

SandRidge Energy

**North Park Basin
T7N-R80W-S17
Castle 0780 3-17H20**

**Wellbore #1
Design #1**

Anticollision Report

14 December, 2015

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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 us	Error Surface:		Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:		Not applied

Survey Tool Program		Date	12/11/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	16,952.7	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-S17						
Castle 0780 1-17H20 - Wellbore #1 - Design #1	500.0	500.0	39.9	37.9	20.093	CC, ES
Castle 0780 1-17H20 - Wellbore #1 - Design #1	16,952.7	16,978.9	1,299.7	908.9	3.325	SF
Castle 0780 2-17H20 - Wellbore #1 - Design #1	500.0	500.0	20.0	18.0	10.062	CC, ES
Castle 0780 2-17H20 - Wellbore #1 - Design #1	16,952.7	16,924.5	659.9	267.3	1.681	Level 4, SF
Castle 0780 4-17H20 - Wellbore #1 - Design #1	500.0	500.0	20.0	18.0	10.082	CC
Castle 0780 4-17H20 - Wellbore #1 - Design #1	4,000.0	4,000.0	31.6	14.3	1.831	Level 4, ES
Castle 0780 4-17H20 - Wellbore #1 - Design #1	16,952.7	17,516.7	659.9	266.4	1.677	Level 4, SF
Hebron 0780 3-18H - Wellbore #1 - Design #1	500.0	500.0	209.9	207.9	105.653	CC, ES
Hebron 0780 3-18H - Wellbore #1 - Design #1	12,200.0	12,281.8	2,543.3	2,344.8	12.814	SF
Hebron 0780 4-18H - Wellbore #1 - Design #1	500.0	500.0	59.9	57.9	30.160	CC, ES
Hebron 0780 4-18H - Wellbore #1 - Design #1	4,400.0	4,400.1	112.2	93.2	5.912	SF
Hebron 0780 4-7H - Wellbore #1 - Design #1	500.0	503.0	257.6	255.6	129.414	CC, ES
Hebron 0780 4-7H - Wellbore #1 - Design #1	3,800.0	3,783.0	289.9	273.5	17.600	SF
Mutual 0780 2-8H - Wellbore #1 - Design #1	500.0	500.0	161.5	159.5	81.264	CC, ES
Mutual 0780 2-8H - Wellbore #1 - Design #1	4,500.0	4,499.4	182.7	163.0	9.284	SF
Mutual 0780 3-8H - Wellbore #1 - Design #1	500.0	500.0	155.2	153.2	78.094	CC, ES
Mutual 0780 3-8H - Wellbore #1 - Design #1	6,000.0	5,968.9	311.2	280.7	10.207	SF
Mutual 0780 4-8H - Wellbore #1 - Design #1	500.0	500.0	151.3	149.3	76.132	CC
Mutual 0780 4-8H - Wellbore #1 - Design #1	3,500.0	3,499.8	160.6	145.6	10.715	ES
Mutual 0780 4-8H - Wellbore #1 - Design #1	6,600.0	6,550.0	353.5	317.1	9.718	SF
Mutual 7-17H - Wellbore #1 - Wellbore #1	1,017.7	1,031.0	347.1	343.9	107.806	CC, ES
Mutual 7-17H - Wellbore #1 - Wellbore #1	4,500.0	4,503.1	370.9	352.8	20.545	SF

Offset Design	T7N-R80W-S17 - Castle 0780 1-17H20 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program:	0-Sperry MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Warning						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.21	0.5	-39.9	39.9					
100.0	100.0	100.0	100.0	0.1	0.1	-89.21	0.5	-39.9	39.9	39.7	0.19	211.457		
200.0	200.0	200.0	200.0	0.3	0.3	-89.21	0.5	-39.9	39.9	39.3	0.64	62.544		
300.0	300.0	300.0	300.0	0.5	0.5	-89.21	0.5	-39.9	39.9	38.8	1.09	36.699		
400.0	400.0	400.0	400.0	0.8	0.8	-89.21	0.5	-39.9	39.9	38.4	1.54	25.968		
500.0	500.0	500.0	500.0	1.0	1.0	-89.21	0.5	-39.9	39.9	37.9	1.99	20.093	CC, ES	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

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Reference Wellbore	Wellbore #1	Database:	EDMProd
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design T7N-R80W-S17 - Castle 0780 1-17H20 - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
608.2	608.2	607.2	607.2	1.2	1.2	153.21	-1.1	-41.1	43.0	40.5	2.43	17.698		
700.0	699.9	698.2	698.0	1.4	1.4	150.59	-4.8	-44.0	49.0	46.2	2.78	17.595		
800.0	799.8	797.9	797.5	1.6	1.6	147.74	-9.7	-47.6	56.2	53.0	3.19	17.614		
900.0	899.8	897.6	897.1	1.8	1.8	145.55	-14.5	-51.2	63.5	59.9	3.61	17.582		
1,000.0	999.7	997.3	996.6	2.0	2.0	143.81	-19.3	-54.8	70.9	66.9	4.05	17.529		
1,092.2	1,091.8	1,089.2	1,088.4	2.3	2.3	142.50	-23.7	-58.1	77.8	73.3	4.45	17.472		
1,100.0	1,099.6	1,097.0	1,096.1	2.3	2.3	142.40	-24.1	-58.4	78.3	73.9	4.48	17.471		
1,200.4	1,200.0	1,197.2	1,196.1	2.5	2.5	-103.00	-28.9	-62.0	84.3	79.3	4.94	17.072		
1,300.0	1,299.6	1,296.6	1,295.3	2.7	2.8	-105.49	-33.7	-65.6	89.0	83.6	5.38	16.543		
1,400.0	1,399.6	1,398.3	1,396.9	2.9	3.0	-107.48	-38.0	-68.8	93.1	87.3	5.82	16.000		
1,500.0	1,499.6	1,501.0	1,499.6	3.1	3.2	-108.13	-39.4	-69.9	94.6	88.4	6.24	15.153		
1,600.0	1,599.6	1,601.0	1,599.6	3.3	3.4	-108.13	-39.4	-69.9	94.6	88.0	6.66	14.206		
1,700.0	1,699.6	1,701.0	1,699.6	3.5	3.6	-108.13	-39.4	-69.9	94.6	87.5	7.08	13.370		
1,800.0	1,799.6	1,801.0	1,799.6	3.7	3.8	-108.13	-39.4	-69.9	94.6	87.1	7.50	12.620		
1,900.0	1,899.6	1,901.0	1,899.6	4.0	4.0	-108.13	-39.4	-69.9	94.6	86.7	7.92	11.946		
2,000.0	1,999.6	2,001.0	1,999.6	4.2	4.2	-108.13	-39.4	-69.9	94.6	86.3	8.35	11.336		
2,100.0	2,099.6	2,101.0	2,099.6	4.4	4.4	-108.13	-39.4	-69.9	94.6	85.8	8.78	10.782		
2,200.0	2,199.6	2,201.0	2,199.6	4.6	4.6	-108.13	-39.4	-69.9	94.6	85.4	9.21	10.278		
2,300.0	2,299.6	2,301.0	2,299.6	4.8	4.8	-108.13	-39.4	-69.9	94.6	85.0	9.64	9.817		
2,400.0	2,399.6	2,401.0	2,399.6	5.1	5.0	-108.13	-39.4	-69.9	94.6	84.5	10.07	9.394		
2,500.0	2,499.6	2,501.0	2,499.6	5.3	5.2	-108.13	-39.4	-69.9	94.6	84.1	10.51	9.005		
2,600.0	2,599.6	2,601.0	2,599.6	5.5	5.5	-108.13	-39.4	-69.9	94.6	83.7	10.94	8.646		
2,700.0	2,699.6	2,701.0	2,699.6	5.7	5.7	-108.13	-39.4	-69.9	94.6	83.2	11.38	8.314		
2,800.0	2,799.6	2,801.0	2,799.6	5.9	5.9	-108.13	-39.4	-69.9	94.6	82.8	11.82	8.006		
2,900.0	2,899.6	2,901.0	2,899.6	6.2	6.1	-108.13	-39.4	-69.9	94.6	82.4	12.26	7.719		
3,000.0	2,999.6	3,001.0	2,999.6	6.4	6.3	-108.13	-39.4	-69.9	94.6	81.9	12.70	7.452		
3,100.0	3,099.6	3,101.0	3,099.6	6.6	6.5	-108.13	-39.4	-69.9	94.6	81.5	13.14	7.202		
3,200.0	3,199.6	3,201.0	3,199.6	6.8	6.8	-108.13	-39.4	-69.9	94.6	81.0	13.58	6.968		
3,300.0	3,299.6	3,301.0	3,299.6	7.1	7.0	-108.13	-39.4	-69.9	94.6	80.6	14.02	6.749		
3,400.0	3,399.6	3,401.0	3,399.6	7.3	7.2	-108.13	-39.4	-69.9	94.6	80.2	14.46	6.542		
3,500.0	3,499.6	3,501.0	3,499.6	7.5	7.4	-108.13	-39.4	-69.9	94.6	79.7	14.91	6.348		
3,600.0	3,599.6	3,601.0	3,599.6	7.7	7.6	-108.13	-39.4	-69.9	94.6	79.3	15.35	6.165		
3,700.0	3,699.6	3,701.0	3,699.6	7.9	7.9	-108.13	-39.4	-69.9	94.6	78.8	15.79	5.992		
3,800.0	3,799.6	3,801.0	3,799.6	8.2	8.1	-108.13	-39.4	-69.9	94.6	78.4	16.24	5.828		
3,900.0	3,899.6	3,901.0	3,899.6	8.4	8.3	-108.13	-39.4	-69.9	94.6	77.9	16.68	5.673		
4,000.0	3,999.6	4,001.0	3,999.6	8.6	8.5	-108.13	-39.4	-69.9	94.6	77.5	17.12	5.526		
4,100.0	4,099.6	4,101.0	4,099.6	8.8	8.7	-108.13	-39.4	-69.9	94.6	77.1	17.57	5.386		
4,200.0	4,199.6	4,201.0	4,199.6	9.1	9.0	-108.13	-39.4	-69.9	94.6	76.6	18.01	5.253		
4,300.0	4,299.6	4,301.0	4,299.6	9.3	9.2	-108.13	-39.4	-69.9	94.6	76.2	18.46	5.126		
4,400.0	4,399.6	4,401.0	4,399.6	9.5	9.4	153.31	-39.4	-69.9	96.2	77.3	18.85	5.102		
4,500.0	4,499.4	4,500.8	4,499.4	9.7	9.6	154.60	-39.4	-69.9	100.9	81.6	19.26	5.239		
4,600.0	4,599.1	4,600.5	4,599.1	9.9	9.8	156.51	-39.4	-69.9	108.8	89.2	19.65	5.537		
4,700.0	4,698.3	4,699.7	4,698.3	10.2	10.1	158.74	-39.4	-69.9	120.1	100.1	20.04	5.995		
4,800.0	4,797.1	4,798.5	4,797.1	10.4	10.3	161.05	-39.4	-69.9	134.8	114.4	20.40	6.608		
4,900.0	4,895.2	4,896.6	4,895.2	10.7	10.5	163.26	-39.4	-69.9	153.0	132.3	20.76	7.372		
5,000.0	4,992.7	4,994.1	4,992.7	10.9	10.7	165.27	-39.4	-69.9	174.7	153.6	21.09	8.283		
5,100.0	5,089.2	5,090.7	5,089.2	11.2	10.9	167.04	-39.4	-69.9	199.9	178.5	21.41	9.334		
5,200.0	5,184.9	5,186.3	5,184.9	11.6	11.1	168.56	-39.4	-69.9	228.5	206.8	21.72	10.521		
5,226.2	5,209.7	5,211.2	5,209.7	11.7	11.2	168.92	-39.4	-69.9	236.6	214.8	21.80	10.853		
5,300.0	5,279.7	5,281.1	5,279.7	12.0	11.4	169.92	-39.4	-69.9	259.7	237.6	22.11	11.742		
5,400.0	5,374.5	5,376.0	5,374.5	12.4	11.6	171.01	-39.4	-69.9	291.1	268.5	22.55	12.910		
5,500.0	5,469.4	5,470.8	5,469.4	12.8	11.8	171.89	-39.4	-69.9	322.5	299.5	22.98	14.033		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

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Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design T7N-R80W-S17 - Castle 0780 1-17H20 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,600.0	5,564.2	5,558.7	5,557.3	13.3	12.0	172.54	-39.6	-70.5	354.6	331.2	23.40	15.154	
5,700.0	5,659.0	5,642.0	5,640.5	13.8	12.1	172.96	-40.2	-73.3	389.4	365.5	23.82	16.349	
5,800.0	5,753.8	5,723.6	5,721.9	14.2	12.3	173.22	-41.4	-78.4	426.7	402.4	24.23	17.611	
5,900.0	5,848.6	5,800.0	5,798.1	14.7	12.5	173.35	-43.0	-85.1	466.5	441.9	24.63	18.938	
6,000.0	5,943.5	5,881.3	5,878.7	15.3	12.7	173.39	-45.2	-94.5	508.7	483.7	25.05	20.304	
6,100.0	6,038.3	5,957.3	5,953.9	15.8	12.8	173.36	-47.8	-105.3	553.3	527.8	25.47	21.722	
6,200.0	6,133.1	6,031.3	6,026.9	16.3	13.0	173.27	-50.7	-117.6	600.1	574.2	25.89	23.180	
6,300.0	6,227.9	6,100.0	6,094.2	16.9	13.2	173.15	-53.8	-130.7	649.0	622.7	26.30	24.681	
6,400.0	6,322.7	6,173.5	6,165.9	17.5	13.4	172.99	-57.5	-146.5	700.0	673.3	26.72	26.198	
6,500.0	6,417.6	6,241.6	6,232.0	18.0	13.6	172.82	-61.3	-162.7	753.0	725.9	27.14	27.747	
6,566.1	6,480.2	6,290.9	6,279.6	18.4	13.7	172.68	-64.2	-175.2	789.0	761.6	27.43	28.767	
6,600.0	6,512.4	6,319.4	6,307.1	18.6	13.8	160.46	-66.0	-182.5	807.4	779.7	27.68	29.171	
6,650.0	6,559.6	6,361.7	6,347.8	18.8	14.0	143.93	-68.5	-193.4	833.9	805.8	28.08	29.702	
6,700.0	6,606.2	6,403.9	6,388.5	19.1	14.1	130.18	-71.1	-204.2	859.5	831.0	28.49	30.167	
6,750.0	6,652.0	6,445.7	6,428.9	19.3	14.2	119.39	-73.6	-215.0	884.2	855.3	28.91	30.584	
6,800.0	6,696.4	6,486.9	6,468.6	19.6	14.4	111.09	-76.1	-225.6	907.8	878.5	29.31	30.972	
6,850.0	6,739.3	6,527.2	6,507.4	19.8	14.5	104.74	-78.5	-235.9	930.5	900.8	29.69	31.338	
6,900.0	6,780.3	6,550.0	6,529.5	20.1	14.6	99.25	-79.9	-241.8	952.4	922.4	30.05	31.693	
6,950.0	6,819.0	6,584.1	6,562.0	20.3	14.7	95.18	-83.3	-251.1	973.8	943.4	30.39	32.042	
7,000.0	6,855.2	6,609.8	6,586.4	20.6	14.8	91.58	-87.0	-258.6	994.7	964.0	30.71	32.393	
7,050.0	6,888.6	6,635.6	6,610.4	20.8	14.9	88.59	-91.8	-266.6	1,015.2	984.1	31.00	32.742	
7,100.0	6,918.9	6,661.6	6,634.3	21.1	15.0	86.12	-97.6	-275.1	1,035.0	1,003.7	31.28	33.088	
7,154.6	6,948.3	6,690.3	6,660.2	21.4	15.1	83.89	-105.3	-284.9	1,055.8	1,024.3	31.56	33.454	
7,200.0	6,971.0	6,715.2	6,682.1	21.7	15.3	84.83	-112.9	-293.8	1,073.3	1,041.3	32.00	33.538	
7,304.6	7,023.3	6,778.7	6,735.9	22.4	15.6	86.92	-136.5	-317.9	1,116.6	1,083.5	33.12	33.710	
7,350.0	7,044.4	6,808.3	6,759.8	22.7	15.7	85.63	-149.4	-329.8	1,136.3	1,102.7	33.66	33.758	
7,400.0	7,063.9	6,841.2	6,785.2	23.1	15.9	84.20	-165.2	-343.4	1,158.5	1,124.2	34.26	33.811	
7,450.0	7,079.3	6,874.6	6,809.8	23.6	16.2	82.78	-182.6	-357.7	1,180.9	1,146.0	34.87	33.868	
7,500.0	7,090.5	6,908.6	6,833.5	24.1	16.4	81.38	-201.9	-372.6	1,203.4	1,168.0	35.47	33.932	
7,550.0	7,097.4	6,943.4	6,856.4	24.6	16.7	80.04	-223.0	-388.2	1,226.1	1,190.0	36.07	33.995	
7,604.6	7,100.0	6,982.7	6,880.2	25.2	17.0	78.65	-248.5	-406.2	1,250.8	1,214.0	36.73	34.053	
7,700.0	7,100.0	7,057.2	6,919.8	26.4	17.6	80.93	-301.0	-441.0	1,294.7	1,256.0	38.67	33.478	
7,800.0	7,100.0	7,840.2	7,100.0	27.6	26.3	90.00	-1,007.7	-610.5	1,298.9	1,250.1	48.87	26.577	
7,900.0	7,100.0	7,940.2	7,100.0	29.0	27.7	90.00	-1,107.7	-610.5	1,298.9	1,247.1	51.83	25.063	
8,000.0	7,100.0	8,040.2	7,100.0	30.4	29.0	90.00	-1,207.7	-610.5	1,298.9	1,244.0	54.89	23.663	
8,100.0	7,100.0	8,140.2	7,100.0	31.9	30.5	90.00	-1,307.7	-610.5	1,299.0	1,240.9	58.05	22.375	
8,200.0	7,100.0	8,240.2	7,100.0	33.4	32.0	90.00	-1,407.7	-610.6	1,299.0	1,237.7	61.30	21.191	
8,300.0	7,100.0	8,340.2	7,100.0	35.0	33.5	90.00	-1,507.7	-610.6	1,299.0	1,234.4	64.61	20.106	
8,400.0	7,100.0	8,440.2	7,100.0	36.6	35.1	90.00	-1,607.7	-610.6	1,299.0	1,231.0	67.98	19.109	
8,500.0	7,100.0	8,540.2	7,100.0	38.2	36.7	90.00	-1,707.7	-610.6	1,299.0	1,227.6	71.39	18.194	
8,600.0	7,100.0	8,640.2	7,100.0	39.8	38.3	90.00	-1,807.7	-610.6	1,299.0	1,224.1	74.86	17.353	
8,700.0	7,100.0	8,740.2	7,100.0	41.5	40.0	90.00	-1,907.7	-610.6	1,299.0	1,220.6	78.36	16.578	
8,800.0	7,100.0	8,840.2	7,100.0	43.2	41.7	90.00	-2,007.7	-610.6	1,299.0	1,217.1	81.89	15.863	
8,900.0	7,100.0	8,940.2	7,100.0	44.9	43.4	90.00	-2,107.7	-610.6	1,299.0	1,213.6	85.45	15.202	
9,000.0	7,100.0	9,040.2	7,100.0	46.7	45.1	90.00	-2,207.7	-610.6	1,299.0	1,210.0	89.04	14.590	
9,100.0	7,100.0	9,140.2	7,100.0	48.4	46.9	90.00	-2,307.7	-610.6	1,299.0	1,206.4	92.64	14.022	
9,200.0	7,100.0	9,240.2	7,100.0	50.2	48.6	90.00	-2,407.7	-610.6	1,299.0	1,202.8	96.27	13.494	
9,300.0	7,100.0	9,340.2	7,100.0	52.0	50.4	90.00	-2,507.7	-610.6	1,299.0	1,199.1	99.92	13.001	
9,400.0	7,100.0	9,440.2	7,100.0	53.8	52.2	90.00	-2,607.7	-610.7	1,299.1	1,195.5	103.58	12.542	
9,500.0	7,100.0	9,540.2	7,100.0	55.6	54.0	90.00	-2,707.7	-610.7	1,299.1	1,191.8	107.25	12.112	
9,600.0	7,100.0	9,640.2	7,100.0	57.4	55.8	90.00	-2,807.7	-610.7	1,299.1	1,188.1	110.94	11.709	
9,700.0	7,100.0	9,740.2	7,100.0	59.2	57.6	90.00	-2,907.7	-610.7	1,299.1	1,184.4	114.64	11.332	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Castle 0780 1-17H20 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,800.0	7,100.0	9,840.2	7,100.0	61.0	59.4	90.00	-3,007.7	-610.7	1,299.1	1,180.7	118.35	10.977	
9,900.0	7,100.0	9,940.2	7,100.0	62.8	61.3	90.00	-3,107.7	-610.7	1,299.1	1,177.0	122.07	10.642	
10,000.0	7,100.0	10,040.2	7,100.0	64.7	63.1	90.00	-3,207.7	-610.7	1,299.1	1,173.3	125.80	10.327	
10,100.0	7,100.0	10,140.2	7,100.0	66.5	64.9	90.00	-3,307.7	-610.7	1,299.1	1,169.6	129.54	10.029	
10,200.0	7,100.0	10,240.2	7,100.0	68.4	66.8	90.00	-3,407.7	-610.7	1,299.1	1,165.8	133.28	9.747	
10,300.0	7,100.0	10,340.2	7,100.0	70.2	68.6	90.00	-3,507.7	-610.7	1,299.1	1,162.1	137.03	9.481	
10,400.0	7,100.0	10,440.2	7,100.0	72.1	70.5	90.00	-3,607.7	-610.7	1,299.1	1,158.4	140.78	9.228	
10,500.0	7,100.0	10,540.2	7,100.0	73.9	72.3	90.00	-3,707.7	-610.7	1,299.1	1,154.6	144.55	8.988	
10,600.0	7,100.0	10,640.2	7,100.0	75.8	74.2	90.00	-3,807.7	-610.8	1,299.2	1,150.8	148.31	8.760	
10,700.0	7,100.0	10,740.2	7,100.0	77.6	76.1	90.00	-3,907.7	-610.8	1,299.2	1,147.1	152.08	8.542	
10,800.0	7,100.0	10,840.2	7,100.0	79.5	77.9	90.00	-4,007.7	-610.8	1,299.2	1,143.3	155.86	8.336	
10,900.0	7,100.0	10,940.2	7,100.0	81.4	79.8	90.00	-4,107.7	-610.8	1,299.2	1,139.5	159.64	8.138	
11,000.0	7,100.0	11,040.2	7,100.0	83.3	81.7	90.00	-4,207.7	-610.8	1,299.2	1,135.8	163.42	7.950	
11,100.0	7,100.0	11,140.2	7,100.0	85.1	83.6	90.00	-4,307.7	-610.8	1,299.2	1,132.0	167.21	7.770	
11,200.0	7,100.0	11,240.2	7,100.0	87.0	85.4	90.00	-4,407.7	-610.8	1,299.2	1,128.2	171.00	7.598	
11,300.0	7,100.0	11,340.2	7,100.0	88.9	87.3	90.00	-4,507.7	-610.8	1,299.2	1,124.4	174.80	7.433	
11,400.0	7,100.0	11,440.2	7,100.0	90.8	89.2	90.00	-4,607.7	-610.8	1,299.2	1,120.6	178.59	7.275	
11,500.0	7,100.0	11,540.2	7,100.0	92.7	91.1	90.00	-4,707.7	-610.8	1,299.2	1,116.8	182.39	7.123	
11,600.0	7,100.0	11,640.2	7,100.0	94.5	93.0	90.00	-4,807.7	-610.8	1,299.2	1,113.0	186.19	6.978	
11,700.0	7,100.0	11,740.2	7,100.0	96.4	94.9	90.00	-4,907.7	-610.9	1,299.2	1,109.2	190.00	6.838	
11,800.0	7,100.0	11,840.2	7,100.0	98.3	96.7	90.00	-5,007.7	-610.9	1,299.3	1,105.4	193.81	6.704	
11,900.0	7,100.0	11,940.2	7,100.0	100.2	98.6	90.00	-5,107.7	-610.9	1,299.3	1,101.6	197.62	6.575	
12,000.0	7,100.0	12,040.2	7,100.0	102.1	100.5	90.00	-5,207.7	-610.9	1,299.3	1,097.8	201.43	6.450	
12,100.0	7,100.0	12,140.2	7,100.0	104.0	102.4	90.00	-5,307.7	-610.9	1,299.3	1,094.0	205.24	6.331	
12,200.0	7,100.0	12,240.2	7,100.0	105.9	104.3	90.00	-5,407.7	-610.9	1,299.3	1,090.2	209.05	6.215	
12,300.0	7,100.0	12,340.2	7,100.0	107.8	106.2	90.00	-5,507.7	-610.9	1,299.3	1,086.4	212.87	6.104	
12,400.0	7,100.0	12,440.2	7,100.0	109.7	108.1	90.00	-5,607.7	-610.9	1,299.3	1,082.6	216.69	5.996	
12,500.0	7,100.0	12,540.2	7,100.0	111.6	110.0	90.00	-5,707.7	-610.9	1,299.3	1,078.8	220.51	5.892	
12,600.0	7,100.0	12,640.2	7,100.0	113.5	111.9	90.00	-5,807.7	-610.9	1,299.3	1,075.0	224.33	5.792	
12,700.0	7,100.0	12,740.2	7,100.0	115.4	113.8	90.00	-5,907.7	-610.9	1,299.3	1,071.2	228.15	5.695	
12,800.0	7,100.0	12,840.2	7,100.0	117.3	115.7	90.00	-6,007.7	-610.9	1,299.3	1,067.4	231.98	5.601	
12,900.0	7,100.0	12,940.2	7,100.0	119.2	117.6	90.00	-6,107.7	-611.0	1,299.3	1,063.5	235.80	5.510	
13,000.0	7,100.0	13,040.2	7,100.0	121.1	119.5	90.00	-6,207.7	-611.0	1,299.3	1,059.7	239.63	5.422	
13,100.0	7,100.0	13,140.2	7,100.0	123.0	121.4	90.00	-6,307.7	-611.0	1,299.4	1,055.9	243.46	5.337	
13,200.0	7,100.0	13,240.2	7,100.0	124.9	123.4	90.00	-6,407.7	-611.0	1,299.4	1,052.1	247.28	5.255	
13,300.0	7,100.0	13,340.2	7,100.0	126.8	125.3	90.00	-6,507.7	-611.0	1,299.4	1,048.3	251.11	5.174	
13,400.0	7,100.0	13,440.2	7,100.0	128.7	127.2	90.00	-6,607.7	-611.0	1,299.4	1,044.4	254.94	5.097	
13,500.0	7,100.0	13,540.2	7,100.0	130.6	129.1	90.00	-6,707.7	-611.0	1,299.4	1,040.6	258.78	5.021	
13,600.0	7,100.0	13,640.2	7,100.0	132.5	131.0	90.00	-6,807.7	-611.0	1,299.4	1,036.8	262.61	4.948	
13,700.0	7,100.0	13,740.2	7,100.0	134.5	132.9	90.00	-6,907.7	-611.0	1,299.4	1,033.0	266.44	4.877	
13,800.0	7,100.0	13,840.2	7,100.0	136.4	134.8	90.00	-7,007.7	-611.0	1,299.4	1,029.1	270.28	4.808	
13,900.0	7,100.0	13,940.2	7,100.0	138.3	136.7	90.00	-7,107.7	-611.0	1,299.4	1,025.3	274.11	4.741	
14,000.0	7,100.0	14,040.2	7,100.0	140.2	138.6	90.00	-7,207.7	-611.0	1,299.4	1,021.5	277.95	4.675	
14,100.0	7,100.0	14,140.2	7,100.0	142.1	140.5	90.00	-7,307.7	-611.1	1,299.4	1,017.7	281.78	4.611	
14,200.0	7,100.0	14,240.2	7,100.0	144.0	142.5	90.00	-7,407.7	-611.1	1,299.4	1,013.8	285.62	4.550	
14,300.0	7,100.0	14,340.2	7,100.0	145.9	144.4	90.00	-7,507.7	-611.1	1,299.5	1,010.0	289.46	4.489	
14,400.0	7,100.0	14,440.2	7,100.0	147.8	146.3	90.00	-7,607.7	-611.1	1,299.5	1,006.2	293.30	4.431	
14,500.0	7,100.0	14,540.2	7,100.0	149.8	148.2	90.00	-7,707.7	-611.1	1,299.5	1,002.3	297.14	4.373	
14,600.0	7,100.0	14,640.2	7,100.0	151.7	150.1	90.00	-7,807.7	-611.1	1,299.5	998.5	300.97	4.318	
14,700.0	7,100.0	14,740.2	7,100.0	153.6	152.0	90.00	-7,907.7	-611.1	1,299.5	994.7	304.81	4.263	
14,800.0	7,100.0	14,840.2	7,100.0	155.5	153.9	90.00	-8,007.7	-611.1	1,299.5	990.8	308.66	4.210	
14,900.0	7,100.0	14,940.2	7,100.0	157.4	155.9	90.00	-8,107.7	-611.1	1,299.5	987.0	312.50	4.158	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Castle 0780 1-17H20 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,000.0	7,100.0	15,040.2	7,100.0	159.3	157.8	90.00	-8,207.7	-611.1	1,299.5	983.2	316.34	4.108	
15,100.0	7,100.0	15,140.2	7,100.0	161.2	159.7	90.00	-8,307.7	-611.1	1,299.5	979.3	320.18	4.059	
15,200.0	7,100.0	15,240.2	7,100.0	163.2	161.6	90.00	-8,407.7	-611.2	1,299.5	975.5	324.02	4.011	
15,300.0	7,100.0	15,340.2	7,100.0	165.1	163.5	90.00	-8,507.7	-611.2	1,299.5	971.7	327.87	3.964	
15,400.0	7,100.0	15,440.2	7,100.0	167.0	165.4	90.00	-8,607.7	-611.2	1,299.5	967.8	331.71	3.918	
15,500.0	7,100.0	15,540.2	7,100.0	168.9	167.4	90.00	-8,707.7	-611.2	1,299.6	964.0	335.55	3.873	
15,600.0	7,100.0	15,640.2	7,100.0	170.8	169.3	90.00	-8,807.7	-611.2	1,299.6	960.2	339.40	3.829	
15,700.0	7,100.0	15,740.2	7,100.0	172.8	171.2	90.00	-8,907.7	-611.2	1,299.6	956.3	343.24	3.786	
15,800.0	7,100.0	15,840.2	7,100.0	174.7	173.1	90.00	-9,007.7	-611.2	1,299.6	952.5	347.09	3.744	
15,900.0	7,100.0	15,940.2	7,100.0	176.6	175.0	90.00	-9,107.7	-611.2	1,299.6	948.7	350.94	3.703	
16,000.0	7,100.0	16,040.2	7,100.0	178.5	177.0	90.00	-9,207.7	-611.2	1,299.6	944.8	354.78	3.663	
16,100.0	7,100.0	16,140.2	7,100.0	180.4	178.9	90.00	-9,307.7	-611.2	1,299.6	941.0	358.63	3.624	
16,200.0	7,100.0	16,240.2	7,100.0	182.3	180.8	90.00	-9,407.7	-611.2	1,299.6	937.1	362.47	3.585	
16,300.0	7,100.0	16,340.2	7,100.0	184.3	182.7	90.00	-9,507.7	-611.2	1,299.6	933.3	366.32	3.548	
16,400.0	7,100.0	16,440.2	7,100.0	186.2	184.6	90.00	-9,607.7	-611.3	1,299.6	929.5	370.17	3.511	
16,500.0	7,100.0	16,540.2	7,100.0	188.1	186.6	90.00	-9,707.7	-611.3	1,299.6	925.6	374.02	3.475	
16,600.0	7,100.0	16,640.2	7,100.0	190.0	188.5	90.00	-9,807.7	-611.3	1,299.6	921.8	377.86	3.439	
16,700.0	7,100.0	16,740.2	7,100.0	191.9	190.4	90.00	-9,907.7	-611.3	1,299.7	917.9	381.71	3.405	
16,800.0	7,100.0	16,840.2	7,100.0	193.9	192.3	90.00	-10,007.7	-611.3	1,299.7	914.1	385.56	3.371	
16,900.0	7,100.0	16,940.2	7,100.0	195.8	194.1	90.00	-10,107.7	-611.3	1,299.7	910.4	389.26	3.339	
16,922.9	7,100.0	16,963.1	7,100.0	196.2	194.5	90.00	-10,130.6	-611.3	1,299.7	909.6	390.06	3.332	
16,952.7	7,100.0	16,978.9	7,100.0	196.8	194.7	90.00	-10,146.4	-611.3	1,299.7	908.9	390.88	3.325 SF	

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Castle 0780 2-17H20 - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-89.25	0.3	-20.0	20.0					
100.0	100.0	100.0	100.0	0.1	0.1	-89.25	0.3	-20.0	20.0	19.8	0.19	105.886		
200.0	200.0	200.0	200.0	0.3	0.3	-89.25	0.3	-20.0	20.0	19.4	0.64	31.318		
300.0	300.0	300.0	300.0	0.5	0.5	-89.25	0.3	-20.0	20.0	18.9	1.09	18.377		
400.0	400.0	400.0	400.0	0.8	0.8	-89.25	0.3	-20.0	20.0	18.5	1.54	13.004		
500.0	500.0	500.0	500.0	1.0	1.0	-89.25	0.3	-20.0	20.0	18.0	1.99	10.062 CC, ES		
608.2	608.2	608.2	608.1	1.2	1.2	151.14	-1.8	-20.0	21.8	19.4	2.42	9.010		
700.0	699.9	699.9	699.8	1.4	1.4	145.77	-5.8	-20.0	25.1	22.4	2.77	9.065		
800.0	799.8	799.8	799.6	1.6	1.6	141.23	-10.3	-20.0	28.9	25.8	3.18	9.105		
900.0	899.8	899.7	899.4	1.8	1.8	137.75	-14.7	-20.0	32.9	29.3	3.60	9.133		
1,000.0	999.7	999.6	999.2	2.0	2.0	135.03	-19.2	-20.0	36.9	32.9	4.04	9.152		
1,092.2	1,091.8	1,091.7	1,091.2	2.3	2.2	133.00	-23.3	-20.0	40.7	36.3	4.44	9.165		
1,100.0	1,099.6	1,099.5	1,099.0	2.3	2.2	132.84	-23.6	-20.0	41.0	36.6	4.48	9.166		
1,200.4	1,200.0	1,200.0	1,199.4	2.5	2.5	-114.20	-28.0	-20.0	43.8	39.0	4.86	9.025		
1,300.0	1,299.6	1,300.2	1,299.6	2.7	2.7	-116.27	-29.7	-20.0	44.6	39.3	5.27	8.457		
1,400.0	1,399.6	1,400.2	1,399.6	2.9	2.9	-116.27	-29.7	-20.0	44.6	38.9	5.69	7.833		
1,500.0	1,499.6	1,500.2	1,499.6	3.1	3.1	-116.27	-29.7	-20.0	44.6	38.5	6.11	7.295		
1,600.0	1,599.6	1,600.2	1,599.6	3.3	3.3	-116.27	-29.7	-20.0	44.6	38.1	6.54	6.822		
1,700.0	1,699.6	1,700.2	1,699.6	3.5	3.5	-116.27	-29.7	-20.0	44.6	37.6	6.96	6.403		
1,800.0	1,799.6	1,800.2	1,799.6	3.7	3.7	-116.27	-29.7	-20.0	44.6	37.2	7.39	6.031		
1,900.0	1,899.6	1,900.2	1,899.6	4.0	3.9	-116.27	-29.7	-20.0	44.6	36.8	7.83	5.698		
2,000.0	1,999.6	2,000.2	1,999.6	4.2	4.1	-116.27	-29.7	-20.0	44.6	36.3	8.26	5.399		
2,100.0	2,099.6	2,100.2	2,099.6	4.4	4.3	-116.27	-29.7	-20.0	44.6	35.9	8.70	5.128		
2,200.0	2,199.6	2,200.2	2,199.6	4.6	4.5	-116.27	-29.7	-20.0	44.6	35.5	9.13	4.883		
2,300.0	2,299.6	2,300.2	2,299.6	4.8	4.8	-116.27	-29.7	-20.0	44.6	35.0	9.57	4.660		
2,400.0	2,399.6	2,400.2	2,399.6	5.1	5.0	-116.27	-29.7	-20.0	44.6	34.6	10.01	4.455		
2,500.0	2,499.6	2,500.2	2,499.6	5.3	5.2	-116.27	-29.7	-20.0	44.6	34.1	10.45	4.268		
2,600.0	2,599.6	2,600.2	2,599.6	5.5	5.4	-116.27	-29.7	-20.0	44.6	33.7	10.89	4.095		
2,700.0	2,699.6	2,700.2	2,699.6	5.7	5.6	-116.27	-29.7	-20.0	44.6	33.3	11.33	3.935		
2,800.0	2,799.6	2,800.2	2,799.6	5.9	5.9	-116.27	-29.7	-20.0	44.6	32.8	11.77	3.788		
2,900.0	2,899.6	2,900.2	2,899.6	6.2	6.1	-116.27	-29.7	-20.0	44.6	32.4	12.22	3.650		
3,000.0	2,999.6	3,000.2	2,999.6	6.4	6.3	-116.27	-29.7	-20.0	44.6	31.9	12.66	3.523		
3,100.0	3,099.6	3,100.2	3,099.6	6.6	6.5	-116.27	-29.7	-20.0	44.6	31.5	13.10	3.403		
3,200.0	3,199.6	3,200.2	3,199.6	6.8	6.7	-116.27	-29.7	-20.0	44.6	31.0	13.55	3.292		
3,300.0	3,299.6	3,300.2	3,299.6	7.1	7.0	-116.27	-29.7	-20.0	44.6	30.6	13.99	3.187		
3,400.0	3,399.6	3,400.2	3,399.6	7.3	7.2	-116.27	-29.7	-20.0	44.6	30.2	14.44	3.089		
3,500.0	3,499.6	3,500.2	3,499.6	7.5	7.4	-116.27	-29.7	-20.0	44.6	29.7	14.88	2.997		
3,600.0	3,599.6	3,600.2	3,599.6	7.7	7.6	-116.27	-29.7	-20.0	44.6	29.3	15.33	2.910		
3,700.0	3,699.6	3,700.2	3,699.6	7.9	7.8	-116.27	-29.7	-20.0	44.6	28.8	15.77	2.828		
3,800.0	3,799.6	3,800.2	3,799.6	8.2	8.1	-116.27	-29.7	-20.0	44.6	28.4	16.22	2.750		
3,900.0	3,899.6	3,900.2	3,899.6	8.4	8.3	-116.27	-29.7	-20.0	44.6	27.9	16.66	2.676		
4,000.0	3,999.6	4,000.2	3,999.6	8.6	8.5	-116.27	-29.7	-20.0	44.6	27.5	17.11	2.607		
4,100.0	4,099.6	4,100.2	4,099.6	8.8	8.7	-116.27	-29.7	-20.0	44.6	27.0	17.56	2.540		
4,200.0	4,199.6	4,200.2	4,199.6	9.1	8.9	-116.27	-29.7	-20.0	44.6	26.6	18.00	2.477		
4,300.0	4,299.6	4,300.2	4,299.6	9.3	9.2	-116.27	-29.7	-20.0	44.6	26.1	18.45	2.417		
4,400.0	4,399.6	4,400.2	4,399.6	9.5	9.4	145.95	-29.7	-20.0	46.0	27.1	18.88	2.438		
4,500.0	4,499.4	4,500.1	4,499.4	9.7	9.6	149.23	-29.7	-20.0	50.5	31.2	19.29	2.615		
4,600.0	4,599.1	4,599.7	4,599.1	9.9	9.8	153.56	-29.7	-20.0	58.1	38.4	19.69	2.951		
4,700.0	4,698.3	4,698.9	4,698.3	10.2	10.1	157.96	-29.7	-20.0	69.3	49.2	20.07	3.450		
4,800.0	4,797.1	4,797.7	4,797.1	10.4	10.3	161.87	-29.7	-20.0	84.0	63.5	20.44	4.109		
4,900.0	4,895.2	4,895.9	4,895.2	10.7	10.5	165.10	-29.7	-20.0	102.3	81.5	20.79	4.922		
5,000.0	4,992.7	4,993.3	4,992.7	10.9	10.7	167.67	-29.7	-20.0	124.2	103.1	21.12	5.881		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Castle 0780 2-17H20 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,089.2	5,089.9	5,089.2	11.2	10.9	169.69	-29.7	-20.0	149.6	128.2	21.44	6.979	
5,200.0	5,184.9	5,185.5	5,184.9	11.6	11.1	171.28	-29.7	-20.0	178.5	156.7	21.74	8.209	
5,226.2	5,209.7	5,210.4	5,209.7	11.7	11.2	171.64	-29.7	-20.0	186.6	164.8	21.82	8.552	
5,300.0	5,279.7	5,280.4	5,279.7	12.0	11.4	172.57	-29.7	-20.0	209.9	187.7	22.13	9.481	
5,400.0	5,374.5	5,375.2	5,374.5	12.4	11.6	173.54	-29.7	-20.0	241.4	218.9	22.56	10.699	
5,500.0	5,469.4	5,470.0	5,469.4	12.8	11.8	174.29	-29.7	-20.0	273.0	250.0	23.00	11.870	
5,600.0	5,564.2	5,564.8	5,564.2	13.3	12.0	174.89	-29.7	-20.0	304.7	281.2	23.44	12.997	
5,700.0	5,659.0	5,659.6	5,659.0	13.8	12.2	175.37	-29.7	-20.0	336.3	312.5	23.89	14.080	
5,800.0	5,753.8	5,754.5	5,753.8	14.2	12.4	175.77	-29.7	-20.0	368.0	343.7	24.34	15.122	
5,900.0	5,848.6	5,849.3	5,848.6	14.7	12.6	176.10	-29.7	-20.0	399.7	374.9	24.79	16.124	
6,000.0	5,943.5	5,944.1	5,943.5	15.3	12.8	176.39	-29.7	-20.0	431.4	406.2	25.25	17.088	
6,100.0	6,038.3	6,038.9	6,038.3	15.8	13.1	176.64	-29.7	-20.0	463.1	437.4	25.71	18.016	
6,200.0	6,133.1	6,133.7	6,133.1	16.3	13.3	176.85	-29.7	-20.0	494.9	468.7	26.17	18.909	
6,300.0	6,227.9	6,228.5	6,227.9	16.9	13.5	177.04	-29.7	-20.0	526.6	500.0	26.64	19.769	
6,400.0	6,322.7	6,323.4	6,322.7	17.5	13.7	177.21	-29.7	-20.0	558.3	531.2	27.11	20.598	
6,500.0	6,417.6	6,418.2	6,417.6	18.0	13.9	177.36	-29.7	-20.0	590.1	562.5	27.58	21.396	
6,566.1	6,480.2	6,488.7	6,488.1	18.4	14.1	177.35	-30.9	-19.9	610.9	583.0	27.90	21.893	
6,600.0	6,512.4	6,529.9	6,529.0	18.6	14.1	166.01	-35.0	-19.5	620.9	592.8	28.11	22.091	
6,650.0	6,559.6	6,590.9	6,588.9	18.8	14.2	150.46	-46.5	-18.5	634.5	606.1	28.43	22.319	
6,700.0	6,606.2	6,652.3	6,647.6	19.1	14.4	137.33	-64.4	-17.0	646.5	617.8	28.79	22.460	
6,750.0	6,652.0	6,713.8	6,704.2	19.3	14.5	126.83	-88.4	-14.9	657.0	627.8	29.18	22.511	
6,800.0	6,696.4	6,775.3	6,757.7	19.6	14.7	118.58	-118.4	-12.2	665.7	636.0	29.62	22.471	
6,850.0	6,739.3	6,836.3	6,807.5	19.8	14.9	112.06	-153.6	-9.2	672.6	642.5	30.11	22.341	
6,900.0	6,780.3	6,896.8	6,852.8	20.1	15.1	106.85	-193.5	-5.7	677.7	647.1	30.64	22.122	
6,950.0	6,819.0	6,956.5	6,893.0	20.3	15.4	102.64	-237.3	-1.8	681.0	649.8	31.22	21.815	
7,000.0	6,855.2	7,015.0	6,927.9	20.6	15.7	99.21	-284.1	2.3	682.5	650.7	31.85	21.428	
7,050.0	6,888.6	7,069.5	6,956.2	20.8	16.1	96.45	-330.5	6.3	682.3	649.7	32.50	20.990	
7,100.0	6,918.9	7,119.1	6,981.0	21.1	16.5	94.56	-373.3	10.1	680.6	647.5	33.14	20.535	
7,154.6	6,948.3	7,173.5	7,008.2	21.4	16.9	93.38	-420.2	14.2	677.3	643.5	33.86	20.003	
7,200.0	6,971.0	7,217.5	7,030.0	21.7	17.3	93.38	-458.3	17.5	673.9	639.3	34.60	19.477	
7,304.6	7,023.3	7,312.6	7,068.3	22.4	18.2	92.53	-545.1	23.2	667.0	630.4	36.51	18.266	
7,350.0	7,044.4	7,352.9	7,080.1	22.7	18.7	92.14	-583.5	25.0	664.6	627.1	37.44	17.750	
7,400.0	7,063.9	7,396.7	7,089.9	23.1	19.2	91.68	-626.2	26.5	662.6	624.0	38.52	17.200	
7,450.0	7,079.3	7,440.1	7,096.4	23.6	19.7	91.21	-669.0	27.5	661.2	621.6	39.65	16.675	
7,500.0	7,090.5	7,483.1	7,099.6	24.1	20.3	90.72	-711.9	28.0	660.5	619.7	40.82	16.181	
7,550.0	7,097.4	7,529.1	7,100.0	24.6	20.9	90.23	-757.9	28.0	660.4	618.3	42.06	15.699	
7,604.6	7,100.0	7,583.6	7,100.0	25.2	21.6	90.00	-812.4	28.1	660.4	616.8	43.51	15.176	
7,700.0	7,100.0	7,679.0	7,100.0	26.4	22.9	90.00	-907.8	28.1	660.4	614.2	46.18	14.301	
7,800.0	7,100.0	7,779.0	7,100.0	27.6	24.4	90.00	-1,007.8	28.1	660.3	611.2	49.11	13.447	
7,900.0	7,100.0	7,879.0	7,100.0	29.0	25.9	90.00	-1,107.8	28.1	660.3	608.2	52.16	12.659	
8,000.0	7,100.0	7,979.0	7,100.0	30.4	27.5	90.00	-1,207.8	28.1	660.3	605.0	55.32	11.937	
8,100.0	7,100.0	8,079.0	7,100.0	31.9	29.2	90.00	-1,307.8	28.1	660.3	601.8	58.56	11.277	
8,200.0	7,100.0	8,179.0	7,100.0	33.4	30.8	90.00	-1,407.8	28.1	660.3	598.5	61.87	10.673	
8,300.0	7,100.0	8,279.0	7,100.0	35.0	32.5	90.00	-1,507.8	28.1	660.3	595.1	65.24	10.121	
8,400.0	7,100.0	8,379.0	7,100.0	36.6	34.2	90.00	-1,607.8	28.1	660.3	591.6	68.66	9.617	
8,500.0	7,100.0	8,479.0	7,100.0	38.2	36.0	90.00	-1,707.8	28.1	660.3	588.2	72.13	9.154	
8,600.0	7,100.0	8,579.0	7,100.0	39.8	37.7	90.00	-1,807.8	28.1	660.3	584.7	75.64	8.730	
8,700.0	7,100.0	8,679.0	7,100.0	41.5	39.5	90.00	-1,907.8	28.1	660.3	581.1	79.18	8.339	
8,800.0	7,100.0	8,779.0	7,100.0	43.2	41.3	90.00	-2,007.8	28.1	660.3	577.5	82.75	7.980	
8,900.0	7,100.0	8,879.0	7,100.0	44.9	43.1	90.00	-2,107.8	28.1	660.3	573.9	86.34	7.647	
9,000.0	7,100.0	8,979.0	7,100.0	46.7	44.9	90.00	-2,207.8	28.1	660.3	570.3	89.96	7.340	
9,100.0	7,100.0	9,079.0	7,100.0	48.4	46.7	90.00	-2,307.8	28.1	660.3	566.7	93.59	7.055	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Castle 0780 2-17H20 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,200.0	7,100.0	9,179.0	7,100.0	50.2	48.6	90.00	-2,407.8	28.1	660.3	563.0	97.24	6.790	
9,300.0	7,100.0	9,279.0	7,100.0	52.0	50.4	90.00	-2,507.8	28.1	660.3	559.3	100.91	6.543	
9,400.0	7,100.0	9,379.0	7,100.0	53.8	52.2	90.00	-2,607.8	28.1	660.3	555.7	104.60	6.312	
9,500.0	7,100.0	9,479.0	7,100.0	55.6	54.1	90.00	-2,707.8	28.2	660.2	552.0	108.29	6.097	
9,600.0	7,100.0	9,579.0	7,100.0	57.4	55.9	90.00	-2,807.8	28.2	660.2	548.2	112.00	5.895	
9,700.0	7,100.0	9,679.0	7,100.0	59.2	57.8	90.00	-2,907.8	28.2	660.2	544.5	115.71	5.706	
9,800.0	7,100.0	9,779.0	7,100.0	61.0	59.7	90.00	-3,007.8	28.2	660.2	540.8	119.44	5.528	
9,900.0	7,100.0	9,879.0	7,100.0	62.8	61.5	90.00	-3,107.8	28.2	660.2	537.1	123.18	5.360	
10,000.0	7,100.0	9,979.0	7,100.0	64.7	63.4	90.00	-3,207.8	28.2	660.2	533.3	126.92	5.202	
10,100.0	7,100.0	10,079.0	7,100.0	66.5	65.3	90.00	-3,307.8	28.2	660.2	529.5	130.67	5.053	
10,200.0	7,100.0	10,179.0	7,100.0	68.4	67.2	90.00	-3,407.8	28.2	660.2	525.8	134.42	4.911	
10,300.0	7,100.0	10,279.0	7,100.0	70.2	69.1	90.00	-3,507.8	28.2	660.2	522.0	138.18	4.778	
10,400.0	7,100.0	10,379.0	7,100.0	72.1	70.9	90.00	-3,607.8	28.2	660.2	518.2	141.95	4.651	
10,500.0	7,100.0	10,479.0	7,100.0	73.9	72.8	90.00	-3,707.8	28.2	660.2	514.5	145.72	4.531	
10,600.0	7,100.0	10,579.0	7,100.0	75.8	74.7	90.00	-3,807.8	28.2	660.2	510.7	149.50	4.416	
10,700.0	7,100.0	10,679.0	7,100.0	77.6	76.6	90.00	-3,907.8	28.2	660.2	506.9	153.28	4.307	
10,800.0	7,100.0	10,779.0	7,100.0	79.5	78.5	90.00	-4,007.8	28.2	660.2	503.1	157.06	4.203	
10,900.0	7,100.0	10,879.0	7,100.0	81.4	80.4	90.00	-4,107.8	28.2	660.2	499.3	160.85	4.104	
11,000.0	7,100.0	10,979.0	7,100.0	83.3	82.3	90.00	-4,207.8	28.2	660.2	495.5	164.64	4.010	
11,100.0	7,100.0	11,079.0	7,100.0	85.1	84.2	90.00	-4,307.8	28.2	660.2	491.7	168.44	3.919	
11,200.0	7,100.0	11,179.0	7,100.0	87.0	86.1	90.00	-4,407.8	28.2	660.2	487.9	172.24	3.833	
11,300.0	7,100.0	11,279.0	7,100.0	88.9	88.0	90.00	-4,507.8	28.2	660.1	484.1	176.04	3.750	
11,400.0	7,100.0	11,379.0	7,100.0	90.8	89.9	90.00	-4,607.8	28.3	660.1	480.3	179.84	3.671	
11,500.0	7,100.0	11,479.0	7,100.0	92.7	91.8	90.00	-4,707.8	28.3	660.1	476.5	183.65	3.595	
11,600.0	7,100.0	11,579.0	7,100.0	94.5	93.7	90.00	-4,807.8	28.3	660.1	472.7	187.45	3.522	
11,700.0	7,100.0	11,679.0	7,100.0	96.4	95.6	90.00	-4,907.8	28.3	660.1	468.9	191.26	3.451	
11,800.0	7,100.0	11,779.0	7,100.0	98.3	97.5	90.00	-5,007.8	28.3	660.1	465.0	195.08	3.384	
11,900.0	7,100.0	11,879.0	7,100.0	100.2	99.4	90.00	-5,107.8	28.3	660.1	461.2	198.89	3.319	
12,000.0	7,100.0	11,979.0	7,100.0	102.1	101.3	90.00	-5,207.8	28.3	660.1	457.4	202.71	3.256	
12,100.0	7,100.0	12,079.0	7,100.0	104.0	103.2	90.00	-5,307.8	28.3	660.1	453.6	206.53	3.196	
12,200.0	7,100.0	12,179.0	7,100.0	105.9	105.2	90.00	-5,407.8	28.3	660.1	449.8	210.35	3.138	
12,300.0	7,100.0	12,279.0	7,100.0	107.8	107.1	90.00	-5,507.8	28.3	660.1	445.9	214.17	3.082	
12,400.0	7,100.0	12,379.0	7,100.0	109.7	109.0	90.00	-5,607.8	28.3	660.1	442.1	217.99	3.028	
12,500.0	7,100.0	12,479.0	7,100.0	111.6	110.9	90.00	-5,707.8	28.3	660.1	438.3	221.81	2.976	
12,600.0	7,100.0	12,579.0	7,100.0	113.5	112.8	90.00	-5,807.8	28.3	660.1	434.4	225.64	2.925	
12,700.0	7,100.0	12,679.0	7,100.0	115.4	114.7	90.00	-5,907.8	28.3	660.1	430.6	229.46	2.877	
12,800.0	7,100.0	12,779.0	7,100.0	117.3	116.6	90.00	-6,007.8	28.3	660.1	426.8	233.29	2.829	
12,900.0	7,100.0	12,879.0	7,100.0	119.2	118.5	90.00	-6,107.8	28.3	660.1	422.9	237.12	2.784	
13,000.0	7,100.0	12,979.0	7,100.0	121.1	120.5	90.00	-6,207.8	28.3	660.1	419.1	240.95	2.739	
13,100.0	7,100.0	13,079.0	7,100.0	123.0	122.4	90.00	-6,307.8	28.3	660.0	415.3	244.78	2.696	
13,200.0	7,100.0	13,179.0	7,100.0	124.9	124.3	90.00	-6,407.8	28.3	660.0	411.4	248.61	2.655	
13,300.0	7,100.0	13,279.0	7,100.0	126.8	126.2	90.00	-6,507.8	28.3	660.0	407.6	252.45	2.615	
13,400.0	7,100.0	13,379.0	7,100.0	128.7	128.1	90.00	-6,607.8	28.4	660.0	403.8	256.28	2.575	
13,500.0	7,100.0	13,479.0	7,100.0	130.6	130.0	90.00	-6,707.8	28.4	660.0	399.9	260.11	2.537	
13,600.0	7,100.0	13,579.0	7,100.0	132.5	132.0	90.00	-6,807.8	28.4	660.0	396.1	263.95	2.501	
13,700.0	7,100.0	13,679.0	7,100.0	134.5	133.9	90.00	-6,907.8	28.4	660.0	392.2	267.79	2.465	
13,800.0	7,100.0	13,779.0	7,100.0	136.4	135.8	90.00	-7,007.8	28.4	660.0	388.4	271.62	2.430	
13,900.0	7,100.0	13,879.0	7,100.0	138.3	137.7	90.00	-7,107.8	28.4	660.0	384.5	275.46	2.396	
14,000.0	7,100.0	13,979.0	7,100.0	140.2	139.6	90.00	-7,207.8	28.4	660.0	380.7	279.30	2.363	
14,100.0	7,100.0	14,079.0	7,100.0	142.1	141.6	90.00	-7,307.8	28.4	660.0	376.9	283.14	2.331	
14,200.0	7,100.0	14,179.0	7,100.0	144.0	143.5	90.00	-7,407.8	28.4	660.0	373.0	286.98	2.300	
14,300.0	7,100.0	14,279.0	7,100.0	145.9	145.4	90.00	-7,507.8	28.4	660.0	369.2	290.82	2.269	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Castle 0780 2-17H20 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,400.0	7,100.0	14,379.0	7,100.0	147.8	147.3	90.00	-7,607.8	28.4	660.0	365.3	294.66	2.240	
14,500.0	7,100.0	14,479.0	7,100.0	149.8	149.2	90.00	-7,707.8	28.4	660.0	361.5	298.50	2.211	
14,600.0	7,100.0	14,579.0	7,100.0	151.7	151.2	90.00	-7,807.8	28.4	660.0	357.6	302.34	2.183	
14,700.0	7,100.0	14,679.0	7,100.0	153.6	153.1	90.00	-7,907.8	28.4	660.0	353.8	306.18	2.155	
14,800.0	7,100.0	14,779.0	7,100.0	155.5	155.0	90.00	-8,007.8	28.4	660.0	349.9	310.03	2.129	
14,900.0	7,100.0	14,879.0	7,100.0	157.4	156.9	90.00	-8,107.8	28.4	659.9	346.1	313.87	2.103	
15,000.0	7,100.0	14,979.0	7,100.0	159.3	158.8	90.00	-8,207.8	28.4	659.9	342.2	317.71	2.077	
15,100.0	7,100.0	15,079.0	7,100.0	161.2	160.8	90.00	-8,307.8	28.4	659.9	338.4	321.56	2.052	
15,200.0	7,100.0	15,179.0	7,100.0	163.2	162.7	90.00	-8,407.8	28.4	659.9	334.5	325.40	2.028	
15,300.0	7,100.0	15,279.0	7,100.0	165.1	164.6	90.00	-8,507.8	28.5	659.9	330.7	329.25	2.004	
15,400.0	7,100.0	15,379.0	7,100.0	167.0	166.5	90.00	-8,607.8	28.5	659.9	326.8	333.09	1.981	Level 4
15,500.0	7,100.0	15,479.0	7,100.0	168.9	168.5	90.00	-8,707.8	28.5	659.9	323.0	336.94	1.959	Level 4
15,600.0	7,100.0	15,579.0	7,100.0	170.8	170.4	90.00	-8,807.8	28.5	659.9	319.1	340.78	1.936	Level 4
15,700.0	7,100.0	15,679.0	7,100.0	172.8	172.3	90.00	-8,907.8	28.5	659.9	315.3	344.63	1.915	Level 4
15,800.0	7,100.0	15,779.0	7,100.0	174.7	174.2	90.00	-9,007.8	28.5	659.9	311.4	348.48	1.894	Level 4
15,900.0	7,100.0	15,879.0	7,100.0	176.6	176.2	90.00	-9,107.8	28.5	659.9	307.6	352.32	1.873	Level 4
16,000.0	7,100.0	15,979.0	7,100.0	178.5	178.1	90.00	-9,207.8	28.5	659.9	303.7	356.17	1.853	Level 4
16,100.0	7,100.0	16,079.0	7,100.0	180.4	180.0	90.00	-9,307.8	28.5	659.9	299.9	360.02	1.833	Level 4
16,200.0	7,100.0	16,179.0	7,100.0	182.3	181.9	90.00	-9,407.8	28.5	659.9	296.0	363.87	1.813	Level 4
16,300.0	7,100.0	16,279.0	7,100.0	184.3	183.9	90.00	-9,507.8	28.5	659.9	292.1	367.72	1.794	Level 4
16,400.0	7,100.0	16,379.0	7,100.0	186.2	185.8	90.00	-9,607.8	28.5	659.9	288.3	371.57	1.776	Level 4
16,500.0	7,100.0	16,479.0	7,100.0	188.1	187.7	90.00	-9,707.8	28.5	659.9	284.4	375.41	1.758	Level 4
16,600.0	7,100.0	16,579.0	7,100.0	190.0	189.6	90.00	-9,807.8	28.5	659.8	280.6	379.26	1.740	Level 4
16,700.0	7,100.0	16,679.0	7,100.0	191.9	191.6	90.00	-9,907.8	28.5	659.8	276.7	383.11	1.722	Level 4
16,800.0	7,100.0	16,779.0	7,100.0	193.9	193.5	90.00	-10,007.8	28.5	659.8	272.9	386.96	1.705	Level 4
16,900.0	7,100.0	16,879.0	7,100.0	195.8	195.4	90.00	-10,107.8	28.5	659.8	269.0	390.81	1.688	Level 4
16,937.6	7,100.0	16,916.6	7,100.0	196.5	196.1	90.00	-10,145.4	28.5	659.8	267.6	392.20	1.682	Level 4
16,952.7	7,100.0	16,924.5	7,100.0	196.8	196.2	90.00	-10,153.3	28.5	659.9	267.3	392.61	1.681	Level 4, SF

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Castle 0780 4-17H20 - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	90.80	-0.3	20.0	20.0					
100.0	100.0	100.0	100.0	0.1	0.1	90.80	-0.3	20.0	20.0	19.8	0.19	106.099		
200.0	200.0	200.0	200.0	0.3	0.3	90.80	-0.3	20.0	20.0	19.4	0.64	31.382		
300.0	300.0	300.0	300.0	0.5	0.5	90.80	-0.3	20.0	20.0	18.9	1.09	18.414		
400.0	400.0	400.0	400.0	0.8	0.8	90.80	-0.3	20.0	20.0	18.5	1.54	13.030		
500.0	500.0	500.0	500.0	1.0	1.0	90.80	-0.3	20.0	20.0	18.0	1.99	10.082 CC		
608.2	608.2	607.5	607.5	1.2	1.2	-28.35	-0.3	22.0	20.2	17.8	2.44	8.296		
616.6	616.5	615.9	615.9	1.2	1.2	-28.75	-0.3	22.3	20.2	17.7	2.47	8.183		
700.0	699.9	699.3	699.2	1.4	1.4	-32.74	-0.3	25.1	20.3	17.5	2.80	7.227		
800.0	799.8	799.3	799.2	1.6	1.6	-37.46	-0.3	28.4	20.4	17.2	3.22	6.351		
900.0	899.8	899.3	899.1	1.8	1.8	-42.07	-0.3	31.7	20.8	17.1	3.65	5.695		
1,000.0	999.7	999.3	999.0	2.0	2.1	-46.52	-0.3	35.0	21.2	17.1	4.08	5.196		
1,092.2	1,091.8	1,091.5	1,091.2	2.3	2.3	-50.43	-0.3	38.1	21.8	17.3	4.49	4.840		
1,100.0	1,099.6	1,099.3	1,099.0	2.3	2.3	-50.73	-0.3	38.3	21.8	17.3	4.53	4.816		
1,200.4	1,200.0	1,199.6	1,199.3	2.5	2.5	65.81	-0.3	41.6	23.7	18.8	4.94	4.799		
1,300.0	1,299.6	1,299.2	1,298.8	2.7	2.7	68.70	-0.3	44.9	26.8	21.4	5.38	4.980		
1,400.0	1,399.6	1,399.1	1,398.7	2.9	3.0	71.01	-0.3	48.2	29.9	24.1	5.82	5.137		
1,500.0	1,499.6	1,500.1	1,499.6	3.1	3.2	72.06	-0.3	50.0	31.6	25.3	6.24	5.055		
1,600.0	1,599.6	1,600.1	1,599.6	3.3	3.4	72.06	-0.3	50.0	31.6	24.9	6.66	4.739		
1,700.0	1,699.6	1,700.1	1,699.6	3.5	3.6	72.06	-0.3	50.0	31.6	24.5	7.09	4.453		
1,800.0	1,799.6	1,800.1	1,799.6	3.7	3.8	72.06	-0.3	50.0	31.6	24.0	7.52	4.198		
1,900.0	1,899.6	1,900.1	1,899.6	4.0	4.0	72.06	-0.3	50.0	31.6	23.6	7.95	3.969		
2,000.0	1,999.6	2,000.1	1,999.6	4.2	4.2	72.06	-0.3	50.0	31.6	23.2	8.39	3.763		
2,100.0	2,099.6	2,100.1	2,099.6	4.4	4.5	72.06	-0.3	50.0	31.6	22.7	8.82	3.577		
2,200.0	2,199.6	2,200.1	2,199.6	4.6	4.7	72.06	-0.3	50.0	31.6	22.3	9.26	3.408		
2,300.0	2,299.6	2,300.1	2,299.6	4.8	4.9	72.06	-0.3	50.0	31.6	21.9	9.70	3.254		
2,400.0	2,399.6	2,400.1	2,399.6	5.1	5.1	72.06	-0.3	50.0	31.6	21.4	10.14	3.113		
2,500.0	2,499.6	2,500.1	2,499.6	5.3	5.3	72.06	-0.3	50.0	31.6	21.0	10.58	2.984		
2,600.0	2,599.6	2,600.1	2,599.6	5.5	5.5	72.06	-0.3	50.0	31.6	20.5	11.02	2.864		
2,700.0	2,699.6	2,700.1	2,699.6	5.7	5.8	72.06	-0.3	50.0	31.6	20.1	11.46	2.754		
2,800.0	2,799.6	2,800.1	2,799.6	5.9	6.0	72.06	-0.3	50.0	31.6	19.7	11.90	2.651		
2,900.0	2,899.6	2,900.1	2,899.6	6.2	6.2	72.06	-0.3	50.0	31.6	19.2	12.35	2.556		
3,000.0	2,999.6	3,000.1	2,999.6	6.4	6.4	72.06	-0.3	50.0	31.6	18.8	12.79	2.468		
3,100.0	3,099.6	3,100.1	3,099.6	6.6	6.6	72.06	-0.3	50.0	31.6	18.3	13.23	2.385		
3,200.0	3,199.6	3,200.1	3,199.6	6.8	6.9	72.06	-0.3	50.0	31.6	17.9	13.68	2.308		
3,300.0	3,299.6	3,300.1	3,299.6	7.1	7.1	72.06	-0.3	50.0	31.6	17.4	14.12	2.235		
3,400.0	3,399.6	3,400.1	3,399.6	7.3	7.3	72.06	-0.3	50.0	31.6	17.0	14.57	2.167		
3,500.0	3,499.6	3,500.1	3,499.6	7.5	7.5	72.06	-0.3	50.0	31.6	16.6	15.01	2.103		
3,600.0	3,599.6	3,600.1	3,599.6	7.7	7.8	72.06	-0.3	50.0	31.6	16.1	15.46	2.042		
3,700.0	3,699.6	3,700.1	3,699.6	7.9	8.0	72.06	-0.3	50.0	31.6	15.7	15.90	1.985 Level 4		
3,800.0	3,799.6	3,800.1	3,799.6	8.2	8.2	72.06	-0.3	50.0	31.6	15.2	16.35	1.931 Level 4		
3,900.0	3,899.6	3,900.1	3,899.6	8.4	8.4	72.06	-0.3	50.0	31.6	14.8	16.80	1.879 Level 4		
3,966.6	3,966.2	3,966.7	3,966.2	8.5	8.6	72.06	-0.3	50.0	31.6	14.5	17.09	1.847 Level 4		
4,000.0	3,999.6	4,000.0	3,999.5	8.6	8.6	72.06	-0.3	50.0	31.6	14.3	17.24	1.831 Level 4, ES		
4,100.0	4,099.6	4,099.0	4,098.5	8.8	8.9	72.67	-0.1	51.7	33.3	15.6	17.68	1.881 Level 4		
4,200.0	4,199.6	4,197.6	4,197.0	9.1	9.1	74.16	0.4	56.8	38.3	20.2	18.12	2.116		
4,300.0	4,299.6	4,295.8	4,294.8	9.3	9.3	75.92	1.3	65.2	46.8	28.3	18.57	2.523		
4,400.0	4,399.6	4,393.5	4,391.8	9.5	9.5	-22.04	2.6	76.9	57.1	38.2	18.94	3.017		
4,500.0	4,499.4	4,490.9	4,488.0	9.7	9.8	-22.04	4.2	91.7	67.6	48.3	19.34	3.495		
4,600.0	4,599.1	4,587.9	4,583.3	9.9	10.0	-22.66	6.1	109.8	78.2	58.5	19.73	3.962		
4,700.0	4,698.3	4,685.8	4,678.8	10.2	10.3	-23.73	8.3	130.9	88.6	68.5	20.12	4.403		
4,800.0	4,797.1	4,785.4	4,776.0	10.4	10.6	-25.39	10.7	153.0	96.4	75.9	20.52	4.700		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Castle 0780 4-17H20 - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft												
Survey Program: 0-Sperry MWD													Offset Well Error:	0.0 usft												
Reference		Offset		Semi Major Axis			Distance							Warning												
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor														
4,900.0	4,895.2	4,885.2	4,873.3	10.7	10.9	-27.71	13.0	175.0	101.2	80.3	20.93	4.837														
5,000.0	4,992.7	4,985.0	4,970.6	10.9	11.3	-30.79	15.4	197.1	103.2	81.8	21.37	4.829														
5,100.0	5,089.2	5,084.8	5,067.8	11.2	11.6	-34.86	17.7	219.2	102.5	80.7	21.86	4.691														
5,200.0	5,184.9	5,184.3	5,164.9	11.6	12.0	-40.22	20.1	241.2	99.7	77.3	22.45	4.443														
5,226.2	5,209.7	5,210.3	5,190.2	11.7	12.1	-41.89	20.7	246.9	98.7	76.1	22.63	4.363														
5,300.0	5,279.7	5,283.6	5,261.7	12.0	12.3	-46.88	22.4	263.1	96.1	72.9	23.22	4.138														
														5,400.0	5,374.5	5,382.8	5,358.4	12.4	12.7	-54.00	24.7	285.1	93.8	69.6	24.12	3.887
														5,500.0	5,469.4	5,482.1	5,455.2	12.8	13.1	-61.36	27.1	307.0	93.0	67.9	25.11	3.702
														5,500.5	5,469.8	5,482.6	5,455.7	12.8	13.1	-61.40	27.1	307.1	93.0	67.9	25.12	3.701
														5,600.0	5,564.2	5,581.4	5,552.0	13.3	13.4	-68.72	29.4	329.0	93.7	67.6	26.16	3.583
5,700.0	5,659.0	5,680.6	5,648.8	13.8	13.8	-75.84	31.7	350.9	96.1	68.8	27.23	3.528														
														5,800.0	5,753.8	5,779.9	5,745.6	14.2	14.2	-82.54	34.1	372.9	99.8	71.5	28.27	3.529
														5,900.0	5,848.6	5,879.2	5,842.3	14.7	14.6	-88.68	36.4	394.8	104.8	75.5	29.27	3.580
														6,000.0	5,943.5	5,978.4	5,939.1	15.3	15.0	-94.22	38.7	416.8	110.9	80.7	30.21	3.670
														6,100.0	6,038.3	6,077.7	6,035.9	15.8	15.4	-99.14	41.1	438.7	117.9	86.8	31.10	3.791
6,200.0	6,133.1	6,177.0	6,132.7	16.3	15.8	-103.48	43.4	460.7	125.7	93.8	31.95	3.935														
														6,300.0	6,227.9	6,276.2	6,229.5	16.9	16.2	-107.31	45.7	482.6	134.1	101.4	32.75	4.096
														6,400.0	6,322.7	6,375.5	6,326.2	17.5	16.7	-110.67	48.1	504.6	143.1	109.6	33.53	4.268
														6,500.0	6,417.6	6,478.4	6,426.3	18.0	17.1	-113.40	50.3	528.2	152.1	117.8	34.33	4.432
														6,566.1	6,480.2	6,552.4	6,496.0	18.4	17.5	-112.39	50.6	553.1	155.2	120.0	35.15	4.414
6,600.0	6,512.4	6,589.9	6,529.9	18.6	17.8	-120.64	50.1	569.1	156.4	120.8	35.57	4.397														
														6,650.0	6,559.6	6,643.3	6,576.2	18.8	18.2	-130.07	48.8	595.5	160.7	124.6	36.15	4.446
														6,700.0	6,606.2	6,693.4	6,617.4	19.1	18.7	-135.91	46.8	624.1	169.1	132.5	36.58	4.622
														6,750.0	6,652.0	6,739.5	6,652.9	19.3	19.1	-138.78	44.3	653.4	182.7	146.0	36.74	4.974
														6,800.0	6,696.4	6,781.1	6,682.8	19.6	19.6	-139.64	41.6	682.2	202.3	165.7	36.59	5.530
6,850.0	6,739.3	6,818.2	6,707.6	19.8	20.1	-139.26	38.9	709.5	227.9	191.8	36.16	6.304														
														6,900.0	6,780.3	6,850.0	6,727.5	20.1	20.5	-138.17	36.2	734.2	259.0	223.5	35.49	7.298
														6,950.0	6,819.0	6,878.9	6,744.3	20.3	20.9	-136.21	33.6	757.6	294.7	260.0	34.69	8.495
														7,000.0	6,855.2	6,903.2	6,757.5	20.6	21.3	-133.59	31.2	777.8	334.2	300.4	33.81	9.886
														7,050.0	6,888.6	6,924.4	6,768.4	20.8	21.6	-129.91	29.0	795.9	376.7	343.8	32.97	11.426
7,100.0	6,918.9	6,945.9	6,779.1	21.1	22.0	-124.64	26.8	814.3	421.4	389.1	32.35	13.026														
														7,154.6	6,948.3	6,966.1	6,789.3	21.4	22.3	-116.87	24.7	831.8	472.0	439.9	32.08	14.713
														7,200.0	6,971.0	6,981.6	6,797.0	21.7	22.6	-116.62	23.1	845.1	514.7	482.2	32.52	15.830
														7,304.6	7,023.3	7,017.2	6,814.8	22.4	23.2	-116.19	19.4	875.6	613.1	579.5	33.60	18.247
														7,350.0	7,044.4	7,031.9	6,822.1	22.7	23.4	-104.14	17.8	888.3	656.0	621.7	34.28	19.134
7,400.0	7,063.9	7,068.3	7,100.0	23.1	35.3	-92.83	-613.3	1,365.1	677.7	636.7	41.05	16.511														
														7,450.0	7,079.3	8,015.8	7,100.0	23.6	35.6	-91.67	-660.8	1,365.1	677.0	634.9	42.02	16.110
														7,500.0	7,090.5	8,064.5	7,100.0	24.1	36.0	-90.78	-709.6	1,365.0	676.6	633.5	43.14	15.686
														7,550.0	7,097.4	8,114.0	7,100.0	24.6	36.3	-90.21	-759.1	1,364.9	676.5	632.1	44.36	15.251
														7,604.6	7,100.0	8,168.5	7,100.0	25.2	36.8	-90.00	-813.6	1,364.8	676.4	630.6	45.77	14.777
7,700.0	7,100.0	8,263.9	7,100.0	26.4	37.5	-90.00	-909.0	1,364.6	676.2	627.9	48.35	13.985														
														7,800.0	7,100.0	8,363.9	7,100.0	27.6	38.4	-90.00	-1,009.0	1,364.4	676.0	624.8	51.20	13.204
														7,900.0	7,100.0	8,463.9	7,100.0	29.0	39.4	-90.00	-1,109.0	1,364.3	675.9	621.7	54.17	12.477
														8,000.0	7,100.0	8,563.9	7,100.0	30.4	40.4	-90.00	-1,209.0	1,364.1	675.7	618.4	57.25	11.802
														8,100.0	7,100.0	8,663.9	7,100.0	31.9	41.5	-90.00	-1,309.0	1,363.9	675.5	615.1	60.42	11.181
8,200.0	7,100.0	8,763.9	7,100.0	33.4	42.7	-90.00	-1,409.0	1,363.7	675.3	611.7	63.66	10.608														
														8,300.0	7,100.0	8,863.9	7,100.0	35.0	43.9	-90.00	-1,509.0	1,363.6	675.1	608.2	66.97	10.081
														8,400.0	7,100.0	8,963.9	7,100.0	36.6	45.1	-90.00	-1,609.0	1,363.4	675.0	604.6	70.34	9.596
														8,500.0	7,100.0	9,063.9	7,100.0	38.2	46.4	-90.00	-1,709.0	1,363.2	674.8	601.0	73.76	9.149
														8,600.0	7,100.0	9,163.9	7,100.0	39.8	47.8	-90.00	-1,809.0	1,363.0	674.6	597.4	77.21	8.737
8,700.0	7,100.0	9,263.9	7,100.0	41.5	49.1	-90.00	-1,909.0	1,362.8	674.4	593.7	80.71	8.357														
														8,800.0	7,100.0	9,363.9	7,100.0	43.2	50.6	-90.00	-2,009.0	1,362.7	674.3	590.0	84.23	8.005

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Castle 0780 4-17H20 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,900.0	7,100.0	9,463.9	7,100.0	44.9	52.0	-90.00	-2,109.0	1,362.5	674.1	586.3	87.79	7.679	
9,000.0	7,100.0	9,563.9	7,100.0	46.7	53.5	-90.00	-2,209.0	1,362.3	673.9	582.5	91.37	7.376	
9,100.0	7,100.0	9,663.9	7,100.0	48.4	55.0	-90.00	-2,309.0	1,362.1	673.7	578.8	94.97	7.094	
9,200.0	7,100.0	9,763.9	7,100.0	50.2	56.6	-90.00	-2,409.0	1,362.0	673.6	575.0	98.59	6.832	
9,300.0	7,100.0	9,863.9	7,100.0	52.0	58.1	-90.00	-2,509.0	1,361.8	673.4	571.2	102.23	6.587	
9,400.0	7,100.0	9,963.9	7,100.0	53.8	59.7	-90.00	-2,609.0	1,361.6	673.2	567.3	105.88	6.358	
9,500.0	7,100.0	10,063.9	7,100.0	55.6	61.3	-90.00	-2,709.0	1,361.4	673.0	563.5	109.55	6.144	
9,600.0	7,100.0	10,163.9	7,100.0	57.4	63.0	-90.00	-2,809.0	1,361.3	672.9	559.6	113.23	5.942	
9,700.0	7,100.0	10,263.9	7,100.0	59.2	64.6	-90.00	-2,909.0	1,361.1	672.7	555.8	116.92	5.753	
9,800.0	7,100.0	10,363.9	7,100.0	61.0	66.3	-90.00	-3,009.0	1,360.9	672.5	551.9	120.63	5.575	
9,900.0	7,100.0	10,463.9	7,100.0	62.8	68.0	-90.00	-3,109.0	1,360.7	672.3	548.0	124.34	5.407	
10,000.0	7,100.0	10,563.9	7,100.0	64.7	69.7	-90.00	-3,209.0	1,360.5	672.1	544.1	128.06	5.249	
10,100.0	7,100.0	10,663.9	7,100.0	66.5	71.4	-90.00	-3,309.0	1,360.4	672.0	540.2	131.79	5.099	
10,200.0	7,100.0	10,763.9	7,100.0	68.4	73.1	-90.00	-3,409.0	1,360.2	671.8	536.3	135.53	4.957	
10,300.0	7,100.0	10,863.9	7,100.0	70.2	74.8	-90.00	-3,509.0	1,360.0	671.6	532.3	139.27	4.822	
10,400.0	7,100.0	10,963.9	7,100.0	72.1	76.6	-90.00	-3,609.0	1,359.8	671.4	528.4	143.02	4.695	
10,500.0	7,100.0	11,063.9	7,100.0	73.9	78.3	-90.00	-3,709.0	1,359.7	671.3	524.5	146.78	4.573	
10,600.0	7,100.0	11,163.9	7,100.0	75.8	80.1	-90.00	-3,809.0	1,359.5	671.1	520.5	150.54	4.458	
10,700.0	7,100.0	11,263.9	7,100.0	77.6	81.8	-90.00	-3,909.0	1,359.3	670.9	516.6	154.31	4.348	
10,800.0	7,100.0	11,363.9	7,100.0	79.5	83.6	-90.00	-4,009.0	1,359.1	670.7	512.7	158.08	4.243	
10,900.0	7,100.0	11,463.9	7,100.0	81.4	85.4	-90.00	-4,109.0	1,358.9	670.6	508.7	161.85	4.143	
11,000.0	7,100.0	11,563.9	7,100.0	83.3	87.2	-90.00	-4,209.0	1,358.8	670.4	504.7	165.63	4.047	
11,100.0	7,100.0	11,663.9	7,100.0	85.1	89.0	-90.00	-4,309.0	1,358.6	670.2	500.8	169.42	3.956	
11,200.0	7,100.0	11,763.9	7,100.0	87.0	90.8	-90.00	-4,409.0	1,358.4	670.0	496.8	173.20	3.868	
11,300.0	7,100.0	11,863.9	7,100.0	88.9	92.6	-90.00	-4,509.0	1,358.2	669.8	492.9	176.99	3.785	
11,400.0	7,100.0	11,963.9	7,100.0	90.8	94.4	-90.00	-4,609.0	1,358.1	669.7	488.9	180.78	3.704	
11,500.0	7,100.0	12,063.9	7,100.0	92.7	96.2	-90.00	-4,709.0	1,357.9	669.5	484.9	184.58	3.627	
11,600.0	7,100.0	12,163.9	7,100.0	94.5	98.0	-90.00	-4,809.0	1,357.7	669.3	480.9	188.38	3.553	
11,700.0	7,100.0	12,263.9	7,100.0	96.4	99.9	-90.00	-4,909.0	1,357.5	669.1	477.0	192.18	3.482	
11,800.0	7,100.0	12,363.9	7,100.0	98.3	101.7	-90.00	-5,009.0	1,357.4	669.0	473.0	195.98	3.413	
11,900.0	7,100.0	12,463.9	7,100.0	100.2	103.5	-90.00	-5,109.0	1,357.2	668.8	469.0	199.79	3.347	
12,000.0	7,100.0	12,563.9	7,100.0	102.1	105.4	-90.00	-5,209.0	1,357.0	668.6	465.0	203.59	3.284	
12,100.0	7,100.0	12,663.9	7,100.0	104.0	107.2	-90.00	-5,309.0	1,356.8	668.4	461.0	207.40	3.223	
12,200.0	7,100.0	12,763.9	7,100.0	105.9	109.1	-90.00	-5,409.0	1,356.6	668.3	457.0	211.22	3.164	
12,300.0	7,100.0	12,863.9	7,100.0	107.8	110.9	-90.00	-5,509.0	1,356.5	668.1	453.0	215.03	3.107	
12,400.0	7,100.0	12,963.9	7,100.0	109.7	112.8	-90.00	-5,609.0	1,356.3	667.9	449.1	218.84	3.052	
12,500.0	7,100.0	13,063.9	7,100.0	111.6	114.6	-90.00	-5,709.0	1,356.1	667.7	445.1	222.66	2.999	
12,600.0	7,100.0	13,163.9	7,100.0	113.5	116.5	-90.00	-5,809.0	1,355.9	667.5	441.1	226.48	2.948	
12,700.0	7,100.0	13,263.9	7,100.0	115.4	118.3	-90.00	-5,909.0	1,355.8	667.4	437.1	230.30	2.898	
12,800.0	7,100.0	13,363.9	7,100.0	117.3	120.2	-90.00	-6,009.0	1,355.6	667.2	433.1	234.12	2.850	
12,900.0	7,100.0	13,463.9	7,100.0	119.2	122.0	-90.00	-6,109.0	1,355.4	667.0	429.1	237.94	2.803	
13,000.0	7,100.0	13,563.9	7,100.0	121.1	123.9	-90.00	-6,209.0	1,355.2	666.8	425.1	241.76	2.758	
13,100.0	7,100.0	13,663.9	7,100.0	123.0	125.8	-90.00	-6,309.0	1,355.0	666.7	421.1	245.59	2.715	
13,200.0	7,100.0	13,763.9	7,100.0	124.9	127.6	-90.00	-6,409.0	1,354.9	666.5	417.1	249.41	2.672	
13,300.0	7,100.0	13,863.9	7,100.0	126.8	129.5	-90.00	-6,509.0	1,354.7	666.3	413.1	253.24	2.631	
13,400.0	7,100.0	13,963.9	7,100.0	128.7	131.4	-90.00	-6,609.0	1,354.5	666.1	409.1	257.07	2.591	
13,500.0	7,100.0	14,063.9	7,100.0	130.6	133.3	-90.00	-6,709.0	1,354.3	666.0	405.1	260.90	2.553	
13,600.0	7,100.0	14,163.9	7,100.0	132.5	135.1	-90.00	-6,809.0	1,354.2	665.8	401.1	264.73	2.515	
13,700.0	7,100.0	14,263.9	7,100.0	134.5	137.0	-90.00	-6,909.0	1,354.0	665.6	397.0	268.56	2.478	
13,800.0	7,100.0	14,363.9	7,100.0	136.4	138.9	-90.00	-7,009.0	1,353.8	665.4	393.0	272.39	2.443	
13,900.0	7,100.0	14,463.9	7,100.0	138.3	140.8	-90.00	-7,109.0	1,353.6	665.2	389.0	276.22	2.408	
14,000.0	7,100.0	14,563.9	7,100.0	140.2	142.7	-90.00	-7,209.0	1,353.5	665.1	385.0	280.06	2.375	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Castle 0780 4-17H20 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,100.0	7,100.0	14,663.9	7,100.0	142.1	144.5	-90.00	-7,309.0	1,353.3	664.9	381.0	283.89	2.342	
14,200.0	7,100.0	14,763.9	7,100.0	144.0	146.4	-90.00	-7,409.0	1,353.1	664.7	377.0	287.72	2.310	
14,300.0	7,100.0	14,863.9	7,100.0	145.9	148.3	-90.00	-7,509.0	1,352.9	664.5	373.0	291.56	2.279	
14,400.0	7,100.0	14,963.9	7,100.0	147.8	150.2	-90.00	-7,609.0	1,352.7	664.4	369.0	295.40	2.249	
14,500.0	7,100.0	15,063.9	7,100.0	149.8	152.1	-90.00	-7,709.0	1,352.6	664.2	365.0	299.23	2.220	
14,600.0	7,100.0	15,163.9	7,100.0	151.7	154.0	-90.00	-7,809.0	1,352.4	664.0	360.9	303.07	2.191	
14,700.0	7,100.0	15,263.9	7,100.0	153.6	155.9	-90.00	-7,909.0	1,352.2	663.8	356.9	306.91	2.163	
14,800.0	7,100.0	15,363.9	7,100.0	155.5	157.8	-90.00	-8,009.0	1,352.0	663.7	352.9	310.75	2.136	
14,900.0	7,100.0	15,463.9	7,100.0	157.4	159.6	-90.00	-8,109.0	1,351.9	663.5	348.9	314.59	2.109	
15,000.0	7,100.0	15,563.9	7,100.0	159.3	161.5	-90.00	-8,209.0	1,351.7	663.3	344.9	318.43	2.083	
15,100.0	7,100.0	15,663.9	7,100.0	161.2	163.4	-90.00	-8,309.0	1,351.5	663.1	340.9	322.27	2.058	
15,200.0	7,100.0	15,763.9	7,100.0	163.2	165.3	-90.00	-8,409.0	1,351.3	663.0	336.8	326.11	2.033	
15,300.0	7,100.0	15,863.9	7,100.0	165.1	167.2	-90.00	-8,509.0	1,351.1	662.8	332.8	329.95	2.009	
15,400.0	7,100.0	15,963.9	7,100.0	167.0	169.1	-90.00	-8,609.0	1,351.0	662.6	328.8	333.79	1.985	Level 4
15,500.0	7,100.0	16,063.9	7,100.0	168.9	171.0	-90.00	-8,709.0	1,350.8	662.4	324.8	337.63	1.962	Level 4
15,600.0	7,100.0	16,163.9	7,100.0	170.8	172.9	-90.00	-8,809.0	1,350.6	662.2	320.8	341.47	1.939	Level 4
15,700.0	7,100.0	16,263.9	7,100.0	172.8	174.8	-90.00	-8,909.0	1,350.4	662.1	316.7	345.32	1.917	Level 4
15,800.0	7,100.0	16,363.9	7,100.0	174.7	176.7	-90.00	-9,008.9	1,350.3	661.9	312.7	349.16	1.896	Level 4
15,900.0	7,100.0	16,463.9	7,100.0	176.6	178.6	-90.00	-9,108.9	1,350.1	661.7	308.7	353.00	1.875	Level 4
16,000.0	7,100.0	16,563.9	7,100.0	178.5	180.5	-90.00	-9,208.9	1,349.9	661.5	304.7	356.85	1.854	Level 4
16,100.0	7,100.0	16,663.9	7,100.0	180.4	182.4	-90.00	-9,308.9	1,349.7	661.4	300.7	360.69	1.834	Level 4
16,200.0	7,100.0	16,763.9	7,100.0	182.3	184.3	-90.00	-9,408.9	1,349.6	661.2	296.6	364.54	1.814	Level 4
16,300.0	7,100.0	16,863.9	7,100.0	184.3	186.2	-90.00	-9,508.9	1,349.4	661.0	292.6	368.38	1.794	Level 4
16,400.0	7,100.0	16,963.9	7,100.0	186.2	188.1	-90.00	-9,608.9	1,349.2	660.8	288.6	372.23	1.775	Level 4
16,500.0	7,100.0	17,063.9	7,100.0	188.1	190.0	-90.00	-9,708.9	1,349.0	660.7	284.6	376.08	1.757	Level 4
16,600.0	7,100.0	17,163.9	7,100.0	190.0	191.9	-90.00	-9,808.9	1,348.8	660.5	280.6	379.92	1.738	Level 4
16,700.0	7,100.0	17,263.9	7,100.0	191.9	193.8	-90.00	-9,908.9	1,348.7	660.3	276.5	383.77	1.721	Level 4
16,800.0	7,100.0	17,363.9	7,100.0	193.9	195.7	-90.00	-10,008.9	1,348.5	660.1	272.5	387.62	1.703	Level 4
16,900.0	7,100.0	17,463.9	7,100.0	195.8	197.6	-90.00	-10,108.9	1,348.3	659.9	268.5	391.46	1.686	Level 4
16,952.7	7,100.0	17,516.7	7,100.0	196.8	198.6	-90.00	-10,161.7	1,348.2	659.9	266.4	393.43	1.677	Level 4, SF

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Hebron 0780 3-18H - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.11	3.3	-209.9	209.9				
100.0	100.0	100.0	100.0	0.1	0.1	-89.11	3.3	-209.9	209.9	209.7	0.19	1,111.871	
200.0	200.0	200.0	200.0	0.3	0.3	-89.11	3.3	-209.9	209.9	209.3	0.64	328.863	
300.0	300.0	300.0	300.0	0.5	0.5	-89.11	3.3	-209.9	209.9	208.8	1.09	192.970	
400.0	400.0	400.0	400.0	0.8	0.8	-89.11	3.3	-209.9	209.9	208.4	1.54	136.546	
500.0	500.0	500.0	500.0	1.0	1.0	-89.11	3.3	-209.9	209.9	207.9	1.99	105.653 CC, ES	
608.2	608.2	608.2	608.2	1.2	1.2	154.55	3.3	-209.9	211.8	209.3	2.45	86.262	
700.0	699.9	699.9	699.9	1.4	1.4	154.95	3.3	-209.9	214.9	212.1	2.84	75.676	
800.0	799.8	799.8	799.8	1.6	1.7	155.37	3.3	-209.9	218.3	215.1	3.27	66.814	
900.0	899.8	899.8	899.8	1.8	1.9	155.77	3.3	-209.9	221.8	218.1	3.70	59.909	
1,000.0	999.7	999.7	999.7	2.0	2.1	156.17	3.3	-209.9	225.2	221.1	4.14	54.402	
1,092.2	1,091.8	1,091.8	1,091.8	2.3	2.3	156.52	3.3	-209.9	228.4	223.9	4.55	50.238	
1,100.0	1,099.6	1,099.6	1,099.6	2.3	2.3	156.55	3.3	-209.9	228.7	224.1	4.58	49.926	
1,200.4	1,200.0	1,200.0	1,200.0	2.5	2.6	-86.70	3.3	-209.9	230.3	225.3	5.02	45.853	
1,300.0	1,299.6	1,299.6	1,299.6	2.7	2.8	-86.70	3.3	-209.9	230.3	224.8	5.45	42.256	
1,400.0	1,399.6	1,399.6	1,399.6	2.9	3.0	-86.70	3.3	-209.9	230.3	224.4	5.89	39.118	
1,500.0	1,499.6	1,499.6	1,499.6	3.1	3.2	-86.70	3.3	-209.9	230.3	224.0	6.33	36.404	
1,600.0	1,599.6	1,599.6	1,599.6	3.3	3.5	-86.70	3.3	-209.9	230.3	223.5	6.77	34.034	
1,700.0	1,699.6	1,699.6	1,699.6	3.5	3.7	-86.70	3.3	-209.9	230.3	223.1	7.21	31.950	
1,800.0	1,799.6	1,799.6	1,799.6	3.7	3.9	-86.70	3.3	-209.9	230.3	222.6	7.65	30.102	
1,900.0	1,899.6	1,899.6	1,899.6	4.0	4.1	-86.70	3.3	-209.9	230.3	222.2	8.09	28.453	
2,000.0	1,999.6	1,999.6	1,999.6	4.2	4.4	-86.70	3.3	-209.9	230.3	221.7	8.54	26.974	
2,100.0	2,099.6	2,099.6	2,099.6	4.4	4.6	-86.70	3.3	-209.9	230.3	221.3	8.98	25.639	
2,200.0	2,199.6	2,199.6	2,199.6	4.6	4.8	-86.70	3.3	-209.9	230.3	220.9	9.43	24.429	
2,300.0	2,299.6	2,299.6	2,299.6	4.8	5.0	-86.70	3.3	-209.9	230.3	220.4	9.87	23.327	
2,400.0	2,399.6	2,399.6	2,399.6	5.1	5.3	-86.70	3.3	-209.9	230.3	220.0	10.32	22.319	
2,500.0	2,499.6	2,499.6	2,499.6	5.3	5.5	-86.70	3.3	-209.9	230.3	219.5	10.76	21.394	
2,600.0	2,599.6	2,599.6	2,599.6	5.5	5.7	-86.70	3.3	-209.9	230.3	219.1	11.21	20.542	
2,700.0	2,699.6	2,699.6	2,699.6	5.7	5.9	-86.70	3.3	-209.9	230.3	218.6	11.66	19.755	
2,800.0	2,799.6	2,799.6	2,799.6	5.9	6.2	-86.70	3.3	-209.9	230.3	218.2	12.10	19.026	
2,900.0	2,899.6	2,899.6	2,899.6	6.2	6.4	-86.70	3.3	-209.9	230.3	217.7	12.55	18.348	
3,000.0	2,999.6	2,999.6	2,999.6	6.4	6.6	-86.70	3.3	-209.9	230.3	217.3	13.00	17.717	
3,100.0	3,099.6	3,099.6	3,099.6	6.6	6.8	-86.70	3.3	-209.9	230.3	216.8	13.45	17.127	
3,200.0	3,199.6	3,199.6	3,199.6	6.8	7.1	-86.70	3.3	-209.9	230.3	216.4	13.89	16.576	
3,300.0	3,299.6	3,299.6	3,299.6	7.1	7.3	-86.70	3.3	-209.9	230.3	215.9	14.34	16.058	
3,400.0	3,399.6	3,392.2	3,392.2	7.3	7.5	-86.65	3.5	-211.4	231.9	217.1	14.76	15.708	
3,500.0	3,499.6	3,484.6	3,484.5	7.5	7.7	-86.52	4.4	-215.7	236.7	221.5	15.18	15.595	
3,600.0	3,599.6	3,576.6	3,576.2	7.7	7.9	-86.30	5.7	-223.0	244.6	229.1	15.59	15.689	
3,700.0	3,699.6	3,668.1	3,667.0	7.9	8.1	-86.02	7.6	-233.1	255.8	239.8	16.02	15.971	
3,800.0	3,799.6	3,758.8	3,756.8	8.2	8.3	-85.70	10.0	-245.9	270.1	253.6	16.45	16.420	
3,900.0	3,899.6	3,848.5	3,845.2	8.4	8.5	-85.35	12.9	-261.4	287.5	270.6	16.89	17.019	
4,000.0	3,999.6	3,937.2	3,932.0	8.6	8.7	-84.98	16.3	-279.3	307.9	290.6	17.35	17.748	
4,100.0	4,099.6	4,024.7	4,017.0	8.8	9.0	-84.62	20.1	-299.5	331.4	313.6	17.83	18.589	
4,200.0	4,199.6	4,110.8	4,100.0	9.1	9.3	-84.28	24.3	-321.9	357.8	339.5	18.32	19.527	
4,300.0	4,299.6	4,204.2	4,189.5	9.3	9.6	-83.93	29.2	-348.1	386.2	367.3	18.87	20.462	
4,400.0	4,399.6	4,299.5	4,280.9	9.5	10.0	177.35	34.2	-374.9	416.4	397.5	18.86	22.072	
4,500.0	4,499.4	4,393.7	4,371.1	9.7	10.3	177.62	39.2	-401.3	449.8	430.6	19.25	23.371	
4,600.0	4,599.1	4,486.7	4,460.2	9.9	10.7	177.86	44.1	-427.5	486.6	467.0	19.62	24.807	
4,700.0	4,698.3	4,578.3	4,548.0	10.2	11.1	178.08	48.9	-453.2	526.6	506.6	19.97	26.373	
4,800.0	4,797.1	4,668.5	4,634.4	10.4	11.5	178.28	53.6	-478.5	569.8	549.5	20.30	28.066	
4,900.0	4,895.2	4,757.1	4,719.4	10.7	11.9	178.45	58.3	-503.4	616.1	595.5	20.62	29.880	
5,000.0	4,992.7	4,844.0	4,802.7	10.9	12.4	178.61	62.9	-527.8	665.4	644.5	20.92	31.814	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Hebron 0780 3-18H - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.0	5,089.2	4,929.2	4,884.3	11.2	12.8	178.75	67.4	-551.8	717.8	696.6	21.20	33.862		
5,200.0	5,184.9	5,012.5	4,964.1	11.6	13.2	178.87	71.7	-575.2	773.1	751.7	21.46	36.023		
5,226.2	5,209.7	5,034.0	4,984.7	11.7	13.3	178.90	72.9	-581.2	788.1	766.6	21.53	36.607		
5,300.0	5,279.7	5,094.3	5,042.5	12.0	13.6	179.00	76.1	-598.2	830.6	808.7	21.83	38.054		
5,400.0	5,374.5	5,176.1	5,120.9	12.4	14.0	179.11	80.4	-621.1	888.1	865.8	22.23	39.943		
5,500.0	5,469.4	5,257.9	5,199.3	12.8	14.4	179.21	84.7	-644.1	945.6	923.0	22.65	41.753		
5,600.0	5,564.2	5,339.7	5,277.7	13.3	14.9	179.30	89.0	-667.1	1,003.1	980.1	23.07	43.488		
5,700.0	5,659.0	5,421.5	5,356.0	13.8	15.3	179.39	93.3	-690.1	1,060.7	1,037.2	23.49	45.151		
5,800.0	5,753.8	5,503.3	5,434.4	14.2	15.7	179.46	97.6	-713.0	1,118.2	1,094.3	23.92	46.745		
5,900.0	5,848.6	5,585.0	5,512.8	14.7	16.2	179.52	101.9	-736.0	1,175.7	1,151.4	24.36	48.272		
6,000.0	5,943.5	5,666.8	5,591.2	15.3	16.6	179.58	106.2	-759.0	1,233.3	1,208.5	24.80	49.736		
6,100.0	6,038.3	5,748.6	5,669.5	15.8	17.1	179.64	110.5	-782.0	1,290.8	1,265.6	25.24	51.141		
6,200.0	6,133.1	5,830.4	5,747.9	16.3	17.5	179.69	114.8	-804.9	1,348.3	1,322.6	25.69	52.490		
6,300.0	6,227.9	5,912.2	5,826.3	16.9	18.0	179.73	119.1	-827.9	1,405.9	1,379.7	26.14	53.783		
6,400.0	6,322.7	5,994.0	5,904.6	17.5	18.4	179.77	123.4	-850.9	1,463.4	1,436.8	26.59	55.025		
6,500.0	6,417.6	6,075.8	5,983.0	18.0	18.9	179.81	127.8	-873.9	1,520.9	1,493.9	27.05	56.218		
6,566.1	6,480.2	6,129.8	6,034.8	18.4	19.2	179.84	130.6	-889.1	1,558.9	1,531.6	27.36	56.980		
6,600.0	6,512.4	6,157.5	6,061.4	18.6	19.3	167.44	132.1	-896.9	1,578.4	1,550.9	27.58	57.240		
6,650.0	6,559.6	6,198.3	6,100.4	18.8	19.6	150.44	134.2	-908.3	1,606.9	1,578.9	27.99	57.402		
6,700.0	6,606.2	6,238.5	6,139.0	19.1	19.8	136.03	136.3	-919.6	1,634.9	1,606.4	28.51	57.349		
6,750.0	6,652.0	6,278.0	6,176.8	19.3	20.0	124.41	138.4	-930.7	1,662.3	1,633.3	29.08	57.163		
6,800.0	6,696.4	6,316.4	6,213.6	19.6	20.2	115.19	140.4	-941.5	1,689.1	1,659.4	29.67	56.924		
6,850.0	6,739.3	6,353.5	6,249.1	19.8	20.4	107.83	142.4	-951.9	1,715.0	1,684.8	30.25	56.691		
6,900.0	6,780.3	6,388.9	6,283.1	20.1	20.6	101.89	144.2	-961.8	1,740.1	1,709.4	30.79	56.508		
6,950.0	6,819.0	6,422.3	6,315.1	20.3	20.8	97.02	146.0	-971.2	1,764.4	1,733.1	31.28	56.400		
7,000.0	6,855.2	6,453.6	6,345.1	20.6	21.0	92.97	147.7	-980.0	1,787.7	1,756.0	31.71	56.380		
7,050.0	6,888.6	6,482.5	6,372.8	20.8	21.2	89.55	149.2	-988.2	1,810.1	1,778.0	32.07	56.449		
7,100.0	6,918.9	6,508.8	6,398.0	21.1	21.3	86.62	150.6	-995.5	1,831.5	1,799.1	32.36	56.605		
7,154.6	6,948.3	6,534.2	6,422.4	21.4	21.5	83.87	151.9	-1,002.7	1,853.8	1,821.2	32.60	56.865		
7,200.0	6,971.0	6,553.9	6,441.2	21.7	21.6	84.46	152.9	-1,008.2	1,872.2	1,839.2	33.01	56.714		
7,304.6	7,023.3	6,559.9	6,447.0	22.4	21.6	84.64	153.3	-1,009.9	1,917.7	1,883.7	33.99	56.418		
7,350.0	7,044.4	6,576.5	6,462.8	22.7	21.7	82.79	154.0	-1,014.8	1,938.5	1,903.9	34.50	56.184		
7,400.0	7,063.9	6,581.3	6,467.4	23.1	21.7	80.31	154.2	-1,016.3	1,961.9	1,926.9	34.97	56.097		
7,450.0	7,079.3	6,585.0	6,470.9	23.6	21.8	77.78	154.4	-1,017.4	1,985.6	1,950.3	35.34	56.187		
7,500.0	7,090.5	6,600.0	6,485.0	24.1	21.9	75.62	154.9	-1,022.4	2,009.6	1,974.0	35.64	56.380		
7,550.0	7,097.4	6,600.0	6,485.0	24.6	21.9	73.01	154.9	-1,022.4	2,033.5	1,997.7	35.76	56.859		
7,604.6	7,100.0	6,600.0	6,485.0	25.2	21.9	70.23	154.9	-1,022.4	2,059.3	2,023.5	35.76	57.592		
7,700.0	7,100.0	6,600.0	6,485.0	26.4	21.9	70.23	154.9	-1,022.4	2,105.8	2,068.8	36.97	56.951		
7,800.0	7,100.0	6,600.0	6,485.0	27.6	21.9	70.23	154.9	-1,022.4	2,158.0	2,119.6	38.33	56.307		
7,900.0	7,100.0	6,586.0	6,471.9	29.0	21.8	69.79	154.4	-1,017.8	2,213.3	2,173.7	39.62	55.860		
8,000.0	7,100.0	6,584.9	6,470.7	30.4	21.8	69.75	154.4	-1,017.4	2,271.8	2,230.7	41.07	55.311		
8,100.0	7,100.0	6,583.6	6,469.6	31.9	21.8	69.71	154.3	-1,017.0	2,333.2	2,290.6	42.57	54.810		
8,200.0	7,100.0	6,582.4	6,468.4	33.4	21.8	69.67	154.3	-1,016.6	2,397.1	2,353.0	44.10	54.358		
8,300.0	7,100.0	6,581.0	6,467.1	35.0	21.7	69.63	154.2	-1,016.2	2,463.4	2,417.8	45.66	53.953		
8,400.0	7,100.0	9,064.9	7,100.0	36.6	45.0	90.00	-1,607.6	-1,786.9	2,475.3	2,406.1	69.16	35.789		
8,500.0	7,100.0	9,164.9	7,100.0	38.2	46.1	90.00	-1,707.6	-1,786.9	2,475.3	2,402.8	72.53	34.126		
8,600.0	7,100.0	9,264.9	7,100.0	39.8	47.3	90.00	-1,807.6	-1,786.9	2,475.3	2,399.3	75.95	32.591		
8,700.0	7,100.0	9,364.9	7,100.0	41.5	48.6	90.00	-1,907.6	-1,786.9	2,475.3	2,395.9	79.41	31.172		
8,800.0	7,100.0	9,464.9	7,100.0	43.2	49.8	90.00	-2,007.6	-1,786.9	2,475.3	2,392.4	82.90	29.859		
8,900.0	7,100.0	9,564.9	7,100.0	44.9	51.2	90.00	-2,107.6	-1,786.9	2,475.3	2,388.9	86.43	28.641		
9,000.0	7,100.0	9,664.9	7,100.0	46.7	52.6	90.00	-2,207.6	-1,786.9	2,475.3	2,385.3	89.98	27.510		
9,100.0	7,100.0	9,764.9	7,100.0	48.4	54.0	90.00	-2,307.6	-1,786.9	2,475.3	2,381.8	93.55	26.459		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Hebron 0780 3-18H - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,200.0	7,100.0	9,864.9	7,100.0	50.2	55.4	90.00	-2,407.6	-1,786.9	2,475.3	2,378.2	97.15	25.479	
9,300.0	7,100.0	9,964.9	7,100.0	52.0	56.9	90.00	-2,507.6	-1,786.9	2,475.3	2,374.6	100.77	24.564	
9,400.0	7,100.0	10,064.9	7,100.0	53.8	58.5	90.00	-2,607.6	-1,786.9	2,475.3	2,370.9	104.41	23.708	
9,500.0	7,100.0	10,164.9	7,100.0	55.6	60.0	90.00	-2,707.6	-1,787.0	2,475.4	2,367.3	108.06	22.907	
9,600.0	7,100.0	10,264.9	7,100.0	57.4	61.6	90.00	-2,807.6	-1,787.0	2,475.4	2,363.6	111.73	22.156	
9,700.0	7,100.0	10,364.9	7,100.0	59.2	63.2	90.00	-2,907.6	-1,787.0	2,475.4	2,360.0	115.40	21.450	
9,800.0	7,100.0	10,464.9	7,100.0	61.0	64.8	90.00	-3,007.6	-1,787.0	2,475.4	2,356.3	119.09	20.785	
9,900.0	7,100.0	10,564.9	7,100.0	62.8	66.4	90.00	-3,107.6	-1,787.0	2,475.4	2,352.6	122.79	20.159	
10,000.0	7,100.0	10,664.9	7,100.0	64.7	68.1	90.00	-3,207.6	-1,787.0	2,475.4	2,348.9	126.51	19.568	
10,100.0	7,100.0	10,764.9	7,100.0	66.5	69.8	90.00	-3,307.6	-1,787.0	2,475.4	2,345.2	130.22	19.009	
10,200.0	7,100.0	10,864.9	7,100.0	68.4	71.5	90.00	-3,407.6	-1,787.0	2,475.4	2,341.4	133.95	18.480	
10,300.0	7,100.0	10,964.9	7,100.0	70.2	73.2	90.00	-3,507.6	-1,787.0	2,475.4	2,337.7	137.69	17.979	
10,400.0	7,100.0	11,064.9	7,100.0	72.1	74.9	90.00	-3,607.6	-1,787.0	2,475.4	2,334.0	141.43	17.503	
10,500.0	7,100.0	11,164.9	7,100.0	73.9	76.6	90.00	-3,707.6	-1,787.0	2,475.4	2,330.2	145.18	17.051	
10,600.0	7,100.0	11,264.9	7,100.0	75.8	78.4	90.00	-3,807.6	-1,787.0	2,475.4	2,326.5	148.93	16.621	
10,700.0	7,100.0	11,364.9	7,100.0	77.6	80.1	90.00	-3,907.6	-1,787.0	2,475.4	2,322.7	152.69	16.212	
10,800.0	7,100.0	11,464.9	7,100.0	79.5	81.9	90.00	-4,007.6	-1,787.0	2,475.4	2,319.0	156.45	15.822	
10,900.0	7,100.0	11,564.9	7,100.0	81.4	83.6	90.00	-4,107.6	-1,787.1	2,475.4	2,315.2	160.22	15.450	
11,000.0	7,100.0	11,664.9	7,100.0	83.3	85.4	90.00	-4,207.6	-1,787.1	2,475.5	2,311.5	164.00	15.095	
11,100.0	7,100.0	11,764.9	7,100.0	85.1	87.2	90.00	-4,307.6	-1,787.1	2,475.5	2,307.7	167.77	14.755	
11,200.0	7,100.0	11,864.9	7,100.0	87.0	89.0	90.00	-4,407.6	-1,787.1	2,475.5	2,303.9	171.55	14.430	
11,300.0	7,100.0	11,964.9	7,100.0	88.9	90.8	90.00	-4,507.6	-1,787.1	2,475.5	2,300.1	175.34	14.118	
11,400.0	7,100.0	12,064.9	7,100.0	90.8	92.6	90.00	-4,607.6	-1,787.1	2,475.5	2,296.4	179.13	13.820	
11,500.0	7,100.0	12,164.9	7,100.0	92.7	94.4	90.00	-4,707.6	-1,787.1	2,475.5	2,292.6	182.92	13.533	
11,600.0	7,100.0	12,264.9	7,100.0	94.5	96.2	90.00	-4,807.6	-1,787.1	2,475.5	2,288.8	186.71	13.258	
11,700.0	7,100.0	12,281.8	7,100.0	96.4	96.7	90.00	-4,824.5	-1,787.1	2,476.9	2,288.0	188.93	13.110	
11,800.0	7,100.0	12,281.8	7,100.0	98.3	96.7	90.00	-4,824.5	-1,787.1	2,482.3	2,291.4	190.84	13.007	
11,900.0	7,100.0	12,281.8	7,100.0	100.2	96.7	90.00	-4,824.5	-1,787.1	2,491.6	2,298.9	192.74	12.927	
12,000.0	7,100.0	12,281.8	7,100.0	102.1	96.7	90.00	-4,824.5	-1,787.1	2,505.0	2,310.3	194.65	12.869	
12,100.0	7,100.0	12,281.8	7,100.0	104.0	96.7	90.00	-4,824.5	-1,787.1	2,522.2	2,325.7	196.56	12.832	
12,200.0	7,100.0	12,281.8	7,100.0	105.9	96.7	90.00	-4,824.5	-1,787.1	2,543.3	2,344.8	198.47	12.814 SF	
12,300.0	7,100.0	12,281.8	7,100.0	107.8	96.7	90.00	-4,824.5	-1,787.1	2,568.1	2,367.7	200.38	12.816	
12,400.0	7,100.0	12,281.8	7,100.0	109.7	96.7	90.00	-4,824.5	-1,787.1	2,596.4	2,394.2	202.29	12.835	
12,500.0	7,100.0	12,281.8	7,100.0	111.6	96.7	90.00	-4,824.5	-1,787.1	2,628.3	2,424.1	204.20	12.871	
12,600.0	7,100.0	12,281.8	7,100.0	113.5	96.7	90.00	-4,824.5	-1,787.1	2,663.6	2,457.5	206.11	12.923	
12,700.0	7,100.0	12,281.8	7,100.0	115.4	96.7	90.00	-4,824.5	-1,787.1	2,702.1	2,494.1	208.02	12.989	
12,800.0	7,100.0	12,281.8	7,100.0	117.3	96.7	90.00	-4,824.5	-1,787.1	2,743.7	2,533.8	209.94	13.069	
12,900.0	7,100.0	12,281.8	7,100.0	119.2	96.7	90.00	-4,824.5	-1,787.1	2,788.3	2,576.5	211.85	13.162	
13,000.0	7,100.0	12,281.8	7,100.0	121.1	96.7	90.00	-4,824.5	-1,787.1	2,835.7	2,622.0	213.77	13.266	
13,100.0	7,100.0	12,281.8	7,100.0	123.0	96.7	90.00	-4,824.5	-1,787.1	2,885.8	2,670.2	215.68	13.380	
13,200.0	7,100.0	12,281.8	7,100.0	124.9	96.7	90.00	-4,824.5	-1,787.1	2,938.5	2,720.9	217.60	13.504	
13,300.0	7,100.0	12,281.8	7,100.0	126.8	96.7	90.00	-4,824.5	-1,787.1	2,993.6	2,774.0	219.51	13.637	
13,400.0	7,100.0	12,281.8	7,100.0	128.7	96.7	90.00	-4,824.5	-1,787.1	3,050.9	2,829.5	221.43	13.778	
13,500.0	7,100.0	12,281.8	7,100.0	130.6	96.7	90.00	-4,824.5	-1,787.1	3,110.4	2,887.1	223.34	13.927	
13,600.0	7,100.0	12,281.8	7,100.0	132.5	96.7	90.00	-4,824.5	-1,787.1	3,172.0	2,946.7	225.26	14.081	
13,700.0	7,100.0	12,281.8	7,100.0	134.5	96.7	90.00	-4,824.5	-1,787.1	3,235.4	3,008.3	227.18	14.242	
13,800.0	7,100.0	12,281.8	7,100.0	136.4	96.7	90.00	-4,824.5	-1,787.1	3,300.7	3,071.6	229.10	14.407	
13,900.0	7,100.0	12,281.8	7,100.0	138.3	96.7	90.00	-4,824.5	-1,787.1	3,367.7	3,136.7	231.02	14.578	
14,000.0	7,100.0	12,281.8	7,100.0	140.2	96.7	90.00	-4,824.5	-1,787.1	3,436.3	3,203.3	232.93	14.752	
14,100.0	7,100.0	12,281.8	7,100.0	142.1	96.7	90.00	-4,824.5	-1,787.1	3,506.4	3,271.5	234.85	14.930	
14,200.0	7,100.0	12,281.8	7,100.0	144.0	96.7	90.00	-4,824.5	-1,787.1	3,577.9	3,341.1	236.77	15.111	
14,300.0	7,100.0	12,281.8	7,100.0	145.9	96.7	90.00	-4,824.5	-1,787.1	3,650.7	3,412.0	238.69	15.295	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Hebron 0780 3-18H - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,400.0	7,100.0	12,281.8	7,100.0	147.8	96.7	90.00	-4,824.5	-1,787.1	3,724.9	3,484.2	240.61	15.481	
14,500.0	7,100.0	12,281.8	7,100.0	149.8	96.7	90.00	-4,824.5	-1,787.1	3,800.2	3,557.6	242.53	15.669	
14,600.0	7,100.0	12,281.8	7,100.0	151.7	96.7	90.00	-4,824.5	-1,787.1	3,876.6	3,632.1	244.45	15.858	
14,700.0	7,100.0	12,281.8	7,100.0	153.6	96.7	90.00	-4,824.5	-1,787.1	3,954.1	3,707.7	246.37	16.049	
14,800.0	7,100.0	12,281.8	7,100.0	155.5	96.7	90.00	-4,824.5	-1,787.1	4,032.5	3,784.2	248.29	16.241	
14,900.0	7,100.0	12,281.8	7,100.0	157.4	96.7	90.00	-4,824.5	-1,787.1	4,111.9	3,861.7	250.22	16.433	
15,000.0	7,100.0	12,281.8	7,100.0	159.3	96.7	90.00	-4,824.5	-1,787.1	4,192.2	3,940.1	252.14	16.627	
15,100.0	7,100.0	12,281.8	7,100.0	161.2	96.7	90.00	-4,824.5	-1,787.1	4,273.3	4,019.2	254.06	16.820	
15,200.0	7,100.0	12,281.8	7,100.0	163.2	96.7	90.00	-4,824.5	-1,787.1	4,355.2	4,099.2	255.98	17.014	
15,300.0	7,100.0	12,281.8	7,100.0	165.1	96.7	90.00	-4,824.5	-1,787.1	4,437.8	4,179.9	257.90	17.207	
15,400.0	7,100.0	12,281.8	7,100.0	167.0	96.7	90.00	-4,824.5	-1,787.1	4,521.2	4,261.4	259.83	17.401	
15,500.0	7,100.0	12,281.8	7,100.0	168.9	96.7	90.00	-4,824.5	-1,787.1	4,605.2	4,343.4	261.75	17.594	
15,600.0	7,100.0	12,281.8	7,100.0	170.8	96.7	90.00	-4,824.5	-1,787.1	4,689.8	4,426.1	263.67	17.787	
15,700.0	7,100.0	12,281.8	7,100.0	172.8	96.7	90.00	-4,824.5	-1,787.1	4,775.0	4,509.4	265.59	17.979	
15,800.0	7,100.0	12,281.8	7,100.0	174.7	96.7	90.00	-4,824.5	-1,787.1	4,860.8	4,593.3	267.52	18.170	
15,900.0	7,100.0	12,281.8	7,100.0	176.6	96.7	90.00	-4,824.5	-1,787.1	4,947.2	4,677.7	269.44	18.361	
16,000.0	7,100.0	12,281.8	7,100.0	178.5	96.7	90.00	-4,824.5	-1,787.1	5,034.0	4,762.6	271.36	18.551	
16,100.0	7,100.0	12,281.8	7,100.0	180.4	96.7	90.00	-4,824.5	-1,787.1	5,121.3	4,848.0	273.29	18.740	
16,200.0	7,100.0	12,281.8	7,100.0	182.3	96.7	90.00	-4,824.5	-1,787.1	5,209.1	4,933.8	275.21	18.927	
16,300.0	7,100.0	12,281.8	7,100.0	184.3	96.7	90.00	-4,824.5	-1,787.1	5,297.3	5,020.1	277.14	19.114	
16,400.0	7,100.0	12,281.8	7,100.0	186.2	96.7	90.00	-4,824.5	-1,787.1	5,385.9	5,106.8	279.06	19.300	
16,500.0	7,100.0	12,281.8	7,100.0	188.1	96.7	90.00	-4,824.5	-1,787.1	5,474.9	5,193.9	280.98	19.485	
16,600.0	7,100.0	12,281.8	7,100.0	190.0	96.7	90.00	-4,824.5	-1,787.1	5,564.2	5,281.3	282.91	19.668	
16,700.0	7,100.0	12,281.8	7,100.0	191.9	96.7	90.00	-4,824.5	-1,787.1	5,654.0	5,369.2	284.83	19.850	
16,800.0	7,100.0	12,281.8	7,100.0	193.9	96.7	90.00	-4,824.5	-1,787.1	5,744.1	5,457.3	286.76	20.031	
16,900.0	7,100.0	12,281.8	7,100.0	195.8	96.7	90.00	-4,824.5	-1,787.1	5,834.5	5,545.8	288.68	20.211	
16,952.7	7,100.0	12,281.8	7,100.0	196.8	96.7	90.00	-4,824.5	-1,787.1	5,882.2	5,592.5	289.70	20.305	

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Hebron 0780 4-18H - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.16	0.9	-59.9	59.9				
100.0	100.0	100.0	100.0	0.1	0.1	-89.16	0.9	-59.9	59.9	59.7	0.19	317.401	
200.0	200.0	200.0	200.0	0.3	0.3	-89.16	0.9	-59.9	59.9	59.3	0.64	93.879	
300.0	300.0	300.0	300.0	0.5	0.5	-89.16	0.9	-59.9	59.9	58.8	1.09	55.086	
400.0	400.0	400.0	400.0	0.8	0.8	-89.16	0.9	-59.9	59.9	58.4	1.54	38.979	
500.0	500.0	500.0	500.0	1.0	1.0	-89.16	0.9	-59.9	59.9	57.9	1.99	30.160 CC, ES	
608.2	608.2	606.1	606.1	1.2	1.2	155.00	0.9	-61.9	63.7	61.3	2.44	26.092	
700.0	699.9	697.7	697.6	1.4	1.4	156.13	0.9	-64.9	69.9	67.1	2.81	24.911	
800.0	799.8	797.4	797.3	1.6	1.6	157.16	0.9	-68.2	76.7	73.5	3.22	23.829	
900.0	899.8	897.2	897.0	1.8	1.8	158.01	0.9	-71.5	83.5	79.9	3.64	22.936	
1,000.0	999.7	997.0	996.7	2.0	2.1	158.74	0.9	-74.8	90.3	86.2	4.07	22.194	
1,092.2	1,091.8	1,088.9	1,088.6	2.3	2.3	159.32	0.9	-77.9	96.6	92.1	4.47	21.617	
1,100.0	1,099.6	1,096.7	1,096.4	2.3	2.3	159.37	0.9	-78.1	97.1	92.6	4.50	21.575	
1,200.4	1,200.0	1,197.0	1,196.6	2.5	2.5	-83.88	0.9	-81.4	102.1	97.1	4.97	20.522	
1,300.0	1,299.6	1,296.5	1,296.1	2.7	2.7	-84.07	0.9	-84.7	105.4	100.0	5.40	19.496	
1,400.0	1,399.6	1,396.5	1,396.0	2.9	3.0	-84.25	0.9	-88.0	108.7	102.8	5.84	18.589	
1,500.0	1,499.6	1,500.1	1,499.6	3.1	3.2	-84.35	0.9	-89.9	110.5	104.2	6.28	17.599	
1,600.0	1,599.6	1,600.1	1,599.6	3.3	3.4	-84.35	0.9	-89.9	110.5	103.8	6.69	16.509	
1,700.0	1,699.6	1,700.1	1,699.6	3.5	3.6	-84.35	0.9	-89.9	110.5	103.3	7.12	15.518	
1,800.0	1,799.6	1,800.1	1,799.6	3.7	3.8	-84.35	0.9	-89.9	110.5	102.9	7.55	14.635	
1,900.0	1,899.6	1,900.1	1,899.6	4.0	4.0	-84.35	0.9	-89.9	110.5	102.5	7.98	13.842	
2,000.0	1,999.6	2,000.1	1,999.6	4.2	4.2	-84.35	0.9	-89.9	110.5	102.0	8.41	13.129	
2,100.0	2,099.6	2,100.1	2,099.6	4.4	4.5	-84.35	0.9	-89.9	110.5	101.6	8.85	12.483	
2,200.0	2,199.6	2,200.1	2,199.6	4.6	4.7	-84.35	0.9	-89.9	110.5	101.2	9.29	11.896	
2,300.0	2,299.6	2,300.1	2,299.6	4.8	4.9	-84.35	0.9	-89.9	110.5	100.7	9.72	11.360	
2,400.0	2,399.6	2,400.1	2,399.6	5.1	5.1	-84.35	0.9	-89.9	110.5	100.3	10.16	10.869	
2,500.0	2,499.6	2,500.1	2,499.6	5.3	5.3	-84.35	0.9	-89.9	110.5	99.9	10.60	10.419	
2,600.0	2,599.6	2,600.1	2,599.6	5.5	5.5	-84.35	0.9	-89.9	110.5	99.4	11.04	10.003	
2,700.0	2,699.6	2,700.1	2,699.6	5.7	5.8	-84.35	0.9	-89.9	110.5	99.0	11.48	9.619	
2,800.0	2,799.6	2,800.1	2,799.6	5.9	6.0	-84.35	0.9	-89.9	110.5	98.5	11.93	9.262	
2,900.0	2,899.6	2,900.1	2,899.6	6.2	6.2	-84.35	0.9	-89.9	110.5	98.1	12.37	8.931	
3,000.0	2,999.6	3,000.1	2,999.6	6.4	6.4	-84.35	0.9	-89.9	110.5	97.6	12.81	8.622	
3,100.0	3,099.6	3,100.1	3,099.6	6.6	6.6	-84.35	0.9	-89.9	110.5	97.2	13.25	8.334	
3,200.0	3,199.6	3,200.1	3,199.6	6.8	6.9	-84.35	0.9	-89.9	110.5	96.8	13.70	8.064	
3,300.0	3,299.6	3,300.1	3,299.6	7.1	7.1	-84.35	0.9	-89.9	110.5	96.3	14.14	7.810	
3,400.0	3,399.6	3,400.1	3,399.6	7.3	7.3	-84.35	0.9	-89.9	110.5	95.9	14.59	7.572	
3,500.0	3,499.6	3,500.1	3,499.6	7.5	7.5	-84.35	0.9	-89.9	110.5	95.4	15.03	7.348	
3,600.0	3,599.6	3,600.1	3,599.6	7.7	7.8	-84.35	0.9	-89.9	110.5	95.0	15.48	7.137	
3,700.0	3,699.6	3,700.1	3,699.6	7.9	8.0	-84.35	0.9	-89.9	110.5	94.5	15.92	6.938	
3,800.0	3,799.6	3,800.1	3,799.6	8.2	8.2	-84.35	0.9	-89.9	110.5	94.1	16.37	6.749	
3,900.0	3,899.6	3,900.1	3,899.6	8.4	8.4	-84.35	0.9	-89.9	110.5	93.6	16.81	6.570	
4,000.0	3,999.6	4,000.1	3,999.6	8.6	8.6	-84.35	0.9	-89.9	110.5	93.2	17.26	6.400	
4,100.0	4,099.6	4,100.1	4,099.6	8.8	8.9	-84.35	0.9	-89.9	110.5	92.8	17.71	6.239	
4,200.0	4,199.6	4,200.1	4,199.6	9.1	9.1	-84.35	0.9	-89.9	110.5	92.3	18.15	6.085	
4,300.0	4,299.6	4,300.1	4,299.6	9.3	9.3	-84.35	0.9	-89.9	110.5	91.9	18.60	5.939	
4,400.0	4,399.6	4,400.1	4,399.6	9.5	9.5	176.68	0.9	-89.9	112.2	93.2	18.98	5.912 SF	
4,500.0	4,499.4	4,497.0	4,496.5	9.7	9.7	176.78	0.9	-90.8	118.4	99.0	19.37	6.110	
4,600.0	4,599.1	4,592.0	4,591.5	9.9	9.9	176.79	0.9	-94.8	131.2	111.5	19.74	6.647	
4,700.0	4,698.3	4,685.5	4,684.7	10.2	10.2	176.74	0.9	-101.8	150.7	130.6	20.09	7.501	
4,800.0	4,797.1	4,776.9	4,775.5	10.4	10.4	176.65	0.9	-111.5	176.7	156.3	20.42	8.651	
4,900.0	4,895.2	4,865.6	4,863.4	10.7	10.6	176.54	0.9	-123.7	209.0	188.3	20.74	10.078	
5,000.0	4,992.7	4,951.1	4,947.7	10.9	10.8	176.43	0.9	-138.1	247.5	226.4	21.04	11.762	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Hebron 0780 4-18H - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,089.2	5,033.1	5,028.1	11.2	11.0	176.31	0.9	-154.2	291.7	270.4	21.32	13.684	
5,200.0	5,184.9	5,111.2	5,104.2	11.6	11.2	176.19	0.9	-171.7	341.5	319.9	21.58	15.826	
5,226.2	5,209.7	5,131.0	5,123.4	11.7	11.3	176.16	0.9	-176.5	355.4	333.8	21.64	16.422	
5,300.0	5,279.7	5,185.7	5,176.4	12.0	11.5	176.13	0.9	-190.3	395.7	373.8	21.92	18.051	
5,400.0	5,374.5	5,257.7	5,245.6	12.4	11.7	176.08	0.9	-210.1	452.1	429.8	22.30	20.276	
5,500.0	5,469.4	5,327.2	5,311.9	12.8	12.0	176.01	0.9	-230.8	510.6	487.9	22.68	22.516	
5,600.0	5,564.2	5,394.4	5,375.5	13.3	12.2	175.94	0.9	-252.4	570.9	547.9	23.05	24.767	
5,700.0	5,659.0	5,471.3	5,447.9	13.8	12.6	175.86	0.9	-278.1	632.4	609.0	23.45	26.967	
5,800.0	5,753.8	5,550.1	5,522.2	14.2	12.9	175.79	0.9	-304.5	694.0	670.1	23.86	29.085	
5,900.0	5,848.6	5,628.9	5,596.5	14.7	13.3	175.74	0.9	-330.9	755.5	731.2	24.27	31.126	
6,000.0	5,943.5	5,707.7	5,670.7	15.3	13.7	175.69	0.9	-357.4	817.1	792.4	24.69	33.092	
6,100.0	6,038.3	5,786.5	5,745.0	15.8	14.0	175.65	0.9	-383.8	878.6	853.5	25.11	34.984	
6,200.0	6,133.1	5,865.4	5,819.2	16.3	14.4	175.61	0.9	-410.2	940.1	914.6	25.54	36.806	
6,300.0	6,227.9	5,944.2	5,893.5	16.9	14.9	175.58	0.9	-436.6	1,001.7	975.7	25.98	38.560	
6,400.0	6,322.7	6,023.0	5,967.8	17.5	15.3	175.55	0.9	-463.0	1,063.2	1,036.8	26.42	40.250	
6,500.0	6,417.6	6,101.8	6,042.0	18.0	15.7	175.53	0.9	-489.4	1,124.8	1,097.9	26.86	41.878	
6,566.1	6,480.2	6,153.9	6,091.1	18.4	16.0	175.51	0.9	-506.9	1,165.4	1,138.3	27.15	42.920	
6,600.0	6,512.4	6,180.7	6,116.3	18.6	16.2	162.89	0.9	-515.9	1,186.2	1,158.8	27.38	43.318	
6,650.0	6,559.6	6,220.3	6,153.6	18.8	16.4	145.66	0.9	-529.1	1,216.3	1,188.5	27.80	43.753	
6,700.0	6,606.2	6,259.6	6,190.7	19.1	16.6	131.16	0.9	-542.3	1,245.8	1,217.5	28.28	44.046	
6,750.0	6,652.0	6,298.6	6,227.4	19.3	16.8	119.56	0.9	-555.4	1,274.4	1,245.6	28.80	44.255	
6,800.0	6,696.4	6,336.7	6,263.3	19.6	17.0	110.45	0.9	-568.2	1,302.0	1,272.7	29.31	44.428	
6,850.0	6,739.3	6,373.7	6,298.2	19.8	17.3	103.26	0.9	-580.6	1,328.6	1,298.9	29.79	44.602	
6,900.0	6,780.3	6,409.4	6,331.9	20.1	17.5	97.54	0.9	-592.5	1,354.2	1,324.0	30.23	44.797	
6,950.0	6,819.0	6,443.5	6,364.0	20.3	17.7	92.93	0.9	-604.0	1,378.7	1,348.1	30.62	45.023	
7,000.0	6,855.2	6,475.7	6,394.3	20.6	17.9	89.16	0.9	-614.8	1,402.2	1,371.2	30.96	45.285	
7,050.0	6,888.6	6,505.8	6,422.7	20.8	18.0	86.03	0.9	-624.8	1,424.6	1,393.3	31.25	45.580	
7,100.0	6,918.9	6,533.5	6,448.8	21.1	18.2	83.40	0.9	-634.1	1,445.9	1,414.4	31.50	45.903	
7,154.6	6,948.3	6,560.9	6,474.6	21.4	18.4	80.96	0.9	-643.3	1,468.1	1,436.4	31.72	46.279	
7,200.0	6,971.0	6,582.3	6,494.7	21.7	18.5	81.74	0.9	-650.5	1,486.5	1,454.3	32.16	46.225	
7,304.6	7,023.3	6,624.1	6,534.1	22.4	18.8	83.24	0.7	-664.6	1,532.0	1,498.8	33.22	46.122	
7,350.0	7,044.4	6,637.9	6,547.0	22.7	18.8	81.39	0.3	-669.4	1,553.0	1,519.4	33.66	46.139	
7,400.0	7,063.9	6,650.0	6,558.2	23.1	18.9	79.20	-0.3	-673.8	1,576.6	1,542.5	34.09	46.242	
7,450.0	7,079.3	6,664.5	6,571.6	23.6	19.0	77.08	-1.3	-679.2	1,600.5	1,566.0	34.47	46.427	
7,500.0	7,090.5	6,675.4	6,581.6	24.1	19.1	74.82	-2.2	-683.4	1,624.7	1,589.9	34.76	46.735	
7,550.0	7,097.4	6,684.3	6,589.8	24.6	19.1	72.51	-3.2	-687.0	1,648.9	1,613.9	34.96	47.168	
7,604.6	7,100.0	6,691.5	6,596.4	25.2	19.2	69.93	-4.0	-689.8	1,675.3	1,640.3	35.06	47.789	
7,700.0	7,100.0	6,702.8	6,606.5	26.4	19.3	70.36	-5.4	-694.4	1,723.3	1,687.0	36.37	47.386	
7,800.0	7,100.0	6,718.4	6,620.6	27.6	19.4	70.96	-7.7	-700.9	1,777.7	1,739.8	37.86	46.958	
7,900.0	7,100.0	6,740.3	6,640.0	29.0	19.5	71.80	-11.6	-710.4	1,835.7	1,796.2	39.47	46.506	
8,000.0	7,100.0	8,257.9	7,100.0	30.4	34.1	90.00	-1,207.9	-1,147.6	1,836.0	1,780.5	55.49	33.086	
8,100.0	7,100.0	8,357.9	7,100.0	31.9	35.3	90.00	-1,307.9	-1,147.6	1,836.0	1,777.4	58.61	31.325	
8,200.0	7,100.0	8,457.9	7,100.0	33.4	36.5	90.00	-1,407.9	-1,147.6	1,836.0	1,774.2	61.82	29.701	
8,300.0	7,100.0	8,557.9	7,100.0	35.0	37.8	90.00	-1,507.9	-1,147.6	1,836.0	1,770.9	65.09	28.207	
8,400.0	7,100.0	8,657.9	7,100.0	36.6	39.2	90.00	-1,607.9	-1,147.6	1,836.0	1,767.6	68.43	26.831	
8,500.0	7,100.0	8,757.9	7,100.0	38.2	40.6	90.00	-1,707.9	-1,147.6	1,836.0	1,764.2	71.82	25.565	
8,600.0	7,100.0	8,857.9	7,100.0	39.8	42.0	90.00	-1,807.9	-1,147.6	1,836.0	1,760.7	75.25	24.398	
8,700.0	7,100.0	8,957.9	7,100.0	41.5	43.5	90.00	-1,907.9	-1,147.6	1,836.0	1,757.2	78.73	23.321	
8,800.0	7,100.0	9,057.9	7,100.0	43.2	45.0	90.00	-2,007.9	-1,147.6	1,836.0	1,753.7	82.24	22.326	
8,900.0	7,100.0	9,157.9	7,100.0	44.9	46.6	90.00	-2,107.9	-1,147.5	1,835.9	1,750.2	85.77	21.404	
9,000.0	7,100.0	9,257.9	7,100.0	46.7	48.2	90.00	-2,207.9	-1,147.5	1,835.9	1,746.6	89.34	20.550	
9,100.0	7,100.0	9,357.9	7,100.0	48.4	49.8	90.00	-2,307.9	-1,147.5	1,835.9	1,743.0	92.93	19.756	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Hebron 0780 4-18H - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,200.0	7,100.0	9,457.9	7,100.0	50.2	51.4	90.00	-2,407.9	-1,147.5	1,835.9	1,739.4	96.54	19.017	
9,300.0	7,100.0	9,557.9	7,100.0	52.0	53.1	90.00	-2,507.9	-1,147.5	1,835.9	1,735.7	100.17	18.328	
9,400.0	7,100.0	9,657.9	7,100.0	53.8	54.7	90.00	-2,607.9	-1,147.5	1,835.9	1,732.1	103.82	17.684	
9,500.0	7,100.0	9,757.9	7,100.0	55.6	56.4	90.00	-2,707.9	-1,147.5	1,835.9	1,728.4	107.48	17.081	
9,600.0	7,100.0	9,857.9	7,100.0	57.4	58.1	90.00	-2,807.9	-1,147.5	1,835.9	1,724.7	111.16	16.516	
9,700.0	7,100.0	9,957.9	7,100.0	59.2	59.9	90.00	-2,907.9	-1,147.5	1,835.9	1,721.0	114.84	15.986	
9,800.0	7,100.0	10,057.9	7,100.0	61.0	61.6	90.00	-3,007.9	-1,147.5	1,835.9	1,717.3	118.54	15.487	
9,900.0	7,100.0	10,157.9	7,100.0	62.8	63.4	90.00	-3,107.9	-1,147.5	1,835.9	1,713.6	122.25	15.017	
10,000.0	7,100.0	10,257.9	7,100.0	64.7	65.1	90.00	-3,207.9	-1,147.5	1,835.9	1,709.9	125.97	14.574	
10,100.0	7,100.0	10,357.9	7,100.0	66.5	66.9	90.00	-3,307.9	-1,147.5	1,835.9	1,706.2	129.70	14.155	
10,200.0	7,100.0	10,457.9	7,100.0	68.4	68.7	90.00	-3,407.9	-1,147.5	1,835.9	1,702.4	133.43	13.759	
10,300.0	7,100.0	10,557.9	7,100.0	70.2	70.4	90.00	-3,507.9	-1,147.5	1,835.9	1,698.7	137.17	13.384	
10,400.0	7,100.0	10,657.9	7,100.0	72.1	72.2	90.00	-3,607.9	-1,147.4	1,835.8	1,694.9	140.92	13.028	
10,500.0	7,100.0	10,757.9	7,100.0	73.9	74.0	90.00	-3,707.9	-1,147.4	1,835.8	1,691.2	144.67	12.689	
10,600.0	7,100.0	10,857.9	7,100.0	75.8	75.9	90.00	-3,807.9	-1,147.4	1,835.8	1,687.4	148.43	12.368	
10,700.0	7,100.0	10,957.9	7,100.0	77.6	77.7	90.00	-3,907.9	-1,147.4	1,835.8	1,683.6	152.20	12.062	
10,800.0	7,100.0	11,057.9	7,100.0	79.5	79.5	90.00	-4,007.9	-1,147.4	1,835.8	1,679.8	155.97	11.770	
10,900.0	7,100.0	11,157.9	7,100.0	81.4	81.3	90.00	-4,107.9	-1,147.4	1,835.8	1,676.1	159.74	11.492	
11,000.0	7,100.0	11,257.9	7,100.0	83.3	83.2	90.00	-4,207.9	-1,147.4	1,835.8	1,672.3	163.52	11.227	
11,100.0	7,100.0	11,357.9	7,100.0	85.1	85.0	90.00	-4,307.9	-1,147.4	1,835.8	1,668.5	167.30	10.973	
11,200.0	7,100.0	11,457.9	7,100.0	87.0	86.8	90.00	-4,407.9	-1,147.4	1,835.8	1,664.7	171.09	10.730	
11,300.0	7,100.0	11,557.9	7,100.0	88.9	88.7	90.00	-4,507.9	-1,147.4	1,835.8	1,660.9	174.88	10.498	
11,400.0	7,100.0	11,657.9	7,100.0	90.8	90.5	90.00	-4,607.9	-1,147.4	1,835.8	1,657.1	178.67	10.275	
11,500.0	7,100.0	11,757.9	7,100.0	92.7	92.4	90.00	-4,707.9	-1,147.4	1,835.8	1,653.3	182.46	10.061	
11,600.0	7,100.0	11,857.9	7,100.0	94.5	94.2	90.00	-4,807.9	-1,147.4	1,835.8	1,649.5	186.26	9.856	
11,605.4	7,100.0	11,863.3	7,100.0	94.6	94.3	90.00	-4,813.3	-1,147.4	1,835.8	1,649.3	186.47	9.845	
11,700.0	7,100.0	11,877.2	7,100.0	96.4	94.6	90.00	-4,827.2	-1,147.4	1,837.5	1,649.0	188.53	9.747	
11,800.0	7,100.0	11,877.2	7,100.0	98.3	94.6	90.00	-4,827.2	-1,147.4	1,844.6	1,654.2	190.44	9.686	
11,900.0	7,100.0	11,877.2	7,100.0	100.2	94.6	90.00	-4,827.2	-1,147.4	1,857.1	1,664.7	192.34	9.655	
12,000.0	7,100.0	11,877.2	7,100.0	102.1	94.6	90.00	-4,827.2	-1,147.4	1,874.8	1,680.6	194.25	9.652	
12,100.0	7,100.0	11,877.2	7,100.0	104.0	94.6	90.00	-4,827.2	-1,147.4	1,897.6	1,701.5	196.16	9.674	
12,200.0	7,100.0	11,877.2	7,100.0	105.9	94.6	90.00	-4,827.2	-1,147.4	1,925.4	1,727.3	198.07	9.721	
12,300.0	7,100.0	11,877.2	7,100.0	107.8	94.6	90.00	-4,827.2	-1,147.4	1,957.9	1,757.9	199.98	9.791	
12,400.0	7,100.0	11,877.2	7,100.0	109.7	94.6	90.00	-4,827.2	-1,147.4	1,994.8	1,793.0	201.89	9.881	
12,500.0	7,100.0	11,877.2	7,100.0	111.6	94.6	90.00	-4,827.2	-1,147.4	2,036.0	1,832.3	203.80	9.991	
12,600.0	7,100.0	11,877.2	7,100.0	113.5	94.6	90.00	-4,827.2	-1,147.4	2,081.3	1,875.5	205.71	10.117	
12,700.0	7,100.0	11,877.2	7,100.0	115.4	94.6	90.00	-4,827.2	-1,147.4	2,130.2	1,922.6	207.62	10.260	
12,800.0	7,100.0	11,877.2	7,100.0	117.3	94.6	90.00	-4,827.2	-1,147.4	2,182.6	1,973.1	209.53	10.417	
12,900.0	7,100.0	11,877.2	7,100.0	119.2	94.6	90.00	-4,827.2	-1,147.4	2,238.3	2,026.9	211.45	10.586	
13,000.0	7,100.0	11,877.2	7,100.0	121.1	94.6	90.00	-4,827.2	-1,147.4	2,297.0	2,083.6	213.36	10.766	
13,100.0	7,100.0	11,877.2	7,100.0	123.0	94.6	90.00	-4,827.2	-1,147.4	2,358.4	2,143.2	215.28	10.955	
13,200.0	7,100.0	11,877.2	7,100.0	124.9	94.6	90.00	-4,827.2	-1,147.4	2,422.5	2,205.3	217.19	11.154	
13,300.0	7,100.0	11,877.2	7,100.0	126.8	94.6	90.00	-4,827.2	-1,147.4	2,488.9	2,269.8	219.11	11.359	
13,400.0	7,100.0	11,877.2	7,100.0	128.7	94.6	90.00	-4,827.2	-1,147.4	2,557.5	2,336.4	221.03	11.571	
13,500.0	7,100.0	11,877.2	7,100.0	130.6	94.6	90.00	-4,827.2	-1,147.4	2,628.1	2,405.1	222.94	11.788	
13,600.0	7,100.0	11,877.2	7,100.0	132.5	94.6	90.00	-4,827.2	-1,147.4	2,700.5	2,475.7	224.86	12.010	
13,700.0	7,100.0	11,877.2	7,100.0	134.5	94.6	90.00	-4,827.2	-1,147.4	2,774.7	2,547.9	226.78	12.235	
13,800.0	7,100.0	11,877.2	7,100.0	136.4	94.6	90.00	-4,827.2	-1,147.4	2,850.5	2,621.8	228.69	12.464	
13,900.0	7,100.0	11,877.2	7,100.0	138.3	94.6	90.00	-4,827.2	-1,147.4	2,927.7	2,697.0	230.61	12.695	
14,000.0	7,100.0	11,877.2	7,100.0	140.2	94.6	90.00	-4,827.2	-1,147.4	3,006.2	2,773.7	232.53	12.928	
14,100.0	7,100.0	11,877.2	7,100.0	142.1	94.6	90.00	-4,827.2	-1,147.4	3,086.0	2,851.6	234.45	13.163	
14,200.0	7,100.0	11,877.2	7,100.0	144.0	94.6	90.00	-4,827.2	-1,147.4	3,166.9	2,930.6	236.37	13.398	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Hebron 0780 4-18H - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,300.0	7,100.0	11,877.2	7,100.0	145.9	94.6	90.00	-4,827.2	-1,147.4	3,249.0	3,010.7	238.29	13.634		
14,400.0	7,100.0	11,877.2	7,100.0	147.8	94.6	90.00	-4,827.2	-1,147.4	3,331.9	3,091.7	240.21	13.871		
14,500.0	7,100.0	11,877.2	7,100.0	149.8	94.6	90.00	-4,827.2	-1,147.4	3,415.8	3,173.7	242.13	14.107		
14,600.0	7,100.0	11,877.2	7,100.0	151.7	94.6	90.00	-4,827.2	-1,147.4	3,500.6	3,256.5	244.05	14.344		
14,700.0	7,100.0	11,877.2	7,100.0	153.6	94.6	90.00	-4,827.2	-1,147.4	3,586.1	3,340.1	245.97	14.579		
14,800.0	7,100.0	11,877.2	7,100.0	155.5	94.6	90.00	-4,827.2	-1,147.4	3,672.4	3,424.5	247.89	14.814		
14,900.0	7,100.0	11,877.2	7,100.0	157.4	94.6	90.00	-4,827.2	-1,147.4	3,759.3	3,509.5	249.81	15.049		
15,000.0	7,100.0	11,877.2	7,100.0	159.3	94.6	90.00	-4,827.2	-1,147.4	3,846.9	3,595.2	251.73	15.282		
15,100.0	7,100.0	11,877.2	7,100.0	161.2	94.6	90.00	-4,827.2	-1,147.4	3,935.1	3,681.4	253.66	15.513		
15,200.0	7,100.0	11,877.2	7,100.0	163.2	94.6	90.00	-4,827.2	-1,147.4	4,023.8	3,768.2	255.58	15.744		
15,300.0	7,100.0	11,877.2	7,100.0	165.1	94.6	90.00	-4,827.2	-1,147.4	4,113.0	3,855.5	257.50	15.973		
15,400.0	7,100.0	11,877.2	7,100.0	167.0	94.6	90.00	-4,827.2	-1,147.4	4,202.7	3,943.3	259.42	16.200		
15,500.0	7,100.0	11,877.2	7,100.0	168.9	94.6	90.00	-4,827.2	-1,147.4	4,292.9	4,031.6	261.35	16.426		
15,600.0	7,100.0	11,877.2	7,100.0	170.8	94.6	90.00	-4,827.2	-1,147.4	4,383.5	4,120.3	263.27	16.650		
15,700.0	7,100.0	11,877.2	7,100.0	172.8	94.6	90.00	-4,827.2	-1,147.4	4,474.5	4,209.3	265.19	16.873		
15,800.0	7,100.0	11,877.2	7,100.0	174.7	94.6	90.00	-4,827.2	-1,147.4	4,565.9	4,298.8	267.11	17.093		
15,900.0	7,100.0	11,877.2	7,100.0	176.6	94.6	90.00	-4,827.2	-1,147.4	4,657.6	4,388.6	269.04	17.312		
16,000.0	7,100.0	11,877.2	7,100.0	178.5	94.6	90.00	-4,827.2	-1,147.4	4,749.7	4,478.8	270.96	17.529		
16,100.0	7,100.0	11,877.2	7,100.0	180.4	94.6	90.00	-4,827.2	-1,147.4	4,842.1	4,569.2	272.88	17.744		
16,200.0	7,100.0	11,877.2	7,100.0	182.3	94.6	90.00	-4,827.2	-1,147.4	4,934.8	4,660.0	274.81	17.957		
16,300.0	7,100.0	11,877.2	7,100.0	184.3	94.6	90.00	-4,827.2	-1,147.4	5,027.7	4,751.0	276.73	18.168		
16,400.0	7,100.0	11,877.2	7,100.0	186.2	94.6	90.00	-4,827.2	-1,147.4	5,121.0	4,842.3	278.66	18.377		
16,500.0	7,100.0	11,877.2	7,100.0	188.1	94.6	90.00	-4,827.2	-1,147.4	5,214.4	4,933.9	280.58	18.584		
16,600.0	7,100.0	11,877.2	7,100.0	190.0	94.6	90.00	-4,827.2	-1,147.4	5,308.2	5,025.6	282.51	18.790		
16,700.0	7,100.0	11,877.2	7,100.0	191.9	94.6	90.00	-4,827.2	-1,147.4	5,402.1	5,117.7	284.43	18.993		
16,800.0	7,100.0	11,877.2	7,100.0	193.9	94.6	90.00	-4,827.2	-1,147.4	5,496.2	5,209.9	286.35	19.194		
16,900.0	7,100.0	11,877.2	7,100.0	195.8	94.6	90.00	-4,827.2	-1,147.4	5,590.6	5,302.3	288.28	19.393		
16,952.7	7,100.0	11,877.2	7,100.0	196.8	94.6	90.00	-4,827.2	-1,147.4	5,640.4	5,351.1	289.29	19.497		

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Hebron 0780 4-7H - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	3.0	3.0	0.0	0.0	-53.60	152.8	-207.3	257.6					
100.0	100.0	103.0	103.0	0.1	0.1	-53.60	152.8	-207.3	257.6	257.4	0.19	1,340.300		
200.0	200.0	203.0	203.0	0.3	0.3	-53.60	152.8	-207.3	257.6	256.9	0.64	401.386		
300.0	300.0	303.0	303.0	0.5	0.5	-53.60	152.8	-207.3	257.6	256.5	1.09	236.037		
400.0	400.0	403.0	403.0	0.8	0.8	-53.60	152.8	-207.3	257.6	256.0	1.54	167.171		
500.0	500.0	503.0	503.0	1.0	1.0	-53.60	152.8	-207.3	257.6	255.6	1.99	129.414 CC, ES		
608.2	608.2	611.2	611.2	1.2	1.2	-170.24	152.8	-207.3	259.6	257.1	2.46	105.565		
700.0	699.9	702.9	702.9	1.4	1.4	-170.37	152.8	-207.3	263.0	260.2	2.84	92.498		
800.0	799.8	802.8	802.8	1.6	1.7	-170.50	152.8	-207.3	266.7	263.5	3.27	81.566		
900.0	899.8	902.8	902.8	1.8	1.9	-170.63	152.8	-207.3	270.5	266.7	3.70	73.045		
1,000.0	999.7	1,002.7	1,002.7	2.0	2.1	-170.76	152.8	-207.3	274.2	270.0	4.14	66.244		
1,092.2	1,091.8	1,094.8	1,094.8	2.3	2.3	-170.88	152.8	-207.3	277.6	273.1	4.54	61.098		
1,100.0	1,099.6	1,102.6	1,102.6	2.3	2.3	-170.89	152.8	-207.3	277.9	273.3	4.58	60.711		
1,200.4	1,200.0	1,203.0	1,203.0	2.5	2.6	-54.38	152.8	-207.3	279.6	274.6	5.04	55.524		
1,300.0	1,299.6	1,302.6	1,302.6	2.7	2.8	-54.38	152.8	-207.3	279.6	274.2	5.46	51.187		
1,400.0	1,399.6	1,402.6	1,402.6	2.9	3.0	-54.38	152.8	-207.3	279.6	273.7	5.90	47.401		
1,500.0	1,499.6	1,502.6	1,502.6	3.1	3.2	-54.38	152.8	-207.3	279.6	273.3	6.34	44.123		
1,600.0	1,599.6	1,602.6	1,602.6	3.3	3.5	-54.38	152.8	-207.3	279.6	272.9	6.78	41.260		
1,700.0	1,699.6	1,702.6	1,702.6	3.5	3.7	-54.38	152.8	-207.3	279.6	272.4	7.22	38.740		
1,800.0	1,799.6	1,802.6	1,802.6	3.7	3.9	-54.38	152.8	-207.3	279.6	272.0	7.66	36.504		
1,900.0	1,899.6	1,902.6	1,902.6	4.0	4.1	-54.38	152.8	-207.3	279.6	271.5	8.10	34.510		
2,000.0	1,999.6	2,002.6	2,002.6	4.2	4.4	-54.38	152.8	-207.3	279.6	271.1	8.55	32.719		
2,100.0	2,099.6	2,102.6	2,102.6	4.4	4.6	-54.38	152.8	-207.3	279.6	270.6	8.99	31.102		
2,200.0	2,199.6	2,202.6	2,202.6	4.6	4.8	-54.38	152.8	-207.3	279.6	270.2	9.44	29.637		
2,300.0	2,299.6	2,302.6	2,302.6	4.8	5.0	-54.38	152.8	-207.3	279.6	269.8	9.88	28.302		
2,400.0	2,399.6	2,402.6	2,402.6	5.1	5.3	-54.38	152.8	-207.3	279.6	269.3	10.33	27.080		
2,500.0	2,499.6	2,502.6	2,502.6	5.3	5.5	-54.38	152.8	-207.3	279.6	268.9	10.77	25.960		
2,600.0	2,599.6	2,602.6	2,602.6	5.5	5.7	-54.38	152.8	-207.3	279.6	268.4	11.22	24.927		
2,700.0	2,699.6	2,702.6	2,702.6	5.7	5.9	-54.38	152.8	-207.3	279.6	268.0	11.66	23.973		
2,800.0	2,799.6	2,802.6	2,802.6	5.9	6.2	-54.38	152.8	-207.3	279.6	267.5	12.11	23.089		
2,900.0	2,899.6	2,902.6	2,902.6	6.2	6.4	-54.38	152.8	-207.3	279.6	267.1	12.56	22.268		
3,000.0	2,999.6	3,002.6	3,002.6	6.4	6.6	-54.38	152.8	-207.3	279.6	266.6	13.00	21.502		
3,100.0	3,099.6	3,102.6	3,102.6	6.6	6.8	-54.38	152.8	-207.3	279.6	266.2	13.45	20.787		
3,200.0	3,199.6	3,202.6	3,202.6	6.8	7.1	-54.38	152.8	-207.3	279.6	265.7	13.90	20.118		
3,300.0	3,299.6	3,302.6	3,302.6	7.1	7.3	-54.38	152.8	-207.3	279.6	265.3	14.35	19.491		
3,400.0	3,399.6	3,402.6	3,402.6	7.3	7.5	-54.38	152.8	-207.3	279.6	264.8	14.79	18.901		
3,465.8	3,465.4	3,468.4	3,468.4	7.4	7.7	-54.38	152.8	-207.3	279.6	264.5	15.09	18.532		
3,500.0	3,499.6	3,500.0	3,500.0	7.5	7.7	-54.38	152.8	-207.3	279.6	264.4	15.24	18.354		
3,600.0	3,599.6	3,596.2	3,596.2	7.7	7.9	-54.63	152.5	-208.9	280.8	265.1	15.66	17.931		
3,700.0	3,699.6	3,689.8	3,689.7	7.9	8.1	-55.32	151.5	-213.5	284.2	268.1	16.07	17.691		
3,800.0	3,799.6	3,783.0	3,782.5	8.2	8.3	-56.43	150.0	-221.0	289.9	273.5	16.47	17.600 SF		
3,900.0	3,899.6	3,875.5	3,874.5	8.4	8.5	-57.89	147.8	-231.4	298.1	281.2	16.89	17.652		
4,000.0	3,999.6	3,967.3	3,965.3	8.6	8.7	-59.63	145.0	-244.5	308.9	291.6	17.31	17.843		
4,100.0	4,099.6	4,058.2	4,054.6	8.8	8.9	-61.59	141.7	-260.4	322.3	304.6	17.74	18.167		
4,200.0	4,199.6	4,147.9	4,142.4	9.1	9.1	-63.68	137.8	-278.7	338.7	320.5	18.19	18.618		
4,300.0	4,299.6	4,236.3	4,228.2	9.3	9.4	-65.82	133.4	-299.4	357.9	339.3	18.66	19.186		
4,400.0	4,399.6	4,324.8	4,313.5	9.5	9.7	-166.95	128.5	-322.6	381.8	362.9	18.94	20.162		
4,500.0	4,499.4	4,419.4	4,404.4	9.7	10.0	-169.13	123.1	-348.3	410.4	391.1	19.34	21.221		
4,600.0	4,599.1	4,512.8	4,494.1	9.9	10.3	-171.09	117.7	-373.7	442.8	423.1	19.72	22.451		
4,700.0	4,698.3	4,605.0	4,582.7	10.2	10.7	-172.83	112.5	-398.8	478.9	458.8	20.09	23.841		
4,800.0	4,797.1	4,695.9	4,669.9	10.4	11.1	-174.37	107.2	-423.4	518.6	498.1	20.43	25.380		
4,900.0	4,895.2	4,785.2	4,755.8	10.7	11.4	-175.73	102.1	-447.7	561.7	541.0	20.76	27.059		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Hebron 0780 4-7H - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,992.7	4,873.0	4,840.1	10.9	11.8	-176.91	97.1	-471.5	608.3	587.2	21.07	28.870	
5,100.0	5,089.2	4,959.1	4,922.8	11.2	12.2	-177.95	92.2	-494.9	658.1	636.7	21.36	30.808	
5,200.0	5,184.9	5,043.3	5,003.8	11.6	12.6	-178.86	87.3	-517.8	711.0	689.4	21.63	32.866	
5,226.2	5,209.7	5,065.1	5,024.7	11.7	12.7	-179.08	86.1	-523.7	725.4	703.7	21.70	33.424	
5,300.0	5,279.7	5,126.3	5,083.4	12.0	13.0	-179.68	82.6	-540.3	766.2	744.2	22.00	34.821	
5,400.0	5,374.5	5,209.1	5,163.0	12.4	13.4	179.61	77.8	-562.8	821.6	799.1	22.42	36.646	
5,500.0	5,469.4	5,292.0	5,242.6	12.8	13.8	178.99	73.1	-585.4	877.0	854.2	22.84	38.397	
5,600.0	5,564.2	5,374.8	5,322.2	13.3	14.2	178.44	68.3	-607.9	932.5	909.3	23.27	40.075	
5,700.0	5,659.0	5,457.7	5,401.8	13.8	14.6	177.96	63.6	-630.4	988.1	964.4	23.71	41.684	
5,800.0	5,753.8	5,540.5	5,481.4	14.2	15.0	177.52	58.8	-652.9	1,043.7	1,019.6	24.15	43.225	
5,900.0	5,848.6	5,623.4	5,561.0	14.7	15.4	177.13	54.1	-675.4	1,099.4	1,074.8	24.59	44.703	
6,000.0	5,943.5	5,706.3	5,640.6	15.3	15.8	176.78	49.3	-697.9	1,155.1	1,130.1	25.05	46.119	
6,100.0	6,038.3	5,789.1	5,720.2	15.8	16.3	176.46	44.6	-720.4	1,210.8	1,185.3	25.50	47.475	
6,200.0	6,133.1	5,872.0	5,799.8	16.3	16.7	176.16	39.9	-742.9	1,266.6	1,240.6	25.97	48.775	
6,300.0	6,227.9	5,954.8	5,879.4	16.9	17.1	175.89	35.1	-765.4	1,322.3	1,295.9	26.44	50.021	
6,400.0	6,322.7	6,037.7	5,959.0	17.5	17.6	175.65	30.4	-787.9	1,378.1	1,351.2	26.91	51.216	
6,500.0	6,417.6	6,120.5	6,038.6	18.0	18.0	175.42	25.6	-810.4	1,433.9	1,406.5	27.38	52.362	
6,566.1	6,480.2	6,175.3	6,091.2	18.4	18.3	175.28	22.5	-825.3	1,470.8	1,443.1	27.70	53.094	
6,600.0	6,512.4	6,203.5	6,118.3	18.6	18.5	162.94	20.9	-832.9	1,489.6	1,461.8	27.86	53.472	
6,650.0	6,559.6	6,245.3	6,158.5	18.8	18.7	146.07	18.5	-844.3	1,516.9	1,488.7	28.17	53.837	
6,700.0	6,606.2	6,287.1	6,198.6	19.1	18.9	131.87	16.1	-855.6	1,543.4	1,514.8	28.58	54.010	
6,750.0	6,652.0	6,328.5	6,238.4	19.3	19.1	120.52	13.7	-866.9	1,569.0	1,539.9	29.03	54.053	
6,800.0	6,696.4	6,369.3	6,277.6	19.6	19.3	111.62	11.4	-878.0	1,593.6	1,564.1	29.50	54.024	
6,850.0	6,739.3	6,409.2	6,315.9	19.8	19.6	104.63	9.1	-888.8	1,617.1	1,587.1	29.96	53.968	
6,900.0	6,780.3	6,447.8	6,353.0	20.1	19.8	99.10	6.9	-899.3	1,639.5	1,609.1	30.41	53.910	
6,950.0	6,819.0	6,484.8	6,388.5	20.3	20.0	94.68	4.7	-909.3	1,660.8	1,629.9	30.83	53.863	
7,000.0	6,855.2	6,519.9	6,422.3	20.6	20.2	91.10	2.7	-918.9	1,680.8	1,649.6	31.22	53.832	
7,050.0	6,888.6	6,550.0	6,451.3	20.8	20.3	88.12	1.9	-926.9	1,699.8	1,668.3	31.58	53.824	
7,100.0	6,918.9	6,574.4	6,474.9	21.1	20.4	85.58	2.4	-933.3	1,717.8	1,685.9	31.90	53.846	
7,154.6	6,948.3	6,600.0	6,499.5	21.4	20.5	83.30	4.0	-939.8	1,736.4	1,704.2	32.23	53.869	
7,200.0	6,971.0	6,609.8	6,509.0	21.7	20.6	83.61	4.9	-942.3	1,751.9	1,719.2	32.64	53.673	
7,304.6	7,023.3	6,637.7	6,535.9	22.4	20.7	84.50	8.4	-949.0	1,790.9	1,757.2	33.67	53.195	
7,350.0	7,044.4	6,650.0	6,547.6	22.7	20.7	82.93	10.3	-951.9	1,809.1	1,775.0	34.11	53.029	
7,400.0	7,063.9	6,650.0	6,547.6	23.1	20.7	80.69	10.3	-951.9	1,829.7	1,795.1	34.56	52.949	
7,450.0	7,079.3	6,650.0	6,547.6	23.6	20.7	78.40	10.3	-951.9	1,850.8	1,815.9	34.95	52.961	
7,500.0	7,090.5	6,650.0	6,547.6	24.1	20.7	76.09	10.3	-951.9	1,872.2	1,837.0	35.27	53.078	
7,550.0	7,097.4	6,650.0	6,547.6	24.6	20.7	73.78	10.3	-951.9	1,893.8	1,858.3	35.53	53.305	
7,604.6	7,100.0	6,650.0	6,547.6	25.2	20.7	71.29	10.3	-951.9	1,917.3	1,881.6	35.73	53.668	
7,700.0	7,100.0	6,650.0	6,547.6	26.4	20.7	71.29	10.3	-951.9	1,960.1	1,923.2	36.95	53.044	
7,800.0	7,100.0	6,650.0	6,547.6	27.6	20.7	71.29	10.3	-951.9	2,008.9	1,970.6	38.31	52.434	
7,900.0	7,100.0	6,632.5	6,530.8	29.0	20.7	70.72	7.6	-947.8	2,061.2	2,021.6	39.60	52.045	
8,000.0	7,100.0	6,627.2	6,525.8	30.4	20.6	70.55	6.9	-946.5	2,117.0	2,075.9	41.03	51.592	
8,100.0	7,100.0	6,622.6	6,521.3	31.9	20.6	70.40	6.3	-945.4	2,175.9	2,133.4	42.51	51.188	
8,200.0	7,100.0	6,618.5	6,517.3	33.4	20.6	70.27	5.8	-944.4	2,237.7	2,193.7	44.02	50.833	
8,300.0	7,100.0	6,600.0	6,499.5	35.0	20.5	69.66	4.0	-939.8	2,302.3	2,256.9	45.43	50.676	
8,400.0	7,100.0	6,600.0	6,499.5	36.6	20.5	69.66	4.0	-939.8	2,369.2	2,322.1	47.03	50.374	
8,500.0	7,100.0	6,600.0	6,499.5	38.2	20.5	69.66	4.0	-939.8	2,438.3	2,389.6	48.66	50.114	
8,600.0	7,100.0	6,600.0	6,499.5	39.8	20.5	69.66	4.0	-939.8	2,509.5	2,459.2	50.30	49.892	
8,700.0	7,100.0	6,600.0	6,499.5	41.5	20.5	69.66	4.0	-939.8	2,582.6	2,530.7	51.96	49.705	
8,800.0	7,100.0	6,600.0	6,499.5	43.2	20.5	69.66	4.0	-939.8	2,657.5	2,603.9	53.63	49.548	
8,900.0	7,100.0	6,600.0	6,499.5	44.9	20.5	69.66	4.0	-939.8	2,734.0	2,678.7	55.32	49.418	
9,000.0	7,100.0	6,600.0	6,499.5	46.7	20.5	69.66	4.0	-939.8	2,811.9	2,754.9	57.02	49.311	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Hebron 0780 4-7H - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,100.0	7,100.0	6,600.0	6,499.5	48.4	20.5	69.66	4.0	-939.8	2,891.3	2,832.5	58.74	49.225	
9,200.0	7,100.0	6,600.0	6,499.5	50.2	20.5	69.66	4.0	-939.8	2,971.8	2,911.4	60.46	49.157	
9,300.0	7,100.0	6,600.0	6,499.5	52.0	20.5	69.66	4.0	-939.8	3,053.5	2,991.3	62.18	49.105	
9,400.0	7,100.0	6,600.0	6,499.5	53.8	20.5	69.66	4.0	-939.8	3,136.3	3,072.4	63.92	49.067	
9,500.0	7,100.0	6,600.0	6,499.5	55.6	20.5	69.66	4.0	-939.8	3,220.1	3,154.4	65.66	49.041	
9,600.0	7,100.0	6,600.0	6,499.5	57.4	20.5	69.66	4.0	-939.8	3,304.7	3,237.3	67.41	49.025	
9,700.0	7,100.0	6,600.0	6,499.5	59.2	20.5	69.66	4.0	-939.8	3,390.2	3,321.0	69.16	49.019	
9,800.0	7,100.0	6,600.0	6,499.5	61.0	20.5	69.66	4.0	-939.8	3,476.5	3,405.5	70.92	49.020	
9,900.0	7,100.0	6,600.0	6,499.5	62.8	20.5	69.66	4.0	-939.8	3,563.4	3,490.8	72.68	49.028	
10,000.0	7,100.0	6,600.0	6,499.5	64.7	20.5	69.66	4.0	-939.8	3,651.1	3,576.6	74.45	49.043	
10,100.0	7,100.0	6,600.0	6,499.5	66.5	20.5	69.66	4.0	-939.8	3,739.4	3,663.1	76.22	49.062	
10,200.0	7,100.0	6,600.0	6,499.5	68.4	20.5	69.66	4.0	-939.8	3,828.2	3,750.2	77.99	49.086	
10,300.0	7,100.0	6,600.0	6,499.5	70.2	20.5	69.66	4.0	-939.8	3,917.6	3,837.8	79.77	49.113	
10,400.0	7,100.0	6,600.0	6,499.5	72.1	20.5	69.66	4.0	-939.8	4,007.5	3,925.9	81.55	49.144	
10,500.0	7,100.0	6,600.0	6,499.5	73.9	20.5	69.66	4.0	-939.8	4,097.8	4,014.5	83.33	49.178	
10,600.0	7,100.0	6,600.0	6,499.5	75.8	20.5	69.66	4.0	-939.8	4,188.6	4,103.5	85.11	49.214	
10,700.0	7,100.0	6,600.0	6,499.5	77.6	20.5	69.66	4.0	-939.8	4,279.8	4,192.9	86.90	49.252	
10,800.0	7,100.0	6,578.1	6,478.4	79.5	20.4	68.95	2.5	-934.2	4,371.0	4,282.7	88.29	49.505	
10,900.0	7,100.0	6,577.5	6,477.8	81.4	20.4	68.93	2.5	-934.1	4,462.9	4,372.9	90.07	49.552	
11,000.0	7,100.0	6,576.9	6,477.2	83.3	20.4	68.91	2.5	-933.9	4,555.2	4,463.3	91.84	49.599	
11,100.0	7,100.0	6,576.3	6,476.7	85.1	20.4	68.89	2.4	-933.8	4,647.8	4,554.2	93.61	49.648	
11,200.0	7,100.0	6,575.8	6,476.2	87.0	20.4	68.87	2.4	-933.7	4,740.7	4,645.3	95.39	49.697	
11,300.0	7,100.0	6,575.3	6,475.7	88.9	20.4	68.85	2.4	-933.5	4,833.8	4,736.7	97.17	49.746	
11,400.0	7,100.0	6,574.8	6,475.2	90.8	20.4	68.84	2.4	-933.4	4,927.3	4,828.3	98.95	49.795	
11,500.0	7,100.0	6,574.3	6,474.7	92.7	20.4	68.82	2.4	-933.3	5,020.9	4,920.2	100.73	49.845	
11,600.0	7,100.0	6,573.9	6,474.3	94.5	20.4	68.81	2.3	-933.2	5,114.9	5,012.4	102.51	49.895	
11,700.0	7,100.0	6,573.4	6,473.9	96.4	20.4	68.79	2.3	-933.1	5,209.0	5,104.7	104.30	49.944	
11,800.0	7,100.0	6,573.0	6,473.5	98.3	20.4	68.78	2.3	-932.9	5,303.4	5,197.3	106.08	49.993	
11,900.0	7,100.0	6,572.6	6,473.1	100.2	20.4	68.77	2.3	-932.8	5,398.0	5,290.1	107.87	50.042	
12,000.0	7,100.0	6,550.0	6,451.3	102.1	20.3	68.03	1.9	-926.9	5,493.1	5,384.0	109.15	50.325	
12,100.0	7,100.0	6,550.0	6,451.3	104.0	20.3	68.03	1.9	-926.9	5,588.1	5,477.1	110.94	50.369	
12,200.0	7,100.0	6,550.0	6,451.3	105.9	20.3	68.03	1.9	-926.9	5,683.2	5,570.4	112.73	50.413	
12,300.0	7,100.0	6,550.0	6,451.3	107.8	20.3	68.03	1.9	-926.9	5,778.4	5,663.9	114.52	50.457	
12,400.0	7,100.0	6,550.0	6,451.3	109.7	20.3	68.03	1.9	-926.9	5,873.9	5,757.6	116.31	50.501	
12,500.0	7,100.0	6,550.0	6,451.3	111.6	20.3	68.03	1.9	-926.9	5,969.5	5,851.3	118.10	50.544	
12,600.0	7,100.0	6,550.0	6,451.3	113.5	20.3	68.03	1.9	-926.9	6,065.2	5,945.3	119.90	50.587	
12,700.0	7,100.0	6,550.0	6,451.3	115.4	20.3	68.03	1.9	-926.9	6,161.0	6,039.3	121.69	50.629	
12,800.0	7,100.0	6,550.0	6,451.3	117.3	20.3	68.03	1.9	-926.9	6,257.0	6,133.5	123.48	50.671	
12,900.0	7,100.0	6,550.0	6,451.3	119.2	20.3	68.03	1.9	-926.9	6,353.1	6,227.8	125.28	50.712	
13,000.0	7,100.0	6,550.0	6,451.3	121.1	20.3	68.03	1.9	-926.9	6,449.3	6,322.3	127.07	50.754	
13,100.0	7,100.0	6,550.0	6,451.3	123.0	20.3	68.03	1.9	-926.9	6,545.7	6,416.8	128.87	50.794	
13,200.0	7,100.0	6,550.0	6,451.3	124.9	20.3	68.03	1.9	-926.9	6,642.1	6,511.5	130.66	50.834	
13,300.0	7,100.0	6,550.0	6,451.3	126.8	20.3	68.03	1.9	-926.9	6,738.7	6,606.2	132.46	50.874	
13,400.0	7,100.0	6,550.0	6,451.3	128.7	20.3	68.03	1.9	-926.9	6,835.3	6,701.1	134.26	50.913	
13,500.0	7,100.0	6,550.0	6,451.3	130.6	20.3	68.03	1.9	-926.9	6,932.1	6,796.0	136.05	50.951	
13,600.0	7,100.0	6,550.0	6,451.3	132.5	20.3	68.03	1.9	-926.9	7,028.9	6,891.1	137.85	50.990	
13,700.0	7,100.0	6,550.0	6,451.3	134.5	20.3	68.03	1.9	-926.9	7,125.8	6,986.2	139.65	51.027	
13,800.0	7,100.0	6,550.0	6,451.3	136.4	20.3	68.03	1.9	-926.9	7,222.8	7,081.4	141.45	51.064	
13,900.0	7,100.0	6,550.0	6,451.3	138.3	20.3	68.03	1.9	-926.9	7,319.9	7,176.7	143.24	51.101	
14,000.0	7,100.0	6,550.0	6,451.3	140.2	20.3	68.03	1.9	-926.9	7,417.1	7,272.1	145.04	51.137	
14,100.0	7,100.0	6,550.0	6,451.3	142.1	20.3	68.03	1.9	-926.9	7,514.3	7,367.5	146.84	51.173	
14,200.0	7,100.0	6,550.0	6,451.3	144.0	20.3	68.03	1.9	-926.9	7,611.6	7,463.0	148.64	51.208	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Hebron 0780 4-7H - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,300.0	7,100.0	6,550.0	6,451.3	145.9	20.3	68.03	1.9	-926.9	7,709.0	7,558.6	150.44	51.242	
14,400.0	7,100.0	6,550.0	6,451.3	147.8	20.3	68.03	1.9	-926.9	7,806.5	7,654.2	152.24	51.277	
14,500.0	7,100.0	6,550.0	6,451.3	149.8	20.3	68.03	1.9	-926.9	7,904.0	7,749.9	154.04	51.310	
14,600.0	7,100.0	6,550.0	6,451.3	151.7	20.3	68.03	1.9	-926.9	8,001.6	7,845.7	155.84	51.343	
14,700.0	7,100.0	6,550.0	6,451.3	153.6	20.3	68.03	1.9	-926.9	8,099.2	7,941.5	157.65	51.376	
14,800.0	7,100.0	6,550.0	6,451.3	155.5	20.3	68.03	1.9	-926.9	8,196.9	8,037.4	159.45	51.408	
14,900.0	7,100.0	6,550.0	6,451.3	157.4	20.3	68.03	1.9	-926.9	8,294.6	8,133.4	161.25	51.440	
15,000.0	7,100.0	6,550.0	6,451.3	159.3	20.3	68.03	1.9	-926.9	8,392.4	8,229.4	163.05	51.472	
15,100.0	7,100.0	6,550.0	6,451.3	161.2	20.3	68.03	1.9	-926.9	8,490.3	8,325.4	164.85	51.502	
15,200.0	7,100.0	6,550.0	6,451.3	163.2	20.3	68.03	1.9	-926.9	8,588.2	8,421.5	166.65	51.533	
15,300.0	7,100.0	6,550.0	6,451.3	165.1	20.3	68.03	1.9	-926.9	8,686.1	8,517.6	168.46	51.563	
15,400.0	7,100.0	6,550.0	6,451.3	167.0	20.3	68.03	1.9	-926.9	8,784.1	8,613.8	170.26	51.593	
15,500.0	7,100.0	6,550.0	6,451.3	168.9	20.3	68.03	1.9	-926.9	8,882.1	8,710.1	172.06	51.622	
15,600.0	7,100.0	6,550.0	6,451.3	170.8	20.3	68.03	1.9	-926.9	8,980.2	8,806.3	173.86	51.651	
15,700.0	7,100.0	6,550.0	6,451.3	172.8	20.3	68.03	1.9	-926.9	9,078.3	8,902.7	175.67	51.679	
15,800.0	7,100.0	6,550.0	6,451.3	174.7	20.3	68.03	1.9	-926.9	9,176.5	8,999.0	177.47	51.707	
15,900.0	7,100.0	6,550.0	6,451.3	176.6	20.3	68.03	1.9	-926.9	9,274.7	9,095.4	179.28	51.734	
16,000.0	7,100.0	6,550.0	6,451.3	178.5	20.3	68.03	1.9	-926.9	9,372.9	9,191.9	181.08	51.762	
16,100.0	7,100.0	6,550.0	6,451.3	180.4	20.3	68.03	1.9	-926.9	9,471.2	9,288.3	182.88	51.788	
16,200.0	7,100.0	6,550.0	6,451.3	182.3	20.3	68.03	1.9	-926.9	9,569.5	9,384.8	184.69	51.815	
16,300.0	7,100.0	6,550.0	6,451.3	184.3	20.3	68.03	1.9	-926.9	9,667.9	9,481.4	186.49	51.841	
16,400.0	7,100.0	6,550.0	6,451.3	186.2	20.3	68.03	1.9	-926.9	9,766.3	9,578.0	188.30	51.867	
16,500.0	7,100.0	6,550.0	6,451.3	188.1	20.3	68.03	1.9	-926.9	9,864.7	9,674.6	190.10	51.892	
16,600.0	7,100.0	6,550.0	6,451.3	190.0	20.3	68.03	1.9	-926.9	9,963.1	9,771.2	191.90	51.917	

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Mutual 0780 2-8H - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-20.89	150.8	-57.6	161.5				
100.0	100.0	100.0	100.0	0.1	0.1	-20.89	150.8	-57.6	161.5	161.3	0.19	855.204	
200.0	200.0	200.0	200.0	0.3	0.3	-20.89	150.8	-57.6	161.5	160.8	0.64	252.948	
300.0	300.0	300.0	300.0	0.5	0.5	-20.89	150.8	-57.6	161.5	160.4	1.09	148.424	
400.0	400.0	400.0	400.0	0.8	0.8	-20.89	150.8	-57.6	161.5	159.9	1.54	105.025	
500.0	500.0	500.0	500.0	1.0	1.0	-20.89	150.8	-57.6	161.5	159.5	1.99	81.264 CC, ES	
608.2	608.2	608.2	608.2	1.2	1.2	-137.92	150.8	-57.6	163.0	160.5	2.46	66.383	
700.0	699.9	699.9	699.9	1.4	1.4	-138.73	150.8	-57.6	165.6	162.7	2.84	58.264	
800.0	799.8	799.8	799.8	1.6	1.7	-139.57	150.8	-57.6	168.4	165.2	3.27	51.490	
900.0	899.8	899.8	899.8	1.8	1.9	-140.39	150.8	-57.6	171.3	167.6	3.71	46.226	
1,000.0	999.7	999.7	999.7	2.0	2.1	-141.18	150.8	-57.6	174.2	170.1	4.14	42.038	
1,092.2	1,091.8	1,091.8	1,091.8	2.3	2.3	-141.89	150.8	-57.6	177.0	172.4	4.55	38.878	
1,100.0	1,099.6	1,099.6	1,099.6	2.3	2.3	-141.95	150.8	-57.6	177.2	172.6	4.59	38.641	
1,200.4	1,200.0	1,200.0	1,200.0	2.5	2.6	-25.75	150.8	-57.6	178.6	173.6	5.03	35.533	
1,300.0	1,299.6	1,299.6	1,299.6	2.7	2.8	-25.75	150.8	-57.6	178.6	173.1	5.45	32.749	
1,400.0	1,399.6	1,399.6	1,399.6	2.9	3.0	-25.75	150.8	-57.6	178.6	172.7	5.89	30.323	
1,500.0	1,499.6	1,499.6	1,499.6	3.1	3.2	-25.75	150.8	-57.6	178.6	172.3	6.33	28.222	
1,600.0	1,599.6	1,599.6	1,599.6	3.3	3.5	-25.75	150.8	-57.6	178.6	171.8	6.77	26.389	
1,700.0	1,699.6	1,699.6	1,699.6	3.5	3.7	-25.75	150.8	-57.6	178.6	171.4	7.21	24.774	
1,800.0	1,799.6	1,799.6	1,799.6	3.7	3.9	-25.75	150.8	-57.6	178.6	170.9	7.65	23.343	
1,900.0	1,899.6	1,899.6	1,899.6	4.0	4.1	-25.75	150.8	-57.6	178.6	170.5	8.09	22.066	
2,000.0	1,999.6	1,999.6	1,999.6	4.2	4.4	-25.75	150.8	-57.6	178.6	170.0	8.54	20.919	
2,100.0	2,099.6	2,099.6	2,099.6	4.4	4.6	-25.75	150.8	-57.6	178.6	169.6	8.98	19.885	
2,200.0	2,199.6	2,199.6	2,199.6	4.6	4.8	-25.75	150.8	-57.6	178.6	169.2	9.43	18.947	
2,300.0	2,299.6	2,299.6	2,299.6	4.8	5.0	-25.75	150.8	-57.6	178.6	168.7	9.87	18.092	
2,400.0	2,399.6	2,399.6	2,399.6	5.1	5.3	-25.75	150.8	-57.6	178.6	168.3	10.32	17.311	
2,500.0	2,499.6	2,499.6	2,499.6	5.3	5.5	-25.75	150.8	-57.6	178.6	167.8	10.76	16.594	
2,600.0	2,599.6	2,599.6	2,599.6	5.5	5.7	-25.75	150.8	-57.6	178.6	167.4	11.21	15.933	
2,700.0	2,699.6	2,699.6	2,699.6	5.7	5.9	-25.75	150.8	-57.6	178.6	166.9	11.65	15.323	
2,800.0	2,799.6	2,799.6	2,799.6	5.9	6.2	-25.75	150.8	-57.6	178.6	166.5	12.10	14.757	
2,900.0	2,899.6	2,899.6	2,899.6	6.2	6.4	-25.75	150.8	-57.6	178.6	166.0	12.55	14.232	
3,000.0	2,999.6	2,999.6	2,999.6	6.4	6.6	-25.75	150.8	-57.6	178.6	165.6	13.00	13.742	
3,100.0	3,099.6	3,099.6	3,099.6	6.6	6.8	-25.75	150.8	-57.6	178.6	165.1	13.44	13.285	
3,200.0	3,199.6	3,199.6	3,199.6	6.8	7.1	-25.75	150.8	-57.6	178.6	164.7	13.89	12.857	
3,300.0	3,299.6	3,299.6	3,299.6	7.1	7.3	-25.75	150.8	-57.6	178.6	164.2	14.34	12.456	
3,400.0	3,399.6	3,399.6	3,399.6	7.3	7.5	-25.75	150.8	-57.6	178.6	163.8	14.78	12.079	
3,500.0	3,499.6	3,499.6	3,499.6	7.5	7.7	-25.75	150.8	-57.6	178.6	163.3	15.23	11.724	
3,600.0	3,599.6	3,599.6	3,599.6	7.7	8.0	-25.75	150.8	-57.6	178.6	162.9	15.68	11.389	
3,700.0	3,699.6	3,699.6	3,699.6	7.9	8.2	-25.75	150.8	-57.6	178.6	162.5	16.13	11.073	
3,800.0	3,799.6	3,799.6	3,799.6	8.2	8.4	-25.75	150.8	-57.6	178.6	162.0	16.58	10.773	
3,900.0	3,899.6	3,899.6	3,899.6	8.4	8.6	-25.75	150.8	-57.6	178.6	161.6	17.02	10.490	
4,000.0	3,999.6	3,999.6	3,999.6	8.6	8.9	-25.75	150.8	-57.6	178.6	161.1	17.47	10.221	
4,100.0	4,099.6	4,099.6	4,099.6	8.8	9.1	-25.75	150.8	-57.6	178.6	160.7	17.92	9.965	
4,200.0	4,199.6	4,199.6	4,199.6	9.1	9.3	-25.75	150.8	-57.6	178.6	160.2	18.37	9.722	
4,300.0	4,299.6	4,299.6	4,299.6	9.3	9.5	-25.75	150.8	-57.6	178.6	159.8	18.82	9.490	
4,400.0	4,399.6	4,399.6	4,399.6	9.5	9.8	-125.21	150.8	-57.6	179.6	160.3	19.25	9.328	
4,500.0	4,499.4	4,499.4	4,499.4	9.7	10.0	-126.50	150.8	-57.6	182.7	163.0	19.67	9.284 SF	
4,600.0	4,599.1	4,599.1	4,599.1	9.9	10.2	-128.55	150.8	-57.6	188.0	167.9	20.09	9.356	
4,700.0	4,698.3	4,698.3	4,698.3	10.2	10.4	-131.21	150.8	-57.6	195.8	175.3	20.50	9.551	
4,800.0	4,797.1	4,797.1	4,797.1	10.4	10.7	-134.30	150.8	-57.6	206.5	185.6	20.90	9.880	
4,900.0	4,895.2	4,895.2	4,895.2	10.7	10.9	-137.63	150.8	-57.6	220.4	199.1	21.29	10.351	
5,000.0	4,992.7	4,992.7	4,992.7	10.9	11.1	-141.03	150.8	-57.6	237.6	216.0	21.66	10.970	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Mutual 0780 2-8H - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,089.2	5,083.7	5,083.7	11.2	11.3	-144.34	150.8	-58.8	259.4	237.4	21.99	11.797	
5,200.0	5,184.9	5,171.7	5,171.6	11.6	11.5	-147.72	150.8	-62.7	287.3	265.0	22.28	12.892	
5,226.2	5,209.7	5,194.2	5,194.1	11.7	11.5	-148.58	150.8	-64.2	295.6	273.3	22.36	13.222	
5,300.0	5,279.7	5,256.8	5,256.5	12.0	11.6	-151.14	150.8	-69.1	320.6	298.0	22.63	14.169	
5,400.0	5,374.5	5,339.7	5,338.9	12.4	11.8	-154.22	150.8	-77.7	357.4	334.4	23.00	15.539	
5,500.0	5,469.4	5,420.5	5,419.0	12.8	12.0	-156.90	150.8	-88.4	397.3	373.9	23.37	17.000	
5,600.0	5,564.2	5,501.9	5,499.4	13.3	12.2	-159.31	150.8	-101.3	440.1	416.4	23.75	18.532	
5,700.0	5,659.0	5,590.2	5,586.5	13.8	12.4	-161.52	150.8	-116.0	484.1	460.0	24.14	20.057	
5,800.0	5,753.8	5,678.5	5,673.5	14.2	12.6	-163.38	150.8	-130.6	528.6	504.1	24.54	21.546	
5,900.0	5,848.6	5,766.8	5,760.6	14.7	12.8	-164.95	150.8	-145.3	573.6	548.6	24.94	22.996	
6,000.0	5,943.5	5,855.1	5,847.7	15.3	13.0	-166.30	150.8	-159.9	618.8	593.4	25.35	24.406	
6,100.0	6,038.3	5,943.4	5,934.8	15.8	13.2	-167.46	150.8	-174.6	664.2	638.4	25.77	25.775	
6,200.0	6,133.1	6,031.7	6,021.8	16.3	13.5	-168.48	150.8	-189.2	709.9	683.7	26.19	27.101	
6,300.0	6,227.9	6,120.0	6,108.9	16.9	13.7	-169.38	150.8	-203.9	755.7	729.0	26.62	28.386	
6,400.0	6,322.7	6,208.3	6,196.0	17.5	14.0	-170.17	150.8	-218.5	801.6	774.5	27.05	29.630	
6,500.0	6,417.6	6,296.6	6,283.1	18.0	14.2	-170.88	150.8	-233.2	847.6	820.1	27.49	30.834	
6,566.1	6,480.2	6,355.0	6,340.6	18.4	14.4	-171.31	150.8	-242.9	878.1	850.3	27.78	31.607	
6,600.0	6,512.4	6,384.9	6,370.2	18.6	14.5	-176.70	150.8	-247.8	893.9	866.0	27.86	32.079	
6,650.0	6,559.6	6,429.1	6,413.7	18.8	14.6	-180.32	150.8	-255.1	917.3	889.3	28.03	32.732	
6,700.0	6,606.2	6,467.8	6,451.9	19.1	14.7	-186.47	150.8	-261.6	941.0	912.8	28.23	33.331	
6,750.0	6,652.0	6,500.0	6,483.6	19.3	14.8	-185.29	151.7	-266.8	965.0	936.5	28.48	33.884	
6,800.0	6,696.4	6,532.8	6,515.9	19.6	14.9	-126.51	154.5	-272.0	989.5	960.7	28.77	34.388	
6,850.0	6,739.3	6,559.2	6,541.7	19.8	15.0	-119.34	158.1	-276.0	1,014.5	985.4	29.10	34.859	
6,900.0	6,780.3	6,582.2	6,564.1	20.1	15.0	-113.34	162.2	-279.4	1,040.0	1,010.6	29.47	35.292	
6,950.0	6,819.0	6,600.0	6,581.3	20.3	15.1	-108.04	166.0	-281.9	1,066.2	1,036.3	29.87	35.689	
7,000.0	6,855.2	6,617.9	6,598.5	20.6	15.1	-103.42	170.3	-284.4	1,092.8	1,062.5	30.30	36.067	
7,050.0	6,888.6	6,630.7	6,610.8	20.8	15.2	-99.04	173.8	-286.1	1,120.0	1,089.2	30.74	36.436	
7,100.0	6,918.9	6,650.0	6,629.0	21.1	15.2	-95.42	179.4	-288.6	1,147.6	1,116.5	31.16	36.835	
7,154.6	6,948.3	6,650.0	6,629.0	21.4	15.2	-90.66	179.4	-288.6	1,178.0	1,146.4	31.58	37.305	
7,200.0	6,971.0	6,650.0	6,629.0	21.7	15.2	-90.66	179.4	-288.6	1,203.9	1,172.0	31.95	37.685	
7,304.6	7,023.3	6,650.0	6,629.0	22.4	15.2	-90.66	179.4	-288.6	1,267.9	1,235.0	32.89	38.548	
7,350.0	7,044.4	6,665.4	6,643.4	22.7	15.3	-87.70	184.4	-290.5	1,297.1	1,263.6	33.47	38.755	
7,400.0	7,063.9	6,666.6	6,644.5	23.1	15.3	-83.34	184.8	-290.7	1,330.2	1,296.3	33.99	39.136	
7,450.0	7,079.3	6,665.9	6,643.9	23.6	15.3	-78.76	184.6	-290.6	1,364.1	1,329.8	34.32	39.748	
7,500.0	7,090.5	6,650.0	6,629.0	24.1	15.2	-73.32	179.4	-288.6	1,398.5	1,364.2	34.30	40.774	
7,550.0	7,097.4	6,650.0	6,629.0	24.6	15.2	-68.89	179.4	-288.6	1,432.6	1,398.5	34.12	41.983	
7,604.6	7,100.0	6,650.0	6,629.0	25.2	15.2	-64.26	179.4	-288.6	1,469.7	1,436.0	33.70	43.617	
7,700.0	7,100.0	6,650.0	6,629.0	26.4	15.2	-64.26	179.4	-288.6	1,535.7	1,500.9	34.85	44.061	
7,800.0	7,100.0	6,632.7	6,612.6	27.6	15.2	-63.44	174.3	-286.3	1,607.8	1,571.9	35.93	44.747	
7,900.0	7,100.0	6,623.7	6,604.0	29.0	15.1	-63.00	171.8	-285.1	1,682.6	1,645.4	37.15	45.289	
8,000.0	7,100.0	6,600.0	6,581.3	30.4	15.1	-61.87	166.0	-281.9	1,760.0	1,721.8	38.21	46.058	
8,100.0	7,100.0	6,600.0	6,581.3	31.9	15.1	-61.87	166.0	-281.9	1,839.1	1,799.5	39.63	46.410	
8,200.0	7,100.0	6,600.0	6,581.3	33.4	15.1	-61.87	166.0	-281.9	1,920.2	1,879.1	41.08	46.743	
8,300.0	7,100.0	6,600.0	6,581.3	35.0	15.1	-61.87	166.0	-281.9	2,003.0	1,960.4	42.56	47.059	
8,400.0	7,100.0	6,600.0	6,581.3	36.6	15.1	-61.87	166.0	-281.9	2,087.3	2,043.2	44.07	47.359	
8,500.0	7,100.0	6,600.0	6,581.3	38.2	15.1	-61.87	166.0	-281.9	2,172.9	2,127.3	45.61	47.644	
8,600.0	7,100.0	6,580.2	6,562.2	39.8	15.0	-60.93	161.8	-279.1	2,259.3	2,212.5	46.81	48.268	
8,700.0	7,100.0	6,575.9	6,558.0	41.5	15.0	-60.73	161.0	-278.4	2,347.0	2,298.7	48.28	48.607	
8,800.0	7,100.0	6,571.9	6,554.1	43.2	15.0	-60.54	160.2	-277.9	2,435.6	2,385.8	49.78	48.930	
8,900.0	7,100.0	6,550.0	6,532.7	44.9	14.9	-59.50	156.7	-274.6	2,525.3	2,474.4	50.91	49.599	
9,000.0	7,100.0	6,550.0	6,532.7	46.7	14.9	-59.50	156.7	-274.6	2,615.3	2,562.8	52.49	49.824	
9,100.0	7,100.0	6,550.0	6,532.7	48.4	14.9	-59.50	156.7	-274.6	2,706.1	2,652.0	54.08	50.039	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Mutual 0780 2-8H - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,200.0	7,100.0	6,550.0	6,532.7	50.2	14.9	59.50	156.7	-274.6	2,797.5	2,741.8	55.68	50.245	
9,300.0	7,100.0	6,550.0	6,532.7	52.0	14.9	59.50	156.7	-274.6	2,889.4	2,832.1	57.28	50.443	
9,400.0	7,100.0	6,550.0	6,532.7	53.8	14.9	59.50	156.7	-274.6	2,981.9	2,923.0	58.89	50.632	
9,500.0	7,100.0	6,550.0	6,532.7	55.6	14.9	59.50	156.7	-274.6	3,074.8	3,014.3	60.51	50.813	
9,600.0	7,100.0	6,550.0	6,532.7	57.4	14.9	59.50	156.7	-274.6	3,168.2	3,106.0	62.14	50.988	
9,700.0	7,100.0	6,550.0	6,532.7	59.2	14.9	59.50	156.7	-274.6	3,261.9	3,198.2	63.77	51.155	
9,800.0	7,100.0	6,550.0	6,532.7	61.0	14.9	59.50	156.7	-274.6	3,356.1	3,290.7	65.40	51.316	
9,900.0	7,100.0	6,550.0	6,532.7	62.8	14.9	59.50	156.7	-274.6	3,450.5	3,383.5	67.04	51.470	
10,000.0	7,100.0	6,550.0	6,532.7	64.7	14.9	59.50	156.7	-274.6	3,545.3	3,476.6	68.68	51.619	
10,100.0	7,100.0	6,550.0	6,532.7	66.5	14.9	59.50	156.7	-274.6	3,640.3	3,570.0	70.33	51.762	
10,200.0	7,100.0	6,550.0	6,532.7	68.4	14.9	59.50	156.7	-274.6	3,735.6	3,663.6	71.98	51.899	
10,300.0	7,100.0	6,550.0	6,532.7	70.2	14.9	59.50	156.7	-274.6	3,831.1	3,757.5	73.63	52.032	
10,400.0	7,100.0	6,550.0	6,532.7	72.1	14.9	59.50	156.7	-274.6	3,926.9	3,851.6	75.29	52.159	
10,500.0	7,100.0	6,550.0	6,532.7	73.9	14.9	59.50	156.7	-274.6	4,022.9	3,945.9	76.94	52.283	
10,600.0	7,100.0	6,550.0	6,532.7	75.8	14.9	59.50	156.7	-274.6	4,119.0	4,040.4	78.61	52.401	
10,700.0	7,100.0	6,550.0	6,532.7	77.6	14.9	59.50	156.7	-274.6	4,215.4	4,135.1	80.27	52.516	
10,800.0	7,100.0	6,527.4	6,510.6	79.5	14.9	58.44	153.9	-271.2	4,311.4	4,230.2	81.18	53.111	
10,900.0	7,100.0	6,526.2	6,509.4	81.4	14.9	58.38	153.8	-271.0	4,408.0	4,325.2	82.79	53.246	
11,000.0	7,100.0	6,525.0	6,508.2	83.3	14.9	58.33	153.7	-270.8	4,504.7	4,420.3	84.40	53.377	
11,100.0	7,100.0	6,523.8	6,507.1	85.1	14.9	58.27	153.6	-270.6	4,601.6	4,515.6	86.01	53.503	
11,200.0	7,100.0	6,522.7	6,506.0	87.0	14.9	58.22	153.5	-270.4	4,698.6	4,611.0	87.62	53.625	
11,300.0	7,100.0	6,500.0	6,483.6	88.9	14.8	57.17	151.7	-266.8	4,796.2	4,707.8	88.42	54.242	
11,400.0	7,100.0	6,500.0	6,483.6	90.8	14.8	57.17	151.7	-266.8	4,893.4	4,803.3	90.06	54.334	
11,500.0	7,100.0	6,500.0	6,483.6	92.7	14.8	57.17	151.7	-266.8	4,990.7	4,899.0	91.70	54.423	
11,600.0	7,100.0	6,500.0	6,483.6	94.5	14.8	57.17	151.7	-266.8	5,088.2	4,994.8	93.35	54.509	
11,700.0	7,100.0	6,500.0	6,483.6	96.4	14.8	57.17	151.7	-266.8	5,185.7	5,090.7	94.99	54.592	
11,800.0	7,100.0	6,500.0	6,483.6	98.3	14.8	57.17	151.7	-266.8	5,283.3	5,186.7	96.63	54.673	
11,900.0	7,100.0	6,500.0	6,483.6	100.2	14.8	57.17	151.7	-266.8	5,381.0	5,282.7	98.28	54.752	
12,000.0	7,100.0	6,500.0	6,483.6	102.1	14.8	57.17	151.7	-266.8	5,478.8	5,378.8	99.93	54.828	
12,100.0	7,100.0	6,500.0	6,483.6	104.0	14.8	57.17	151.7	-266.8	5,576.6	5,475.1	101.57	54.902	
12,200.0	7,100.0	6,500.0	6,483.6	105.9	14.8	57.17	151.7	-266.8	5,674.6	5,571.3	103.22	54.975	
12,300.0	7,100.0	6,500.0	6,483.6	107.8	14.8	57.17	151.7	-266.8	5,772.6	5,667.7	104.87	55.045	
12,400.0	7,100.0	6,500.0	6,483.6	109.7	14.8	57.17	151.7	-266.8	5,870.6	5,764.1	106.52	55.113	
12,500.0	7,100.0	6,500.0	6,483.6	111.6	14.8	57.17	151.7	-266.8	5,968.8	5,860.6	108.17	55.179	
12,600.0	7,100.0	6,500.0	6,483.6	113.5	14.8	57.17	151.7	-266.8	6,067.0	5,957.2	109.82	55.244	
12,700.0	7,100.0	6,500.0	6,483.6	115.4	14.8	57.17	151.7	-266.8	6,165.2	6,053.8	111.47	55.307	
12,800.0	7,100.0	6,500.0	6,483.6	117.3	14.8	57.17	151.7	-266.8	6,263.6	6,150.4	113.13	55.368	
12,900.0	7,100.0	6,500.0	6,483.6	119.2	14.8	57.17	151.7	-266.8	6,361.9	6,247.1	114.78	55.427	
13,000.0	7,100.0	6,500.0	6,483.6	121.1	14.8	57.17	151.7	-266.8	6,460.3	6,343.9	116.43	55.486	
13,100.0	7,100.0	6,500.0	6,483.6	123.0	14.8	57.17	151.7	-266.8	6,558.8	6,440.7	118.09	55.542	
13,200.0	7,100.0	6,500.0	6,483.6	124.9	14.8	57.17	151.7	-266.8	6,657.3	6,537.6	119.74	55.597	
13,300.0	7,100.0	6,500.0	6,483.6	126.8	14.8	57.17	151.7	-266.8	6,755.9	6,634.5	121.40	55.651	
13,400.0	7,100.0	6,500.0	6,483.6	128.7	14.8	57.17	151.7	-266.8	6,854.5	6,731.4	123.05	55.704	
13,500.0	7,100.0	6,500.0	6,483.6	130.6	14.8	57.17	151.7	-266.8	6,953.1	6,828.4	124.71	55.755	
13,600.0	7,100.0	6,500.0	6,483.6	132.5	14.8	57.17	151.7	-266.8	7,051.8	6,925.4	126.36	55.805	
13,700.0	7,100.0	6,500.0	6,483.6	134.5	14.8	57.17	151.7	-266.8	7,150.5	7,022.5	128.02	55.854	
13,800.0	7,100.0	6,500.0	6,483.6	136.4	14.8	57.17	151.7	-266.8	7,249.2	7,119.5	129.68	55.902	
13,900.0	7,100.0	6,500.0	6,483.6	138.3	14.8	57.17	151.7	-266.8	7,348.0	7,216.7	131.33	55.949	
14,000.0	7,100.0	6,500.0	6,483.6	140.2	14.8	57.17	151.7	-266.8	7,446.8	7,313.8	132.99	55.994	
14,100.0	7,100.0	6,500.0	6,483.6	142.1	14.8	57.17	151.7	-266.8	7,545.7	7,411.0	134.65	56.039	
14,200.0	7,100.0	6,500.0	6,483.6	144.0	14.8	57.17	151.7	-266.8	7,644.5	7,508.2	136.31	56.082	
14,300.0	7,100.0	6,500.0	6,483.6	145.9	14.8	57.17	151.7	-266.8	7,743.4	7,605.5	137.97	56.125	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Mutual 0780 2-8H - Wellbore #1 - Design #1													Offset Site Error: 0.0 usft	
Survey Program: 0-Sperry MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,400.0	7,100.0	6,500.0	6,483.6	147.8	14.8	57.17	151.7	-266.8	7,842.4	7,702.7	139.63	56.167		
14,500.0	7,100.0	6,500.0	6,483.6	149.8	14.8	57.17	151.7	-266.8	7,941.3	7,800.0	141.29	56.207		
14,600.0	7,100.0	6,500.0	6,483.6	151.7	14.8	57.17	151.7	-266.8	8,040.3	7,897.4	142.95	56.247		
14,700.0	7,100.0	6,500.0	6,483.6	153.6	14.8	57.17	151.7	-266.8	8,139.3	7,994.7	144.61	56.286		
14,800.0	7,100.0	6,500.0	6,483.6	155.5	14.8	57.17	151.7	-266.8	8,238.3	8,092.1	146.27	56.324		
14,900.0	7,100.0	6,500.0	6,483.6	157.4	14.8	57.17	151.7	-266.8	8,337.4	8,189.5	147.93	56.362		
15,000.0	7,100.0	6,500.0	6,483.6	159.3	14.8	57.17	151.7	-266.8	8,436.5	8,286.9	149.59	56.399		
15,100.0	7,100.0	6,500.0	6,483.6	161.2	14.8	57.17	151.7	-266.8	8,535.6	8,384.3	151.25	56.435		
15,200.0	7,100.0	6,500.0	6,483.6	163.2	14.8	57.17	151.7	-266.8	8,634.7	8,481.8	152.91	56.470		
15,300.0	7,100.0	6,500.0	6,483.6	165.1	14.8	57.17	151.7	-266.8	8,733.8	8,579.3	154.57	56.504		
15,400.0	7,100.0	6,500.0	6,483.6	167.0	14.8	57.17	151.7	-266.8	8,833.0	8,676.8	156.23	56.538		
15,500.0	7,100.0	6,500.0	6,483.6	168.9	14.8	57.17	151.7	-266.8	8,932.2	8,774.3	157.89	56.571		
15,600.0	7,100.0	6,500.0	6,483.6	170.8	14.8	57.17	151.7	-266.8	9,031.4	8,871.8	159.55	56.604		
15,700.0	7,100.0	6,500.0	6,483.6	172.8	14.8	57.17	151.7	-266.8	9,130.6	8,969.4	161.22	56.636		
15,800.0	7,100.0	6,500.0	6,483.6	174.7	14.8	57.17	151.7	-266.8	9,229.8	9,066.9	162.88	56.667		
15,900.0	7,100.0	6,500.0	6,483.6	176.6	14.8	57.17	151.7	-266.8	9,329.0	9,164.5	164.54	56.697		
16,000.0	7,100.0	6,500.0	6,483.6	178.5	14.8	57.17	151.7	-266.8	9,428.3	9,262.1	166.20	56.728		
16,100.0	7,100.0	6,500.0	6,483.6	180.4	14.8	57.17	151.7	-266.8	9,527.6	9,359.7	167.87	56.757		
16,200.0	7,100.0	6,500.0	6,483.6	182.3	14.8	57.17	151.7	-266.8	9,626.9	9,457.4	169.53	56.786		
16,300.0	7,100.0	6,500.0	6,483.6	184.3	14.8	57.17	151.7	-266.8	9,726.2	9,555.0	171.19	56.815		
16,400.0	7,100.0	6,500.0	6,483.6	186.2	14.8	57.17	151.7	-266.8	9,825.5	9,652.7	172.85	56.843		
16,500.0	7,100.0	6,500.0	6,483.6	188.1	14.8	57.17	151.7	-266.8	9,924.8	9,750.3	174.52	56.870		

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Mutual 0780 3-8H - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-14.01	150.5	-37.6	155.2				
100.0	100.0	100.0	100.0	0.1	0.1	-14.01	150.5	-37.6	155.2	155.0	0.19	821.843	
200.0	200.0	200.0	200.0	0.3	0.3	-14.01	150.5	-37.6	155.2	154.5	0.64	243.081	
300.0	300.0	300.0	300.0	0.5	0.5	-14.01	150.5	-37.6	155.2	154.1	1.09	142.634	
400.0	400.0	400.0	400.0	0.8	0.8	-14.01	150.5	-37.6	155.2	153.6	1.54	100.928	
500.0	500.0	500.0	500.0	1.0	1.0	-14.01	150.5	-37.6	155.2	153.2	1.99	78.094 CC, ES	
608.2	608.2	606.0	606.0	1.2	1.2	-130.76	151.8	-36.9	157.6	155.2	2.45	64.327	
700.0	699.9	697.8	697.7	1.4	1.4	-131.31	153.3	-36.2	161.1	158.3	2.84	56.826	
800.0	799.8	797.7	797.6	1.6	1.7	-131.88	154.9	-35.4	165.0	161.7	3.26	50.536	
900.0	899.8	897.6	897.5	1.8	1.9	-132.43	156.5	-34.6	168.8	165.1	3.70	45.632	
1,000.0	999.7	997.5	997.4	2.0	2.1	-132.96	158.1	-33.8	172.7	168.6	4.14	41.721	
1,092.2	1,091.8	1,089.6	1,089.5	2.3	2.3	-133.42	159.6	-33.1	176.3	171.7	4.55	38.765	
1,100.0	1,099.6	1,097.4	1,097.3	2.3	2.3	-133.46	159.7	-33.0	176.6	172.0	4.58	38.544	
1,200.4	1,200.0	1,197.8	1,197.7	2.5	2.6	-16.94	161.3	-32.2	179.1	174.1	5.01	35.765	
1,300.0	1,299.6	1,297.4	1,297.2	2.7	2.8	-16.55	162.9	-31.4	180.4	175.0	5.43	33.193	
1,400.0	1,399.6	1,397.4	1,397.2	2.9	3.0	-16.17	164.5	-30.6	181.7	175.8	5.87	30.950	
1,500.0	1,499.6	1,497.3	1,497.2	3.1	3.2	-15.79	166.1	-29.8	183.0	176.7	6.31	29.009	
1,600.0	1,599.6	1,597.3	1,597.1	3.3	3.5	-15.41	167.7	-29.0	184.4	177.6	6.75	27.316	
1,700.0	1,699.6	1,697.3	1,697.1	3.5	3.7	-15.04	169.3	-28.2	185.7	178.5	7.19	25.826	
1,800.0	1,799.6	1,799.8	1,799.6	3.7	3.9	-14.76	170.5	-27.6	186.7	179.1	7.62	24.491	
1,900.0	1,899.6	1,899.8	1,899.6	4.0	4.1	-14.76	170.5	-27.6	186.7	178.7	8.04	23.226	
2,000.0	1,999.6	1,999.8	1,999.6	4.2	4.3	-14.76	170.5	-27.6	186.7	178.2	8.48	22.017	
2,100.0	2,099.6	2,099.8	2,099.6	4.4	4.5	-14.76	170.5	-27.6	186.7	177.8	8.92	20.926	
2,200.0	2,199.6	2,199.8	2,199.6	4.6	4.8	-14.76	170.5	-27.6	186.7	177.3	9.37	19.937	
2,300.0	2,299.6	2,299.8	2,299.6	4.8	5.0	-14.76	170.5	-27.6	186.7	176.9	9.81	19.035	
2,400.0	2,399.6	2,399.8	2,399.6	5.1	5.2	-14.76	170.5	-27.6	186.7	176.5	10.25	18.211	
2,500.0	2,499.6	2,499.8	2,499.6	5.3	5.4	-14.76	170.5	-27.6	186.7	176.0	10.70	17.454	
2,600.0	2,599.6	2,599.8	2,599.6	5.5	5.7	-14.76	170.5	-27.6	186.7	175.6	11.14	16.757	
2,700.0	2,699.6	2,699.8	2,699.6	5.7	5.9	-14.76	170.5	-27.6	186.7	175.1	11.59	16.113	
2,800.0	2,799.6	2,799.8	2,799.6	5.9	6.1	-14.76	170.5	-27.6	186.7	174.7	12.03	15.517	
2,900.0	2,899.6	2,900.4	2,900.2	6.2	6.3	-14.22	170.8	-25.8	186.6	174.1	12.47	14.958	
3,000.0	2,999.6	3,000.7	3,000.4	6.4	6.5	-12.60	171.7	-20.6	186.2	173.3	12.90	14.427	
3,100.0	3,099.6	3,100.6	3,099.8	6.6	6.8	-9.92	173.1	-12.0	185.9	172.5	13.34	13.935	
3,119.5	3,119.1	3,119.9	3,119.1	6.7	6.8	-9.27	173.4	-9.9	185.9	172.4	13.42	13.847	
3,200.0	3,199.6	3,199.7	3,198.2	6.8	7.0	-6.19	175.0	-0.1	186.1	172.4	13.77	13.516	
3,300.0	3,299.6	3,298.6	3,296.1	7.1	7.2	-1.89	177.3	13.8	187.4	173.2	14.20	13.196	
3,400.0	3,399.6	3,397.6	3,394.1	7.3	7.5	2.35	179.6	27.8	189.8	175.2	14.64	12.967	
3,500.0	3,499.6	3,496.6	3,492.1	7.5	7.7	6.46	181.9	41.7	193.2	178.2	15.08	12.816	
3,600.0	3,599.6	3,595.6	3,590.0	7.7	8.0	10.41	184.1	55.7	197.6	182.1	15.52	12.732	
3,700.0	3,699.6	3,694.5	3,688.0	7.9	8.3	14.17	186.4	69.6	202.9	186.9	15.97	12.704	
3,800.0	3,799.6	3,793.5	3,785.9	8.2	8.6	17.74	188.7	83.5	209.1	192.6	16.43	12.725	
3,900.0	3,899.6	3,892.5	3,883.9	8.4	8.8	21.09	191.0	97.5	216.0	199.1	16.89	12.784	
4,000.0	3,999.6	3,991.5	3,981.9	8.6	9.1	24.22	193.2	111.4	223.6	206.2	17.36	12.875	
4,100.0	4,099.6	4,090.4	4,079.8	8.8	9.4	27.14	195.5	125.4	231.8	214.0	17.84	12.991	
4,200.0	4,199.6	4,189.4	4,177.8	9.1	9.7	29.86	197.8	139.3	240.6	222.3	18.33	13.127	
4,300.0	4,299.6	4,288.4	4,275.8	9.3	10.0	32.39	200.1	153.3	249.9	231.1	18.82	13.277	
4,400.0	4,399.6	4,387.6	4,373.9	9.5	10.3	-64.47	202.4	167.2	258.9	239.4	19.47	13.296	
4,500.0	4,499.4	4,487.1	4,472.5	9.7	10.6	-63.13	204.6	181.3	266.6	246.7	19.93	13.377	
4,600.0	4,599.1	4,586.9	4,571.2	9.9	10.9	-62.53	206.9	195.3	272.9	252.4	20.41	13.372	
4,700.0	4,698.3	4,686.8	4,670.1	10.2	11.2	-62.62	209.2	209.4	277.5	256.6	20.90	13.278	
4,800.0	4,797.1	4,786.7	4,768.9	10.4	11.6	-63.37	211.5	223.4	280.5	259.1	21.42	13.099	
4,900.0	4,895.2	4,886.4	4,867.6	10.7	11.9	-64.76	213.8	237.5	282.1	260.1	21.97	12.842	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Mutual 0780 3-8H - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,000.0	4,992.7	4,985.9	4,966.1	10.9	12.2	-66.79	216.1	251.5	282.5	259.9	22.56	12.520	
5,100.0	5,089.2	5,085.0	5,064.2	11.2	12.5	-69.48	218.4	265.5	282.0	258.7	23.21	12.146	
5,200.0	5,184.9	5,183.6	5,161.8	11.6	12.8	-72.82	220.7	279.4	281.0	257.1	23.93	11.742	
5,226.2	5,209.7	5,209.3	5,187.3	11.7	12.9	-73.80	221.3	283.0	280.8	256.6	24.13	11.635	
5,295.4	5,275.3	5,277.2	5,254.5	12.0	13.1	-76.46	222.8	292.6	280.5	255.8	24.68	11.364	
5,300.0	5,279.7	5,281.8	5,259.0	12.0	13.1	-76.63	222.9	293.2	280.5	255.7	24.72	11.348	
5,400.0	5,374.5	5,379.9	5,356.1	12.4	13.5	-80.46	225.2	307.0	281.2	255.6	25.53	11.014	
5,500.0	5,469.4	5,478.1	5,453.3	12.8	13.8	-84.25	227.4	320.8	283.2	256.8	26.36	10.743	
5,600.0	5,564.2	5,576.2	5,550.4	13.3	14.1	-87.98	229.7	334.7	286.5	259.3	27.20	10.532	
5,700.0	5,659.0	5,674.4	5,647.6	13.8	14.4	-91.61	231.9	348.5	290.9	262.9	28.04	10.377	
5,800.0	5,753.8	5,772.5	5,744.7	14.2	14.7	-95.12	234.2	362.3	296.6	267.7	28.87	10.274	
5,900.0	5,848.6	5,870.7	5,841.9	14.7	15.1	-98.49	236.5	376.1	303.4	273.7	29.69	10.219	
6,000.0	5,943.5	5,968.9	5,939.0	15.3	15.4	-101.71	238.7	390.0	311.2	280.7	30.48	10.207 SF	
6,100.0	6,038.3	6,067.0	6,036.2	15.8	15.7	-104.76	241.0	403.8	319.9	288.7	31.26	10.233	
6,200.0	6,133.1	6,165.2	6,133.3	16.3	16.0	-107.65	243.2	417.6	329.5	297.5	32.02	10.292	
6,300.0	6,227.9	6,263.3	6,230.5	16.9	16.4	-110.38	245.5	431.5	340.0	307.2	32.75	10.379	
6,400.0	6,322.7	6,361.5	6,327.6	17.5	16.7	-112.94	247.8	445.3	351.1	317.7	33.47	10.492	
6,500.0	6,417.6	6,459.6	6,424.8	18.0	17.0	-115.34	250.0	459.1	363.0	328.8	34.16	10.624	
6,566.1	6,480.2	6,515.5	6,479.9	18.4	17.2	-116.51	251.9	467.6	371.6	337.0	34.62	10.734	
6,600.0	6,512.4	6,541.5	6,505.3	18.6	17.3	-127.14	253.9	472.7	377.9	343.2	34.70	10.889	
6,650.0	6,559.6	6,578.9	6,541.4	18.8	17.5	-141.47	258.3	481.5	391.3	356.6	34.70	11.276	
6,700.0	6,606.2	6,614.3	6,574.9	19.1	17.7	-153.24	263.9	491.3	409.7	375.2	34.56	11.855	
6,750.0	6,652.0	6,650.0	6,608.0	19.3	17.9	-162.27	271.1	502.7	432.9	398.6	34.29	12.626	
6,800.0	6,696.4	6,675.7	6,631.3	19.6	18.0	-169.54	277.1	511.8	460.6	426.8	33.79	13.634	
6,850.0	6,739.3	6,700.0	6,652.8	19.8	18.2	-175.40	283.6	521.0	492.6	459.5	33.11	14.876	
6,900.0	6,780.3	6,721.9	6,671.8	20.1	18.3	-179.50	289.9	529.9	528.5	496.2	32.29	16.367	
6,950.0	6,819.0	6,739.1	6,686.5	20.3	18.5	174.44	295.3	537.2	567.8	536.5	31.32	18.132	
7,000.0	6,855.2	6,750.0	6,695.6	20.6	18.5	168.53	298.8	542.0	610.0	579.8	30.25	20.168	
7,050.0	6,888.6	6,762.8	6,706.1	20.8	18.6	161.98	303.2	547.8	654.6	625.3	29.32	22.328	
7,100.0	6,918.9	6,769.8	6,711.8	21.1	18.7	152.70	305.6	551.0	700.9	672.2	28.78	24.358	
7,154.6	6,948.3	6,774.2	6,715.4	21.4	18.7	137.91	307.2	553.0	753.0	723.6	29.37	25.640	
7,200.0	6,971.0	6,776.4	6,717.2	21.7	18.8	138.51	308.0	554.1	796.8	767.3	29.46	27.044	
7,304.6	7,023.3	6,781.1	6,720.9	22.4	18.8	139.72	309.6	556.3	898.3	868.6	29.74	30.208	
7,350.0	7,044.4	6,782.1	6,721.8	22.7	18.8	122.96	310.0	556.8	942.8	911.0	31.88	29.577	
7,400.0	7,063.9	6,781.6	6,721.3	23.1	18.8	90.58	309.8	556.5	992.3	957.5	34.86	28.464	
7,450.0	7,079.3	6,779.3	6,719.5	23.6	18.8	56.35	309.0	555.4	1,041.8	1,009.7	32.17	32.381	
7,500.0	7,090.5	6,775.5	6,716.5	24.1	18.7	36.32	307.7	553.7	1,091.0	1,063.1	27.93	39.063	
7,550.0	7,097.4	6,770.4	6,712.3	24.6	18.7	25.93	305.8	551.3	1,139.5	1,114.2	25.33	44.994	
7,604.6	7,100.0	6,750.0	6,695.6	25.2	18.5	19.90	298.8	542.0	1,191.5	1,167.6	23.89	49.867	
7,700.0	7,100.0	6,750.0	6,695.6	26.4	18.5	19.90	298.8	542.0	1,281.0	1,256.6	24.35	52.610	
7,800.0	7,100.0	6,750.0	6,695.6	27.6	18.5	19.90	298.8	542.0	1,375.6	1,350.7	24.87	55.306	
7,900.0	7,100.0	6,726.0	6,675.3	29.0	18.4	20.27	291.1	531.6	1,470.4	1,444.9	25.48	57.717	
8,000.0	7,100.0	6,700.0	6,652.8	30.4	18.2	20.52	283.6	521.0	1,565.9	1,539.8	26.10	59.991	
8,100.0	7,100.0	6,700.0	6,652.8	31.9	18.2	20.52	283.6	521.0	1,661.4	1,634.7	26.75	62.101	
8,200.0	7,100.0	6,700.0	6,652.8	33.4	18.2	20.52	283.6	521.0	1,757.4	1,730.0	27.43	64.059	
8,300.0	7,100.0	6,700.0	6,652.8	35.0	18.2	20.52	283.6	521.0	1,853.9	1,825.7	28.14	65.874	
8,400.0	7,100.0	6,679.4	6,634.6	36.6	18.1	20.64	278.1	513.2	1,950.3	1,921.4	28.87	67.551	
8,500.0	7,100.0	6,672.0	6,627.9	38.2	18.0	20.66	276.2	510.4	2,047.1	2,017.5	29.62	69.111	
8,600.0	7,100.0	6,650.0	6,608.0	39.8	17.9	20.68	271.1	502.7	2,144.3	2,114.0	30.36	70.626	
8,700.0	7,100.0	6,650.0	6,608.0	41.5	17.9	20.68	271.1	502.7	2,241.4	2,210.3	31.15	71.950	
8,800.0	7,100.0	6,650.0	6,608.0	43.2	17.9	20.68	271.1	502.7	2,338.7	2,306.8	31.96	73.183	
8,900.0	7,100.0	6,650.0	6,608.0	44.9	17.9	20.68	271.1	502.7	2,436.3	2,403.5	32.78	74.332	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Mutual 0780 3-8H - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,000.0	7,100.0	6,650.0	6,608.0	46.7	17.9	20.68	271.1	502.7	2,534.0	2,500.4	33.61	75.405	
9,100.0	7,100.0	6,650.0	6,608.0	48.4	17.9	20.68	271.1	502.7	2,631.9	2,597.5	34.45	76.409	
9,200.0	7,100.0	6,650.0	6,608.0	50.2	17.9	20.68	271.1	502.7	2,730.0	2,694.7	35.29	77.349	
9,300.0	7,100.0	6,626.4	6,586.3	52.0	17.7	20.63	266.2	495.0	2,827.7	2,791.7	36.08	78.372	
9,400.0	7,100.0	6,622.0	6,582.2	53.8	17.7	20.61	265.3	493.7	2,925.9	2,889.0	36.93	79.232	
9,500.0	7,100.0	6,600.0	6,561.5	55.6	17.6	20.49	261.5	487.2	3,024.4	2,986.7	37.69	80.237	
9,600.0	7,100.0	6,600.0	6,561.5	57.4	17.6	20.49	261.5	487.2	3,122.6	3,084.0	38.57	80.964	
9,700.0	7,100.0	6,600.0	6,561.5	59.2	17.6	20.49	261.5	487.2	3,220.9	3,181.5	39.45	81.651	
9,800.0	7,100.0	6,600.0	6,561.5	61.0	17.6	20.49	261.5	487.2	3,319.4	3,279.1	40.33	82.300	
9,900.0	7,100.0	6,600.0	6,561.5	62.8	17.6	20.49	261.5	487.2	3,417.9	3,376.7	41.22	82.913	
10,000.0	7,100.0	6,600.0	6,561.5	64.7	17.6	20.49	261.5	487.2	3,516.5	3,474.4	42.12	83.494	
10,100.0	7,100.0	6,600.0	6,561.5	66.5	17.6	20.49	261.5	487.2	3,615.2	3,572.2	43.02	84.045	
10,200.0	7,100.0	6,600.0	6,561.5	68.4	17.6	20.49	261.5	487.2	3,714.0	3,670.1	43.92	84.568	
10,300.0	7,100.0	6,600.0	6,561.5	70.2	17.6	20.49	261.5	487.2	3,812.8	3,768.0	44.82	85.066	
10,400.0	7,100.0	6,600.0	6,561.5	72.1	17.6	20.49	261.5	487.2	3,911.7	3,866.0	45.73	85.539	
10,500.0	7,100.0	6,600.0	6,561.5	73.9	17.6	20.49	261.5	487.2	4,010.6	3,964.0	46.64	85.989	
10,600.0	7,100.0	6,600.0	6,561.5	75.8	17.6	20.49	261.5	487.2	4,109.6	4,062.1	47.55	86.419	
10,700.0	7,100.0	6,600.0	6,561.5	77.6	17.6	20.49	261.5	487.2	4,208.7	4,160.2	48.47	86.829	
10,800.0	7,100.0	6,578.6	6,541.2	79.5	17.5	20.32	258.2	481.4	4,307.4	4,258.2	49.22	87.518	
10,900.0	7,100.0	6,576.4	6,539.0	81.4	17.5	20.30	257.9	480.9	4,406.5	4,356.4	50.11	87.928	
11,000.0	7,100.0	6,574.3	6,537.0	83.3	17.5	20.28	257.6	480.3	4,505.6	4,454.6	51.01	88.321	
11,100.0	7,100.0	6,572.2	6,535.0	85.1	17.5	20.26	257.4	479.8	4,604.7	4,552.8	51.91	88.699	
11,200.0	7,100.0	6,550.0	6,513.6	87.0	17.4	20.03	254.8	474.6	4,704.2	4,651.6	52.60	89.438	
11,300.0	7,100.0	6,550.0	6,513.6	88.9	17.4	20.03	254.8	474.6	4,803.3	4,749.8	53.52	89.755	
11,400.0	7,100.0	6,550.0	6,513.6	90.8	17.4	20.03	254.8	474.6	4,902.5	4,848.0	54.44	90.059	
11,500.0	7,100.0	6,550.0	6,513.6	92.7	17.4	20.03	254.8	474.6	5,001.7	4,946.3	55.36	90.352	
11,600.0	7,100.0	6,550.0	6,513.6	94.5	17.4	20.03	254.8	474.6	5,100.9	5,044.6	56.28	90.633	
11,700.0	7,100.0	6,550.0	6,513.6	96.4	17.4	20.03	254.8	474.6	5,200.2	5,143.0	57.21	90.904	
11,800.0	7,100.0	6,550.0	6,513.6	98.3	17.4	20.03	254.8	474.6	5,299.4	5,241.3	58.13	91.164	
11,900.0	7,100.0	6,550.0	6,513.6	100.2	17.4	20.03	254.8	474.6	5,398.8	5,339.7	59.06	91.416	
12,000.0	7,100.0	6,550.0	6,513.6	102.1	17.4	20.03	254.8	474.6	5,498.1	5,438.1	59.99	91.658	
12,100.0	7,100.0	6,550.0	6,513.6	104.0	17.4	20.03	254.8	474.6	5,597.5	5,536.6	60.91	91.892	
12,200.0	7,100.0	6,550.0	6,513.6	105.9	17.4	20.03	254.8	474.6	5,696.9	5,635.0	61.84	92.118	
12,300.0	7,100.0	6,550.0	6,513.6	107.8	17.4	20.03	254.8	474.6	5,796.3	5,733.5	62.77	92.336	
12,400.0	7,100.0	6,550.0	6,513.6	109.7	17.4	20.03	254.8	474.6	5,895.7	5,832.0	63.71	92.546	
12,500.0	7,100.0	6,550.0	6,513.6	111.6	17.4	20.03	254.8	474.6	5,995.1	5,930.5	64.64	92.750	
12,600.0	7,100.0	6,550.0	6,513.6	113.5	17.4	20.03	254.8	474.6	6,094.6	6,029.0	65.57	92.948	
12,700.0	7,100.0	6,550.0	6,513.6	115.4	17.4	20.03	254.8	474.6	6,194.1	6,127.6	66.50	93.139	
12,800.0	7,100.0	6,550.0	6,513.6	117.3	17.4	20.03	254.8	474.6	6,293.6	6,226.1	67.44	93.324	
12,900.0	7,100.0	6,550.0	6,513.6	119.2	17.4	20.03	254.8	474.6	6,393.1	6,324.7	68.37	93.503	
13,000.0	7,100.0	6,550.0	6,513.6	121.1	17.4	20.03	254.8	474.6	6,492.6	6,423.3	69.31	93.677	
13,100.0	7,100.0	6,550.0	6,513.6	123.0	17.4	20.03	254.8	474.6	6,592.2	6,521.9	70.25	93.845	
13,200.0	7,100.0	6,550.0	6,513.6	124.9	17.4	20.03	254.8	474.6	6,691.7	6,620.6	71.18	94.009	
13,300.0	7,100.0	6,550.0	6,513.6	126.8	17.4	20.03	254.8	474.6	6,791.3	6,719.2	72.12	94.168	
13,400.0	7,100.0	6,550.0	6,513.6	128.7	17.4	20.03	254.8	474.6	6,890.9	6,817.8	73.06	94.322	
13,500.0	7,100.0	6,550.0	6,513.6	130.6	17.4	20.03	254.8	474.6	6,990.5	6,916.5	74.00	94.472	
13,600.0	7,100.0	6,550.0	6,513.6	132.5	17.4	20.03	254.8	474.6	7,090.1	7,015.2	74.93	94.618	
13,700.0	7,100.0	6,550.0	6,513.6	134.5	17.4	20.03	254.8	474.6	7,189.7	7,113.8	75.87	94.760	
13,800.0	7,100.0	6,550.0	6,513.6	136.4	17.4	20.03	254.8	474.6	7,289.3	7,212.5	76.81	94.897	
13,900.0	7,100.0	6,550.0	6,513.6	138.3	17.4	20.03	254.8	474.6	7,389.0	7,311.2	77.75	95.032	
14,000.0	7,100.0	6,550.0	6,513.6	140.2	17.4	20.03	254.8	474.6	7,488.6	7,409.9	78.69	95.162	
14,100.0	7,100.0	6,550.0	6,513.6	142.1	17.4	20.03	254.8	474.6	7,588.3	7,508.6	79.63	95.289	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Mutual 0780 3-8H - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,200.0	7,100.0	6,550.0	6,513.6	144.0	17.4	20.03	254.8	474.6	7,687.9	7,607.4	80.58	95.413		
14,300.0	7,100.0	6,550.0	6,513.6	145.9	17.4	20.03	254.8	474.6	7,787.6	7,706.1	81.52	95.534		
14,400.0	7,100.0	6,550.0	6,513.6	147.8	17.4	20.03	254.8	474.6	7,887.3	7,804.8	82.46	95.651		
14,500.0	7,100.0	6,550.0	6,513.6	149.8	17.4	20.03	254.8	474.6	7,987.0	7,903.6	83.40	95.766		
14,600.0	7,100.0	6,550.0	6,513.6	151.7	17.4	20.03	254.8	474.6	8,086.7	8,002.3	84.34	95.878		
14,700.0	7,100.0	6,550.0	6,513.6	153.6	17.4	20.03	254.8	474.6	8,186.4	8,101.1	85.29	95.987		
14,800.0	7,100.0	6,550.0	6,513.6	155.5	17.4	20.03	254.8	474.6	8,286.1	8,199.9	86.23	96.094		
14,900.0	7,100.0	6,550.0	6,513.6	157.4	17.4	20.03	254.8	474.6	8,385.8	8,298.6	87.17	96.198		
15,000.0	7,100.0	6,526.6	6,490.8	159.3	17.3	19.75	252.7	469.7	8,485.2	8,397.6	87.62	96.836		
15,100.0	7,100.0	6,525.9	6,490.1	161.2	17.3	19.74	252.6	469.6	8,584.9	8,496.4	88.55	96.953		
15,200.0	7,100.0	6,525.3	6,489.5	163.2	17.3	19.73	252.6	469.4	8,684.6	8,595.1	89.47	97.066		
15,300.0	7,100.0	6,524.6	6,488.9	165.1	17.3	19.72	252.5	469.3	8,784.3	8,693.9	90.39	97.178		
15,400.0	7,100.0	6,524.0	6,488.3	167.0	17.3	19.71	252.5	469.2	8,884.1	8,792.8	91.32	97.287		
15,500.0	7,100.0	6,523.4	6,487.7	168.9	17.3	19.71	252.4	469.1	8,983.8	8,891.6	92.24	97.393		
15,600.0	7,100.0	6,500.0	6,464.7	170.8	17.2	19.38	251.1	465.0	9,083.9	8,991.3	92.59	98.109		
15,700.0	7,100.0	6,500.0	6,464.7	172.8	17.2	19.38	251.1	465.0	9,183.6	9,090.1	93.52	98.197		
15,800.0	7,100.0	6,500.0	6,464.7	174.7	17.2	19.38	251.1	465.0	9,283.3	9,188.9	94.46	98.283		
15,900.0	7,100.0	6,500.0	6,464.7	176.6	17.2	19.38	251.1	465.0	9,383.1	9,287.7	95.39	98.366		
16,000.0	7,100.0	6,500.0	6,464.7	178.5	17.2	19.38	251.1	465.0	9,482.8	9,386.5	96.32	98.449		
16,100.0	7,100.0	6,500.0	6,464.7	180.4	17.2	19.38	251.1	465.0	9,582.6	9,485.3	97.26	98.529		
16,200.0	7,100.0	6,500.0	6,464.7	182.3	17.2	19.38	251.1	465.0	9,682.3	9,584.1	98.19	98.608		
16,300.0	7,100.0	6,500.0	6,464.7	184.3	17.2	19.38	251.1	465.0	9,782.1	9,683.0	99.12	98.685		
16,400.0	7,100.0	6,500.0	6,464.7	186.2	17.2	19.38	251.1	465.0	9,881.9	9,781.8	100.06	98.761		
16,500.0	7,100.0	6,500.0	6,464.7	188.1	17.2	19.38	251.1	465.0	9,981.6	9,880.6	100.99	98.835		

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Mutual 0780 4-8H - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-6.69	150.2	-17.6	151.3				
100.0	100.0	100.0	100.0	0.1	0.1	-6.69	150.2	-17.6	151.3	151.1	0.19	801.195	
200.0	200.0	200.0	200.0	0.3	0.3	-6.69	150.2	-17.6	151.3	150.6	0.64	236.973	
300.0	300.0	300.0	300.0	0.5	0.5	-6.69	150.2	-17.6	151.3	150.2	1.09	139.050	
400.0	400.0	400.0	400.0	0.8	0.8	-6.69	150.2	-17.6	151.3	149.7	1.54	98.392	
500.0	500.0	500.0	500.0	1.0	1.0	-6.69	150.2	-17.6	151.3	149.3	1.99	76.132 CC	
608.2	608.2	608.8	608.7	1.2	1.2	-123.12	150.2	-15.6	152.2	149.7	2.44	62.321	
700.0	699.9	700.6	700.5	1.4	1.4	-123.08	150.2	-12.5	153.7	150.9	2.81	54.618	
800.0	799.8	800.5	800.4	1.6	1.6	-123.04	150.2	-9.2	155.4	152.2	3.24	48.025	
900.0	899.8	900.5	900.3	1.8	1.8	-123.00	150.2	-5.9	157.1	153.4	3.67	42.829	
1,000.0	999.7	1,000.5	1,000.3	2.0	2.1	-122.96	150.2	-2.6	158.8	154.7	4.11	38.659	
1,092.2	1,091.8	1,092.7	1,092.4	2.3	2.3	-122.92	150.2	0.4	160.3	155.8	4.52	35.498	
1,100.0	1,099.6	1,100.5	1,100.2	2.3	2.3	-122.91	150.2	0.7	160.4	155.9	4.55	35.261	
1,200.4	1,200.0	1,200.3	1,200.0	2.5	2.5	-6.27	150.2	2.4	161.2	156.3	4.93	32.726	
1,300.0	1,299.6	1,299.9	1,299.6	2.7	2.7	-6.27	150.2	2.4	161.2	155.9	5.33	30.234	
1,400.0	1,399.6	1,399.9	1,399.6	2.9	2.9	-6.27	150.2	2.4	161.2	155.4	5.76	27.992	
1,500.0	1,499.6	1,499.9	1,499.6	3.1	3.1	-6.27	150.2	2.4	161.2	155.0	6.19	26.046	
1,600.0	1,599.6	1,599.9	1,599.6	3.3	3.3	-6.27	150.2	2.4	161.2	154.6	6.62	24.343	
1,700.0	1,699.6	1,699.9	1,699.6	3.5	3.6	-6.27	150.2	2.4	161.2	154.1	7.06	22.843	
1,800.0	1,799.6	1,799.9	1,799.6	3.7	3.8	-6.27	150.2	2.4	161.2	153.7	7.49	21.512	
1,900.0	1,899.6	1,899.9	1,899.6	4.0	4.0	-6.27	150.2	2.4	161.2	153.3	7.93	20.323	
2,000.0	1,999.6	1,999.9	1,999.6	4.2	4.2	-6.27	150.2	2.4	161.2	152.8	8.37	19.257	
2,100.0	2,099.6	2,099.9	2,099.6	4.4	4.4	-6.27	150.2	2.4	161.2	152.4	8.81	18.294	
2,200.0	2,199.6	2,199.9	2,199.6	4.6	4.7	-6.27	150.2	2.4	161.2	152.0	9.25	17.422	
2,300.0	2,299.6	2,299.9	2,299.6	4.8	4.9	-6.27	150.2	2.4	161.2	151.5	9.69	16.628	
2,400.0	2,399.6	2,399.9	2,399.6	5.1	5.1	-6.27	150.2	2.4	161.2	151.1	10.14	15.902	
2,500.0	2,499.6	2,499.9	2,499.6	5.3	5.3	-6.27	150.2	2.4	161.2	150.6	10.58	15.236	
2,600.0	2,599.6	2,599.9	2,599.6	5.5	5.6	-6.27	150.2	2.4	161.2	150.2	11.02	14.622	
2,700.0	2,699.6	2,699.9	2,699.6	5.7	5.8	-6.27	150.2	2.4	161.2	149.7	11.47	14.056	
2,800.0	2,799.6	2,799.9	2,799.6	5.9	6.0	-6.27	150.2	2.4	161.2	149.3	11.91	13.531	
2,900.0	2,899.6	2,899.9	2,899.6	6.2	6.2	-6.27	150.2	2.4	161.2	148.8	12.36	13.044	
3,000.0	2,999.6	2,999.9	2,999.6	6.4	6.4	-6.27	150.2	2.4	161.2	148.4	12.80	12.591	
3,100.0	3,099.6	3,099.9	3,099.6	6.6	6.7	-6.27	150.2	2.4	161.2	148.0	13.25	12.167	
3,200.0	3,199.6	3,200.5	3,200.2	6.8	6.9	-5.64	150.2	4.2	161.0	147.3	13.69	11.763	
3,300.0	3,299.6	3,300.8	3,300.3	7.1	7.1	-3.77	150.2	9.5	160.6	146.5	14.12	11.372	
3,400.0	3,399.6	3,400.7	3,399.8	7.3	7.3	-0.65	150.2	18.2	160.3	145.7	14.55	11.011	
3,416.8	3,416.5	3,417.4	3,416.5	7.3	7.4	0.00	150.2	20.0	160.2	145.6	14.63	10.955	
3,500.0	3,499.6	3,499.8	3,498.2	7.5	7.6	3.68	150.2	30.3	160.6	145.6	14.99	10.715 ES	
3,600.0	3,599.6	3,597.9	3,595.1	7.7	7.8	9.08	150.2	45.6	162.3	146.9	15.42	10.530	
3,700.0	3,699.6	3,694.9	3,690.3	7.9	8.1	15.36	150.2	64.0	166.4	150.6	15.85	10.501	
3,800.0	3,799.6	3,790.5	3,783.5	8.2	8.4	22.17	150.2	85.3	173.8	157.5	16.29	10.669	
3,900.0	3,899.6	3,884.6	3,874.5	8.4	8.7	29.12	150.2	109.3	185.1	168.4	16.74	11.057	
4,000.0	3,999.6	3,980.7	3,967.0	8.6	9.0	35.76	150.2	135.4	200.1	182.9	17.23	11.613	
4,100.0	4,099.6	4,077.0	4,059.6	8.8	9.4	41.45	150.2	161.5	217.5	199.7	17.76	12.250	
4,200.0	4,199.6	4,173.2	4,152.3	9.1	9.8	46.30	150.2	187.7	236.7	218.4	18.31	12.929	
4,300.0	4,299.6	4,269.5	4,244.9	9.3	10.2	50.42	150.2	213.8	257.4	238.5	18.89	13.623	
4,400.0	4,399.6	4,366.1	4,337.9	9.5	10.6	-45.03	150.2	240.1	277.9	258.5	19.40	14.324	
4,500.0	4,499.4	4,463.6	4,431.8	9.7	11.1	-42.40	150.2	266.6	296.8	276.9	19.86	14.945	
4,600.0	4,599.1	4,561.9	4,526.3	9.9	11.5	-40.50	150.2	293.3	313.4	293.1	20.32	15.426	
4,700.0	4,698.3	4,660.6	4,621.3	10.2	12.0	-39.20	150.2	320.1	327.6	306.8	20.79	15.760	
4,800.0	4,797.1	4,759.9	4,716.9	10.4	12.5	-38.39	150.2	347.1	339.2	317.9	21.27	15.948	
4,900.0	4,895.2	4,859.5	4,812.7	10.7	12.9	-38.01	150.2	374.1	348.1	326.3	21.77	15.990	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

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Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

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Reference		Offset		Semi Major Axis			Distance							Warning
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5,000.0	4,992.7	4,959.3	4,908.7	10.9	13.4	-38.03	150.2	401.3	354.3	332.0	22.30	15.890		
5,100.0	5,089.2	5,059.2	5,004.9	11.2	13.9	-38.43	150.2	428.4	357.7	334.9	22.85	15.652		
5,200.0	5,184.9	5,159.0	5,101.0	11.6	14.5	-39.20	150.2	455.5	358.4	335.0	23.46	15.280		
5,226.2	5,209.7	5,185.2	5,126.2	11.7	14.6	-39.46	150.2	462.6	358.2	334.6	23.63	15.162		
5,300.0	5,279.7	5,258.8	5,197.0	12.0	15.0	-40.24	150.2	482.7	357.3	333.2	24.16	14.791		
5,400.0	5,374.5	5,358.6	5,293.1	12.4	15.5	-41.29	150.2	509.8	356.2	331.3	24.91	14.301		
5,500.0	5,469.4	5,458.4	5,389.1	12.8	16.0	-42.35	150.2	536.9	355.2	329.5	25.69	13.826		
5,600.0	5,564.2	5,558.2	5,485.1	13.3	16.5	-43.42	150.2	564.0	354.4	327.8	26.51	13.367		
5,700.0	5,659.0	5,657.9	5,581.1	13.8	17.1	-44.49	150.2	591.1	353.6	326.3	27.36	12.924		
5,800.0	5,753.8	5,757.7	5,677.2	14.2	17.6	-45.56	150.2	618.2	353.0	324.8	28.25	12.497		
5,900.0	5,848.6	5,857.5	5,773.2	14.7	18.1	-46.64	150.2	645.3	352.5	323.3	29.16	12.087		
6,000.0	5,943.5	5,957.3	5,869.2	15.3	18.7	-47.72	150.2	672.4	352.1	322.0	30.11	11.694		
6,100.0	6,038.3	6,057.0	5,965.2	15.8	19.2	-48.80	150.2	699.5	351.9	320.8	31.09	11.318		
6,200.0	6,133.1	6,156.8	6,061.2	16.3	19.7	-49.88	150.2	726.6	351.8	319.7	32.10	10.959		
6,238.3	6,169.4	6,195.1	6,098.0	16.6	20.0	-50.30	150.2	737.0	351.8	319.3	32.50	10.825		
6,300.0	6,227.9	6,256.6	6,157.3	16.9	20.3	-50.97	150.2	753.8	351.8	318.7	33.14	10.616		
6,400.0	6,322.7	6,356.4	6,253.3	17.5	20.8	-52.05	150.2	780.9	352.0	317.7	34.21	10.289		
6,500.0	6,417.6	6,456.2	6,349.3	18.0	21.4	-53.13	150.2	808.0	352.2	316.9	35.30	9.978		
6,566.1	6,480.2	6,522.1	6,412.8	18.4	21.7	-53.85	150.2	825.9	352.5	316.4	36.03	9.781		
6,600.0	6,512.4	6,550.0	6,439.6	18.6	21.9	-64.23	150.2	833.5	353.5	317.1	36.38	9.718 SF		
6,650.0	6,559.6	6,585.0	6,473.0	18.8	22.1	-78.25	150.5	844.2	359.7	323.0	36.68	9.805		
6,700.0	6,606.2	6,616.6	6,502.4	19.1	22.3	-89.63	151.2	855.6	371.8	335.0	36.78	10.108		
6,750.0	6,652.0	6,650.0	6,532.8	19.3	22.6	-98.23	152.3	869.3	389.5	352.8	36.71	10.611		
6,800.0	6,696.4	6,674.7	6,554.8	19.6	22.8	-104.19	153.3	880.6	412.5	376.1	36.39	11.335		
6,850.0	6,739.3	6,700.0	6,576.8	19.8	23.0	-108.14	154.7	893.1	440.3	404.3	35.92	12.256		
6,900.0	6,780.3	6,723.6	6,596.7	20.1	23.3	-110.39	156.1	905.5	472.3	437.0	35.32	13.371		
6,950.0	6,819.0	6,750.0	6,618.5	20.3	23.6	-111.34	157.9	920.4	508.2	473.5	34.68	14.653		
7,000.0	6,855.2	6,761.5	6,627.7	20.6	23.7	-110.24	158.8	927.2	547.0	513.1	33.92	16.125		
7,050.0	6,888.6	6,776.4	6,639.4	20.8	23.9	-107.77	160.0	936.3	588.6	555.3	33.32	17.666		
7,100.0	6,918.9	6,788.5	6,648.9	21.1	24.0	-103.35	161.1	943.9	632.3	599.4	32.95	19.191		
7,154.6	6,948.3	6,800.0	6,657.6	21.4	24.2	-95.94	162.1	951.2	681.9	649.0	32.93	20.712		
7,200.0	6,971.0	6,800.0	6,657.6	21.7	24.2	-95.94	162.1	951.2	724.0	690.7	33.31	21.736		
7,304.6	7,023.3	6,821.4	6,673.5	22.4	24.4	-98.65	164.2	965.4	821.7	787.4	34.33	23.935		
7,350.0	7,044.4	6,827.1	6,677.6	22.7	24.5	-86.54	164.7	969.2	864.5	829.8	34.72	24.899		
7,400.0	7,063.9	6,831.7	6,680.9	23.1	24.6	-72.95	165.2	972.4	911.8	877.2	34.69	26.286		
7,450.0	7,079.3	6,834.6	6,683.1	23.6	24.6	-60.48	165.5	974.4	959.0	925.1	33.94	28.256		
7,500.0	7,090.5	6,836.0	6,684.0	24.1	24.6	-49.97	165.6	975.4	1,005.7	973.0	32.73	30.731		
7,550.0	7,097.4	6,835.9	6,684.0	24.6	24.6	-41.55	165.6	975.3	1,051.7	1,020.2	31.47	33.416		
7,604.6	7,100.0	6,834.1	6,682.7	25.2	24.6	-34.40	165.5	974.1	1,100.9	1,070.4	30.44	36.164		
7,700.0	7,100.0	6,829.7	6,679.5	26.4	24.6	-33.90	165.0	971.0	1,186.4	1,155.3	31.09	38.165		
7,800.0	7,100.0	6,825.1	6,676.2	27.6	24.5	-33.40	164.5	967.9	1,277.5	1,245.7	31.79	40.182		
7,900.0	7,100.0	6,820.7	6,673.0	29.0	24.4	-32.92	164.1	964.9	1,369.8	1,337.3	32.53	42.113		
8,000.0	7,100.0	6,816.4	6,669.8	30.4	24.4	-32.46	163.7	962.0	1,463.1	1,429.9	33.28	43.961		
8,100.0	7,100.0	6,800.0	6,657.6	31.9	24.2	-30.71	162.1	951.2	1,557.4	1,523.8	33.54	46.426		
8,200.0	7,100.0	6,800.0	6,657.6	33.4	24.2	-30.71	162.1	951.2	1,652.1	1,617.6	34.48	47.910		
8,300.0	7,100.0	6,800.0	6,657.6	35.0	24.2	-30.71	162.1	951.2	1,747.4	1,711.9	35.44	49.301		
8,400.0	7,100.0	6,800.0	6,657.6	36.6	24.2	-30.71	162.1	951.2	1,843.2	1,806.8	36.42	50.606		
8,500.0	7,100.0	6,800.0	6,657.6	38.2	24.2	-30.71	162.1	951.2	1,939.4	1,902.0	37.42	51.830		
8,600.0	7,100.0	6,800.0	6,657.6	39.8	24.2	-30.71	162.1	951.2	2,036.0	1,997.6	38.43	52.980		
8,700.0	7,100.0	6,800.0	6,657.6	41.5	24.2	-30.71	162.1	951.2	2,132.9	2,093.4	39.45	54.061		
8,800.0	7,100.0	6,800.0	6,657.6	43.2	24.2	-30.71	162.1	951.2	2,230.1	2,189.6	40.49	55.077		
8,900.0	7,100.0	6,782.8	6,644.4	44.9	24.0	-28.93	160.6	940.2	2,327.3	2,286.8	40.54	57.402		

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9,000.0	7,100.0	6,779.5	6,641.9	46.7	23.9	-28.60	160.3	938.2	2,424.9	2,383.5	41.37	58.611	
9,100.0	7,100.0	6,776.3	6,639.4	48.4	23.9	-28.28	160.0	936.2	2,522.6	2,480.4	42.20	59.775	
9,200.0	7,100.0	6,773.2	6,637.0	50.2	23.8	-27.97	159.8	934.3	2,620.5	2,577.5	43.03	60.897	
9,300.0	7,100.0	6,770.2	6,634.6	52.0	23.8	-27.67	159.5	932.5	2,718.6	2,674.7	43.86	61.980	
9,400.0	7,100.0	6,767.3	6,632.3	53.8	23.8	-27.38	159.3	930.7	2,816.8	2,772.1	44.69	63.025	
9,500.0	7,100.0	6,750.0	6,618.5	55.6	23.6	-25.72	157.9	920.4	2,915.1	2,870.6	44.59	65.376	
9,600.0	7,100.0	6,750.0	6,618.5	57.4	23.6	-25.72	157.9	920.4	3,013.5	2,967.9	45.58	66.112	
9,700.0	7,100.0	6,750.0	6,618.5	59.2	23.6	-25.72	157.9	920.4	3,112.0	3,065.4	46.58	66.813	
9,800.0	7,100.0	6,750.0	6,618.5	61.0	23.6	-25.72	157.9	920.4	3,210.5	3,163.0	47.58	67.480	
9,900.0	7,100.0	6,750.0	6,618.5	62.8	23.6	-25.72	157.9	920.4	3,309.2	3,260.6	48.58	68.116	
10,000.0	7,100.0	6,750.0	6,618.5	64.7	23.6	-25.72	157.9	920.4	3,407.9	3,358.3	49.59	68.723	
10,100.0	7,100.0	6,750.0	6,618.5	66.5	23.6	-25.72	157.9	920.4	3,506.7	3,456.1	50.60	69.303	
10,200.0	7,100.0	6,750.0	6,618.5	68.4	23.6	-25.72	157.9	920.4	3,605.6	3,554.0	51.61	69.857	
10,300.0	7,100.0	6,750.0	6,618.5	70.2	23.6	-25.72	157.9	920.4	3,704.5	3,651.9	52.63	70.387	
10,400.0	7,100.0	6,750.0	6,618.5	72.1	23.6	-25.72	157.9	920.4	3,803.5	3,749.8	53.65	70.895	
10,500.0	7,100.0	6,750.0	6,618.5	73.9	23.6	-25.72	157.9	920.4	3,902.5	3,847.8	54.67	71.381	
10,600.0	7,100.0	6,750.0	6,618.5	75.8	23.6	-25.72	157.9	920.4	4,001.6	3,945.9	55.70	71.848	
10,700.0	7,100.0	6,750.0	6,618.5	77.6	23.6	-25.72	157.9	920.4	4,100.7	4,044.0	56.72	72.296	
10,800.0	7,100.0	6,750.0	6,618.5	79.5	23.6	-25.72	157.9	920.4	4,199.9	4,142.1	57.75	72.726	
10,900.0	7,100.0	6,730.6	6,602.6	81.4	23.4	-23.95	156.6	909.4	4,298.9	4,241.9	57.09	75.306	
11,000.0	7,100.0	6,728.6	6,600.9	83.3	23.3	-23.77	156.4	908.3	4,398.2	4,340.2	57.91	75.952	
11,100.0	7,100.0	6,726.6	6,599.2	85.1	23.3	-23.60	156.3	907.2	4,497.4	4,438.7	58.73	76.580	
11,200.0	7,100.0	6,724.7	6,597.6	87.0	23.3	-23.43	156.2	906.1	4,596.7	4,537.1	59.55	77.193	
11,300.0	7,100.0	6,722.7	6,596.0	88.9	23.3	-23.26	156.0	905.1	4,696.0	4,635.6	60.37	77.790	
11,400.0	7,100.0	6,720.9	6,594.5	90.8	23.3	-23.10	155.9	904.1	4,795.3	4,734.1	61.19	78.372	
11,500.0	7,100.0	6,719.0	6,592.9	92.7	23.2	-22.94	155.8	903.1	4,894.7	4,832.6	62.00	78.940	
11,600.0	7,100.0	6,700.0	6,576.8	94.5	23.0	-21.36	154.7	893.1	4,994.1	4,932.8	61.30	81.476	
11,700.0	7,100.0	6,700.0	6,576.8	96.4	23.0	-21.36	154.7	893.1	5,093.5	5,031.3	62.25	81.825	
11,800.0	7,100.0	6,700.0	6,576.8	98.3	23.0	-21.36	154.7	893.1	5,192.9	5,129.7	63.20	82.162	
11,900.0	7,100.0	6,700.0	6,576.8	100.2	23.0	-21.36	154.7	893.1	5,292.3	5,228.2	64.16	82.488	
12,000.0	7,100.0	6,700.0	6,576.8	102.1	23.0	-21.36	154.7	893.1	5,391.8	5,326.7	65.11	82.804	
12,100.0	7,100.0	6,700.0	6,576.8	104.0	23.0	-21.36	154.7	893.1	5,491.2	5,425.2	66.07	83.110	
12,200.0	7,100.0	6,700.0	6,576.8	105.9	23.0	-21.36	154.7	893.1	5,590.7	5,523.7	67.03	83.407	
12,300.0	7,100.0	6,700.0	6,576.8	107.8	23.0	-21.36	154.7	893.1	5,690.2	5,622.2	67.99	83.694	
12,400.0	7,100.0	6,700.0	6,576.8	109.7	23.0	-21.36	154.7	893.1	5,789.8	5,720.8	68.95	83.973	
12,500.0	7,100.0	6,700.0	6,576.8	111.6	23.0	-21.36	154.7	893.1	5,889.3	5,819.4	69.91	84.243	
12,600.0	7,100.0	6,700.0	6,576.8	113.5	23.0	-21.36	154.7	893.1	5,988.8	5,918.0	70.87	84.506	
12,700.0	7,100.0	6,700.0	6,576.8	115.4	23.0	-21.36	154.7	893.1	6,088.4	6,016.6	71.83	84.761	
12,800.0	7,100.0	6,700.0	6,576.8	117.3	23.0	-21.36	154.7	893.1	6,188.0	6,115.2	72.79	85.008	
12,900.0	7,100.0	6,700.0	6,576.8	119.2	23.0	-21.36	154.7	893.1	6,287.6	6,213.8	73.76	85.249	
13,000.0	7,100.0	6,700.0	6,576.8	121.1	23.0	-21.36	154.7	893.1	6,387.2	6,312.5	74.72	85.483	
13,100.0	7,100.0	6,700.0	6,576.8	123.0	23.0	-21.36	154.7	893.1	6,486.8	6,411.1	75.68	85.710	
13,200.0	7,100.0	6,700.0	6,576.8	124.9	23.0	-21.36	154.7	893.1	6,586.4	6,509.8	76.65	85.932	
13,300.0	7,100.0	6,700.0	6,576.8	126.8	23.0	-21.36	154.7	893.1	6,686.1	6,608.5	77.61	86.147	
13,400.0	7,100.0	6,700.0	6,576.8	128.7	23.0	-21.36	154.7	893.1	6,785.7	6,707.2	78.58	86.357	
13,500.0	7,100.0	6,700.0	6,576.8	130.6	23.0	-21.36	154.7	893.1	6,885.4	6,805.8	79.54	86.561	
13,600.0	7,100.0	6,700.0	6,576.8	132.5	23.0	-21.36	154.7	893.1	6,985.1	6,904.6	80.51	86.760	
13,700.0	7,100.0	6,700.0	6,576.8	134.5	23.0	-21.36	154.7	893.1	7,084.7	7,003.3	81.48	86.954	
13,800.0	7,100.0	6,700.0	6,576.8	136.4	23.0	-21.36	154.7	893.1	7,184.4	7,102.0	82.44	87.143	
13,900.0	7,100.0	6,700.0	6,576.8	138.3	23.0	-21.36	154.7	893.1	7,284.1	7,200.7	83.41	87.328	
14,000.0	7,100.0	6,700.0	6,576.8	140.2	23.0	-21.36	154.7	893.1	7,383.8	7,299.5	84.38	87.508	
14,100.0	7,100.0	6,700.0	6,576.8	142.1	23.0	-21.36	154.7	893.1	7,483.5	7,398.2	85.35	87.683	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Mutual 0780 4-8H - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-Sperry MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,200.0	7,100.0	6,700.0	6,576.8	144.0	23.0	-21.36	154.7	893.1	7,583.3	7,497.0	86.32	87.854		
14,300.0	7,100.0	6,679.6	6,559.1	145.9	22.9	-19.78	153.6	882.9	7,682.9	7,598.1	84.82	90.580		
14,400.0	7,100.0	6,678.5	6,558.1	147.8	22.9	-19.70	153.5	882.4	7,782.6	7,697.0	85.63	90.885		
14,500.0	7,100.0	6,677.5	6,557.2	149.8	22.8	-19.62	153.5	881.9	7,882.3	7,795.9	86.44	91.183		
14,600.0	7,100.0	6,676.4	6,556.3	151.7	22.8	-19.54	153.4	881.4	7,982.1	7,894.8	87.26	91.476		
14,700.0	7,100.0	6,675.4	6,555.4	153.6	22.8	-19.47	153.4	880.9	8,081.8	7,993.7	88.07	91.764		
14,800.0	7,100.0	6,674.4	6,554.5	155.5	22.8	-19.39	153.3	880.4	8,181.6	8,092.7	88.88	92.047		
14,900.0	7,100.0	6,673.4	6,553.6	157.4	22.8	-19.32	153.3	880.0	8,281.3	8,191.6	89.70	92.324		
15,000.0	7,100.0	6,672.4	6,552.7	159.3	22.8	-19.25	153.2	879.5	8,381.1	8,290.6	90.51	92.597		
15,100.0	7,100.0	6,671.4	6,551.9	161.2	22.8	-19.18	153.2	879.0	8,480.8	8,389.5	91.32	92.864		
15,200.0	7,100.0	6,670.4	6,551.0	163.2	22.8	-19.11	153.1	878.6	8,580.6	8,488.5	92.14	93.127		
15,300.0	7,100.0	6,650.0	6,532.8	165.1	22.6	-17.69	152.3	869.3	8,680.5	8,589.8	90.70	95.710		
15,400.0	7,100.0	6,650.0	6,532.8	167.0	22.6	-17.69	152.3	869.3	8,780.2	8,688.6	91.60	95.855		
15,500.0	7,100.0	6,650.0	6,532.8	168.9	22.6	-17.69	152.3	869.3	8,880.0	8,787.5	92.50	95.997		
15,600.0	7,100.0	6,650.0	6,532.8	170.8	22.6	-17.69	152.3	869.3	8,979.8	8,886.4	93.41	96.136		
15,700.0	7,100.0	6,650.0	6,532.8	172.8	22.6	-17.69	152.3	869.3	9,079.6	8,985.3	94.31	96.273		
15,800.0	7,100.0	6,650.0	6,532.8	174.7	22.6	-17.69	152.3	869.3	9,179.4	9,084.1	95.22	96.406		
15,900.0	7,100.0	6,650.0	6,532.8	176.6	22.6	-17.69	152.3	869.3	9,279.2	9,183.0	96.12	96.537		
16,000.0	7,100.0	6,650.0	6,532.8	178.5	22.6	-17.69	152.3	869.3	9,378.9	9,281.9	97.02	96.665		
16,100.0	7,100.0	6,650.0	6,532.8	180.4	22.6	-17.69	152.3	869.3	9,478.8	9,380.8	97.93	96.791		
16,200.0	7,100.0	6,650.0	6,532.8	182.3	22.6	-17.69	152.3	869.3	9,578.6	9,479.7	98.83	96.915		
16,300.0	7,100.0	6,650.0	6,532.8	184.3	22.6	-17.69	152.3	869.3	9,678.4	9,578.6	99.74	97.036		
16,400.0	7,100.0	6,650.0	6,532.8	186.2	22.6	-17.69	152.3	869.3	9,778.2	9,677.5	100.65	97.155		
16,500.0	7,100.0	6,650.0	6,532.8	188.1	22.6	-17.69	152.3	869.3	9,878.0	9,776.4	101.55	97.271		
16,600.0	7,100.0	6,650.0	6,532.8	190.0	22.6	-17.69	152.3	869.3	9,977.8	9,875.4	102.46	97.385		

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Mutual 7-17H - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 1031-Sperry MWD												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	3.0	3.0	0.0	0.0	-103.46	-83.3	-347.8	357.6				
100.0	100.0	104.7	104.7	0.1	0.1	-103.47	-83.2	-347.5	357.4	357.2	0.22	1,657.366	
200.0	200.0	206.4	206.3	0.3	0.2	-103.48	-83.1	-346.8	356.7	356.1	0.56	639.093	
300.0	300.0	308.0	308.0	0.5	0.4	-103.50	-83.0	-345.6	355.5	354.6	0.90	394.767	
400.0	400.0	409.6	409.6	0.8	0.5	-103.52	-82.7	-344.0	353.9	352.6	1.24	284.700	
500.0	500.0	511.2	511.2	1.0	0.6	-103.56	-82.4	-341.9	351.8	350.2	1.59	221.892	
605.1	605.1	618.0	617.9	1.2	0.7	140.05	-82.1	-339.1	350.5	348.6	1.90	184.389	
608.2	608.2	621.2	621.1	1.2	0.7	140.06	-82.1	-339.1	350.5	348.6	1.91	183.438	
700.0	699.9	714.4	714.3	1.4	0.8	140.39	-81.7	-336.2	350.4	348.2	2.20	159.630	
800.0	799.8	816.0	815.8	1.6	1.0	140.74	-81.2	-332.7	349.9	347.3	2.51	139.170	
900.0	899.8	917.6	917.3	1.8	1.1	141.08	-80.6	-328.7	348.8	346.0	2.84	122.882	
1,000.0	999.7	1,019.2	1,018.8	2.0	1.2	141.42	-80.0	-324.3	347.4	344.2	3.17	109.650	
1,017.7	1,017.4	1,031.0	1,030.6	2.1	1.2	141.46	-79.9	-323.7	347.1	343.9	3.22	107.806 CC, ES	
1,092.2	1,091.8	1,087.9	1,087.5	2.3	1.3	141.34	-82.0	-323.4	349.3	345.8	3.50	99.842	
1,100.0	1,099.6	1,095.7	1,095.2	2.3	1.3	141.32	-82.4	-323.4	349.7	346.2	3.53	99.055	
1,200.4	1,200.0	1,197.9	1,197.4	2.5	1.5	-102.53	-86.5	-324.5	352.9	348.9	3.97	88.918	
1,300.0	1,299.6	1,299.3	1,298.7	2.7	1.7	-102.91	-89.1	-325.2	354.2	349.8	4.38	80.891	
1,400.0	1,399.6	1,399.5	1,398.9	2.9	2.0	-103.04	-90.1	-326.0	355.2	350.4	4.79	74.092	
1,500.0	1,499.6	1,498.5	1,497.9	3.1	2.1	-103.15	-91.1	-327.0	356.4	351.2	5.20	68.550	
1,600.0	1,599.6	1,595.1	1,594.5	3.3	2.3	-103.31	-92.4	-328.4	358.1	352.5	5.60	63.992	
1,700.0	1,699.6	1,690.4	1,689.8	3.5	2.5	-103.47	-94.1	-330.8	361.0	355.0	5.99	60.233	
1,800.0	1,799.6	1,797.3	1,796.6	3.7	2.7	-103.65	-95.9	-333.5	363.8	357.4	6.44	56.534	
1,900.0	1,899.6	1,903.2	1,902.5	4.0	3.0	-103.69	-96.3	-334.2	364.5	357.6	6.88	52.946	
2,000.0	1,999.6	2,003.7	2,002.9	4.2	3.2	-103.70	-96.3	-334.1	364.5	357.2	7.32	49.814	
2,100.0	2,099.6	2,103.3	2,102.6	4.4	3.4	-103.71	-96.4	-334.0	364.4	356.7	7.74	47.062	
2,200.0	2,199.6	2,203.3	2,202.6	4.6	3.6	-103.71	-96.4	-334.0	364.4	356.3	8.18	44.563	
2,300.0	2,299.6	2,303.3	2,302.6	4.8	3.8	-103.71	-96.4	-334.0	364.4	355.8	8.61	42.348	
2,400.0	2,399.6	2,403.5	2,402.8	5.1	4.0	-103.69	-96.3	-334.0	364.4	355.4	9.03	40.337	
2,500.0	2,499.6	2,503.3	2,502.6	5.3	4.2	-103.68	-96.2	-334.0	364.4	354.9	9.46	38.501	
2,600.0	2,599.6	2,603.4	2,602.7	5.5	4.4	-103.67	-96.1	-334.0	364.4	354.5	9.90	36.812	
2,700.0	2,699.6	2,703.3	2,702.6	5.7	4.6	-103.66	-96.0	-334.0	364.4	354.0	10.33	35.256	
2,800.0	2,799.6	2,803.3	2,802.6	5.9	4.8	-103.66	-96.0	-334.0	364.4	353.6	10.76	33.851	
2,900.0	2,899.6	2,903.3	2,902.6	6.2	5.0	-103.66	-96.0	-334.0	364.4	353.2	11.19	32.556	
3,000.0	2,999.6	3,003.3	3,002.6	6.4	5.2	-103.66	-96.0	-334.0	364.4	352.7	11.62	31.355	
3,100.0	3,099.6	3,103.3	3,102.6	6.6	5.5	-103.66	-96.0	-334.0	364.4	352.3	12.05	30.227	
3,200.0	3,199.6	3,203.3	3,202.6	6.8	5.7	-103.66	-96.0	-334.0	364.4	351.9	12.49	29.175	
3,300.0	3,299.6	3,303.3	3,302.6	7.1	5.9	-103.66	-96.0	-334.0	364.4	351.4	12.92	28.209	
3,400.0	3,399.6	3,403.3	3,402.6	7.3	6.1	-103.66	-96.0	-334.0	364.4	351.0	13.34	27.306	
3,500.0	3,499.6	3,503.3	3,502.6	7.5	6.3	-103.66	-96.0	-334.0	364.4	350.6	13.77	26.453	
3,600.0	3,599.6	3,603.3	3,602.6	7.7	6.5	-103.66	-96.0	-334.0	364.4	350.1	14.20	25.651	
3,700.0	3,699.6	3,703.3	3,702.6	7.9	6.7	-103.66	-96.0	-334.0	364.4	349.7	14.64	24.890	
3,800.0	3,799.6	3,803.5	3,802.8	8.2	6.9	-103.65	-96.0	-334.0	364.3	349.3	15.08	24.164	
3,900.0	3,899.6	3,903.3	3,902.6	8.4	7.1	-103.63	-95.9	-334.0	364.3	348.8	15.52	23.481	
4,000.0	3,999.6	4,003.3	4,002.6	8.6	7.3	-103.63	-95.9	-334.0	364.3	348.4	15.95	22.845	
4,100.0	4,099.6	4,103.3	4,102.6	8.8	7.5	-103.63	-95.9	-334.0	364.3	347.9	16.38	22.240	
4,158.7	4,158.3	4,162.0	4,161.3	9.0	7.7	-103.63	-95.9	-334.0	364.3	347.7	16.64	21.897	
4,200.0	4,199.6	4,203.2	4,202.5	9.1	7.8	-103.63	-95.9	-334.0	364.3	347.5	16.82	21.662	
4,300.0	4,299.6	4,303.0	4,302.3	9.3	8.0	-103.62	-95.8	-334.1	364.4	347.1	17.25	21.122	
4,400.0	4,399.6	4,403.3	4,402.6	9.5	8.2	157.46	-95.8	-334.2	366.0	348.4	17.66	20.730	
4,500.0	4,499.4	4,503.1	4,502.3	9.7	8.4	157.73	-95.8	-334.2	370.9	352.8	18.05	20.545 SF	
4,600.0	4,599.1	4,602.6	4,601.9	9.9	8.6	158.19	-95.7	-334.3	379.0	360.6	18.44	20.552	
4,700.0	4,698.3	4,702.0	4,701.3	10.2	8.8	158.78	-95.6	-334.3	390.4	371.5	18.82	20.742	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Mutual 7-17H - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 1031-Sperry MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,800.0	4,797.1	4,800.8	4,800.1	10.4	9.0	159.47	-95.6	-334.3	405.0	385.8	19.19	21.103	
4,900.0	4,895.2	4,898.9	4,898.2	10.7	9.2	160.25	-95.6	-334.3	423.0	403.4	19.56	21.628	
5,000.0	4,992.7	4,996.4	4,995.7	10.9	9.4	161.09	-95.6	-334.3	444.2	424.3	19.91	22.312	
5,100.0	5,089.2	5,093.0	5,092.2	11.2	9.6	161.96	-95.6	-334.3	468.9	448.6	20.25	23.150	
5,200.0	5,184.9	5,188.6	5,187.9	11.6	9.8	162.82	-95.6	-334.3	496.8	476.3	20.59	24.134	
5,226.2	5,209.7	5,213.5	5,212.7	11.7	9.9	163.05	-95.6	-334.3	504.7	484.1	20.67	24.415	
5,300.0	5,279.7	5,283.4	5,282.7	12.0	10.0	163.79	-95.6	-334.3	527.3	506.3	20.99	25.123	
5,400.0	5,374.5	5,378.3	5,377.5	12.4	10.2	164.70	-95.6	-334.3	558.0	536.6	21.42	26.048	
5,500.0	5,469.4	5,472.9	5,472.2	12.8	10.4	165.51	-95.6	-334.3	588.8	566.9	21.86	26.935	
5,600.0	5,564.2	5,568.0	5,567.3	13.3	10.6	166.26	-95.5	-334.3	619.7	597.4	22.30	27.791	
5,700.0	5,659.0	5,663.4	5,662.7	13.8	10.8	166.94	-95.3	-334.3	650.7	627.9	22.74	28.610	
5,800.0	5,753.8	5,758.6	5,757.8	14.2	11.0	167.55	-95.2	-334.1	681.6	658.4	23.18	29.401	
5,900.0	5,848.6	5,852.0	5,851.3	14.7	11.2	168.10	-95.1	-334.1	712.6	689.0	23.62	30.168	
6,000.0	5,943.5	5,946.8	5,946.1	15.3	11.4	168.61	-95.0	-334.2	743.9	719.8	24.07	30.904	
6,100.0	6,038.3	6,042.0	6,041.3	15.8	11.6	169.09	-94.9	-334.2	775.1	750.6	24.53	31.606	
6,200.0	6,133.1	6,137.4	6,136.7	16.3	11.8	169.53	-94.7	-334.1	806.4	781.4	24.98	32.280	
6,300.0	6,227.9	6,231.2	6,230.5	16.9	12.0	169.93	-94.6	-334.1	837.7	812.2	25.43	32.934	
6,400.0	6,322.7	6,326.4	6,325.6	17.5	12.2	170.31	-94.5	-334.2	869.1	843.2	25.90	33.560	
6,500.0	6,417.6	6,420.4	6,419.6	18.0	12.4	170.65	-94.4	-334.2	900.5	874.1	26.36	34.161	
6,566.1	6,480.2	6,482.0	6,481.2	18.4	12.6	170.86	-94.4	-334.3	921.3	894.6	26.66	34.552	
6,600.0	6,512.4	6,513.1	6,512.4	18.6	12.6	159.86	-94.4	-334.4	931.9	905.0	26.89	34.656	
6,650.0	6,559.6	6,558.5	6,557.8	18.8	12.7	145.00	-94.2	-334.5	946.8	919.6	27.22	34.787	
6,700.0	6,606.2	6,602.6	6,601.8	19.1	12.8	132.76	-93.8	-334.8	960.9	933.4	27.54	34.894	
6,750.0	6,652.0	6,643.6	6,642.9	19.3	12.9	123.29	-93.3	-335.2	974.5	946.6	27.85	34.990	
6,800.0	6,696.4	6,672.5	6,671.8	19.6	13.0	115.87	-93.0	-335.7	987.6	959.5	28.15	35.089	
6,850.0	6,739.3	6,839.6	6,836.4	19.8	13.3	115.35	-70.9	-327.1	997.1	968.7	28.42	35.084	
6,900.0	6,780.3	6,869.5	6,864.7	20.1	13.4	111.88	-61.9	-323.3	1,005.4	976.8	28.66	35.083	
6,950.0	6,819.0	6,890.6	6,884.1	20.3	13.4	108.89	-54.3	-320.7	1,014.8	985.9	28.92	35.094	
7,000.0	6,855.2	6,907.0	6,899.0	20.6	13.5	106.27	-47.7	-318.5	1,025.3	996.1	29.20	35.118	
7,050.0	6,888.6	6,918.1	6,908.9	20.8	13.5	103.75	-42.8	-317.1	1,037.2	1,007.7	29.51	35.147	
7,100.0	6,918.9	6,925.3	6,915.2	21.1	13.5	101.28	-39.5	-316.1	1,050.5	1,020.6	29.85	35.187	
7,154.6	6,948.3	6,928.3	6,917.8	21.4	13.5	98.50	-38.1	-315.6	1,066.5	1,036.2	30.26	35.248	
7,200.0	6,971.0	6,929.0	6,918.4	21.7	13.5	98.54	-37.8	-315.5	1,081.2	1,050.6	30.60	35.333	
7,304.6	7,023.3	6,930.3	6,919.6	22.4	13.5	98.61	-37.1	-315.4	1,121.5	1,090.0	31.49	35.618	
7,350.0	7,044.4	6,929.8	6,919.2	22.7	13.5	96.34	-37.4	-315.4	1,141.8	1,109.7	32.11	35.560	
7,400.0	7,063.9	6,927.4	6,917.1	23.1	13.5	93.43	-38.5	-315.8	1,166.1	1,133.3	32.81	35.543	
7,450.0	7,079.3	6,923.4	6,913.5	23.6	13.5	90.14	-40.4	-316.3	1,192.2	1,158.8	33.47	35.621	
7,500.0	7,090.5	6,918.0	6,908.8	24.1	13.5	86.54	-42.9	-317.1	1,219.8	1,185.8	34.04	35.839	
7,550.0	7,097.4	6,907.0	6,899.0	24.6	13.5	82.48	-47.7	-318.5	1,248.5	1,214.1	34.43	36.263	
7,604.6	7,100.0	6,907.0	6,899.0	25.2	13.5	78.55	-47.7	-318.5	1,280.8	1,246.0	34.71	36.895	
7,700.0	7,100.0	6,890.9	6,884.4	26.4	13.4	77.78	-54.2	-320.6	1,339.6	1,303.7	35.88	37.335	
7,800.0	7,100.0	6,876.0	6,870.7	27.6	13.4	77.06	-59.7	-322.5	1,405.3	1,368.1	37.18	37.799	
7,900.0	7,100.0	6,876.0	6,870.7	29.0	13.4	77.06	-59.7	-322.5	1,474.6	1,436.0	38.65	38.156	
8,000.0	7,100.0	6,860.4	6,856.2	30.4	13.4	76.30	-64.8	-324.5	1,547.0	1,507.0	40.04	38.640	
8,100.0	7,100.0	6,845.0	6,841.6	31.9	13.3	75.55	-69.4	-326.4	1,622.3	1,580.8	41.46	39.132	
8,200.0	7,100.0	6,845.0	6,841.6	33.4	13.3	75.55	-69.4	-326.4	1,699.8	1,656.8	43.05	39.487	
8,300.0	7,100.0	6,845.0	6,841.6	35.0	13.3	75.55	-69.4	-326.4	1,779.6	1,735.0	44.67	39.838	
8,400.0	7,100.0	6,831.1	6,828.3	36.6	13.3	74.87	-73.1	-328.1	1,861.2	1,815.0	46.18	40.306	
8,500.0	7,100.0	6,814.0	6,811.7	38.2	13.3	74.04	-77.0	-330.0	1,944.6	1,896.9	47.65	40.805	
8,600.0	7,100.0	6,814.0	6,811.7	39.8	13.3	74.04	-77.0	-330.0	2,029.1	1,979.8	49.34	41.128	
8,700.0	7,100.0	6,814.0	6,811.7	41.5	13.3	74.04	-77.0	-330.0	2,115.1	2,064.0	51.04	41.443	
8,800.0	7,100.0	6,804.6	6,802.6	43.2	13.3	73.58	-79.0	-331.0	2,202.2	2,149.5	52.63	41.841	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

Offset Design T7N-R80W-S17 - Mutual 7-17H - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 1031-Sperry MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,900.0	7,100.0	6,795.7	6,794.0	44.9	13.2	73.15	-80.8	-331.9	2,290.2	2,236.0	54.24	42.225	
9,000.0	7,100.0	6,782.0	6,780.5	46.7	13.2	72.48	-83.4	-333.1	2,379.2	2,323.4	55.78	42.653	
9,100.0	7,100.0	6,782.0	6,780.5	48.4	13.2	72.48	-83.4	-333.1	2,468.9	2,411.3	57.52	42.925	
9,200.0	7,100.0	6,782.0	6,780.5	50.2	13.2	72.48	-83.4	-333.1	2,559.3	2,500.1	59.26	43.186	
9,300.0	7,100.0	6,782.0	6,780.5	52.0	13.2	72.48	-83.4	-333.1	2,650.5	2,589.5	61.02	43.439	
9,400.0	7,100.0	6,767.0	6,765.7	53.8	13.2	71.75	-86.0	-334.2	2,742.1	2,679.5	62.54	43.848	
9,500.0	7,100.0	6,763.1	6,761.9	55.6	13.2	71.56	-86.6	-334.5	2,834.3	2,770.1	64.23	44.126	
9,600.0	7,100.0	6,751.0	6,750.0	57.4	13.1	70.97	-88.3	-335.2	2,927.1	2,861.3	65.79	44.493	
9,700.0	7,100.0	6,751.0	6,750.0	59.2	13.1	70.97	-88.3	-335.2	3,020.2	2,952.7	67.55	44.709	
9,800.0	7,100.0	6,751.0	6,750.0	61.0	13.1	70.97	-88.3	-335.2	3,113.8	3,044.4	69.32	44.917	
9,900.0	7,100.0	6,751.0	6,750.0	62.8	13.1	70.97	-88.3	-335.2	3,207.7	3,136.6	71.10	45.117	
10,000.0	7,100.0	6,751.0	6,750.0	64.7	13.1	70.97	-88.3	-335.2	3,302.0	3,229.1	72.88	45.310	
10,100.0	7,100.0	6,751.0	6,750.0	66.5	13.1	70.97	-88.3	-335.2	3,396.6	3,322.0	74.66	45.495	
10,200.0	7,100.0	6,751.0	6,750.0	68.4	13.1	70.97	-88.3	-335.2	3,491.6	3,415.1	76.44	45.674	
10,300.0	7,100.0	6,751.0	6,750.0	70.2	13.1	70.97	-88.3	-335.2	3,586.8	3,508.5	78.23	45.847	
10,400.0	7,100.0	6,751.0	6,750.0	72.1	13.1	70.97	-88.3	-335.2	3,682.2	3,602.2	80.03	46.014	
10,500.0	7,100.0	6,736.6	6,735.8	73.9	13.1	70.28	-90.1	-335.9	3,777.8	3,696.3	81.50	46.353	
10,600.0	7,100.0	6,734.8	6,734.0	75.8	13.1	70.19	-90.3	-336.0	3,873.6	3,790.4	83.25	46.531	
10,700.0	7,100.0	6,733.1	6,732.2	77.6	13.1	70.10	-90.5	-336.0	3,969.7	3,884.7	85.00	46.703	
10,800.0	7,100.0	6,720.0	6,719.2	79.5	13.1	69.47	-91.8	-336.5	4,066.1	3,979.6	86.48	47.020	
10,900.0	7,100.0	6,720.0	6,719.2	81.4	13.1	69.47	-91.8	-336.5	4,162.5	4,074.2	88.26	47.159	
11,000.0	7,100.0	6,720.0	6,719.2	83.3	13.1	69.47	-91.8	-336.5	4,259.0	4,169.0	90.05	47.294	
11,100.0	7,100.0	6,720.0	6,719.2	85.1	13.1	69.47	-91.8	-336.5	4,355.7	4,263.9	91.85	47.425	
11,200.0	7,100.0	6,720.0	6,719.2	87.0	13.1	69.47	-91.8	-336.5	4,452.6	4,359.0	93.64	47.551	
11,300.0	7,100.0	6,720.0	6,719.2	88.9	13.1	69.47	-91.8	-336.5	4,549.6	4,454.2	95.43	47.673	
11,400.0	7,100.0	6,720.0	6,719.2	90.8	13.1	69.47	-91.8	-336.5	4,646.7	4,549.5	97.23	47.792	
11,500.0	7,100.0	6,720.0	6,719.2	92.7	13.1	69.47	-91.8	-336.5	4,744.0	4,644.9	99.03	47.906	
11,600.0	7,100.0	6,720.0	6,719.2	94.5	13.1	69.47	-91.8	-336.5	4,841.3	4,740.5	100.82	48.017	
11,700.0	7,100.0	6,720.0	6,719.2	96.4	13.1	69.47	-91.8	-336.5	4,938.8	4,836.2	102.62	48.125	
11,800.0	7,100.0	6,720.0	6,719.2	98.3	13.1	69.47	-91.8	-336.5	5,036.4	4,931.9	104.42	48.229	
11,900.0	7,100.0	6,720.0	6,719.2	100.2	13.1	69.47	-91.8	-336.5	5,134.0	5,027.8	106.23	48.331	
12,000.0	7,100.0	6,720.0	6,719.2	102.1	13.1	69.47	-91.8	-336.5	5,231.8	5,123.7	108.03	48.429	
12,100.0	7,100.0	6,720.0	6,719.2	104.0	13.1	69.47	-91.8	-336.5	5,329.6	5,219.7	109.83	48.525	
12,200.0	7,100.0	6,720.0	6,719.2	105.9	13.1	69.47	-91.8	-336.5	5,427.5	5,315.9	111.64	48.617	
12,300.0	7,100.0	6,720.0	6,719.2	107.8	13.1	69.47	-91.8	-336.5	5,525.5	5,412.0	113.44	48.708	
12,400.0	7,100.0	6,720.0	6,719.2	109.7	13.1	69.47	-91.8	-336.5	5,623.5	5,508.3	115.25	48.795	
12,500.0	7,100.0	6,720.0	6,719.2	111.6	13.1	69.47	-91.8	-336.5	5,721.6	5,604.6	117.05	48.880	
12,600.0	7,100.0	6,720.0	6,719.2	113.5	13.1	69.47	-91.8	-336.5	5,819.8	5,701.0	118.86	48.963	
12,700.0	7,100.0	6,720.0	6,719.2	115.4	13.1	69.47	-91.8	-336.5	5,918.1	5,797.4	120.67	49.044	
12,800.0	7,100.0	6,720.0	6,719.2	117.3	13.1	69.47	-91.8	-336.5	6,016.4	5,893.9	122.48	49.122	
12,900.0	7,100.0	6,720.0	6,719.2	119.2	13.1	69.47	-91.8	-336.5	6,114.7	5,990.5	124.29	49.199	
13,000.0	7,100.0	6,720.0	6,719.2	121.1	13.1	69.47	-91.8	-336.5	6,213.2	6,087.1	126.10	49.273	
13,100.0	7,100.0	6,720.0	6,719.2	123.0	13.1	69.47	-91.8	-336.5	6,311.6	6,183.7	127.91	49.346	
13,200.0	7,100.0	6,720.0	6,719.2	124.9	13.1	69.47	-91.8	-336.5	6,410.1	6,280.4	129.72	49.416	
13,300.0	7,100.0	6,720.0	6,719.2	126.8	13.1	69.47	-91.8	-336.5	6,508.7	6,377.1	131.53	49.485	
13,400.0	7,100.0	6,720.0	6,719.2	128.7	13.1	69.47	-91.8	-336.5	6,607.3	6,473.9	133.34	49.552	
13,500.0	7,100.0	6,720.0	6,719.2	130.6	13.1	69.47	-91.8	-336.5	6,705.9	6,570.8	135.15	49.618	
13,600.0	7,100.0	6,720.0	6,719.2	132.5	13.1	69.47	-91.8	-336.5	6,804.6	6,667.6	136.96	49.682	
13,700.0	7,100.0	6,720.0	6,719.2	134.5	13.1	69.47	-91.8	-336.5	6,903.3	6,764.5	138.78	49.744	
13,800.0	7,100.0	6,720.0	6,719.2	136.4	13.1	69.47	-91.8	-336.5	7,002.1	6,861.5	140.59	49.805	
13,900.0	7,100.0	6,720.0	6,719.2	138.3	13.1	69.47	-91.8	-336.5	7,100.9	6,958.4	142.40	49.864	
14,000.0	7,100.0	6,720.0	6,719.2	140.2	13.1	69.47	-91.8	-336.5	7,199.7	7,055.5	144.22	49.922	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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

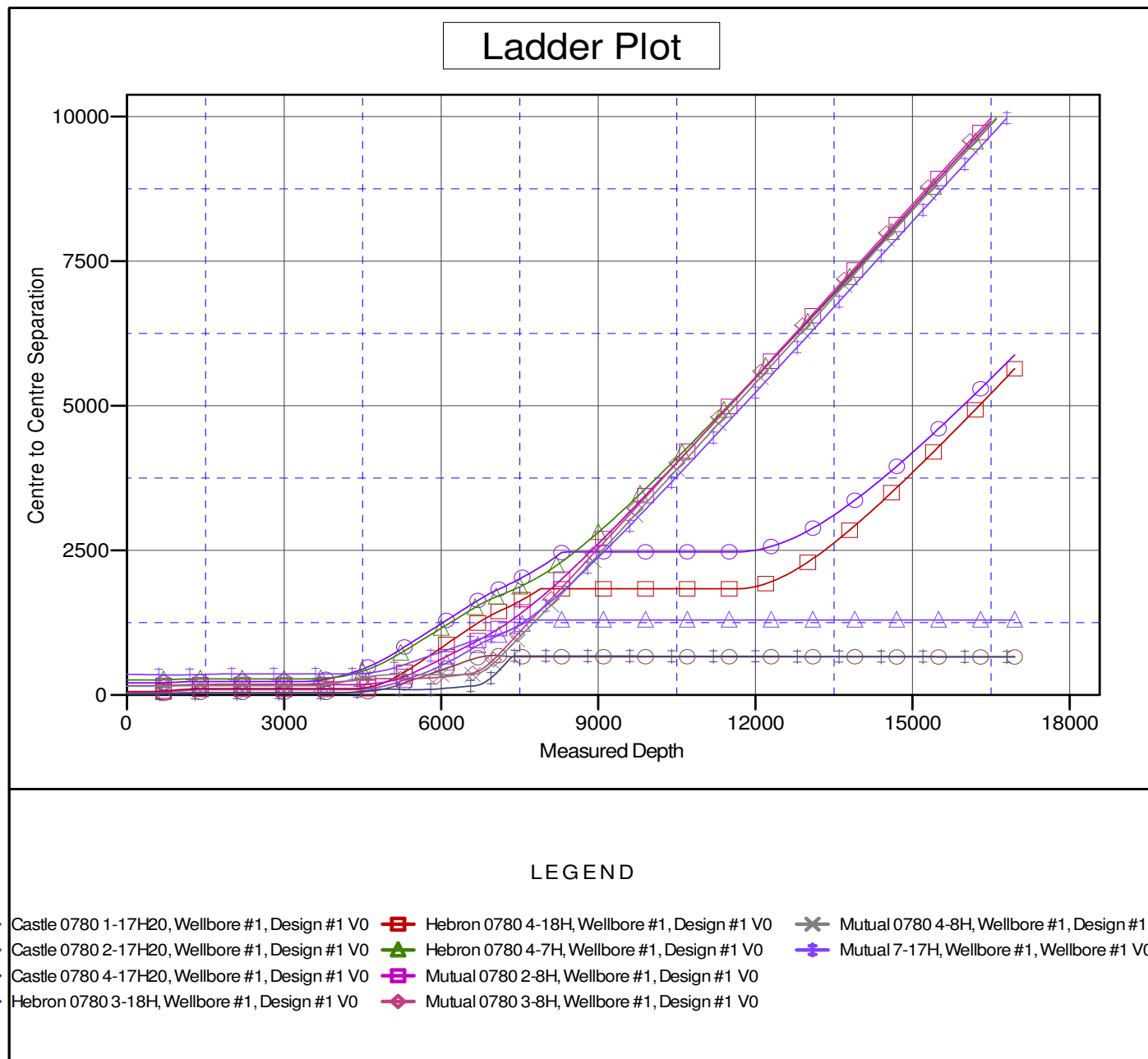
Offset Design T7N-R80W-S17 - Mutual 7-17H - Wellbore #1 - Wellbore #1													Offset Site Error: 0.0 usft	
Survey Program: 1031-Sperry MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,100.0	7,100.0	6,720.0	6,719.2	142.1	13.1	69.47	-91.8	-336.5	7,298.5	7,152.5	146.03	49.979		
14,200.0	7,100.0	6,720.0	6,719.2	144.0	13.1	69.47	-91.8	-336.5	7,397.4	7,249.6	147.85	50.035		
14,300.0	7,100.0	6,720.0	6,719.2	145.9	13.1	69.47	-91.8	-336.5	7,496.3	7,346.7	149.66	50.089		
14,400.0	7,100.0	6,720.0	6,719.2	147.8	13.1	69.47	-91.8	-336.5	7,595.3	7,443.8	151.48	50.142		
14,500.0	7,100.0	6,720.0	6,719.2	149.8	13.1	69.47	-91.8	-336.5	7,694.2	7,540.9	153.29	50.194		
14,600.0	7,100.0	6,720.0	6,719.2	151.7	13.1	69.47	-91.8	-336.5	7,793.2	7,638.1	155.11	50.244		
14,700.0	7,100.0	6,720.0	6,719.2	153.6	13.1	69.47	-91.8	-336.5	7,892.3	7,735.3	156.92	50.294		
14,800.0	7,100.0	6,720.0	6,719.2	155.5	13.1	69.47	-91.8	-336.5	7,991.3	7,832.6	158.74	50.342		
14,900.0	7,100.0	6,720.0	6,719.2	157.4	13.1	69.47	-91.8	-336.5	8,090.4	7,929.8	160.56	50.390		
15,000.0	7,100.0	6,720.0	6,719.2	159.3	13.1	69.47	-91.8	-336.5	8,189.5	8,027.1	162.37	50.436		
15,100.0	7,100.0	6,720.0	6,719.2	161.2	13.1	69.47	-91.8	-336.5	8,288.6	8,124.4	164.19	50.482		
15,200.0	7,100.0	6,720.0	6,719.2	163.2	13.1	69.47	-91.8	-336.5	8,387.7	8,221.7	166.01	50.526		
15,300.0	7,100.0	6,720.0	6,719.2	165.1	13.1	69.47	-91.8	-336.5	8,486.9	8,319.0	167.82	50.570		
15,400.0	7,100.0	6,720.0	6,719.2	167.0	13.1	69.47	-91.8	-336.5	8,586.0	8,416.4	169.64	50.613		
15,500.0	7,100.0	6,720.0	6,719.2	168.9	13.1	69.47	-91.8	-336.5	8,685.2	8,513.8	171.46	50.655		
15,600.0	7,100.0	6,720.0	6,719.2	170.8	13.1	69.47	-91.8	-336.5	8,784.4	8,611.2	173.28	50.696		
15,700.0	7,100.0	6,720.0	6,719.2	172.8	13.1	69.47	-91.8	-336.5	8,883.7	8,708.6	175.10	50.736		
15,800.0	7,100.0	6,720.0	6,719.2	174.7	13.1	69.47	-91.8	-336.5	8,982.9	8,806.0	176.91	50.776		
15,900.0	7,100.0	6,720.0	6,719.2	176.6	13.1	69.47	-91.8	-336.5	9,082.2	8,903.5	178.73	50.814		
16,000.0	7,100.0	6,720.0	6,719.2	178.5	13.1	69.47	-91.8	-336.5	9,181.5	9,000.9	180.55	50.852		
16,100.0	7,100.0	6,720.0	6,719.2	180.4	13.1	69.47	-91.8	-336.5	9,280.8	9,098.4	182.37	50.890		
16,200.0	7,100.0	6,720.0	6,719.2	182.3	13.1	69.47	-91.8	-336.5	9,380.1	9,195.9	184.19	50.926		
16,300.0	7,100.0	6,720.0	6,719.2	184.3	13.1	69.47	-91.8	-336.5	9,479.4	9,293.4	186.01	50.962		
16,400.0	7,100.0	6,720.0	6,719.2	186.2	13.1	69.47	-91.8	-336.5	9,578.7	9,390.9	187.83	50.998		
16,500.0	7,100.0	6,720.0	6,719.2	188.1	13.1	69.47	-91.8	-336.5	9,678.1	9,488.4	189.65	51.032		
16,600.0	7,100.0	6,704.1	6,703.3	190.0	13.0	68.70	-92.8	-336.6	9,777.1	9,586.5	190.61	51.293		
16,700.0	7,100.0	6,703.9	6,703.1	191.9	13.0	68.69	-92.8	-336.6	9,876.5	9,684.1	192.42	51.328		
16,800.0	7,100.0	6,703.8	6,703.0	193.9	13.0	68.68	-92.8	-336.6	9,975.9	9,781.6	194.22	51.363		

SandRidge Energy

Anticollision Report

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Reference Site:	T7N-R80W-S17	MD Reference:	WELL @ 8172.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Castle 0780 3-17H20	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 WELL @ 8172.0usft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is 105° 30' 0.000 W
 Coordinates are relative to: Castle 0780 3-17H20
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: -0.58°



SandRidge Energy

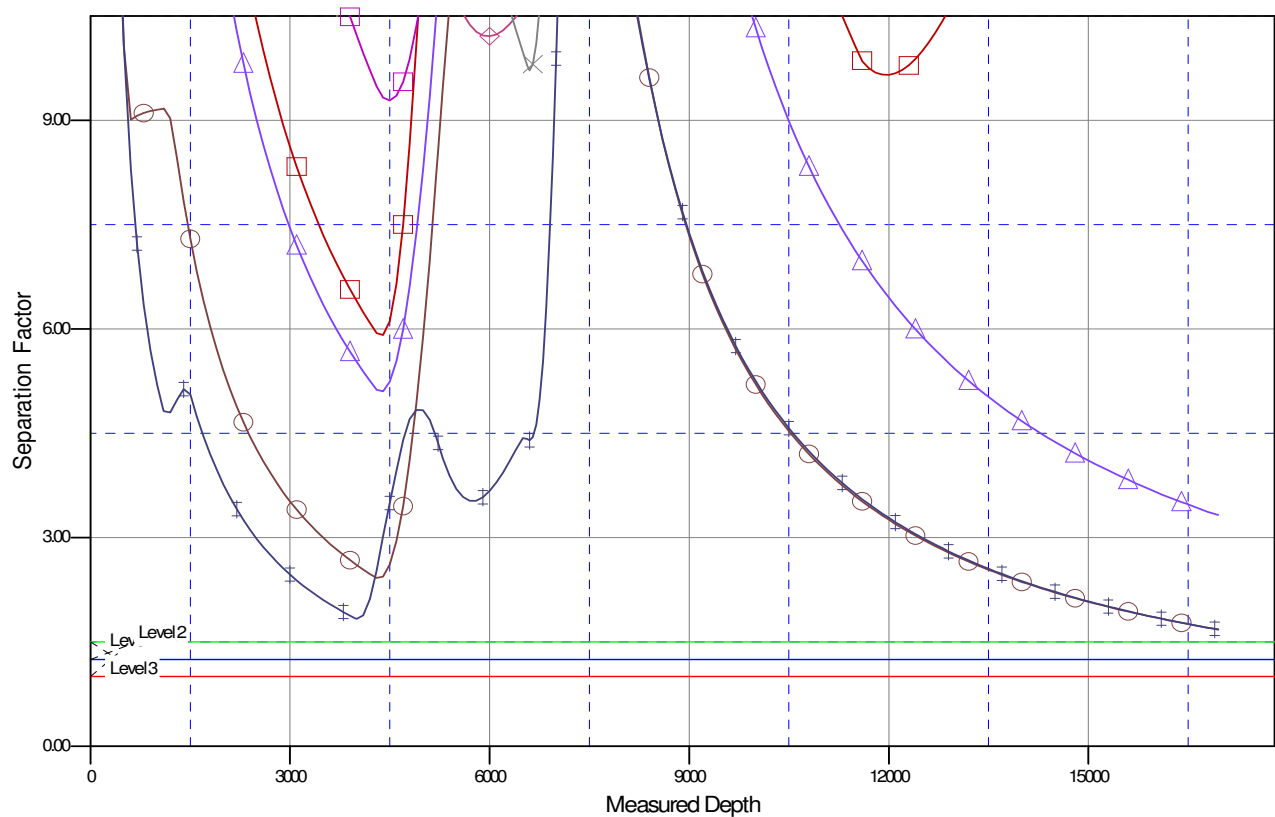
Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 3-17H20
Project:	North Park Basin	TVD Reference:	WELL @ 8172.0usft (Original Well Elev)
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Reference Well:	Castle 0780 3-17H20	Survey Calculation Method:	Minimum Curvature
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 Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Castle 0780 3-17H20
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: -0.58°

Separation Factor Plot



LEGEND

- Castle 0780 1-17H20, Wellbore #1, Design #1 V0
- Castle 0780 2-17H20, Wellbore #1, Design #1 V0
- Castle 0780 4-17H20, Wellbore #1, Design #1 V0
- Hebron 0780 3-18H, Wellbore #1, Design #1 V0
- Hebron 0780 4-18H, Wellbore #1, Design #1 V0
- Hebron 0780 4-7H, Wellbore #1, Design #1 V0
- Mutual 0780 2-8H, Wellbore #1, Design #1 V0
- Mutual 0780 3-8H, Wellbore #1, Design #1 V0
- Mutual 0780 4-8H, Wellbore #1, Design #1 V0
- Mutual 7-17H, Wellbore #1, Wellbore #1 V0