

PROJECT DETAILS: North Park Basin


Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone

System Datum: Mean Sea Level

G

T

M



Azimuths to Grid North
True North: 0.59°
Magnetic North: 10.49°

Magnetic Field
Strength: 53195.2snT
Dip Angle: 66.98°
Date: 12/31/2009
Model: IGRF200510

FORMATION TOP DETAILS

TVDPathMDPathFormationDipAngleDipDir

6275.06616.1Niobrara0.00

CASING DETAILS

TVDMDNameSize

6675.07528.2LP5-1/2

DESIGN DETAILS: Design #1

0' Vertical Section coordinates

TypeTargetAzimuthOriginTypeN/SE/WFromTVD

User360.00Slot0.00.00.0

Project: North Park Basin
Site: T7N-R80W-S7
Well: Marr 0780 8-6H31
Wellbore: Wellbore #1
Design: Design #1

True Vertical Depth

0

650

1300

1950

2600

3250

3900

4550

5200

5850

6500

Niobrara

Vertical Section at 360.00°

South(-)/North(+)

10500

9000

7500

6000

4500

3000

1500

0

-1500

-3000

-4500

Marr 0780 8-6H31

West(-)/East(+)

-6000

-4500

-3000

-1500

0

1500

3000

4500

6000

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	2800.0	0.00	0.00	2800.0	0.0	0.0	0.00	0.00	0.0		
3	4208.2	28.16	90.00	4152.2	0.0	339.2	2.00	90.00	0.0		
4	6667.5	28.16	90.00	6320.3	0.0	1500.0	0.00	0.00	0.0		
5	7369.0	90.00	46.00	6675.0	279.5	1979.3	10.00	-47.61	279.5		
6	8289.0	90.00	0.00	6675.0	1103.8	2329.2	5.00	-90.00	1103.8	Marr 0780 8-6H31 BHL	
7	18485.3	90.00	0.00	6675.0	11300.1	2329.2	0.00	0.00	11300.1	Marr 0780 8-6H31 BHL	

SandRidge Energy

North Park Basin

T7N-R80W-S7

Marr 0780 8-6H31

Wellbore #1

Plan: Design #1

Standard Survey Report

10 July, 2017

SandRidge Energy, Inc.

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Marr 0780 8-6H31
Project:	North Park Basin	TVD Reference:	KB @ 8146.0usft
Site:	T7N-R80W-S7	MD Reference:	KB @ 8146.0usft
Well:	Marr 0780 8-6H31	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDMPProd

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-S7					
Site Position:		Northing:	1,462,096.65 usft	Latitude:	40° 35' 53.698 N	
From:	Map	Easting:	2,745,719.49 usft	Longitude:	106° 24' 56.506 W	
Position Uncertainty:		0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.59 °

Well	Marr 0780 8-6H31					
Well Position	+N/-S	0.0 usft	Northing:	1,462,110.28 usft	Latitude:	40° 35' 53.833 N
	+E/-W	0.0 usft	Easting:	2,745,725.67 usft	Longitude:	106° 24' 56.428 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,130.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	9.90	66.98	53,195

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	360.00	

Survey Tool Program	Date	7/10/2017			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	18,485.3	Design #1 (Wellbore #1)	Sperry MWD	Fixed:v2:standard declination	

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00	

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Survey Report

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Project:	North Park Basin	TVD Reference:	KB @ 8146.0usft
Site:	T7N-R80W-S7	MD Reference:	KB @ 8146.0usft
Well:	Marr 0780 8-6H31	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)
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
2,900.0	2.00	90.00	2,900.0	0.0	1.7	0.0	2.00	2.00	0.00
3,000.0	4.00	90.00	2,999.8	0.0	7.0	0.0	2.00	2.00	0.00
3,100.0	6.00	90.00	3,099.5	0.0	15.7	0.0	2.00	2.00	0.00
3,200.0	8.00	90.00	3,198.7	0.0	27.9	0.0	2.00	2.00	0.00
3,300.0	10.00	90.00	3,297.5	0.0	43.5	0.0	2.00	2.00	0.00
3,400.0	12.00	90.00	3,395.6	0.0	62.6	0.0	2.00	2.00	0.00
3,500.0	14.00	90.00	3,493.1	0.0	85.1	0.0	2.00	2.00	0.00
3,600.0	16.00	90.00	3,589.6	0.0	111.0	0.0	2.00	2.00	0.00
3,700.0	18.00	90.00	3,685.3	0.0	140.2	0.0	2.00	2.00	0.00
3,800.0	20.00	90.00	3,779.8	0.0	172.8	0.0	2.00	2.00	0.00
3,900.0	22.00	90.00	3,873.2	0.0	208.6	0.0	2.00	2.00	0.00
4,000.0	24.00	90.00	3,965.2	0.0	247.7	0.0	2.00	2.00	0.00
4,100.0	26.00	90.00	4,055.8	0.0	289.9	0.0	2.00	2.00	0.00
4,208.2	28.16	90.00	4,152.2	0.0	339.2	0.0	2.00	2.00	0.00
Start 2459.3 hold at 4208.2 MD									
4,300.0	28.16	90.00	4,233.1	0.0	382.5	0.0	0.00	0.00	0.00
4,400.0	28.16	90.00	4,321.3	0.0	429.7	0.0	0.00	0.00	0.00
4,500.0	28.16	90.00	4,409.4	0.0	476.9	0.0	0.00	0.00	0.00
4,600.0	28.16	90.00	4,497.6	0.0	524.1	0.0	0.00	0.00	0.00
4,700.0	28.16	90.00	4,585.7	0.0	571.3	0.0	0.00	0.00	0.00
4,800.0	28.16	90.00	4,673.9	0.0	618.5	0.0	0.00	0.00	0.00
4,900.0	28.16	90.00	4,762.1	0.0	665.7	0.0	0.00	0.00	0.00
5,000.0	28.16	90.00	4,850.2	0.0	712.9	0.0	0.00	0.00	0.00
5,100.0	28.16	90.00	4,938.4	0.0	760.1	0.0	0.00	0.00	0.00

SandRidge Energy, Inc.

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Marr 0780 8-6H31
Project:	North Park Basin	TVD Reference:	KB @ 8146.0usft
Site:	T7N-R80W-S7	MD Reference:	KB @ 8146.0usft
Well:	Marr 0780 8-6H31	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)
5,200.0	28.16	90.00	5,026.5	0.0	807.3	0.0	0.00	0.00	0.00
5,300.0	28.16	90.00	5,114.7	0.0	854.5	0.0	0.00	0.00	0.00
5,400.0	28.16	90.00	5,202.9	0.0	901.7	0.0	0.00	0.00	0.00
5,500.0	28.16	90.00	5,291.0	0.0	948.9	0.0	0.00	0.00	0.00
5,600.0	28.16	90.00	5,379.2	0.0	996.1	0.0	0.00	0.00	0.00
5,700.0	28.16	90.00	5,467.3	0.0	1,043.3	0.0	0.00	0.00	0.00
5,800.0	28.16	90.00	5,555.5	0.0	1,090.5	0.0	0.00	0.00	0.00
5,900.0	28.16	90.00	5,643.7	0.0	1,137.7	0.0	0.00	0.00	0.00
6,000.0	28.16	90.00	5,731.8	0.0	1,184.9	0.0	0.00	0.00	0.00
6,100.0	28.16	90.00	5,820.0	0.0	1,232.1	0.0	0.00	0.00	0.00
6,200.0	28.16	90.00	5,908.1	0.0	1,279.3	0.0	0.00	0.00	0.00
6,300.0	28.16	90.00	5,996.3	0.0	1,326.5	0.0	0.00	0.00	0.00
6,400.0	28.16	90.00	6,084.5	0.0	1,373.7	0.0	0.00	0.00	0.00
6,500.0	28.16	90.00	6,172.6	0.0	1,420.9	0.0	0.00	0.00	0.00
6,600.0	28.16	90.00	6,260.8	0.0	1,468.1	0.0	0.00	0.00	0.00
6,616.1	28.16	90.00	6,275.0	0.0	1,475.7	0.0	0.00	0.00	0.00
Niobrara									
6,667.5	28.16	90.00	6,320.3	0.0	1,500.0	0.0	0.00	0.00	0.00
Start DLS 10.00 TFO -47.61									
6,700.0	30.44	85.26	6,348.6	0.7	1,515.9	0.7	10.00	7.01	-14.59
6,750.0	34.23	79.14	6,390.9	4.4	1,542.3	4.4	10.00	7.57	-12.24
6,800.0	38.26	74.14	6,431.2	11.3	1,571.0	11.3	10.00	8.07	-10.01
6,850.0	42.47	69.97	6,469.3	21.3	1,601.8	21.3	10.00	8.42	-8.33
6,900.0	46.81	66.43	6,504.9	34.4	1,634.4	34.4	10.00	8.68	-7.08
6,950.0	51.25	63.37	6,537.7	50.4	1,668.6	50.4	10.00	8.87	-6.13
7,000.0	55.75	60.67	6,567.4	69.3	1,704.0	69.3	10.00	9.01	-5.40
7,050.0	60.31	58.24	6,593.9	90.8	1,740.5	90.8	10.00	9.12	-4.85
7,100.0	64.91	56.03	6,616.9	114.9	1,777.8	114.9	10.00	9.20	-4.43
7,150.0	69.53	53.98	6,636.2	141.4	1,815.5	141.4	10.00	9.26	-4.10
7,200.0	74.19	52.05	6,651.8	170.0	1,853.5	170.0	10.00	9.30	-3.86
7,250.0	78.85	50.20	6,663.4	200.5	1,891.3	200.5	10.00	9.33	-3.69
7,300.0	83.53	48.42	6,671.1	232.7	1,928.8	232.7	10.00	9.36	-3.57
7,350.0	88.22	46.66	6,674.7	266.3	1,965.5	266.3	10.00	9.37	-3.51
7,369.0	90.00	46.00	6,675.0	279.5	1,979.3	279.5	10.00	9.37	-3.49
Start DLS 5.00 TFO -90.00									
7,400.0	90.00	44.45	6,675.0	301.3	2,001.3	301.3	5.00	0.00	-5.00
7,500.0	90.00	39.45	6,675.0	375.6	2,068.1	375.6	5.00	0.00	-5.00
7,600.0	90.00	34.45	6,675.0	455.5	2,128.2	455.5	5.00	0.00	-5.00
7,700.0	90.00	29.45	6,675.0	540.3	2,181.1	540.3	5.00	0.00	-5.00
7,800.0	90.00	24.45	6,675.0	629.5	2,226.4	629.5	5.00	0.00	-5.00
7,900.0	90.00	19.45	6,675.0	722.2	2,263.8	722.2	5.00	0.00	-5.00
8,000.0	90.00	14.45	6,675.0	817.8	2,292.9	817.8	5.00	0.00	-5.00
8,100.0	90.00	9.45	6,675.0	915.6	2,313.6	915.6	5.00	0.00	-5.00
8,200.0	90.00	4.45	6,675.0	1,014.8	2,325.7	1,014.8	5.00	0.00	-5.00

SandRidge Energy, Inc.

Survey Report

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Project:	North Park Basin	TVD Reference:	KB @ 8146.0usft
Site:	T7N-R80W-S7	MD Reference:	KB @ 8146.0usft
Well:	Marr 0780 8-6H31	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)
8,289.0	90.00	0.00	6,675.0	1,103.8	2,329.2	1,103.8	5.00	0.00	-5.00
Start 10196.3 hold at 8289.0 MD									
8,300.0	90.00	0.00	6,675.0	1,114.7	2,329.2	1,114.7	0.00	0.00	0.00
8,400.0	90.00	0.00	6,675.0	1,214.7	2,329.2	1,214.7	0.00	0.00	0.00
8,500.0	90.00	0.00	6,675.0	1,314.7	2,329.2	1,314.7	0.00	0.00	0.00
8,600.0	90.00	0.00	6,675.0	1,414.7	2,329.2	1,414.7	0.00	0.00	0.00
8,700.0	90.00	0.00	6,675.0	1,514.7	2,329.2	1,514.7	0.00	0.00	0.00
8,800.0	90.00	0.00	6,675.0	1,614.7	2,329.2	1,614.7	0.00	0.00	0.00
8,900.0	90.00	0.00	6,675.0	1,714.7	2,329.2	1,714.7	0.00	0.00	0.00
9,000.0	90.00	0.00	6,675.0	1,814.7	2,329.2	1,814.7	0.00	0.00	0.00
9,100.0	90.00	0.00	6,675.0	1,914.7	2,329.2	1,914.7	0.00	0.00	0.00
9,200.0	90.00	0.00	6,675.0	2,014.7	2,329.2	2,014.7	0.00	0.00	0.00
9,300.0	90.00	0.00	6,675.0	2,114.7	2,329.2	2,114.7	0.00	0.00	0.00
9,400.0	90.00	0.00	6,675.0	2,214.7	2,329.2	2,214.7	0.00	0.00	0.00
9,500.0	90.00	0.00	6,675.0	2,314.7	2,329.2	2,314.7	0.00	0.00	0.00
9,600.0	90.00	0.00	6,675.0	2,414.7	2,329.2	2,414.7	0.00	0.00	0.00
9,700.0	90.00	0.00	6,675.0	2,514.7	2,329.2	2,514.7	0.00	0.00	0.00
9,800.0	90.00	0.00	6,675.0	2,614.7	2,329.2	2,614.7	0.00	0.00	0.00
9,900.0	90.00	0.00	6,675.0	2,714.7	2,329.2	2,714.7	0.00	0.00	0.00
10,000.0	90.00	0.00	6,675.0	2,814.7	2,329.2	2,814.7	0.00	0.00	0.00
10,100.0	90.00	0.00	6,675.0	2,914.7	2,329.2	2,914.7	0.00	0.00	0.00
10,200.0	90.00	0.00	6,675.0	3,014.7	2,329.2	3,014.7	0.00	0.00	0.00
10,300.0	90.00	0.00	6,675.0	3,114.7	2,329.2	3,114.7	0.00	0.00	0.00
10,400.0	90.00	0.00	6,675.0	3,214.7	2,329.2	3,214.7	0.00	0.00	0.00
10,500.0	90.00	0.00	6,675.0	3,314.7	2,329.2	3,314.7	0.00	0.00	0.00
10,600.0	90.00	0.00	6,675.0	3,414.7	2,329.2	3,414.7	0.00	0.00	0.00
10,700.0	90.00	0.00	6,675.0	3,514.7	2,329.2	3,514.7	0.00	0.00	0.00
10,800.0	90.00	0.00	6,675.0	3,614.7	2,329.2	3,614.7	0.00	0.00	0.00
10,900.0	90.00	0.00	6,675.0	3,714.7	2,329.2	3,714.7	0.00	0.00	0.00
11,000.0	90.00	0.00	6,675.0	3,814.7	2,329.2	3,814.7	0.00	0.00	0.00
11,100.0	90.00	0.00	6,675.0	3,914.7	2,329.2	3,914.7	0.00	0.00	0.00
11,200.0	90.00	0.00	6,675.0	4,014.7	2,329.2	4,014.7	0.00	0.00	0.00
11,300.0	90.00	0.00	6,675.0	4,114.7	2,329.2	4,114.7	0.00	0.00	0.00
11,400.0	90.00	0.00	6,675.0	4,214.7	2,329.2	4,214.7	0.00	0.00	0.00
11,500.0	90.00	0.00	6,675.0	4,314.7	2,329.2	4,314.7	0.00	0.00	0.00
11,600.0	90.00	0.00	6,675.0	4,414.7	2,329.2	4,414.7	0.00	0.00	0.00
11,700.0	90.00	0.00	6,675.0	4,514.7	2,329.2	4,514.7	0.00	0.00	0.00
11,800.0	90.00	0.00	6,675.0	4,614.7	2,329.2	4,614.7	0.00	0.00	0.00
11,900.0	90.00	0.00	6,675.0	4,714.7	2,329.2	4,714.7	0.00	0.00	0.00
12,000.0	90.00	0.00	6,675.0	4,814.7	2,329.2	4,814.7	0.00	0.00	0.00
12,100.0	90.00	0.00	6,675.0	4,914.7	2,329.2	4,914.7	0.00	0.00	0.00
12,200.0	90.00	0.00	6,675.0	5,014.7	2,329.2	5,014.7	0.00	0.00	0.00
12,300.0	90.00	0.00	6,675.0	5,114.7	2,329.2	5,114.7	0.00	0.00	0.00

SandRidge Energy, Inc.

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Marr 0780 8-6H31
Project:	North Park Basin	TVD Reference:	KB @ 8146.0usft
Site:	T7N-R80W-S7	MD Reference:	KB @ 8146.0usft
Well:	Marr 0780 8-6H31	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)
12,400.0	90.00	0.00	6,675.0	5,214.7	2,329.2	5,214.7	0.00	0.00	0.00
12,500.0	90.00	0.00	6,675.0	5,314.7	2,329.2	5,314.7	0.00	0.00	0.00
12,600.0	90.00	0.00	6,675.0	5,414.7	2,329.2	5,414.7	0.00	0.00	0.00
12,700.0	90.00	0.00	6,675.0	5,514.7	2,329.2	5,514.7	0.00	0.00	0.00
12,800.0	90.00	0.00	6,675.0	5,614.7	2,329.2	5,614.7	0.00	0.00	0.00
12,900.0	90.00	0.00	6,675.0	5,714.7	2,329.2	5,714.7	0.00	0.00	0.00
13,000.0	90.00	0.00	6,675.0	5,814.7	2,329.2	5,814.7	0.00	0.00	0.00
13,100.0	90.00	0.00	6,675.0	5,914.7	2,329.2	5,914.7	0.00	0.00	0.00
13,200.0	90.00	0.00	6,675.0	6,014.7	2,329.2	6,014.7	0.00	0.00	0.00
13,300.0	90.00	0.00	6,675.0	6,114.7	2,329.2	6,114.7	0.00	0.00	0.00
13,400.0	90.00	0.00	6,675.0	6,214.7	2,329.2	6,214.7	0.00	0.00	0.00
13,500.0	90.00	0.00	6,675.0	6,314.7	2,329.2	6,314.7	0.00	0.00	0.00
13,600.0	90.00	0.00	6,675.0	6,414.7	2,329.2	6,414.7	0.00	0.00	0.00
13,700.0	90.00	0.00	6,675.0	6,514.7	2,329.2	6,514.7	0.00	0.00	0.00
13,800.0	90.00	0.00	6,675.0	6,614.7	2,329.2	6,614.7	0.00	0.00	0.00
13,900.0	90.00	0.00	6,675.0	6,714.7	2,329.2	6,714.7	0.00	0.00	0.00
14,000.0	90.00	0.00	6,675.0	6,814.7	2,329.2	6,814.7	0.00	0.00	0.00
14,100.0	90.00	0.00	6,675.0	6,914.7	2,329.2	6,914.7	0.00	0.00	0.00
14,200.0	90.00	0.00	6,675.0	7,014.7	2,329.2	7,014.7	0.00	0.00	0.00
14,300.0	90.00	0.00	6,675.0	7,114.7	2,329.2	7,114.7	0.00	0.00	0.00
14,400.0	90.00	0.00	6,675.0	7,214.7	2,329.2	7,214.7	0.00	0.00	0.00
14,500.0	90.00	0.00	6,675.0	7,314.7	2,329.2	7,314.7	0.00	0.00	0.00
14,600.0	90.00	0.00	6,675.0	7,414.7	2,329.2	7,414.7	0.00	0.00	0.00
14,700.0	90.00	0.00	6,675.0	7,514.7	2,329.2	7,514.7	0.00	0.00	0.00
14,800.0	90.00	0.00	6,675.0	7,614.7	2,329.2	7,614.7	0.00	0.00	0.00
14,900.0	90.00	0.00	6,675.0	7,714.7	2,329.2	7,714.7	0.00	0.00	0.00
15,000.0	90.00	0.00	6,675.0	7,814.7	2,329.2	7,814.7	0.00	0.00	0.00
15,100.0	90.00	0.00	6,675.0	7,914.7	2,329.2	7,914.7	0.00	0.00	0.00
15,200.0	90.00	0.00	6,675.0	8,014.7	2,329.2	8,014.7	0.00	0.00	0.00
15,300.0	90.00	0.00	6,675.0	8,114.7	2,329.2	8,114.7	0.00	0.00	0.00
15,400.0	90.00	0.00	6,675.0	8,214.7	2,329.2	8,214.7	0.00	0.00	0.00
15,500.0	90.00	0.00	6,675.0	8,314.7	2,329.2	8,314.7	0.00	0.00	0.00
15,600.0	90.00	0.00	6,675.0	8,414.7	2,329.2	8,414.7	0.00	0.00	0.00
15,700.0	90.00	0.00	6,675.0	8,514.7	2,329.2	8,514.7	0.00	0.00	0.00
15,800.0	90.00	0.00	6,675.0	8,614.7	2,329.2	8,614.7	0.00	0.00	0.00
15,900.0	90.00	0.00	6,675.0	8,714.7	2,329.2	8,714.7	0.00	0.00	0.00
16,000.0	90.00	0.00	6,675.0	8,814.7	2,329.2	8,814.7	0.00	0.00	0.00
16,100.0	90.00	0.00	6,675.0	8,914.7	2,329.2	8,914.7	0.00	0.00	0.00
16,200.0	90.00	0.00	6,675.0	9,014.7	2,329.2	9,014.7	0.00	0.00	0.00
16,300.0	90.00	0.00	6,675.0	9,114.7	2,329.2	9,114.7	0.00	0.00	0.00
16,400.0	90.00	0.00	6,675.0	9,214.7	2,329.2	9,214.7	0.00	0.00	0.00
16,500.0	90.00	0.00	6,675.0	9,314.7	2,329.2	9,314.7	0.00	0.00	0.00
16,600.0	90.00	0.00	6,675.0	9,414.7	2,329.2	9,414.7	0.00	0.00	0.00
16,700.0	90.00	0.00	6,675.0	9,514.7	2,329.2	9,514.7	0.00	0.00	0.00

SandRidge Energy, Inc.

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Marr 0780 8-6H31
Project:	North Park Basin	TVD Reference:	KB @ 8146.0usft
Site:	T7N-R80W-S7	MD Reference:	KB @ 8146.0usft
Well:	Marr 0780 8-6H31	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)
16,800.0	90.00	0.00	6,675.0	9,614.7	2,329.2	9,614.7	0.00	0.00	0.00
16,900.0	90.00	0.00	6,675.0	9,714.7	2,329.2	9,714.7	0.00	0.00	0.00
17,000.0	90.00	0.00	6,675.0	9,814.7	2,329.2	9,814.7	0.00	0.00	0.00
17,100.0	90.00	0.00	6,675.0	9,914.7	2,329.2	9,914.7	0.00	0.00	0.00
17,200.0	90.00	0.00	6,675.0	10,014.7	2,329.2	10,014.7	0.00	0.00	0.00
17,300.0	90.00	0.00	6,675.0	10,114.7	2,329.2	10,114.7	0.00	0.00	0.00
17,400.0	90.00	0.00	6,675.0	10,214.7	2,329.2	10,214.7	0.00	0.00	0.00
17,500.0	90.00	0.00	6,675.0	10,314.7	2,329.2	10,314.7	0.00	0.00	0.00
17,600.0	90.00	0.00	6,675.0	10,414.7	2,329.2	10,414.7	0.00	0.00	0.00
17,700.0	90.00	0.00	6,675.0	10,514.7	2,329.2	10,514.7	0.00	0.00	0.00
17,800.0	90.00	0.00	6,675.0	10,614.7	2,329.2	10,614.7	0.00	0.00	0.00
17,900.0	90.00	0.00	6,675.0	10,714.7	2,329.2	10,714.7	0.00	0.00	0.00
18,000.0	90.00	0.00	6,675.0	10,814.7	2,329.2	10,814.7	0.00	0.00	0.00
18,100.0	90.00	0.00	6,675.0	10,914.7	2,329.2	10,914.7	0.00	0.00	0.00
18,200.0	90.00	0.00	6,675.0	11,014.7	2,329.2	11,014.7	0.00	0.00	0.00
18,300.0	90.00	0.00	6,675.0	11,114.7	2,329.2	11,114.7	0.00	0.00	0.00
18,400.0	90.00	0.00	6,675.0	11,214.7	2,329.2	11,214.7	0.00	0.00	0.00
18,485.3	90.00	0.00	6,675.0	11,300.1	2,329.2	11,300.1	0.00	0.00	0.00
TD at 18485.3									

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									
Marr 0780 8-6H31 BHL	0.00	360.00	6,675.0	11,300.1	2,329.2	1,473,410.36	2,748,054.91	40° 37' 45.726 N	106° 24' 27.733 W
- plan hits target center									
- Point									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,616.1	6,275.0	Niobrara		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2800	2800	0	0	Start Build 2.00
4208	4152	0	339	Start 2459.3 hold at 4208.2 MD
6668	6320	0	1500	Start DLS 10.00 TFO -47.61
7369	6675	279	1979	Start DLS 5.00 TFO -90.00
8289	6675	1104	2329	Start 10196.3 hold at 8289.0 MD
18,485	6675	11,300	2329	TD at 18485.3

SandRidge Energy, Inc.

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Marr 0780 8-6H31
Project:	North Park Basin	TVD Reference:	KB @ 8146.0usft
Site:	T7N-R80W-S7	MD Reference:	KB @ 8146.0usft
Well:	Marr 0780 8-6H31	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDMProd

Checked By: _____ Approved By: _____ Date: _____

SandRidge Energy

North Park Basin

T7N-R80W-S7

Marr 0780 8-6H31

Wellbore #1

Design #1

Anticollision Summary Report

10 July, 2017

SandRidge Energy, Inc.
Anticollision Summary Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Marr 0780 8-6H31
Project:	North Park Basin	TVD Reference:	KB @ 8146.0usft
Reference Site:	T7N-R80W-S7	MD Reference:	KB @ 8146.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Marr 0780 8-6H31	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMProd
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference	Design #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		WARNING: There is hidden tight data in this project
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	7/10/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	18,485.3	Design #1 (Wellbore #1)	Sperry MWD	Fixed:v2:standard declination

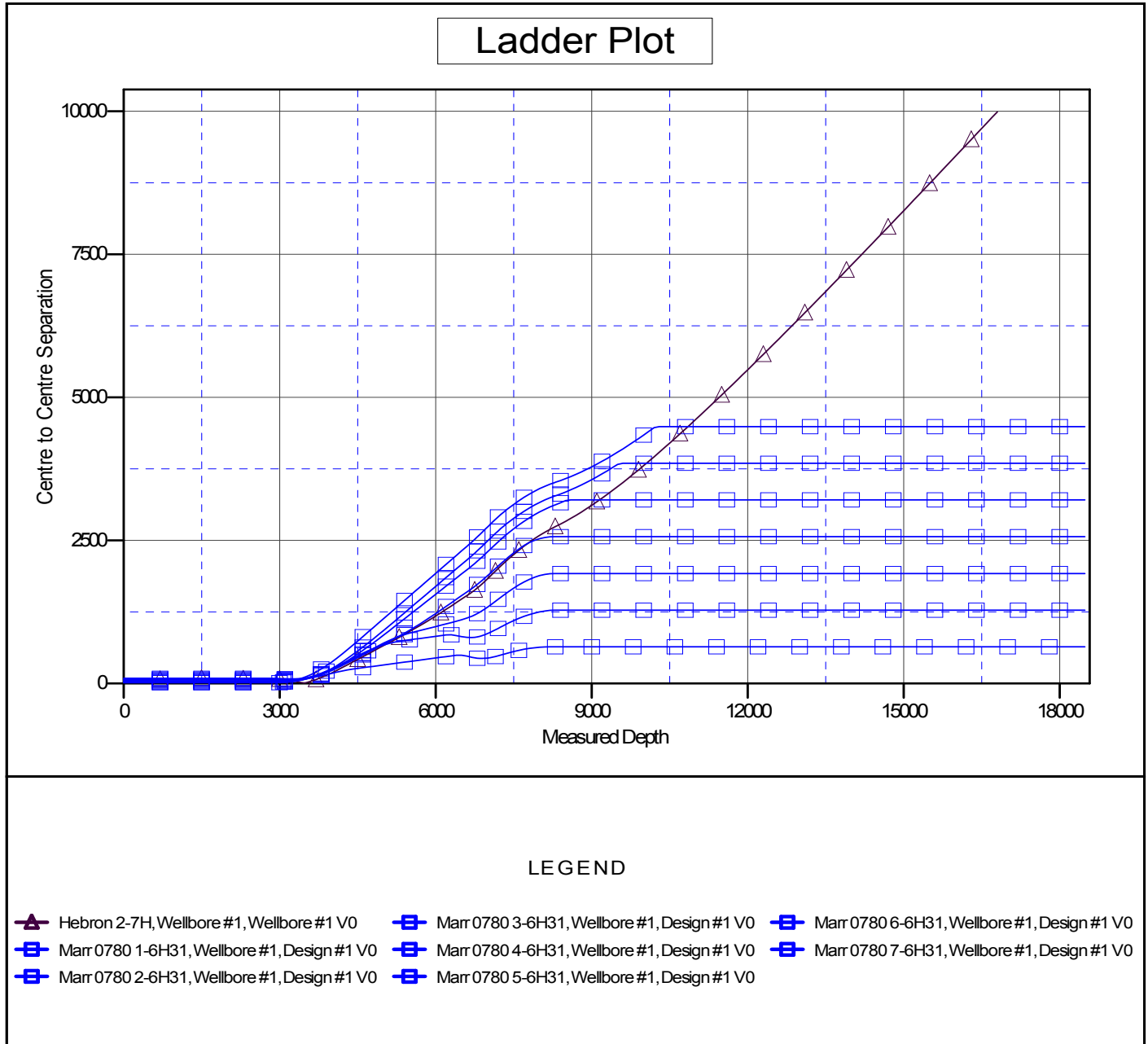
Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
T7N-R80W-S7						
Hebron 2-7H - Wellbore #1 - Wellbore #1	3,469.2	3,464.4	8.0	-6.8	0.542	Level 1, CC, ES, SF
Marr 0780 1-6H31 - Wellbore #1 - Design #1	3,148.8	3,148.1	54.6	40.8	3.951	CC, ES, SF
Marr 0780 2-6H31 - Wellbore #1 - Design #1	3,264.2	3,261.1	81.8	67.5	5.701	CC, ES
Marr 0780 2-6H31 - Wellbore #1 - Design #1	3,300.0	3,296.5	82.1	67.5	5.653	SF
Marr 0780 3-6H31 - Wellbore #1 - Design #1	3,127.8	3,126.1	41.0	27.3	2.985	CC, ES, SF
Marr 0780 4-6H31 - Wellbore #1 - Design #1	3,223.9	3,221.3	68.2	54.0	4.812	CC, ES
Marr 0780 4-6H31 - Wellbore #1 - Design #1	3,300.0	3,296.5	69.3	54.8	4.774	SF
Marr 0780 5-6H31 - Wellbore #1 - Design #1	2,992.0	2,992.1	14.3	1.1	1.083	Level 2, CC
Marr 0780 5-6H31 - Wellbore #1 - Design #1	3,000.0	3,000.0	14.3	1.1	1.081	Level 2, ES, SF
Marr 0780 6-6H31 - Wellbore #1 - Design #1	2,800.0	2,799.0	14.8	2.5	1.203	Level 2, CC, ES, SF
Marr 0780 7-6H31 - Wellbore #1 - Design #1	3,067.3	3,066.9	27.3	13.8	2.026	CC, ES
Marr 0780 7-6H31 - Wellbore #1 - Design #1	18,485.3	18,200.6	640.7	212.2	1.495	Level 3, SF

SandRidge Energy, Inc.
Anticollision Summary Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Marr 0780 8-6H31
Project:	North Park Basin	TVD Reference:	KB @ 8146.0usft
Reference Site:	T7N-R80W-S7	MD Reference:	KB @ 8146.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Marr 0780 8-6H31	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMProd
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 8146.0usft
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Marr 0780 8-6H31
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: -0.59°



SandRidge Energy, Inc.

Anticollision Summary Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Marr 0780 8-6H31
Project:	North Park Basin	TVD Reference:	KB @ 8146.0usft
Reference Site:	T7N-R80W-S7	MD Reference:	KB @ 8146.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Marr 0780 8-6H31	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMProd
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 8146.0usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Marr 0780 8-6H31
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: -0.59°

