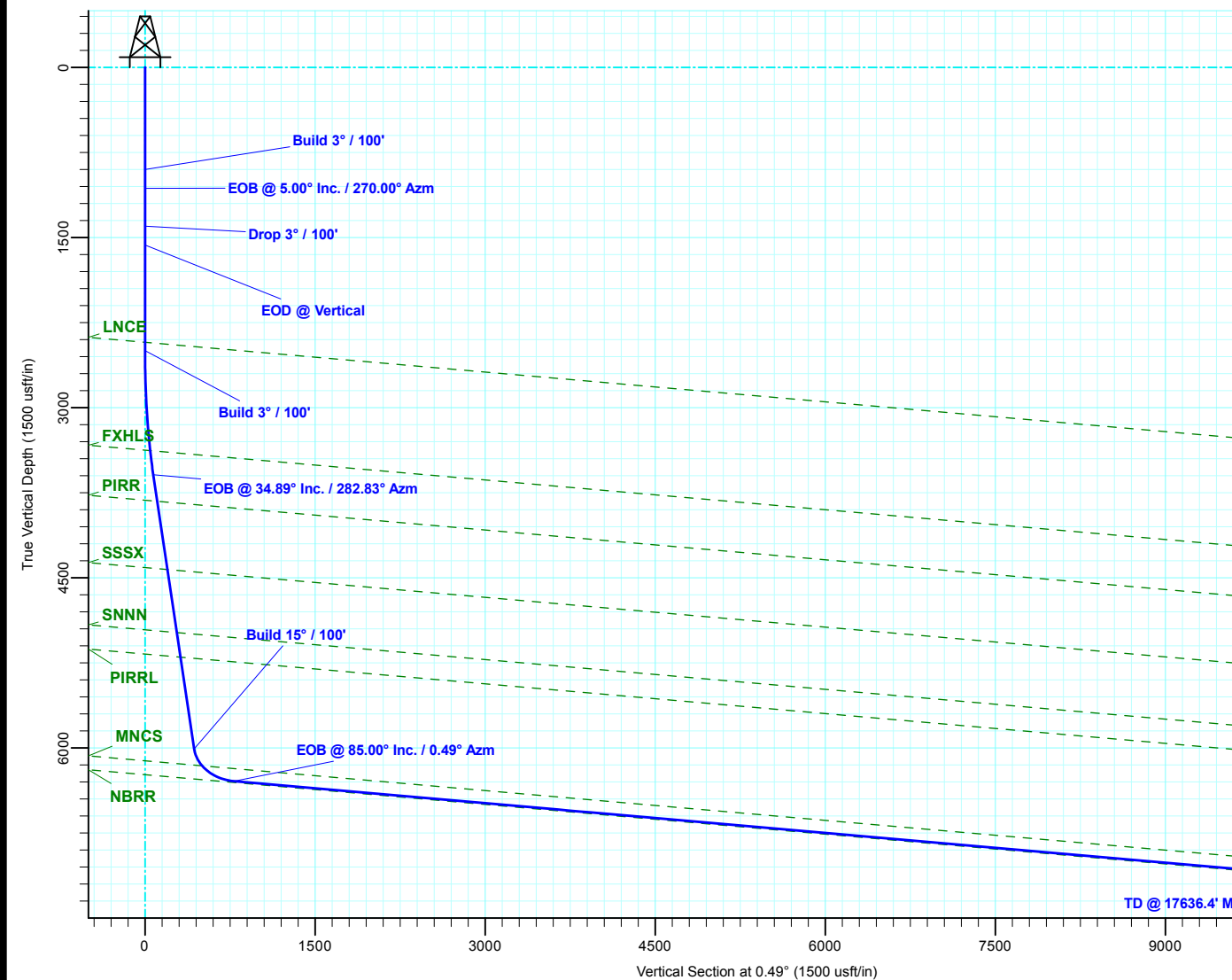
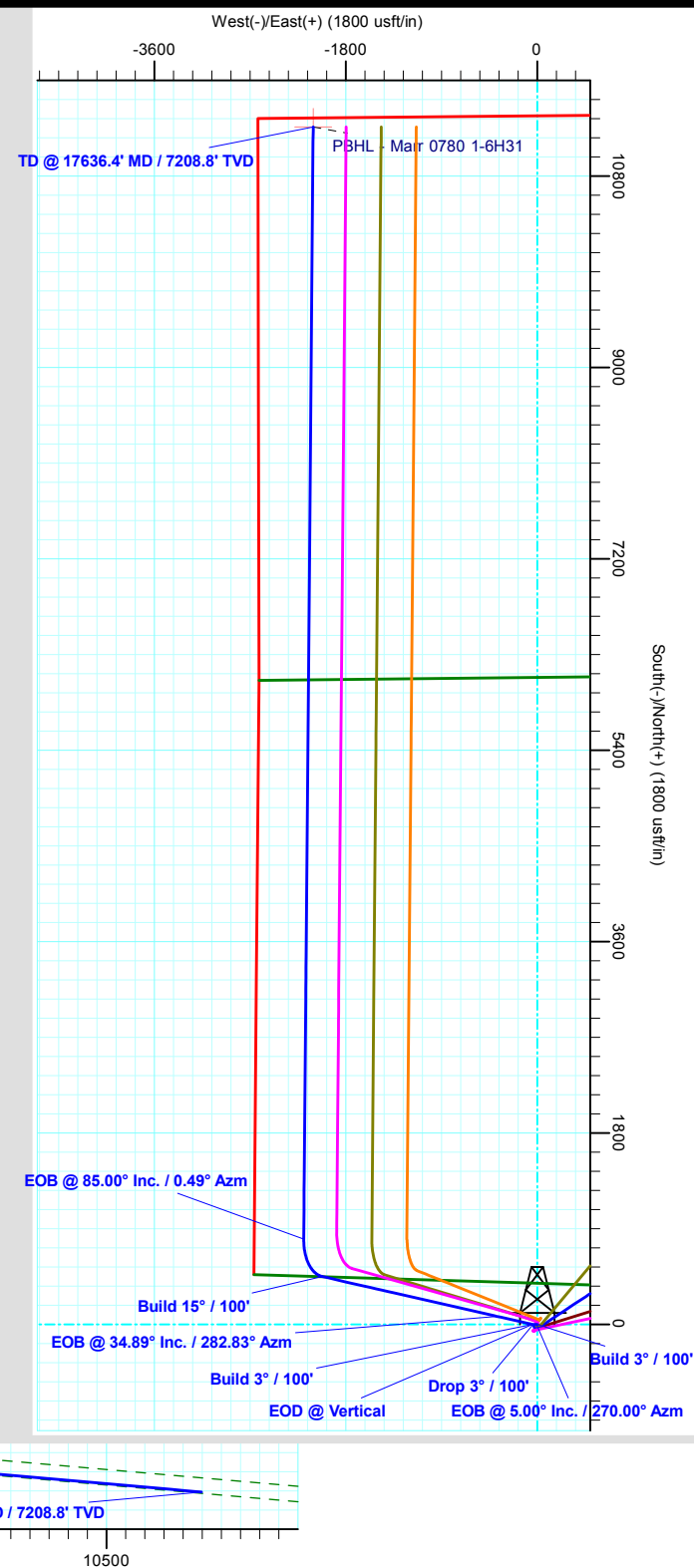


SandRidge Energy  
Jackson County, Colorado  
Sec 7, T7N, R80W, 6th PM  
Marr 0780 1-6H31  
Design #1  
Cyclone #33



ANNOTATIONS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.0	Build 3° / 100'	
1066.7	5.00	270.00	1066.5	0.0	-7.3	-0.1	7.3	EOB @ 5.00° Inc. / 270.00° Azm	
1400.7	5.00	270.00	1399.2	0.0	-36.4	-0.3	36.4	Drop 3° / 100'	
1567.3	0.00	0.00	1565.6	0.0	-43.6	-0.4	43.6	EOD @ Vertical	
2500.0	0.00	0.00	2498.3	0.0	-43.6	-0.4	43.6	Build 3° / 100'	
3663.0	34.89	282.83	3590.7	76.2	-378.3	73.0	386.9	EOB @ 34.89° Inc. / 282.83° Azm	
6610.7	34.89	282.83	6008.6	450.6	-2022.3	433.3	2073.0	Build 15° / 100'	
7136.4	85.00	0.49	6293.6	803.4	-2194.8	784.6	2492.6	EOB @ 85.00° Inc. / 0.49° Azm	
17636.4	85.00	0.49	7208.8	11263.0	-2105.4	11244.6	12952.6	TD @ 17636.4' MD / 7208.8' TVD	

WELL DETAILS: Marr 0780 1-6H31						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.0	0.0	1462151.30	2745744.40	40° 35' 54.240 N	106° 24' 56.190 W	



# **SandRidge Energy**

**Jackson County, Colorado  
Sec 7, T7N, R80W, 6th PM  
Marr 0780 1-6H31**

**Wellbore #1**

**Plan: Design #1**

## **QES Well Planning Report**

**13 September, 2018**



# Well Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Marr 0780 1-6H31
<b>Company:</b>	SandRidge Energy	<b>TVD Reference:</b>	RKB @ 8156.0usft (Cyclone #33)
<b>Project:</b>	Jackson County, Colorado	<b>MD Reference:</b>	RKB @ 8156.0usft (Cyclone #33)
<b>Site:</b>	Sec 7, T7N, R80W, 6th PM	<b>North Reference:</b>	Grid
<b>Well:</b>	Marr 0780 1-6H31	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

<b>Project</b>	Jackson County, Colorado		
<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		

<b>Site</b>	Sec 7, T7N, R80W, 6th PM		
<b>Site Position:</b>		<b>Northing:</b>	1,461,937.18 usft
<b>From:</b>	Map	<b>Easting:</b>	2,743,084.61 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	40° 35' 51.852 N
		<b>Longitude:</b>	106° 25' 30.641 W
		<b>Grid Convergence:</b>	-0.60 °

<b>Well</b>	Marr 0780 1-6H31		
<b>Well Position</b>	<b>+N/-S</b>	214.1 usft	<b>Northing:</b> 1,462,151.30 usft
	<b>+E/-W</b>	2,659.8 usft	<b>Easting:</b> 2,745,744.40 usft
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	<b>Latitude:</b> 40° 35' 54.240 N
			<b>Longitude:</b> 106° 24' 56.190 W
			<b>Ground Level:</b> 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>
	IGRF2015	9/13/2018	8.95	66.72	52,146.06745685

<b>Design</b>	Design #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<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	0.49

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,066.7	5.00	270.00	1,066.5	0.0	-7.3	3.00	3.00	0.00	270.00	
1,400.7	5.00	270.00	1,399.2	0.0	-36.4	0.00	0.00	0.00	0.00	
1,567.3	0.00	0.00	1,565.6	0.0	-43.6	3.00	-3.00	0.00	180.00	
2,500.0	0.00	0.00	2,498.3	0.0	-43.6	0.00	0.00	0.00	0.00	
3,663.0	34.89	282.83	3,590.7	76.2	-378.3	3.00	3.00	0.00	282.83	
6,610.7	34.89	282.83	6,008.6	450.6	-2,022.3	0.00	0.00	0.00	0.00	
7,136.4	85.00	0.49	6,293.6	803.4	-2,194.8	15.00	9.53	14.77	82.69	
17,636.4	85.00	0.49	7,208.8	11,263.0	-2,105.3	0.00	0.00	0.00	0.00	PBHL - Marr 0780 1

# Well Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Marr 0780 1-6H31
<b>Company:</b>	SandRidge Energy	<b>TVD Reference:</b>	RKB @ 8156.0usft (Cyclone #33)
<b>Project:</b>	Jackson County, Colorado	<b>MD Reference:</b>	RKB @ 8156.0usft (Cyclone #33)
<b>Site:</b>	Sec 7, T7N, R80W, 6th PM	<b>North Reference:</b>	Grid
<b>Well:</b>	Marr 0780 1-6H31	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

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
<b>Build 3° / 100'</b>									
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	3.00	270.00	1,000.0	0.0	-2.6	0.0	3.00	3.00	0.00
<b>EOB @ 5.00° Inc. / 270.00° Azm</b>									
1,066.7	5.00	270.00	1,066.5	0.0	-7.3	-0.1	3.00	3.00	0.00
1,100.0	5.00	270.00	1,099.7	0.0	-10.2	-0.1	0.00	0.00	0.00
1,200.0	5.00	270.00	1,199.3	0.0	-18.9	-0.2	0.00	0.00	0.00
1,300.0	5.00	270.00	1,298.9	0.0	-27.6	-0.2	0.00	0.00	0.00
<b>Drop 3° / 100'</b>									
1,400.7	5.00	270.00	1,399.2	0.0	-36.4	-0.3	0.00	0.00	0.00
1,500.0	2.02	270.00	1,498.3	0.0	-42.5	-0.4	3.00	-3.00	0.00
<b>EOD @ Vertical</b>									
1,567.3	0.00	0.00	1,565.6	0.0	-43.6	-0.4	3.00	-3.00	0.00
1,600.0	0.00	0.00	1,598.3	0.0	-43.6	-0.4	0.00	0.00	0.00
1,700.0	0.00	0.00	1,698.3	0.0	-43.6	-0.4	0.00	0.00	0.00
1,800.0	0.00	0.00	1,798.3	0.0	-43.6	-0.4	0.00	0.00	0.00
1,900.0	0.00	0.00	1,898.3	0.0	-43.6	-0.4	0.00	0.00	0.00
2,000.0	0.00	0.00	1,998.3	0.0	-43.6	-0.4	0.00	0.00	0.00
2,100.0	0.00	0.00	2,098.3	0.0	-43.6	-0.4	0.00	0.00	0.00
2,200.0	0.00	0.00	2,198.3	0.0	-43.6	-0.4	0.00	0.00	0.00
2,300.0	0.00	0.00	2,298.3	0.0	-43.6	-0.4	0.00	0.00	0.00
2,400.0	0.00	0.00	2,398.3	0.0	-43.6	-0.4	0.00	0.00	0.00
<b>LNCE</b>									
2,426.7	0.00	0.00	2,425.0	0.0	-43.6	-0.4	0.00	0.00	0.00
<b>Build 3° / 100'</b>									
2,500.0	0.00	0.00	2,498.3	0.0	-43.6	-0.4	0.00	0.00	0.00
2,600.0	3.00	282.83	2,598.3	0.6	-46.2	0.2	3.00	3.00	0.00
2,700.0	6.00	282.83	2,697.9	2.3	-53.8	1.9	3.00	3.00	0.00
2,800.0	9.00	282.83	2,797.1	5.2	-66.6	4.7	3.00	3.00	0.00
2,900.0	12.00	282.83	2,895.4	9.3	-84.3	8.5	3.00	3.00	0.00
3,000.0	15.00	282.83	2,992.6	14.5	-107.1	13.5	3.00	3.00	0.00
3,100.0	18.00	282.83	3,088.5	20.8	-134.8	19.6	3.00	3.00	0.00
3,200.0	21.00	282.83	3,182.7	28.2	-167.3	26.7	3.00	3.00	0.00
3,300.0	24.00	282.83	3,275.1	36.7	-204.6	34.9	3.00	3.00	0.00
3,400.0	27.00	282.83	3,365.4	46.2	-246.6	44.1	3.00	3.00	0.00
<b>FXHLS</b>									
3,416.5	27.49	282.83	3,380.0	47.9	-254.0	45.7	3.00	3.00	0.00
3,500.0	30.00	282.83	3,453.2	56.8	-293.1	54.3	3.00	3.00	0.00
3,600.0	33.00	282.83	3,538.5	68.4	-344.1	65.5	3.00	3.00	0.00
<b>EOB @ 34.89° Inc. / 282.83° Azm</b>									
3,663.0	34.89	282.83	3,590.7	76.2	-378.3	73.0	3.00	3.00	0.00
3,700.0	34.89	282.83	3,621.1	80.9	-399.0	77.5	0.00	0.00	0.00
3,800.0	34.89	282.83	3,703.1	93.6	-454.8	89.7	0.00	0.00	0.00
3,900.0	34.89	282.83	3,785.2	106.3	-510.5	102.0	0.00	0.00	0.00

# Well Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Marr 0780 1-6H31
<b>Company:</b>	SandRidge Energy	<b>TVD Reference:</b>	RKB @ 8156.0usft (Cyclone #33)
<b>Project:</b>	Jackson County, Colorado	<b>MD Reference:</b>	RKB @ 8156.0usft (Cyclone #33)
<b>Site:</b>	Sec 7, T7N, R80W, 6th PM	<b>North Reference:</b>	Grid
<b>Well:</b>	Marr 0780 1-6H31	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

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)
<b>PIRR</b>									
3,949.1	34.89	282.83	3,825.4	112.6	-537.9	108.0	0.00	0.00	0.00
4,000.0	34.89	282.83	3,867.2	119.0	-566.3	114.2	0.00	0.00	0.00
4,100.0	34.89	282.83	3,949.2	131.7	-622.1	126.4	0.00	0.00	0.00
4,200.0	34.89	282.83	4,031.2	144.4	-677.9	138.6	0.00	0.00	0.00
4,300.0	34.89	282.83	4,113.3	157.1	-733.6	150.9	0.00	0.00	0.00
4,400.0	34.89	282.83	4,195.3	169.8	-789.4	163.1	0.00	0.00	0.00
4,500.0	34.89	282.83	4,277.3	182.5	-845.2	175.3	0.00	0.00	0.00
4,600.0	34.89	282.83	4,359.3	195.2	-900.9	187.5	0.00	0.00	0.00
<b>SSSX</b>									
4,684.1	34.89	282.83	4,428.3	205.9	-947.8	197.8	0.00	0.00	0.00
4,700.0	34.89	282.83	4,441.4	207.9	-956.7	199.7	0.00	0.00	0.00
4,800.0	34.89	282.83	4,523.4	220.6	-1,012.5	212.0	0.00	0.00	0.00
4,900.0	34.89	282.83	4,605.4	233.3	-1,068.3	224.2	0.00	0.00	0.00
5,000.0	34.89	282.83	4,687.4	246.0	-1,124.0	236.4	0.00	0.00	0.00
5,100.0	34.89	282.83	4,769.5	258.7	-1,179.8	248.6	0.00	0.00	0.00
5,200.0	34.89	282.83	4,851.5	271.4	-1,235.6	260.9	0.00	0.00	0.00
5,300.0	34.89	282.83	4,933.5	284.1	-1,291.3	273.1	0.00	0.00	0.00
<b>SNNN</b>									
5,361.0	34.89	282.83	4,983.5	291.9	-1,325.3	280.5	0.00	0.00	0.00
5,400.0	34.89	282.83	5,015.5	296.8	-1,347.1	285.3	0.00	0.00	0.00
5,500.0	34.89	282.83	5,097.6	309.5	-1,402.9	297.5	0.00	0.00	0.00
5,600.0	34.89	282.83	5,179.6	322.2	-1,458.6	309.8	0.00	0.00	0.00
<b>PIRRL</b>									
5,624.1	34.89	282.83	5,199.4	325.3	-1,472.1	312.7	0.00	0.00	0.00
5,700.0	34.89	282.83	5,261.6	334.9	-1,514.4	322.0	0.00	0.00	0.00
5,800.0	34.89	282.83	5,343.7	347.6	-1,570.2	334.2	0.00	0.00	0.00
5,900.0	34.89	282.83	5,425.7	360.3	-1,626.0	346.4	0.00	0.00	0.00
6,000.0	34.89	282.83	5,507.7	373.0	-1,681.7	358.7	0.00	0.00	0.00
6,100.0	34.89	282.83	5,589.7	385.7	-1,737.5	370.9	0.00	0.00	0.00
6,200.0	34.89	282.83	5,671.8	398.4	-1,793.3	383.1	0.00	0.00	0.00
6,300.0	34.89	282.83	5,753.8	411.2	-1,849.0	395.3	0.00	0.00	0.00
6,400.0	34.89	282.83	5,835.8	423.9	-1,904.8	407.5	0.00	0.00	0.00
6,500.0	34.89	282.83	5,917.8	436.6	-1,960.6	419.8	0.00	0.00	0.00
6,600.0	34.89	282.83	5,999.9	449.3	-2,016.4	432.0	0.00	0.00	0.00
<b>Build 15° / 100'</b>									
6,610.7	34.89	282.83	6,008.6	450.6	-2,022.3	433.3	0.00	0.00	0.00
6,625.0	35.22	286.52	6,020.4	452.7	-2,030.3	435.3	15.00	2.30	25.81
6,650.0	36.05	292.80	6,040.7	457.6	-2,044.0	440.1	15.00	3.35	25.11
6,675.0	37.20	298.78	6,060.7	464.1	-2,057.4	446.5	15.00	4.60	23.94
6,700.0	38.64	304.42	6,080.5	472.1	-2,070.4	454.4	15.00	5.74	22.56
6,725.0	40.33	309.69	6,099.8	481.7	-2,083.1	463.9	15.00	6.75	21.08
6,750.0	42.24	314.58	6,118.6	492.8	-2,095.3	474.9	15.00	7.64	19.57
6,775.0	44.34	319.11	6,136.8	505.3	-2,107.0	487.3	15.00	8.41	18.12
6,800.0	46.61	323.30	6,154.3	519.2	-2,118.2	501.1	15.00	9.07	16.76
<b>MNCS</b>									
6,805.6	47.14	324.20	6,158.1	522.5	-2,120.6	504.3	15.00	9.44	15.98
6,825.0	49.02	327.18	6,171.1	534.4	-2,128.7	516.2	15.00	9.70	15.38
6,850.0	51.55	330.78	6,187.1	550.9	-2,138.6	532.6	15.00	10.12	14.39
6,875.0	54.18	334.13	6,202.2	568.6	-2,147.8	550.2	15.00	10.53	13.40
6,900.0	56.90	337.26	6,216.3	587.3	-2,156.3	568.9	15.00	10.88	12.52
6,925.0	59.70	340.20	6,229.4	607.2	-2,164.0	588.6	15.00	11.18	11.76
6,950.0	62.55	342.98	6,241.5	627.9	-2,170.9	609.3	15.00	11.42	11.10

# Well Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Marr 0780 1-6H31
<b>Company:</b>	SandRidge Energy	<b>TVD Reference:</b>	RKB @ 8156.0usft (Cyclone #33)
<b>Project:</b>	Jackson County, Colorado	<b>MD Reference:</b>	RKB @ 8156.0usft (Cyclone #33)
<b>Site:</b>	Sec 7, T7N, R80W, 6th PM	<b>North Reference:</b>	Grid
<b>Well:</b>	Marr 0780 1-6H31	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

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)
6,975.0	65.46	345.61	6,252.5	649.6	-2,177.0	630.9	15.00	11.63	10.54
7,000.0	68.41	348.13	6,262.3	672.0	-2,182.2	653.3	15.00	11.81	10.06
7,025.0	71.40	350.54	6,270.9	695.0	-2,186.5	676.3	15.00	11.95	9.65
7,050.0	74.42	352.87	6,278.2	718.7	-2,190.0	699.9	15.00	12.07	9.32
7,075.0	77.46	355.13	6,284.3	742.8	-2,192.5	724.0	15.00	12.17	9.05
7,100.0	80.52	357.34	6,289.1	767.3	-2,194.1	748.5	15.00	12.24	8.83
7,125.0	83.59	359.51	6,292.5	792.0	-2,194.8	773.2	15.00	12.29	8.68
<b>EOB @ 85.00° Inc. / 0.49° Azm</b>									
7,136.4	85.00	0.49	6,293.6	803.4	-2,194.8	784.6	15.00	12.32	8.60
7,200.0	85.00	0.49	6,299.2	866.7	-2,194.3	847.9	0.00	0.00	0.00
7,300.0	85.00	0.49	6,307.9	966.3	-2,193.4	947.5	0.00	0.00	0.00
7,400.0	85.00	0.49	6,316.6	1,065.9	-2,192.6	1,047.2	0.00	0.00	0.00
7,500.0	85.00	0.49	6,325.3	1,165.6	-2,191.7	1,146.8	0.00	0.00	0.00
7,600.0	85.00	0.49	6,334.0	1,265.2	-2,190.9	1,246.4	0.00	0.00	0.00
7,700.0	85.00	0.49	6,342.8	1,364.8	-2,190.0	1,346.0	0.00	0.00	0.00
7,800.0	85.00	0.49	6,351.5	1,464.4	-2,189.2	1,445.6	0.00	0.00	0.00
7,900.0	85.00	0.49	6,360.2	1,564.0	-2,188.3	1,545.2	0.00	0.00	0.00
8,000.0	85.00	0.49	6,368.9	1,663.6	-2,187.4	1,644.9	0.00	0.00	0.00
8,100.0	85.00	0.49	6,377.6	1,763.3	-2,186.6	1,744.5	0.00	0.00	0.00
8,200.0	85.00	0.49	6,386.3	1,862.9	-2,185.7	1,844.1	0.00	0.00	0.00
8,300.0	85.00	0.49	6,395.1	1,962.5	-2,184.9	1,943.7	0.00	0.00	0.00
8,400.0	85.00	0.49	6,403.8	2,062.1	-2,184.0	2,043.3	0.00	0.00	0.00
8,500.0	85.00	0.49	6,412.5	2,161.7	-2,183.2	2,143.0	0.00	0.00	0.00
8,600.0	85.00	0.49	6,421.2	2,261.3	-2,182.3	2,242.6	0.00	0.00	0.00
8,700.0	85.00	0.49	6,429.9	2,360.9	-2,181.5	2,342.2	0.00	0.00	0.00
8,800.0	85.00	0.49	6,438.6	2,460.6	-2,180.6	2,441.8	0.00	0.00	0.00
8,900.0	85.00	0.49	6,447.3	2,560.2	-2,179.8	2,541.4	0.00	0.00	0.00
9,000.0	85.00	0.49	6,456.1	2,659.8	-2,178.9	2,641.1	0.00	0.00	0.00
9,100.0	85.00	0.49	6,464.8	2,759.4	-2,178.1	2,740.7	0.00	0.00	0.00
9,200.0	85.00	0.49	6,473.5	2,859.0	-2,177.2	2,840.3	0.00	0.00	0.00
9,300.0	85.00	0.49	6,482.2	2,958.6	-2,176.4	2,939.9	0.00	0.00	0.00
9,400.0	85.00	0.49	6,490.9	3,058.3	-2,175.5	3,039.5	0.00	0.00	0.00
9,500.0	85.00	0.49	6,499.6	3,157.9	-2,174.7	3,139.2	0.00	0.00	0.00
9,600.0	85.00	0.49	6,508.4	3,257.5	-2,173.8	3,238.8	0.00	0.00	0.00
9,700.0	85.00	0.49	6,517.1	3,357.1	-2,173.0	3,338.4	0.00	0.00	0.00
9,800.0	85.00	0.49	6,525.8	3,456.7	-2,172.1	3,438.0	0.00	0.00	0.00
9,900.0	85.00	0.49	6,534.5	3,556.3	-2,171.3	3,537.6	0.00	0.00	0.00
10,000.0	85.00	0.49	6,543.2	3,656.0	-2,170.4	3,637.3	0.00	0.00	0.00
10,100.0	85.00	0.49	6,551.9	3,755.6	-2,169.6	3,736.9	0.00	0.00	0.00
10,200.0	85.00	0.49	6,560.6	3,855.2	-2,168.7	3,836.5	0.00	0.00	0.00
10,300.0	85.00	0.49	6,569.4	3,954.8	-2,167.9	3,936.1	0.00	0.00	0.00
10,400.0	85.00	0.49	6,578.1	4,054.4	-2,167.0	4,035.7	0.00	0.00	0.00
10,500.0	85.00	0.49	6,586.8	4,154.0	-2,166.1	4,135.4	0.00	0.00	0.00
10,600.0	85.00	0.49	6,595.5	4,253.6	-2,165.3	4,235.0	0.00	0.00	0.00
10,700.0	85.00	0.49	6,604.2	4,353.3	-2,164.4	4,334.6	0.00	0.00	0.00
10,800.0	85.00	0.49	6,612.9	4,452.9	-2,163.6	4,434.2	0.00	0.00	0.00
10,900.0	85.00	0.49	6,621.7	4,552.5	-2,162.7	4,533.8	0.00	0.00	0.00
11,000.0	85.00	0.49	6,630.4	4,652.1	-2,161.9	4,633.5	0.00	0.00	0.00
11,100.0	85.00	0.49	6,639.1	4,751.7	-2,161.0	4,733.1	0.00	0.00	0.00
11,200.0	85.00	0.49	6,647.8	4,851.3	-2,160.2	4,832.7	0.00	0.00	0.00
11,300.0	85.00	0.49	6,656.5	4,951.0	-2,159.3	4,932.3	0.00	0.00	0.00
11,400.0	85.00	0.49	6,665.2	5,050.6	-2,158.5	5,031.9	0.00	0.00	0.00
11,500.0	85.00	0.49	6,674.0	5,150.2	-2,157.6	5,131.5	0.00	0.00	0.00
11,600.0	85.00	0.49	6,682.7	5,249.8	-2,156.8	5,231.2	0.00	0.00	0.00

# Well Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Marr 0780 1-6H31
<b>Company:</b>	SandRidge Energy	<b>TVD Reference:</b>	RKB @ 8156.0usft (Cyclone #33)
<b>Project:</b>	Jackson County, Colorado	<b>MD Reference:</b>	RKB @ 8156.0usft (Cyclone #33)
<b>Site:</b>	Sec 7, T7N, R80W, 6th PM	<b>North Reference:</b>	Grid
<b>Well:</b>	Marr 0780 1-6H31	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

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)
11,700.0	85.00	0.49	6,691.4	5,349.4	-2,155.9	5,330.8	0.00	0.00	0.00
11,800.0	85.00	0.49	6,700.1	5,449.0	-2,155.1	5,430.4	0.00	0.00	0.00
11,900.0	85.00	0.49	6,708.8	5,548.7	-2,154.2	5,530.0	0.00	0.00	0.00
12,000.0	85.00	0.49	6,717.5	5,648.3	-2,153.4	5,629.6	0.00	0.00	0.00
12,100.0	85.00	0.49	6,726.2	5,747.9	-2,152.5	5,729.3	0.00	0.00	0.00
12,200.0	85.00	0.49	6,735.0	5,847.5	-2,151.7	5,828.9	0.00	0.00	0.00
12,300.0	85.00	0.49	6,743.7	5,947.1	-2,150.8	5,928.5	0.00	0.00	0.00
12,400.0	85.00	0.49	6,752.4	6,046.7	-2,150.0	6,028.1	0.00	0.00	0.00
12,500.0	85.00	0.49	6,761.1	6,146.3	-2,149.1	6,127.7	0.00	0.00	0.00
12,600.0	85.00	0.49	6,769.8	6,246.0	-2,148.3	6,227.4	0.00	0.00	0.00
12,700.0	85.00	0.49	6,778.5	6,345.6	-2,147.4	6,327.0	0.00	0.00	0.00
12,800.0	85.00	0.49	6,787.3	6,445.2	-2,146.6	6,426.6	0.00	0.00	0.00
12,900.0	85.00	0.49	6,796.0	6,544.8	-2,145.7	6,526.2	0.00	0.00	0.00
13,000.0	85.00	0.49	6,804.7	6,644.4	-2,144.8	6,625.8	0.00	0.00	0.00
13,100.0	85.00	0.49	6,813.4	6,744.0	-2,144.0	6,725.5	0.00	0.00	0.00
13,200.0	85.00	0.49	6,822.1	6,843.7	-2,143.1	6,825.1	0.00	0.00	0.00
13,300.0	85.00	0.49	6,830.8	6,943.3	-2,142.3	6,924.7	0.00	0.00	0.00
13,400.0	85.00	0.49	6,839.5	7,042.9	-2,141.4	7,024.3	0.00	0.00	0.00
13,500.0	85.00	0.49	6,848.3	7,142.5	-2,140.6	7,123.9	0.00	0.00	0.00
13,600.0	85.00	0.49	6,857.0	7,242.1	-2,139.7	7,223.6	0.00	0.00	0.00
13,700.0	85.00	0.49	6,865.7	7,341.7	-2,138.9	7,323.2	0.00	0.00	0.00
13,800.0	85.00	0.49	6,874.4	7,441.4	-2,138.0	7,422.8	0.00	0.00	0.00
13,900.0	85.00	0.49	6,883.1	7,541.0	-2,137.2	7,522.4	0.00	0.00	0.00
14,000.0	85.00	0.49	6,891.8	7,640.6	-2,136.3	7,622.0	0.00	0.00	0.00
14,100.0	85.00	0.49	6,900.6	7,740.2	-2,135.5	7,721.7	0.00	0.00	0.00
14,200.0	85.00	0.49	6,909.3	7,839.8	-2,134.6	7,821.3	0.00	0.00	0.00
14,300.0	85.00	0.49	6,918.0	7,939.4	-2,133.8	7,920.9	0.00	0.00	0.00
14,400.0	85.00	0.49	6,926.7	8,039.0	-2,132.9	8,020.5	0.00	0.00	0.00
14,500.0	85.00	0.49	6,935.4	8,138.7	-2,132.1	8,120.1	0.00	0.00	0.00
14,600.0	85.00	0.49	6,944.1	8,238.3	-2,131.2	8,219.8	0.00	0.00	0.00
14,700.0	85.00	0.49	6,952.8	8,337.9	-2,130.4	8,319.4	0.00	0.00	0.00
14,800.0	85.00	0.49	6,961.6	8,437.5	-2,129.5	8,419.0	0.00	0.00	0.00
14,900.0	85.00	0.49	6,970.3	8,537.1	-2,128.7	8,518.6	0.00	0.00	0.00
15,000.0	85.00	0.49	6,979.0	8,636.7	-2,127.8	8,618.2	0.00	0.00	0.00
15,100.0	85.00	0.49	6,987.7	8,736.4	-2,127.0	8,717.9	0.00	0.00	0.00
15,200.0	85.00	0.49	6,996.4	8,836.0	-2,126.1	8,817.5	0.00	0.00	0.00
15,300.0	85.00	0.49	7,005.1	8,935.6	-2,125.3	8,917.1	0.00	0.00	0.00
15,400.0	85.00	0.49	7,013.9	9,035.2	-2,124.4	9,016.7	0.00	0.00	0.00
15,500.0	85.00	0.49	7,022.6	9,134.8	-2,123.6	9,116.3	0.00	0.00	0.00
15,600.0	85.00	0.49	7,031.3	9,234.4	-2,122.7	9,215.9	0.00	0.00	0.00
15,700.0	85.00	0.49	7,040.0	9,334.1	-2,121.8	9,315.6	0.00	0.00	0.00
15,800.0	85.00	0.49	7,048.7	9,433.7	-2,121.0	9,415.2	0.00	0.00	0.00
15,900.0	85.00	0.49	7,057.4	9,533.3	-2,120.1	9,514.8	0.00	0.00	0.00
16,000.0	85.00	0.49	7,066.2	9,632.9	-2,119.3	9,614.4	0.00	0.00	0.00
16,100.0	85.00	0.49	7,074.9	9,732.5	-2,118.4	9,714.0	0.00	0.00	0.00
16,200.0	85.00	0.49	7,083.6	9,832.1	-2,117.6	9,813.7	0.00	0.00	0.00
16,300.0	85.00	0.49	7,092.3	9,931.7	-2,116.7	9,913.3	0.00	0.00	0.00
16,400.0	85.00	0.49	7,101.0	10,031.4	-2,115.9	10,012.9	0.00	0.00	0.00
16,500.0	85.00	0.49	7,109.7	10,131.0	-2,115.0	10,112.5	0.00	0.00	0.00
16,600.0	85.00	0.49	7,118.4	10,230.6	-2,114.2	10,212.1	0.00	0.00	0.00
16,700.0	85.00	0.49	7,127.2	10,330.2	-2,113.3	10,311.8	0.00	0.00	0.00
16,800.0	85.00	0.49	7,135.9	10,429.8	-2,112.5	10,411.4	0.00	0.00	0.00
16,900.0	85.00	0.49	7,144.6	10,529.4	-2,111.6	10,511.0	0.00	0.00	0.00
17,000.0	85.00	0.49	7,153.3	10,629.1	-2,110.8	10,610.6	0.00	0.00	0.00

# Well Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Marr 0780 1-6H31
<b>Company:</b>	SandRidge Energy	<b>TVD Reference:</b>	RKB @ 8156.0usft (Cyclone #33)
<b>Project:</b>	Jackson County, Colorado	<b>MD Reference:</b>	RKB @ 8156.0usft (Cyclone #33)
<b>Site:</b>	Sec 7, T7N, R80W, 6th PM	<b>North Reference:</b>	Grid
<b>Well:</b>	Marr 0780 1-6H31	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

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)
17,100.0	85.00	0.49	7,162.0	10,728.7	-2,109.9	10,710.2	0.00	0.00	0.00
17,200.0	85.00	0.49	7,170.7	10,828.3	-2,109.1	10,809.9	0.00	0.00	0.00
17,300.0	85.00	0.49	7,179.5	10,927.9	-2,108.2	10,909.5	0.00	0.00	0.00
17,400.0	85.00	0.49	7,188.2	11,027.5	-2,107.4	11,009.1	0.00	0.00	0.00
17,500.0	85.00	0.49	7,196.9	11,127.1	-2,106.5	11,108.7	0.00	0.00	0.00
17,600.0	85.00	0.49	7,205.6	11,226.8	-2,105.7	11,208.3	0.00	0.00	0.00
<b>TD @ 17636.4' MD / 7208.8' TVD</b>									
17,636.4	85.00	0.49	7,208.8	11,263.0	-2,105.3	11,244.6	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
KOP (plat) - Marr 0780 - hit/miss target - Shape - Point	0.00	360.00	0.0	581.7	-2,305.6	1,462,732.99	2,743,438.76	40° 35' 59.752 N	106° 25' 26.157 W
- plan misses target center by 2377.9usft at 0.0usft MD (0.0 TVD, 0.0 N, 0.0 E)									
LP (plat) - Marr 0780 - hit/miss target - Shape - Point	0.00	360.00	0.0	1,031.5	-2,297.2	1,463,182.84	2,743,447.23	40° 36' 4.197 N	106° 25' 26.108 W
- plan misses target center by 2518.1usft at 0.0usft MD (0.0 TVD, 0.0 N, 0.0 E)									
PBHL - Marr 0780 1-6 - hit/miss target - Shape - Point	0.00	0.00	7,208.8	11,263.0	-2,105.3	1,473,414.33	2,743,639.05	40° 37' 45.314 N	106° 25' 25.003 W
- plan hits target center									

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,426.7	2,425.0	LNCE		5.00	0.49	
3,416.5	3,380.0	FXHLS		5.00	0.49	
3,949.1	3,825.4	PIRR		5.00	0.49	
4,684.1	4,428.3	SSSX		5.00	0.49	
5,361.0	4,983.5	SNNN		5.00	0.49	
5,624.1	5,199.4	PIRRL		5.00	0.49	
6,805.6	6,158.1	MNCS		5.00	0.49	



# Well Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Marr 0780 1-6H31
<b>Company:</b>	SandRidge Energy	<b>TVD Reference:</b>	RKB @ 8156.0usft (Cyclone #33)
<b>Project:</b>	Jackson County, Colorado	<b>MD Reference:</b>	RKB @ 8156.0usft (Cyclone #33)
<b>Site:</b>	Sec 7, T7N, R80W, 6th PM	<b>North Reference:</b>	Grid
<b>Well:</b>	Marr 0780 1-6H31	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

## Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
900.0	900.0	0.0	0.0	Build 3° / 100'
1,066.7	1,066.5	0.0	-7.3	EOB @ 5.00° Inc. / 270.00° Azm
1,400.7	1,399.2	0.0	-36.4	Drop 3° / 100'
1,567.3	1,565.6	0.0	-43.6	EOD @ Vertical
2,500.0	2,498.3	0.0	-43.6	Build 3° / 100'
3,663.0	3,590.7	76.2	-378.3	EOB @ 34.89° Inc. / 282.83° Azm
6,610.7	6,008.6	450.6	-2,022.3	Build 15° / 100'
7,136.4	6,293.6	803.4	-2,194.8	EOB @ 85.00° Inc. / 0.49° Azm
17,636.4	7,208.8	11,263.0	-2,105.3	TD @ 17636.4' MD / 7208.8' TVD