

US ROCKIES WATTENBERG PLANNING

**WELD-NAD83-UTMFT13N
3N-68W-33 Newby 15-33HZ Pad
NEWBY STATE 38N-4HZ**

Plan A

Plan: Permit Rev-2

Standard Planning Report

19 April, 2017

Project: WELD-NAD83-UTMFT13N
Site: 3N-68W-33 Newby 15-33HZ Pad
Well: NEWBY STATE 38N-4HZ
Wellbore: Plan A
Design: Permit Rev-2

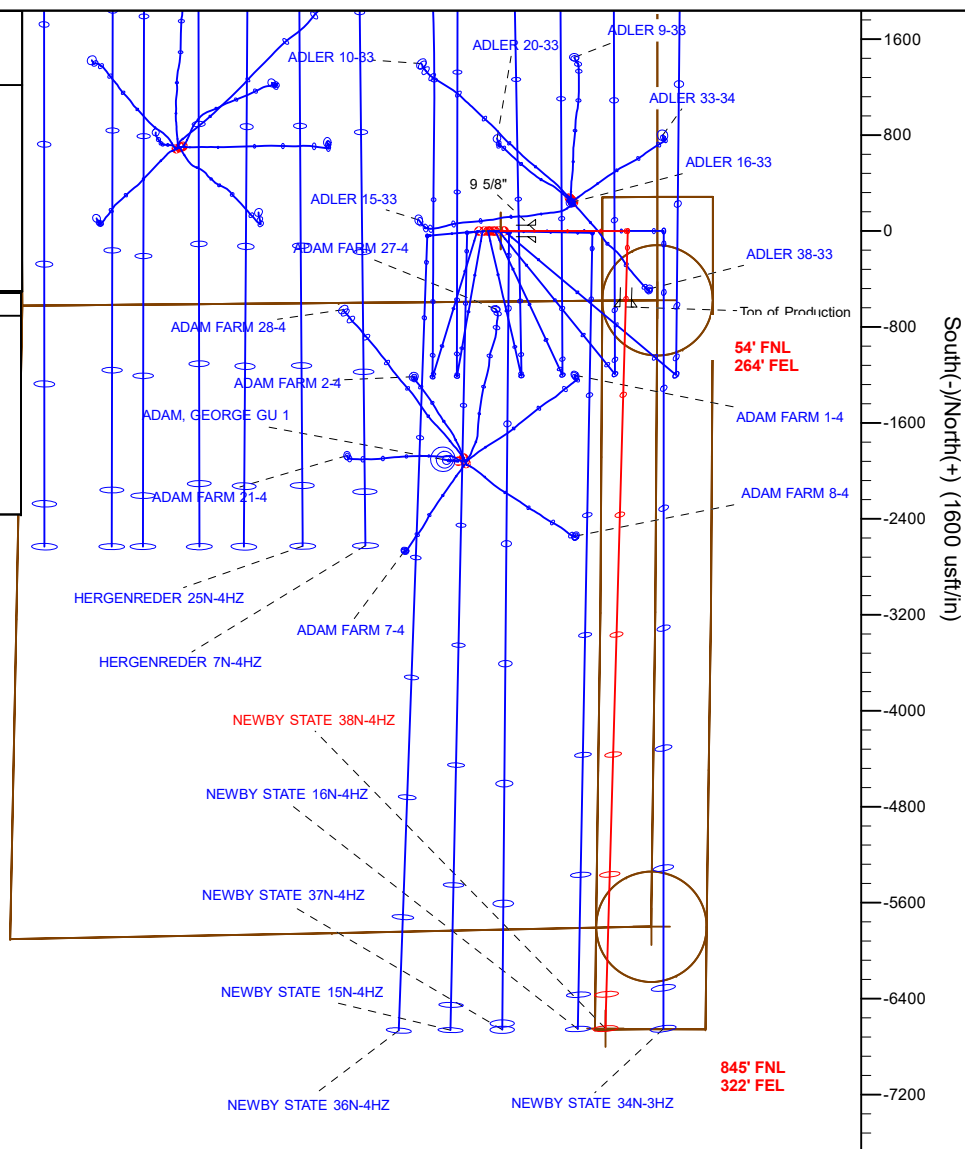
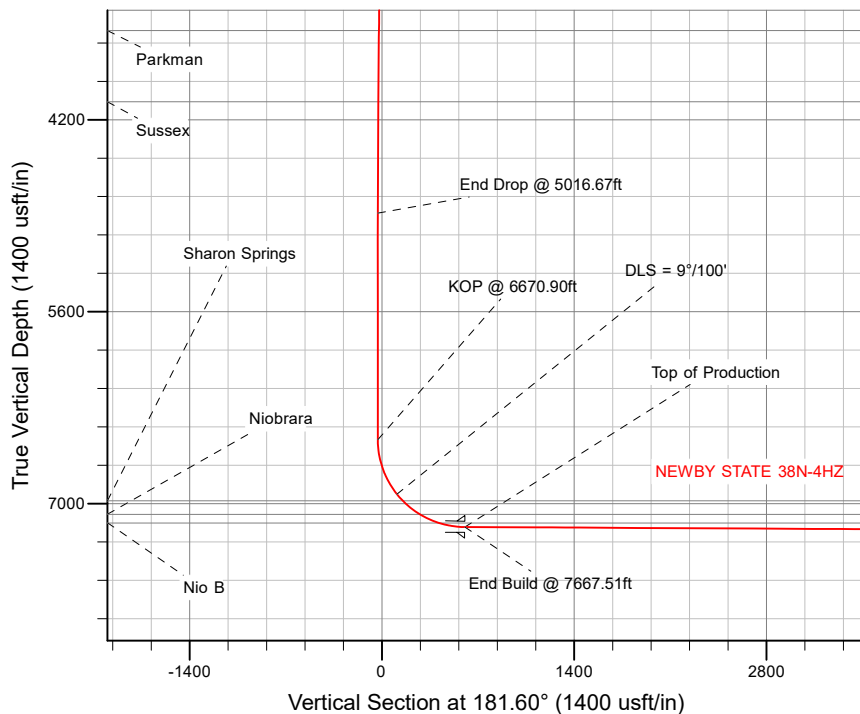
US ROCKIES WATTENBERG PLANNING

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	1316.67	16.00	90.00	1302.86	0.00	147.97	1.50	90.00	-4.13	
4	4216.67	16.00	90.00	4090.52	0.00	947.32	0.00	0.00	-26.45	
5	5016.67	0.00	0.00	4880.16	0.00	1058.29	2.00	180.00	-29.55	
6	6670.90	0.00	0.00	6534.39	0.00	1058.29	0.00	0.00	-29.55	
7	7667.51	89.70	181.60	7171.00	-632.99	1040.57	9.00	181.60	603.69	
8	13685.96	89.70	181.60	7203.00	-6648.99	872.13	0.00	0.00	6622.05	NEWBY STATE 38N-4HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
NEWBY STATE 38N-4HZ_SHL	0.00	0.00	0.00	40.176579	-105.003020	Point
NEWBY STATE 38N-4HZ_BHL	7203.00	-6648.99	872.13	40.158320	-104.999899	Point



WELL DETAILS: NEWBY STATE 38N-4HZ

Ground Level: 4894'

RKB = 20' @ 4914.00usft (D Rig)

Plan: Permit Rev-2 (NEWBY STATE 38N-4HZ/Plan A)

Created By: Clint Eshelman

Date: 4/19/2017

Reviewed: _____

Date: _____

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well NEWBY STATE 38N-4HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 20' @ 4914.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 20' @ 4914.00usft (D Rig)
Site:	3N-68W-33 Newby 15-33HZ Pad	North Reference:	True
Well:	NEWBY STATE 38N-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

Project	WELD-NAD83-UTMFT13N		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)		

Site		3N-68W-33 Newby 15-33HZ Pad			
Site Position:		Northing:	14,591,032.57 usft	Latitude:	40.176575
From:	Lat/Long	Easting:	1,639,378.12 usft	Longitude:	-105.003718
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.00 °

Well	NEWBY STATE 38N-4HZ					
Well Position	+N/-S	1.46 usft	Northing:	14,591,034.02 usft	Latitude:	40.176579
	+E/-W	194.97 usft	Easting:	1,639,573.09 usft	Longitude:	-105.003020
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,894.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/14/2016	8.36	66.67	52,506.11113438

Design	Permit Rev-2				
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	181.60	

Plan Survey Tool Program	Date	4/19/2017			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	1,800.00	Permit Rev-2 (Plan A)	APC_ISCWSA REV 2 MWD Fixed:v2:standard declination	
2	1,800.00	13,685.96	Permit Rev-2 (Plan A)	APC_ISCWSA REV 2 MWD+I Fixed:v2:crustal field declination	

Corporate Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 20' @ 4914.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 20' @ 4914.00usft (D Rig)
Site:	3N-68W-33 Newby 15-33HZ Pad	North Reference:	True
Well:	NEWBY STATE 38N-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,316.67	16.00	90.00	1,302.86	0.00	147.97	1.50	1.50	0.00	90.00	
4,216.67	16.00	90.00	4,090.52	0.00	947.32	0.00	0.00	0.00	0.00	
5,016.67	0.00	0.00	4,880.16	0.00	1,058.29	2.00	-2.00	0.00	180.00	
6,670.90	0.00	0.00	6,534.39	0.00	1,058.29	0.00	0.00	0.00	0.00	
7,667.51	89.70	181.60	7,171.00	-632.99	1,040.57	9.00	9.00	-17.90	181.60	
13,685.96	89.70	181.60	7,203.00	-6,648.99	872.13	0.00	0.00	0.00	0.00	NEWBY STATE 38N-4

Corporate
Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well NEWBY STATE 38N-4HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 20' @ 4914.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 20' @ 4914.00usft (D Rig)
Site:	3N-68W-33 Newby 15-33HZ Pad	North Reference:	True
Well:	NEWBY STATE 38N-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 250.00ft									
300.00	0.75	90.00	300.00	0.00	0.33	-0.01	1.50	1.50	0.00
400.00	2.25	90.00	399.96	0.00	2.94	-0.08	1.50	1.50	0.00
500.00	3.75	90.00	499.82	0.00	8.18	-0.23	1.50	1.50	0.00
600.00	5.25	90.00	599.51	0.00	16.02	-0.45	1.50	1.50	0.00
700.00	6.75	90.00	698.96	0.00	26.48	-0.74	1.50	1.50	0.00
800.00	8.25	90.00	798.10	0.00	39.53	-1.10	1.50	1.50	0.00
821.13	8.57	90.00	819.00	0.00	42.62	-1.19	1.50	1.50	0.00
Fox Hills									
900.00	9.75	90.00	896.87	0.00	55.17	-1.54	1.50	1.50	0.00
1,000.00	11.25	90.00	995.19	0.00	73.39	-2.05	1.50	1.50	0.00
1,100.00	12.75	90.00	1,093.00	0.00	94.19	-2.63	1.50	1.50	0.00
1,200.00	14.25	90.00	1,190.24	0.00	117.53	-3.28	1.50	1.50	0.00
1,300.00	15.75	90.00	1,286.83	0.00	143.41	-4.00	1.50	1.50	0.00
1,316.67	16.00	90.00	1,302.86	0.00	147.97	-4.13	1.50	1.50	0.00
End Nudge @ 1316.67ft									
1,400.00	16.00	90.00	1,382.96	0.00	170.94	-4.77	0.00	0.00	0.00
1,500.00	16.00	90.00	1,479.09	0.00	198.50	-5.54	0.00	0.00	0.00
1,600.00	16.00	90.00	1,575.21	0.00	226.07	-6.31	0.00	0.00	0.00
1,700.00	16.00	90.00	1,671.34	0.00	253.63	-7.08	0.00	0.00	0.00
1,800.00	16.00	90.00	1,767.47	0.00	281.19	-7.85	0.00	0.00	0.00
1,833.84	16.00	90.00	1,800.00	0.00	290.52	-8.11	0.00	0.00	0.00
9 5/8"									
1,900.00	16.00	90.00	1,863.59	0.00	308.76	-8.62	0.00	0.00	0.00
2,000.00	16.00	90.00	1,959.72	0.00	336.32	-9.39	0.00	0.00	0.00
2,100.00	16.00	90.00	2,055.85	0.00	363.89	-10.16	0.00	0.00	0.00
2,200.00	16.00	90.00	2,151.97	0.00	391.45	-10.93	0.00	0.00	0.00
2,300.00	16.00	90.00	2,248.10	0.00	419.01	-11.70	0.00	0.00	0.00
2,400.00	16.00	90.00	2,344.22	0.00	446.58	-12.47	0.00	0.00	0.00
2,500.00	16.00	90.00	2,440.35	0.00	474.14	-13.24	0.00	0.00	0.00
2,600.00	16.00	90.00	2,536.48	0.00	501.70	-14.01	0.00	0.00	0.00
2,700.00	16.00	90.00	2,632.60	0.00	529.27	-14.78	0.00	0.00	0.00
2,800.00	16.00	90.00	2,728.73	0.00	556.83	-15.55	0.00	0.00	0.00
2,900.00	16.00	90.00	2,824.85	0.00	584.40	-16.32	0.00	0.00	0.00
3,000.00	16.00	90.00	2,920.98	0.00	611.96	-17.09	0.00	0.00	0.00
3,100.00	16.00	90.00	3,017.11	0.00	639.52	-17.86	0.00	0.00	0.00
3,200.00	16.00	90.00	3,113.23	0.00	667.09	-18.63	0.00	0.00	0.00
3,300.00	16.00	90.00	3,209.36	0.00	694.65	-19.40	0.00	0.00	0.00
3,400.00	16.00	90.00	3,305.49	0.00	722.21	-20.17	0.00	0.00	0.00
3,500.00	16.00	90.00	3,401.61	0.00	749.78	-20.94	0.00	0.00	0.00
3,600.00	16.00	90.00	3,497.74	0.00	777.34	-21.70	0.00	0.00	0.00
3,653.33	16.00	90.00	3,549.00	0.00	792.04	-22.12	0.00	0.00	0.00
Parkman									
3,700.00	16.00	90.00	3,593.86	0.00	804.91	-22.47	0.00	0.00	0.00
3,800.00	16.00	90.00	3,689.99	0.00	832.47	-23.24	0.00	0.00	0.00
3,900.00	16.00	90.00	3,786.12	0.00	860.03	-24.01	0.00	0.00	0.00
4,000.00	16.00	90.00	3,882.24	0.00	887.60	-24.78	0.00	0.00	0.00
4,100.00	16.00	90.00	3,978.37	0.00	915.16	-25.55	0.00	0.00	0.00
4,193.24	16.00	90.00	4,068.00	0.00	940.86	-26.27	0.00	0.00	0.00

Corporate
Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 20' @ 4914.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 20' @ 4914.00usft (D Rig)
Site:	3N-68W-33 Newby 15-33HZ Pad	North Reference:	True
Well:	NEWBY STATE 38N-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Sussex									
4,200.00	16.00	90.00	4,074.50	0.00	942.72	-26.32	0.00	0.00	0.00
4,216.67	16.00	90.00	4,090.52	0.00	947.32	-26.45	0.00	0.00	0.00
Begin Drop @ 4216.67ft									
4,300.00	14.33	90.00	4,170.94	0.00	969.12	-27.06	2.00	-2.00	0.00
4,400.00	12.33	90.00	4,268.24	0.00	992.18	-27.70	2.00	-2.00	0.00
4,500.00	10.33	90.00	4,366.29	0.00	1,011.83	-28.25	2.00	-2.00	0.00
4,600.00	8.33	90.00	4,464.96	0.00	1,028.05	-28.70	2.00	-2.00	0.00
4,700.00	6.33	90.00	4,564.14	0.00	1,040.81	-29.06	2.00	-2.00	0.00
4,800.00	4.33	90.00	4,663.70	0.00	1,050.11	-29.32	2.00	-2.00	0.00
4,900.00	2.33	90.00	4,763.52	0.00	1,055.92	-29.48	2.00	-2.00	0.00
5,000.00	0.33	90.00	4,863.49	0.00	1,058.25	-29.55	2.00	-2.00	0.00
5,016.67	0.00	0.00	4,880.16	0.00	1,058.29	-29.55	2.00	-2.00	0.00
End Drop @ 5016.67ft									
5,100.00	0.00	0.00	4,963.49	0.00	1,058.29	-29.55	0.00	0.00	0.00
5,200.00	0.00	0.00	5,063.49	0.00	1,058.29	-29.55	0.00	0.00	0.00
5,300.00	0.00	0.00	5,163.49	0.00	1,058.29	-29.55	0.00	0.00	0.00
5,400.00	0.00	0.00	5,263.49	0.00	1,058.29	-29.55	0.00	0.00	0.00
5,500.00	0.00	0.00	5,363.49	0.00	1,058.29	-29.55	0.00	0.00	0.00
5,600.00	0.00	0.00	5,463.49	0.00	1,058.29	-29.55	0.00	0.00	0.00
5,700.00	0.00	0.00	5,563.49	0.00	1,058.29	-29.55	0.00	0.00	0.00
5,800.00	0.00	0.00	5,663.49	0.00	1,058.29	-29.55	0.00	0.00	0.00
5,900.00	0.00	0.00	5,763.49	0.00	1,058.29	-29.55	0.00	0.00	0.00
6,000.00	0.00	0.00	5,863.49	0.00	1,058.29	-29.55	0.00	0.00	0.00
6,100.00	0.00	0.00	5,963.49	0.00	1,058.29	-29.55	0.00	0.00	0.00
6,200.00	0.00	0.00	6,063.49	0.00	1,058.29	-29.55	0.00	0.00	0.00
6,300.00	0.00	0.00	6,163.49	0.00	1,058.29	-29.55	0.00	0.00	0.00
6,400.00	0.00	0.00	6,263.49	0.00	1,058.29	-29.55	0.00	0.00	0.00
6,500.00	0.00	0.00	6,363.49	0.00	1,058.29	-29.55	0.00	0.00	0.00
6,600.00	0.00	0.00	6,463.49	0.00	1,058.29	-29.55	0.00	0.00	0.00
6,670.90	0.00	0.00	6,534.39	0.00	1,058.29	-29.55	0.00	0.00	0.00
KOP @ 6670.90ft									
6,700.00	2.62	181.60	6,563.48	-0.66	1,058.28	-28.88	9.00	9.00	0.00
6,800.00	11.62	181.60	6,662.61	-13.04	1,057.93	-16.50	9.00	9.00	0.00
6,900.00	20.62	181.60	6,758.58	-40.77	1,057.15	11.23	9.00	9.00	0.00
7,000.00	29.62	181.60	6,849.03	-83.16	1,055.97	53.64	9.00	9.00	0.00
7,100.00	38.62	181.60	6,931.73	-139.17	1,054.40	109.67	9.00	9.00	0.00
DLS = 9°/100'									
7,163.10	44.30	181.60	6,979.00	-180.91	1,053.23	151.43	9.00	9.00	0.00
Sharon Springs									
7,200.00	47.62	181.60	7,004.65	-207.42	1,052.49	177.95	9.00	9.00	0.00
7,300.00	56.62	181.60	7,065.99	-286.24	1,050.28	256.80	9.00	9.00	0.00
7,324.36	58.81	181.60	7,079.00	-306.83	1,049.70	277.40	9.00	9.00	0.00
Niobrara									
7,400.00	65.62	181.60	7,114.24	-373.68	1,047.83	344.28	9.00	9.00	0.00
7,477.97	72.64	181.60	7,142.00	-446.46	1,045.79	417.09	9.00	9.00	0.00
Nio B									
7,500.00	74.62	181.60	7,148.21	-467.59	1,045.20	438.22	9.00	9.00	0.00
7,600.00	83.62	181.60	7,167.07	-565.65	1,042.46	536.32	9.00	9.00	0.00
7,667.51	89.70	181.60	7,171.00	-632.99	1,040.57	603.68	9.00	9.00	0.00
End Build @ 7667.51ft - Top of Production									
7,700.00	89.70	181.60	7,171.17	-665.46	1,039.66	636.17	0.00	0.00	0.00
7,800.00	89.70	181.60	7,171.70	-765.42	1,036.86	736.17	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well NEWBY STATE 38N-4HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 20' @ 4914.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 20' @ 4914.00usft (D Rig)
Site:	3N-68W-33 Newby 15-33HZ Pad	North Reference:	True
Well:	NEWBY STATE 38N-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,900.00	89.70	181.60	7,172.24	-865.38	1,034.07	836.17	0.00	0.00	0.00
8,000.00	89.70	181.60	7,172.77	-965.34	1,031.27	936.17	0.00	0.00	0.00
8,100.00	89.70	181.60	7,173.30	-1,065.30	1,028.47	1,036.17	0.00	0.00	0.00
8,200.00	89.70	181.60	7,173.83	-1,165.26	1,025.67	1,136.17	0.00	0.00	0.00
8,300.00	89.70	181.60	7,174.36	-1,265.22	1,022.87	1,236.16	0.00	0.00	0.00
8,400.00	89.70	181.60	7,174.89	-1,365.18	1,020.07	1,336.16	0.00	0.00	0.00
8,500.00	89.70	181.60	7,175.43	-1,465.14	1,017.27	1,436.16	0.00	0.00	0.00
8,600.00	89.70	181.60	7,175.96	-1,565.10	1,014.47	1,536.16	0.00	0.00	0.00
8,700.00	89.70	181.60	7,176.49	-1,665.06	1,011.68	1,636.16	0.00	0.00	0.00
8,800.00	89.70	181.60	7,177.02	-1,765.02	1,008.88	1,736.16	0.00	0.00	0.00
8,900.00	89.70	181.60	7,177.55	-1,864.97	1,006.08	1,836.16	0.00	0.00	0.00
9,000.00	89.70	181.60	7,178.08	-1,964.93	1,003.28	1,936.15	0.00	0.00	0.00
9,100.00	89.70	181.60	7,178.62	-2,064.89	1,000.48	2,036.15	0.00	0.00	0.00
9,200.00	89.70	181.60	7,179.15	-2,164.85	997.68	2,136.15	0.00	0.00	0.00
9,300.00	89.70	181.60	7,179.68	-2,264.81	994.88	2,236.15	0.00	0.00	0.00
9,400.00	89.70	181.60	7,180.21	-2,364.77	992.08	2,336.15	0.00	0.00	0.00
9,500.00	89.70	181.60	7,180.74	-2,464.73	989.29	2,436.15	0.00	0.00	0.00
9,600.00	89.70	181.60	7,181.27	-2,564.69	986.49	2,536.15	0.00	0.00	0.00
9,700.00	89.70	181.60	7,181.81	-2,664.65	983.69	2,636.15	0.00	0.00	0.00
9,800.00	89.70	181.60	7,182.34	-2,764.61	980.89	2,736.14	0.00	0.00	0.00
9,900.00	89.70	181.60	7,182.87	-2,864.57	978.09	2,836.14	0.00	0.00	0.00
10,000.00	89.70	181.60	7,183.40	-2,964.53	975.29	2,936.14	0.00	0.00	0.00
10,100.00	89.70	181.60	7,183.93	-3,064.49	972.49	3,036.14	0.00	0.00	0.00
10,200.00	89.70	181.60	7,184.47	-3,164.45	969.69	3,136.14	0.00	0.00	0.00
10,300.00	89.70	181.60	7,185.00	-3,264.41	966.90	3,236.14	0.00	0.00	0.00
10,400.00	89.70	181.60	7,185.53	-3,364.37	964.10	3,336.14	0.00	0.00	0.00
10,500.00	89.70	181.60	7,186.06	-3,464.33	961.30	3,436.13	0.00	0.00	0.00
10,600.00	89.70	181.60	7,186.59	-3,564.28	958.50	3,536.13	0.00	0.00	0.00
10,700.00	89.70	181.60	7,187.12	-3,664.24	955.70	3,636.13	0.00	0.00	0.00
10,800.00	89.70	181.60	7,187.66	-3,764.20	952.90	3,736.13	0.00	0.00	0.00
10,900.00	89.70	181.60	7,188.19	-3,864.16	950.10	3,836.13	0.00	0.00	0.00
11,000.00	89.70	181.60	7,188.72	-3,964.12	947.30	3,936.13	0.00	0.00	0.00
11,100.00	89.70	181.60	7,189.25	-4,064.08	944.51	4,036.13	0.00	0.00	0.00
11,200.00	89.70	181.60	7,189.78	-4,164.04	941.71	4,136.12	0.00	0.00	0.00
11,300.00	89.70	181.60	7,190.31	-4,264.00	938.91	4,236.12	0.00	0.00	0.00
11,400.00	89.70	181.60	7,190.85	-4,363.96	936.11	4,336.12	0.00	0.00	0.00
11,500.00	89.70	181.60	7,191.38	-4,463.92	933.31	4,436.12	0.00	0.00	0.00
11,600.00	89.70	181.60	7,191.91	-4,563.88	930.51	4,536.12	0.00	0.00	0.00
11,700.00	89.70	181.60	7,192.44	-4,663.84	927.71	4,636.12	0.00	0.00	0.00
11,800.00	89.70	181.60	7,192.97	-4,763.80	924.91	4,736.12	0.00	0.00	0.00
11,900.00	89.70	181.60	7,193.50	-4,863.76	922.12	4,836.11	0.00	0.00	0.00
12,000.00	89.70	181.60	7,194.04	-4,963.72	919.32	4,936.11	0.00	0.00	0.00
12,100.00	89.70	181.60	7,194.57	-5,063.68	916.52	5,036.11	0.00	0.00	0.00
12,200.00	89.70	181.60	7,195.10	-5,163.64	913.72	5,136.11	0.00	0.00	0.00
12,300.00	89.70	181.60	7,195.63	-5,263.60	910.92	5,236.11	0.00	0.00	0.00
12,400.00	89.70	181.60	7,196.16	-5,363.55	908.12	5,336.11	0.00	0.00	0.00
12,500.00	89.70	181.60	7,196.69	-5,463.51	905.32	5,436.11	0.00	0.00	0.00
12,600.00	89.70	181.60	7,197.23	-5,563.47	902.52	5,536.10	0.00	0.00	0.00
12,700.00	89.70	181.60	7,197.76	-5,663.43	899.73	5,636.10	0.00	0.00	0.00
12,800.00	89.70	181.60	7,198.29	-5,763.39	896.93	5,736.10	0.00	0.00	0.00
12,900.00	89.70	181.60	7,198.82	-5,863.35	894.13	5,836.10	0.00	0.00	0.00
13,000.00	89.70	181.60	7,199.35	-5,963.31	891.33	5,936.10	0.00	0.00	0.00
13,100.00	89.70	181.60	7,199.88	-6,063.27	888.53	6,036.10	0.00	0.00	0.00
13,200.00	89.70	181.60	7,200.42	-6,163.23	885.73	6,136.10	0.00	0.00	0.00

Corporate
Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well NEWBY STATE 38N-4HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 20' @ 4914.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 20' @ 4914.00usft (D Rig)
Site:	3N-68W-33 Newby 15-33HZ Pad	North Reference:	True
Well:	NEWBY STATE 38N-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,300.00	89.70	181.60	7,200.95	-6,263.19	882.93	6,236.09	0.00	0.00	0.00
13,400.00	89.70	181.60	7,201.48	-6,363.15	880.13	6,336.09	0.00	0.00	0.00
13,500.00	89.70	181.60	7,202.01	-6,463.11	877.34	6,436.09	0.00	0.00	0.00
13,600.00	89.70	181.60	7,202.54	-6,563.07	874.54	6,536.09	0.00	0.00	0.00
13,685.96	89.70	181.60	7,203.00	-6,648.99	872.13	6,622.05	0.00	0.00	0.00
TD Well @ 13685.96ft									

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,833.84	1,800.00	9 5/8"	9-5/8	13-1/2
7,667.51	7,171.00	Top of Production	5-1/2	7-7/8

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
821.13	819.00	Fox Hills			
3,653.33	3,549.00	Parkman			
4,193.24	4,068.00	Sussex			
7,163.10	6,979.00	Sharon Springs			
7,324.36	7,079.00	Niobrara			
7,477.97	7,142.00	Nio B			

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
250.00	250.00	0.00	0.00	Begin Nudge @ 250.00ft
1,316.67	1,302.86	0.00	147.97	End Nudge @ 1316.67ft
4,216.67	4,090.52	0.00	947.32	Begin Drop @ 4216.67ft
5,016.67	4,880.16	0.00	1,058.29	End Drop @ 5016.67ft
6,670.90	6,534.39	0.00	1,058.29	KOP @ 6670.90ft
7,100.00	6,931.73	-139.17	1,054.40	DLS = 9°/100'
7,667.51	7,171.00	-632.99	1,040.57	End Build @ 7667.51ft
13,685.96	7,203.00	-6,648.99	872.13	TD Well @ 13685.96ft