

# **US ROCKIES WATTENBERG PLANNING**

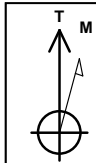
**WELD-NAD83-UTMFT13N  
3N-65W-29 RW 35-29HZ Pad  
RW 28N-29HZ**

**Plan A**

**Plan: Permit Rev-1**

## **Standard Planning Report**

**11 January, 2017**



Azimuths to True North  
Magnetic North: 8.06°  
  
Magnetic Field  
Strength: 52443.7snT  
Dip Angle: 66.70°  
Date: 1/4/2017  
Model: IGRF2010

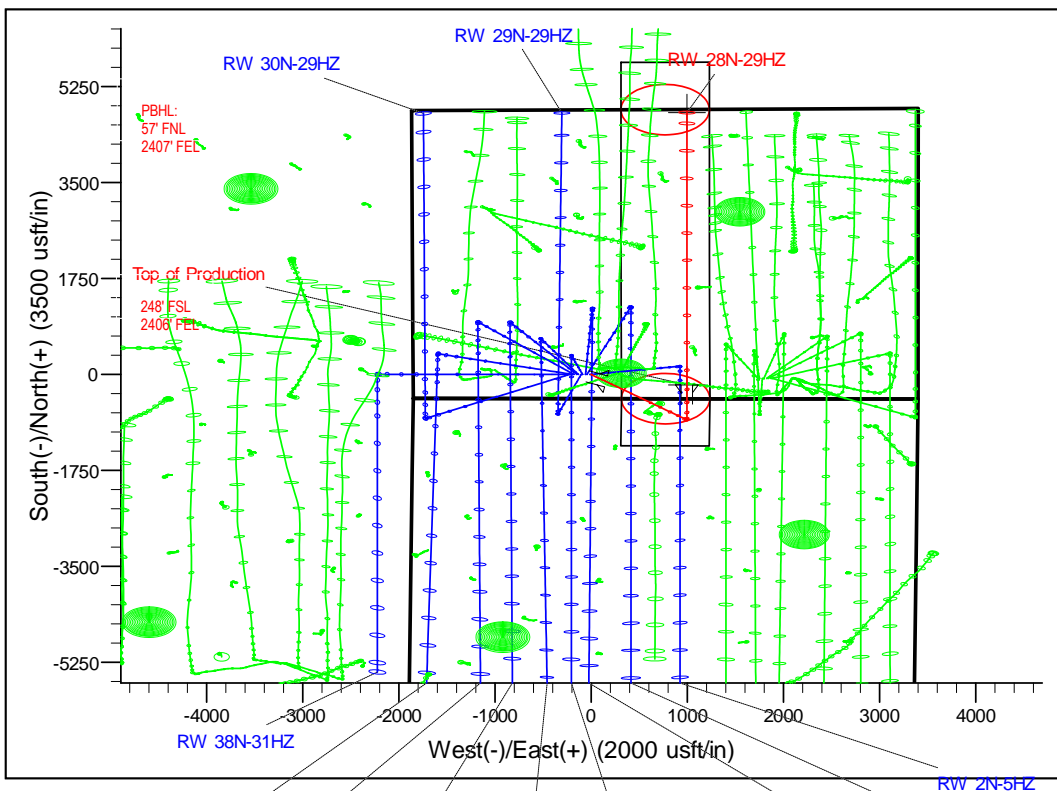
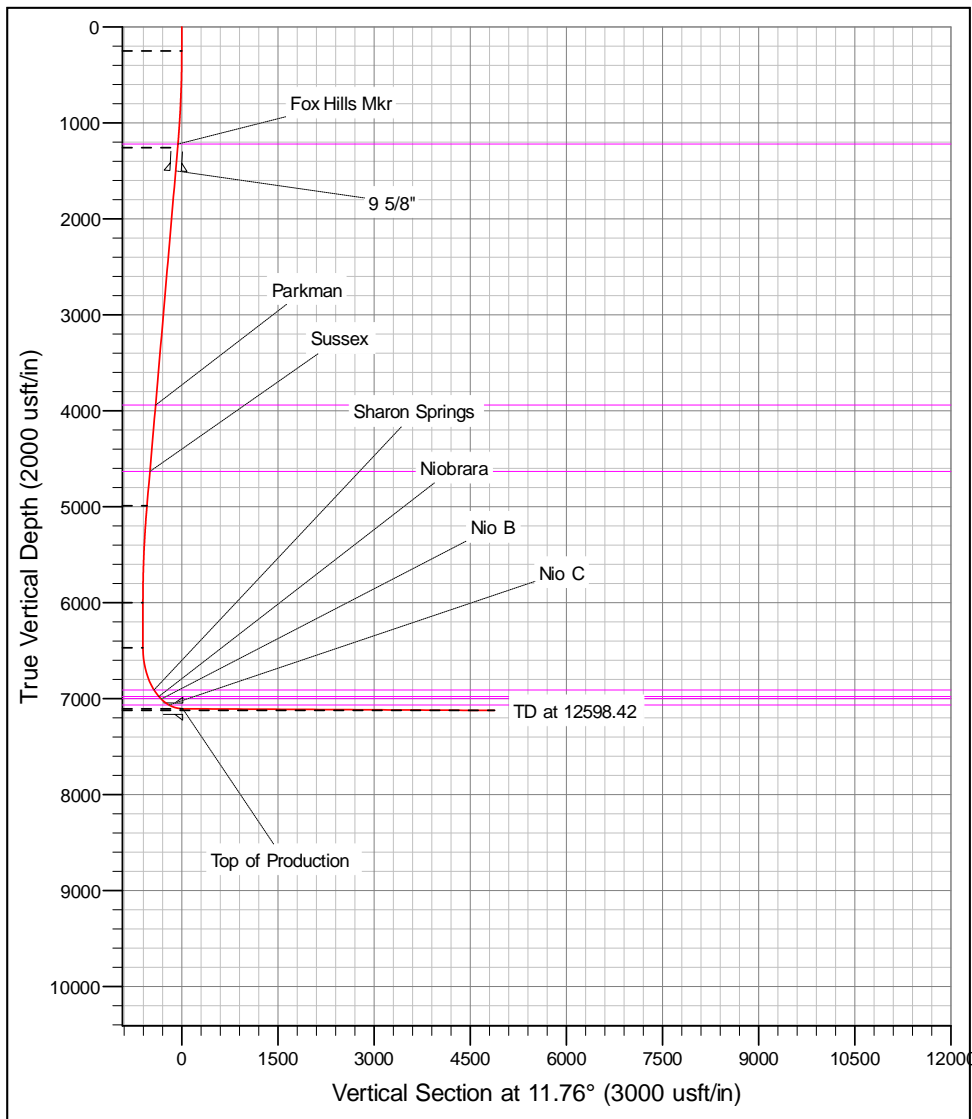
SITE: 3N-65W-29 RW 35-29HZ Pad  
  
Well: RW 28N-29HZ  
Wellbore: Plan A  
Design: Permit Rev-1

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1220.00	1230.74	Fox Hills Mkr
3940.00	4050.76	Parkman
4633.00	4769.25	Sussex
6911.00	7118.70	Sharon Springs
6973.00	7219.70	Niobrara
7005.00	7266.84	Nio B
7068.00	7408.58	Nio C

WELL DETAILS: RW 28N-29HZ						
+N/-S	+E/-W	GL: 4885.00	RKB @ 4902.00usft (D Rig)			
		Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	14596213.27	1726966.09	40.190387	-104.690089	

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
1270.62	15.31	129.71	1258.52	-86.61	104.27	1.50	-63.54
5140.92	15.31	129.71	4991.48	-739.53	890.34	0.00	-542.53
6161.54	0.00	0.00	6000.00	-826.14	994.61	1.50	-606.07
6631.58	0.00	0.00	6470.04	-826.14	994.61	0.00	-606.07
7629.36	89.80	0.00	7106.65	-191.74	994.61	9.00	15.01
12598.42	89.80	0.00	7124.00	4777.29	994.61	0.00	4879.73

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
RW 28N-29HZ_PBHL	7124.00	4777.29	994.61	14600994.00	1727944.02	40.203506	-104.686527



# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 28N-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 28N-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>From:</b>	Lat/Long	<b>Easting:</b>	1,726,726.18 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	40.190393
		<b>Longitude:</b>	-104.690948
		<b>Grid Convergence:</b>	0.20 °

<b>Well</b>	RW 28N-29HZ					
<b>Well Position</b>	<b>+N-S</b>	-2.18 usft	<b>Northing:</b>	14,596,213.27 usft	<b>Latitude:</b>	40.190387
	<b>+E/-W</b>	239.90 usft	<b>Easting:</b>	1,726,966.09 usft	<b>Longitude:</b>	-104.690089
<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	52,443.69884939

<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	11.76

<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	12,598.42	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	
1,270.62	15.31	129.71	1,258.52	-86.61	104.27	1.50	1.50	0.00	129.71	
5,140.92	15.31	129.71	4,991.48	-739.53	890.34	0.00	0.00	0.00	0.00	
6,161.54	0.00	0.00	6,000.00	-826.14	994.61	1.50	-1.50	0.00	180.00	
6,631.58	0.00	0.00	6,470.04	-826.14	994.61	0.00	0.00	0.00	0.00	
7,629.36	89.80	0.00	7,106.65	-191.74	994.61	9.00	9.00	0.00	0.00	
12,598.42	89.80	0.00	7,124.00	4,777.29	994.61	0.00	0.00	0.00	0.00	RW 28N-29HZ_PBI

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 28N-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 28N-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	129.71	300.00	-0.21	0.25	-0.15	1.50	1.50	0.00
400.00	2.25	129.71	399.96	-1.88	2.27	-1.38	1.50	1.50	0.00
500.00	3.75	129.71	499.82	-5.23	6.29	-3.83	1.50	1.50	0.00
600.00	5.25	129.71	599.51	-10.24	12.33	-7.51	1.50	1.50	0.00
700.00	6.75	129.71	698.96	-16.92	20.37	-12.41	1.50	1.50	0.00
800.00	8.25	129.71	798.10	-25.26	30.41	-18.53	1.50	1.50	0.00
900.00	9.75	129.71	896.87	-35.25	42.44	-25.86	1.50	1.50	0.00
1,000.00	11.25	129.71	995.19	-46.90	56.46	-34.40	1.50	1.50	0.00
1,100.00	12.75	129.71	1,093.00	-60.18	72.45	-44.15	1.50	1.50	0.00
1,200.00	14.25	129.71	1,190.24	-75.10	90.41	-55.09	1.50	1.50	0.00
1,230.74	14.71	129.71	1,220.00	-80.01	96.32	-58.69	1.50	1.50	0.00
<b>Fox Hills Mkr</b>									
1,270.62	15.31	129.71	1,258.52	-86.61	104.27	-63.54	1.50	1.50	0.00
1,300.00	15.31	129.71	1,286.86	-91.56	110.23	-67.17	0.00	0.00	0.00
1,400.00	15.31	129.71	1,383.31	-108.43	130.54	-79.55	0.00	0.00	0.00
1,500.00	15.31	129.71	1,479.76	-125.30	150.86	-91.92	0.00	0.00	0.00
1,520.99	15.31	129.71	1,500.00	-128.84	155.12	-94.52	0.00	0.00	0.00
<b>9 5/8"</b>									
1,600.00	15.31	129.71	1,576.21	-142.17	171.17	-104.30	0.00	0.00	0.00
1,700.00	15.31	129.71	1,672.66	-159.04	191.48	-116.68	0.00	0.00	0.00
1,800.00	15.31	129.71	1,769.11	-175.91	211.79	-129.05	0.00	0.00	0.00
1,900.00	15.31	129.71	1,865.56	-192.78	232.10	-141.43	0.00	0.00	0.00
2,000.00	15.31	129.71	1,962.02	-209.65	252.41	-153.81	0.00	0.00	0.00
2,100.00	15.31	129.71	2,058.47	-226.52	272.72	-166.18	0.00	0.00	0.00
2,200.00	15.31	129.71	2,154.92	-243.39	293.03	-178.56	0.00	0.00	0.00
2,300.00	15.31	129.71	2,251.37	-260.26	313.34	-190.93	0.00	0.00	0.00
2,400.00	15.31	129.71	2,347.82	-277.13	333.65	-203.31	0.00	0.00	0.00
2,500.00	15.31	129.71	2,444.27	-294.01	353.96	-215.69	0.00	0.00	0.00
2,600.00	15.31	129.71	2,540.73	-310.88	374.27	-228.06	0.00	0.00	0.00
2,700.00	15.31	129.71	2,637.18	-327.75	394.58	-240.44	0.00	0.00	0.00
2,800.00	15.31	129.71	2,733.63	-344.62	414.89	-252.82	0.00	0.00	0.00
2,900.00	15.31	129.71	2,830.08	-361.49	435.20	-265.19	0.00	0.00	0.00
3,000.00	15.31	129.71	2,926.53	-378.36	455.51	-277.57	0.00	0.00	0.00
3,100.00	15.31	129.71	3,022.98	-395.23	475.82	-289.94	0.00	0.00	0.00
3,200.00	15.31	129.71	3,119.43	-412.10	496.13	-302.32	0.00	0.00	0.00
3,300.00	15.31	129.71	3,215.89	-428.97	516.44	-314.70	0.00	0.00	0.00
3,400.00	15.31	129.71	3,312.34	-445.84	536.75	-327.07	0.00	0.00	0.00
3,500.00	15.31	129.71	3,408.79	-462.71	557.06	-339.45	0.00	0.00	0.00
3,600.00	15.31	129.71	3,505.24	-479.58	577.37	-351.83	0.00	0.00	0.00
3,700.00	15.31	129.71	3,601.69	-496.45	597.69	-364.20	0.00	0.00	0.00
3,800.00	15.31	129.71	3,698.14	-513.32	618.00	-376.58	0.00	0.00	0.00
3,900.00	15.31	129.71	3,794.59	-530.19	638.31	-388.95	0.00	0.00	0.00
4,000.00	15.31	129.71	3,891.05	-547.06	658.62	-401.33	0.00	0.00	0.00
4,050.76	15.31	129.71	3,940.00	-555.62	668.93	-407.61	0.00	0.00	0.00
<b>Parkman</b>									
4,100.00	15.31	129.71	3,987.50	-563.93	678.93	-413.71	0.00	0.00	0.00
4,200.00	15.31	129.71	4,083.95	-580.80	699.24	-426.08	0.00	0.00	0.00
4,300.00	15.31	129.71	4,180.40	-597.67	719.55	-438.46	0.00	0.00	0.00
4,400.00	15.31	129.71	4,276.85	-614.54	739.86	-450.84	0.00	0.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 28N-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 28N-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	15.31	129.71	4,373.30	-631.41	760.17	-463.21	0.00	0.00	0.00
4,600.00	15.31	129.71	4,469.75	-648.28	780.48	-475.59	0.00	0.00	0.00
4,700.00	15.31	129.71	4,566.21	-665.15	800.79	-487.96	0.00	0.00	0.00
4,769.25	15.31	129.71	4,633.00	-676.83	814.85	-496.54	0.00	0.00	0.00
<b>Sussex</b>									
4,800.00	15.31	129.71	4,662.66	-682.02	821.10	-500.34	0.00	0.00	0.00
4,900.00	15.31	129.71	4,759.11	-698.89	841.41	-512.72	0.00	0.00	0.00
5,000.00	15.31	129.71	4,855.56	-715.76	861.72	-525.09	0.00	0.00	0.00
5,100.00	15.31	129.71	4,952.01	-732.63	882.03	-537.47	0.00	0.00	0.00
5,140.92	15.31	129.71	4,991.48	-739.53	890.34	-542.53	0.00	0.00	0.00
5,200.00	14.42	129.71	5,048.58	-749.22	902.00	-549.64	1.50	-1.50	0.00
5,300.00	12.92	129.71	5,145.74	-764.32	920.19	-560.72	1.50	-1.50	0.00
5,400.00	11.42	129.71	5,243.49	-777.79	936.41	-570.60	1.50	-1.50	0.00
5,500.00	9.92	129.71	5,341.76	-789.63	950.65	-579.28	1.50	-1.50	0.00
5,600.00	8.42	129.71	5,440.48	-799.81	962.92	-586.76	1.50	-1.50	0.00
5,700.00	6.92	129.71	5,539.58	-808.34	973.19	-593.02	1.50	-1.50	0.00
5,800.00	5.42	129.71	5,639.00	-815.22	981.46	-598.06	1.50	-1.50	0.00
5,900.00	3.92	129.71	5,738.66	-820.42	987.72	-601.87	1.50	-1.50	0.00
6,000.00	2.42	129.71	5,838.51	-823.96	991.98	-604.47	1.50	-1.50	0.00
6,100.00	0.92	129.71	5,938.46	-825.82	994.23	-605.84	1.50	-1.50	0.00
6,161.54	0.00	0.00	6,000.00	-826.14	994.61	-606.07	1.50	-1.50	0.00
6,200.00	0.00	0.00	6,038.46	-826.14	994.61	-606.07	0.00	0.00	0.00
6,300.00	0.00	0.00	6,138.46	-826.14	994.61	-606.07	0.00	0.00	0.00
6,400.00	0.00	0.00	6,238.46	-826.14	994.61	-606.07	0.00	0.00	0.00
6,500.00	0.00	0.00	6,338.46	-826.14	994.61	-606.07	0.00	0.00	0.00
6,600.00	0.00	0.00	6,438.46	-826.14	994.61	-606.07	0.00	0.00	0.00
6,631.58	0.00	0.00	6,470.04	-826.14	994.61	-606.07	0.00	0.00	0.00
6,700.00	6.16	0.00	6,538.33	-822.47	994.61	-602.47	9.00	9.00	0.00
6,800.00	15.16	0.00	6,636.50	-803.99	994.61	-584.39	9.00	9.00	0.00
6,900.00	24.16	0.00	6,730.58	-770.39	994.61	-551.49	9.00	9.00	0.00
7,000.00	33.16	0.00	6,818.24	-722.48	994.61	-504.58	9.00	9.00	0.00
7,100.00	42.16	0.00	6,897.32	-661.45	994.61	-444.83	9.00	9.00	0.00
7,118.70	43.84	0.00	6,911.00	-648.69	994.61	-432.35	9.00	9.00	0.00
<b>Sharon Springs</b>									
7,200.00	51.16	0.00	6,965.89	-588.79	994.61	-373.71	9.00	9.00	0.00
7,219.70	52.93	0.00	6,978.00	-573.27	994.61	-358.50	9.00	9.00	0.00
<b>Niobrara</b>									
7,266.84	57.17	0.00	7,005.00	-534.63	994.61	-320.68	9.00	9.00	0.00
<b>Nio B</b>									
7,300.00	60.16	0.00	7,022.24	-506.31	994.61	-292.96	9.00	9.00	0.00
7,400.00	69.16	0.00	7,065.00	-416.03	994.61	-204.57	9.00	9.00	0.00
7,408.58	69.93	0.00	7,068.00	-407.99	994.61	-196.69	9.00	9.00	0.00
<b>Nio C</b>									
7,500.00	78.16	0.00	7,093.11	-320.17	994.61	-110.72	9.00	9.00	0.00
7,600.00	87.16	0.00	7,105.88	-221.09	994.61	-13.72	9.00	9.00	0.00
7,629.36	89.80	0.00	7,106.65	-191.74	994.61	15.01	9.00	9.00	0.00
<b>Top of Production - RW 28N-29HZ_PHL</b>									
7,700.00	89.80	0.00	7,106.90	-121.10	994.61	84.17	0.00	0.00	0.00
7,800.00	89.80	0.00	7,107.25	-21.10	994.61	182.07	0.00	0.00	0.00
7,900.00	89.80	0.00	7,107.60	78.90	994.61	279.97	0.00	0.00	0.00
8,000.00	89.80	0.00	7,107.95	178.90	994.61	377.87	0.00	0.00	0.00
8,100.00	89.80	0.00	7,108.30	278.90	994.61	475.77	0.00	0.00	0.00
8,200.00	89.80	0.00	7,108.65	378.90	994.61	573.67	0.00	0.00	0.00

## Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 28N-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 28N-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	89.80	0.00	7,109.00	478.89	994.61	671.57	0.00	0.00	0.00	
8,400.00	89.80	0.00	7,109.34	578.89	994.61	769.47	0.00	0.00	0.00	
8,500.00	89.80	0.00	7,109.69	678.89	994.61	867.37	0.00	0.00	0.00	
8,600.00	89.80	0.00	7,110.04	778.89	994.61	965.27	0.00	0.00	0.00	
8,700.00	89.80	0.00	7,110.39	878.89	994.61	1,063.17	0.00	0.00	0.00	
8,800.00	89.80	0.00	7,110.74	978.89	994.61	1,161.07	0.00	0.00	0.00	
8,900.00	89.80	0.00	7,111.09	1,078.89	994.61	1,258.97	0.00	0.00	0.00	
9,000.00	89.80	0.00	7,111.44	1,178.89	994.61	1,356.87	0.00	0.00	0.00	
9,100.00	89.80	0.00	7,111.79	1,278.89	994.61	1,454.77	0.00	0.00	0.00	
9,200.00	89.80	0.00	7,112.14	1,378.89	994.61	1,552.67	0.00	0.00	0.00	
9,300.00	89.80	0.00	7,112.49	1,478.89	994.61	1,650.57	0.00	0.00	0.00	
9,400.00	89.80	0.00	7,112.84	1,578.89	994.61	1,748.47	0.00	0.00	0.00	
9,500.00	89.80	0.00	7,113.18	1,678.89	994.61	1,846.37	0.00	0.00	0.00	
9,600.00	89.80	0.00	7,113.53	1,778.89	994.61	1,944.27	0.00	0.00	0.00	
9,700.00	89.80	0.00	7,113.88	1,878.89	994.61	2,042.17	0.00	0.00	0.00	
9,800.00	89.80	0.00	7,114.23	1,978.89	994.61	2,140.07	0.00	0.00	0.00	
9,900.00	89.80	0.00	7,114.58	2,078.89	994.61	2,237.97	0.00	0.00	0.00	
10,000.00	89.80	0.00	7,114.93	2,178.88	994.61	2,335.87	0.00	0.00	0.00	
10,100.00	89.80	0.00	7,115.28	2,278.88	994.61	2,433.77	0.00	0.00	0.00	
10,200.00	89.80	0.00	7,115.63	2,378.88	994.61	2,531.67	0.00	0.00	0.00	
10,300.00	89.80	0.00	7,115.98	2,478.88	994.61	2,629.57	0.00	0.00	0.00	
10,400.00	89.80	0.00	7,116.33	2,578.88	994.61	2,727.47	0.00	0.00	0.00	
10,500.00	89.80	0.00	7,116.68	2,678.88	994.61	2,825.37	0.00	0.00	0.00	
10,600.00	89.80	0.00	7,117.02	2,778.88	994.61	2,923.27	0.00	0.00	0.00	
10,700.00	89.80	0.00	7,117.37	2,878.88	994.61	3,021.17	0.00	0.00	0.00	
10,800.00	89.80	0.00	7,117.72	2,978.88	994.61	3,119.07	0.00	0.00	0.00	
10,900.00	89.80	0.00	7,118.07	3,078.88	994.61	3,216.97	0.00	0.00	0.00	
11,000.00	89.80	0.00	7,118.42	3,178.88	994.61	3,314.87	0.00	0.00	0.00	
11,100.00	89.80	0.00	7,118.77	3,278.88	994.61	3,412.77	0.00	0.00	0.00	
11,200.00	89.80	0.00	7,119.12	3,378.88	994.61	3,510.67	0.00	0.00	0.00	
11,300.00	89.80	0.00	7,119.47	3,478.88	994.61	3,608.57	0.00	0.00	0.00	
11,400.00	89.80	0.00	7,119.82	3,578.88	994.61	3,706.47	0.00	0.00	0.00	
11,500.00	89.80	0.00	7,120.17	3,678.88	994.61	3,804.37	0.00	0.00	0.00	
11,600.00	89.80	0.00	7,120.52	3,778.87	994.61	3,902.27	0.00	0.00	0.00	
11,700.00	89.80	0.00	7,120.86	3,878.87	994.61	4,000.17	0.00	0.00	0.00	
11,800.00	89.80	0.00	7,121.21	3,978.87	994.61	4,098.07	0.00	0.00	0.00	
11,900.00	89.80	0.00	7,121.56	4,078.87	994.61	4,195.97	0.00	0.00	0.00	
12,000.00	89.80	0.00	7,121.91	4,178.87	994.61	4,293.87	0.00	0.00	0.00	
12,100.00	89.80	0.00	7,122.26	4,278.87	994.61	4,391.77	0.00	0.00	0.00	
12,200.00	89.80	0.00	7,122.61	4,378.87	994.61	4,489.67	0.00	0.00	0.00	
12,300.00	89.80	0.00	7,122.96	4,478.87	994.61	4,587.57	0.00	0.00	0.00	
12,400.00	89.80	0.00	7,123.31	4,578.87	994.61	4,685.47	0.00	0.00	0.00	
12,500.00	89.80	0.00	7,123.66	4,678.87	994.61	4,783.37	0.00	0.00	0.00	
12,598.42	89.80	0.00	7,124.00	4,777.29	994.61	4,879.73	0.00	0.00	0.00	
<b>RW 28N-29HZ_PBHL</b>										

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 28N-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 28N-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 28N-29HZ_PHL - plan hits target center - Point	0.00	0.00	7,106.65	-191.74	994.61	14,596,025.00	1,727,961.36	40.189861	-104.686528
RW 28N-29HZ_PBHL - plan hits target center - Point	0.00	0.00	7,124.00	4,777.29	994.61	14,600,994.00	1,727,944.02	40.203506	-104.686527

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,520.99	1,500.00	9 5/8"	9-5/8	13-1/2	
7,629.36	7,106.65	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				
4,050.76	3,940.00	Parkman				
4,769.25	4,633.00	Sussex				
7,118.70	6,911.00	Sharon Springs				
7,219.70	6,978.00	Niobrara				
7,266.84	7,005.00	Nio B				
7,408.58	7,068.00	Nio C				