SandRidge Energy

North Park Basin
T7N-R80W-S17
Mutual 0780 3-8H

Wellbore #1
Design #1

Anticollision Report

15 December, 2015

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMProd
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Reference Design #1

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria	WARNING: There is hidden tight data in this project	
Interpolation Method:	Stations	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 usft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 12/14/2015

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	11,971.9	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	150.0	148.0	75.503	CC, ES
Castle 0780 1-17H20 - Wellbore #1 - Design #1	3,300.0	3,298.9	232.5	218.4	16.461	SF
Castle 0780 2-17H20 - Wellbore #1 - Design #1	500.0	500.0	151.3	149.3	76.155	CC, ES
Castle 0780 2-17H20 - Wellbore #1 - Design #1	3,600.0	3,595.0	227.2	211.6	14.605	SF
Castle 0780 3-17H20 - Wellbore #1 - Design #1	500.0	500.0	155.2	153.2	78.094	CC, ES
Castle 0780 3-17H20 - Wellbore #1 - Design #1	6,000.0	6,004.8	312.7	282.0	10.203	SF
Castle 0780 4-17H20 - Wellbore #1 - Design #1	500.0	500.0	161.5	159.5	81.258	CC, ES
Castle 0780 4-17H20 - Wellbore #1 - Design #1	6,483.2	6,483.1	211.8	177.8	6.235	SF
Hebron 0780 3-18H - Wellbore #1 - Design #1	500.0	500.0	226.7	224.7	114.094	CC, ES
Hebron 0780 3-18H - Wellbore #1 - Design #1	3,100.0	3,099.3	260.7	247.2	19.249	SF
Hebron 0780 4-18H - Wellbore #1 - Design #1	500.0	500.0	151.3	149.3	76.162	CC, ES
Hebron 0780 4-18H - Wellbore #1 - Design #1	3,100.0	3,099.7	189.0	175.6	14.130	SF
Hebron 0780 4-7H - Wellbore #1 - Design #1	500.0	503.0	169.8	167.8	85.298	CC
Hebron 0780 4-7H - Wellbore #1 - Design #1	551.3	554.3	170.0	167.7	76.562	ES
Hebron 0780 4-7H - Wellbore #1 - Design #1	11,971.9	12,091.6	2,000.7	1,804.8	10.210	SF
Mutual 0780 2-8H - Wellbore #1 - Design #1	500.0	500.0	20.0	18.0	10.072	CC
Mutual 0780 2-8H - Wellbore #1 - Design #1	551.3	551.3	20.2	18.0	9.120	ES
Mutual 0780 2-8H - Wellbore #1 - Design #1	2,799.9	2,799.7	35.9	23.6	2.926	SF
Mutual 0780 4-8H - Wellbore #1 - Design #1	500.0	500.0	20.0	18.0	10.047	CC
Mutual 0780 4-8H - Wellbore #1 - Design #1	3,200.0	3,198.7	25.1	11.3	1.813	Level 4, ES
Mutual 0780 4-8H - Wellbore #1 - Design #1	3,210.2	3,208.8	25.2	11.3	1.812	Level 4, SF
Mutual 7-17H - Wellbore #1 - Wellbore #1	10,639.1	11,157.0	19.0	-44.6	0.299	Level 1, CC
Mutual 7-17H - Wellbore #1 - Wellbore #1	10,700.0	11,215.0	26.7	-92.2	0.225	Level 1, SF
Mutual 7-17H - Wellbore #1 - Wellbore #1	10,800.0	11,309.9	53.4	-92.6	0.366	Level 1, ES

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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-179.10	-150.0	-2.3	150.0				
100.0	100.0	100.0	100.0	0.1	0.1	-179.10	-150.0	-2.3	150.0	149.8	0.19	794.573	
200.0	200.0	200.0	200.0	0.3	0.3	-179.10	-150.0	-2.3	150.0	149.4	0.64	235.015	
300.0	300.0	300.0	300.0	0.5	0.5	-179.10	-150.0	-2.3	150.0	148.9	1.09	137.901	

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

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Reference Well:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
400.0	400.0	400.0	400.0	0.8	0.8	-179.10	-150.0	-2.3	150.0	148.5	1.54	97.579	
500.0	500.0	500.0	500.0	1.0	1.0	-179.10	-150.0	-2.3	150.0	148.0	1.99	75.503	CC, ES
551.3	551.3	549.2	549.2	1.1	1.1	154.49	-150.3	-2.6	150.8	148.6	2.20	68.488	
600.0	600.0	595.8	595.8	1.2	1.2	154.89	-151.3	-3.3	152.6	150.2	2.40	63.451	
700.0	700.0	692.2	692.1	1.4	1.4	156.16	-155.1	-6.2	158.3	155.5	2.82	56.182	
800.0	800.0	791.9	791.6	1.7	1.6	157.58	-159.9	-9.8	165.0	161.7	3.24	50.895	
900.0	899.9	891.6	891.1	1.9	1.8	158.90	-164.7	-13.4	171.7	168.1	3.67	46.765	
1,000.0	999.9	991.3	990.6	2.1	2.0	160.11	-169.5	-17.0	178.6	174.5	4.11	43.464	
1,100.0	1,099.9	1,091.0	1,090.1	2.3	2.3	161.24	-174.4	-20.6	185.5	181.0	4.55	40.780	
1,200.0	1,199.9	1,190.7	1,189.6	2.6	2.5	162.28	-179.2	-24.2	192.5	187.5	4.99	38.563	
1,300.0	1,299.9	1,290.4	1,289.1	2.8	2.7	163.25	-184.0	-27.8	199.6	194.2	5.44	36.706	
1,400.0	1,399.9	1,394.3	1,393.0	3.0	3.0	164.10	-188.4	-31.1	206.1	200.2	5.88	35.022	
1,500.0	1,499.8	1,501.2	1,499.8	3.2	3.2	164.48	-190.0	-32.3	209.5	203.2	6.32	33.121	
1,600.0	1,599.8	1,601.2	1,599.8	3.5	3.4	164.61	-190.0	-32.3	211.2	204.5	6.75	31.273	
1,700.0	1,699.8	1,701.2	1,699.8	3.7	3.6	164.74	-190.0	-32.3	212.9	205.8	7.18	29.646	
1,748.9	1,748.7	1,750.1	1,748.7	3.8	3.7	164.80	-190.0	-32.3	213.8	206.4	7.39	28.915	
1,800.2	1,800.0	1,801.4	1,800.0	3.9	3.8	-168.60	-190.0	-32.3	214.2	206.5	7.68	27.894	
1,900.0	1,899.8	1,901.2	1,899.8	4.1	4.0	-168.60	-190.0	-32.3	214.2	206.1	8.08	26.516	
2,000.0	1,999.8	2,001.2	1,999.8	4.3	4.2	-168.60	-190.0	-32.3	214.2	205.7	8.51	25.184	
2,100.0	2,099.8	2,101.2	2,099.8	4.5	4.4	-168.60	-190.0	-32.3	214.2	205.3	8.94	23.973	
2,200.0	2,199.8	2,201.2	2,199.8	4.8	4.6	-168.60	-190.0	-32.3	214.2	204.9	9.37	22.869	
2,300.0	2,299.8	2,301.2	2,299.8	5.0	4.8	-168.60	-190.0	-32.3	214.2	204.4	9.80	21.858	
2,400.0	2,399.8	2,401.2	2,399.8	5.2	5.0	-168.60	-190.0	-32.3	214.2	204.0	10.24	20.930	
2,500.0	2,499.8	2,501.2	2,499.8	5.4	5.2	-168.60	-190.0	-32.3	214.2	203.6	10.67	20.075	
2,600.0	2,599.8	2,601.2	2,599.8	5.7	5.5	-168.60	-190.0	-32.3	214.2	203.1	11.11	19.286	
2,700.0	2,699.8	2,701.2	2,699.8	5.9	5.7	-168.60	-190.0	-32.3	214.2	202.7	11.55	18.554	
2,799.9	2,799.7	2,801.1	2,799.7	6.1	5.9	-168.60	-190.0	-32.3	214.2	202.2	11.98	17.876	
2,900.0	2,899.8	2,901.2	2,899.8	6.3	6.1	111.10	-190.0	-32.3	214.9	202.5	12.38	17.350	
3,000.0	2,999.6	3,001.0	2,999.6	6.5	6.3	112.35	-190.0	-32.3	216.8	204.0	12.81	16.921	
3,100.0	3,099.3	3,100.7	3,099.3	6.8	6.5	114.38	-190.0	-32.3	220.3	207.0	13.24	16.632	
3,200.0	3,198.5	3,199.9	3,198.5	7.0	6.8	117.09	-190.0	-32.3	225.6	211.9	13.68	16.494	
3,210.2	3,208.6	3,210.0	3,208.6	7.0	6.8	117.40	-190.0	-32.3	226.3	212.5	13.72	16.489	
3,300.0	3,297.5	3,298.9	3,297.5	7.2	7.0	120.18	-190.0	-32.3	232.5	218.4	14.12	16.461	SF
3,400.0	3,396.5	3,397.9	3,396.5	7.5	7.2	123.11	-190.0	-32.3	240.0	225.5	14.57	16.470	
3,500.0	3,495.4	3,496.8	3,495.4	7.8	7.4	125.85	-190.0	-32.3	248.2	233.1	15.03	16.514	
3,600.0	3,594.4	3,595.8	3,594.4	8.0	7.6	128.42	-190.0	-32.3	256.8	241.4	15.48	16.588	
3,700.0	3,693.4	3,694.8	3,693.4	8.3	7.8	130.81	-190.0	-32.3	266.0	250.1	15.94	16.687	
3,800.0	3,792.4	3,793.8	3,792.4	8.6	8.1	133.05	-190.0	-32.3	275.6	259.2	16.40	16.806	
3,900.0	3,891.3	3,892.7	3,891.3	8.9	8.3	135.13	-190.0	-32.3	285.6	268.7	16.86	16.941	
4,000.0	3,990.3	3,991.7	3,990.3	9.2	8.5	137.07	-190.0	-32.3	295.9	278.6	17.32	17.089	
4,100.0	4,089.3	4,090.7	4,089.3	9.5	8.7	138.88	-190.0	-32.3	306.6	288.8	17.77	17.247	
4,200.0	4,188.3	4,189.7	4,188.3	9.8	8.9	140.57	-190.0	-32.3	317.5	299.3	18.23	17.413	
4,300.0	4,287.2	4,288.6	4,287.2	10.1	9.1	142.14	-190.0	-32.3	328.7	310.0	18.69	17.585	
4,400.0	4,386.2	4,387.6	4,386.2	10.4	9.4	143.61	-190.0	-32.3	340.1	321.0	19.15	17.761	
4,500.0	4,485.2	4,486.6	4,485.2	10.7	9.6	144.99	-190.0	-32.3	351.7	332.1	19.61	17.939	
4,600.0	4,584.2	4,585.6	4,584.2	11.0	9.8	146.27	-190.0	-32.3	363.6	343.5	20.07	18.119	
4,700.0	4,683.1	4,684.6	4,683.1	11.3	10.0	147.48	-190.0	-32.3	375.6	355.0	20.52	18.299	
4,800.0	4,782.1	4,783.5	4,782.1	11.6	10.2	148.61	-190.0	-32.3	387.7	366.7	20.98	18.479	
4,900.0	4,881.1	4,882.5	4,881.1	11.9	10.5	149.67	-190.0	-32.3	400.0	378.6	21.44	18.658	
5,000.0	4,980.1	4,981.5	4,980.1	12.2	10.7	150.67	-190.0	-32.3	412.4	390.5	21.90	18.835	
5,100.0	5,079.1	5,080.5	5,079.1	12.6	10.9	151.61	-190.0	-32.3	424.9	402.6	22.35	19.010	
5,200.0	5,178.0	5,179.4	5,178.0	12.9	11.1	152.50	-190.0	-32.3	437.6	414.8	22.81	19.183	

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

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

Offset Design T7N-R80W-S17 - Castle 0780 1-17H20 - Wellbore #1 - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-Sperry MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,300.0	5,277.0	5,278.4	5,277.0	13.2	11.3	153.33	-190.0	-32.3	450.3	427.0	23.27	19.353	
5,400.0	5,376.0	5,377.4	5,376.0	13.5	11.6	154.13	-190.0	-32.3	463.1	439.4	23.73	19.520	
5,500.0	5,475.0	5,476.4	5,475.0	13.9	11.8	154.87	-190.0	-32.3	476.0	451.9	24.18	19.684	
5,600.0	5,573.9	5,565.0	5,563.6	14.2	12.0	155.54	-190.2	-33.1	489.8	465.2	24.61	19.900	
5,700.0	5,672.9	5,649.6	5,648.1	14.5	12.2	156.24	-190.9	-36.1	506.3	481.3	25.02	20.233	
5,800.0	5,771.9	5,733.1	5,731.5	14.8	12.3	156.98	-192.2	-41.5	525.7	500.2	25.43	20.672	
5,900.0	5,870.9	5,815.6	5,813.6	15.2	12.5	157.75	-194.0	-49.2	547.8	522.0	25.83	21.208	
6,000.0	5,969.8	5,900.0	5,897.3	15.5	12.7	158.55	-196.4	-59.4	572.7	546.5	26.23	21.832	
6,100.0	6,068.8	5,976.9	5,973.3	15.8	12.9	159.29	-199.0	-70.8	600.4	573.7	26.62	22.550	
6,200.0	6,167.8	6,055.4	6,050.6	16.2	13.1	160.05	-202.3	-84.5	630.7	603.7	27.02	23.345	
6,300.0	6,266.8	6,132.5	6,126.0	16.5	13.3	160.78	-205.9	-99.9	663.6	636.2	27.41	24.215	
6,400.0	6,365.7	6,208.0	6,199.5	16.8	13.5	161.49	-209.9	-116.9	699.1	671.3	27.79	25.154	
6,483.2	6,448.1	6,270.8	6,260.1	17.1	13.7	162.06	-213.6	-132.5	730.5	702.4	28.12	25.983	
6,500.0	6,464.7	6,286.1	6,274.9	17.2	13.7	168.07	-214.5	-136.4	737.3	709.1	28.13	26.205	
6,550.0	6,513.6	6,330.6	6,317.8	17.4	13.9	178.90	-217.2	-147.8	759.8	731.6	28.11	27.024	
6,600.0	6,561.5	6,373.1	6,358.9	17.6	14.0	-175.05	-219.7	-158.8	785.9	757.9	27.99	28.079	
6,650.0	6,608.0	6,413.4	6,397.8	17.9	14.1	-170.87	-222.2	-169.1	815.4	787.7	27.77	29.365	
6,700.0	6,652.8	6,451.2	6,434.2	18.2	14.3	-167.51	-224.5	-178.8	848.2	820.7	27.48	30.869	
6,750.0	6,695.6	6,486.1	6,467.9	18.5	14.4	-164.45	-226.6	-187.8	883.8	856.7	27.14	32.567	
6,800.0	6,735.9	6,517.9	6,498.5	18.9	14.5	-161.34	-228.5	-195.9	922.2	895.4	26.81	34.401	
6,850.0	6,773.5	6,542.9	6,522.6	19.4	14.6	-157.82	-230.0	-202.3	963.0	936.4	26.56	36.261	
6,900.0	6,808.2	6,550.0	6,529.5	19.9	14.6	-153.05	-230.5	-204.2	1,006.1	979.6	26.55	37.896	
6,950.0	6,839.6	6,550.0	6,529.5	20.4	14.6	-146.22	-230.5	-204.2	1,051.5	1,024.3	27.14	38.745	
7,000.0	6,867.5	6,569.4	6,548.1	21.0	14.7	-138.12	-232.2	-209.4	1,098.0	1,069.5	28.52	38.501	
7,014.6	6,874.9	6,570.9	6,549.5	21.2	14.7	-134.82	-232.3	-209.8	1,111.8	1,082.7	29.20	38.082	
7,100.0	6,917.7	6,578.5	6,556.8	22.3	14.7	-135.61	-233.1	-211.9	1,193.5	1,163.7	29.78	40.072	
7,164.6	6,949.9	6,583.8	6,561.8	23.1	14.7	-136.14	-233.8	-213.4	1,255.5	1,225.2	30.26	41.490	
7,200.0	6,967.3	6,600.0	6,577.1	23.6	14.8	-125.35	-236.0	-218.1	1,289.7	1,257.0	32.66	39.493	
7,250.0	6,990.3	6,600.0	6,577.1	24.3	14.8	-110.91	-236.0	-218.1	1,337.1	1,301.6	35.47	37.692	
7,300.0	7,011.5	6,600.0	6,577.1	24.9	14.8	-99.85	-236.0	-218.1	1,383.7	1,346.6	37.07	37.332	
7,350.0	7,030.8	6,600.0	6,577.1	25.5	14.8	-91.47	-236.0	-218.1	1,429.3	1,391.5	37.79	37.823	
7,400.0	7,047.9	6,600.0	6,577.1	26.1	14.8	-85.04	-236.0	-218.1	1,473.7	1,435.7	37.97	38.814	
7,450.0	7,062.7	6,600.0	6,577.1	26.7	14.8	-80.05	-236.0	-218.1	1,516.6	1,478.8	37.80	40.123	
7,500.0	7,075.2	6,600.0	6,577.1	27.2	14.8	-76.14	-236.0	-218.1	1,557.8	1,520.4	37.40	41.650	
7,550.0	7,085.2	6,600.0	6,577.1	27.8	14.8	-73.08	-236.0	-218.1	1,597.2	1,560.3	36.85	43.338	
7,600.0	7,092.7	6,600.0	6,577.1	28.3	14.8	-70.69	-236.0	-218.1	1,634.6	1,598.4	36.20	45.149	
7,650.0	7,097.6	6,600.0	6,577.1	28.8	14.8	-68.85	-236.0	-218.1	1,669.8	1,634.3	35.49	47.048	
7,700.0	7,099.9	6,600.0	6,577.1	29.2	14.8	-67.50	-236.0	-218.1	1,702.8	1,668.1	34.75	49.002	
7,717.5	7,100.0	6,600.0	6,577.1	29.4	14.8	-67.12	-236.0	-218.1	1,713.9	1,679.4	34.49	49.693	
7,800.0	7,100.0	6,600.0	6,577.1	30.1	14.8	-67.12	-236.0	-218.1	1,766.1	1,730.8	35.38	49.923	
7,900.0	7,100.0	6,600.0	6,577.1	31.1	14.8	-67.12	-236.0	-218.1	1,832.5	1,796.0	36.50	50.201	
8,000.0	7,100.0	6,600.0	6,577.1	32.1	14.8	-67.12	-236.0	-218.1	1,901.9	1,864.2	37.71	50.430	
8,100.0	7,100.0	6,579.3	6,557.5	33.2	14.7	-66.25	-233.2	-212.1	1,973.4	1,934.6	38.76	50.911	
8,200.0	7,100.0	6,576.6	6,555.0	34.4	14.7	-66.14	-232.9	-211.4	2,047.6	2,007.5	40.06	51.111	
8,300.0	7,100.0	6,574.1	6,552.6	35.7	14.7	-66.04	-232.7	-210.7	2,123.9	2,082.5	41.41	51.285	
8,400.0	7,100.0	6,571.8	6,550.4	37.0	14.7	-65.94	-232.4	-210.1	2,202.1	2,159.2	42.81	51.439	
8,500.0	7,100.0	6,550.0	6,529.5	38.3	14.6	-65.03	-230.5	-204.2	2,282.4	2,238.4	43.98	51.892	
8,600.0	7,100.0	6,550.0	6,529.5	39.7	14.6	-65.03	-230.5	-204.2	2,363.7	2,318.2	45.47	51.986	
8,700.0	7,100.0	6,550.0	6,529.5	41.2	14.6	-65.03	-230.5	-204.2	2,446.4	2,399.4	46.98	52.072	
8,800.0	7,100.0	6,550.0	6,529.5	42.7	14.6	-65.03	-230.5	-204.2	2,530.3	2,481.8	48.52	52.151	
8,900.0	7,100.0	6,550.0	6,529.5	44.2	14.6	-65.03	-230.5	-204.2	2,615.4	2,565.3	50.08	52.226	
9,000.0	7,100.0	6,550.0	6,529.5	45.8	14.6	-65.03	-230.5	-204.2	2,701.5	2,649.9	51.66	52.297	

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

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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			Offset Wellbore Centre		Distance				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,100.0	7,100.0	6,550.0	6,529.5	47.4	14.6	-65.03	-230.5	-204.2	2,788.6	2,735.3	53.25	52.365	
9,200.0	7,100.0	6,550.0	6,529.5	49.0	14.6	-65.03	-230.5	-204.2	2,876.4	2,821.6	54.86	52.429	
9,300.0	7,100.0	6,550.0	6,529.5	50.6	14.6	-65.03	-230.5	-204.2	2,965.1	2,908.6	56.49	52.492	
9,400.0	7,100.0	6,550.0	6,529.5	52.3	14.6	-65.03	-230.5	-204.2	3,054.4	2,996.3	58.12	52.552	
9,500.0	7,100.0	6,550.0	6,529.5	54.0	14.6	-65.03	-230.5	-204.2	3,144.4	3,084.6	59.77	52.611	
9,600.0	7,100.0	6,550.0	6,529.5	55.7	14.6	-65.03	-230.5	-204.2	3,235.0	3,173.6	61.42	52.668	
9,700.0	7,100.0	6,550.0	6,529.5	57.4	14.6	-65.03	-230.5	-204.2	3,326.1	3,263.0	63.09	52.724	
9,800.0	7,100.0	6,550.0	6,529.5	59.1	14.6	-65.03	-230.5	-204.2	3,417.7	3,353.0	64.76	52.778	
9,900.0	7,100.0	6,550.0	6,529.5	60.8	14.6	-65.03	-230.5	-204.2	3,509.8	3,443.4	66.43	52.831	
10,000.0	7,100.0	6,550.0	6,529.5	62.6	14.6	-65.03	-230.5	-204.2	3,602.3	3,534.2	68.12	52.882	
10,100.0	7,100.0	6,550.0	6,529.5	64.4	14.6	-65.03	-230.5	-204.2	3,695.2	3,625.4	69.81	52.933	
10,200.0	7,100.0	6,546.7	6,526.3	66.1	14.6	-64.89	-230.2	-203.3	3,788.4	3,717.0	71.43	53.034	
10,300.0	7,100.0	6,542.9	6,522.6	67.9	14.6	-64.73	-230.0	-202.3	3,882.0	3,808.9	73.05	53.144	
10,400.0	7,100.0	6,542.9	6,522.6	69.7	14.6	-64.73	-230.0	-202.3	3,975.9	3,901.1	74.75	53.190	
10,500.0	7,100.0	6,542.9	6,522.6	71.5	14.6	-64.73	-230.0	-202.3	4,070.0	3,993.6	76.45	53.236	
10,600.0	7,100.0	6,542.9	6,522.6	73.3	14.6	-64.73	-230.0	-202.3	4,164.5	4,086.3	78.16	53.281	
10,700.0	7,100.0	6,541.7	6,521.5	75.1	14.6	-64.69	-229.9	-202.1	4,259.2	4,179.3	79.85	53.343	
10,800.0	7,100.0	6,535.7	6,515.7	76.9	14.6	-64.44	-229.6	-200.5	4,354.1	4,272.7	81.41	53.483	
10,900.0	7,100.0	6,529.7	6,509.8	78.7	14.5	-64.19	-229.2	-199.0	4,449.3	4,366.3	82.97	53.624	
11,000.0	7,100.0	6,523.6	6,504.0	80.6	14.5	-63.94	-228.8	-197.4	4,544.6	4,460.1	84.53	53.764	
11,100.0	7,100.0	6,517.6	6,498.2	82.4	14.5	-63.69	-228.5	-195.9	4,640.1	4,554.1	86.08	53.904	
11,200.0	7,100.0	6,511.5	6,492.4	84.2	14.5	-63.44	-228.1	-194.3	4,735.9	4,648.2	87.63	54.045	
11,300.0	7,100.0	6,505.5	6,486.5	86.1	14.4	-63.19	-227.7	-192.8	4,831.7	4,742.6	89.17	54.185	
11,400.0	7,100.0	6,499.4	6,480.7	87.9	14.4	-62.94	-227.4	-191.2	4,927.8	4,837.1	90.71	54.325	
11,500.0	7,100.0	6,493.4	6,474.9	89.8	14.4	-62.69	-227.0	-189.6	5,023.9	4,931.7	92.24	54.465	
11,600.0	7,100.0	6,487.4	6,469.1	91.6	14.4	-62.44	-226.6	-188.1	5,120.3	5,026.5	93.77	54.605	
11,700.0	7,100.0	6,481.3	6,463.2	93.5	14.4	-62.20	-226.3	-186.5	5,216.7	5,121.4	95.29	54.746	
11,800.0	7,100.0	6,475.3	6,457.4	95.4	14.3	-61.95	-225.9	-185.0	5,313.3	5,216.5	96.81	54.886	
11,900.0	7,100.0	6,469.2	6,451.6	97.2	14.3	-61.70	-225.6	-183.4	5,410.0	5,311.7	98.32	55.027	
11,971.9	7,100.0	6,464.9	6,447.4	98.6	14.3	-61.53	-225.3	-182.3	5,479.5	5,380.1	99.40	55.128	

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	173.33	-150.3	17.6	151.3				
100.0	100.0	100.0	100.0	0.1	0.1	173.33	-150.3	17.6	151.3	151.1	0.19	801.439	
200.0	200.0	200.0	200.0	0.3	0.3	173.33	-150.3	17.6	151.3	150.7	0.64	237.046	
300.0	300.0	300.0	300.0	0.5	0.5	173.33	-150.3	17.6	151.3	150.2	1.09	139.093	
400.0	400.0	400.0	400.0	0.8	0.8	173.33	-150.3	17.6	151.3	149.8	1.54	98.422	
500.0	500.0	500.0	500.0	1.0	1.0	173.33	-150.3	17.6	151.3	149.3	1.99	76.155	CC, ES
551.3	551.3	548.7	548.7	1.1	1.1	146.86	-150.7	17.6	152.1	149.9	2.20	69.172	
600.0	600.0	594.9	594.9	1.2	1.2	147.08	-151.9	17.6	154.1	151.7	2.40	64.193	
700.0	700.0	693.0	692.9	1.4	1.4	147.59	-156.0	17.6	159.8	157.0	2.81	56.910	
800.0	800.0	792.8	792.6	1.7	1.6	148.08	-160.5	17.6	165.8	162.5	3.22	51.414	
900.0	899.9	892.6	892.3	1.9	1.8	148.53	-164.9	17.6	171.7	168.1	3.65	47.070	
1,000.0	999.9	992.4	992.0	2.1	2.0	148.95	-169.4	17.6	177.7	173.6	4.08	43.568	
1,100.0	1,099.9	1,092.2	1,091.7	2.3	2.2	149.35	-173.8	17.6	183.7	179.2	4.51	40.699	
1,200.0	1,199.9	1,193.4	1,192.8	2.6	2.4	149.73	-178.3	17.6	189.6	184.7	4.95	38.285	
1,300.0	1,299.9	1,300.5	1,299.9	2.8	2.7	150.05	-180.3	17.6	193.0	187.6	5.40	35.747	
1,400.0	1,399.9	1,400.5	1,399.9	3.0	2.9	150.31	-180.3	17.6	194.6	188.7	5.83	33.361	
1,500.0	1,499.8	1,500.5	1,499.8	3.2	3.1	150.57	-180.3	17.6	196.1	189.9	6.26	31.310	
1,600.0	1,599.8	1,600.5	1,599.8	3.5	3.3	150.83	-180.3	17.6	197.7	191.0	6.70	29.514	
1,700.0	1,699.8	1,700.4	1,699.8	3.7	3.5	151.08	-180.3	17.6	199.3	192.1	7.13	27.929	
1,748.9	1,748.7	1,749.3	1,748.7	3.8	3.6	151.20	-180.3	17.6	200.0	192.7	7.35	27.219	
1,800.2	1,800.0	1,800.6	1,800.0	3.9	3.7	177.83	-180.3	17.6	200.4	192.8	7.59	26.403	
1,900.0	1,899.8	1,900.4	1,899.8	4.1	3.9	177.83	-180.3	17.6	200.4	192.4	8.00	25.059	
2,000.0	1,999.8	2,000.4	1,999.8	4.3	4.1	177.83	-180.3	17.6	200.4	192.0	8.43	23.766	
2,100.0	2,099.8	2,100.4	2,099.8	4.5	4.3	177.83	-180.3	17.6	200.4	191.6	8.87	22.597	
2,200.0	2,199.8	2,200.4	2,199.8	4.8	4.5	177.83	-180.3	17.6	200.4	191.1	9.31	21.534	
2,300.0	2,299.8	2,300.4	2,299.8	5.0	4.8	177.83	-180.3	17.6	200.4	190.7	9.75	20.565	
2,400.0	2,399.8	2,400.4	2,399.8	5.2	5.0	177.83	-180.3	17.6	200.4	190.2	10.19	19.677	
2,500.0	2,499.8	2,500.4	2,499.8	5.4	5.2	177.83	-180.3	17.6	200.4	189.8	10.63	18.861	
2,600.0	2,599.8	2,600.4	2,599.8	5.7	5.4	177.83	-180.3	17.6	200.4	189.4	11.07	18.109	
2,700.0	2,699.8	2,700.4	2,699.8	5.9	5.6	177.83	-180.3	17.6	200.4	188.9	11.51	17.414	
2,799.9	2,799.7	2,800.3	2,799.7	6.1	5.9	177.83	-180.3	17.6	200.4	188.5	11.95	16.770	
2,900.0	2,899.8	2,900.4	2,899.8	6.3	6.1	97.60	-180.3	17.6	200.7	188.3	12.38	16.206	
3,000.0	2,999.6	3,000.3	2,999.6	6.5	6.3	99.06	-180.3	17.6	201.4	188.6	12.82	15.716	
3,100.0	3,099.3	3,099.9	3,099.3	6.8	6.5	101.45	-180.3	17.6	203.0	189.7	13.26	15.311	
3,200.0	3,198.5	3,199.1	3,198.5	7.0	6.7	104.70	-180.3	17.6	205.8	192.0	13.70	15.013	
3,210.2	3,208.6	3,209.2	3,208.6	7.0	6.8	105.07	-180.3	17.6	206.1	192.4	13.75	14.990	
3,300.0	3,297.5	3,298.1	3,297.5	7.2	6.9	108.42	-180.3	17.6	209.9	195.7	14.16	14.819	
3,400.0	3,396.5	3,397.1	3,396.5	7.5	7.2	112.01	-180.3	17.6	214.8	200.2	14.62	14.691	
3,500.0	3,495.4	3,496.1	3,495.4	7.8	7.4	115.42	-180.3	17.6	220.6	205.5	15.09	14.623	
3,600.0	3,594.4	3,595.0	3,594.4	8.0	7.6	118.64	-180.3	17.6	227.2	211.6	15.55	14.605	SF
3,700.0	3,693.4	3,694.0	3,693.4	8.3	7.8	121.68	-180.3	17.6	234.4	218.4	16.02	14.631	
3,800.0	3,792.4	3,793.0	3,792.4	8.6	8.0	124.54	-180.3	17.6	242.3	225.8	16.49	14.693	
3,900.0	3,891.3	3,892.0	3,891.3	8.9	8.3	127.21	-180.3	17.6	250.7	233.7	16.95	14.786	
4,000.0	3,990.3	3,990.9	3,990.3	9.2	8.5	129.70	-180.3	17.6	259.6	242.2	17.42	14.905	
4,100.0	4,089.3	4,089.9	4,089.3	9.5	8.7	132.03	-180.3	17.6	269.0	251.1	17.88	15.043	
4,200.0	4,188.3	4,188.9	4,188.3	9.8	8.9	134.20	-180.3	17.6	278.8	260.5	18.35	15.198	
4,300.0	4,287.2	4,287.9	4,287.2	10.1	9.1	136.22	-180.3	17.6	289.0	270.2	18.81	15.367	
4,400.0	4,386.2	4,386.8	4,386.2	10.4	9.4	138.10	-180.3	17.6	299.5	280.2	19.27	15.545	
4,500.0	4,485.2	4,485.8	4,485.2	10.7	9.6	139.85	-180.3	17.6	310.3	290.6	19.73	15.731	
4,600.0	4,584.2	4,584.8	4,584.2	11.0	9.8	141.48	-180.3	17.6	321.4	301.2	20.19	15.922	
4,700.0	4,683.1	4,683.8	4,683.1	11.3	10.0	143.01	-180.3	17.6	332.7	312.1	20.64	16.118	
4,800.0	4,782.1	4,782.8	4,782.1	11.6	10.2	144.43	-180.3	17.6	344.3	323.2	21.10	16.315	

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,900.0	4,881.1	4,881.7	4,881.1	11.9	10.5	145.77	-180.3	17.6	356.0	334.5	21.56	16.514	
5,000.0	4,980.1	4,980.7	4,980.1	12.2	10.7	147.01	-180.3	17.6	368.0	345.9	22.02	16.713	
5,100.0	5,079.1	5,079.7	5,079.1	12.6	10.9	148.18	-180.3	17.6	380.1	357.6	22.47	16.911	
5,200.0	5,178.0	5,178.7	5,178.0	12.9	11.1	149.28	-180.3	17.6	392.3	369.4	22.93	17.108	
5,300.0	5,277.0	5,277.6	5,277.0	13.2	11.4	150.31	-180.3	17.6	404.7	381.3	23.39	17.302	
5,400.0	5,376.0	5,376.6	5,376.0	13.5	11.6	151.28	-180.3	17.6	417.1	393.3	23.84	17.495	
5,500.0	5,475.0	5,475.6	5,475.0	13.9	11.8	152.19	-180.3	17.6	429.7	405.4	24.30	17.685	
5,600.0	5,573.9	5,574.6	5,573.9	14.2	12.0	153.05	-180.3	17.6	442.4	417.7	24.76	17.872	
5,700.0	5,672.9	5,673.5	5,672.9	14.5	12.2	153.86	-180.3	17.6	455.2	430.0	25.21	18.056	
5,800.0	5,771.9	5,772.5	5,771.9	14.8	12.5	154.63	-180.3	17.6	468.1	442.4	25.67	18.236	
5,900.0	5,870.9	5,871.5	5,870.9	15.2	12.7	155.36	-180.3	17.6	481.1	455.0	26.13	18.413	
6,000.0	5,969.8	5,970.5	5,969.8	15.5	12.9	156.05	-180.3	17.6	494.1	467.5	26.58	18.587	
6,100.0	6,068.8	6,069.4	6,068.8	15.8	13.1	156.70	-180.3	17.6	507.2	480.2	27.04	18.757	
6,200.0	6,167.8	6,168.4	6,167.8	16.2	13.3	157.32	-180.3	17.6	520.4	492.9	27.50	18.923	
6,300.0	6,266.8	6,267.4	6,266.8	16.5	13.6	157.91	-180.3	17.6	533.6	505.6	27.96	19.086	
6,400.0	6,365.7	6,366.4	6,365.7	16.8	13.8	158.47	-180.3	17.6	546.9	518.4	28.41	19.246	
6,483.2	6,448.1	6,448.7	6,448.1	17.1	14.0	158.92	-180.3	17.6	557.9	529.1	28.80	19.376	
6,500.0	6,464.7	6,461.3	6,460.7	17.2	14.0	164.70	-180.4	17.6	560.5	531.6	28.81	19.451	
6,550.0	6,513.6	6,500.0	6,499.3	17.4	14.1	174.68	-182.3	17.8	571.6	542.8	28.80	19.846	
6,600.0	6,561.5	6,528.5	6,527.7	17.6	14.1	179.73	-185.4	18.0	588.0	559.3	28.66	20.515	
6,650.0	6,608.0	6,559.2	6,557.9	17.9	14.2	-177.30	-190.3	18.5	609.4	581.0	28.42	21.443	
6,700.0	6,652.8	6,587.1	6,585.2	18.2	14.2	-175.32	-196.2	19.0	635.7	607.6	28.08	22.635	
6,750.0	6,695.6	6,611.9	6,609.2	18.5	14.3	-173.80	-202.5	19.5	666.4	638.8	27.65	24.098	
6,800.0	6,735.9	6,633.6	6,629.9	18.9	14.3	-172.44	-208.8	20.1	701.2	674.0	27.15	25.831	
6,850.0	6,773.5	6,650.0	6,645.4	19.4	14.4	-170.90	-214.1	20.5	739.6	713.0	26.58	27.828	
6,900.0	6,808.2	6,666.9	6,661.3	19.9	14.4	-169.22	-220.1	21.1	781.1	755.1	26.00	30.042	
6,950.0	6,839.6	6,678.9	6,672.4	20.4	14.4	-166.76	-224.6	21.5	825.2	799.7	25.47	32.391	
7,000.0	6,867.5	6,688.0	6,680.7	21.0	14.4	-163.01	-228.1	21.8	871.3	846.2	25.17	34.614	
7,014.6	6,874.9	6,700.0	6,691.7	21.2	14.5	-162.72	-233.1	22.2	885.2	860.1	25.08	35.298	
7,100.0	6,917.7	6,700.0	6,691.7	22.3	14.5	-162.72	-233.1	22.2	966.5	941.1	25.39	38.065	
7,164.6	6,949.9	6,700.0	6,691.7	23.1	14.5	-162.72	-233.1	22.2	1,028.4	1,002.7	25.65	40.098	
7,200.0	6,967.3	6,700.0	6,691.7	23.6	14.5	-148.39	-233.1	22.2	1,062.4	1,034.6	27.83	38.175	
7,250.0	6,990.3	6,716.0	6,706.1	24.3	14.5	-131.67	-240.0	22.8	1,110.3	1,078.9	31.44	35.312	
7,300.0	7,011.5	6,717.9	6,707.8	24.9	14.5	-115.65	-240.8	22.9	1,158.1	1,123.3	34.84	33.244	
7,350.0	7,030.8	6,718.3	6,708.2	25.5	14.5	-102.97	-241.0	22.9	1,205.3	1,168.4	36.88	32.682	
7,400.0	7,047.9	6,717.3	6,707.3	26.1	14.5	-93.27	-240.5	22.9	1,251.7	1,213.9	37.81	33.108	
7,450.0	7,062.7	6,715.1	6,705.3	26.7	14.5	-85.89	-239.6	22.8	1,297.0	1,258.9	38.01	34.121	
7,500.0	7,075.2	6,700.0	6,691.7	27.2	14.5	-79.29	-233.1	22.2	1,341.0	1,303.3	37.70	35.571	
7,550.0	7,085.2	6,700.0	6,691.7	27.8	14.5	-75.33	-233.1	22.2	1,383.4	1,346.2	37.21	37.176	
7,600.0	7,092.7	6,700.0	6,691.7	28.3	14.5	-72.28	-233.1	22.2	1,424.1	1,387.5	36.59	38.922	
7,650.0	7,097.6	6,700.0	6,691.7	28.8	14.5	-69.97	-233.1	22.2	1,462.9	1,427.0	35.88	40.769	
7,700.0	7,099.9	6,700.0	6,691.7	29.2	14.5	-68.25	-233.1	22.2	1,499.7	1,464.6	35.14	42.682	
7,717.5	7,100.0	6,700.0	6,691.7	29.4	14.5	-67.77	-233.1	22.2	1,512.1	1,477.2	34.87	43.362	
7,800.0	7,100.0	6,676.2	6,669.9	30.1	14.4	-66.72	-223.6	21.4	1,570.4	1,534.9	35.52	44.210	
7,900.0	7,100.0	6,650.0	6,645.4	31.1	14.4	-65.57	-214.1	20.5	1,644.0	1,607.7	36.36	45.215	
8,000.0	7,100.0	6,650.0	6,645.4	32.1	14.4	-65.57	-214.1	20.5	1,719.7	1,682.2	37.55	45.793	
8,100.0	7,100.0	6,650.0	6,645.4	33.2	14.4	-65.57	-214.1	20.5	1,797.8	1,759.0	38.82	46.312	
8,200.0	7,100.0	6,650.0	6,645.4	34.4	14.4	-65.57	-214.1	20.5	1,877.9	1,837.8	40.14	46.781	
8,300.0	7,100.0	6,625.9	6,622.6	35.7	14.3	-64.51	-206.5	19.9	1,959.3	1,918.1	41.21	47.545	
8,400.0	7,100.0	6,600.0	6,597.7	37.0	14.3	-63.37	-199.3	19.2	2,042.8	2,000.5	42.27	48.332	
8,500.0	7,100.0	6,600.0	6,597.7	38.3	14.3	-63.37	-199.3	19.2	2,127.1	2,083.4	43.70	48.676	
8,600.0	7,100.0	6,600.0	6,597.7	39.7	14.3	-63.37	-199.3	19.2	2,212.7	2,167.6	45.17	48.992	

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

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,700.0	7,100.0	6,600.0	6,597.7	41.2	14.3	-63.37	-199.3	19.2	2,299.5	2,252.9	46.66	49.283	
8,800.0	7,100.0	6,600.0	6,597.7	42.7	14.3	-63.37	-199.3	19.2	2,387.3	2,339.2	48.18	49.552	
8,900.0	7,100.0	6,600.0	6,597.7	44.2	14.3	-63.37	-199.3	19.2	2,476.1	2,426.4	49.72	49.801	
9,000.0	7,100.0	6,600.0	6,597.7	45.8	14.3	-63.37	-199.3	19.2	2,565.6	2,514.4	51.28	50.034	
9,100.0	7,100.0	6,579.3	6,577.6	47.4	14.2	-62.47	-194.4	18.8	2,655.5	2,603.0	52.49	50.588	
9,200.0	7,100.0	6,575.2	6,573.6	49.0	14.2	-62.29	-193.5	18.7	2,746.3	2,692.3	54.00	50.860	
9,300.0	7,100.0	6,571.3	6,569.8	50.6	14.2	-62.12	-192.7	18.7	2,837.7	2,782.2	55.52	51.116	
9,400.0	7,100.0	6,550.0	6,548.9	52.3	14.2	-61.21	-188.7	18.3	2,930.0	2,873.3	56.70	51.673	
9,500.0	7,100.0	6,550.0	6,548.9	54.0	14.2	-61.21	-188.7	18.3	3,022.3	2,964.0	58.30	51.839	
9,600.0	7,100.0	6,550.0	6,548.9	55.7	14.2	-61.21	-188.7	18.3	3,115.1	3,055.2	59.91	51.997	
9,700.0	7,100.0	6,550.0	6,548.9	57.4	14.2	-61.21	-188.7	18.3	3,208.3	3,146.8	61.52	52.146	
9,800.0	7,100.0	6,550.0	6,548.9	59.1	14.2	-61.21	-188.7	18.3	3,301.9	3,238.7	63.15	52.288	
9,900.0	7,100.0	6,550.0	6,548.9	60.8	14.2	-61.21	-188.7	18.3	3,395.9	3,331.1	64.78	52.423	
10,000.0	7,100.0	6,550.0	6,548.9	62.6	14.2	-61.21	-188.7	18.3	3,490.2	3,423.8	66.41	52.551	
10,100.0	7,100.0	6,550.0	6,548.9	64.4	14.2	-61.21	-188.7	18.3	3,584.8	3,516.8	68.06	52.674	
10,200.0	7,100.0	6,550.0	6,548.9	66.1	14.2	-61.21	-188.7	18.3	3,679.7	3,610.0	69.70	52.791	
10,300.0	7,100.0	6,550.0	6,548.9	67.9	14.2	-61.21	-188.7	18.3	3,774.9	3,703.5	71.36	52.902	
10,400.0	7,100.0	6,550.0	6,548.9	69.7	14.2	-61.21	-188.7	18.3	3,870.3	3,797.3	73.01	53.009	
10,500.0	7,100.0	6,550.0	6,548.9	71.5	14.2	-61.21	-188.7	18.3	3,965.9	3,891.3	74.67	53.111	
10,600.0	7,100.0	6,550.0	6,548.9	73.3	14.2	-61.21	-188.7	18.3	4,061.8	3,985.5	76.34	53.209	
10,700.0	7,100.0	6,550.0	6,548.9	75.1	14.2	-61.21	-188.7	18.3	4,157.8	4,079.8	78.00	53.303	
10,800.0	7,100.0	6,550.0	6,548.9	76.9	14.2	-61.21	-188.7	18.3	4,254.1	4,174.4	79.67	53.393	
10,900.0	7,100.0	6,550.0	6,548.9	78.7	14.2	-61.21	-188.7	18.3	4,350.5	4,269.1	81.35	53.480	
11,000.0	7,100.0	6,550.0	6,548.9	80.6	14.2	-61.21	-188.7	18.3	4,447.0	4,364.0	83.02	53.563	
11,100.0	7,100.0	6,527.8	6,526.9	82.4	14.1	-60.26	-185.3	18.0	4,543.3	4,459.2	84.05	54.055	
11,200.0	7,100.0	6,526.3	6,525.4	84.2	14.1	-60.20	-185.1	18.0	4,640.0	4,554.4	85.67	54.161	
11,300.0	7,100.0	6,524.8	6,524.0	86.1	14.1	-60.13	-184.9	18.0	4,737.0	4,649.7	87.30	54.264	
11,400.0	7,100.0	6,523.4	6,522.6	87.9	14.1	-60.07	-184.8	18.0	4,834.0	4,745.1	88.92	54.362	
11,500.0	7,100.0	6,500.0	6,499.3	89.8	14.1	-59.09	-182.3	17.8	4,931.6	4,841.8	89.84	54.894	
11,600.0	7,100.0	6,500.0	6,499.3	91.6	14.1	-59.09	-182.3	17.8	5,028.8	4,937.3	91.50	54.961	
11,700.0	7,100.0	6,500.0	6,499.3	93.5	14.1	-59.09	-182.3	17.8	5,126.1	5,032.9	93.16	55.025	
11,800.0	7,100.0	6,500.0	6,499.3	95.4	14.1	-59.09	-182.3	17.8	5,223.5	5,128.7	94.82	55.088	
11,900.0	7,100.0	6,500.0	6,499.3	97.2	14.1	-59.09	-182.3	17.8	5,321.0	5,224.5	96.49	55.149	
11,971.9	7,100.0	6,500.0	6,499.3	98.6	14.1	-59.09	-182.3	17.8	5,391.1	5,293.5	97.68	55.191	

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	165.99	-150.5	37.6	155.2				
100.0	100.0	100.0	100.0	0.1	0.1	165.99	-150.5	37.6	155.2	155.0	0.19	821.843	
200.0	200.0	200.0	200.0	0.3	0.3	165.99	-150.5	37.6	155.2	154.5	0.64	243.081	
300.0	300.0	300.0	300.0	0.5	0.5	165.99	-150.5	37.6	155.2	154.1	1.09	142.634	
400.0	400.0	400.0	400.0	0.8	0.8	165.99	-150.5	37.6	155.2	153.6	1.54	100.928	
500.0	500.0	500.0	500.0	1.0	1.0	165.99	-150.5	37.6	155.2	153.2	1.99	78.094	CC, ES
551.3	551.3	549.5	549.5	1.1	1.1	139.40	-150.7	38.0	155.8	153.6	2.20	70.669	
600.0	600.0	596.5	596.5	1.2	1.2	139.27	-151.3	39.0	157.3	154.9	2.41	65.240	
700.0	700.0	696.0	696.0	1.4	1.4	138.68	-152.9	42.4	161.1	158.3	2.83	56.862	
800.0	800.0	796.0	795.8	1.7	1.6	138.10	-154.6	45.7	164.9	161.7	3.26	50.565	
900.0	899.9	895.9	895.6	1.9	1.8	137.55	-156.3	49.1	168.8	165.1	3.70	45.658	
1,000.0	999.9	995.8	995.5	2.1	2.0	137.03	-158.0	52.5	172.7	168.5	4.14	41.743	
1,100.0	1,099.9	1,095.9	1,095.5	2.3	2.3	136.53	-159.7	55.9	176.6	172.0	4.58	38.557	
1,200.0	1,199.9	1,200.3	1,199.9	2.6	2.5	136.50	-160.5	57.6	179.1	174.1	5.01	35.747	
1,300.0	1,299.9	1,300.3	1,299.9	2.8	2.7	136.89	-160.5	57.6	180.4	175.0	5.44	33.162	
1,400.0	1,399.9	1,400.3	1,399.9	3.0	2.9	137.27	-160.5	57.6	181.7	175.9	5.88	30.914	
1,500.0	1,499.8	1,500.2	1,499.8	3.2	3.1	137.65	-160.5	57.6	183.0	176.7	6.32	28.970	
1,600.0	1,599.8	1,600.2	1,599.8	3.5	3.3	138.03	-160.5	57.6	184.4	177.6	6.76	27.276	
1,700.0	1,699.8	1,700.2	1,699.8	3.7	3.5	138.40	-160.5	57.6	185.7	178.5	7.20	25.786	
1,748.9	1,748.7	1,749.1	1,748.7	3.8	3.6	138.58	-160.5	57.6	186.4	178.9	7.42	25.121	
1,800.2	1,800.0	1,800.4	1,800.0	3.9	3.7	165.24	-160.5	57.6	186.7	179.1	7.62	24.504	
1,900.0	1,899.8	1,900.2	1,899.8	4.1	4.0	165.24	-160.5	57.6	186.7	178.7	8.03	23.240	
2,000.0	1,999.8	2,000.2	1,999.8	4.3	4.2	165.24	-160.5	57.6	186.7	178.2	8.48	22.030	
2,100.0	2,099.8	2,100.2	2,099.8	4.5	4.4	165.24	-160.5	57.6	186.7	177.8	8.92	20.937	
2,200.0	2,199.8	2,200.2	2,199.8	4.8	4.6	165.24	-160.5	57.6	186.7	177.4	9.36	19.947	
2,300.0	2,299.8	2,300.2	2,299.8	5.0	4.8	165.24	-160.5	57.6	186.7	176.9	9.80	19.045	
2,400.0	2,399.8	2,400.2	2,399.8	5.2	5.1	165.24	-160.5	57.6	186.7	176.5	10.25	18.219	
2,500.0	2,499.8	2,500.2	2,499.8	5.4	5.3	165.24	-160.5	57.6	186.7	176.0	10.69	17.462	
2,600.0	2,599.8	2,600.2	2,599.8	5.7	5.5	165.24	-160.5	57.6	186.7	175.6	11.14	16.765	
2,700.0	2,699.8	2,700.2	2,699.8	5.9	5.7	165.24	-160.5	57.6	186.7	175.1	11.58	16.120	
2,799.9	2,799.7	2,800.1	2,799.7	6.1	5.9	165.24	-160.5	57.6	186.7	174.7	12.03	15.524	
2,900.0	2,899.8	2,900.2	2,899.8	6.3	6.2	85.05	-160.5	57.6	186.6	174.1	12.48	14.943	
3,000.0	2,999.6	3,000.0	2,999.6	6.5	6.4	86.66	-160.5	57.6	186.2	173.3	12.92	14.408	
3,100.0	3,099.3	3,099.7	3,099.3	6.8	6.6	89.34	-160.5	57.6	185.9	172.5	13.37	13.905	
3,119.9	3,119.1	3,119.5	3,119.1	6.8	6.7	90.00	-160.5	57.6	185.9	172.4	13.46	13.810	
3,200.0	3,198.5	3,198.9	3,198.5	7.0	6.8	93.06	-160.5	57.6	186.1	172.3	13.82	13.465	
3,210.2	3,208.6	3,209.0	3,208.6	7.0	6.9	93.50	-160.5	57.6	186.2	172.3	13.87	13.425	
3,300.0	3,297.5	3,297.9	3,297.5	7.2	7.1	97.37	-160.5	57.6	187.4	173.1	14.29	13.118	
3,400.0	3,396.5	3,396.9	3,396.5	7.5	7.3	101.61	-160.5	57.6	189.8	175.1	14.76	12.861	
3,500.0	3,495.4	3,495.8	3,495.4	7.8	7.5	105.72	-160.5	57.6	193.2	178.0	15.23	12.685	
3,600.0	3,594.4	3,594.8	3,594.4	8.0	7.7	109.67	-160.5	57.6	197.6	181.9	15.71	12.581	
3,700.0	3,693.4	3,693.8	3,693.4	8.3	7.9	113.43	-160.5	57.6	202.9	186.7	16.18	12.539	
3,800.0	3,792.4	3,792.8	3,792.4	8.6	8.2	117.00	-160.5	57.6	209.0	192.4	16.65	12.551	
3,900.0	3,891.3	3,891.7	3,891.3	8.9	8.4	120.35	-160.5	57.6	215.9	198.8	17.13	12.609	
4,000.0	3,990.3	3,990.7	3,990.3	9.2	8.6	123.48	-160.5	57.6	223.5	205.9	17.59	12.705	
4,100.0	4,089.3	4,089.7	4,089.3	9.5	8.8	126.41	-160.5	57.6	231.8	213.7	18.06	12.832	
4,200.0	4,188.3	4,188.7	4,188.3	9.8	9.0	129.13	-160.5	57.6	240.6	222.0	18.53	12.985	
4,300.0	4,287.2	4,287.6	4,287.2	10.1	9.3	131.65	-160.5	57.6	249.9	230.9	18.99	13.159	
4,400.0	4,386.2	4,390.2	4,389.8	10.4	9.5	133.79	-160.8	59.0	259.0	239.6	19.45	13.317	
4,500.0	4,485.2	4,493.9	4,493.4	10.7	9.7	135.10	-161.6	64.1	266.9	247.0	19.92	13.399	
4,600.0	4,584.2	4,598.2	4,597.3	11.0	9.9	135.63	-163.0	72.9	273.2	252.8	20.40	13.387	
4,700.0	4,683.1	4,702.7	4,701.0	11.3	10.2	135.45	-165.0	85.5	277.8	256.9	20.92	13.281	

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,800.0	4,782.1	4,807.2	4,804.2	11.6	10.4	134.58	-167.6	101.8	280.7	259.3	21.46	13.085	
4,900.0	4,881.1	4,911.4	4,906.4	11.9	10.7	133.04	-170.7	121.8	282.2	260.2	22.03	12.808	
5,000.0	4,980.1	5,015.0	5,007.2	12.2	11.0	130.83	-174.5	145.2	282.4	259.8	22.66	12.466	
5,100.0	5,079.1	5,117.7	5,106.3	12.6	11.3	127.94	-178.7	172.1	281.8	258.5	23.34	12.076	
5,200.0	5,178.0	5,219.4	5,203.3	12.9	11.7	124.39	-183.5	202.0	280.9	256.8	24.08	11.665	
5,277.2	5,254.5	5,295.4	5,275.3	13.1	12.0	121.42	-187.3	225.9	280.5	255.8	24.68	11.364	
5,300.0	5,277.0	5,317.7	5,296.5	13.2	12.0	120.55	-188.4	232.9	280.5	255.6	24.86	11.282	
5,400.0	5,376.0	5,415.9	5,389.6	13.5	12.5	116.72	-193.3	263.7	281.4	255.8	25.67	10.963	
5,500.0	5,475.0	5,514.0	5,482.7	13.9	12.9	112.94	-198.2	294.5	283.7	257.2	26.50	10.704	
5,600.0	5,573.9	5,612.2	5,575.7	14.2	13.3	109.23	-203.0	325.3	287.2	259.8	27.34	10.502	
5,700.0	5,672.9	5,710.3	5,668.8	14.5	13.8	105.62	-207.9	356.1	291.9	263.7	28.19	10.356	
5,800.0	5,771.9	5,808.5	5,761.9	14.8	14.3	102.13	-212.8	386.9	297.8	268.7	29.02	10.260	
5,900.0	5,870.9	5,906.6	5,854.9	15.2	14.8	98.79	-217.7	417.7	304.7	274.9	29.84	10.211	
6,000.0	5,969.8	6,004.8	5,948.0	15.5	15.3	95.60	-222.6	448.5	312.7	282.0	30.65	10.203	SF
6,100.0	6,068.8	6,102.9	6,041.1	15.8	15.8	92.58	-227.5	479.3	321.6	290.2	31.43	10.232	
6,200.0	6,167.8	6,201.1	6,134.1	16.2	16.3	89.72	-232.4	510.1	331.4	299.2	32.19	10.293	
6,300.0	6,266.8	6,299.3	6,227.2	16.5	16.9	87.02	-237.3	540.9	341.9	309.0	32.94	10.382	
6,400.0	6,365.7	6,397.4	6,320.3	16.8	17.4	84.49	-242.2	571.7	353.2	319.6	33.66	10.495	
6,483.2	6,448.1	6,479.1	6,397.7	17.1	17.9	82.51	-246.2	597.3	363.1	328.9	34.24	10.605	
6,500.0	6,464.7	6,495.6	6,413.4	17.2	18.0	87.63	-247.0	602.5	365.3	330.9	34.34	10.636	
6,550.0	6,513.6	6,544.8	6,460.0	17.4	18.3	96.04	-249.5	617.9	373.1	338.4	34.66	10.762	
6,600.0	6,561.5	6,583.6	6,496.8	17.6	18.5	99.99	-251.7	630.0	383.1	348.1	34.94	10.962	
6,650.0	6,608.0	6,613.5	6,525.1	17.9	18.7	102.04	-254.8	639.1	396.9	361.7	35.18	11.282	
6,700.0	6,652.8	6,650.0	6,559.6	18.2	18.8	103.39	-260.7	649.6	414.8	379.3	35.46	11.697	
6,750.0	6,695.6	6,667.3	6,575.8	18.5	18.9	103.34	-264.3	654.5	436.1	400.5	35.63	12.240	
6,800.0	6,735.9	6,700.0	6,606.2	18.9	19.1	103.57	-272.5	663.3	461.4	425.5	35.91	12.846	
6,850.0	6,773.5	6,700.0	6,606.2	19.4	19.1	101.01	-272.5	663.3	489.9	453.8	36.05	13.590	
6,900.0	6,808.2	6,728.0	6,631.9	19.9	19.2	99.95	-280.8	670.4	521.2	484.8	36.38	14.327	
6,950.0	6,839.6	6,750.0	6,652.0	20.4	19.3	97.97	-288.3	675.7	555.5	518.8	36.74	15.120	
7,000.0	6,867.5	6,750.0	6,652.0	21.0	19.3	93.06	-288.3	675.7	592.0	555.0	37.03	15.986	
7,014.6	6,874.9	6,750.0	6,652.0	21.2	19.3	91.44	-288.3	675.7	603.1	566.0	37.12	16.249	
7,100.0	6,917.7	6,772.7	6,672.3	22.3	19.5	94.06	-296.8	681.0	670.1	631.7	38.41	17.445	
7,164.6	6,949.9	6,783.3	6,681.7	23.1	19.5	95.24	-301.1	683.4	722.9	683.5	39.37	18.360	
7,200.0	6,967.3	6,800.0	6,696.4	23.6	19.6	97.17	-308.1	687.0	753.3	713.9	39.38	19.131	
7,250.0	6,990.3	6,800.0	6,696.4	24.3	19.6	96.09	-308.1	687.0	798.0	758.7	39.21	20.349	
7,300.0	7,011.5	6,800.0	6,696.4	24.9	19.6	92.64	-308.1	687.0	844.8	805.8	38.96	21.680	
7,350.0	7,030.8	6,800.0	6,696.4	25.5	19.6	84.58	-308.1	687.0	893.0	854.6	38.39	23.260	
7,400.0	7,047.9	6,800.0	6,696.4	26.1	19.6	66.38	-308.1	687.0	942.2	906.1	36.08	26.114	
7,450.0	7,062.7	6,800.0	6,696.4	26.7	19.6	31.10	-308.1	687.0	991.8	963.4	28.36	34.968	
7,500.0	7,075.2	6,800.0	6,696.4	27.2	19.6	-3.50	-308.1	687.0	1,041.3	1,016.9	24.45	42.582	
7,550.0	7,085.2	6,800.0	6,696.4	27.8	19.6	-21.56	-308.1	687.0	1,090.6	1,064.3	26.28	41.499	
7,600.0	7,092.7	6,800.0	6,696.4	28.3	19.6	-30.48	-308.1	687.0	1,139.2	1,111.6	27.54	41.359	
7,650.0	7,097.6	6,800.0	6,696.4	28.8	19.6	-35.49	-308.1	687.0	1,186.9	1,158.7	28.13	42.200	
7,700.0	7,099.9	6,780.2	6,679.0	29.2	19.5	-37.87	-299.8	682.7	1,232.9	1,204.8	28.13	43.828	
7,717.5	7,100.0	6,778.0	6,677.0	29.4	19.5	-38.70	-298.9	682.2	1,248.8	1,220.6	28.16	44.343	
7,800.0	7,100.0	6,768.0	6,668.1	30.1	19.4	-38.30	-295.0	679.9	1,323.4	1,294.8	28.63	46.231	
7,900.0	7,100.0	6,750.0	6,652.0	31.1	19.3	-37.62	-288.3	675.7	1,414.9	1,385.7	29.15	48.530	
8,000.0	7,100.0	6,750.0	6,652.0	32.1	19.3	-37.62	-288.3	675.7	1,507.1	1,477.1	29.97	50.290	
8,100.0	7,100.0	6,750.0	6,652.0	33.2	19.3	-37.62	-288.3	675.7	1,600.2	1,569.4	30.84	51.893	
8,200.0	7,100.0	6,728.9	6,632.8	34.4	19.2	-36.87	-281.1	670.6	1,693.6	1,662.2	31.46	53.828	
8,300.0	7,100.0	6,721.1	6,625.6	35.7	19.2	-36.61	-278.6	668.7	1,787.7	1,755.4	32.30	55.345	
8,400.0	7,100.0	6,700.0	6,606.2	37.0	19.1	-35.93	-272.5	663.3	1,882.6	1,849.6	32.99	57.066	

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

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,500.0	7,100.0	6,700.0	6,606.2	38.3	19.1	-35.93	-272.5	663.3	1,977.4	1,943.5	33.99	58.183	
8,600.0	7,100.0	6,700.0	6,606.2	39.7	19.1	-35.93	-272.5	663.3	2,072.8	2,037.8	35.01	59.204	
8,700.0	7,100.0	6,700.0	6,606.2	41.2	19.1	-35.93	-272.5	663.3	2,168.6	2,132.5	36.06	60.139	
8,800.0	7,100.0	6,700.0	6,606.2	42.7	19.1	-35.93	-272.5	663.3	2,264.7	2,227.6	37.13	60.996	
8,900.0	7,100.0	6,700.0	6,606.2	44.2	19.1	-35.93	-272.5	663.3	2,361.2	2,323.0	38.22	61.784	
9,000.0	7,100.0	6,700.0	6,606.2	45.8	19.1	-35.93	-272.5	663.3	2,457.9	2,418.6	39.32	62.509	
9,100.0	7,100.0	6,675.3	6,583.3	47.4	19.0	-35.19	-266.1	656.7	2,554.3	2,514.2	40.02	63.822	
9,200.0	7,100.0	6,671.1	6,579.3	49.0	18.9	-35.07	-265.2	655.5	2,651.2	2,610.2	41.07	64.557	
9,300.0	7,100.0	6,650.0	6,559.6	50.6	18.8	-34.50	-260.7	649.6	2,748.7	2,706.9	41.84	65.690	
9,400.0	7,100.0	6,650.0	6,559.6	52.3	18.8	-34.50	-260.7	649.6	2,845.9	2,803.0	42.97	66.234	
9,500.0	7,100.0	6,650.0	6,559.6	54.0	18.8	-34.50	-260.7	649.6	2,943.3	2,899.2	44.10	66.740	
9,600.0	7,100.0	6,650.0	6,559.6	55.7	18.8	-34.50	-260.7	649.6	3,040.9	2,995.7	45.24	67.213	
9,700.0	7,100.0	6,650.0	6,559.6	57.4	18.8	-34.50	-260.7	649.6	3,138.6	3,092.2	46.39	67.656	
9,800.0	7,100.0	6,650.0	6,559.6	59.1	18.8	-34.50	-260.7	649.6	3,236.5	3,188.9	47.55	68.070	
9,900.0	7,100.0	6,650.0	6,559.6	60.8	18.8	-34.50	-260.7	649.6	3,334.5	3,285.8	48.71	68.459	
10,000.0	7,100.0	6,650.0	6,559.6	62.6	18.8	-34.50	-260.7	649.6	3,432.6	3,382.7	49.87	68.825	
10,100.0	7,100.0	6,650.0	6,559.6	64.4	18.8	-34.50	-260.7	649.6	3,530.8	3,479.7	51.05	69.169	
10,200.0	7,100.0	6,650.0	6,559.6	66.1	18.8	-34.50	-260.7	649.6	3,629.1	3,576.9	52.22	69.493	
10,300.0	7,100.0	6,650.0	6,559.6	67.9	18.8	-34.50	-260.7	649.6	3,727.5	3,674.1	53.40	69.799	
10,400.0	7,100.0	6,650.0	6,559.6	69.7	18.8	-34.50	-260.7	649.6	3,826.0	3,771.4	54.59	70.089	
10,500.0	7,100.0	6,650.0	6,559.6	71.5	18.8	-34.50	-260.7	649.6	3,924.5	3,868.7	55.77	70.364	
10,600.0	7,100.0	6,650.0	6,559.6	73.3	18.8	-34.50	-260.7	649.6	4,023.1	3,966.2	56.97	70.624	
10,700.0	7,100.0	6,650.0	6,559.6	75.1	18.8	-34.50	-260.7	649.6	4,121.8	4,063.7	58.16	70.871	
10,800.0	7,100.0	6,627.1	6,538.0	76.9	18.7	-33.92	-256.8	643.1	4,220.1	4,161.3	58.83	71.739	
10,900.0	7,100.0	6,625.3	6,536.3	78.7	18.7	-33.88	-256.5	642.5	4,318.8	4,258.8	59.97	72.014	
11,000.0	7,100.0	6,623.5	6,534.6	80.6	18.7	-33.84	-256.2	642.0	4,417.6	4,356.5	61.12	72.277	
11,100.0	7,100.0	6,600.0	6,512.4	82.4	18.6	-33.30	-253.2	635.0	4,516.9	4,455.1	61.78	73.113	
11,200.0	7,100.0	6,600.0	6,512.4	84.2	18.6	-33.30	-253.2	635.0	4,615.7	4,552.7	62.96	73.310	
11,300.0	7,100.0	6,600.0	6,512.4	86.1	18.6	-33.30	-253.2	635.0	4,714.6	4,650.4	64.14	73.499	
11,400.0	7,100.0	6,600.0	6,512.4	87.9	18.6	-33.30	-253.2	635.0	4,813.5	4,748.1	65.33	73.680	
11,500.0	7,100.0	6,600.0	6,512.4	89.8	18.6	-33.30	-253.2	635.0	4,912.4	4,845.9	66.52	73.853	
11,600.0	7,100.0	6,600.0	6,512.4	91.6	18.6	-33.30	-253.2	635.0	5,011.4	4,943.7	67.70	74.019	
11,700.0	7,100.0	6,600.0	6,512.4	93.5	18.6	-33.30	-253.2	635.0	5,110.4	5,041.5	68.89	74.178	
11,800.0	7,100.0	6,600.0	6,512.4	95.4	18.6	-33.30	-253.2	635.0	5,209.5	5,139.4	70.09	74.330	
11,900.0	7,100.0	6,600.0	6,512.4	97.2	18.6	-33.30	-253.2	635.0	5,308.6	5,237.3	71.28	74.477	
11,971.9	7,100.0	6,600.0	6,512.4	98.6	18.6	-33.30	-253.2	635.0	5,379.8	5,307.7	72.14	74.579	

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMProd
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design T7N-R80W-S17 - Castle 0780 4-17H20 - Wellbore #1 - Design #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-Sperry MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	159.10	-150.8	57.6	161.5				
100.0	100.0	100.0	100.0	0.1	0.1	159.10	-150.8	57.6	161.5	161.3	0.19	855.143	
200.0	200.0	200.0	200.0	0.3	0.3	159.10	-150.8	57.6	161.5	160.8	0.64	252.930	
300.0	300.0	300.0	300.0	0.5	0.5	159.10	-150.8	57.6	161.5	160.4	1.09	148.413	
400.0	400.0	400.0	400.0	0.8	0.8	159.10	-150.8	57.6	161.5	159.9	1.54	105.018	
500.0	500.0	500.0	500.0	1.0	1.0	159.10	-150.8	57.6	161.5	159.5	1.99	81.258	CC, ES
551.3	551.3	550.3	550.3	1.1	1.1	132.50	-150.8	58.0	161.9	159.7	2.21	73.309	
600.0	600.0	598.1	598.0	1.2	1.2	132.31	-150.8	59.3	163.0	160.5	2.42	67.374	
700.0	700.0	698.0	697.9	1.4	1.4	131.70	-150.8	62.6	165.4	162.5	2.85	58.045	
800.0	800.0	798.0	797.8	1.7	1.6	131.11	-150.8	65.9	167.8	164.5	3.29	51.063	
900.0	899.9	897.9	897.7	1.9	1.8	130.53	-150.8	69.2	170.2	166.5	3.73	45.668	
1,000.0	999.9	997.9	997.6	2.1	2.1	129.97	-150.8	72.5	172.7	168.5	4.17	41.389	
1,100.0	1,099.9	1,097.8	1,097.5	2.3	2.3	129.42	-150.8	75.8	175.2	170.6	4.62	37.920	
1,200.0	1,199.9	1,197.8	1,197.4	2.6	2.5	128.89	-150.8	79.1	177.7	172.6	5.07	35.055	
1,300.0	1,299.9	1,297.8	1,297.3	2.8	2.7	128.38	-150.8	82.5	180.2	174.7	5.52	32.651	
1,400.0	1,399.9	1,397.7	1,397.3	3.0	3.0	127.88	-150.8	85.8	182.7	176.7	5.97	30.608	
1,500.0	1,499.8	1,500.3	1,499.8	3.2	3.2	127.81	-150.8	87.6	184.6	178.2	6.41	28.803	
1,600.0	1,599.8	1,600.3	1,599.8	3.5	3.4	128.25	-150.8	87.6	185.7	178.8	6.83	27.170	
1,700.0	1,699.8	1,700.3	1,699.8	3.7	3.6	128.68	-150.8	87.6	186.8	179.5	7.27	25.690	
1,748.9	1,748.7	1,749.2	1,748.7	3.8	3.7	128.89	-150.8	87.6	187.3	179.9	7.49	25.027	
1,800.2	1,800.0	1,800.5	1,800.0	3.9	3.8	155.57	-150.8	87.6	187.6	180.0	7.67	24.476	
1,900.0	1,899.8	1,900.3	1,899.8	4.1	4.0	155.57	-150.8	87.6	187.6	179.6	8.08	23.231	
2,000.0	1,999.8	2,000.3	1,999.8	4.3	4.2	155.57	-150.8	87.6	187.6	179.1	8.51	22.036	
2,100.0	2,099.8	2,100.3	2,099.8	4.5	4.5	155.57	-150.8	87.6	187.6	178.7	8.95	20.955	
2,200.0	2,199.8	2,200.3	2,199.8	4.8	4.7	155.57	-150.8	87.6	187.6	178.2	9.39	19.973	
2,300.0	2,299.8	2,300.3	2,299.8	5.0	4.9	155.57	-150.8	87.6	187.6	177.8	9.83	19.078	
2,400.0	2,399.8	2,400.3	2,399.8	5.2	5.1	155.57	-150.8	87.6	187.6	177.4	10.28	18.258	
2,500.0	2,499.8	2,500.3	2,499.8	5.4	5.3	155.57	-150.8	87.6	187.6	176.9	10.72	17.504	
2,600.0	2,599.8	2,600.3	2,599.8	5.7	5.5	155.57	-150.8	87.6	187.6	176.5	11.16	16.810	
2,700.0	2,699.8	2,700.3	2,699.8	5.9	5.8	155.57	-150.8	87.6	187.6	176.0	11.61	16.167	
2,799.9	2,799.7	2,800.2	2,799.7	6.1	6.0	155.57	-150.8	87.6	187.6	175.6	12.05	15.572	
2,900.0	2,899.8	2,900.3	2,899.8	6.3	6.2	75.37	-150.8	87.6	187.2	174.7	12.51	14.957	
3,000.0	2,999.6	3,000.1	2,999.6	6.5	6.4	76.95	-150.8	87.6	185.9	173.0	12.95	14.357	
3,100.0	3,099.3	3,099.7	3,099.3	6.8	6.6	79.62	-150.8	87.6	184.1	170.8	13.39	13.749	
3,200.0	3,198.5	3,199.0	3,198.5	7.0	6.9	83.40	-150.8	87.6	182.3	168.5	13.85	13.165	
3,210.2	3,208.6	3,209.1	3,208.6	7.0	6.9	83.85	-150.8	87.6	182.2	168.3	13.90	13.109	
3,300.0	3,297.5	3,298.0	3,297.5	7.2	7.1	87.84	-150.8	87.6	181.2	166.9	14.32	12.657	
3,348.4	3,345.4	3,345.9	3,345.4	7.4	7.2	90.00	-150.8	87.6	181.1	166.6	14.55	12.448	
3,400.0	3,396.5	3,396.9	3,396.5	7.5	7.3	92.30	-150.8	87.6	181.3	166.5	14.79	12.252	
3,500.0	3,495.4	3,495.9	3,495.4	7.8	7.5	96.74	-150.8	87.6	182.4	167.1	15.27	11.942	
3,600.0	3,594.4	3,594.9	3,594.4	8.0	7.7	101.10	-150.8	87.6	184.6	168.9	15.75	11.719	
3,700.0	3,693.4	3,693.9	3,693.4	8.3	8.0	105.34	-150.8	87.6	187.9	171.7	16.24	11.574	
3,800.0	3,792.4	3,792.8	3,792.4	8.6	8.2	109.41	-150.8	87.6	192.2	175.5	16.72	11.499	
3,900.0	3,891.3	3,891.8	3,891.3	8.9	8.4	113.28	-150.8	87.6	197.5	180.3	17.19	11.485	
4,000.0	3,990.3	3,990.8	3,990.3	9.2	8.6	116.94	-150.8	87.6	203.6	185.9	17.67	11.522	
4,100.0	4,089.3	4,092.9	4,092.4	9.5	8.8	120.12	-150.7	89.1	209.8	191.7	18.14	11.564	
4,200.0	4,188.3	4,196.1	4,195.4	9.8	9.1	122.29	-150.1	94.3	214.9	196.3	18.63	11.535	
4,300.0	4,287.2	4,299.8	4,298.8	10.1	9.3	123.53	-149.2	103.2	218.4	199.3	19.13	11.416	
4,400.0	4,386.2	4,403.8	4,402.0	10.4	9.6	123.89	-147.8	115.9	220.1	200.4	19.65	11.200	
4,500.0	4,485.2	4,507.9	4,504.7	10.7	9.8	123.41	-146.1	132.2	220.0	199.8	20.20	10.888	
4,600.0	4,584.2	4,611.7	4,606.5	11.0	10.1	122.06	-143.9	152.3	218.1	197.3	20.79	10.491	
4,700.0	4,683.1	4,712.5	4,704.9	11.3	10.4	120.09	-141.6	174.4	215.0	193.6	21.40	10.048	

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

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMProd
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design T7N-R80W-S17 - Castle 0780 4-17H20 - Wellbore #1 - Design #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-Sperry MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,800.0	4,782.1	4,812.1	4,802.0	11.6	10.7	118.04	-139.2	196.5	212.2	190.2	22.03	9.630	
4,900.0	4,881.1	4,911.8	4,899.2	11.9	11.0	115.95	-136.9	218.5	209.6	186.9	22.69	9.240	
5,000.0	4,980.1	5,011.5	4,996.4	12.2	11.4	113.80	-134.6	240.5	207.4	184.0	23.36	8.876	
5,100.0	5,079.1	5,111.1	5,093.5	12.6	11.7	111.61	-132.2	262.6	205.4	181.3	24.05	8.540	
5,200.0	5,178.0	5,210.8	5,190.7	12.9	12.1	109.38	-129.9	284.6	203.7	179.0	24.76	8.230	
5,300.0	5,277.0	5,310.5	5,287.9	13.2	12.4	107.12	-127.5	306.6	202.4	176.9	25.47	7.945	
5,400.0	5,376.0	5,410.1	5,385.1	13.5	12.8	104.83	-125.2	328.7	201.3	175.1	26.20	7.685	
5,500.0	5,475.0	5,509.8	5,482.2	13.9	13.2	102.52	-122.8	350.7	200.6	173.7	26.94	7.449	
5,600.0	5,573.9	5,609.5	5,579.4	14.2	13.5	100.20	-120.5	372.8	200.3	172.6	27.67	7.237	
5,662.1	5,635.4	5,671.4	5,639.8	14.4	13.8	98.76	-119.0	386.4	200.2	172.1	28.14	7.116	
5,700.0	5,672.9	5,709.1	5,676.6	14.5	13.9	97.88	-118.1	394.8	200.2	171.8	28.42	7.047	
5,800.0	5,771.9	5,808.8	5,773.7	14.8	14.3	95.55	-115.8	416.8	200.5	171.4	29.15	6.878	
5,900.0	5,870.9	5,908.5	5,870.9	15.2	14.7	93.24	-113.5	438.9	201.1	171.3	29.89	6.730	
6,000.0	5,969.8	6,008.1	5,968.1	15.5	15.1	90.95	-111.1	460.9	202.1	171.5	30.62	6.601	
6,100.0	6,068.8	6,107.8	6,065.3	15.8	15.5	88.68	-108.8	483.0	203.4	172.0	31.34	6.490	
6,200.0	6,167.8	6,207.5	6,162.4	16.2	16.0	86.44	-106.4	505.0	205.0	172.9	32.05	6.396	
6,300.0	6,266.8	6,307.1	6,259.6	16.5	16.4	84.24	-104.1	527.0	206.9	174.1	32.74	6.317	
6,400.0	6,365.7	6,406.8	6,356.8	16.8	16.8	82.08	-101.7	549.1	209.1	175.6	33.43	6.254	
6,483.2	6,448.1	6,483.1	6,430.9	17.1	17.1	80.17	-100.1	567.1	211.8	177.8	33.97	6.235 SF	
6,500.0	6,464.7	6,500.0	6,447.0	17.2	17.2	85.13	-100.0	572.2	213.0	178.9	34.08	6.251	
6,550.0	6,513.6	6,538.7	6,483.3	17.4	17.4	93.10	-99.9	585.4	219.0	184.6	34.39	6.367	
6,600.0	6,561.5	6,579.3	6,520.4	17.6	17.7	96.06	-100.2	601.9	228.5	193.8	34.73	6.579	
6,650.0	6,608.0	6,618.8	6,555.3	17.9	18.0	96.99	-101.0	620.4	241.4	206.3	35.11	6.877	
6,700.0	6,652.8	6,657.1	6,587.8	18.2	18.3	96.91	-102.2	640.6	257.5	222.0	35.52	7.249	
6,750.0	6,695.6	6,694.0	6,617.8	18.5	18.7	96.23	-103.8	662.0	276.4	240.4	35.96	7.684	
6,800.0	6,735.9	6,729.4	6,645.3	18.9	19.0	95.15	-105.6	684.3	297.8	261.4	36.45	8.170	
6,850.0	6,773.5	6,763.4	6,670.3	19.4	19.4	93.77	-107.7	707.2	321.6	284.7	36.98	8.698	
6,900.0	6,808.2	6,800.0	6,695.7	19.9	19.8	92.23	-110.3	733.5	347.6	310.0	37.58	9.248	
6,950.0	6,839.6	6,826.9	6,713.2	20.4	20.2	90.22	-112.4	753.7	375.3	337.1	38.14	9.838	
7,000.0	6,867.5	6,856.5	6,731.4	21.0	20.6	88.10	-114.9	776.9	404.6	365.8	38.78	10.434	
7,014.6	6,874.9	6,864.9	6,736.3	21.2	20.7	87.44	-115.7	783.7	413.4	374.5	38.97	10.609	
7,100.0	6,917.7	6,912.8	6,762.6	22.3	21.4	89.14	-120.3	823.6	467.0	426.3	40.70	11.475	
7,164.6	6,949.9	6,958.5	6,785.4	23.1	22.2	90.18	-125.1	862.8	509.0	466.8	42.15	12.076	
7,200.0	6,967.3	6,984.4	6,798.4	23.6	22.6	91.29	-127.8	885.1	532.8	490.5	42.30	12.595	
7,250.0	6,990.3	7,018.4	6,815.4	24.3	23.2	92.38	-131.3	914.3	568.9	526.6	42.28	13.455	
7,300.0	7,011.5	7,049.1	6,830.7	24.9	23.7	92.81	-134.5	940.7	607.7	565.6	42.06	14.446	
7,350.0	7,030.8	7,070.7	6,841.6	25.5	24.1	92.11	-136.8	959.3	648.9	607.3	41.62	15.592	
7,400.0	7,047.9	7,084.1	6,848.2	26.1	24.3	89.78	-138.3	970.8	692.5	651.5	41.00	16.889	
7,450.0	7,062.7	7,100.0	6,856.1	26.7	24.6	85.88	-140.5	984.4	738.3	698.0	40.32	18.311	
7,500.0	7,075.2	7,100.0	6,856.1	27.2	24.6	77.15	-140.5	984.4	785.5	746.3	39.17	20.051	
7,550.0	7,085.2	7,100.0	6,856.1	27.8	24.6	62.50	-140.5	984.4	833.8	796.9	36.88	22.608	
7,600.0	7,092.7	7,100.0	6,856.1	28.3	24.6	40.60	-140.5	984.4	882.7	850.6	32.05	27.540	
7,650.0	7,097.6	7,100.0	6,856.1	28.8	24.6	16.03	-140.5	984.4	931.7	905.6	26.15	35.634	
7,700.0	7,099.9	7,100.0	6,856.1	29.2	24.6	-3.40	-140.5	984.4	980.6	957.0	23.57	41.595	
7,717.5	7,100.0	7,100.0	6,856.1	29.4	24.6	-8.57	-140.5	984.4	997.6	974.2	23.47	42.510	
7,800.0	7,100.0	7,100.0	6,856.1	30.1	24.6	-8.57	-140.5	984.4	1,077.7	1,054.0	23.77	45.330	
7,900.0	7,100.0	7,100.0	6,856.1	31.1	24.6	-8.57	-140.5	984.4	1,175.3	1,151.1	24.18	48.610	
8,000.0	7,100.0	7,087.3	6,849.8	32.1	24.4	-10.78	-138.7	973.5	1,273.0	1,248.4	24.68	51.577	
8,100.0	7,100.0	7,083.3	6,847.8	33.2	24.3	-11.43	-138.2	970.1	1,371.1	1,345.9	25.20	54.408	
8,200.0	7,100.0	7,070.7	6,841.6	34.4	24.1	-13.45	-136.8	959.3	1,469.6	1,443.7	25.90	56.744	
8,300.0	7,100.0	7,070.7	6,841.6	35.7	24.1	-13.45	-136.8	959.3	1,568.0	1,541.6	26.46	59.263	
8,400.0	7,100.0	7,070.7	6,841.6	37.0	24.1	-13.45	-136.8	959.3	1,666.7	1,639.6	27.04	61.629	

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMProd
Reference Design:	Design #1	**Offset TVD Reference:**	Offset Datum

Offset Design T7N-R80W-S17 - Castle 0780 4-17H20 - Wellbore #1 - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-Sperry MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,500.0	7,100.0	7,070.7	6,841.6	38.3	24.1	-13.45	-136.8	959.3	1,765.5	1,737.8	27.65	63.849	
8,600.0	7,100.0	7,061.2	6,836.8	39.7	23.9	-14.90	-135.8	951.1	1,864.4	1,835.8	28.52	65.364	
8,700.0	7,100.0	7,050.8	6,831.6	41.2	23.7	-16.39	-134.7	942.1	1,963.3	1,933.8	29.50	66.548	
8,800.0	7,100.0	7,040.4	6,826.4	42.7	23.6	-17.81	-133.6	933.2	2,062.3	2,031.7	30.56	67.477	
8,900.0	7,100.0	7,030.0	6,821.2	44.2	23.4	-19.16	-132.5	924.2	2,161.4	2,129.7	31.70	68.185	
9,000.0	7,100.0	7,019.6	6,816.0	45.8	23.2	-20.43	-131.4	915.3	2,260.4	2,227.5	32.90	68.707	
9,100.0	7,100.0	7,009.2	6,810.8	47.4	23.0	-21.64	-130.3	906.3	2,359.5	2,325.4	34.16	69.073	
9,200.0	7,100.0	6,998.8	6,805.6	49.0	22.8	-22.79	-129.3	897.4	2,458.7	2,423.2	35.47	69.311	
9,300.0	7,100.0	6,988.4	6,800.4	50.6	22.7	-23.88	-128.2	888.5	2,557.8	2,521.0	36.84	69.440	
9,400.0	7,100.0	6,978.0	6,795.2	52.3	22.5	-24.91	-127.1	879.5	2,657.0	2,618.8	38.24	69.486	
9,500.0	7,100.0	6,967.6	6,790.0	54.0	22.3	-25.89	-126.0	870.6	2,756.2	2,716.6	39.68	69.466	
9,600.0	7,100.0	6,957.2	6,784.8	55.7	22.2	-26.83	-124.9	861.6	2,855.5	2,814.3	41.15	69.394	
9,700.0	7,100.0	6,946.8	6,779.6	57.4	22.0	-27.72	-123.9	852.7	2,954.7	2,912.1	42.65	69.282	
9,800.0	7,100.0	6,936.4	6,774.4	59.1	21.8	-28.57	-122.8	843.8	3,054.0	3,009.8	44.17	69.140	
9,900.0	7,100.0	6,926.0	6,769.2	60.8	21.7	-29.38	-121.7	834.8	3,153.2	3,107.5	45.72	68.974	
10,000.0	7,100.0	6,920.7	6,766.6	62.6	21.6	-29.77	-121.1	830.3	3,252.5	3,205.5	47.03	69.155	
10,100.0	7,100.0	6,913.2	6,762.8	64.4	21.4	-30.31	-120.4	823.9	3,351.8	3,303.3	48.48	69.145	
10,200.0	7,100.0	6,908.4	6,760.3	66.1	21.4	-30.65	-119.9	819.8	3,451.1	3,401.3	49.80	69.298	
10,300.0	7,100.0	6,900.0	6,755.9	67.9	21.2	-31.20	-119.0	812.7	3,550.5	3,499.2	51.30	69.208	
10,400.0	7,100.0	6,900.0	6,755.9	69.7	21.2	-31.20	-119.0	812.7	3,649.9	3,597.5	52.42	69.631	
10,500.0	7,100.0	6,900.0	6,755.9	71.5	21.2	-31.20	-119.0	812.7	3,749.3	3,695.7	53.54	70.031	
10,600.0	7,100.0	6,900.0	6,755.9	73.3	21.2	-31.20	-119.0	812.7	3,848.7	3,794.1	54.66	70.412	
10,700.0	7,100.0	6,885.5	6,748.0	75.1	21.0	-32.06	-117.6	800.6	3,948.1	3,891.6	56.49	69.895	
10,800.0	7,100.0	6,881.2	6,745.6	76.9	21.0	-32.30	-117.2	797.1	4,047.6	3,989.7	57.83	69.991	
10,900.0	7,100.0	6,877.0	6,743.3	78.7	20.9	-32.53	-116.8	793.6	4,147.0	4,087.9	59.18	70.080	
11,000.0	7,100.0	6,872.9	6,741.0	80.6	20.8	-32.74	-116.4	790.2	4,246.5	4,186.0	60.52	70.165	
11,100.0	7,100.0	6,868.9	6,738.6	82.4	20.8	-32.94	-116.1	787.0	4,346.0	4,284.2	61.87	70.245	
11,200.0	7,100.0	6,865.0	6,736.4	84.2	20.7	-33.13	-115.7	783.8	4,445.5	4,382.3	63.22	70.321	
11,300.0	7,100.0	6,850.0	6,727.5	86.1	20.5	-33.79	-114.4	771.8	4,545.1	4,480.1	65.02	69.905	
11,400.0	7,100.0	6,850.0	6,727.5	87.9	20.5	-33.79	-114.4	771.8	4,644.6	4,578.4	66.21	70.146	
11,500.0	7,100.0	6,850.0	6,727.5	89.8	20.5	-33.79	-114.4	771.8	4,744.2	4,676.8	67.41	70.377	
11,600.0	7,100.0	6,850.0	6,727.5	91.6	20.5	-33.79	-114.4	771.8	4,843.7	4,775.1	68.61	70.599	
11,700.0	7,100.0	6,850.0	6,727.5	93.5	20.5	-33.79	-114.4	771.8	4,943.3	4,873.5	69.81	70.812	
11,800.0	7,100.0	6,850.0	6,727.5	95.4	20.5	-33.79	-114.4	771.8	5,042.9	4,971.9	71.01	71.016	
11,900.0	7,100.0	6,850.0	6,727.5	97.2	20.5	-33.79	-114.4	771.8	5,142.5	5,070.3	72.21	71.213	
11,971.9	7,100.0	6,850.0	6,727.5	98.6	20.5	-33.79	-114.4	771.8	5,214.1	5,141.0	73.08	71.349	

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-130.52	-147.3	-172.3	226.7				
100.0	100.0	100.0	100.0	0.1	0.1	-130.52	-147.3	-172.3	226.7	226.5	0.19	1,200.707	
200.0	200.0	200.0	200.0	0.3	0.3	-130.52	-147.3	-172.3	226.7	226.1	0.64	355.139	
300.0	300.0	300.0	300.0	0.5	0.5	-130.52	-147.3	-172.3	226.7	225.6	1.09	208.387	
400.0	400.0	400.0	400.0	0.8	0.8	-130.52	-147.3	-172.3	226.7	225.2	1.54	147.455	
500.0	500.0	500.0	500.0	1.0	1.0	-130.52	-147.3	-172.3	226.7	224.7	1.99	114.094	CC, ES
551.3	551.3	551.3	551.3	1.1	1.1	-157.13	-147.3	-172.3	227.1	224.9	2.22	102.426	
600.0	600.0	600.0	600.0	1.2	1.2	-157.21	-147.3	-172.3	227.9	225.5	2.43	93.610	
700.0	700.0	700.0	700.0	1.4	1.4	-157.39	-147.3	-172.3	229.6	226.7	2.88	79.658	
800.0	800.0	800.0	800.0	1.7	1.7	-157.56	-147.3	-172.3	231.2	227.9	3.33	69.439	
900.0	899.9	899.9	899.9	1.9	1.9	-157.72	-147.3	-172.3	232.9	229.1	3.78	61.637	
1,000.0	999.9	999.9	999.9	2.1	2.1	-157.89	-147.3	-172.3	234.5	230.3	4.23	55.486	
1,100.0	1,099.9	1,099.9	1,099.9	2.3	2.3	-158.05	-147.3	-172.3	236.2	231.5	4.68	50.514	
1,200.0	1,199.9	1,199.9	1,199.9	2.6	2.6	-158.21	-147.3	-172.3	237.9	232.7	5.13	46.412	
1,300.0	1,299.9	1,299.9	1,299.9	2.8	2.8	-158.37	-147.3	-172.3	239.5	234.0	5.57	42.970	
1,400.0	1,399.9	1,399.9	1,399.9	3.0	3.0	-158.53	-147.3	-172.3	241.2	235.2	6.02	40.042	
1,500.0	1,499.8	1,499.8	1,499.8	3.2	3.2	-158.69	-147.3	-172.3	242.9	236.4	6.47	37.519	
1,600.0	1,599.8	1,599.8	1,599.8	3.5	3.5	-158.84	-147.3	-172.3	244.5	237.6	6.92	35.325	
1,700.0	1,699.8	1,699.8	1,699.8	3.7	3.7	-158.99	-147.3	-172.3	246.2	238.8	7.37	33.397	
1,748.9	1,748.7	1,748.7	1,748.7	3.8	3.8	-159.06	-147.3	-172.3	247.0	239.4	7.59	32.538	
1,800.2	1,800.0	1,800.0	1,800.0	3.9	3.9	-132.54	-147.3	-172.3	247.4	239.6	7.82	31.658	
1,900.0	1,899.8	1,899.8	1,899.8	4.1	4.1	-132.54	-147.3	-172.3	247.4	239.2	8.24	30.042	
2,000.0	1,999.8	1,999.8	1,999.8	4.3	4.4	-132.54	-147.3	-172.3	247.4	238.8	8.68	28.495	
2,100.0	2,099.8	2,099.8	2,099.8	4.5	4.6	-132.54	-147.3	-172.3	247.4	238.3	9.13	27.099	
2,200.0	2,199.8	2,199.8	2,199.8	4.8	4.8	-132.54	-147.3	-172.3	247.4	237.9	9.58	25.832	
2,300.0	2,299.8	2,299.8	2,299.8	5.0	5.0	-132.54	-147.3	-172.3	247.4	237.4	10.03	24.679	
2,400.0	2,399.8	2,399.8	2,399.8	5.2	5.3	-132.54	-147.3	-172.3	247.4	237.0	10.47	23.623	
2,500.0	2,499.8	2,499.8	2,499.8	5.4	5.5	-132.54	-147.3	-172.3	247.4	236.5	10.92	22.654	
2,600.0	2,599.8	2,599.8	2,599.8	5.7	5.7	-132.54	-147.3	-172.3	247.4	236.1	11.37	21.761	
2,700.0	2,699.8	2,699.8	2,699.8	5.9	5.9	-132.54	-147.3	-172.3	247.4	235.6	11.82	20.936	
2,799.9	2,799.7	2,799.7	2,799.7	6.1	6.2	-132.54	-147.3	-172.3	247.4	235.2	12.27	20.172	
2,900.0	2,899.8	2,899.8	2,899.8	6.3	6.4	146.94	-147.3	-172.3	248.9	236.2	12.70	19.598	
3,000.0	2,999.6	2,999.6	2,999.6	6.5	6.6	147.54	-147.3	-172.3	253.3	240.2	13.13	19.299	
3,100.0	3,099.3	3,099.3	3,099.3	6.8	6.8	148.49	-147.3	-172.3	260.7	247.2	13.54	19.249	SF
3,200.0	3,198.5	3,198.5	3,198.5	7.0	7.1	149.73	-147.3	-172.3	271.2	257.2	13.96	19.432	
3,210.2	3,208.6	3,208.6	3,208.6	7.0	7.1	149.87	-147.3	-172.3	272.4	258.4	14.00	19.464	
3,300.0	3,297.5	3,297.5	3,297.5	7.2	7.3	151.16	-147.3	-172.3	283.6	269.2	14.39	19.707	
3,400.0	3,396.5	3,390.1	3,390.1	7.5	7.5	152.61	-147.0	-173.7	297.3	282.5	14.81	20.072	
3,500.0	3,495.4	3,481.6	3,481.4	7.8	7.7	154.31	-146.2	-178.0	313.3	298.1	15.22	20.588	
3,600.0	3,594.4	3,571.9	3,571.5	8.0	7.9	156.19	-144.9	-185.0	331.9	316.3	15.63	21.240	
3,700.0	3,693.4	3,660.9	3,659.9	8.3	8.1	158.16	-143.1	-194.6	353.2	337.2	16.04	22.025	
3,800.0	3,792.4	3,748.4	3,746.6	8.6	8.3	160.16	-140.8	-206.8	377.2	360.8	16.44	22.938	
3,900.0	3,891.3	3,834.4	3,831.3	8.9	8.5	162.15	-138.1	-221.2	404.0	387.1	16.85	23.971	
4,000.0	3,990.3	3,918.7	3,913.9	9.2	8.7	164.08	-135.0	-237.7	433.6	416.3	17.26	25.119	
4,100.0	4,089.3	4,000.0	3,993.1	9.5	8.9	165.90	-131.6	-256.0	466.0	448.3	17.67	26.377	
4,200.0	4,188.3	4,081.8	4,072.2	9.8	9.2	167.67	-127.8	-276.5	501.1	483.1	18.08	27.721	
4,300.0	4,287.2	4,165.5	4,152.5	10.1	9.5	169.39	-123.4	-299.7	538.8	520.3	18.50	29.129	
4,400.0	4,386.2	4,256.5	4,239.7	10.4	9.8	171.05	-118.6	-325.2	577.4	558.5	18.93	30.495	
4,500.0	4,485.2	4,347.6	4,326.9	10.7	10.2	172.51	-113.8	-350.8	616.4	597.0	19.37	31.814	
4,600.0	4,584.2	4,438.6	4,414.1	11.0	10.5	173.80	-109.0	-376.4	655.6	635.8	19.82	33.084	
4,700.0	4,683.1	4,529.6	4,501.3	11.3	10.9	174.94	-104.2	-401.9	695.1	674.8	20.26	34.306	
4,800.0	4,782.1	4,620.6	4,588.6	11.6	11.3	175.97	-99.4	-427.5	734.8	714.1	20.71	35.481	

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

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,900.0	4,881.1	4,711.6	4,675.8	11.9	11.7	176.89	-94.7	-453.1	774.7	753.5	21.16	36.610	
5,000.0	4,980.1	4,802.6	4,763.0	12.2	12.2	177.72	-89.9	-478.6	814.8	793.1	21.62	37.694	
5,100.0	5,079.1	4,893.6	4,850.2	12.6	12.6	178.47	-85.1	-504.2	854.9	832.9	22.07	38.735	
5,200.0	5,178.0	4,984.6	4,937.4	12.9	13.0	179.16	-80.3	-529.8	895.2	872.7	22.53	39.735	
5,300.0	5,277.0	5,075.6	5,024.6	13.2	13.5	179.79	-75.5	-555.3	935.6	912.6	22.99	40.695	
5,400.0	5,376.0	5,166.7	5,111.8	13.5	14.0	-179.63	-70.7	-580.9	976.1	952.7	23.45	41.618	
5,500.0	5,475.0	5,257.7	5,199.1	13.9	14.4	-179.10	-65.9	-606.5	1,016.7	992.8	23.92	42.505	
5,600.0	5,573.9	5,348.7	5,286.3	14.2	14.9	-178.61	-61.1	-632.0	1,057.3	1,032.9	24.39	43.357	
5,700.0	5,672.9	5,439.7	5,373.5	14.5	15.4	-178.16	-56.3	-657.6	1,098.0	1,073.1	24.85	44.176	
5,800.0	5,771.9	5,530.7	5,460.7	14.8	15.9	-177.73	-51.5	-683.2	1,138.7	1,113.4	25.33	44.964	
5,900.0	5,870.9	5,621.7	5,547.9	15.2	16.4	-177.34	-46.7	-708.8	1,179.5	1,153.7	25.80	45.722	
6,000.0	5,969.8	5,712.7	5,635.1	15.5	16.9	-176.97	-41.9	-734.3	1,220.4	1,194.1	26.27	46.452	
6,100.0	6,068.8	5,803.7	5,722.3	15.8	17.4	-176.63	-37.1	-759.9	1,261.2	1,234.5	26.75	47.154	
6,200.0	6,167.8	5,894.7	5,809.6	16.2	17.9	-176.31	-32.3	-785.5	1,302.1	1,274.9	27.22	47.831	
6,300.0	6,266.8	5,985.8	5,896.8	16.5	18.4	-176.00	-27.5	-811.0	1,343.1	1,315.4	27.70	48.482	
6,400.0	6,365.7	6,076.8	5,984.0	16.8	18.9	-175.72	-22.7	-836.6	1,384.1	1,355.9	28.18	49.110	
6,483.2	6,448.1	6,152.5	6,056.6	17.1	19.3	-175.50	-18.8	-857.9	1,418.2	1,389.6	28.58	49.616	
6,500.0	6,464.7	6,167.7	6,071.1	17.2	19.4	-169.29	-18.0	-862.1	1,425.2	1,396.7	28.58	49.870	
6,550.0	6,513.6	6,212.1	6,113.6	17.4	19.6	-157.82	-15.6	-874.6	1,448.2	1,419.7	28.53	50.768	
6,600.0	6,561.5	6,254.8	6,154.6	17.6	19.9	-150.99	-13.4	-886.6	1,474.1	1,445.7	28.44	51.825	
6,650.0	6,608.0	6,295.5	6,193.6	17.9	20.1	-145.91	-11.2	-898.0	1,502.6	1,474.2	28.38	52.949	
6,700.0	6,652.8	6,334.0	6,230.5	18.2	20.3	-141.51	-9.2	-908.8	1,533.6	1,505.2	28.40	54.002	
6,750.0	6,695.6	6,369.8	6,264.8	18.5	20.5	-137.29	-7.3	-918.9	1,566.9	1,538.3	28.59	54.806	
6,800.0	6,735.9	6,402.8	6,296.5	18.9	20.7	-132.96	-5.6	-928.2	1,602.2	1,573.2	29.05	55.162	
6,850.0	6,773.5	6,432.8	6,325.1	19.4	20.9	-128.31	-4.0	-936.6	1,639.5	1,609.6	29.86	54.898	
6,900.0	6,808.2	6,459.3	6,350.6	19.9	21.0	-123.16	-2.6	-944.1	1,678.3	1,647.2	31.11	53.953	
6,950.0	6,839.6	6,482.4	6,372.7	20.4	21.2	-117.38	-1.4	-950.5	1,718.5	1,685.7	32.78	52.427	
7,000.0	6,867.5	6,501.7	6,391.2	21.0	21.3	-110.88	-0.4	-956.0	1,759.9	1,725.1	34.79	50.593	
7,014.6	6,874.9	6,506.6	6,395.9	21.2	21.3	-108.84	-0.1	-957.3	1,772.1	1,736.7	35.41	50.053	
7,100.0	6,917.7	6,534.4	6,422.6	22.3	21.5	-110.15	1.4	-965.2	1,844.5	1,808.2	36.28	50.841	
7,164.6	6,949.9	6,555.5	6,442.7	23.1	21.6	-111.12	2.5	-971.1	1,899.6	1,862.6	36.97	51.388	
7,200.0	6,967.3	6,559.9	6,447.0	23.6	21.6	-105.68	2.7	-972.3	1,929.6	1,891.6	37.97	50.824	
7,250.0	6,990.3	6,559.9	6,447.0	24.3	21.6	-98.84	2.7	-972.3	1,970.6	1,931.7	38.92	50.640	
7,300.0	7,011.5	6,559.9	6,447.0	24.9	21.6	-93.12	2.7	-972.3	2,010.1	1,970.7	39.40	51.014	
7,350.0	7,030.8	6,559.9	6,447.0	25.5	21.6	-88.35	2.7	-972.3	2,047.7	2,008.2	39.54	51.790	
7,400.0	7,047.9	6,559.9	6,447.0	26.1	21.6	-84.37	2.7	-972.3	2,083.4	2,044.0	39.41	52.860	
7,450.0	7,062.7	6,559.9	6,447.0	26.7	21.6	-81.07	2.7	-972.3	2,116.8	2,077.7	39.10	54.137	
7,500.0	7,075.2	6,577.5	6,463.8	27.2	21.7	-78.93	3.5	-977.5	2,147.6	2,108.9	38.74	55.437	
7,550.0	7,085.2	6,579.1	6,465.3	27.8	21.7	-76.75	3.6	-978.0	2,176.3	2,138.0	38.26	56.882	
7,600.0	7,092.7	6,580.3	6,466.4	28.3	21.7	-75.01	3.7	-978.4	2,202.3	2,164.6	37.76	58.331	
7,650.0	7,097.6	6,581.3	6,467.3	28.8	21.7	-73.68	3.7	-978.7	2,225.7	2,188.5	37.27	59.721	
7,700.0	7,099.9	6,581.9	6,468.0	29.2	21.8	-72.72	3.7	-978.9	2,246.4	2,209.6	36.83	60.992	
7,717.5	7,100.0	6,582.1	6,468.1	29.4	21.8	-72.47	3.7	-978.9	2,253.0	2,216.3	36.69	61.399	
7,800.0	7,100.0	6,582.7	6,468.7	30.1	21.8	-72.48	3.7	-979.1	2,284.4	2,246.7	37.62	60.717	
7,900.0	7,100.0	6,583.5	6,469.4	31.1	21.8	-72.50	3.8	-979.4	2,325.8	2,287.0	38.80	59.944	
8,000.0	7,100.0	6,600.0	6,485.0	32.1	21.9	-72.95	4.3	-984.8	2,371.0	2,330.8	40.17	59.021	
8,100.0	7,100.0	6,600.0	6,485.0	33.2	21.9	-72.95	4.3	-984.8	2,419.2	2,377.7	41.50	58.292	
8,200.0	7,100.0	6,600.0	6,485.0	34.4	21.9	-72.95	4.3	-984.8	2,470.5	2,427.6	42.89	57.598	
8,300.0	7,100.0	6,600.0	6,485.0	35.7	21.9	-72.95	4.3	-984.8	2,524.7	2,480.4	44.33	56.947	
8,400.0	7,100.0	6,600.0	6,485.0	37.0	21.9	-72.95	4.3	-984.8	2,581.7	2,535.9	45.82	56.341	
8,500.0	7,100.0	6,600.0	6,485.0	38.3	21.9	-72.95	4.3	-984.8	2,641.2	2,593.8	47.35	55.782	
8,600.0	7,100.0	6,600.0	6,485.0	39.7	21.9	-72.95	4.3	-984.8	2,703.1	2,654.2	48.91	55.268	

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

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,700.0	7,100.0	6,600.0	6,485.0	41.2	21.9	-72.95	4.3	-984.8	2,767.2	2,716.7	50.50	54.800	
8,800.0	7,100.0	6,600.0	6,485.0	42.7	21.9	-72.95	4.3	-984.8	2,833.5	2,781.4	52.11	54.373	
8,900.0	7,100.0	6,600.0	6,485.0	44.2	21.9	-72.95	4.3	-984.8	2,901.6	2,847.9	53.75	53.986	
9,000.0	7,100.0	6,600.0	6,485.0	45.8	21.9	-72.95	4.3	-984.8	2,971.6	2,916.2	55.40	53.635	
9,100.0	7,100.0	6,600.0	6,485.0	47.4	21.9	-72.95	4.3	-984.8	3,043.2	2,986.1	57.08	53.319	
9,200.0	7,100.0	6,600.0	6,485.0	49.0	21.9	-72.95	4.3	-984.8	3,116.4	3,057.6	58.76	53.033	
9,300.0	7,100.0	6,600.0	6,485.0	50.6	21.9	-72.95	4.3	-984.8	3,191.1	3,130.6	60.46	52.776	
9,400.0	7,100.0	6,600.0	6,485.0	52.3	21.9	-72.95	4.3	-984.8	3,267.1	3,204.9	62.18	52.544	
9,500.0	7,100.0	6,600.0	6,485.0	54.0	21.9	-72.95	4.3	-984.8	3,344.3	3,280.4	63.90	52.336	
9,600.0	7,100.0	6,600.0	6,485.0	55.7	21.9	-72.95	4.3	-984.8	3,422.8	3,357.1	65.63	52.149	
9,700.0	7,100.0	6,600.0	6,485.0	57.4	21.9	-72.95	4.3	-984.8	3,502.3	3,435.0	67.38	51.982	
9,800.0	7,100.0	6,600.0	6,485.0	59.1	21.9	-72.95	4.3	-984.8	3,582.9	3,513.8	69.13	51.832	
9,900.0	7,100.0	6,600.0	6,485.0	60.8	21.9	-72.95	4.3	-984.8	3,664.4	3,593.5	70.88	51.697	
10,000.0	7,100.0	6,600.0	6,485.0	62.6	21.9	-72.95	4.3	-984.8	3,746.9	3,674.2	72.65	51.577	
10,100.0	7,100.0	6,600.0	6,485.0	64.4	21.9	-72.95	4.3	-984.8	3,830.1	3,755.7	74.41	51.470	
10,200.0	7,100.0	6,600.0	6,485.0	66.1	21.9	-72.95	4.3	-984.8	3,914.2	3,838.0	76.19	51.374	
10,300.0	7,100.0	6,600.0	6,485.0	67.9	21.9	-72.95	4.3	-984.8	3,998.9	3,921.0	77.97	51.289	
10,400.0	7,100.0	6,600.0	6,485.0	69.7	21.9	-72.95	4.3	-984.8	4,084.4	4,004.7	79.75	51.214	
10,500.0	7,100.0	6,600.0	6,485.0	71.5	21.9	-72.95	4.3	-984.8	4,170.5	4,089.0	81.54	51.147	
10,600.0	7,100.0	6,600.0	6,485.0	73.3	21.9	-72.95	4.3	-984.8	4,257.2	4,173.9	83.33	51.088	
10,700.0	7,100.0	6,600.0	6,485.0	75.1	21.9	-72.95	4.3	-984.8	4,344.5	4,259.4	85.13	51.037	
10,800.0	7,100.0	6,600.0	6,485.0	76.9	21.9	-72.95	4.3	-984.8	4,432.4	4,345.4	86.92	50.991	
10,900.0	7,100.0	6,600.0	6,485.0	78.7	21.9	-72.95	4.3	-984.8	4,520.7	4,432.0	88.73	50.952	
11,000.0	7,100.0	6,600.0	6,485.0	80.6	21.9	-72.95	4.3	-984.8	4,609.5	4,519.0	90.53	50.917	
11,100.0	7,100.0	6,600.0	6,485.0	82.4	21.9	-72.95	4.3	-984.8	4,698.8	4,606.4	92.34	50.888	
11,200.0	7,100.0	6,600.0	6,485.0	84.2	21.9	-72.95	4.3	-984.8	4,788.5	4,694.3	94.15	50.862	
11,300.0	7,100.0	6,600.0	6,485.0	86.1	21.9	-72.95	4.3	-984.8	4,878.5	4,782.6	95.96	50.841	
11,400.0	7,100.0	6,600.0	6,485.0	87.9	21.9	-72.95	4.3	-984.8	4,969.0	4,871.2	97.77	50.824	
11,500.0	7,100.0	6,600.0	6,485.0	89.8	21.9	-72.95	4.3	-984.8	5,059.8	4,960.2	99.59	50.809	
11,600.0	7,100.0	6,600.0	6,485.0	91.6	21.9	-72.95	4.3	-984.8	5,151.0	5,049.6	101.40	50.798	
11,700.0	7,100.0	6,600.0	6,485.0	93.5	21.9	-72.95	4.3	-984.8	5,242.5	5,139.3	103.22	50.789	
11,800.0	7,100.0	6,600.0	6,485.0	95.4	21.9	-72.95	4.3	-984.8	5,334.3	5,229.2	105.04	50.783	
11,900.0	7,100.0	6,600.0	6,485.0	97.2	21.9	-72.95	4.3	-984.8	5,426.4	5,319.5	106.86	50.778	
11,971.9	7,100.0	6,600.0	6,485.0	98.6	21.9	-72.95	4.3	-984.8	5,492.7	5,384.5	108.17	50.777	

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-171.51	-149.7	-22.3	151.3				
100.0	100.0	100.0	100.0	0.1	0.1	-171.51	-149.7	-22.3	151.3	151.1	0.19	801.518	
200.0	200.0	200.0	200.0	0.3	0.3	-171.51	-149.7	-22.3	151.3	150.7	0.64	237.069	
300.0	300.0	300.0	300.0	0.5	0.5	-171.51	-149.7	-22.3	151.3	150.2	1.09	139.107	
400.0	400.0	400.0	400.0	0.8	0.8	-171.51	-149.7	-22.3	151.3	149.8	1.54	98.432	
500.0	500.0	500.0	500.0	1.0	1.0	-171.51	-149.7	-22.3	151.3	149.3	1.99	76.162	CC, ES
551.3	551.3	550.9	550.9	1.1	1.1	162.15	-149.7	-22.8	151.8	149.6	2.21	68.686	
600.0	600.0	599.2	599.2	1.2	1.2	162.71	-149.7	-24.1	152.9	150.4	2.42	63.129	
700.0	700.0	699.1	699.0	1.4	1.4	164.12	-149.7	-27.4	155.2	152.3	2.85	54.395	
800.0	800.0	799.0	798.9	1.7	1.6	165.48	-149.7	-30.7	157.5	154.2	3.29	47.877	
900.0	899.9	898.9	898.7	1.9	1.8	166.80	-149.7	-34.0	160.0	156.3	3.73	42.861	
1,000.0	999.9	998.8	998.6	2.1	2.1	168.08	-149.7	-37.3	162.6	158.4	4.18	38.900	
1,100.0	1,099.9	1,098.7	1,098.4	2.3	2.3	169.32	-149.7	-40.6	165.2	160.6	4.63	35.703	
1,200.0	1,199.9	1,198.6	1,198.3	2.6	2.5	170.52	-149.7	-43.9	167.9	162.8	5.08	33.076	
1,300.0	1,299.9	1,298.5	1,298.1	2.8	2.7	171.68	-149.7	-47.2	170.7	165.1	5.53	30.884	
1,400.0	1,399.9	1,398.4	1,398.0	3.0	3.0	172.80	-149.7	-50.5	173.5	167.5	5.98	29.029	
1,500.0	1,499.8	1,500.3	1,499.8	3.2	3.2	173.43	-149.7	-52.3	175.9	169.5	6.41	27.423	
1,600.0	1,599.8	1,600.3	1,599.8	3.5	3.4	173.50	-149.7	-52.3	177.7	170.8	6.84	25.982	
1,700.0	1,699.8	1,700.3	1,699.8	3.7	3.6	173.56	-149.7	-52.3	179.4	172.2	7.27	24.670	
1,748.9	1,748.7	1,749.2	1,748.7	3.8	3.7	173.59	-149.7	-52.3	180.3	172.8	7.49	24.081	
1,800.2	1,800.0	1,800.5	1,800.0	3.9	3.8	-159.82	-149.7	-52.3	180.8	173.1	7.68	23.534	
1,900.0	1,899.8	1,900.3	1,899.8	4.1	4.0	-159.82	-149.7	-52.3	180.8	172.7	8.09	22.341	
2,000.0	1,999.8	2,000.3	1,999.8	4.3	4.2	-159.82	-149.7	-52.3	180.8	172.2	8.53	21.196	
2,100.0	2,099.8	2,100.3	2,099.8	4.5	4.5	-159.82	-149.7	-52.3	180.8	171.8	8.97	20.159	
2,200.0	2,199.8	2,200.3	2,199.8	4.8	4.7	-159.82	-149.7	-52.3	180.8	171.4	9.41	19.217	
2,300.0	2,299.8	2,300.3	2,299.8	5.0	4.9	-159.82	-149.7	-52.3	180.8	170.9	9.85	18.357	
2,400.0	2,399.8	2,400.3	2,399.8	5.2	5.1	-159.82	-149.7	-52.3	180.8	170.5	10.29	17.570	
2,500.0	2,499.8	2,500.3	2,499.8	5.4	5.3	-159.82	-149.7	-52.3	180.8	170.0	10.73	16.846	
2,600.0	2,599.8	2,600.3	2,599.8	5.7	5.5	-159.82	-149.7	-52.3	180.8	169.6	11.17	16.179	
2,700.0	2,699.8	2,700.3	2,699.8	5.9	5.8	-159.82	-149.7	-52.3	180.8	169.1	11.62	15.562	
2,799.9	2,799.7	2,800.2	2,799.7	6.1	6.0	-159.82	-149.7	-52.3	180.8	168.7	12.06	14.990	
2,900.0	2,899.8	2,900.3	2,899.8	6.3	6.2	119.92	-149.7	-52.3	181.6	169.1	12.52	14.511	
3,000.0	2,999.6	3,000.1	2,999.6	6.5	6.4	121.28	-149.7	-52.3	184.3	171.4	12.95	14.236	
3,100.0	3,099.3	3,099.7	3,099.3	6.8	6.6	123.45	-149.7	-52.3	189.0	175.6	13.37	14.130	SF
3,200.0	3,198.5	3,199.0	3,198.5	7.0	6.9	126.30	-149.7	-52.3	196.0	182.2	13.80	14.199	
3,210.2	3,208.6	3,209.1	3,208.6	7.0	6.9	126.62	-149.7	-52.3	196.8	183.0	13.85	14.217	
3,300.0	3,297.5	3,298.0	3,297.5	7.2	7.1	129.48	-149.7	-52.3	204.8	190.6	14.24	14.379	
3,400.0	3,396.5	3,396.9	3,396.5	7.5	7.3	132.42	-149.7	-52.3	214.2	199.5	14.69	14.583	
3,500.0	3,495.4	3,495.9	3,495.4	7.8	7.5	135.10	-149.7	-52.3	224.1	209.0	15.14	14.808	
3,600.0	3,594.4	3,594.9	3,594.4	8.0	7.7	137.55	-149.7	-52.3	234.5	218.9	15.59	15.047	
3,700.0	3,693.4	3,693.9	3,693.4	8.3	8.0	139.79	-149.7	-52.3	245.3	229.2	16.04	15.296	
3,800.0	3,792.4	3,792.8	3,792.4	8.6	8.2	141.84	-149.7	-52.3	256.4	239.9	16.49	15.551	
3,900.0	3,891.3	3,891.8	3,891.3	8.9	8.4	143.72	-149.7	-52.3	267.8	250.9	16.94	15.810	
4,000.0	3,990.3	3,990.8	3,990.3	9.2	8.6	145.45	-149.7	-52.3	279.5	262.1	17.39	16.070	
4,100.0	4,089.3	4,089.8	4,089.3	9.5	8.8	147.03	-149.7	-52.3	291.4	273.5	17.84	16.330	
4,200.0	4,188.3	4,188.7	4,188.3	9.8	9.1	148.50	-149.7	-52.3	303.5	285.2	18.30	16.587	
4,300.0	4,287.2	4,287.7	4,287.2	10.1	9.3	149.85	-149.7	-52.3	315.8	297.0	18.75	16.842	
4,400.0	4,386.2	4,386.7	4,386.2	10.4	9.5	151.09	-149.7	-52.3	328.2	309.0	19.20	17.092	
4,500.0	4,485.2	4,480.4	4,479.9	10.7	9.7	152.25	-149.7	-52.9	341.3	321.7	19.64	17.376	
4,600.0	4,584.2	4,570.0	4,569.4	11.0	9.9	153.52	-149.7	-56.0	356.8	336.8	20.06	17.786	
4,700.0	4,683.1	4,658.5	4,657.8	11.3	10.1	154.92	-149.7	-61.9	375.1	354.6	20.48	18.316	
4,800.0	4,782.1	4,745.8	4,744.7	11.6	10.3	156.41	-149.7	-70.3	396.1	375.2	20.89	18.962	

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

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,900.0	4,881.1	4,831.7	4,829.9	11.9	10.5	157.92	-149.7	-81.2	420.0	398.7	21.30	19.717	
5,000.0	4,980.1	4,916.2	4,913.3	12.2	10.7	159.43	-149.7	-94.4	446.6	424.9	21.71	20.575	
5,100.0	5,079.1	5,000.0	4,995.7	12.6	10.9	160.92	-149.7	-109.9	476.1	454.0	22.11	21.530	
5,200.0	5,178.0	5,080.3	5,074.1	12.9	11.2	162.32	-149.7	-127.0	508.3	485.8	22.51	22.578	
5,300.0	5,277.0	5,159.8	5,151.3	13.2	11.4	163.67	-149.7	-146.1	543.2	520.3	22.91	23.708	
5,400.0	5,376.0	5,237.4	5,226.1	13.5	11.7	164.95	-149.7	-166.8	580.8	557.5	23.31	24.915	
5,500.0	5,475.0	5,313.2	5,298.6	13.9	11.9	166.14	-149.7	-189.0	621.0	597.3	23.71	26.193	
5,600.0	5,573.9	5,387.1	5,368.7	14.2	12.2	167.25	-149.7	-212.4	663.7	639.6	24.10	27.533	
5,700.0	5,672.9	5,472.0	5,448.6	14.5	12.6	168.43	-149.7	-240.8	708.1	683.6	24.52	28.875	
5,800.0	5,771.9	5,560.5	5,532.1	14.8	13.0	169.53	-149.7	-270.5	752.9	727.9	24.95	30.171	
5,900.0	5,870.9	5,649.1	5,615.5	15.2	13.4	170.51	-149.7	-300.1	797.8	772.5	25.39	31.428	
6,000.0	5,969.8	5,737.6	5,698.9	15.5	13.8	171.38	-149.7	-329.8	843.0	817.1	25.82	32.645	
6,100.0	6,068.8	5,826.1	5,782.3	15.8	14.2	172.17	-149.7	-359.5	888.2	862.0	26.26	33.822	
6,200.0	6,167.8	5,914.7	5,865.7	16.2	14.7	172.88	-149.7	-389.1	933.6	906.9	26.70	34.962	
6,300.0	6,266.8	6,003.2	5,949.1	16.5	15.2	173.52	-149.7	-418.8	979.1	951.9	27.15	36.064	
6,400.0	6,365.7	6,091.7	6,032.5	16.8	15.7	174.11	-149.7	-448.5	1,024.7	997.1	27.60	37.130	
6,483.2	6,448.1	6,165.4	6,101.9	17.1	16.1	174.56	-149.7	-473.2	1,062.7	1,034.7	27.97	37.990	
6,500.0	6,464.7	6,180.2	6,115.9	17.2	16.2	-179.25	-149.7	-478.1	1,070.5	1,042.5	27.98	38.263	
6,550.0	6,513.6	6,223.0	6,156.2	17.4	16.4	-167.83	-149.7	-492.5	1,096.1	1,068.2	27.94	39.234	
6,600.0	6,561.5	6,263.9	6,194.8	17.6	16.6	-161.05	-149.7	-506.2	1,124.8	1,097.0	27.83	40.420	
6,650.0	6,608.0	6,302.6	6,231.2	17.9	16.9	-156.01	-149.7	-519.2	1,156.5	1,128.8	27.69	41.769	
6,700.0	6,652.8	6,338.7	6,265.2	18.2	17.1	-151.60	-149.7	-531.2	1,190.8	1,163.2	27.57	43.192	
6,750.0	6,695.6	6,371.9	6,296.5	18.5	17.3	-147.30	-149.7	-542.4	1,227.5	1,200.0	27.56	44.546	
6,800.0	6,735.9	6,402.0	6,324.9	18.9	17.4	-142.73	-149.7	-552.5	1,266.4	1,238.7	27.76	45.622	
6,850.0	6,773.5	6,428.9	6,350.2	19.4	17.6	-137.58	-149.7	-561.5	1,307.3	1,279.0	28.32	46.159	
6,900.0	6,808.2	6,452.2	6,372.1	19.9	17.7	-131.54	-149.7	-569.3	1,349.8	1,320.4	29.39	45.920	
6,950.0	6,839.6	6,471.8	6,390.6	20.4	17.8	-124.29	-149.7	-575.9	1,393.7	1,362.7	31.09	44.834	
7,000.0	6,867.5	6,487.5	6,405.4	21.0	17.9	-115.55	-149.7	-581.1	1,438.8	1,405.4	33.35	43.137	
7,014.6	6,874.9	6,491.4	6,409.1	21.2	18.0	-112.69	-149.7	-582.4	1,452.0	1,418.0	34.08	42.603	
7,100.0	6,917.7	6,512.9	6,429.4	22.3	18.1	-114.30	-149.7	-589.6	1,530.3	1,495.5	34.86	43.894	
7,164.6	6,949.9	6,529.2	6,444.7	23.1	18.2	-115.47	-149.7	-595.1	1,589.8	1,554.3	35.48	44.813	
7,200.0	6,967.3	6,538.0	6,453.0	23.6	18.2	-108.44	-149.7	-598.0	1,622.2	1,585.3	36.87	44.000	
7,250.0	6,990.3	6,549.6	6,463.9	24.3	18.3	-100.30	-149.7	-601.9	1,667.0	1,628.9	38.15	43.698	
7,300.0	7,011.5	6,560.3	6,474.0	24.9	18.4	-93.78	-149.7	-605.5	1,710.4	1,671.6	38.84	44.039	
7,350.0	7,030.8	6,570.0	6,483.1	25.5	18.4	-88.50	-149.7	-608.8	1,752.3	1,713.2	39.10	44.810	
7,400.0	7,047.9	6,578.6	6,491.3	26.1	18.5	-84.19	-149.7	-611.7	1,792.4	1,753.4	39.06	45.889	
7,450.0	7,062.7	6,586.1	6,498.3	26.7	18.5	-80.64	-149.7	-614.2	1,830.6	1,791.8	38.78	47.200	
7,500.0	7,075.2	6,592.4	6,504.3	27.2	18.6	-77.72	-149.7	-616.3	1,866.8	1,828.5	38.34	48.689	
7,550.0	7,085.2	6,597.5	6,509.1	27.8	18.6	-75.33	-149.7	-618.0	1,900.8	1,863.0	37.78	50.313	
7,600.0	7,092.7	6,601.3	6,512.6	28.3	18.6	-73.41	-149.7	-619.3	1,932.4	1,895.3	37.14	52.028	
7,650.0	7,097.6	6,603.7	6,514.9	28.8	18.6	-71.89	-149.7	-620.1	1,961.6	1,925.1	36.47	53.789	
7,700.0	7,099.9	6,604.9	6,516.0	29.2	18.6	-70.74	-149.7	-620.5	1,988.3	1,952.5	35.80	55.546	
7,717.5	7,100.0	6,605.0	6,516.1	29.4	18.6	-70.42	-149.7	-620.5	1,997.0	1,961.5	35.57	56.151	
7,800.0	7,100.0	6,605.0	6,516.1	30.1	18.6	-70.42	-149.7	-620.5	2,038.6	2,002.1	36.48	55.887	
7,900.0	7,100.0	6,605.0	6,516.1	31.1	18.6	-70.42	-149.7	-620.5	2,092.2	2,054.6	37.63	55.598	
8,000.0	7,100.0	6,605.0	6,516.1	32.1	18.6	-70.42	-149.7	-620.5	2,149.2	2,110.4	38.87	55.293	
8,100.0	7,100.0	6,605.0	6,516.1	33.2	18.6	-70.42	-149.7	-620.5	2,209.3	2,169.1	40.18	54.986	
8,200.0	7,100.0	6,605.0	6,516.1	34.4	18.6	-70.42	-149.7	-620.5	2,272.1	2,230.6	41.55	54.685	
8,300.0	7,100.0	6,605.0	6,516.1	35.7	18.6	-70.42	-149.7	-620.5	2,337.5	2,294.6	42.97	54.398	
8,400.0	7,100.0	6,605.0	6,516.1	37.0	18.6	-70.42	-149.7	-620.5	2,405.4	2,360.9	44.44	54.129	
8,500.0	7,100.0	6,605.0	6,516.1	38.3	18.6	-70.42	-149.7	-620.5	2,475.4	2,429.4	45.94	53.879	
8,600.0	7,100.0	6,605.0	6,516.1	39.7	18.6	-70.42	-149.7	-620.5	2,547.4	2,499.9	47.48	53.650	

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

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,700.0	7,100.0	6,605.0	6,516.1	41.2	18.6	-70.42	-149.7	-620.5	2,621.2	2,572.2	49.05	53.441	
8,800.0	7,100.0	6,605.0	6,516.1	42.7	18.6	-70.42	-149.7	-620.5	2,696.7	2,646.1	50.64	53.251	
8,900.0	7,100.0	6,605.0	6,516.1	44.2	18.6	-70.42	-149.7	-620.5	2,773.8	2,721.6	52.26	53.081	
9,000.0	7,100.0	6,605.0	6,516.1	45.8	18.6	-70.42	-149.7	-620.5	2,852.3	2,798.4	53.89	52.929	
9,100.0	7,100.0	6,604.9	6,516.1	47.4	18.6	-70.42	-149.7	-620.5	2,932.1	2,876.6	55.54	52.792	
9,200.0	7,100.0	6,604.9	6,516.1	49.0	18.6	-70.42	-149.7	-620.5	3,013.2	2,955.9	57.21	52.671	
9,300.0	7,100.0	6,604.9	6,516.1	50.6	18.6	-70.42	-149.7	-620.5	3,095.3	3,036.4	58.89	52.564	
9,400.0	7,100.0	6,604.9	6,516.1	52.3	18.6	-70.42	-149.7	-620.5	3,178.4	3,117.9	60.58	52.469	
9,500.0	7,100.0	6,604.9	6,516.1	54.0	18.6	-70.42	-149.7	-620.5	3,262.5	3,200.2	62.28	52.386	
9,600.0	7,100.0	6,604.9	6,516.1	55.7	18.6	-70.42	-149.7	-620.5	3,347.5	3,283.5	63.99	52.313	
9,700.0	7,100.0	6,604.9	6,516.1	57.4	18.6	-70.42	-149.7	-620.5	3,433.3	3,367.6	65.71	52.249	
9,800.0	7,100.0	6,604.9	6,516.1	59.1	18.6	-70.42	-149.7	-620.5	3,519.8	3,452.4	67.44	52.194	
9,900.0	7,100.0	6,604.9	6,516.1	60.8	18.6	-70.42	-149.7	-620.5	3,607.0	3,537.9	69.17	52.146	
10,000.0	7,100.0	6,604.9	6,516.1	62.6	18.6	-70.42	-149.7	-620.5	3,694.9	3,624.0	70.91	52.105	
10,100.0	7,100.0	6,604.9	6,516.1	64.4	18.6	-70.42	-149.7	-620.5	3,783.4	3,710.7	72.66	52.070	
10,200.0	7,100.0	6,604.9	6,516.1	66.1	18.6	-70.42	-149.7	-620.5	3,872.4	3,798.0	74.41	52.041	
10,300.0	7,100.0	6,604.9	6,516.1	67.9	18.6	-70.42	-149.7	-620.5	3,962.0	3,885.8	76.17	52.016	
10,400.0	7,100.0	6,604.9	6,516.1	69.7	18.6	-70.42	-149.7	-620.5	4,052.0	3,974.1	77.93	51.996	
10,500.0	7,100.0	6,604.9	6,516.1	71.5	18.6	-70.42	-149.7	-620.5	4,142.5	4,062.9	79.69	51.980	
10,600.0	7,100.0	6,604.9	6,516.1	73.3	18.6	-70.42	-149.7	-620.5	4,233.5	4,152.0	81.46	51.968	
10,700.0	7,100.0	6,604.9	6,516.1	75.1	18.6	-70.42	-149.7	-620.5	4,324.8	4,241.6	83.24	51.958	
10,800.0	7,100.0	6,604.9	6,516.1	76.9	18.6	-70.42	-149.7	-620.5	4,416.5	4,331.5	85.01	51.952	
10,900.0	7,100.0	6,604.9	6,516.1	78.7	18.6	-70.42	-149.7	-620.5	4,508.6	4,421.8	86.79	51.948	
11,000.0	7,100.0	6,604.9	6,516.1	80.6	18.6	-70.42	-149.7	-620.5	4,601.0	4,512.4	88.57	51.946	
11,100.0	7,100.0	6,604.9	6,516.1	82.4	18.6	-70.42	-149.7	-620.5	4,693.7	4,603.3	90.36	51.946	
11,200.0	7,100.0	6,604.9	6,516.1	84.2	18.6	-70.42	-149.7	-620.5	4,786.7	4,694.5	92.14	51.948	
11,300.0	7,100.0	6,604.9	6,516.1	86.1	18.6	-70.42	-149.7	-620.5	4,880.0	4,786.0	93.93	51.952	
11,400.0	7,100.0	6,604.9	6,516.1	87.9	18.6	-70.42	-149.7	-620.5	4,973.5	4,877.8	95.72	51.957	
11,500.0	7,100.0	6,604.9	6,516.0	89.8	18.6	-70.42	-149.7	-620.5	5,067.3	4,969.8	97.52	51.964	
11,600.0	7,100.0	6,604.9	6,516.0	91.6	18.6	-70.42	-149.7	-620.5	5,161.3	5,062.0	99.31	51.972	
11,700.0	7,100.0	6,604.9	6,516.0	93.5	18.6	-70.42	-149.7	-620.5	5,255.5	5,154.4	101.11	51.980	
11,800.0	7,100.0	6,604.9	6,516.0	95.4	18.6	-70.42	-149.7	-620.5	5,350.0	5,247.1	102.90	51.990	
11,900.0	7,100.0	6,604.9	6,516.0	97.2	18.6	-70.42	-149.7	-620.5	5,444.6	5,339.9	104.70	52.000	
11,971.9	7,100.0	6,604.9	6,516.0	98.6	18.6	-70.42	-149.7	-620.5	5,512.7	5,406.8	106.00	52.008	

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	3.0	3.0	0.0	0.0	-89.23	2.3	-169.8	169.8				
100.0	100.0	103.0	103.0	0.1	0.1	-89.23	2.3	-169.8	169.8	169.6	0.19	883.409	
200.0	200.0	203.0	203.0	0.3	0.3	-89.23	2.3	-169.8	169.8	169.1	0.64	264.559	
300.0	300.0	303.0	303.0	0.5	0.5	-89.23	2.3	-169.8	169.8	168.7	1.09	155.575	
400.0	400.0	403.0	403.0	0.8	0.8	-89.23	2.3	-169.8	169.8	168.2	1.54	110.185	
500.0	500.0	503.0	503.0	1.0	1.0	-89.23	2.3	-169.8	169.8	167.8	1.99	85.298	CC
551.3	551.3	554.3	554.3	1.1	1.1	-115.93	2.3	-169.8	170.0	167.7	2.22	76.562	ES
600.0	600.0	603.0	603.0	1.2	1.2	-116.19	2.3	-169.8	170.4	167.9	2.44	69.893	
700.0	700.0	703.0	703.0	1.4	1.4	-116.73	2.3	-169.8	171.2	168.3	2.88	59.334	
800.0	800.0	803.0	803.0	1.7	1.7	-117.26	2.3	-169.8	172.0	168.6	3.33	51.601	
900.0	899.9	902.9	902.9	1.9	1.9	-117.79	2.3	-169.8	172.8	169.0	3.78	45.698	
1,000.0	999.9	1,002.9	1,002.9	2.1	2.1	-118.31	2.3	-169.8	173.6	169.4	4.23	41.046	
1,100.0	1,099.9	1,102.9	1,102.9	2.3	2.3	-118.83	2.3	-169.8	174.5	169.8	4.68	37.288	
1,200.0	1,199.9	1,202.9	1,202.9	2.6	2.6	-119.34	2.3	-169.8	175.4	170.2	5.13	34.190	
1,300.0	1,299.9	1,302.9	1,302.9	2.8	2.8	-119.85	2.3	-169.8	176.2	170.7	5.58	31.593	
1,400.0	1,399.9	1,402.9	1,402.9	3.0	3.0	-120.35	2.3	-169.8	177.1	171.1	6.03	29.386	
1,500.0	1,499.8	1,502.8	1,502.8	3.2	3.2	-120.85	2.3	-169.8	178.1	171.6	6.48	27.486	
1,600.0	1,599.8	1,602.8	1,602.8	3.5	3.5	-121.34	2.3	-169.8	179.0	172.1	6.93	25.835	
1,700.0	1,699.8	1,702.8	1,702.8	3.7	3.7	-121.83	2.3	-169.8	179.9	172.5	7.38	24.386	
1,748.9	1,748.7	1,751.7	1,751.7	3.8	3.8	-122.06	2.3	-169.8	180.4	172.8	7.60	23.741	
1,800.2	1,800.0	1,803.0	1,803.0	3.9	3.9	-95.63	2.3	-169.8	180.6	172.8	7.82	23.110	
1,900.0	1,899.8	1,902.8	1,902.8	4.1	4.1	-95.63	2.3	-169.8	180.6	172.4	8.24	21.930	
2,000.0	1,999.8	2,002.8	2,002.8	4.3	4.4	-95.63	2.3	-169.8	180.6	171.9	8.68	20.800	
2,100.0	2,099.8	2,102.8	2,102.8	4.5	4.6	-95.63	2.3	-169.8	180.6	171.5	9.13	19.779	
2,200.0	2,199.8	2,202.8	2,202.8	4.8	4.8	-95.63	2.3	-169.8	180.6	171.0	9.58	18.854	
2,300.0	2,299.8	2,302.8	2,302.8	5.0	5.0	-95.63	2.3	-169.8	180.6	170.6	10.03	18.012	
2,400.0	2,399.8	2,402.8	2,402.8	5.2	5.3	-95.63	2.3	-169.8	180.6	170.1	10.48	17.241	
2,500.0	2,499.8	2,502.8	2,502.8	5.4	5.5	-95.63	2.3	-169.8	180.6	169.7	10.92	16.534	
2,600.0	2,599.8	2,602.8	2,602.8	5.7	5.7	-95.63	2.3	-169.8	180.6	169.3	11.37	15.882	
2,700.0	2,699.8	2,702.8	2,702.8	5.9	5.9	-95.63	2.3	-169.8	180.6	168.8	11.82	15.279	
2,799.9	2,799.7	2,802.7	2,802.7	6.1	6.2	-95.63	2.3	-169.8	180.6	168.4	12.27	14.721	
2,900.0	2,899.8	2,902.8	2,902.8	6.3	6.4	-176.39	2.3	-169.8	182.4	169.7	12.70	14.359	
3,000.0	2,999.6	3,002.6	3,002.6	6.5	6.6	-176.48	2.3	-169.8	187.6	174.5	13.12	14.298	
3,100.0	3,099.3	3,102.3	3,102.3	6.8	6.8	-176.63	2.3	-169.8	196.3	182.8	13.53	14.508	
3,200.0	3,198.5	3,201.5	3,201.5	7.0	7.1	-176.81	2.3	-169.8	208.5	194.5	13.93	14.967	
3,210.2	3,208.6	3,211.6	3,211.6	7.0	7.1	-176.83	2.3	-169.8	209.9	195.9	13.97	15.026	
3,300.0	3,297.5	3,300.5	3,300.5	7.2	7.3	-177.01	2.3	-169.8	222.7	208.3	14.36	15.509	
3,400.0	3,396.5	3,399.5	3,399.5	7.5	7.5	-177.19	2.3	-169.8	237.0	222.2	14.80	16.015	
3,500.0	3,495.4	3,498.4	3,498.4	7.8	7.7	-177.35	2.3	-169.8	251.2	236.0	15.24	16.489	
3,600.0	3,594.4	3,589.2	3,589.1	8.0	7.9	-177.51	2.0	-171.1	267.0	251.3	15.64	17.068	
3,700.0	3,693.4	3,678.7	3,678.6	8.3	8.1	-177.70	1.1	-175.2	285.8	269.8	16.04	17.823	
3,800.0	3,792.4	3,767.2	3,766.8	8.6	8.3	-177.91	-0.3	-181.9	307.7	291.3	16.43	18.728	
3,900.0	3,891.3	3,854.3	3,853.4	8.9	8.5	-178.13	-2.2	-191.2	332.6	315.8	16.83	19.767	
4,000.0	3,990.3	3,940.1	3,938.3	9.2	8.6	-178.35	-4.7	-202.8	360.4	343.2	17.22	20.930	
4,100.0	4,089.3	4,024.2	4,021.3	9.5	8.8	-178.56	-7.6	-216.6	391.0	373.4	17.61	22.202	
4,200.0	4,188.3	4,106.8	4,102.2	9.8	9.0	-178.77	-10.9	-232.4	424.3	406.3	18.00	23.574	
4,300.0	4,287.2	4,187.6	4,181.0	10.1	9.3	-178.97	-14.7	-250.1	460.4	442.0	18.39	25.034	
4,400.0	4,386.2	4,266.6	4,257.5	10.4	9.5	-179.15	-18.8	-269.5	499.0	480.2	18.78	26.574	
4,500.0	4,485.2	4,350.9	4,338.6	10.7	9.8	-179.33	-23.5	-292.2	539.8	520.7	19.18	28.147	
4,600.0	4,584.2	4,442.0	4,426.1	11.0	10.1	-179.51	-28.8	-316.9	581.0	561.4	19.59	29.652	
4,700.0	4,683.1	4,533.2	4,513.7	11.3	10.4	-179.66	-34.0	-341.7	622.1	602.1	20.01	31.091	
4,800.0	4,782.1	4,624.3	4,601.2	11.6	10.8	-179.79	-39.2	-366.4	663.3	642.9	20.43	32.465	

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,900.0	4,881.1	4,715.4	4,688.7	11.9	11.1	-179.91	-44.4	-391.2	704.5	683.6	20.86	33.778	
5,000.0	4,980.1	4,806.6	4,776.3	12.2	11.5	179.99	-49.6	-415.9	745.6	724.3	21.28	35.032	
5,100.0	5,079.1	4,897.7	4,863.8	12.6	11.9	179.90	-54.9	-440.7	786.8	765.1	21.72	36.231	
5,200.0	5,178.0	4,988.8	4,951.4	12.9	12.3	179.82	-60.1	-465.4	828.0	805.8	22.15	37.378	
5,300.0	5,277.0	5,079.9	5,038.9	13.2	12.7	179.74	-65.3	-490.2	869.1	846.5	22.59	38.475	
5,400.0	5,376.0	5,171.1	5,126.5	13.5	13.2	179.67	-70.5	-514.9	910.3	887.3	23.03	39.526	
5,500.0	5,475.0	5,262.2	5,214.0	13.9	13.6	179.61	-75.8	-539.7	951.5	928.0	23.47	40.533	
5,600.0	5,573.9	5,353.3	5,301.6	14.2	14.1	179.55	-81.0	-564.4	992.6	968.7	23.92	41.498	
5,700.0	5,672.9	5,444.5	5,389.1	14.5	14.5	179.50	-86.2	-589.2	1,033.8	1,009.4	24.37	42.424	
5,800.0	5,771.9	5,535.6	5,476.7	14.8	15.0	179.45	-91.4	-614.0	1,075.0	1,050.1	24.82	43.311	
5,900.0	5,870.9	5,626.7	5,564.2	15.2	15.4	179.40	-96.6	-638.7	1,116.1	1,090.9	25.27	44.164	
6,000.0	5,969.8	5,717.8	5,651.8	15.5	15.9	179.36	-101.9	-663.5	1,157.3	1,131.6	25.73	44.982	
6,100.0	6,068.8	5,809.0	5,739.3	15.8	16.4	179.32	-107.1	-688.2	1,198.5	1,172.3	26.19	45.769	
6,200.0	6,167.8	5,900.1	5,826.8	16.2	16.8	179.29	-112.3	-713.0	1,239.7	1,213.0	26.64	46.525	
6,300.0	6,266.8	5,991.2	5,914.4	16.5	17.3	179.25	-117.5	-737.7	1,280.8	1,253.7	27.11	47.252	
6,400.0	6,365.7	6,082.3	6,001.9	16.8	17.8	179.22	-122.8	-762.5	1,322.0	1,294.4	27.57	47.951	
6,483.2	6,448.1	6,158.2	6,074.8	17.1	18.2	179.19	-127.1	-783.1	1,356.3	1,328.3	27.96	48.513	
6,500.0	6,464.7	6,173.4	6,089.4	17.2	18.3	-174.71	-128.0	-787.2	1,363.4	1,335.4	27.98	48.734	
6,550.0	6,513.6	6,217.6	6,131.8	17.4	18.5	-163.55	-130.5	-799.2	1,386.6	1,358.6	28.00	49.531	
6,600.0	6,561.5	6,259.8	6,172.4	17.6	18.8	-157.03	-132.9	-810.7	1,413.0	1,385.0	27.98	50.493	
6,650.0	6,608.0	6,299.7	6,210.8	17.9	19.0	-152.24	-135.2	-821.5	1,442.3	1,414.3	27.98	51.540	
6,700.0	6,652.8	6,337.1	6,246.6	18.2	19.2	-148.12	-137.4	-831.7	1,474.2	1,446.2	28.05	52.551	
6,750.0	6,695.6	6,371.5	6,279.8	18.5	19.4	-144.12	-139.3	-841.0	1,508.7	1,480.4	28.27	53.362	
6,800.0	6,735.9	6,402.9	6,309.9	18.9	19.5	-139.94	-141.1	-849.5	1,545.4	1,516.7	28.74	53.766	
6,850.0	6,773.5	6,430.9	6,336.8	19.4	19.7	-135.29	-142.7	-857.1	1,584.2	1,554.7	29.58	53.554	
6,900.0	6,808.2	6,455.3	6,360.2	19.9	19.8	-129.94	-144.1	-863.8	1,624.8	1,593.9	30.89	52.593	
6,950.0	6,839.6	6,475.9	6,380.1	20.4	19.9	-123.66	-145.3	-869.4	1,666.9	1,634.2	32.74	50.915	
7,000.0	6,867.5	7,225.0	6,979.4	21.0	22.0	-126.35	198.6	-978.9	1,701.5	1,669.0	32.43	52.468	
7,014.6	6,874.9	7,235.9	6,984.8	21.2	22.0	-125.10	208.0	-978.9	1,710.7	1,677.9	32.85	52.073	
7,100.0	6,917.7	7,299.4	7,016.6	22.3	22.2	-124.42	262.9	-978.9	1,765.5	1,731.7	33.81	52.221	
7,164.6	6,949.9	7,354.7	7,042.9	23.1	22.4	-123.80	311.6	-978.9	1,806.9	1,772.3	34.64	52.156	
7,200.0	6,967.3	7,386.3	7,055.8	23.6	22.5	-119.24	340.4	-978.9	1,829.1	1,793.4	35.69	51.254	
7,250.0	6,990.3	7,431.9	7,071.7	24.3	22.7	-113.49	383.1	-978.9	1,858.7	1,821.7	36.95	50.298	
7,300.0	7,011.5	7,478.4	7,084.3	24.9	22.9	-108.48	427.9	-978.9	1,885.9	1,847.9	38.03	49.586	
7,350.0	7,030.8	7,525.5	7,093.4	25.5	23.2	-104.15	474.1	-978.9	1,910.6	1,871.6	38.98	49.011	
7,400.0	7,047.9	7,572.9	7,098.6	26.1	23.5	-100.43	521.2	-978.9	1,932.6	1,892.7	39.86	48.486	
7,450.0	7,062.7	7,619.9	7,100.0	26.7	23.8	-97.28	568.2	-978.9	1,951.7	1,911.0	40.70	47.951	
7,500.0	7,075.2	7,665.5	7,100.0	27.2	24.2	-94.73	613.7	-978.9	1,967.8	1,926.2	41.55	47.364	
7,550.0	7,085.2	7,712.7	7,100.0	27.8	24.6	-92.74	660.9	-978.9	1,980.8	1,938.4	42.41	46.708	
7,600.0	7,092.7	7,761.1	7,100.0	28.3	25.1	-91.30	709.4	-978.9	1,990.5	1,947.2	43.33	45.937	
7,650.0	7,097.6	7,810.4	7,100.0	28.8	25.6	-90.37	758.7	-978.9	1,996.9	1,952.6	44.28	45.097	
7,700.0	7,099.9	7,860.3	7,100.0	29.2	26.1	-89.94	808.5	-978.9	1,999.9	1,954.6	45.27	44.173	
7,717.5	7,100.0	7,877.8	7,100.0	29.4	26.3	-89.91	826.1	-978.9	2,000.1	1,954.5	45.62	43.843	
7,800.0	7,100.0	7,960.3	7,100.0	30.1	27.3	-89.91	908.5	-978.9	2,000.1	1,952.3	47.76	41.878	
7,900.0	7,100.0	8,060.3	7,100.0	31.1	28.6	-89.91	1,008.5	-978.9	2,000.1	1,949.6	50.46	39.634	
8,000.0	7,100.0	8,160.3	7,100.0	32.1	29.9	-89.91	1,108.5	-979.0	2,000.1	1,946.8	53.31	37.518	
8,100.0	7,100.0	8,260.3	7,100.0	33.2	31.3	-89.91	1,208.5	-979.0	2,000.1	1,943.8	56.28	35.540	
8,200.0	7,100.0	8,360.3	7,100.0	34.4	32.8	-89.91	1,308.5	-979.0	2,000.1	1,940.8	59.35	33.701	
8,300.0	7,100.0	8,460.3	7,100.0	35.7	34.3	-89.91	1,408.5	-979.0	2,000.1	1,937.6	62.51	31.999	
8,400.0	7,100.0	8,560.3	7,100.0	37.0	35.8	-89.91	1,508.5	-979.0	2,000.1	1,934.4	65.74	30.425	
8,500.0	7,100.0	8,660.3	7,100.0	38.3	37.4	-89.91	1,608.5	-979.0	2,000.1	1,931.1	69.04	28.971	
8,600.0	7,100.0	8,760.3	7,100.0	39.7	39.1	-89.91	1,708.5	-979.0	2,000.1	1,927.7	72.39	27.629	

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,700.0	7,100.0	8,860.3	7,100.0	41.2	40.7	-89.91	1,808.5	-979.0	2,000.1	1,924.3	75.79	26.389	
8,800.0	7,100.0	8,960.3	7,100.0	42.7	42.4	-89.91	1,908.5	-979.0	2,000.1	1,920.9	79.24	25.242	
8,900.0	7,100.0	9,060.3	7,100.0	44.2	44.1	-89.91	2,008.5	-979.0	2,000.1	1,917.4	82.72	24.179	
9,000.0	7,100.0	9,160.3	7,100.0	45.8	45.8	-89.91	2,108.5	-979.0	2,000.1	1,913.9	86.24	23.194	
9,100.0	7,100.0	9,260.3	7,100.0	47.4	47.5	-89.91	2,208.5	-979.0	2,000.1	1,910.4	89.78	22.279	
9,200.0	7,100.0	9,360.3	7,100.0	49.0	49.3	-89.91	2,308.5	-979.0	2,000.2	1,906.8	93.35	21.427	
9,300.0	7,100.0	9,460.3	7,100.0	50.6	51.0	-89.91	2,408.5	-979.0	2,000.2	1,903.2	96.94	20.633	
9,400.0	7,100.0	9,560.3	7,100.0	52.3	52.8	-89.91	2,508.5	-979.0	2,000.2	1,899.6	100.55	19.892	
9,500.0	7,100.0	9,660.3	7,100.0	54.0	54.6	-89.91	2,608.5	-979.0	2,000.2	1,896.0	104.18	19.199	
9,600.0	7,100.0	9,760.3	7,100.0	55.7	56.4	-89.91	2,708.5	-979.0	2,000.2	1,892.4	107.82	18.550	
9,700.0	7,100.0	9,860.3	7,100.0	57.4	58.2	-89.91	2,808.5	-979.0	2,000.2	1,888.7	111.48	17.941	
9,800.0	7,100.0	9,960.3	7,100.0	59.1	60.0	-89.91	2,908.5	-979.0	2,000.2	1,885.0	115.16	17.369	
9,900.0	7,100.0	10,060.3	7,100.0	60.8	61.8	-89.91	3,008.5	-979.0	2,000.2	1,881.3	118.84	16.831	
10,000.0	7,100.0	10,160.3	7,100.0	62.6	63.6	-89.91	3,108.5	-979.0	2,000.2	1,877.7	122.54	16.323	
10,100.0	7,100.0	10,260.3	7,100.0	64.4	65.5	-89.91	3,208.5	-979.0	2,000.2	1,874.0	126.25	15.844	
10,200.0	7,100.0	10,360.3	7,100.0	66.1	67.3	-89.91	3,308.5	-979.0	2,000.2	1,870.2	129.96	15.391	
10,300.0	7,100.0	10,460.3	7,100.0	67.9	69.2	-89.91	3,408.5	-979.0	2,000.2	1,866.5	133.69	14.962	
10,400.0	7,100.0	10,560.3	7,100.0	69.7	71.0	-89.91	3,508.5	-979.0	2,000.2	1,862.8	137.42	14.556	
10,500.0	7,100.0	10,660.3	7,100.0	71.5	72.8	-89.91	3,608.5	-979.0	2,000.2	1,859.1	141.16	14.170	
10,600.0	7,100.0	10,760.3	7,100.0	73.3	74.7	-89.91	3,708.5	-979.0	2,000.2	1,855.3	144.90	13.804	
10,700.0	7,100.0	10,860.3	7,100.0	75.1	76.6	-89.91	3,808.5	-979.0	2,000.2	1,851.6	148.65	13.456	
10,800.0	7,100.0	10,960.3	7,100.0	76.9	78.4	-89.91	3,908.5	-979.0	2,000.2	1,847.8	152.41	13.124	
10,900.0	7,100.0	11,060.3	7,100.0	78.7	80.3	-89.91	4,008.5	-979.0	2,000.2	1,844.1	156.17	12.808	
11,000.0	7,100.0	11,160.3	7,100.0	80.6	82.2	-89.91	4,108.5	-979.0	2,000.3	1,840.3	159.94	12.507	
11,100.0	7,100.0	11,260.3	7,100.0	82.4	84.0	-89.91	4,208.5	-979.0	2,000.3	1,836.5	163.71	12.218	
11,200.0	7,100.0	11,360.3	7,100.0	84.2	85.9	-89.91	4,308.5	-979.0	2,000.3	1,832.8	167.48	11.943	
11,300.0	7,100.0	11,460.3	7,100.0	86.1	87.8	-89.91	4,408.5	-979.0	2,000.3	1,829.0	171.26	11.680	
11,400.0	7,100.0	11,560.3	7,100.0	87.9	89.7	-89.91	4,508.5	-979.0	2,000.3	1,825.2	175.04	11.427	
11,500.0	7,100.0	11,660.3	7,100.0	89.8	91.5	-89.91	4,608.5	-979.0	2,000.3	1,821.4	178.83	11.185	
11,600.0	7,100.0	11,760.3	7,100.0	91.6	93.4	-89.91	4,708.5	-979.0	2,000.3	1,817.7	182.62	10.953	
11,700.0	7,100.0	11,860.3	7,100.0	93.5	95.3	-89.91	4,808.5	-979.0	2,000.3	1,813.9	186.41	10.730	
11,800.0	7,100.0	11,960.3	7,100.0	95.4	97.2	-89.91	4,908.5	-979.0	2,000.3	1,810.1	190.21	10.516	
11,900.0	7,100.0	12,060.3	7,100.0	97.2	99.1	-89.91	5,008.5	-979.0	2,000.3	1,806.3	194.01	10.311	
11,910.7	7,100.0	12,071.0	7,100.0	97.4	99.3	-89.91	5,019.2	-979.0	2,000.3	1,805.9	194.41	10.289	
11,971.9	7,100.0	12,091.6	7,100.0	98.6	99.7	-89.91	5,039.9	-979.0	2,000.7	1,804.8	195.96	10.210	SF

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.14	0.3	-20.0	20.0				
100.0	100.0	100.0	100.0	0.1	0.1	-89.14	0.3	-20.0	20.0	19.8	0.19	105.995	
200.0	200.0	200.0	200.0	0.3	0.3	-89.14	0.3	-20.0	20.0	19.4	0.64	31.351	
300.0	300.0	300.0	300.0	0.5	0.5	-89.14	0.3	-20.0	20.0	18.9	1.09	18.396	
400.0	400.0	400.0	400.0	0.8	0.8	-89.14	0.3	-20.0	20.0	18.5	1.54	13.017	
500.0	500.0	500.0	500.0	1.0	1.0	-89.14	0.3	-20.0	20.0	18.0	1.99	10.072	CC
551.3	551.3	551.3	551.3	1.1	1.1	-116.88	0.3	-20.0	20.2	18.0	2.22	9.120	ES
600.0	600.0	600.0	600.0	1.2	1.2	-119.04	0.3	-20.0	20.6	18.2	2.43	8.474	
700.0	700.0	700.0	700.0	1.4	1.4	-123.20	0.3	-20.0	21.6	18.7	2.88	7.480	
800.0	800.0	800.0	800.0	1.7	1.7	-127.01	0.3	-20.0	22.6	19.3	3.33	6.783	
900.0	899.9	899.9	899.9	1.9	1.9	-130.46	0.3	-20.0	23.7	19.9	3.78	6.274	
1,000.0	999.9	999.9	999.9	2.1	2.1	-133.60	0.3	-20.0	24.9	20.7	4.23	5.892	
1,100.0	1,099.9	1,099.9	1,099.9	2.3	2.3	-136.44	0.3	-20.0	26.2	21.5	4.68	5.597	
1,200.0	1,199.9	1,199.9	1,199.9	2.6	2.6	-139.01	0.3	-20.0	27.5	22.4	5.12	5.365	
1,300.0	1,299.9	1,299.9	1,299.9	2.8	2.8	-141.34	0.3	-20.0	28.9	23.3	5.57	5.179	
1,400.0	1,399.9	1,399.9	1,399.9	3.0	3.0	-143.46	0.3	-20.0	30.3	24.3	6.02	5.028	
1,500.0	1,499.8	1,499.8	1,499.8	3.2	3.2	-145.38	0.3	-20.0	31.7	25.3	6.47	4.904	
1,600.0	1,599.8	1,599.8	1,599.8	3.5	3.5	-147.14	0.3	-20.0	33.2	26.3	6.92	4.801	
1,700.0	1,699.8	1,699.8	1,699.8	3.7	3.7	-148.74	0.3	-20.0	34.8	27.4	7.37	4.714	
1,748.9	1,748.7	1,748.7	1,748.7	3.8	3.8	-149.47	0.3	-20.0	35.5	27.9	7.59	4.676	
1,800.2	1,800.0	1,800.0	1,800.0	3.9	3.9	-123.28	0.3	-20.0	35.9	28.1	7.82	4.593	
1,900.0	1,899.8	1,899.8	1,899.8	4.1	4.1	-123.28	0.3	-20.0	35.9	27.7	8.24	4.359	
2,000.0	1,999.8	1,999.8	1,999.8	4.3	4.4	-123.28	0.3	-20.0	35.9	27.2	8.68	4.134	
2,100.0	2,099.8	2,099.8	2,099.8	4.5	4.6	-123.28	0.3	-20.0	35.9	26.8	9.13	3.931	
2,200.0	2,199.8	2,199.8	2,199.8	4.8	4.8	-123.28	0.3	-20.0	35.9	26.3	9.58	3.748	
2,300.0	2,299.8	2,299.8	2,299.8	5.0	5.0	-123.28	0.3	-20.0	35.9	25.9	10.03	3.580	
2,400.0	2,399.8	2,399.8	2,399.8	5.2	5.3	-123.28	0.3	-20.0	35.9	25.4	10.47	3.427	
2,500.0	2,499.8	2,499.8	2,499.8	5.4	5.5	-123.28	0.3	-20.0	35.9	25.0	10.92	3.287	
2,600.0	2,599.8	2,599.8	2,599.8	5.7	5.7	-123.28	0.3	-20.0	35.9	24.5	11.37	3.157	
2,700.0	2,699.8	2,699.8	2,699.8	5.9	5.9	-123.28	0.3	-20.0	35.9	24.1	11.82	3.037	
2,799.9	2,799.7	2,799.7	2,799.7	6.1	6.2	-123.28	0.3	-20.0	35.9	23.6	12.27	2.926	SF
2,900.0	2,899.8	2,899.8	2,899.8	6.3	6.4	157.06	0.3	-20.0	37.5	24.8	12.70	2.953	
3,000.0	2,999.6	2,999.6	2,999.6	6.5	6.6	159.79	0.3	-20.0	42.4	29.3	13.12	3.230	
3,100.0	3,099.3	3,099.3	3,099.3	6.8	6.8	163.15	0.3	-20.0	50.6	37.1	13.53	3.743	
3,200.0	3,198.5	3,198.5	3,198.5	7.0	7.1	166.34	0.3	-20.0	62.4	48.5	13.93	4.480	
3,210.2	3,208.6	3,208.6	3,208.6	7.0	7.1	166.64	0.3	-20.0	63.8	49.8	13.97	4.568	
3,300.0	3,297.5	3,297.5	3,297.5	7.2	7.3	168.86	0.3	-20.0	76.4	62.0	14.36	5.317	
3,400.0	3,396.5	3,396.5	3,396.5	7.5	7.5	170.61	0.3	-20.0	90.4	75.6	14.80	6.110	
3,500.0	3,495.4	3,495.4	3,495.4	7.8	7.7	171.88	0.3	-20.0	104.5	89.3	15.23	6.860	
3,600.0	3,594.4	3,594.4	3,594.4	8.0	7.9	172.86	0.3	-20.0	118.7	103.0	15.68	7.570	
3,700.0	3,693.4	3,693.4	3,693.4	8.3	8.2	173.62	0.3	-20.0	132.8	116.7	16.12	8.242	
3,800.0	3,792.4	3,792.4	3,792.4	8.6	8.4	174.24	0.3	-20.0	147.0	130.5	16.56	8.878	
3,900.0	3,891.3	3,891.3	3,891.3	8.9	8.6	174.75	0.3	-20.0	161.2	144.2	17.01	9.482	
4,000.0	3,990.3	3,990.3	3,990.3	9.2	8.8	175.18	0.3	-20.0	175.5	158.0	17.45	10.054	
4,100.0	4,089.3	4,089.3	4,089.3	9.5	9.1	175.54	0.3	-20.0	189.7	171.8	17.90	10.598	
4,200.0	4,188.3	4,188.3	4,188.3	9.8	9.3	175.85	0.3	-20.0	203.9	185.6	18.35	11.114	
4,300.0	4,287.2	4,287.2	4,287.2	10.1	9.5	176.12	0.3	-20.0	218.2	199.4	18.80	11.606	
4,400.0	4,386.2	4,386.2	4,386.2	10.4	9.7	176.36	0.3	-20.0	232.4	213.2	19.25	12.074	
4,500.0	4,485.2	4,485.2	4,485.2	10.7	10.0	176.57	0.3	-20.0	246.6	227.0	19.70	12.521	
4,600.0	4,584.2	4,584.2	4,584.2	11.0	10.2	176.76	0.3	-20.0	260.9	240.7	20.15	12.947	
4,700.0	4,683.1	4,683.1	4,683.1	11.3	10.4	176.93	0.3	-20.0	275.2	254.5	20.60	13.354	
4,800.0	4,782.1	4,782.1	4,782.1	11.6	10.6	177.08	0.3	-20.0	289.4	268.3	21.06	13.743	

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

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,900.0	4,881.1	4,881.1	4,881.1	11.9	10.8	177.21	0.3	-20.0	303.7	282.1	21.51	14.115	
5,000.0	4,980.1	4,980.1	4,980.1	12.2	11.1	177.34	0.3	-20.0	317.9	295.9	21.97	14.472	
5,100.0	5,079.1	5,071.0	5,071.0	12.6	11.3	177.48	0.3	-20.9	333.1	310.7	22.40	14.875	
5,200.0	5,178.0	5,159.0	5,158.9	12.9	11.4	177.69	0.3	-24.4	351.3	328.5	22.81	15.402	
5,300.0	5,277.0	5,246.0	5,245.7	13.2	11.6	177.96	0.3	-30.6	372.4	349.1	23.21	16.040	
5,400.0	5,376.0	5,331.8	5,331.0	13.5	11.8	178.28	0.3	-39.2	396.3	372.7	23.62	16.780	
5,500.0	5,475.0	5,416.2	5,414.7	13.9	12.0	178.62	0.3	-50.2	423.2	399.1	24.02	17.614	
5,600.0	5,573.9	5,502.6	5,500.0	14.2	12.2	179.00	0.3	-63.9	452.6	428.2	24.43	18.526	
5,700.0	5,672.9	5,597.8	5,594.0	14.5	12.4	179.38	0.3	-79.7	482.9	458.0	24.86	19.428	
5,800.0	5,771.9	5,693.1	5,687.9	14.8	12.6	179.71	0.3	-95.5	513.2	487.9	25.28	20.298	
5,900.0	5,870.9	5,788.4	5,781.8	15.2	12.9	-179.99	0.3	-111.3	543.5	517.7	25.71	21.137	
6,000.0	5,969.8	5,883.6	5,875.8	15.5	13.1	-179.72	0.3	-127.1	573.8	547.6	26.14	21.949	
6,100.0	6,068.8	5,978.9	5,969.7	15.8	13.3	-179.48	0.3	-142.9	604.1	577.5	26.57	22.732	
6,200.0	6,167.8	6,074.2	6,063.7	16.2	13.6	-179.27	0.3	-158.7	634.4	607.4	27.01	23.489	
6,300.0	6,266.8	6,169.4	6,157.6	16.5	13.9	-179.07	0.3	-174.5	664.7	637.3	27.44	24.221	
6,400.0	6,365.7	6,264.7	6,251.6	16.8	14.1	-178.89	0.3	-190.3	695.0	667.2	27.88	24.929	
6,483.2	6,448.1	6,344.0	6,329.8	17.1	14.3	-178.75	0.3	-203.5	720.3	692.0	28.25	25.501	
6,500.0	6,464.7	6,359.9	6,345.5	17.2	14.4	-172.74	0.3	-206.1	725.6	697.3	28.28	25.659	
6,550.0	6,513.6	6,406.5	6,391.5	17.4	14.5	-161.93	0.3	-213.8	743.5	715.2	28.33	26.246	
6,600.0	6,561.5	6,451.7	6,436.0	17.6	14.7	-155.91	0.3	-221.3	764.6	736.3	28.33	26.990	
6,650.0	6,608.0	6,508.9	6,492.3	17.9	14.8	-151.87	1.8	-230.7	788.6	760.3	28.33	27.838	
6,700.0	6,652.8	6,574.1	6,556.3	18.2	15.0	-148.45	10.1	-240.6	814.4	786.0	28.35	28.727	
6,750.0	6,695.6	6,639.5	6,619.1	18.5	15.2	-145.11	25.7	-249.7	841.7	813.3	28.42	29.613	
6,800.0	6,735.9	6,704.8	6,679.7	18.9	15.4	-141.65	48.4	-257.7	870.5	841.9	28.61	30.425	
6,850.0	6,773.5	6,769.6	6,737.2	19.4	15.6	-137.95	77.6	-264.5	900.6	871.6	28.98	31.079	
6,900.0	6,808.2	6,833.9	6,790.6	19.9	15.7	-133.99	112.8	-270.1	931.9	902.3	29.58	31.507	
6,950.0	6,839.6	6,897.7	6,839.6	20.4	15.9	-129.75	153.5	-274.4	964.2	933.8	30.44	31.672	
7,000.0	6,867.5	6,961.2	6,883.7	21.0	16.2	-125.24	199.0	-277.3	997.3	965.7	31.58	31.578	
7,014.6	6,874.9	6,979.7	6,895.6	21.2	16.3	-123.88	213.2	-278.0	1,007.1	975.1	31.96	31.510	
7,100.0	6,917.7	7,082.3	6,953.0	22.3	16.8	-122.64	298.0	-279.4	1,063.3	1,030.0	33.31	31.919	
7,164.6	6,949.9	7,130.3	6,977.0	23.1	17.1	-121.90	339.5	-279.4	1,105.1	1,070.7	34.33	32.185	
7,200.0	6,967.3	7,157.1	6,990.4	23.6	17.2	-117.41	362.8	-279.4	1,127.5	1,092.2	35.38	31.867	
7,250.0	6,990.3	7,196.9	7,010.3	24.3	17.5	-111.90	397.3	-279.4	1,157.5	1,120.8	36.67	31.563	
7,300.0	7,011.5	7,239.2	7,031.2	24.9	17.8	-107.29	434.0	-279.4	1,185.2	1,147.4	37.82	31.339	
7,350.0	7,030.8	7,284.2	7,051.0	25.5	18.2	-103.37	474.4	-279.4	1,210.3	1,171.4	38.86	31.145	
7,400.0	7,047.9	7,330.7	7,068.0	26.1	18.7	-100.03	517.6	-279.4	1,232.6	1,192.8	39.82	30.956	
7,450.0	7,062.7	7,378.4	7,081.8	26.7	19.2	-97.22	563.3	-279.4	1,252.0	1,211.2	40.72	30.749	
7,500.0	7,075.2	7,427.2	7,091.9	27.2	19.7	-94.88	611.0	-279.4	1,268.2	1,226.7	41.57	30.511	
7,550.0	7,085.2	7,476.5	7,098.0	27.8	20.3	-92.98	660.0	-279.4	1,281.3	1,238.9	42.37	30.240	
7,600.0	7,092.7	7,526.0	7,099.8	28.3	20.8	-91.49	709.4	-279.4	1,291.0	1,247.9	43.12	29.937	
7,650.0	7,097.6	7,575.4	7,099.8	28.8	21.5	-90.48	758.8	-279.4	1,297.3	1,253.5	43.83	29.600	
7,700.0	7,099.9	7,625.2	7,099.8	29.2	22.1	-90.02	808.6	-279.4	1,300.3	1,255.8	44.49	29.225	
7,717.5	7,100.0	7,642.8	7,099.8	29.4	22.4	-89.99	826.2	-279.4	1,300.5	1,255.8	44.72	29.083	
7,800.0	7,100.0	7,725.2	7,099.8	30.1	23.5	-89.99	908.6	-279.4	1,300.5	1,253.6	46.85	27.757	
7,900.0	7,100.0	7,825.2	7,099.8	31.1	24.9	-89.99	1,008.6	-279.4	1,300.5	1,250.9	49.56	26.240	
8,000.0	7,100.0	7,925.2	7,099.8	32.1	26.4	-89.99	1,108.6	-279.4	1,300.5	1,248.1	52.41	24.812	
8,100.0	7,100.0	8,025.2	7,099.8	33.2	28.0	-89.99	1,208.6	-279.4	1,300.5	1,245.1	55.39	23.480	
8,200.0	7,100.0	8,125.2	7,099.8	34.4	29.6	-89.99	1,308.6	-279.4	1,300.5	1,242.0	58.46	22.244	
8,300.0	7,100.0	8,225.2	7,099.8	35.7	31.2	-89.99	1,408.6	-279.4	1,300.5	1,238.9	61.63	21.102	
8,400.0	7,100.0	8,325.2	7,099.8	37.0	32.9	-89.99	1,508.6	-279.4	1,300.5	1,235.6	64.87	20.048	
8,500.0	7,100.0	8,425.2	7,099.8	38.3	34.6	-89.99	1,608.6	-279.4	1,300.5	1,232.3	68.18	19.076	
8,600.0	7,100.0	8,525.2	7,099.8	39.7	36.3	-89.99	1,708.6	-279.4	1,300.5	1,229.0	71.54	18.179	

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

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,700.0	7,100.0	8,625.2	7,099.8	41.2	38.0	-89.99	1,808.6	-279.3	1,300.5	1,225.6	74.95	17.352	
8,800.0	7,100.0	8,725.2	7,099.8	42.7	39.8	-89.99	1,908.6	-279.3	1,300.5	1,222.1	78.40	16.588	
8,900.0	7,100.0	8,825.2	7,099.8	44.2	41.6	-89.99	2,008.6	-279.3	1,300.5	1,218.6	81.89	15.882	
9,000.0	7,100.0	8,925.2	7,099.8	45.8	43.4	-89.99	2,108.6	-279.3	1,300.5	1,215.1	85.41	15.227	
9,100.0	7,100.0	9,025.2	7,099.8	47.4	45.2	-89.99	2,208.6	-279.3	1,300.5	1,211.6	88.96	14.620	
9,200.0	7,100.0	9,125.2	7,099.8	49.0	47.0	-89.99	2,308.6	-279.3	1,300.5	1,208.0	92.53	14.055	
9,300.0	7,100.0	9,225.2	7,099.8	50.6	48.8	-89.99	2,408.6	-279.3	1,300.5	1,204.4	96.13	13.529	
9,400.0	7,100.0	9,325.2	7,099.8	52.3	50.6	-89.99	2,508.6	-279.3	1,300.5	1,200.8	99.74	13.039	
9,500.0	7,100.0	9,425.2	7,099.8	54.0	52.4	-89.99	2,608.6	-279.3	1,300.5	1,197.1	103.38	12.580	
9,600.0	7,100.0	9,525.2	7,099.8	55.7	54.3	-89.99	2,708.6	-279.3	1,300.5	1,193.5	107.03	12.151	
9,700.0	7,100.0	9,625.2	7,099.8	57.4	56.1	-89.99	2,808.6	-279.3	1,300.5	1,189.8	110.69	11.749	
9,800.0	7,100.0	9,725.2	7,099.8	59.1	58.0	-89.99	2,908.6	-279.3	1,300.5	1,186.1	114.37	11.371	
9,900.0	7,100.0	9,825.2	7,099.8	60.8	59.8	-89.99	3,008.6	-279.3	1,300.5	1,182.5	118.06	11.016	
10,000.0	7,100.0	9,925.2	7,099.8	62.6	61.7	-89.99	3,108.6	-279.3	1,300.5	1,178.8	121.76	10.681	
10,100.0	7,100.0	10,025.2	7,099.8	64.4	63.6	-89.99	3,208.6	-279.3	1,300.5	1,175.0	125.47	10.365	
10,200.0	7,100.0	10,125.2	7,099.8	66.1	65.4	-89.99	3,308.6	-279.3	1,300.5	1,171.3	129.19	10.067	
10,300.0	7,100.0	10,225.2	7,099.8	67.9	67.3	-89.99	3,408.6	-279.3	1,300.5	1,167.6	132.91	9.785	
10,400.0	7,100.0	10,325.2	7,099.8	69.7	69.2	-89.99	3,508.6	-279.3	1,300.5	1,163.9	136.65	9.517	
10,500.0	7,100.0	10,425.2	7,099.8	71.5	71.1	-89.99	3,608.6	-279.3	1,300.5	1,160.1	140.39	9.264	
10,600.0	7,100.0	10,525.2	7,099.8	73.3	72.9	-89.99	3,708.6	-279.3	1,300.5	1,156.4	144.14	9.023	
10,700.0	7,100.0	10,625.2	7,099.8	75.1	74.8	-89.99	3,808.6	-279.3	1,300.5	1,152.6	147.89	8.794	
10,800.0	7,100.0	10,725.2	7,099.8	76.9	76.7	-89.99	3,908.6	-279.3	1,300.5	1,148.9	151.65	8.576	
10,900.0	7,100.0	10,825.2	7,099.8	78.7	78.6	-89.99	4,008.6	-279.3	1,300.5	1,145.1	155.42	8.368	
11,000.0	7,100.0	10,925.2	7,099.8	80.6	80.5	-89.99	4,108.6	-279.3	1,300.5	1,141.3	159.19	8.170	
11,100.0	7,100.0	11,025.2	7,099.8	82.4	82.4	-89.99	4,208.6	-279.3	1,300.5	1,137.6	162.96	7.981	
11,200.0	7,100.0	11,125.2	7,099.8	84.2	84.3	-89.99	4,308.6	-279.3	1,300.5	1,133.8	166.74	7.800	
11,300.0	7,100.0	11,225.2	7,099.8	86.1	86.2	-89.99	4,408.6	-279.3	1,300.5	1,130.0	170.52	7.627	
11,400.0	7,100.0	11,325.2	7,099.8	87.9	88.1	-89.99	4,508.6	-279.3	1,300.5	1,126.2	174.30	7.461	
11,500.0	7,100.0	11,425.2	7,099.8	89.8	90.0	-89.99	4,608.6	-279.3	1,300.5	1,122.4	178.09	7.303	
11,600.0	7,100.0	11,525.2	7,099.8	91.6	91.9	-89.99	4,708.6	-279.3	1,300.5	1,118.6	181.88	7.150	
11,700.0	7,100.0	11,625.2	7,099.8	93.5	93.8	-89.99	4,808.6	-279.3	1,300.5	1,114.8	185.68	7.004	
11,800.0	7,100.0	11,725.2	7,099.8	95.4	95.7	-89.99	4,908.6	-279.3	1,300.5	1,111.0	189.47	6.864	
11,900.0	7,100.0	11,825.2	7,099.8	97.2	97.5	-89.99	5,008.6	-279.3	1,300.5	1,107.3	193.18	6.732	
11,905.2	7,100.0	11,830.4	7,099.8	97.3	97.6	-89.99	5,013.8	-279.3	1,300.5	1,107.2	193.36	6.726	
11,971.9	7,100.0	11,853.4	7,099.8	98.6	97.9	-89.99	5,036.8	-279.3	1,301.3	1,106.3	194.98	6.674	

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.89	-0.3	20.0	20.0				
100.0	100.0	100.0	100.0	0.1	0.1	90.89	-0.3	20.0	20.0	19.8	0.19	105.731	
200.0	200.0	200.0	200.0	0.3	0.3	90.89	-0.3	20.0	20.0	19.3	0.64	31.273	
300.0	300.0	300.0	300.0	0.5	0.5	90.89	-0.3	20.0	20.0	18.9	1.09	18.350	
400.0	400.0	400.0	400.0	0.8	0.8	90.89	-0.3	20.0	20.0	18.4	1.54	12.985	
500.0	500.0	500.0	500.0	1.0	1.0	90.89	-0.3	20.0	20.0	18.0	1.99	10.047	CC
551.3	551.3	550.9	550.9	1.1	1.1	65.46	-0.3	20.4	20.2	18.0	2.21	9.153	
600.0	600.0	599.3	599.3	1.2	1.2	67.48	-0.3	21.7	21.1	18.7	2.42	8.736	
700.0	700.0	699.3	699.2	1.4	1.4	70.90	-0.3	25.0	23.8	21.0	2.85	8.358	
800.0	800.0	799.2	799.1	1.7	1.6	73.63	-0.3	28.3	26.5	23.2	3.28	8.084	
900.0	899.9	899.2	899.0	1.9	1.8	75.85	-0.3	31.6	29.3	25.6	3.72	7.877	
1,000.0	999.9	999.1	998.9	2.1	2.1	77.68	-0.3	34.9	32.1	27.9	4.16	7.716	
1,100.0	1,099.9	1,099.1	1,098.8	2.3	2.3	79.21	-0.3	38.2	34.9	30.3	4.60	7.588	
1,200.0	1,199.9	1,200.2	1,199.9	2.6	2.5	81.26	-0.3	40.0	36.3	31.3	5.03	7.211	
1,300.0	1,299.9	1,300.2	1,299.9	2.8	2.7	84.07	-0.3	40.0	36.1	30.6	5.46	6.603	
1,400.0	1,399.9	1,400.2	1,399.9	3.0	2.9	86.91	-0.3	40.0	35.9	30.0	5.90	6.086	
1,500.0	1,499.8	1,500.2	1,499.8	3.2	3.1	89.76	-0.3	40.0	35.9	29.5	6.35	5.653	
1,508.3	1,508.1	1,508.4	1,508.1	3.3	3.2	90.00	-0.3	40.0	35.9	29.5	6.38	5.620	
1,600.0	1,599.8	1,600.1	1,599.8	3.5	3.4	92.62	-0.3	40.0	35.9	29.1	6.79	5.289	
1,700.0	1,699.8	1,700.1	1,699.8	3.7	3.6	95.46	-0.3	40.0	36.0	28.8	7.24	4.981	
1,748.9	1,748.7	1,749.0	1,748.7	3.8	3.7	96.85	-0.3	40.0	36.1	28.7	7.45	4.848	
1,800.2	1,800.0	1,800.3	1,800.0	3.9	3.8	124.13	-0.3	40.0	36.2	28.5	7.67	4.718	
1,900.0	1,899.8	1,900.1	1,899.8	4.1	4.0	124.13	-0.3	40.0	36.2	28.1	8.09	4.475	
2,000.0	1,999.8	2,000.1	1,999.8	4.3	4.2	124.13	-0.3	40.0	36.2	27.7	8.53	4.243	
2,100.0	2,099.8	2,100.1	2,099.8	4.5	4.4	124.13	-0.3	40.0	36.2	27.2	8.97	4.033	
2,200.0	2,199.8	2,200.1	2,199.8	4.8	4.7	124.13	-0.3	40.0	36.2	26.8	9.42	3.843	
2,300.0	2,299.8	2,300.1	2,299.8	5.0	4.9	124.13	-0.3	40.0	36.2	26.3	9.86	3.670	
2,400.0	2,399.8	2,400.1	2,399.8	5.2	5.1	124.13	-0.3	40.0	36.2	25.9	10.31	3.511	
2,500.0	2,499.8	2,500.1	2,499.8	5.4	5.3	124.13	-0.3	40.0	36.2	25.4	10.75	3.366	
2,600.0	2,599.8	2,600.1	2,599.8	5.7	5.6	124.13	-0.3	40.0	36.2	25.0	11.20	3.232	
2,700.0	2,699.8	2,700.1	2,699.8	5.9	5.8	124.13	-0.3	40.0	36.2	24.5	11.65	3.108	
2,799.9	2,799.7	2,800.0	2,799.7	6.1	6.0	124.13	-0.3	40.0	36.2	24.1	12.09	2.994	
2,900.0	2,899.8	2,900.1	2,899.8	6.3	6.2	45.39	-0.3	40.0	34.9	22.4	12.52	2.790	
3,000.0	2,999.6	3,000.0	2,999.6	6.5	6.4	52.24	-0.3	40.0	31.5	18.5	12.96	2.430	
3,100.0	3,099.3	3,099.6	3,099.3	6.8	6.7	67.05	-0.3	40.0	27.0	13.6	13.41	2.016	
3,189.7	3,188.3	3,188.4	3,188.1	7.0	6.9	87.28	-0.3	41.3	25.1	11.3	13.83	1.817	Level 4
3,200.0	3,198.5	3,198.7	3,198.4	7.0	6.9	89.74	-0.3	41.7	25.1	11.3	13.87	1.813	Level 4, ES
3,210.2	3,208.6	3,208.8	3,208.5	7.0	6.9	92.17	-0.3	42.0	25.2	11.3	13.92	1.812	Level 4, SF
3,300.0	3,297.5	3,298.3	3,297.8	7.2	7.1	109.13	-0.3	46.8	27.5	13.2	14.32	1.922	Level 4
3,400.0	3,396.5	3,398.4	3,397.5	7.5	7.3	118.34	-0.3	55.5	31.1	16.4	14.77	2.108	
3,500.0	3,495.4	3,498.7	3,497.1	7.8	7.6	120.19	-0.3	67.7	34.0	18.7	15.25	2.227	
3,600.0	3,594.4	3,599.1	3,596.3	8.0	7.8	116.52	-0.3	83.4	35.6	19.8	15.77	2.258	
3,700.0	3,693.4	3,699.2	3,694.5	8.3	8.1	107.90	-0.3	102.5	36.7	20.4	16.35	2.246	
3,800.0	3,792.4	3,798.9	3,791.7	8.6	8.4	94.85	-0.3	124.9	38.7	21.7	16.97	2.282	
3,900.0	3,891.3	3,897.9	3,887.3	8.9	8.7	79.31	-0.3	150.4	43.5	26.0	17.53	2.484	
4,000.0	3,990.3	3,997.0	3,982.6	9.2	9.1	66.19	-0.3	177.4	51.6	33.6	18.00	2.867	
4,100.0	4,089.3	4,096.1	4,078.0	9.5	9.5	56.94	-0.3	204.3	61.6	43.2	18.43	3.344	
4,200.0	4,188.3	4,195.1	4,173.4	9.8	9.9	50.37	-0.3	231.2	72.8	53.9	18.86	3.859	
4,300.0	4,287.2	4,294.2	4,268.7	10.1	10.3	45.59	-0.3	258.1	84.7	65.3	19.30	4.386	
4,400.0	4,386.2	4,393.3	4,364.1	10.4	10.7	42.00	-0.3	285.1	97.0	77.2	19.75	4.908	
4,500.0	4,485.2	4,492.4	4,459.4	10.7	11.2	39.22	-0.3	312.0	109.5	89.3	20.21	5.419	
4,600.0	4,584.2	4,591.5	4,554.8	11.0	11.7	37.02	-0.3	338.9	122.3	101.6	20.68	5.915	

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,700.0	4,683.1	4,690.5	4,650.1	11.3	12.1	35.23	-0.3	365.8	135.3	114.1	21.16	6.393	
4,800.0	4,782.1	4,789.6	4,745.5	11.6	12.6	33.76	-0.3	392.7	148.3	126.7	21.64	6.853	
4,900.0	4,881.1	4,888.7	4,840.8	11.9	13.1	32.53	-0.3	419.7	161.4	139.3	22.13	7.294	
5,000.0	4,980.1	4,987.8	4,936.2	12.2	13.6	31.48	-0.3	446.6	174.6	152.0	22.62	7.718	
5,100.0	5,079.1	5,086.9	5,031.5	12.6	14.1	30.58	-0.3	473.5	187.9	164.7	23.12	8.125	
5,200.0	5,178.0	5,185.9	5,126.9	12.9	14.6	29.80	-0.3	500.4	201.1	177.5	23.62	8.515	
5,300.0	5,277.0	5,285.0	5,222.2	13.2	15.1	29.11	-0.3	527.3	214.4	190.3	24.13	8.888	
5,400.0	5,376.0	5,384.1	5,317.6	13.5	15.6	28.51	-0.3	554.3	227.8	203.1	24.63	9.247	
5,500.0	5,475.0	5,483.2	5,412.9	13.9	16.1	27.97	-0.3	581.2	241.1	216.0	25.14	9.590	
5,600.0	5,573.9	5,582.3	5,508.3	14.2	16.7	27.49	-0.3	608.1	254.5	228.8	25.66	9.920	
5,700.0	5,672.9	5,681.3	5,603.6	14.5	17.2	27.06	-0.3	635.0	267.9	241.7	26.17	10.237	
5,800.0	5,771.9	5,780.4	5,699.0	14.8	17.7	26.66	-0.3	661.9	281.3	254.6	26.69	10.541	
5,900.0	5,870.9	5,879.5	5,794.3	15.2	18.2	26.31	-0.3	688.9	294.7	267.5	27.20	10.833	
6,000.0	5,969.8	5,978.6	5,889.7	15.5	18.8	25.98	-0.3	715.8	308.1	280.4	27.73	11.114	
6,100.0	6,068.8	6,077.7	5,985.1	15.8	19.3	25.68	-0.3	742.7	321.6	293.3	28.25	11.384	
6,200.0	6,167.8	6,176.7	6,080.4	16.2	19.9	25.41	-0.3	769.6	335.0	306.2	28.77	11.644	
6,300.0	6,266.8	6,275.8	6,175.8	16.5	20.4	25.16	-0.3	796.5	348.5	319.2	29.30	11.895	
6,400.0	6,365.7	6,374.9	6,271.1	16.8	20.9	24.92	-0.3	823.5	361.9	332.1	29.82	12.136	
6,483.2	6,448.1	6,457.3	6,350.5	17.1	21.4	24.74	-0.3	845.9	373.1	342.9	30.26	12.330	
6,500.0	6,464.7	6,474.0	6,366.5	17.2	21.5	30.22	-0.3	850.4	375.3	344.9	30.33	12.373	
6,550.0	6,513.6	6,523.7	6,414.3	17.4	21.8	39.92	-0.3	863.9	380.1	349.6	30.59	12.428	
6,600.0	6,561.5	6,563.2	6,452.3	17.6	22.0	45.23	-0.3	874.9	383.2	352.3	30.88	12.410	
6,650.0	6,608.0	6,600.0	6,487.0	17.9	22.2	48.79	0.2	887.0	386.4	355.2	31.23	12.373	
6,700.0	6,652.8	6,625.1	6,510.2	18.2	22.4	51.18	0.9	896.5	389.9	358.3	31.57	12.348	
6,750.0	6,695.6	6,650.0	6,532.8	18.5	22.6	53.08	1.7	906.9	393.9	361.9	31.98	12.318	
6,800.0	6,735.9	6,686.0	6,564.6	18.9	22.9	55.20	3.3	923.6	398.3	365.7	32.62	12.211	
6,850.0	6,773.5	6,715.9	6,590.3	19.4	23.2	56.95	5.1	939.0	403.5	370.1	33.32	12.109	
6,900.0	6,808.2	6,750.0	6,618.5	19.9	23.6	58.83	7.4	958.0	409.4	375.2	34.23	11.961	
6,950.0	6,839.6	6,774.9	6,638.3	20.4	23.9	60.13	9.4	972.9	416.3	381.1	35.12	11.851	
7,000.0	6,867.5	6,800.0	6,657.6	21.0	24.2	61.32	11.6	988.8	424.1	388.0	36.13	11.740	
7,014.6	6,874.9	6,812.3	6,666.8	21.2	24.3	61.98	12.7	996.9	426.6	390.0	36.57	11.665	
7,100.0	6,917.7	6,862.5	6,702.5	22.3	25.0	65.06	18.0	1,031.7	445.4	406.6	38.74	11.495	
7,164.6	6,949.9	6,900.0	6,727.1	23.1	25.5	66.98	22.4	1,059.7	464.0	423.7	40.38	11.493	
7,200.0	6,967.3	6,923.0	6,741.2	23.6	25.9	68.92	25.3	1,077.6	476.4	435.6	40.74	11.693	
7,250.0	6,990.3	6,950.0	6,756.9	24.3	26.3	70.84	29.0	1,099.3	497.7	456.8	40.95	12.154	
7,300.0	7,011.5	6,979.7	6,772.9	24.9	26.8	72.22	33.2	1,123.9	523.3	482.2	41.03	12.753	
7,350.0	7,030.8	7,011.5	6,788.9	25.5	27.4	73.08	38.0	1,151.0	552.5	511.5	40.99	13.481	
7,400.0	7,047.9	7,045.3	6,805.8	26.1	28.0	73.53	43.1	1,179.8	584.7	543.8	40.86	14.311	
7,450.0	7,062.7	7,075.9	6,821.1	26.7	28.6	73.20	47.7	1,205.9	619.5	579.0	40.57	15.271	
7,500.0	7,075.2	7,102.9	6,834.6	27.2	29.0	71.94	51.7	1,228.9	656.9	616.7	40.15	16.358	
7,550.0	7,085.2	7,991.8	7,100.0	27.8	39.2	88.86	661.0	1,681.6	680.0	630.1	49.87	13.634	
7,600.0	7,092.7	8,040.3	7,100.0	28.3	39.4	89.45	709.4	1,681.6	670.1	621.2	48.87	13.711	
7,650.0	7,097.6	8,089.6	7,100.0	28.8	39.7	89.82	758.8	1,681.6	663.6	615.8	47.82	13.878	
7,700.0	7,099.9	8,139.4	7,100.0	29.2	39.9	89.99	808.6	1,681.6	660.7	613.9	46.78	14.124	
7,717.5	7,100.0	8,157.0	7,100.0	29.4	40.0	90.00	826.1	1,681.6	660.5	614.1	46.41	14.231	
7,800.0	7,100.0	8,239.4	7,100.0	30.1	40.5	90.00	908.6	1,681.6	660.5	612.1	48.34	13.663	
7,900.0	7,100.0	8,339.4	7,100.0	31.1	41.1	90.00	1,008.6	1,681.6	660.5	609.7	50.81	12.998	
8,000.0	7,100.0	8,439.4	7,100.0	32.1	41.7	90.00	1,108.6	1,681.6	660.5	607.0	53.45	12.357	
8,100.0	7,100.0	8,539.4	7,100.0	33.2	42.5	90.00	1,208.6	1,681.6	660.5	604.2	56.23	11.746	
8,200.0	7,100.0	8,639.4	7,100.0	34.4	43.3	90.00	1,308.6	1,681.6	660.5	601.3	59.13	11.170	
8,300.0	7,100.0	8,739.4	7,100.0	35.7	44.1	90.00	1,408.6	1,681.6	660.5	598.3	62.14	10.629	
8,400.0	7,100.0	8,839.4	7,100.0	37.0	45.1	90.00	1,508.6	1,681.6	660.5	595.2	65.23	10.125	

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,500.0	7,100.0	8,939.4	7,100.0	38.3	46.1	90.00	1,608.6	1,681.6	660.4	592.0	68.41	9.655	
8,600.0	7,100.0	9,039.4	7,100.0	39.7	47.1	90.00	1,708.6	1,681.6	660.4	588.8	71.65	9.218	
8,700.0	7,100.0	9,139.4	7,100.0	41.2	48.2	90.00	1,808.6	1,681.6	660.4	585.5	74.95	8.812	
8,800.0	7,100.0	9,239.4	7,100.0	42.7	49.4	90.00	1,908.6	1,681.6	660.4	582.1	78.30	8.435	
8,900.0	7,100.0	9,339.4	7,100.0	44.2	50.6	90.00	2,008.6	1,681.6	660.4	578.7	81.70	8.084	
9,000.0	7,100.0	9,439.4	7,100.0	45.8	51.9	90.00	2,108.6	1,681.6	660.4	575.3	85.13	7.758	
9,100.0	7,100.0	9,539.4	7,100.0	47.4	53.2	90.00	2,208.6	1,681.6	660.4	571.8	88.60	7.454	
9,200.0	7,100.0	9,639.4	7,100.0	49.0	54.5	90.00	2,308.6	1,681.6	660.4	568.3	92.11	7.170	
9,300.0	7,100.0	9,739.4	7,100.0	50.6	55.9	90.00	2,408.6	1,681.6	660.4	564.8	95.64	6.905	
9,400.0	7,100.0	9,839.4	7,100.0	52.3	57.4	90.00	2,508.6	1,681.6	660.4	561.2	99.19	6.658	
9,500.0	7,100.0	9,939.4	7,100.0	54.0	58.8	90.00	2,608.6	1,681.6	660.4	557.6	102.77	6.426	
9,600.0	7,100.0	10,039.4	7,100.0	55.7	60.4	90.00	2,708.6	1,681.6	660.4	554.0	106.37	6.209	
9,700.0	7,100.0	10,139.4	7,100.0	57.4	61.9	90.00	2,808.6	1,681.6	660.4	550.4	109.98	6.004	
9,800.0	7,100.0	10,239.4	7,100.0	59.1	63.4	90.00	2,908.6	1,681.6	660.4	546.8	113.62	5.812	
9,900.0	7,100.0	10,339.4	7,100.0	60.8	65.0	90.00	3,008.6	1,681.6	660.4	543.1	117.26	5.632	
10,000.0	7,100.0	10,439.4	7,100.0	62.6	66.6	90.00	3,108.6	1,681.6	660.4	539.4	120.92	5.461	
10,100.0	7,100.0	10,539.4	7,100.0	64.4	68.2	90.00	3,208.6	1,681.6	660.4	535.8	124.59	5.300	
10,200.0	7,100.0	10,639.4	7,100.0	66.1	69.9	90.00	3,308.6	1,681.6	660.4	532.1	128.28	5.148	
10,300.0	7,100.0	10,739.4	7,100.0	67.9	71.5	90.00	3,408.6	1,681.6	660.4	528.4	131.97	5.004	
10,400.0	7,100.0	10,839.4	7,100.0	69.7	73.2	90.00	3,508.6	1,681.6	660.3	524.7	135.67	4.867	
10,500.0	7,100.0	10,939.4	7,100.0	71.5	74.9	90.00	3,608.6	1,681.6	660.3	521.0	139.38	4.738	
10,600.0	7,100.0	11,039.4	7,100.0	73.3	76.6	90.00	3,708.6	1,681.6	660.3	517.2	143.10	4.614	
10,700.0	7,100.0	11,139.4	7,100.0	75.1	78.3	90.00	3,808.6	1,681.6	660.3	513.5	146.83	4.497	
10,800.0	7,100.0	11,239.4	7,100.0	76.9	80.1	90.00	3,908.6	1,681.6	660.3	509.8	150.56	4.386	
10,900.0	7,100.0	11,339.4	7,100.0	78.7	81.8	90.00	4,008.6	1,681.6	660.3	506.0	154.30	4.279	
11,000.0	7,100.0	11,439.4	7,100.0	80.6	83.5	90.00	4,108.6	1,681.5	660.3	502.3	158.05	4.178	
11,100.0	7,100.0	11,539.4	7,100.0	82.4	85.3	90.00	4,208.6	1,681.5	660.3	498.5	161.80	4.081	
11,200.0	7,100.0	11,639.4	7,100.0	84.2	87.1	90.00	4,308.6	1,681.5	660.3	494.8	165.56	3.988	
11,300.0	7,100.0	11,739.4	7,100.0	86.1	88.8	90.00	4,408.6	1,681.5	660.3	491.0	169.32	3.900	
11,400.0	7,100.0	11,839.4	7,100.0	87.9	90.6	90.00	4,508.6	1,681.5	660.3	487.2	173.09	3.815	
11,500.0	7,100.0	11,939.4	7,100.0	89.8	92.4	90.00	4,608.6	1,681.5	660.3	483.4	176.86	3.734	
11,600.0	7,100.0	12,039.4	7,100.0	91.6	94.2	90.00	4,708.6	1,681.5	660.3	479.7	180.63	3.655	
11,700.0	7,100.0	12,139.4	7,100.0	93.5	96.0	90.00	4,808.6	1,681.5	660.3	475.9	184.41	3.581	
11,800.0	7,100.0	12,239.4	7,100.0	95.4	97.8	90.00	4,908.6	1,681.5	660.3	472.1	188.19	3.509	
11,900.0	7,100.0	12,339.4	7,100.0	97.2	99.6	90.00	5,008.6	1,681.5	660.3	468.3	191.97	3.439	
11,971.9	7,100.0	12,411.3	7,100.0	98.6	100.9	90.00	5,080.5	1,681.5	660.3	465.6	194.69	3.391	

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	3.0	3.0	0.0	0.0	-127.01	-233.8	-310.2	388.5				
100.0	100.0	104.6	104.6	0.1	0.1	-127.02	-233.8	-310.0	388.2	388.0	0.22	1,791.575	
200.0	200.0	206.2	206.2	0.3	0.2	-127.08	-233.7	-309.3	387.6	387.1	0.56	691.920	
300.0	300.0	307.8	307.7	0.5	0.4	-127.16	-233.5	-308.1	386.6	385.7	0.90	427.780	
400.0	400.0	409.3	409.3	0.8	0.5	-127.28	-233.3	-306.4	385.2	383.9	1.25	308.812	
500.0	500.0	510.8	510.8	1.0	0.6	-127.44	-233.0	-304.3	383.3	381.8	1.59	240.971	
551.3	551.3	562.9	562.8	1.1	0.7	-154.14	-232.8	-303.0	382.7	380.9	1.75	218.716	
600.0	600.0	612.4	612.3	1.2	0.7	-154.29	-232.6	-301.7	382.3	380.4	1.91	199.739	
700.0	700.0	713.9	713.7	1.4	0.8	-154.64	-232.2	-298.7	381.3	379.1	2.25	169.273	
800.0	800.0	815.3	815.1	1.7	1.0	-155.03	-231.7	-295.2	379.9	377.3	2.59	146.574	
900.0	899.9	916.8	916.5	1.9	1.1	-155.45	-231.2	-291.2	378.1	375.2	2.93	128.976	
1,000.0	999.9	1,018.2	1,017.9	2.1	1.2	-155.92	-230.6	-286.8	376.0	372.7	3.27	114.906	
1,021.6	1,021.5	1,031.0	1,030.6	2.2	1.2	-155.98	-230.5	-286.2	375.6	372.2	3.34	112.614	
1,100.0	1,099.9	1,088.1	1,087.7	2.3	1.3	-156.32	-232.5	-285.8	378.1	374.5	3.63	104.144	
1,200.0	1,199.9	1,192.2	1,191.7	2.6	1.5	-156.83	-236.9	-286.8	383.3	379.2	4.07	94.216	
1,300.0	1,299.9	1,297.0	1,296.4	2.8	1.7	-157.18	-239.6	-287.6	387.1	382.6	4.51	85.805	
1,400.0	1,399.9	1,398.7	1,398.1	3.0	1.9	-157.32	-240.7	-288.5	390.1	385.2	4.94	78.903	
1,500.0	1,499.8	1,497.2	1,496.7	3.2	2.1	-157.43	-241.6	-289.4	393.1	387.8	5.36	73.354	
1,600.0	1,599.8	1,593.8	1,593.2	3.5	2.3	-157.54	-242.9	-290.8	396.7	390.9	5.77	68.796	
1,700.0	1,699.8	1,688.2	1,687.5	3.7	2.5	-157.58	-244.6	-293.2	401.4	395.3	6.17	65.043	
1,748.9	1,748.7	1,739.0	1,738.3	3.8	2.6	-157.60	-245.6	-294.7	404.0	397.6	6.39	63.251	
1,800.2	1,800.0	1,796.6	1,795.9	3.9	2.7	-131.05	-246.4	-295.9	405.7	399.1	6.60	61.444	
1,900.0	1,899.8	1,903.4	1,902.7	4.1	3.0	-131.03	-246.8	-296.6	406.4	399.4	7.03	57.797	
2,000.0	1,999.8	2,003.6	2,002.9	4.3	3.2	-131.04	-246.9	-296.5	406.4	399.0	7.47	54.433	
2,100.0	2,099.8	2,103.5	2,102.8	4.5	3.4	-131.05	-246.9	-296.5	406.4	398.5	7.90	51.465	
2,200.0	2,199.8	2,203.5	2,202.8	4.8	3.6	-131.05	-246.9	-296.5	406.4	398.1	8.33	48.768	
2,300.0	2,299.8	2,303.6	2,302.9	5.0	3.8	-131.05	-246.9	-296.5	406.4	397.7	8.76	46.374	
2,400.0	2,399.8	2,403.9	2,403.2	5.2	4.0	-131.04	-246.8	-296.5	406.3	397.1	9.19	44.193	
2,500.0	2,499.8	2,503.6	2,502.9	5.4	4.2	-131.04	-246.8	-296.5	406.3	396.7	9.63	42.205	
2,600.0	2,599.8	2,603.8	2,603.1	5.7	4.4	-131.02	-246.6	-296.5	406.2	396.2	10.06	40.370	
2,700.0	2,699.8	2,703.5	2,702.8	5.9	4.6	-131.02	-246.6	-296.5	406.2	395.7	10.50	38.685	
2,799.9	2,799.7	2,803.4	2,802.7	6.1	4.8	-131.02	-246.6	-296.5	406.2	395.3	10.93	37.163	
2,900.0	2,899.8	2,903.5	2,902.8	6.3	5.0	148.37	-246.6	-296.5	407.7	396.3	11.35	35.911	
3,000.0	2,999.6	3,003.4	3,002.6	6.5	5.2	148.70	-246.6	-296.5	412.2	400.4	11.76	35.046	
3,100.0	3,099.3	3,103.0	3,102.3	6.8	5.5	149.24	-246.6	-296.5	419.6	407.5	12.17	34.482	
3,200.0	3,198.5	3,202.2	3,201.5	7.0	5.7	149.97	-246.6	-296.5	430.2	417.6	12.58	34.207	
3,210.2	3,208.6	3,212.3	3,211.6	7.0	5.7	150.05	-246.6	-296.5	431.4	418.8	12.62	34.195	
3,300.0	3,297.5	3,301.2	3,300.5	7.2	5.9	150.88	-246.6	-296.5	442.6	429.6	12.99	34.061	
3,400.0	3,396.5	3,400.2	3,399.5	7.5	6.1	151.75	-246.6	-296.5	455.2	441.7	13.42	33.923	
3,500.0	3,495.4	3,499.2	3,498.4	7.8	6.3	152.57	-246.6	-296.5	467.8	454.0	13.85	33.786	
3,600.0	3,594.4	3,598.1	3,597.4	8.0	6.5	153.36	-246.6	-296.5	480.5	466.3	14.28	33.657	
3,700.0	3,693.4	3,697.1	3,696.4	8.3	6.7	154.10	-246.6	-296.5	493.4	478.7	14.71	33.531	
3,800.0	3,792.4	3,796.6	3,795.8	8.6	6.9	154.81	-246.5	-296.5	506.2	491.1	15.16	33.401	
3,900.0	3,891.3	3,895.1	3,894.3	8.9	7.1	155.49	-246.4	-296.5	519.1	503.5	15.60	33.282	
4,000.0	3,990.3	3,994.0	3,993.3	9.2	7.3	156.12	-246.4	-296.5	532.2	516.2	16.04	33.186	
4,100.0	4,089.3	4,093.0	4,092.3	9.5	7.5	156.73	-246.4	-296.5	545.3	528.8	16.48	33.095	
4,200.0	4,188.3	4,192.0	4,191.2	9.8	7.7	157.31	-246.4	-296.5	558.5	541.5	16.92	33.001	
4,300.0	4,287.2	4,290.6	4,289.9	10.1	7.9	157.87	-246.4	-296.6	571.7	554.3	17.36	32.925	
4,400.0	4,386.2	4,389.9	4,389.2	10.4	8.1	158.40	-246.3	-296.6	585.0	567.2	17.80	32.859	
4,500.0	4,485.2	4,488.9	4,488.2	10.7	8.4	158.90	-246.3	-296.6	598.3	580.1	18.24	32.798	
4,600.0	4,584.2	4,587.8	4,587.1	11.0	8.6	159.39	-246.2	-296.7	611.7	593.0	18.69	32.734	
4,700.0	4,683.1	4,686.9	4,686.1	11.3	8.8	159.86	-246.2	-296.7	625.1	605.9	19.13	32.676	

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,800.0	4,782.1	4,785.8	4,785.1	11.6	9.0	160.30	-246.2	-296.7	638.5	618.9	19.57	32.619	
4,900.0	4,881.1	4,884.8	4,884.1	11.9	9.2	160.72	-246.2	-296.7	652.0	632.0	20.02	32.560	
5,000.0	4,980.1	4,983.8	4,983.1	12.2	9.4	161.13	-246.2	-296.7	665.5	645.0	20.47	32.504	
5,100.0	5,079.1	5,082.8	5,082.1	12.6	9.6	161.52	-246.2	-296.7	679.0	658.1	20.92	32.454	
5,200.0	5,178.0	5,181.7	5,181.0	12.9	9.8	161.89	-246.2	-296.7	692.6	671.2	21.37	32.406	
5,300.0	5,277.0	5,280.7	5,280.0	13.2	10.0	162.25	-246.2	-296.7	706.2	684.4	21.82	32.361	
5,400.0	5,376.0	5,379.7	5,379.0	13.5	10.2	162.60	-246.2	-296.7	719.8	697.5	22.27	32.315	
5,500.0	5,475.0	5,478.8	5,478.1	13.9	10.5	162.93	-246.2	-296.7	733.4	710.7	22.73	32.270	
5,600.0	5,573.9	5,578.2	5,577.5	14.2	10.7	163.27	-246.0	-296.7	747.1	723.9	23.18	32.231	
5,700.0	5,672.9	5,677.8	5,677.1	14.5	10.9	163.58	-245.9	-296.7	760.6	737.0	23.63	32.192	
5,800.0	5,771.9	5,776.9	5,776.2	14.8	11.1	163.89	-245.8	-296.5	774.2	750.1	24.07	32.163	
5,900.0	5,870.9	5,874.1	5,873.3	15.2	11.3	164.17	-245.7	-296.5	787.9	763.3	24.51	32.145	
6,000.0	5,969.8	5,974.0	5,973.2	15.5	11.5	164.47	-245.5	-296.6	801.6	776.7	24.96	32.117	
6,100.0	6,068.8	6,073.2	6,072.5	15.8	11.7	164.75	-245.4	-296.6	815.3	789.9	25.41	32.088	
6,200.0	6,167.8	6,172.4	6,171.7	16.2	11.9	165.01	-245.2	-296.6	829.0	803.1	25.86	32.063	
6,300.0	6,266.8	6,270.5	6,269.7	16.5	12.1	165.27	-245.1	-296.6	842.8	816.5	26.30	32.045	
6,400.0	6,365.7	6,369.3	6,368.6	16.8	12.3	165.52	-245.0	-296.6	856.6	829.8	26.75	32.023	
6,483.2	6,448.1	6,450.9	6,450.2	17.1	12.5	165.72	-244.9	-296.7	868.1	841.0	27.12	32.007	
6,500.0	6,464.7	6,467.0	6,466.3	17.2	12.5	171.51	-245.0	-296.7	870.7	843.6	27.16	32.060	
6,550.0	6,513.6	6,515.8	6,515.1	17.4	12.6	-178.33	-244.9	-296.8	881.1	853.9	27.21	32.380	
6,600.0	6,561.5	6,563.6	6,562.9	17.6	12.7	-172.95	-244.7	-297.0	895.4	868.2	27.18	32.945	
6,650.0	6,608.0	7,585.3	7,130.9	17.9	18.1	-136.31	366.1	-121.6	876.7	843.9	32.81	26.719	
6,700.0	6,652.8	7,599.0	7,130.7	18.2	18.3	-134.86	379.0	-117.0	861.6	828.7	32.90	26.187	
6,750.0	6,695.6	7,621.0	7,130.6	18.5	18.5	-133.07	399.7	-109.5	851.3	818.1	33.14	25.684	
6,800.0	6,735.9	7,645.2	7,130.5	18.9	18.8	-131.16	422.5	-101.3	845.6	812.1	33.51	25.237	
6,838.0	6,764.8	7,666.0	7,130.4	19.3	19.0	-129.53	442.0	-94.2	844.3	810.4	33.90	24.908	
6,850.0	6,773.5	7,673.4	7,130.3	19.4	19.1	-128.96	449.0	-91.7	844.5	810.4	34.05	24.799	
6,900.0	6,808.2	7,704.2	7,129.6	19.9	19.5	-126.48	478.0	-81.5	847.5	812.8	34.78	24.367	
6,950.0	6,839.6	7,735.0	7,128.9	20.4	19.9	-123.86	507.1	-71.2	854.6	819.0	35.65	23.975	
7,000.0	6,867.5	7,767.2	7,128.2	21.0	20.2	-121.03	537.5	-60.6	865.3	828.6	36.68	23.591	
7,014.6	6,874.9	7,777.7	7,128.1	21.2	20.4	-120.14	547.4	-57.2	869.0	832.0	37.03	23.468	
7,100.0	6,917.7	7,837.3	7,127.1	22.3	21.1	-117.59	603.7	-37.8	893.2	854.1	39.06	22.866	
7,164.6	6,949.9	7,883.0	7,126.5	23.1	21.7	-115.69	647.0	-22.9	913.6	872.9	40.69	22.450	
7,200.0	6,967.3	7,913.0	7,126.4	23.6	22.1	-111.85	675.2	-13.1	924.7	882.8	41.95	22.046	
7,250.0	6,990.3	7,950.0	7,126.1	24.3	22.6	-107.20	710.3	-1.1	938.7	895.2	43.49	21.583	
7,300.0	7,011.5	7,992.8	7,125.4	24.9	23.2	-103.02	750.8	12.7	950.4	905.5	44.97	21.133	
7,350.0	7,030.8	8,034.4	7,124.8	25.5	23.8	-99.51	790.1	26.1	959.6	913.3	46.25	20.748	
7,400.0	7,047.9	8,072.4	7,123.4	26.1	24.3	-96.65	826.2	38.0	966.2	918.9	47.30	20.428	
7,450.0	7,062.7	8,121.9	7,121.7	26.7	25.1	-94.13	873.2	53.5	969.9	921.6	48.32	20.070	
7,500.0	7,075.2	8,170.9	7,120.8	27.2	25.8	-92.26	919.8	68.8	970.4	921.3	49.14	19.750	
7,550.0	7,085.2	8,226.3	7,119.9	27.8	26.6	-90.92	972.2	86.5	967.3	917.5	49.88	19.395	
7,600.0	7,092.7	8,276.8	7,119.6	28.3	27.4	-90.25	1,020.0	102.8	960.7	910.4	50.35	19.080	
7,650.0	7,097.6	8,324.0	7,119.3	28.8	28.1	-90.18	1,064.7	117.9	950.8	900.2	50.63	18.782	
7,700.0	7,099.9	8,371.1	7,119.0	29.2	28.8	-90.70	1,109.3	133.1	937.5	886.8	50.75	18.474	
7,717.5	7,100.0	8,390.9	7,118.7	29.4	29.1	-91.02	1,128.0	139.5	932.1	881.2	50.81	18.343	
7,800.0	7,100.0	8,468.0	7,116.3	30.1	30.4	-90.89	1,200.9	164.6	905.1	852.2	52.96	17.091	
7,900.0	7,100.0	8,545.5	7,110.9	31.1	31.6	-90.54	1,274.4	188.6	874.0	818.6	55.36	15.787	
8,000.0	7,100.0	8,639.4	7,104.8	32.1	33.1	-90.13	1,363.7	217.0	843.7	785.6	58.07	14.529	
8,100.0	7,100.0	8,735.1	7,100.1	33.2	34.6	-89.79	1,454.8	246.1	813.2	752.3	60.90	13.353	
8,200.0	7,100.0	8,844.6	7,096.2	34.4	36.4	-89.47	1,558.6	280.5	781.7	717.7	64.04	12.206	
8,300.0	7,100.0	8,935.5	7,093.4	35.7	37.9	-89.23	1,644.6	309.9	749.5	682.5	66.96	11.192	
8,400.0	7,100.0	9,009.1	7,093.3	37.0	39.1	-89.19	1,714.9	331.7	719.8	650.1	69.65	10.333	

SandRidge Energy

Anticollision Report

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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

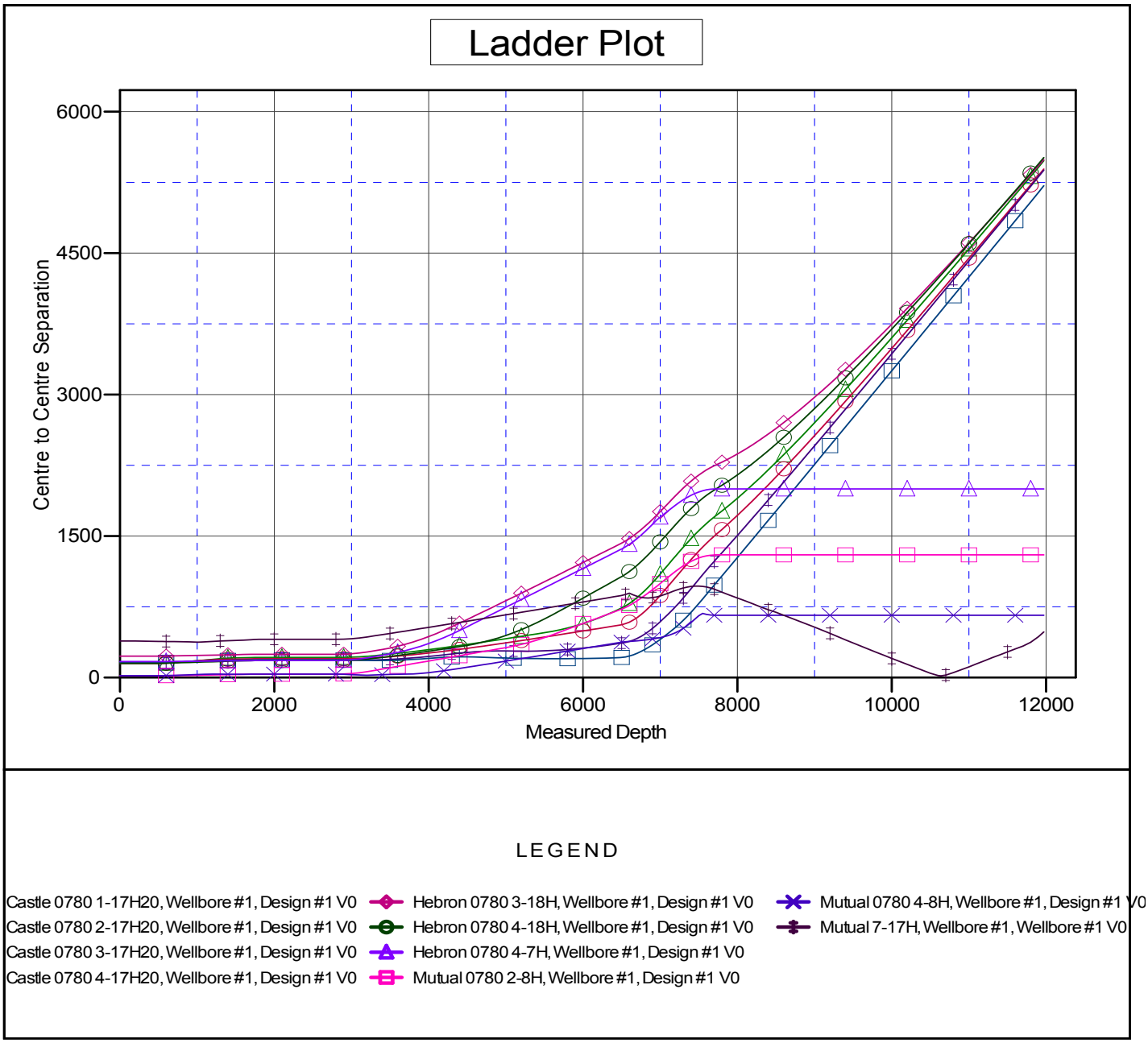
Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,500.0	7,100.0	9,111.2	7,094.9	38.3	40.8	-89.29	1,812.8	360.5	691.6	618.7	72.86	9.492	
8,600.0	7,100.0	9,217.3	7,095.9	39.7	42.6	-89.35	1,913.9	392.7	661.2	585.0	76.18	8.679	
8,700.0	7,100.0	9,319.8	7,094.2	41.2	44.3	-89.15	2,011.0	425.6	629.1	549.6	79.48	7.914	
8,800.0	7,100.0	9,409.4	7,093.1	42.7	45.9	-89.00	2,096.1	453.7	597.7	515.1	82.59	7.237	
8,900.0	7,100.0	9,508.1	7,089.8	44.2	47.6	-88.59	2,189.6	485.1	566.0	480.1	85.87	6.591	
9,000.0	7,100.0	9,604.0	7,086.9	45.8	49.2	-88.18	2,280.4	515.8	534.0	444.9	89.12	5.992	
9,100.0	7,100.0	9,703.5	7,084.8	47.4	50.9	-87.80	2,374.3	548.5	501.2	408.7	92.44	5.422	
9,200.0	7,100.0	9,801.9	7,082.8	49.0	52.6	-87.36	2,467.0	581.3	468.0	372.3	95.75	4.888	
9,300.0	7,100.0	9,894.0	7,080.2	50.6	54.2	-86.80	2,553.7	612.4	434.3	335.4	98.96	4.389	
9,400.0	7,100.0	9,991.7	7,078.0	52.3	55.9	-86.19	2,645.5	645.7	400.4	298.2	102.24	3.916	
9,500.0	7,100.0	10,079.8	7,076.0	54.0	57.4	-85.53	2,728.4	675.5	366.8	261.5	105.36	3.482	
9,600.0	7,100.0	10,180.1	7,072.9	55.7	59.2	-84.49	2,822.8	709.2	333.6	224.9	108.62	3.071	
9,700.0	7,100.0	10,268.6	7,070.8	57.4	60.7	-83.48	2,906.1	739.2	300.1	188.5	111.65	2.688	
9,800.0	7,100.0	10,360.2	7,069.1	59.1	62.3	-82.34	2,992.6	769.0	268.0	153.3	114.68	2.336	
9,900.0	7,100.0	10,457.2	7,069.4	60.8	64.0	-81.35	3,084.5	800.1	236.1	118.3	117.82	2.004	
10,000.0	7,100.0	10,550.3	7,071.1	62.6	65.6	-80.52	3,172.6	830.2	203.9	83.0	120.91	1.687	Level 4
10,100.0	7,100.0	10,646.8	7,074.5	64.4	67.3	-79.92	3,264.0	860.9	172.0	47.9	124.11	1.386	Level 3
10,200.0	7,100.0	10,739.9	7,076.9	66.1	68.9	-78.72	3,352.5	890.0	140.8	13.8	127.00	1.109	Level 2
10,300.0	7,100.0	10,836.1	7,079.3	67.9	70.6	-76.75	3,443.7	920.4	109.3	-20.2	129.54	0.844	Level 1
10,400.0	7,100.0	10,930.9	7,081.6	69.7	72.3	-72.97	3,533.2	951.4	77.1	-53.8	130.87	0.589	Level 1
10,500.0	7,100.0	11,025.0	7,082.6	71.5	74.0	-62.48	3,622.2	982.0	46.2	-79.8	126.03	0.367	Level 1
10,600.0	7,100.0	11,119.3	7,083.5	73.3	75.6	-26.41	3,711.8	1,011.5	22.1	-60.6	82.67	0.267	Level 1
10,639.1	7,100.0	11,157.0	7,084.1	74.0	76.3	5.29	3,747.7	1,023.0	19.0	-44.6	63.60	0.299	Level 1, CC
10,700.0	7,100.0	11,215.0	7,085.8	75.1	77.3	48.57	3,802.8	1,040.8	26.7	-92.2	118.85	0.225	Level 1, SF
10,800.0	7,100.0	11,309.9	7,089.0	76.9	79.0	74.08	3,893.0	1,070.3	53.4	-92.6	145.98	0.366	Level 1, ES
10,900.0	7,100.0	11,405.3	7,094.4	78.7	80.6	83.78	3,983.4	1,100.0	83.1	-70.0	153.04	0.543	Level 1
11,000.0	7,100.0	11,499.2	7,101.4	80.6	82.3	89.14	4,072.4	1,129.3	114.0	-43.1	157.02	0.726	Level 1
11,100.0	7,100.0	11,593.4	7,109.0	82.4	83.9	92.47	4,161.4	1,159.3	146.0	-14.2	160.22	0.911	Level 1
11,200.0	7,100.0	11,689.2	7,116.6	84.2	85.6	94.60	4,251.8	1,189.8	178.4	15.1	163.30	1.092	Level 2
11,300.0	7,100.0	11,784.8	7,124.1	86.1	87.3	96.06	4,342.3	1,219.9	210.5	44.1	166.39	1.265	Level 3
11,400.0	7,100.0	11,881.2	7,131.9	87.9	89.0	97.23	4,434.0	1,248.7	241.1	71.6	169.48	1.422	Level 3
11,500.0	7,100.0	11,978.1	7,140.3	89.8	90.7	98.26	4,526.0	1,277.8	272.1	99.5	172.56	1.577	Level 4
11,600.0	7,100.0	12,072.2	7,149.0	91.6	92.3	99.17	4,615.4	1,306.0	303.1	127.5	175.61	1.726	Level 4
11,700.0	7,100.0	12,166.1	7,159.2	93.5	94.0	100.20	4,704.5	1,333.4	333.8	155.3	178.55	1.870	Level 4
11,800.0	7,100.0	12,181.0	7,160.9	95.4	94.2	100.36	4,718.7	1,337.9	373.7	193.1	180.59	2.069	
11,900.0	7,100.0	12,181.0	7,160.9	97.2	94.2	100.36	4,718.7	1,337.9	433.2	250.7	182.45	2.374	
11,971.9	7,100.0	12,181.0	7,160.9	98.6	94.2	100.36	4,718.7	1,337.9	484.2	300.4	183.79	2.635	

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

Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Ele
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W

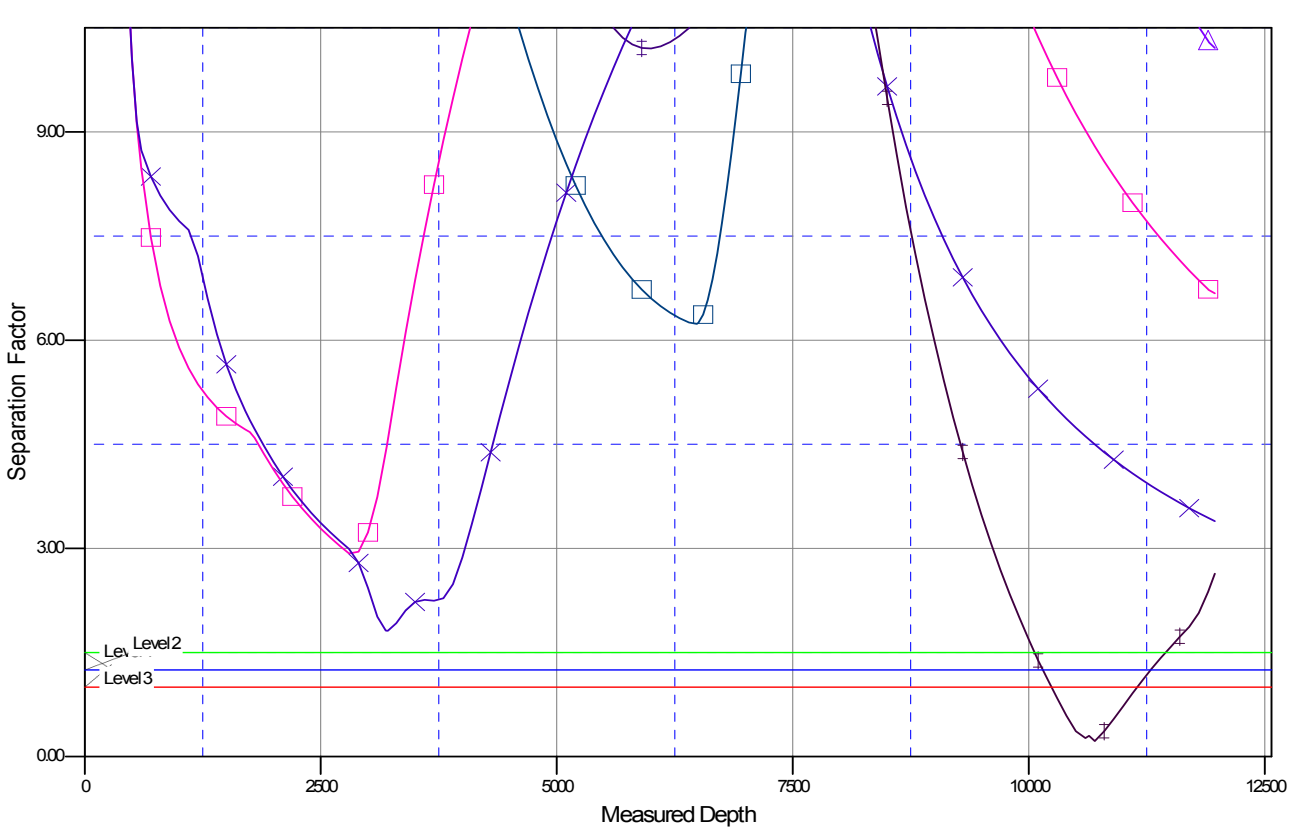
Coordinates are relative to: Mutual 0780 3-8H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: -0.58°



Company:	SandRidge Energy	**Local Co-ordinate Reference:**	Well Mutual 0780 3-8H
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:	Mutual 0780 3-8H	**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 Ele
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Mutual 0780 3-8H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: -0.58°



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