

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N  
3N-65W-33 CANNON 4-33HZ  
CANNON 28N-W4HZ**

**Plan A**

**Plan: Permit Rev-1**

## **Standard Planning Report**

**07 November, 2016**



Azimuths to True North  
 Magnetic North: 8.07°  
 Magnetic Field  
 Strength: 52464.2snT  
 Dip Angle: 66.71°  
 Date: 10/27/2016  
 Model: IGRF2010

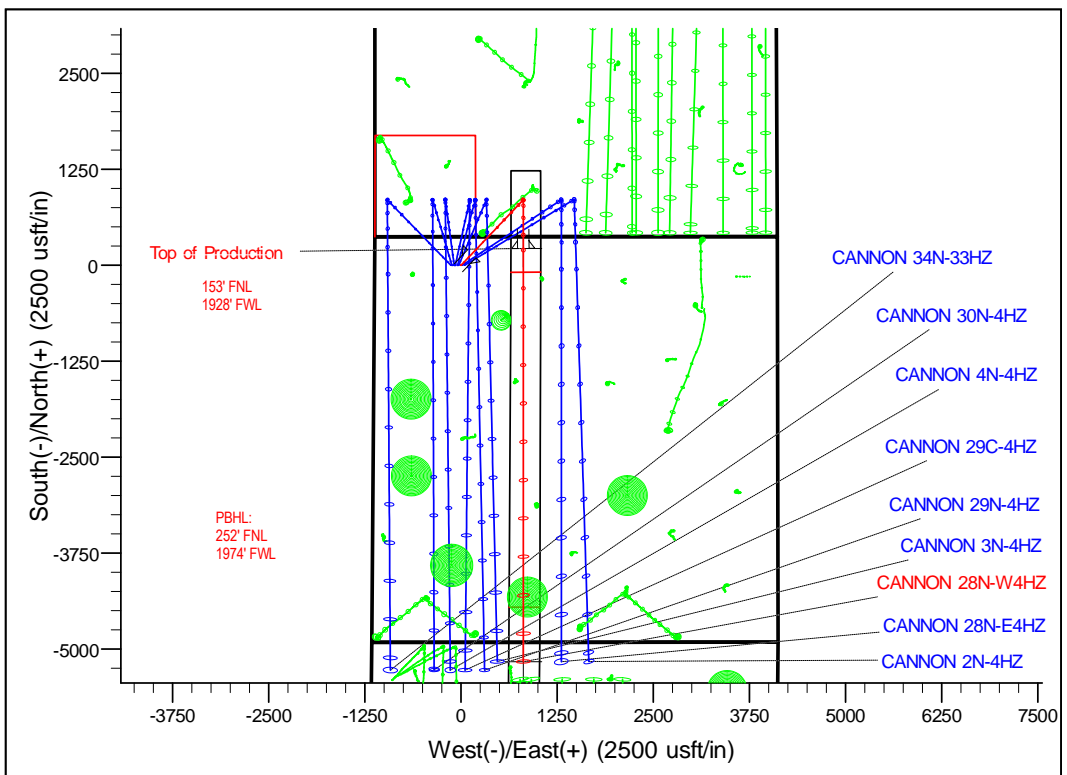
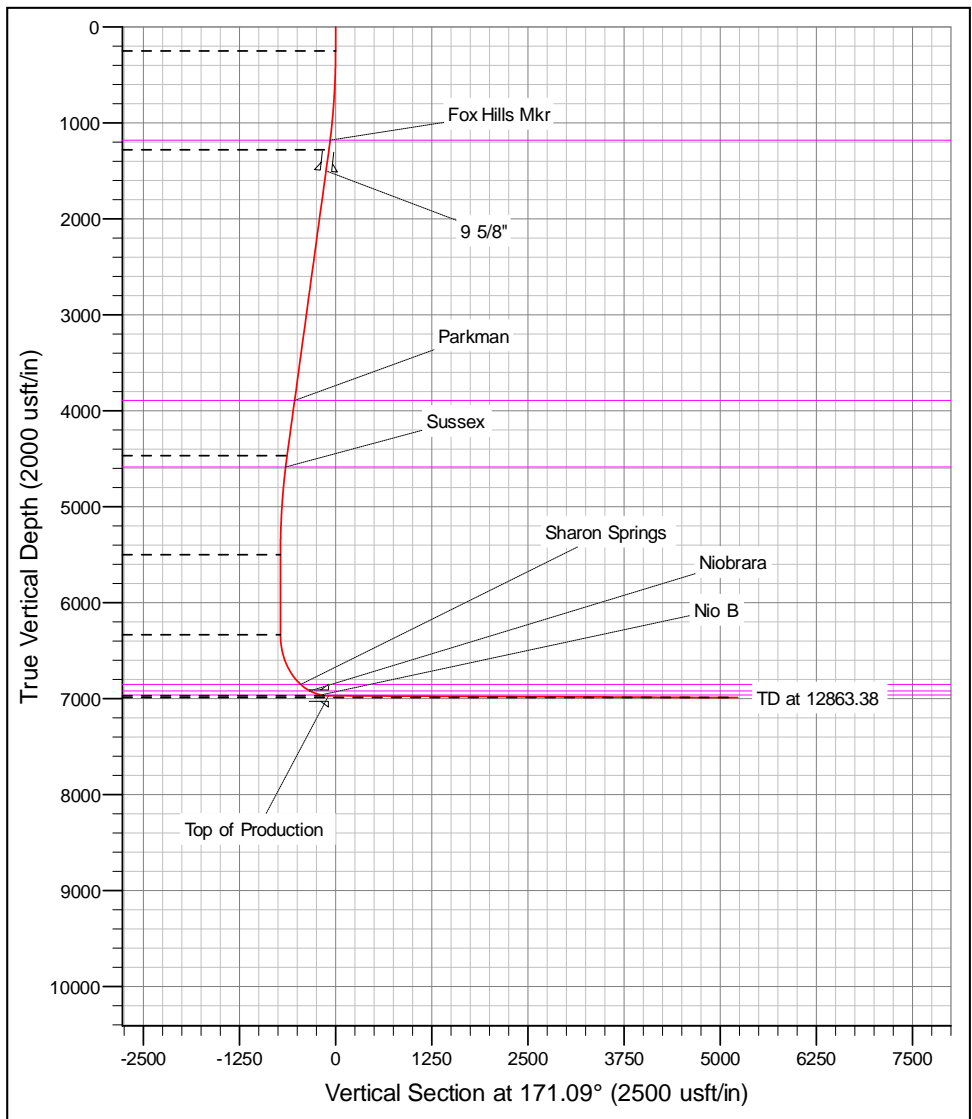
SITE: 3N-65W-33 CANNON 4-33HZ  
 Well: CANNON 28N-W4HZ  
 Wellbore: Plan A  
 Design: Permit Rev-1

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1182.00	1191.50	Fox Hills Mkr
3893.00	4006.43	Parkman
4586.00	4725.59	Sussex
6853.00	7088.90	Sharon Springs
6920.00	7226.03	Niobrara
6962.00	7374.68	Nio B

WELL DETAILS: CANNON 28N-W4HZ						
+N/-S	+E/-W	GL: 4862.00	RKB @ 4879.00usft (D Rig)			
0.00	0.00	Northing	Easting	Latitude	Longitude	Slot
		14595413.40	1731490.22	40.188146	-104.673900	

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	
1292.96	15.64	43.52	1280.05	102.61	97.44	1.50	-86.27	
4605.58	15.64	43.52	4469.95	750.39	712.56	0.00	-630.90	
5648.54	0.00	0.00	5500.00	853.00	810.00	1.50	-717.17	
6483.14	0.00	0.00	6334.60	853.00	810.00	0.00	-717.17	
7480.92	89.80	180.00	6971.21	218.60	810.00	9.00	-90.44	
12863.38	89.80	180.00	6990.00	-5163.83	810.00	0.00	5226.98	

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
CANNON 28N-W4HZ_PBHL	6990.00	-5163.83	810.00	14590252.57	1732319.19	40.173966	-104.671000



# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well CANNON 28N-W4HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4879.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4879.00usft (D Rig)
<b>Site:</b>	3N-65W-33 CANNON 4-33HZ	<b>North Reference:</b>	True
<b>Well:</b>	CANNON 28N-W4HZ	<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-33 CANNON 4-33HZ		
<b>Site Position:</b>		<b>Northing:</b>	14,595,414.36 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,731,355.32 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	40.188150
		<b>Longitude:</b>	-104.674383
		<b>Grid Convergence:</b>	0.21 °

<b>Well</b>	CANNON 28N-W4HZ		
<b>Well Position</b>	<b>+N-S</b>	-1.46 usft	<b>Northing:</b> 14,595,413.39 usft
	<b>+E-W</b>	134.89 usft	<b>Easting:</b> 1,731,490.22 usft
<b>Position Uncertainty</b>		3.28 usft	<b>Wellhead Elevation:</b> 0.00 usft
			<b>Latitude:</b> 40.188146
			<b>Longitude:</b> -104.673900
			<b>Ground Level:</b> 4,862.00 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	10/27/2016	8.07	66.71	52,464.18371297

<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	171.09

<b>Plan Survey Tool Program</b>	Date	11/7/2016			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	12,863.38	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	
1,292.96	15.64	43.52	1,280.05	102.61	97.44	1.50	1.50	0.00	43.52	
4,605.58	15.64	43.52	4,469.95	750.39	712.56	0.00	0.00	0.00	0.00	
5,648.54	0.00	0.00	5,500.00	853.00	810.00	1.50	-1.50	0.00	180.00	
6,483.14	0.00	0.00	6,334.60	853.00	810.00	0.00	0.00	0.00	0.00	
7,480.92	89.80	180.00	6,971.21	218.60	810.00	9.00	9.00	0.00	180.00	
12,863.38	89.80	180.00	6,990.00	-5,163.83	810.00	0.00	0.00	0.00	0.00	CANNON 28N-W4H

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well CANNON 28N-W4HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4879.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4879.00usft (D Rig)
<b>Site:</b>	3N-65W-33 CANNON 4-33HZ	<b>North Reference:</b>	True
<b>Well:</b>	CANNON 28N-W4HZ	<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	43.52	300.00	0.24	0.23	-0.20	1.50	1.50	0.00
400.00	2.25	43.52	399.96	2.14	2.03	-1.80	1.50	1.50	0.00
500.00	3.75	43.52	499.82	5.93	5.63	-4.99	1.50	1.50	0.00
600.00	5.25	43.52	599.51	11.62	11.03	-9.77	1.50	1.50	0.00
700.00	6.75	43.52	698.96	19.20	18.23	-16.14	1.50	1.50	0.00
800.00	8.25	43.52	798.10	28.66	27.22	-24.10	1.50	1.50	0.00
900.00	9.75	43.52	896.87	40.01	37.99	-33.64	1.50	1.50	0.00
1,000.00	11.25	43.52	995.19	53.22	50.54	-44.75	1.50	1.50	0.00
1,100.00	12.75	43.52	1,093.00	68.30	64.86	-57.42	1.50	1.50	0.00
1,191.50	14.12	43.52	1,182.00	83.72	79.50	-70.39	1.50	1.50	0.00
<b>Fox Hills Mkr</b>									
1,200.00	14.25	43.52	1,190.24	85.23	80.93	-71.66	1.50	1.50	0.00
1,292.96	15.64	43.52	1,280.05	102.61	97.44	-86.27	1.50	1.50	0.00
1,300.00	15.64	43.52	1,286.83	103.99	98.75	-87.43	0.00	0.00	0.00
1,400.00	15.64	43.52	1,383.12	123.54	117.32	-103.87	0.00	0.00	0.00
1,500.00	15.64	43.52	1,479.42	143.10	135.89	-120.31	0.00	0.00	0.00
1,521.37	15.64	43.52	1,500.00	147.28	139.85	-123.83	0.00	0.00	0.00
<b>9 5/8"</b>									
1,600.00	15.64	43.52	1,575.71	162.65	154.45	-136.75	0.00	0.00	0.00
1,700.00	15.64	43.52	1,672.01	182.21	173.02	-153.19	0.00	0.00	0.00
1,800.00	15.64	43.52	1,768.30	201.76	191.59	-169.64	0.00	0.00	0.00
1,900.00	15.64	43.52	1,864.60	221.32	210.16	-186.08	0.00	0.00	0.00
2,000.00	15.64	43.52	1,960.90	240.87	228.73	-202.52	0.00	0.00	0.00
2,100.00	15.64	43.52	2,057.19	260.43	247.30	-218.96	0.00	0.00	0.00
2,200.00	15.64	43.52	2,153.49	279.98	265.87	-235.40	0.00	0.00	0.00
2,300.00	15.64	43.52	2,249.78	299.54	284.44	-251.84	0.00	0.00	0.00
2,400.00	15.64	43.52	2,346.08	319.09	303.01	-268.28	0.00	0.00	0.00
2,500.00	15.64	43.52	2,442.37	338.65	321.57	-284.72	0.00	0.00	0.00
2,600.00	15.64	43.52	2,538.67	358.20	340.14	-301.16	0.00	0.00	0.00
2,700.00	15.64	43.52	2,634.96	377.76	358.71	-317.60	0.00	0.00	0.00
2,800.00	15.64	43.52	2,731.26	397.31	377.28	-334.05	0.00	0.00	0.00
2,900.00	15.64	43.52	2,827.55	416.87	395.85	-350.49	0.00	0.00	0.00
3,000.00	15.64	43.52	2,923.85	436.42	414.42	-366.93	0.00	0.00	0.00
3,100.00	15.64	43.52	3,020.15	455.97	432.99	-383.37	0.00	0.00	0.00
3,200.00	15.64	43.52	3,116.44	475.53	451.56	-399.81	0.00	0.00	0.00
3,300.00	15.64	43.52	3,212.74	495.08	470.13	-416.25	0.00	0.00	0.00
3,400.00	15.64	43.52	3,309.03	514.64	488.70	-432.69	0.00	0.00	0.00
3,500.00	15.64	43.52	3,405.33	534.19	507.26	-449.13	0.00	0.00	0.00
3,600.00	15.64	43.52	3,501.62	553.75	525.83	-465.57	0.00	0.00	0.00
3,700.00	15.64	43.52	3,597.92	573.30	544.40	-482.01	0.00	0.00	0.00
3,800.00	15.64	43.52	3,694.21	592.86	562.97	-498.46	0.00	0.00	0.00
3,900.00	15.64	43.52	3,790.51	612.41	581.54	-514.90	0.00	0.00	0.00
4,000.00	15.64	43.52	3,886.80	631.97	600.11	-531.34	0.00	0.00	0.00
4,006.43	15.64	43.52	3,893.00	633.23	601.30	-532.39	0.00	0.00	0.00
<b>Parkman</b>									
4,100.00	15.64	43.52	3,983.10	651.52	618.68	-547.78	0.00	0.00	0.00
4,200.00	15.64	43.52	4,079.39	671.08	637.25	-564.22	0.00	0.00	0.00
4,300.00	15.64	43.52	4,175.69	690.63	655.82	-580.66	0.00	0.00	0.00
4,400.00	15.64	43.52	4,271.99	710.19	674.39	-597.10	0.00	0.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well CANNON 28N-W4HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4879.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4879.00usft (D Rig)
<b>Site:</b>	3N-65W-33 CANNON 4-33HZ	<b>North Reference:</b>	True
<b>Well:</b>	CANNON 28N-W4HZ	<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	15.64	43.52	4,368.28	729.74	692.95	-613.54	0.00	0.00	0.00	
4,600.00	15.64	43.52	4,464.58	749.30	711.52	-629.98	0.00	0.00	0.00	
4,605.58	15.64	43.52	4,469.95	750.39	712.56	-630.90	0.00	0.00	0.00	
4,700.00	14.23	43.52	4,561.18	768.03	729.32	-645.74	1.50	-1.50	0.00	
4,725.59	13.84	43.52	4,586.00	772.53	733.59	-649.52	1.50	-1.50	0.00	
<b>Sussex</b>										
4,800.00	12.73	43.52	4,658.42	784.93	745.37	-659.95	1.50	-1.50	0.00	
4,900.00	11.23	43.52	4,756.24	799.98	759.66	-672.60	1.50	-1.50	0.00	
5,000.00	9.73	43.52	4,854.57	813.17	772.18	-683.69	1.50	-1.50	0.00	
5,100.00	8.23	43.52	4,953.34	824.49	782.92	-693.20	1.50	-1.50	0.00	
5,200.00	6.73	43.52	5,052.49	833.92	791.89	-701.14	1.50	-1.50	0.00	
5,300.00	5.23	43.52	5,151.94	841.48	799.06	-707.49	1.50	-1.50	0.00	
5,400.00	3.73	43.52	5,251.63	847.14	804.43	-712.25	1.50	-1.50	0.00	
5,500.00	2.23	43.52	5,351.50	850.91	808.01	-715.41	1.50	-1.50	0.00	
5,600.00	0.73	43.52	5,451.46	852.78	809.79	-716.99	1.50	-1.50	0.00	
5,648.54	0.00	0.00	5,500.00	853.00	810.00	-717.17	1.50	-1.50	0.00	
5,700.00	0.00	0.00	5,551.46	853.00	810.00	-717.17	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,651.46	853.00	810.00	-717.17	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,751.46	853.00	810.00	-717.17	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,851.46	853.00	810.00	-717.17	0.00	0.00	0.00	
6,100.00	0.00	0.00	5,951.46	853.00	810.00	-717.17	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,051.46	853.00	810.00	-717.17	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,151.46	853.00	810.00	-717.17	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,251.46	853.00	810.00	-717.17	0.00	0.00	0.00	
6,483.14	0.00	0.00	6,334.60	853.00	810.00	-717.17	0.00	0.00	0.00	
6,500.00	1.52	180.00	6,351.46	852.78	810.00	-716.95	9.00	9.00	0.00	
6,600.00	10.52	180.00	6,450.80	842.30	810.00	-706.61	9.00	9.00	0.00	
6,700.00	19.52	180.00	6,547.29	816.42	810.00	-681.03	9.00	9.00	0.00	
6,800.00	28.52	180.00	6,638.54	775.76	810.00	-640.87	9.00	9.00	0.00	
6,900.00	37.52	180.00	6,722.30	721.33	810.00	-587.09	9.00	9.00	0.00	
7,000.00	46.52	180.00	6,796.52	654.46	810.00	-521.03	9.00	9.00	0.00	
7,088.90	54.52	180.00	6,853.00	585.90	810.00	-453.30	9.00	9.00	0.00	
<b>Sharon Springs</b>										
7,100.00	55.52	180.00	6,859.36	576.80	810.00	-444.31	9.00	9.00	0.00	
7,200.00	64.52	180.00	6,909.28	490.28	810.00	-358.83	9.00	9.00	0.00	
7,226.03	66.86	180.00	6,920.00	466.55	810.00	-335.40	9.00	9.00	0.00	
<b>Niobrara</b>										
7,300.00	73.52	180.00	6,945.06	397.00	810.00	-266.68	9.00	9.00	0.00	
7,374.68	80.24	180.00	6,962.00	324.31	810.00	-194.87	9.00	9.00	0.00	
<b>Nio B</b>										
7,400.00	82.52	180.00	6,965.79	299.28	810.00	-170.14	9.00	9.00	0.00	
7,480.92	89.80	180.00	6,971.21	218.60	810.00	-90.44	9.00	9.00	0.00	
<b>Top of Production - CANNON 28N-W4HZ_PHL</b>										
7,500.00	89.80	180.00	6,971.28	199.52	810.00	-71.59	0.00	0.00	0.00	
7,600.00	89.80	180.00	6,971.63	99.52	810.00	27.21	0.00	0.00	0.00	
7,700.00	89.80	180.00	6,971.98	-0.48	810.00	126.00	0.00	0.00	0.00	
7,800.00	89.80	180.00	6,972.33	-100.48	810.00	224.79	0.00	0.00	0.00	
7,900.00	89.80	180.00	6,972.67	-200.48	810.00	323.58	0.00	0.00	0.00	
8,000.00	89.80	180.00	6,973.02	-300.48	810.00	422.37	0.00	0.00	0.00	
8,100.00	89.80	180.00	6,973.37	-400.48	810.00	521.16	0.00	0.00	0.00	
8,200.00	89.80	180.00	6,973.72	-500.48	810.00	619.95	0.00	0.00	0.00	
8,300.00	89.80	180.00	6,974.07	-600.48	810.00	718.75	0.00	0.00	0.00	
8,400.00	89.80	180.00	6,974.42	-700.48	810.00	817.54	0.00	0.00	0.00	
8,500.00	89.80	180.00	6,974.77	-800.48	810.00	916.33	0.00	0.00	0.00	

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well CANNON 28N-W4HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4879.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4879.00usft (D Rig)
<b>Site:</b>	3N-65W-33 CANNON 4-33HZ	<b>North Reference:</b>	True
<b>Well:</b>	CANNON 28N-W4HZ	<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	89.80	180.00	6,975.12	-900.48	810.00	1,015.12	0.00	0.00	0.00
8,700.00	89.80	180.00	6,975.47	-1,000.47	810.00	1,113.91	0.00	0.00	0.00
8,800.00	89.80	180.00	6,975.82	-1,100.47	810.00	1,212.70	0.00	0.00	0.00
8,900.00	89.80	180.00	6,976.17	-1,200.47	810.00	1,311.49	0.00	0.00	0.00
9,000.00	89.80	180.00	6,976.51	-1,300.47	810.00	1,410.28	0.00	0.00	0.00
9,100.00	89.80	180.00	6,976.86	-1,400.47	810.00	1,509.08	0.00	0.00	0.00
9,200.00	89.80	180.00	6,977.21	-1,500.47	810.00	1,607.87	0.00	0.00	0.00
9,300.00	89.80	180.00	6,977.56	-1,600.47	810.00	1,706.66	0.00	0.00	0.00
9,400.00	89.80	180.00	6,977.91	-1,700.47	810.00	1,805.45	0.00	0.00	0.00
9,500.00	89.80	180.00	6,978.26	-1,800.47	810.00	1,904.24	0.00	0.00	0.00
9,600.00	89.80	180.00	6,978.61	-1,900.47	810.00	2,003.03	0.00	0.00	0.00
9,700.00	89.80	180.00	6,978.96	-2,000.47	810.00	2,101.82	0.00	0.00	0.00
9,800.00	89.80	180.00	6,979.31	-2,100.47	810.00	2,200.62	0.00	0.00	0.00
9,900.00	89.80	180.00	6,979.66	-2,200.47	810.00	2,299.41	0.00	0.00	0.00
10,000.00	89.80	180.00	6,980.01	-2,300.47	810.00	2,398.20	0.00	0.00	0.00
10,100.00	89.80	180.00	6,980.35	-2,400.47	810.00	2,496.99	0.00	0.00	0.00
10,200.00	89.80	180.00	6,980.70	-2,500.47	810.00	2,595.78	0.00	0.00	0.00
10,300.00	89.80	180.00	6,981.05	-2,600.46	810.00	2,694.57	0.00	0.00	0.00
10,400.00	89.80	180.00	6,981.40	-2,700.46	810.00	2,793.36	0.00	0.00	0.00
10,500.00	89.80	180.00	6,981.75	-2,800.46	810.00	2,892.16	0.00	0.00	0.00
10,600.00	89.80	180.00	6,982.10	-2,900.46	810.00	2,990.95	0.00	0.00	0.00
10,700.00	89.80	180.00	6,982.45	-3,000.46	810.00	3,089.74	0.00	0.00	0.00
10,800.00	89.80	180.00	6,982.80	-3,100.46	810.00	3,188.53	0.00	0.00	0.00
10,900.00	89.80	180.00	6,983.15	-3,200.46	810.00	3,287.32	0.00	0.00	0.00
11,000.00	89.80	180.00	6,983.50	-3,300.46	810.00	3,386.11	0.00	0.00	0.00
11,100.00	89.80	180.00	6,983.84	-3,400.46	810.00	3,484.90	0.00	0.00	0.00
11,200.00	89.80	180.00	6,984.19	-3,500.46	810.00	3,583.70	0.00	0.00	0.00
11,300.00	89.80	180.00	6,984.54	-3,600.46	810.00	3,682.49	0.00	0.00	0.00
11,400.00	89.80	180.00	6,984.89	-3,700.46	810.00	3,781.28	0.00	0.00	0.00
11,500.00	89.80	180.00	6,985.24	-3,800.46	810.00	3,880.07	0.00	0.00	0.00
11,600.00	89.80	180.00	6,985.59	-3,900.46	810.00	3,978.86	0.00	0.00	0.00
11,700.00	89.80	180.00	6,985.94	-4,000.46	810.00	4,077.65	0.00	0.00	0.00
11,800.00	89.80	180.00	6,986.29	-4,100.46	810.00	4,176.44	0.00	0.00	0.00
11,900.00	89.80	180.00	6,986.64	-4,200.46	810.00	4,275.24	0.00	0.00	0.00
12,000.00	89.80	180.00	6,986.99	-4,300.45	810.00	4,374.03	0.00	0.00	0.00
12,100.00	89.80	180.00	6,987.34	-4,400.45	810.00	4,472.82	0.00	0.00	0.00
12,200.00	89.80	180.00	6,987.68	-4,500.45	810.00	4,571.61	0.00	0.00	0.00
12,300.00	89.80	180.00	6,988.03	-4,600.45	810.00	4,670.40	0.00	0.00	0.00
12,400.00	89.80	180.00	6,988.38	-4,700.45	810.00	4,769.19	0.00	0.00	0.00
12,500.00	89.80	180.00	6,988.73	-4,800.45	810.00	4,867.98	0.00	0.00	0.00
12,600.00	89.80	180.00	6,989.08	-4,900.45	810.00	4,966.78	0.00	0.00	0.00
12,700.00	89.80	180.00	6,989.43	-5,000.45	810.00	5,065.57	0.00	0.00	0.00
12,800.00	89.80	180.00	6,989.78	-5,100.45	810.00	5,164.36	0.00	0.00	0.00
12,863.38	89.80	180.00	6,990.00	-5,163.83	810.00	5,226.98	0.00	0.00	0.00
<b>CANNON 28N-W4HZ_PBHL</b>									

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well CANNON 28N-W4HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4879.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4879.00usft (D Rig)
<b>Site:</b>	3N-65W-33 CANNON 4-33HZ	<b>North Reference:</b>	True
<b>Well:</b>	CANNON 28N-W4HZ	<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 (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
CANNON 28N-W4HZ - hit/miss target - Shape - Point	0.00	0.00	6,971.21	218.60	810.00	14,595,634.97	1,732,299.41	40.188746	-104.671000
CANNON 28N-W4HZ - plan hits target center - Point	0.00	0.00	6,990.00	-5,163.83	810.00	14,590,252.57	1,732,319.18	40.173966	-104.671001

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,521.37	1,500.00	9 5/8"	9-5/8	13-1/2	
7,480.92	6,971.21	Top of Production	5-1/2	8-1/2	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,191.50	1,182.00	Fox Hills Mkr				
4,006.43	3,893.00	Parkman				
4,725.59	4,586.00	Sussex				
7,088.90	6,853.00	Sharon Springs				
7,226.03	6,920.00	Niobrara				
7,374.68	6,962.00	Nio B				