

# **US ROCKIES WATTENBERG PLANNING**

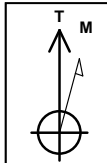
**WELD-NAD83-UTMFT13N  
3N-65W-29 RW 35-29HZ Pad  
RW 30N-29HZ**

**Plan A**

**Plan: Permit Rev-1**

## **Standard Planning Report**

**11 January, 2017**



Azimuths to True North  
Magnetic North: 8.06°

Magnetic Field  
Strength: 52443.6snT  
Dip Angle: 66.70°  
Date: 1/4/2017  
Model: IGRF2010

SITE: 3N-65W-29 RW 35-29HZ Pad

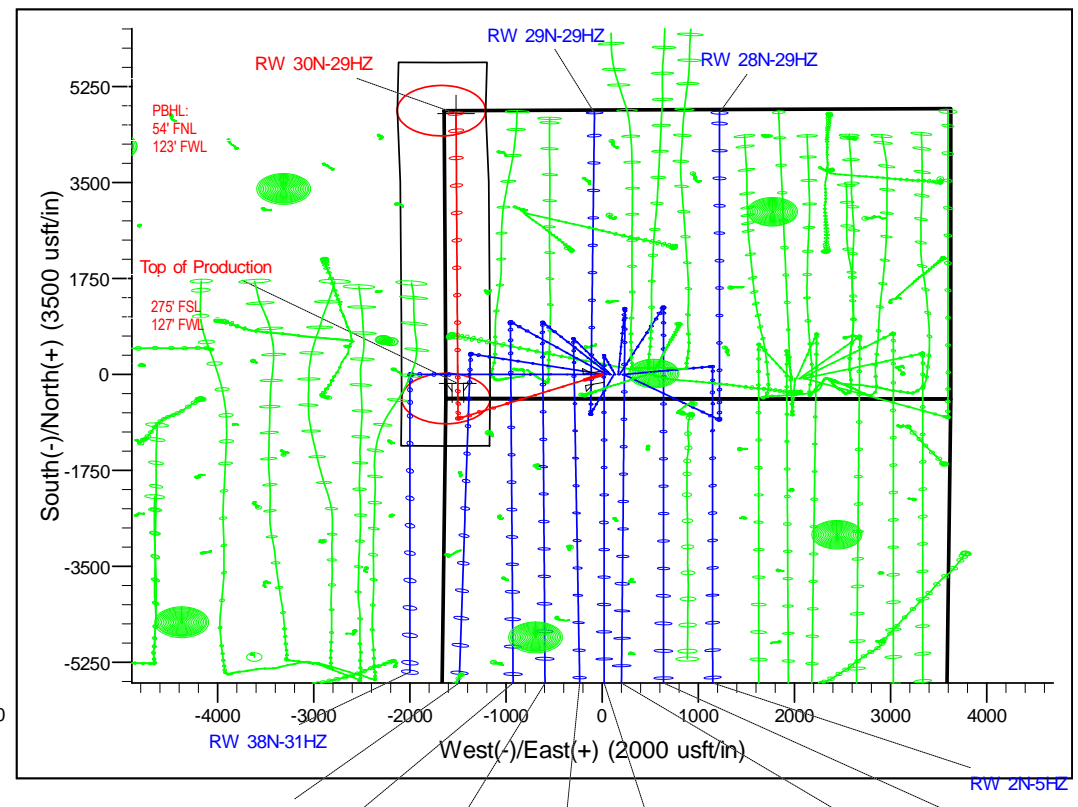
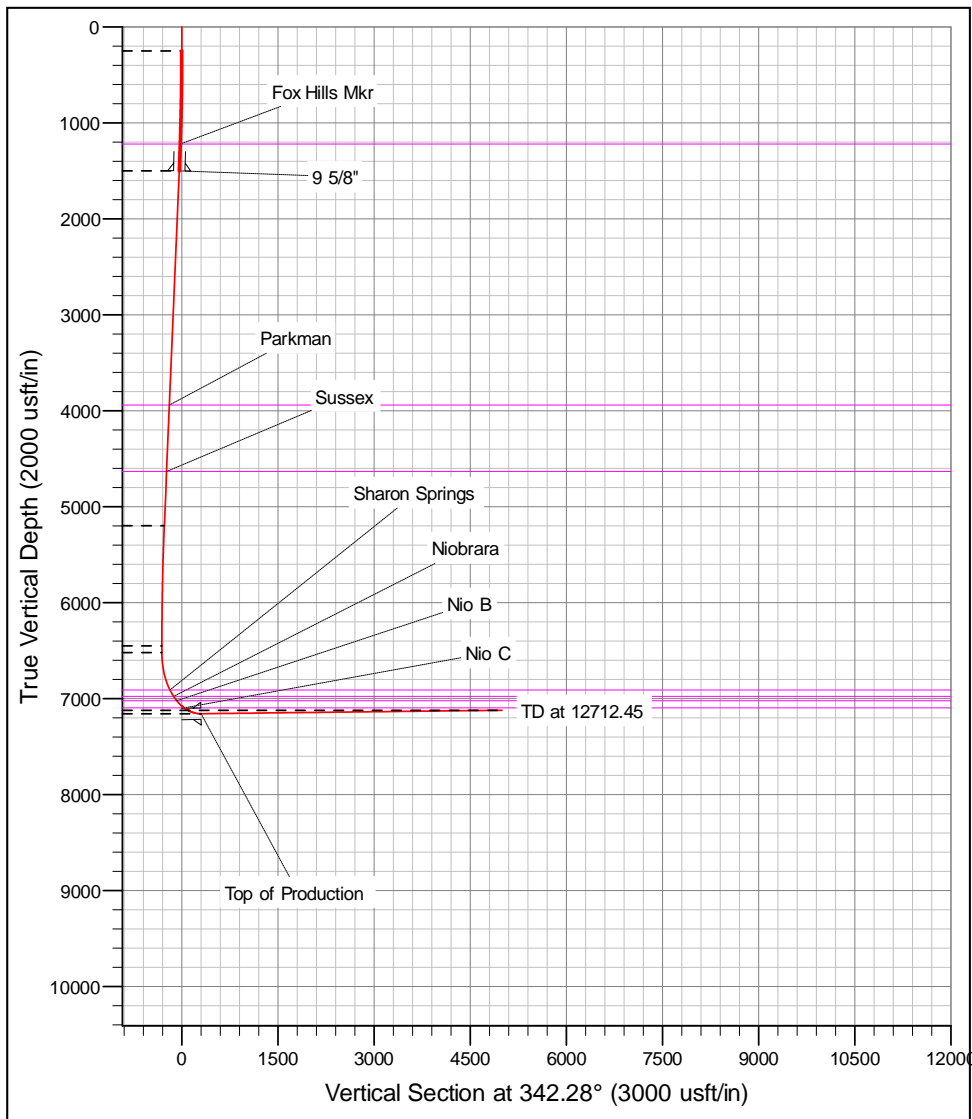
Well: RW 30N-29HZ  
Wellbore: Plan A  
Design: Permit Rev-1

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1220.00	1230.74	Fox Hills Mkr
3940.00	4105.88	Parkman
4633.00	4839.33	Sussex
6910.00	7202.25	Sharon Springs
6977.00	7291.99	Niobrara
7022.00	7360.28	Nio B
7097.00	7503.15	Nio C

WELL DETAILS: RW 30N-29HZ						
+N/-S	+E/-W	GL: 4885.00	RKB @ 4902.00usft (D Rig)			
0.00	0.00	Northing	Easting	Latitude	Longitude	Slot
		14596214.31	1726741.27	40.190392	-104.690894	

SECTION DETAILS							
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSect
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
1524.48	19.12	241.77	1500.96	-99.63	-185.60	1.50	-38.42
5438.40	19.12	241.77	5199.04	-705.89	-1314.99	0.00	-272.17
6712.88	0.00	0.00	6450.00	-805.52	-1500.59	1.50	-310.58
6784.37	0.00	0.00	6521.49	-805.52	-1500.59	0.00	-310.58
7789.04	90.42	359.79	7158.09	-164.24	-1502.90	9.00	300.98
12712.45	90.42	359.79	7122.00	4759.01	-1520.59	0.00	4996.04

DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude
RW 30N-29HZ_PBHL	7122.00	4759.01	-1520.59	14600968.00	1725204.11	40.203460



# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 30N-29HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4902.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4902.00usft (D Rig)
<b>Site:</b>	3N-65W-29 RW 35-29HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	RW 30N-29HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

<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)		

<b>Site</b>	3N-65W-29 RW 35-29HZ Pad				
<b>Site Position:</b>		<b>Northing:</b>	14,596,214.62 usft	<b>Latitude:</b>	40.190393
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,726,726.18 usft	<b>Longitude:</b>	-104.690948
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.20 °

<b>Well</b>	RW 30N-29HZ					
<b>Well Position</b>	<b>+N/-S</b>	-0.36 usft	<b>Northing:</b>	14,596,214.30 usft	<b>Latitude:</b>	40.190392
	<b>+E/-W</b>	15.08 usft	<b>Easting:</b>	1,726,741.27 usft	<b>Longitude:</b>	-104.690894
<b>Position Uncertainty</b>		3.28 usft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	4,885.00 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	1/4/2017	8.06	66.70	52,443.61959912

<b>Design</b>	Permit Rev-1			
<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	342.28

<b>Plan Survey Tool Program</b>	Date	1/11/2017			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	12,712.45	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWI Fixed:v2:crustal field declinat	

<b>Plan Sections</b>										
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	
1,524.48	19.12	241.77	1,500.96	-99.63	-185.60	1.50	1.50	0.00	241.77	
5,438.40	19.12	241.77	5,199.04	-705.89	-1,314.99	0.00	0.00	0.00	0.00	
6,712.88	0.00	0.00	6,450.00	-805.52	-1,500.59	1.50	-1.50	0.00	180.00	
6,784.37	0.00	0.00	6,521.49	-805.52	-1,500.59	0.00	0.00	0.00	0.00	
7,789.04	90.42	359.79	7,158.09	-164.24	-1,502.90	9.00	9.00	0.00	359.79	
12,712.45	90.42	359.79	7,122.00	4,759.01	-1,520.59	0.00	0.00	0.00	0.00	RW 30N-29HZ_PBI

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 30N-29HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4902.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4902.00usft (D Rig)
<b>Site:</b>	3N-65W-29 RW 35-29HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	RW 30N-29HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

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
300.00	0.75	241.77	300.00	-0.15	-0.29	-0.06	1.50	1.50	0.00
400.00	2.25	241.77	399.96	-1.39	-2.59	-0.54	1.50	1.50	0.00
500.00	3.75	241.77	499.82	-3.87	-7.21	-1.49	1.50	1.50	0.00
600.00	5.25	241.77	599.51	-7.58	-14.12	-2.92	1.50	1.50	0.00
700.00	6.75	241.77	698.96	-12.52	-23.33	-4.83	1.50	1.50	0.00
800.00	8.25	241.77	798.10	-18.70	-34.83	-7.21	1.50	1.50	0.00
900.00	9.75	241.77	896.87	-26.09	-48.61	-10.06	1.50	1.50	0.00
1,000.00	11.25	241.77	995.19	-34.71	-64.67	-13.38	1.50	1.50	0.00
1,100.00	12.75	241.77	1,093.00	-44.55	-82.98	-17.18	1.50	1.50	0.00
1,200.00	14.25	241.77	1,190.24	-55.59	-103.55	-21.43	1.50	1.50	0.00
1,230.74	14.71	241.77	1,220.00	-59.22	-110.33	-22.83	1.50	1.50	0.00
<b>Fox Hills Mkr</b>									
1,300.00	15.75	241.77	1,286.83	-67.83	-126.36	-26.15	1.50	1.50	0.00
1,400.00	17.25	241.77	1,382.71	-81.26	-151.38	-31.33	1.50	1.50	0.00
1,500.00	18.75	241.77	1,477.81	-95.88	-178.61	-36.97	1.50	1.50	0.00
1,523.46	19.10	241.77	1,500.00	-99.47	-185.31	-38.35	1.50	1.50	0.00
<b>9 5/8"</b>									
1,524.48	19.12	241.77	1,500.96	-99.63	-185.60	-38.42	1.50	1.50	0.00
1,600.00	19.12	241.77	1,572.32	-111.33	-207.40	-42.93	0.00	0.00	0.00
1,700.00	19.12	241.77	1,666.80	-126.82	-236.25	-48.90	0.00	0.00	0.00
1,800.00	19.12	241.77	1,761.29	-142.31	-265.11	-54.87	0.00	0.00	0.00
1,900.00	19.12	241.77	1,855.77	-157.80	-293.96	-60.84	0.00	0.00	0.00
2,000.00	19.12	241.77	1,950.26	-173.29	-322.82	-66.82	0.00	0.00	0.00
2,100.00	19.12	241.77	2,044.74	-188.78	-351.67	-72.79	0.00	0.00	0.00
2,200.00	19.12	241.77	2,139.23	-204.27	-380.53	-78.76	0.00	0.00	0.00
2,300.00	19.12	241.77	2,233.71	-219.76	-409.38	-84.73	0.00	0.00	0.00
2,400.00	19.12	241.77	2,328.20	-235.25	-438.24	-90.70	0.00	0.00	0.00
2,500.00	19.12	241.77	2,422.68	-250.74	-467.10	-96.68	0.00	0.00	0.00
2,600.00	19.12	241.77	2,517.17	-266.23	-495.95	-102.65	0.00	0.00	0.00
2,700.00	19.12	241.77	2,611.65	-281.72	-524.81	-108.62	0.00	0.00	0.00
2,800.00	19.12	241.77	2,706.14	-297.21	-553.66	-114.59	0.00	0.00	0.00
2,900.00	19.12	241.77	2,800.62	-312.70	-582.52	-120.57	0.00	0.00	0.00
3,000.00	19.12	241.77	2,895.11	-328.19	-611.37	-126.54	0.00	0.00	0.00
3,100.00	19.12	241.77	2,989.60	-343.68	-640.23	-132.51	0.00	0.00	0.00
3,200.00	19.12	241.77	3,084.08	-359.17	-669.08	-138.48	0.00	0.00	0.00
3,300.00	19.12	241.77	3,178.57	-374.66	-697.94	-144.46	0.00	0.00	0.00
3,400.00	19.12	241.77	3,273.05	-390.15	-726.79	-150.43	0.00	0.00	0.00
3,500.00	19.12	241.77	3,367.54	-405.63	-755.65	-156.40	0.00	0.00	0.00
3,600.00	19.12	241.77	3,462.02	-421.12	-784.51	-162.37	0.00	0.00	0.00
3,700.00	19.12	241.77	3,556.51	-436.61	-813.36	-168.35	0.00	0.00	0.00
3,800.00	19.12	241.77	3,650.99	-452.10	-842.22	-174.32	0.00	0.00	0.00
3,900.00	19.12	241.77	3,745.48	-467.59	-871.07	-180.29	0.00	0.00	0.00
4,000.00	19.12	241.77	3,839.96	-483.08	-899.93	-186.26	0.00	0.00	0.00
4,100.00	19.12	241.77	3,934.45	-498.57	-928.78	-192.23	0.00	0.00	0.00
4,105.88	19.12	241.77	3,940.00	-499.48	-930.48	-192.59	0.00	0.00	0.00
<b>Parkman</b>									
4,200.00	19.12	241.77	4,028.93	-514.06	-957.64	-198.21	0.00	0.00	0.00
4,300.00	19.12	241.77	4,123.42	-529.55	-986.49	-204.18	0.00	0.00	0.00
4,400.00	19.12	241.77	4,217.90	-545.04	-1,015.35	-210.15	0.00	0.00	0.00

## Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 30N-29HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4902.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4902.00usft (D Rig)
<b>Site:</b>	3N-65W-29 RW 35-29HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	RW 30N-29HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

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)	
4,500.00	19.12	241.77	4,312.39	-560.53	-1,044.21	-216.12	0.00	0.00	0.00	
4,600.00	19.12	241.77	4,406.87	-576.02	-1,073.06	-222.10	0.00	0.00	0.00	
4,700.00	19.12	241.77	4,501.36	-591.51	-1,101.92	-228.07	0.00	0.00	0.00	
4,800.00	19.12	241.77	4,595.84	-607.00	-1,130.77	-234.04	0.00	0.00	0.00	
4,839.33	19.12	241.77	4,633.00	-613.09	-1,142.12	-236.39	0.00	0.00	0.00	
<b>Sussex</b>										
4,900.00	19.12	241.77	4,690.33	-622.49	-1,159.63	-240.01	0.00	0.00	0.00	
5,000.00	19.12	241.77	4,784.81	-637.98	-1,188.48	-245.99	0.00	0.00	0.00	
5,100.00	19.12	241.77	4,879.30	-653.47	-1,217.34	-251.96	0.00	0.00	0.00	
5,200.00	19.12	241.77	4,973.78	-668.96	-1,246.19	-257.93	0.00	0.00	0.00	
5,300.00	19.12	241.77	5,068.27	-684.45	-1,275.05	-263.90	0.00	0.00	0.00	
5,400.00	19.12	241.77	5,162.75	-699.94	-1,303.90	-269.88	0.00	0.00	0.00	
5,438.40	19.12	241.77	5,199.04	-705.89	-1,314.99	-272.17	0.00	0.00	0.00	
5,500.00	18.19	241.77	5,257.40	-715.21	-1,332.35	-275.76	1.50	-1.50	0.00	
5,600.00	16.69	241.77	5,352.80	-729.38	-1,358.76	-281.23	1.50	-1.50	0.00	
5,700.00	15.19	241.77	5,448.95	-742.37	-1,382.96	-286.24	1.50	-1.50	0.00	
5,800.00	13.69	241.77	5,545.78	-754.17	-1,404.93	-290.79	1.50	-1.50	0.00	
5,900.00	12.19	241.77	5,643.24	-764.76	-1,424.67	-294.87	1.50	-1.50	0.00	
6,000.00	10.69	241.77	5,741.25	-774.15	-1,442.15	-298.49	1.50	-1.50	0.00	
6,100.00	9.19	241.77	5,839.74	-782.31	-1,457.36	-301.64	1.50	-1.50	0.00	
6,200.00	7.69	241.77	5,938.66	-789.26	-1,470.30	-304.31	1.50	-1.50	0.00	
6,300.00	6.19	241.77	6,037.92	-794.98	-1,480.95	-306.52	1.50	-1.50	0.00	
6,400.00	4.69	241.77	6,137.47	-799.46	-1,489.31	-308.25	1.50	-1.50	0.00	
6,500.00	3.19	241.77	6,237.23	-802.72	-1,495.36	-309.50	1.50	-1.50	0.00	
6,600.00	1.69	241.77	6,337.13	-804.73	-1,499.12	-310.28	1.50	-1.50	0.00	
6,700.00	0.19	241.77	6,437.12	-805.51	-1,500.57	-310.58	1.50	-1.50	0.00	
6,712.88	0.00	0.00	6,450.00	-805.52	-1,500.59	-310.58	1.50	-1.50	0.00	
6,784.37	0.00	0.00	6,521.49	-805.52	-1,500.59	-310.58	0.00	0.00	0.00	
6,800.00	1.41	359.79	6,537.12	-805.33	-1,500.59	-310.40	9.00	9.00	0.00	
6,900.00	10.41	359.79	6,636.48	-795.05	-1,500.63	-300.60	9.00	9.00	0.00	
7,000.00	19.41	359.79	6,733.02	-769.35	-1,500.72	-276.09	9.00	9.00	0.00	
7,100.00	28.41	359.79	6,824.35	-728.87	-1,500.87	-237.48	9.00	9.00	0.00	
7,200.00	37.41	359.79	6,908.21	-674.60	-1,501.06	-185.73	9.00	9.00	0.00	
7,202.25	37.61	359.79	6,910.00	-673.23	-1,501.07	-184.42	9.00	9.00	0.00	
<b>Sharon Springs</b>										
7,291.99	45.69	359.79	6,977.00	-613.64	-1,501.28	-127.60	9.00	9.00	0.00	
<b>Niobrara</b>										
7,300.00	46.41	359.79	6,982.56	-607.87	-1,501.30	-122.10	9.00	9.00	0.00	
7,360.28	51.83	359.79	7,022.00	-562.31	-1,501.46	-78.65	9.00	9.00	0.00	
<b>Nio B</b>										
7,400.00	55.41	359.79	7,045.55	-530.34	-1,501.58	-48.16	9.00	9.00	0.00	
7,500.00	64.41	359.79	7,095.64	-443.91	-1,501.89	34.27	9.00	9.00	0.00	
7,503.16	64.69	359.79	7,097.00	-441.06	-1,501.90	36.98	9.00	9.00	0.00	
<b>Nio C</b>										
7,600.00	73.41	359.79	7,131.60	-350.71	-1,502.23	123.15	9.00	9.00	0.00	
7,700.00	82.41	359.79	7,152.52	-253.03	-1,502.58	216.30	9.00	9.00	0.00	
7,789.04	90.42	359.79	7,158.09	-164.23	-1,502.90	300.98	9.00	9.00	0.00	
<b>Top of Production - RW 30N-29HZ_PHL</b>										
7,800.00	90.42	359.79	7,158.01	-153.27	-1,502.93	311.43	0.00	0.00	0.00	
7,900.00	90.42	359.79	7,157.28	-53.28	-1,503.29	406.79	0.00	0.00	0.00	
8,000.00	90.42	359.79	7,156.54	46.72	-1,503.65	502.15	0.00	0.00	0.00	
8,100.00	90.42	359.79	7,155.81	146.72	-1,504.01	597.52	0.00	0.00	0.00	
8,200.00	90.42	359.79	7,155.08	246.71	-1,504.37	692.88	0.00	0.00	0.00	

## Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 30N-29HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4902.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4902.00usft (D Rig)
<b>Site:</b>	3N-65W-29 RW 35-29HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	RW 30N-29HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

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)	
8,300.00	90.42	359.79	7,154.34	346.71	-1,504.73	788.24	0.00	0.00	0.00	
8,400.00	90.42	359.79	7,153.61	446.71	-1,505.09	883.60	0.00	0.00	0.00	
8,500.00	90.42	359.79	7,152.88	546.70	-1,505.45	978.96	0.00	0.00	0.00	
8,600.00	90.42	359.79	7,152.15	646.70	-1,505.81	1,074.33	0.00	0.00	0.00	
8,700.00	90.42	359.79	7,151.41	746.70	-1,506.17	1,169.69	0.00	0.00	0.00	
8,800.00	90.42	359.79	7,150.68	846.69	-1,506.53	1,265.05	0.00	0.00	0.00	
8,900.00	90.42	359.79	7,149.95	946.69	-1,506.89	1,360.41	0.00	0.00	0.00	
9,000.00	90.42	359.79	7,149.21	1,046.69	-1,507.25	1,455.77	0.00	0.00	0.00	
9,100.00	90.42	359.79	7,148.48	1,146.68	-1,507.61	1,551.14	0.00	0.00	0.00	
9,200.00	90.42	359.79	7,147.75	1,246.68	-1,507.97	1,646.50	0.00	0.00	0.00	
9,300.00	90.42	359.79	7,147.01	1,346.68	-1,508.33	1,741.86	0.00	0.00	0.00	
9,400.00	90.42	359.79	7,146.28	1,446.67	-1,508.69	1,837.22	0.00	0.00	0.00	
9,500.00	90.42	359.79	7,145.55	1,546.67	-1,509.05	1,932.58	0.00	0.00	0.00	
9,600.00	90.42	359.79	7,144.82	1,646.67	-1,509.41	2,027.95	0.00	0.00	0.00	
9,700.00	90.42	359.79	7,144.08	1,746.66	-1,509.77	2,123.31	0.00	0.00	0.00	
9,800.00	90.42	359.79	7,143.35	1,846.66	-1,510.12	2,218.67	0.00	0.00	0.00	
9,900.00	90.42	359.79	7,142.62	1,946.66	-1,510.48	2,314.03	0.00	0.00	0.00	
10,000.00	90.42	359.79	7,141.88	2,046.65	-1,510.84	2,409.39	0.00	0.00	0.00	
10,100.00	90.42	359.79	7,141.15	2,146.65	-1,511.20	2,504.76	0.00	0.00	0.00	
10,200.00	90.42	359.79	7,140.42	2,246.65	-1,511.56	2,600.12	0.00	0.00	0.00	
10,300.00	90.42	359.79	7,139.68	2,346.64	-1,511.92	2,695.48	0.00	0.00	0.00	
10,400.00	90.42	359.79	7,138.95	2,446.64	-1,512.28	2,790.84	0.00	0.00	0.00	
10,500.00	90.42	359.79	7,138.22	2,546.64	-1,512.64	2,886.20	0.00	0.00	0.00	
10,600.00	90.42	359.79	7,137.49	2,646.63	-1,513.00	2,981.57	0.00	0.00	0.00	
10,700.00	90.42	359.79	7,136.75	2,746.63	-1,513.36	3,076.93	0.00	0.00	0.00	
10,800.00	90.42	359.79	7,136.02	2,846.63	-1,513.72	3,172.29	0.00	0.00	0.00	
10,900.00	90.42	359.79	7,135.29	2,946.62	-1,514.08	3,267.65	0.00	0.00	0.00	
11,000.00	90.42	359.79	7,134.55	3,046.62	-1,514.44	3,363.01	0.00	0.00	0.00	
11,100.00	90.42	359.79	7,133.82	3,146.62	-1,514.80	3,458.37	0.00	0.00	0.00	
11,200.00	90.42	359.79	7,133.09	3,246.61	-1,515.16	3,553.74	0.00	0.00	0.00	
11,300.00	90.42	359.79	7,132.35	3,346.61	-1,515.52	3,649.10	0.00	0.00	0.00	
11,400.00	90.42	359.79	7,131.62	3,446.61	-1,515.88	3,744.46	0.00	0.00	0.00	
11,500.00	90.42	359.79	7,130.89	3,546.60	-1,516.24	3,839.82	0.00	0.00	0.00	
11,600.00	90.42	359.79	7,130.15	3,646.60	-1,516.60	3,935.18	0.00	0.00	0.00	
11,700.00	90.42	359.79	7,129.42	3,746.60	-1,516.96	4,030.55	0.00	0.00	0.00	
11,800.00	90.42	359.79	7,128.69	3,846.59	-1,517.31	4,125.91	0.00	0.00	0.00	
11,900.00	90.42	359.79	7,127.96	3,946.59	-1,517.67	4,221.27	0.00	0.00	0.00	
12,000.00	90.42	359.79	7,127.22	4,046.59	-1,518.03	4,316.63	0.00	0.00	0.00	
12,100.00	90.42	359.79	7,126.49	4,146.58	-1,518.39	4,411.99	0.00	0.00	0.00	
12,200.00	90.42	359.79	7,125.76	4,246.58	-1,518.75	4,507.36	0.00	0.00	0.00	
12,300.00	90.42	359.79	7,125.02	4,346.58	-1,519.11	4,602.72	0.00	0.00	0.00	
12,400.00	90.42	359.79	7,124.29	4,446.57	-1,519.47	4,698.08	0.00	0.00	0.00	
12,500.00	90.42	359.79	7,123.56	4,546.57	-1,519.83	4,793.44	0.00	0.00	0.00	
12,600.00	90.42	359.79	7,122.82	4,646.57	-1,520.19	4,888.80	0.00	0.00	0.00	
12,700.00	90.42	359.79	7,122.09	4,746.56	-1,520.55	4,984.17	0.00	0.00	0.00	
12,712.45	90.42	359.79	7,122.00	4,759.01	-1,520.59	4,996.04	0.00	0.00	0.00	
<b>RW 30N-29HZ_PBHL</b>										

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 30N-29HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4902.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4902.00usft (D Rig)
<b>Site:</b>	3N-65W-29 RW 35-29HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	RW 30N-29HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-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									
RW 30N-29HZ_PBHL - plan hits target center - Point	0.00	0.00	7,122.00	4,759.01	-1,520.59	14,600,967.99	1,725,204.11	40.203461	-104.696340
RW 30N-29HZ_PHL - plan hits target center - Point	0.00	0.00	7,158.09	-164.23	-1,502.90	14,596,044.84	1,725,238.95	40.189941	-104.696276

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,523.46	1,500.00	9 5/8"	9-5/8	13-1/2	
7,789.04	7,158.09	Top of Production	5-1/2	8-1/2	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,230.74	1,220.00	Fox Hills Mkr				
4,105.88	3,940.00	Parkman				
4,839.33	4,633.00	Sussex				
7,202.25	6,910.00	Sharon Springs				
7,291.99	6,977.00	Niobrara				
7,360.28	7,022.00	Nio B				
7,503.16	7,097.00	Nio C				