

EXTRACTION OIL & GAS

Weld County

Sec 18-T2N-R68W

RINN VALLEY WEST N18-20-11C

ORIGINAL WELLBORE

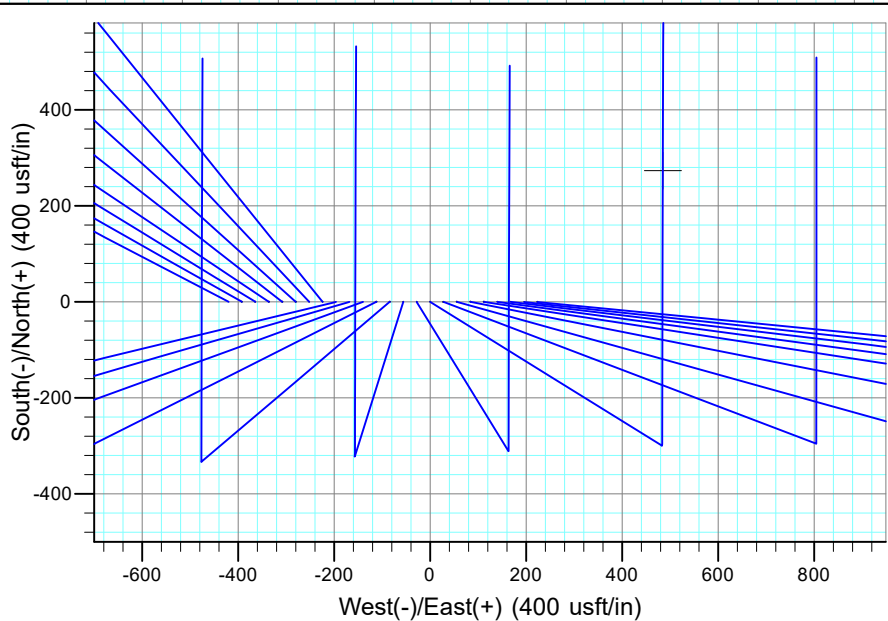
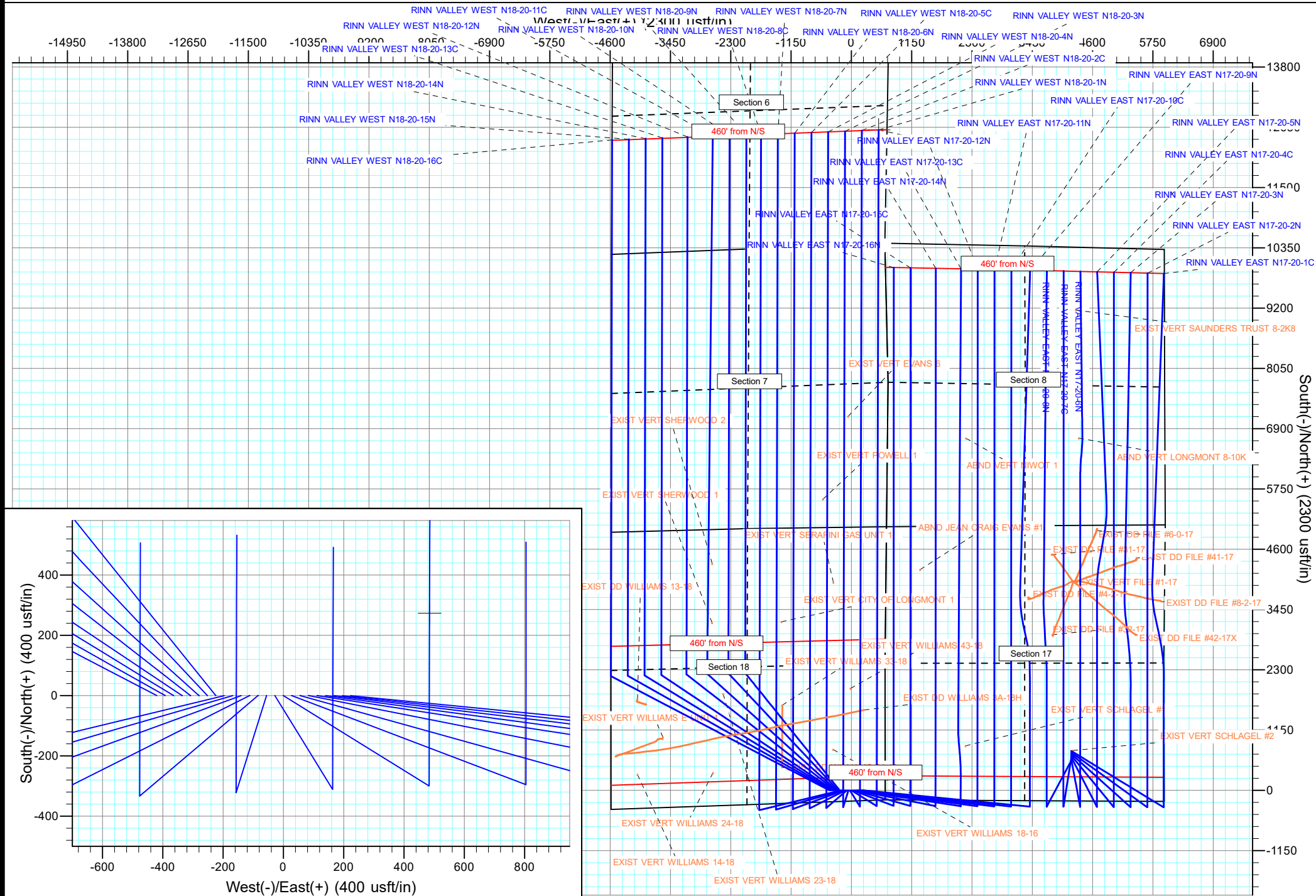
PROPOSAL 1

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 N18-20-11C
Project:	Weld County	TVD Reference:	KB 25' @ 4968.00usft
Reference Site:	Sec 18-T2N-R68W	MD Reference:	KB 25' @ 4968.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	RINN VALLEY WEST N18-20-11C	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	18,522.78	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
Sec 18-T2N-R68W						
EXIST DD WILLIAMS 13-18 - Wellbore #1 - Wellbore #1	7,972.74	7,028.60	1,425.60	1,336.78	16.050	CC, ES
EXIST DD WILLIAMS 13-18 - Wellbore #1 - Wellbore #1	8,400.00	7,380.54	1,492.57	1,397.42	15.686	SF
EXIST DD WILLIAMS 34-18 - Wellbore #1 - Design #1	4,347.27	3,847.36	319.73	269.24	6.333	CC, ES
EXIST DD WILLIAMS 34-18 - Wellbore #1 - Design #1	4,400.00	3,886.48	321.69	270.87	6.329	SF
EXIST DD WILLIAMS 3A-18H - Wellbore #1 - Wellbore #	8,039.25	9,232.16	1,267.49	1,162.39	12.059	CC, ES
EXIST DD WILLIAMS 3A-18H - Wellbore #1 - Wellbore #	8,100.00	9,233.36	1,272.08	1,166.48	12.046	SF
EXIST VERT CITY OF LONGMONT 1 - Wellbore #1 - De	9,200.00	7,467.99	1,405.55	1,188.39	6.472	SF
EXIST VERT CITY OF LONGMONT 1 - Wellbore #1 - De	9,268.19	7,467.99	1,403.89	1,187.64	6.492	CC, ES
EXIST VERT SERAFINI GAS UNIT 1 - Wellbore #1 - De	10,000.00	7,459.96	2,389.31	2,161.58	10.492	SF
EXIST VERT SERAFINI GAS UNIT 1 - Wellbore #1 - De	10,030.99	7,459.96	2,389.11	2,161.44	10.494	CC, ES
EXIST VERT SHERWOOD 1 - Wellbore #1 - Design #1	9,200.00	7,472.99	89.49	-138.52	0.392	Level 1, ES
EXIST VERT SHERWOOD 1 - Wellbore #1 - Design #1	9,236.39	7,472.99	81.76	-134.13	0.379	Level 1, CC, SF
EXIST VERT SHERWOOD 2 - Wellbore #1 - Design #1	10,365.63	7,464.95	72.98	-160.04	0.313	Level 1, CC, ES, SF
EXIST VERT WILLIAMS 14-18 - Wellbore #1 - Design #1	6,584.49	5,703.68	2,318.37	2,140.03	13.000	CC
EXIST VERT WILLIAMS 14-18 - Wellbore #1 - Design #1	7,950.00	7,015.62	2,337.72	2,126.92	11.090	ES
EXIST VERT WILLIAMS 14-18 - Wellbore #1 - Design #1	8,100.00	7,163.32	2,357.27	2,143.18	11.011	SF
EXIST VERT WILLIAMS 18-16 - Wellbore #1 - Design #1	2,438.68	2,276.02	531.29	472.51	9.039	CC
EXIST VERT WILLIAMS 18-16 - Wellbore #1 - Design #1	2,500.00	2,325.01	532.57	472.13	8.812	ES
EXIST VERT WILLIAMS 18-16 - Wellbore #1 - Design #1	2,700.00	2,484.75	554.06	488.51	8.452	SF
EXIST VERT WILLIAMS 23-18 - Wellbore #1 - Design #1	6,217.55	5,303.96	80.41	-86.12	0.483	Level 1, CC, ES, SF
EXIST VERT WILLIAMS 24-18 - Wellbore #1 - Design #1	4,772.87	4,202.37	1,330.42	1,204.19	10.539	CC
EXIST VERT WILLIAMS 24-18 - Wellbore #1 - Design #1	4,900.00	4,303.91	1,332.62	1,202.78	10.264	ES
EXIST VERT WILLIAMS 24-18 - Wellbore #1 - Design #1	5,600.00	4,863.01	1,420.46	1,273.09	9.639	SF
EXIST VERT WILLIAMS 33-18 - Wellbore #1 - Design #1	4,579.39	4,007.16	516.23	396.36	4.307	CC
EXIST VERT WILLIAMS 33-18 - Wellbore #1 - Design #1	4,600.00	4,009.30	516.38	396.22	4.298	ES
EXIST VERT WILLIAMS 33-18 - Wellbore #1 - Design #1	4,700.00	4,089.17	521.31	398.64	4.250	SF
EXIST VERT WILLIAMS 43-18 - Wellbore #1 - Design #1	3,325.94	2,980.70	1,621.60	1,538.03	19.403	CC
EXIST VERT WILLIAMS 43-18 - Wellbore #1 - Design #1	3,500.00	3,119.72	1,624.98	1,536.51	18.368	ES
EXIST VERT WILLIAMS 43-18 - Wellbore #1 - Design #1	8,500.00	7,407.86	2,783.36	2,586.25	14.121	SF
EXIST VERT WILLIAMS E UNIT 1 - Wellbore #1 - Desig	6,878.55	5,778.95	1,463.60	1,281.36	8.031	CC
EXIST VERT WILLIAMS E UNIT 1 - Wellbore #1 - Desig	7,950.00	6,828.62	1,475.02	1,267.92	7.122	ES
EXIST VERT WILLIAMS E UNIT 1 - Wellbore #1 - Desig	8,050.00	6,927.84	1,484.46	1,275.18	7.093	SF
RINN VALLEY EAST N17-20-10C - ORIGINAL WELLBO	200.00	194.00	475.90	474.93	493.523	CC, ES
RINN VALLEY EAST N17-20-10C - ORIGINAL WELLBO	16,700.00	18,190.90	5,759.83	5,392.50	15.680	SF
RINN VALLEY EAST N17-20-11N - ORIGINAL WELLBO	300.00	294.00	447.94	446.26	266.434	CC, ES
RINN VALLEY EAST N17-20-11N - ORIGINAL WELLBO	16,600.00	17,849.98	5,435.53	5,070.12	14.875	SF
RINN VALLEY EAST N17-20-12N - ORIGINAL WELLBO	400.00	395.00	419.98	417.57	174.862	CC, 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 N18-20-11C
Project:	Weld County	TVD Reference:	KB 25' @ 4968.00usft
Reference Site:	Sec 18-T2N-R68W	MD Reference:	KB 25' @ 4968.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	RINN VALLEY WEST N18-20-11C	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 N17-20-12N - ORIGINAL WELLBO	16,500.00	17,737.60	5,107.34	4,743.46	14.036	SF
RINN VALLEY EAST N17-20-13C - ORIGINAL WELLBO	500.00	495.00	392.01	388.90	125.698	CC, ES
RINN VALLEY EAST N17-20-13C - ORIGINAL WELLBO	16,400.00	17,872.59	4,773.62	4,410.80	13.157	SF
RINN VALLEY EAST N17-20-14N - ORIGINAL WELLBO	600.00	596.00	364.05	360.21	94.825	CC, ES
RINN VALLEY EAST N17-20-14N - ORIGINAL WELLBO	16,300.00	17,504.45	4,294.41	3,933.59	11.902	SF
RINN VALLEY EAST N17-20-15C - ORIGINAL WELLBO	600.00	604.00	335.81	331.95	86.820	CC, ES
RINN VALLEY EAST N17-20-15C - ORIGINAL WELLBO	16,200.00	17,652.00	3,802.15	3,441.75	10.550	SF
RINN VALLEY EAST N17-20-16N - ORIGINAL WELLBO	600.00	603.00	307.85	303.99	79.665	CC, ES
RINN VALLEY EAST N17-20-16N - ORIGINAL WELLBO	16,200.00	17,363.45	3,490.73	3,131.77	9.725	SF
RINN VALLEY EAST N17-20-9N - ORIGINAL WELLBOR	100.00	93.00	503.86	503.60	1,942.073	CC, ES
RINN VALLEY EAST N17-20-9N - ORIGINAL WELLBOR	16,800.00	18,144.53	6,131.02	5,762.29	16.627	SF
RINN VALLEY WEST N18-20-10N - ORIGINAL WELLBO	600.00	601.00	27.96	24.10	7.249	CC, ES
RINN VALLEY WEST N18-20-10N - ORIGINAL WELLBO	18,523.39	18,176.13	405.66	43.66	1.121	Level 2, SF
RINN VALLEY WEST N18-20-12N - ORIGINAL WELLBO	500.00	500.00	27.96	24.82	8.914	CC, ES
RINN VALLEY WEST N18-20-12N - ORIGINAL WELLBO	18,523.39	18,474.27	541.65	127.32	1.307	Level 3, SF
RINN VALLEY WEST N18-20-13C - ORIGINAL WELLBO	400.00	400.00	55.92	53.50	23.111	CC, ES
RINN VALLEY WEST N18-20-13C - ORIGINAL WELLBO	18,523.39	18,868.13	960.73	511.56	2.139	SF
RINN VALLEY WEST N18-20-14N - ORIGINAL WELLBO	300.00	300.00	84.16	82.46	49.428	CC, ES
RINN VALLEY WEST N18-20-14N - ORIGINAL WELLBO	18,523.39	18,827.94	1,305.42	859.53	2.928	SF
RINN VALLEY WEST N18-20-15N - ORIGINAL WELLBO	200.00	201.00	112.12	111.13	113.327	CC, ES
RINN VALLEY WEST N18-20-15N - ORIGINAL WELLBO	18,523.39	18,973.96	1,621.05	1,173.13	3.619	SF
RINN VALLEY WEST N18-20-16C - ORIGINAL WELLBO	100.00	102.00	140.09	139.81	515.887	CC, ES
RINN VALLEY WEST N18-20-16C - ORIGINAL WELLBO	18,523.39	19,290.82	1,921.75	1,471.77	4.271	SF
RINN VALLEY WEST N18-20-1N - ORIGINAL WELLBOR	600.00	603.00	279.89	276.03	72.429	CC, ES
RINN VALLEY WEST N18-20-1N - ORIGINAL WELLBOR	18,523.39	19,842.68	3,172.34	2,727.35	7.129	SF
RINN VALLEY WEST N18-20-2C - ORIGINAL WELLBOR	600.00	602.00	251.93	248.07	65.254	CC, ES
RINN VALLEY WEST N18-20-2C - ORIGINAL WELLBOR	18,523.39	20,084.08	2,843.04	2,395.93	6.359	SF
RINN VALLEY WEST N18-20-3N - ORIGINAL WELLBOR	600.00	602.00	223.97	220.11	58.012	CC, ES
RINN VALLEY WEST N18-20-3N - ORIGINAL WELLBOR	18,523.39	19,844.76	2,535.06	2,090.19	5.698	SF
RINN VALLEY WEST N18-20-4N - ORIGINAL WELLBOR	600.00	601.00	196.01	192.15	50.817	CC, ES
RINN VALLEY WEST N18-20-4N - ORIGINAL WELLBOR	18,523.39	19,871.13	2,216.65	1,772.95	4.996	SF
RINN VALLEY WEST N18-20-5C - ORIGINAL WELLBOR	600.00	601.00	168.05	164.19	43.567	CC, ES
RINN VALLEY WEST N18-20-5C - ORIGINAL WELLBOR	18,523.39	20,161.47	1,881.77	1,434.96	4.212	SF
RINN VALLEY WEST N18-20-6N - ORIGINAL WELLBOR	600.00	602.00	140.09	136.22	36.285	CC, ES
RINN VALLEY WEST N18-20-6N - ORIGINAL WELLBOR	18,523.39	19,973.14	1,581.74	1,141.45	3.593	SF
RINN VALLEY WEST N18-20-7N - ORIGINAL WELLBOR	600.00	602.00	111.84	107.98	28.970	CC, ES
RINN VALLEY WEST N18-20-7N - ORIGINAL WELLBOR	18,523.39	20,047.64	1,266.62	829.69	2.899	SF
RINN VALLEY WEST N18-20-8C - ORIGINAL WELLBOR	600.00	603.00	83.88	80.02	21.707	CC, ES
RINN VALLEY WEST N18-20-8C - ORIGINAL WELLBOR	18,523.39	20,373.12	920.99	474.71	2.064	SF
RINN VALLEY WEST N18-20-9N - ORIGINAL WELLBOR	600.00	602.00	55.92	52.06	14.485	CC, ES
RINN VALLEY WEST N18-20-9N - ORIGINAL WELLBOR	18,523.39	18,077.64	686.57	271.01	1.652	SF
Sec 6-T2N-R68W						
ABND VERT MAYEDA 1 - Wellbore #1 - Design #1	16,914.33	4,333.00	3,185.08	3,098.29	36.696	CC, ES
ABND VERT MAYEDA 1 - Wellbore #1 - Design #1	18,500.00	4,333.00	3,557.97	3,438.58	29.800	SF
EXIST VERT MAYEDA, JOHN Y 2 - Wellbore #1 - Desig	16,975.25	7,500.00	193.73	-149.41	0.565	Level 1, CC, ES, SF
Sec 7-T2N-R68W						
EXIST VERT EVANS 6 - Wellbore #1 - Design #1	13,200.71	7,448.92	2,635.36	2,355.80	9.427	CC, ES, SF
EXIST VERT POWELL 1 - Wellbore #1 - Design #1	11,600.00	7,454.93	2,170.95	1,917.81	8.576	SF
EXIST VERT POWELL 1 - Wellbore #1 - Design #1	11,614.88	7,454.93	2,170.90	1,917.81	8.578	CC, ES