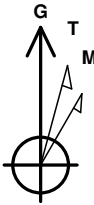
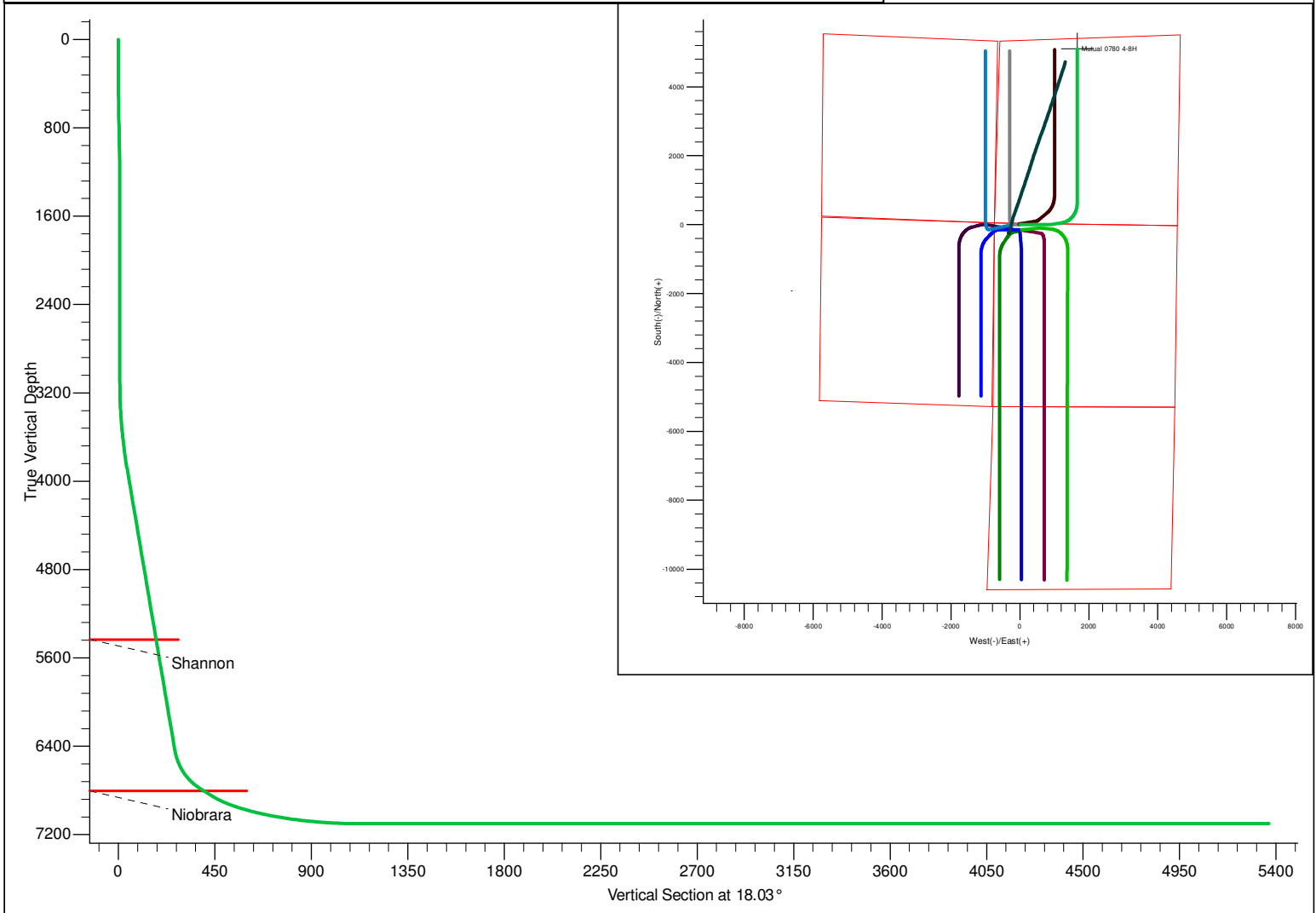


PROJECT DETAILS: North Park Basin								Azimuths to Grid North True North: 0.58° Magnetic North: 10.48°		
Geodetic System: US State Plane 1983 Datum: North American Datum 1983 Ellipsoid: GRS 1980 Zone: Colorado Northern Zone System Datum: Mean Sea Level								Magnetic Field Strength: 53189.1snT Dip Angle: 66.97° Date: 12/31/2009 Model: IGRF200510		
FORMATION TOP DETAILS								CASING DETAILS		
TVDPathMDPath 5433.0 5504.0 6803.0 7039.7								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 4-8H Wellbore: Wellbore #1 Design: Design #1			
0' Vertical Section coordinates										
Type	Target	Azimuth	Origin	Type	N/S	E/W From TVD				
TD		18.03	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	594.6	1.89	90.00	594.6	0.0	1.6	2.00	90.00	0.5		
4	1105.7	1.89	90.00	1105.4	0.0	18.4	0.00	0.00	5.7		
5	1200.3	0.00	0.00	1200.0	0.0	20.0	2.00	180.00	6.2		
6	3099.6	0.00	0.00	3099.3	0.0	20.0	0.00	0.00	6.2		
7	3887.9	15.77	90.00	3877.7	0.0	127.8	2.00	90.00	39.6		
8	6546.0	15.77	90.00	6435.8	0.0	850.0	0.00	0.00	263.2		
9	6991.3	60.00	80.00	6778.8	35.3	1113.8	10.00	-12.38	378.4		
10	7141.3	60.00	80.00	6853.8	57.8	1241.7	0.00	0.00	439.4		
11	7954.8	90.00	360.00	7100.0	624.3	1661.7	10.00	-84.96	1108.1	Mutual 4-8H	
12	12433.4	90.00	360.00	7100.0	5102.9	1661.6	0.00	0.00	5366.6	Mutual 4-8H	

SandRidge Energy

North Park Basin

T7N-R80W-S17

Mutual 0780 4-8H

Wellbore #1

Plan: Design #1

Standard Survey Report

14 December, 2015

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Mutual 0780 4-8H
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Mutual 0780 4-8H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDMProd

Project	North Park Basin		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		T7N-R80W-S17			
Site Position:		Northing:	1,456,885.51 usft	Latitude:	40° 35' 2.501 N
From:	Lat/Long	Easting:	2,748,625.91 usft	Longitude:	106° 24' 18.140 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.58 °

Well	Mutual 0780 4-8H					
Well Position	+N/-S	0.0 usft	Northing:	1,457,112.64 usft	Latitude:	40° 35' 4.762 N
	+E/-W	0.0 usft	Easting:	2,748,793.22 usft	Longitude:	106° 24' 16.002 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,156.0 usft

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

Design	Design #1				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	18.03	

Survey Tool Program	Date	12/14/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	12,433.4	Design #1 (Wellbore #1)	Sperry MWD	Fixed:v2:standard declination	

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
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

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Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Mutual 0780 4-8H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDMProd

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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	90.00	525.0	0.0	0.1	0.0	2.00	2.00	0.00
550.0	1.00	90.00	550.0	0.0	0.4	0.1	2.00	2.00	0.00
575.0	1.50	90.00	575.0	0.0	1.0	0.3	2.00	2.00	0.00
594.6	1.89	90.00	594.6	0.0	1.6	0.5	2.00	2.00	0.00
Start 511.1 hold at 594.6 MD									
600.0	1.89	90.00	600.0	0.0	1.7	0.5	0.00	0.00	0.00
625.0	1.89	90.00	625.0	0.0	2.6	0.8	0.00	0.00	0.00
650.0	1.89	90.00	650.0	0.0	3.4	1.0	0.00	0.00	0.00
675.0	1.89	90.00	674.9	0.0	4.2	1.3	0.00	0.00	0.00
700.0	1.89	90.00	699.9	0.0	5.0	1.6	0.00	0.00	0.00
725.0	1.89	90.00	724.9	0.0	5.9	1.8	0.00	0.00	0.00
750.0	1.89	90.00	749.9	0.0	6.7	2.1	0.00	0.00	0.00
775.0	1.89	90.00	774.9	0.0	7.5	2.3	0.00	0.00	0.00
800.0	1.89	90.00	799.9	0.0	8.3	2.6	0.00	0.00	0.00
825.0	1.89	90.00	824.9	0.0	9.2	2.8	0.00	0.00	0.00
850.0	1.89	90.00	849.8	0.0	10.0	3.1	0.00	0.00	0.00
875.0	1.89	90.00	874.8	0.0	10.8	3.3	0.00	0.00	0.00
900.0	1.89	90.00	899.8	0.0	11.6	3.6	0.00	0.00	0.00
925.0	1.89	90.00	924.8	0.0	12.5	3.9	0.00	0.00	0.00
950.0	1.89	90.00	949.8	0.0	13.3	4.1	0.00	0.00	0.00
975.0	1.89	90.00	974.8	0.0	14.1	4.4	0.00	0.00	0.00
1,000.0	1.89	90.00	999.8	0.0	14.9	4.6	0.00	0.00	0.00
1,025.0	1.89	90.00	1,024.7	0.0	15.8	4.9	0.00	0.00	0.00
1,050.0	1.89	90.00	1,049.7	0.0	16.6	5.1	0.00	0.00	0.00
1,075.0	1.89	90.00	1,074.7	0.0	17.4	5.4	0.00	0.00	0.00
1,100.0	1.89	90.00	1,099.7	0.0	18.2	5.7	0.00	0.00	0.00
1,105.7	1.89	90.00	1,105.4	0.0	18.4	5.7	0.00	0.00	0.00
Start Drop -2.00									
1,125.0	1.51	90.00	1,124.7	0.0	19.0	5.9	2.00	-2.00	0.00
1,150.0	1.01	90.00	1,149.7	0.0	19.6	6.1	2.00	-2.00	0.00
1,175.0	0.51	90.00	1,174.7	0.0	19.9	6.2	2.00	-2.00	0.00
1,200.0	0.01	90.00	1,199.7	0.0	20.0	6.2	2.00	-2.00	0.00

SandRidge Energy

Survey Report

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Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Mutual 0780 4-8H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDMProd

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,200.3	0.00	0.00	1,200.0	0.0	20.0	6.2	2.00	-2.00	0.00
Start 1899.3 hold at 1200.3 MD									
1,225.0	0.00	0.00	1,224.7	0.0	20.0	6.2	0.00	0.00	0.00
1,250.0	0.00	0.00	1,249.7	0.0	20.0	6.2	0.00	0.00	0.00
1,275.0	0.00	0.00	1,274.7	0.0	20.0	6.2	0.00	0.00	0.00
1,300.0	0.00	0.00	1,299.7	0.0	20.0	6.2	0.00	0.00	0.00
1,325.0	0.00	0.00	1,324.7	0.0	20.0	6.2	0.00	0.00	0.00
1,350.0	0.00	0.00	1,349.7	0.0	20.0	6.2	0.00	0.00	0.00
1,375.0	0.00	0.00	1,374.7	0.0	20.0	6.2	0.00	0.00	0.00
1,400.0	0.00	0.00	1,399.7	0.0	20.0	6.2	0.00	0.00	0.00
1,425.0	0.00	0.00	1,424.7	0.0	20.0	6.2	0.00	0.00	0.00
1,450.0	0.00	0.00	1,449.7	0.0	20.0	6.2	0.00	0.00	0.00
1,475.0	0.00	0.00	1,474.7	0.0	20.0	6.2	0.00	0.00	0.00
1,500.0	0.00	0.00	1,499.7	0.0	20.0	6.2	0.00	0.00	0.00
1,525.0	0.00	0.00	1,524.7	0.0	20.0	6.2	0.00	0.00	0.00
1,550.0	0.00	0.00	1,549.7	0.0	20.0	6.2	0.00	0.00	0.00
1,575.0	0.00	0.00	1,574.7	0.0	20.0	6.2	0.00	0.00	0.00
1,600.0	0.00	0.00	1,599.7	0.0	20.0	6.2	0.00	0.00	0.00
1,625.0	0.00	0.00	1,624.7	0.0	20.0	6.2	0.00	0.00	0.00
1,650.0	0.00	0.00	1,649.7	0.0	20.0	6.2	0.00	0.00	0.00
1,675.0	0.00	0.00	1,674.7	0.0	20.0	6.2	0.00	0.00	0.00
1,700.0	0.00	0.00	1,699.7	0.0	20.0	6.2	0.00	0.00	0.00
1,725.0	0.00	0.00	1,724.7	0.0	20.0	6.2	0.00	0.00	0.00
1,750.0	0.00	0.00	1,749.7	0.0	20.0	6.2	0.00	0.00	0.00
1,775.0	0.00	0.00	1,774.7	0.0	20.0	6.2	0.00	0.00	0.00
1,800.0	0.00	0.00	1,799.7	0.0	20.0	6.2	0.00	0.00	0.00
1,825.0	0.00	0.00	1,824.7	0.0	20.0	6.2	0.00	0.00	0.00
1,850.0	0.00	0.00	1,849.7	0.0	20.0	6.2	0.00	0.00	0.00
1,875.0	0.00	0.00	1,874.7	0.0	20.0	6.2	0.00	0.00	0.00
1,900.0	0.00	0.00	1,899.7	0.0	20.0	6.2	0.00	0.00	0.00
1,925.0	0.00	0.00	1,924.7	0.0	20.0	6.2	0.00	0.00	0.00
1,950.0	0.00	0.00	1,949.7	0.0	20.0	6.2	0.00	0.00	0.00
1,975.0	0.00	0.00	1,974.7	0.0	20.0	6.2	0.00	0.00	0.00
2,000.0	0.00	0.00	1,999.7	0.0	20.0	6.2	0.00	0.00	0.00
2,025.0	0.00	0.00	2,024.7	0.0	20.0	6.2	0.00	0.00	0.00
2,050.0	0.00	0.00	2,049.7	0.0	20.0	6.2	0.00	0.00	0.00
2,075.0	0.00	0.00	2,074.7	0.0	20.0	6.2	0.00	0.00	0.00
2,100.0	0.00	0.00	2,099.7	0.0	20.0	6.2	0.00	0.00	0.00
2,125.0	0.00	0.00	2,124.7	0.0	20.0	6.2	0.00	0.00	0.00
2,150.0	0.00	0.00	2,149.7	0.0	20.0	6.2	0.00	0.00	0.00
2,175.0	0.00	0.00	2,174.7	0.0	20.0	6.2	0.00	0.00	0.00
2,200.0	0.00	0.00	2,199.7	0.0	20.0	6.2	0.00	0.00	0.00
2,225.0	0.00	0.00	2,224.7	0.0	20.0	6.2	0.00	0.00	0.00
2,250.0	0.00	0.00	2,249.7	0.0	20.0	6.2	0.00	0.00	0.00

SandRidge Energy

Survey Report

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Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Mutual 0780 4-8H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDMProd

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2,275.0	0.00	0.00	2,274.7	0.0	20.0	6.2	0.00	0.00	0.00
2,300.0	0.00	0.00	2,299.7	0.0	20.0	6.2	0.00	0.00	0.00
2,325.0	0.00	0.00	2,324.7	0.0	20.0	6.2	0.00	0.00	0.00
2,350.0	0.00	0.00	2,349.7	0.0	20.0	6.2	0.00	0.00	0.00
2,375.0	0.00	0.00	2,374.7	0.0	20.0	6.2	0.00	0.00	0.00
2,400.0	0.00	0.00	2,399.7	0.0	20.0	6.2	0.00	0.00	0.00
2,425.0	0.00	0.00	2,424.7	0.0	20.0	6.2	0.00	0.00	0.00
2,450.0	0.00	0.00	2,449.7	0.0	20.0	6.2	0.00	0.00	0.00
2,475.0	0.00	0.00	2,474.7	0.0	20.0	6.2	0.00	0.00	0.00
2,500.0	0.00	0.00	2,499.7	0.0	20.0	6.2	0.00	0.00	0.00
2,525.0	0.00	0.00	2,524.7	0.0	20.0	6.2	0.00	0.00	0.00
2,550.0	0.00	0.00	2,549.7	0.0	20.0	6.2	0.00	0.00	0.00
2,575.0	0.00	0.00	2,574.7	0.0	20.0	6.2	0.00	0.00	0.00
2,600.0	0.00	0.00	2,599.7	0.0	20.0	6.2	0.00	0.00	0.00
2,625.0	0.00	0.00	2,624.7	0.0	20.0	6.2	0.00	0.00	0.00
2,650.0	0.00	0.00	2,649.7	0.0	20.0	6.2	0.00	0.00	0.00
2,675.0	0.00	0.00	2,674.7	0.0	20.0	6.2	0.00	0.00	0.00
2,700.0	0.00	0.00	2,699.7	0.0	20.0	6.2	0.00	0.00	0.00
2,725.0	0.00	0.00	2,724.7	0.0	20.0	6.2	0.00	0.00	0.00
2,750.0	0.00	0.00	2,749.7	0.0	20.0	6.2	0.00	0.00	0.00
2,775.0	0.00	0.00	2,774.7	0.0	20.0	6.2	0.00	0.00	0.00
2,800.0	0.00	0.00	2,799.7	0.0	20.0	6.2	0.00	0.00	0.00
2,825.0	0.00	0.00	2,824.7	0.0	20.0	6.2	0.00	0.00	0.00
2,850.0	0.00	0.00	2,849.7	0.0	20.0	6.2	0.00	0.00	0.00
2,875.0	0.00	0.00	2,874.7	0.0	20.0	6.2	0.00	0.00	0.00
2,900.0	0.00	0.00	2,899.7	0.0	20.0	6.2	0.00	0.00	0.00
2,925.0	0.00	0.00	2,924.7	0.0	20.0	6.2	0.00	0.00	0.00
2,950.0	0.00	0.00	2,949.7	0.0	20.0	6.2	0.00	0.00	0.00
2,975.0	0.00	0.00	2,974.7	0.0	20.0	6.2	0.00	0.00	0.00
3,000.0	0.00	0.00	2,999.7	0.0	20.0	6.2	0.00	0.00	0.00
3,025.0	0.00	0.00	3,024.7	0.0	20.0	6.2	0.00	0.00	0.00
3,050.0	0.00	0.00	3,049.7	0.0	20.0	6.2	0.00	0.00	0.00
3,075.0	0.00	0.00	3,074.7	0.0	20.0	6.2	0.00	0.00	0.00
3,099.6	0.00	0.00	3,099.3	0.0	20.0	6.2	0.00	0.00	0.00
Start Build 2.00									
3,100.0	0.01	90.00	3,099.7	0.0	20.0	6.2	2.00	2.00	0.00
3,125.0	0.51	90.00	3,124.7	0.0	20.1	6.2	2.00	2.00	0.00
3,150.0	1.01	90.00	3,149.7	0.0	20.4	6.3	2.00	2.00	0.00
3,175.0	1.51	90.00	3,174.7	0.0	21.0	6.5	2.00	2.00	0.00
3,200.0	2.01	90.00	3,199.7	0.0	21.8	6.7	2.00	2.00	0.00
3,225.0	2.51	90.00	3,224.6	0.0	22.7	7.0	2.00	2.00	0.00
3,250.0	3.01	90.00	3,249.6	0.0	23.9	7.4	2.00	2.00	0.00
3,275.0	3.51	90.00	3,274.6	0.0	25.4	7.9	2.00	2.00	0.00

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Mutual 0780 4-8H
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Mutual 0780 4-8H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDMProd

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,300.0	4.01	90.00	3,299.5	0.0	27.0	8.4	2.00	2.00	0.00
3,325.0	4.51	90.00	3,324.5	0.0	28.9	8.9	2.00	2.00	0.00
3,350.0	5.01	90.00	3,349.4	0.0	30.9	9.6	2.00	2.00	0.00
3,375.0	5.51	90.00	3,374.3	0.0	33.2	10.3	2.00	2.00	0.00
3,400.0	6.01	90.00	3,399.1	0.0	35.7	11.1	2.00	2.00	0.00
3,425.0	6.51	90.00	3,424.0	0.0	38.5	11.9	2.00	2.00	0.00
3,450.0	7.01	90.00	3,448.8	0.0	41.4	12.8	2.00	2.00	0.00
3,475.0	7.51	90.00	3,473.6	0.0	44.6	13.8	2.00	2.00	0.00
3,500.0	8.01	90.00	3,498.4	0.0	47.9	14.8	2.00	2.00	0.00
3,525.0	8.51	90.00	3,523.1	0.0	51.5	16.0	2.00	2.00	0.00
3,550.0	9.01	90.00	3,547.8	0.0	55.3	17.1	2.00	2.00	0.00
3,575.0	9.51	90.00	3,572.5	0.0	59.4	18.4	2.00	2.00	0.00
3,600.0	10.01	90.00	3,597.1	0.0	63.6	19.7	2.00	2.00	0.00
3,625.0	10.51	90.00	3,621.7	0.0	68.0	21.1	2.00	2.00	0.00
3,650.0	11.01	90.00	3,646.3	0.0	72.7	22.5	2.00	2.00	0.00
3,675.0	11.51	90.00	3,670.8	0.0	77.6	24.0	2.00	2.00	0.00
3,700.0	12.01	90.00	3,695.3	0.0	82.7	25.6	2.00	2.00	0.00
3,725.0	12.51	90.00	3,719.7	0.0	88.0	27.2	2.00	2.00	0.00
3,750.0	13.01	90.00	3,744.1	0.0	93.5	29.0	2.00	2.00	0.00
3,775.0	13.51	90.00	3,768.4	0.0	99.2	30.7	2.00	2.00	0.00
3,800.0	14.01	90.00	3,792.7	0.0	105.2	32.6	2.00	2.00	0.00
3,825.0	14.51	90.00	3,817.0	0.0	111.3	34.5	2.00	2.00	0.00
3,850.0	15.01	90.00	3,841.1	0.0	117.7	36.4	2.00	2.00	0.00
3,875.0	15.51	90.00	3,865.3	0.0	124.3	38.5	2.00	2.00	0.00
3,887.9	15.77	90.00	3,877.7	0.0	127.8	39.6	2.00	2.00	0.00
Start 2658.1 hold at 3887.9 MD									
3,900.0	15.77	90.00	3,889.3	0.0	131.1	40.6	0.00	0.00	0.00
3,925.0	15.77	90.00	3,913.4	0.0	137.9	42.7	0.00	0.00	0.00
3,950.0	15.77	90.00	3,937.4	0.0	144.6	44.8	0.00	0.00	0.00
3,975.0	15.77	90.00	3,961.5	0.0	151.4	46.9	0.00	0.00	0.00
4,000.0	15.77	90.00	3,985.6	0.0	158.2	49.0	0.00	0.00	0.00
4,025.0	15.77	90.00	4,009.6	0.0	165.0	51.1	0.00	0.00	0.00
4,050.0	15.77	90.00	4,033.7	0.0	171.8	53.2	0.00	0.00	0.00
4,075.0	15.77	90.00	4,057.7	0.0	178.6	55.3	0.00	0.00	0.00
4,100.0	15.77	90.00	4,081.8	0.0	185.4	57.4	0.00	0.00	0.00
4,125.0	15.77	90.00	4,105.9	0.0	192.2	59.5	0.00	0.00	0.00
4,150.0	15.77	90.00	4,129.9	0.0	199.0	61.6	0.00	0.00	0.00
4,175.0	15.77	90.00	4,154.0	0.0	205.8	63.7	0.00	0.00	0.00
4,200.0	15.77	90.00	4,178.0	0.0	212.6	65.8	0.00	0.00	0.00
4,225.0	15.77	90.00	4,202.1	0.0	219.4	67.9	0.00	0.00	0.00
4,250.0	15.77	90.00	4,226.2	0.0	226.2	70.0	0.00	0.00	0.00
4,275.0	15.77	90.00	4,250.2	0.0	232.9	72.1	0.00	0.00	0.00
4,300.0	15.77	90.00	4,274.3	0.0	239.7	74.2	0.00	0.00	0.00
4,325.0	15.77	90.00	4,298.3	0.0	246.5	76.3	0.00	0.00	0.00

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Mutual 0780 4-8H
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Mutual 0780 4-8H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDMProd

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,350.0	15.77	90.00	4,322.4	0.0	253.3	78.4	0.00	0.00	0.00
4,375.0	15.77	90.00	4,346.5	0.0	260.1	80.5	0.00	0.00	0.00
4,400.0	15.77	90.00	4,370.5	0.0	266.9	82.6	0.00	0.00	0.00
4,425.0	15.77	90.00	4,394.6	0.0	273.7	84.7	0.00	0.00	0.00
4,450.0	15.77	90.00	4,418.6	0.0	280.5	86.8	0.00	0.00	0.00
4,475.0	15.77	90.00	4,442.7	0.0	287.3	88.9	0.00	0.00	0.00
4,500.0	15.77	90.00	4,466.7	0.0	294.1	91.0	0.00	0.00	0.00
4,525.0	15.77	90.00	4,490.8	0.0	300.9	93.2	0.00	0.00	0.00
4,550.0	15.77	90.00	4,514.9	0.0	307.7	95.3	0.00	0.00	0.00
4,575.0	15.77	90.00	4,538.9	0.0	314.5	97.4	0.00	0.00	0.00
4,600.0	15.77	90.00	4,563.0	0.0	321.3	99.5	0.00	0.00	0.00
4,625.0	15.77	90.00	4,587.0	0.0	328.0	101.6	0.00	0.00	0.00
4,650.0	15.77	90.00	4,611.1	0.0	334.8	103.7	0.00	0.00	0.00
4,675.0	15.77	90.00	4,635.2	0.0	341.6	105.8	0.00	0.00	0.00
4,700.0	15.77	90.00	4,659.2	0.0	348.4	107.9	0.00	0.00	0.00
4,725.0	15.77	90.00	4,683.3	0.0	355.2	110.0	0.00	0.00	0.00
4,750.0	15.77	90.00	4,707.3	0.0	362.0	112.1	0.00	0.00	0.00
4,775.0	15.77	90.00	4,731.4	0.0	368.8	114.2	0.00	0.00	0.00
4,800.0	15.77	90.00	4,755.5	0.0	375.6	116.3	0.00	0.00	0.00
4,825.0	15.77	90.00	4,779.5	0.0	382.4	118.4	0.00	0.00	0.00
4,850.0	15.77	90.00	4,803.6	0.0	389.2	120.5	0.00	0.00	0.00
4,875.0	15.77	90.00	4,827.6	0.0	396.0	122.6	0.00	0.00	0.00
4,900.0	15.77	90.00	4,851.7	0.0	402.8	124.7	0.00	0.00	0.00
4,925.0	15.77	90.00	4,875.8	0.0	409.6	126.8	0.00	0.00	0.00
4,950.0	15.77	90.00	4,899.8	0.0	416.4	128.9	0.00	0.00	0.00
4,975.0	15.77	90.00	4,923.9	0.0	423.1	131.0	0.00	0.00	0.00
5,000.0	15.77	90.00	4,947.9	0.0	429.9	133.1	0.00	0.00	0.00
5,025.0	15.77	90.00	4,972.0	0.0	436.7	135.2	0.00	0.00	0.00
5,050.0	15.77	90.00	4,996.1	0.0	443.5	137.3	0.00	0.00	0.00
5,075.0	15.77	90.00	5,020.1	0.0	450.3	139.4	0.00	0.00	0.00
5,100.0	15.77	90.00	5,044.2	0.0	457.1	141.5	0.00	0.00	0.00
5,125.0	15.77	90.00	5,068.2	0.0	463.9	143.6	0.00	0.00	0.00
5,150.0	15.77	90.00	5,092.3	0.0	470.7	145.7	0.00	0.00	0.00
5,175.0	15.77	90.00	5,116.4	0.0	477.5	147.8	0.00	0.00	0.00
5,200.0	15.77	90.00	5,140.4	0.0	484.3	149.9	0.00	0.00	0.00
5,225.0	15.77	90.00	5,164.5	0.0	491.1	152.0	0.00	0.00	0.00
5,250.0	15.77	90.00	5,188.5	0.0	497.9	154.1	0.00	0.00	0.00
5,275.0	15.77	90.00	5,212.6	0.0	504.7	156.2	0.00	0.00	0.00
5,300.0	15.77	90.00	5,236.7	0.0	511.4	158.3	0.00	0.00	0.00
5,325.0	15.77	90.00	5,260.7	0.0	518.2	160.4	0.00	0.00	0.00
5,350.0	15.77	90.00	5,284.8	0.0	525.0	162.5	0.00	0.00	0.00
5,375.0	15.77	90.00	5,308.8	0.0	531.8	164.7	0.00	0.00	0.00
5,400.0	15.77	90.00	5,332.9	0.0	538.6	166.8	0.00	0.00	0.00

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Mutual 0780 4-8H
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Mutual 0780 4-8H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDMProd

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,425.0	15.77	90.00	5,357.0	0.0	545.4	168.9	0.00	0.00	0.00
5,450.0	15.77	90.00	5,381.0	0.0	552.2	171.0	0.00	0.00	0.00
5,475.0	15.77	90.00	5,405.1	0.0	559.0	173.1	0.00	0.00	0.00
5,500.0	15.77	90.00	5,429.1	0.0	565.8	175.2	0.00	0.00	0.00
5,525.0	15.77	90.00	5,453.2	0.0	572.6	177.3	0.00	0.00	0.00
5,550.0	15.77	90.00	5,477.2	0.0	579.4	179.4	0.00	0.00	0.00
5,575.0	15.77	90.00	5,501.3	0.0	586.2	181.5	0.00	0.00	0.00
5,600.0	15.77	90.00	5,525.4	0.0	593.0	183.6	0.00	0.00	0.00
5,625.0	15.77	90.00	5,549.4	0.0	599.8	185.7	0.00	0.00	0.00
5,650.0	15.77	90.00	5,573.5	0.0	606.5	187.8	0.00	0.00	0.00
5,675.0	15.77	90.00	5,597.5	0.0	613.3	189.9	0.00	0.00	0.00
5,700.0	15.77	90.00	5,621.6	0.0	620.1	192.0	0.00	0.00	0.00
5,725.0	15.77	90.00	5,645.7	0.0	626.9	194.1	0.00	0.00	0.00
5,750.0	15.77	90.00	5,669.7	0.0	633.7	196.2	0.00	0.00	0.00
5,775.0	15.77	90.00	5,693.8	0.0	640.5	198.3	0.00	0.00	0.00
5,800.0	15.77	90.00	5,717.8	0.0	647.3	200.4	0.00	0.00	0.00
5,825.0	15.77	90.00	5,741.9	0.0	654.1	202.5	0.00	0.00	0.00
5,850.0	15.77	90.00	5,766.0	0.0	660.9	204.6	0.00	0.00	0.00
5,875.0	15.77	90.00	5,790.0	0.0	667.7	206.7	0.00	0.00	0.00
5,900.0	15.77	90.00	5,814.1	0.0	674.5	208.8	0.00	0.00	0.00
5,925.0	15.77	90.00	5,838.1	0.0	681.3	210.9	0.00	0.00	0.00
5,950.0	15.77	90.00	5,862.2	0.0	688.1	213.0	0.00	0.00	0.00
5,975.0	15.77	90.00	5,886.3	0.0	694.9	215.1	0.00	0.00	0.00
6,000.0	15.77	90.00	5,910.3	0.0	701.6	217.2	0.00	0.00	0.00
6,025.0	15.77	90.00	5,934.4	0.0	708.4	219.3	0.00	0.00	0.00
6,050.0	15.77	90.00	5,958.4	0.0	715.2	221.4	0.00	0.00	0.00
6,075.0	15.77	90.00	5,982.5	0.0	722.0	223.5	0.00	0.00	0.00
6,100.0	15.77	90.00	6,006.6	0.0	728.8	225.6	0.00	0.00	0.00
6,125.0	15.77	90.00	6,030.6	0.0	735.6	227.7	0.00	0.00	0.00
6,150.0	15.77	90.00	6,054.7	0.0	742.4	229.8	0.00	0.00	0.00
6,175.0	15.77	90.00	6,078.7	0.0	749.2	231.9	0.00	0.00	0.00
6,200.0	15.77	90.00	6,102.8	0.0	756.0	234.1	0.00	0.00	0.00
6,225.0	15.77	90.00	6,126.9	0.0	762.8	236.2	0.00	0.00	0.00
6,250.0	15.77	90.00	6,150.9	0.0	769.6	238.3	0.00	0.00	0.00
6,275.0	15.77	90.00	6,175.0	0.0	776.4	240.4	0.00	0.00	0.00
6,300.0	15.77	90.00	6,199.0	0.0	783.2	242.5	0.00	0.00	0.00
6,325.0	15.77	90.00	6,223.1	0.0	789.9	244.6	0.00	0.00	0.00
6,350.0	15.77	90.00	6,247.2	0.0	796.7	246.7	0.00	0.00	0.00
6,375.0	15.77	90.00	6,271.2	0.0	803.5	248.8	0.00	0.00	0.00
6,400.0	15.77	90.00	6,295.3	0.0	810.3	250.9	0.00	0.00	0.00
6,425.0	15.77	90.00	6,319.3	0.0	817.1	253.0	0.00	0.00	0.00
6,450.0	15.77	90.00	6,343.4	0.0	823.9	255.1	0.00	0.00	0.00
6,475.0	15.77	90.00	6,367.5	0.0	830.7	257.2	0.00	0.00	0.00

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Mutual 0780 4-8H
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Mutual 0780 4-8H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDMProd

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,500.0	15.77	90.00	6,391.5	0.0	837.5	259.3	0.00	0.00	0.00
6,525.0	15.77	90.00	6,415.6	0.0	844.3	261.4	0.00	0.00	0.00
6,546.0	15.77	90.00	6,435.8	0.0	850.0	263.2	0.00	0.00	0.00
Start DLS 10.00 TFO -12.38									
6,550.0	16.15	89.69	6,439.6	0.0	851.1	263.5	10.00	9.77	-7.71
6,575.0	18.61	88.05	6,463.5	0.2	858.6	266.0	10.00	9.81	-6.56
6,600.0	21.07	86.78	6,487.0	0.5	867.0	268.9	10.00	9.85	-5.08
6,625.0	23.54	85.77	6,510.1	1.2	876.5	272.5	10.00	9.88	-4.06
6,650.0	26.02	84.94	6,532.8	2.0	886.9	276.5	10.00	9.90	-3.33
6,675.0	28.49	84.24	6,555.0	3.1	898.3	281.1	10.00	9.92	-2.78
6,700.0	30.98	83.65	6,576.8	4.4	910.7	286.1	10.00	9.93	-2.37
6,725.0	33.46	83.14	6,597.9	5.9	923.9	291.7	10.00	9.94	-2.05
6,750.0	35.95	82.69	6,618.5	7.7	938.0	297.7	10.00	9.95	-1.80
6,775.0	38.44	82.29	6,638.4	9.7	953.0	304.3	10.00	9.95	-1.60
6,800.0	40.93	81.93	6,657.6	11.9	968.8	311.2	10.00	9.96	-1.43
6,825.0	43.42	81.61	6,676.1	14.3	985.4	318.7	10.00	9.96	-1.29
6,850.0	45.91	81.31	6,693.9	16.9	1,002.8	326.5	10.00	9.97	-1.18
6,875.0	48.40	81.04	6,710.9	19.7	1,020.9	334.8	10.00	9.97	-1.08
6,900.0	50.89	80.79	6,727.1	22.7	1,039.7	343.5	10.00	9.97	-1.00
6,925.0	53.39	80.55	6,742.4	25.9	1,059.2	352.6	10.00	9.97	-0.94
6,950.0	55.88	80.34	6,756.9	29.3	1,079.3	362.0	10.00	9.97	-0.88
6,975.0	58.37	80.13	6,770.5	32.9	1,100.0	371.8	10.00	9.98	-0.83
6,991.3	60.00	80.00	6,778.8	35.3	1,113.8	378.4	10.00	9.98	-0.79
Start 150.0 hold at 6991.3 MD									
7,000.0	60.00	80.00	6,783.2	36.6	1,121.2	381.9	0.00	0.00	0.00
7,025.0	60.00	80.00	6,795.7	40.3	1,142.5	392.1	0.00	0.00	0.00
7,050.0	60.00	80.00	6,808.2	44.1	1,163.9	402.3	0.00	0.00	0.00
7,075.0	60.00	80.00	6,820.7	47.9	1,185.2	412.4	0.00	0.00	0.00
7,100.0	60.00	80.00	6,833.2	51.6	1,206.5	422.6	0.00	0.00	0.00
7,125.0	60.00	80.00	6,845.7	55.4	1,227.8	432.8	0.00	0.00	0.00
7,141.3	60.00	80.00	6,853.8	57.8	1,241.7	439.4	0.00	0.00	0.00
Start DLS 10.00 TFO -84.96									
7,150.0	60.08	79.00	6,858.2	59.2	1,249.1	443.0	10.00	0.92	-11.49
7,175.0	60.35	76.14	6,870.6	63.9	1,270.3	454.0	10.00	1.09	-11.45
7,200.0	60.69	73.29	6,882.9	69.6	1,291.3	466.0	10.00	1.33	-11.39
7,225.0	61.08	70.46	6,895.1	76.4	1,312.1	478.9	10.00	1.57	-11.30
7,250.0	61.53	67.66	6,907.1	84.2	1,332.5	492.7	10.00	1.81	-11.21
7,275.0	62.04	64.88	6,918.9	93.1	1,352.7	507.3	10.00	2.04	-11.11
7,300.0	62.60	62.13	6,930.5	103.0	1,372.5	522.9	10.00	2.26	-11.00
7,325.0	63.22	59.41	6,941.9	113.9	1,391.9	539.2	10.00	2.47	-10.88
7,350.0	63.89	56.72	6,953.0	125.7	1,410.9	556.3	10.00	2.68	-10.76
7,375.0	64.61	54.06	6,963.9	138.5	1,429.5	574.2	10.00	2.87	-10.64
7,400.0	65.37	51.44	6,974.5	152.2	1,447.5	592.9	10.00	3.06	-10.51
7,425.0	66.18	48.84	6,984.7	166.8	1,465.0	612.2	10.00	3.24	-10.37

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Mutual 0780 4-8H
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Mutual 0780 4-8H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDMProd

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,450.0	67.04	46.28	6,994.6	182.3	1,481.9	632.1	10.00	3.41	-10.24
7,475.0	67.93	43.75	7,004.2	198.6	1,498.2	652.7	10.00	3.57	-10.11
7,500.0	68.86	41.26	7,013.4	215.8	1,513.9	673.9	10.00	3.73	-9.98
7,525.0	69.83	38.80	7,022.2	233.7	1,529.0	695.6	10.00	3.87	-9.85
7,550.0	70.83	36.36	7,030.7	252.3	1,543.3	717.7	10.00	4.01	-9.73
7,575.0	71.87	33.96	7,038.6	271.7	1,557.0	740.4	10.00	4.13	-9.61
7,600.0	72.93	31.59	7,046.2	291.7	1,569.9	763.4	10.00	4.25	-9.50
7,625.0	74.02	29.24	7,053.3	312.4	1,582.0	786.8	10.00	4.36	-9.39
7,650.0	75.13	26.92	7,060.0	333.6	1,593.4	810.6	10.00	4.46	-9.28
7,675.0	76.27	24.62	7,066.1	355.5	1,603.9	834.6	10.00	4.55	-9.19
7,700.0	77.43	22.35	7,071.8	377.8	1,613.6	858.8	10.00	4.64	-9.10
7,725.0	78.61	20.09	7,077.0	400.6	1,622.4	883.2	10.00	4.71	-9.02
7,750.0	79.81	17.86	7,081.7	423.8	1,630.4	907.8	10.00	4.78	-8.94
7,775.0	81.02	15.64	7,085.9	447.4	1,637.5	932.4	10.00	4.84	-8.87
7,800.0	82.24	13.44	7,089.5	471.4	1,643.7	957.1	10.00	4.90	-8.81
7,825.0	83.48	11.25	7,092.6	495.6	1,649.0	981.8	10.00	4.94	-8.76
7,850.0	84.72	9.07	7,095.2	520.1	1,653.4	1,006.4	10.00	4.98	-8.72
7,875.0	85.97	6.90	7,097.2	544.7	1,656.9	1,030.9	10.00	5.01	-8.68
7,900.0	87.23	4.73	7,098.7	569.6	1,659.4	1,055.3	10.00	5.03	-8.66
7,925.0	88.49	2.57	7,099.6	594.5	1,661.0	1,079.5	10.00	5.05	-8.64
7,950.0	89.76	0.41	7,100.0	619.5	1,661.6	1,103.5	10.00	5.06	-8.63
7,954.8	90.00	360.00	7,100.0	624.3	1,661.7	1,108.1	10.00	5.06	-8.63
Start 4478.6 hold at 7954.8 MD									
7,975.0	90.00	360.00	7,100.0	644.5	1,661.7	1,127.3	0.00	0.00	0.00
8,000.0	90.00	360.00	7,100.0	669.5	1,661.7	1,151.0	0.00	0.00	0.00
8,025.0	90.00	360.00	7,100.0	694.5	1,661.7	1,174.8	0.00	0.00	0.00
8,050.0	90.00	360.00	7,100.0	719.5	1,661.7	1,198.6	0.00	0.00	0.00
8,075.0	90.00	360.00	7,100.0	744.5	1,661.7	1,222.3	0.00	0.00	0.00
8,100.0	90.00	360.00	7,100.0	769.5	1,661.7	1,246.1	0.00	0.00	0.00
8,125.0	90.00	360.00	7,100.0	794.5	1,661.7	1,269.9	0.00	0.00	0.00
8,150.0	90.00	360.00	7,100.0	819.5	1,661.7	1,293.7	0.00	0.00	0.00
8,175.0	90.00	360.00	7,100.0	844.5	1,661.7	1,317.4	0.00	0.00	0.00
8,200.0	90.00	360.00	7,100.0	869.5	1,661.7	1,341.2	0.00	0.00	0.00
8,225.0	90.00	360.00	7,100.0	894.5	1,661.7	1,365.0	0.00	0.00	0.00
8,250.0	90.00	360.00	7,100.0	919.5	1,661.7	1,388.7	0.00	0.00	0.00
8,275.0	90.00	360.00	7,100.0	944.5	1,661.7	1,412.5	0.00	0.00	0.00
8,300.0	90.00	360.00	7,100.0	969.5	1,661.6	1,436.3	0.00	0.00	0.00
8,325.0	90.00	360.00	7,100.0	994.5	1,661.6	1,460.1	0.00	0.00	0.00
8,350.0	90.00	360.00	7,100.0	1,019.5	1,661.6	1,483.8	0.00	0.00	0.00
8,375.0	90.00	360.00	7,100.0	1,044.5	1,661.6	1,507.6	0.00	0.00	0.00
8,400.0	90.00	360.00	7,100.0	1,069.5	1,661.6	1,531.4	0.00	0.00	0.00
8,425.0	90.00	360.00	7,100.0	1,094.5	1,661.6	1,555.1	0.00	0.00	0.00
8,450.0	90.00	360.00	7,100.0	1,119.5	1,661.6	1,578.9	0.00	0.00	0.00
8,475.0	90.00	360.00	7,100.0	1,144.5	1,661.6	1,602.7	0.00	0.00	0.00

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Mutual 0780 4-8H
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Mutual 0780 4-8H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDMProd

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,500.0	90.00	360.00	7,100.0	1,169.5	1,661.6	1,626.5	0.00	0.00	0.00
8,525.0	90.00	360.00	7,100.0	1,194.5	1,661.6	1,650.2	0.00	0.00	0.00
8,550.0	90.00	360.00	7,100.0	1,219.5	1,661.6	1,674.0	0.00	0.00	0.00
8,575.0	90.00	360.00	7,100.0	1,244.5	1,661.6	1,697.8	0.00	0.00	0.00
8,600.0	90.00	360.00	7,100.0	1,269.5	1,661.6	1,721.5	0.00	0.00	0.00
8,625.0	90.00	360.00	7,100.0	1,294.5	1,661.6	1,745.3	0.00	0.00	0.00
8,650.0	90.00	360.00	7,100.0	1,319.5	1,661.6	1,769.1	0.00	0.00	0.00
8,675.0	90.00	360.00	7,100.0	1,344.5	1,661.6	1,792.9	0.00	0.00	0.00
8,700.0	90.00	360.00	7,100.0	1,369.5	1,661.6	1,816.6	0.00	0.00	0.00
8,725.0	90.00	360.00	7,100.0	1,394.5	1,661.6	1,840.4	0.00	0.00	0.00
8,750.0	90.00	360.00	7,100.0	1,419.5	1,661.6	1,864.2	0.00	0.00	0.00
8,775.0	90.00	360.00	7,100.0	1,444.5	1,661.6	1,887.9	0.00	0.00	0.00
8,800.0	90.00	360.00	7,100.0	1,469.5	1,661.6	1,911.7	0.00	0.00	0.00
8,825.0	90.00	360.00	7,100.0	1,494.5	1,661.6	1,935.5	0.00	0.00	0.00
8,850.0	90.00	360.00	7,100.0	1,519.5	1,661.6	1,959.3	0.00	0.00	0.00
8,875.0	90.00	360.00	7,100.0	1,544.5	1,661.6	1,983.0	0.00	0.00	0.00
8,900.0	90.00	360.00	7,100.0	1,569.5	1,661.6	2,006.8	0.00	0.00	0.00
8,925.0	90.00	360.00	7,100.0	1,594.5	1,661.6	2,030.6	0.00	0.00	0.00
8,950.0	90.00	360.00	7,100.0	1,619.5	1,661.6	2,054.3	0.00	0.00	0.00
8,975.0	90.00	360.00	7,100.0	1,644.5	1,661.6	2,078.1	0.00	0.00	0.00
9,000.0	90.00	360.00	7,100.0	1,669.5	1,661.6	2,101.9	0.00	0.00	0.00
9,025.0	90.00	360.00	7,100.0	1,694.5	1,661.6	2,125.7	0.00	0.00	0.00
9,050.0	90.00	360.00	7,100.0	1,719.5	1,661.6	2,149.4	0.00	0.00	0.00
9,075.0	90.00	360.00	7,100.0	1,744.5	1,661.6	2,173.2	0.00	0.00	0.00
9,100.0	90.00	360.00	7,100.0	1,769.5	1,661.6	2,197.0	0.00	0.00	0.00
9,125.0	90.00	360.00	7,100.0	1,794.5	1,661.6	2,220.7	0.00	0.00	0.00
9,150.0	90.00	360.00	7,100.0	1,819.5	1,661.6	2,244.5	0.00	0.00	0.00
9,175.0	90.00	360.00	7,100.0	1,844.5	1,661.6	2,268.3	0.00	0.00	0.00
9,200.0	90.00	360.00	7,100.0	1,869.5	1,661.6	2,292.1	0.00	0.00	0.00
9,225.0	90.00	360.00	7,100.0	1,894.5	1,661.6	2,315.8	0.00	0.00	0.00
9,250.0	90.00	360.00	7,100.0	1,919.5	1,661.6	2,339.6	0.00	0.00	0.00
9,275.0	90.00	360.00	7,100.0	1,944.5	1,661.6	2,363.4	0.00	0.00	0.00
9,300.0	90.00	360.00	7,100.0	1,969.5	1,661.6	2,387.1	0.00	0.00	0.00
9,325.0	90.00	360.00	7,100.0	1,994.5	1,661.6	2,410.9	0.00	0.00	0.00
9,350.0	90.00	360.00	7,100.0	2,019.5	1,661.6	2,434.7	0.00	0.00	0.00
9,375.0	90.00	360.00	7,100.0	2,044.5	1,661.6	2,458.5	0.00	0.00	0.00
9,400.0	90.00	360.00	7,100.0	2,069.5	1,661.6	2,482.2	0.00	0.00	0.00
9,425.0	90.00	360.00	7,100.0	2,094.5	1,661.6	2,506.0	0.00	0.00	0.00
9,450.0	90.00	360.00	7,100.0	2,119.5	1,661.6	2,529.8	0.00	0.00	0.00
9,475.0	90.00	360.00	7,100.0	2,144.5	1,661.6	2,553.5	0.00	0.00	0.00
9,500.0	90.00	360.00	7,100.0	2,169.5	1,661.6	2,577.3	0.00	0.00	0.00
9,525.0	90.00	360.00	7,100.0	2,194.5	1,661.6	2,601.1	0.00	0.00	0.00
9,550.0	90.00	360.00	7,100.0	2,219.5	1,661.6	2,624.9	0.00	0.00	0.00

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Mutual 0780 4-8H
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Mutual 0780 4-8H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	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)
9,575.0	90.00	360.00	7,100.0	2,244.5	1,661.6	2,648.6	0.00	0.00	0.00
9,600.0	90.00	360.00	7,100.0	2,269.5	1,661.6	2,672.4	0.00	0.00	0.00
9,625.0	90.00	360.00	7,100.0	2,294.5	1,661.6	2,696.2	0.00	0.00	0.00
9,650.0	90.00	360.00	7,100.0	2,319.5	1,661.6	2,719.9	0.00	0.00	0.00
9,675.0	90.00	360.00	7,100.0	2,344.5	1,661.6	2,743.7	0.00	0.00	0.00
9,700.0	90.00	360.00	7,100.0	2,369.5	1,661.6	2,767.5	0.00	0.00	0.00
9,725.0	90.00	360.00	7,100.0	2,394.5	1,661.6	2,791.3	0.00	0.00	0.00
9,750.0	90.00	360.00	7,100.0	2,419.5	1,661.6	2,815.0	0.00	0.00	0.00
9,775.0	90.00	360.00	7,100.0	2,444.5	1,661.6	2,838.8	0.00	0.00	0.00
9,800.0	90.00	360.00	7,100.0	2,469.5	1,661.6	2,862.6	0.00	0.00	0.00
9,825.0	90.00	360.00	7,100.0	2,494.5	1,661.6	2,886.3	0.00	0.00	0.00
9,850.0	90.00	360.00	7,100.0	2,519.5	1,661.6	2,910.1	0.00	0.00	0.00
9,875.0	90.00	360.00	7,100.0	2,544.5	1,661.6	2,933.9	0.00	0.00	0.00
9,900.0	90.00	360.00	7,100.0	2,569.5	1,661.6	2,957.7	0.00	0.00	0.00
9,925.0	90.00	360.00	7,100.0	2,594.5	1,661.6	2,981.4	0.00	0.00	0.00
9,950.0	90.00	360.00	7,100.0	2,619.5	1,661.6	3,005.2	0.00	0.00	0.00
9,975.0	90.00	360.00	7,100.0	2,644.5	1,661.6	3,029.0	0.00	0.00	0.00
10,000.0	90.00	360.00	7,100.0	2,669.5	1,661.6	3,052.7	0.00	0.00	0.00
10,025.0	90.00	360.00	7,100.0	2,694.5	1,661.6	3,076.5	0.00	0.00	0.00
10,050.0	90.00	360.00	7,100.0	2,719.5	1,661.6	3,100.3	0.00	0.00	0.00
10,075.0	90.00	360.00	7,100.0	2,744.5	1,661.6	3,124.1	0.00	0.00	0.00
10,100.0	90.00	360.00	7,100.0	2,769.5	1,661.6	3,147.8	0.00	0.00	0.00
10,125.0	90.00	360.00	7,100.0	2,794.5	1,661.6	3,171.6	0.00	0.00	0.00
10,150.0	90.00	360.00	7,100.0	2,819.5	1,661.6	3,195.4	0.00	0.00	0.00
10,175.0	90.00	360.00	7,100.0	2,844.5	1,661.6	3,219.1	0.00	0.00	0.00
10,200.0	90.00	360.00	7,100.0	2,869.5	1,661.6	3,242.9	0.00	0.00	0.00
10,225.0	90.00	360.00	7,100.0	2,894.5	1,661.6	3,266.7	0.00	0.00	0.00
10,250.0	90.00	360.00	7,100.0	2,919.5	1,661.6	3,290.5	0.00	0.00	0.00
10,275.0	90.00	360.00	7,100.0	2,944.5	1,661.6	3,314.2	0.00	0.00	0.00
10,300.0	90.00	360.00	7,100.0	2,969.5	1,661.6	3,338.0	0.00	0.00	0.00
10,325.0	90.00	360.00	7,100.0	2,994.5	1,661.6	3,361.8	0.00	0.00	0.00
10,350.0	90.00	360.00	7,100.0	3,019.5	1,661.6	3,385.6	0.00	0.00	0.00
10,375.0	90.00	360.00	7,100.0	3,044.5	1,661.6	3,409.3	0.00	0.00	0.00
10,400.0	90.00	360.00	7,100.0	3,069.5	1,661.6	3,433.1	0.00	0.00	0.00
10,425.0	90.00	360.00	7,100.0	3,094.5	1,661.6	3,456.9	0.00	0.00	0.00
10,450.0	90.00	360.00	7,100.0	3,119.5	1,661.6	3,480.6	0.00	0.00	0.00
10,475.0	90.00	360.00	7,100.0	3,144.5	1,661.6	3,504.4	0.00	0.00	0.00
10,500.0	90.00	360.00	7,100.0	3,169.5	1,661.6	3,528.2	0.00	0.00	0.00
10,525.0	90.00	360.00	7,100.0	3,194.5	1,661.6	3,552.0	0.00	0.00	0.00
10,550.0	90.00	360.00	7,100.0	3,219.5	1,661.6	3,575.7	0.00	0.00	0.00
10,575.0	90.00	360.00	7,100.0	3,244.5	1,661.6	3,599.5	0.00	0.00	0.00
10,600.0	90.00	360.00	7,100.0	3,269.5	1,661.6	3,623.3	0.00	0.00	0.00
10,625.0	90.00	360.00	7,100.0	3,294.5	1,661.6	3,647.0	0.00	0.00	0.00

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Mutual 0780 4-8H
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Mutual 0780 4-8H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	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	360.00	7,100.0	3,319.5	1,661.6	3,670.8	0.00	0.00	0.00
10,675.0	90.00	360.00	7,100.0	3,344.5	1,661.6	3,694.6	0.00	0.00	0.00
10,700.0	90.00	360.00	7,100.0	3,369.5	1,661.6	3,718.4	0.00	0.00	0.00
10,725.0	90.00	360.00	7,100.0	3,394.5	1,661.6	3,742.1	0.00	0.00	0.00
10,750.0	90.00	360.00	7,100.0	3,419.5	1,661.6	3,765.9	0.00	0.00	0.00
10,775.0	90.00	360.00	7,100.0	3,444.5	1,661.6	3,789.7	0.00	0.00	0.00
10,800.0	90.00	360.00	7,100.0	3,469.5	1,661.6	3,813.4	0.00	0.00	0.00
10,825.0	90.00	360.00	7,100.0	3,494.5	1,661.6	3,837.2	0.00	0.00	0.00
10,850.0	90.00	360.00	7,100.0	3,519.5	1,661.6	3,861.0	0.00	0.00	0.00
10,875.0	90.00	360.00	7,100.0	3,544.5	1,661.6	3,884.8	0.00	0.00	0.00
10,900.0	90.00	360.00	7,100.0	3,569.5	1,661.6	3,908.5	0.00	0.00	0.00
10,925.0	90.00	360.00	7,100.0	3,594.5	1,661.6	3,932.3	0.00	0.00	0.00
10,950.0	90.00	360.00	7,100.0	3,619.5	1,661.6	3,956.1	0.00	0.00	0.00
10,975.0	90.00	360.00	7,100.0	3,644.5	1,661.6	3,979.8	0.00	0.00	0.00
11,000.0	90.00	360.00	7,100.0	3,669.5	1,661.6	4,003.6	0.00	0.00	0.00
11,025.0	90.00	360.00	7,100.0	3,694.5	1,661.6	4,027.4	0.00	0.00	0.00
11,050.0	90.00	360.00	7,100.0	3,719.5	1,661.6	4,051.2	0.00	0.00	0.00
11,075.0	90.00	360.00	7,100.0	3,744.5	1,661.6	4,074.9	0.00	0.00	0.00
11,100.0	90.00	360.00	7,100.0	3,769.5	1,661.6	4,098.7	0.00	0.00	0.00
11,125.0	90.00	360.00	7,100.0	3,794.5	1,661.6	4,122.5	0.00	0.00	0.00
11,150.0	90.00	360.00	7,100.0	3,819.5	1,661.6	4,146.2	0.00	0.00	0.00
11,175.0	90.00	360.00	7,100.0	3,844.5	1,661.6	4,170.0	0.00	0.00	0.00
11,200.0	90.00	360.00	7,100.0	3,869.5	1,661.6	4,193.8	0.00	0.00	0.00
11,225.0	90.00	360.00	7,100.0	3,894.5	1,661.6	4,217.6	0.00	0.00	0.00
11,250.0	90.00	360.00	7,100.0	3,919.5	1,661.6	4,241.3	0.00	0.00	0.00
11,275.0	90.00	360.00	7,100.0	3,944.5	1,661.6	4,265.1	0.00	0.00	0.00
11,300.0	90.00	360.00	7,100.0	3,969.5	1,661.6	4,288.9	0.00	0.00	0.00
11,325.0	90.00	360.00	7,100.0	3,994.5	1,661.6	4,312.6	0.00	0.00	0.00
11,350.0	90.00	360.00	7,100.0	4,019.5	1,661.6	4,336.4	0.00	0.00	0.00
11,375.0	90.00	360.00	7,100.0	4,044.5	1,661.6	4,360.2	0.00	0.00	0.00
11,400.0	90.00	360.00	7,100.0	4,069.5	1,661.6	4,384.0	0.00	0.00	0.00
11,425.0	90.00	360.00	7,100.0	4,094.5	1,661.6	4,407.7	0.00	0.00	0.00
11,450.0	90.00	360.00	7,100.0	4,119.5	1,661.6	4,431.5	0.00	0.00	0.00
11,475.0	90.00	360.00	7,100.0	4,144.5	1,661.6	4,455.3	0.00	0.00	0.00
11,500.0	90.00	360.00	7,100.0	4,169.5	1,661.6	4,479.0	0.00	0.00	0.00
11,525.0	90.00	360.00	7,100.0	4,194.5	1,661.6	4,502.8	0.00	0.00	0.00
11,550.0	90.00	360.00	7,100.0	4,219.5	1,661.6	4,526.6	0.00	0.00	0.00
11,575.0	90.00	360.00	7,100.0	4,244.5	1,661.6	4,550.4	0.00	0.00	0.00
11,600.0	90.00	360.00	7,100.0	4,269.5	1,661.6	4,574.1	0.00	0.00	0.00
11,625.0	90.00	360.00	7,100.0	4,294.5	1,661.6	4,597.9	0.00	0.00	0.00
11,650.0	90.00	360.00	7,100.0	4,319.5	1,661.6	4,621.7	0.00	0.00	0.00
11,675.0	90.00	360.00	7,100.0	4,344.5	1,661.6	4,645.4	0.00	0.00	0.00
11,700.0	90.00	360.00	7,100.0	4,369.5	1,661.6	4,669.2	0.00	0.00	0.00
11,725.0	90.00	360.00	7,100.0	4,394.5	1,661.6	4,693.0	0.00	0.00	0.00

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Mutual 0780 4-8H
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Mutual 0780 4-8H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDMProd

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,750.0	90.00	360.00	7,100.0	4,419.5	1,661.6	4,716.8	0.00	0.00	0.00
11,775.0	90.00	360.00	7,100.0	4,444.5	1,661.6	4,740.5	0.00	0.00	0.00
11,800.0	90.00	360.00	7,100.0	4,469.5	1,661.6	4,764.3	0.00	0.00	0.00
11,825.0	90.00	360.00	7,100.0	4,494.5	1,661.6	4,788.1	0.00	0.00	0.00
11,850.0	90.00	360.00	7,100.0	4,519.5	1,661.6	4,811.8	0.00	0.00	0.00
11,875.0	90.00	360.00	7,100.0	4,544.5	1,661.6	4,835.6	0.00	0.00	0.00
11,900.0	90.00	360.00	7,100.0	4,569.5	1,661.6	4,859.4	0.00	0.00	0.00
11,925.0	90.00	360.00	7,100.0	4,594.5	1,661.6	4,883.2	0.00	0.00	0.00
11,950.0	90.00	360.00	7,100.0	4,619.5	1,661.6	4,906.9	0.00	0.00	0.00
11,975.0	90.00	360.00	7,100.0	4,644.5	1,661.6	4,930.7	0.00	0.00	0.00
12,000.0	90.00	360.00	7,100.0	4,669.5	1,661.6	4,954.5	0.00	0.00	0.00
12,025.0	90.00	360.00	7,100.0	4,694.5	1,661.6	4,978.2	0.00	0.00	0.00
12,050.0	90.00	360.00	7,100.0	4,719.5	1,661.6	5,002.0	0.00	0.00	0.00
12,075.0	90.00	360.00	7,100.0	4,744.5	1,661.6	5,025.8	0.00	0.00	0.00
12,100.0	90.00	360.00	7,100.0	4,769.5	1,661.6	5,049.6	0.00	0.00	0.00
12,125.0	90.00	360.00	7,100.0	4,794.5	1,661.6	5,073.3	0.00	0.00	0.00
12,150.0	90.00	360.00	7,100.0	4,819.5	1,661.6	5,097.1	0.00	0.00	0.00
12,175.0	90.00	360.00	7,100.0	4,844.5	1,661.6	5,120.9	0.00	0.00	0.00
12,200.0	90.00	360.00	7,100.0	4,869.5	1,661.6	5,144.6	0.00	0.00	0.00
12,225.0	90.00	360.00	7,100.0	4,894.5	1,661.6	5,168.4	0.00	0.00	0.00
12,250.0	90.00	360.00	7,100.0	4,919.5	1,661.6	5,192.2	0.00	0.00	0.00
12,275.0	90.00	360.00	7,100.0	4,944.5	1,661.6	5,216.0	0.00	0.00	0.00
12,300.0	90.00	360.00	7,100.0	4,969.5	1,661.6	5,239.7	0.00	0.00	0.00
12,325.0	90.00	360.00	7,100.0	4,994.5	1,661.6	5,263.5	0.00	0.00	0.00
12,350.0	90.00	360.00	7,100.0	5,019.5	1,661.6	5,287.3	0.00	0.00	0.00
12,375.0	90.00	360.00	7,100.0	5,044.5	1,661.6	5,311.0	0.00	0.00	0.00
12,400.0	90.00	360.00	7,100.0	5,069.5	1,661.6	5,334.8	0.00	0.00	0.00
12,425.0	90.00	360.00	7,100.0	5,094.5	1,661.6	5,358.6	0.00	0.00	0.00
12,433.4	90.00	360.00	7,100.0	5,102.9	1,661.6	5,366.6	0.00	0.00	0.00
TD at 12433.4									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Mutual 4-8H	0.00	360.00	7,100.0	5,102.9	1,661.6	1,462,215.53	2,750,454.79	40° 35' 55.351 N	106° 23' 55.137 W
- plan hits target center									
- Point									

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Mutual 0780 4-8H
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Well:	Mutual 0780 4-8H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDMProd

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,504.0	5,433.0	Shannon		0.00	
7,039.7	6,803.0	Niobrara		0.00	

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	
595	595	0	2	Start 511.1 hold at 594.6 MD	
1106	1105	0	18	Start Drop -2.00	
1200	1200	0	20	Start 1899.3 hold at 1200.3 MD	
3100	3099	0	20	Start Build 2.00	
3888	3878	0	128	Start 2658.1 hold at 3887.9 MD	
6546	6436	0	850	Start DLS 10.00 TFO -12.38	
6991	6779	35	1114	Start 150.0 hold at 6991.3 MD	
7141	6854	58	1242	Start DLS 10.00 TFO -84.96	
7955	7100	624	1662	Start 4478.6 hold at 7954.8 MD	
12,433	7100	5103	1662	TD at 12433.4	

Checked By: _____ Approved By: _____ Date: _____