

SandRidge Energy

**North Park Basin
T7N-R80W-S17
Castle 0780 4-17H20**

**Wellbore #1
Design #1**

Anticollision Report

14 December, 2015

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 4-17H20
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 4-17H20	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	17,522.2	Design #1 (Wellbore #1)	Sperry MWD	Fixed:v2:standard declination	

Summary						
Site Name Offset Well - Wellbore - Design	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	60.0	58.0	30.175	CC, ES
Castle 0780 1-17H20 - Wellbore #1 - Design #1	17,523.1	16,978.9	1,959.6	1,568.1	5.005	SF
Castle 0780 2-17H20 - Wellbore #1 - Design #1	500.0	500.0	40.0	38.0	20.143	CC, ES
Castle 0780 2-17H20 - Wellbore #1 - Design #1	17,523.1	16,924.5	1,319.8	926.5	3.356	SF
Castle 0780 3-17H20 - Wellbore #1 - Design #1	500.0	500.0	20.0	18.0	10.082	CC
Castle 0780 3-17H20 - Wellbore #1 - Design #1	4,000.0	3,999.9	31.6	14.3	1.830	Level 4, ES
Castle 0780 3-17H20 - Wellbore #1 - Design #1	17,523.1	16,952.7	659.9	266.4	1.677	Level 4, SF
Hebron 0780 3-18H - Wellbore #1 - Design #1	500.0	500.0	230.0	228.0	115.735	CC, ES
Hebron 0780 3-18H - Wellbore #1 - Design #1	13,200.0	12,281.8	3,304.5	3,096.9	15.918	SF
Hebron 0780 4-18H - Wellbore #1 - Design #1	500.0	500.0	80.0	78.0	40.242	CC, ES
Hebron 0780 4-18H - Wellbore #1 - Design #1	4,100.0	4,100.0	141.7	124.0	8.028	SF
Hebron 0780 4-7H - Wellbore #1 - Design #1	500.0	503.0	274.1	272.1	137.722	CC, ES
Hebron 0780 4-7H - Wellbore #1 - Design #1	3,800.0	3,780.0	310.5	294.0	18.840	SF
Mutual 0780 2-8H - Wellbore #1 - Design #1	500.0	500.0	169.9	167.9	85.505	CC, ES
Mutual 0780 2-8H - Wellbore #1 - Design #1	4,200.0	4,199.4	189.0	170.7	10.297	SF
Mutual 0780 3-8H - Wellbore #1 - Design #1	500.0	500.0	161.5	159.5	81.258	CC, ES
Mutual 0780 3-8H - Wellbore #1 - Design #1	6,450.0	6,438.1	210.0	176.4	6.234	SF
Mutual 0780 4-8H - Wellbore #1 - Design #1	3,620.1	3,622.8	150.5	135.0	9.697	CC, ES
Mutual 0780 4-8H - Wellbore #1 - Design #1	7,150.0	6,938.7	229.4	186.1	5.301	SF
Mutual 7-17H - Wellbore #1 - Wellbore #1	1,016.0	1,031.0	368.2	365.0	113.690	CC, ES
Mutual 7-17H - Wellbore #1 - Wellbore #1	4,300.0	4,302.4	411.4	394.2	23.955	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							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	0.8	-59.9	60.0				
100.0	100.0	100.0	100.0	0.1	0.1	-89.21	0.8	-59.9	60.0	59.8	0.19	317.556	
200.0	200.0	200.0	200.0	0.3	0.3	-89.21	0.8	-59.9	60.0	59.3	0.64	93.925	
300.0	300.0	300.0	300.0	0.5	0.5	-89.21	0.8	-59.9	60.0	58.9	1.09	55.113	
400.0	400.0	400.0	400.0	0.8	0.8	-89.21	0.8	-59.9	60.0	58.4	1.54	38.998	
500.0	500.0	500.0	500.0	1.0	1.0	-89.21	0.8	-59.9	60.0	58.0	1.99	30.175	CC, ES
594.9	594.9	593.7	593.7	1.2	1.2	179.64	-0.4	-60.9	62.5	60.1	2.38	26.250	

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 4-17H20
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 4-17H20	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							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		
600.0	600.0	598.7	598.7	1.2	1.2	179.52	-0.5	-61.0	62.7	60.3	2.40	26.141		
700.0	699.9	697.4	697.2	1.4	1.4	176.24	-4.5	-64.0	69.2	66.4	2.80	24.755		
800.0	799.9	797.0	796.7	1.6	1.6	172.98	-9.3	-67.6	76.6	73.4	3.21	23.872		
900.0	899.8	896.6	896.1	1.8	1.8	170.29	-14.1	-71.2	84.1	80.5	3.63	23.165		
1,000.0	999.8	996.3	995.6	2.1	2.0	168.05	-19.0	-74.8	91.9	87.8	4.06	22.597		
1,100.0	1,099.7	1,095.9	1,095.0	2.3	2.3	166.16	-23.8	-78.4	99.7	95.2	4.50	22.136		
1,200.0	1,199.7	1,195.6	1,194.5	2.5	2.5	164.55	-28.6	-82.0	107.6	102.7	4.95	21.757		
1,300.0	1,299.6	1,295.2	1,294.0	2.7	2.7	163.16	-33.4	-85.6	115.6	110.2	5.39	21.441		
1,405.6	1,405.1	1,403.0	1,401.6	3.0	3.0	162.11	-37.8	-88.9	123.4	117.5	5.86	21.055		
1,500.5	1,500.0	1,501.4	1,500.0	3.2	3.2	-108.08	-39.2	-89.9	126.2	119.9	6.32	19.967		
1,600.0	1,599.5	1,600.9	1,599.5	3.4	3.4	-108.08	-39.2	-89.9	126.2	119.5	6.72	18.780		
1,700.0	1,699.5	1,700.9	1,699.5	3.6	3.6	-108.08	-39.2	-89.9	126.2	119.1	7.13	17.694		
1,800.0	1,799.5	1,800.9	1,799.5	3.8	3.8	-108.08	-39.2	-89.9	126.2	118.6	7.55	16.717		
1,900.0	1,899.5	1,900.9	1,899.5	4.0	4.0	-108.08	-39.2	-89.9	126.2	118.2	7.97	15.835		
2,000.0	1,999.5	2,000.9	1,999.5	4.2	4.2	-108.08	-39.2	-89.9	126.2	117.8	8.39	15.037		
2,100.0	2,099.5	2,100.9	2,099.5	4.5	4.4	-108.08	-39.2	-89.9	126.2	117.4	8.82	14.310		
2,200.0	2,199.5	2,200.9	2,199.5	4.7	4.6	-108.08	-39.2	-89.9	126.2	116.9	9.25	13.648		
2,300.0	2,299.5	2,300.9	2,299.5	4.9	4.8	-108.08	-39.2	-89.9	126.2	116.5	9.68	13.041		
2,400.0	2,399.5	2,400.9	2,399.5	5.1	5.0	-108.08	-39.2	-89.9	126.2	116.1	10.11	12.484		
2,500.0	2,499.5	2,500.9	2,499.5	5.3	5.2	-108.08	-39.2	-89.9	126.2	115.6	10.54	11.971		
2,600.0	2,599.5	2,600.9	2,599.5	5.5	5.5	-108.08	-39.2	-89.9	126.2	115.2	10.98	11.497		
2,700.0	2,699.5	2,700.9	2,699.5	5.8	5.7	-108.08	-39.2	-89.9	126.2	114.8	11.41	11.058		
2,800.0	2,799.5	2,800.9	2,799.5	6.0	5.9	-108.08	-39.2	-89.9	126.2	114.3	11.85	10.650		
2,900.0	2,899.5	2,900.9	2,899.5	6.2	6.1	-108.08	-39.2	-89.9	126.2	113.9	12.29	10.271		
3,000.0	2,999.5	3,000.9	2,999.5	6.4	6.3	-108.08	-39.2	-89.9	126.2	113.5	12.72	9.917		
3,100.0	3,099.5	3,100.9	3,099.5	6.6	6.5	-108.08	-39.2	-89.9	126.2	113.0	13.16	9.586		
3,200.0	3,199.5	3,200.9	3,199.5	6.9	6.8	-108.08	-39.2	-89.9	126.2	112.6	13.60	9.276		
3,300.0	3,299.5	3,300.9	3,299.5	7.1	7.0	-108.08	-39.2	-89.9	126.2	112.1	14.04	8.985		
3,400.0	3,399.5	3,400.9	3,399.5	7.3	7.2	-108.08	-39.2	-89.9	126.2	111.7	14.48	8.711		
3,500.0	3,499.5	3,500.9	3,499.5	7.5	7.4	-108.08	-39.2	-89.9	126.2	111.3	14.93	8.454		
3,600.0	3,599.5	3,600.9	3,599.5	7.8	7.6	-108.08	-39.2	-89.9	126.2	110.8	15.37	8.211		
3,700.0	3,699.5	3,700.9	3,699.5	8.0	7.9	-108.08	-39.2	-89.9	126.2	110.4	15.81	7.981		
3,800.0	3,799.5	3,800.9	3,799.5	8.2	8.1	-108.08	-39.2	-89.9	126.2	109.9	16.25	7.763		
3,900.0	3,899.5	3,900.9	3,899.5	8.4	8.3	-108.08	-39.2	-89.9	126.2	109.5	16.70	7.557		
4,000.0	3,999.5	4,000.9	3,999.5	8.6	8.5	-108.08	-39.2	-89.9	126.2	109.0	17.14	7.362		
4,100.0	4,099.5	4,100.9	4,099.5	8.9	8.7	168.14	-39.2	-89.9	127.9	110.4	17.52	7.299		
4,200.0	4,199.4	4,200.8	4,199.4	9.1	9.0	168.59	-39.2	-89.9	133.0	115.1	17.94	7.416		
4,300.0	4,299.0	4,300.4	4,299.0	9.3	9.2	169.25	-39.2	-89.9	141.6	123.2	18.34	7.719		
4,400.0	4,398.2	4,399.6	4,398.2	9.5	9.4	170.06	-39.2	-89.9	153.6	134.8	18.73	8.199		
4,500.0	4,497.0	4,498.4	4,497.0	9.8	9.6	170.92	-39.2	-89.9	169.0	149.9	19.10	8.846		
4,600.0	4,595.1	4,596.5	4,595.1	10.1	9.8	171.79	-39.2	-89.9	187.9	168.4	19.46	9.652		
4,642.4	4,636.6	4,638.0	4,636.6	10.2	9.9	172.14	-39.2	-89.9	196.9	177.3	19.61	10.039		
4,700.0	4,692.7	4,694.1	4,692.7	10.4	10.0	172.62	-39.2	-89.9	209.6	189.7	19.86	10.552		
4,800.0	4,790.2	4,791.6	4,790.2	10.7	10.3	173.33	-39.2	-89.9	231.7	211.4	20.30	11.413		
4,900.0	4,887.7	4,889.1	4,887.7	11.0	10.5	173.91	-39.2	-89.9	253.8	233.0	20.74	12.237		
5,000.0	4,985.2	4,986.6	4,985.2	11.3	10.7	174.40	-39.2	-89.9	275.9	254.7	21.18	13.026		
5,100.0	5,082.7	5,084.1	5,082.7	11.7	10.9	174.82	-39.2	-89.9	298.1	276.4	21.63	13.783		
5,200.0	5,180.2	5,181.6	5,180.2	12.0	11.1	175.18	-39.2	-89.9	320.2	298.1	22.07	14.508		
5,300.0	5,277.7	5,279.1	5,277.7	12.4	11.3	175.49	-39.2	-89.9	342.4	319.9	22.52	15.204		
5,400.0	5,375.2	5,376.6	5,375.2	12.7	11.6	175.76	-39.2	-89.9	364.6	341.6	22.97	15.871		
5,500.0	5,472.7	5,474.1	5,472.7	13.1	11.8	176.01	-39.2	-89.9	386.7	363.3	23.42	16.512		
5,600.0	5,570.2	5,562.7	5,561.3	13.5	12.0	176.20	-39.3	-90.6	409.7	385.8	23.85	17.178		

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 4-17H20
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 4-17H20	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
5,700.0	5,667.7	5,647.0	5,645.5	13.9	12.2	176.34	-40.0	-93.6	435.4	411.1	24.27	17.944	
5,800.0	5,765.2	5,729.8	5,728.2	14.3	12.3	176.45	-41.3	-98.9	463.9	439.3	24.68	18.801	
5,900.0	5,862.7	5,811.2	5,809.2	14.7	12.5	176.53	-43.0	-106.3	495.2	470.1	25.08	19.740	
6,000.0	5,960.2	5,891.1	5,888.5	15.1	12.7	176.58	-45.3	-115.8	529.1	503.6	25.49	20.754	
6,100.0	6,057.7	5,969.3	5,965.8	15.5	12.9	176.60	-47.9	-127.2	565.6	539.7	25.90	21.837	
6,200.0	6,155.2	6,045.8	6,041.1	15.9	13.1	176.61	-51.0	-140.3	604.6	578.3	26.30	22.983	
6,300.0	6,252.6	6,120.5	6,114.3	16.3	13.3	176.61	-54.5	-155.0	646.0	619.2	26.71	24.187	
6,400.0	6,350.1	6,200.0	6,191.7	16.8	13.5	176.59	-58.6	-172.6	689.7	662.6	27.12	25.431	
6,445.4	6,394.4	6,226.0	6,216.9	17.0	13.5	176.58	-60.1	-178.9	710.3	683.0	27.29	26.028	
6,450.0	6,398.9	6,229.3	6,220.1	17.0	13.6	175.99	-60.3	-179.7	712.4	685.1	27.29	26.107	
6,500.0	6,447.0	6,265.4	6,254.9	17.2	13.7	171.13	-62.4	-188.7	737.8	710.5	27.23	27.091	
6,550.0	6,493.8	6,303.9	6,292.0	17.5	13.8	167.83	-64.7	-198.6	766.9	739.7	27.12	28.280	
6,600.0	6,538.9	6,341.8	6,328.7	17.9	13.9	165.16	-67.0	-208.3	799.2	772.2	26.95	29.656	
6,650.0	6,581.9	6,376.9	6,362.5	18.3	14.0	162.68	-69.1	-217.3	834.5	807.7	26.76	31.190	
6,700.0	6,622.6	6,408.9	6,393.3	18.7	14.1	160.10	-71.1	-225.5	872.5	846.0	26.58	32.824	
6,750.0	6,660.6	6,437.4	6,420.9	19.3	14.2	157.16	-72.8	-232.9	913.1	886.6	26.50	34.451	
6,800.0	6,695.7	6,462.3	6,444.9	19.8	14.3	153.54	-74.3	-239.3	955.8	929.2	26.63	35.887	
6,850.0	6,727.5	6,483.4	6,465.3	20.5	14.4	148.80	-75.6	-244.7	1,000.4	973.2	27.16	36.830	
6,900.0	6,755.9	6,500.6	6,481.8	21.2	14.4	142.19	-76.6	-249.1	1,046.5	1,018.1	28.39	36.856	
6,920.7	6,766.6	6,506.5	6,487.5	21.6	14.5	138.64	-77.0	-250.6	1,066.0	1,036.8	29.21	36.497	
7,000.0	6,806.2	6,527.7	6,508.0	22.9	14.5	140.53	-78.3	-256.1	1,141.1	1,111.5	29.63	38.517	
7,070.7	6,841.6	6,544.7	6,524.4	24.1	14.6	141.93	-79.3	-260.4	1,208.2	1,178.2	30.05	40.208	
7,100.0	6,856.1	6,550.0	6,529.5	24.6	14.6	133.94	-79.6	-261.8	1,235.9	1,203.8	32.07	38.538	
7,150.0	6,880.8	6,550.0	6,529.5	25.4	14.6	122.05	-79.6	-261.8	1,282.6	1,247.6	34.96	36.684	
7,200.0	6,904.9	6,550.0	6,529.5	26.3	14.6	112.65	-79.6	-261.8	1,328.2	1,291.2	37.00	35.901	
7,250.0	6,928.3	6,567.6	6,546.3	27.1	14.7	106.38	-81.1	-266.5	1,372.4	1,334.2	38.21	35.922	
7,300.0	6,950.8	6,573.8	6,552.3	27.9	14.7	100.49	-81.8	-268.2	1,415.3	1,376.2	39.10	36.195	
7,350.0	6,972.3	6,580.1	6,558.3	28.7	14.7	95.56	-82.5	-270.0	1,456.4	1,416.8	39.64	36.741	
7,400.0	6,992.5	6,586.3	6,564.2	29.5	14.7	91.39	-83.3	-271.7	1,495.8	1,455.9	39.89	37.495	
7,450.0	7,011.4	6,600.0	6,577.1	30.3	14.8	88.21	-85.2	-275.7	1,533.2	1,493.3	39.90	38.424	
7,500.0	7,028.8	6,600.0	6,577.1	31.0	14.8	84.86	-85.2	-275.7	1,568.4	1,528.7	39.71	39.500	
7,550.0	7,044.5	6,600.0	6,577.1	31.6	14.8	82.00	-85.2	-275.7	1,601.5	1,562.1	39.31	40.734	
7,600.0	7,058.4	6,600.0	6,577.1	32.2	14.8	79.58	-85.2	-275.7	1,632.2	1,593.5	38.76	42.116	
7,650.0	7,070.5	6,618.2	6,594.3	32.8	14.8	78.26	-88.2	-281.2	1,660.4	1,622.3	38.13	43.548	
7,700.0	7,080.6	6,624.9	6,600.5	33.3	14.9	76.80	-89.4	-283.3	1,686.2	1,648.8	37.36	45.136	
7,750.0	7,088.6	6,631.7	6,606.8	33.8	14.9	75.66	-90.7	-285.4	1,709.4	1,672.9	36.51	46.821	
7,800.0	7,094.6	6,638.7	6,613.3	34.2	14.9	74.81	-92.1	-287.6	1,729.9	1,694.3	35.61	48.579	
7,850.0	7,098.3	6,650.0	6,623.7	34.6	15.0	74.39	-94.6	-291.3	1,747.7	1,713.0	34.72	50.334	
7,900.0	7,100.0	6,650.0	6,623.7	34.9	15.0	73.86	-94.6	-291.3	1,762.7	1,729.0	33.79	52.175	
7,911.9	7,100.0	6,650.0	6,623.7	35.0	15.0	73.78	-94.6	-291.3	1,765.9	1,732.3	33.57	52.605	
8,000.0	7,100.0	6,669.5	6,641.5	35.5	15.0	74.41	-99.3	-297.8	1,790.7	1,756.1	34.62	51.720	
8,100.0	7,100.0	6,689.7	6,659.6	36.2	15.1	75.06	-104.8	-304.7	1,823.3	1,787.5	35.87	50.830	
8,200.0	7,100.0	6,715.2	6,682.2	37.0	15.3	75.87	-112.6	-313.8	1,860.4	1,823.2	37.27	49.924	
8,300.0	7,100.0	6,748.5	6,710.7	37.9	15.4	76.89	-124.2	-326.2	1,901.6	1,862.8	38.81	49.003	
8,400.0	7,100.0	6,793.1	6,747.6	38.8	15.7	78.22	-142.3	-343.6	1,946.2	1,905.7	40.51	48.042	
8,500.0	7,100.0	7,977.4	7,100.0	39.8	28.2	90.00	-1,144.6	-630.6	1,974.7	1,920.2	54.58	36.181	
8,600.0	7,100.0	8,077.4	7,100.0	40.8	29.6	90.00	-1,244.6	-630.6	1,974.6	1,916.9	57.63	34.264	
8,700.0	7,100.0	8,177.4	7,100.0	41.9	31.0	90.00	-1,344.6	-630.6	1,974.4	1,913.6	60.77	32.490	
8,800.0	7,100.0	8,277.4	7,100.0	43.1	32.5	90.00	-1,444.6	-630.6	1,974.2	1,910.2	63.99	30.852	
8,900.0	7,100.0	8,377.4	7,100.0	44.3	34.1	90.00	-1,544.6	-630.6	1,974.1	1,906.8	67.28	29.342	
9,000.0	7,100.0	8,477.4	7,100.0	45.6	35.7	90.00	-1,644.6	-630.6	1,973.9	1,903.3	70.62	27.949	
9,100.0	7,100.0	8,577.4	7,100.0	46.9	37.3	90.00	-1,744.6	-630.6	1,973.7	1,899.7	74.02	26.664	

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 4-17H20
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 4-17H20	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						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	8,677.4	7,100.0	48.3	39.0	90.00	-1,844.6	-630.6	1,973.5	1,896.1	77.46	25.478	
9,300.0	7,100.0	8,777.4	7,100.0	49.7	40.6	90.00	-1,944.6	-630.6	1,973.4	1,892.4	80.94	24.381	
9,400.0	7,100.0	8,877.4	7,100.0	51.1	42.3	90.00	-2,044.6	-630.6	1,973.2	1,888.8	84.45	23.365	
9,500.0	7,100.0	8,977.4	7,100.0	52.6	44.0	90.00	-2,144.6	-630.6	1,973.0	1,885.1	87.99	22.423	
9,600.0	7,100.0	9,077.4	7,100.0	54.1	45.8	90.00	-2,244.6	-630.7	1,972.9	1,881.3	91.56	21.547	
9,700.0	7,100.0	9,177.4	7,100.0	55.6	47.5	90.00	-2,344.6	-630.7	1,972.7	1,877.6	95.15	20.733	
9,800.0	7,100.0	9,277.4	7,100.0	57.1	49.3	90.00	-2,444.6	-630.7	1,972.5	1,873.8	98.76	19.973	
9,900.0	7,100.0	9,377.4	7,100.0	58.7	51.1	90.00	-2,544.6	-630.7	1,972.4	1,870.0	102.39	19.264	
10,000.0	7,100.0	9,477.4	7,100.0	60.3	52.9	90.00	-2,644.6	-630.7	1,972.2	1,866.2	106.03	18.600	
10,100.0	7,100.0	9,577.4	7,100.0	61.9	54.7	90.00	-2,744.6	-630.7	1,972.0	1,862.3	109.69	17.978	
10,200.0	7,100.0	9,677.4	7,100.0	63.6	56.5	90.00	-2,844.6	-630.7	1,971.9	1,858.5	113.37	17.394	
10,300.0	7,100.0	9,777.4	7,100.0	65.2	58.3	90.00	-2,944.6	-630.7	1,971.7	1,854.6	117.05	16.844	
10,400.0	7,100.0	9,877.4	7,100.0	66.9	60.1	90.00	-3,044.6	-630.7	1,971.5	1,850.8	120.75	16.327	
10,500.0	7,100.0	9,977.4	7,100.0	68.6	61.9	90.00	-3,144.6	-630.7	1,971.4	1,846.9	124.46	15.840	
10,600.0	7,100.0	10,077.4	7,100.0	70.3	63.8	90.00	-3,244.6	-630.7	1,971.2	1,843.0	128.17	15.379	
10,700.0	7,100.0	10,177.4	7,100.0	72.0	65.6	90.00	-3,344.6	-630.7	1,971.0	1,839.1	131.90	14.944	
10,800.0	7,100.0	10,277.4	7,100.0	73.7	67.5	90.00	-3,444.6	-630.8	1,970.9	1,835.2	135.63	14.531	
10,900.0	7,100.0	10,377.4	7,100.0	75.5	69.3	90.00	-3,544.6	-630.8	1,970.7	1,831.3	139.37	14.140	
11,000.0	7,100.0	10,477.4	7,100.0	77.2	71.2	90.00	-3,644.6	-630.8	1,970.5	1,827.4	143.11	13.769	
11,100.0	7,100.0	10,577.4	7,100.0	79.0	73.0	90.00	-3,744.6	-630.8	1,970.3	1,823.5	146.86	13.416	
11,200.0	7,100.0	10,677.4	7,100.0	80.7	74.9	90.00	-3,844.6	-630.8	1,970.2	1,819.6	150.62	13.080	
11,300.0	7,100.0	10,777.4	7,100.0	82.5	76.8	90.00	-3,944.6	-630.8	1,970.0	1,815.6	154.38	12.761	
11,400.0	7,100.0	10,877.4	7,100.0	84.3	78.6	90.00	-4,044.6	-630.8	1,969.8	1,811.7	158.15	12.456	
11,500.0	7,100.0	10,977.4	7,100.0	86.1	80.5	90.00	-4,144.6	-630.8	1,969.7	1,807.7	161.92	12.164	
11,600.0	7,100.0	11,077.4	7,100.0	87.8	82.4	90.00	-4,244.6	-630.8	1,969.5	1,803.8	165.70	11.886	
11,700.0	7,100.0	11,177.4	7,100.0	89.6	84.2	90.00	-4,344.6	-630.8	1,969.3	1,799.9	169.48	11.620	
11,800.0	7,100.0	11,277.4	7,100.0	91.4	86.1	90.00	-4,444.6	-630.8	1,969.2	1,795.9	173.26	11.365	
11,900.0	7,100.0	11,377.4	7,100.0	93.3	88.0	90.00	-4,544.6	-630.9	1,969.0	1,792.0	177.04	11.121	
12,000.0	7,100.0	11,477.4	7,100.0	95.1	89.9	90.00	-4,644.6	-630.9	1,968.8	1,788.0	180.83	10.887	
12,100.0	7,100.0	11,577.4	7,100.0	96.9	91.8	90.00	-4,744.6	-630.9	1,968.7	1,784.0	184.63	10.663	
12,200.0	7,100.0	11,677.4	7,100.0	98.7	93.7	90.00	-4,844.6	-630.9	1,968.5	1,780.1	188.42	10.447	
12,300.0	7,100.0	11,777.4	7,100.0	100.5	95.6	90.00	-4,944.6	-630.9	1,968.3	1,776.1	192.22	10.240	
12,400.0	7,100.0	11,877.4	7,100.0	102.4	97.5	90.00	-5,044.6	-630.9	1,968.2	1,772.1	196.02	10.041	
12,500.0	7,100.0	11,977.4	7,100.0	104.2	99.3	90.00	-5,144.6	-630.9	1,968.0	1,768.2	199.82	9.849	
12,600.0	7,100.0	12,077.4	7,100.0	106.0	101.2	90.00	-5,244.6	-630.9	1,967.8	1,764.2	203.63	9.664	
12,700.0	7,100.0	12,177.4	7,100.0	107.9	103.1	90.00	-5,344.6	-630.9	1,967.6	1,760.2	207.44	9.486	
12,800.0	7,100.0	12,277.4	7,100.0	109.7	105.0	90.00	-5,444.6	-630.9	1,967.5	1,756.2	211.24	9.314	
12,900.0	7,100.0	12,377.4	7,100.0	111.6	106.9	90.00	-5,544.6	-630.9	1,967.3	1,752.3	215.06	9.148	
13,000.0	7,100.0	12,477.4	7,100.0	113.4	108.8	90.00	-5,644.6	-630.9	1,967.1	1,748.3	218.87	8.988	
13,100.0	7,100.0	12,577.4	7,100.0	115.3	110.7	90.00	-5,744.6	-631.0	1,967.0	1,744.3	222.68	8.833	
13,200.0	7,100.0	12,677.4	7,100.0	117.1	112.6	90.00	-5,844.6	-631.0	1,966.8	1,740.3	226.50	8.683	
13,300.0	7,100.0	12,777.4	7,100.0	119.0	114.5	90.00	-5,944.6	-631.0	1,966.6	1,736.3	230.32	8.539	
13,400.0	7,100.0	12,877.4	7,100.0	120.9	116.4	90.00	-6,044.6	-631.0	1,966.5	1,732.3	234.14	8.399	
13,500.0	7,100.0	12,977.4	7,100.0	122.7	118.3	90.00	-6,144.6	-631.0	1,966.3	1,728.3	237.96	8.263	
13,600.0	7,100.0	13,077.4	7,100.0	124.6	120.3	90.00	-6,244.6	-631.0	1,966.1	1,724.4	241.78	8.132	
13,700.0	7,100.0	13,177.4	7,100.0	126.4	122.2	90.00	-6,344.6	-631.0	1,966.0	1,720.4	245.60	8.005	
13,800.0	7,100.0	13,277.4	7,100.0	128.3	124.1	90.00	-6,444.6	-631.0	1,965.8	1,716.4	249.42	7.881	
13,900.0	7,100.0	13,377.4	7,100.0	130.2	126.0	90.00	-6,544.6	-631.0	1,965.6	1,712.4	253.25	7.762	
14,000.0	7,100.0	13,477.4	7,100.0	132.1	127.9	90.00	-6,644.6	-631.0	1,965.5	1,708.4	257.08	7.645	
14,100.0	7,100.0	13,577.4	7,100.0	133.9	129.8	90.00	-6,744.6	-631.0	1,965.3	1,704.4	260.90	7.533	
14,200.0	7,100.0	13,677.4	7,100.0	135.8	131.7	90.00	-6,844.6	-631.0	1,965.1	1,700.4	264.73	7.423	
14,300.0	7,100.0	13,777.4	7,100.0	137.7	133.6	90.00	-6,944.6	-631.1	1,964.9	1,696.4	268.56	7.317	

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 4-17H20
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 4-17H20	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
14,400.0	7,100.0	13,877.4	7,100.0	139.6	135.5	90.00	-7,044.6	-631.1	1,964.8	1,692.4	272.39	7.213	
14,500.0	7,100.0	13,977.4	7,100.0	141.5	137.4	90.00	-7,144.6	-631.1	1,964.6	1,688.4	276.22	7.112	
14,600.0	7,100.0	14,077.4	7,100.0	143.3	139.3	90.00	-7,244.6	-631.1	1,964.4	1,684.4	280.05	7.015	
14,700.0	7,100.0	14,177.4	7,100.0	145.2	141.3	90.00	-7,344.6	-631.1	1,964.3	1,680.4	283.89	6.919	
14,800.0	7,100.0	14,277.4	7,100.0	147.1	143.2	90.00	-7,444.6	-631.1	1,964.1	1,676.4	287.72	6.826	
14,900.0	7,100.0	14,377.4	7,100.0	149.0	145.1	90.00	-7,544.6	-631.1	1,963.9	1,672.4	291.55	6.736	
15,000.0	7,100.0	14,477.4	7,100.0	150.9	147.0	90.00	-7,644.6	-631.1	1,963.8	1,668.4	295.39	6.648	
15,100.0	7,100.0	14,577.4	7,100.0	152.8	148.9	90.00	-7,744.6	-631.1	1,963.6	1,664.4	299.23	6.562	
15,200.0	7,100.0	14,677.4	7,100.0	154.7	150.8	90.00	-7,844.6	-631.1	1,963.4	1,660.4	303.06	6.479	
15,300.0	7,100.0	14,777.4	7,100.0	156.5	152.7	90.00	-7,944.6	-631.1	1,963.3	1,656.4	306.90	6.397	
15,400.0	7,100.0	14,877.4	7,100.0	158.4	154.7	90.00	-8,044.6	-631.2	1,963.1	1,652.4	310.74	6.318	
15,500.0	7,100.0	14,977.4	7,100.0	160.3	156.6	90.00	-8,144.6	-631.2	1,962.9	1,648.3	314.57	6.240	
15,600.0	7,100.0	15,077.4	7,100.0	162.2	158.5	90.00	-8,244.6	-631.2	1,962.8	1,644.3	318.41	6.164	
15,700.0	7,100.0	15,177.4	7,100.0	164.1	160.4	90.00	-8,344.6	-631.2	1,962.6	1,640.3	322.25	6.090	
15,800.0	7,100.0	15,277.4	7,100.0	166.0	162.3	90.00	-8,444.6	-631.2	1,962.4	1,636.3	326.09	6.018	
15,900.0	7,100.0	15,377.4	7,100.0	167.9	164.2	90.00	-8,544.6	-631.2	1,962.2	1,632.3	329.93	5.947	
16,000.0	7,100.0	15,477.4	7,100.0	169.8	166.2	90.00	-8,644.6	-631.2	1,962.1	1,628.3	333.77	5.878	
16,100.0	7,100.0	15,577.4	7,100.0	171.7	168.1	90.00	-8,744.6	-631.2	1,961.9	1,624.3	337.61	5.811	
16,200.0	7,100.0	15,677.4	7,100.0	173.6	170.0	90.00	-8,844.6	-631.2	1,961.7	1,620.3	341.46	5.745	
16,300.0	7,100.0	15,777.4	7,100.0	175.5	171.9	90.00	-8,944.6	-631.2	1,961.6	1,616.3	345.30	5.681	
16,400.0	7,100.0	15,877.4	7,100.0	177.4	173.8	90.00	-9,044.6	-631.2	1,961.4	1,612.3	349.14	5.618	
16,500.0	7,100.0	15,977.4	7,100.0	179.3	175.8	90.00	-9,144.6	-631.2	1,961.2	1,608.3	352.98	5.556	
16,600.0	7,100.0	16,077.4	7,100.0	181.2	177.7	90.00	-9,244.6	-631.3	1,961.1	1,604.2	356.83	5.496	
16,700.0	7,100.0	16,177.4	7,100.0	183.1	179.6	90.00	-9,344.6	-631.3	1,960.9	1,600.2	360.67	5.437	
16,800.0	7,100.0	16,277.4	7,100.0	185.0	181.5	90.00	-9,444.6	-631.3	1,960.7	1,596.2	364.51	5.379	
16,900.0	7,100.0	16,377.4	7,100.0	186.9	183.4	90.00	-9,544.6	-631.3	1,960.6	1,592.2	368.36	5.322	
17,000.0	7,100.0	16,477.4	7,100.0	188.8	185.4	90.00	-9,644.6	-631.3	1,960.4	1,588.2	372.20	5.267	
17,100.0	7,100.0	16,577.4	7,100.0	190.7	187.3	90.00	-9,744.6	-631.3	1,960.2	1,584.2	376.05	5.213	
17,200.0	7,100.0	16,677.4	7,100.0	192.6	189.2	90.00	-9,844.6	-631.3	1,960.1	1,580.2	379.90	5.159	
17,300.0	7,100.0	16,777.4	7,100.0	194.5	191.1	90.00	-9,944.6	-631.3	1,959.9	1,576.1	383.74	5.107	
17,400.0	7,100.0	16,877.4	7,100.0	196.4	193.0	90.00	-10,044.6	-631.3	1,959.7	1,572.1	387.59	5.056	
17,500.0	7,100.0	16,977.4	7,100.0	198.3	194.7	90.00	-10,144.6	-631.3	1,959.5	1,568.4	391.15	5.010	
17,504.8	7,100.0	16,978.9	7,100.0	198.4	194.7	90.00	-10,146.1	-631.3	1,959.5	1,568.3	391.25	5.008	
17,522.7	7,100.0	16,978.9	7,100.0	198.7	194.7	90.00	-10,146.1	-631.3	1,959.6	1,568.1	391.53	5.005	
17,523.1	7,100.0	16,978.9	7,100.0	198.7	194.7	90.00	-10,146.1	-631.3	1,959.6	1,568.1	391.53	5.005 SF	

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 4-17H20
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 4-17H20	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 Tooface (")	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	-89.23	0.5	-40.0	40.0				
100.0	100.0	100.0	100.0	0.1	0.1	-89.23	0.5	-40.0	40.0	39.8	0.19	211.985	
200.0	200.0	200.0	200.0	0.3	0.3	-89.23	0.5	-40.0	40.0	39.4	0.64	62.700	
300.0	300.0	300.0	300.0	0.5	0.5	-89.23	0.5	-40.0	40.0	38.9	1.09	36.791	
400.0	400.0	400.0	400.0	0.8	0.8	-89.23	0.5	-40.0	40.0	38.5	1.54	26.033	
500.0	500.0	500.0	500.0	1.0	1.0	-89.23	0.5	-40.0	40.0	38.0	1.99	20.143 CC, ES	
594.9	594.9	594.9	594.9	1.2	1.2	178.58	-1.0	-40.0	41.6	39.2	2.38	17.502	
600.0	600.0	600.0	599.9	1.2	1.2	178.35	-1.2	-40.0	41.8	39.4	2.40	17.427	
700.0	699.9	699.8	699.7	1.4	1.4	173.01	-5.5	-40.0	45.4	42.6	2.79	16.296	
800.0	799.9	799.6	799.4	1.6	1.6	168.35	-10.0	-40.0	49.4	46.2	3.20	15.451	
900.0	899.8	899.5	899.2	1.8	1.8	164.40	-14.4	-40.0	53.7	50.1	3.62	14.818	
1,000.0	999.8	999.3	998.9	2.1	2.0	161.04	-18.9	-40.0	58.2	54.1	4.06	14.339	
1,100.0	1,099.7	1,099.2	1,098.7	2.3	2.2	158.18	-23.3	-40.0	62.8	58.3	4.50	13.969	
1,200.0	1,199.7	1,199.3	1,198.7	2.5	2.5	155.80	-27.7	-40.0	67.6	62.6	4.94	13.676	
1,300.0	1,299.6	1,300.2	1,299.6	2.7	2.7	155.59	-29.5	-40.0	71.3	65.9	5.37	13.272	
1,405.6	1,405.1	1,405.7	1,405.1	3.0	2.9	156.70	-29.5	-40.0	74.5	68.7	5.83	12.792	
1,500.5	1,500.0	1,500.6	1,500.0	3.2	3.1	-112.82	-29.5	-40.0	76.0	69.8	6.21	12.234	
1,600.0	1,599.5	1,600.1	1,599.5	3.4	3.3	-112.82	-29.5	-40.0	76.0	69.3	6.62	11.482	
1,700.0	1,699.5	1,700.1	1,699.5	3.6	3.5	-112.82	-29.5	-40.0	76.0	68.9	7.04	10.794	
1,800.0	1,799.5	1,800.1	1,799.5	3.8	3.7	-112.82	-29.5	-40.0	76.0	68.5	7.46	10.179	
1,900.0	1,899.5	1,900.1	1,899.5	4.0	3.9	-112.82	-29.5	-40.0	76.0	68.1	7.89	9.627	
2,000.0	1,999.5	2,000.1	1,999.5	4.2	4.1	-112.82	-29.5	-40.0	76.0	67.6	8.32	9.129	
2,100.0	2,099.5	2,100.1	2,099.5	4.5	4.3	-112.82	-29.5	-40.0	76.0	67.2	8.75	8.679	
2,200.0	2,199.5	2,200.1	2,199.5	4.7	4.5	-112.82	-29.5	-40.0	76.0	66.8	9.19	8.269	
2,300.0	2,299.5	2,300.1	2,299.5	4.9	4.8	-112.82	-29.5	-40.0	76.0	66.3	9.62	7.895	
2,400.0	2,399.5	2,400.1	2,399.5	5.1	5.0	-112.82	-29.5	-40.0	76.0	65.9	10.06	7.552	
2,500.0	2,499.5	2,500.1	2,499.5	5.3	5.2	-112.82	-29.5	-40.0	76.0	65.5	10.50	7.237	
2,600.0	2,599.5	2,600.1	2,599.5	5.5	5.4	-112.82	-29.5	-40.0	76.0	65.0	10.93	6.947	
2,700.0	2,699.5	2,700.1	2,699.5	5.8	5.6	-112.82	-29.5	-40.0	76.0	64.6	11.37	6.679	
2,800.0	2,799.5	2,800.1	2,799.5	6.0	5.9	-112.82	-29.5	-40.0	76.0	64.2	11.81	6.430	
2,900.0	2,899.5	2,900.1	2,899.5	6.2	6.1	-112.82	-29.5	-40.0	76.0	63.7	12.26	6.199	
3,000.0	2,999.5	3,000.1	2,999.5	6.4	6.3	-112.82	-29.5	-40.0	76.0	63.3	12.70	5.983	
3,100.0	3,099.5	3,100.1	3,099.5	6.6	6.5	-112.82	-29.5	-40.0	76.0	62.8	13.14	5.782	
3,200.0	3,199.5	3,200.1	3,199.5	6.9	6.7	-112.82	-29.5	-40.0	76.0	62.4	13.58	5.593	
3,300.0	3,299.5	3,300.1	3,299.5	7.1	7.0	-112.82	-29.5	-40.0	76.0	61.9	14.02	5.417	
3,400.0	3,399.5	3,400.1	3,399.5	7.3	7.2	-112.82	-29.5	-40.0	76.0	61.5	14.47	5.251	
3,500.0	3,499.5	3,500.1	3,499.5	7.5	7.4	-112.82	-29.5	-40.0	76.0	61.1	14.91	5.095	
3,600.0	3,599.5	3,600.1	3,599.5	7.8	7.6	-112.82	-29.5	-40.0	76.0	60.6	15.36	4.947	
3,700.0	3,699.5	3,700.1	3,699.5	8.0	7.8	-112.82	-29.5	-40.0	76.0	60.2	15.80	4.808	
3,800.0	3,799.5	3,800.1	3,799.5	8.2	8.1	-112.82	-29.5	-40.0	76.0	59.7	16.24	4.676	
3,900.0	3,899.5	3,900.1	3,899.5	8.4	8.3	-112.82	-29.5	-40.0	76.0	59.3	16.69	4.552	
4,000.0	3,999.5	4,000.1	3,999.5	8.6	8.5	-112.82	-29.5	-40.0	76.0	58.8	17.13	4.434	
4,100.0	4,099.5	4,100.1	4,099.5	8.9	8.7	163.62	-29.5	-40.0	77.6	60.1	17.55	4.423	
4,200.0	4,199.4	4,200.0	4,199.4	9.1	8.9	164.61	-29.5	-40.0	82.7	64.7	17.97	4.600	
4,300.0	4,299.0	4,299.6	4,299.0	9.3	9.2	166.03	-29.5	-40.0	91.1	72.7	18.38	4.958	
4,400.0	4,398.2	4,398.8	4,398.2	9.5	9.4	167.61	-29.5	-40.0	103.0	84.2	18.77	5.487	
4,500.0	4,497.0	4,497.6	4,497.0	9.8	9.6	169.18	-29.5	-40.0	118.3	99.2	19.14	6.180	
4,600.0	4,595.1	4,595.8	4,595.1	10.1	9.8	170.61	-29.5	-40.0	137.1	117.6	19.51	7.029	
4,642.4	4,636.6	4,637.2	4,636.6	10.2	9.9	171.17	-29.5	-40.0	146.1	126.5	19.66	7.434	
4,700.0	4,692.7	4,693.3	4,692.7	10.4	10.0	171.88	-29.5	-40.0	158.8	138.9	19.91	7.977	
4,800.0	4,790.2	4,790.8	4,790.2	10.7	10.3	172.87	-29.5	-40.0	180.8	160.5	20.34	8.890	
4,900.0	4,887.7	4,888.3	4,887.7	11.0	10.5	173.65	-29.5	-40.0	202.9	182.2	20.78	9.765	

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 4-17H20
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 4-17H20	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		
5,000.0	4,985.2	4,985.8	4,985.2	11.3	10.7	174.28	-29.5	-40.0	225.1	203.8	21.22	10.605		
5,100.0	5,082.7	5,083.3	5,082.7	11.7	10.9	174.79	-29.5	-40.0	247.2	225.5	21.67	11.409		
5,200.0	5,180.2	5,180.8	5,180.2	12.0	11.1	175.22	-29.5	-40.0	269.4	247.2	22.11	12.181		
5,300.0	5,277.7	5,278.3	5,277.7	12.4	11.4	175.58	-29.5	-40.0	291.5	269.0	22.56	12.921		
5,400.0	5,375.2	5,375.8	5,375.2	12.7	11.6	175.90	-29.5	-40.0	313.7	290.7	23.01	13.632		
5,500.0	5,472.7	5,473.3	5,472.7	13.1	11.8	176.17	-29.5	-40.0	335.9	312.4	23.46	14.315		
5,600.0	5,570.2	5,570.8	5,570.2	13.5	12.0	176.41	-29.5	-40.0	358.1	334.2	23.92	14.971		
5,700.0	5,667.7	5,668.3	5,667.7	13.9	12.2	176.62	-29.5	-40.0	380.3	355.9	24.37	15.602		
5,800.0	5,765.2	5,765.8	5,765.2	14.3	12.4	176.80	-29.5	-40.0	402.5	377.6	24.83	16.209		
5,900.0	5,862.7	5,863.3	5,862.7	14.7	12.7	176.97	-29.5	-40.0	424.7	399.4	25.29	16.793		
6,000.0	5,960.2	5,960.8	5,960.2	15.1	12.9	177.12	-29.5	-40.0	446.9	421.1	25.75	17.355		
6,100.0	6,057.7	6,058.3	6,057.7	15.5	13.1	177.26	-29.5	-40.0	469.1	442.9	26.21	17.897		
6,200.0	6,155.2	6,155.8	6,155.2	15.9	13.3	177.38	-29.5	-40.0	491.3	464.6	26.67	18.419		
6,300.0	6,252.6	6,253.3	6,252.6	16.3	13.5	177.49	-29.5	-40.0	513.5	486.4	27.14	18.923		
6,400.0	6,350.1	6,350.8	6,350.1	16.8	13.8	177.60	-29.5	-40.0	535.7	508.1	27.60	19.409		
6,445.4	6,394.4	6,395.0	6,394.4	17.0	13.9	177.64	-29.5	-40.0	545.8	518.0	27.81	19.624		
6,450.0	6,398.9	6,399.5	6,398.9	17.0	13.9	177.10	-29.5	-40.0	546.9	519.1	27.82	19.661		
6,500.0	6,447.0	6,447.6	6,447.0	17.2	14.0	172.87	-29.5	-40.0	560.4	532.6	27.78	20.174		
6,550.0	6,493.8	6,492.2	6,491.5	17.5	14.1	170.14	-30.9	-39.9	577.9	550.2	27.64	20.904		
6,600.0	6,538.9	6,534.9	6,533.9	17.9	14.1	167.82	-35.5	-39.5	599.4	572.0	27.44	21.842		
6,650.0	6,581.9	6,575.3	6,573.7	18.3	14.2	165.55	-42.7	-38.9	624.8	597.6	27.21	22.964		
6,700.0	6,622.6	6,613.2	6,610.4	18.7	14.3	163.16	-52.0	-38.0	653.7	626.7	26.97	24.235		
6,750.0	6,660.6	6,650.0	6,645.4	19.3	14.4	160.50	-63.3	-37.1	686.1	659.3	26.80	25.595		
6,800.0	6,695.7	6,680.3	6,673.6	19.8	14.4	157.52	-74.3	-36.1	721.5	694.7	26.76	26.966		
6,850.0	6,727.5	6,709.3	6,700.1	20.5	14.5	154.01	-86.2	-35.1	759.7	732.8	26.94	28.196		
6,900.0	6,755.9	6,735.3	6,723.2	21.2	14.6	149.80	-98.0	-34.0	800.4	772.9	27.50	29.106		
6,920.7	6,766.6	6,745.2	6,731.9	21.6	14.6	147.78	-102.7	-33.6	817.9	790.0	27.87	29.342		
7,000.0	6,806.2	6,781.7	6,763.1	22.9	14.7	147.50	-121.5	-32.0	885.5	856.9	28.64	30.914		
7,070.7	6,841.6	6,813.3	6,789.2	24.1	14.8	147.06	-139.4	-30.4	946.1	916.7	29.42	32.154		
7,100.0	6,856.1	6,826.5	6,799.7	24.6	14.8	141.18	-147.3	-29.7	971.0	940.1	30.88	31.444		
7,150.0	6,880.8	6,850.0	6,818.1	25.4	14.9	132.28	-161.9	-28.4	1,012.6	979.5	33.16	30.541		
7,200.0	6,904.9	6,875.6	6,837.4	26.3	15.0	124.69	-178.7	-27.0	1,052.7	1,017.6	35.09	30.002		
7,250.0	6,928.3	6,900.0	6,855.0	27.1	15.1	118.18	-195.4	-25.5	1,091.1	1,054.4	36.66	29.760		
7,300.0	6,950.8	6,931.7	6,876.9	27.9	15.2	112.66	-218.3	-23.5	1,127.4	1,089.5	37.92	29.731		
7,350.0	6,972.3	6,962.6	6,896.9	28.7	15.4	107.89	-241.7	-21.5	1,161.6	1,122.7	38.90	29.862		
7,400.0	6,992.5	6,995.3	6,916.7	29.5	15.6	103.79	-267.7	-19.2	1,193.2	1,153.6	39.64	30.104		
7,450.0	7,011.4	7,030.0	6,936.1	30.3	15.8	100.27	-296.3	-16.7	1,222.2	1,182.0	40.18	30.420		
7,500.0	7,028.8	7,068.8	6,955.8	31.0	16.1	97.29	-329.6	-13.8	1,248.3	1,207.8	40.56	30.777		
7,550.0	7,044.5	7,112.4	6,977.6	31.6	16.4	94.90	-367.2	-10.5	1,271.3	1,230.4	40.82	31.144		
7,600.0	7,058.4	7,157.1	7,000.0	32.2	16.8	93.04	-405.8	-7.1	1,290.9	1,249.9	40.97	31.508		
7,650.0	7,070.5	7,201.7	7,022.3	32.8	17.1	91.67	-444.3	-3.7	1,307.0	1,266.0	41.00	31.877		
7,700.0	7,080.6	7,233.5	7,037.4	33.3	17.4	90.53	-472.1	-1.4	1,320.0	1,279.1	40.86	32.301		
7,750.0	7,088.6	7,265.8	7,051.2	33.8	17.8	89.72	-501.3	0.6	1,329.8	1,289.2	40.65	32.717		
7,800.0	7,094.6	7,300.0	7,064.0	34.2	18.1	89.26	-532.9	2.6	1,336.6	1,296.3	40.38	33.099		
7,850.0	7,098.3	7,333.1	7,074.6	34.6	18.5	89.11	-564.2	4.2	1,340.3	1,300.2	40.07	33.446		
7,900.0	7,100.0	7,367.8	7,083.8	34.9	18.9	89.29	-597.7	5.6	1,340.7	1,301.0	39.76	33.722		
7,911.9	7,100.0	7,376.2	7,085.7	35.0	19.0	89.39	-605.8	5.8	1,340.3	1,300.7	39.68	33.775		
8,000.0	7,100.0	7,439.6	7,096.3	35.5	19.7	89.84	-668.3	7.5	1,337.8	1,296.4	41.44	32.285		
8,100.0	7,100.0	7,516.3	7,100.0	36.2	20.7	90.00	-744.8	8.0	1,336.9	1,293.3	43.59	30.672		
8,200.0	7,100.0	7,616.3	7,100.0	37.0	22.0	90.00	-844.8	8.0	1,336.7	1,290.5	46.20	28.932		
8,300.0	7,100.0	7,716.3	7,100.0	37.9	23.5	90.00	-944.8	8.0	1,336.5	1,287.5	48.98	27.286		
8,400.0	7,100.0	7,816.3	7,100.0	38.8	25.0	90.00	-1,044.8	8.0	1,336.3	1,284.4	51.90	25.748		

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 4-17H20
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 4-17H20	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
8,500.0	7,100.0	7,916.3	7,100.0	39.8	26.5	90.00	-1,144.8	8.0	1,336.1	1,281.2	54.93	24.322	
8,600.0	7,100.0	8,016.3	7,100.0	40.8	28.1	90.00	-1,244.8	8.0	1,335.9	1,277.9	58.07	23.007	
8,700.0	7,100.0	8,116.3	7,100.0	41.9	29.8	90.00	-1,344.8	8.0	1,335.8	1,274.5	61.28	21.796	
8,800.0	7,100.0	8,216.3	7,100.0	43.1	31.4	90.00	-1,444.8	8.1	1,335.6	1,271.0	64.57	20.684	
8,900.0	7,100.0	8,316.3	7,100.0	44.3	33.1	90.00	-1,544.8	8.1	1,335.4	1,267.5	67.92	19.662	
9,000.0	7,100.0	8,416.3	7,100.0	45.6	34.9	90.00	-1,644.8	8.1	1,335.2	1,263.9	71.32	18.722	
9,100.0	7,100.0	8,516.3	7,100.0	46.9	36.6	90.00	-1,744.8	8.1	1,335.0	1,260.3	74.76	17.858	
9,200.0	7,100.0	8,616.3	7,100.0	48.3	38.4	90.00	-1,844.8	8.1	1,334.9	1,256.6	78.24	17.060	
9,300.0	7,100.0	8,716.3	7,100.0	49.7	40.2	90.00	-1,944.8	8.1	1,334.7	1,252.9	81.76	16.324	
9,400.0	7,100.0	8,816.3	7,100.0	51.1	42.0	90.00	-2,044.8	8.1	1,334.5	1,249.2	85.31	15.644	
9,500.0	7,100.0	8,916.3	7,100.0	52.6	43.8	90.00	-2,144.8	8.1	1,334.3	1,245.4	88.88	15.013	
9,600.0	7,100.0	9,016.3	7,100.0	54.1	45.6	90.00	-2,244.8	8.1	1,334.1	1,241.6	92.47	14.427	
9,700.0	7,100.0	9,116.3	7,100.0	55.6	47.4	90.00	-2,344.8	8.1	1,333.9	1,237.8	96.09	13.882	
9,800.0	7,100.0	9,216.3	7,100.0	57.1	49.2	90.00	-2,444.8	8.1	1,333.8	1,234.0	99.73	13.374	
9,900.0	7,100.0	9,316.3	7,100.0	58.7	51.1	90.00	-2,544.8	8.1	1,333.6	1,230.2	103.38	12.900	
10,000.0	7,100.0	9,416.3	7,100.0	60.3	52.9	90.00	-2,644.8	8.1	1,333.4	1,226.4	107.04	12.457	
10,100.0	7,100.0	9,516.3	7,100.0	61.9	54.8	90.00	-2,744.8	8.1	1,333.2	1,222.5	110.72	12.041	
10,200.0	7,100.0	9,616.3	7,100.0	63.6	56.6	90.00	-2,844.8	8.1	1,333.0	1,218.6	114.41	11.651	
10,300.0	7,100.0	9,716.3	7,100.0	65.2	58.5	90.00	-2,944.8	8.1	1,332.8	1,214.7	118.12	11.284	
10,400.0	7,100.0	9,816.3	7,100.0	66.9	60.4	90.00	-3,044.8	8.1	1,332.7	1,210.8	121.83	10.939	
10,500.0	7,100.0	9,916.3	7,100.0	68.6	62.2	90.00	-3,144.8	8.1	1,332.5	1,206.9	125.55	10.613	
10,600.0	7,100.0	10,016.3	7,100.0	70.3	64.1	90.00	-3,244.8	8.1	1,332.3	1,203.0	129.28	10.306	
10,700.0	7,100.0	10,116.3	7,100.0	72.0	66.0	90.00	-3,344.8	8.2	1,332.1	1,199.1	133.01	10.015	
10,800.0	7,100.0	10,216.3	7,100.0	73.7	67.9	90.00	-3,444.8	8.2	1,331.9	1,195.2	136.76	9.739	
10,900.0	7,100.0	10,316.3	7,100.0	75.5	69.8	90.00	-3,544.8	8.2	1,331.8	1,191.2	140.51	9.478	
11,000.0	7,100.0	10,416.3	7,100.0	77.2	71.6	90.00	-3,644.8	8.2	1,331.6	1,187.3	144.26	9.230	
11,100.0	7,100.0	10,516.3	7,100.0	79.0	73.5	90.00	-3,744.8	8.2	1,331.4	1,183.4	148.03	8.994	
11,200.0	7,100.0	10,616.3	7,100.0	80.7	75.4	90.00	-3,844.8	8.2	1,331.2	1,179.4	151.79	8.770	
11,300.0	7,100.0	10,716.3	7,100.0	82.5	77.3	90.00	-3,944.8	8.2	1,331.0	1,175.5	155.56	8.556	
11,400.0	7,100.0	10,816.3	7,100.0	84.3	79.2	90.00	-4,044.8	8.2	1,330.8	1,171.5	159.34	8.352	
11,500.0	7,100.0	10,916.3	7,100.0	86.1	81.1	90.00	-4,144.8	8.2	1,330.7	1,167.5	163.12	8.158	
11,600.0	7,100.0	11,016.3	7,100.0	87.8	83.0	90.00	-4,244.8	8.2	1,330.5	1,163.6	166.90	7.972	
11,700.0	7,100.0	11,116.3	7,100.0	89.6	84.9	90.00	-4,344.8	8.2	1,330.3	1,159.6	170.69	7.794	
11,800.0	7,100.0	11,216.3	7,100.0	91.4	86.8	90.00	-4,444.8	8.2	1,330.1	1,155.6	174.48	7.623	
11,900.0	7,100.0	11,316.3	7,100.0	93.3	88.7	90.00	-4,544.8	8.2	1,329.9	1,151.7	178.27	7.460	
12,000.0	7,100.0	11,416.3	7,100.0	95.1	90.6	90.00	-4,644.8	8.2	1,329.7	1,147.7	182.07	7.304	
12,100.0	7,100.0	11,516.3	7,100.0	96.9	92.5	90.00	-4,744.8	8.2	1,329.6	1,143.7	185.87	7.153	
12,200.0	7,100.0	11,616.3	7,100.0	98.7	94.4	90.00	-4,844.8	8.2	1,329.4	1,139.7	189.67	7.009	
12,300.0	7,100.0	11,716.3	7,100.0	100.5	96.3	90.00	-4,944.8	8.2	1,329.2	1,135.7	193.47	6.870	
12,400.0	7,100.0	11,816.3	7,100.0	102.4	98.2	90.00	-5,044.8	8.2	1,329.0	1,131.7	197.28	6.737	
12,500.0	7,100.0	11,916.3	7,100.0	104.2	100.1	90.00	-5,144.8	8.2	1,328.8	1,127.7	201.08	6.608	
12,600.0	7,100.0	12,016.3	7,100.0	106.0	102.0	90.00	-5,244.8	8.3	1,328.6	1,123.8	204.89	6.485	
12,700.0	7,100.0	12,116.3	7,100.0	107.9	104.0	90.00	-5,344.8	8.3	1,328.5	1,119.8	208.71	6.365	
12,800.0	7,100.0	12,216.3	7,100.0	109.7	105.9	90.00	-5,444.8	8.3	1,328.3	1,115.8	212.52	6.250	
12,900.0	7,100.0	12,316.3	7,100.0	111.6	107.8	90.00	-5,544.8	8.3	1,328.1	1,111.8	216.34	6.139	
13,000.0	7,100.0	12,416.3	7,100.0	113.4	109.7	90.00	-5,644.8	8.3	1,327.9	1,107.8	220.15	6.032	
13,100.0	7,100.0	12,516.3	7,100.0	115.3	111.6	90.00	-5,744.8	8.3	1,327.7	1,103.8	223.97	5.928	
13,200.0	7,100.0	12,616.3	7,100.0	117.1	113.5	90.00	-5,844.8	8.3	1,327.6	1,099.8	227.79	5.828	
13,300.0	7,100.0	12,716.3	7,100.0	119.0	115.4	90.00	-5,944.8	8.3	1,327.4	1,095.8	231.61	5.731	
13,400.0	7,100.0	12,816.3	7,100.0	120.9	117.3	90.00	-6,044.8	8.3	1,327.2	1,091.8	235.43	5.637	
13,500.0	7,100.0	12,916.3	7,100.0	122.7	119.3	90.00	-6,144.8	8.3	1,327.0	1,087.7	239.26	5.546	
13,600.0	7,100.0	13,016.3	7,100.0	124.6	121.2	90.00	-6,244.8	8.3	1,326.8	1,083.7	243.08	5.458	

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 4-17H20
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 4-17H20	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)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,700.0	7,100.0	13,116.3	7,100.0	126.4	123.1	90.00	-6,344.8	8.3	1,326.6	1,079.7	246.91	5.373	
13,800.0	7,100.0	13,216.3	7,100.0	128.3	125.0	90.00	-6,444.8	8.3	1,326.5	1,075.7	250.74	5.290	
13,900.0	7,100.0	13,316.3	7,100.0	130.2	126.9	90.00	-6,544.8	8.3	1,326.3	1,071.7	254.57	5.210	
14,000.0	7,100.0	13,416.3	7,100.0	132.1	128.8	90.00	-6,644.8	8.3	1,326.1	1,067.7	258.40	5.132	
14,100.0	7,100.0	13,516.3	7,100.0	133.9	130.8	90.00	-6,744.8	8.3	1,325.9	1,063.7	262.23	5.056	
14,200.0	7,100.0	13,616.3	7,100.0	135.8	132.7	90.00	-6,844.8	8.3	1,325.7	1,059.7	266.06	4.983	
14,300.0	7,100.0	13,716.3	7,100.0	137.7	134.6	90.00	-6,944.8	8.3	1,325.5	1,055.7	269.89	4.911	
14,400.0	7,100.0	13,816.3	7,100.0	139.6	136.5	90.00	-7,044.8	8.3	1,325.4	1,051.6	273.72	4.842	
14,500.0	7,100.0	13,916.3	7,100.0	141.5	138.4	90.00	-7,144.8	8.4	1,325.2	1,047.6	277.56	4.774	
14,600.0	7,100.0	14,016.3	7,100.0	143.3	140.4	90.00	-7,244.8	8.4	1,325.0	1,043.6	281.39	4.709	
14,700.0	7,100.0	14,116.3	7,100.0	145.2	142.3	90.00	-7,344.8	8.4	1,324.8	1,039.6	285.22	4.645	
14,800.0	7,100.0	14,216.3	7,100.0	147.1	144.2	90.00	-7,444.8	8.4	1,324.6	1,035.6	289.06	4.583	
14,900.0	7,100.0	14,316.3	7,100.0	149.0	146.1	90.00	-7,544.8	8.4	1,324.5	1,031.6	292.90	4.522	
15,000.0	7,100.0	14,416.3	7,100.0	150.9	148.0	90.00	-7,644.8	8.4	1,324.3	1,027.5	296.73	4.463	
15,100.0	7,100.0	14,516.3	7,100.0	152.8	150.0	90.00	-7,744.8	8.4	1,324.1	1,023.5	300.57	4.405	
15,200.0	7,100.0	14,616.3	7,100.0	154.7	151.9	90.00	-7,844.8	8.4	1,323.9	1,019.5	304.41	4.349	
15,300.0	7,100.0	14,716.3	7,100.0	156.5	153.8	90.00	-7,944.8	8.4	1,323.7	1,015.5	308.25	4.294	
15,400.0	7,100.0	14,816.3	7,100.0	158.4	155.7	90.00	-8,044.8	8.4	1,323.5	1,011.5	312.09	4.241	
15,500.0	7,100.0	14,916.3	7,100.0	160.3	157.6	90.00	-8,144.8	8.4	1,323.4	1,007.4	315.93	4.189	
15,600.0	7,100.0	15,016.3	7,100.0	162.2	159.6	90.00	-8,244.8	8.4	1,323.2	1,003.4	319.77	4.138	
15,700.0	7,100.0	15,116.3	7,100.0	164.1	161.5	90.00	-8,344.8	8.4	1,323.0	999.4	323.61	4.088	
15,800.0	7,100.0	15,216.3	7,100.0	166.0	163.4	90.00	-8,444.8	8.4	1,322.8	995.4	327.45	4.040	
15,900.0	7,100.0	15,316.3	7,100.0	167.9	165.3	90.00	-8,544.8	8.4	1,322.6	991.3	331.29	3.992	
16,000.0	7,100.0	15,416.3	7,100.0	169.8	167.3	90.00	-8,644.8	8.4	1,322.4	987.3	335.14	3.946	
16,100.0	7,100.0	15,516.3	7,100.0	171.7	169.2	90.00	-8,744.8	8.4	1,322.3	983.3	338.98	3.901	
16,200.0	7,100.0	15,616.3	7,100.0	173.6	171.1	90.00	-8,844.8	8.4	1,322.1	979.3	342.82	3.856	
16,300.0	7,100.0	15,716.3	7,100.0	175.5	173.0	90.00	-8,944.8	8.4	1,321.9	975.2	346.67	3.813	
16,400.0	7,100.0	15,816.3	7,100.0	177.4	175.0	90.00	-9,044.8	8.5	1,321.7	971.2	350.51	3.771	
16,500.0	7,100.0	15,916.3	7,100.0	179.3	176.9	90.00	-9,144.8	8.5	1,321.5	967.2	354.36	3.729	
16,600.0	7,100.0	16,016.3	7,100.0	181.2	178.8	90.00	-9,244.8	8.5	1,321.4	963.2	358.20	3.689	
16,700.0	7,100.0	16,116.3	7,100.0	183.1	180.7	90.00	-9,344.8	8.5	1,321.2	959.1	362.05	3.649	
16,800.0	7,100.0	16,216.3	7,100.0	185.0	182.6	90.00	-9,444.8	8.5	1,321.0	955.1	365.89	3.610	
16,900.0	7,100.0	16,316.3	7,100.0	186.9	184.6	90.00	-9,544.8	8.5	1,320.8	951.1	369.74	3.572	
17,000.0	7,100.0	16,416.3	7,100.0	188.8	186.5	90.00	-9,644.8	8.5	1,320.6	947.0	373.58	3.535	
17,100.0	7,100.0	16,516.3	7,100.0	190.7	188.4	90.00	-9,744.8	8.5	1,320.4	943.0	377.43	3.498	
17,200.0	7,100.0	16,616.3	7,100.0	192.6	190.3	90.00	-9,844.8	8.5	1,320.3	939.0	381.28	3.463	
17,300.0	7,100.0	16,716.3	7,100.0	194.5	192.3	90.00	-9,944.8	8.5	1,320.1	935.0	385.13	3.428	
17,400.0	7,100.0	16,816.3	7,100.0	196.4	194.2	90.00	-10,044.8	8.5	1,319.9	930.9	388.97	3.393	
17,500.0	7,100.0	16,916.3	7,100.0	198.3	196.1	90.00	-10,144.8	8.5	1,319.7	927.0	392.76	3.360	
17,510.7	7,100.0	16,924.5	7,100.0	198.5	196.2	90.00	-10,153.1	8.5	1,319.7	926.6	393.05	3.358	
17,522.7	7,100.0	16,924.5	7,100.0	198.7	196.2	90.00	-10,153.1	8.5	1,319.7	926.5	393.24	3.356	
17,523.1	7,100.0	16,924.5	7,100.0	198.7	196.2	90.00	-10,153.1	8.5	1,319.8	926.5	393.24	3.356 SF	

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 4-17H20
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 4-17H20	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 3-17H20 - 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		
0.0	0.0	0.0	0.0	0.0	0.0	-89.20	0.3	-20.0	20.0					
100.0	100.0	100.0	100.0	0.1	0.1	-89.20	0.3	-20.0	20.0	19.8	0.19	106.099		
200.0	200.0	200.0	200.0	0.3	0.3	-89.20	0.3	-20.0	20.0	19.4	0.64	31.382		
300.0	300.0	300.0	300.0	0.5	0.5	-89.20	0.3	-20.0	20.0	18.9	1.09	18.414		
400.0	400.0	400.0	400.0	0.8	0.8	-89.20	0.3	-20.0	20.0	18.5	1.54	13.030		
500.0	500.0	500.0	500.0	1.0	1.0	-89.20	0.3	-20.0	20.0	18.0	1.99	10.082 CC		
594.9	594.9	595.5	595.5	1.2	1.2	178.77	-0.4	-18.6	20.2	17.8	2.39	8.464		
600.0	600.0	600.6	600.6	1.2	1.2	178.55	-0.5	-18.4	20.2	17.8	2.41	8.398		
700.0	699.9	700.7	700.6	1.4	1.4	173.78	-2.2	-15.1	20.3	17.5	2.81	7.220		
800.0	799.9	800.6	800.5	1.6	1.6	169.05	-3.9	-11.7	20.5	17.2	3.22	6.346		
900.0	899.8	900.6	900.4	1.8	1.8	164.44	-5.6	-8.3	20.8	17.1	3.65	5.691		
1,000.0	999.8	1,000.6	1,000.3	2.1	2.0	160.00	-7.3	-5.0	21.2	17.1	4.09	5.194		
1,100.0	1,099.7	1,100.6	1,100.2	2.3	2.3	155.80	-8.9	-1.6	21.8	17.3	4.53	4.815		
1,200.0	1,199.7	1,200.0	1,199.7	2.5	2.5	155.81	-9.7	0.0	23.7	18.8	4.95	4.795		
1,300.0	1,299.6	1,300.0	1,299.6	2.7	2.7	158.71	-9.7	0.0	26.8	21.4	5.37	4.985		
1,405.6	1,405.1	1,405.5	1,405.1	3.0	2.9	161.13	-9.7	0.0	30.1	24.2	5.83	5.159		
1,500.5	1,500.0	1,500.4	1,500.0	3.2	3.1	-107.94	-9.7	0.0	31.6	25.3	6.26	5.039		
1,600.0	1,599.5	1,599.9	1,599.5	3.4	3.3	-107.94	-9.7	0.0	31.6	24.9	6.68	4.727		
1,700.0	1,699.5	1,699.9	1,699.5	3.6	3.5	-107.94	-9.7	0.0	31.6	24.5	7.10	4.443		
1,800.0	1,799.5	1,799.9	1,799.5	3.8	3.7	-107.94	-9.7	0.0	31.6	24.0	7.54	4.189		
1,900.0	1,899.5	1,899.9	1,899.5	4.0	4.0	-107.94	-9.7	0.0	31.6	23.6	7.97	3.962		
2,000.0	1,999.5	1,999.9	1,999.5	4.2	4.2	-107.94	-9.7	0.0	31.6	23.2	8.40	3.757		
2,100.0	2,099.5	2,099.9	2,099.5	4.5	4.4	-107.94	-9.7	0.0	31.6	22.7	8.84	3.572		
2,200.0	2,199.5	2,199.9	2,199.5	4.7	4.6	-107.94	-9.7	0.0	31.6	22.3	9.27	3.403		
2,300.0	2,299.5	2,299.9	2,299.5	4.9	4.8	-107.94	-9.7	0.0	31.6	21.9	9.71	3.250		
2,400.0	2,399.5	2,399.9	2,399.5	5.1	5.1	-107.94	-9.7	0.0	31.6	21.4	10.15	3.109		
2,500.0	2,499.5	2,499.9	2,499.5	5.3	5.3	-107.94	-9.7	0.0	31.6	21.0	10.59	2.980		
2,600.0	2,599.5	2,599.9	2,599.5	5.5	5.5	-107.94	-9.7	0.0	31.6	20.5	11.03	2.861		
2,700.0	2,699.5	2,699.9	2,699.5	5.8	5.7	-107.94	-9.7	0.0	31.6	20.1	11.47	2.751		
2,800.0	2,799.5	2,799.9	2,799.5	6.0	5.9	-107.94	-9.7	0.0	31.6	19.6	11.92	2.649		
2,900.0	2,899.5	2,899.9	2,899.5	6.2	6.2	-107.94	-9.7	0.0	31.6	19.2	12.36	2.554		
3,000.0	2,999.5	2,999.9	2,999.5	6.4	6.4	-107.94	-9.7	0.0	31.6	18.8	12.80	2.465		
3,100.0	3,099.5	3,099.9	3,099.5	6.6	6.6	-107.94	-9.7	0.0	31.6	18.3	13.25	2.383		
3,200.0	3,199.5	3,199.9	3,199.5	6.9	6.8	-107.94	-9.7	0.0	31.6	17.9	13.69	2.306		
3,300.0	3,299.5	3,299.9	3,299.5	7.1	7.1	-107.94	-9.7	0.0	31.6	17.4	14.13	2.233		
3,400.0	3,399.5	3,399.9	3,399.5	7.3	7.3	-107.94	-9.7	0.0	31.6	17.0	14.58	2.165		
3,500.0	3,499.5	3,499.9	3,499.5	7.5	7.5	-107.94	-9.7	0.0	31.6	16.5	15.02	2.101		
3,600.0	3,599.5	3,599.9	3,599.5	7.8	7.7	-107.94	-9.7	0.0	31.6	16.1	15.47	2.040		
3,700.0	3,699.5	3,699.9	3,699.5	8.0	7.9	-107.94	-9.7	0.0	31.6	15.6	15.91	1.983 Level 4		
3,800.0	3,799.5	3,799.9	3,799.5	8.2	8.2	-107.94	-9.7	0.0	31.6	15.2	16.36	1.929 Level 4		
3,900.0	3,899.5	3,899.9	3,899.5	8.4	8.4	-107.94	-9.7	0.0	31.6	14.8	16.81	1.878 Level 4		
4,000.0	3,999.5	3,999.9	3,999.5	8.6	8.6	-107.94	-9.7	0.0	31.6	14.3	17.25	1.830 Level 4, ES		
4,100.0	4,099.5	4,099.9	4,099.5	8.9	8.8	168.75	-9.7	0.0	33.3	15.6	17.66	1.884 Level 4		
4,200.0	4,199.4	4,199.8	4,199.4	9.1	9.1	170.25	-9.7	0.0	38.4	20.3	18.08	2.126		
4,300.0	4,299.0	4,299.4	4,299.0	9.3	9.3	172.03	-9.7	0.0	47.0	28.6	18.48	2.545		
4,400.0	4,398.2	4,400.5	4,400.1	9.5	9.5	173.02	-10.0	1.7	57.5	38.7	18.86	3.049		
4,500.0	4,497.0	4,502.0	4,501.4	9.8	9.7	172.93	-10.8	7.0	68.2	49.0	19.22	3.547		
4,600.0	4,595.1	4,603.8	4,602.9	10.1	9.9	172.19	-12.2	15.9	79.1	59.5	19.58	4.038		
4,642.4	4,636.6	4,647.1	4,645.9	10.2	10.0	171.74	-13.0	20.7	83.7	64.0	19.73	4.243		
4,700.0	4,692.7	4,706.0	4,704.3	10.4	10.2	170.99	-14.2	28.3	89.5	69.6	19.98	4.481		
4,800.0	4,790.2	4,808.7	4,805.7	10.7	10.4	169.17	-16.8	44.5	97.1	76.7	20.44	4.753		
4,900.0	4,887.7	4,911.7	4,906.7	11.0	10.7	166.67	-19.9	64.2	101.7	80.7	20.92	4.860		

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 4-17H20
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 4-17H20	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 3-17H20 - 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		
5,000.0	4,985.2	5,014.8	5,007.0	11.3	11.0	163.35	-23.6	87.6	103.2	81.8	21.43	4.818		
5,100.0	5,082.7	5,117.5	5,106.1	11.7	11.3	158.98	-27.9	114.4	102.2	80.2	22.00	4.646		
5,200.0	5,180.2	5,219.8	5,203.7	12.0	11.7	153.21	-32.7	144.6	99.0	76.4	22.66	4.371		
5,300.0	5,277.7	5,319.3	5,298.0	12.4	12.1	146.42	-37.6	175.8	95.6	72.1	23.44	4.077		
5,400.0	5,375.2	5,418.5	5,392.1	12.7	12.5	139.24	-42.6	206.9	93.5	69.2	24.32	3.845		
5,482.6	5,455.7	5,500.5	5,469.8	13.1	12.8	133.16	-46.6	232.6	93.0	67.9	25.12	3.701		
5,500.0	5,472.7	5,517.8	5,486.2	13.1	12.9	131.87	-47.5	238.0	93.0	67.7	25.30	3.676		
5,600.0	5,570.2	5,617.1	5,580.4	13.5	13.4	124.54	-52.5	269.2	94.1	67.7	26.33	3.572		
5,700.0	5,667.7	5,716.3	5,674.5	13.9	13.8	117.48	-57.4	300.3	96.6	69.2	27.39	3.527		
5,800.0	5,765.2	5,815.6	5,768.6	14.3	14.3	110.87	-62.3	331.5	100.6	72.2	28.43	3.538		
5,900.0	5,862.7	5,914.9	5,862.7	14.7	14.8	104.83	-67.3	362.6	105.8	76.4	29.43	3.595		
6,000.0	5,960.2	6,014.1	5,956.8	15.1	15.3	99.41	-72.2	393.8	112.1	81.7	30.38	3.689		
6,100.0	6,057.7	6,113.4	6,051.0	15.5	15.9	94.60	-77.2	424.9	119.2	88.0	31.27	3.813		
6,200.0	6,155.2	6,212.6	6,145.1	15.9	16.4	90.35	-82.1	456.1	127.2	95.0	32.12	3.959		
6,300.0	6,252.6	6,311.9	6,239.2	16.3	17.0	86.61	-87.1	487.2	135.7	102.8	32.94	4.120		
6,400.0	6,350.1	6,411.2	6,333.3	16.8	17.5	83.33	-92.0	518.4	144.8	111.0	33.72	4.293		
6,445.4	6,394.4	6,456.2	6,376.1	17.0	17.8	81.97	-94.3	532.5	149.0	114.9	34.07	4.373		
6,450.0	6,398.9	6,460.8	6,380.4	17.0	17.8	81.29	-94.5	533.9	149.4	115.3	34.10	4.382		
6,500.0	6,447.0	6,510.6	6,427.6	17.2	18.1	76.49	-97.0	549.6	153.1	118.6	34.54	4.434		
6,550.0	6,493.8	6,560.5	6,474.9	17.5	18.4	75.03	-99.4	565.2	155.1	120.0	35.12	4.415		
6,600.0	6,538.9	6,600.0	6,512.4	17.9	18.6	75.47	-102.4	577.4	156.7	120.9	35.76	4.382		
6,650.0	6,581.9	6,639.6	6,549.7	18.3	18.8	77.60	-108.0	589.1	160.4	123.9	36.51	4.393		
6,700.0	6,622.6	6,676.1	6,584.0	18.7	19.0	80.58	-115.5	599.3	167.0	129.7	37.32	4.475		
6,750.0	6,660.6	6,710.5	6,615.9	19.3	19.1	83.85	-124.6	608.4	177.3	139.2	38.16	4.647		
6,800.0	6,695.7	6,742.3	6,644.9	19.8	19.3	86.87	-134.7	616.3	192.0	153.0	38.99	4.923		
6,850.0	6,727.5	6,771.3	6,671.0	20.5	19.4	89.24	-145.4	623.1	211.1	171.3	39.82	5.301		
6,900.0	6,755.9	6,800.0	6,696.4	21.2	19.6	91.17	-157.3	629.4	234.7	194.0	40.69	5.768		
6,920.7	6,766.6	6,807.4	6,702.9	21.6	19.6	91.05	-160.5	631.0	245.6	204.6	41.04	5.985		
7,000.0	6,806.2	6,850.0	6,739.3	22.9	19.8	97.57	-181.0	639.4	293.3	251.0	42.33	6.930		
7,070.7	6,841.6	6,873.2	6,758.5	24.1	19.9	100.48	-193.2	643.5	341.3	297.9	43.42	7.860		
7,100.0	6,856.1	6,885.2	6,768.3	24.6	20.0	99.42	-199.8	645.6	361.8	317.9	43.93	8.237		
7,150.0	6,880.8	6,900.0	6,780.3	25.4	20.1	96.89	-208.3	648.0	396.0	351.3	44.67	8.864		
7,200.0	6,904.9	6,927.2	6,801.6	26.3	20.2	95.37	-224.6	652.1	428.6	383.3	45.24	9.474		
7,250.0	6,928.3	6,950.0	6,819.0	27.1	20.3	93.36	-239.1	655.1	459.8	414.1	45.67	10.068		
7,300.0	6,950.8	6,971.2	6,834.6	27.9	20.4	91.26	-253.1	657.7	489.4	443.5	45.93	10.654		
7,350.0	6,972.3	7,000.0	6,855.2	28.7	20.6	89.69	-273.1	660.8	517.4	471.3	46.05	11.235		
7,400.0	6,992.5	7,017.2	6,867.0	29.5	20.7	87.60	-285.5	662.4	543.5	497.5	45.96	11.825		
7,450.0	7,011.4	7,050.0	6,888.6	30.3	20.8	86.43	-310.1	664.9	567.9	522.1	45.78	12.405		
7,500.0	7,028.8	7,065.7	6,898.4	31.0	20.9	84.65	-322.2	665.9	590.1	544.8	45.34	13.016		
7,550.0	7,044.5	7,100.0	6,918.9	31.6	21.1	83.85	-349.7	667.4	610.5	565.7	44.87	13.606		
7,600.0	7,058.4	7,116.8	6,928.3	32.2	21.2	82.55	-363.6	667.9	628.6	584.5	44.13	14.246		
7,650.0	7,070.5	7,143.3	6,942.5	32.8	21.3	81.83	-386.0	668.3	644.7	601.3	43.34	14.875		
7,700.0	7,080.6	7,180.7	6,961.3	33.3	21.6	81.71	-418.3	668.4	658.3	615.7	42.58	15.461		
7,750.0	7,088.6	7,225.8	6,983.8	33.8	21.8	82.17	-457.3	668.4	668.5	626.7	41.85	15.972		
7,800.0	7,094.6	7,270.8	7,006.4	34.2	22.1	83.01	-496.4	668.4	675.3	634.2	41.11	16.426		
7,850.0	7,098.3	7,314.2	7,028.0	34.6	22.4	84.16	-533.9	668.4	678.8	638.5	40.35	16.822		
7,900.0	7,100.0	7,354.4	7,046.3	34.9	22.8	85.45	-569.8	668.4	679.3	639.7	39.60	17.157		
7,911.9	7,100.0	7,364.3	7,050.4	35.0	22.8	85.80	-578.8	668.4	679.0	639.6	39.43	17.221		
8,000.0	7,100.0	7,441.8	7,077.0	35.5	23.5	88.05	-651.5	668.4	677.1	635.6	41.47	16.326		
8,100.0	7,100.0	7,537.6	7,096.1	36.2	24.5	89.67	-745.2	668.4	676.5	632.6	43.95	15.392		
8,200.0	7,100.0	7,637.3	7,100.0	37.0	25.6	90.00	-844.7	668.4	676.3	629.8	46.57	14.522		
8,300.0	7,100.0	7,737.2	7,100.0	37.9	26.8	90.00	-944.7	668.4	676.1	626.8	49.33	13.708		

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 4-17H20
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 4-17H20	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 3-17H20 - 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	
8,400.0	7,100.0	7,837.2	7,100.0	38.8	28.1	90.00	-1,044.7	668.4	676.0	623.7	52.22	12.945	
8,500.0	7,100.0	7,937.2	7,100.0	39.8	29.5	90.00	-1,144.7	668.4	675.8	620.6	55.23	12.236	
8,600.0	7,100.0	8,037.2	7,100.0	40.8	30.9	90.00	-1,244.7	668.4	675.6	617.3	58.34	11.580	
8,700.0	7,100.0	8,137.2	7,100.0	41.9	32.4	90.00	-1,344.7	668.4	675.4	613.9	61.54	10.976	
8,800.0	7,100.0	8,237.2	7,100.0	43.1	34.0	90.00	-1,444.7	668.4	675.3	610.5	64.81	10.419	
8,900.0	7,100.0	8,337.2	7,100.0	44.3	35.5	90.00	-1,544.7	668.4	675.1	606.9	68.14	9.907	
9,000.0	7,100.0	8,437.2	7,100.0	45.6	37.2	90.00	-1,644.7	668.4	674.9	603.4	71.53	9.436	
9,100.0	7,100.0	8,537.2	7,100.0	46.9	38.8	90.00	-1,744.7	668.4	674.7	599.8	74.96	9.002	
9,200.0	7,100.0	8,637.2	7,100.0	48.3	40.5	90.00	-1,844.7	668.4	674.6	596.1	78.43	8.601	
9,300.0	7,100.0	8,737.2	7,100.0	49.7	42.2	90.00	-1,944.7	668.4	674.4	592.4	81.93	8.231	
9,400.0	7,100.0	8,837.2	7,100.0	51.1	43.9	90.00	-2,044.7	668.4	674.2	588.7	85.47	7.888	
9,500.0	7,100.0	8,937.2	7,100.0	52.6	45.6	90.00	-2,144.7	668.4	674.0	585.0	89.03	7.571	
9,600.0	7,100.0	9,037.2	7,100.0	54.1	47.3	90.00	-2,244.7	668.4	673.8	581.2	92.62	7.275	
9,700.0	7,100.0	9,137.2	7,100.0	55.6	49.1	90.00	-2,344.7	668.4	673.7	577.4	96.23	7.001	
9,800.0	7,100.0	9,237.2	7,100.0	57.1	50.9	90.00	-2,444.7	668.4	673.5	573.6	99.86	6.745	
9,900.0	7,100.0	9,337.2	7,100.0	58.7	52.6	90.00	-2,544.7	668.4	673.3	569.8	103.50	6.506	
10,000.0	7,100.0	9,437.2	7,100.0	60.3	54.4	90.00	-2,644.7	668.4	673.1	566.0	107.16	6.282	
10,100.0	7,100.0	9,537.2	7,100.0	61.9	56.2	90.00	-2,744.7	668.4	673.0	562.1	110.83	6.072	
10,200.0	7,100.0	9,637.2	7,100.0	63.6	58.0	90.00	-2,844.7	668.4	672.8	558.3	114.52	5.875	
10,300.0	7,100.0	9,737.2	7,100.0	65.2	59.9	90.00	-2,944.7	668.4	672.6	554.4	118.21	5.690	
10,400.0	7,100.0	9,837.2	7,100.0	66.9	61.7	90.00	-3,044.7	668.4	672.4	550.5	121.92	5.515	
10,500.0	7,100.0	9,937.2	7,100.0	68.6	63.5	90.00	-3,144.7	668.4	672.3	546.6	125.64	5.351	
10,600.0	7,100.0	10,037.2	7,100.0	70.3	65.4	90.00	-3,244.7	668.4	672.1	542.7	129.36	5.195	
10,700.0	7,100.0	10,137.2	7,100.0	72.0	67.2	90.00	-3,344.7	668.4	671.9	538.8	133.10	5.048	
10,800.0	7,100.0	10,237.2	7,100.0	73.7	69.0	90.00	-3,444.7	668.4	671.7	534.9	136.84	4.909	
10,900.0	7,100.0	10,337.2	7,100.0	75.5	70.9	90.00	-3,544.7	668.4	671.5	531.0	140.58	4.777	
11,000.0	7,100.0	10,437.2	7,100.0	77.2	72.7	90.00	-3,644.7	668.4	671.4	527.0	144.33	4.652	
11,100.0	7,100.0	10,537.2	7,100.0	79.0	74.6	90.00	-3,744.7	668.4	671.2	523.1	148.09	4.532	
11,200.0	7,100.0	10,637.2	7,100.0	80.7	76.5	90.00	-3,844.7	668.4	671.0	519.2	151.86	4.419	
11,300.0	7,100.0	10,737.2	7,100.0	82.5	78.3	90.00	-3,944.7	668.4	670.8	515.2	155.62	4.311	
11,400.0	7,100.0	10,837.2	7,100.0	84.3	80.2	90.00	-4,044.7	668.4	670.7	511.3	159.40	4.208	
11,500.0	7,100.0	10,937.2	7,100.0	86.1	82.1	90.00	-4,144.7	668.4	670.5	507.3	163.17	4.109	
11,600.0	7,100.0	11,037.2	7,100.0	87.8	84.0	90.00	-4,244.7	668.4	670.3	503.4	166.95	4.015	
11,700.0	7,100.0	11,137.2	7,100.0	89.6	85.8	90.00	-4,344.7	668.4	670.1	499.4	170.74	3.925	
11,800.0	7,100.0	11,237.2	7,100.0	91.4	87.7	90.00	-4,444.7	668.4	670.0	495.4	174.52	3.839	
11,900.0	7,100.0	11,337.2	7,100.0	93.3	89.6	90.00	-4,544.7	668.4	669.8	491.5	178.32	3.756	
12,000.0	7,100.0	11,437.2	7,100.0	95.1	91.5	90.00	-4,644.7	668.4	669.6	487.5	182.11	3.677	
12,100.0	7,100.0	11,537.2	7,100.0	96.9	93.4	90.00	-4,744.7	668.4	669.4	483.5	185.91	3.601	
12,200.0	7,100.0	11,637.2	7,100.0	98.7	95.2	90.00	-4,844.7	668.4	669.3	479.5	189.71	3.528	
12,300.0	7,100.0	11,737.2	7,100.0	100.5	97.1	90.00	-4,944.7	668.4	669.1	475.6	193.51	3.458	
12,400.0	7,100.0	11,837.2	7,100.0	102.4	99.0	90.00	-5,044.7	668.4	668.9	471.6	197.31	3.390	
12,500.0	7,100.0	11,937.2	7,100.0	104.2	100.9	90.00	-5,144.7	668.4	668.7	467.6	201.12	3.325	
12,600.0	7,100.0	12,037.2	7,100.0	106.0	102.8	90.00	-5,244.7	668.4	668.5	463.6	204.93	3.262	
12,700.0	7,100.0	12,137.2	7,100.0	107.9	104.7	90.00	-5,344.7	668.4	668.4	459.6	208.74	3.202	
12,800.0	7,100.0	12,237.2	7,100.0	109.7	106.6	90.00	-5,444.7	668.4	668.2	455.6	212.55	3.144	
12,900.0	7,100.0	12,337.2	7,100.0	111.6	108.5	90.00	-5,544.7	668.4	668.0	451.7	216.36	3.087	
13,000.0	7,100.0	12,437.2	7,100.0	113.4	110.4	90.00	-5,644.7	668.4	667.8	447.7	220.18	3.033	
13,100.0	7,100.0	12,537.2	7,100.0	115.3	112.3	90.00	-5,744.7	668.4	667.7	443.7	223.99	2.981	
13,200.0	7,100.0	12,637.2	7,100.0	117.1	114.2	90.00	-5,844.7	668.4	667.5	439.7	227.81	2.930	
13,300.0	7,100.0	12,737.2	7,100.0	119.0	116.1	90.00	-5,944.7	668.4	667.3	435.7	231.63	2.881	
13,400.0	7,100.0	12,837.2	7,100.0	120.9	118.0	90.00	-6,044.7	668.4	667.1	431.7	235.45	2.833	
13,500.0	7,100.0	12,937.2	7,100.0	122.7	119.9	90.00	-6,144.7	668.4	667.0	427.7	239.28	2.787	

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 4-17H20
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 4-17H20	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 3-17H20 - 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
13,600.0	7,100.0	13,037.2	7,100.0	124.6	121.8	90.00	-6,244.7	668.4	666.8	423.7	243.10	2.743	
13,700.0	7,100.0	13,137.2	7,100.0	126.4	123.7	90.00	-6,344.7	668.4	666.6	419.7	246.93	2.700	
13,800.0	7,100.0	13,237.2	7,100.0	128.3	125.6	90.00	-6,444.7	668.4	666.4	415.7	250.75	2.658	
13,900.0	7,100.0	13,337.2	7,100.0	130.2	127.5	90.00	-6,544.7	668.4	666.2	411.7	254.58	2.617	
14,000.0	7,100.0	13,437.2	7,100.0	132.1	129.4	90.00	-6,644.7	668.4	666.1	407.7	258.41	2.578	
14,100.0	7,100.0	13,537.2	7,100.0	133.9	131.4	90.00	-6,744.7	668.4	665.9	403.7	262.24	2.539	
14,200.0	7,100.0	13,637.2	7,100.0	135.8	133.3	90.00	-6,844.7	668.4	665.7	399.6	266.07	2.502	
14,300.0	7,100.0	13,737.2	7,100.0	137.7	135.2	90.00	-6,944.7	668.4	665.5	395.6	269.90	2.466	
14,400.0	7,100.0	13,837.2	7,100.0	139.6	137.1	90.00	-7,044.7	668.4	665.4	391.6	273.73	2.431	
14,500.0	7,100.0	13,937.2	7,100.0	141.5	139.0	90.00	-7,144.7	668.4	665.2	387.6	277.56	2.397	
14,600.0	7,100.0	14,037.2	7,100.0	143.3	140.9	90.00	-7,244.7	668.4	665.0	383.6	281.40	2.363	
14,700.0	7,100.0	14,137.2	7,100.0	145.2	142.8	90.00	-7,344.7	668.4	664.8	379.6	285.23	2.331	
14,800.0	7,100.0	14,237.2	7,100.0	147.1	144.7	90.00	-7,444.7	668.4	664.7	375.6	289.06	2.299	
14,900.0	7,100.0	14,337.2	7,100.0	149.0	146.6	90.00	-7,544.7	668.4	664.5	371.6	292.90	2.269	
15,000.0	7,100.0	14,437.2	7,100.0	150.9	148.6	90.00	-7,644.7	668.4	664.3	367.6	296.74	2.239	
15,100.0	7,100.0	14,537.2	7,100.0	152.8	150.5	90.00	-7,744.7	668.3	664.1	363.5	300.57	2.210	
15,200.0	7,100.0	14,637.2	7,100.0	154.7	152.4	90.00	-7,844.7	668.3	663.9	359.5	304.41	2.181	
15,300.0	7,100.0	14,737.2	7,100.0	156.5	154.3	90.00	-7,944.7	668.3	663.8	355.5	308.25	2.153	
15,400.0	7,100.0	14,837.2	7,100.0	158.4	156.2	90.00	-8,044.7	668.3	663.6	351.5	312.09	2.126	
15,500.0	7,100.0	14,937.2	7,100.0	160.3	158.1	90.00	-8,144.7	668.3	663.4	347.5	315.93	2.100	
15,600.0	7,100.0	15,037.2	7,100.0	162.2	160.0	90.00	-8,244.7	668.3	663.2	343.5	319.77	2.074	
15,700.0	7,100.0	15,137.2	7,100.0	164.1	162.0	90.00	-8,344.7	668.3	663.1	339.5	323.61	2.049	
15,800.0	7,100.0	15,237.2	7,100.0	166.0	163.9	90.00	-8,444.7	668.3	662.9	335.4	327.45	2.024	
15,900.0	7,100.0	15,337.2	7,100.0	167.9	165.8	90.00	-8,544.7	668.3	662.7	331.4	331.29	2.000	
16,000.0	7,100.0	15,437.2	7,100.0	169.8	167.7	90.00	-8,644.7	668.3	662.5	327.4	335.13	1.977 Level 4	
16,100.0	7,100.0	15,537.2	7,100.0	171.7	169.6	90.00	-8,744.7	668.3	662.4	323.4	338.97	1.954 Level 4	
16,200.0	7,100.0	15,637.2	7,100.0	173.6	171.5	90.00	-8,844.7	668.3	662.2	319.4	342.82	1.932 Level 4	
16,300.0	7,100.0	15,737.2	7,100.0	175.5	173.5	90.00	-8,944.7	668.3	662.0	315.3	346.66	1.910 Level 4	
16,400.0	7,100.0	15,837.2	7,100.0	177.4	175.4	90.00	-9,044.7	668.3	661.8	311.3	350.50	1.888 Level 4	
16,500.0	7,100.0	15,937.2	7,100.0	179.3	177.3	90.00	-9,144.7	668.3	661.6	307.3	354.35	1.867 Level 4	
16,600.0	7,100.0	16,037.2	7,100.0	181.2	179.2	90.00	-9,244.7	668.3	661.5	303.3	358.19	1.847 Level 4	
16,700.0	7,100.0	16,137.2	7,100.0	183.1	181.1	90.00	-9,344.7	668.3	661.3	299.3	362.04	1.827 Level 4	
16,800.0	7,100.0	16,237.2	7,100.0	185.0	183.1	90.00	-9,444.7	668.3	661.1	295.2	365.88	1.807 Level 4	
16,900.0	7,100.0	16,337.2	7,100.0	186.9	185.0	90.00	-9,544.7	668.3	660.9	291.2	369.73	1.788 Level 4	
17,000.0	7,100.0	16,437.2	7,100.0	188.8	186.9	90.00	-9,644.7	668.3	660.8	287.2	373.57	1.769 Level 4	
17,100.0	7,100.0	16,537.2	7,100.0	190.7	188.8	90.00	-9,744.7	668.3	660.6	283.2	377.42	1.750 Level 4	
17,200.0	7,100.0	16,637.2	7,100.0	192.6	190.7	90.00	-9,844.7	668.3	660.4	279.1	381.27	1.732 Level 4	
17,300.0	7,100.0	16,737.2	7,100.0	194.5	192.7	90.00	-9,944.7	668.3	660.2	275.1	385.11	1.714 Level 4	
17,400.0	7,100.0	16,837.2	7,100.0	196.4	194.6	90.00	-10,044.7	668.3	660.1	271.1	388.96	1.697 Level 4	
17,500.0	7,100.0	16,937.2	7,100.0	198.3	196.5	90.00	-10,144.7	668.3	659.9	267.1	392.81	1.680 Level 4	
17,516.7	7,100.0	16,952.7	7,100.0	198.6	196.8	90.00	-10,160.2	668.3	659.9	266.5	393.36	1.677 Level 4	
17,522.7	7,100.0	16,952.7	7,100.0	198.7	196.8	90.00	-10,160.2	668.3	659.9	266.4	393.46	1.677 Level 4	
17,523.1	7,100.0	16,952.7	7,100.0	198.7	196.8	90.00	-10,160.2	668.3	659.9	266.4	393.46	1.677 Level 4, SF	

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 4-17H20
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 4-17H20	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	-89.12	3.5	-229.9	230.0				
100.0	100.0	100.0	100.0	0.1	0.1	-89.12	3.5	-229.9	230.0	229.8	0.19	1,217.970	
200.0	200.0	200.0	200.0	0.3	0.3	-89.12	3.5	-229.9	230.0	229.3	0.64	360.245	
300.0	300.0	300.0	300.0	0.5	0.5	-89.12	3.5	-229.9	230.0	228.9	1.09	211.383	
400.0	400.0	400.0	400.0	0.8	0.8	-89.12	3.5	-229.9	230.0	228.4	1.54	149.575	
500.0	500.0	500.0	500.0	1.0	1.0	-89.12	3.5	-229.9	230.0	228.0	1.99	115.735 CC, ES	
594.9	594.9	594.9	594.9	1.2	1.2	-179.12	3.5	-229.9	231.5	229.1	2.40	96.332	
600.0	600.0	600.0	600.0	1.2	1.2	-179.12	3.5	-229.9	231.7	229.3	2.42	95.546	
700.0	699.9	699.9	699.9	1.4	1.4	-179.14	3.5	-229.9	235.0	232.2	2.85	82.364	
800.0	799.9	799.9	799.9	1.6	1.7	-179.15	3.5	-229.9	238.3	235.0	3.29	72.492	
900.0	899.8	899.8	899.8	1.8	1.9	-179.16	3.5	-229.9	241.6	237.9	3.73	64.857	
1,000.0	999.8	999.8	999.8	2.1	2.1	-179.17	3.5	-229.9	244.9	240.8	4.17	58.791	
1,100.0	1,099.7	1,099.7	1,099.7	2.3	2.3	-179.18	3.5	-229.9	248.3	243.7	4.61	53.863	
1,200.0	1,199.7	1,199.7	1,199.7	2.5	2.6	-179.19	3.5	-229.9	251.6	246.5	5.05	49.785	
1,300.0	1,299.6	1,299.6	1,299.6	2.7	2.8	-179.20	3.5	-229.9	254.9	249.4	5.50	46.357	
1,405.6	1,405.1	1,405.1	1,405.1	3.0	3.0	-179.21	3.5	-229.9	258.4	252.4	5.97	43.286	
1,500.5	1,500.0	1,500.0	1,500.0	3.2	3.2	-89.22	3.5	-229.9	260.0	253.5	6.43	40.446	
1,600.0	1,599.5	1,599.5	1,599.5	3.4	3.5	-89.22	3.5	-229.9	260.0	253.1	6.85	37.955	
1,700.0	1,699.5	1,699.5	1,699.5	3.6	3.7	-89.22	3.5	-229.9	260.0	252.7	7.28	35.685	
1,800.0	1,799.5	1,799.5	1,799.5	3.8	3.9	-89.22	3.5	-229.9	260.0	252.2	7.72	33.665	
1,900.0	1,899.5	1,899.5	1,899.5	4.0	4.1	-89.22	3.5	-229.9	260.0	251.8	8.16	31.856	
2,000.0	1,999.5	1,999.5	1,999.5	4.2	4.4	-89.22	3.5	-229.9	260.0	251.4	8.60	30.228	
2,100.0	2,099.5	2,099.5	2,099.5	4.5	4.6	-89.22	3.5	-229.9	260.0	250.9	9.04	28.755	
2,200.0	2,199.5	2,199.5	2,199.5	4.7	4.8	-89.22	3.5	-229.9	260.0	250.5	9.48	27.416	
2,300.0	2,299.5	2,299.5	2,299.5	4.9	5.0	-89.22	3.5	-229.9	260.0	250.0	9.92	26.194	
2,400.0	2,399.5	2,399.5	2,399.5	5.1	5.3	-89.22	3.5	-229.9	260.0	249.6	10.37	25.075	
2,500.0	2,499.5	2,499.5	2,499.5	5.3	5.5	-89.22	3.5	-229.9	260.0	249.1	10.81	24.047	
2,600.0	2,599.5	2,599.5	2,599.5	5.5	5.7	-89.22	3.5	-229.9	260.0	248.7	11.25	23.099	
2,700.0	2,699.5	2,699.5	2,699.5	5.8	5.9	-89.22	3.5	-229.9	260.0	248.3	11.70	22.221	
2,800.0	2,799.5	2,799.5	2,799.5	6.0	6.2	-89.22	3.5	-229.9	260.0	247.8	12.14	21.408	
2,900.0	2,899.5	2,899.5	2,899.5	6.2	6.4	-89.22	3.5	-229.9	260.0	247.4	12.59	20.651	
3,000.0	2,999.5	2,999.5	2,999.5	6.4	6.6	-89.22	3.5	-229.9	260.0	246.9	13.03	19.945	
3,100.0	3,099.5	3,099.5	3,099.5	6.6	6.8	-89.22	3.5	-229.9	260.0	246.5	13.48	19.286	
3,200.0	3,199.5	3,199.5	3,199.5	6.9	7.1	-89.22	3.5	-229.9	260.0	246.0	13.93	18.668	
3,300.0	3,299.5	3,299.5	3,299.5	7.1	7.3	-89.22	3.5	-229.9	260.0	245.6	14.37	18.089	
3,400.0	3,399.5	3,391.3	3,391.3	7.3	7.5	-89.17	3.8	-231.4	261.5	246.7	14.79	17.683	
3,500.0	3,499.5	3,482.9	3,482.8	7.5	7.7	-89.00	4.6	-235.7	266.2	251.0	15.20	17.515	
3,600.0	3,599.5	3,574.1	3,573.7	7.8	7.9	-88.75	6.0	-242.8	274.1	258.5	15.61	17.553	
3,700.0	3,699.5	3,664.7	3,663.8	8.0	8.1	-88.42	7.8	-252.7	285.1	269.0	16.04	17.778	
3,800.0	3,799.5	3,754.7	3,752.8	8.2	8.3	-88.03	10.2	-265.3	299.2	282.7	16.47	18.170	
3,900.0	3,899.5	3,843.7	3,840.4	8.4	8.5	-87.60	13.0	-280.5	316.3	299.4	16.91	18.711	
4,000.0	3,999.5	3,931.7	3,926.6	8.6	8.7	-87.15	16.3	-298.1	336.5	319.1	17.36	19.382	
4,100.0	4,099.5	4,018.1	4,010.6	8.9	9.0	-170.59	20.0	-317.9	361.3	343.7	17.60	20.529	
4,200.0	4,199.4	4,102.1	4,091.7	9.1	9.2	-170.16	24.1	-339.6	392.3	374.3	17.97	21.826	
4,300.0	4,299.0	4,191.4	4,177.2	9.3	9.6	-169.78	28.8	-364.5	428.7	410.3	18.35	23.365	
4,400.0	4,398.2	4,283.1	4,265.2	9.5	9.9	-169.48	33.6	-390.3	468.4	449.7	18.71	25.036	
4,500.0	4,497.0	4,373.5	4,351.8	9.8	10.3	-169.27	38.4	-415.7	511.2	492.1	19.05	26.829	
4,600.0	4,595.1	4,462.3	4,436.9	10.1	10.6	-169.12	43.0	-440.6	557.1	537.7	19.38	28.739	
4,642.4	4,636.6	4,499.5	4,472.6	10.2	10.8	-169.07	45.0	-451.1	577.5	557.9	19.52	29.585	
4,700.0	4,692.7	4,549.8	4,520.8	10.4	11.0	-169.13	47.7	-465.2	605.5	585.8	19.75	30.651	
4,800.0	4,790.2	4,637.2	4,604.5	10.7	11.4	-169.21	52.3	-489.8	654.2	634.0	20.17	32.439	
4,900.0	4,887.7	4,724.5	4,688.1	11.0	11.8	-169.29	56.9	-514.3	702.9	682.3	20.59	34.146	

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 4-17H20
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 4-17H20	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	
5,000.0	4,985.2	4,811.9	4,771.8	11.3	12.2	-169.35	61.5	-538.8	751.6	730.6	21.01	35.776	
5,100.0	5,082.7	4,899.2	4,855.5	11.7	12.6	-169.41	66.1	-563.4	800.3	778.8	21.44	37.334	
5,200.0	5,180.2	4,986.5	4,939.2	12.0	13.1	-169.46	70.7	-587.9	849.0	827.1	21.87	38.822	
5,300.0	5,277.7	5,073.9	5,022.9	12.4	13.5	-169.51	75.3	-612.4	897.7	875.4	22.31	40.244	
5,400.0	5,375.2	5,161.2	5,106.6	12.7	13.9	-169.55	79.9	-637.0	946.4	923.6	22.75	41.605	
5,500.0	5,472.7	5,248.6	5,190.3	13.1	14.4	-169.58	84.5	-661.5	995.1	971.9	23.19	42.907	
5,600.0	5,570.2	5,335.9	5,274.0	13.5	14.8	-169.62	89.1	-686.1	1,043.8	1,020.1	23.64	44.153	
5,700.0	5,667.7	5,423.2	5,357.7	13.9	15.3	-169.65	93.7	-710.6	1,092.5	1,068.4	24.09	45.346	
5,800.0	5,765.2	5,510.6	5,441.4	14.3	15.8	-169.67	98.3	-735.1	1,141.2	1,116.6	24.55	46.489	
5,900.0	5,862.7	5,597.9	5,525.1	14.7	16.2	-169.70	102.9	-759.7	1,189.8	1,164.8	25.00	47.585	
6,000.0	5,960.2	5,685.3	5,608.8	15.1	16.7	-169.72	107.5	-784.2	1,238.5	1,213.1	25.47	48.635	
6,100.0	6,057.7	5,772.6	5,692.5	15.5	17.2	-169.74	112.1	-808.7	1,287.2	1,261.3	25.93	49.642	
6,200.0	6,155.2	5,859.9	5,776.2	15.9	17.7	-169.76	116.7	-833.3	1,335.9	1,309.5	26.40	50.609	
6,300.0	6,252.6	5,947.3	5,859.9	16.3	18.2	-169.78	121.3	-857.8	1,384.6	1,357.8	26.87	51.538	
6,400.0	6,350.1	6,034.6	5,943.6	16.8	18.6	-169.80	125.9	-882.4	1,433.3	1,406.0	27.34	52.429	
6,445.4	6,394.4	6,074.3	5,981.6	17.0	18.9	-169.81	128.0	-893.5	1,455.4	1,427.9	27.55	52.823	
6,450.0	6,398.9	6,078.3	5,985.4	17.0	18.9	-170.35	128.2	-894.6	1,457.7	1,430.2	27.55	52.920	
6,500.0	6,447.0	6,120.6	6,026.0	17.2	19.1	-174.57	130.4	-906.5	1,484.3	1,456.9	27.39	54.182	
6,550.0	6,493.8	6,160.5	6,064.2	17.5	19.3	-177.15	132.5	-917.7	1,514.4	1,487.2	27.13	55.810	
6,600.0	6,538.9	6,197.6	6,099.8	17.9	19.6	-179.01	134.5	-928.1	1,547.9	1,521.1	26.78	57.806	
6,650.0	6,581.9	6,231.7	6,132.4	18.3	19.7	-179.47	136.2	-937.7	1,584.4	1,558.1	26.33	60.168	
6,700.0	6,622.6	6,262.4	6,161.9	18.7	19.9	-178.06	137.9	-946.4	1,623.8	1,598.0	25.82	62.880	
6,750.0	6,660.6	6,289.6	6,188.0	19.3	20.1	-176.59	139.3	-954.0	1,665.7	1,640.4	25.28	65.902	
6,800.0	6,695.7	6,313.1	6,210.4	19.8	20.2	-174.87	140.5	-960.6	1,709.8	1,685.1	24.73	69.126	
6,850.0	6,727.5	6,332.6	6,229.1	20.5	20.3	-172.60	141.6	-966.1	1,755.7	1,731.5	24.29	72.291	
6,900.0	6,755.9	6,348.0	6,243.9	21.2	20.4	-169.15	142.4	-970.4	1,803.2	1,779.1	24.14	74.694	
6,920.7	6,766.6	6,353.2	6,248.9	21.6	20.4	-167.07	142.7	-971.9	1,823.3	1,799.0	24.29	75.063	
7,000.0	6,806.2	6,371.6	6,266.5	22.9	20.5	-167.62	143.6	-977.0	1,900.2	1,875.7	24.54	77.446	
7,070.7	6,841.6	6,388.0	6,282.3	24.1	20.6	-168.07	144.5	-981.6	1,968.9	1,944.2	24.77	79.473	
7,100.0	6,856.1	6,394.8	6,288.7	24.6	20.7	-155.34	144.8	-983.5	1,997.3	1,969.3	28.07	71.162	
7,150.0	6,880.8	6,406.0	6,299.4	25.4	20.7	-137.15	145.4	-986.7	2,045.5	2,011.2	34.32	59.603	
7,200.0	6,904.9	6,416.7	6,309.7	26.3	20.8	-123.51	146.0	-989.7	2,093.0	2,054.1	38.89	53.813	
7,250.0	6,928.3	6,426.8	6,319.5	27.1	20.9	-113.29	146.5	-992.5	2,139.6	2,097.8	41.75	51.249	
7,300.0	6,950.8	6,436.4	6,328.6	27.9	20.9	-105.43	147.0	-995.2	2,184.9	2,141.4	43.41	50.326	
7,350.0	6,972.3	6,445.2	6,337.1	28.7	21.0	-99.17	147.5	-997.7	2,228.7	2,184.4	44.28	50.329	
7,400.0	6,992.5	6,453.3	6,344.8	29.5	21.0	-94.07	147.9	-1,000.0	2,270.8	2,226.2	44.58	50.932	
7,450.0	7,011.4	6,460.5	6,351.7	30.3	21.0	-89.84	148.3	-1,002.0	2,310.9	2,266.4	44.46	51.977	
7,500.0	7,028.8	6,466.9	6,357.8	31.0	21.1	-86.28	148.6	-1,003.8	2,348.9	2,304.9	44.00	53.385	
7,550.0	7,044.5	6,472.3	6,363.0	31.6	21.1	-83.28	148.9	-1,005.3	2,384.7	2,341.4	43.27	55.116	
7,600.0	7,058.4	6,476.8	6,367.3	32.2	21.1	-80.75	149.2	-1,006.6	2,418.0	2,375.6	42.31	57.146	
7,650.0	7,070.5	6,480.2	6,370.6	32.8	21.2	-78.63	149.3	-1,007.5	2,448.6	2,407.5	41.18	59.456	
7,700.0	7,080.6	6,482.6	6,372.9	33.3	21.2	-76.87	149.5	-1,008.2	2,476.6	2,436.7	39.93	62.024	
7,750.0	7,088.6	6,484.0	6,374.2	33.8	21.2	-75.44	149.5	-1,008.6	2,501.7	2,463.1	38.60	64.818	
7,800.0	7,094.6	6,484.3	6,374.5	34.2	21.2	-74.32	149.6	-1,008.7	2,523.9	2,486.6	37.24	67.782	
7,850.0	7,098.3	6,483.5	6,373.7	34.6	21.2	-73.47	149.5	-1,008.5	2,543.0	2,507.1	35.90	70.835	
7,900.0	7,100.0	6,481.6	6,372.0	34.9	21.2	-72.90	149.4	-1,007.9	2,559.0	2,524.4	34.65	73.852	
7,911.9	7,100.0	6,481.1	6,371.4	35.0	21.2	-72.80	149.4	-1,007.8	2,562.4	2,528.0	34.37	74.548	
8,000.0	7,100.0	6,476.5	6,367.0	35.5	21.1	-72.70	149.1	-1,006.5	2,587.9	2,552.7	35.25	73.406	
8,100.0	7,100.0	6,471.2	6,362.0	36.2	21.1	-72.58	148.9	-1,005.0	2,620.2	2,583.8	36.32	72.148	
8,200.0	7,100.0	6,466.0	6,357.0	37.0	21.1	-72.45	148.6	-1,003.5	2,655.8	2,618.3	37.48	70.866	
8,300.0	7,100.0	6,460.8	6,352.0	37.9	21.0	-72.33	148.3	-1,002.1	2,694.6	2,655.9	38.72	69.595	
8,400.0	7,100.0	6,455.6	6,347.0	38.8	21.0	-72.21	148.0	-1,000.6	2,736.5	2,696.5	40.03	68.362	

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 4-17H20
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 4-17H20	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	
8,500.0	7,100.0	6,450.4	6,342.0	39.8	21.0	72.09	147.8	-999.1	2,781.4	2,740.0	41.40	67.183	
8,600.0	7,100.0	6,445.2	6,337.0	40.8	21.0	71.97	147.5	-997.7	2,829.1	2,786.3	42.82	66.068	
8,700.0	7,100.0	6,439.9	6,332.0	41.9	20.9	71.85	147.2	-996.2	2,879.5	2,835.2	44.28	65.023	
8,800.0	7,100.0	6,434.7	6,327.0	43.1	20.9	71.73	146.9	-994.8	2,932.4	2,886.6	45.78	64.052	
8,900.0	7,100.0	6,429.5	6,322.0	44.3	20.9	71.61	146.7	-993.3	2,987.7	2,940.4	47.31	63.152	
9,000.0	7,100.0	6,424.3	6,317.0	45.6	20.8	71.49	146.4	-991.8	3,045.3	2,996.5	48.86	62.322	
9,100.0	7,100.0	6,419.1	6,312.0	46.9	20.8	71.36	146.1	-990.4	3,105.1	3,054.6	50.44	61.559	
9,200.0	7,100.0	9,302.1	7,100.0	48.3	47.8	90.00	-1,844.5	-1,806.9	3,149.9	3,071.3	78.56	40.094	
9,300.0	7,100.0	9,402.1	7,100.0	49.7	49.0	90.00	-1,944.5	-1,806.9	3,149.7	3,067.7	82.00	38.411	
9,400.0	7,100.0	9,502.1	7,100.0	51.1	50.3	90.00	-2,044.5	-1,806.9	3,149.5	3,064.0	85.47	36.848	
9,500.0	7,100.0	9,602.1	7,100.0	52.6	51.7	90.00	-2,144.5	-1,806.9	3,149.3	3,060.4	88.98	35.394	
9,600.0	7,100.0	9,702.1	7,100.0	54.1	53.1	90.00	-2,244.5	-1,807.0	3,149.2	3,056.7	92.51	34.040	
9,700.0	7,100.0	9,802.1	7,100.0	55.6	54.5	90.00	-2,344.5	-1,807.0	3,149.0	3,052.9	96.07	32.777	
9,800.0	7,100.0	9,902.1	7,100.0	57.1	56.0	90.00	-2,444.5	-1,807.0	3,148.8	3,049.2	99.66	31.597	
9,900.0	7,100.0	10,002.1	7,100.0	58.7	57.5	90.00	-2,544.5	-1,807.0	3,148.7	3,045.4	103.26	30.493	
10,000.0	7,100.0	10,102.1	7,100.0	60.3	59.0	90.00	-2,644.5	-1,807.0	3,148.5	3,041.6	106.88	29.459	
10,100.0	7,100.0	10,202.1	7,100.0	61.9	60.6	90.00	-2,744.5	-1,807.0	3,148.3	3,037.8	110.52	28.488	
10,200.0	7,100.0	10,302.1	7,100.0	63.6	62.2	90.00	-2,844.5	-1,807.0	3,148.2	3,034.0	114.17	27.575	
10,300.0	7,100.0	10,402.1	7,100.0	65.2	63.8	90.00	-2,944.5	-1,807.0	3,148.0	3,030.1	117.83	26.716	
10,400.0	7,100.0	10,502.1	7,100.0	66.9	65.4	90.00	-3,044.5	-1,807.0	3,147.8	3,026.3	121.51	25.906	
10,500.0	7,100.0	10,602.1	7,100.0	68.6	67.1	90.00	-3,144.5	-1,807.0	3,147.6	3,022.4	125.20	25.141	
10,600.0	7,100.0	10,702.1	7,100.0	70.3	68.7	90.00	-3,244.5	-1,807.0	3,147.5	3,018.6	128.90	24.419	
10,700.0	7,100.0	10,802.1	7,100.0	72.0	70.4	90.00	-3,344.5	-1,807.0	3,147.3	3,014.7	132.60	23.735	
10,800.0	7,100.0	10,902.1	7,100.0	73.7	72.1	90.00	-3,444.5	-1,807.0	3,147.1	3,010.8	136.32	23.086	
10,900.0	7,100.0	11,002.1	7,100.0	75.5	73.8	90.00	-3,544.5	-1,807.0	3,147.0	3,006.9	140.04	22.471	
11,000.0	7,100.0	11,102.1	7,100.0	77.2	75.5	90.00	-3,644.5	-1,807.0	3,146.8	3,003.0	143.78	21.887	
11,100.0	7,100.0	11,202.1	7,100.0	79.0	77.3	90.00	-3,744.5	-1,807.1	3,146.6	2,999.1	147.51	21.331	
11,200.0	7,100.0	11,302.1	7,100.0	80.7	79.0	90.00	-3,844.5	-1,807.1	3,146.4	2,995.2	151.26	20.802	
11,300.0	7,100.0	11,402.1	7,100.0	82.5	80.8	90.00	-3,944.5	-1,807.1	3,146.3	2,991.3	155.01	20.297	
11,400.0	7,100.0	11,502.1	7,100.0	84.3	82.5	90.00	-4,044.5	-1,807.1	3,146.1	2,987.3	158.76	19.816	
11,500.0	7,100.0	11,602.1	7,100.0	86.1	84.3	90.00	-4,144.5	-1,807.1	3,145.9	2,983.4	162.52	19.357	
11,600.0	7,100.0	11,702.1	7,100.0	87.8	86.1	90.00	-4,244.5	-1,807.1	3,145.8	2,979.5	166.29	18.917	
11,700.0	7,100.0	11,802.1	7,100.0	89.6	87.9	90.00	-4,344.5	-1,807.1	3,145.6	2,975.5	170.06	18.497	
11,800.0	7,100.0	11,902.1	7,100.0	91.4	89.7	90.00	-4,444.5	-1,807.1	3,145.4	2,971.6	173.83	18.095	
11,900.0	7,100.0	12,002.1	7,100.0	93.3	91.5	90.00	-4,544.5	-1,807.1	3,145.3	2,967.6	177.61	17.709	
12,000.0	7,100.0	12,102.1	7,100.0	95.1	93.3	90.00	-4,644.5	-1,807.1	3,145.1	2,963.7	181.39	17.339	
12,100.0	7,100.0	12,202.1	7,100.0	96.9	95.1	90.00	-4,744.5	-1,807.1	3,144.9	2,959.7	185.17	16.984	
12,178.3	7,100.0	12,280.4	7,100.0	98.3	96.5	90.00	-4,822.8	-1,807.1	3,144.8	2,956.6	188.14	16.715	
12,200.0	7,100.0	12,281.8	7,100.0	98.7	96.7	90.00	-4,824.2	-1,807.1	3,144.8	2,956.2	188.58	16.677	
12,300.0	7,100.0	12,281.8	7,100.0	100.5	96.7	90.00	-4,824.2	-1,807.1	3,146.9	2,956.4	190.47	16.521	
12,400.0	7,100.0	12,281.8	7,100.0	102.4	96.7	90.00	-4,824.2	-1,807.1	3,152.1	2,959.7	192.37	16.386	
12,500.0	7,100.0	12,281.8	7,100.0	104.2	96.7	90.00	-4,824.2	-1,807.1	3,160.5	2,966.2	194.27	16.269	
12,600.0	7,100.0	12,281.8	7,100.0	106.0	96.7	90.00	-4,824.2	-1,807.1	3,172.0	2,975.9	196.17	16.170	
12,700.0	7,100.0	12,281.8	7,100.0	107.9	96.7	90.00	-4,824.2	-1,807.1	3,186.7	2,988.6	198.07	16.088	
12,800.0	7,100.0	12,281.8	7,100.0	109.7	96.7	90.00	-4,824.2	-1,807.1	3,204.3	3,004.4	199.98	16.024	
12,900.0	7,100.0	12,281.8	7,100.0	111.6	96.7	90.00	-4,824.2	-1,807.1	3,225.0	3,023.1	201.88	15.975	
13,000.0	7,100.0	12,281.8	7,100.0	113.4	96.7	90.00	-4,824.2	-1,807.1	3,248.6	3,044.9	203.78	15.942	
13,100.0	7,100.0	12,281.8	7,100.0	115.3	96.7	90.00	-4,824.2	-1,807.1	3,275.2	3,069.5	205.69	15.923	
13,200.0	7,100.0	12,281.8	7,100.0	117.1	96.7	90.00	-4,824.2	-1,807.1	3,304.5	3,096.9	207.60	15.918 SF	
13,300.0	7,100.0	12,281.8	7,100.0	119.0	96.7	90.00	-4,824.2	-1,807.1	3,336.6	3,127.1	209.50	15.926	
13,400.0	7,100.0	12,281.8	7,100.0	120.9	96.7	90.00	-4,824.2	-1,807.1	3,371.3	3,159.9	211.41	15.947	
13,500.0	7,100.0	12,281.8	7,100.0	122.7	96.7	90.00	-4,824.2	-1,807.1	3,408.6	3,195.3	213.32	15.979	

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 4-17H20
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 4-17H20	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
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
13,600.0	7,100.0	12,281.8	7,100.0	124.6	96.7	90.00	-4,824.2	-1,807.1	3,448.4	3,233.2	215.23	16.022	
13,700.0	7,100.0	12,281.8	7,100.0	126.4	96.7	90.00	-4,824.2	-1,807.1	3,490.6	3,273.5	217.14	16.076	
13,800.0	7,100.0	12,281.8	7,100.0	128.3	96.7	90.00	-4,824.2	-1,807.1	3,535.2	3,316.1	219.05	16.139	
13,900.0	7,100.0	12,281.8	7,100.0	130.2	96.7	90.00	-4,824.2	-1,807.1	3,582.0	3,361.0	220.96	16.211	
14,000.0	7,100.0	12,281.8	7,100.0	132.1	96.7	90.00	-4,824.2	-1,807.1	3,630.9	3,408.0	222.87	16.291	
14,100.0	7,100.0	12,281.8	7,100.0	133.9	96.7	90.00	-4,824.2	-1,807.1	3,681.9	3,457.1	224.79	16.380	
14,200.0	7,100.0	12,281.8	7,100.0	135.8	96.7	90.00	-4,824.2	-1,807.1	3,734.9	3,508.2	226.70	16.475	
14,300.0	7,100.0	12,281.8	7,100.0	137.7	96.7	90.00	-4,824.2	-1,807.1	3,789.8	3,561.2	228.61	16.577	
14,400.0	7,100.0	12,281.8	7,100.0	139.6	96.7	90.00	-4,824.2	-1,807.1	3,846.5	3,616.0	230.53	16.686	
14,500.0	7,100.0	12,281.8	7,100.0	141.5	96.7	90.00	-4,824.2	-1,807.1	3,904.9	3,672.5	232.44	16.800	
14,600.0	7,100.0	12,281.8	7,100.0	143.3	96.7	90.00	-4,824.2	-1,807.1	3,965.0	3,730.7	234.35	16.919	
14,700.0	7,100.0	12,281.8	7,100.0	145.2	96.7	90.00	-4,824.2	-1,807.1	4,026.7	3,790.5	236.27	17.043	
14,800.0	7,100.0	12,281.8	7,100.0	147.1	96.7	90.00	-4,824.2	-1,807.1	4,089.9	3,851.7	238.19	17.171	
14,900.0	7,100.0	12,281.8	7,100.0	149.0	96.7	90.00	-4,824.2	-1,807.1	4,154.6	3,914.5	240.10	17.303	
15,000.0	7,100.0	12,281.8	7,100.0	150.9	96.7	90.00	-4,824.2	-1,807.1	4,220.6	3,978.6	242.02	17.439	
15,100.0	7,100.0	12,281.8	7,100.0	152.8	96.7	90.00	-4,824.2	-1,807.1	4,287.9	4,044.0	243.93	17.578	
15,200.0	7,100.0	12,281.8	7,100.0	154.7	96.7	90.00	-4,824.2	-1,807.1	4,356.5	4,110.7	245.85	17.720	
15,300.0	7,100.0	12,281.8	7,100.0	156.5	96.7	90.00	-4,824.2	-1,807.1	4,426.3	4,178.6	247.77	17.865	
15,400.0	7,100.0	12,281.8	7,100.0	158.4	96.7	90.00	-4,824.2	-1,807.1	4,497.3	4,247.6	249.69	18.012	
15,500.0	7,100.0	12,281.8	7,100.0	160.3	96.7	90.00	-4,824.2	-1,807.1	4,569.3	4,317.7	251.60	18.161	
15,600.0	7,100.0	12,281.8	7,100.0	162.2	96.7	90.00	-4,824.2	-1,807.1	4,642.3	4,388.8	253.52	18.311	
15,700.0	7,100.0	12,281.8	7,100.0	164.1	96.7	90.00	-4,824.2	-1,807.1	4,716.4	4,461.0	255.44	18.464	
15,800.0	7,100.0	12,281.8	7,100.0	166.0	96.7	90.00	-4,824.2	-1,807.1	4,791.4	4,534.0	257.36	18.617	
15,900.0	7,100.0	12,281.8	7,100.0	167.9	96.7	90.00	-4,824.2	-1,807.1	4,867.3	4,608.0	259.28	18.772	
16,000.0	7,100.0	12,281.8	7,100.0	169.8	96.7	90.00	-4,824.2	-1,807.1	4,944.0	4,682.8	261.20	18.928	
16,100.0	7,100.0	12,281.8	7,100.0	171.7	96.7	90.00	-4,824.2	-1,807.1	5,021.6	4,758.5	263.12	19.085	
16,200.0	7,100.0	12,281.8	7,100.0	173.6	96.7	90.00	-4,824.2	-1,807.1	5,099.9	4,834.9	265.04	19.242	
16,300.0	7,100.0	12,281.8	7,100.0	175.5	96.7	90.00	-4,824.2	-1,807.1	5,179.0	4,912.1	266.96	19.400	
16,400.0	7,100.0	12,281.8	7,100.0	177.4	96.7	90.00	-4,824.2	-1,807.1	5,258.8	4,990.0	268.88	19.558	
16,500.0	7,100.0	12,281.8	7,100.0	179.3	96.7	90.00	-4,824.2	-1,807.1	5,339.3	5,068.5	270.80	19.717	
16,600.0	7,100.0	12,281.8	7,100.0	181.2	96.7	90.00	-4,824.2	-1,807.1	5,420.4	5,147.7	272.72	19.875	
16,700.0	7,100.0	12,281.8	7,100.0	183.1	96.7	90.00	-4,824.2	-1,807.1	5,502.2	5,227.6	274.64	20.034	
16,800.0	7,100.0	12,281.8	7,100.0	185.0	96.7	90.00	-4,824.2	-1,807.1	5,584.6	5,308.0	276.56	20.193	
16,900.0	7,100.0	12,281.8	7,100.0	186.9	96.7	90.00	-4,824.2	-1,807.1	5,667.5	5,389.0	278.48	20.351	
17,000.0	7,100.0	12,281.8	7,100.0	188.8	96.7	90.00	-4,824.2	-1,807.1	5,750.9	5,470.5	280.41	20.509	
17,100.0	7,100.0	12,281.8	7,100.0	190.7	96.7	90.00	-4,824.2	-1,807.1	5,834.9	5,552.6	282.33	20.667	
17,200.0	7,100.0	12,281.8	7,100.0	192.6	96.7	90.00	-4,824.2	-1,807.1	5,919.4	5,635.1	284.25	20.825	
17,300.0	7,100.0	12,281.8	7,100.0	194.5	96.7	90.00	-4,824.2	-1,807.1	6,004.3	5,718.2	286.17	20.982	
17,400.0	7,100.0	12,281.8	7,100.0	196.4	96.7	90.00	-4,824.2	-1,807.1	6,089.8	5,801.7	288.09	21.138	
17,500.0	7,100.0	12,281.8	7,100.0	198.3	96.7	90.00	-4,824.2	-1,807.1	6,175.6	5,885.6	290.02	21.294	
17,522.7	7,100.0	12,281.8	7,100.0	198.7	96.7	90.00	-4,824.2	-1,807.1	6,195.1	5,904.8	290.37	21.335	
17,523.1	7,100.0	12,281.8	7,100.0	198.7	96.7	90.00	-4,824.2	-1,807.1	6,195.5	5,905.1	290.37	21.336	

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 4-17H20
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 4-17H20	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	
0.0	0.0	0.0	0.0	0.0	0.0	-89.17	1.2	-79.9	80.0					
100.0	100.0	100.0	100.0	0.1	0.1	-89.17	1.2	-79.9	80.0	79.8	0.19	423.500		
200.0	200.0	200.0	200.0	0.3	0.3	-89.17	1.2	-79.9	80.0	79.3	0.64	125.261		
300.0	300.0	300.0	300.0	0.5	0.5	-89.17	1.2	-79.9	80.0	78.9	1.09	73.500		
400.0	400.0	400.0	400.0	0.8	0.8	-89.17	1.2	-79.9	80.0	78.4	1.54	52.009		
500.0	500.0	500.0	500.0	1.0	1.0	-89.17	1.2	-79.9	80.0	78.0	1.99	40.242 CC, ES		
594.9	594.9	592.2	592.2	1.2	1.2	-179.20	1.2	-81.4	83.1	80.7	2.39	34.777		
600.0	600.0	597.2	597.2	1.2	1.2	-179.20	1.2	-81.6	83.4	81.0	2.41	34.589		
700.0	699.9	697.0	696.9	1.4	1.4	-179.26	1.2	-84.9	90.0	87.2	2.82	31.923		
800.0	799.9	796.8	796.7	1.6	1.6	-179.31	1.2	-88.2	96.6	93.4	3.24	29.848		
900.0	899.8	896.6	896.4	1.8	1.8	-179.35	1.2	-91.5	103.3	99.6	3.66	28.186		
1,000.0	999.8	996.4	996.1	2.1	2.1	-179.39	1.2	-94.8	109.9	105.8	4.09	26.835		
1,100.0	1,099.7	1,096.1	1,095.8	2.3	2.3	-179.43	1.2	-98.1	116.5	112.0	4.53	25.719		
1,200.0	1,199.7	1,195.9	1,195.6	2.5	2.5	-179.46	1.2	-101.4	123.1	118.2	4.97	24.784		
1,300.0	1,299.6	1,295.7	1,295.3	2.7	2.7	-179.49	1.2	-104.7	129.7	124.3	5.41	23.991		
1,405.6	1,405.1	1,401.0	1,400.6	3.0	3.0	-179.51	1.2	-108.2	136.7	130.9	5.87	23.276		
1,500.5	1,500.0	1,500.5	1,500.0	3.2	3.2	-89.53	1.2	-109.9	140.0	133.6	6.37	21.957		
1,600.0	1,599.5	1,600.0	1,599.5	3.4	3.4	-89.53	1.2	-109.9	140.0	133.2	6.77	20.672		
1,700.0	1,699.5	1,700.0	1,699.5	3.6	3.6	-89.53	1.2	-109.9	140.0	132.8	7.19	19.461		
1,800.0	1,799.5	1,800.0	1,799.5	3.8	3.8	-89.53	1.2	-109.9	140.0	132.3	7.62	18.376		
1,900.0	1,899.5	1,900.0	1,899.5	4.0	4.0	-89.53	1.2	-109.9	140.0	131.9	8.04	17.399		
2,000.0	1,999.5	2,000.0	1,999.5	4.2	4.2	-89.53	1.2	-109.9	140.0	131.5	8.47	16.517		
2,100.0	2,099.5	2,100.0	2,099.5	4.5	4.5	-89.53	1.2	-109.9	140.0	131.0	8.90	15.716		
2,200.0	2,199.5	2,200.0	2,199.5	4.7	4.7	-89.53	1.2	-109.9	140.0	130.6	9.34	14.987		
2,300.0	2,299.5	2,300.0	2,299.5	4.9	4.9	-89.53	1.2	-109.9	140.0	130.2	9.77	14.321		
2,400.0	2,399.5	2,400.0	2,399.5	5.1	5.1	-89.53	1.2	-109.9	140.0	129.7	10.21	13.709		
2,500.0	2,499.5	2,500.0	2,499.5	5.3	5.3	-89.53	1.2	-109.9	140.0	129.3	10.65	13.146		
2,600.0	2,599.5	2,600.0	2,599.5	5.5	5.5	-89.53	1.2	-109.9	140.0	128.9	11.08	12.626		
2,700.0	2,699.5	2,700.0	2,699.5	5.8	5.8	-89.53	1.2	-109.9	140.0	128.4	11.52	12.145		
2,800.0	2,799.5	2,800.0	2,799.5	6.0	6.0	-89.53	1.2	-109.9	140.0	128.0	11.96	11.699		
2,900.0	2,899.5	2,900.0	2,899.5	6.2	6.2	-89.53	1.2	-109.9	140.0	127.6	12.40	11.283		
3,000.0	2,999.5	3,000.0	2,999.5	6.4	6.4	-89.53	1.2	-109.9	140.0	127.1	12.84	10.896		
3,100.0	3,099.5	3,100.0	3,099.5	6.6	6.6	-89.53	1.2	-109.9	140.0	126.7	13.29	10.534		
3,200.0	3,199.5	3,200.0	3,199.5	6.9	6.9	-89.53	1.2	-109.9	140.0	126.2	13.73	10.194		
3,300.0	3,299.5	3,300.0	3,299.5	7.1	7.1	-89.53	1.2	-109.9	140.0	125.8	14.17	9.876		
3,400.0	3,399.5	3,400.0	3,399.5	7.3	7.3	-89.53	1.2	-109.9	140.0	125.3	14.61	9.576		
3,500.0	3,499.5	3,500.0	3,499.5	7.5	7.5	-89.53	1.2	-109.9	140.0	124.9	15.06	9.294		
3,600.0	3,599.5	3,600.0	3,599.5	7.8	7.8	-89.53	1.2	-109.9	140.0	124.5	15.50	9.028		
3,700.0	3,699.5	3,700.0	3,699.5	8.0	8.0	-89.53	1.2	-109.9	140.0	124.0	15.95	8.777		
3,800.0	3,799.5	3,800.0	3,799.5	8.2	8.2	-89.53	1.2	-109.9	140.0	123.6	16.39	8.539		
3,900.0	3,899.5	3,900.0	3,899.5	8.4	8.4	-89.53	1.2	-109.9	140.0	123.1	16.84	8.313		
4,000.0	3,999.5	4,000.0	3,999.5	8.6	8.6	-89.53	1.2	-109.9	140.0	122.7	17.28	8.099		
4,100.0	4,099.5	4,100.0	4,099.5	8.9	8.9	-173.53	1.2	-109.9	141.7	124.0	17.65	8.028 SF		
4,200.0	4,199.4	4,199.8	4,199.4	9.1	9.1	-173.75	1.2	-109.9	146.9	128.8	18.06	8.131		
4,300.0	4,299.0	4,299.5	4,299.0	9.3	9.3	-174.08	1.2	-109.9	155.6	137.1	18.47	8.424		
4,400.0	4,398.2	4,398.7	4,398.2	9.5	9.5	-174.49	1.2	-109.9	167.7	148.8	18.85	8.894		
4,500.0	4,497.0	4,493.1	4,492.6	9.8	9.7	-174.90	1.2	-110.8	184.1	164.9	19.21	9.584		
4,600.0	4,595.1	4,584.2	4,583.6	10.1	9.9	-175.28	1.2	-114.4	207.0	187.5	19.54	10.592		
4,642.4	4,636.6	4,622.2	4,621.5	10.2	10.0	-175.43	1.2	-116.7	218.7	199.0	19.68	11.111		
4,700.0	4,692.7	4,673.1	4,672.3	10.4	10.1	-175.63	1.2	-120.7	235.8	215.8	19.91	11.839		
4,800.0	4,790.2	4,760.2	4,759.0	10.7	10.3	-175.90	1.2	-129.5	267.7	247.4	20.32	13.178		
4,900.0	4,887.7	4,845.5	4,843.5	11.0	10.5	-176.09	1.2	-140.8	302.5	281.8	20.72	14.602		

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 4-17H20
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 4-17H20	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
5,000.0	4,985.2	4,928.8	4,925.7	11.3	10.7	-176.22	1.2	-154.1	340.1	319.0	21.12	16.103	
5,100.0	5,082.7	5,010.2	5,005.6	11.7	11.0	-176.31	1.2	-169.5	380.3	358.8	21.52	17.672	
5,200.0	5,180.2	5,089.5	5,083.0	12.0	11.2	-176.37	1.2	-186.7	423.1	401.1	21.92	19.302	
5,300.0	5,277.7	5,166.7	5,157.9	12.4	11.4	-176.40	1.2	-205.4	468.3	445.9	22.31	20.986	
5,400.0	5,375.2	5,241.8	5,230.3	12.7	11.7	-176.41	1.2	-225.6	515.8	493.1	22.71	22.717	
5,500.0	5,472.7	5,314.7	5,300.0	13.1	11.9	-176.41	1.2	-247.0	565.6	542.5	23.10	24.489	
5,600.0	5,570.2	5,385.6	5,367.2	13.5	12.2	-176.41	1.2	-269.5	617.6	594.1	23.48	26.297	
5,700.0	5,667.7	5,466.0	5,443.0	13.9	12.5	-176.39	1.2	-296.4	671.1	647.2	23.89	28.084	
5,800.0	5,765.2	5,550.5	5,522.6	14.3	12.9	-176.38	1.2	-324.7	724.6	700.3	24.31	29.802	
5,900.0	5,862.7	5,634.9	5,602.1	14.7	13.3	-176.36	1.2	-353.0	778.2	753.5	24.74	31.459	
6,000.0	5,960.2	5,719.4	5,681.7	15.1	13.7	-176.35	1.2	-381.3	831.7	806.6	25.16	33.055	
6,100.0	6,057.7	5,803.8	5,761.3	15.5	14.1	-176.35	1.2	-409.6	885.3	859.7	25.59	34.592	
6,200.0	6,155.2	5,888.3	5,840.8	15.9	14.6	-176.34	1.2	-437.9	938.9	912.8	26.03	36.074	
6,300.0	6,252.6	5,972.7	5,920.4	16.3	15.0	-176.33	1.2	-466.2	992.4	966.0	26.46	37.501	
6,400.0	6,350.1	6,057.2	6,000.0	16.8	15.5	-176.32	1.2	-494.5	1,046.0	1,019.1	26.90	38.878	
6,445.4	6,394.4	6,095.5	6,036.1	17.0	15.7	-176.32	1.2	-507.4	1,070.3	1,043.2	27.10	39.487	
6,450.0	6,398.9	6,099.4	6,039.7	17.0	15.7	-176.89	1.2	-508.7	1,072.8	1,045.7	27.10	39.585	
6,500.0	6,447.0	6,140.2	6,078.2	17.2	15.9	178.47	1.2	-522.3	1,101.7	1,074.7	27.00	40.801	
6,550.0	6,493.8	6,178.3	6,114.1	17.5	16.1	175.39	1.2	-535.1	1,133.9	1,107.1	26.81	42.298	
6,600.0	6,538.9	6,213.6	6,147.3	17.9	16.3	172.92	1.2	-546.9	1,169.3	1,142.7	26.54	44.061	
6,650.0	6,581.9	6,245.7	6,177.6	18.3	16.5	170.63	1.2	-557.7	1,207.5	1,181.3	26.22	46.058	
6,700.0	6,622.6	6,274.3	6,204.5	18.7	16.7	168.22	1.2	-567.3	1,248.3	1,222.4	25.89	48.216	
6,750.0	6,660.6	6,299.3	6,228.1	19.3	16.8	165.38	1.2	-575.6	1,291.4	1,265.8	25.63	50.381	
6,800.0	6,695.7	6,320.4	6,248.0	19.8	17.0	161.69	1.2	-582.7	1,336.4	1,310.8	25.59	52.216	
6,850.0	6,727.5	6,337.6	6,264.1	20.5	17.1	156.43	1.2	-588.5	1,383.1	1,357.0	26.08	53.027	
6,900.0	6,755.9	6,350.6	6,276.4	21.2	17.1	148.07	1.2	-592.8	1,431.0	1,403.2	27.78	51.518	
6,920.7	6,766.6	6,354.7	6,280.3	21.6	17.2	143.02	1.2	-594.2	1,451.1	1,422.0	29.12	49.826	
7,000.0	6,806.2	6,369.2	6,294.0	22.9	17.2	144.42	1.2	-599.1	1,528.5	1,499.0	29.50	51.821	
7,070.7	6,841.6	6,382.2	6,306.2	24.1	17.3	145.59	1.2	-603.4	1,597.5	1,567.7	29.85	53.525	
7,100.0	6,856.1	6,387.5	6,311.2	24.6	17.3	134.28	1.2	-605.2	1,626.0	1,592.8	33.24	48.916	
7,150.0	6,880.8	6,396.5	6,319.7	25.4	17.4	120.04	1.2	-608.2	1,674.2	1,636.9	37.24	44.954	
7,200.0	6,904.9	6,405.3	6,328.0	26.3	17.5	110.03	1.2	-611.2	1,721.4	1,681.8	39.58	43.494	
7,250.0	6,928.3	6,413.9	6,336.1	27.1	17.5	102.54	1.2	-614.1	1,767.4	1,726.4	40.93	43.179	
7,300.0	6,950.8	6,422.2	6,343.9	27.9	17.6	96.64	1.2	-616.8	1,811.9	1,770.2	41.67	43.480	
7,350.0	6,972.3	6,430.0	6,351.3	28.7	17.6	91.83	1.2	-619.5	1,854.8	1,812.8	41.99	44.173	
7,400.0	6,992.5	6,437.5	6,358.3	29.5	17.6	87.81	1.2	-622.0	1,895.8	1,853.8	41.98	45.157	
7,450.0	7,011.4	6,444.4	6,364.8	30.3	17.7	84.40	1.2	-624.3	1,934.7	1,893.0	41.71	46.383	
7,500.0	7,028.8	6,450.8	6,370.8	31.0	17.7	81.49	1.2	-626.4	1,971.5	1,930.3	41.22	47.826	
7,550.0	7,044.5	6,456.5	6,376.2	31.6	17.8	79.01	1.2	-628.3	2,005.9	1,965.4	40.55	49.472	
7,600.0	7,058.4	6,461.6	6,381.1	32.2	17.8	76.91	1.2	-630.1	2,037.9	1,998.1	39.72	51.311	
7,650.0	7,070.5	6,466.1	6,385.2	32.8	17.8	75.14	1.2	-631.6	2,067.2	2,028.4	38.76	53.330	
7,700.0	7,080.6	6,469.8	6,388.7	33.3	17.8	73.67	1.2	-632.8	2,093.8	2,056.1	37.72	55.512	
7,750.0	7,088.6	6,472.8	6,391.5	33.8	17.9	72.49	1.2	-633.8	2,117.7	2,081.0	36.62	57.827	
7,800.0	7,094.6	6,475.0	6,393.6	34.2	17.9	71.57	1.2	-634.5	2,138.6	2,103.1	35.51	60.233	
7,850.0	7,098.3	6,476.4	6,395.0	34.6	17.9	70.91	1.2	-635.0	2,156.6	2,122.2	34.42	62.665	
7,900.0	7,100.0	6,477.0	6,395.5	34.9	17.9	70.49	1.2	-635.2	2,171.6	2,138.2	33.39	65.032	
7,911.9	7,100.0	6,477.0	6,395.6	35.0	17.9	70.43	1.2	-635.2	2,174.8	2,141.6	33.17	65.573	
8,000.0	7,100.0	6,477.1	6,395.6	35.5	17.9	70.43	1.2	-635.2	2,198.9	2,164.8	34.06	64.556	
8,100.0	7,100.0	6,477.2	6,395.7	36.2	17.9	70.43	1.2	-635.3	2,230.1	2,195.0	35.14	63.464	
8,200.0	7,100.0	6,477.2	6,395.7	37.0	17.9	70.43	1.2	-635.3	2,265.4	2,229.1	36.32	62.377	
8,300.0	7,100.0	6,477.3	6,395.8	37.9	17.9	70.43	1.2	-635.3	2,304.4	2,266.9	37.58	61.322	
8,400.0	7,100.0	6,477.3	6,395.8	38.8	17.9	70.44	1.2	-635.3	2,347.1	2,308.2	38.91	60.318	

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 4-17H20
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 4-17H20	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	
8,500.0	7,100.0	6,477.4	6,395.9	39.8	17.9	70.44	1.2	-635.3	2,393.2	2,352.9	40.31	59.376	
8,600.0	7,100.0	6,477.5	6,396.0	40.8	17.9	70.44	1.2	-635.4	2,442.5	2,400.8	41.75	58.502	
8,700.0	7,100.0	6,477.5	6,396.0	41.9	17.9	70.44	1.2	-635.4	2,494.9	2,451.6	43.24	57.698	
8,800.0	7,100.0	8,495.2	7,100.0	43.1	37.0	90.00	-1,444.9	-1,167.6	2,511.3	2,446.7	64.51	38.930	
8,900.0	7,100.0	8,595.2	7,100.0	44.3	38.3	90.00	-1,544.9	-1,167.6	2,511.1	2,443.3	67.76	37.057	
9,000.0	7,100.0	8,695.2	7,100.0	45.6	39.7	90.00	-1,644.9	-1,167.6	2,510.9	2,439.8	71.08	35.326	
9,100.0	7,100.0	8,795.2	7,100.0	46.9	41.1	90.00	-1,744.9	-1,167.6	2,510.7	2,436.3	74.45	33.725	
9,200.0	7,100.0	8,895.2	7,100.0	48.3	42.6	90.00	-1,844.9	-1,167.6	2,510.5	2,432.7	77.86	32.244	
9,300.0	7,100.0	8,995.2	7,100.0	49.7	44.1	90.00	-1,944.9	-1,167.6	2,510.3	2,429.0	81.31	30.872	
9,400.0	7,100.0	9,095.2	7,100.0	51.1	45.6	90.00	-2,044.9	-1,167.6	2,510.2	2,425.3	84.80	29.599	
9,500.0	7,100.0	9,195.2	7,100.0	52.6	47.2	90.00	-2,144.9	-1,167.6	2,510.0	2,421.6	88.32	28.417	
9,600.0	7,100.0	9,295.2	7,100.0	54.1	48.8	90.00	-2,244.9	-1,167.6	2,509.8	2,417.9	91.87	27.318	
9,700.0	7,100.0	9,395.2	7,100.0	55.6	50.4	90.00	-2,344.9	-1,167.6	2,509.6	2,414.2	95.45	26.294	
9,800.0	7,100.0	9,495.2	7,100.0	57.1	52.0	90.00	-2,444.9	-1,167.6	2,509.4	2,410.4	99.04	25.337	
9,900.0	7,100.0	9,595.2	7,100.0	58.7	53.7	90.00	-2,544.9	-1,167.5	2,509.2	2,406.6	102.65	24.444	
10,000.0	7,100.0	9,695.2	7,100.0	60.3	55.4	90.00	-2,644.9	-1,167.5	2,509.1	2,402.8	106.28	23.607	
10,100.0	7,100.0	9,795.2	7,100.0	61.9	57.1	90.00	-2,744.9	-1,167.5	2,508.9	2,398.9	109.93	22.822	
10,200.0	7,100.0	9,895.2	7,100.0	63.6	58.8	90.00	-2,844.9	-1,167.5	2,508.7	2,395.1	113.59	22.085	
10,300.0	7,100.0	9,995.2	7,100.0	65.2	60.5	90.00	-2,944.9	-1,167.5	2,508.5	2,391.2	117.27	21.392	
10,400.0	7,100.0	10,095.2	7,100.0	66.9	62.3	90.00	-3,044.9	-1,167.5	2,508.3	2,387.4	120.95	20.738	
10,500.0	7,100.0	10,195.2	7,100.0	68.6	64.0	90.00	-3,144.9	-1,167.5	2,508.1	2,383.5	124.65	20.122	
10,600.0	7,100.0	10,295.2	7,100.0	70.3	65.8	90.00	-3,244.9	-1,167.5	2,507.9	2,379.6	128.35	19.539	
10,700.0	7,100.0	10,395.2	7,100.0	72.0	67.5	90.00	-3,344.9	-1,167.5	2,507.8	2,375.7	132.07	18.988	
10,800.0	7,100.0	10,495.2	7,100.0	73.7	69.3	90.00	-3,444.9	-1,167.5	2,507.6	2,371.8	135.79	18.466	
10,900.0	7,100.0	10,595.2	7,100.0	75.5	71.1	90.00	-3,544.9	-1,167.5	2,507.4	2,367.9	139.52	17.971	
11,000.0	7,100.0	10,695.2	7,100.0	77.2	72.9	90.00	-3,644.9	-1,167.5	2,507.2	2,364.0	143.26	17.501	
11,100.0	7,100.0	10,795.2	7,100.0	79.0	74.7	90.00	-3,744.9	-1,167.5	2,507.0	2,360.0	147.00	17.054	
11,200.0	7,100.0	10,895.2	7,100.0	80.7	76.5	90.00	-3,844.9	-1,167.5	2,506.8	2,356.1	150.75	16.629	
11,300.0	7,100.0	10,995.2	7,100.0	82.5	78.4	90.00	-3,944.9	-1,167.5	2,506.7	2,352.2	154.51	16.223	
11,400.0	7,100.0	11,095.2	7,100.0	84.3	80.2	90.00	-4,044.9	-1,167.5	2,506.5	2,348.2	158.27	15.837	
11,500.0	7,100.0	11,195.2	7,100.0	86.1	82.0	90.00	-4,144.9	-1,167.4	2,506.3	2,344.3	162.04	15.468	
11,600.0	7,100.0	11,295.2	7,100.0	87.8	83.8	90.00	-4,244.9	-1,167.4	2,506.1	2,340.3	165.81	15.115	
11,700.0	7,100.0	11,395.2	7,100.0	89.6	85.7	90.00	-4,344.9	-1,167.4	2,505.9	2,336.3	169.58	14.777	
11,800.0	7,100.0	11,495.2	7,100.0	91.4	87.5	90.00	-4,444.9	-1,167.4	2,505.7	2,332.4	173.36	14.454	
11,900.0	7,100.0	11,595.2	7,100.0	93.3	89.4	90.00	-4,544.9	-1,167.4	2,505.6	2,328.4	177.14	14.145	
12,000.0	7,100.0	11,695.2	7,100.0	95.1	91.2	90.00	-4,644.9	-1,167.4	2,505.4	2,324.5	180.92	13.848	
12,100.0	7,100.0	11,795.2	7,100.0	96.9	93.1	90.00	-4,744.9	-1,167.4	2,505.2	2,320.5	184.71	13.563	
12,178.5	7,100.0	11,873.7	7,100.0	98.3	94.5	90.00	-4,823.4	-1,167.4	2,505.1	2,317.4	187.69	13.347	
12,200.0	7,100.0	11,877.2	7,100.0	98.7	94.6	90.00	-4,826.9	-1,167.4	2,505.1	2,316.9	188.16	13.313	
12,300.0	7,100.0	11,877.2	7,100.0	100.5	94.6	90.00	-4,826.9	-1,167.4	2,507.6	2,317.5	190.06	13.194	
12,400.0	7,100.0	11,877.2	7,100.0	102.4	94.6	90.00	-4,826.9	-1,167.4	2,514.1	2,322.2	191.96	13.097	
12,500.0	7,100.0	11,877.2	7,100.0	104.2	94.6	90.00	-4,826.9	-1,167.4	2,524.6	2,330.7	193.86	13.023	
12,600.0	7,100.0	11,877.2	7,100.0	106.0	94.6	90.00	-4,826.9	-1,167.4	2,538.9	2,343.2	195.76	12.970	
12,700.0	7,100.0	11,877.2	7,100.0	107.9	94.6	90.00	-4,826.9	-1,167.4	2,557.1	2,359.5	197.66	12.937	
12,800.0	7,100.0	11,877.2	7,100.0	109.7	94.6	90.00	-4,826.9	-1,167.4	2,579.1	2,379.5	199.56	12.924	
12,900.0	7,100.0	11,877.2	7,100.0	111.6	94.6	90.00	-4,826.9	-1,167.4	2,604.6	2,403.2	201.46	12.929	
13,000.0	7,100.0	11,877.2	7,100.0	113.4	94.6	90.00	-4,826.9	-1,167.4	2,633.8	2,430.4	203.37	12.951	
13,100.0	7,100.0	11,877.2	7,100.0	115.3	94.6	90.00	-4,826.9	-1,167.4	2,666.4	2,461.1	205.28	12.989	
13,200.0	7,100.0	11,877.2	7,100.0	117.1	94.6	90.00	-4,826.9	-1,167.4	2,702.3	2,495.1	207.18	13.043	
13,300.0	7,100.0	11,877.2	7,100.0	119.0	94.6	90.00	-4,826.9	-1,167.4	2,741.3	2,532.3	209.09	13.111	
13,400.0	7,100.0	11,877.2	7,100.0	120.9	94.6	90.00	-4,826.9	-1,167.4	2,783.5	2,572.5	211.00	13.192	
13,500.0	7,100.0	11,877.2	7,100.0	122.7	94.6	90.00	-4,826.9	-1,167.4	2,828.5	2,615.6	212.91	13.285	

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 4-17H20
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 4-17H20	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	
13,600.0	7,100.0	11,877.2	7,100.0	124.6	94.6	90.00	-4,826.9	-1,167.4	2,876.3	2,661.5	214.81	13.390	
13,700.0	7,100.0	11,877.2	7,100.0	126.4	94.6	90.00	-4,826.9	-1,167.4	2,926.7	2,710.0	216.72	13.504	
13,800.0	7,100.0	11,877.2	7,100.0	128.3	94.6	90.00	-4,826.9	-1,167.4	2,979.7	2,761.0	218.64	13.628	
13,900.0	7,100.0	11,877.2	7,100.0	130.2	94.6	90.00	-4,826.9	-1,167.4	3,035.0	2,814.4	220.55	13.761	
14,000.0	7,100.0	11,877.2	7,100.0	132.1	94.6	90.00	-4,826.9	-1,167.4	3,092.5	2,870.1	222.46	13.902	
14,100.0	7,100.0	11,877.2	7,100.0	133.9	94.6	90.00	-4,826.9	-1,167.4	3,152.2	2,927.8	224.37	14.049	
14,200.0	7,100.0	11,877.2	7,100.0	135.8	94.6	90.00	-4,826.9	-1,167.4	3,213.9	2,987.6	226.28	14.203	
14,300.0	7,100.0	11,877.2	7,100.0	137.7	94.6	90.00	-4,826.9	-1,167.4	3,277.5	3,049.3	228.20	14.362	
14,400.0	7,100.0	11,877.2	7,100.0	139.6	94.6	90.00	-4,826.9	-1,167.4	3,342.8	3,112.7	230.11	14.527	
14,500.0	7,100.0	11,877.2	7,100.0	141.5	94.6	90.00	-4,826.9	-1,167.4	3,409.9	3,177.8	232.03	14.696	
14,600.0	7,100.0	11,877.2	7,100.0	143.3	94.6	90.00	-4,826.9	-1,167.4	3,478.5	3,244.5	233.94	14.869	
14,700.0	7,100.0	11,877.2	7,100.0	145.2	94.6	90.00	-4,826.9	-1,167.4	3,548.6	3,312.7	235.86	15.046	
14,800.0	7,100.0	11,877.2	7,100.0	147.1	94.6	90.00	-4,826.9	-1,167.4	3,620.1	3,382.3	237.77	15.225	
14,900.0	7,100.0	11,877.2	7,100.0	149.0	94.6	90.00	-4,826.9	-1,167.4	3,693.0	3,453.3	239.69	15.407	
15,000.0	7,100.0	11,877.2	7,100.0	150.9	94.6	90.00	-4,826.9	-1,167.4	3,767.0	3,525.4	241.60	15.592	
15,100.0	7,100.0	11,877.2	7,100.0	152.8	94.6	90.00	-4,826.9	-1,167.4	3,842.3	3,598.8	243.52	15.778	
15,200.0	7,100.0	11,877.2	7,100.0	154.7	94.6	90.00	-4,826.9	-1,167.4	3,918.7	3,673.2	245.44	15.966	
15,300.0	7,100.0	11,877.2	7,100.0	156.5	94.6	90.00	-4,826.9	-1,167.4	3,996.1	3,748.7	247.35	16.155	
15,400.0	7,100.0	11,877.2	7,100.0	158.4	94.6	90.00	-4,826.9	-1,167.4	4,074.5	3,825.2	249.27	16.345	
15,500.0	7,100.0	11,877.2	7,100.0	160.3	94.6	90.00	-4,826.9	-1,167.4	4,153.8	3,902.6	251.19	16.536	
15,600.0	7,100.0	11,877.2	7,100.0	162.2	94.6	90.00	-4,826.9	-1,167.4	4,234.0	3,980.9	253.11	16.728	
15,700.0	7,100.0	11,877.2	7,100.0	164.1	94.6	90.00	-4,826.9	-1,167.4	4,315.0	4,060.0	255.03	16.920	
15,800.0	7,100.0	11,877.2	7,100.0	166.0	94.6	90.00	-4,826.9	-1,167.4	4,396.8	4,139.9	256.95	17.112	
15,900.0	7,100.0	11,877.2	7,100.0	167.9	94.6	90.00	-4,826.9	-1,167.4	4,479.4	4,220.5	258.87	17.304	
16,000.0	7,100.0	11,877.2	7,100.0	169.8	94.6	90.00	-4,826.9	-1,167.4	4,562.6	4,301.8	260.78	17.496	
16,100.0	7,100.0	11,877.2	7,100.0	171.7	94.6	90.00	-4,826.9	-1,167.4	4,646.5	4,383.8	262.70	17.687	
16,200.0	7,100.0	11,877.2	7,100.0	173.6	94.6	90.00	-4,826.9	-1,167.4	4,731.0	4,466.4	264.62	17.878	
16,300.0	7,100.0	11,877.2	7,100.0	175.5	94.6	90.00	-4,826.9	-1,167.4	4,816.2	4,549.6	266.54	18.069	
16,400.0	7,100.0	11,877.2	7,100.0	177.4	94.6	90.00	-4,826.9	-1,167.4	4,901.9	4,633.4	268.46	18.259	
16,500.0	7,100.0	11,877.2	7,100.0	179.3	94.6	90.00	-4,826.9	-1,167.4	4,988.1	4,717.7	270.39	18.448	
16,600.0	7,100.0	11,877.2	7,100.0	181.2	94.6	90.00	-4,826.9	-1,167.4	5,074.8	4,802.5	272.31	18.636	
16,700.0	7,100.0	11,877.2	7,100.0	183.1	94.6	90.00	-4,826.9	-1,167.4	5,162.0	4,887.8	274.23	18.824	
16,800.0	7,100.0	11,877.2	7,100.0	185.0	94.6	90.00	-4,826.9	-1,167.4	5,249.7	4,973.5	276.15	19.010	
16,900.0	7,100.0	11,877.2	7,100.0	186.9	94.6	90.00	-4,826.9	-1,167.4	5,337.8	5,059.7	278.07	19.196	
17,000.0	7,100.0	11,877.2	7,100.0	188.8	94.6	90.00	-4,826.9	-1,167.4	5,426.3	5,146.3	279.99	19.380	
17,100.0	7,100.0	11,877.2	7,100.0	190.7	94.6	90.00	-4,826.9	-1,167.4	5,515.2	5,233.2	281.91	19.563	
17,200.0	7,100.0	11,877.2	7,100.0	192.6	94.6	90.00	-4,826.9	-1,167.4	5,604.4	5,320.6	283.83	19.745	
17,300.0	7,100.0	11,877.2	7,100.0	194.5	94.6	90.00	-4,826.9	-1,167.4	5,694.1	5,408.3	285.76	19.926	
17,400.0	7,100.0	11,877.2	7,100.0	196.4	94.6	90.00	-4,826.9	-1,167.4	5,784.0	5,496.4	287.68	20.106	
17,500.0	7,100.0	11,877.2	7,100.0	198.3	94.6	90.00	-4,826.9	-1,167.4	5,874.3	5,584.7	289.60	20.284	
17,522.7	7,100.0	11,877.2	7,100.0	198.7	94.6	90.00	-4,826.9	-1,167.4	5,894.8	5,604.9	289.95	20.330	
17,523.1	7,100.0	11,877.2	7,100.0	198.7	94.6	90.00	-4,826.9	-1,167.4	5,895.2	5,605.2	289.96	20.331	

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 4-17H20
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 4-17H20	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 Tooface (")	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	-56.04	153.1	-227.4	274.1				
100.0	100.0	103.0	103.0	0.1	0.1	-56.04	153.1	-227.4	274.1	273.9	0.19	1,426.350	
200.0	200.0	203.0	203.0	0.3	0.3	-56.04	153.1	-227.4	274.1	273.5	0.64	427.156	
300.0	300.0	303.0	303.0	0.5	0.5	-56.04	153.1	-227.4	274.1	273.0	1.09	251.191	
400.0	400.0	403.0	403.0	0.8	0.8	-56.04	153.1	-227.4	274.1	272.6	1.54	177.904	
500.0	500.0	503.0	503.0	1.0	1.0	-56.04	153.1	-227.4	274.1	272.1	1.99	137.722 CC, ES	
594.9	594.9	597.9	597.9	1.2	1.2	-146.21	153.1	-227.4	275.4	273.0	2.41	114.458	
600.0	600.0	603.0	603.0	1.2	1.2	-146.23	153.1	-227.4	275.6	273.1	2.43	113.499	
700.0	699.9	702.9	702.9	1.4	1.4	-146.61	153.1	-227.4	278.3	275.5	2.86	97.413	
800.0	799.9	802.9	802.9	1.6	1.7	-146.98	153.1	-227.4	281.1	277.8	3.29	85.379	
900.0	899.8	902.8	902.8	1.8	1.9	-147.34	153.1	-227.4	283.9	280.1	3.73	76.079	
1,000.0	999.8	1,002.8	1,002.8	2.1	2.1	-147.70	153.1	-227.4	286.7	282.5	4.17	68.696	
1,100.0	1,099.7	1,102.7	1,102.7	2.3	2.3	-148.05	153.1	-227.4	289.5	284.9	4.62	62.704	
1,200.0	1,199.7	1,202.7	1,202.7	2.5	2.6	-148.39	153.1	-227.4	292.3	287.2	5.06	57.749	
1,300.0	1,299.6	1,302.6	1,302.6	2.7	2.8	-148.73	153.1	-227.4	295.1	289.6	5.51	53.587	
1,405.6	1,405.1	1,408.1	1,408.1	3.0	3.0	-149.08	153.1	-227.4	298.1	292.1	5.98	49.862	
1,500.5	1,500.0	1,503.0	1,503.0	3.2	3.2	-59.25	153.1	-227.4	299.5	293.0	6.42	46.648	
1,600.0	1,599.5	1,602.5	1,602.5	3.4	3.5	-59.25	153.1	-227.4	299.5	292.6	6.84	43.768	
1,700.0	1,699.5	1,702.5	1,702.5	3.6	3.7	-59.25	153.1	-227.4	299.5	292.2	7.28	41.147	
1,800.0	1,799.5	1,802.5	1,802.5	3.8	3.9	-59.25	153.1	-227.4	299.5	291.7	7.72	38.815	
1,900.0	1,899.5	1,902.5	1,902.5	4.0	4.1	-59.25	153.1	-227.4	299.5	291.3	8.15	36.726	
2,000.0	1,999.5	2,002.5	2,002.5	4.2	4.4	-59.25	153.1	-227.4	299.5	290.9	8.59	34.847	
2,100.0	2,099.5	2,102.5	2,102.5	4.5	4.6	-59.25	153.1	-227.4	299.5	290.4	9.03	33.147	
2,200.0	2,199.5	2,202.5	2,202.5	4.7	4.8	-59.25	153.1	-227.4	299.5	290.0	9.48	31.602	
2,300.0	2,299.5	2,302.5	2,302.5	4.9	5.0	-59.25	153.1	-227.4	299.5	289.5	9.92	30.193	
2,400.0	2,399.5	2,402.5	2,402.5	5.1	5.3	-59.25	153.1	-227.4	299.5	289.1	10.36	28.902	
2,500.0	2,499.5	2,502.5	2,502.5	5.3	5.5	-59.25	153.1	-227.4	299.5	288.7	10.80	27.716	
2,600.0	2,599.5	2,602.5	2,602.5	5.5	5.7	-59.25	153.1	-227.4	299.5	288.2	11.25	26.622	
2,700.0	2,699.5	2,702.5	2,702.5	5.8	5.9	-59.25	153.1	-227.4	299.5	287.8	11.69	25.610	
2,800.0	2,799.5	2,802.5	2,802.5	6.0	6.2	-59.25	153.1	-227.4	299.5	287.3	12.14	24.672	
2,900.0	2,899.5	2,902.5	2,902.5	6.2	6.4	-59.25	153.1	-227.4	299.5	286.9	12.58	23.799	
3,000.0	2,999.5	3,002.5	3,002.5	6.4	6.6	-59.25	153.1	-227.4	299.5	286.4	13.03	22.985	
3,100.0	3,099.5	3,102.5	3,102.5	6.6	6.8	-59.25	153.1	-227.4	299.5	286.0	13.47	22.225	
3,200.0	3,199.5	3,202.5	3,202.5	6.9	7.1	-59.25	153.1	-227.4	299.5	285.5	13.92	21.513	
3,300.0	3,299.5	3,302.5	3,302.5	7.1	7.3	-59.25	153.1	-227.4	299.5	285.1	14.37	20.845	
3,400.0	3,399.5	3,402.5	3,402.5	7.3	7.5	-59.25	153.1	-227.4	299.5	284.6	14.81	20.217	
3,465.8	3,465.3	3,468.3	3,468.3	7.5	7.7	-59.25	153.1	-227.4	299.5	284.4	15.11	19.823	
3,500.0	3,499.5	3,500.0	3,500.0	7.5	7.7	-59.25	153.1	-227.4	299.5	284.2	15.25	19.633	
3,600.0	3,599.5	3,595.2	3,595.1	7.8	7.9	-59.45	152.8	-228.9	300.7	285.0	15.67	19.186	
3,700.0	3,699.5	3,687.8	3,687.7	8.0	8.1	-60.03	151.9	-233.4	304.4	288.3	16.08	18.933	
3,800.0	3,799.5	3,780.0	3,779.6	8.2	8.3	-60.96	150.3	-240.7	310.5	294.0	16.48	18.840 SF	
3,900.0	3,899.5	3,871.7	3,870.6	8.4	8.5	-62.19	148.2	-250.9	319.2	302.3	16.89	18.896	
4,000.0	3,999.5	3,962.6	3,960.6	8.6	8.7	-63.67	145.4	-263.8	330.5	313.2	17.31	19.098	
4,100.0	4,099.5	4,052.2	4,048.8	8.9	8.9	-149.21	142.2	-279.3	346.1	328.4	17.67	19.588	
4,200.0	4,199.4	4,139.9	4,134.6	9.1	9.1	-151.10	138.4	-297.0	367.5	349.5	18.05	20.356	
4,300.0	4,299.0	4,225.1	4,217.4	9.3	9.4	-153.10	134.3	-316.7	394.9	376.5	18.43	21.433	
4,400.0	4,398.2	4,307.6	4,296.9	9.5	9.6	-155.10	129.8	-338.0	428.4	409.6	18.79	22.807	
4,500.0	4,497.0	4,398.1	4,383.9	9.8	9.9	-157.23	124.6	-362.6	466.7	447.6	19.15	24.374	
4,600.0	4,595.1	4,487.1	4,469.4	10.1	10.2	-159.14	119.5	-386.8	508.7	489.2	19.49	26.095	
4,642.4	4,636.6	4,524.4	4,505.2	10.2	10.4	-159.88	117.4	-396.9	527.5	507.9	19.63	26.869	
4,700.0	4,692.7	4,574.8	4,553.7	10.4	10.6	-161.01	114.5	-410.6	553.7	533.8	19.87	27.869	
4,800.0	4,790.2	4,662.3	4,637.7	10.7	10.9	-162.74	109.4	-434.4	599.4	579.1	20.27	29.565	

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 4-17H20
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 4-17H20	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		
4,900.0	4,887.7	4,749.9	4,721.8	11.0	11.3	-164.23	104.4	-458.1	645.5	624.9	20.69	31.205		
5,000.0	4,985.2	4,837.4	4,805.9	11.3	11.7	-165.53	99.4	-481.9	692.0	670.9	21.10	32.790		
5,100.0	5,082.7	4,924.9	4,890.0	11.7	12.0	-166.67	94.4	-505.7	738.7	717.1	21.52	34.319		
5,200.0	5,180.2	5,012.4	4,974.1	12.0	12.4	-167.67	89.4	-529.5	785.5	763.6	21.95	35.793		
5,300.0	5,277.7	5,100.0	5,058.2	12.4	12.8	-168.56	84.4	-553.2	832.6	810.2	22.37	37.212		
5,400.0	5,375.2	5,187.5	5,142.2	12.7	13.2	-169.36	79.4	-577.0	879.8	857.0	22.81	38.578		
5,500.0	5,472.7	5,275.0	5,226.3	13.1	13.7	-170.08	74.3	-600.8	927.1	903.9	23.24	39.893		
5,600.0	5,570.2	5,362.5	5,310.4	13.5	14.1	-170.73	69.3	-624.5	974.5	950.8	23.68	41.158		
5,700.0	5,667.7	5,450.1	5,394.5	13.9	14.5	-171.32	64.3	-648.3	1,022.0	997.9	24.12	42.376		
5,800.0	5,765.2	5,537.6	5,478.6	14.3	15.0	-171.86	59.3	-672.1	1,069.6	1,045.1	24.56	43.547		
5,900.0	5,862.7	5,625.1	5,562.7	14.7	15.4	-172.35	54.3	-695.9	1,117.3	1,092.3	25.01	44.675		
6,000.0	5,960.2	5,712.6	5,646.7	15.1	15.9	-172.80	49.3	-719.6	1,165.0	1,139.5	25.46	45.760		
6,100.0	6,057.7	5,800.1	5,730.8	15.5	16.3	-173.22	44.2	-743.4	1,212.8	1,186.8	25.91	46.805		
6,200.0	6,155.2	5,887.7	5,814.9	15.9	16.8	-173.60	39.2	-767.2	1,260.6	1,234.2	26.37	47.811		
6,300.0	6,252.6	5,975.2	5,899.0	16.3	17.2	-173.96	34.2	-791.0	1,308.4	1,281.6	26.82	48.780		
6,400.0	6,350.1	6,062.7	5,983.1	16.8	17.7	-174.29	29.2	-814.7	1,356.3	1,329.0	27.28	49.713		
6,445.4	6,394.4	6,102.4	6,021.2	17.0	17.9	-174.44	26.9	-825.5	1,378.1	1,350.6	27.49	50.126		
6,450.0	6,398.9	6,106.5	6,025.1	17.0	17.9	-175.01	26.7	-826.6	1,380.3	1,352.8	27.48	50.222		
6,500.0	6,447.0	6,149.0	6,065.9	17.2	18.2	-179.61	24.3	-838.2	1,406.4	1,379.1	27.33	51.465		
6,550.0	6,493.8	6,189.1	6,104.5	17.5	18.4	177.36	22.0	-849.1	1,436.2	1,409.1	27.07	53.063		
6,600.0	6,538.9	6,226.6	6,140.5	17.9	18.6	174.99	19.8	-859.3	1,469.2	1,442.5	26.71	55.010		
6,650.0	6,581.9	6,261.2	6,173.7	18.3	18.8	172.87	17.8	-868.6	1,505.3	1,479.0	26.28	57.285		
6,700.0	6,622.6	6,292.5	6,203.8	18.7	18.9	170.72	16.0	-877.2	1,544.2	1,518.4	25.81	59.830		
6,750.0	6,660.6	6,320.4	6,230.7	19.3	19.1	168.31	14.4	-884.7	1,585.7	1,560.3	25.37	62.512		
6,800.0	6,695.7	6,344.7	6,253.9	19.8	19.2	165.36	13.0	-891.3	1,629.3	1,604.2	25.05	65.036		
6,850.0	6,727.5	6,365.1	6,273.5	20.5	19.3	161.42	11.9	-896.9	1,674.8	1,649.7	25.08	66.772		
6,900.0	6,755.9	6,381.5	6,289.3	21.2	19.4	155.61	10.9	-901.3	1,721.8	1,695.9	25.91	66.459		
6,920.7	6,766.6	6,387.1	6,294.7	21.6	19.4	152.29	10.6	-902.8	1,741.7	1,715.0	26.69	65.262		
7,000.0	6,806.2	6,407.1	6,313.9	22.9	19.6	153.15	9.5	-908.3	1,817.9	1,790.9	27.04	67.219		
7,070.7	6,841.6	6,425.0	6,331.1	24.1	19.7	153.87	8.4	-913.1	1,886.1	1,858.7	27.39	68.863		
7,100.0	6,856.1	6,432.4	6,338.2	24.6	19.7	143.58	8.0	-915.1	1,914.2	1,883.7	30.47	62.811		
7,150.0	6,880.8	6,445.1	6,350.5	25.4	19.8	129.40	7.3	-918.6	1,961.6	1,926.7	34.96	56.116		
7,200.0	6,904.9	6,457.8	6,362.7	26.3	19.8	118.68	6.6	-922.1	2,008.2	1,970.1	38.02	52.823		
7,250.0	6,928.3	6,470.4	6,374.8	27.1	19.9	110.38	5.8	-925.5	2,053.5	2,013.5	39.95	51.401		
7,300.0	6,950.8	6,482.8	6,386.7	27.9	20.0	103.77	5.1	-928.9	2,097.3	2,056.2	41.10	51.035		
7,350.0	6,972.3	6,494.9	6,398.3	28.7	20.0	98.37	4.4	-932.1	2,139.5	2,097.8	41.69	51.325		
7,400.0	6,992.5	6,506.6	6,409.6	29.5	20.1	93.88	3.8	-935.3	2,179.8	2,137.9	41.86	52.070		
7,450.0	7,011.4	6,517.9	6,420.4	30.3	20.2	90.10	3.1	-938.4	2,217.9	2,176.2	41.72	53.159		
7,500.0	7,028.8	6,532.6	6,434.5	31.0	20.2	87.03	2.5	-942.3	2,253.8	2,212.5	41.34	54.523		
7,550.0	7,044.5	6,544.3	6,445.8	31.6	20.3	84.36	2.2	-945.5	2,287.3	2,246.5	40.76	56.112		
7,600.0	7,058.4	6,553.3	6,454.4	32.2	20.3	82.05	2.2	-947.8	2,318.2	2,278.2	40.04	57.900		
7,650.0	7,070.5	6,559.8	6,460.8	32.8	20.4	80.07	2.2	-949.6	2,346.5	2,307.3	39.20	59.853		
7,700.0	7,080.6	6,564.4	6,465.2	33.3	20.4	78.41	2.3	-950.7	2,372.0	2,333.7	38.30	61.935		
7,750.0	7,088.6	6,567.3	6,468.0	33.8	20.4	77.05	2.4	-951.5	2,394.7	2,357.4	37.36	64.096		
7,800.0	7,094.6	6,568.8	6,469.5	34.2	20.4	75.98	2.4	-951.9	2,414.4	2,378.0	36.43	66.273		
7,850.0	7,098.3	6,569.2	6,469.8	34.6	20.4	75.18	2.5	-952.0	2,431.2	2,395.6	35.55	68.388		
7,900.0	7,100.0	6,568.7	6,469.3	34.9	20.4	74.66	2.4	-951.9	2,444.8	2,410.0	34.75	70.347		
7,911.9	7,100.0	6,568.4	6,469.1	35.0	20.4	74.58	2.4	-951.8	2,447.6	2,413.0	34.58	70.778		
8,000.0	7,100.0	6,566.7	6,467.4	35.5	20.4	74.54	2.4	-951.3	2,469.1	2,433.6	35.49	69.568		
8,100.0	7,100.0	6,565.1	6,465.9	36.2	20.4	74.50	2.3	-950.9	2,497.0	2,460.4	36.59	68.245		
8,200.0	7,100.0	6,563.8	6,464.6	37.0	20.4	74.47	2.3	-950.6	2,528.5	2,490.7	37.79	66.917		
8,300.0	7,100.0	6,562.7	6,463.6	37.9	20.4	74.44	2.3	-950.3	2,563.6	2,524.5	39.07	65.616		

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 4-17H20
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 4-17H20	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		
8,400.0	7,100.0	6,550.0	6,451.3	38.8	20.3	74.13	2.2	-947.0	2,602.1	2,561.8	40.35	64.483		
8,500.0	7,100.0	6,550.0	6,451.3	39.8	20.3	74.13	2.2	-947.0	2,643.8	2,602.0	41.77	63.287		
8,600.0	7,100.0	6,550.0	6,451.3	40.8	20.3	74.13	2.2	-947.0	2,688.5	2,645.3	43.25	62.167		
8,700.0	7,100.0	6,550.0	6,451.3	41.9	20.3	74.13	2.2	-947.0	2,736.2	2,691.4	44.76	61.125		
8,800.0	7,100.0	6,550.0	6,451.3	43.1	20.3	74.13	2.2	-947.0	2,786.6	2,740.3	46.32	60.163		
8,900.0	7,100.0	6,550.0	6,451.3	44.3	20.3	74.13	2.2	-947.0	2,839.7	2,791.8	47.91	59.277		
9,000.0	7,100.0	6,550.0	6,451.3	45.6	20.3	74.13	2.2	-947.0	2,895.2	2,845.7	49.52	58.466		
9,100.0	7,100.0	6,550.0	6,451.3	46.9	20.3	74.13	2.2	-947.0	2,953.1	2,902.0	51.16	57.724		
9,200.0	7,100.0	6,550.0	6,451.3	48.3	20.3	74.13	2.2	-947.0	3,013.2	2,960.4	52.82	57.047		
9,300.0	7,100.0	6,550.0	6,451.3	49.7	20.3	74.13	2.2	-947.0	3,075.4	3,020.9	54.50	56.431		
9,400.0	7,100.0	6,550.0	6,451.3	51.1	20.3	74.13	2.2	-947.0	3,139.5	3,083.3	56.19	55.870		
9,500.0	7,100.0	6,550.0	6,451.3	52.6	20.3	74.13	2.2	-947.0	3,205.5	3,147.6	57.90	55.360		
9,600.0	7,100.0	6,550.0	6,451.3	54.1	20.3	74.13	2.2	-947.0	3,273.2	3,213.6	59.62	54.897		
9,700.0	7,100.0	6,550.0	6,451.3	55.6	20.3	74.13	2.2	-947.0	3,342.5	3,281.2	61.36	54.476		
9,800.0	7,100.0	6,550.0	6,451.3	57.1	20.3	74.13	2.2	-947.0	3,413.3	3,350.2	63.10	54.094		
9,900.0	7,100.0	6,550.0	6,451.3	58.7	20.3	74.13	2.2	-947.0	3,485.6	3,420.8	64.85	53.747		
10,000.0	7,100.0	6,550.0	6,451.3	60.3	20.3	74.13	2.2	-947.0	3,559.2	3,492.6	66.61	53.431		
10,100.0	7,100.0	6,550.0	6,451.3	61.9	20.3	74.13	2.2	-947.0	3,634.1	3,565.7	68.38	53.145		
10,200.0	7,100.0	6,550.0	6,451.3	63.6	20.3	74.13	2.2	-947.0	3,710.2	3,640.0	70.15	52.885		
10,300.0	7,100.0	6,550.0	6,451.3	65.2	20.3	74.13	2.2	-947.0	3,787.3	3,715.4	71.93	52.650		
10,400.0	7,100.0	6,550.0	6,451.3	66.9	20.3	74.13	2.2	-947.0	3,865.5	3,791.8	73.72	52.436		
10,500.0	7,100.0	6,550.0	6,451.3	68.6	20.3	74.13	2.2	-947.0	3,944.7	3,869.2	75.51	52.241		
10,600.0	7,100.0	6,550.0	6,451.3	70.3	20.3	74.13	2.2	-947.0	4,024.9	3,947.6	77.30	52.065		
10,700.0	7,100.0	6,550.0	6,451.3	72.0	20.3	74.13	2.2	-947.0	4,105.9	4,026.8	79.10	51.905		
10,800.0	7,100.0	6,550.0	6,451.3	73.7	20.3	74.13	2.2	-947.0	4,187.7	4,106.8	80.91	51.759		
10,900.0	7,100.0	6,550.0	6,451.3	75.5	20.3	74.13	2.2	-947.0	4,270.3	4,187.6	82.71	51.628		
11,000.0	7,100.0	6,550.0	6,451.3	77.2	20.3	74.13	2.2	-947.0	4,353.6	4,269.1	84.52	51.508		
11,100.0	7,100.0	6,550.0	6,451.3	79.0	20.3	74.13	2.2	-947.0	4,437.6	4,351.3	86.33	51.400		
11,200.0	7,100.0	6,550.0	6,451.3	80.7	20.3	74.13	2.2	-947.0	4,522.3	4,434.1	88.15	51.302		
11,300.0	7,100.0	6,550.0	6,451.3	82.5	20.3	74.13	2.2	-947.0	4,607.6	4,517.6	89.97	51.213		
11,400.0	7,100.0	6,550.0	6,451.3	84.3	20.3	74.13	2.2	-947.0	4,693.4	4,601.6	91.79	51.133		
11,500.0	7,100.0	6,550.0	6,451.3	86.1	20.3	74.13	2.2	-947.0	4,779.8	4,686.2	93.61	51.061		
11,600.0	7,100.0	6,550.0	6,451.3	87.8	20.3	74.13	2.2	-947.0	4,866.7	4,771.3	95.43	50.996		
11,700.0	7,100.0	6,550.0	6,451.3	89.6	20.3	74.13	2.2	-947.0	4,954.2	4,856.9	97.26	50.937		
11,800.0	7,100.0	6,550.0	6,451.3	91.4	20.3	74.13	2.2	-947.0	5,042.1	4,943.0	99.09	50.884		
11,900.0	7,100.0	6,550.0	6,451.3	93.3	20.3	74.13	2.2	-947.0	5,130.4	5,029.5	100.92	50.837		
12,000.0	7,100.0	6,550.0	6,451.3	95.1	20.3	74.13	2.2	-947.0	5,219.1	5,116.4	102.75	50.795		
12,100.0	7,100.0	6,550.0	6,451.3	96.9	20.3	74.13	2.2	-947.0	5,308.3	5,203.7	104.58	50.757		
12,200.0	7,100.0	6,550.0	6,451.3	98.7	20.3	74.13	2.2	-947.0	5,397.8	5,291.4	106.42	50.723		
12,300.0	7,100.0	6,550.0	6,451.3	100.5	20.3	74.13	2.2	-947.0	5,487.7	5,379.5	108.25	50.694		
12,400.0	7,100.0	6,550.0	6,451.3	102.4	20.3	74.13	2.2	-947.0	5,578.0	5,467.9	110.09	50.668		
12,500.0	7,100.0	6,550.0	6,451.3	104.2	20.3	74.13	2.2	-947.0	5,668.5	5,556.6	111.93	50.645		
12,600.0	7,100.0	6,550.0	6,451.3	106.0	20.3	74.13	2.2	-947.0	5,759.4	5,645.7	113.77	50.625		
12,700.0	7,100.0	6,550.0	6,451.3	107.9	20.3	74.13	2.2	-947.0	5,850.6	5,735.0	115.61	50.608		
12,800.0	7,100.0	6,550.0	6,451.3	109.7	20.3	74.13	2.2	-947.0	5,942.1	5,824.6	117.45	50.593		
12,900.0	7,100.0	6,550.0	6,451.3	111.6	20.3	74.13	2.2	-947.0	6,033.8	5,914.5	119.29	50.581		
13,000.0	7,100.0	6,550.0	6,451.3	113.4	20.3	74.13	2.2	-947.0	6,125.8	6,004.7	121.13	50.571		
13,100.0	7,100.0	6,550.0	6,451.3	115.3	20.3	74.13	2.2	-947.0	6,218.0	6,095.0	122.98	50.563		
13,200.0	7,100.0	6,550.0	6,451.3	117.1	20.3	74.13	2.2	-947.0	6,310.5	6,185.7	124.82	50.556		
13,300.0	7,100.0	6,550.0	6,451.3	119.0	20.3	74.13	2.2	-947.0	6,403.2	6,276.5	126.67	50.552		
13,400.0	7,100.0	6,550.0	6,451.3	120.9	20.3	74.13	2.2	-947.0	6,496.1	6,367.6	128.51	50.549		
13,500.0	7,100.0	6,550.0	6,451.3	122.7	20.3	74.13	2.2	-947.0	6,589.2	6,458.9	130.36	50.547		

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 4-17H20
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 4-17H20	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		
13,600.0	7,100.0	6,550.0	6,451.3	124.6	20.3	74.13	2.2	-947.0	6,682.6	6,550.4	132.21	50.546		
13,700.0	7,100.0	6,550.0	6,451.3	126.4	20.3	74.13	2.2	-947.0	6,776.1	6,642.0	134.05	50.547		
13,800.0	7,100.0	6,550.0	6,451.3	128.3	20.3	74.13	2.2	-947.0	6,869.8	6,733.9	135.90	50.549		
13,900.0	7,100.0	6,550.0	6,451.3	130.2	20.3	74.13	2.2	-947.0	6,963.6	6,825.9	137.75	50.552		
14,000.0	7,100.0	6,550.0	6,451.3	132.1	20.3	74.13	2.2	-947.0	7,057.7	6,918.1	139.60	50.556		
14,100.0	7,100.0	6,550.0	6,451.3	133.9	20.3	74.13	2.2	-947.0	7,151.9	7,010.4	141.45	50.561		
14,200.0	7,100.0	6,550.0	6,451.3	135.8	20.3	74.13	2.2	-947.0	7,246.2	7,102.9	143.30	50.566		
14,300.0	7,100.0	6,550.0	6,451.3	137.7	20.3	74.13	2.2	-947.0	7,340.8	7,195.6	145.15	50.572		
14,400.0	7,100.0	6,550.0	6,451.3	139.6	20.3	74.13	2.2	-947.0	7,435.4	7,288.4	147.01	50.579		
14,500.0	7,100.0	6,550.0	6,451.3	141.5	20.3	74.13	2.2	-947.0	7,530.2	7,381.3	148.86	50.587		
14,600.0	7,100.0	6,550.0	6,451.3	143.3	20.3	74.13	2.2	-947.0	7,625.1	7,474.4	150.71	50.595		
14,700.0	7,100.0	6,550.0	6,451.3	145.2	20.3	74.13	2.2	-947.0	7,720.2	7,567.6	152.56	50.603		
14,800.0	7,100.0	6,550.0	6,451.3	147.1	20.3	74.13	2.2	-947.0	7,815.3	7,660.9	154.42	50.612		
14,900.0	7,100.0	6,550.0	6,451.3	149.0	20.3	74.13	2.2	-947.0	7,910.6	7,754.4	156.27	50.622		
15,000.0	7,100.0	6,550.0	6,451.3	150.9	20.3	74.13	2.2	-947.0	8,006.0	7,847.9	158.12	50.632		
15,100.0	7,100.0	6,550.0	6,451.3	152.8	20.3	74.13	2.2	-947.0	8,101.6	7,941.6	159.98	50.642		
15,200.0	7,100.0	6,550.0	6,451.3	154.7	20.3	74.13	2.2	-947.0	8,197.2	8,035.4	161.83	50.652		
15,300.0	7,100.0	6,550.0	6,451.3	156.5	20.3	74.13	2.2	-947.0	8,292.9	8,129.2	163.69	50.663		
15,400.0	7,100.0	6,550.0	6,451.3	158.4	20.3	74.13	2.2	-947.0	8,388.7	8,223.2	165.54	50.674		
15,500.0	7,100.0	6,550.0	6,451.3	160.3	20.3	74.13	2.2	-947.0	8,484.7	8,317.3	167.40	50.686		
15,600.0	7,100.0	6,550.0	6,451.3	162.2	20.3	74.13	2.2	-947.0	8,580.7	8,411.4	169.25	50.697		
15,700.0	7,100.0	6,550.0	6,451.3	164.1	20.3	74.13	2.2	-947.0	8,676.8	8,505.7	171.11	50.709		
15,800.0	7,100.0	6,550.0	6,451.3	166.0	20.3	74.13	2.2	-947.0	8,773.0	8,600.0	172.97	50.721		
15,900.0	7,100.0	6,550.0	6,451.3	167.9	20.3	74.13	2.2	-947.0	8,869.3	8,694.4	174.82	50.733		
16,000.0	7,100.0	6,550.0	6,451.3	169.8	20.3	74.13	2.2	-947.0	8,965.6	8,788.9	176.68	50.745		
16,100.0	7,100.0	6,550.0	6,451.3	171.7	20.3	74.13	2.2	-947.0	9,062.1	8,883.5	178.54	50.757		
16,200.0	7,100.0	6,550.0	6,451.3	173.6	20.3	74.13	2.2	-947.0	9,158.6	8,978.2	180.39	50.770		
16,300.0	7,100.0	6,550.0	6,451.3	175.5	20.3	74.13	2.2	-947.0	9,255.2	9,072.9	182.25	50.782		
16,400.0	7,100.0	6,550.0	6,451.3	177.4	20.3	74.13	2.2	-947.0	9,351.8	9,167.7	184.11	50.795		
16,500.0	7,100.0	6,550.0	6,451.3	179.3	20.3	74.13	2.2	-947.0	9,448.6	9,262.6	185.97	50.808		
16,600.0	7,100.0	6,550.0	6,451.3	181.2	20.3	74.13	2.2	-947.0	9,545.4	9,357.5	187.83	50.820		
16,700.0	7,100.0	6,550.0	6,451.3	183.1	20.3	74.13	2.2	-947.0	9,642.2	9,452.5	189.68	50.833		
16,800.0	7,100.0	6,550.0	6,451.3	185.0	20.3	74.13	2.2	-947.0	9,739.1	9,547.6	191.54	50.846		
16,900.0	7,100.0	6,550.0	6,451.3	186.9	20.3	74.13	2.2	-947.0	9,836.1	9,642.7	193.40	50.859		
17,000.0	7,100.0	6,550.0	6,451.3	188.8	20.3	74.13	2.2	-947.0	9,933.2	9,737.9	195.26	50.871		

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 4-17H20
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 4-17H20	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
0.0	0.0	0.0	0.0	0.0	0.0	-27.18	151.1	-77.6	169.9				
100.0	100.0	100.0	100.0	0.1	0.1	-27.18	151.1	-77.6	169.9	169.7	0.19	899.839	
200.0	200.0	200.0	200.0	0.3	0.3	-27.18	151.1	-77.6	169.9	169.3	0.64	266.150	
300.0	300.0	300.0	300.0	0.5	0.5	-27.18	151.1	-77.6	169.9	168.8	1.09	156.171	
400.0	400.0	400.0	400.0	0.8	0.8	-27.18	151.1	-77.6	169.9	168.4	1.54	110.507	
500.0	500.0	500.0	500.0	1.0	1.0	-27.18	151.1	-77.6	169.9	167.9	1.99	85.505 CC, ES	
594.9	594.9	594.9	594.9	1.2	1.2	-117.64	151.1	-77.6	170.6	168.2	2.40	71.025	
600.0	600.0	600.0	600.0	1.2	1.2	-117.69	151.1	-77.6	170.7	168.3	2.42	70.422	
700.0	699.9	699.9	699.9	1.4	1.4	-118.66	151.1	-77.6	172.3	169.4	2.86	60.331	
800.0	799.9	799.9	799.9	1.6	1.7	-119.62	151.1	-77.6	173.9	170.6	3.29	52.803	
900.0	899.8	899.8	899.8	1.8	1.9	-120.56	151.1	-77.6	175.5	171.8	3.73	47.005	
1,000.0	999.8	999.8	999.8	2.1	2.1	-121.48	151.1	-77.6	177.2	173.1	4.18	42.417	
1,100.0	1,099.7	1,099.7	1,099.7	2.3	2.3	-122.39	151.1	-77.6	179.0	174.4	4.62	38.705	
1,200.0	1,199.7	1,199.7	1,199.7	2.5	2.6	-123.27	151.1	-77.6	180.8	175.7	5.07	35.646	
1,300.0	1,299.6	1,299.6	1,299.6	2.7	2.8	-124.14	151.1	-77.6	182.6	177.1	5.52	33.085	
1,405.6	1,405.1	1,405.1	1,405.1	3.0	3.0	-125.04	151.1	-77.6	184.6	178.6	5.99	30.801	
1,500.5	1,500.0	1,500.0	1,500.0	3.2	3.2	-35.45	151.1	-77.6	185.5	179.1	6.40	29.004	
1,600.0	1,599.5	1,599.5	1,599.5	3.4	3.5	-35.45	151.1	-77.6	185.5	178.7	6.82	27.202	
1,700.0	1,699.5	1,699.5	1,699.5	3.6	3.7	-35.45	151.1	-77.6	185.5	178.3	7.26	25.567	
1,800.0	1,799.5	1,799.5	1,799.5	3.8	3.9	-35.45	151.1	-77.6	185.5	177.8	7.69	24.112	
1,900.0	1,899.5	1,899.5	1,899.5	4.0	4.1	-35.45	151.1	-77.6	185.5	177.4	8.13	22.810	
2,000.0	1,999.5	1,999.5	1,999.5	4.2	4.4	-35.45	151.1	-77.6	185.5	177.0	8.57	21.639	
2,100.0	2,099.5	2,099.5	2,099.5	4.5	4.6	-35.45	151.1	-77.6	185.5	176.5	9.01	20.580	
2,200.0	2,199.5	2,199.5	2,199.5	4.7	4.8	-35.45	151.1	-77.6	185.5	176.1	9.46	19.618	
2,300.0	2,299.5	2,299.5	2,299.5	4.9	5.0	-35.45	151.1	-77.6	185.5	175.6	9.90	18.741	
2,400.0	2,399.5	2,399.5	2,399.5	5.1	5.3	-35.45	151.1	-77.6	185.5	175.2	10.34	17.938	
2,500.0	2,499.5	2,499.5	2,499.5	5.3	5.5	-35.45	151.1	-77.6	185.5	174.7	10.79	17.200	
2,600.0	2,599.5	2,599.5	2,599.5	5.5	5.7	-35.45	151.1	-77.6	185.5	174.3	11.23	16.520	
2,700.0	2,699.5	2,699.5	2,699.5	5.8	5.9	-35.45	151.1	-77.6	185.5	173.9	11.68	15.891	
2,800.0	2,799.5	2,799.5	2,799.5	6.0	6.2	-35.45	151.1	-77.6	185.5	173.4	12.12	15.307	
2,900.0	2,899.5	2,899.5	2,899.5	6.2	6.4	-35.45	151.1	-77.6	185.5	173.0	12.57	14.765	
3,000.0	2,999.5	2,999.5	2,999.5	6.4	6.6	-35.45	151.1	-77.6	185.5	172.5	13.01	14.259	
3,100.0	3,099.5	3,099.5	3,099.5	6.6	6.8	-35.45	151.1	-77.6	185.5	172.1	13.46	13.787	
3,200.0	3,199.5	3,199.5	3,199.5	6.9	7.1	-35.45	151.1	-77.6	185.5	171.6	13.90	13.344	
3,300.0	3,299.5	3,299.5	3,299.5	7.1	7.3	-35.45	151.1	-77.6	185.5	171.2	14.35	12.929	
3,400.0	3,399.5	3,399.5	3,399.5	7.3	7.5	-35.45	151.1	-77.6	185.5	170.7	14.80	12.539	
3,500.0	3,499.5	3,499.5	3,499.5	7.5	7.7	-35.45	151.1	-77.6	185.5	170.3	15.24	12.172	
3,600.0	3,599.5	3,599.5	3,599.5	7.8	8.0	-35.45	151.1	-77.6	185.5	169.8	15.69	11.825	
3,700.0	3,699.5	3,699.5	3,699.5	8.0	8.2	-35.45	151.1	-77.6	185.5	169.4	16.14	11.497	
3,800.0	3,799.5	3,799.5	3,799.5	8.2	8.4	-35.45	151.1	-77.6	185.5	168.9	16.58	11.187	
3,900.0	3,899.5	3,899.5	3,899.5	8.4	8.6	-35.45	151.1	-77.6	185.5	168.5	17.03	10.894	
4,000.0	3,999.5	3,999.5	3,999.5	8.6	8.9	-35.45	151.1	-77.6	185.5	168.0	17.48	10.615	
4,100.0	4,099.5	4,099.5	4,099.5	8.9	9.1	-119.83	151.1	-77.6	186.4	168.5	17.93	10.398	
4,200.0	4,199.4	4,199.4	4,199.4	9.1	9.3	-121.16	151.1	-77.6	189.0	170.7	18.36	10.297 SF	
4,300.0	4,299.0	4,299.0	4,299.0	9.3	9.5	-123.28	151.1	-77.6	193.7	174.9	18.79	10.308	
4,400.0	4,398.2	4,398.2	4,398.2	9.5	9.8	-126.07	151.1	-77.6	200.7	181.5	19.22	10.442	
4,500.0	4,497.0	4,497.0	4,497.0	9.8	10.0	-129.34	151.1	-77.6	210.3	190.7	19.64	10.710	
4,600.0	4,595.1	4,595.1	4,595.1	10.1	10.2	-132.91	151.1	-77.6	223.0	203.0	20.05	11.125	
4,642.4	4,636.6	4,636.6	4,636.6	10.2	10.3	-134.46	151.1	-77.6	229.4	209.2	20.21	11.348	
4,700.0	4,692.7	4,692.7	4,692.7	10.4	10.4	-136.63	151.1	-77.6	238.7	218.2	20.47	11.661	
4,800.0	4,790.2	4,790.2	4,790.2	10.7	10.6	-140.03	151.1	-77.6	255.5	234.5	20.91	12.219	
4,900.0	4,887.7	4,887.7	4,887.7	11.0	10.9	-143.00	151.1	-77.6	273.0	251.7	21.35	12.790	

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 4-17H20
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 4-17H20	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 Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
5,000.0	4,985.2	4,985.2	4,985.2	11.3	11.1	-145.61	151.1	-77.6	291.3	269.5	21.79	13.366		
5,100.0	5,082.7	5,075.3	5,075.3	11.7	11.3	-147.83	151.1	-78.6	311.0	288.8	22.21	14.002		
5,200.0	5,180.2	5,162.8	5,162.7	12.0	11.4	-149.94	151.1	-82.2	333.9	311.3	22.61	14.764		
5,300.0	5,277.7	5,248.8	5,248.5	12.4	11.6	-151.92	151.1	-88.4	360.0	336.9	23.01	15.641		
5,400.0	5,375.2	5,333.2	5,332.4	12.7	11.8	-153.76	151.1	-97.0	389.2	365.8	23.41	16.624		
5,500.0	5,472.7	5,415.9	5,414.4	13.1	12.0	-155.45	151.1	-107.7	421.4	397.6	23.80	17.703		
5,600.0	5,570.2	5,499.7	5,497.2	13.5	12.2	-157.02	151.1	-121.0	456.5	432.3	24.20	18.862		
5,700.0	5,667.7	5,592.1	5,588.3	13.9	12.4	-158.55	151.1	-136.3	492.6	468.0	24.61	20.016		
5,800.0	5,765.2	5,684.6	5,679.5	14.3	12.6	-159.87	151.1	-151.7	529.1	504.0	25.03	21.139		
5,900.0	5,862.7	5,777.1	5,770.7	14.7	12.8	-161.02	151.1	-167.0	565.7	540.2	25.45	22.231		
6,000.0	5,960.2	5,869.6	5,861.9	15.1	13.1	-162.03	151.1	-182.4	602.5	576.6	25.87	23.291		
6,100.0	6,057.7	5,962.1	5,953.1	15.5	13.3	-162.93	151.1	-197.7	639.5	613.2	26.29	24.319		
6,200.0	6,155.2	6,054.5	6,044.3	15.9	13.5	-163.73	151.1	-213.0	676.5	649.8	26.72	25.317		
6,300.0	6,252.6	6,147.0	6,135.5	16.3	13.8	-164.45	151.1	-228.4	713.7	686.6	27.15	26.283		
6,400.0	6,350.1	6,239.5	6,226.7	16.8	14.0	-165.09	151.1	-243.7	751.0	723.4	27.59	27.220		
6,445.4	6,394.4	6,281.5	6,268.1	17.0	14.2	-165.37	151.1	-250.7	767.9	740.1	27.79	27.636		
6,450.0	6,398.9	6,285.7	6,272.3	17.0	14.2	-165.91	151.1	-251.4	769.7	741.9	27.79	27.700		
6,500.0	6,447.0	6,330.9	6,316.9	17.2	14.3	-170.16	151.1	-258.9	790.7	763.0	27.70	28.540		
6,550.0	6,493.8	6,374.1	6,359.5	17.5	14.4	-172.72	151.1	-266.1	815.6	788.1	27.52	29.639		
6,600.0	6,538.9	6,415.0	6,399.8	17.9	14.5	-174.48	151.1	-272.8	844.3	817.0	27.23	31.000		
6,650.0	6,581.9	6,453.3	6,437.5	18.3	14.7	-175.81	151.1	-279.2	876.3	849.5	26.86	32.629		
6,700.0	6,622.6	6,488.0	6,471.7	18.7	14.8	-176.85	151.5	-284.9	911.7	885.3	26.40	34.531		
6,750.0	6,660.6	6,519.1	6,502.4	19.3	14.8	-177.60	153.4	-289.9	950.0	924.1	25.88	36.706		
6,800.0	6,695.7	6,546.6	6,529.5	19.8	14.9	-178.14	156.5	-294.1	990.9	965.6	25.31	39.150		
6,850.0	6,727.5	6,570.4	6,552.6	20.5	15.0	-178.56	160.2	-297.7	1,034.3	1,009.6	24.71	41.857		
6,900.0	6,755.9	6,590.1	6,571.8	21.2	15.0	-178.94	164.1	-300.5	1,079.7	1,055.6	24.09	44.810		
6,920.7	6,766.6	6,597.1	6,578.6	21.6	15.1	-179.11	165.6	-301.5	1,099.0	1,075.2	23.84	46.098		
7,000.0	6,806.2	6,622.2	6,602.6	22.9	15.1	-178.36	171.7	-305.0	1,173.4	1,149.3	24.15	48.593		
7,070.7	6,841.6	6,644.0	6,623.3	24.1	15.2	-177.65	177.9	-307.8	1,239.9	1,215.5	24.45	50.721		
7,100.0	6,856.1	6,652.6	6,631.4	24.6	15.2	-172.91	180.5	-309.0	1,267.5	1,242.9	24.59	51.541		
7,150.0	6,880.8	6,665.8	6,643.8	25.4	15.3	-157.32	184.8	-310.6	1,314.5	1,287.8	26.70	49.240		
7,200.0	6,904.9	6,676.9	6,654.1	26.3	15.3	-143.23	188.7	-312.0	1,361.2	1,331.2	30.02	45.347		
7,250.0	6,928.3	6,685.7	6,662.3	27.1	15.3	-131.08	191.9	-313.0	1,407.4	1,374.2	33.27	42.299		
7,300.0	6,950.8	6,692.3	6,668.3	27.9	15.3	-120.85	194.3	-313.8	1,452.9	1,417.0	35.89	40.477		
7,350.0	6,972.3	6,700.0	6,675.4	28.7	15.4	-112.56	197.3	-314.7	1,497.3	1,459.5	37.74	39.679		
7,400.0	6,992.5	6,700.0	6,675.4	29.5	15.4	-105.21	197.3	-314.7	1,540.5	1,501.5	39.01	39.489		
7,450.0	7,011.4	6,700.0	6,675.4	30.3	15.4	-99.15	197.3	-314.7	1,582.2	1,542.5	39.72	39.838		
7,500.0	7,028.8	6,700.0	6,675.4	31.0	15.4	-94.14	197.3	-314.7	1,622.4	1,582.4	39.98	40.579		
7,550.0	7,044.5	6,700.0	6,675.4	31.6	15.4	-89.97	197.3	-314.7	1,660.7	1,620.8	39.90	41.625		
7,600.0	7,058.4	6,700.0	6,675.4	32.2	15.4	-86.50	197.3	-314.7	1,697.1	1,657.6	39.54	42.922		
7,650.0	7,070.5	6,686.6	6,663.1	32.8	15.3	-83.05	192.2	-313.2	1,731.3	1,692.4	38.92	44.485		
7,700.0	7,080.6	6,680.9	6,657.9	33.3	15.3	-80.50	190.1	-312.5	1,763.2	1,725.1	38.13	46.237		
7,750.0	7,088.6	6,674.6	6,652.0	33.8	15.3	-78.39	187.9	-311.7	1,792.8	1,755.6	37.22	48.173		
7,800.0	7,094.6	6,667.7	6,645.6	34.2	15.3	-76.69	185.5	-310.9	1,819.8	1,783.6	36.21	50.263		
7,850.0	7,098.3	6,650.0	6,629.0	34.6	15.2	-75.00	179.7	-308.6	1,844.3	1,809.2	35.09	52.566		
7,900.0	7,100.0	6,650.0	6,629.0	34.9	15.2	-74.25	179.7	-308.6	1,865.9	1,831.8	34.08	54.754		
7,911.9	7,100.0	6,650.0	6,629.0	35.0	15.2	-74.11	179.7	-308.6	1,870.6	1,836.8	33.84	55.272		
8,000.0	7,100.0	6,650.0	6,629.0	35.5	15.2	-74.11	179.7	-308.6	1,906.9	1,872.1	34.76	54.856		
8,100.0	7,100.0	6,626.2	6,606.5	36.2	15.1	-73.37	172.8	-305.5	1,951.7	1,916.0	35.70	54.667		
8,200.0	7,100.0	6,615.5	6,596.2	37.0	15.1	-73.03	170.0	-304.1	2,000.5	1,963.6	36.82	54.326		
8,300.0	7,100.0	6,600.0	6,581.3	37.9	15.1	-72.53	166.2	-301.9	2,052.8	2,014.8	37.99	54.040		
8,400.0	7,100.0	6,600.0	6,581.3	38.8	15.1	-72.53	166.2	-301.9	2,108.5	2,069.2	39.34	53.602		

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 4-17H20
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 4-17H20	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		
8,500.0	7,100.0	6,600.0	6,581.3	39.8	15.1	72.53	166.2	-301.9	2,167.3	2,126.6	40.75	53.192		
8,600.0	7,100.0	6,600.0	6,581.3	40.8	15.1	72.53	166.2	-301.9	2,229.1	2,186.9	42.21	52.814		
8,700.0	7,100.0	6,577.9	6,560.0	41.9	15.0	71.83	161.6	-298.8	2,293.2	2,249.7	43.52	52.691		
8,800.0	7,100.0	6,572.6	6,554.8	43.1	15.0	71.66	160.6	-298.0	2,360.0	2,315.0	45.01	52.430		
8,900.0	7,100.0	6,550.0	6,532.7	44.3	14.9	70.93	157.0	-294.6	2,429.2	2,382.8	46.37	52.389		
9,000.0	7,100.0	6,550.0	6,532.7	45.6	14.9	70.93	157.0	-294.6	2,500.2	2,452.2	47.96	52.132		
9,100.0	7,100.0	6,550.0	6,532.7	46.9	14.9	70.93	157.0	-294.6	2,573.1	2,523.5	49.57	51.905		
9,200.0	7,100.0	6,550.0	6,532.7	48.3	14.9	70.93	157.0	-294.6	2,647.7	2,596.5	51.21	51.706		
9,300.0	7,100.0	6,550.0	6,532.7	49.7	14.9	70.93	157.0	-294.6	2,724.0	2,671.1	52.86	51.532		
9,400.0	7,100.0	6,550.0	6,532.7	51.1	14.9	70.93	157.0	-294.6	2,801.8	2,747.2	54.53	51.381		
9,500.0	7,100.0	6,550.0	6,532.7	52.6	14.9	70.93	157.0	-294.6	2,880.9	2,824.7	56.21	51.250		
9,600.0	7,100.0	6,550.0	6,532.7	54.1	14.9	70.93	157.0	-294.6	2,961.3	2,903.4	57.91	51.138		
9,700.0	7,100.0	6,550.0	6,532.7	55.6	14.9	70.93	157.0	-294.6	3,042.9	2,983.3	59.62	51.042		
9,800.0	7,100.0	6,550.0	6,532.7	57.1	14.9	70.93	157.0	-294.6	3,125.5	3,064.2	61.33	50.960		
9,900.0	7,100.0	6,550.0	6,532.7	58.7	14.9	70.93	157.0	-294.6	3,209.2	3,146.1	63.06	50.892		
10,000.0	7,100.0	6,550.0	6,532.7	60.3	14.9	70.93	157.0	-294.6	3,293.7	3,228.9	64.79	50.835		
10,100.0	7,100.0	6,550.0	6,532.7	61.9	14.9	70.93	157.0	-294.6	3,379.1	3,312.6	66.53	50.788		
10,200.0	7,100.0	6,550.0	6,532.7	63.6	14.9	70.93	157.0	-294.6	3,465.3	3,397.0	68.28	50.750		
10,300.0	7,100.0	6,528.3	6,511.5	65.2	14.9	70.23	154.3	-291.3	3,551.7	3,482.0	69.74	50.929		
10,400.0	7,100.0	6,526.6	6,509.8	66.9	14.9	70.18	154.1	-291.1	3,639.2	3,567.8	71.47	50.921		
10,500.0	7,100.0	6,525.1	6,508.3	68.6	14.9	70.13	154.0	-290.8	3,727.4	3,654.2	73.20	50.919		
10,600.0	7,100.0	6,523.6	6,506.8	70.3	14.9	70.08	153.8	-290.6	3,816.1	3,741.1	74.94	50.921		
10,700.0	7,100.0	6,522.2	6,505.5	72.0	14.9	70.04	153.7	-290.4	3,905.3	3,828.6	76.68	50.928		
10,800.0	7,100.0	6,500.0	6,483.6	73.7	14.8	69.32	152.0	-286.9	3,995.5	3,917.4	78.11	51.154		
10,900.0	7,100.0	6,500.0	6,483.6	75.5	14.8	69.32	152.0	-286.9	4,085.6	4,005.8	79.87	51.154		
11,000.0	7,100.0	6,500.0	6,483.6	77.2	14.8	69.32	152.0	-286.9	4,176.3	4,094.6	81.64	51.156		
11,100.0	7,100.0	6,500.0	6,483.6	79.0	14.8	69.32	152.0	-286.9	4,267.3	4,183.9	83.41	51.162		
11,200.0	7,100.0	6,500.0	6,483.6	80.7	14.8	69.32	152.0	-286.9	4,358.8	4,273.6	85.18	51.171		
11,300.0	7,100.0	6,500.0	6,483.6	82.5	14.8	69.32	152.0	-286.9	4,450.6	4,363.6	86.96	51.182		
11,400.0	7,100.0	6,500.0	6,483.6	84.3	14.8	69.32	152.0	-286.9	4,542.7	4,454.0	88.73	51.195		
11,500.0	7,100.0	6,500.0	6,483.6	86.1	14.8	69.32	152.0	-286.9	4,635.2	4,544.7	90.51	51.210		
11,600.0	7,100.0	6,500.0	6,483.6	87.8	14.8	69.32	152.0	-286.9	4,728.0	4,635.7	92.30	51.227		
11,700.0	7,100.0	6,500.0	6,483.6	89.6	14.8	69.32	152.0	-286.9	4,821.1	4,727.0	94.08	51.245		
11,800.0	7,100.0	6,500.0	6,483.6	91.4	14.8	69.32	152.0	-286.9	4,914.4	4,818.6	95.87	51.264		
11,900.0	7,100.0	6,500.0	6,483.6	93.3	14.8	69.32	152.0	-286.9	5,008.0	4,910.4	97.65	51.284		
12,000.0	7,100.0	6,500.0	6,483.6	95.1	14.8	69.32	152.0	-286.9	5,101.9	5,002.4	99.44	51.305		
12,100.0	7,100.0	6,500.0	6,483.6	96.9	14.8	69.32	152.0	-286.9	5,195.9	5,094.7	101.23	51.327		
12,200.0	7,100.0	6,500.0	6,483.6	98.7	14.8	69.32	152.0	-286.9	5,290.2	5,187.2	103.02	51.350		
12,300.0	7,100.0	6,500.0	6,483.6	100.5	14.8	69.32	152.0	-286.9	5,384.7	5,279.9	104.82	51.373		
12,400.0	7,100.0	6,500.0	6,483.6	102.4	14.8	69.32	152.0	-286.9	5,479.4	5,372.8	106.61	51.397		
12,500.0	7,100.0	6,500.0	6,483.6	104.2	14.8	69.32	152.0	-286.9	5,574.3	5,465.9	108.41	51.421		
12,600.0	7,100.0	6,500.0	6,483.6	106.0	14.8	69.32	152.0	-286.9	5,669.4	5,559.2	110.20	51.445		
12,700.0	7,100.0	6,500.0	6,483.6	107.9	14.8	69.32	152.0	-286.9	5,764.6	5,652.6	112.00	51.470		
12,800.0	7,100.0	6,500.0	6,483.6	109.7	14.8	69.32	152.0	-286.9	5,860.0	5,746.2	113.80	51.494		
12,900.0	7,100.0	6,500.0	6,483.6	111.6	14.8	69.32	152.0	-286.9	5,955.5	5,839.9	115.60	51.519		
13,000.0	7,100.0	6,500.0	6,483.6	113.4	14.8	69.32	152.0	-286.9	6,051.2	5,933.8	117.40	51.544		
13,100.0	7,100.0	6,500.0	6,483.6	115.3	14.8	69.32	152.0	-286.9	6,147.0	6,027.8	119.20	51.569		
13,200.0	7,100.0	6,500.0	6,483.6	117.1	14.8	69.32	152.0	-286.9	6,242.9	6,121.9	121.00	51.594		
13,300.0	7,100.0	6,500.0	6,483.6	119.0	14.8	69.32	152.0	-286.9	6,339.0	6,216.2	122.80	51.619		
13,400.0	7,100.0	6,500.0	6,483.6	120.9	14.8	69.32	152.0	-286.9	6,435.2	6,310.6	124.61	51.644		
13,500.0	7,100.0	6,500.0	6,483.6	122.7	14.8	69.32	152.0	-286.9	6,531.5	6,405.1	126.41	51.669		
13,600.0	7,100.0	6,500.0	6,483.6	124.6	14.8	69.32	152.0	-286.9	6,627.9	6,499.7	128.21	51.694		

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 4-17H20
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 4-17H20	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		
13,700.0	7,100.0	6,500.0	6,483.6	126.4	14.8	69.32	152.0	-286.9	6,724.5	6,594.4	130.02	51.719		
13,800.0	7,100.0	6,500.0	6,483.6	128.3	14.8	69.32	152.0	-286.9	6,821.1	6,689.2	131.83	51.743		
13,900.0	7,100.0	6,500.0	6,483.6	130.2	14.8	69.32	152.0	-286.9	6,917.8	6,784.2	133.63	51.768		
14,000.0	7,100.0	6,500.0	6,483.6	132.1	14.8	69.32	152.0	-286.9	7,014.6	6,879.2	135.44	51.792		
14,100.0	7,100.0	6,500.0	6,483.6	133.9	14.8	69.32	152.0	-286.9	7,111.5	6,974.2	137.25	51.816		
14,200.0	7,100.0	6,500.0	6,483.6	135.8	14.8	69.32	152.0	-286.9	7,208.5	7,069.4	139.05	51.840		
14,300.0	7,100.0	6,500.0	6,483.6	137.7	14.8	69.32	152.0	-286.9	7,305.5	7,164.7	140.86	51.863		
14,400.0	7,100.0	6,500.0	6,483.6	139.6	14.8	69.32	152.0	-286.9	7,402.7	7,260.0	142.67	51.887		
14,500.0	7,100.0	6,500.0	6,483.6	141.5	14.8	69.32	152.0	-286.9	7,499.9	7,355.4	144.48	51.910		
14,600.0	7,100.0	6,500.0	6,483.6	143.3	14.8	69.32	152.0	-286.9	7,597.2	7,450.9	146.29	51.933		
14,700.0	7,100.0	6,500.0	6,483.6	145.2	14.8	69.32	152.0	-286.9	7,694.5	7,546.4	148.10	51.955		
14,800.0	7,100.0	6,500.0	6,483.6	147.1	14.8	69.32	152.0	-286.9	7,792.0	7,642.1	149.91	51.978		
14,900.0	7,100.0	6,500.0	6,483.6	149.0	14.8	69.32	152.0	-286.9	7,889.5	7,737.7	151.72	52.000		
15,000.0	7,100.0	6,500.0	6,483.6	150.9	14.8	69.32	152.0	-286.9	7,987.0	7,833.5	153.53	52.022		
15,100.0	7,100.0	6,500.0	6,483.6	152.8	14.8	69.32	152.0	-286.9	8,084.6	7,929.3	155.34	52.044		
15,200.0	7,100.0	6,500.0	6,483.6	154.7	14.8	69.32	152.0	-286.9	8,182.3	8,025.1	157.15	52.066		
15,300.0	7,100.0	6,500.0	6,483.6	156.5	14.8	69.32	152.0	-286.9	8,280.0	8,121.1	158.97	52.087		
15,400.0	7,100.0	6,500.0	6,483.6	158.4	14.8	69.32	152.0	-286.9	8,377.8	8,217.0	160.78	52.108		
15,500.0	7,100.0	6,500.0	6,483.6	160.3	14.8	69.32	152.0	-286.9	8,475.6	8,313.0	162.59	52.129		
15,600.0	7,100.0	6,500.0	6,483.6	162.2	14.8	69.32	152.0	-286.9	8,573.5	8,409.1	164.40	52.149		
15,700.0	7,100.0	6,500.0	6,483.6	164.1	14.8	69.32	152.0	-286.9	8,671.4	8,505.2	166.22	52.170		
15,800.0	7,100.0	6,500.0	6,483.6	166.0	14.8	69.32	152.0	-286.9	8,769.4	8,601.4	168.03	52.190		
15,900.0	7,100.0	6,500.0	6,483.6	167.9	14.8	69.32	152.0	-286.9	8,867.4	8,697.6	169.84	52.209		
16,000.0	7,100.0	6,500.0	6,483.6	169.8	14.8	69.32	152.0	-286.9	8,965.5	8,793.8	171.66	52.229		
16,100.0	7,100.0	6,500.0	6,483.6	171.7	14.8	69.32	152.0	-286.9	9,063.6	8,890.1	173.47	52.248		
16,200.0	7,100.0	6,500.0	6,483.6	173.6	14.8	69.32	152.0	-286.9	9,161.8	8,986.5	175.29	52.268		
16,300.0	7,100.0	6,500.0	6,483.6	175.5	14.8	69.32	152.0	-286.9	9,259.9	9,082.8	177.10	52.286		
16,400.0	7,100.0	6,500.0	6,483.6	177.4	14.8	69.32	152.0	-286.9	9,358.2	9,179.2	178.92	52.305		
16,500.0	7,100.0	6,500.0	6,483.6	179.3	14.8	69.32	152.0	-286.9	9,456.4	9,275.7	180.73	52.324		
16,600.0	7,100.0	6,500.0	6,483.6	181.2	14.8	69.32	152.0	-286.9	9,554.7	9,372.2	182.55	52.342		
16,700.0	7,100.0	6,500.0	6,483.6	183.1	14.8	69.32	152.0	-286.9	9,653.1	9,468.7	184.36	52.360		
16,800.0	7,100.0	6,500.0	6,483.6	185.0	14.8	69.32	152.0	-286.9	9,751.4	9,565.3	186.18	52.377		
16,900.0	7,100.0	6,500.0	6,483.6	186.9	14.8	69.32	152.0	-286.9	9,849.8	9,661.8	187.99	52.395		
17,000.0	7,100.0	6,500.0	6,483.6	188.8	14.8	69.32	152.0	-286.9	9,948.3	9,758.5	189.81	52.412		

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 4-17H20
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 4-17H20	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		
0.0	0.0	0.0	0.0	0.0	0.0	-20.90	150.8	-57.6	161.5					
100.0	100.0	100.0	100.0	0.1	0.1	-20.90	150.8	-57.6	161.5	161.3	0.19	855.143		
200.0	200.0	200.0	200.0	0.3	0.3	-20.90	150.8	-57.6	161.5	160.8	0.64	252.930		
300.0	300.0	300.0	300.0	0.5	0.5	-20.90	150.8	-57.6	161.5	160.4	1.09	148.413		
400.0	400.0	400.0	400.0	0.8	0.8	-20.90	150.8	-57.6	161.5	159.9	1.54	105.018		
500.0	500.0	500.0	500.0	1.0	1.0	-20.90	150.8	-57.6	161.5	159.5	1.99	81.258 CC, ES		
594.9	594.9	593.0	592.9	1.2	1.2	-111.07	151.9	-57.1	162.8	160.4	2.40	67.939		
600.0	600.0	598.0	598.0	1.2	1.2	-111.11	152.0	-57.0	163.0	160.5	2.42	67.382		
700.0	699.9	698.0	698.0	1.4	1.4	-111.72	153.6	-56.2	165.4	162.5	2.85	58.055		
800.0	799.9	797.9	797.9	1.6	1.7	-112.31	155.2	-55.4	167.8	164.5	3.29	51.069		
900.0	899.8	897.9	897.8	1.8	1.9	-112.89	156.8	-54.6	170.2	166.5	3.73	45.672		
1,000.0	999.8	997.8	997.8	2.1	2.1	-113.45	158.4	-53.8	172.7	168.5	4.17	41.392		
1,100.0	1,099.7	1,097.8	1,097.7	2.3	2.3	-114.00	160.0	-53.0	175.2	170.6	4.62	37.922		
1,200.0	1,199.7	1,197.8	1,197.7	2.5	2.6	-114.53	161.6	-52.2	177.7	172.6	5.07	35.056		
1,300.0	1,299.6	1,297.7	1,297.6	2.7	2.8	-115.04	163.2	-51.4	180.2	174.7	5.52	32.653		
1,405.6	1,405.1	1,403.2	1,403.1	3.0	3.0	-115.57	164.9	-50.6	182.8	176.8	5.99	30.505		
1,500.5	1,500.0	1,498.1	1,498.0	3.2	3.2	-25.62	166.4	-49.8	184.6	178.2	6.38	28.945		
1,600.0	1,599.5	1,597.6	1,597.5	3.4	3.5	-25.19	168.0	-49.0	185.7	178.9	6.80	27.302		
1,700.0	1,699.5	1,697.6	1,697.4	3.6	3.7	-24.76	169.6	-48.2	186.8	179.5	7.24	25.809		
1,800.0	1,799.5	1,799.7	1,799.5	3.8	3.9	-24.43	170.8	-47.6	187.6	180.0	7.67	24.477		
1,900.0	1,899.5	1,899.7	1,899.5	4.0	4.1	-24.43	170.8	-47.6	187.6	179.6	8.08	23.230		
2,000.0	1,999.5	1,999.7	1,999.5	4.2	4.3	-24.43	170.8	-47.6	187.6	179.1	8.51	22.035		
2,100.0	2,099.5	2,099.7	2,099.5	4.5	4.5	-24.43	170.8	-47.6	187.6	178.7	8.95	20.955		
2,200.0	2,199.5	2,199.7	2,199.5	4.7	4.8	-24.43	170.8	-47.6	187.6	178.2	9.39	19.973		
2,300.0	2,299.5	2,299.7	2,299.5	4.9	5.0	-24.43	170.8	-47.6	187.6	177.8	9.84	19.077		
2,400.0	2,399.5	2,399.7	2,399.5	5.1	5.2	-24.43	170.8	-47.6	187.6	177.4	10.28	18.257		
2,500.0	2,499.5	2,499.7	2,499.5	5.3	5.4	-24.43	170.8	-47.6	187.6	176.9	10.72	17.504		
2,600.0	2,599.5	2,599.7	2,599.5	5.5	5.7	-24.43	170.8	-47.6	187.6	176.5	11.16	16.809		
2,700.0	2,699.5	2,699.7	2,699.5	5.8	5.9	-24.43	170.8	-47.6	187.6	176.0	11.61	16.167		
2,800.0	2,799.5	2,799.7	2,799.5	6.0	6.1	-24.43	170.8	-47.6	187.6	175.6	12.05	15.571		
2,900.0	2,899.5	2,901.4	2,901.2	6.2	6.3	-23.90	171.1	-45.8	187.2	174.7	12.49	14.987		
3,000.0	2,999.5	3,002.9	3,002.5	6.4	6.5	-22.29	172.0	-40.5	185.9	173.0	12.92	14.386		
3,100.0	3,099.5	3,103.8	3,103.0	6.6	6.8	-19.59	173.4	-31.7	184.1	170.8	13.36	13.784		
3,200.0	3,199.5	3,204.0	3,202.4	6.9	7.0	-15.76	175.4	-19.5	182.3	168.5	13.79	13.217		
3,300.0	3,299.5	3,303.0	3,300.5	7.1	7.2	-11.32	177.7	-5.6	181.2	167.0	14.23	12.740		
3,345.9	3,345.4	3,348.4	3,345.4	7.2	7.4	-9.27	178.7	0.8	181.1	166.7	14.42	12.555		
3,400.0	3,399.5	3,402.0	3,398.4	7.3	7.5	-6.86	180.0	8.4	181.3	166.6	14.66	12.364		
3,500.0	3,499.5	3,501.0	3,496.4	7.5	7.8	-2.42	182.2	22.3	182.4	167.3	15.10	12.079		
3,600.0	3,599.5	3,599.9	3,594.3	7.8	8.0	1.94	184.5	36.2	184.7	169.1	15.55	11.875		
3,700.0	3,699.5	3,698.9	3,692.3	8.0	8.3	6.17	186.8	50.2	188.0	172.0	16.01	11.743		
3,800.0	3,799.5	3,797.9	3,790.3	8.2	8.6	10.23	189.1	64.1	192.4	175.9	16.48	11.673		
3,900.0	3,899.5	3,896.9	3,888.2	8.4	8.9	14.10	191.3	78.1	197.6	180.7	16.96	11.655		
4,000.0	3,999.5	3,995.8	3,986.2	8.6	9.1	17.76	193.6	92.0	203.8	186.3	17.44	11.681		
4,100.0	4,099.5	4,095.0	4,084.4	8.9	9.4	-63.04	195.9	106.0	209.9	191.7	18.16	11.555		
4,200.0	4,199.4	4,194.6	4,182.9	9.1	9.7	-60.90	198.2	120.0	214.9	196.2	18.64	11.527		
4,300.0	4,299.0	4,294.5	4,281.8	9.3	10.0	-59.67	200.5	134.1	218.3	199.2	19.13	11.413		
4,400.0	4,398.2	4,394.4	4,380.7	9.5	10.3	-59.27	202.8	148.2	220.1	200.4	19.63	11.209		
4,500.0	4,497.0	4,494.4	4,479.7	9.8	10.6	-59.69	205.1	162.2	220.0	199.9	20.16	10.915		
4,600.0	4,595.1	4,594.3	4,578.5	10.1	11.0	-60.94	207.4	176.3	218.3	197.6	20.72	10.537		
4,642.4	4,636.6	4,636.6	4,620.4	10.2	11.1	-61.72	208.4	182.3	217.1	196.1	20.97	10.354		
4,700.0	4,692.7	4,694.0	4,677.2	10.4	11.3	-62.87	209.7	190.4	215.3	194.0	21.32	10.098		
4,800.0	4,790.2	4,793.6	4,775.8	10.7	11.6	-64.91	212.0	204.4	212.4	190.5	21.96	9.676		

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 4-17H20
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 4-17H20	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						
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
4,900.0	4,887.7	4,893.3	4,874.5	11.0	11.9	-67.01	214.3	218.4	209.9	187.2	22.61	9.281	
5,000.0	4,985.2	4,993.0	4,973.1	11.3	12.2	-69.15	216.6	232.5	207.6	184.3	23.29	8.914	
5,100.0	5,082.7	5,092.6	5,071.8	11.7	12.5	-71.33	218.8	246.5	205.6	181.6	23.98	8.573	
5,200.0	5,180.2	5,192.3	5,170.4	12.0	12.9	-73.56	221.1	260.6	203.9	179.2	24.68	8.260	
5,300.0	5,277.7	5,292.0	5,269.1	12.4	13.2	-75.82	223.4	274.6	202.5	177.1	25.40	7.972	
5,400.0	5,375.2	5,391.6	5,367.7	12.7	13.5	-78.11	225.7	288.6	201.4	175.3	26.13	7.709	
5,500.0	5,472.7	5,491.3	5,466.4	13.1	13.8	-80.41	228.0	302.7	200.7	173.8	26.87	7.471	
5,600.0	5,570.2	5,591.0	5,565.0	13.5	14.2	-82.73	230.3	316.7	200.3	172.7	27.61	7.256	
5,671.4	5,639.8	5,662.1	5,635.4	13.8	14.4	-84.39	231.9	326.7	200.2	172.1	28.14	7.116	
5,700.0	5,667.7	5,690.6	5,663.6	13.9	14.5	-85.06	232.6	330.8	200.2	171.9	28.35	7.063	
5,800.0	5,765.2	5,790.3	5,762.3	14.3	14.8	-87.38	234.9	344.8	200.5	171.4	29.09	6.893	
5,900.0	5,862.7	5,890.0	5,860.9	14.7	15.1	-89.69	237.2	358.8	201.1	171.3	29.82	6.743	
6,000.0	5,960.2	5,989.6	5,959.6	15.1	15.5	-91.99	239.5	372.9	202.0	171.4	30.55	6.612	
6,100.0	6,057.7	6,089.3	6,058.2	15.5	15.8	-94.26	241.8	386.9	203.2	172.0	31.27	6.499	
6,200.0	6,155.2	6,189.0	6,156.9	15.9	16.1	-96.50	244.1	401.0	204.8	172.8	31.98	6.404	
6,300.0	6,252.6	6,288.6	6,255.5	16.3	16.5	-98.71	246.4	415.0	206.7	174.0	32.68	6.325	
6,400.0	6,350.1	6,388.3	6,354.2	16.8	16.8	-100.87	248.6	429.0	208.8	175.5	33.36	6.260	
6,445.4	6,394.4	6,433.6	6,399.0	17.0	16.9	-101.83	249.7	435.4	209.9	176.3	33.66	6.236	
6,450.0	6,398.9	6,438.1	6,403.5	17.0	17.0	-102.44	249.8	436.1	210.0	176.4	33.69	6.234 SF	
6,500.0	6,447.0	6,487.1	6,451.9	17.2	17.1	-107.78	250.9	443.0	212.6	178.6	33.99	6.254	
6,550.0	6,493.8	6,529.8	6,494.0	17.5	17.3	-111.31	253.2	450.3	218.3	184.0	34.29	6.366	
6,600.0	6,538.9	6,572.3	6,535.1	17.9	17.5	-113.68	257.7	459.8	227.8	193.1	34.62	6.578	
6,650.0	6,581.9	6,614.2	6,574.9	18.3	17.7	-115.21	264.2	471.3	240.9	205.9	35.01	6.881	
6,700.0	6,622.6	6,655.4	6,613.0	18.7	17.9	-116.03	272.6	484.5	257.6	222.1	35.47	7.262	
6,750.0	6,660.6	6,695.5	6,648.9	19.3	18.2	-116.24	282.6	499.3	277.5	241.5	36.02	7.704	
6,800.0	6,695.7	6,734.5	6,682.6	19.8	18.4	-115.88	294.1	515.2	300.4	263.8	36.68	8.192	
6,850.0	6,727.5	6,772.1	6,713.7	20.5	18.7	-115.01	306.7	532.0	326.2	288.7	37.46	8.708	
6,900.0	6,755.9	6,808.3	6,742.4	21.2	19.0	-113.65	320.3	549.5	354.5	316.1	38.38	9.236	
6,920.7	6,766.6	6,822.9	6,753.5	21.6	19.1	-112.95	326.1	556.9	366.9	328.1	38.80	9.454	
7,000.0	6,806.2	6,878.4	6,793.6	22.9	19.7	-114.53	350.2	586.8	415.7	375.5	40.19	10.342	
7,070.7	6,841.6	6,927.7	6,826.0	24.1	20.2	-114.97	373.9	615.3	460.1	418.5	41.65	11.047	
7,100.0	6,856.1	6,950.0	6,839.6	24.6	20.4	-117.50	385.3	628.8	479.2	437.4	41.79	11.469	
7,150.0	6,880.8	6,978.7	6,856.0	25.4	20.7	-121.80	400.6	646.7	514.5	472.8	41.72	12.333	
7,200.0	6,904.9	7,006.1	6,870.7	26.3	21.1	-126.13	415.7	664.2	552.7	511.4	41.34	13.371	
7,250.0	6,928.3	7,032.3	6,883.8	27.1	21.4	-130.65	430.6	681.3	593.7	553.1	40.61	14.619	
7,300.0	6,950.8	7,056.2	6,895.8	27.9	21.7	-135.78	444.2	696.9	636.8	597.4	39.41	16.158	
7,350.0	6,972.3	7,076.2	6,905.7	28.7	22.0	-141.99	455.6	709.9	681.8	644.3	37.59	18.141	
7,400.0	6,992.5	7,092.1	6,913.7	29.5	22.2	-150.11	464.7	720.3	728.4	693.5	34.94	20.850	
7,450.0	7,011.4	7,103.8	6,919.6	30.3	22.3	-161.65	471.4	728.0	776.2	744.9	31.27	24.824	
7,500.0	7,028.8	7,111.4	6,923.3	31.0	22.4	-179.17	475.6	732.9	824.8	797.4	27.37	30.137	
7,550.0	7,044.5	7,114.6	6,924.9	31.6	22.5	155.36	477.5	735.0	873.9	845.5	28.36	30.809	
7,600.0	7,058.4	7,113.4	6,924.4	32.2	22.5	127.34	476.8	734.2	923.1	887.9	35.15	26.257	
7,650.0	7,070.5	7,107.9	6,921.6	32.8	22.4	106.09	473.7	730.7	972.0	932.9	39.03	24.904	
7,700.0	7,080.6	7,098.2	6,916.8	33.3	22.2	92.61	468.1	724.3	1,020.2	980.6	39.58	25.777	
7,750.0	7,088.6	7,084.2	6,909.8	33.8	22.1	84.10	460.2	715.2	1,067.4	1,028.6	38.83	27.492	
7,800.0	7,094.6	7,066.2	6,900.7	34.2	21.8	78.50	449.9	703.4	1,113.3	1,075.6	37.69	29.541	
7,850.0	7,098.3	7,044.1	6,889.7	34.6	21.5	74.69	437.4	689.0	1,157.4	1,120.9	36.48	31.729	
7,900.0	7,100.0	7,018.3	6,876.8	34.9	21.2	72.05	422.7	672.2	1,199.4	1,164.1	35.32	33.958	
7,911.9	7,100.0	7,014.6	6,874.9	35.0	21.2	71.61	420.5	669.7	1,209.1	1,174.0	35.08	34.462	
8,000.0	7,100.0	6,983.5	6,858.7	35.5	20.8	70.91	403.2	649.7	1,280.6	1,244.9	35.72	35.850	
8,100.0	7,100.0	6,950.0	6,839.6	36.2	20.4	70.06	385.3	628.8	1,362.9	1,326.4	36.50	37.340	
8,200.0	7,100.0	6,924.8	6,824.2	37.0	20.1	69.39	372.4	613.6	1,446.4	1,409.0	37.44	38.632	

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 4-17H20
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 4-17H20	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		
8,300.0	7,100.0	6,900.0	6,808.2	37.9	19.9	68.68	360.3	599.0	1,531.0	1,492.6	38.45	39.819		
8,400.0	7,100.0	6,875.8	6,791.8	38.8	19.6	67.97	349.0	585.3	1,616.7	1,577.1	39.52	40.905		
8,500.0	7,100.0	6,850.0	6,773.5	39.8	19.4	67.17	337.5	571.2	1,703.3	1,662.6	40.62	41.935		
8,600.0	7,100.0	6,834.8	6,762.4	40.8	19.2	66.69	331.0	563.1	1,790.7	1,748.9	41.86	42.775		
8,700.0	7,100.0	6,816.8	6,748.9	41.9	19.1	66.11	323.6	553.8	1,879.1	1,836.0	43.11	43.589		
8,800.0	7,100.0	6,800.0	6,735.9	43.1	18.9	65.56	317.0	545.4	1,968.1	1,923.8	44.39	44.339		
8,900.0	7,100.0	6,800.0	6,735.9	44.3	18.9	65.56	317.0	545.4	2,058.1	2,012.2	45.90	44.839		
9,000.0	7,100.0	6,771.1	6,712.9	45.6	18.7	64.60	306.3	531.6	2,148.4	2,101.3	47.06	45.652		
9,100.0	7,100.0	6,750.0	6,695.6	46.9	18.5	63.88	299.1	522.0	2,239.5	2,191.1	48.32	46.348		
9,200.0	7,100.0	6,750.0	6,695.6	48.3	18.5	63.88	299.1	522.0	2,331.0	2,281.1	49.88	46.731		
9,300.0	7,100.0	6,750.0	6,695.6	49.7	18.5	63.88	299.1	522.0	2,423.3	2,371.8	51.46	47.087		
9,400.0	7,100.0	6,724.7	6,674.2	51.1	18.4	63.00	291.0	511.0	2,515.7	2,463.0	52.67	47.760		
9,500.0	7,100.0	6,700.0	6,652.8	52.6	18.2	62.13	283.8	501.0	2,608.8	2,554.9	53.88	48.423		
9,600.0	7,100.0	6,700.0	6,652.8	54.1	18.2	62.13	283.8	501.0	2,702.1	2,646.6	55.48	48.707		
9,700.0	7,100.0	6,700.0	6,652.8	55.6	18.2	62.13	283.8	501.0	2,795.9	2,738.8	57.09	48.974		
9,800.0	7,100.0	6,700.0	6,652.8	57.1	18.2	62.13	283.8	501.0	2,890.0	2,831.3	58.71	49.225		
9,900.0	7,100.0	6,700.0	6,652.8	58.7	18.2	62.13	283.8	501.0	2,984.6	2,924.2	60.34	49.462		
10,000.0	7,100.0	6,675.6	6,631.2	60.3	18.0	61.26	277.4	491.7	3,079.1	3,017.6	61.52	50.050		
10,100.0	7,100.0	6,669.0	6,625.3	61.9	18.0	61.03	275.8	489.3	3,174.1	3,111.1	63.03	50.360		
10,200.0	7,100.0	6,650.0	6,608.0	63.6	17.9	60.34	271.3	482.7	3,269.4	3,205.1	64.28	50.862		
10,300.0	7,100.0	6,650.0	6,608.0	65.2	17.9	60.34	271.3	482.7	3,364.8	3,298.9	65.91	51.050		
10,400.0	7,100.0	6,650.0	6,608.0	66.9	17.9	60.34	271.3	482.7	3,460.5	3,392.9	67.55	51.228		
10,500.0	7,100.0	6,650.0	6,608.0	68.6	17.9	60.34	271.3	482.7	3,556.4	3,487.2	69.19	51.397		
10,600.0	7,100.0	6,650.0	6,608.0	70.3	17.9	60.34	271.3	482.7	3,652.5	3,581.7	70.84	51.559		
10,700.0	7,100.0	6,650.0	6,608.0	72.0	17.9	60.34	271.3	482.7	3,748.8	3,676.3	72.49	51.713		
10,800.0	7,100.0	6,650.0	6,608.0	73.7	17.9	60.34	271.3	482.7	3,845.3	3,771.2	74.15	51.861		
10,900.0	7,100.0	6,628.2	6,587.9	75.5	17.8	59.55	266.8	475.5	3,941.7	3,866.4	75.28	52.361		
11,000.0	7,100.0	6,624.1	6,584.2	77.2	17.7	59.40	266.0	474.3	4,038.5	3,961.6	76.83	52.563		
11,100.0	7,100.0	6,620.3	6,580.6	79.0	17.7	59.26	265.3	473.1	4,135.3	4,056.9	78.38	52.757		
11,200.0	7,100.0	6,600.0	6,561.5	80.7	17.6	58.52	261.7	467.2	4,232.5	4,153.0	79.50	53.237		
11,300.0	7,100.0	6,600.0	6,561.5	82.5	17.6	58.52	261.7	467.2	4,329.5	4,248.4	81.15	53.355		
11,400.0	7,100.0	6,600.0	6,561.5	84.3	17.6	58.52	261.7	467.2	4,426.7	4,343.9	82.79	53.469		
11,500.0	7,100.0	6,600.0	6,561.5	86.1	17.6	58.52	261.7	467.2	4,524.0	4,439.6	84.44	53.578		
11,600.0	7,100.0	6,600.0	6,561.5	87.8	17.6	58.52	261.7	467.2	4,621.5	4,535.4	86.09	53.683		
11,700.0	7,100.0	6,600.0	6,561.5	89.6	17.6	58.52	261.7	467.2	4,719.0	4,631.3	87.74	53.784		
11,800.0	7,100.0	6,600.0	6,561.5	91.4	17.6	58.52	261.7	467.2	4,816.6	4,727.2	89.39	53.882		
11,900.0	7,100.0	6,600.0	6,561.5	93.3	17.6	58.52	261.7	467.2	4,914.4	4,823.3	91.05	53.976		
12,000.0	7,100.0	6,600.0	6,561.5	95.1	17.6	58.52	261.7	467.2	5,012.2	4,919.5	92.70	54.067		
12,100.0	7,100.0	6,600.0	6,561.5	96.9	17.6	58.52	261.7	467.2	5,110.1	5,015.7	94.36	54.155		
12,200.0	7,100.0	6,600.0	6,561.5	98.7	17.6	58.52	261.7	467.2	5,208.1	5,112.0	96.02	54.240		
12,300.0	7,100.0	6,600.0	6,561.5	100.5	17.6	58.52	261.7	467.2	5,306.1	5,208.4	97.68	54.322		
12,400.0	7,100.0	6,600.0	6,561.5	102.4	17.6	58.52	261.7	467.2	5,404.2	5,304.9	99.34	54.401		
12,500.0	7,100.0	6,600.0	6,561.5	104.2	17.6	58.52	261.7	467.2	5,502.4	5,401.4	101.00	54.478		
12,600.0	7,100.0	6,600.0	6,561.5	106.0	17.6	58.52	261.7	467.2	5,600.7	5,498.0	102.67	54.553		
12,700.0	7,100.0	6,576.8	6,539.4	107.9	17.5	57.67	258.3	460.9	5,698.7	5,595.2	103.52	55.048		
12,800.0	7,100.0	6,574.8	6,537.5	109.7	17.5	57.60	258.0	460.4	5,797.0	5,691.9	105.11	55.154		
12,900.0	7,100.0	6,573.0	6,535.8	111.6	17.5	57.53	257.8	460.0	5,895.4	5,788.7	106.69	55.257		
13,000.0	7,100.0	6,550.0	6,513.6	113.4	17.4	56.68	255.1	454.5	5,994.1	5,886.6	107.49	55.766		
13,100.0	7,100.0	6,550.0	6,513.6	115.3	17.4	56.68	255.1	454.5	6,092.5	5,983.4	109.13	55.830		
13,200.0	7,100.0	6,550.0	6,513.6	117.1	17.4	56.68	255.1	454.5	6,191.0	6,080.2	110.77	55.892		
13,300.0	7,100.0	6,550.0	6,513.6	119.0	17.4	56.68	255.1	454.5	6,289.5	6,177.1	112.41	55.952		
13,400.0	7,100.0	6,550.0	6,513.6	120.9	17.4	56.68	255.1	454.5	6,388.1	6,274.0	114.05	56.011		

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 4-17H20
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 4-17H20	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		
13,500.0	7,100.0	6,550.0	6,513.6	122.7	17.4	56.68	255.1	454.5	6,486.7	6,371.0	115.69	56.068		
13,600.0	7,100.0	6,550.0	6,513.6	124.6	17.4	56.68	255.1	454.5	6,585.3	6,468.0	117.34	56.123		
13,700.0	7,100.0	6,550.0	6,513.6	126.4	17.4	56.68	255.1	454.5	6,684.0	6,565.1	118.98	56.178		
13,800.0	7,100.0	6,550.0	6,513.6	128.3	17.4	56.68	255.1	454.5	6,782.8	6,662.2	120.63	56.230		
13,900.0	7,100.0	6,550.0	6,513.6	130.2	17.4	56.68	255.1	454.5	6,881.5	6,759.3	122.27	56.281		
14,000.0	7,100.0	6,550.0	6,513.6	132.1	17.4	56.68	255.1	454.5	6,980.4	6,856.4	123.92	56.331		
14,100.0	7,100.0	6,550.0	6,513.6	133.9	17.4	56.68	255.1	454.5	7,079.2	6,953.6	125.56	56.380		
14,200.0	7,100.0	6,550.0	6,513.6	135.8	17.4	56.68	255.1	454.5	7,178.1	7,050.9	127.21	56.428		
14,300.0	7,100.0	6,550.0	6,513.6	137.7	17.4	56.68	255.1	454.5	7,277.0	7,148.1	128.86	56.474		
14,400.0	7,100.0	6,550.0	6,513.6	139.6	17.4	56.68	255.1	454.5	7,375.9	7,245.4	130.50	56.519		
14,500.0	7,100.0	6,550.0	6,513.6	141.5	17.4	56.68	255.1	454.5	7,474.9	7,342.7	132.15	56.563		
14,600.0	7,100.0	6,550.0	6,513.6	143.3	17.4	56.68	255.1	454.5	7,573.9	7,440.1	133.80	56.606		
14,700.0	7,100.0	6,550.0	6,513.6	145.2	17.4	56.68	255.1	454.5	7,672.9	7,537.4	135.45	56.648		
14,800.0	7,100.0	6,550.0	6,513.6	147.1	17.4	56.68	255.1	454.5	7,771.9	7,634.8	137.10	56.689		
14,900.0	7,100.0	6,550.0	6,513.6	149.0	17.4	56.68	255.1	454.5	7,871.0	7,732.2	138.75	56.730		
15,000.0	7,100.0	6,550.0	6,513.6	150.9	17.4	56.68	255.1	454.5	7,970.1	7,829.7	140.40	56.769		
15,100.0	7,100.0	6,550.0	6,513.6	152.8	17.4	56.68	255.1	454.5	8,069.2	7,927.1	142.05	56.807		
15,200.0	7,100.0	6,550.0	6,513.6	154.7	17.4	56.68	255.1	454.5	8,168.3	8,024.6	143.70	56.845		
15,300.0	7,100.0	6,550.0	6,513.6	156.5	17.4	56.68	255.1	454.5	8,267.5	8,122.1	145.35	56.881		
15,400.0	7,100.0	6,550.0	6,513.6	158.4	17.4	56.68	255.1	454.5	8,366.6	8,219.6	147.00	56.917		
15,500.0	7,100.0	6,550.0	6,513.6	160.3	17.4	56.68	255.1	454.5	8,465.8	8,317.2	148.65	56.952		
15,600.0	7,100.0	6,550.0	6,513.6	162.2	17.4	56.68	255.1	454.5	8,565.0	8,414.7	150.30	56.987		
15,700.0	7,100.0	6,550.0	6,513.6	164.1	17.4	56.68	255.1	454.5	8,664.3	8,512.3	151.95	57.020		
15,800.0	7,100.0	6,550.0	6,513.6	166.0	17.4	56.68	255.1	454.5	8,763.5	8,609.9	153.60	57.053		
15,900.0	7,100.0	6,550.0	6,513.6	167.9	17.4	56.68	255.1	454.5	8,862.8	8,707.5	155.25	57.085		
16,000.0	7,100.0	6,550.0	6,513.6	169.8	17.4	56.68	255.1	454.5	8,962.0	8,805.1	156.91	57.117		
16,100.0	7,100.0	6,550.0	6,513.6	171.7	17.4	56.68	255.1	454.5	9,061.3	8,902.8	158.56	57.148		
16,200.0	7,100.0	6,550.0	6,513.6	173.6	17.4	56.68	255.1	454.5	9,160.7	9,000.4	160.21	57.178		
16,300.0	7,100.0	6,550.0	6,513.6	175.5	17.4	56.68	255.1	454.5	9,260.0	9,098.1	161.86	57.208		
16,400.0	7,100.0	6,550.0	6,513.6	177.4	17.4	56.68	255.1	454.5	9,359.3	9,195.8	163.52	57.237		
16,500.0	7,100.0	6,550.0	6,513.6	179.3	17.4	56.68	255.1	454.5	9,458.7	9,293.5	165.17	57.266		
16,600.0	7,100.0	6,550.0	6,513.6	181.2	17.4	56.68	255.1	454.5	9,558.0	9,391.2	166.82	57.294		
16,700.0	7,100.0	6,550.0	6,513.6	183.1	17.4	56.68	255.1	454.5	9,657.4	9,488.9	168.48	57.321		
16,800.0	7,100.0	6,550.0	6,513.6	185.0	17.4	56.68	255.1	454.5	9,756.8	9,586.7	170.13	57.348		
16,900.0	7,100.0	6,550.0	6,513.6	186.9	17.4	56.68	255.1	454.5	9,856.2	9,684.4	171.79	57.375		
17,000.0	7,100.0	6,550.0	6,513.6	188.8	17.4	56.68	255.1	454.5	9,955.6	9,782.2	173.44	57.401		

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 4-17H20
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 4-17H20	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
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	-14.04	150.5	-37.6	155.2				
100.0	100.0	100.0	100.0	0.1	0.1	-14.04	150.5	-37.6	155.2	155.0	0.19	821.779	
200.0	200.0	200.0	200.0	0.3	0.3	-14.04	150.5	-37.6	155.2	154.5	0.64	243.062	
300.0	300.0	300.0	300.0	0.5	0.5	-14.04	150.5	-37.6	155.2	154.1	1.09	142.623	
400.0	400.0	400.0	400.0	0.8	0.8	-14.04	150.5	-37.6	155.2	153.6	1.54	100.920	
500.0	500.0	500.0	500.0	1.0	1.0	-14.04	150.5	-37.6	155.2	153.2	1.99	78.088	
588.5	588.5	589.7	589.7	1.2	1.2	-104.03	150.5	-36.2	155.2	152.8	2.37	65.586	
594.9	594.9	596.2	596.1	1.2	1.2	-104.03	150.5	-36.0	155.1	152.8	2.39	64.841	
600.0	600.0	601.2	601.2	1.2	1.2	-104.03	150.5	-35.9	155.2	152.7	2.41	64.286	
700.0	699.9	701.2	701.2	1.4	1.4	-104.04	150.5	-32.6	155.2	152.3	2.83	54.845	
800.0	799.9	801.2	801.1	1.6	1.6	-104.04	150.5	-29.3	155.2	151.9	3.26	47.630	
900.0	899.8	901.2	901.1	1.8	1.9	-104.04	150.5	-26.0	155.2	151.5	3.69	41.996	
1,000.0	999.8	1,001.2	1,001.0	2.1	2.1	-104.05	150.5	-22.7	155.2	151.0	4.14	37.501	
1,100.0	1,099.7	1,101.2	1,100.9	2.3	2.3	-104.05	150.5	-19.3	155.2	150.6	4.58	33.845	
1,200.0	1,199.7	1,200.3	1,200.0	2.5	2.5	-104.61	150.5	-17.6	155.6	150.5	5.01	31.027	
1,300.0	1,299.6	1,299.9	1,299.6	2.7	2.7	-105.78	150.5	-17.6	156.4	151.0	5.44	28.759	
1,405.6	1,405.1	1,405.4	1,405.1	3.0	2.9	-107.01	150.5	-17.6	157.4	151.5	5.90	26.662	
1,500.5	1,500.0	1,500.3	1,500.0	3.2	3.1	-17.56	150.5	-17.6	157.9	151.6	6.25	25.246	
1,600.0	1,599.5	1,599.8	1,599.5	3.4	3.3	-17.56	150.5	-17.6	157.9	151.2	6.67	23.667	
1,700.0	1,699.5	1,699.8	1,699.5	3.6	3.6	-17.56	150.5	-17.6	157.9	150.8	7.10	22.232	
1,800.0	1,799.5	1,799.8	1,799.5	3.8	3.8	-17.56	150.5	-17.6	157.9	150.3	7.53	20.956	
1,900.0	1,899.5	1,899.8	1,899.5	4.0	4.0	-17.56	150.5	-17.6	157.9	149.9	7.97	19.813	
2,000.0	1,999.5	1,999.8	1,999.5	4.2	4.2	-17.56	150.5	-17.6	157.9	149.5	8.40	18.785	
2,100.0	2,099.5	2,099.8	2,099.5	4.5	4.4	-17.56	150.5	-17.6	157.9	149.0	8.84	17.856	
2,200.0	2,199.5	2,199.8	2,199.5	4.7	4.7	-17.56	150.5	-17.6	157.9	148.6	9.28	17.012	
2,300.0	2,299.5	2,299.8	2,299.5	4.9	4.9	-17.56	150.5	-17.6	157.9	148.2	9.72	16.243	
2,400.0	2,399.5	2,399.8	2,399.5	5.1	5.1	-17.56	150.5	-17.6	157.9	147.7	10.16	15.538	
2,500.0	2,499.5	2,499.8	2,499.5	5.3	5.3	-17.56	150.5	-17.6	157.9	147.3	10.60	14.892	
2,600.0	2,599.5	2,599.8	2,599.5	5.5	5.6	-17.56	150.5	-17.6	157.9	146.8	11.04	14.296	
2,700.0	2,699.5	2,699.8	2,699.5	5.8	5.8	-17.56	150.5	-17.6	157.9	146.4	11.49	13.745	
2,800.0	2,799.5	2,799.8	2,799.5	6.0	6.0	-17.56	150.5	-17.6	157.9	146.0	11.93	13.235	
2,900.0	2,899.5	2,899.8	2,899.5	6.2	6.2	-17.56	150.5	-17.6	157.9	145.5	12.37	12.760	
3,000.0	2,999.5	2,999.8	2,999.5	6.4	6.4	-17.56	150.5	-17.6	157.9	145.1	12.82	12.318	
3,100.0	3,099.5	3,099.8	3,099.5	6.6	6.7	-17.56	150.5	-17.6	157.9	144.6	13.26	11.906	
3,200.0	3,199.5	3,201.5	3,201.2	6.9	6.9	-16.93	150.5	-15.8	157.4	143.6	13.70	11.485	
3,300.0	3,299.5	3,302.9	3,302.4	7.1	7.1	-15.04	150.5	-10.4	155.9	141.7	14.13	11.029	
3,400.0	3,399.5	3,403.8	3,402.9	7.3	7.3	-11.82	150.5	-1.5	153.8	139.3	14.57	10.559	
3,500.0	3,499.5	3,503.9	3,502.2	7.5	7.6	-7.25	150.5	10.8	151.8	136.8	15.00	10.116	
3,600.0	3,599.5	3,603.0	3,600.1	7.8	7.8	-1.34	150.5	26.5	150.6	135.1	15.44	9.754	
3,620.1	3,619.6	3,622.8	3,619.6	7.8	7.9	0.00	150.5	30.0	150.5	135.0	15.52	9.697 CC, ES	
3,700.0	3,699.5	3,701.0	3,696.3	8.0	8.1	5.79	150.5	45.3	151.3	135.5	15.87	9.533	
3,800.0	3,799.5	3,797.5	3,790.3	8.2	8.4	13.79	150.5	67.0	155.3	138.9	16.33	9.510	
3,900.0	3,899.5	3,892.6	3,882.2	8.4	8.7	22.19	150.5	91.4	163.5	146.7	16.81	9.726	
4,000.0	3,999.5	3,988.8	3,974.8	8.6	9.1	30.19	150.5	117.6	175.9	158.5	17.34	10.145	
4,100.0	4,099.5	4,085.5	4,067.9	8.9	9.4	-46.99	150.5	143.8	190.2	172.1	18.09	10.515	
4,200.0	4,199.4	4,183.0	4,161.7	9.1	9.8	-41.81	150.5	170.3	204.1	185.5	18.56	10.993	
4,300.0	4,299.0	4,281.2	4,256.2	9.3	10.3	-37.85	150.5	197.0	216.6	197.5	19.04	11.377	
4,400.0	4,398.2	4,380.1	4,351.3	9.5	10.7	-34.84	150.5	223.9	227.1	207.6	19.51	11.641	
4,500.0	4,497.0	4,479.3	4,446.9	9.8	11.1	-32.57	150.5	250.8	235.2	215.2	19.98	11.772	
4,600.0	4,595.1	4,579.0	4,542.7	10.1	11.6	-30.89	150.5	277.9	240.7	220.2	20.46	11.764	
4,642.4	4,636.6	4,621.3	4,583.5	10.2	11.8	-30.34	150.5	289.4	242.1	221.5	20.66	11.718	
4,700.0	4,692.7	4,678.8	4,638.8	10.4	12.1	-29.66	150.5	305.0	243.8	222.8	20.97	11.622	

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 4-17H20
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 4-17H20	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	
4,800.0	4,790.2	4,778.6	4,734.9	10.7	12.5	-28.52	150.5	332.1	246.7	225.2	21.51	11.466	
4,900.0	4,887.7	4,878.4	4,831.0	11.0	13.0	-27.40	150.5	359.3	249.7	227.6	22.05	11.322	
5,000.0	4,985.2	4,978.3	4,927.0	11.3	13.5	-26.30	150.5	386.4	252.8	230.2	22.59	11.190	
5,100.0	5,082.7	5,078.1	5,023.1	11.7	14.0	-25.24	150.5	413.5	256.0	232.9	23.13	11.069	
5,200.0	5,180.2	5,178.0	5,119.2	12.0	14.5	-24.20	150.5	440.6	259.3	235.6	23.66	10.958	
5,300.0	5,277.7	5,277.8	5,215.3	12.4	15.1	-23.19	150.5	467.8	262.7	238.5	24.19	10.858	
5,400.0	5,375.2	5,377.6	5,311.4	12.7	15.6	-22.20	150.5	494.9	266.1	241.4	24.72	10.766	
5,500.0	5,472.7	5,477.5	5,407.4	13.1	16.1	-21.24	150.5	522.0	269.7	244.4	25.24	10.682	
5,600.0	5,570.2	5,577.3	5,503.5	13.5	16.6	-20.30	150.5	549.2	273.3	247.5	25.76	10.606	
5,700.0	5,667.7	5,677.1	5,599.6	13.9	17.2	-19.39	150.5	576.3	276.9	250.7	26.28	10.538	
5,800.0	5,765.2	5,777.0	5,695.7	14.3	17.7	-18.50	150.5	603.4	280.7	253.9	26.80	10.475	
5,900.0	5,862.7	5,876.8	5,791.8	14.7	18.2	-17.64	150.5	630.5	284.5	257.2	27.31	10.419	
6,000.0	5,960.2	5,976.6	5,887.8	15.1	18.8	-16.80	150.5	657.7	288.4	260.6	27.81	10.368	
6,100.0	6,057.7	6,076.5	5,983.9	15.5	19.3	-15.98	150.5	684.8	292.3	264.0	28.32	10.322	
6,200.0	6,155.2	6,176.3	6,080.0	15.9	19.9	-15.18	150.5	711.9	296.3	267.5	28.82	10.280	
6,300.0	6,252.6	6,276.2	6,176.1	16.3	20.4	-14.41	150.5	739.0	300.3	271.0	29.32	10.243	
6,400.0	6,350.1	6,376.0	6,272.2	16.8	20.9	-13.65	150.5	766.2	304.4	274.6	29.82	10.209	
6,445.4	6,394.4	6,421.3	6,315.8	17.0	21.2	-13.32	150.5	778.5	306.3	276.3	30.05	10.195	
6,450.0	6,398.9	6,425.9	6,320.2	17.0	21.2	-13.79	150.5	779.7	306.5	276.4	30.06	10.198	
6,500.0	6,447.0	6,475.9	6,368.3	17.2	21.5	-17.60	150.5	793.3	306.3	276.2	30.15	10.160	
6,550.0	6,493.8	6,525.7	6,416.2	17.5	21.8	-20.29	150.5	806.8	302.3	272.0	30.25	9.994	
6,600.0	6,538.9	6,565.2	6,454.1	17.9	22.0	-22.60	150.6	817.9	295.0	264.6	30.33	9.725	
6,650.0	6,581.9	6,600.0	6,487.0	18.3	22.2	-24.77	151.1	829.4	286.5	256.1	30.44	9.415	
6,700.0	6,622.6	6,630.5	6,515.1	18.7	22.4	-26.92	151.9	841.1	277.3	246.7	30.60	9.062	
6,750.0	6,660.6	6,663.3	6,544.7	19.3	22.7	-29.33	153.1	855.2	267.4	236.5	30.94	8.644	
6,800.0	6,695.7	6,700.0	6,576.8	19.8	23.0	-32.26	154.9	873.0	257.1	225.5	31.59	8.139	
6,850.0	6,727.5	6,729.3	6,601.4	20.5	23.4	-35.13	156.8	888.6	246.5	214.1	32.43	7.602	
6,900.0	6,755.9	6,762.4	6,628.4	21.2	23.7	-38.65	159.2	907.7	236.2	202.4	33.77	6.994	
6,920.7	6,766.6	6,776.2	6,639.3	21.6	23.9	-40.25	160.3	916.1	232.0	197.5	34.46	6.732	
7,000.0	6,806.2	6,830.5	6,680.1	22.9	24.6	-45.13	165.4	951.6	221.0	183.6	37.44	5.903	
7,053.1	6,832.8	6,868.5	6,706.6	23.8	25.1	-48.29	169.5	978.5	219.0	179.4	39.58	5.533	
7,070.7	6,841.6	6,881.3	6,715.1	24.1	25.3	-49.29	171.0	988.0	219.2	178.9	40.31	5.439	
7,100.0	6,856.1	6,900.0	6,727.1	24.6	25.5	-52.28	173.2	1,002.1	221.1	179.7	41.39	5.342	
7,150.0	6,880.8	6,938.7	6,750.5	25.4	26.2	-57.60	178.3	1,032.5	229.4	186.1	43.27	5.301 SF	
7,200.0	6,904.9	6,973.7	6,769.8	26.3	26.7	-62.11	183.2	1,061.2	244.1	199.4	44.67	5.465	
7,250.0	6,928.3	7,011.7	6,789.0	27.1	27.4	-66.29	188.9	1,093.5	264.5	218.7	45.80	5.776	
7,300.0	6,950.8	7,052.6	6,809.5	27.9	28.1	-70.39	195.0	1,128.4	289.1	242.4	46.71	6.189	
7,350.0	6,972.3	7,090.8	6,828.6	28.7	28.8	-73.94	200.8	1,161.1	317.5	270.3	47.18	6.729	
7,400.0	6,992.5	7,126.2	6,846.3	29.5	29.5	-76.85	206.1	1,191.2	349.4	302.2	47.21	7.402	
7,450.0	7,011.4	7,150.0	6,858.2	30.3	29.9	-78.21	209.7	1,211.5	384.9	338.4	46.56	8.267	
7,500.0	7,028.8	7,168.2	6,867.2	31.0	30.2	-78.29	213.0	1,226.9	424.1	378.6	45.48	9.326	
7,550.0	7,044.5	7,181.1	6,873.6	31.6	30.4	-76.68	215.7	1,237.8	466.5	422.4	44.02	10.597	
7,600.0	7,058.4	7,200.0	6,882.9	32.2	30.8	-74.57	220.1	1,253.7	511.4	468.8	42.59	12.008	
7,650.0	7,070.5	7,200.0	6,882.9	32.8	30.8	-66.49	220.1	1,253.7	557.9	517.8	40.13	13.901	
7,700.0	7,080.6	7,200.0	6,882.9	33.3	30.8	-53.32	220.1	1,253.7	605.8	569.0	36.74	16.490	
7,750.0	7,088.6	7,200.0	6,882.9	33.8	30.8	-33.98	220.1	1,253.7	654.4	622.5	31.87	20.534	
7,800.0	7,094.6	7,200.0	6,882.9	34.2	30.8	-11.61	220.1	1,253.7	703.3	676.3	26.98	26.068	
7,850.0	7,098.3	7,200.0	6,882.9	34.6	30.8	7.41	220.1	1,253.7	752.0	727.2	24.79	30.341	
7,900.0	7,100.0	7,200.0	6,882.9	34.9	30.8	20.72	220.1	1,253.7	800.3	775.6	24.77	32.309	
7,911.9	7,100.0	7,200.0	6,882.9	35.0	30.8	23.17	220.1	1,253.7	811.7	786.8	24.92	32.575	
8,000.0	7,100.0	7,200.0	6,882.9	35.5	30.8	23.17	220.1	1,253.7	896.4	871.0	25.37	35.328	
8,100.0	7,100.0	7,178.1	6,872.1	36.2	30.4	26.03	215.1	1,235.3	992.6	966.3	26.28	37.769	

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 4-17H20
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 4-17H20	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	
8,200.0	7,100.0	7,170.6	6,868.4	37.0	30.3	26.92	213.5	1,229.0	1,089.5	1,062.4	27.05	40.273	
8,300.0	7,100.0	7,150.0	6,858.2	37.9	29.9	29.18	209.7	1,211.5	1,187.0	1,158.9	28.16	42.150	
8,400.0	7,100.0	7,150.0	6,858.2	38.8	29.9	29.18	209.7	1,211.5	1,284.5	1,255.5	28.93	44.397	
8,500.0	7,100.0	7,150.0	6,858.2	39.8	29.9	29.18	209.7	1,211.5	1,382.3	1,352.5	29.74	46.479	
8,600.0	7,100.0	7,150.0	6,858.2	40.8	29.9	29.18	209.7	1,211.5	1,480.4	1,449.8	30.58	48.408	
8,700.0	7,100.0	7,141.3	6,853.8	41.9	29.7	30.06	208.4	1,204.1	1,578.7	1,547.0	31.69	49.822	
8,800.0	7,100.0	7,134.8	6,850.6	43.1	29.6	30.68	207.4	1,198.6	1,677.1	1,644.4	32.78	51.161	
8,900.0	7,100.0	7,119.6	6,843.0	44.3	29.3	32.05	205.1	1,185.6	1,775.7	1,741.5	34.17	51.969	
9,000.0	7,100.0	7,104.4	6,835.4	45.6	29.1	33.31	202.8	1,172.6	1,874.2	1,838.6	35.60	52.647	
9,100.0	7,100.0	7,089.3	6,827.8	46.9	28.8	34.47	200.5	1,159.7	1,972.8	1,935.7	37.07	53.214	
9,200.0	7,100.0	7,074.1	6,820.2	48.3	28.5	35.53	198.2	1,146.7	2,071.4	2,032.8	38.58	53.694	
9,300.0	7,100.0	7,058.9	6,812.6	49.7	28.2	36.51	196.0	1,133.8	2,170.0	2,129.9	40.11	54.101	
9,400.0	7,100.0	7,043.7	6,805.0	51.1	28.0	37.42	193.7	1,120.8	2,268.6	2,227.0	41.66	54.450	
9,500.0	7,100.0	7,028.5	6,797.4	52.6	27.7	38.26	191.4	1,107.9	2,367.3	2,324.1	43.24	54.751	
9,600.0	7,100.0	7,013.3	6,789.8	54.1	27.4	39.05	189.1	1,094.9	2,466.0	2,421.1	44.83	55.011	
9,700.0	7,100.0	6,998.1	6,782.2	55.6	27.2	39.78	186.8	1,082.0	2,564.7	2,518.2	46.43	55.236	
9,800.0	7,100.0	6,991.3	6,778.8	57.1	27.0	40.09	185.8	1,076.1	2,663.4	2,615.5	47.85	55.659	
9,900.0	7,100.0	6,979.5	6,772.8	58.7	26.8	40.59	184.0	1,066.1	2,762.1	2,712.7	49.40	55.917	
10,000.0	7,100.0	6,972.1	6,768.9	60.3	26.7	40.88	183.0	1,059.9	2,860.9	2,810.1	50.84	56.271	
10,100.0	7,100.0	6,964.9	6,765.1	61.9	26.6	41.14	181.9	1,054.0	2,959.8	2,907.5	52.29	56.605	
10,200.0	7,100.0	6,950.0	6,756.9	63.6	26.3	41.62	179.8	1,041.7	3,058.7	3,004.8	53.88	56.764	
10,300.0	7,100.0	6,950.0	6,756.9	65.2	26.3	41.62	179.8	1,041.7	3,157.6	3,102.4	55.20	57.201	
10,400.0	7,100.0	6,950.0	6,756.9	66.9	26.3	41.62	179.8	1,041.7	3,256.5	3,200.0	56.52	57.614	
10,500.0	7,100.0	6,950.0	6,756.9	68.6	26.3	41.62	179.8	1,041.7	3,355.6	3,297.7	57.85	58.004	
10,600.0	7,100.0	6,931.9	6,746.5	70.3	26.0	42.10	177.3	1,027.0	3,454.6	3,395.0	59.51	58.052	
10,700.0	7,100.0	6,925.8	6,742.9	72.0	26.0	42.24	176.5	1,022.2	3,553.6	3,492.7	60.95	58.306	
10,800.0	7,100.0	6,919.9	6,739.4	73.7	25.9	42.37	175.8	1,017.5	3,652.7	3,590.3	62.39	58.550	
10,900.0	7,100.0	6,914.1	6,735.9	75.5	25.8	42.48	175.0	1,013.0	3,751.8	3,688.0	63.82	58.785	
11,000.0	7,100.0	6,900.0	6,727.1	77.2	25.5	42.72	173.2	1,002.1	3,851.0	3,785.6	65.36	58.921	
11,100.0	7,100.0	6,900.0	6,727.1	79.0	25.5	42.72	173.2	1,002.1	3,950.1	3,883.4	66.73	59.200	
11,200.0	7,100.0	6,900.0	6,727.1	80.7	25.5	42.72	173.2	1,002.1	4,049.3	3,981.2	68.09	59.466	
11,300.0	7,100.0	6,900.0	6,727.1	82.5	25.5	42.72	173.2	1,002.1	4,148.6	4,079.1	69.47	59.720	
11,400.0	7,100.0	6,900.0	6,727.1	84.3	25.5	42.72	173.2	1,002.1	4,247.8	4,177.0	70.84	59.963	
11,500.0	7,100.0	6,882.5	6,715.8	86.1	25.3	42.95	171.1	988.8	4,347.0	4,274.6	72.40	60.044	
11,600.0	7,100.0	6,877.7	6,712.7	87.8	25.2	43.00	170.5	985.2	4,446.3	4,372.5	73.82	60.232	
11,700.0	7,100.0	6,873.0	6,709.5	89.6	25.2	43.05	170.0	981.8	4,545.6	4,470.4	75.24	60.415	
11,800.0	7,100.0	6,868.4	6,706.5	91.4	25.1	43.09	169.5	978.4	4,644.9	4,568.3	76.66	60.593	
11,900.0	7,100.0	6,850.0	6,693.9	93.3	24.8	43.20	167.4	965.2	4,744.3	4,666.2	78.13	60.722	
12,000.0	7,100.0	6,850.0	6,693.9	95.1	24.8	43.20	167.4	965.2	4,843.6	4,764.1	79.52	60.907	
12,100.0	7,100.0	6,850.0	6,693.9	96.9	24.8	43.20	167.4	965.2	4,943.0	4,862.1	80.92	61.086	
12,200.0	7,100.0	6,850.0	6,693.9	98.7	24.8	43.20	167.4	965.2	5,042.4	4,960.0	82.31	61.257	
12,300.0	7,100.0	6,850.0	6,693.9	100.5	24.8	43.20	167.4	965.2	5,141.8	5,058.0	83.71	61.423	
12,400.0	7,100.0	6,850.0	6,693.9	102.4	24.8	43.20	167.4	965.2	5,241.2	5,156.1	85.11	61.582	
12,500.0	7,100.0	6,850.0	6,693.9	104.2	24.8	43.20	167.4	965.2	5,340.6	5,254.1	86.51	61.736	
12,600.0	7,100.0	6,850.0	6,693.9	106.0	24.8	43.20	167.4	965.2	5,440.1	5,352.2	87.91	61.885	
12,700.0	7,100.0	6,831.8	6,681.1	107.9	24.6	43.24	165.5	952.5	5,539.5	5,450.2	89.33	62.009	
12,800.0	7,100.0	6,828.2	6,678.5	109.7	24.5	43.25	165.1	950.0	5,639.0	5,548.2	90.73	62.149	
12,900.0	7,100.0	6,824.7	6,675.9	111.6	24.5	43.25	164.8	947.6	5,738.4	5,646.3	92.13	62.285	
13,000.0	7,100.0	6,821.3	6,673.4	113.4	24.4	43.24	164.4	945.3	5,837.9	5,744.4	93.53	62.419	
13,100.0	7,100.0	6,817.9	6,671.0	115.3	24.4	43.24	164.1	943.0	5,937.4	5,842.5	94.92	62.550	
13,200.0	7,100.0	6,800.0	6,657.6	117.1	24.2	43.19	162.4	931.2	6,037.0	5,940.7	96.24	62.727	
13,300.0	7,100.0	6,800.0	6,657.6	119.0	24.2	43.19	162.4	931.2	6,136.5	6,038.8	97.65	62.843	

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 4-17H20
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 4-17H20	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
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	
13,400.0	7,100.0	6,800.0	6,657.6	120.9	24.2	43.19	162.4	931.2	6,236.0	6,137.0	99.05	62.956		
13,500.0	7,100.0	6,800.0	6,657.6	122.7	24.2	43.19	162.4	931.2	6,335.5	6,235.1	100.46	63.066		
13,600.0	7,100.0	6,800.0	6,657.6	124.6	24.2	43.19	162.4	931.2	6,435.1	6,333.2	101.87	63.172		
13,700.0	7,100.0	6,800.0	6,657.6	126.4	24.2	43.19	162.4	931.2	6,534.6	6,431.4	103.27	63.275		
13,800.0	7,100.0	6,800.0	6,657.6	128.3	24.2	43.19	162.4	931.2	6,634.2	6,529.5	104.68	63.376		
13,900.0	7,100.0	6,800.0	6,657.6	130.2	24.2	43.19	162.4	931.2	6,733.8	6,627.7	106.09	63.473		
14,000.0	7,100.0	6,800.0	6,657.6	132.1	24.2	43.19	162.4	931.2	6,833.4	6,725.9	107.50	63.568		
14,100.0	7,100.0	6,800.0	6,657.6	133.9	24.2	43.19	162.4	931.2	6,933.0	6,824.1	108.91	63.660		
14,200.0	7,100.0	6,800.0	6,657.6	135.8	24.2	43.19	162.4	931.2	7,032.6	6,922.3	110.32	63.749		
14,300.0	7,100.0	6,800.0	6,657.6	137.7	24.2	43.19	162.4	931.2	7,132.3	7,020.5	111.73	63.836		
14,400.0	7,100.0	6,780.3	6,642.5	139.6	23.9	43.08	160.6	918.6	7,231.8	7,118.9	112.95	64.029		
14,500.0	7,100.0	6,777.8	6,640.6	141.5	23.9	43.06	160.4	917.1	7,331.4	7,217.1	114.33	64.128		
14,600.0	7,100.0	6,775.4	6,638.6	143.3	23.9	43.04	160.2	915.6	7,431.1	7,315.4	115.70	64.226		
14,700.0	7,100.0	6,773.0	6,636.8	145.2	23.8	43.02	160.0	914.1	7,530.7	7,413.6	117.08	64.321		
14,800.0	7,100.0	6,770.6	6,634.9	147.1	23.8	43.00	159.8	912.7	7,630.4	7,511.9	118.46	64.415		
14,900.0	7,100.0	6,768.3	6,633.1	149.0	23.8	42.99	159.7	911.3	7,730.0	7,610.2	119.83	64.508		
15,000.0	7,100.0	6,750.0	6,618.5	150.9	23.6	42.81	158.2	900.4	7,829.8	7,708.8	120.93	64.744		
15,100.0	7,100.0	6,750.0	6,618.5	152.8	23.6	42.81	158.2	900.4	7,929.4	7,807.1	122.34	64.815		
15,200.0	7,100.0	6,750.0	6,618.5	154.7	23.6	42.81	158.2	900.4	8,029.1	7,905.3	123.75	64.884		
15,300.0	7,100.0	6,750.0	6,618.5	156.5	23.6	42.81	158.2	900.4	8,128.7	8,003.6	125.15	64.951		
15,400.0	7,100.0	6,750.0	6,618.5	158.4	23.6	42.81	158.2	900.4	8,228.4	8,101.9	126.56	65.017		
15,500.0	7,100.0	6,750.0	6,618.5	160.3	23.6	42.81	158.2	900.4	8,328.1	8,200.1	127.96	65.081		
15,600.0	7,100.0	6,750.0	6,618.5	162.2	23.6	42.81	158.2	900.4	8,427.8	8,298.4	129.37	65.144		
15,700.0	7,100.0	6,750.0	6,618.5	164.1	23.6	42.81	158.2	900.4	8,527.5	8,396.7	130.78	65.206		
15,800.0	7,100.0	6,750.0	6,618.5	166.0	23.6	42.81	158.2	900.4	8,627.2	8,495.0	132.19	65.266		
15,900.0	7,100.0	6,750.0	6,618.5	167.9	23.6	42.81	158.2	900.4	8,726.9	8,593.3	133.59	65.325		
16,000.0	7,100.0	6,750.0	6,618.5	169.8	23.6	42.81	158.2	900.4	8,826.6	8,691.6	135.00	65.382		
16,100.0	7,100.0	6,750.0	6,618.5	171.7	23.6	42.81	158.2	900.4	8,926.4	8,789.9	136.41	65.438		
16,200.0	7,100.0	6,750.0	6,618.5	173.6	23.6	42.81	158.2	900.4	9,026.1	8,888.3	137.82	65.493		
16,300.0	7,100.0	6,750.0	6,618.5	175.5	23.6	42.81	158.2	900.4	9,125.8	8,986.6	139.23	65.547		
16,400.0	7,100.0	6,750.0	6,618.5	177.4	23.6	42.81	158.2	900.4	9,225.6	9,084.9	140.63	65.600		
16,500.0	7,100.0	6,750.0	6,618.5	179.3	23.6	42.81	158.2	900.4	9,325.3	9,183.3	142.04	65.652		
16,600.0	7,100.0	6,750.0	6,618.5	181.2	23.6	42.81	158.2	900.4	9,425.1	9,281.6	143.45	65.702		
16,700.0	7,100.0	6,750.0	6,618.5	183.1	23.6	42.81	158.2	900.4	9,524.8	9,380.0	144.86	65.752		
16,800.0	7,100.0	6,750.0	6,618.5	185.0	23.6	42.81	158.2	900.4	9,624.6	9,478.3	146.27	65.800		
16,900.0	7,100.0	6,730.1	6,602.2	186.9	23.4	42.57	156.8	889.1	9,724.3	9,577.1	147.19	66.068		
17,000.0	7,100.0	6,728.5	6,600.8	188.8	23.3	42.55	156.7	888.2	9,824.0	9,675.5	148.55	66.134		
17,100.0	7,100.0	6,727.0	6,599.6	190.7	23.3	42.53	156.6	887.4	9,923.8	9,773.9	149.91	66.199		

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 4-17H20
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 4-17H20	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						
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	Warning
0.0	0.0	3.1	3.1	0.0	0.0	-102.71	-83.0	-367.8	377.1				
100.0	100.0	104.8	104.8	0.1	0.1	-102.72	-83.0	-367.6	376.8	376.6	0.22	1,728.272	
200.0	200.0	206.5	206.5	0.3	0.2	-102.73	-82.9	-366.8	376.1	375.5	0.56	668.256	
300.0	300.0	308.3	308.3	0.5	0.4	-102.74	-82.7	-365.7	374.9	374.0	0.91	413.108	
400.0	400.0	410.0	410.0	0.8	0.5	-102.76	-82.5	-364.0	373.3	372.0	1.25	298.079	
500.0	500.0	511.7	511.6	1.0	0.6	-102.79	-82.2	-361.9	371.2	369.6	1.60	232.424	
579.2	579.2	592.3	592.2	1.2	0.7	167.22	-81.9	-359.9	370.3	368.5	1.82	202.998	
594.9	594.9	608.2	608.2	1.2	0.7	167.23	-81.8	-359.4	370.3	368.4	1.87	197.544	
600.0	600.0	613.4	613.3	1.2	0.7	167.24	-81.8	-359.3	370.3	368.4	1.89	195.890	
700.0	699.9	715.1	715.0	1.4	0.8	167.31	-81.4	-356.2	370.5	368.3	2.21	167.760	
800.0	799.9	816.8	816.6	1.6	1.0	167.38	-80.9	-352.7	370.3	367.8	2.53	146.190	
900.0	899.8	918.5	918.3	1.8	1.1	167.44	-80.3	-348.7	369.6	366.7	2.86	129.177	
1,000.0	999.8	1,020.2	1,019.9	2.1	1.2	167.50	-79.7	-344.3	368.4	365.2	3.19	115.423	
1,016.0	1,015.7	1,031.0	1,030.6	2.1	1.2	167.51	-79.7	-343.8	368.2	365.0	3.24	113.690 CC, ES	
1,100.0	1,099.7	1,095.1	1,094.6	2.3	1.3	167.21	-82.0	-343.5	371.1	367.5	3.55	104.401	
1,200.0	1,199.7	1,197.0	1,196.5	2.5	1.5	166.73	-86.2	-344.5	376.2	372.2	3.98	94.423	
1,300.0	1,299.6	1,298.9	1,298.3	2.7	1.7	166.50	-88.8	-345.2	380.7	376.3	4.42	86.095	
1,405.6	1,405.1	1,404.6	1,404.0	3.0	2.0	166.49	-89.9	-346.1	385.2	380.3	4.88	79.013	
1,500.5	1,500.0	1,498.5	1,497.9	3.2	2.1	-103.54	-90.8	-347.0	387.8	382.5	5.31	72.992	
1,600.0	1,599.5	1,594.3	1,593.7	3.4	2.3	-103.68	-92.1	-348.4	389.5	383.8	5.69	68.456	
1,700.0	1,699.5	1,689.2	1,688.5	3.6	2.5	-103.83	-93.8	-350.8	392.4	386.4	6.08	64.553	
1,800.0	1,799.5	1,796.6	1,795.9	3.8	2.7	-103.99	-95.6	-353.5	395.3	388.8	6.52	60.667	
1,900.0	1,899.5	1,903.1	1,902.4	4.0	3.0	-104.03	-96.0	-354.2	396.0	389.0	6.96	56.889	
2,000.0	1,999.5	2,003.6	2,002.9	4.2	3.2	-104.04	-96.0	-354.1	396.0	388.6	7.39	53.592	
2,100.0	2,099.5	2,103.2	2,102.5	4.5	3.4	-104.05	-96.1	-354.1	395.9	388.1	7.81	50.686	
2,200.0	2,199.5	2,203.2	2,202.5	4.7	3.6	-104.05	-96.1	-354.1	395.9	387.7	8.24	48.040	
2,300.0	2,299.5	2,303.3	2,302.5	4.9	3.8	-104.05	-96.1	-354.1	395.9	387.2	8.67	45.689	
2,400.0	2,399.5	2,403.4	2,402.7	5.1	4.0	-104.03	-96.0	-354.1	395.9	386.8	9.09	43.549	
2,500.0	2,499.5	2,503.3	2,502.5	5.3	4.2	-104.02	-95.9	-354.1	395.9	386.3	9.52	41.592	
2,600.0	2,599.5	2,603.3	2,602.6	5.5	4.4	-104.01	-95.8	-354.1	395.8	385.9	9.95	39.788	
2,700.0	2,699.5	2,703.2	2,702.5	5.8	4.6	-104.00	-95.8	-354.1	395.8	385.5	10.38	38.124	
2,800.0	2,799.5	2,803.2	2,802.5	6.0	4.8	-104.00	-95.8	-354.1	395.8	385.0	10.81	36.619	
2,900.0	2,899.5	2,903.2	2,902.5	6.2	5.0	-104.00	-95.8	-354.1	395.8	384.6	11.24	35.230	
3,000.0	2,999.5	3,003.2	3,002.5	6.4	5.2	-104.00	-95.8	-354.1	395.8	384.2	11.66	33.942	
3,100.0	3,099.5	3,103.2	3,102.5	6.6	5.5	-104.00	-95.8	-354.1	395.8	383.7	12.09	32.730	
3,200.0	3,199.5	3,203.2	3,202.5	6.9	5.7	-104.00	-95.8	-354.1	395.8	383.3	12.53	31.599	
3,300.0	3,299.5	3,303.2	3,302.5	7.1	5.9	-104.00	-95.8	-354.1	395.8	382.9	12.95	30.559	
3,400.0	3,399.5	3,403.2	3,402.5	7.3	6.1	-104.00	-95.8	-354.1	395.8	382.5	13.38	29.588	
3,500.0	3,499.5	3,503.2	3,502.5	7.5	6.3	-104.00	-95.8	-354.1	395.8	382.0	13.81	28.669	
3,600.0	3,599.5	3,603.2	3,602.5	7.8	6.5	-104.00	-95.8	-354.1	395.8	381.6	14.24	27.804	
3,700.0	3,699.5	3,703.2	3,702.5	8.0	6.7	-104.00	-95.8	-354.1	395.8	381.2	14.67	26.983	
3,800.0	3,799.5	3,803.4	3,802.7	8.2	6.9	-103.99	-95.7	-354.1	395.8	380.7	15.11	26.200	
3,900.0	3,899.5	3,903.2	3,902.5	8.4	7.1	-103.98	-95.6	-354.1	395.8	380.2	15.54	25.463	
4,000.0	3,999.5	4,003.2	4,002.5	8.6	7.3	-103.98	-95.6	-354.1	395.8	379.8	15.97	24.777	
4,100.0	4,099.5	4,103.2	4,102.5	8.9	7.5	172.13	-95.6	-354.1	397.5	381.2	16.37	24.286	
4,200.0	4,199.4	4,203.0	4,202.3	9.1	7.8	172.21	-95.6	-354.1	402.7	385.9	16.78	24.001	
4,300.0	4,299.0	4,302.4	4,301.6	9.3	8.0	172.37	-95.5	-354.2	411.4	394.2	17.17	23.955 SF	
4,400.0	4,398.2	4,401.9	4,401.2	9.5	8.2	172.56	-95.5	-354.2	423.5	406.0	17.56	24.125	
4,500.0	4,497.0	4,500.6	4,499.9	9.8	8.4	172.79	-95.5	-354.2	439.0	421.1	17.93	24.492	
4,600.0	4,595.1	4,598.7	4,597.9	10.1	8.6	173.05	-95.4	-354.3	458.0	439.7	18.29	25.044	
4,642.4	4,636.6	4,640.2	4,639.5	10.2	8.7	173.17	-95.4	-354.3	467.1	448.7	18.44	25.332	
4,700.0	4,692.7	4,696.4	4,695.7	10.4	8.8	173.35	-95.4	-354.3	479.8	461.2	18.68	25.684	

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 4-17H20
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 4-17H20	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	4,790.2	4,793.9	4,793.2	10.7	9.0	173.65	-95.4	-354.3	501.9	482.8	19.11	26.267		
4,900.0	4,887.7	4,891.4	4,890.7	11.0	9.2	173.91	-95.4	-354.3	524.0	504.5	19.54	26.818		
5,000.0	4,985.2	4,988.9	4,988.2	11.3	9.4	174.16	-95.4	-354.3	546.2	526.2	19.98	27.342		
5,100.0	5,082.7	5,086.4	5,085.7	11.7	9.6	174.39	-95.4	-354.3	568.3	547.9	20.41	27.842		
5,200.0	5,180.2	5,183.9	5,183.2	12.0	9.8	174.60	-95.4	-354.3	590.4	569.6	20.85	28.319		
5,300.0	5,277.7	5,281.4	5,280.7	12.4	10.0	174.80	-95.4	-354.3	612.6	591.3	21.29	28.774		
5,400.0	5,375.2	5,378.9	5,378.2	12.7	10.2	174.98	-95.4	-354.3	634.7	613.0	21.73	29.205		
5,500.0	5,472.7	5,476.3	5,475.6	13.1	10.5	175.15	-95.3	-354.3	656.9	634.7	22.18	29.617		
5,600.0	5,570.2	5,574.2	5,573.4	13.5	10.7	175.32	-95.2	-354.3	679.1	656.4	22.63	30.013		
5,700.0	5,667.7	5,672.3	5,671.6	13.9	10.9	175.48	-95.0	-354.3	701.2	678.1	23.07	30.390		
5,800.0	5,765.2	5,770.1	5,769.3	14.3	11.1	175.63	-94.9	-354.2	723.2	699.7	23.51	30.757		
5,900.0	5,862.7	5,865.8	5,865.1	14.7	11.3	175.76	-94.9	-354.1	745.3	721.3	23.95	31.118		
6,000.0	5,960.2	5,963.8	5,963.1	15.1	11.5	175.90	-94.7	-354.2	767.5	743.1	24.40	31.457		
6,100.0	6,057.7	6,061.7	6,061.0	15.5	11.7	176.02	-94.6	-354.2	789.7	764.9	24.85	31.778		
6,200.0	6,155.2	6,159.7	6,159.0	15.9	11.9	176.15	-94.4	-354.2	811.8	786.5	25.30	32.087		
6,300.0	6,252.6	6,256.0	6,255.3	16.3	12.1	176.26	-94.2	-354.2	834.0	808.2	25.75	32.391		
6,400.0	6,350.1	6,353.7	6,353.0	16.8	12.3	176.36	-94.2	-354.2	856.2	830.0	26.20	32.678		
6,445.4	6,394.4	6,397.6	6,396.9	17.0	12.4	176.40	-94.2	-354.2	866.3	839.9	26.41	32.805		
6,450.0	6,398.9	6,402.1	6,401.3	17.0	12.4	175.86	-94.2	-354.2	867.3	840.9	26.41	32.838		
6,500.0	6,447.0	6,449.7	6,449.0	17.2	12.5	171.57	-94.1	-354.3	880.8	854.4	26.42	33.335		
6,550.0	6,493.8	6,495.1	6,494.4	17.5	12.6	168.89	-94.1	-354.3	898.3	871.9	26.37	34.071		
6,600.0	6,538.9	6,539.8	6,539.1	17.9	12.7	166.95	-94.0	-354.5	919.6	893.4	26.26	35.024		
6,650.0	6,581.9	6,581.5	6,580.8	18.3	12.8	165.34	-93.7	-354.7	944.6	918.5	26.10	36.188		
6,700.0	6,622.6	6,618.7	6,617.9	18.7	12.8	163.81	-93.3	-355.0	973.2	947.3	25.92	37.542		
6,750.0	6,660.6	6,653.8	6,653.1	19.3	12.9	162.25	-92.9	-355.4	1,005.2	979.4	25.75	39.036		
6,800.0	6,695.7	6,685.8	6,679.8	19.8	13.4	166.14	-55.8	-341.3	1,037.6	1,012.1	25.55	40.613		
6,850.0	6,727.5	7,012.0	6,986.3	20.5	13.8	170.24	8.5	-322.9	1,068.5	1,043.4	25.11	42.544		
6,900.0	6,755.9	7,066.5	7,025.4	21.2	13.9	171.92	45.1	-313.4	1,101.4	1,076.7	24.67	44.646		
6,920.7	6,766.6	7,080.4	7,034.6	21.6	14.0	172.23	55.2	-311.0	1,115.9	1,091.5	24.48	45.578		
7,000.0	6,806.2	7,324.8	7,131.1	22.9	15.5	-172.27	269.3	-258.7	1,172.2	1,146.6	25.68	45.641		
7,070.7	6,841.6	7,497.0	7,134.1	24.1	17.2	-161.10	433.8	-208.8	1,222.0	1,193.7	28.28	43.213		
7,100.0	6,856.1	7,497.0	7,134.1	24.6	17.2	-165.54	433.8	-208.8	1,242.8	1,215.0	27.78	44.739		
7,150.0	6,880.8	7,504.8	7,133.8	25.4	17.3	-173.11	441.1	-206.2	1,279.8	1,252.8	27.09	47.249		
7,200.0	6,904.9	7,504.8	7,133.8	26.3	17.3	178.23	441.1	-206.2	1,318.4	1,291.9	26.58	49.605		
7,250.0	6,928.3	7,497.0	7,134.1	27.1	17.2	168.58	433.8	-208.8	1,358.2	1,331.5	26.67	50.920		
7,300.0	6,950.8	7,334.4	7,132.1	27.9	15.6	148.99	278.6	-256.3	1,397.7	1,368.8	28.90	48.367		
7,350.0	6,972.3	7,318.3	7,130.2	28.7	15.5	139.78	263.1	-260.4	1,436.9	1,406.0	30.96	46.420		
7,400.0	6,992.5	7,299.1	7,127.3	29.5	15.3	131.16	244.7	-265.2	1,475.6	1,442.6	33.00	44.718		
7,450.0	7,011.4	7,274.4	7,122.6	30.3	15.1	123.21	221.3	-271.4	1,513.4	1,478.6	34.79	43.507		
7,500.0	7,028.8	7,175.7	7,088.0	31.0	14.5	113.13	131.8	-293.4	1,549.3	1,512.8	36.48	42.466		
7,550.0	7,044.5	7,158.5	7,079.8	31.6	14.4	107.66	117.2	-296.7	1,583.2	1,546.0	37.20	42.556		
7,600.0	7,058.4	7,134.4	7,067.2	32.2	14.2	102.69	97.1	-301.3	1,615.4	1,577.8	37.56	43.006		
7,650.0	7,070.5	7,111.7	7,054.1	32.8	14.1	98.49	79.0	-305.5	1,645.5	1,607.9	37.58	43.792		
7,700.0	7,080.6	7,096.0	7,044.6	33.3	14.1	95.14	66.9	-308.2	1,673.4	1,636.1	37.31	44.849		
7,750.0	7,088.6	7,075.8	7,031.6	33.8	14.0	92.21	51.8	-311.8	1,699.1	1,662.2	36.82	46.143		
7,800.0	7,094.6	7,064.0	7,023.7	34.2	13.9	90.01	43.3	-313.9	1,722.3	1,686.1	36.18	47.603		
7,850.0	7,098.3	7,041.7	7,008.2	34.6	13.9	87.98	27.8	-317.8	1,743.0	1,707.6	35.38	49.262		
7,900.0	7,100.0	7,033.0	7,001.9	34.9	13.8	86.72	22.0	-319.3	1,761.1	1,726.6	34.57	50.947		
7,911.9	7,100.0	7,021.6	6,993.5	35.0	13.8	86.24	14.5	-321.2	1,765.0	1,730.7	34.33	51.419		
8,000.0	7,100.0	6,990.5	6,969.6	35.5	13.7	85.44	-4.6	-326.5	1,794.9	1,759.8	35.14	51.077		
8,100.0	7,100.0	6,955.1	6,940.7	36.2	13.6	84.47	-24.4	-331.8	1,832.1	1,796.0	36.12	50.717		
8,200.0	7,100.0	6,938.0	6,926.2	37.0	13.6	83.99	-33.1	-334.3	1,873.2	1,836.0	37.29	50.233		

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 4-17H20
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 4-17H20	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	
8,300.0	7,100.0	6,907.0	6,899.0	37.9	13.5	83.09	-47.4	-338.6	1,918.2	1,879.8	38.47	49.863		
8,400.0	7,100.0	6,907.0	6,899.0	38.8	13.5	83.09	-47.4	-338.6	1,966.9	1,927.0	39.87	49.327		
8,500.0	7,100.0	6,889.6	6,883.3	39.8	13.4	82.58	-54.4	-340.8	2,019.0	1,977.7	41.25	48.948		
8,600.0	7,100.0	6,876.0	6,870.7	40.8	13.4	82.17	-59.4	-342.5	2,074.5	2,031.8	42.69	48.596		
8,700.0	7,100.0	6,876.0	6,870.7	41.9	13.4	82.17	-59.4	-342.5	2,133.1	2,088.8	44.25	48.208		
8,800.0	7,100.0	6,862.8	6,858.4	43.1	13.4	81.77	-63.8	-344.2	2,194.5	2,148.7	45.77	47.949		
8,900.0	7,100.0	6,845.0	6,841.6	44.3	13.3	81.22	-69.1	-346.4	2,258.7	2,211.4	47.29	47.765		
9,000.0	7,100.0	6,845.0	6,841.6	45.6	13.3	81.22	-69.1	-346.4	2,325.1	2,276.2	48.94	47.508		
9,100.0	7,100.0	6,845.0	6,841.6	46.9	13.3	81.22	-69.1	-346.4	2,393.9	2,343.2	50.62	47.291		
9,200.0	7,100.0	6,845.0	6,841.6	48.3	13.3	81.22	-69.1	-346.4	2,464.8	2,412.5	52.32	47.110		
9,300.0	7,100.0	6,829.8	6,827.0	49.7	13.3	80.75	-73.1	-348.3	2,537.5	2,483.5	53.94	47.046		
9,400.0	7,100.0	6,814.0	6,811.7	51.1	13.3	80.25	-76.8	-350.0	2,612.0	2,556.5	55.56	47.015		
9,500.0	7,100.0	6,814.0	6,811.7	52.6	13.3	80.25	-76.8	-350.0	2,688.1	2,630.8	57.30	46.910		
9,600.0	7,100.0	6,814.0	6,811.7	54.1	13.3	80.25	-76.8	-350.0	2,765.6	2,706.6	59.06	46.826		
9,700.0	7,100.0	6,804.1	6,802.1	55.6	13.2	79.94	-78.8	-351.1	2,844.6	2,783.8	60.76	46.820		
9,800.0	7,100.0	6,794.5	6,792.8	57.1	13.2	79.65	-80.7	-352.0	2,924.7	2,862.2	62.46	46.827		
9,900.0	7,100.0	6,782.0	6,780.5	58.7	13.2	79.25	-83.1	-353.1	3,006.0	2,941.8	64.14	46.866		
10,000.0	7,100.0	6,782.0	6,780.5	60.3	13.2	79.25	-83.1	-353.1	3,088.3	3,022.4	65.93	46.840		
10,100.0	7,100.0	6,782.0	6,780.5	61.9	13.2	79.25	-83.1	-353.1	3,171.7	3,103.9	67.73	46.826		
10,200.0	7,100.0	6,769.4	6,768.1	63.6	13.2	78.86	-85.3	-354.1	3,255.8	3,186.4	69.43	46.897		
10,300.0	7,100.0	6,765.1	6,763.9	65.2	13.2	78.72	-86.0	-354.4	3,340.9	3,269.7	71.20	46.925		
10,400.0	7,100.0	6,751.0	6,750.0	66.9	13.1	78.28	-88.1	-355.3	3,426.8	3,354.0	72.88	47.022		
10,500.0	7,100.0	6,751.0	6,750.0	68.6	13.1	78.28	-88.1	-355.3	3,513.4	3,438.7	74.70	47.037		
10,600.0	7,100.0	6,751.0	6,750.0	70.3	13.1	78.28	-88.1	-355.3	3,600.7	3,524.1	76.52	47.057		
10,700.0	7,100.0	6,751.0	6,750.0	72.0	13.1	78.28	-88.1	-355.3	3,688.6	3,610.2	78.34	47.082		
10,800.0	7,100.0	6,751.0	6,750.0	73.7	13.1	78.28	-88.1	-355.3	3,777.1	3,696.9	80.17	47.111		
10,900.0	7,100.0	6,751.0	6,750.0	75.5	13.1	78.28	-88.1	-355.3	3,866.1	3,784.1	82.01	47.143		
11,000.0	7,100.0	6,751.0	6,750.0	77.2	13.1	78.28	-88.1	-355.3	3,955.7	3,871.9	83.84	47.179		
11,100.0	7,100.0	6,751.0	6,750.0	79.0	13.1	78.28	-88.1	-355.3	4,045.8	3,960.1	85.68	47.217		
11,200.0	7,100.0	6,751.0	6,750.0	80.7	13.1	78.28	-88.1	-355.3	4,136.3	4,048.8	87.53	47.257		
11,300.0	7,100.0	6,736.8	6,735.9	82.5	13.1	77.83	-89.8	-355.9	4,227.1	4,137.9	89.21	47.385		
11,400.0	7,100.0	6,734.9	6,734.0	84.3	13.1	77.77	-90.0	-356.0	4,318.5	4,227.4	91.03	47.439		
11,500.0	7,100.0	6,733.1	6,732.2	86.1	13.1	77.71	-90.2	-356.1	4,410.1	4,317.3	92.86	47.494		
11,600.0	7,100.0	6,720.0	6,719.2	87.8	13.1	77.30	-91.5	-356.5	4,502.3	4,407.7	94.54	47.621		
11,700.0	7,100.0	6,720.0	6,719.2	89.6	13.1	77.30	-91.5	-356.5	4,594.6	4,498.2	96.39	47.666		
11,800.0	7,100.0	6,720.0	6,719.2	91.4	13.1	77.30	-91.5	-356.5	4,687.3	4,589.0	98.24	47.711		
11,900.0	7,100.0	6,720.0	6,719.2	93.3	13.1	77.30	-91.5	-356.5	4,780.2	4,680.1	100.09	47.757		
12,000.0	7,100.0	6,720.0	6,719.2	95.1	13.1	77.30	-91.5	-356.5	4,873.5	4,771.5	101.95	47.804		
12,100.0	7,100.0	6,720.0	6,719.2	96.9	13.1	77.30	-91.5	-356.5	4,967.0	4,863.2	103.80	47.850		
12,200.0	7,100.0	6,720.0	6,719.2	98.7	13.1	77.30	-91.5	-356.5	5,060.7	4,955.1	105.66	47.897		
12,300.0	7,100.0	6,720.0	6,719.2	100.5	13.1	77.30	-91.5	-356.5	5,154.7	5,047.2	107.52	47.943		
12,400.0	7,100.0	6,720.0	6,719.2	102.4	13.1	77.30	-91.5	-356.5	5,248.9	5,139.5	109.38	47.990		
12,500.0	7,100.0	6,720.0	6,719.2	104.2	13.1	77.30	-91.5	-356.5	5,343.3	5,232.1	111.24	48.036		
12,600.0	7,100.0	6,720.0	6,719.2	106.0	13.1	77.30	-91.5	-356.5	5,437.9	5,324.8	113.10	48.082		
12,700.0	7,100.0	6,720.0	6,719.2	107.9	13.1	77.30	-91.5	-356.5	5,532.7	5,417.8	114.96	48.128		
12,800.0	7,100.0	6,720.0	6,719.2	109.7	13.1	77.30	-91.5	-356.5	5,627.7	5,510.9	116.82	48.173		
12,900.0	7,100.0	6,720.0	6,719.2	111.6	13.1	77.30	-91.5	-356.5	5,722.9	5,604.2	118.69	48.219		
13,000.0	7,100.0	6,720.0	6,719.2	113.4	13.1	77.30	-91.5	-356.5	5,818.2	5,697.6	120.55	48.263		
13,100.0	7,100.0	6,720.0	6,719.2	115.3	13.1	77.30	-91.5	-356.5	5,913.6	5,791.2	122.42	48.307		
13,200.0	7,100.0	6,720.0	6,719.2	117.1	13.1	77.30	-91.5	-356.5	6,009.3	5,885.0	124.28	48.351		
13,300.0	7,100.0	6,720.0	6,719.2	119.0	13.1	77.30	-91.5	-356.5	6,105.0	5,978.9	126.15	48.395		
13,400.0	7,100.0	6,720.0	6,719.2	120.9	13.1	77.30	-91.5	-356.5	6,200.9	6,072.9	128.02	48.437		

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 4-17H20
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 4-17H20	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

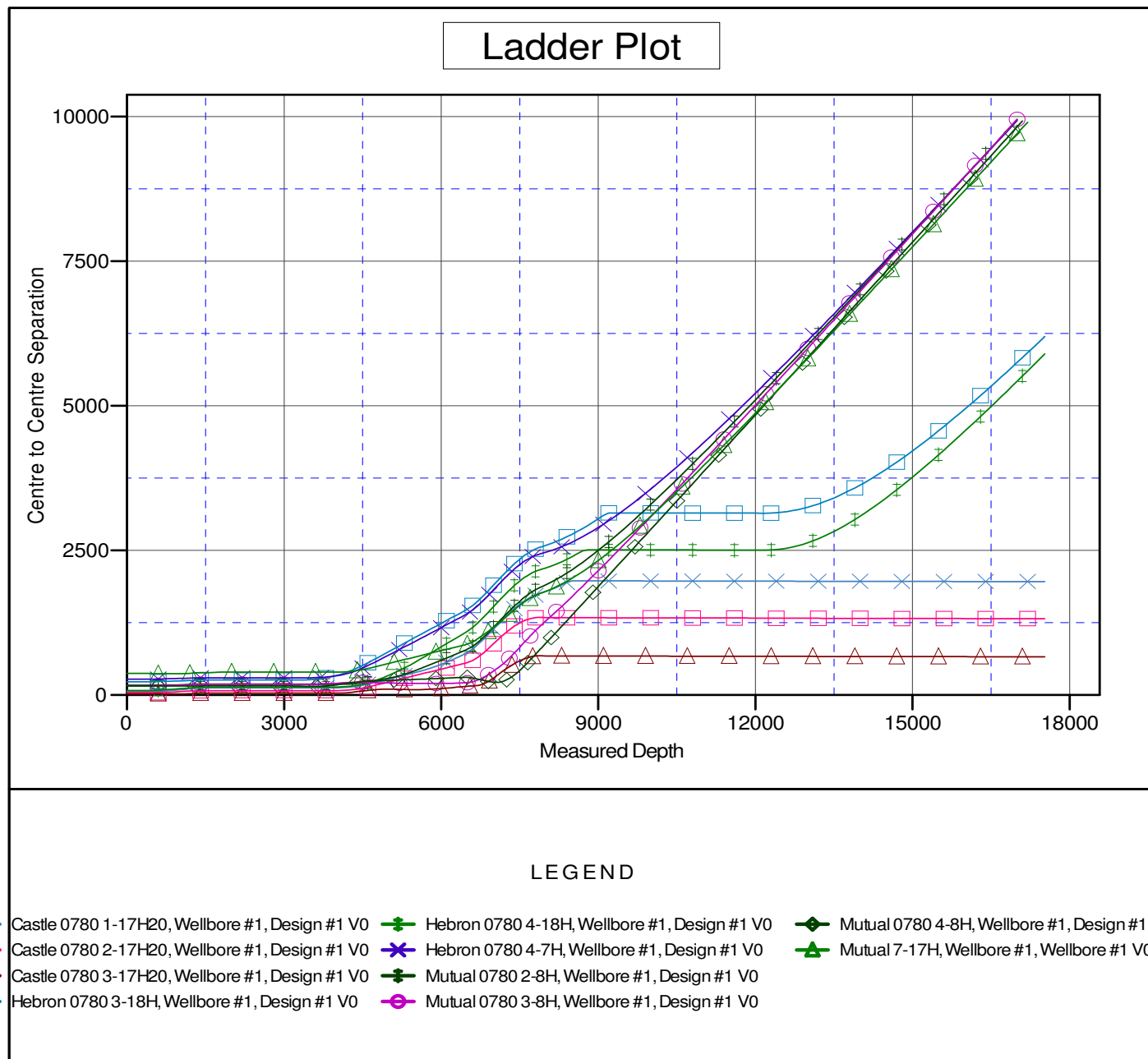
Offset Design T7N-R80W-S17 - Mutual 7-17H - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 1031-Sperry MWD													Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance										Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (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		
13,500.0	7,100.0	6,720.0	6,719.2	122.7	13.1	77.30	-91.5	-356.5	6,296.9	6,167.1	129.89	48.480		
13,600.0	7,100.0	6,720.0	6,719.2	124.6	13.1	77.30	-91.5	-356.5	6,393.1	6,261.3	131.76	48.522		
13,700.0	7,100.0	6,720.0	6,719.2	126.4	13.1	77.30	-91.5	-356.5	6,489.3	6,355.7	133.63	48.563		
13,800.0	7,100.0	6,720.0	6,719.2	128.3	13.1	77.30	-91.5	-356.5	6,585.7	6,450.2	135.50	48.604		
13,900.0	7,100.0	6,720.0	6,719.2	130.2	13.1	77.30	-91.5	-356.5	6,682.2	6,544.8	137.37	48.644		
14,000.0	7,100.0	6,720.0	6,719.2	132.1	13.1	77.30	-91.5	-356.5	6,778.8	6,639.5	139.24	48.683		
14,100.0	7,100.0	6,720.0	6,719.2	133.9	13.1	77.30	-91.5	-356.5	6,875.4	6,734.3	141.11	48.723		
14,200.0	7,100.0	6,720.0	6,719.2	135.8	13.1	77.30	-91.5	-356.5	6,972.2	6,829.2	142.99	48.761		
14,300.0	7,100.0	6,720.0	6,719.2	137.7	13.1	77.30	-91.5	-356.5	7,069.1	6,924.2	144.86	48.799		
14,400.0	7,100.0	6,720.0	6,719.2	139.6	13.1	77.30	-91.5	-356.5	7,166.0	7,019.3	146.73	48.837		
14,500.0	7,100.0	6,720.0	6,719.2	141.5	13.1	77.30	-91.5	-356.5	7,263.1	7,114.4	148.61	48.874		
14,600.0	7,100.0	6,720.0	6,719.2	143.3	13.1	77.30	-91.5	-356.5	7,360.2	7,209.7	150.48	48.910		
14,700.0	7,100.0	6,720.0	6,719.2	145.2	13.1	77.30	-91.5	-356.5	7,457.3	7,305.0	152.36	48.946		
14,800.0	7,100.0	6,720.0	6,719.2	147.1	13.1	77.30	-91.5	-356.5	7,554.6	7,400.4	154.23	48.981		
14,900.0	7,100.0	6,720.0	6,719.2	149.0	13.1	77.30	-91.5	-356.5	7,651.9	7,495.8	156.11	49.016		
15,000.0	7,100.0	6,720.0	6,719.2	150.9	13.1	77.30	-91.5	-356.5	7,749.3	7,591.4	157.99	49.051		
15,100.0	7,100.0	6,720.0	6,719.2	152.8	13.1	77.30	-91.5	-356.5	7,846.8	7,686.9	159.86	49.085		
15,200.0	7,100.0	6,720.0	6,719.2	154.7	13.1	77.30	-91.5	-356.5	7,944.3	7,782.6	161.74	49.118		
15,300.0	7,100.0	6,720.0	6,719.2	156.5	13.1	77.30	-91.5	-356.5	8,041.9	7,878.3	163.62	49.151		
15,400.0	7,100.0	6,720.0	6,719.2	158.4	13.1	77.30	-91.5	-356.5	8,139.6	7,974.1	165.49	49.183		
15,500.0	7,100.0	6,720.0	6,719.2	160.3	13.1	77.30	-91.5	-356.5	8,237.3	8,069.9	167.37	49.215		
15,600.0	7,100.0	6,720.0	6,719.2	162.2	13.1	77.30	-91.5	-356.5	8,335.0	8,165.8	169.25	49.247		
15,700.0	7,100.0	6,720.0	6,719.2	164.1	13.1	77.30	-91.5	-356.5	8,432.8	8,261.7	171.13	49.278		
15,800.0	7,100.0	6,720.0	6,719.2	166.0	13.1	77.30	-91.5	-356.5	8,530.7	8,357.7	173.01	49.308		
15,900.0	7,100.0	6,720.0	6,719.2	167.9	13.1	77.30	-91.5	-356.5	8,628.6	8,453.7	174.89	49.338		
16,000.0	7,100.0	6,720.0	6,719.2	169.8	13.1	77.30	-91.5	-356.5	8,726.6	8,549.8	176.77	49.368		
16,100.0	7,100.0	6,720.0	6,719.2	171.7	13.1	77.30	-91.5	-356.5	8,824.6	8,645.9	178.65	49.397		
16,200.0	7,100.0	6,720.0	6,719.2	173.6	13.1	77.30	-91.5	-356.5	8,922.6	8,742.1	180.52	49.426		
16,300.0	7,100.0	6,720.0	6,719.2	175.5	13.1	77.30	-91.5	-356.5	9,020.7	8,838.3	182.40	49.454		
16,400.0	7,100.0	6,720.0	6,719.2	177.4	13.1	77.30	-91.5	-356.5	9,118.8	8,934.5	184.28	49.482		
16,500.0	7,100.0	6,720.0	6,719.2	179.3	13.1	77.30	-91.5	-356.5	9,217.0	9,030.8	186.17	49.510		
16,600.0	7,100.0	6,720.0	6,719.2	181.2	13.1	77.30	-91.5	-356.5	9,315.2	9,127.2	188.05	49.537		
16,700.0	7,100.0	6,720.0	6,719.2	183.1	13.1	77.30	-91.5	-356.5	9,413.5	9,223.5	189.93	49.564		
16,800.0	7,100.0	6,720.0	6,719.2	185.0	13.1	77.30	-91.5	-356.5	9,511.7	9,319.9	191.81	49.590		
16,900.0	7,100.0	6,720.0	6,719.2	186.9	13.1	77.30	-91.5	-356.5	9,610.1	9,416.4	193.69	49.616		
17,000.0	7,100.0	6,704.1	6,703.4	188.8	13.0	76.79	-92.5	-356.6	9,708.1	9,512.9	195.19	49.735		
17,100.0	7,100.0	6,704.0	6,703.2	190.7	13.0	76.79	-92.5	-356.6	9,806.5	9,609.4	197.07	49.762		
17,200.0	7,100.0	6,703.8	6,703.1	192.6	13.0	76.78	-92.5	-356.6	9,904.9	9,705.9	198.94	49.788		

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 4-17H20
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 4-17H20	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 4-17H20
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: -0.58°



SandRidge Energy

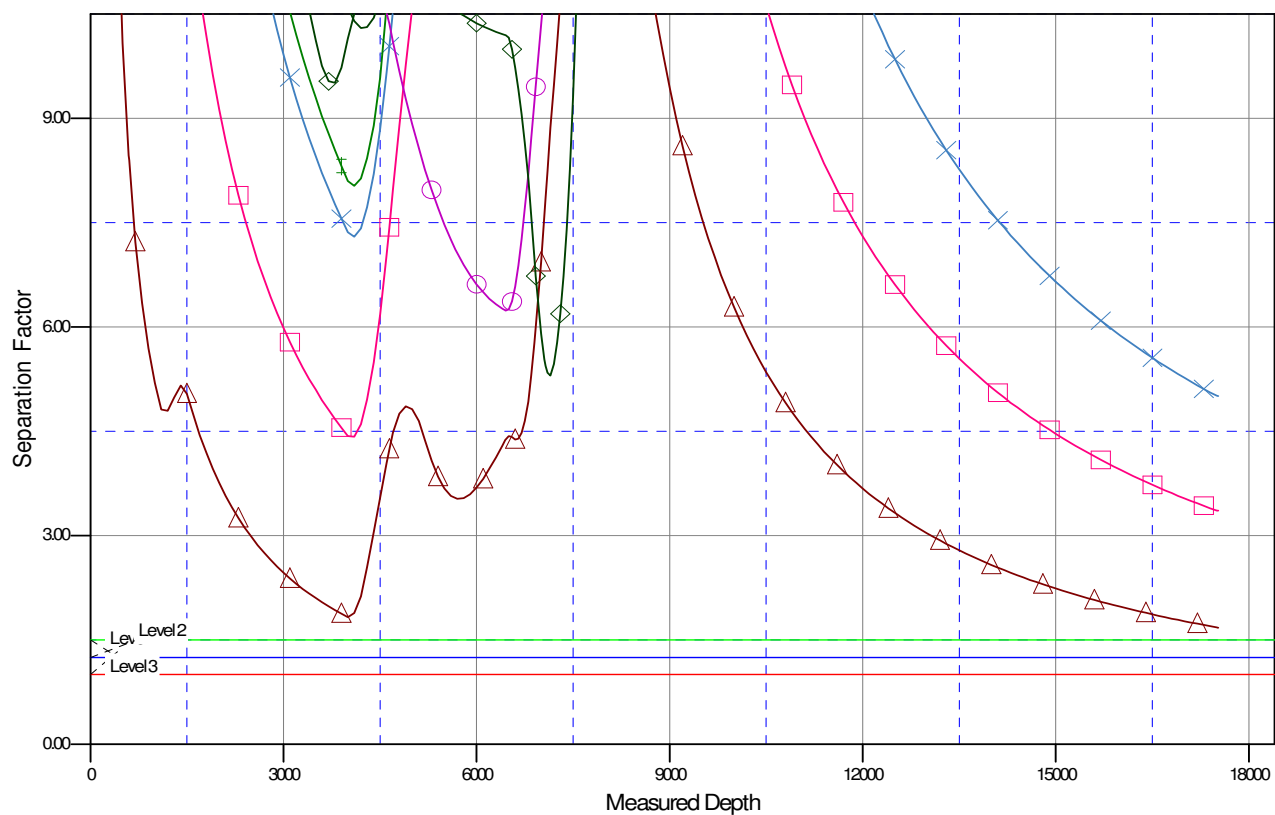
Anticollision Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Castle 0780 4-17H20
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 4-17H20	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 4-17H20
 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 3-17H20, 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