

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N  
3N-68W-33 Newby 15-33HZ Pad  
NEWBY STATE 36N-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 36N-4HZ  
Wellbore: Plan A  
Design: Permit Rev-2

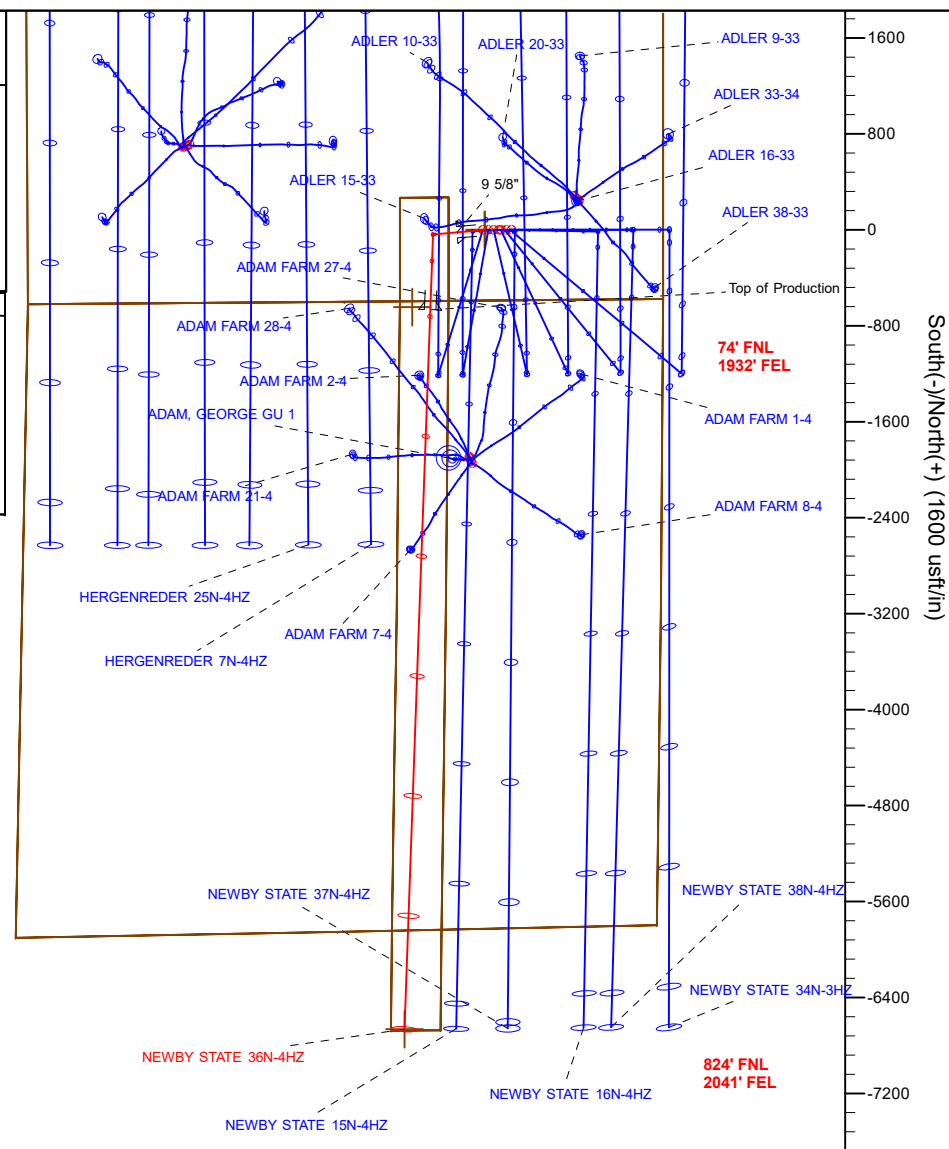
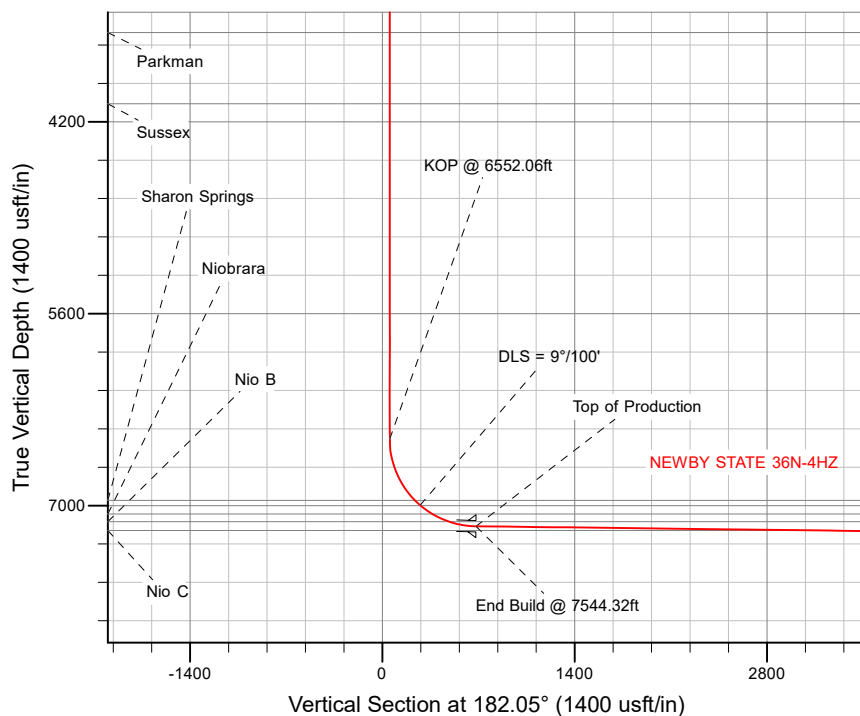
# US ROCKIES WATTENBERG PLANNING

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	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	983.33	11.00	265.00	978.84	-6.12	-69.91	1.50	265.00	8.61	
4	2603.33	11.00	265.00	2569.07	-33.06	-377.85	0.00	0.00	46.55	
5	3153.33	0.00	0.00	3115.70	-37.64	-430.28	2.00	180.00	53.01	
6	6552.06	0.00	0.00	6514.43	-37.64	-430.28	0.00	0.00	53.01	
7	7544.32	89.30	182.05	7151.00	-666.12	-452.73	9.00	182.05	681.89	
8	13546.07	89.30	182.05	7224.00	-6663.60	-666.93	0.00	0.00	6683.19	NEWBY STATE 36N-4HZ_TOE

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
NEWBY STATE 36N-4HZ_SHL	0.00	0.00	0.00	40.176575	-105.003664	Point
NEWBY STATE 36N-4HZ_TOE	7224.00	-6663.60	-666.93	40.158276	-105.006051	Point



## WELL DETAILS: NEWBY STATE 36N-4HZ

Ground Level: 4894'

RKB = 20' @ 4914.00usft (D Rig)

Plan: Permit Rev-2 (NEWBY STATE 36N-4HZ/Plan A)

Created By: Clint Eshelman

Date: 4/19/2017

Reviewed: \_\_\_\_\_

Date: \_\_\_\_\_

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well NEWBY STATE 36N-4HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 20' @ 4914.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 20' @ 4914.00usft (D Rig)
<b>Site:</b>	3N-68W-33 Newby 15-33HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	NEWBY STATE 36N-4HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-2		

<b>Project</b>	WELD-NAD83-UTMFT13N		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	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 36N-4HZ					
Well Position	+N/-S	0.00 usft	Northing:	14,591,032.57 usft	Latitude:	40.176575
	+E/-W	15.08 usft	Easting:	1,639,393.20 usft	Longitude:	-105.003664
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,894.00 usft

<b>Wellbore</b>	Plan A				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	1/14/2016	8.36	66.67	52,506.04138824

<b>Design</b>	Permit Rev-2			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	182.05

<b>Plan Survey Tool Program</b>	<b>Date</b>	4/19/2017		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	1,800.00	Permit Rev-2 (Plan A)	APC_ISCWSA REV 2 MWD Fixed:v2:standard declination
2	1,800.00	13,546.07	Permit Rev-2 (Plan A)	APC_ISCWSA REV 2 MWD+I Fixed:v2:crustal field declination

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well NEWBY STATE 36N-4HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 20' @ 4914.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 20' @ 4914.00usft (D Rig)
<b>Site:</b>	3N-68W-33 Newby 15-33HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	NEWBY STATE 36N-4HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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	
983.33	11.00	265.00	978.84	-6.12	-69.91	1.50	1.50	0.00	265.00	
2,603.33	11.00	265.00	2,569.07	-33.06	-377.85	0.00	0.00	0.00	0.00	
3,153.33	0.00	0.00	3,115.70	-37.64	-430.28	2.00	-2.00	17.27	180.00	
6,552.06	0.00	0.00	6,514.43	-37.64	-430.28	0.00	0.00	0.00	0.00	
7,544.32	89.30	182.05	7,151.00	-666.12	-452.73	9.00	9.00	-17.93	182.05	
13,546.07	89.30	182.05	7,224.00	-6,663.60	-666.93	0.00	0.00	0.00	0.00	NEWBY STATE 36N-4

**Corporate**  
**Planning Report**

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well NEWBY STATE 36N-4HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 20' @ 4914.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 20' @ 4914.00usft (D Rig)
<b>Site:</b>	3N-68W-33 Newby 15-33HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	NEWBY STATE 36N-4HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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
<b>Begin Nudge @ 250.00ft</b>									
300.00	0.75	265.00	300.00	-0.03	-0.33	0.04	1.50	1.50	0.00
400.00	2.25	265.00	399.96	-0.26	-2.93	0.36	1.50	1.50	0.00
500.00	3.75	265.00	499.82	-0.71	-8.15	1.00	1.50	1.50	0.00
600.00	5.25	265.00	599.51	-1.40	-15.96	1.97	1.50	1.50	0.00
700.00	6.75	265.00	698.96	-2.31	-26.38	3.25	1.50	1.50	0.00
800.00	8.25	265.00	798.10	-3.45	-39.38	4.85	1.50	1.50	0.00
821.13	8.57	265.00	819.00	-3.71	-42.46	5.23	1.50	1.50	0.00
<b>Fox Hills</b>									
900.00	9.75	265.00	896.87	-4.81	-54.96	6.77	1.50	1.50	0.00
983.33	11.00	265.00	978.83	-6.12	-69.91	8.61	1.50	1.50	0.00
<b>End Nudge @ 983.33ft</b>									
1,000.00	11.00	265.00	995.20	-6.39	-73.08	9.00	0.00	0.00	0.00
1,100.00	11.00	265.00	1,093.36	-8.06	-92.09	11.35	0.00	0.00	0.00
1,200.00	11.00	265.00	1,191.52	-9.72	-111.10	13.69	0.00	0.00	0.00
1,300.00	11.00	265.00	1,289.69	-11.38	-130.10	16.03	0.00	0.00	0.00
1,400.00	11.00	265.00	1,387.85	-13.05	-149.11	18.37	0.00	0.00	0.00
1,500.00	11.00	265.00	1,486.01	-14.71	-168.12	20.71	0.00	0.00	0.00
1,600.00	11.00	265.00	1,584.17	-16.37	-187.13	23.06	0.00	0.00	0.00
1,700.00	11.00	265.00	1,682.34	-18.03	-206.14	25.40	0.00	0.00	0.00
1,800.00	11.00	265.00	1,780.50	-19.70	-225.15	27.74	0.00	0.00	0.00
1,819.87	11.00	265.00	1,800.00	-20.03	-228.92	28.20	0.00	0.00	0.00
<b>9 5/8"</b>									
1,900.00	11.00	265.00	1,878.66	-21.36	-244.15	30.08	0.00	0.00	0.00
2,000.00	11.00	265.00	1,976.82	-23.02	-263.16	32.42	0.00	0.00	0.00
2,100.00	11.00	265.00	2,074.99	-24.69	-282.17	34.76	0.00	0.00	0.00
2,200.00	11.00	265.00	2,173.15	-26.35	-301.18	37.11	0.00	0.00	0.00
2,300.00	11.00	265.00	2,271.31	-28.01	-320.19	39.45	0.00	0.00	0.00
2,400.00	11.00	265.00	2,369.48	-29.68	-339.20	41.79	0.00	0.00	0.00
2,500.00	11.00	265.00	2,467.64	-31.34	-358.20	44.13	0.00	0.00	0.00
2,600.00	11.00	265.00	2,565.80	-33.00	-377.21	46.47	0.00	0.00	0.00
2,603.33	11.00	265.00	2,569.07	-33.06	-377.85	46.55	0.00	0.00	0.00
<b>Begin Drop @ 2603.33ft</b>									
2,700.00	9.07	265.00	2,664.26	-34.53	-394.62	48.62	2.00	-2.00	0.00
2,800.00	7.07	265.00	2,763.26	-35.75	-408.60	50.34	2.00	-2.00	0.00
2,900.00	5.07	265.00	2,862.70	-36.67	-419.13	51.64	2.00	-2.00	0.00
3,000.00	3.07	265.00	2,962.44	-37.29	-426.19	52.51	2.00	-2.00	0.00
3,100.00	1.07	265.00	3,062.37	-37.60	-429.79	52.95	2.00	-2.00	0.00
3,153.33	0.00	266.03	3,115.70	-37.64	-430.28	53.01	2.00	-2.00	1.94
<b>End Drop @ 3153.33ft</b>									
3,200.00	0.00	0.00	3,162.37	-37.64	-430.28	53.01	0.00	0.00	201.34
3,300.00	0.00	0.00	3,262.37	-37.64	-430.28	53.01	0.00	0.00	0.00
3,400.00	0.00	0.00	3,362.37	-37.64	-430.28	53.01	0.00	0.00	0.00
3,500.00	0.00	0.00	3,462.37	-37.64	-430.28	53.01	0.00	0.00	0.00
3,586.63	0.00	0.00	3,549.00	-37.64	-430.28	53.01	0.00	0.00	0.00
<b>Parkman</b>									
3,600.00	0.00	0.00	3,562.37	-37.64	-430.28	53.01	0.00	0.00	0.00
3,700.00	0.00	0.00	3,662.37	-37.64	-430.28	53.01	0.00	0.00	0.00
3,800.00	0.00	0.00	3,762.37	-37.64	-430.28	53.01	0.00	0.00	0.00

**Corporate**  
**Planning Report**

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well NEWBY STATE 36N-4HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 20' @ 4914.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 20' @ 4914.00usft (D Rig)
<b>Site:</b>	3N-68W-33 Newby 15-33HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	NEWBY STATE 36N-4HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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)
3,900.00	0.00	0.00	3,862.37	-37.64	-430.28	53.01	0.00	0.00	0.00
4,000.00	0.00	0.00	3,962.37	-37.64	-430.28	53.01	0.00	0.00	0.00
4,100.00	0.00	0.00	4,062.37	-37.64	-430.28	53.01	0.00	0.00	0.00
4,105.63	0.00	0.00	4,068.00	-37.64	-430.28	53.01	0.00	0.00	0.00
<b>Sussex</b>									
4,200.00	0.00	0.00	4,162.37	-37.64	-430.28	53.01	0.00	0.00	0.00
4,300.00	0.00	0.00	4,262.37	-37.64	-430.28	53.01	0.00	0.00	0.00
4,400.00	0.00	0.00	4,362.37	-37.64	-430.28	53.01	0.00	0.00	0.00
4,500.00	0.00	0.00	4,462.37	-37.64	-430.28	53.01	0.00	0.00	0.00
4,600.00	0.00	0.00	4,562.37	-37.64	-430.28	53.01	0.00	0.00	0.00
4,700.00	0.00	0.00	4,662.37	-37.64	-430.28	53.01	0.00	0.00	0.00
4,800.00	0.00	0.00	4,762.37	-37.64	-430.28	53.01	0.00	0.00	0.00
4,900.00	0.00	0.00	4,862.37	-37.64	-430.28	53.01	0.00	0.00	0.00
5,000.00	0.00	0.00	4,962.37	-37.64	-430.28	53.01	0.00	0.00	0.00
5,100.00	0.00	0.00	5,062.37	-37.64	-430.28	53.01	0.00	0.00	0.00
5,200.00	0.00	0.00	5,162.37	-37.64	-430.28	53.01	0.00	0.00	0.00
5,300.00	0.00	0.00	5,262.37	-37.64	-430.28	53.01	0.00	0.00	0.00
5,400.00	0.00	0.00	5,362.37	-37.64	-430.28	53.01	0.00	0.00	0.00
5,500.00	0.00	0.00	5,462.37	-37.64	-430.28	53.01	0.00	0.00	0.00
5,600.00	0.00	0.00	5,562.37	-37.64	-430.28	53.01	0.00	0.00	0.00
5,700.00	0.00	0.00	5,662.37	-37.64	-430.28	53.01	0.00	0.00	0.00
5,800.00	0.00	0.00	5,762.37	-37.64	-430.28	53.01	0.00	0.00	0.00
5,900.00	0.00	0.00	5,862.37	-37.64	-430.28	53.01	0.00	0.00	0.00
6,000.00	0.00	0.00	5,962.37	-37.64	-430.28	53.01	0.00	0.00	0.00
6,100.00	0.00	0.00	6,062.37	-37.64	-430.28	53.01	0.00	0.00	0.00
6,200.00	0.00	0.00	6,162.37	-37.64	-430.28	53.01	0.00	0.00	0.00
6,300.00	0.00	0.00	6,262.37	-37.64	-430.28	53.01	0.00	0.00	0.00
6,400.00	0.00	0.00	6,362.37	-37.64	-430.28	53.01	0.00	0.00	0.00
6,500.00	0.00	0.00	6,462.37	-37.64	-430.28	53.01	0.00	0.00	0.00
6,552.06	0.00	0.00	6,514.43	-37.64	-430.28	53.01	0.00	0.00	0.00
<b>KOP @ 6552.06ft</b>									
6,600.00	4.31	182.05	6,562.32	-39.45	-430.34	54.82	9.00	9.00	-371.20
6,700.00	13.31	182.05	6,661.04	-54.75	-430.89	70.12	9.00	9.00	0.00
6,800.00	22.31	182.05	6,756.15	-85.29	-431.98	100.69	9.00	9.00	0.00
6,900.00	31.31	182.05	6,845.30	-130.32	-433.59	145.75	9.00	9.00	0.00
7,000.00	40.31	182.05	6,926.31	-188.74	-435.68	204.21	9.00	9.00	0.00
7,048.41	44.67	182.05	6,962.00	-221.42	-436.84	236.90	9.00	9.00	0.00
<b>Sharon Springs</b>									
7,100.00	49.31	182.05	6,997.18	-259.10	-438.19	274.61	9.00	9.00	0.00
<b>DLS = 9°/100'</b>									
7,200.00	58.31	182.05	7,056.16	-339.68	-441.07	355.24	9.00	9.00	0.00
7,211.29	59.33	182.05	7,062.00	-349.33	-441.41	364.90	9.00	9.00	0.00
<b>Niobrara</b>									
7,300.00	67.31	182.05	7,101.80	-428.49	-444.24	444.10	9.00	9.00	0.00
7,342.91	71.18	182.05	7,117.00	-468.58	-445.67	484.22	9.00	9.00	0.00
<b>Nio B</b>									
7,400.00	76.31	182.05	7,132.98	-523.33	-447.63	539.01	9.00	9.00	0.00
7,500.00	85.31	182.05	7,148.92	-621.89	-451.15	637.63	9.00	9.00	0.00
7,544.32	89.30	182.05	7,151.00	-666.12	-452.73	681.89	9.00	9.00	0.00
<b>End Build @ 7544.32ft - Top of Production</b>									
7,600.00	89.30	182.05	7,151.68	-721.76	-454.71	737.56	0.00	0.00	0.00
7,700.00	89.30	182.05	7,152.90	-821.69	-458.28	837.56	0.00	0.00	0.00
7,800.00	89.30	182.05	7,154.11	-921.62	-461.85	937.55	0.00	0.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well NEWBY STATE 36N-4HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 20' @ 4914.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 20' @ 4914.00usft (D Rig)
<b>Site:</b>	3N-68W-33 Newby 15-33HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	NEWBY STATE 36N-4HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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	89.30	182.05	7,155.33	-1,021.55	-465.42	1,037.54	0.00	0.00	0.00
8,000.00	89.30	182.05	7,156.55	-1,121.48	-468.99	1,137.54	0.00	0.00	0.00
8,100.00	89.30	182.05	7,157.76	-1,221.41	-472.56	1,237.53	0.00	0.00	0.00
8,200.00	89.30	182.05	7,158.98	-1,321.33	-476.13	1,337.52	0.00	0.00	0.00
8,300.00	89.30	182.05	7,160.19	-1,421.26	-479.70	1,437.51	0.00	0.00	0.00
8,400.00	89.30	182.05	7,161.41	-1,521.19	-483.27	1,537.51	0.00	0.00	0.00
8,500.00	89.30	182.05	7,162.63	-1,621.12	-486.84	1,637.50	0.00	0.00	0.00
8,600.00	89.30	182.05	7,163.84	-1,721.05	-490.40	1,737.49	0.00	0.00	0.00
8,700.00	89.30	182.05	7,165.06	-1,820.98	-493.97	1,837.48	0.00	0.00	0.00
8,800.00	89.30	182.05	7,166.28	-1,920.91	-497.54	1,937.48	0.00	0.00	0.00
8,900.00	89.30	182.05	7,167.49	-2,020.84	-501.11	2,037.47	0.00	0.00	0.00
9,000.00	89.30	182.05	7,168.71	-2,120.77	-504.68	2,137.46	0.00	0.00	0.00
9,100.00	89.30	182.05	7,169.92	-2,220.69	-508.25	2,237.45	0.00	0.00	0.00
9,200.00	89.30	182.05	7,171.14	-2,320.62	-511.82	2,337.45	0.00	0.00	0.00
9,300.00	89.30	182.05	7,172.36	-2,420.55	-515.39	2,437.44	0.00	0.00	0.00
9,400.00	89.30	182.05	7,173.57	-2,520.48	-518.96	2,537.43	0.00	0.00	0.00
9,500.00	89.30	182.05	7,174.79	-2,620.41	-522.53	2,637.42	0.00	0.00	0.00
9,600.00	89.30	182.05	7,176.01	-2,720.34	-526.10	2,737.42	0.00	0.00	0.00
9,700.00	89.30	182.05	7,177.22	-2,820.27	-529.66	2,837.41	0.00	0.00	0.00
9,800.00	89.30	182.05	7,178.44	-2,920.20	-533.23	2,937.40	0.00	0.00	0.00
9,900.00	89.30	182.05	7,179.65	-3,020.13	-536.80	3,037.39	0.00	0.00	0.00
10,000.00	89.30	182.05	7,180.87	-3,120.05	-540.37	3,137.39	0.00	0.00	0.00
10,092.87	89.30	182.05	7,182.00	-3,212.86	-543.69	3,230.25	0.00	0.00	0.00
Nio C									
10,100.00	89.30	182.05	7,182.09	-3,219.98	-543.94	3,237.38	0.00	0.00	0.00
10,200.00	89.30	182.05	7,183.30	-3,319.91	-547.51	3,337.37	0.00	0.00	0.00
10,300.00	89.30	182.05	7,184.52	-3,419.84	-551.08	3,437.37	0.00	0.00	0.00
10,400.00	89.30	182.05	7,185.74	-3,519.77	-554.65	3,537.36	0.00	0.00	0.00
10,500.00	89.30	182.05	7,186.95	-3,619.70	-558.22	3,637.35	0.00	0.00	0.00
10,600.00	89.30	182.05	7,188.17	-3,719.63	-561.79	3,737.34	0.00	0.00	0.00
10,700.00	89.30	182.05	7,189.38	-3,819.56	-565.36	3,837.34	0.00	0.00	0.00
10,800.00	89.30	182.05	7,190.60	-3,919.49	-568.92	3,937.33	0.00	0.00	0.00
10,900.00	89.30	182.05	7,191.82	-4,019.41	-572.49	4,037.32	0.00	0.00	0.00
11,000.00	89.30	182.05	7,193.03	-4,119.34	-576.06	4,137.31	0.00	0.00	0.00
11,100.00	89.30	182.05	7,194.25	-4,219.27	-579.63	4,237.31	0.00	0.00	0.00
11,200.00	89.30	182.05	7,195.47	-4,319.20	-583.20	4,337.30	0.00	0.00	0.00
11,300.00	89.30	182.05	7,196.68	-4,419.13	-586.77	4,437.29	0.00	0.00	0.00
11,400.00	89.30	182.05	7,197.90	-4,519.06	-590.34	4,537.28	0.00	0.00	0.00
11,500.00	89.30	182.05	7,199.11	-4,618.99	-593.91	4,637.28	0.00	0.00	0.00
11,600.00	89.30	182.05	7,200.33	-4,718.92	-597.48	4,737.27	0.00	0.00	0.00
11,700.00	89.30	182.05	7,201.55	-4,818.85	-601.05	4,837.26	0.00	0.00	0.00
11,800.00	89.30	182.05	7,202.76	-4,918.77	-604.61	4,937.25	0.00	0.00	0.00
11,900.00	89.30	182.05	7,203.98	-5,018.70	-608.18	5,037.25	0.00	0.00	0.00
12,000.00	89.30	182.05	7,205.20	-5,118.63	-611.75	5,137.24	0.00	0.00	0.00
12,100.00	89.30	182.05	7,206.41	-5,218.56	-615.32	5,237.23	0.00	0.00	0.00
12,200.00	89.30	182.05	7,207.63	-5,318.49	-618.89	5,337.22	0.00	0.00	0.00
12,300.00	89.30	182.05	7,208.84	-5,418.42	-622.46	5,437.22	0.00	0.00	0.00
12,400.00	89.30	182.05	7,210.06	-5,518.35	-626.03	5,537.21	0.00	0.00	0.00
12,500.00	89.30	182.05	7,211.28	-5,618.28	-629.60	5,637.20	0.00	0.00	0.00
12,600.00	89.30	182.05	7,212.49	-5,718.21	-633.17	5,737.20	0.00	0.00	0.00
12,700.00	89.30	182.05	7,213.71	-5,818.13	-636.74	5,837.19	0.00	0.00	0.00
12,800.00	89.30	182.05	7,214.93	-5,918.06	-640.31	5,937.18	0.00	0.00	0.00
12,900.00	89.30	182.05	7,216.14	-6,017.99	-643.87	6,037.17	0.00	0.00	0.00
13,000.00	89.30	182.05	7,217.36	-6,117.92	-647.44	6,137.17	0.00	0.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well NEWBY STATE 36N-4HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 20' @ 4914.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 20' @ 4914.00usft (D Rig)
<b>Site:</b>	3N-68W-33 Newby 15-33HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	NEWBY STATE 36N-4HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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)
13,100.00	89.30	182.05	7,218.57	-6,217.85	-651.01	6,237.16	0.00	0.00	0.00
13,200.00	89.30	182.05	7,219.79	-6,317.78	-654.58	6,337.15	0.00	0.00	0.00
13,300.00	89.30	182.05	7,221.01	-6,417.71	-658.15	6,437.14	0.00	0.00	0.00
13,400.00	89.30	182.05	7,222.22	-6,517.64	-661.72	6,537.14	0.00	0.00	0.00
13,500.00	89.30	182.05	7,223.44	-6,617.57	-665.29	6,637.13	0.00	0.00	0.00
13,546.07	89.30	182.05	7,224.00	-6,663.60	-666.93	6,683.19	0.00	0.00	0.00
TD Well @ 13546.07ft									

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,819.87	1,800.00	9 5/8"	9-5/8	13-1/2
7,544.32	7,151.00	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			
3,586.63	3,549.00	Parkman			
4,105.63	4,068.00	Sussex			
7,048.41	6,962.00	Sharon Springs			
7,211.29	7,062.00	Niobrara			
7,342.91	7,117.00	Nio B			
10,092.87	7,182.00	Nio C			

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
983.33	978.83	-6.12	-69.91	End Nudge @ 983.33ft
2,603.33	2,569.07	-33.06	-377.85	Begin Drop @ 2603.33ft
3,153.33	3,115.70	-37.64	-430.28	End Drop @ 3153.33ft
6,552.06	6,514.43	-37.64	-430.28	KOP @ 6552.06ft
7,100.00	6,997.18	-259.10	-438.19	DLS = 9°/100'
7,544.32	7,151.00	-666.12	-452.73	End Build @ 7544.32ft
13,546.07	7,224.00	-6,663.60	-666.93	TD Well @ 13546.07ft