



# **SandRidge Energy**

**North Park Basin**

**T7N-R81W-S12**

**Peters 0781 10-12H13**

**Wellbore #1**

**Plan: Design #1**

## **Standard Survey Report**

**17 October, 2017**

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Peters 0781 10-12H13
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	KB @ 8156.0usft
<b>Site:</b>	T7N-R81W-S12	<b>MD Reference:</b>	KB @ 8156.0usft
<b>Well:</b>	Peters 0781 10-12H13	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	EDMProd

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

Site		T7N-R81W-S12			
Site Position:		Northing:	1,462,087.17 usft	Latitude:	40° 35' 53.334 N
From:	Map	Easting:	2,743,086.13 usft	Longitude:	106° 25' 30.641 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.60 °

Well	Peters 0781 10-12H13					
Well Position	+N-S	0.0 usft	Northing:	1,461,937.65 usft	Latitude:	40° 35' 51.852 N
	+E-W	0.0 usft	Easting:	2,743,039.55 usft	Longitude:	106° 25' 31.225 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,130.0 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	12/31/2009	9.90	66.98	53,194

<b>Design</b>	Design #1				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0	
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	187.21	

<b>Survey Tool Program</b>	<b>Date</b>	10/17/2017			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
0.0	16,939.2	Design #1 (Wellbore #1)	Sperry MWD	Fixed:v2:standard declination	

<b>Planned Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
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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<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	KB @ 8156.0usft
<b>Site:</b>	T7N-R81W-S12	<b>MD Reference:</b>	KB @ 8156.0usft
<b>Well:</b>	Peters 0781 10-12H13	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	EDMPProd

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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
2,900.0	3.00	286.00	2,900.0	0.7	-2.5	-0.4	3.00	3.00	0.00
3,000.0	6.00	286.00	2,999.6	2.9	-10.1	-1.6	3.00	3.00	0.00
3,100.0	9.00	286.00	3,098.8	6.5	-22.6	-3.6	3.00	3.00	0.00
3,200.0	12.00	286.00	3,197.1	11.5	-40.1	-6.4	3.00	3.00	0.00
3,300.0	15.00	286.00	3,294.3	17.9	-62.6	-9.9	3.00	3.00	0.00
3,400.0	18.00	286.00	3,390.2	25.8	-89.9	-14.3	3.00	3.00	0.00
3,438.0	19.14	286.00	3,426.2	29.1	-101.5	-16.1	3.00	3.00	0.00
3,500.0	19.14	286.00	3,484.8	34.7	-121.0	-19.2	0.00	0.00	0.00
3,600.0	19.14	286.00	3,579.2	43.8	-152.5	-24.3	0.00	0.00	0.00
3,700.0	19.14	286.00	3,673.7	52.8	-184.1	-29.3	0.00	0.00	0.00
3,800.0	19.14	286.00	3,768.2	61.8	-215.6	-34.3	0.00	0.00	0.00
3,900.0	19.14	286.00	3,862.7	70.9	-247.1	-39.3	0.00	0.00	0.00
4,000.0	19.14	286.00	3,957.1	79.9	-278.6	-44.3	0.00	0.00	0.00
4,100.0	19.14	286.00	4,051.6	88.9	-310.1	-49.3	0.00	0.00	0.00
4,200.0	19.14	286.00	4,146.1	98.0	-341.7	-54.3	0.00	0.00	0.00
4,300.0	19.14	286.00	4,240.5	107.0	-373.2	-59.3	0.00	0.00	0.00
4,400.0	19.14	286.00	4,335.0	116.1	-404.7	-64.4	0.00	0.00	0.00
4,500.0	19.14	286.00	4,429.5	125.1	-436.2	-69.4	0.00	0.00	0.00
4,600.0	19.14	286.00	4,524.0	134.1	-467.7	-74.4	0.00	0.00	0.00
4,700.0	19.14	286.00	4,618.4	143.2	-499.2	-79.4	0.00	0.00	0.00
4,800.0	19.14	286.00	4,712.9	152.2	-530.8	-84.4	0.00	0.00	0.00
4,900.0	19.14	286.00	4,807.4	161.3	-562.3	-89.4	0.00	0.00	0.00
5,000.0	19.14	286.00	4,901.8	170.3	-593.8	-94.4	0.00	0.00	0.00
5,100.0	19.14	286.00	4,996.3	179.3	-625.3	-99.4	0.00	0.00	0.00
5,200.0	19.14	286.00	5,090.8	188.4	-656.8	-104.4	0.00	0.00	0.00

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## Survey Report

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<b>Well:</b>	Peters 0781 10-12H13	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	EDMPProd

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.0	19.14	286.00	5,185.3	197.4	-688.3	-109.5	0.00	0.00	0.00
5,400.0	19.14	286.00	5,279.7	206.5	-719.9	-114.5	0.00	0.00	0.00
5,500.0	19.14	286.00	5,374.2	215.5	-751.4	-119.5	0.00	0.00	0.00
5,600.0	19.14	286.00	5,468.7	224.5	-782.9	-124.5	0.00	0.00	0.00
5,700.0	19.14	286.00	5,563.2	233.6	-814.4	-129.5	0.00	0.00	0.00
5,800.0	19.14	286.00	5,657.6	242.6	-845.9	-134.5	0.00	0.00	0.00
5,900.0	19.14	286.00	5,752.1	251.7	-877.5	-139.5	0.00	0.00	0.00
6,000.0	19.14	286.00	5,846.6	260.7	-909.0	-144.5	0.00	0.00	0.00
6,100.0	19.14	286.00	5,941.0	269.7	-940.5	-149.6	0.00	0.00	0.00
6,200.0	19.14	286.00	6,035.5	278.8	-972.0	-154.6	0.00	0.00	0.00
6,300.0	19.14	286.00	6,130.0	287.8	-1,003.5	-159.6	0.00	0.00	0.00
6,400.0	19.14	286.00	6,224.5	296.9	-1,035.0	-164.6	0.00	0.00	0.00
6,434.8	19.14	286.00	6,257.3	300.0	-1,046.0	-166.3	0.00	0.00	0.00
6,500.0	18.50	265.78	6,319.1	302.2	-1,066.6	-165.9	10.00	-0.99	-31.00
6,600.0	21.55	237.64	6,413.3	291.2	-1,098.0	-151.0	10.00	3.05	-28.14
6,700.0	27.92	219.01	6,504.2	263.1	-1,128.4	-119.4	10.00	6.37	-18.63
6,800.0	35.88	207.46	6,589.1	218.8	-1,156.7	-71.8	10.00	7.96	-11.55
6,900.0	44.58	199.78	6,665.4	159.6	-1,182.1	-9.9	10.00	8.70	-7.68
7,000.0	53.65	194.20	6,730.8	87.3	-1,204.0	64.5	10.00	9.07	-5.58
7,100.0	62.93	189.81	6,783.3	4.2	-1,221.5	149.1	10.00	9.28	-4.39
7,200.0	72.33	186.10	6,821.4	-87.3	-1,234.1	241.5	10.00	9.39	-3.71
7,300.0	81.78	182.76	6,843.8	-184.3	-1,241.6	338.7	10.00	9.46	-3.34
7,386.6	90.00	180.00	6,850.0	-270.6	-1,243.7	424.6	10.00	9.48	-3.19
7,400.0	90.00	180.00	6,850.0	-284.0	-1,243.7	437.8	0.00	0.00	0.00
7,500.0	90.00	180.00	6,850.0	-384.0	-1,243.7	537.1	0.00	0.00	0.00
7,600.0	90.00	180.00	6,850.0	-484.0	-1,243.7	636.3	0.00	0.00	0.00
7,700.0	90.00	180.00	6,850.0	-584.0	-1,243.6	735.5	0.00	0.00	0.00
7,800.0	90.00	180.00	6,850.0	-684.0	-1,243.6	834.7	0.00	0.00	0.00
7,900.0	90.00	180.00	6,850.0	-784.0	-1,243.6	933.9	0.00	0.00	0.00
8,000.0	90.00	180.00	6,850.0	-884.0	-1,243.6	1,033.1	0.00	0.00	0.00
8,100.0	90.00	180.00	6,850.0	-984.0	-1,243.6	1,132.3	0.00	0.00	0.00
8,200.0	90.00	180.00	6,850.0	-1,084.0	-1,243.6	1,231.5	0.00	0.00	0.00
8,300.0	90.00	180.00	6,850.0	-1,184.0	-1,243.6	1,330.7	0.00	0.00	0.00
8,400.0	90.00	180.00	6,850.0	-1,284.0	-1,243.6	1,429.9	0.00	0.00	0.00
8,500.0	90.00	180.00	6,850.0	-1,384.0	-1,243.6	1,529.1	0.00	0.00	0.00
8,600.0	90.00	180.00	6,850.0	-1,484.0	-1,243.6	1,628.3	0.00	0.00	0.00
8,700.0	90.00	180.00	6,850.0	-1,584.0	-1,243.6	1,727.5	0.00	0.00	0.00
8,800.0	90.00	180.00	6,850.0	-1,684.0	-1,243.5	1,826.8	0.00	0.00	0.00
8,900.0	90.00	180.00	6,850.0	-1,784.0	-1,243.5	1,926.0	0.00	0.00	0.00
9,000.0	90.00	180.00	6,850.0	-1,884.0	-1,243.5	2,025.2	0.00	0.00	0.00
9,100.0	90.00	180.00	6,850.0	-1,984.0	-1,243.5	2,124.4	0.00	0.00	0.00
9,200.0	90.00	180.00	6,850.0	-2,084.0	-1,243.5	2,223.6	0.00	0.00	0.00
9,300.0	90.00	180.00	6,850.0	-2,184.0	-1,243.5	2,322.8	0.00	0.00	0.00

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## Survey Report

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<b>Site:</b>	T7N-R81W-S12	<b>MD Reference:</b>	KB @ 8156.0usft
<b>Well:</b>	Peters 0781 10-12H13	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	EDMPProd

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,400.0	90.00	180.00	6,850.0	-2,284.0	-1,243.5	2,422.0	0.00	0.00	0.00
9,500.0	90.00	180.00	6,850.0	-2,384.0	-1,243.5	2,521.2	0.00	0.00	0.00
9,600.0	90.00	180.00	6,850.0	-2,484.0	-1,243.5	2,620.4	0.00	0.00	0.00
9,700.0	90.00	180.00	6,850.0	-2,584.0	-1,243.5	2,719.6	0.00	0.00	0.00
9,800.0	90.00	180.00	6,850.0	-2,684.0	-1,243.5	2,818.8	0.00	0.00	0.00
9,900.0	90.00	180.00	6,850.0	-2,784.0	-1,243.5	2,918.0	0.00	0.00	0.00
10,000.0	90.00	180.00	6,850.0	-2,884.0	-1,243.4	3,017.3	0.00	0.00	0.00
10,100.0	90.00	180.00	6,850.0	-2,984.0	-1,243.4	3,116.5	0.00	0.00	0.00
10,200.0	90.00	180.00	6,850.0	-3,084.0	-1,243.4	3,215.7	0.00	0.00	0.00
10,300.0	90.00	180.00	6,850.0	-3,184.0	-1,243.4	3,314.9	0.00	0.00	0.00
10,400.0	90.00	180.00	6,850.0	-3,284.0	-1,243.4	3,414.1	0.00	0.00	0.00
10,500.0	90.00	180.00	6,850.0	-3,384.0	-1,243.4	3,513.3	0.00	0.00	0.00
10,600.0	90.00	180.00	6,850.0	-3,484.0	-1,243.4	3,612.5	0.00	0.00	0.00
10,700.0	90.00	180.00	6,850.0	-3,584.0	-1,243.4	3,711.7	0.00	0.00	0.00
10,800.0	90.00	180.00	6,850.0	-3,684.0	-1,243.4	3,810.9	0.00	0.00	0.00
10,900.0	90.00	180.00	6,850.0	-3,784.0	-1,243.4	3,910.1	0.00	0.00	0.00
11,000.0	90.00	180.00	6,850.0	-3,884.0	-1,243.4	4,009.3	0.00	0.00	0.00
11,100.0	90.00	180.00	6,850.0	-3,984.0	-1,243.4	4,108.5	0.00	0.00	0.00
11,200.0	90.00	180.00	6,850.0	-4,084.0	-1,243.3	4,207.7	0.00	0.00	0.00
11,300.0	90.00	180.00	6,850.0	-4,184.0	-1,243.3	4,307.0	0.00	0.00	0.00
11,400.0	90.00	180.00	6,850.0	-4,284.0	-1,243.3	4,406.2	0.00	0.00	0.00
11,500.0	90.00	180.00	6,850.0	-4,384.0	-1,243.3	4,505.4	0.00	0.00	0.00
11,600.0	90.00	180.00	6,850.0	-4,484.0	-1,243.3	4,604.6	0.00	0.00	0.00
11,700.0	90.00	180.00	6,850.0	-4,584.0	-1,243.3	4,703.8	0.00	0.00	0.00
11,800.0	90.00	180.00	6,850.0	-4,684.0	-1,243.3	4,803.0	0.00	0.00	0.00
11,900.0	90.00	180.00	6,850.0	-4,784.0	-1,243.3	4,902.2	0.00	0.00	0.00
12,000.0	90.00	180.00	6,850.0	-4,884.0	-1,243.3	5,001.4	0.00	0.00	0.00
12,100.0	90.00	180.00	6,850.0	-4,984.0	-1,243.3	5,100.6	0.00	0.00	0.00
12,200.0	90.00	180.00	6,850.0	-5,084.0	-1,243.3	5,199.8	0.00	0.00	0.00
12,300.0	90.00	180.00	6,850.0	-5,184.0	-1,243.3	5,299.0	0.00	0.00	0.00
12,400.0	90.00	180.00	6,850.0	-5,284.0	-1,243.2	5,398.2	0.00	0.00	0.00
12,500.0	90.00	180.00	6,850.0	-5,384.0	-1,243.2	5,497.5	0.00	0.00	0.00
12,600.0	90.00	180.00	6,850.0	-5,484.0	-1,243.2	5,596.7	0.00	0.00	0.00
12,700.0	90.00	180.00	6,850.0	-5,584.0	-1,243.2	5,695.9	0.00	0.00	0.00
12,800.0	90.00	180.00	6,850.0	-5,684.0	-1,243.2	5,795.1	0.00	0.00	0.00
12,900.0	90.00	180.00	6,850.0	-5,784.0	-1,243.2	5,894.3	0.00	0.00	0.00
13,000.0	90.00	180.00	6,850.0	-5,884.0	-1,243.2	5,993.5	0.00	0.00	0.00
13,100.0	90.00	180.00	6,850.0	-5,984.0	-1,243.2	6,092.7	0.00	0.00	0.00
13,200.0	90.00	180.00	6,850.0	-6,084.0	-1,243.2	6,191.9	0.00	0.00	0.00
13,300.0	90.00	180.00	6,850.0	-6,184.0	-1,243.2	6,291.1	0.00	0.00	0.00
13,400.0	90.00	180.00	6,850.0	-6,284.0	-1,243.2	6,390.3	0.00	0.00	0.00
13,500.0	90.00	180.00	6,850.0	-6,384.0	-1,243.2	6,489.5	0.00	0.00	0.00
13,600.0	90.00	180.00	6,850.0	-6,484.0	-1,243.1	6,588.7	0.00	0.00	0.00

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Peters 0781 10-12H13
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	KB @ 8156.0usft
<b>Site:</b>	T7N-R81W-S12	<b>MD Reference:</b>	KB @ 8156.0usft
<b>Well:</b>	Peters 0781 10-12H13	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	EDMProd

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,700.0	90.00	180.00	6,850.0	-6,584.0	-1,243.1	6,687.9	0.00	0.00	0.00
13,800.0	90.00	180.00	6,850.0	-6,684.0	-1,243.1	6,787.2	0.00	0.00	0.00
13,900.0	90.00	180.00	6,850.0	-6,784.0	-1,243.1	6,886.4	0.00	0.00	0.00
14,000.0	90.00	180.00	6,850.0	-6,884.0	-1,243.1	6,985.6	0.00	0.00	0.00
14,100.0	90.00	180.00	6,850.0	-6,984.0	-1,243.1	7,084.8	0.00	0.00	0.00
14,200.0	90.00	180.00	6,850.0	-7,084.0	-1,243.1	7,184.0	0.00	0.00	0.00
14,300.0	90.00	180.00	6,850.0	-7,184.0	-1,243.1	7,283.2	0.00	0.00	0.00
14,400.0	90.00	180.00	6,850.0	-7,284.0	-1,243.1	7,382.4	0.00	0.00	0.00
14,500.0	90.00	180.00	6,850.0	-7,384.0	-1,243.1	7,481.6	0.00	0.00	0.00
14,600.0	90.00	180.00	6,850.0	-7,484.0	-1,243.1	7,580.8	0.00	0.00	0.00
14,700.0	90.00	180.00	6,850.0	-7,584.0	-1,243.0	7,680.0	0.00	0.00	0.00
14,800.0	90.00	180.00	6,850.0	-7,684.0	-1,243.0	7,779.2	0.00	0.00	0.00
14,900.0	90.00	180.00	6,850.0	-7,784.0	-1,243.0	7,878.4	0.00	0.00	0.00
15,000.0	90.00	180.00	6,850.0	-7,884.0	-1,243.0	7,977.7	0.00	0.00	0.00
15,100.0	90.00	180.00	6,850.0	-7,984.0	-1,243.0	8,076.9	0.00	0.00	0.00
15,200.0	90.00	180.00	6,850.0	-8,084.0	-1,243.0	8,176.1	0.00	0.00	0.00
15,300.0	90.00	180.00	6,850.0	-8,184.0	-1,243.0	8,275.3	0.00	0.00	0.00
15,400.0	90.00	180.00	6,850.0	-8,284.0	-1,243.0	8,374.5	0.00	0.00	0.00
15,500.0	90.00	180.00	6,850.0	-8,384.0	-1,243.0	8,473.7	0.00	0.00	0.00
15,600.0	90.00	180.00	6,850.0	-8,484.0	-1,243.0	8,572.9	0.00	0.00	0.00
15,700.0	90.00	180.00	6,850.0	-8,584.0	-1,243.0	8,672.1	0.00	0.00	0.00
15,800.0	90.00	180.00	6,850.0	-8,684.0	-1,243.0	8,771.3	0.00	0.00	0.00
15,900.0	90.00	180.00	6,850.0	-8,784.0	-1,242.9	8,870.5	0.00	0.00	0.00
16,000.0	90.00	180.00	6,850.0	-8,884.0	-1,242.9	8,969.7	0.00	0.00	0.00
16,100.0	90.00	180.00	6,850.0	-8,984.0	-1,242.9	9,068.9	0.00	0.00	0.00
16,200.0	90.00	180.00	6,850.0	-9,084.0	-1,242.9	9,168.1	0.00	0.00	0.00
16,300.0	90.00	180.00	6,850.0	-9,184.0	-1,242.9	9,267.4	0.00	0.00	0.00
16,400.0	90.00	180.00	6,850.0	-9,284.0	-1,242.9	9,366.6	0.00	0.00	0.00
16,500.0	90.00	180.00	6,850.0	-9,384.0	-1,242.9	9,465.8	0.00	0.00	0.00
16,600.0	90.00	180.00	6,850.0	-9,484.0	-1,242.9	9,565.0	0.00	0.00	0.00
16,700.0	90.00	180.00	6,850.0	-9,584.0	-1,242.9	9,664.2	0.00	0.00	0.00
16,800.0	90.00	180.00	6,850.0	-9,684.0	-1,242.9	9,763.4	0.00	0.00	0.00
16,900.0	90.00	180.00	6,850.0	-9,784.0	-1,242.9	9,862.6	0.00	0.00	0.00
16,939.2	90.00	180.00	6,850.0	-9,823.1	-1,242.9	9,901.5	0.00	0.00	0.00

### Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Peters 10 BHL	0.00	360.00	6,850.0	-9,823.1	-1,242.9	1,452,114.50	2,741,796.69	40° 34' 14.660 N	106° 25' 46.001 W
- hit/miss target									
- Shape									
- plan hits target center									
- Point									

# SandRidge Energy

## Survey Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Peters 0781 10-12H13
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	KB @ 8156.0usft
<b>Site:</b>	T7N-R81W-S12	<b>MD Reference:</b>	KB @ 8156.0usft
<b>Well:</b>	Peters 0781 10-12H13	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Design #1	<b>Database:</b>	EDMProd

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



# **SandRidge Energy**

**North Park Basin**

**T7N-R81W-S12**

**Peters 0781 10-12H13**

**Wellbore #1**

**Design #1**

## **Anticollision Summary Report**

**17 October, 2017**

# SandRidge Energy

## Anticollision Summary Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Peters 0781 10-12H13
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	KB @ 8156.0usft
<b>Reference Site:</b>	T7N-R81W-S12	<b>MD Reference:</b>	KB @ 8156.0usft
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Peters 0781 10-12H13	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMProd
<b>Reference Design:</b>	Design #1	<b>Offset TVD Reference:</b>	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	10/17/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	16,939.2	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
T7N-R80W-S18						
Hebron 01-18H - Wellbore #1 - Wellbore #1	11,612.7	6,498.0	4,057.4	3,969.0	45.862	CC
Hebron 01-18H - Wellbore #1 - Wellbore #1	11,700.0	6,498.0	4,058.4	3,968.2	45.033	ES
Hebron 01-18H - Wellbore #1 - Wellbore #1	15,000.0	6,303.4	5,279.6	5,127.5	34.726	SF
Hebron 0780 2-18H - Wellbore #1 - Wellbore #1	12,260.3	6,911.0	4,592.1	4,475.1	39.254	CC
Hebron 0780 2-18H - Wellbore #1 - Wellbore #1	16,939.2	11,630.0	4,611.3	4,330.4	16.419	ES, SF
Hebron 1-18HR - Wellbore #1 - Wellbore #1	5,546.4	11,809.0	3,688.0	3,583.0	35.110	CC, ES
Hebron 1-18HR - Wellbore #1 - Wellbore #1	14,600.0	6,221.0	4,710.1	4,553.1	29.997	SF
Hebron 5-18H - Wellbore #1 - Wellbore #1	16,435.3	11,360.0	1,879.5	1,616.6	7.149	CC
Hebron 5-18H - Wellbore #1 - Wellbore #1	16,500.0	11,360.0	1,880.6	1,616.5	7.120	ES
Hebron 5-18H - Wellbore #1 - Wellbore #1	16,700.0	11,360.0	1,898.0	1,630.1	7.083	SF
Peters 0781 11-13H12 - Wellbore #1 - Design #1	6,725.6	16,400.9	304.6	104.9	1.526	Level 4, CC, ES, SF
Peters 0781 13-13H12 - Wellbore #1 - Design #1	6,631.0	16,380.6	572.0	372.2	2.863	CC, ES, SF
Peters 0781 15-13H12 - Wellbore #1 - Design #1	6,540.4	16,356.0	839.4	639.9	4.207	CC, ES, SF
Peters 0781 9-13H12 - Wellbore #1 - Design #1	6,827.8	16,419.2	37.2	-162.0	0.187	Level 1, CC, ES, SF
T7N-R81W-S12						
Hebron 3-12H - Wellbore #1 - Wellbore #1	4,936.7	4,867.0	95.3	67.8	3.460	CC, ES, SF
Peters 0781 12-12H13 - Wellbore #1 - Design #1	2,800.0	2,800.0	15.1	2.8	1.226	Level 2, CC
Peters 0781 12-12H13 - Wellbore #1 - Design #1	16,939.2	17,083.0	281.9	-101.4	0.736	Level 1, ES, SF
Peters 0781 14-12H13 - Wellbore #1 - Design #1	2,800.0	2,800.0	30.1	17.8	2.444	CC, ES
Peters 0781 14-12H13 - Wellbore #1 - Design #1	16,939.2	17,106.6	563.8	180.3	1.470	Level 3, SF
Peters 0781 16-12H13 - Wellbore #1 - Design #1	2,800.0	2,800.0	45.1	32.8	3.663	CC, ES
Peters 0781 16-12H13 - Wellbore #1 - Design #1	16,939.2	16,996.9	845.6	462.7	2.208	SF

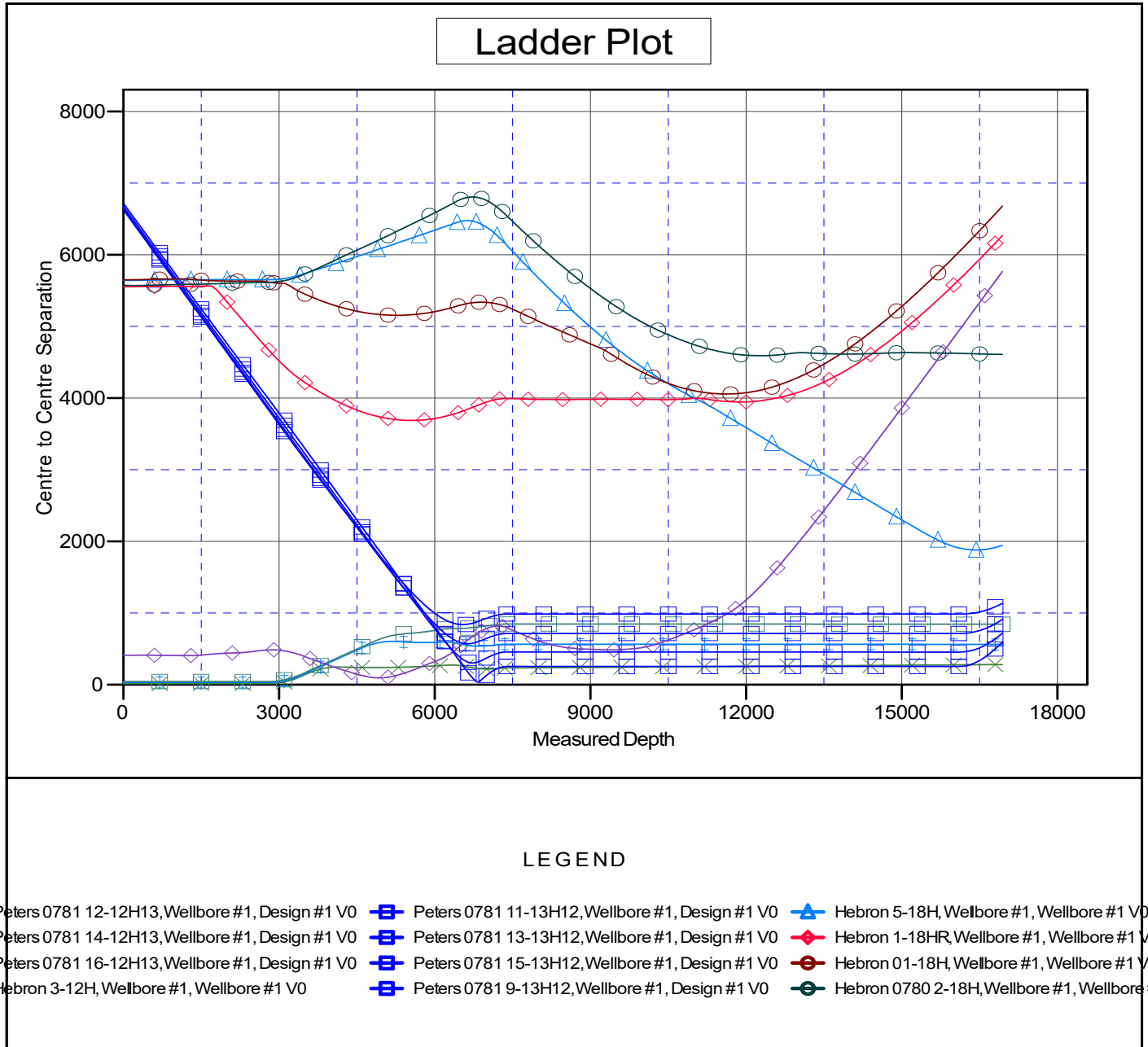
# SandRidge Energy

## Anticollision Summary Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Peters 0781 10-12H13
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	KB @ 8156.0usft
<b>Reference Site:</b>	T7N-R81W-S12	<b>MD Reference:</b>	KB @ 8156.0usft
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Peters 0781 10-12H13	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMProd
<b>Reference Design:</b>	Design #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB @ 8156.0usft  
Offset Depths are relative to Offset Datum  
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Peters 0781 10-12H13  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: -0.60°



# SandRidge Energy

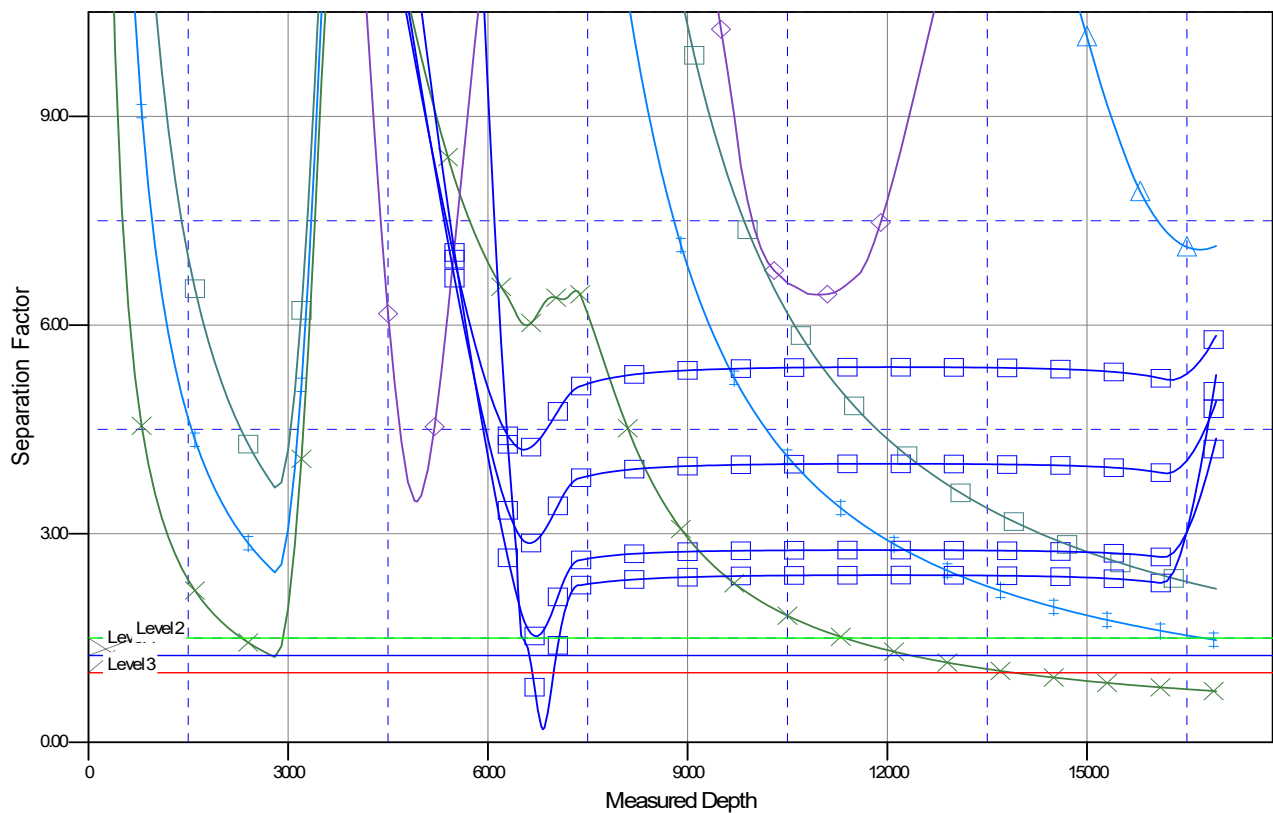
## Anticollision Summary Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Peters 0781 10-12H13
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	KB @ 8156.0usft
<b>Reference Site:</b>	T7N-R81W-S12	<b>MD Reference:</b>	KB @ 8156.0usft
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Peters 0781 10-12H13	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMProd
<b>Reference Design:</b>	Design #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB @ 8156.0usft  
Offset Depths are relative to Offset Datum  
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Peters 0781 10-12H13  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: -0.60°

### Separation Factor Plot



### LEGEND

Peters 0781 12-12H13, Wellbore #1, Design #1 V0	Peters 0781 11-13H12, Wellbore #1, Design #1 V0	Hebron 5-18H, Wellbore #1, Wellbore #1 V0
Peters 0781 14-12H13, Wellbore #1, Design #1 V0	Peters 0781 13-13H12, Wellbore #1, Design #1 V0	Hebron 1-18HR, Wellbore #1, Wellbore #1 V0
Peters 0781 16-12H13, Wellbore #1, Design #1 V0	Peters 0781 15-13H12, Wellbore #1, Design #1 V0	Hebron 01-18H, Wellbore #1, Wellbore #1 V0
Hebron 3-12H, Wellbore #1, Wellbore #1 V0	Peters 0781 9-13H12, Wellbore #1, Design #1 V0	Hebron 0780 2-18H, Wellbore #1, Wellbore #