

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: 0.63°
Magnetic North: 10.56°

Magnetic Field
Strength: 53187.7snT
Dip Angle: 66.97°
Date: 12/31/2009
Model: IGRF200510

FORMATION TOP DETAILS

TVDPath
5000.0

MDPath
5593.4

Formation
Niobrara

DipAngle
0.00

DipDir

CASING DETAILS

No casing data is available

DESIGN DETAILS: Design #1

0' Vertical Section coordinates

Type
User

Target

Azimuth
0.00

Origin
Slot

Type

N/S
0.0

E/W
0.0

From
TVD

0.0

Project: North Park Basin
Site: T7N-R81W-S10
Well: Beaver Creek 0881 1-3H34
Wellbore: Wellbore #1
Design: Design #1

True Vertical Depth

0

550

1100

1650

2200

2750

3300

3850

4400

4950

0

850

1700

2550

3400

4250

5100

5950

6800

7650

8500

9350

10200

11050

Niobrara

Vertical Section at 0.00°

South(-)/North(+)

10000

8000

6000

4000

2000

0

-2000

-4000

-6000

-4000

-2000

0

2000

4000

6000

Beaver Creek 1

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	1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0		
3	3162.9	33.26	90.00	3071.1	0.0	469.3	2.00	90.00	0.0		
4	5106.2	33.26	90.00	4696.1	0.0	1535.0	0.00	0.00	0.0		
5	5440.5	60.00	90.00	4923.6	0.0	1775.8	8.00	0.00	0.0		
6	5590.5	60.00	90.00	4998.6	0.0	1905.7	0.00	0.00	0.0		
7	6490.4	90.00	0.00	5285.0	572.9	2401.9	10.00	-90.00	572.9	Beaver Creek 1	
8	16817.7	90.00	0.00	5285.0	10900.2	2402.4	0.00	0.00	10900.2	Beaver Creek 1	

SandRidge Energy

North Park Basin

T7N-R81W-S10

Beaver Creek 0881 1-3H34

Wellbore #1

Plan: Design #1

Standard Survey Report

03 October, 2016

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Beaver Creek 0881 1-3H34
Project:	North Park Basin	TVD Reference:	KB @ 8266.0usft
Site:	T7N-R81W-S10	MD Reference:	KB @ 8266.0usft
Well:	Beaver Creek 0881 1-3H34	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-R81W-S10			
Site Position:		Northing:	1,462,405.44 usft	Latitude:	40° 35' 55.092 N
From:	Map	Easting:	2,729,967.12 usft	Longitude:	106° 28' 20.748 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.63 °

Well	Beaver Creek 0881 1-3H34					
Well Position	+N-S	0.0 usft	Northing:	1,462,405.44 usft	Latitude:	40° 35' 55.092 N
	+E-W	0.0 usft	Easting:	2,729,967.12 usft	Longitude:	106° 28' 20.748 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,250.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	9.93	66.97	53,188

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	0.00	

Survey Tool Program	Date	10/3/2016			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	16,817.6	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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Site:	T7N-R81W-S10	MD Reference:	KB @ 8266.0usft
Well:	Beaver Creek 0881 1-3H34	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
Start Build 2.00									
1,600.0	2.00	90.00	1,600.0	0.0	1.7	0.0	2.00	2.00	0.00
1,700.0	4.00	90.00	1,699.8	0.0	7.0	0.0	2.00	2.00	0.00
1,800.0	6.00	90.00	1,799.5	0.0	15.7	0.0	2.00	2.00	0.00
1,900.0	8.00	90.00	1,898.7	0.0	27.9	0.0	2.00	2.00	0.00
2,000.0	10.00	90.00	1,997.5	0.0	43.5	0.0	2.00	2.00	0.00
2,100.0	12.00	90.00	2,095.6	0.0	62.6	0.0	2.00	2.00	0.00
2,200.0	14.00	90.00	2,193.1	0.0	85.1	0.0	2.00	2.00	0.00
2,300.0	16.00	90.00	2,289.6	0.0	111.0	0.0	2.00	2.00	0.00
2,400.0	18.00	90.00	2,385.3	0.0	140.2	0.0	2.00	2.00	0.00
2,500.0	20.00	90.00	2,479.8	0.0	172.8	0.0	2.00	2.00	0.00
2,600.0	22.00	90.00	2,573.2	0.0	208.6	0.0	2.00	2.00	0.00
2,700.0	24.00	90.00	2,665.2	0.0	247.7	0.0	2.00	2.00	0.00
2,800.0	26.00	90.00	2,755.8	0.0	289.9	0.0	2.00	2.00	0.00
2,900.0	28.00	90.00	2,844.9	0.0	335.3	0.0	2.00	2.00	0.00
3,000.0	30.00	90.00	2,932.4	0.0	383.8	0.0	2.00	2.00	0.00
3,100.0	32.00	90.00	3,018.1	0.0	435.3	0.0	2.00	2.00	0.00
3,162.9	33.26	90.00	3,071.1	0.0	469.3	0.0	2.00	2.00	0.00
Start 1943.3 hold at 3162.9 MD									
3,200.0	33.26	90.00	3,102.1	0.0	489.6	0.0	0.00	0.00	0.00
3,300.0	33.26	90.00	3,185.7	0.0	544.4	0.0	0.00	0.00	0.00
3,400.0	33.26	90.00	3,269.3	0.0	599.3	0.0	0.00	0.00	0.00
3,500.0	33.26	90.00	3,353.0	0.0	654.1	0.0	0.00	0.00	0.00
3,600.0	33.26	90.00	3,436.6	0.0	708.9	0.0	0.00	0.00	0.00
3,700.0	33.26	90.00	3,520.2	0.0	763.8	0.0	0.00	0.00	0.00
3,800.0	33.26	90.00	3,603.8	0.0	818.6	0.0	0.00	0.00	0.00
3,900.0	33.26	90.00	3,687.4	0.0	873.5	0.0	0.00	0.00	0.00
4,000.0	33.26	90.00	3,771.1	0.0	928.3	0.0	0.00	0.00	0.00
4,100.0	33.26	90.00	3,854.7	0.0	983.2	0.0	0.00	0.00	0.00
4,200.0	33.26	90.00	3,938.3	0.0	1,038.0	0.0	0.00	0.00	0.00
4,300.0	33.26	90.00	4,021.9	0.0	1,092.8	0.0	0.00	0.00	0.00
4,400.0	33.26	90.00	4,105.5	0.0	1,147.7	0.0	0.00	0.00	0.00
4,500.0	33.26	90.00	4,189.2	0.0	1,202.5	0.0	0.00	0.00	0.00
4,600.0	33.26	90.00	4,272.8	0.0	1,257.4	0.0	0.00	0.00	0.00
4,700.0	33.26	90.00	4,356.4	0.0	1,312.2	0.0	0.00	0.00	0.00
4,800.0	33.26	90.00	4,440.0	0.0	1,367.1	0.0	0.00	0.00	0.00
4,900.0	33.26	90.00	4,523.6	0.0	1,421.9	0.0	0.00	0.00	0.00
5,000.0	33.26	90.00	4,607.3	0.0	1,476.7	0.0	0.00	0.00	0.00

SandRidge Energy

Survey Report

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Project:	North Park Basin	TVD Reference:	KB @ 8266.0usft
Site:	T7N-R81W-S10	MD Reference:	KB @ 8266.0usft
Well:	Beaver Creek 0881 1-3H34	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)
5,106.2	33.26	90.00	4,696.1	0.0	1,535.0	0.0	0.00	0.00	0.00
Start DLS 8.00 TFO 0.00									
5,150.0	36.76	90.00	4,731.9	0.0	1,560.1	0.0	8.00	8.00	0.00
5,200.0	40.76	90.00	4,770.9	0.0	1,591.4	0.0	8.00	8.00	0.00
5,250.0	44.76	90.00	4,807.6	0.0	1,625.3	0.0	8.00	8.00	0.00
5,300.0	48.76	90.00	4,841.9	0.0	1,661.8	0.0	8.00	8.00	0.00
5,350.0	52.76	90.00	4,873.5	0.0	1,700.5	0.0	8.00	8.00	0.00
5,400.0	56.76	90.00	4,902.3	0.0	1,741.3	0.0	8.00	8.00	0.00
5,440.5	60.00	90.00	4,923.6	0.0	1,775.8	0.0	8.00	8.00	0.00
Start 150.0 hold at 5440.5 MD									
5,500.0	60.00	90.00	4,953.3	0.0	1,827.3	0.0	0.00	0.00	0.00
5,590.5	60.00	90.00	4,998.6	0.0	1,905.7	0.0	0.00	0.00	0.00
Start DLS 10.00 TFO -90.00									
5,593.4	60.00	89.67	5,000.0	0.0	1,908.2	0.0	10.00	0.01	-11.55
Niobrara									
5,600.0	60.00	88.90	5,003.3	0.1	1,913.9	0.1	10.00	0.06	-11.55
5,650.0	60.18	83.14	5,028.3	3.1	1,957.1	3.1	10.00	0.35	-11.53
5,700.0	60.60	77.41	5,053.0	10.4	1,999.9	10.4	10.00	0.85	-11.46
5,750.0	61.27	71.74	5,077.3	22.1	2,042.0	22.1	10.00	1.33	-11.34
5,800.0	62.16	66.15	5,101.0	37.9	2,083.1	37.9	10.00	1.80	-11.17
5,850.0	63.28	60.67	5,123.9	57.8	2,122.8	57.8	10.00	2.24	-10.97
5,900.0	64.61	55.30	5,145.9	81.6	2,160.9	81.6	10.00	2.65	-10.73
5,950.0	66.12	50.06	5,166.7	109.1	2,197.0	109.1	10.00	3.03	-10.48
6,000.0	67.81	44.94	5,186.3	140.2	2,230.9	140.2	10.00	3.38	-10.23
6,050.0	69.66	39.96	5,204.5	174.6	2,262.3	174.6	10.00	3.69	-9.97
6,100.0	71.64	35.09	5,221.0	212.0	2,291.0	212.0	10.00	3.97	-9.73
6,150.0	73.74	30.34	5,235.9	252.1	2,316.8	252.1	10.00	4.21	-9.50
6,200.0	75.95	25.69	5,249.0	294.7	2,339.5	294.7	10.00	4.41	-9.30
6,250.0	78.24	21.13	5,260.2	339.5	2,358.8	339.5	10.00	4.59	-9.12
6,300.0	80.61	16.65	5,269.3	385.9	2,374.7	385.9	10.00	4.73	-8.96
6,350.0	83.03	12.23	5,276.5	433.9	2,387.0	433.9	10.00	4.84	-8.84
6,400.0	85.49	7.85	5,281.5	482.8	2,395.7	482.8	10.00	4.92	-8.75
6,450.0	87.98	3.51	5,284.3	532.5	2,400.7	532.5	10.00	4.97	-8.69
6,490.4	90.00	0.00	5,285.0	572.9	2,401.9	572.9	10.01	5.00	-8.67
Start 10327.3 hold at 6490.4 MD									
6,500.0	90.00	0.00	5,285.0	582.5	2,401.9	582.5	0.00	0.00	0.00
6,600.0	90.00	0.00	5,285.0	682.5	2,401.9	682.5	0.00	0.00	0.00
6,700.0	90.00	0.00	5,285.0	782.5	2,401.9	782.5	0.00	0.00	0.00
6,800.0	90.00	0.00	5,285.0	882.5	2,401.9	882.5	0.00	0.00	0.00
6,900.0	90.00	0.00	5,285.0	982.5	2,401.9	982.5	0.00	0.00	0.00
7,000.0	90.00	0.00	5,285.0	1,082.5	2,401.9	1,082.5	0.00	0.00	0.00
7,100.0	90.00	0.00	5,285.0	1,182.5	2,401.9	1,182.5	0.00	0.00	0.00
7,200.0	90.00	0.00	5,285.0	1,282.5	2,401.9	1,282.5	0.00	0.00	0.00
7,300.0	90.00	0.00	5,285.0	1,382.5	2,401.9	1,382.5	0.00	0.00	0.00

SandRidge Energy

Survey Report

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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)
7,400.0	90.00	0.00	5,285.0	1,482.5	2,401.9	1,482.5	0.00	0.00	0.00
7,500.0	90.00	0.00	5,285.0	1,582.5	2,401.9	1,582.5	0.00	0.00	0.00
7,600.0	90.00	0.00	5,285.0	1,682.5	2,401.9	1,682.5	0.00	0.00	0.00
7,700.0	90.00	0.00	5,285.0	1,782.5	2,401.9	1,782.5	0.00	0.00	0.00
7,800.0	90.00	0.00	5,285.0	1,882.5	2,401.9	1,882.5	0.00	0.00	0.00
7,900.0	90.00	0.00	5,285.0	1,982.5	2,401.9	1,982.5	0.00	0.00	0.00
8,000.0	90.00	0.00	5,285.0	2,082.5	2,401.9	2,082.5	0.00	0.00	0.00
8,100.0	90.00	0.00	5,285.0	2,182.5	2,401.9	2,182.5	0.00	0.00	0.00
8,200.0	90.00	0.00	5,285.0	2,282.5	2,401.9	2,282.5	0.00	0.00	0.00
8,300.0	90.00	0.00	5,285.0	2,382.5	2,401.9	2,382.5	0.00	0.00	0.00
8,400.0	90.00	0.00	5,285.0	2,482.5	2,402.0	2,482.5	0.00	0.00	0.00
8,500.0	90.00	0.00	5,285.0	2,582.5	2,402.0	2,582.5	0.00	0.00	0.00
8,600.0	90.00	0.00	5,285.0	2,682.5	2,402.0	2,682.5	0.00	0.00	0.00
8,700.0	90.00	0.00	5,285.0	2,782.5	2,402.0	2,782.5	0.00	0.00	0.00
8,800.0	90.00	0.00	5,285.0	2,882.5	2,402.0	2,882.5	0.00	0.00	0.00
8,900.0	90.00	0.00	5,285.0	2,982.5	2,402.0	2,982.5	0.00	0.00	0.00
9,000.0	90.00	0.00	5,285.0	3,082.5	2,402.0	3,082.5	0.00	0.00	0.00
9,100.0	90.00	0.00	5,285.0	3,182.5	2,402.0	3,182.5	0.00	0.00	0.00
9,200.0	90.00	0.00	5,285.0	3,282.5	2,402.0	3,282.5	0.00	0.00	0.00
9,300.0	90.00	0.00	5,285.0	3,382.5	2,402.0	3,382.5	0.00	0.00	0.00
9,400.0	90.00	0.00	5,285.0	3,482.5	2,402.0	3,482.5	0.00	0.00	0.00
9,500.0	90.00	0.00	5,285.0	3,582.5	2,402.0	3,582.5	0.00	0.00	0.00
9,600.0	90.00	0.00	5,285.0	3,682.5	2,402.0	3,682.5	0.00	0.00	0.00
9,700.0	90.00	0.00	5,285.0	3,782.5	2,402.0	3,782.5	0.00	0.00	0.00
9,800.0	90.00	0.00	5,285.0	3,882.5	2,402.0	3,882.5	0.00	0.00	0.00
9,900.0	90.00	0.00	5,285.0	3,982.5	2,402.0	3,982.5	0.00	0.00	0.00
10,000.0	90.00	0.00	5,285.0	4,082.5	2,402.0	4,082.5	0.00	0.00	0.00
10,100.0	90.00	0.00	5,285.0	4,182.5	2,402.0	4,182.5	0.00	0.00	0.00
10,200.0	90.00	0.00	5,285.0	4,282.5	2,402.0	4,282.5	0.00	0.00	0.00
10,300.0	90.00	0.00	5,285.0	4,382.5	2,402.0	4,382.5	0.00	0.00	0.00
10,400.0	90.00	0.00	5,285.0	4,482.5	2,402.0	4,482.5	0.00	0.00	0.00
10,500.0	90.00	0.00	5,285.0	4,582.5	2,402.1	4,582.5	0.00	0.00	0.00
10,600.0	90.00	0.00	5,285.0	4,682.5	2,402.1	4,682.5	0.00	0.00	0.00
10,700.0	90.00	0.00	5,285.0	4,782.5	2,402.1	4,782.5	0.00	0.00	0.00
10,800.0	90.00	0.00	5,285.0	4,882.5	2,402.1	4,882.5	0.00	0.00	0.00
10,900.0	90.00	0.00	5,285.0	4,982.5	2,402.1	4,982.5	0.00	0.00	0.00
11,000.0	90.00	0.00	5,285.0	5,082.5	2,402.1	5,082.5	0.00	0.00	0.00
11,100.0	90.00	0.00	5,285.0	5,182.5	2,402.1	5,182.5	0.00	0.00	0.00
11,200.0	90.00	0.00	5,285.0	5,282.5	2,402.1	5,282.5	0.00	0.00	0.00
11,300.0	90.00	0.00	5,285.0	5,382.5	2,402.1	5,382.5	0.00	0.00	0.00
11,400.0	90.00	0.00	5,285.0	5,482.5	2,402.1	5,482.5	0.00	0.00	0.00
11,500.0	90.00	0.00	5,285.0	5,582.5	2,402.1	5,582.5	0.00	0.00	0.00
11,600.0	90.00	0.00	5,285.0	5,682.5	2,402.1	5,682.5	0.00	0.00	0.00
11,700.0	90.00	0.00	5,285.0	5,782.5	2,402.1	5,782.5	0.00	0.00	0.00

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Beaver Creek 0881 1-3H34
Project:	North Park Basin	TVD Reference:	KB @ 8266.0usft
Site:	T7N-R81W-S10	MD Reference:	KB @ 8266.0usft
Well:	Beaver Creek 0881 1-3H34	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)
11,800.0	90.00	0.00	5,285.0	5,882.5	2,402.1	5,882.5	0.00	0.00	0.00
11,900.0	90.00	0.00	5,285.0	5,982.5	2,402.1	5,982.5	0.00	0.00	0.00
12,000.0	90.00	0.00	5,285.0	6,082.5	2,402.1	6,082.5	0.00	0.00	0.00
12,100.0	90.00	0.00	5,285.0	6,182.5	2,402.1	6,182.5	0.00	0.00	0.00
12,200.0	90.00	0.00	5,285.0	6,282.5	2,402.1	6,282.5	0.00	0.00	0.00
12,300.0	90.00	0.00	5,285.0	6,382.5	2,402.1	6,382.5	0.00	0.00	0.00
12,400.0	90.00	0.00	5,285.0	6,482.5	2,402.1	6,482.5	0.00	0.00	0.00
12,500.0	90.00	0.00	5,285.0	6,582.5	2,402.1	6,582.5	0.00	0.00	0.00
12,600.0	90.00	0.00	5,285.0	6,682.5	2,402.2	6,682.5	0.00	0.00	0.00
12,700.0	90.00	0.00	5,285.0	6,782.5	2,402.2	6,782.5	0.00	0.00	0.00
12,800.0	90.00	0.00	5,285.0	6,882.5	2,402.2	6,882.5	0.00	0.00	0.00
12,900.0	90.00	0.00	5,285.0	6,982.5	2,402.2	6,982.5	0.00	0.00	0.00
13,000.0	90.00	0.00	5,285.0	7,082.5	2,402.2	7,082.5	0.00	0.00	0.00
13,100.0	90.00	0.00	5,285.0	7,182.5	2,402.2	7,182.5	0.00	0.00	0.00
13,200.0	90.00	0.00	5,285.0	7,282.5	2,402.2	7,282.5	0.00	0.00	0.00
13,300.0	90.00	0.00	5,285.0	7,382.5	2,402.2	7,382.5	0.00	0.00	0.00
13,400.0	90.00	0.00	5,285.0	7,482.5	2,402.2	7,482.5	0.00	0.00	0.00
13,500.0	90.00	0.00	5,285.0	7,582.5	2,402.2	7,582.5	0.00	0.00	0.00
13,600.0	90.00	0.00	5,285.0	7,682.5	2,402.2	7,682.5	0.00	0.00	0.00
13,700.0	90.00	0.00	5,285.0	7,782.5	2,402.2	7,782.5	0.00	0.00	0.00
13,800.0	90.00	0.00	5,285.0	7,882.5	2,402.2	7,882.5	0.00	0.00	0.00
13,900.0	90.00	0.00	5,285.0	7,982.5	2,402.2	7,982.5	0.00	0.00	0.00
14,000.0	90.00	0.00	5,285.0	8,082.5	2,402.2	8,082.5	0.00	0.00	0.00
14,100.0	90.00	0.00	5,285.0	8,182.5	2,402.2	8,182.5	0.00	0.00	0.00
14,200.0	90.00	0.00	5,285.0	8,282.5	2,402.2	8,282.5	0.00	0.00	0.00
14,300.0	90.00	0.00	5,285.0	8,382.5	2,402.2	8,382.5	0.00	0.00	0.00
14,400.0	90.00	0.00	5,285.0	8,482.5	2,402.2	8,482.5	0.00	0.00	0.00
14,500.0	90.00	0.00	5,285.0	8,582.5	2,402.2	8,582.5	0.00	0.00	0.00
14,600.0	90.00	0.00	5,285.0	8,682.5	2,402.2	8,682.5	0.00	0.00	0.00
14,700.0	90.00	0.00	5,285.0	8,782.5	2,402.3	8,782.5	0.00	0.00	0.00
14,800.0	90.00	0.00	5,285.0	8,882.5	2,402.3	8,882.5	0.00	0.00	0.00
14,900.0	90.00	0.00	5,285.0	8,982.5	2,402.3	8,982.5	0.00	0.00	0.00
15,000.0	90.00	0.00	5,285.0	9,082.5	2,402.3	9,082.5	0.00	0.00	0.00
15,100.0	90.00	0.00	5,285.0	9,182.5	2,402.3	9,182.5	0.00	0.00	0.00
15,200.0	90.00	0.00	5,285.0	9,282.5	2,402.3	9,282.5	0.00	0.00	0.00
15,300.0	90.00	0.00	5,285.0	9,382.5	2,402.3	9,382.5	0.00	0.00	0.00
15,400.0	90.00	0.00	5,285.0	9,482.5	2,402.3	9,482.5	0.00	0.00	0.00
15,500.0	90.00	0.00	5,285.0	9,582.5	2,402.3	9,582.5	0.00	0.00	0.00
15,600.0	90.00	0.00	5,285.0	9,682.5	2,402.3	9,682.5	0.00	0.00	0.00
15,700.0	90.00	0.00	5,285.0	9,782.5	2,402.3	9,782.5	0.00	0.00	0.00
15,800.0	90.00	0.00	5,285.0	9,882.5	2,402.3	9,882.5	0.00	0.00	0.00
15,900.0	90.00	0.00	5,285.0	9,982.5	2,402.3	9,982.5	0.00	0.00	0.00
16,000.0	90.00	0.00	5,285.0	10,082.5	2,402.3	10,082.5	0.00	0.00	0.00

SandRidge Energy

Survey Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Beaver Creek 0881 1-3H34
Project:	North Park Basin	TVD Reference:	KB @ 8266.0usft
Site:	T7N-R81W-S10	MD Reference:	KB @ 8266.0usft
Well:	Beaver Creek 0881 1-3H34	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)
16,100.0	90.00	0.00	5,285.0	10,182.5	2,402.3	10,182.5	0.00	0.00	0.00
16,200.0	90.00	0.00	5,285.0	10,282.5	2,402.3	10,282.5	0.00	0.00	0.00
16,300.0	90.00	0.00	5,285.0	10,382.5	2,402.3	10,382.5	0.00	0.00	0.00
16,400.0	90.00	0.00	5,285.0	10,482.5	2,402.3	10,482.5	0.00	0.00	0.00
16,500.0	90.00	0.00	5,285.0	10,582.5	2,402.3	10,582.5	0.00	0.00	0.00
16,600.0	90.00	0.00	5,285.0	10,682.5	2,402.3	10,682.5	0.00	0.00	0.00
16,700.0	90.00	0.00	5,285.0	10,782.5	2,402.3	10,782.5	0.00	0.00	0.00
16,800.0	90.00	0.00	5,285.0	10,882.5	2,402.3	10,882.5	0.00	0.00	0.00
16,817.7	90.00	0.00	5,285.0	10,900.2	2,402.3	10,900.2	0.00	0.00	0.00
TD at 16817.7									

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
Beaver Creek 1 - plan hits target center - Point	0.00	0.00	5,285.0	10,900.2	2,402.3	1,473,305.64	2,732,369.47	40° 37' 43.055 N	106° 27' 51.143 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,593.4	5,000.0	Niobrara		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1500	1500	0	0	Start Build 2.00
3163	3071	0	469	Start 1943.3 hold at 3162.9 MD
5106	4696	0	1535	Start DLS 8.00 TFO 0.00
5441	4924	0	1776	Start 150.0 hold at 5440.5 MD
5591	4999	0	1906	Start DLS 10.00 TFO -90.00
6490	5285	573	2402	Start 10327.3 hold at 6490.4 MD
16,818	5285	10,900	2402	TD at 16817.7

Checked By: _____ Approved By: _____ Date: _____

SandRidge Energy

North Park Basin

T7N-R81W-S10

Beaver Creek 0881 1-3H34

Wellbore #1

Design #1

Anticollision Summary Report

03 October, 2016

SandRidge Energy

Anticollision Summary Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Beaver Creek 0881 1-3H34
Project:	North Park Basin	TVD Reference:	KB @ 8266.0usft
Reference Site:	T7N-R81W-S10	MD Reference:	KB @ 8266.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Beaver Creek 0881 1-3H34	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	10/3/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	16,817.6	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-R81W-S10						
Beaver Creek 0881 2-3H34 - Wellbore #1 - Design #1	1,533.4	1,533.4	15.0	8.4	2.263	CC
Beaver Creek 0881 2-3H34 - Wellbore #1 - Design #1	1,600.0	1,600.0	15.1	8.2	2.180	ES
Beaver Creek 0881 2-3H34 - Wellbore #1 - Design #1	16,817.7	16,458.8	659.9	242.3	1.580	Level 4, SF
Beaver Creek 0881 3-3H34 - Wellbore #1 - Design #1	1,542.1	1,542.1	30.0	23.3	4.502	CC
Beaver Creek 0881 3-3H34 - Wellbore #1 - Design #1	1,600.0	1,600.0	30.0	23.1	4.343	ES
Beaver Creek 0881 3-3H34 - Wellbore #1 - Design #1	16,817.7	16,098.5	1,319.2	902.2	3.164	SF
Beaver Creek 0881 4-3H34 - Wellbore #1 - Design #1	1,551.3	1,551.3	45.0	38.3	6.712	CC
Beaver Creek 0881 4-3H34 - Wellbore #1 - Design #1	1,600.0	1,600.0	45.0	38.1	6.508	ES
Beaver Creek 0881 4-3H34 - Wellbore #1 - Design #1	16,817.7	15,882.1	1,979.1	1,562.0	4.745	SF

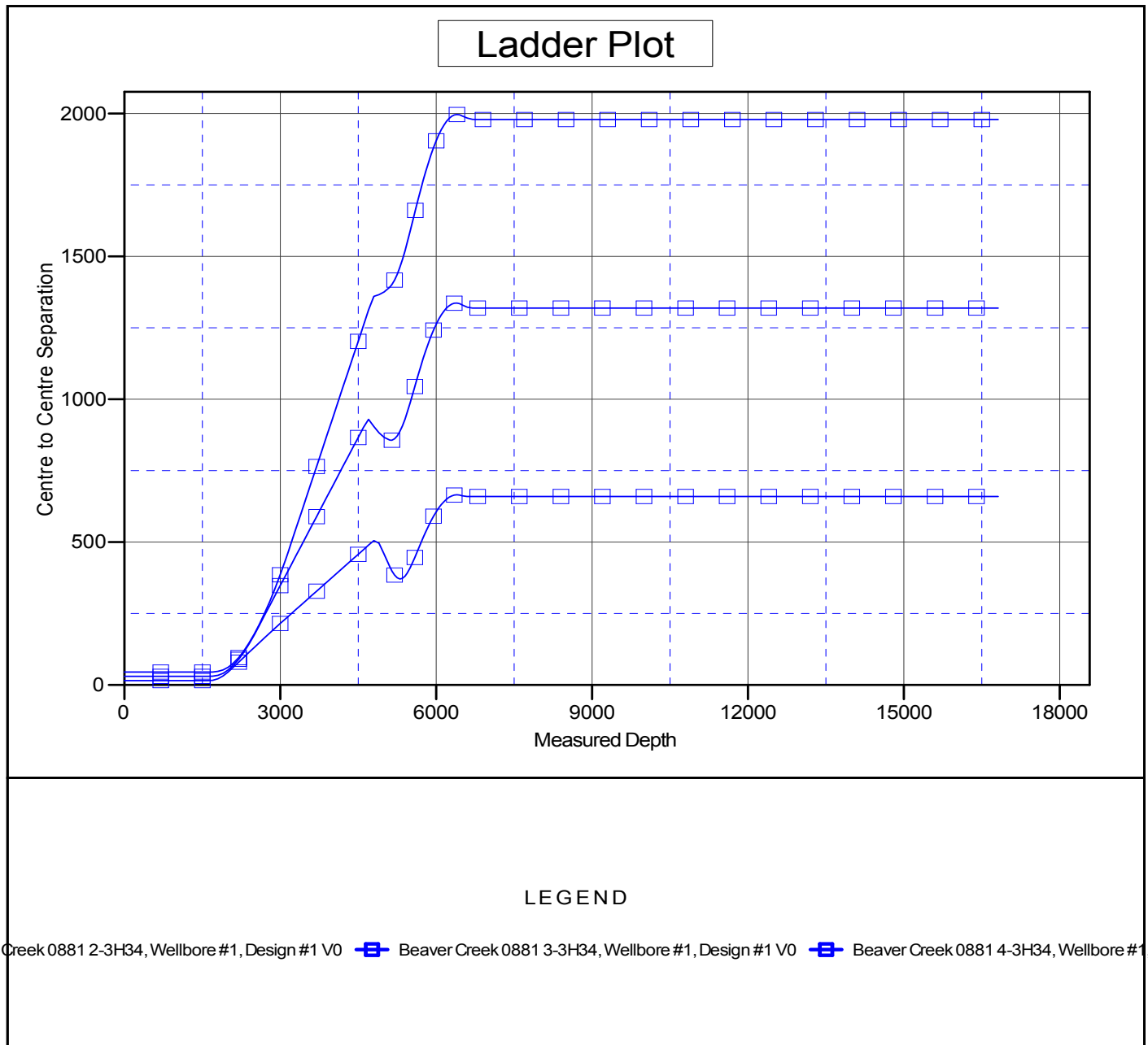
SandRidge Energy

Anticollision Summary Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Beaver Creek 0881 1-3H34
Project:	North Park Basin	TVD Reference:	KB @ 8266.0usft
Reference Site:	T7N-R81W-S10	MD Reference:	KB @ 8266.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Beaver Creek 0881 1-3H34	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 @ 8266.0usft
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Beaver Creek 0881 1-3H34
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: -0.63°



SandRidge Energy

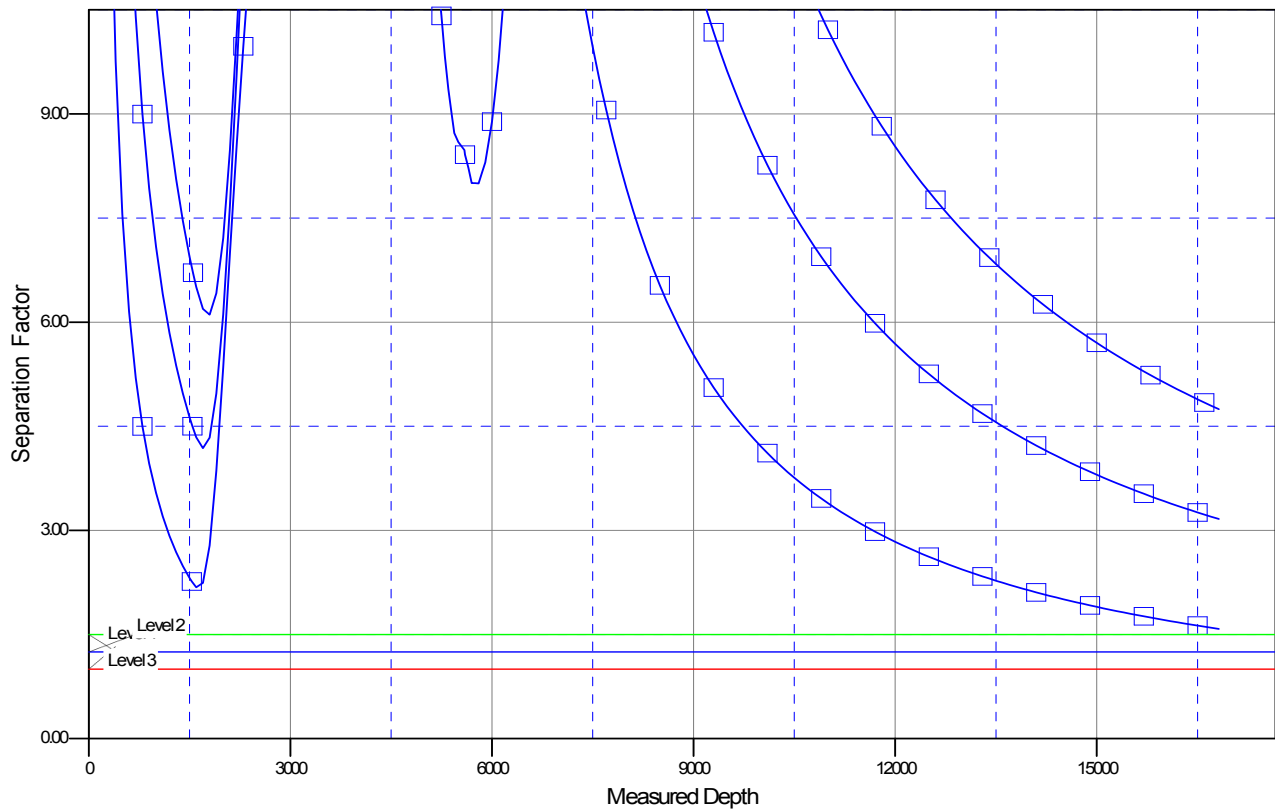
Anticollision Summary Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Beaver Creek 0881 1-3H34
Project:	North Park Basin	TVD Reference:	KB @ 8266.0usft
Reference Site:	T7N-R81W-S10	MD Reference:	KB @ 8266.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Beaver Creek 0881 1-3H34	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 @ 8266.0usft
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Beaver Creek 0881 1-3H34
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: -0.63°

Separation Factor Plot



LEGEND

Beaver Creek 0881 2-3H34, Wellbore #1, Design #1 V0 Beaver Creek 0881 3-3H34, Wellbore #1, Design #1 V0 Beaver Creek 0881 4-3H34, Wellbore #1, Design #1 V0