

EXTRACTION OIL & GAS

Weld County

Sec 17-T2N-R68W

RINN VALLEY EAST N17-20-2N

ORIGINAL WELLBORE

Plan: PROPOSAL 1

Standard Planning Report

14 March, 2018



Project: Weld County
Site: Sec 17-T2N-R68W
Well: RINN VALLEY EAST N17-20-2N
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL 1

PROJECT DETAILS: Weld County

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone

System Datum: Mean Sea Level



Azimuths to True North
Magnetic North: 8.33°

Magnetic Field
Strength: 52226.9snT
Dip Angle: 66.60°
Date: 6/12/2017
Model: IGRF2015

WELL DETAILS: RINN VALLEY EAST N17-20-2N

+N/-S	+E/-W	Northing	Easting	4916.00	Latitude	Longitude	Slot
0.00	0.00	1292028.05	3133095.70		40° 8' 2.508 N	105° 1' 26.332 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	1089.06	17.78	125.81	1074.86	-90.08	110.98	2.00	125.81	-129.87	
4	6053.50	17.78	125.81	5802.14	-967.16	1340.42	0.00	0.00	-1568.58	
5	6942.56	0.00	0.00	6677.00	-1047.24	1451.40	2.00	180.00	-1698.45	
6	6972.56	0.00	0.00	6707.00	-1047.24	1451.40	0.00	0.00	-1698.45	
7	7872.63	90.00	0.03	7280.00	-474.24	1451.73	10.00	0.03	-1233.94	RVE N17-2N - LP
8	17489.99	90.00	0.03	7280.00	9143.13	1457.03	0.00	0.00	6562.61	RVE N17-2N - PBHL

FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
3477.00	3611.71	PARKMAN
4047.00	4210.31	SUSSEX
4452.00	4635.63	SHANNON
7242.00	7662.78	NIOBRARA
7270.00	7765.42	NIO B TARGET

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	Start Build 2.00
1089.06	17.78	125.81	1074.86	-90.08	110.98	136.85	136.85	Start 4964.43 hold at 1089.06 MD
6053.50	17.78	125.81	5802.14	-967.16	1340.42	-1568.58	1652.92	Start Drop -2.00
6942.56	0.00	0.00	6677.00	-1047.24	1451.40	-1698.45	1789.77	Start 30.00 hold at 6942.56 MD
6972.56	0.00	0.00	6707.00	-1047.24	1451.40	-1698.45	1789.77	Start DLS 10.00 TFO 0.03
7872.63	90.00	0.03	7280.00	-474.24	1451.73	-1233.94	2362.77	Start 9617.36 hold at 7872.63 MD
17489.99	90.00	0.03	7280.00	9143.13	1457.03	6562.61	11980.14	TD at 17489.99

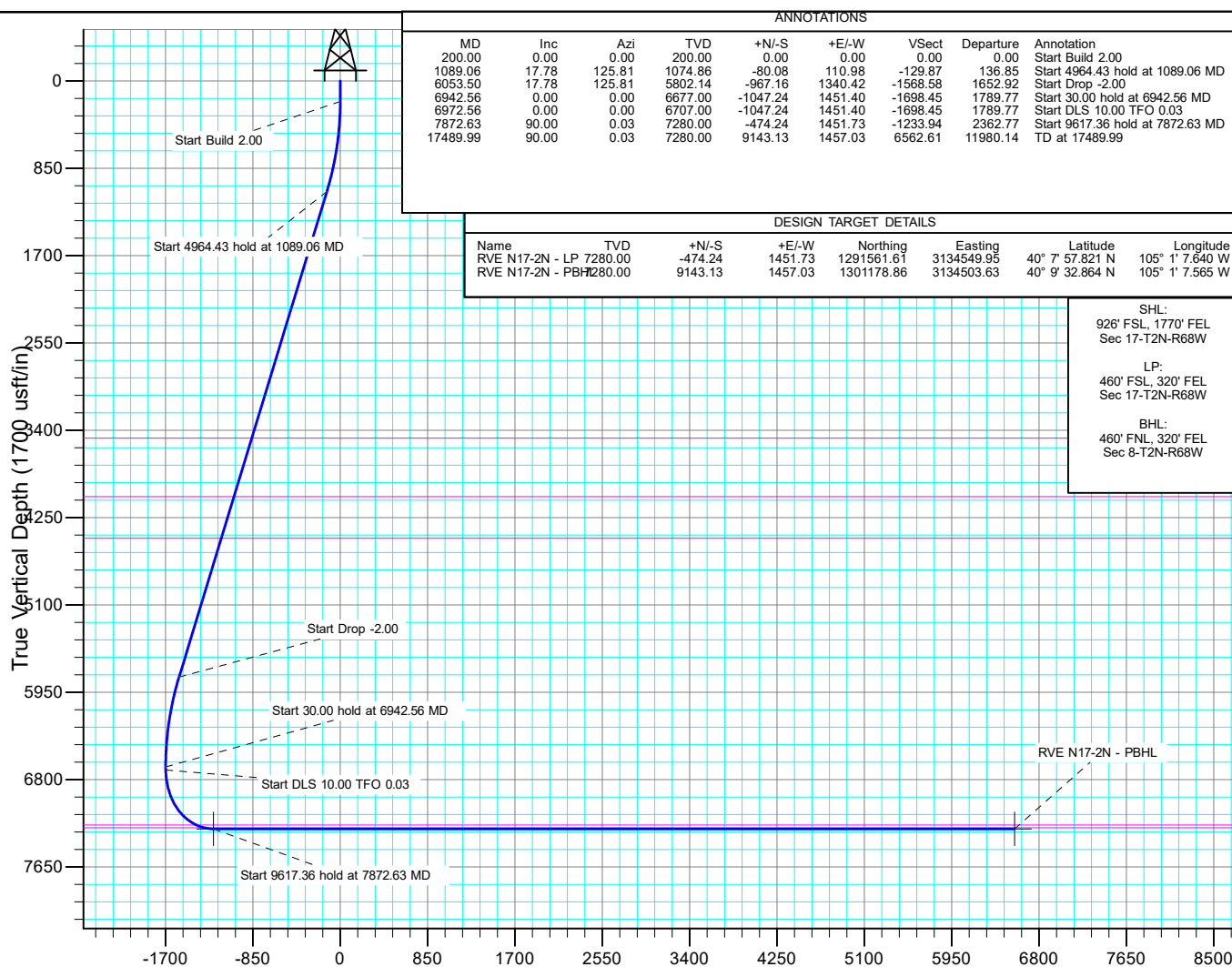
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
RVE N17-2N - LP	7280.00	-474.24	1451.73	1291561.61	3134549.95	40° 7' 57.821 N	105° 1' 7.640 W
RVE N17-2N - PBHL	7280.00	9143.13	1457.03	1301178.86	3134503.63	40° 9' 32.864 N	105° 1' 7.565 W

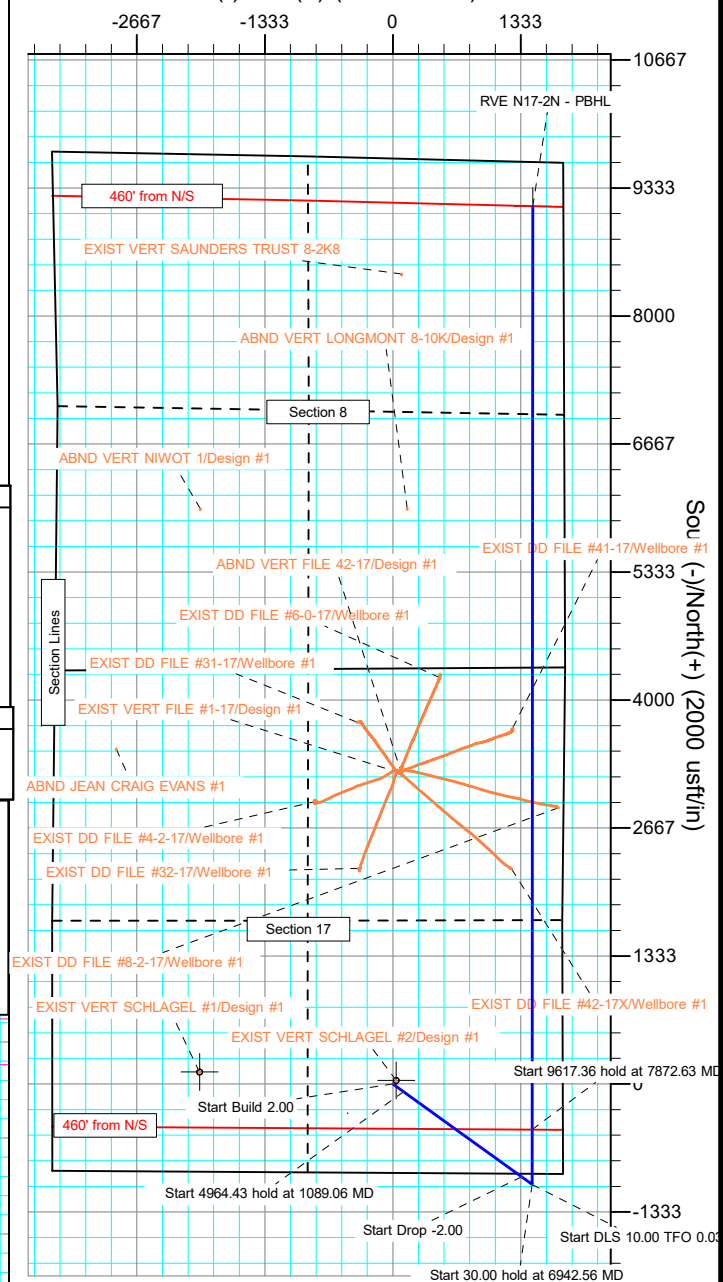
SHL:
926' FSL, 1770' FEL
Sec 17-T2N-R68W

LP:
460' FSL, 320' FEL
Sec 17-T2N-R68W

BHL:
460' FNL, 320' FEL
Sec 8-T2N-R68W



West(-)/East(+) (2000 usft/in)



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well RINN VALLEY EAST N17-20-2N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4941.00usft
Project:	Weld County	MD Reference:	KB 25' @ 4941.00usft
Site:	Sec 17-T2N-R68W	North Reference:	True
Well:	RINN VALLEY EAST N17-20-2N	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Project	Weld County		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Sec 17-T2N-R68W			
Site Position:		Northing:	1,291,101.45 usft	Latitude:	40° 7' 53.256 N
From:	Lat/Long	Easting:	3,134,873.45 usft	Longitude:	105° 1' 3.508 W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.31 °

Well	RINN VALLEY EAST N17-20-2N					
Well Position	+N/-S	936.25 usft	Northing:	1,292,028.05 usft	Latitude:	40° 8' 2.508 N
	+E/-W	-1,772.68 usft	Easting:	3,133,095.70 usft	Longitude:	105° 1' 26.332 W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	4,916.00 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/12/2017	8.33	66.60	52,226.90833878

Design	PROPOSAL 1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	324.19

Plan Survey Tool Program	Date	2/15/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,489.86	PROPOSAL 1 (ORIGINAL WELL	MWD OWSG
			OWSG MWD - Standard	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,089.06	17.78	125.81	1,074.86	-80.08	110.98	2.00	2.00	0.00	125.81	
6,053.50	17.78	125.81	5,802.14	-967.16	1,340.42	0.00	0.00	0.00	0.00	
6,942.56	0.00	0.00	6,677.00	-1,047.24	1,451.40	2.00	-2.00	0.00	180.00	
6,972.56	0.00	0.00	6,707.00	-1,047.24	1,451.40	0.00	0.00	0.00	0.00	
7,872.63	90.00	0.03	7,280.00	-474.24	1,451.73	10.00	10.00	0.00	0.03	RVE N17-2N - LP
17,489.99	90.00	0.03	7,280.00	9,143.13	1,457.03	0.00	0.00	0.00	0.00	RVE N17-2N - PBHL

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well RINN VALLEY EAST N17-20-2N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4941.00usft
Project:	Weld County	MD Reference:	KB 25' @ 4941.00usft
Site:	Sec 17-T2N-R68W	North Reference:	True
Well:	RINN VALLEY EAST N17-20-2N	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
300.00	2.00	125.81	299.98	-1.02	1.42	-1.66	2.00	2.00	0.00
400.00	4.00	125.81	399.84	-4.08	5.66	-6.62	2.00	2.00	0.00
500.00	6.00	125.81	499.45	-9.18	12.73	-14.89	2.00	2.00	0.00
600.00	8.00	125.81	598.70	-16.31	22.61	-26.46	2.00	2.00	0.00
700.00	10.00	125.81	697.47	-25.47	35.29	-41.30	2.00	2.00	0.00
800.00	12.00	125.81	795.62	-36.63	50.77	-59.41	2.00	2.00	0.00
900.00	14.00	125.81	893.06	-49.79	69.01	-80.75	2.00	2.00	0.00
1,000.00	16.00	125.81	989.64	-64.94	90.00	-105.31	2.00	2.00	0.00
1,089.06	17.78	125.81	1,074.86	-80.08	110.98	-129.87	2.00	2.00	0.00
Start 4964.43 hold at 1089.06 MD									
1,100.00	17.78	125.81	1,085.27	-82.03	113.69	-133.04	0.00	0.00	0.00
1,200.00	17.78	125.81	1,180.50	-99.90	138.45	-162.02	0.00	0.00	0.00
1,300.00	17.78	125.81	1,275.72	-117.77	163.22	-191.00	0.00	0.00	0.00
1,400.00	17.78	125.81	1,370.94	-135.64	187.98	-219.98	0.00	0.00	0.00
1,500.00	17.78	125.81	1,466.17	-153.51	212.75	-248.96	0.00	0.00	0.00
1,600.00	17.78	125.81	1,561.39	-171.37	237.51	-277.94	0.00	0.00	0.00
1,700.00	17.78	125.81	1,656.61	-189.24	262.28	-306.92	0.00	0.00	0.00
1,800.00	17.78	125.81	1,751.84	-207.11	287.04	-335.90	0.00	0.00	0.00
1,900.00	17.78	125.81	1,847.06	-224.98	311.81	-364.88	0.00	0.00	0.00
2,000.00	17.78	125.81	1,942.28	-242.85	336.57	-393.86	0.00	0.00	0.00
2,100.00	17.78	125.81	2,037.50	-260.72	361.34	-422.84	0.00	0.00	0.00
2,200.00	17.78	125.81	2,132.73	-278.59	386.10	-451.82	0.00	0.00	0.00
2,300.00	17.78	125.81	2,227.95	-296.46	410.87	-480.80	0.00	0.00	0.00
2,400.00	17.78	125.81	2,323.17	-314.33	435.63	-509.78	0.00	0.00	0.00
2,500.00	17.78	125.81	2,418.40	-332.19	460.40	-538.76	0.00	0.00	0.00
2,600.00	17.78	125.81	2,513.62	-350.06	485.16	-567.74	0.00	0.00	0.00
2,700.00	17.78	125.81	2,608.84	-367.93	509.93	-596.73	0.00	0.00	0.00
2,800.00	17.78	125.81	2,704.06	-385.80	534.69	-625.71	0.00	0.00	0.00
2,900.00	17.78	125.81	2,799.29	-403.67	559.46	-654.69	0.00	0.00	0.00
3,000.00	17.78	125.81	2,894.51	-421.54	584.22	-683.67	0.00	0.00	0.00
3,100.00	17.78	125.81	2,989.73	-439.41	608.99	-712.65	0.00	0.00	0.00
3,200.00	17.78	125.81	3,084.96	-457.28	633.75	-741.63	0.00	0.00	0.00
3,300.00	17.78	125.81	3,180.18	-475.15	658.52	-770.61	0.00	0.00	0.00
3,400.00	17.78	125.81	3,275.40	-493.01	683.28	-799.59	0.00	0.00	0.00
3,500.00	17.78	125.81	3,370.62	-510.88	708.05	-828.57	0.00	0.00	0.00
3,600.00	17.78	125.81	3,465.85	-528.75	732.81	-857.55	0.00	0.00	0.00
3,611.71	17.78	125.81	3,477.00	-530.84	735.71	-860.94	0.00	0.00	0.00
PARKMAN									
3,700.00	17.78	125.81	3,561.07	-546.62	757.58	-886.53	0.00	0.00	0.00
3,800.00	17.78	125.81	3,656.29	-564.49	782.34	-915.51	0.00	0.00	0.00
3,900.00	17.78	125.81	3,751.52	-582.36	807.11	-944.49	0.00	0.00	0.00
4,000.00	17.78	125.81	3,846.74	-600.23	831.87	-973.47	0.00	0.00	0.00
4,100.00	17.78	125.81	3,941.96	-618.10	856.64	-1,002.45	0.00	0.00	0.00
4,200.00	17.78	125.81	4,037.18	-635.96	881.40	-1,031.43	0.00	0.00	0.00
4,210.31	17.78	125.81	4,047.00	-637.81	883.95	-1,034.42	0.00	0.00	0.00
SUSSEX									
4,300.00	17.78	125.81	4,132.41	-653.83	906.17	-1,060.41	0.00	0.00	0.00
4,400.00	17.78	125.81	4,227.63	-671.70	930.93	-1,089.39	0.00	0.00	0.00
4,500.00	17.78	125.81	4,322.85	-689.57	955.70	-1,118.37	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well RINN VALLEY EAST N17-20-2N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4941.00usft
Project:	Weld County	MD Reference:	KB 25' @ 4941.00usft
Site:	Sec 17-T2N-R68W	North Reference:	True
Well:	RINN VALLEY EAST N17-20-2N	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,600.00	17.78	125.81	4,418.08	-707.44	980.46	-1,147.35	0.00	0.00	0.00
4,635.63	17.78	125.81	4,452.00	-713.81	989.28	-1,157.68	0.00	0.00	0.00
SHANNON									
4,700.00	17.78	125.81	4,513.30	-725.31	1,005.23	-1,176.33	0.00	0.00	0.00
4,800.00	17.78	125.81	4,608.52	-743.18	1,029.99	-1,205.31	0.00	0.00	0.00
4,900.00	17.78	125.81	4,703.75	-761.05	1,054.76	-1,234.29	0.00	0.00	0.00
5,000.00	17.78	125.81	4,798.97	-778.92	1,079.52	-1,263.27	0.00	0.00	0.00
5,100.00	17.78	125.81	4,894.19	-796.78	1,104.29	-1,292.25	0.00	0.00	0.00
5,200.00	17.78	125.81	4,989.41	-814.65	1,129.05	-1,321.23	0.00	0.00	0.00
5,300.00	17.78	125.81	5,084.64	-832.52	1,153.82	-1,350.21	0.00	0.00	0.00
5,400.00	17.78	125.81	5,179.86	-850.39	1,178.58	-1,379.19	0.00	0.00	0.00
5,500.00	17.78	125.81	5,275.08	-868.26	1,203.35	-1,408.17	0.00	0.00	0.00
5,600.00	17.78	125.81	5,370.31	-886.13	1,228.11	-1,437.15	0.00	0.00	0.00
5,700.00	17.78	125.81	5,465.53	-904.00	1,252.88	-1,466.13	0.00	0.00	0.00
5,800.00	17.78	125.81	5,560.75	-921.87	1,277.64	-1,495.12	0.00	0.00	0.00
5,900.00	17.78	125.81	5,655.97	-939.74	1,302.41	-1,524.10	0.00	0.00	0.00
6,000.00	17.78	125.81	5,751.20	-957.60	1,327.17	-1,553.08	0.00	0.00	0.00
6,053.50	17.78	125.81	5,802.14	-967.16	1,340.42	-1,568.58	0.00	0.00	0.00
Start Drop -2.00									
6,100.00	16.85	125.81	5,846.53	-975.26	1,351.64	-1,581.71	2.00	-2.00	0.00
6,200.00	14.85	125.81	5,942.73	-991.24	1,373.79	-1,607.63	2.00	-2.00	0.00
6,300.00	12.85	125.81	6,039.81	-1,005.25	1,393.21	-1,630.35	2.00	-2.00	0.00
6,400.00	10.85	125.81	6,137.68	-1,017.27	1,409.86	-1,649.84	2.00	-2.00	0.00
6,500.00	8.85	125.81	6,236.20	-1,027.28	1,423.73	-1,666.07	2.00	-2.00	0.00
6,600.00	6.85	125.81	6,335.25	-1,035.27	1,434.81	-1,679.04	2.00	-2.00	0.00
6,700.00	4.85	125.81	6,434.73	-1,041.24	1,443.08	-1,688.71	2.00	-2.00	0.00
6,800.00	2.85	125.81	6,534.50	-1,045.16	1,448.52	-1,695.08	2.00	-2.00	0.00
6,900.00	0.85	125.81	6,634.44	-1,047.06	1,451.14	-1,698.15	2.00	-2.00	0.00
6,942.56	0.00	0.00	6,677.00	-1,047.24	1,451.40	-1,698.45	2.00	-2.00	0.00
Start 30.00 hold at 6942.56 MD									
6,972.56	0.00	0.00	6,707.00	-1,047.24	1,451.40	-1,698.45	0.00	0.00	0.00
Start DLS 10.00 TFO 0.03									
7,000.00	2.74	0.03	6,734.43	-1,046.58	1,451.40	-1,697.92	10.00	10.00	0.00
7,050.00	7.74	0.03	6,784.20	-1,042.02	1,451.40	-1,694.21	10.00	10.00	0.00
7,100.00	12.74	0.03	6,833.39	-1,033.13	1,451.41	-1,687.01	10.00	10.00	0.00
7,150.00	17.74	0.03	6,881.62	-1,019.99	1,451.42	-1,676.36	10.00	10.00	0.00
7,200.00	22.74	0.03	6,928.51	-1,002.69	1,451.43	-1,662.34	10.00	10.00	0.00
7,250.00	27.74	0.03	6,973.72	-981.38	1,451.44	-1,645.06	10.00	10.00	0.00
7,300.00	32.74	0.03	7,016.91	-956.20	1,451.45	-1,624.65	10.00	10.00	0.00
7,350.00	37.74	0.03	7,057.73	-927.36	1,451.47	-1,601.27	10.00	10.00	0.00
7,400.00	42.74	0.03	7,095.88	-895.07	1,451.49	-1,575.09	10.00	10.00	0.00
7,450.00	47.74	0.03	7,131.08	-859.58	1,451.51	-1,546.32	10.00	10.00	0.00
7,500.00	52.74	0.03	7,163.05	-821.15	1,451.53	-1,515.17	10.00	10.00	0.00
7,550.00	57.74	0.03	7,191.55	-780.09	1,451.55	-1,481.88	10.00	10.00	0.00
7,600.00	62.74	0.03	7,216.36	-736.70	1,451.58	-1,446.70	10.00	10.00	0.00
7,650.00	67.74	0.03	7,237.29	-691.31	1,451.60	-1,409.91	10.00	10.00	0.00
7,662.78	69.02	0.03	7,242.00	-679.43	1,451.61	-1,400.28	10.00	10.00	0.00
NIOBRARA									
7,700.00	72.74	0.03	7,254.19	-644.27	1,451.63	-1,371.78	10.00	10.00	0.00
7,750.00	77.74	0.03	7,266.93	-595.93	1,451.66	-1,332.59	10.00	10.00	0.00
7,765.42	79.28	0.03	7,270.00	-580.82	1,451.67	-1,320.34	10.00	10.00	0.00
NIO B TARGET									
7,800.00	82.74	0.03	7,275.40	-546.67	1,451.69	-1,292.66	10.00	10.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well RINN VALLEY EAST N17-20-2N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4941.00usft
Project:	Weld County	MD Reference:	KB 25' @ 4941.00usft
Site:	Sec 17-T2N-R68W	North Reference:	True
Well:	RINN VALLEY EAST N17-20-2N	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,850.00	87.74	0.03	7,279.55	-496.86	1,451.71	-1,252.28	10.00	10.00	0.00
7,872.63	90.00	0.03	7,280.00	-474.24	1,451.73	-1,233.94	10.00	10.00	0.00
Start 9617.36 hold at 7872.63 MD									
7,900.00	90.00	0.03	7,280.00	-446.87	1,451.74	-1,211.75	0.00	0.00	0.00
8,000.00	90.00	0.03	7,280.00	-346.87	1,451.80	-1,130.68	0.00	0.00	0.00
8,100.00	90.00	0.03	7,280.00	-246.87	1,451.86	-1,049.62	0.00	0.00	0.00
8,200.00	90.00	0.03	7,280.00	-146.87	1,451.91	-968.55	0.00	0.00	0.00
8,300.00	90.00	0.03	7,280.00	-46.87	1,451.97	-887.48	0.00	0.00	0.00
8,400.00	90.00	0.03	7,280.00	53.13	1,452.03	-806.42	0.00	0.00	0.00
8,500.00	90.00	0.03	7,280.00	153.13	1,452.08	-725.35	0.00	0.00	0.00
8,600.00	90.00	0.03	7,280.00	253.13	1,452.14	-644.29	0.00	0.00	0.00
8,700.00	90.00	0.03	7,280.00	353.13	1,452.20	-563.22	0.00	0.00	0.00
8,800.00	90.00	0.03	7,280.00	453.13	1,452.25	-482.15	0.00	0.00	0.00
8,900.00	90.00	0.03	7,279.99	553.13	1,452.31	-401.09	0.00	0.00	0.00
9,000.00	90.00	0.03	7,279.99	653.13	1,452.37	-320.02	0.00	0.00	0.00
9,100.00	90.00	0.03	7,279.99	753.13	1,452.43	-238.95	0.00	0.00	0.00
9,200.00	90.00	0.03	7,279.99	853.13	1,452.48	-157.89	0.00	0.00	0.00
9,300.00	90.00	0.03	7,279.99	953.13	1,452.54	-76.82	0.00	0.00	0.00
9,400.00	90.00	0.03	7,279.99	1,053.13	1,452.60	4.25	0.00	0.00	0.00
9,500.00	90.00	0.03	7,279.99	1,153.13	1,452.65	85.31	0.00	0.00	0.00
9,600.00	90.00	0.03	7,279.99	1,253.13	1,452.71	166.38	0.00	0.00	0.00
9,700.00	90.00	0.03	7,279.99	1,353.13	1,452.77	247.44	0.00	0.00	0.00
9,800.00	90.00	0.03	7,279.99	1,453.13	1,452.82	328.51	0.00	0.00	0.00
9,900.00	90.00	0.03	7,279.99	1,553.13	1,452.88	409.58	0.00	0.00	0.00
10,000.00	90.00	0.03	7,279.99	1,653.13	1,452.94	490.64	0.00	0.00	0.00
10,100.00	90.00	0.03	7,279.99	1,753.13	1,453.00	571.71	0.00	0.00	0.00
10,200.00	90.00	0.03	7,279.99	1,853.13	1,453.05	652.78	0.00	0.00	0.00
10,300.00	90.00	0.03	7,279.99	1,953.13	1,453.11	733.84	0.00	0.00	0.00
10,400.00	90.00	0.03	7,279.99	2,053.13	1,453.17	814.91	0.00	0.00	0.00
10,500.00	90.00	0.03	7,279.99	2,153.13	1,453.22	895.98	0.00	0.00	0.00
10,600.00	90.00	0.03	7,279.99	2,253.13	1,453.28	977.04	0.00	0.00	0.00
10,700.00	90.00	0.03	7,279.98	2,353.13	1,453.34	1,058.11	0.00	0.00	0.00
10,800.00	90.00	0.03	7,279.98	2,453.13	1,453.39	1,139.17	0.00	0.00	0.00
10,900.00	90.00	0.03	7,279.98	2,553.13	1,453.45	1,220.24	0.00	0.00	0.00
11,000.00	90.00	0.03	7,279.98	2,653.13	1,453.51	1,301.31	0.00	0.00	0.00
11,100.00	90.00	0.03	7,279.98	2,753.13	1,453.57	1,382.37	0.00	0.00	0.00
11,200.00	90.00	0.03	7,279.98	2,853.13	1,453.62	1,463.44	0.00	0.00	0.00
11,300.00	90.00	0.03	7,279.98	2,953.13	1,453.68	1,544.51	0.00	0.00	0.00
11,400.00	90.00	0.03	7,279.98	3,053.13	1,453.74	1,625.57	0.00	0.00	0.00
11,500.00	90.00	0.03	7,279.98	3,153.13	1,453.79	1,706.64	0.00	0.00	0.00
11,600.00	90.00	0.03	7,279.98	3,253.13	1,453.85	1,787.71	0.00	0.00	0.00
11,700.00	90.00	0.03	7,279.98	3,353.13	1,453.91	1,868.77	0.00	0.00	0.00
11,800.00	90.00	0.03	7,279.98	3,453.13	1,453.96	1,949.84	0.00	0.00	0.00
11,900.00	90.00	0.03	7,279.98	3,553.13	1,454.02	2,030.90	0.00	0.00	0.00
12,000.00	90.00	0.03	7,279.98	3,653.13	1,454.08	2,111.97	0.00	0.00	0.00
12,100.00	90.00	0.03	7,279.98	3,753.13	1,454.14	2,193.04	0.00	0.00	0.00
12,200.00	90.00	0.03	7,279.98	3,853.13	1,454.19	2,274.10	0.00	0.00	0.00
12,300.00	90.00	0.03	7,279.98	3,953.13	1,454.25	2,355.17	0.00	0.00	0.00
12,400.00	90.00	0.03	7,279.98	4,053.13	1,454.31	2,436.24	0.00	0.00	0.00
12,500.00	90.00	0.03	7,279.98	4,153.13	1,454.36	2,517.30	0.00	0.00	0.00
12,600.00	90.00	0.03	7,279.97	4,253.13	1,454.42	2,598.37	0.00	0.00	0.00
12,700.00	90.00	0.03	7,279.97	4,353.13	1,454.48	2,679.44	0.00	0.00	0.00
12,800.00	90.00	0.03	7,279.97	4,453.13	1,454.53	2,760.50	0.00	0.00	0.00
12,900.00	90.00	0.03	7,279.97	4,553.13	1,454.59	2,841.57	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well RINN VALLEY EAST N17-20-2N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4941.00usft
Project:	Weld County	MD Reference:	KB 25' @ 4941.00usft
Site:	Sec 17-T2N-R68W	North Reference:	True
Well:	RINN VALLEY EAST N17-20-2N	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
13,000.00	90.00	0.03	7,279.97	4,653.13	1,454.65	2,922.63	0.00	0.00	0.00
13,100.00	90.00	0.03	7,279.97	4,753.13	1,454.71	3,003.70	0.00	0.00	0.00
13,200.00	90.00	0.03	7,279.97	4,853.13	1,454.76	3,084.77	0.00	0.00	0.00
13,300.00	90.00	0.03	7,279.97	4,953.13	1,454.82	3,165.83	0.00	0.00	0.00
13,400.00	90.00	0.03	7,279.97	5,053.13	1,454.88	3,246.90	0.00	0.00	0.00
13,500.00	90.00	0.03	7,279.97	5,153.13	1,454.93	3,327.97	0.00	0.00	0.00
13,600.00	90.00	0.03	7,279.97	5,253.13	1,454.99	3,409.03	0.00	0.00	0.00
13,700.00	90.00	0.03	7,279.97	5,353.13	1,455.05	3,490.10	0.00	0.00	0.00
13,800.00	90.00	0.03	7,279.97	5,453.13	1,455.10	3,571.17	0.00	0.00	0.00
13,900.00	90.00	0.03	7,279.97	5,553.13	1,455.16	3,652.23	0.00	0.00	0.00
14,000.00	90.00	0.03	7,279.97	5,653.13	1,455.22	3,733.30	0.00	0.00	0.00
14,100.00	90.00	0.03	7,279.97	5,753.13	1,455.28	3,814.36	0.00	0.00	0.00
14,200.00	90.00	0.03	7,279.97	5,853.13	1,455.33	3,895.43	0.00	0.00	0.00
14,300.00	90.00	0.03	7,279.97	5,953.13	1,455.39	3,976.50	0.00	0.00	0.00
14,400.00	90.00	0.03	7,279.96	6,053.13	1,455.45	4,057.56	0.00	0.00	0.00
14,500.00	90.00	0.03	7,279.96	6,153.13	1,455.50	4,138.63	0.00	0.00	0.00
14,600.00	90.00	0.03	7,279.96	6,253.13	1,455.56	4,219.70	0.00	0.00	0.00
14,700.00	90.00	0.03	7,279.96	6,353.13	1,455.62	4,300.76	0.00	0.00	0.00
14,800.00	90.00	0.03	7,279.96	6,453.13	1,455.67	4,381.83	0.00	0.00	0.00
14,900.00	90.00	0.03	7,279.96	6,553.13	1,455.73	4,462.90	0.00	0.00	0.00
15,000.00	90.00	0.03	7,279.96	6,653.13	1,455.79	4,543.96	0.00	0.00	0.00
15,100.00	90.00	0.03	7,279.96	6,753.13	1,455.84	4,625.03	0.00	0.00	0.00
15,200.00	90.00	0.03	7,279.96	6,853.13	1,455.90	4,706.09	0.00	0.00	0.00
15,300.00	90.00	0.03	7,279.96	6,953.13	1,455.96	4,787.16	0.00	0.00	0.00
15,400.00	90.00	0.03	7,279.96	7,053.13	1,456.02	4,868.23	0.00	0.00	0.00
15,500.00	90.00	0.03	7,279.96	7,153.13	1,456.07	4,949.29	0.00	0.00	0.00
15,600.00	90.00	0.03	7,279.96	7,253.13	1,456.13	5,030.36	0.00	0.00	0.00
15,700.00	90.00	0.03	7,279.96	7,353.13	1,456.19	5,111.43	0.00	0.00	0.00
15,800.00	90.00	0.03	7,279.96	7,453.13	1,456.24	5,192.49	0.00	0.00	0.00
15,900.00	90.00	0.03	7,279.96	7,553.13	1,456.30	5,273.56	0.00	0.00	0.00
16,000.00	90.00	0.03	7,279.96	7,653.13	1,456.36	5,354.63	0.00	0.00	0.00
16,100.00	90.00	0.03	7,279.96	7,753.13	1,456.41	5,435.69	0.00	0.00	0.00
16,200.00	90.00	0.03	7,279.95	7,853.13	1,456.47	5,516.76	0.00	0.00	0.00
16,300.00	90.00	0.03	7,279.95	7,953.13	1,456.53	5,597.82	0.00	0.00	0.00
16,400.00	90.00	0.03	7,279.95	8,053.13	1,456.59	5,678.89	0.00	0.00	0.00
16,500.00	90.00	0.03	7,279.95	8,153.13	1,456.64	5,759.96	0.00	0.00	0.00
16,600.00	90.00	0.03	7,279.95	8,253.13	1,456.70	5,841.02	0.00	0.00	0.00
16,700.00	90.00	0.03	7,279.95	8,353.13	1,456.76	5,922.09	0.00	0.00	0.00
16,800.00	90.00	0.03	7,279.95	8,453.13	1,456.81	6,003.16	0.00	0.00	0.00
16,900.00	90.00	0.03	7,279.95	8,553.13	1,456.87	6,084.22	0.00	0.00	0.00
17,000.00	90.00	0.03	7,279.95	8,653.13	1,456.93	6,165.29	0.00	0.00	0.00
17,100.00	90.00	0.03	7,279.95	8,753.13	1,456.98	6,246.36	0.00	0.00	0.00
17,200.00	90.00	0.03	7,279.95	8,853.13	1,457.04	6,327.42	0.00	0.00	0.00
17,300.00	90.00	0.03	7,279.95	8,953.13	1,457.10	6,408.49	0.00	0.00	0.00
17,400.00	90.00	0.03	7,279.95	9,053.13	1,457.16	6,489.55	0.00	0.00	0.00
17,489.99	90.00	0.03	7,280.00	9,143.13	1,457.03	6,562.61	0.00	0.00	0.00
TD at 17489.99									

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well RINN VALLEY EAST N17-20-2N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4941.00usft
Project:	Weld County	MD Reference:	KB 25' @ 4941.00usft
Site:	Sec 17-T2N-R68W	North Reference:	True
Well:	RINN VALLEY EAST N17-20-2N	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
RVE N17-2N - PBHL	0.00	0.00	7,280.00	9,143.13	1,457.03	1,301,178.86	3,134,503.63	40° 9' 32.864 N	105° 1' 7.565 W
- plan hits target center									
- Point									
RVE N17-2N - LP	0.00	0.00	7,280.00	-474.24	1,451.73	1,291,561.61	3,134,549.95	40° 7' 57.821 N	105° 1' 7.640 W
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
3,611.71	3,477.00	PARKMAN				
4,210.31	4,047.00	SUSSEX				
4,635.63	4,452.00	SHANNON				
7,662.78	7,242.00	NIOBRARA				
7,765.42	7,270.00	NIO B TARGET				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)		
200.00	200.00	0.00	0.00	Start Build 2.00	
1,089.06	1,074.86	-80.08	110.98	Start 4964.43 hold at 1089.06 MD	
6,053.50	5,802.14	-967.16	1,340.42	Start Drop -2.00	
6,942.56	6,677.00	-1,047.24	1,451.40	Start 30.00 hold at 6942.56 MD	
6,972.56	6,707.00	-1,047.24	1,451.40	Start DLS 10.00 TFO 0.03	
7,872.63	7,280.00	-474.24	1,451.73	Start 9617.36 hold at 7872.63 MD	
17,489.99	7,280.00	9,143.13	1,457.03	TD at 17489.99	