

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N  
3N-65W-33 CANNON 4-33HZ  
CANNON 29N-4HZ**

**Plan A**

**Plan: Permit Rev-1**

## **Standard Planning Report**

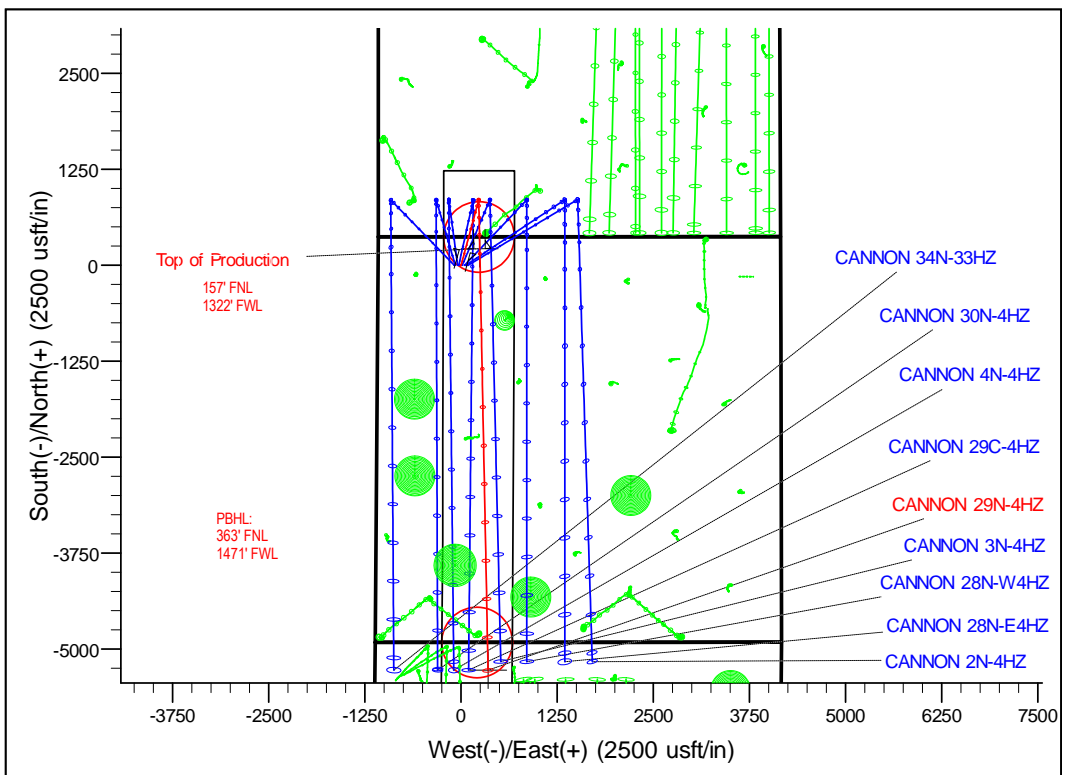
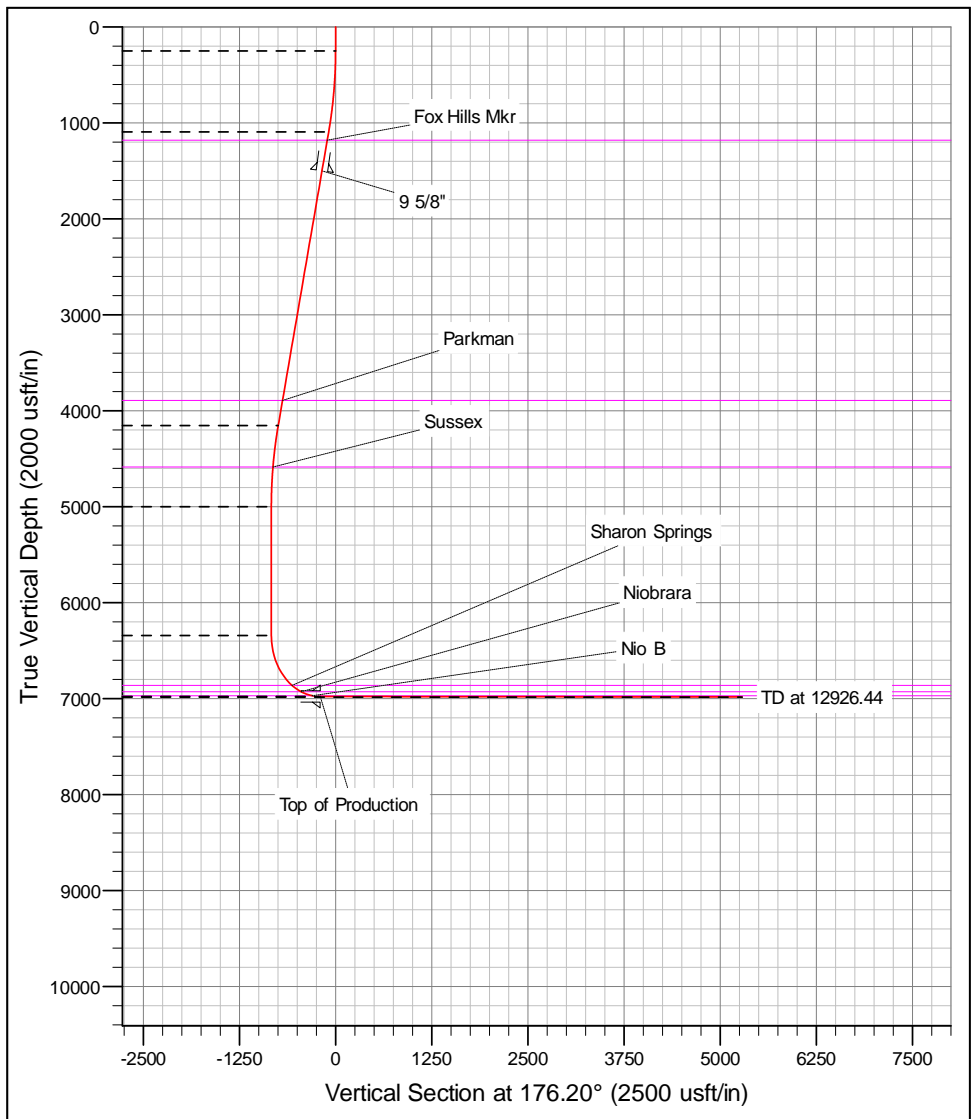
**07 November, 2016**

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1182.00	1191.25	Fox Hills Mkr
3893.00	3971.01	Parkman
4586.00	4676.89	Sussex
6862.00	7041.80	Sharon Springs
6923.00	7173.76	Niobrara
6970.00	7325.89	No B

WELL DETAILS: CANNON 29N-4HZ						
+N/-S	+E/-W	GL: 4862.00	RKB @ 4879.00usft (D Rig)	North	East	Slot
0.00	0.00	14595413.96	1731445.26	40.188148	-104.674061	

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
1101.31	12.77	15.10	1094.28	91.21	24.61	1.50	-89.38
4240.39	12.77	15.10	4155.72	761.09	205.39	0.00	-745.80
5091.70	0.00	0.00	5000.00	852.30	230.00	1.50	-835.18
6434.29	0.00	0.00	6342.59	852.30	230.00	0.00	-835.18
7433.73	89.95	178.87	6979.21	216.36	242.49	9.00	-199.81
12926.44	89.95	178.87	6984.00	-5275.28	350.38	0.005286.91	

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	North	East	Latitude	Longitude
CANNON 29N-4HZ_PBHL	6984.00	-5275.28	350.38	14590140.00	1731815.00	40.173662	-104.672807



# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well CANNON 29N-4HZ
<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 29N-4HZ	<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 29N-4HZ					
<b>Well Position</b>	<b>+N-S</b>	-0.73 usft	<b>Northing:</b>	14,595,413.96 usft	<b>Latitude:</b>	40.188148
	<b>+E-W</b>	89.93 usft	<b>Easting:</b>	1,731,445.26 usft	<b>Longitude:</b>	-104.674061
<b>Position Uncertainty</b>		3.28 usft	<b>Wellhead Elevation:</b>	0.00 usft	<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	52,464.16836851

<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	176.20

<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	12,926.44	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	
1,101.31	12.77	15.10	1,094.28	91.21	24.61	1.50	1.50	0.00	15.10	
4,240.39	12.77	15.10	4,155.72	761.09	205.39	0.00	0.00	0.00	0.00	
5,091.70	0.00	0.00	5,000.00	852.30	230.00	1.50	-1.50	0.00	180.00	
6,434.29	0.00	0.00	6,342.59	852.30	230.00	0.00	0.00	0.00	0.00	
7,433.73	89.95	178.87	6,979.21	216.36	242.49	9.00	9.00	0.00	178.87	
12,926.44	89.95	178.87	6,984.00	-5,275.28	350.38	0.00	0.00	0.00	0.00	CANNON 29N-4HZ

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well CANNON 29N-4HZ
<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 29N-4HZ	<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	15.10	300.00	0.32	0.09	-0.31	1.50	1.50	0.00
400.00	2.25	15.10	399.96	2.84	0.77	-2.79	1.50	1.50	0.00
500.00	3.75	15.10	499.82	7.90	2.13	-7.74	1.50	1.50	0.00
600.00	5.25	15.10	599.51	15.47	4.17	-15.16	1.50	1.50	0.00
700.00	6.75	15.10	698.96	25.56	6.90	-25.05	1.50	1.50	0.00
800.00	8.25	15.10	798.10	38.16	10.30	-37.40	1.50	1.50	0.00
900.00	9.75	15.10	896.87	53.27	14.37	-52.20	1.50	1.50	0.00
1,000.00	11.25	15.10	995.19	70.86	19.12	-69.44	1.50	1.50	0.00
1,100.00	12.75	15.10	1,093.00	90.93	24.54	-89.11	1.50	1.50	0.00
1,101.31	12.77	15.10	1,094.28	91.21	24.61	-89.38	1.50	1.50	0.00
1,191.25	12.77	15.10	1,182.00	110.41	29.79	-108.19	0.00	0.00	0.00
<b>Fox Hills Mkr</b>									
1,200.00	12.77	15.10	1,190.53	112.27	30.30	-110.02	0.00	0.00	0.00
1,300.00	12.77	15.10	1,288.06	133.61	36.06	-130.93	0.00	0.00	0.00
1,400.00	12.77	15.10	1,385.58	154.95	41.82	-151.84	0.00	0.00	0.00
1,500.00	12.77	15.10	1,483.11	176.29	47.57	-172.75	0.00	0.00	0.00
1,517.32	12.77	15.10	1,500.00	179.99	48.57	-176.37	0.00	0.00	0.00
<b>9 5/8"</b>									
1,600.00	12.77	15.10	1,580.64	197.63	53.33	-193.66	0.00	0.00	0.00
1,700.00	12.77	15.10	1,678.16	218.97	59.09	-214.57	0.00	0.00	0.00
1,800.00	12.77	15.10	1,775.69	240.31	64.85	-235.49	0.00	0.00	0.00
1,900.00	12.77	15.10	1,873.22	261.65	70.61	-256.40	0.00	0.00	0.00
2,000.00	12.77	15.10	1,970.74	282.99	76.37	-277.31	0.00	0.00	0.00
2,100.00	12.77	15.10	2,068.27	304.33	82.13	-298.22	0.00	0.00	0.00
2,200.00	12.77	15.10	2,165.80	325.67	87.88	-319.13	0.00	0.00	0.00
2,300.00	12.77	15.10	2,263.32	347.01	93.64	-340.04	0.00	0.00	0.00
2,400.00	12.77	15.10	2,360.85	368.35	99.40	-360.95	0.00	0.00	0.00
2,500.00	12.77	15.10	2,458.38	389.69	105.16	-381.86	0.00	0.00	0.00
2,600.00	12.77	15.10	2,555.90	411.03	110.92	-402.78	0.00	0.00	0.00
2,700.00	12.77	15.10	2,653.43	432.37	116.68	-423.69	0.00	0.00	0.00
2,800.00	12.77	15.10	2,750.96	453.71	122.44	-444.60	0.00	0.00	0.00
2,900.00	12.77	15.10	2,848.48	475.05	128.20	-465.51	0.00	0.00	0.00
3,000.00	12.77	15.10	2,946.01	496.39	133.95	-486.42	0.00	0.00	0.00
3,100.00	12.77	15.10	3,043.54	517.73	139.71	-507.33	0.00	0.00	0.00
3,200.00	12.77	15.10	3,141.06	539.07	145.47	-528.24	0.00	0.00	0.00
3,300.00	12.77	15.10	3,238.59	560.41	151.23	-549.16	0.00	0.00	0.00
3,400.00	12.77	15.10	3,336.12	581.75	156.99	-570.07	0.00	0.00	0.00
3,500.00	12.77	15.10	3,433.64	603.09	162.75	-590.98	0.00	0.00	0.00
3,600.00	12.77	15.10	3,531.17	624.43	168.51	-611.89	0.00	0.00	0.00
3,700.00	12.77	15.10	3,628.69	645.77	174.27	-632.80	0.00	0.00	0.00
3,800.00	12.77	15.10	3,726.22	667.11	180.02	-653.71	0.00	0.00	0.00
3,900.00	12.77	15.10	3,823.75	688.45	185.78	-674.62	0.00	0.00	0.00
3,971.01	12.77	15.10	3,893.00	703.60	189.87	-689.47	0.00	0.00	0.00
<b>Parkman</b>									
4,000.00	12.77	15.10	3,921.27	709.79	191.54	-695.53	0.00	0.00	0.00
4,100.00	12.77	15.10	4,018.80	731.13	197.30	-716.45	0.00	0.00	0.00
4,200.00	12.77	15.10	4,116.33	752.47	203.06	-737.36	0.00	0.00	0.00
4,240.39	12.77	15.10	4,155.72	761.09	205.39	-745.80	0.00	0.00	0.00
4,300.00	11.88	15.10	4,213.96	773.37	208.70	-757.84	1.50	-1.50	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well CANNON 29N-4HZ
<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 29N-4HZ	<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)	
4,400.00	10.38	15.10	4,312.07	792.00	213.73	-776.09	1.50	-1.50	0.00	
4,500.00	8.88	15.10	4,410.66	808.14	218.08	-791.91	1.50	-1.50	0.00	
4,600.00	7.38	15.10	4,509.66	821.79	221.77	-805.28	1.50	-1.50	0.00	
4,676.89	6.22	15.10	4,586.00	830.58	224.14	-813.89	1.50	-1.50	0.00	
<b>Sussex</b>										
4,700.00	5.88	15.10	4,608.99	832.93	224.77	-816.20	1.50	-1.50	0.00	
4,800.00	4.38	15.10	4,708.58	841.55	227.10	-824.65	1.50	-1.50	0.00	
4,900.00	2.88	15.10	4,808.38	847.66	228.75	-830.63	1.50	-1.50	0.00	
5,000.00	1.38	15.10	4,908.31	851.24	229.71	-834.14	1.50	-1.50	0.00	
5,091.70	0.00	0.00	5,000.00	852.30	230.00	-835.18	1.50	-1.50	0.00	
5,100.00	0.00	0.00	5,008.30	852.30	230.00	-835.18	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,108.30	852.30	230.00	-835.18	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,208.30	852.30	230.00	-835.18	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,308.30	852.30	230.00	-835.18	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,408.30	852.30	230.00	-835.18	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,508.30	852.30	230.00	-835.18	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,608.30	852.30	230.00	-835.18	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,708.30	852.30	230.00	-835.18	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,808.30	852.30	230.00	-835.18	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,908.30	852.30	230.00	-835.18	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,008.30	852.30	230.00	-835.18	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,108.30	852.30	230.00	-835.18	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,208.30	852.30	230.00	-835.18	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,308.30	852.30	230.00	-835.18	0.00	0.00	0.00	
6,434.29	0.00	0.00	6,342.59	852.30	230.00	-835.18	0.00	0.00	0.00	
6,500.00	5.91	178.87	6,408.18	848.91	230.07	-831.80	9.00	9.00	0.00	
6,600.00	14.91	178.87	6,506.43	830.86	230.42	-813.76	9.00	9.00	0.00	
6,700.00	23.91	178.87	6,600.65	797.66	231.07	-780.59	9.00	9.00	0.00	
6,800.00	32.91	178.87	6,688.51	750.13	232.01	-733.11	9.00	9.00	0.00	
6,900.00	41.91	178.87	6,767.86	689.45	233.20	-672.48	9.00	9.00	0.00	
7,000.00	50.91	178.87	6,836.73	617.11	234.62	-600.20	9.00	9.00	0.00	
7,041.80	54.68	178.87	6,862.00	583.83	235.27	-566.95	9.00	9.00	0.00	
<b>Sharon Springs</b>										
7,100.00	59.91	178.87	6,893.44	534.88	236.24	-518.05	9.00	9.00	0.00	
7,179.76	67.09	178.87	6,929.00	463.56	237.64	-446.79	9.00	9.00	0.00	
<b>Niobrara</b>										
7,200.00	68.91	178.87	6,936.58	444.79	238.01	-428.04	9.00	9.00	0.00	
7,300.00	77.91	178.87	6,965.10	349.07	239.89	-332.41	9.00	9.00	0.00	
7,325.89	80.24	178.87	6,970.00	323.66	240.39	-307.02	9.00	9.00	0.00	
<b>Nio B</b>										
7,400.00	86.91	178.87	6,978.28	250.07	241.83	-233.49	9.00	9.00	0.00	
7,433.73	89.95	178.87	6,979.21	216.36	242.49	-199.81	9.00	9.00	0.00	
<b>Top of Production - CANNON 29N-4HZ_PHL</b>										
7,500.00	89.95	178.87	6,979.26	150.10	243.79	-133.62	0.00	0.00	0.00	
7,600.00	89.95	178.87	6,979.35	50.12	245.76	-33.73	0.00	0.00	0.00	
7,700.00	89.95	178.87	6,979.44	-49.86	247.72	66.17	0.00	0.00	0.00	
7,800.00	89.95	178.87	6,979.53	-149.84	249.69	166.06	0.00	0.00	0.00	
7,900.00	89.95	178.87	6,979.61	-249.82	251.65	265.95	0.00	0.00	0.00	
8,000.00	89.95	178.87	6,979.70	-349.80	253.62	365.84	0.00	0.00	0.00	
8,100.00	89.95	178.87	6,979.79	-449.78	255.58	465.73	0.00	0.00	0.00	
8,200.00	89.95	178.87	6,979.88	-549.76	257.54	565.62	0.00	0.00	0.00	
8,300.00	89.95	178.87	6,979.96	-649.74	259.51	665.51	0.00	0.00	0.00	
8,400.00	89.95	178.87	6,980.05	-749.72	261.47	765.40	0.00	0.00	0.00	
8,500.00	89.95	178.87	6,980.14	-849.70	263.44	865.29	0.00	0.00	0.00	

# Corporate Planning Report

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<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 29N-4HZ	<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	89.95	178.87	6,980.22	-949.68	265.40	965.18	0.00	0.00	0.00
8,700.00	89.95	178.87	6,980.31	-1,049.66	267.36	1,065.08	0.00	0.00	0.00
8,800.00	89.95	178.87	6,980.40	-1,149.64	269.33	1,164.97	0.00	0.00	0.00
8,900.00	89.95	178.87	6,980.49	-1,249.63	271.29	1,264.86	0.00	0.00	0.00
9,000.00	89.95	178.87	6,980.57	-1,349.61	273.26	1,364.75	0.00	0.00	0.00
9,100.00	89.95	178.87	6,980.66	-1,449.59	275.22	1,464.64	0.00	0.00	0.00
9,200.00	89.95	178.87	6,980.75	-1,549.57	277.19	1,564.53	0.00	0.00	0.00
9,300.00	89.95	178.87	6,980.84	-1,649.55	279.15	1,664.42	0.00	0.00	0.00
9,400.00	89.95	178.87	6,980.92	-1,749.53	281.11	1,764.31	0.00	0.00	0.00
9,500.00	89.95	178.87	6,981.01	-1,849.51	283.08	1,864.20	0.00	0.00	0.00
9,600.00	89.95	178.87	6,981.10	-1,949.49	285.04	1,964.09	0.00	0.00	0.00
9,700.00	89.95	178.87	6,981.18	-2,049.47	287.01	2,063.99	0.00	0.00	0.00
9,800.00	89.95	178.87	6,981.27	-2,149.45	288.97	2,163.88	0.00	0.00	0.00
9,900.00	89.95	178.87	6,981.36	-2,249.43	290.93	2,263.77	0.00	0.00	0.00
10,000.00	89.95	178.87	6,981.45	-2,349.41	292.90	2,363.66	0.00	0.00	0.00
10,100.00	89.95	178.87	6,981.53	-2,449.39	294.86	2,463.55	0.00	0.00	0.00
10,200.00	89.95	178.87	6,981.62	-2,549.37	296.83	2,563.44	0.00	0.00	0.00
10,300.00	89.95	178.87	6,981.71	-2,649.35	298.79	2,663.33	0.00	0.00	0.00
10,400.00	89.95	178.87	6,981.80	-2,749.34	300.76	2,763.22	0.00	0.00	0.00
10,500.00	89.95	178.87	6,981.88	-2,849.32	302.72	2,863.11	0.00	0.00	0.00
10,600.00	89.95	178.87	6,981.97	-2,949.30	304.68	2,963.01	0.00	0.00	0.00
10,700.00	89.95	178.87	6,982.06	-3,049.28	306.65	3,062.90	0.00	0.00	0.00
10,800.00	89.95	178.87	6,982.14	-3,149.26	308.61	3,162.79	0.00	0.00	0.00
10,900.00	89.95	178.87	6,982.23	-3,249.24	310.58	3,262.68	0.00	0.00	0.00
11,000.00	89.95	178.87	6,982.32	-3,349.22	312.54	3,362.57	0.00	0.00	0.00
11,100.00	89.95	178.87	6,982.41	-3,449.20	314.50	3,462.46	0.00	0.00	0.00
11,200.00	89.95	178.87	6,982.49	-3,549.18	316.47	3,562.35	0.00	0.00	0.00
11,300.00	89.95	178.87	6,982.58	-3,649.16	318.43	3,662.24	0.00	0.00	0.00
11,400.00	89.95	178.87	6,982.67	-3,749.14	320.40	3,762.13	0.00	0.00	0.00
11,500.00	89.95	178.87	6,982.76	-3,849.12	322.36	3,862.02	0.00	0.00	0.00
11,600.00	89.95	178.87	6,982.84	-3,949.10	324.33	3,961.92	0.00	0.00	0.00
11,700.00	89.95	178.87	6,982.93	-4,049.08	326.29	4,061.81	0.00	0.00	0.00
11,800.00	89.95	178.87	6,983.02	-4,149.06	328.25	4,161.70	0.00	0.00	0.00
11,900.00	89.95	178.87	6,983.10	-4,249.05	330.22	4,261.59	0.00	0.00	0.00
12,000.00	89.95	178.87	6,983.19	-4,349.03	332.18	4,361.48	0.00	0.00	0.00
12,100.00	89.95	178.87	6,983.28	-4,449.01	334.15	4,461.37	0.00	0.00	0.00
12,200.00	89.95	178.87	6,983.37	-4,548.99	336.11	4,561.26	0.00	0.00	0.00
12,300.00	89.95	178.87	6,983.45	-4,648.97	338.07	4,661.15	0.00	0.00	0.00
12,400.00	89.95	178.87	6,983.54	-4,748.95	340.04	4,761.04	0.00	0.00	0.00
12,500.00	89.95	178.87	6,983.63	-4,848.93	342.00	4,860.93	0.00	0.00	0.00
12,600.00	89.95	178.87	6,983.72	-4,948.91	343.97	4,960.83	0.00	0.00	0.00
12,700.00	89.95	178.87	6,983.80	-5,048.89	345.93	5,060.72	0.00	0.00	0.00
12,800.00	89.95	178.87	6,983.89	-5,148.87	347.90	5,160.61	0.00	0.00	0.00
12,900.00	89.95	178.87	6,983.98	-5,248.85	349.86	5,260.50	0.00	0.00	0.00
12,926.44	89.95	178.87	6,984.00	-5,275.28	350.38	5,286.91	0.00	0.00	0.00
<b>CANNON 29N-4HZ_PBHL</b>									

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well CANNON 29N-4HZ
<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 29N-4HZ	<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									
CANNON 29N-4HZ_P - plan hits target center - Point	0.00	0.00	6,979.21	216.36	242.49	14,595,631.21	1,731,686.95	40.188742	-104.673193
CANNON 29N-4HZ_P - plan hits target center - Point	0.00	0.00	6,984.00	-5,275.28	350.38	14,590,140.00	1,731,815.00	40.173662	-104.672807

Casing Points					
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter	
(usft)	(usft)		(")	(")	
1,517.32	1,500.00	9 5/8"	9-5/8	13-1/2	
7,433.73	6,979.21	Top of Production	5-1/2	8-1/2	

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
1,191.25	1,182.00	Fox Hills Mkr				
3,971.01	3,893.00	Parkman				
4,676.89	4,586.00	Sussex				
7,041.80	6,862.00	Sharon Springs				
7,179.76	6,929.00	Niobrara				
7,325.89	6,970.00	Nio B				