

EXTRACTION OIL & GAS

Weld County

Sec 18-T2N-R68W

RINN VALLEY WEST N18-20-4N

ORIGINAL WELLBORE

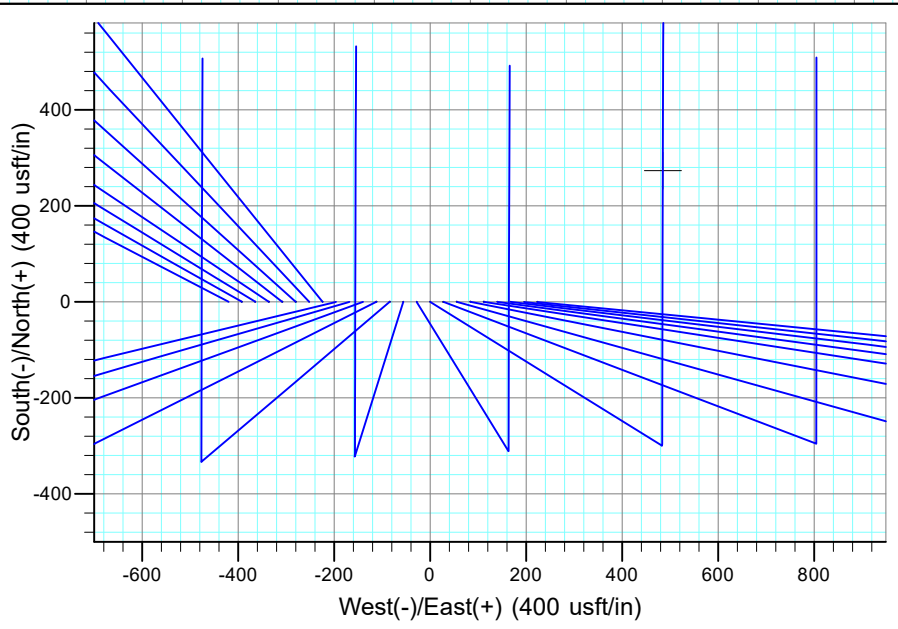
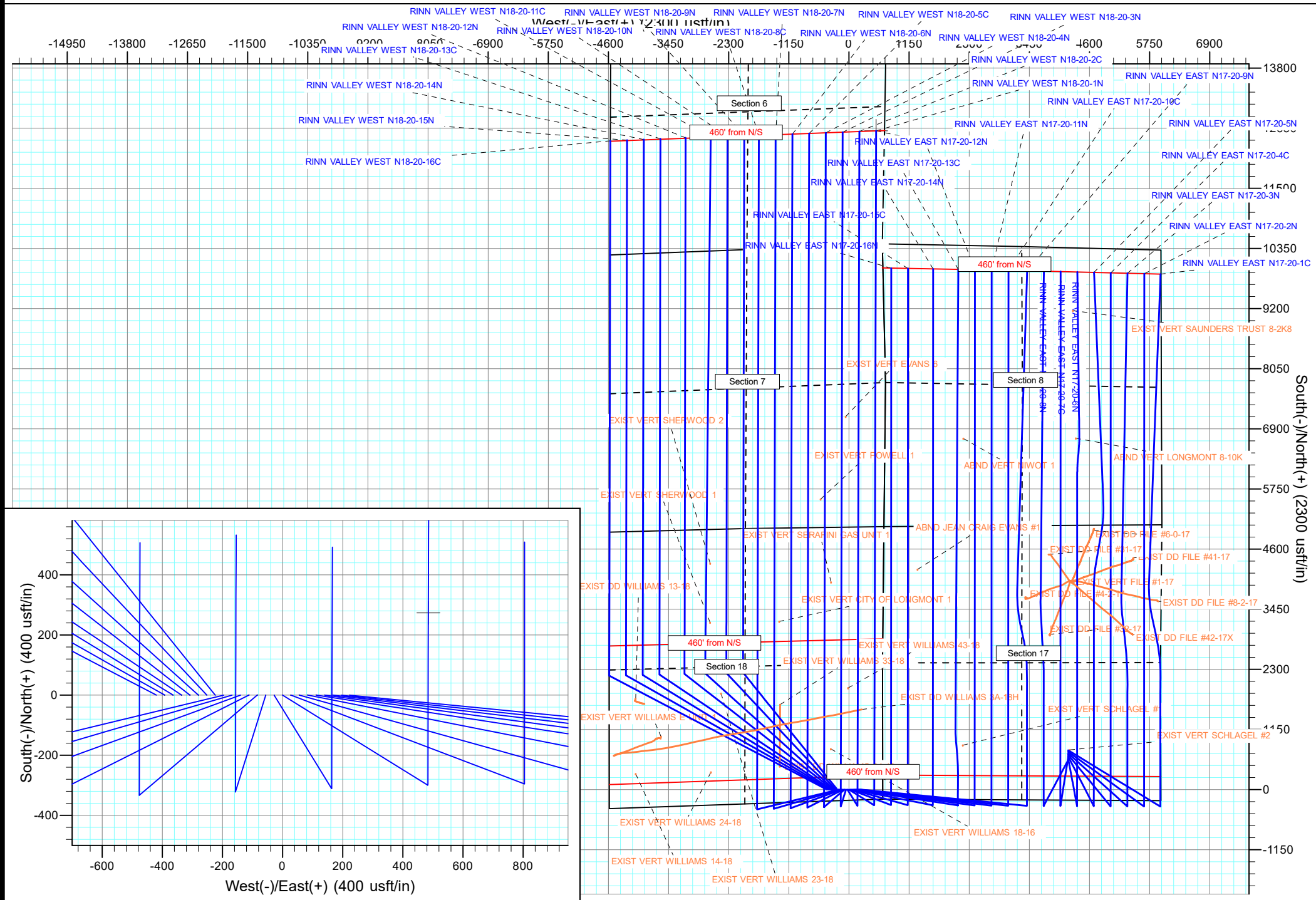
PROPOSAL 1

Anticollision Report

20 March, 2018



Project: Weld County
 Site: Sec 18-T2N-R68W
 Well: RINN VALLEY WEST N18-20-1N
 ORIGINAL WELLBORE
 PROPOSAL 1



Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well RINN VALLEY WEST N18-20-4N
Project:	Weld County	TVD Reference:	KB 25' @ 4967.00usft
Reference Site:	Sec 18-T2N-R68W	MD Reference:	KB 25' @ 4967.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	RINN VALLEY WEST N18-20-4N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Reference	PROPOSAL 1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 9,999.98 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	3/20/2018	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	19,955.05	PROPOSAL 1 (ORIGINAL WELLBORE)	MWD OWSG	OWSG MWD - Standard

Summary	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Site Name Offset Well - Wellbore - Design						
Sec 17-T2N-R68W						
ABND VERT FILE 42-17 - Wellbore #1 - Design #1	1,013.77	941.77	5,887.41	5,865.48	268.417	CC
ABND VERT FILE 42-17 - Wellbore #1 - Design #1	1,100.00	1,020.00	5,887.42	5,863.61	247.299	ES
ABND VERT FILE 42-17 - Wellbore #1 - Design #1	16,000.00	1,020.00	9,082.48	8,973.37	83.244	SF
ABND VERT JEAN CRAIG EVANS #1 - Wellbore #1 - De	11,609.69	4,838.00	2,960.55	2,846.63	25.988	CC, ES
ABND VERT JEAN CRAIG EVANS #1 - Wellbore #1 - De	12,700.00	4,838.00	3,154.94	3,026.41	24.546	SF
EXIST DD FILE #31-17 - Wellbore #1 - Wellbore #1	11,897.48	7,353.69	4,295.86	4,182.86	38.017	CC
EXIST DD FILE #31-17 - Wellbore #1 - Wellbore #1	12,000.00	7,353.41	4,297.09	4,182.51	37.503	ES
EXIST DD FILE #31-17 - Wellbore #1 - Wellbore #1	13,300.00	7,349.79	4,519.01	4,388.89	34.728	SF
EXIST DD FILE #32-17 - Wellbore #1 - Wellbore #1	10,373.56	7,299.06	4,316.31	4,224.77	47.157	CC
EXIST DD FILE #32-17 - Wellbore #1 - Wellbore #1	10,400.00	7,299.83	4,316.39	4,224.43	46.940	ES
EXIST DD FILE #32-17 - Wellbore #1 - Wellbore #1	12,100.00	7,330.92	4,648.64	4,534.86	40.853	SF
EXIST DD FILE #41-17 - Wellbore #1 - Wellbore #1	280.27	208.28	5,884.72	5,883.36	4,335.019	CC
EXIST DD FILE #41-17 - Wellbore #1 - Wellbore #1	12,100.00	12,100.00	5,907.18	5,775.92	45.005	ES
EXIST DD FILE #41-17 - Wellbore #1 - Wellbore #1	14,400.00	7,183.42	6,439.76	6,293.16	43.928	SF
EXIST DD FILE #4-2-17 - Wellbore #1 - Wellbore #1	11,082.06	7,261.48	3,839.82	3,741.08	38.889	CC
EXIST DD FILE #4-2-17 - Wellbore #1 - Wellbore #1	11,100.00	7,261.58	3,839.86	3,740.83	38.774	ES
EXIST DD FILE #4-2-17 - Wellbore #1 - Wellbore #1	12,400.00	7,267.82	4,059.69	3,943.34	34.893	SF
EXIST DD FILE #42-17X - Wellbore #1 - Wellbore #1	100.00	22.39	5,888.16	5,887.99	10,000.000	CC
EXIST DD FILE #42-17X - Wellbore #1 - Wellbore #1	10,500.00	7,313.90	5,889.91	5,795.66	62.493	ES
EXIST DD FILE #42-17X - Wellbore #1 - Wellbore #1	13,200.00	7,301.28	6,529.14	6,404.81	52.513	SF
EXIST DD FILE #6-0-17 - Wellbore #1 - Wellbore #1	12,382.12	7,466.83	5,145.22	5,020.38	41.214	CC
EXIST DD FILE #6-0-17 - Wellbore #1 - Wellbore #1	12,500.00	7,463.54	5,146.57	5,019.76	40.585	ES
EXIST DD FILE #6-0-17 - Wellbore #1 - Wellbore #1	13,400.00	13,400.00	5,244.91	5,089.78	33.811	SF
EXIST DD FILE #8-2-17 - Wellbore #1 - Wellbore #1	237.58	165.58	5,886.24	5,885.29	6,220.156	CC
EXIST DD FILE #8-2-17 - Wellbore #1 - Wellbore #1	300.00	189.88	5,886.44	5,885.18	4,691.556	ES
EXIST DD FILE #8-2-17 - Wellbore #1 - Wellbore #1	14,300.00	7,319.00	7,155.15	7,015.27	51.150	SF
EXIST VERT FILE #1-17 - Wellbore #1 - Design #1	11,372.75	7,208.01	4,722.68	4,620.03	46.007	CC
EXIST VERT FILE #1-17 - Wellbore #1 - Design #1	11,400.00	7,208.01	4,722.76	4,619.68	45.814	ES
EXIST VERT FILE #1-17 - Wellbore #1 - Design #1	13,200.00	7,208.01	5,063.85	4,938.32	40.339	SF
EXIST VERT SCHLAGEL #1 - Wellbore #1 - Design #1	1,300.00	1,243.00	2,414.97	2,385.92	83.113	CC
EXIST VERT SCHLAGEL #1 - Wellbore #1 - Design #1	1,400.00	1,342.98	2,416.62	2,385.20	76.931	ES
EXIST VERT SCHLAGEL #1 - Wellbore #1 - Design #1	8,600.00	7,223.00	2,673.81	2,494.39	14.903	SF
EXIST VERT SCHLAGEL #2 - Wellbore #1 - Design #1	1,300.00	1,254.00	4,378.05	4,348.77	149.535	CC
EXIST VERT SCHLAGEL #2 - Wellbore #1 - Design #1	1,400.00	1,353.98	4,379.56	4,347.92	138.445	ES
EXIST VERT SCHLAGEL #2 - Wellbore #1 - Design #1	9,600.00	7,234.00	4,914.82	4,723.46	25.683	SF
RINN VALLEY EAST N17-20-1C - ORIGINAL WELLBOR	100.00	73.00	4,342.39	4,342.16	10,000.000	CC
RINN VALLEY EAST N17-20-1C - ORIGINAL WELLBOR	200.00	134.16	4,342.72	4,341.97	5,802.060	ES

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well RINN VALLEY WEST N18-20-4N
Project:	Weld County	TVD Reference:	KB 25' @ 4967.00usft
Reference Site:	Sec 18-T2N-R68W	MD Reference:	KB 25' @ 4967.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	RINN VALLEY WEST N18-20-4N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Sec 17-T2N-R68W						
RINN VALLEY EAST N17-20-1C - ORIGINAL WELLBOR	18,400.00	17,826.05	6,511.81	6,145.21	17.763	SF
RINN VALLEY EAST N17-20-2N - ORIGINAL WELLBOR	200.00	174.00	4,337.08	4,336.18	4,858.954	CC
RINN VALLEY EAST N17-20-2N - ORIGINAL WELLBOR	300.00	235.87	4,337.40	4,335.93	2,951.605	ES
RINN VALLEY EAST N17-20-2N - ORIGINAL WELLBOR	18,300.00	17,489.99	6,181.21	5,815.60	16.907	SF
RINN VALLEY EAST N17-20-3N - ORIGINAL WELLBOR	300.00	275.00	4,331.93	4,330.32	2,685.435	CC
RINN VALLEY EAST N17-20-3N - ORIGINAL WELLBOR	400.00	338.50	4,332.25	4,330.06	1,974.078	ES
RINN VALLEY EAST N17-20-3N - ORIGINAL WELLBOR	18,200.00	17,430.94	5,848.09	5,483.95	16.060	SF
RINN VALLEY EAST N17-20-4C - ORIGINAL WELLBOR	400.00	376.00	4,326.69	4,324.36	1,854.046	CC
RINN VALLEY EAST N17-20-4C - ORIGINAL WELLBOR	500.00	442.97	4,326.98	4,324.06	1,478.767	ES
RINN VALLEY EAST N17-20-4C - ORIGINAL WELLBOR	18,100.00	17,618.90	5,522.25	5,159.63	15.229	SF
RINN VALLEY EAST N17-20-5N - ORIGINAL WELLBOR	500.00	478.00	4,321.91	4,318.85	1,413.421	CC
RINN VALLEY EAST N17-20-5N - ORIGINAL WELLBOR	600.00	552.52	4,322.14	4,318.46	1,176.122	ES
RINN VALLEY EAST N17-20-5N - ORIGINAL WELLBOR	18,000.00	17,358.43	5,183.55	4,821.65	14.323	SF
RINN VALLEY EAST N17-20-6N - ORIGINAL WELLBOR	600.00	579.00	4,317.02	4,313.24	1,142.585	CC
RINN VALLEY EAST N17-20-6N - ORIGINAL WELLBOR	1,000.00	953.82	4,318.10	4,311.60	664.199	ES
RINN VALLEY EAST N17-20-6N - ORIGINAL WELLBOR	17,900.00	17,327.22	4,852.36	4,491.24	13.437	SF
RINN VALLEY EAST N17-20-7C - ORIGINAL WELLBOR	1,446.13	1,617.23	4,289.31	4,278.68	403.488	CC
RINN VALLEY EAST N17-20-7C - ORIGINAL WELLBOR	17,400.00	17,574.73	4,504.51	4,149.22	12.678	ES
RINN VALLEY EAST N17-20-7C - ORIGINAL WELLBOR	17,800.00	17,574.73	4,529.94	4,170.14	12.590	SF
RINN VALLEY EAST N17-20-8N - ORIGINAL WELLBOR	10,969.72	11,000.00	4,130.26	3,993.80	30.268	CC
RINN VALLEY EAST N17-20-8N - ORIGINAL WELLBOR	17,400.00	17,350.72	4,176.45	3,821.05	11.751	ES
RINN VALLEY EAST N17-20-8N - ORIGINAL WELLBOR	17,700.00	17,350.72	4,192.92	3,834.25	11.690	SF

Anticollision Report

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Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Sec 18-T2N-R68W						
EXIST DD WILLIAMS 13-18 - Wellbore #1 - Wellbore #1	9,113.97	7,289.30	3,610.61	3,543.30	53.642	CC
EXIST DD WILLIAMS 13-18 - Wellbore #1 - Wellbore #1	9,200.00	7,290.79	3,611.63	3,543.06	52.670	ES
EXIST DD WILLIAMS 13-18 - Wellbore #1 - Wellbore #1	10,900.00	7,315.25	4,028.10	3,937.60	44.511	SF
EXIST DD WILLIAMS 34-18 - Wellbore #1 - Design #1	8,064.24	7,329.13	848.58	788.30	14.077	CC, ES
EXIST DD WILLIAMS 34-18 - Wellbore #1 - Design #1	8,200.00	7,294.40	858.67	797.32	13.996	SF
EXIST DD WILLIAMS 3A-18H - Wellbore #1 - Wellbore #	8,784.17	11,280.04	2.44	-49.86	0.047	Level 1, CC, SF
EXIST DD WILLIAMS 3A-18H - Wellbore #1 - Wellbore #	8,800.00	11,282.83	15.77	-114.72	0.121	Level 1, ES
EXIST VERT CITY OF LONGMONT 1 - Wellbore #1 - De	10,605.62	7,219.01	868.24	659.07	4.151	CC, ES
EXIST VERT CITY OF LONGMONT 1 - Wellbore #1 - De	10,700.00	7,219.01	873.36	662.60	4.144	SF
EXIST VERT SERAFINI GAS UNIT 1 - Wellbore #1 - De	11,360.96	7,211.01	122.71	-98.76	0.554	Level 1, CC, ES, SF
EXIST VERT SHERWOOD 1 - Wellbore #1 - Design #1	10,583.81	7,224.01	2,190.58	1,981.65	10.485	CC
EXIST VERT SHERWOOD 1 - Wellbore #1 - Design #1	10,600.00	7,224.01	2,190.64	1,981.43	10.471	ES
EXIST VERT SHERWOOD 1 - Wellbore #1 - Design #1	10,900.00	7,224.01	2,213.28	1,999.30	10.344	SF
EXIST VERT SHERWOOD 2 - Wellbore #1 - Design #1	11,713.08	7,216.01	2,190.82	1,963.34	9.631	CC, ES
EXIST VERT SHERWOOD 2 - Wellbore #1 - Design #1	12,000.00	7,216.01	2,209.53	1,977.40	9.519	SF
EXIST VERT WILLIAMS 14-18 - Wellbore #1 - Design #1	7,682.92	7,324.00	3,603.46	3,429.67	20.735	CC
EXIST VERT WILLIAMS 14-18 - Wellbore #1 - Design #1	7,700.00	7,324.00	3,603.50	3,429.63	20.726	ES
EXIST VERT WILLIAMS 14-18 - Wellbore #1 - Design #1	8,500.00	7,324.00	3,694.93	3,514.22	20.447	SF
EXIST VERT WILLIAMS 18-16 - Wellbore #1 - Design #1	8,169.50	7,242.00	125.45	-50.19	0.714	Level 1, CC, ES, SF
EXIST VERT WILLIAMS 23-18 - Wellbore #1 - Design #1	9,227.81	7,249.00	1,973.88	1,785.35	10.470	CC, ES
EXIST VERT WILLIAMS 23-18 - Wellbore #1 - Design #1	9,500.00	7,249.00	1,992.56	1,799.99	10.347	SF
EXIST VERT WILLIAMS 24-18 - Wellbore #1 - Design #1	7,719.18	7,304.00	2,162.73	1,989.17	12.460	CC, ES
EXIST VERT WILLIAMS 24-18 - Wellbore #1 - Design #1	7,900.00	7,304.00	2,170.28	1,995.59	12.424	SF
EXIST VERT WILLIAMS 33-18 - Wellbore #1 - Design #1	9,017.42	7,249.00	844.31	658.70	4.549	CC, ES
EXIST VERT WILLIAMS 33-18 - Wellbore #1 - Design #1	9,100.00	7,249.00	848.34	661.46	4.540	SF
EXIST VERT WILLIAMS 43-18 - Wellbore #1 - Design #1	9,337.94	7,238.00	454.91	265.02	2.396	CC, ES, SF
EXIST VERT WILLIAMS E UNIT 1 - Wellbore #1 - Desig	8,397.82	7,137.00	3,120.52	2,944.73	17.752	CC
EXIST VERT WILLIAMS E UNIT 1 - Wellbore #1 - Desig	8,400.00	7,137.00	3,120.52	2,944.71	17.749	ES
EXIST VERT WILLIAMS E UNIT 1 - Wellbore #1 - Desig	9,100.00	7,137.00	3,198.54	3,014.05	17.337	SF
RINN VALLEY EAST N17-20-10C - ORIGINAL WELLBO	200.00	195.00	279.89	278.92	289.181	CC, ES
RINN VALLEY EAST N17-20-10C - ORIGINAL WELLBO	17,800.00	18,190.90	3,539.41	3,171.35	9.616	SF
RINN VALLEY EAST N17-20-11N - ORIGINAL WELLBO	300.00	295.00	251.93	250.24	149.529	CC, ES
RINN VALLEY EAST N17-20-11N - ORIGINAL WELLBO	17,700.00	17,849.98	3,199.39	2,831.94	8.707	SF
RINN VALLEY EAST N17-20-12N - ORIGINAL WELLBO	400.00	396.00	223.97	221.56	93.113	CC, ES
RINN VALLEY EAST N17-20-12N - ORIGINAL WELLBO	17,600.00	17,737.60	2,870.34	2,504.75	7.851	SF
RINN VALLEY EAST N17-20-13C - ORIGINAL WELLBO	500.00	496.00	196.01	192.89	62.777	CC, ES
RINN VALLEY EAST N17-20-13C - ORIGINAL WELLBO	17,600.00	17,872.59	2,563.55	2,200.51	7.061	SF
RINN VALLEY EAST N17-20-14N - ORIGINAL WELLBO	600.00	597.00	168.05	164.20	43.730	CC, ES
RINN VALLEY EAST N17-20-14N - ORIGINAL WELLBO	17,500.00	17,504.45	2,063.33	1,700.10	5.680	SF
RINN VALLEY EAST N17-20-15C - ORIGINAL WELLBO	700.00	697.00	139.81	135.25	30.661	CC, ES
RINN VALLEY EAST N17-20-15C - ORIGINAL WELLBO	17,400.00	17,652.00	1,598.39	1,240.87	4.471	SF
RINN VALLEY EAST N17-20-16N - ORIGINAL WELLBO	800.00	798.00	111.84	106.56	21.182	CC, ES
RINN VALLEY EAST N17-20-16N - ORIGINAL WELLBO	17,400.00	17,363.45	1,257.90	896.46	3.480	SF
RINN VALLEY EAST N17-20-9N - ORIGINAL WELLBOR	100.00	94.00	307.85	307.59	1,180.467	CC, ES
RINN VALLEY EAST N17-20-9N - ORIGINAL WELLBOR	17,900.00	18,144.53	3,897.95	3,526.70	10.500	SF
RINN VALLEY WEST N18-20-10N - ORIGINAL WELLBO	700.00	700.00	168.05	163.48	36.767	CC, ES
RINN VALLEY WEST N18-20-10N - ORIGINAL WELLBO	19,955.15	18,189.61	1,883.08	1,433.03	4.184	SF
RINN VALLEY WEST N18-20-11C - ORIGINAL WELLBO	600.00	601.00	196.01	192.15	50.817	CC, ES
RINN VALLEY WEST N18-20-11C - ORIGINAL WELLBO	19,955.15	18,523.39	2,217.63	1,770.98	4.965	SF
RINN VALLEY WEST N18-20-12N - ORIGINAL WELLBO	500.00	501.00	223.97	220.83	71.323	CC, ES
RINN VALLEY WEST N18-20-12N - ORIGINAL WELLBO	19,955.15	18,474.27	2,684.10	2,233.20	5.953	SF
RINN VALLEY WEST N18-20-13C - ORIGINAL WELLBO	400.00	401.00	251.93	249.51	103.963	CC, ES
RINN VALLEY WEST N18-20-13C - ORIGINAL WELLBO	19,955.15	18,868.13	3,174.11	2,724.78	7.064	SF

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

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well RINN VALLEY WEST N18-20-4N
Project:	Weld County	TVD Reference:	KB 25' @ 4967.00usft
Reference Site:	Sec 18-T2N-R68W	MD Reference:	KB 25' @ 4967.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	RINN VALLEY WEST N18-20-4N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Sec 18-T2N-R68W						
RINN VALLEY WEST N18-20-14N - ORIGINAL WELLBO	300.00	301.00	280.17	278.46	164.195	CC, ES
RINN VALLEY WEST N18-20-14N - ORIGINAL WELLBO	19,955.15	18,827.94	3,484.85	3,033.24	7.716	SF
RINN VALLEY WEST N18-20-15N - ORIGINAL WELLBO	200.00	202.00	308.13	307.14	310.314	CC, ES
RINN VALLEY WEST N18-20-15N - ORIGINAL WELLBO	19,955.15	18,973.96	3,805.10	3,353.34	8.423	SF
RINN VALLEY WEST N18-20-16C - ORIGINAL WELLBO	100.00	103.00	336.09	335.82	1,231.619	CC, ES
RINN VALLEY WEST N18-20-16C - ORIGINAL WELLBO	19,955.15	19,290.82	4,132.73	3,682.10	9.171	SF
RINN VALLEY WEST N18-20-1N - ORIGINAL WELLBOR	1,300.00	1,302.00	83.88	75.00	9.447	CC, ES
RINN VALLEY WEST N18-20-1N - ORIGINAL WELLBOR	19,955.15	19,926.65	960.71	508.93	2.126	SF
RINN VALLEY WEST N18-20-2C - ORIGINAL WELLBOR	1,300.00	1,301.00	55.92	47.05	6.301	CC, ES
RINN VALLEY WEST N18-20-2C - ORIGINAL WELLBOR	19,955.15	20,169.47	688.26	260.41	1.609	SF
RINN VALLEY WEST N18-20-3N - ORIGINAL WELLBOR	1,300.00	1,301.00	27.96	19.09	3.150	CC
RINN VALLEY WEST N18-20-3N - ORIGINAL WELLBOR	19,955.15	19,931.23	320.68	-132.02	0.708	Level 1, ES, SF
RINN VALLEY WEST N18-20-5C - ORIGINAL WELLBOR	1,200.00	1,202.00	27.96	19.80	3.426	CC, ES
RINN VALLEY WEST N18-20-5C - ORIGINAL WELLBOR	19,955.15	20,232.07	405.26	29.05	1.077	Level 2, SF
RINN VALLEY WEST N18-20-6N - ORIGINAL WELLBOR	1,100.00	1,103.00	55.92	48.47	7.507	CC, ES
RINN VALLEY WEST N18-20-6N - ORIGINAL WELLBOR	19,955.15	20,030.48	641.03	189.33	1.419	Level 3, SF
RINN VALLEY WEST N18-20-7N - ORIGINAL WELLBOR	1,000.00	1,003.00	84.16	77.43	12.502	CC, ES
RINN VALLEY WEST N18-20-7N - ORIGINAL WELLBOR	19,955.15	20,091.71	961.54	510.16	2.130	SF
RINN VALLEY WEST N18-20-8C - ORIGINAL WELLBOR	900.00	904.00	112.12	106.11	18.629	CC, ES
RINN VALLEY WEST N18-20-8C - ORIGINAL WELLBOR	19,955.15	20,405.87	1,305.44	861.77	2.942	SF
RINN VALLEY WEST N18-20-9N - ORIGINAL WELLBOR	800.00	799.00	140.09	134.80	26.512	CC, ES
RINN VALLEY WEST N18-20-9N - ORIGINAL WELLBOR	19,955.15	18,104.03	1,562.85	1,113.13	3.475	SF
Sec 6-T2N-R68W						
ABND VERT MAYEDA 1 - Wellbore #1 - Design #1	18,261.58	4,333.00	3,626.25	3,438.67	19.332	CC
ABND VERT MAYEDA 1 - Wellbore #1 - Design #1	18,300.00	4,333.00	3,626.45	3,438.36	19.281	ES
ABND VERT MAYEDA 1 - Wellbore #1 - Design #1	19,000.00	4,333.00	3,700.67	3,504.12	18.829	SF
EXIST VERT MAYEDA, JOHN Y 2 - Wellbore #1 - Desig	18,321.62	7,271.02	2,021.35	1,678.11	5.889	CC, ES
EXIST VERT MAYEDA, JOHN Y 2 - Wellbore #1 - Desig	18,500.00	7,271.02	2,029.21	1,683.24	5.865	SF
Sec 7-T2N-R68W						
EXIST VERT EVANS 6 - Wellbore #1 - Design #1	14,528.79	7,200.01	392.86	117.38	1.426	Level 3, CC, ES, SF
EXIST VERT POWELL 1 - Wellbore #1 - Design #1	12,946.48	7,206.01	83.54	-164.72	0.337	Level 1, CC, ES, SF
Sec 8-T2N-R68W						
ABND VERT LONGMONT 8-10K - Wellbore #1 - Design	14,125.85	7,189.01	4,797.24	4,528.99	17.883	CC
ABND VERT LONGMONT 8-10K - Wellbore #1 - Design	14,200.00	7,189.01	4,797.82	4,528.35	17.805	ES
ABND VERT LONGMONT 8-10K - Wellbore #1 - Design	15,100.00	7,189.01	4,895.15	4,613.45	17.377	SF
ABND VERT NIWOT 1 - Wellbore #1 - Design #1	14,116.27	7,200.99	2,644.00	2,375.66	9.853	CC, ES
ABND VERT NIWOT 1 - Wellbore #1 - Design #1	14,400.00	7,200.99	2,659.18	2,387.04	9.771	SF
EXIST VERT SAUNDERS TRUST 8-2K8 - Wellbore #1 -	16,567.80	7,285.01	4,731.56	4,418.81	15.129	CC
EXIST VERT SAUNDERS TRUST 8-2K8 - Wellbore #1 -	16,600.00	7,285.01	4,731.67	4,418.38	15.103	ES
EXIST VERT SAUNDERS TRUST 8-2K8 - Wellbore #1 -	17,300.00	7,285.02	4,787.88	4,464.95	14.826	SF

Offset Design Sec 17-T2N-R68W - ABND VERT FILE 42-17 - Wellbore #1 - Design #1											Offset Site Error:	0.00 usft	
Survey Program: 0-INC											Offset Well Error:	0.00 usft	
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor
0.00	0.00	0.00	0.00	0.00	0.00	47.94	3,944.08	4,371.03	5,887.85				
100.00	100.00	28.00	28.00	0.13	0.32	47.94	3,944.08	4,371.03	5,887.41	5,886.95	0.46	N/A	

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