

EXTRACTION OIL & GAS

Weld County

Sec 17-T2N-R68W

RINN VALLEY EAST N17-20-4C

ORIGINAL WELLBORE

Plan: PROPOSAL 1

Standard Planning Report

14 March, 2018



Project: Weld County
Site: Sec 17-T2N-R68W
Well: RINN VALLEY EAST N17-20-4C
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: 52226.8snT
Dip Angle: 66.60°
Date: 6/12/2017
Model: IGRF2015

WELL DETAILS: RINN VALLEY EAST N17-20-4C

+N/-S	+E/-W	Northing	Easting	4918.00	Latitude	Longitude	Slot
0.00	0.00	1291971.94	3133094.60		40° 8' 1.953 N	105° 1' 26.350 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	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
3	1010.10	12.20	140.54	1005.50	-49.97	41.13	2.00	140.54	-64.38	
4	6448.98	12.20	140.54	6321.50	-937.56	771.65	0.00	0.00	-1207.85	
5	7059.07	0.00	0.00	6927.00	-987.53	812.78	2.00	180.00	-1272.23	
6	7089.07	0.00	0.00	6957.00	-987.53	812.78	0.00	0.00	-1272.23	
7	7989.15	90.00	0.03	7530.00	-414.52	813.10	10.00	0.03	-794.91	RVE N17-4C - LP
8	17618.90	90.00	0.03	7530.00	9215.22	818.38	0.00	0.00	7226.80	RVE N17-4C - PBHL

FORMATION TOP DETAILS

TVDPth	MDPath	Formation
3477.00	3538.73	PARKMAN
4047.00	4121.90	SUSSEX
4452.00	4536.26	SHANNON
7242.00	7387.37	NIORARA
7270.00	7420.20	NIO B TARGET
7510.00	7837.30	FORT HAYS
7530.00	7989.15	CODELL

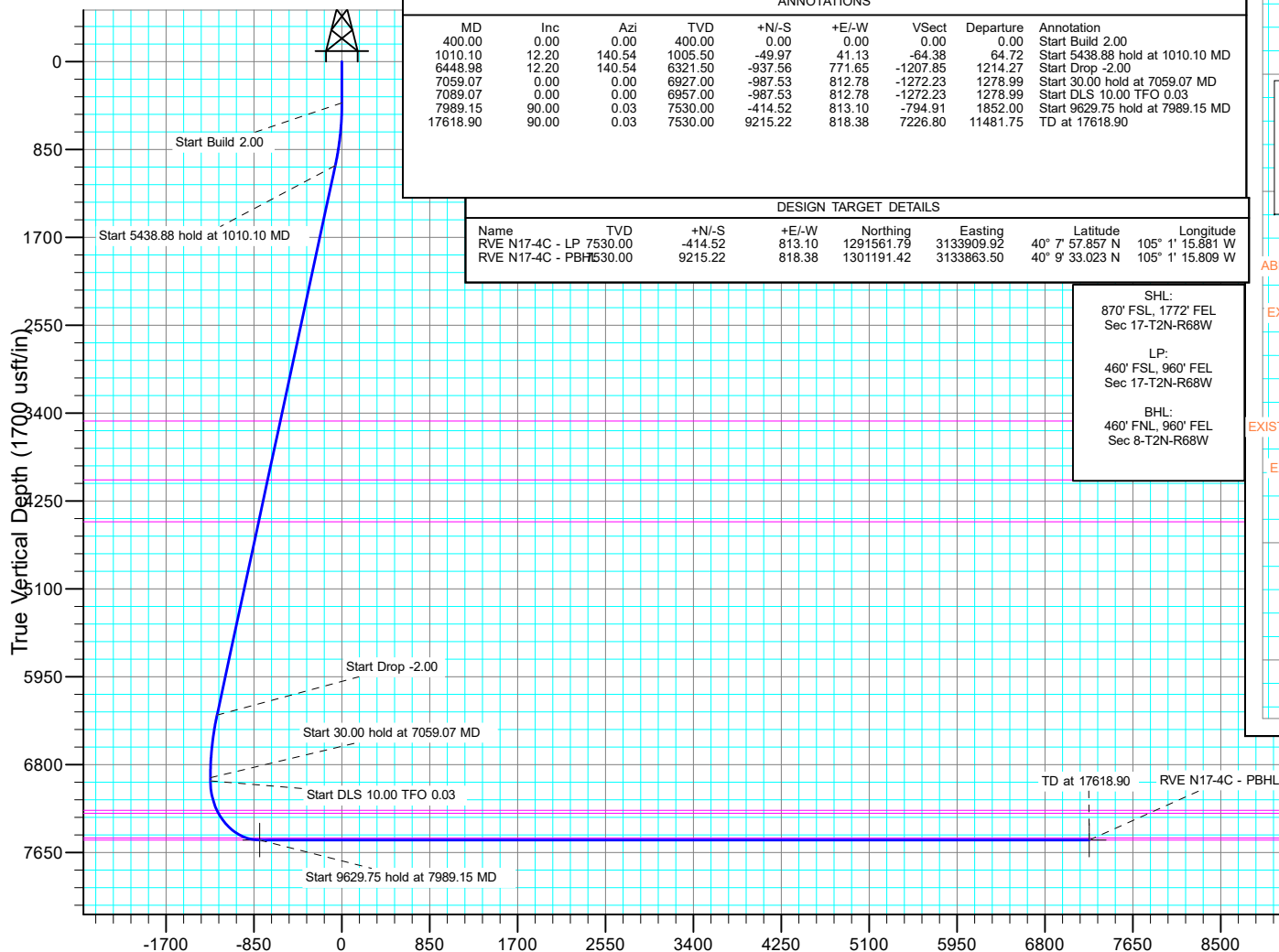
ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	Start Build 2.00
1010.10	12.20	140.54	1005.50	-49.97	41.13	-64.38	64.72	Start 5438.88 hold at 1010.10 MD
6448.98	12.20	140.54	6321.50	-937.56	771.65	-1207.85	1214.27	Start Drop -2.00
7059.07	0.00	0.00	6927.00	-987.53	812.78	-1272.23	1278.99	Start 30.00 hold at 7059.07 MD
7089.07	0.00	0.00	6957.00	-987.53	812.78	-1272.23	1278.99	Start DLS 10.00 TFO 0.03
7989.15	90.00	0.03	7530.00	-414.52	813.10	-794.91	1852.00	Start 9629.75 hold at 7989.15 MD
17618.90	90.00	0.03	7530.00	9215.22	818.38	7226.80	11481.75	TD at 17618.90

DESIGN TARGET DETAILS

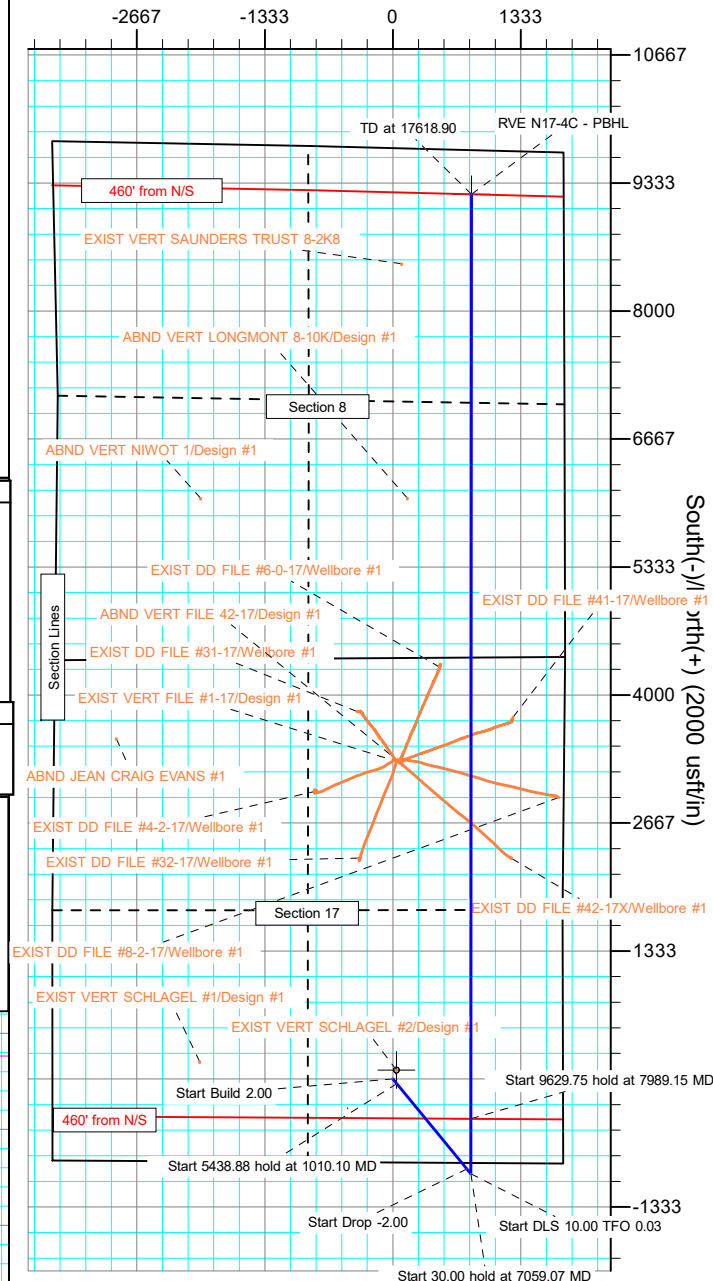
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
RVE N17-4C - LP	7530.00	-414.52	813.10	1291561.79	3133909.92	40° 7' 57.857 N	105° 1' 15.881 W
RVE N17-4C - PBHL	7530.00	9215.22	818.38	1301191.42	3133863.50	40° 9' 33.023 N	105° 1' 15.809 W

SHL:
870' FSL, 1772' FEL
Sec 17-T2N-R68W
LP:
460' FSL, 960' FEL
Sec 17-T2N-R68W
BHL:
460' FNL, 960' FEL
Sec 8-T2N-R68W



Vertical Section at 326.44° (1700 usft/in)

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



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well RINN VALLEY EAST N17-20-4C
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4943.00usft
Project:	Weld County	MD Reference:	KB 25' @ 4943.00usft
Site:	Sec 17-T2N-R68W	North Reference:	True
Well:	RINN VALLEY EAST N17-20-4C	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 N17-20-4C					
Well Position	+N/-S	880.15 usft	Northing:	1,291,971.94 usft	Latitude:	40° 8' 1.953 N
	+E/-W	-1,774.09 usft	Easting:	3,133,094.60 usft	Longitude:	105° 1' 26.350 W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	4,918.00 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/12/2017	8.33	66.60	52,226.81113697

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	326.44

Plan Survey Tool Program			Date	2/15/2018	
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	17,618.83	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	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,010.10	12.20	140.54	1,005.50	-49.97	41.13	2.00	2.00	0.00	140.54	
6,448.98	12.20	140.54	6,321.50	-937.56	771.65	0.00	0.00	0.00	0.00	
7,059.08	0.00	0.00	6,927.00	-987.53	812.78	2.00	-2.00	0.00	180.00	
7,089.08	0.00	0.00	6,957.00	-987.53	812.78	0.00	0.00	0.00	0.00	
7,989.15	90.00	0.03	7,530.00	-414.52	813.10	10.00	10.00	0.00	0.03	RVE N17-4C - LP
17,618.90	90.00	0.03	7,530.00	9,215.22	818.38	0.00	0.00	0.00	0.00	RVE N17-4C - PBHL

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Project:	Weld County	MD Reference:	KB 25' @ 4943.00usft
Site:	Sec 17-T2N-R68W	North Reference:	True
Well:	RINN VALLEY EAST N17-20-4C	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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
500.00	2.00	140.54	499.98	-1.35	1.11	-1.74	2.00	2.00	0.00
600.00	4.00	140.54	599.84	-5.39	4.43	-6.94	2.00	2.00	0.00
700.00	6.00	140.54	699.45	-12.12	9.97	-15.61	2.00	2.00	0.00
800.00	8.00	140.54	798.70	-21.53	17.72	-27.73	2.00	2.00	0.00
900.00	10.00	140.54	897.47	-33.60	27.66	-43.29	2.00	2.00	0.00
1,000.00	12.00	140.54	995.62	-48.34	39.78	-62.27	2.00	2.00	0.00
1,010.10	12.20	140.54	1,005.50	-49.97	41.13	-64.38	2.00	2.00	0.00
Start 5438.88 hold at 1010.10 MD									
1,100.00	12.20	140.54	1,093.37	-64.64	53.20	-83.28	0.00	0.00	0.00
1,200.00	12.20	140.54	1,191.11	-80.96	66.63	-104.30	0.00	0.00	0.00
1,300.00	12.20	140.54	1,288.85	-97.28	80.07	-125.33	0.00	0.00	0.00
1,400.00	12.20	140.54	1,386.59	-113.60	93.50	-146.35	0.00	0.00	0.00
1,500.00	12.20	140.54	1,484.33	-129.92	106.93	-167.37	0.00	0.00	0.00
1,600.00	12.20	140.54	1,582.07	-146.24	120.36	-188.40	0.00	0.00	0.00
1,700.00	12.20	140.54	1,679.81	-162.56	133.79	-209.42	0.00	0.00	0.00
1,800.00	12.20	140.54	1,777.55	-178.88	147.22	-230.45	0.00	0.00	0.00
1,900.00	12.20	140.54	1,875.29	-195.20	160.66	-251.47	0.00	0.00	0.00
2,000.00	12.20	140.54	1,973.04	-211.52	174.09	-272.49	0.00	0.00	0.00
2,100.00	12.20	140.54	2,070.78	-227.84	187.52	-293.52	0.00	0.00	0.00
2,200.00	12.20	140.54	2,168.52	-244.15	200.95	-314.54	0.00	0.00	0.00
2,300.00	12.20	140.54	2,266.26	-260.47	214.38	-335.57	0.00	0.00	0.00
2,400.00	12.20	140.54	2,364.00	-276.79	227.81	-356.59	0.00	0.00	0.00
2,500.00	12.20	140.54	2,461.74	-293.11	241.24	-377.61	0.00	0.00	0.00
2,600.00	12.20	140.54	2,559.48	-309.43	254.68	-398.64	0.00	0.00	0.00
2,700.00	12.20	140.54	2,657.22	-325.75	268.11	-419.66	0.00	0.00	0.00
2,800.00	12.20	140.54	2,754.96	-342.07	281.54	-440.69	0.00	0.00	0.00
2,900.00	12.20	140.54	2,852.70	-358.39	294.97	-461.71	0.00	0.00	0.00
3,000.00	12.20	140.54	2,950.44	-374.71	308.40	-482.74	0.00	0.00	0.00
3,100.00	12.20	140.54	3,048.18	-391.03	321.83	-503.76	0.00	0.00	0.00
3,200.00	12.20	140.54	3,145.93	-407.35	335.27	-524.78	0.00	0.00	0.00
3,300.00	12.20	140.54	3,243.67	-423.67	348.70	-545.81	0.00	0.00	0.00
3,400.00	12.20	140.54	3,341.41	-439.99	362.13	-566.83	0.00	0.00	0.00
3,500.00	12.20	140.54	3,439.15	-456.31	375.56	-587.86	0.00	0.00	0.00
3,538.73	12.20	140.54	3,477.00	-462.63	380.76	-596.00	0.00	0.00	0.00
PARKMAN									
3,600.00	12.20	140.54	3,536.89	-472.63	388.99	-608.88	0.00	0.00	0.00
3,700.00	12.20	140.54	3,634.63	-488.94	402.42	-629.90	0.00	0.00	0.00
3,800.00	12.20	140.54	3,732.37	-505.26	415.85	-650.93	0.00	0.00	0.00
3,900.00	12.20	140.54	3,830.11	-521.58	429.29	-671.95	0.00	0.00	0.00
4,000.00	12.20	140.54	3,927.85	-537.90	442.72	-692.98	0.00	0.00	0.00
4,100.00	12.20	140.54	4,025.59	-554.22	456.15	-714.00	0.00	0.00	0.00
4,121.90	12.20	140.54	4,047.00	-557.80	459.09	-718.60	0.00	0.00	0.00
SUSSEX									
4,200.00	12.20	140.54	4,123.33	-570.54	469.58	-735.02	0.00	0.00	0.00
4,300.00	12.20	140.54	4,221.08	-586.86	483.01	-756.05	0.00	0.00	0.00
4,400.00	12.20	140.54	4,318.82	-603.18	496.44	-777.07	0.00	0.00	0.00
4,500.00	12.20	140.54	4,416.56	-619.50	509.87	-798.10	0.00	0.00	0.00

Planning Report

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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4943.00usft
Project:	Weld County	MD Reference:	KB 25' @ 4943.00usft
Site:	Sec 17-T2N-R68W	North Reference:	True
Well:	RINN VALLEY EAST N17-20-4C	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)
4,536.26	12.20	140.54	4,452.00	-625.42	514.75	-805.72	0.00	0.00	0.00
SHANNON									
4,600.00	12.20	140.54	4,514.30	-635.82	523.31	-819.12	0.00	0.00	0.00
4,700.00	12.20	140.54	4,612.04	-652.14	536.74	-840.14	0.00	0.00	0.00
4,800.00	12.20	140.54	4,709.78	-668.46	550.17	-861.17	0.00	0.00	0.00
4,900.00	12.20	140.54	4,807.52	-684.78	563.60	-882.19	0.00	0.00	0.00
5,000.00	12.20	140.54	4,905.26	-701.10	577.03	-903.22	0.00	0.00	0.00
5,100.00	12.20	140.54	5,003.00	-717.42	590.46	-924.24	0.00	0.00	0.00
5,200.00	12.20	140.54	5,100.74	-733.73	603.90	-945.26	0.00	0.00	0.00
5,300.00	12.20	140.54	5,198.48	-750.05	617.33	-966.29	0.00	0.00	0.00
5,400.00	12.20	140.54	5,296.22	-766.37	630.76	-987.31	0.00	0.00	0.00
5,500.00	12.20	140.54	5,393.97	-782.69	644.19	-1,008.34	0.00	0.00	0.00
5,600.00	12.20	140.54	5,491.71	-799.01	657.62	-1,029.36	0.00	0.00	0.00
5,700.00	12.20	140.54	5,589.45	-815.33	671.05	-1,050.38	0.00	0.00	0.00
5,800.00	12.20	140.54	5,687.19	-831.65	684.48	-1,071.41	0.00	0.00	0.00
5,900.00	12.20	140.54	5,784.93	-847.97	697.92	-1,092.43	0.00	0.00	0.00
6,000.00	12.20	140.54	5,882.67	-864.29	711.35	-1,113.46	0.00	0.00	0.00
6,100.00	12.20	140.54	5,980.41	-880.61	724.78	-1,134.48	0.00	0.00	0.00
6,200.00	12.20	140.54	6,078.15	-896.93	738.21	-1,155.50	0.00	0.00	0.00
6,300.00	12.20	140.54	6,175.89	-913.25	751.64	-1,176.53	0.00	0.00	0.00
6,400.00	12.20	140.54	6,273.63	-929.57	765.07	-1,197.55	0.00	0.00	0.00
6,448.98	12.20	140.54	6,321.50	-937.56	771.65	-1,207.85	0.00	0.00	0.00
Start Drop -2.00									
6,500.00	11.18	140.54	6,371.47	-945.54	778.22	-1,218.13	2.00	-2.00	0.00
6,600.00	9.18	140.54	6,469.89	-959.19	789.46	-1,235.72	2.00	-2.00	0.00
6,700.00	7.18	140.54	6,568.86	-970.18	798.50	-1,249.87	2.00	-2.00	0.00
6,800.00	5.18	140.54	6,668.28	-978.49	805.34	-1,260.58	2.00	-2.00	0.00
6,900.00	3.18	140.54	6,768.01	-984.12	809.97	-1,267.83	2.00	-2.00	0.00
7,000.00	1.18	140.54	6,867.93	-987.06	812.39	-1,271.62	2.00	-2.00	0.00
7,059.08	0.00	0.00	6,927.00	-987.53	812.78	-1,272.23	2.00	-2.00	0.00
Start 30.00 hold at 7059.07 MD									
7,089.08	0.00	0.00	6,957.00	-987.53	812.78	-1,272.23	0.00	0.00	0.00
Start DLS 10.00 TFO 0.03									
7,100.00	1.09	0.03	6,967.92	-987.43	812.78	-1,272.14	10.00	10.00	0.00
7,150.00	6.09	0.03	7,017.81	-984.29	812.78	-1,269.53	10.00	10.00	0.00
7,200.00	11.09	0.03	7,067.23	-976.83	812.79	-1,263.31	10.00	10.00	0.00
7,250.00	16.09	0.03	7,115.82	-965.08	812.79	-1,253.53	10.00	10.00	0.00
7,300.00	21.09	0.03	7,163.19	-949.14	812.80	-1,240.25	10.00	10.00	0.00
7,350.00	26.09	0.03	7,209.00	-929.14	812.81	-1,223.59	10.00	10.00	0.00
7,387.37	29.83	0.03	7,242.00	-911.63	812.82	-1,209.00	10.00	10.00	0.00
NIOBRARA									
7,400.00	31.09	0.03	7,252.89	-905.22	812.83	-1,203.66	10.00	10.00	0.00
7,420.20	33.11	0.03	7,270.00	-894.49	812.83	-1,194.72	10.00	10.00	0.00
NIO B TARGET									
7,450.00	36.09	0.03	7,294.53	-877.57	812.84	-1,180.63	10.00	10.00	0.00
7,500.00	41.09	0.03	7,333.60	-846.39	812.86	-1,154.66	10.00	10.00	0.00
7,550.00	46.09	0.03	7,369.80	-811.93	812.88	-1,125.95	10.00	10.00	0.00
7,600.00	51.09	0.03	7,402.86	-774.44	812.90	-1,094.72	10.00	10.00	0.00
7,650.00	56.09	0.03	7,432.53	-734.21	812.92	-1,061.21	10.00	10.00	0.00
7,700.00	61.09	0.03	7,458.58	-691.56	812.95	-1,025.68	10.00	10.00	0.00
7,750.00	66.09	0.03	7,480.82	-646.79	812.97	-988.39	10.00	10.00	0.00
7,800.00	71.09	0.03	7,499.07	-600.26	813.00	-949.62	10.00	10.00	0.00
7,837.30	74.82	0.03	7,510.00	-564.60	813.02	-919.92	10.00	10.00	0.00

Planning Report

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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4943.00usft
Project:	Weld County	MD Reference:	KB 25' @ 4943.00usft
Site:	Sec 17-T2N-R68W	North Reference:	True
Well:	RINN VALLEY EAST N17-20-4C	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)
FORT HAYS									
7,850.00	76.09	0.03	7,513.19	-552.31	813.02	-909.68	10.00	10.00	0.00
7,900.00	81.09	0.03	7,523.08	-503.31	813.05	-868.87	10.00	10.00	0.00
7,950.00	86.09	0.03	7,528.66	-453.64	813.08	-827.49	10.00	10.00	0.00
7,989.15	90.00	0.03	7,530.00	-414.52	813.10	-794.91	10.00	10.00	0.00
Start 9629.75 hold at 7989.15 MD - CODELL									
8,000.00	90.00	0.03	7,530.00	-403.67	813.11	-785.87	0.00	0.00	0.00
8,100.00	90.00	0.03	7,530.00	-303.67	813.16	-702.57	0.00	0.00	0.00
8,200.00	90.00	0.03	7,530.00	-203.67	813.22	-619.27	0.00	0.00	0.00
8,300.00	90.00	0.03	7,530.00	-103.67	813.28	-535.97	0.00	0.00	0.00
8,400.00	90.00	0.03	7,530.00	-3.67	813.33	-452.67	0.00	0.00	0.00
8,500.00	90.00	0.03	7,530.00	96.33	813.39	-369.36	0.00	0.00	0.00
8,600.00	90.00	0.03	7,529.99	196.33	813.44	-286.06	0.00	0.00	0.00
8,700.00	90.00	0.03	7,529.99	296.33	813.50	-202.76	0.00	0.00	0.00
8,800.00	90.00	0.03	7,529.99	396.33	813.56	-119.46	0.00	0.00	0.00
8,900.00	90.00	0.03	7,529.99	496.33	813.61	-36.16	0.00	0.00	0.00
9,000.00	90.00	0.03	7,529.99	596.33	813.67	47.14	0.00	0.00	0.00
9,100.00	90.00	0.03	7,529.99	696.33	813.72	130.44	0.00	0.00	0.00
9,200.00	90.00	0.03	7,529.99	796.33	813.78	213.74	0.00	0.00	0.00
9,300.00	90.00	0.03	7,529.99	896.33	813.84	297.04	0.00	0.00	0.00
9,400.00	90.00	0.03	7,529.99	996.33	813.89	380.34	0.00	0.00	0.00
9,500.00	90.00	0.03	7,529.98	1,096.33	813.95	463.64	0.00	0.00	0.00
9,600.00	90.00	0.03	7,529.98	1,196.33	814.00	546.94	0.00	0.00	0.00
9,700.00	90.00	0.03	7,529.98	1,296.33	814.06	630.24	0.00	0.00	0.00
9,800.00	90.00	0.03	7,529.98	1,396.33	814.12	713.54	0.00	0.00	0.00
9,900.00	90.00	0.03	7,529.98	1,496.33	814.17	796.84	0.00	0.00	0.00
10,000.00	90.00	0.03	7,529.98	1,596.33	814.23	880.15	0.00	0.00	0.00
10,100.00	90.00	0.03	7,529.98	1,696.33	814.28	963.45	0.00	0.00	0.00
10,200.00	90.00	0.03	7,529.98	1,796.33	814.34	1,046.75	0.00	0.00	0.00
10,300.00	90.00	0.03	7,529.98	1,896.33	814.40	1,130.05	0.00	0.00	0.00
10,400.00	90.00	0.03	7,529.98	1,996.33	814.45	1,213.35	0.00	0.00	0.00
10,500.00	90.00	0.03	7,529.97	2,096.33	814.51	1,296.65	0.00	0.00	0.00
10,600.00	90.00	0.03	7,529.97	2,196.33	814.56	1,379.95	0.00	0.00	0.00
10,700.00	90.00	0.03	7,529.97	2,296.33	814.62	1,463.25	0.00	0.00	0.00
10,800.00	90.00	0.03	7,529.97	2,396.33	814.68	1,546.55	0.00	0.00	0.00
10,900.00	90.00	0.03	7,529.97	2,496.33	814.73	1,629.85	0.00	0.00	0.00
11,000.00	90.00	0.03	7,529.97	2,596.33	814.79	1,713.15	0.00	0.00	0.00
11,100.00	90.00	0.03	7,529.97	2,696.33	814.84	1,796.45	0.00	0.00	0.00
11,200.00	90.00	0.03	7,529.97	2,796.33	814.90	1,879.75	0.00	0.00	0.00
11,300.00	90.00	0.03	7,529.97	2,896.33	814.96	1,963.05	0.00	0.00	0.00
11,400.00	90.00	0.03	7,529.97	2,996.33	815.01	2,046.36	0.00	0.00	0.00
11,500.00	90.00	0.03	7,529.96	3,096.33	815.07	2,129.66	0.00	0.00	0.00
11,600.00	90.00	0.03	7,529.96	3,196.33	815.12	2,212.96	0.00	0.00	0.00
11,700.00	90.00	0.03	7,529.96	3,296.33	815.18	2,296.26	0.00	0.00	0.00
11,800.00	90.00	0.03	7,529.96	3,396.33	815.24	2,379.56	0.00	0.00	0.00
11,900.00	90.00	0.03	7,529.96	3,496.33	815.29	2,462.86	0.00	0.00	0.00
12,000.00	90.00	0.03	7,529.96	3,596.33	815.35	2,546.16	0.00	0.00	0.00
12,100.00	90.00	0.03	7,529.96	3,696.33	815.40	2,629.46	0.00	0.00	0.00
12,200.00	90.00	0.03	7,529.96	3,796.33	815.46	2,712.76	0.00	0.00	0.00
12,300.00	90.00	0.03	7,529.96	3,896.33	815.52	2,796.06	0.00	0.00	0.00
12,400.00	90.00	0.03	7,529.96	3,996.33	815.57	2,879.36	0.00	0.00	0.00
12,500.00	90.00	0.03	7,529.95	4,096.33	815.63	2,962.66	0.00	0.00	0.00
12,600.00	90.00	0.03	7,529.95	4,196.33	815.68	3,045.96	0.00	0.00	0.00
12,700.00	90.00	0.03	7,529.95	4,296.33	815.74	3,129.26	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well RINN VALLEY EAST N17-20-4C
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4943.00usft
Project:	Weld County	MD Reference:	KB 25' @ 4943.00usft
Site:	Sec 17-T2N-R68W	North Reference:	True
Well:	RINN VALLEY EAST N17-20-4C	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)
12,800.00	90.00	0.03	7,529.95	4,396.33	815.80	3,212.56	0.00	0.00	0.00
12,900.00	90.00	0.03	7,529.95	4,496.33	815.85	3,295.87	0.00	0.00	0.00
13,000.00	90.00	0.03	7,529.95	4,596.33	815.91	3,379.17	0.00	0.00	0.00
13,100.00	90.00	0.03	7,529.95	4,696.33	815.96	3,462.47	0.00	0.00	0.00
13,200.00	90.00	0.03	7,529.95	4,796.33	816.02	3,545.77	0.00	0.00	0.00
13,300.00	90.00	0.03	7,529.95	4,896.33	816.08	3,629.07	0.00	0.00	0.00
13,400.00	90.00	0.03	7,529.95	4,996.33	816.13	3,712.37	0.00	0.00	0.00
13,500.00	90.00	0.03	7,529.94	5,096.33	816.19	3,795.67	0.00	0.00	0.00
13,600.00	90.00	0.03	7,529.94	5,196.33	816.24	3,878.97	0.00	0.00	0.00
13,700.00	90.00	0.03	7,529.94	5,296.33	816.30	3,962.27	0.00	0.00	0.00
13,800.00	90.00	0.03	7,529.94	5,396.33	816.36	4,045.57	0.00	0.00	0.00
13,900.00	90.00	0.03	7,529.94	5,496.33	816.41	4,128.87	0.00	0.00	0.00
14,000.00	90.00	0.03	7,529.94	5,596.33	816.47	4,212.17	0.00	0.00	0.00
14,100.00	90.00	0.03	7,529.94	5,696.33	816.52	4,295.47	0.00	0.00	0.00
14,200.00	90.00	0.03	7,529.94	5,796.33	816.58	4,378.77	0.00	0.00	0.00
14,300.00	90.00	0.03	7,529.94	5,896.33	816.64	4,462.08	0.00	0.00	0.00
14,400.00	90.00	0.03	7,529.94	5,996.33	816.69	4,545.38	0.00	0.00	0.00
14,500.00	90.00	0.03	7,529.93	6,096.33	816.75	4,628.68	0.00	0.00	0.00
14,600.00	90.00	0.03	7,529.93	6,196.33	816.80	4,711.98	0.00	0.00	0.00
14,700.00	90.00	0.03	7,529.93	6,296.33	816.86	4,795.28	0.00	0.00	0.00
14,800.00	90.00	0.03	7,529.93	6,396.33	816.92	4,878.58	0.00	0.00	0.00
14,900.00	90.00	0.03	7,529.93	6,496.33	816.97	4,961.88	0.00	0.00	0.00
15,000.00	90.00	0.03	7,529.93	6,596.33	817.03	5,045.18	0.00	0.00	0.00
15,100.00	90.00	0.03	7,529.93	6,696.33	817.08	5,128.48	0.00	0.00	0.00
15,200.00	90.00	0.03	7,529.93	6,796.33	817.14	5,211.78	0.00	0.00	0.00
15,300.00	90.00	0.03	7,529.93	6,896.33	817.20	5,295.08	0.00	0.00	0.00
15,400.00	90.00	0.03	7,529.93	6,996.33	817.25	5,378.38	0.00	0.00	0.00
15,500.00	90.00	0.03	7,529.92	7,096.33	817.31	5,461.68	0.00	0.00	0.00
15,600.00	90.00	0.03	7,529.92	7,196.33	817.36	5,544.98	0.00	0.00	0.00
15,700.00	90.00	0.03	7,529.92	7,296.33	817.42	5,628.28	0.00	0.00	0.00
15,800.00	90.00	0.03	7,529.92	7,396.33	817.48	5,711.59	0.00	0.00	0.00
15,900.00	90.00	0.03	7,529.92	7,496.33	817.53	5,794.89	0.00	0.00	0.00
16,000.00	90.00	0.03	7,529.92	7,596.33	817.59	5,878.19	0.00	0.00	0.00
16,100.00	90.00	0.03	7,529.92	7,696.33	817.64	5,961.49	0.00	0.00	0.00
16,200.00	90.00	0.03	7,529.92	7,796.33	817.70	6,044.79	0.00	0.00	0.00
16,300.00	90.00	0.03	7,529.92	7,896.33	817.76	6,128.09	0.00	0.00	0.00
16,400.00	90.00	0.03	7,529.92	7,996.33	817.81	6,211.39	0.00	0.00	0.00
16,500.00	90.00	0.03	7,529.91	8,096.33	817.87	6,294.69	0.00	0.00	0.00
16,600.00	90.00	0.03	7,529.91	8,196.33	817.92	6,377.99	0.00	0.00	0.00
16,700.00	90.00	0.03	7,529.91	8,296.33	817.98	6,461.29	0.00	0.00	0.00
16,800.00	90.00	0.03	7,529.91	8,396.33	818.04	6,544.59	0.00	0.00	0.00
16,900.00	90.00	0.03	7,529.91	8,496.33	818.09	6,627.89	0.00	0.00	0.00
17,000.00	90.00	0.03	7,529.91	8,596.33	818.15	6,711.19	0.00	0.00	0.00
17,100.00	90.00	0.03	7,529.91	8,696.33	818.20	6,794.49	0.00	0.00	0.00
17,200.00	90.00	0.03	7,529.91	8,796.33	818.26	6,877.80	0.00	0.00	0.00
17,300.00	90.00	0.03	7,529.91	8,896.33	818.32	6,961.10	0.00	0.00	0.00
17,400.00	90.00	0.03	7,529.91	8,996.33	818.37	7,044.40	0.00	0.00	0.00
17,500.00	90.00	0.03	7,529.90	9,096.33	818.43	7,127.70	0.00	0.00	0.00
17,600.00	90.00	0.03	7,529.90	9,196.33	818.48	7,211.00	0.00	0.00	0.00
17,618.90	90.00	0.03	7,530.00	9,215.22	818.38	7,226.80	0.00	0.00	0.00
TD at 17618.90									

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well RINN VALLEY EAST N17-20-4C
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4943.00usft
Project:	Weld County	MD Reference:	KB 25' @ 4943.00usft
Site:	Sec 17-T2N-R68W	North Reference:	True
Well:	RINN VALLEY EAST N17-20-4C	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
RVE N17-4C - LP - plan hits target center - Point	0.00	0.00	7,530.00	-414.52	813.10	1,291,561.79	3,133,909.92	40° 7' 57.857 N	105° 1' 15.881 W
RVE N17-4C - PBHL - plan hits target center - Point	0.00	0.00	7,530.00	9,215.22	818.38	1,301,191.42	3,133,863.50	40° 9' 33.023 N	105° 1' 15.809 W

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,538.73	3,477.00	PARKMAN				
4,121.90	4,047.00	SUSSEX				
4,536.26	4,452.00	SHANNON				
7,387.37	7,242.00	NIOBRARA				
7,420.20	7,270.00	NIO B TARGET				
7,837.30	7,510.00	FORT HAYS				
7,989.15	7,530.00	CODELL				

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
400.00	400.00	0.00	0.00	Start Build 2.00
1,010.10	1,005.50	-49.97	41.13	Start 5438.88 hold at 1010.10 MD
6,448.98	6,321.50	-937.56	771.65	Start Drop -2.00
7,059.08	6,927.00	-987.53	812.78	Start 30.00 hold at 7059.07 MD
7,089.08	6,957.00	-987.53	812.78	Start DLS 10.00 TFO 0.03
7,989.15	7,530.00	-414.52	813.10	Start 9629.75 hold at 7989.15 MD
17,618.90	7,530.00	9,215.22	818.38	TD at 17618.90