

# **US ROCKIES WATTENBERG PLANNING**

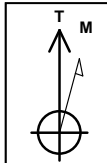
**WELD-NAD83-UTMFT13N  
3N-65W-29 RW 35-29HZ Pad  
RW 2N-5HZ**

**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

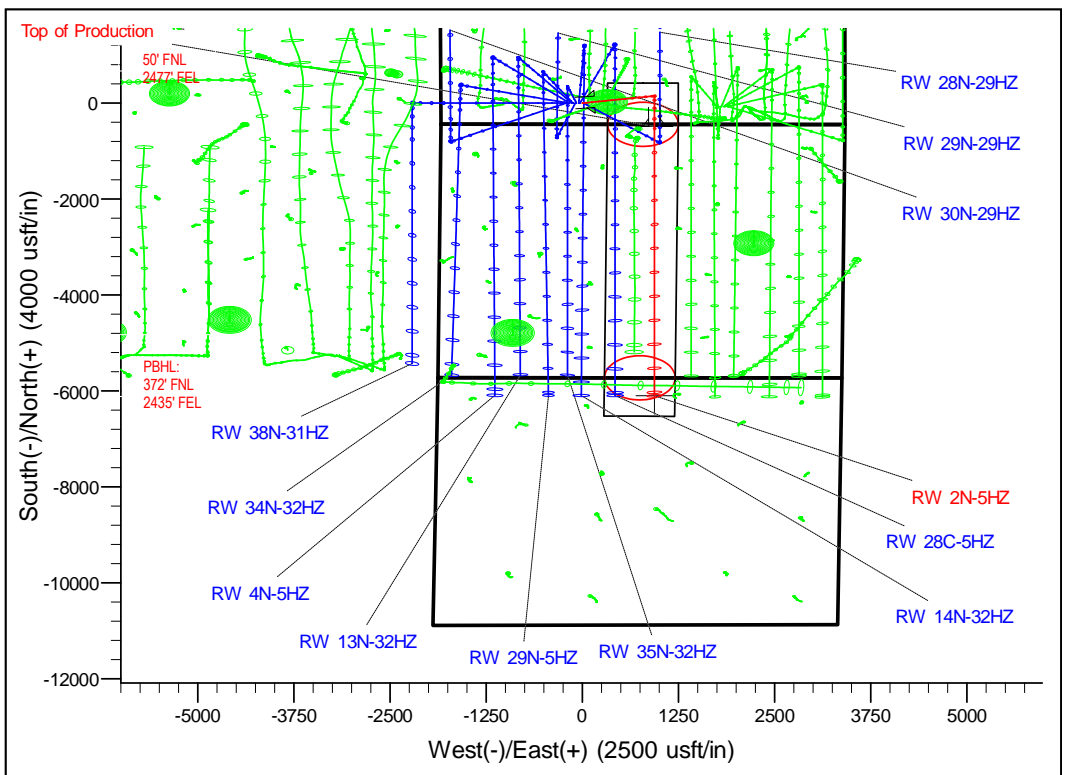
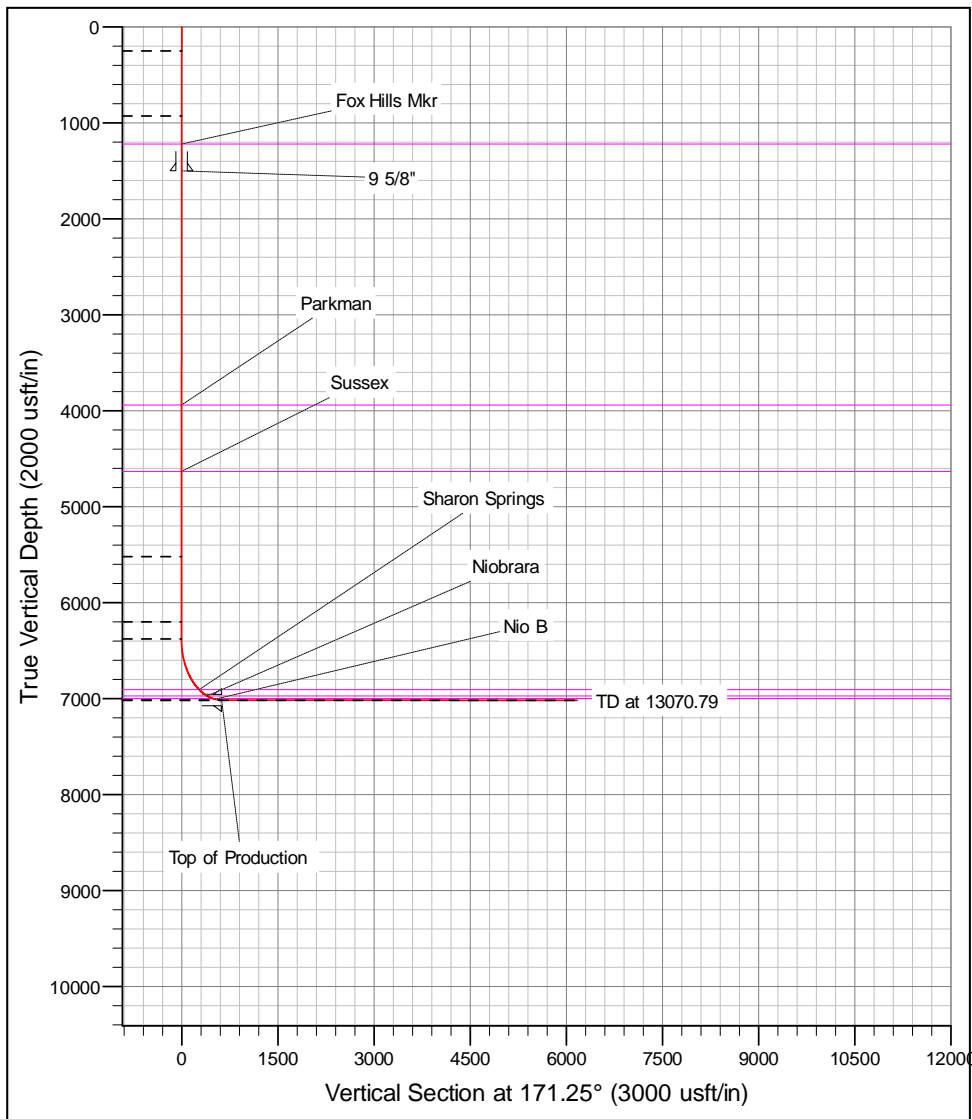
SITE: 3N-65W-29 RW 35-29HZ Pad  
  
Well: RW 2N-5HZ  
Wellbore: Plan A  
Design: Permit Rev-1

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1220.00	1228.33	Fox Hills Mkr
3940.00	3992.26	Parkman
4633.00	4696.46	Sussex
6906.00	7090.91	Sharon Springs
6973.00	7225.38	Niobrara
7007.00	7353.33	Nio B

WELL DETAILS: RW 2N-5HZ						
+N/-S	+E/-W	GL: 4885.00	RKB @ 4902.00usft (Original Well Elev)			Slot
		Northing	Easting	Latitude	Longitude	
0.00	0.00	14596213.22	1726951.29	40.190387	-104.690142	

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
931.98	10.23	80.92	928.36	9.58	59.96	1.50	-0.35
5599.45	10.23	80.92	5521.64	140.42	878.48	0.00	-5.13
6281.43	0.00	0.00	6200.00	150.00	938.44	1.50	-5.48
6460.87	0.00	0.00	6379.44	150.00	938.44	0.00	-5.48
7460.54	89.97	180.00	7016.06	-486.29	938.44	9.00	623.40
13070.79	89.97	180.00	7019.00	-6096.53	938.44	0.00	6168.34

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
RW 2N-5HZ_PBHL	7019.00	-6096.53	938.44	14590120.00	1727911.00	40.173645	-104.686783



# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 2N-5HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4902.00usft (Original Well Elev)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4902.00usft (Original Well Elev)
<b>Site:</b>	3N-65W-29 RW 35-29HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	RW 2N-5HZ	<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 2N-5HZ					
<b>Well Position</b>	<b>+N/-S</b>	-2.18 usft	<b>Northing:</b>	14,596,213.22 usft	<b>Latitude:</b>	40.190387
	<b>+E/-W</b>	225.09 usft	<b>Easting:</b>	1,726,951.28 usft	<b>Longitude:</b>	-104.690142
<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	52,443.69345923

<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	171.25

<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	13,070.79	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	0.00
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
931.98	10.23	80.92	928.36	9.58	59.96	1.50	1.50	0.00	80.92	80.92
5,599.45	10.23	80.92	5,521.64	140.42	878.48	0.00	0.00	0.00	0.00	0.00
6,281.43	0.00	0.00	6,200.00	150.00	938.44	1.50	-1.50	0.00	180.00	180.00
6,460.87	0.00	0.00	6,379.44	150.00	938.44	0.00	0.00	0.00	0.00	0.00
7,460.54	89.97	180.00	7,016.06	-486.29	938.44	9.00	9.00	0.00	180.00	180.00
13,070.79	89.97	180.00	7,019.00	-6,096.53	938.44	0.00	0.00	0.00	0.00	0.00 RW 2N-5HZ_PBHL

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 2N-5HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4902.00usft (Original Well Elev)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4902.00usft (Original Well Elev)
<b>Site:</b>	3N-65W-29 RW 35-29HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	RW 2N-5HZ	<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	80.92	300.00	0.05	0.32	0.00	1.50	1.50	0.00
400.00	2.25	80.92	399.96	0.46	2.91	-0.02	1.50	1.50	0.00
500.00	3.75	80.92	499.82	1.29	8.08	-0.05	1.50	1.50	0.00
600.00	5.25	80.92	599.51	2.53	15.82	-0.09	1.50	1.50	0.00
700.00	6.75	80.92	698.96	4.18	26.14	-0.15	1.50	1.50	0.00
800.00	8.25	80.92	798.10	6.24	39.03	-0.23	1.50	1.50	0.00
900.00	9.75	80.92	896.87	8.71	54.48	-0.32	1.50	1.50	0.00
931.98	10.23	80.92	928.36	9.58	59.96	-0.35	1.50	1.50	0.00
1,000.00	10.23	80.92	995.30	11.49	71.89	-0.42	0.00	0.00	0.00
1,100.00	10.23	80.92	1,093.71	14.29	89.42	-0.52	0.00	0.00	0.00
1,200.00	10.23	80.92	1,192.12	17.10	106.96	-0.62	0.00	0.00	0.00
1,228.33	10.23	80.92	1,220.00	17.89	111.93	-0.65	0.00	0.00	0.00
<b>Fox Hills Mkr</b>									
1,300.00	10.23	80.92	1,290.53	19.90	124.50	-0.73	0.00	0.00	0.00
1,400.00	10.23	80.92	1,388.94	22.70	142.03	-0.83	0.00	0.00	0.00
1,500.00	10.23	80.92	1,487.35	25.51	159.57	-0.93	0.00	0.00	0.00
1,512.85	10.23	80.92	1,500.00	25.87	161.82	-0.95	0.00	0.00	0.00
<b>9 5/8"</b>									
1,600.00	10.23	80.92	1,585.76	28.31	177.11	-1.03	0.00	0.00	0.00
1,700.00	10.23	80.92	1,684.17	31.11	194.64	-1.14	0.00	0.00	0.00
1,800.00	10.23	80.92	1,782.58	33.91	212.18	-1.24	0.00	0.00	0.00
1,900.00	10.23	80.92	1,880.99	36.72	229.72	-1.34	0.00	0.00	0.00
2,000.00	10.23	80.92	1,979.41	39.52	247.25	-1.44	0.00	0.00	0.00
2,100.00	10.23	80.92	2,077.82	42.32	264.79	-1.55	0.00	0.00	0.00
2,200.00	10.23	80.92	2,176.23	45.13	282.33	-1.65	0.00	0.00	0.00
2,300.00	10.23	80.92	2,274.64	47.93	299.86	-1.75	0.00	0.00	0.00
2,400.00	10.23	80.92	2,373.05	50.73	317.40	-1.85	0.00	0.00	0.00
2,500.00	10.23	80.92	2,471.46	53.54	334.94	-1.96	0.00	0.00	0.00
2,600.00	10.23	80.92	2,569.87	56.34	352.48	-2.06	0.00	0.00	0.00
2,700.00	10.23	80.92	2,668.28	59.14	370.01	-2.16	0.00	0.00	0.00
2,800.00	10.23	80.92	2,766.69	61.95	387.55	-2.26	0.00	0.00	0.00
2,900.00	10.23	80.92	2,865.10	64.75	405.09	-2.37	0.00	0.00	0.00
3,000.00	10.23	80.92	2,963.51	67.55	422.62	-2.47	0.00	0.00	0.00
3,100.00	10.23	80.92	3,061.92	70.35	440.16	-2.57	0.00	0.00	0.00
3,200.00	10.23	80.92	3,160.33	73.16	457.70	-2.67	0.00	0.00	0.00
3,300.00	10.23	80.92	3,258.74	75.96	475.23	-2.78	0.00	0.00	0.00
3,400.00	10.23	80.92	3,357.15	78.76	492.77	-2.88	0.00	0.00	0.00
3,500.00	10.23	80.92	3,455.56	81.57	510.31	-2.98	0.00	0.00	0.00
3,600.00	10.23	80.92	3,553.97	84.37	527.84	-3.08	0.00	0.00	0.00
3,700.00	10.23	80.92	3,652.38	87.17	545.38	-3.19	0.00	0.00	0.00
3,800.00	10.23	80.92	3,750.79	89.98	562.92	-3.29	0.00	0.00	0.00
3,900.00	10.23	80.92	3,849.20	92.78	580.45	-3.39	0.00	0.00	0.00
3,992.26	10.23	80.92	3,940.00	95.37	596.63	-3.48	0.00	0.00	0.00
<b>Parkman</b>									
4,000.00	10.23	80.92	3,947.61	95.58	597.99	-3.49	0.00	0.00	0.00
4,100.00	10.23	80.92	4,046.02	98.39	615.53	-3.59	0.00	0.00	0.00
4,200.00	10.23	80.92	4,144.43	101.19	633.06	-3.70	0.00	0.00	0.00
4,300.00	10.23	80.92	4,242.84	103.99	650.60	-3.80	0.00	0.00	0.00
4,400.00	10.23	80.92	4,341.25	106.79	668.14	-3.90	0.00	0.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 2N-5HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4902.00usft (Original Well Elev)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4902.00usft (Original Well Elev)
<b>Site:</b>	3N-65W-29 RW 35-29HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	RW 2N-5HZ	<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	10.23	80.92	4,439.66	109.60	685.67	-4.00	0.00	0.00	0.00	
4,600.00	10.23	80.92	4,538.08	112.40	703.21	-4.11	0.00	0.00	0.00	
4,696.46	10.23	80.92	4,633.00	115.10	720.13	-4.21	0.00	0.00	0.00	
<b>Sussex</b>										
4,700.00	10.23	80.92	4,636.49	115.20	720.75	-4.21	0.00	0.00	0.00	
4,800.00	10.23	80.92	4,734.90	118.01	738.28	-4.31	0.00	0.00	0.00	
4,900.00	10.23	80.92	4,833.31	120.81	755.82	-4.41	0.00	0.00	0.00	
5,000.00	10.23	80.92	4,931.72	123.61	773.36	-4.52	0.00	0.00	0.00	
5,100.00	10.23	80.92	5,030.13	126.42	790.89	-4.62	0.00	0.00	0.00	
5,200.00	10.23	80.92	5,128.54	129.22	808.43	-4.72	0.00	0.00	0.00	
5,300.00	10.23	80.92	5,226.95	132.02	825.97	-4.82	0.00	0.00	0.00	
5,400.00	10.23	80.92	5,325.36	134.83	843.50	-4.93	0.00	0.00	0.00	
5,500.00	10.23	80.92	5,423.77	137.63	861.04	-5.03	0.00	0.00	0.00	
5,599.45	10.23	80.92	5,521.64	140.42	878.48	-5.13	0.00	0.00	0.00	
5,600.00	10.22	80.92	5,522.18	140.43	878.58	-5.13	1.50	-1.50	0.00	
5,700.00	8.72	80.92	5,620.81	143.03	894.83	-5.23	1.50	-1.50	0.00	
5,800.00	7.22	80.92	5,719.84	145.22	908.52	-5.31	1.50	-1.50	0.00	
5,900.00	5.72	80.92	5,819.20	147.00	919.65	-5.37	1.50	-1.50	0.00	
6,000.00	4.22	80.92	5,918.83	148.36	928.21	-5.42	1.50	-1.50	0.00	
6,100.00	2.72	80.92	6,018.64	149.32	934.19	-5.46	1.50	-1.50	0.00	
6,200.00	1.22	80.92	6,118.58	149.86	937.58	-5.48	1.50	-1.50	0.00	
6,281.43	0.00	0.00	6,200.00	150.00	938.44	-5.48	1.50	-1.50	0.00	
6,300.00	0.00	0.00	6,218.57	150.00	938.44	-5.48	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,318.57	150.00	938.44	-5.48	0.00	0.00	0.00	
6,460.87	0.00	0.00	6,379.44	150.00	938.44	-5.48	0.00	0.00	0.00	
6,500.00	3.52	180.00	6,418.55	148.80	938.44	-4.29	9.00	9.00	0.00	
6,600.00	12.52	180.00	6,517.47	134.86	938.44	9.48	9.00	9.00	0.00	
6,700.00	21.52	180.00	6,612.99	105.61	938.44	38.39	9.00	9.00	0.00	
6,800.00	30.52	180.00	6,702.76	61.79	938.44	81.70	9.00	9.00	0.00	
6,900.00	39.52	180.00	6,784.57	4.46	938.44	138.37	9.00	9.00	0.00	
7,000.00	48.52	180.00	6,856.40	-64.96	938.44	206.98	9.00	9.00	0.00	
7,080.91	55.80	180.00	6,906.00	-128.82	938.44	270.09	9.00	9.00	0.00	
<b>Sharon Springs</b>										
7,100.00	57.52	180.00	6,916.49	-144.77	938.44	285.85	9.00	9.00	0.00	
7,200.00	66.52	180.00	6,963.36	-232.99	938.44	373.05	9.00	9.00	0.00	
7,225.38	68.81	180.00	6,973.00	-256.46	938.44	396.25	9.00	9.00	0.00	
<b>Niobrara</b>										
7,300.00	75.52	180.00	6,995.84	-327.45	938.44	466.42	9.00	9.00	0.00	
7,353.33	80.32	180.00	7,007.00	-379.58	938.44	517.94	9.00	9.00	0.00	
<b>Nio B</b>										
7,400.00	84.52	180.00	7,013.15	-425.84	938.44	563.66	9.00	9.00	0.00	
7,460.54	89.97	180.00	7,016.06	-486.29	938.44	623.40	9.00	9.00	0.00	
<b>Top of Production - RW 2N-5HZ_PHL</b>										
7,500.00	89.97	180.00	7,016.08	-525.75	938.44	662.40	0.00	0.00	0.00	
7,600.00	89.97	180.00	7,016.14	-625.75	938.44	761.24	0.00	0.00	0.00	
7,700.00	89.97	180.00	7,016.19	-725.75	938.44	860.07	0.00	0.00	0.00	
7,800.00	89.97	180.00	7,016.24	-825.75	938.44	958.91	0.00	0.00	0.00	
7,900.00	89.97	180.00	7,016.29	-925.75	938.44	1,057.74	0.00	0.00	0.00	
8,000.00	89.97	180.00	7,016.35	-1,025.75	938.44	1,156.58	0.00	0.00	0.00	
8,100.00	89.97	180.00	7,016.40	-1,125.75	938.44	1,255.42	0.00	0.00	0.00	
8,200.00	89.97	180.00	7,016.45	-1,225.75	938.44	1,354.25	0.00	0.00	0.00	
8,300.00	89.97	180.00	7,016.50	-1,325.75	938.44	1,453.09	0.00	0.00	0.00	
8,400.00	89.97	180.00	7,016.55	-1,425.75	938.44	1,551.92	0.00	0.00	0.00	
8,500.00	89.97	180.00	7,016.61	-1,525.75	938.44	1,650.76	0.00	0.00	0.00	

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 2N-5HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4902.00usft (Original Well Elev)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4902.00usft (Original Well Elev)
<b>Site:</b>	3N-65W-29 RW 35-29HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	RW 2N-5HZ	<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)	
8,600.00	89.97	180.00	7,016.66	-1,625.75	938.44	1,749.60	0.00	0.00	0.00	
8,700.00	89.97	180.00	7,016.71	-1,725.75	938.44	1,848.43	0.00	0.00	0.00	
8,800.00	89.97	180.00	7,016.76	-1,825.75	938.44	1,947.27	0.00	0.00	0.00	
8,900.00	89.97	180.00	7,016.82	-1,925.75	938.44	2,046.10	0.00	0.00	0.00	
9,000.00	89.97	180.00	7,016.87	-2,025.75	938.44	2,144.94	0.00	0.00	0.00	
9,100.00	89.97	180.00	7,016.92	-2,125.75	938.44	2,243.77	0.00	0.00	0.00	
9,200.00	89.97	180.00	7,016.97	-2,225.75	938.44	2,342.61	0.00	0.00	0.00	
9,300.00	89.97	180.00	7,017.03	-2,325.75	938.44	2,441.45	0.00	0.00	0.00	
9,400.00	89.97	180.00	7,017.08	-2,425.75	938.44	2,540.28	0.00	0.00	0.00	
9,500.00	89.97	180.00	7,017.13	-2,525.75	938.44	2,639.12	0.00	0.00	0.00	
9,600.00	89.97	180.00	7,017.18	-2,625.75	938.44	2,737.95	0.00	0.00	0.00	
9,700.00	89.97	180.00	7,017.24	-2,725.75	938.44	2,836.79	0.00	0.00	0.00	
9,800.00	89.97	180.00	7,017.29	-2,825.75	938.44	2,935.63	0.00	0.00	0.00	
9,900.00	89.97	180.00	7,017.34	-2,925.75	938.44	3,034.46	0.00	0.00	0.00	
10,000.00	89.97	180.00	7,017.39	-3,025.75	938.44	3,133.30	0.00	0.00	0.00	
10,100.00	89.97	180.00	7,017.44	-3,125.75	938.44	3,232.13	0.00	0.00	0.00	
10,200.00	89.97	180.00	7,017.50	-3,225.75	938.44	3,330.97	0.00	0.00	0.00	
10,300.00	89.97	180.00	7,017.55	-3,325.75	938.44	3,429.81	0.00	0.00	0.00	
10,400.00	89.97	180.00	7,017.60	-3,425.75	938.44	3,528.64	0.00	0.00	0.00	
10,500.00	89.97	180.00	7,017.65	-3,525.75	938.44	3,627.48	0.00	0.00	0.00	
10,600.00	89.97	180.00	7,017.71	-3,625.75	938.44	3,726.31	0.00	0.00	0.00	
10,700.00	89.97	180.00	7,017.76	-3,725.75	938.44	3,825.15	0.00	0.00	0.00	
10,800.00	89.97	180.00	7,017.81	-3,825.75	938.44	3,923.99	0.00	0.00	0.00	
10,900.00	89.97	180.00	7,017.86	-3,925.75	938.44	4,022.82	0.00	0.00	0.00	
11,000.00	89.97	180.00	7,017.92	-4,025.75	938.44	4,121.66	0.00	0.00	0.00	
11,100.00	89.97	180.00	7,017.97	-4,125.75	938.44	4,220.49	0.00	0.00	0.00	
11,200.00	89.97	180.00	7,018.02	-4,225.75	938.44	4,319.33	0.00	0.00	0.00	
11,300.00	89.97	180.00	7,018.07	-4,325.75	938.44	4,418.16	0.00	0.00	0.00	
11,400.00	89.97	180.00	7,018.13	-4,425.75	938.44	4,517.00	0.00	0.00	0.00	
11,500.00	89.97	180.00	7,018.18	-4,525.75	938.44	4,615.84	0.00	0.00	0.00	
11,600.00	89.97	180.00	7,018.23	-4,625.75	938.44	4,714.67	0.00	0.00	0.00	
11,700.00	89.97	180.00	7,018.28	-4,725.75	938.44	4,813.51	0.00	0.00	0.00	
11,800.00	89.97	180.00	7,018.33	-4,825.75	938.44	4,912.34	0.00	0.00	0.00	
11,900.00	89.97	180.00	7,018.39	-4,925.75	938.44	5,011.18	0.00	0.00	0.00	
12,000.00	89.97	180.00	7,018.44	-5,025.75	938.44	5,110.02	0.00	0.00	0.00	
12,100.00	89.97	180.00	7,018.49	-5,125.75	938.44	5,208.85	0.00	0.00	0.00	
12,200.00	89.97	180.00	7,018.54	-5,225.75	938.44	5,307.69	0.00	0.00	0.00	
12,300.00	89.97	180.00	7,018.60	-5,325.75	938.44	5,406.52	0.00	0.00	0.00	
12,400.00	89.97	180.00	7,018.65	-5,425.75	938.44	5,505.36	0.00	0.00	0.00	
12,500.00	89.97	180.00	7,018.70	-5,525.75	938.44	5,604.20	0.00	0.00	0.00	
12,600.00	89.97	180.00	7,018.75	-5,625.75	938.44	5,703.03	0.00	0.00	0.00	
12,700.00	89.97	180.00	7,018.81	-5,725.75	938.44	5,801.87	0.00	0.00	0.00	
12,800.00	89.97	180.00	7,018.86	-5,825.75	938.44	5,900.70	0.00	0.00	0.00	
12,900.00	89.97	180.00	7,018.91	-5,925.75	938.44	5,999.54	0.00	0.00	0.00	
13,000.00	89.97	180.00	7,018.96	-6,025.75	938.44	6,098.38	0.00	0.00	0.00	
13,070.79	89.97	180.00	7,019.00	-6,096.53	938.44	6,168.34	0.00	0.00	0.00	
<b>RW 2N-5HZ_PBHL</b>										

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 2N-5HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4902.00usft (Original Well Elev)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4902.00usft (Original Well Elev)
<b>Site:</b>	3N-65W-29 RW 35-29HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	RW 2N-5HZ	<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 2N-5HZ_PHL - plan hits target center - Point	0.00	0.00	7,016.06	-486.29	938.44	14,595,730.21	1,727,891.42	40.189052	-104.686782
RW 2N-5HZ_PBHL - plan hits target center - Point	0.00	0.00	7,019.00	-6,096.53	938.44	14,590,120.00	1,727,911.00	40.173645	-104.686783

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,512.85	1,500.00	9 5/8"	9-5/8	12-1/4	
7,460.54	7,016.06	Top of Production	5-1/2	8-1/2	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,228.33	1,220.00	Fox Hills Mkr				
3,992.26	3,940.00	Parkman				
4,696.46	4,633.00	Sussex				
7,080.91	6,906.00	Sharon Springs				
7,225.38	6,973.00	Niobrara				
7,353.33	7,007.00	Nio B				