

# **US ROCKIES WATTENBERG PLANNING**

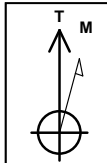
**WELD-NAD83-UTMFT13N  
3N-65W-29 RW 15-29HZ Pad  
RW 2N-29HZ**

**Plan A**

**Plan: Permit Rev-1**

## **Standard Planning Report**

**12 December, 2016**



Azimuths to True North  
 Magnetic North: 8.06°  
 Magnetic Field  
 Strength: 52452.7snT  
 Dip Angle: 66.70°  
 Date: 12/6/2016  
 Model: IGRF2010

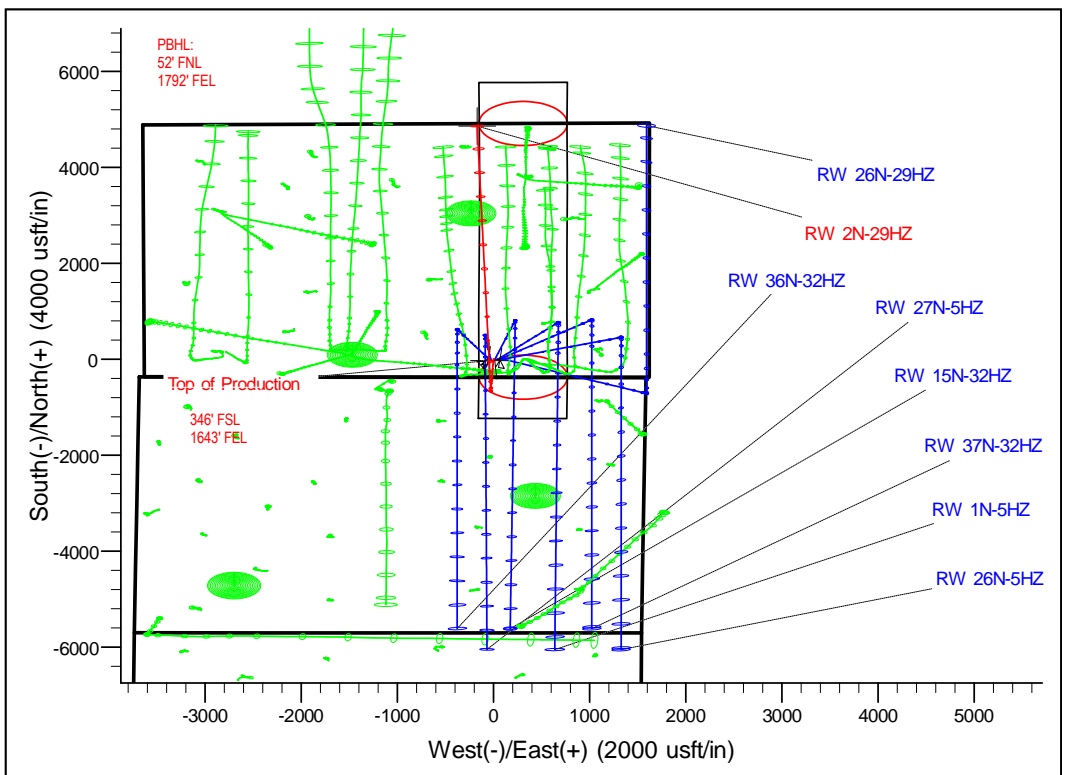
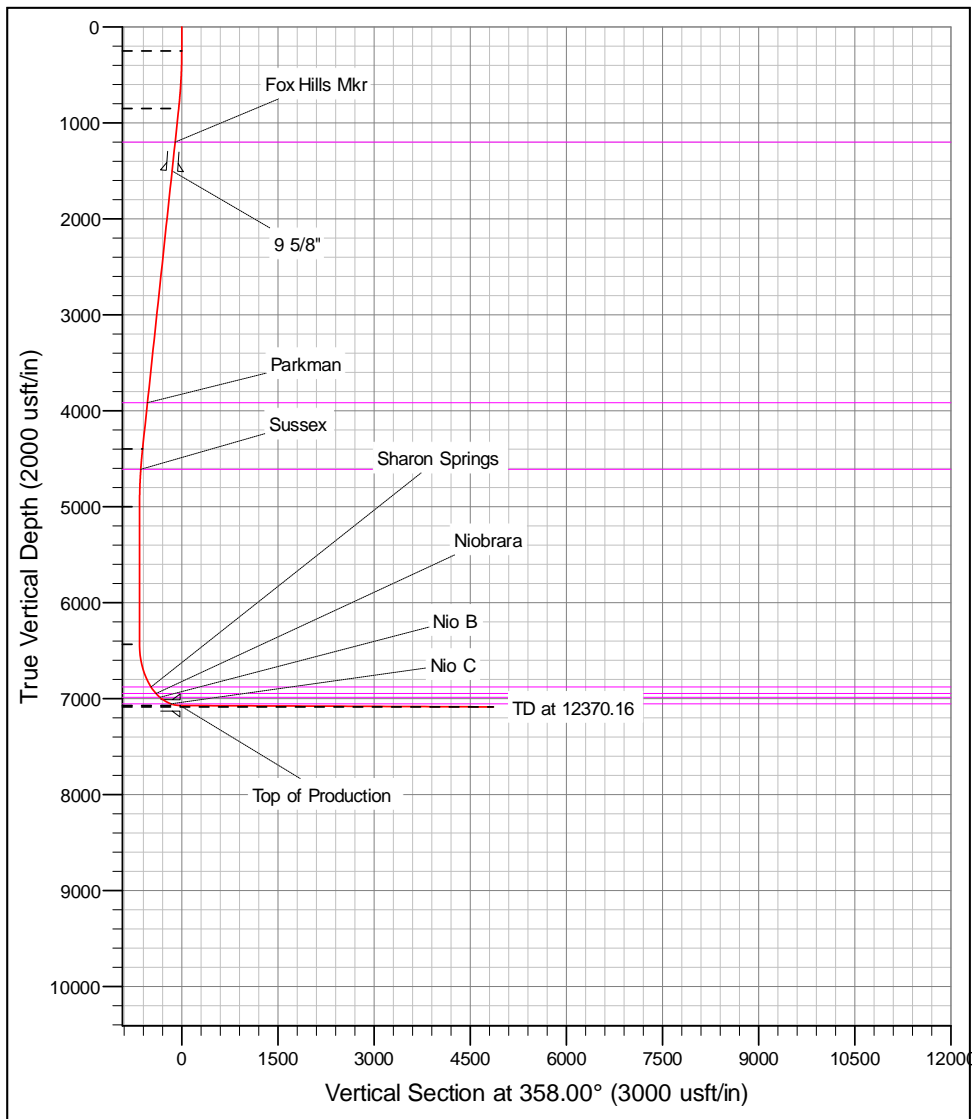
SITE: 3N-65W-29 RW 15-29HZ Pad  
 Well: RW 2N-29HZ  
 Wellbore: Plan A  
 Design: Permit Rev-1

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1202.00	1208.94	Fox Hills Mkr
3918.00	3959.25	Parkman
4611.00	4660.16	Sussex
6880.00	6977.23	Sharon Springs
6947.00	7079.10	Niobrara
6987.00	7151.96	Nio B
7055.00	7336.09	Nio C

WELL DETAILS: RW 2N-29HZ						
+N/-S	+E/-W	GL: 4867.00	RKB @ 4884.00usft (D Rig)			
		Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	14596148.17	1728746.14	40.190191	-104.683716	

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
853.99	9.06	182.50	851.47	-47.61	-2.08	1.50	-47.51
4445.85	9.06	182.50	4398.53	-612.66	-26.76	0.00	-611.35
5049.84	0.00	0.00	5000.00	-660.27	-28.84	1.50	-658.86
6485.72	0.00	0.00	6435.89	-660.27	-28.84	0.00	-658.86
7483.83	89.83	358.53	7072.50	-25.75	-45.07	9.00	-24.15
12370.16	89.83	358.53	7087.00	4858.96	-170.00	0.00	4861.93

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
RW 2N-29HZ_PBHL	7087.00	4858.96	-170.00	14601006.50	1728558.83	40.203534	-104.684325



# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 2N-29HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4884.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4884.00usft (D Rig)
<b>Site:</b>	3N-65W-29 RW 15-29HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	RW 2N-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 15-29HZ Pad				
<b>Site Position:</b>		<b>Northing:</b>	14,596,148.74 usft	<b>Latitude:</b>	40.190193
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,728,701.18 usft	<b>Longitude:</b>	-104.683877
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.20 °

<b>Well</b>	RW 2N-29HZ					
<b>Well Position</b>	<b>+N-S</b>	-0.73 usft	<b>Northing:</b>	14,596,148.17 usft	<b>Latitude:</b>	40.190191
	<b>+E-W</b>	44.96 usft	<b>Easting:</b>	1,728,746.14 usft	<b>Longitude:</b>	-104.683716
<b>Position Uncertainty</b>		3.28 usft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	4,867.00 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	12/6/2016	8.07	66.70	52,452.72450734

<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	358.00	

<b>Plan Survey Tool Program</b>	Date	12/12/2016			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	12,369.91	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWI Fixed:v2:Rockies, crustal dex	

<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	
853.99	9.06	182.50	851.47	-47.61	-2.08	1.50	1.50	0.00	182.50	
4,445.85	9.06	182.50	4,398.53	-612.66	-26.76	0.00	0.00	0.00	0.00	
5,049.84	0.00	0.00	5,000.00	-660.27	-28.84	1.50	-1.50	0.00	180.00	
6,485.72	0.00	0.00	6,435.89	-660.27	-28.84	0.00	0.00	0.00	0.00	
7,483.83	89.83	358.53	7,072.50	-25.75	-45.07	9.00	9.00	0.00	358.53	
12,370.16	89.83	358.53	7,087.00	4,858.96	-170.00	0.00	0.00	0.00	0.00	RW 2N-29HZ_PBH

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 2N-29HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4884.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4884.00usft (D Rig)
<b>Site:</b>	3N-65W-29 RW 15-29HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	RW 2N-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	182.50	300.00	-0.33	-0.01	-0.33	1.50	1.50	0.00
400.00	2.25	182.50	399.96	-2.94	-0.13	-2.94	1.50	1.50	0.00
500.00	3.75	182.50	499.82	-8.17	-0.36	-8.15	1.50	1.50	0.00
600.00	5.25	182.50	599.51	-16.01	-0.70	-15.97	1.50	1.50	0.00
700.00	6.75	182.50	698.96	-26.45	-1.16	-26.39	1.50	1.50	0.00
800.00	8.25	182.50	798.10	-39.49	-1.73	-39.41	1.50	1.50	0.00
853.99	9.06	182.50	851.47	-47.61	-2.08	-47.51	1.50	1.50	0.00
900.00	9.06	182.50	896.91	-54.85	-2.40	-54.73	0.00	0.00	0.00
1,000.00	9.06	182.50	995.66	-70.58	-3.08	-70.43	0.00	0.00	0.00
1,100.00	9.06	182.50	1,094.42	-86.31	-3.77	-86.12	0.00	0.00	0.00
1,200.00	9.06	182.50	1,193.17	-102.04	-4.46	-101.82	0.00	0.00	0.00
1,208.94	9.06	182.50	1,202.00	-103.45	-4.52	-103.23	0.00	0.00	0.00
<b>Fox Hills Mkr</b>									
1,300.00	9.06	182.50	1,291.92	-117.77	-5.14	-117.52	0.00	0.00	0.00
1,400.00	9.06	182.50	1,390.67	-133.50	-5.83	-133.22	0.00	0.00	0.00
1,500.00	9.06	182.50	1,489.43	-149.24	-6.52	-148.92	0.00	0.00	0.00
1,510.71	9.06	182.50	1,500.00	-150.92	-6.59	-150.60	0.00	0.00	0.00
<b>9 5/8"</b>									
1,600.00	9.06	182.50	1,588.18	-164.97	-7.21	-164.61	0.00	0.00	0.00
1,700.00	9.06	182.50	1,686.93	-180.70	-7.89	-180.31	0.00	0.00	0.00
1,800.00	9.06	182.50	1,785.68	-196.43	-8.58	-196.01	0.00	0.00	0.00
1,900.00	9.06	182.50	1,884.44	-212.16	-9.27	-211.71	0.00	0.00	0.00
2,000.00	9.06	182.50	1,983.19	-227.89	-9.96	-227.41	0.00	0.00	0.00
2,100.00	9.06	182.50	2,081.94	-243.62	-10.64	-243.10	0.00	0.00	0.00
2,200.00	9.06	182.50	2,180.69	-259.36	-11.33	-258.80	0.00	0.00	0.00
2,300.00	9.06	182.50	2,279.45	-275.09	-12.02	-274.50	0.00	0.00	0.00
2,400.00	9.06	182.50	2,378.20	-290.82	-12.70	-290.20	0.00	0.00	0.00
2,500.00	9.06	182.50	2,476.95	-306.55	-13.39	-305.89	0.00	0.00	0.00
2,600.00	9.06	182.50	2,575.70	-322.28	-14.08	-321.59	0.00	0.00	0.00
2,700.00	9.06	182.50	2,674.46	-338.01	-14.77	-337.29	0.00	0.00	0.00
2,800.00	9.06	182.50	2,773.21	-353.75	-15.45	-352.99	0.00	0.00	0.00
2,900.00	9.06	182.50	2,871.96	-369.48	-16.14	-368.69	0.00	0.00	0.00
3,000.00	9.06	182.50	2,970.71	-385.21	-16.83	-384.38	0.00	0.00	0.00
3,100.00	9.06	182.50	3,069.47	-400.94	-17.51	-400.08	0.00	0.00	0.00
3,200.00	9.06	182.50	3,168.22	-416.67	-18.20	-415.78	0.00	0.00	0.00
3,300.00	9.06	182.50	3,266.97	-432.40	-18.89	-431.48	0.00	0.00	0.00
3,400.00	9.06	182.50	3,365.72	-448.13	-19.58	-447.18	0.00	0.00	0.00
3,500.00	9.06	182.50	3,464.48	-463.87	-20.26	-462.87	0.00	0.00	0.00
3,600.00	9.06	182.50	3,563.23	-479.60	-20.95	-478.57	0.00	0.00	0.00
3,700.00	9.06	182.50	3,661.98	-495.33	-21.64	-494.27	0.00	0.00	0.00
3,800.00	9.06	182.50	3,760.73	-511.06	-22.33	-509.97	0.00	0.00	0.00
3,900.00	9.06	182.50	3,859.49	-526.79	-23.01	-525.67	0.00	0.00	0.00
3,959.25	9.06	182.50	3,918.00	-536.11	-23.42	-534.97	0.00	0.00	0.00
<b>Parkman</b>									
4,000.00	9.06	182.50	3,958.24	-542.52	-23.70	-541.36	0.00	0.00	0.00
4,100.00	9.06	182.50	4,056.99	-558.25	-24.39	-557.06	0.00	0.00	0.00
4,200.00	9.06	182.50	4,155.74	-573.99	-25.07	-572.76	0.00	0.00	0.00
4,300.00	9.06	182.50	4,254.50	-589.72	-25.76	-588.46	0.00	0.00	0.00
4,400.00	9.06	182.50	4,353.25	-605.45	-26.45	-604.15	0.00	0.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 2N-29HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4884.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4884.00usft (D Rig)
<b>Site:</b>	3N-65W-29 RW 15-29HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	RW 2N-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)
4,445.85	9.06	182.50	4,398.53	-612.66	-26.76	-611.35	0.00	0.00	0.00
4,500.00	8.25	182.50	4,452.06	-620.80	-27.12	-619.47	1.50	-1.50	0.00
4,600.00	6.75	182.50	4,551.20	-633.84	-27.69	-632.48	1.50	-1.50	0.00
4,660.16	5.85	182.50	4,611.00	-640.43	-27.98	-639.06	1.50	-1.50	0.00
<b>Sussex</b>									
4,700.00	5.25	182.50	4,650.65	-644.28	-28.14	-642.90	1.50	-1.50	0.00
4,800.00	3.75	182.50	4,750.34	-652.11	-28.49	-650.72	1.50	-1.50	0.00
4,900.00	2.25	182.50	4,850.20	-657.33	-28.72	-655.93	1.50	-1.50	0.00
5,000.00	0.75	182.50	4,950.16	-659.95	-28.83	-658.53	1.50	-1.50	0.00
5,049.84	0.00	0.00	5,000.00	-660.27	-28.84	-658.86	1.50	-1.50	0.00
5,100.00	0.00	0.00	5,050.16	-660.27	-28.84	-658.86	0.00	0.00	0.00
5,200.00	0.00	0.00	5,150.16	-660.27	-28.84	-658.86	0.00	0.00	0.00
5,300.00	0.00	0.00	5,250.16	-660.27	-28.84	-658.86	0.00	0.00	0.00
5,400.00	0.00	0.00	5,350.16	-660.27	-28.84	-658.86	0.00	0.00	0.00
5,500.00	0.00	0.00	5,450.16	-660.27	-28.84	-658.86	0.00	0.00	0.00
5,600.00	0.00	0.00	5,550.16	-660.27	-28.84	-658.86	0.00	0.00	0.00
5,700.00	0.00	0.00	5,650.16	-660.27	-28.84	-658.86	0.00	0.00	0.00
5,800.00	0.00	0.00	5,750.16	-660.27	-28.84	-658.86	0.00	0.00	0.00
5,900.00	0.00	0.00	5,850.16	-660.27	-28.84	-658.86	0.00	0.00	0.00
6,000.00	0.00	0.00	5,950.16	-660.27	-28.84	-658.86	0.00	0.00	0.00
6,100.00	0.00	0.00	6,050.16	-660.27	-28.84	-658.86	0.00	0.00	0.00
6,200.00	0.00	0.00	6,150.16	-660.27	-28.84	-658.86	0.00	0.00	0.00
6,300.00	0.00	0.00	6,250.16	-660.27	-28.84	-658.86	0.00	0.00	0.00
6,400.00	0.00	0.00	6,350.16	-660.27	-28.84	-658.86	0.00	0.00	0.00
6,485.72	0.00	0.00	6,435.89	-660.27	-28.84	-658.86	0.00	0.00	0.00
6,500.00	1.28	358.53	6,450.16	-660.11	-28.85	-658.70	9.00	9.00	0.00
6,600.00	10.28	358.53	6,549.55	-650.04	-29.10	-648.63	9.00	9.00	0.00
6,700.00	19.28	358.53	6,646.14	-624.56	-29.76	-623.14	9.00	9.00	0.00
6,800.00	28.28	358.53	6,737.55	-584.28	-30.79	-582.85	9.00	9.00	0.00
6,900.00	37.28	358.53	6,821.54	-530.21	-32.17	-528.76	9.00	9.00	0.00
6,977.23	44.24	358.53	6,880.00	-479.83	-33.46	-478.37	9.00	9.00	0.00
<b>Sharon Springs</b>									
7,000.00	46.28	358.53	6,896.02	-463.66	-33.87	-462.20	9.00	9.00	0.00
7,079.10	53.40	358.53	6,947.00	-403.27	-35.42	-401.78	9.00	9.00	0.00
<b>Niobrara</b>									
7,100.00	55.28	358.53	6,959.18	-386.29	-35.85	-384.80	9.00	9.00	0.00
7,151.96	59.96	358.53	6,987.00	-342.43	-36.97	-340.93	9.00	9.00	0.00
<b>Nio B</b>									
7,200.00	64.28	358.53	7,009.46	-299.99	-38.06	-298.48	9.00	9.00	0.00
7,300.00	73.28	358.53	7,045.61	-206.90	-40.44	-205.36	9.00	9.00	0.00
7,336.09	76.53	358.53	7,055.00	-172.07	-41.33	-170.52	9.00	9.00	0.00
<b>Nio C</b>									
7,400.00	82.28	358.53	7,066.74	-109.29	-42.93	-107.73	9.00	9.00	0.00
7,483.83	89.83	358.53	7,072.50	-25.75	-45.07	-24.16	9.00	9.00	0.00
<b>Top of Production - RW 2N-29HZ_PHL</b>									
7,500.00	89.83	358.53	7,072.55	-9.59	-45.48	-7.99	0.00	0.00	0.00
7,600.00	89.83	358.53	7,072.85	90.38	-48.04	92.01	0.00	0.00	0.00
7,700.00	89.83	358.53	7,073.14	190.35	-50.60	192.00	0.00	0.00	0.00
7,800.00	89.83	358.53	7,073.44	290.31	-53.15	292.00	0.00	0.00	0.00
7,900.00	89.83	358.53	7,073.74	390.28	-55.71	391.99	0.00	0.00	0.00
8,000.00	89.83	358.53	7,074.03	490.25	-58.27	491.99	0.00	0.00	0.00
8,100.00	89.83	358.53	7,074.33	590.22	-60.82	591.98	0.00	0.00	0.00
8,200.00	89.83	358.53	7,074.63	690.18	-63.38	691.98	0.00	0.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 2N-29HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4884.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4884.00usft (D Rig)
<b>Site:</b>	3N-65W-29 RW 15-29HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	RW 2N-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	89.83	358.53	7,074.92	790.15	-65.94	791.97	0.00	0.00	0.00	
8,400.00	89.83	358.53	7,075.22	890.12	-68.50	891.97	0.00	0.00	0.00	
8,500.00	89.83	358.53	7,075.52	990.08	-71.05	991.96	0.00	0.00	0.00	
8,600.00	89.83	358.53	7,075.81	1,090.05	-73.61	1,091.96	0.00	0.00	0.00	
8,700.00	89.83	358.53	7,076.11	1,190.02	-76.17	1,191.95	0.00	0.00	0.00	
8,800.00	89.83	358.53	7,076.41	1,289.98	-78.72	1,291.95	0.00	0.00	0.00	
8,900.00	89.83	358.53	7,076.70	1,389.95	-81.28	1,391.94	0.00	0.00	0.00	
9,000.00	89.83	358.53	7,077.00	1,489.92	-83.84	1,491.94	0.00	0.00	0.00	
9,100.00	89.83	358.53	7,077.30	1,589.88	-86.39	1,591.93	0.00	0.00	0.00	
9,200.00	89.83	358.53	7,077.59	1,689.85	-88.95	1,691.93	0.00	0.00	0.00	
9,300.00	89.83	358.53	7,077.89	1,789.82	-91.51	1,791.92	0.00	0.00	0.00	
9,400.00	89.83	358.53	7,078.19	1,889.78	-94.06	1,891.92	0.00	0.00	0.00	
9,500.00	89.83	358.53	7,078.48	1,989.75	-96.62	1,991.91	0.00	0.00	0.00	
9,600.00	89.83	358.53	7,078.78	2,089.72	-99.18	2,091.91	0.00	0.00	0.00	
9,700.00	89.83	358.53	7,079.08	2,189.69	-101.73	2,191.90	0.00	0.00	0.00	
9,800.00	89.83	358.53	7,079.37	2,289.65	-104.29	2,291.90	0.00	0.00	0.00	
9,900.00	89.83	358.53	7,079.67	2,389.62	-106.85	2,391.89	0.00	0.00	0.00	
10,000.00	89.83	358.53	7,079.97	2,489.59	-109.40	2,491.89	0.00	0.00	0.00	
10,100.00	89.83	358.53	7,080.26	2,589.55	-111.96	2,591.88	0.00	0.00	0.00	
10,200.00	89.83	358.53	7,080.56	2,689.52	-114.52	2,691.88	0.00	0.00	0.00	
10,300.00	89.83	358.53	7,080.86	2,789.49	-117.07	2,791.87	0.00	0.00	0.00	
10,400.00	89.83	358.53	7,081.15	2,889.45	-119.63	2,891.87	0.00	0.00	0.00	
10,500.00	89.83	358.53	7,081.45	2,989.42	-122.19	2,991.86	0.00	0.00	0.00	
10,600.00	89.83	358.53	7,081.75	3,089.39	-124.74	3,091.86	0.00	0.00	0.00	
10,700.00	89.83	358.53	7,082.04	3,189.35	-127.30	3,191.85	0.00	0.00	0.00	
10,800.00	89.83	358.53	7,082.34	3,289.32	-129.86	3,291.85	0.00	0.00	0.00	
10,900.00	89.83	358.53	7,082.64	3,389.29	-132.41	3,391.85	0.00	0.00	0.00	
11,000.00	89.83	358.53	7,082.93	3,489.25	-134.97	3,491.84	0.00	0.00	0.00	
11,100.00	89.83	358.53	7,083.23	3,589.22	-137.53	3,591.84	0.00	0.00	0.00	
11,200.00	89.83	358.53	7,083.53	3,689.19	-140.08	3,691.83	0.00	0.00	0.00	
11,300.00	89.83	358.53	7,083.82	3,789.16	-142.64	3,791.83	0.00	0.00	0.00	
11,400.00	89.83	358.53	7,084.12	3,889.12	-145.20	3,891.82	0.00	0.00	0.00	
11,500.00	89.83	358.53	7,084.42	3,989.09	-147.75	3,991.82	0.00	0.00	0.00	
11,600.00	89.83	358.53	7,084.72	4,089.06	-150.31	4,091.81	0.00	0.00	0.00	
11,700.00	89.83	358.53	7,085.01	4,189.02	-152.87	4,191.81	0.00	0.00	0.00	
11,800.00	89.83	358.53	7,085.31	4,288.99	-155.42	4,291.80	0.00	0.00	0.00	
11,900.00	89.83	358.53	7,085.61	4,388.96	-157.98	4,391.80	0.00	0.00	0.00	
12,000.00	89.83	358.53	7,085.90	4,488.92	-160.54	4,491.79	0.00	0.00	0.00	
12,100.00	89.83	358.53	7,086.20	4,588.89	-163.09	4,591.79	0.00	0.00	0.00	
12,200.00	89.83	358.53	7,086.50	4,688.86	-165.65	4,691.78	0.00	0.00	0.00	
12,300.00	89.83	358.53	7,086.79	4,788.82	-168.21	4,791.78	0.00	0.00	0.00	
12,370.16	89.83	358.53	7,087.00	4,858.96	-170.00	4,861.93	0.00	0.00	0.00	
<b>RW 2N-29HZ_PBHL</b>										

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RW 2N-29HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4884.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4884.00usft (D Rig)
<b>Site:</b>	3N-65W-29 RW 15-29HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	RW 2N-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 2N-29HZ_PHL - plan hits target center - Point	0.00	0.00	7,072.50	-25.75	-45.07	14,596,122.26	1,728,701.16	40.190120	-104.683878
RW 2N-29HZ_PBHL - plan hits target center - Point	0.00	0.00	7,087.00	4,858.96	-170.00	14,601,006.49	1,728,558.83	40.203534	-104.684325

Casing Points					
Measured Depth	Vertical Depth		Name	Casing Diameter	Hole Diameter
(usft)	(usft)			(")	(")
1,510.71	1,500.00	9 5/8"		9-5/8	12-1/4
7,483.83	7,072.50	Top of Production		5-1/2	8-1/2

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
1,208.94	1,202.00	Fox Hills Mkr				
3,959.25	3,918.00	Parkman				
4,660.16	4,611.00	Sussex				
6,977.23	6,880.00	Sharon Springs				
7,079.10	6,947.00	Niobrara				
7,151.96	6,987.00	Nio B				
7,336.09	7,055.00	Nio C				