

EXTRACTION OIL & GAS

Weld County

Sec 18-T2N-R68W

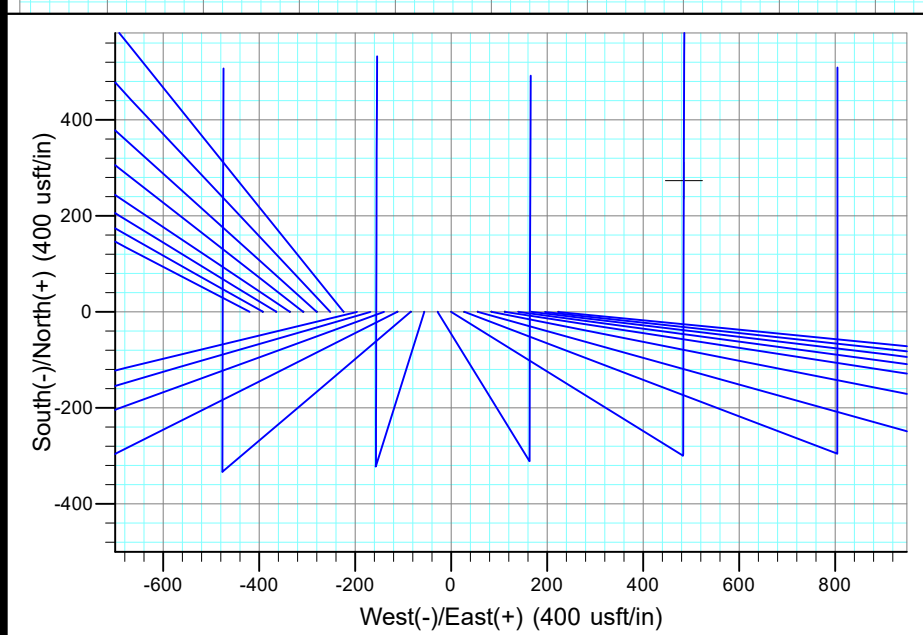
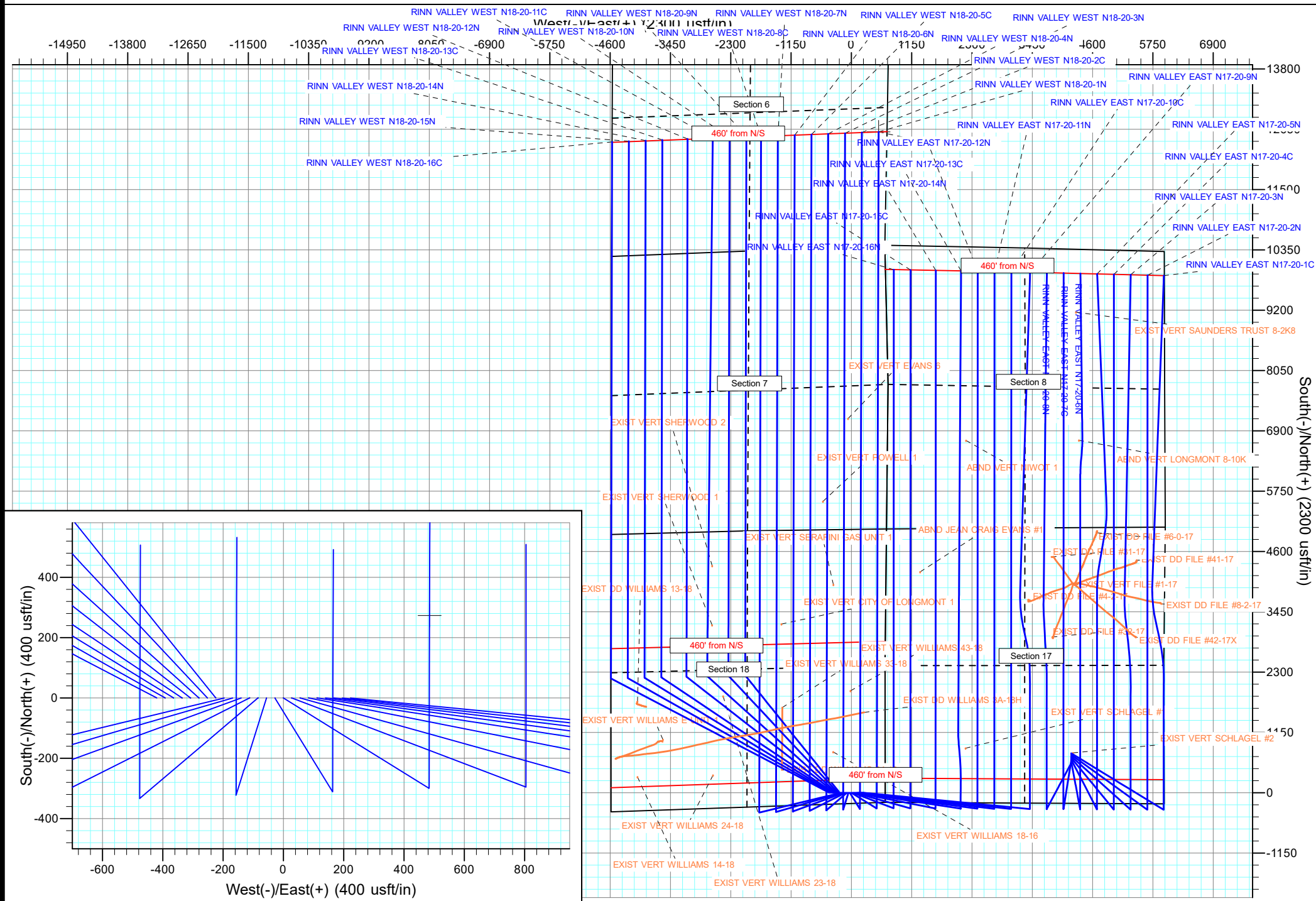
RINN VALLEY EAST N17-20-11N

ORIGINAL WELLBORE

PROPOSAL 1

Anticollision Report

19 March, 2018



Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well RINN VALLEY EAST N17-20-11N
Project:	Weld County	TVD Reference:	KB 25' @ 4962.00usft
Reference Site:	Sec 18-T2N-R68W	MD Reference:	KB 25' @ 4962.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	RINN VALLEY EAST N17-20-11N	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	3/19/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	17,849.92	PROPOSAL 1 (ORIGINAL WELLBORE)	MWD OWSG	OWSG MWD - Standard

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						
ABND JEAN CRAIG EVANS #1 - Wellbore #1 - Design #	12,124.31	4,838.00	2,765.46	2,666.06	27.822	CC, ES
ABND JEAN CRAIG EVANS #1 - Wellbore #1 - Design #	13,400.00	4,838.00	3,045.52	2,931.07	26.610	SF
ABND VERT FILE 42-17 - Wellbore #1 - Design #1	2,711.75	1,020.00	5,431.04	5,395.75	153.928	CC, ES
ABND VERT FILE 42-17 - Wellbore #1 - Design #1	16,000.00	1,020.00	7,611.70	7,515.37	79.017	SF
EXIST DD FILE #31-17 - Wellbore #1 - Wellbore #1	12,406.83	7,292.42	1,105.90	992.33	9.738	CC, ES
EXIST DD FILE #31-17 - Wellbore #1 - Wellbore #1	12,700.00	7,291.67	1,144.10	1,021.62	9.342	SF
EXIST DD FILE #32-17 - Wellbore #1 - Wellbore #1	10,883.66	7,342.03	1,122.71	1,029.11	11.995	CC
EXIST DD FILE #32-17 - Wellbore #1 - Wellbore #1	10,900.00	7,342.37	1,122.83	1,028.61	11.917	ES
EXIST DD FILE #32-17 - Wellbore #1 - Wellbore #1	11,200.00	7,348.51	1,166.41	1,062.13	11.185	SF
EXIST DD FILE #41-17 - Wellbore #1 - Wellbore #1	12,324.27	7,292.60	2,710.89	2,597.67	23.942	CC
EXIST DD FILE #41-17 - Wellbore #1 - Wellbore #1	12,400.00	7,291.34	2,711.95	2,596.65	23.520	ES
EXIST DD FILE #41-17 - Wellbore #1 - Wellbore #1	13,400.00	7,274.70	2,916.45	2,778.80	21.187	SF
EXIST DD FILE #4-2-17 - Wellbore #1 - Wellbore #1	11,592.47	7,294.81	647.85	547.37	6.447	CC
EXIST DD FILE #4-2-17 - Wellbore #1 - Wellbore #1	11,600.00	7,294.83	647.90	546.98	6.420	ES
EXIST DD FILE #4-2-17 - Wellbore #1 - Wellbore #1	11,800.00	7,295.48	680.28	569.95	6.166	SF
EXIST DD FILE #42-17X - Wellbore #1 - Wellbore #1	10,885.03	7,389.28	2,695.63	2,600.79	28.424	CC
EXIST DD FILE #42-17X - Wellbore #1 - Wellbore #1	10,900.00	7,389.13	2,695.67	2,600.53	28.335	ES
EXIST DD FILE #42-17X - Wellbore #1 - Wellbore #1	11,900.00	7,379.13	2,880.37	2,767.21	25.454	SF
EXIST DD FILE #6-0-17 - Wellbore #1 - Wellbore #1	12,892.19	7,411.78	1,956.67	1,831.45	15.625	CC
EXIST DD FILE #6-0-17 - Wellbore #1 - Wellbore #1	13,000.00	7,405.26	1,959.63	1,831.05	15.240	ES
EXIST DD FILE #6-0-17 - Wellbore #1 - Wellbore #1	13,400.00	7,383.22	2,021.31	1,882.63	14.576	SF
EXIST DD FILE #8-2-17 - Wellbore #1 - Wellbore #1	11,526.30	7,412.00	3,169.06	3,068.00	31.359	CC
EXIST DD FILE #8-2-17 - Wellbore #1 - Wellbore #1	11,600.00	7,392.66	3,169.80	3,067.12	30.873	ES
EXIST DD FILE #8-2-17 - Wellbore #1 - Wellbore #1	13,000.00	7,373.85	3,494.44	3,365.11	27.019	SF
EXIST VERT FILE #1-17 - Wellbore #1 - Design #1	11,880.98	7,212.81	1,530.86	1,426.94	14.731	CC
EXIST VERT FILE #1-17 - Wellbore #1 - Design #1	11,900.00	7,212.81	1,530.98	1,426.44	14.645	ES
EXIST VERT FILE #1-17 - Wellbore #1 - Design #1	12,300.00	7,212.80	1,587.17	1,471.68	13.743	SF
EXIST VERT SCHLAGEL #1 - Wellbore #1 - Design #1	8,761.13	7,227.95	547.91	367.87	3.043	CC, ES, SF
EXIST VERT SCHLAGEL #2 - Wellbore #1 - Design #1	8,674.96	7,238.96	1,502.48	1,322.92	8.368	CC
EXIST VERT SCHLAGEL #2 - Wellbore #1 - Design #1	8,700.00	7,238.96	1,502.69	1,322.81	8.354	ES
EXIST VERT SCHLAGEL #2 - Wellbore #1 - Design #1	9,000.00	7,238.94	1,537.24	1,351.63	8.282	SF
RINN VALLEY EAST N17-20-1C - ORIGINAL WELLBOR	11,798.79	11,846.15	3,022.05	2,875.17	20.576	CC
RINN VALLEY EAST N17-20-1C - ORIGINAL WELLBOR	12,000.00	11,951.62	3,025.50	2,872.74	19.806	ES
RINN VALLEY EAST N17-20-1C - ORIGINAL WELLBOR	17,849.98	17,782.49	3,240.04	2,889.70	9.248	SF
RINN VALLEY EAST N17-20-2N - ORIGINAL WELLBOR	6,539.54	5,489.54	2,844.57	2,788.22	50.483	CC
RINN VALLEY EAST N17-20-2N - ORIGINAL WELLBOR	17,849.98	17,489.99	2,917.77	2,564.62	8.262	ES, SF
RINN VALLEY EAST N17-20-3N - ORIGINAL WELLBOR	11,560.27	11,200.00	2,482.71	2,342.57	17.715	CC

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 EAST N17-20-11N
Project:	Weld County	TVD Reference:	KB 25' @ 4962.00usft
Reference Site:	Sec 18-T2N-R68W	MD Reference:	KB 25' @ 4962.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	RINN VALLEY EAST N17-20-11N	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 N17-20-3N - ORIGINAL WELLBOR	17,849.98	17,430.94	2,597.64	2,244.22	7.350	ES, SF
RINN VALLEY EAST N17-20-4C - ORIGINAL WELLBOR	6,872.85	6,112.10	2,238.36	2,181.12	39.107	CC
RINN VALLEY EAST N17-20-4C - ORIGINAL WELLBOR	17,849.98	17,618.90	2,293.27	1,942.57	6.539	ES, SF
RINN VALLEY EAST N17-20-5N - ORIGINAL WELLBOR	17,805.58	17,358.43	1,956.88	1,603.91	5.544	CC
RINN VALLEY EAST N17-20-5N - ORIGINAL WELLBOR	17,849.98	17,358.43	1,957.39	1,602.98	5.523	ES, SF
RINN VALLEY EAST N17-20-6N - ORIGINAL WELLBOR	17,813.34	17,327.22	1,636.85	1,283.03	4.626	CC
RINN VALLEY EAST N17-20-6N - ORIGINAL WELLBOR	17,849.98	17,327.22	1,637.26	1,282.21	4.611	ES, SF
RINN VALLEY EAST N17-20-7C - ORIGINAL WELLBOR	7,421.22	6,909.11	1,319.76	1,261.18	22.529	CC
RINN VALLEY EAST N17-20-7C - ORIGINAL WELLBOR	17,849.98	17,574.73	1,343.05	994.60	3.854	ES, SF
RINN VALLEY EAST N17-20-8N - ORIGINAL WELLBOR	11,479.23	11,000.00	937.65	799.92	6.808	CC
RINN VALLEY EAST N17-20-8N - ORIGINAL WELLBOR	17,849.98	17,350.72	997.03	641.91	2.808	ES, SF

Anticollision Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well RINN VALLEY EAST N17-20-11N
Project:	Weld County	TVD Reference:	KB 25' @ 4962.00usft
Reference Site:	Sec 18-T2N-R68W	MD Reference:	KB 25' @ 4962.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	RINN VALLEY EAST N17-20-11N	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 18-T2N-R68W						
EXIST DD WILLIAMS 13-18 - Wellbore #1 - Wellbore #1	0.00	0.00	4,397.44			
EXIST DD WILLIAMS 13-18 - Wellbore #1 - Wellbore #1	100.00	80.99	4,397.66	4,397.39	10,000.000	ES
EXIST DD WILLIAMS 13-18 - Wellbore #1 - Wellbore #1	13,600.00	7,348.07	7,874.92	7,765.80	72.170	SF
EXIST DD WILLIAMS 34-18 - Wellbore #1 - Design #1	331.69	323.12	2,195.91	2,194.00	1,146.364	CC, ES
EXIST DD WILLIAMS 34-18 - Wellbore #1 - Design #1	10,100.00	6,957.53	4,305.08	4,232.85	59.601	SF
EXIST DD WILLIAMS 3A-18H - Wellbore #1 - Wellbore #	7,800.00	12,015.00	2,961.70	2,836.07	23.574	SF
EXIST DD WILLIAMS 3A-18H - Wellbore #1 - Wellbore #	9,400.00	12,015.00	2,477.23	2,400.36	32.224	ES
EXIST DD WILLIAMS 3A-18H - Wellbore #1 - Wellbore #	9,446.27	12,015.00	2,476.80	2,401.18	32.752	CC
EXIST VERT CITY OF LONGMONT 1 - Wellbore #1 - De	300.00	244.00	3,549.13	3,543.90	678.194	CC
EXIST VERT CITY OF LONGMONT 1 - Wellbore #1 - De	400.00	343.98	3,550.05	3,542.40	464.294	ES
EXIST VERT CITY OF LONGMONT 1 - Wellbore #1 - De	11,800.00	7,223.81	4,117.26	3,900.00	18.951	SF
EXIST VERT SERAFINI GAS UNIT 1 - Wellbore #1 - De	11,879.09	7,215.81	3,069.13	2,846.13	13.763	CC
EXIST VERT SERAFINI GAS UNIT 1 - Wellbore #1 - De	11,900.00	7,215.81	3,069.20	2,846.04	13.753	ES
EXIST VERT SERAFINI GAS UNIT 1 - Wellbore #1 - De	12,200.00	7,215.80	3,085.86	2,860.51	13.694	SF
EXIST VERT SHERWOOD 1 - Wellbore #1 - Design #1	300.00	249.00	4,266.62	4,261.29	799.420	CC
EXIST VERT SHERWOOD 1 - Wellbore #1 - Design #1	400.00	348.98	4,267.93	4,260.18	550.821	ES
EXIST VERT SHERWOOD 1 - Wellbore #1 - Design #1	12,400.00	7,228.80	5,537.18	5,312.85	24.683	SF
EXIST VERT SHERWOOD 2 - Wellbore #1 - Design #1	300.00	241.00	5,165.61	5,160.42	995.040	CC
EXIST VERT SHERWOOD 2 - Wellbore #1 - Design #1	12,300.00	7,220.80	5,382.27	5,152.57	23.432	ES
EXIST VERT SHERWOOD 2 - Wellbore #1 - Design #1	13,400.00	7,220.80	5,506.29	5,265.22	22.841	SF
EXIST VERT WILLIAMS 14-18 - Wellbore #1 - Design #1	300.00	349.00	4,257.00	4,249.64	578.566	CC
EXIST VERT WILLIAMS 14-18 - Wellbore #1 - Design #1	400.00	448.98	4,258.74	4,249.00	437.054	ES
EXIST VERT WILLIAMS 14-18 - Wellbore #1 - Design #1	10,700.00	7,328.84	7,244.87	7,046.28	36.481	SF
EXIST VERT WILLIAMS 18-16 - Wellbore #1 - Design #1	300.00	267.00	932.21	926.49	162.930	CC
EXIST VERT WILLIAMS 18-16 - Wellbore #1 - Design #1	400.00	366.98	933.34	925.22	114.859	ES
EXIST VERT WILLIAMS 18-16 - Wellbore #1 - Design #1	9,000.00	7,246.94	3,089.07	2,907.31	16.996	SF
EXIST VERT WILLIAMS 23-18 - Wellbore #1 - Design #1	300.00	274.00	3,195.69	3,189.88	549.436	CC
EXIST VERT WILLIAMS 23-18 - Wellbore #1 - Design #1	400.00	373.98	3,197.23	3,189.01	389.015	ES
EXIST VERT WILLIAMS 23-18 - Wellbore #1 - Design #1	11,000.00	7,253.83	5,319.15	5,115.37	26.102	SF
EXIST VERT WILLIAMS 24-18 - Wellbore #1 - Design #1	300.00	329.00	2,825.20	2,818.25	406.542	CC
EXIST VERT WILLIAMS 24-18 - Wellbore #1 - Design #1	400.00	428.98	2,826.95	2,817.61	302.724	ES
EXIST VERT WILLIAMS 24-18 - Wellbore #1 - Design #1	9,600.00	7,308.90	5,531.61	5,344.12	29.503	SF
EXIST VERT WILLIAMS 33-18 - Wellbore #1 - Design #1	300.00	274.00	2,201.74	2,195.92	378.546	CC
EXIST VERT WILLIAMS 33-18 - Wellbore #1 - Design #1	400.00	373.98	2,203.06	2,194.84	268.054	ES
EXIST VERT WILLIAMS 33-18 - Wellbore #1 - Design #1	10,300.00	7,253.86	4,112.46	3,917.09	21.050	SF
EXIST VERT WILLIAMS 43-18 - Wellbore #1 - Design #1	300.00	263.00	1,952.42	1,946.83	349.423	CC
EXIST VERT WILLIAMS 43-18 - Wellbore #1 - Design #1	600.00	562.45	1,955.81	1,943.05	153.276	ES
EXIST VERT WILLIAMS 43-18 - Wellbore #1 - Design #1	10,100.00	7,242.87	2,752.17	2,557.84	14.163	SF
EXIST VERT WILLIAMS E UNIT 1 - Wellbore #1 - Desig	300.00	162.00	3,895.66	3,892.21	1,130.413	CC
EXIST VERT WILLIAMS E UNIT 1 - Wellbore #1 - Desig	400.00	261.98	3,897.38	3,891.43	654.170	ES
EXIST VERT WILLIAMS E UNIT 1 - Wellbore #1 - Desig	11,000.00	7,141.83	6,651.34	6,451.87	33.344	SF
RINN VALLEY EAST N17-20-10C - ORIGINAL WELLBO	200.00	200.00	27.96	26.98	28.366	CC, ES
RINN VALLEY EAST N17-20-10C - ORIGINAL WELLBO	17,752.85	20,303.88	406.24	83.60	1.259	Level 3, SF
RINN VALLEY EAST N17-20-12N - ORIGINAL WELLBO	300.00	301.00	27.96	26.25	16.387	CC
RINN VALLEY EAST N17-20-12N - ORIGINAL WELLBO	17,849.98	17,729.95	319.99	-40.24	0.888	Level 1, ES, SF
RINN VALLEY EAST N17-20-13C - ORIGINAL WELLBO	300.00	301.00	55.92	54.22	32.773	CC, ES
RINN VALLEY EAST N17-20-13C - ORIGINAL WELLBO	17,849.98	17,859.09	686.85	338.63	1.972	SF
RINN VALLEY EAST N17-20-14N - ORIGINAL WELLBO	300.00	302.00	83.88	82.17	49.057	CC, ES
RINN VALLEY EAST N17-20-14N - ORIGINAL WELLBO	17,849.98	17,484.08	1,120.30	760.09	3.110	SF
RINN VALLEY EAST N17-20-15C - ORIGINAL WELLBO	300.00	302.00	112.12	110.41	65.573	CC, ES
RINN VALLEY EAST N17-20-15C - ORIGINAL WELLBO	17,849.98	17,622.85	1,619.85	1,260.78	4.511	SF
RINN VALLEY EAST N17-20-16N - ORIGINAL WELLBO	300.00	303.00	140.09	138.37	81.754	CC, ES
RINN VALLEY EAST N17-20-16N - ORIGINAL WELLBO	17,849.98	17,331.57	1,921.10	1,560.98	5.335	SF

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

Anticollision Report

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Reference Site:	Sec 18-T2N-R68W	MD Reference:	KB 25' @ 4962.00usft
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Reference Well:	RINN VALLEY EAST N17-20-11N	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 18-T2N-R68W						
RINN VALLEY EAST N17-20-9N - ORIGINAL WELLBOR	100.00	99.00	55.92	55.66	209.052	CC, ES
RINN VALLEY EAST N17-20-9N - ORIGINAL WELLBOR	17,849.98	18,136.90	676.76	314.18	1.867	SF
RINN VALLEY WEST N18-20-10N - ORIGINAL WELLBO	300.00	305.00	419.98	418.26	244.078	CC, ES
RINN VALLEY WEST N18-20-10N - ORIGINAL WELLBO	17,849.98	15,639.89	5,059.21	4,700.51	14.104	SF
RINN VALLEY WEST N18-20-11C - ORIGINAL WELLBO	300.00	306.00	447.94	446.21	259.787	CC, ES
RINN VALLEY WEST N18-20-11C - ORIGINAL WELLBO	17,849.98	15,949.00	5,384.95	5,026.14	15.008	SF
RINN VALLEY WEST N18-20-12N - ORIGINAL WELLBO	300.00	306.00	475.90	474.17	276.003	CC, ES
RINN VALLEY WEST N18-20-12N - ORIGINAL WELLBO	17,849.98	15,957.56	5,859.62	5,499.92	16.290	SF
RINN VALLEY WEST N18-20-13C - ORIGINAL WELLBO	300.00	306.00	503.86	502.14	292.220	CC, ES
RINN VALLEY WEST N18-20-13C - ORIGINAL WELLBO	17,849.98	16,371.15	6,344.29	5,984.31	17.624	SF
RINN VALLEY WEST N18-20-14N - ORIGINAL WELLBO	300.00	306.00	532.10	530.38	308.598	CC, ES
RINN VALLEY WEST N18-20-14N - ORIGINAL WELLBO	17,849.98	16,344.53	6,659.48	6,298.90	18.469	SF
RINN VALLEY WEST N18-20-15N - ORIGINAL WELLBO	200.00	207.00	560.06	559.05	554.028	CC, ES
RINN VALLEY WEST N18-20-15N - ORIGINAL WELLBO	17,849.98	16,503.53	6,979.71	6,618.83	19.341	SF
RINN VALLEY WEST N18-20-16C - ORIGINAL WELLBO	100.00	108.00	588.02	587.74	2,103.022	CC, ES
RINN VALLEY WEST N18-20-16C - ORIGINAL WELLBO	17,849.98	16,834.22	7,303.34	6,942.46	20.238	SF
RINN VALLEY WEST N18-20-1N - ORIGINAL WELLBOR	300.00	303.00	168.05	166.33	98.072	CC, ES
RINN VALLEY WEST N18-20-1N - ORIGINAL WELLBOR	17,849.98	17,309.99	2,218.64	1,858.49	6.160	SF
RINN VALLEY WEST N18-20-2C - ORIGINAL WELLBOR	300.00	304.00	196.01	194.29	114.152	CC, ES
RINN VALLEY WEST N18-20-2C - ORIGINAL WELLBOR	17,849.98	17,551.64	2,550.30	2,189.76	7.074	SF
RINN VALLEY WEST N18-20-3N - ORIGINAL WELLBOR	300.00	304.00	223.97	222.25	130.436	CC, ES
RINN VALLEY WEST N18-20-3N - ORIGINAL WELLBOR	17,849.98	17,312.31	2,858.55	2,497.56	7.918	SF
RINN VALLEY WEST N18-20-4N - ORIGINAL WELLBOR	300.00	305.00	251.93	250.21	146.414	CC, ES
RINN VALLEY WEST N18-20-4N - ORIGINAL WELLBOR	17,849.98	17,338.48	3,178.76	2,818.15	8.815	SF
RINN VALLEY WEST N18-20-5C - ORIGINAL WELLBOR	300.00	307.00	279.89	278.16	161.989	CC, ES
RINN VALLEY WEST N18-20-5C - ORIGINAL WELLBOR	17,849.98	17,628.43	3,507.84	3,147.49	9.734	SF
RINN VALLEY WEST N18-20-6N - ORIGINAL WELLBOR	300.00	308.00	307.85	306.12	177.803	CC, ES
RINN VALLEY WEST N18-20-6N - ORIGINAL WELLBOR	17,849.98	17,440.03	3,819.61	3,459.36	10.603	SF
RINN VALLEY WEST N18-20-7N - ORIGINAL WELLBOR	300.00	308.00	336.09	334.36	194.114	CC, ES
RINN VALLEY WEST N18-20-7N - ORIGINAL WELLBOR	17,849.98	17,514.38	4,139.78	3,779.55	11.492	SF
RINN VALLEY WEST N18-20-8C - ORIGINAL WELLBOR	300.00	309.00	364.05	362.32	209.829	CC, ES
RINN VALLEY WEST N18-20-8C - ORIGINAL WELLBOR	17,849.98	17,841.62	4,466.66	4,106.44	12.400	SF
RINN VALLEY WEST N18-20-9N - ORIGINAL WELLBOR	300.00	304.00	392.01	390.30	228.303	CC, ES
RINN VALLEY WEST N18-20-9N - ORIGINAL WELLBOR	17,849.98	15,541.01	4,739.24	4,380.95	13.227	SF
Sec 8-T2N-R68W						
ABND VERT LONGMONT 8-10K - Wellbore #1 - Design	14,633.89	7,206.18	1,611.37	1,342.19	5.986	CC
ABND VERT LONGMONT 8-10K - Wellbore #1 - Design	14,700.00	7,206.18	1,612.72	1,341.38	5.943	ES
ABND VERT LONGMONT 8-10K - Wellbore #1 - Design	14,900.00	7,206.17	1,633.19	1,356.43	5.901	SF
ABND VERT NIWOT 1 - Wellbore #1 - Design #1	14,600.00	7,203.82	542.67	272.80	2.011	ES, SF
ABND VERT NIWOT 1 - Wellbore #1 - Design #1	14,628.97	7,203.82	541.89	272.84	2.014	CC
EXIST VERT SAUNDERS TRUST 8-2K8 - Wellbore #1 -	17,075.96	7,289.94	1,550.99	1,237.83	4.953	CC
EXIST VERT SAUNDERS TRUST 8-2K8 - Wellbore #1 -	17,100.00	7,289.94	1,551.18	1,237.18	4.940	ES
EXIST VERT SAUNDERS TRUST 8-2K8 - Wellbore #1 -	17,300.00	7,289.96	1,567.09	1,247.58	4.905	SF

Offset Design Sec 17-T2N-R68W - ABND JEAN CRAIG EVANS #1 - Wellbore #1 - Design #1											
Survey Program: 0-INC											
Reference											
Offset											
Semi Major Axis											
Distance											
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)
0.00	0.00	0.00	0.00	0.00	0.00	15.17	4,211.83	1,142.30	4,364.50		
Warning											

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