

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N**

**1N-66W-08 Gabel 37-8HZ Pad**

**Gabel 28N-5HZ**

**Plan A**

**Plan: Permit Rev-1**

## **Standard Planning Report**

**15 July, 2016**



Azimuths to True North  
Magnetic North: 8.17°

Magnetic Field  
Strength: 52421.6snT  
Dip Angle: 66.60°  
Date: 7/5/2016  
Model: IGRF2010

SITE: 1N-66W-08 Gabel 37-8HZ Pad

Well: Gabel 28N-5HZ  
Wellbore: Plan A  
Design: Permit Rev-1

#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1400.00	1415.33	Fox Hills
4206.00	4297.77	Parkman
4632.00	4735.37	Sussex
7138.00	7312.50	Sharon Springs
7183.00	7377.54	Niobrara
7284.00	7566.96	Nio B
7333.00	7749.74	Nio C

#### WELL DETAILS: Gabel 28N-5HZ

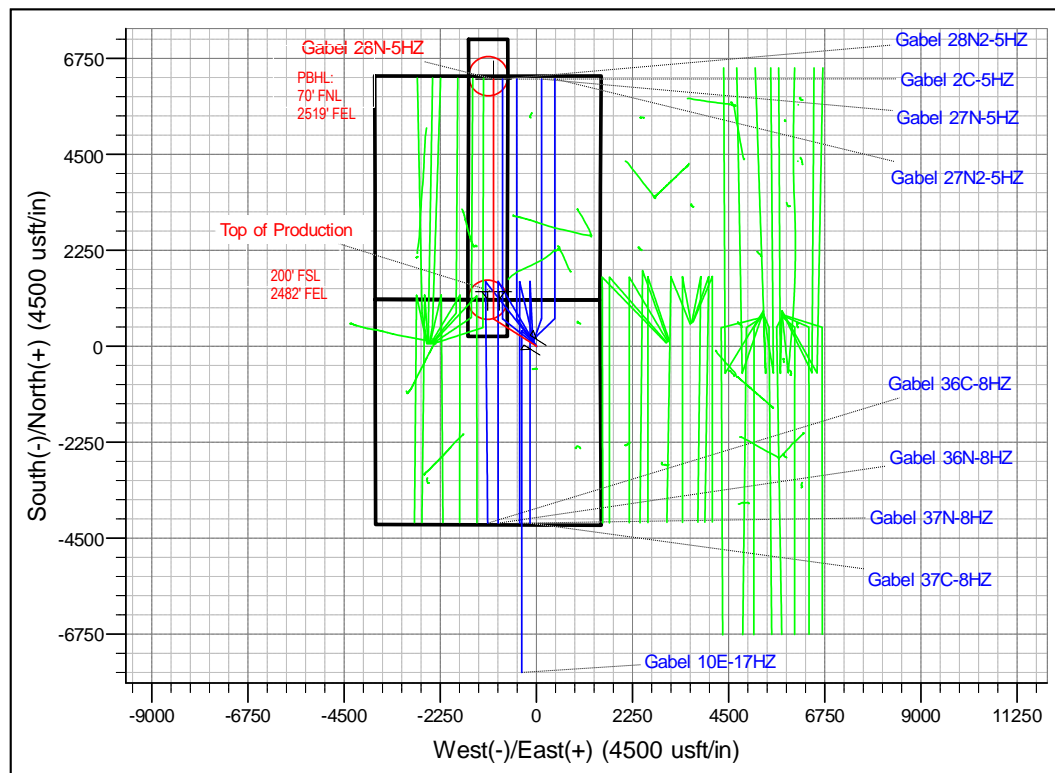
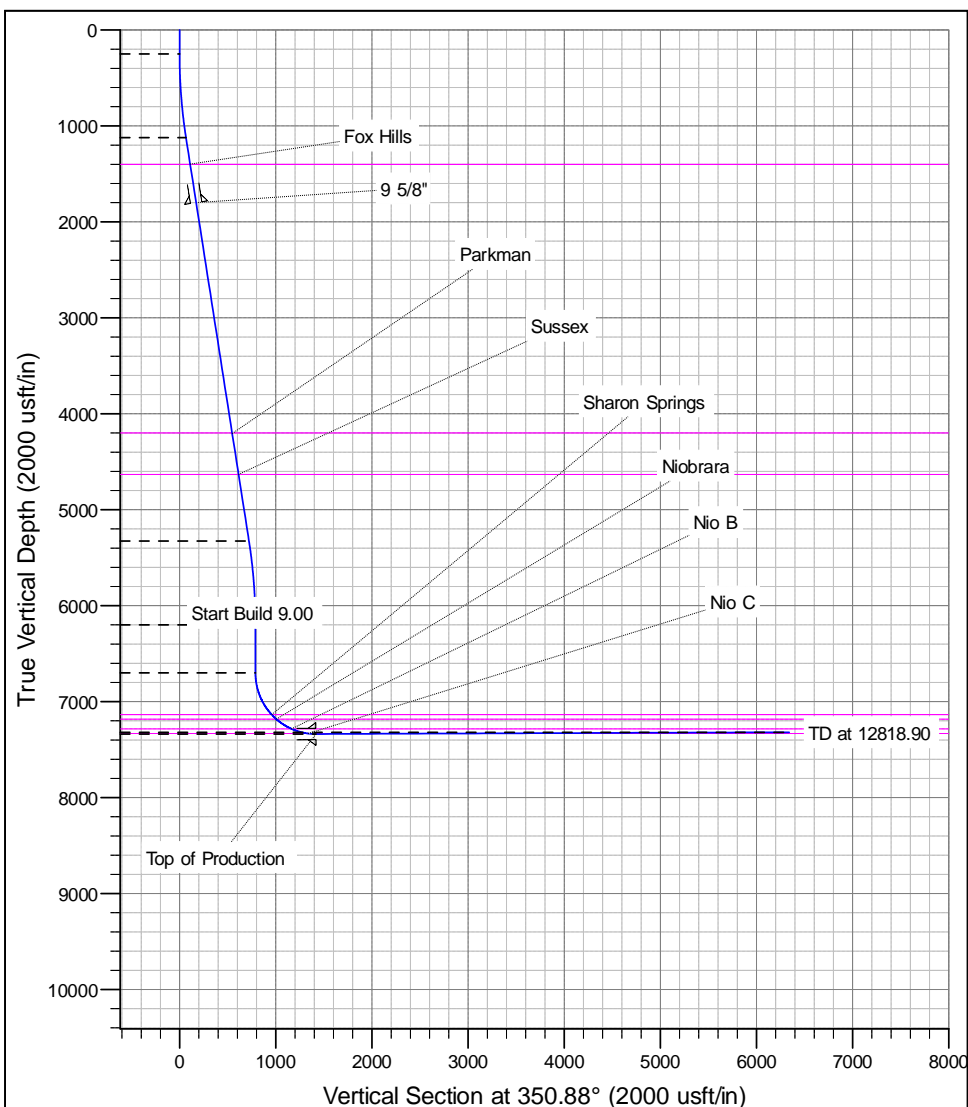
+N/-S	+E/-W	GL: 4941.00	RKB @ 4958.00usft (D Rig)	Longitude	Slot
0.00	0.00	Northing 14552276.57	Easting 1697208.96	Latitude 40.069968	

#### 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
1131.63	13.22	302.42	1123.83	54.30	-85.51	1.50	67.16
5448.46	13.22	302.42	5326.17	583.70	-919.17	0.00	721.94
6330.09	0.00	0.00	6200.00	638.00	-1004.68	1.50	789.11
6831.75	0.00	0.00	6701.65	638.00	-1004.68	0.00	789.11
7834.08	90.21	360.00	7338.27	1276.95	-1004.68	9.00	1419.99
12818.90	90.21	360.00	7320.00	6261.74	-1004.68	0.00	6341.83

#### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
GABEL 28N-5HZ PBHL	7320.00	6261.74	-1004.68	14558536.00	1696190.00	40.087164	-104.800592



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## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well Gabel 28N-5HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4958.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4958.00usft (D Rig)
<b>Site:</b>	1N-66W-08 Gabel 37-8HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	Gabel 28N-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)		

Site		1N-66W-08 Gabel 37-8HZ Pad			
Site Position:		Northing:	14,552,276.56 usft	Latitude:	40.069968
From:	Lat/Long	Easting:	1,697,208.96 usft	Longitude:	-104.797000
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.13

Well	Gabel 28N-5HZ					
Well Position	+N/-S	0.00 usft	Northing:	14,552,276.56 usft	Latitude:	40.069968
	+E/-W	0.00 usft	Easting:	1,697,208.96 usft	Longitude:	-104.797000
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,941.00 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	7/5/2016	8.17	66.60	52,422

<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	350.88	

<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	
1,131.63	13.22	302.42	1,123.83	54.30	-85.51	1.50	1.50	0.00	302.42	
5,448.46	13.22	302.42	5,326.17	583.70	-919.17	0.00	0.00	0.00	0.00	
6,330.09	0.00	0.00	6,200.00	638.00	-1,004.68	1.50	-1.50	0.00	180.00	
6,831.75	0.00	0.00	6,701.65	638.00	-1,004.68	0.00	0.00	0.00	0.00	
7,834.08	90.21	360.00	7,338.27	1,276.95	-1,004.68	9.00	9.00	0.00	360.00	
12,818.90	90.21	360.00	7,320.00	6,261.74	-1,004.68	0.00	0.00	0.00	0.00	GABEL 28N-5HZ_P

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## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well Gabel 28N-5HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4958.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4958.00usft (D Rig)
<b>Site:</b>	1N-66W-08 Gabel 37-8HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	Gabel 28N-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	302.42	300.00	0.18	-0.28	0.22	1.50	1.50	0.00
400.00	2.25	302.42	399.96	1.58	-2.49	1.95	1.50	1.50	0.00
500.00	3.75	302.42	499.82	4.38	-6.90	5.42	1.50	1.50	0.00
600.00	5.25	302.42	599.51	8.59	-13.53	10.62	1.50	1.50	0.00
700.00	6.75	302.42	698.96	14.19	-22.35	17.55	1.50	1.50	0.00
800.00	8.25	302.42	798.10	21.19	-33.37	26.21	1.50	1.50	0.00
900.00	9.75	302.42	896.87	29.58	-46.57	36.58	1.50	1.50	0.00
1,000.00	11.25	302.42	995.19	39.34	-61.96	48.66	1.50	1.50	0.00
1,100.00	12.75	302.42	1,093.00	50.49	-79.51	62.45	1.50	1.50	0.00
1,131.63	13.22	302.42	1,123.83	54.30	-85.51	67.16	1.50	1.50	0.00
1,200.00	13.22	302.42	1,190.38	62.69	-98.71	77.53	0.00	0.00	0.00
1,300.00	13.22	302.42	1,287.73	74.95	-118.02	92.70	0.00	0.00	0.00
1,400.00	13.22	302.42	1,385.08	87.21	-137.34	107.87	0.00	0.00	0.00
1,415.33	13.22	302.42	1,400.00	89.09	-140.30	110.19	0.00	0.00	0.00
Fox Hills									
1,500.00	13.22	302.42	1,482.42	99.48	-156.65	123.04	0.00	0.00	0.00
1,600.00	13.22	302.42	1,579.77	111.74	-175.96	138.20	0.00	0.00	0.00
1,700.00	13.22	302.42	1,677.12	124.00	-195.27	153.37	0.00	0.00	0.00
1,800.00	13.22	302.42	1,774.47	136.27	-214.58	168.54	0.00	0.00	0.00
1,826.23	13.22	302.42	1,800.00	139.48	-219.65	172.52	0.00	0.00	0.00
9 5/8"									
1,900.00	13.22	302.42	1,871.82	148.53	-233.90	183.71	0.00	0.00	0.00
2,000.00	13.22	302.42	1,969.16	160.79	-253.21	198.88	0.00	0.00	0.00
2,100.00	13.22	302.42	2,066.51	173.06	-272.52	214.05	0.00	0.00	0.00
2,200.00	13.22	302.42	2,163.86	185.32	-291.83	229.21	0.00	0.00	0.00
2,300.00	13.22	302.42	2,261.21	197.58	-311.14	244.38	0.00	0.00	0.00
2,400.00	13.22	302.42	2,358.56	209.85	-330.46	259.55	0.00	0.00	0.00
2,500.00	13.22	302.42	2,455.91	222.11	-349.77	274.72	0.00	0.00	0.00
2,600.00	13.22	302.42	2,553.25	234.38	-369.08	289.89	0.00	0.00	0.00
2,700.00	13.22	302.42	2,650.60	246.64	-388.39	305.05	0.00	0.00	0.00
2,800.00	13.22	302.42	2,747.95	258.90	-407.70	320.22	0.00	0.00	0.00
2,900.00	13.22	302.42	2,845.30	271.17	-427.01	335.39	0.00	0.00	0.00
3,000.00	13.22	302.42	2,942.65	283.43	-446.33	350.56	0.00	0.00	0.00
3,100.00	13.22	302.42	3,039.99	295.69	-465.64	365.73	0.00	0.00	0.00
3,200.00	13.22	302.42	3,137.34	307.96	-484.95	380.89	0.00	0.00	0.00
3,300.00	13.22	302.42	3,234.69	320.22	-504.26	396.06	0.00	0.00	0.00
3,400.00	13.22	302.42	3,332.04	332.48	-523.57	411.23	0.00	0.00	0.00
3,500.00	13.22	302.42	3,429.39	344.75	-542.89	426.40	0.00	0.00	0.00
3,600.00	13.22	302.42	3,526.73	357.01	-562.20	441.57	0.00	0.00	0.00
3,700.00	13.22	302.42	3,624.08	369.28	-581.51	456.74	0.00	0.00	0.00
3,800.00	13.22	302.42	3,721.43	381.54	-600.82	471.90	0.00	0.00	0.00
3,900.00	13.22	302.42	3,818.78	393.80	-620.13	487.07	0.00	0.00	0.00
4,000.00	13.22	302.42	3,916.13	406.07	-639.45	502.24	0.00	0.00	0.00
4,100.00	13.22	302.42	4,013.48	418.33	-658.76	517.41	0.00	0.00	0.00
4,200.00	13.22	302.42	4,110.82	430.59	-678.07	532.58	0.00	0.00	0.00
4,297.77	13.22	302.42	4,206.00	442.58	-696.95	547.41	0.00	0.00	0.00
Parkman									
4,300.00	13.22	302.42	4,208.17	442.86	-697.38	547.74	0.00	0.00	0.00
4,400.00	13.22	302.42	4,305.52	455.12	-716.69	562.91	0.00	0.00	0.00

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## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well Gabel 28N-5HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4958.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4958.00usft (D Rig)
<b>Site:</b>	1N-66W-08 Gabel 37-8HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	Gabel 28N-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	13.22	302.42	4,402.87	467.38	-736.00	578.08	0.00	0.00	0.00
4,600.00	13.22	302.42	4,500.22	479.65	-755.32	593.25	0.00	0.00	0.00
4,700.00	13.22	302.42	4,597.56	491.91	-774.63	608.42	0.00	0.00	0.00
4,735.37	13.22	302.42	4,632.00	496.25	-781.46	613.78	0.00	0.00	0.00
<b>Sussex</b>									
4,800.00	13.22	302.42	4,694.91	504.17	-793.94	623.59	0.00	0.00	0.00
4,900.00	13.22	302.42	4,792.26	516.44	-813.25	638.75	0.00	0.00	0.00
5,000.00	13.22	302.42	4,889.61	528.70	-832.56	653.92	0.00	0.00	0.00
5,100.00	13.22	302.42	4,986.96	540.97	-851.88	669.09	0.00	0.00	0.00
5,200.00	13.22	302.42	5,084.30	553.23	-871.19	684.26	0.00	0.00	0.00
5,300.00	13.22	302.42	5,181.65	565.49	-890.50	699.43	0.00	0.00	0.00
5,400.00	13.22	302.42	5,279.00	577.76	-909.81	714.59	0.00	0.00	0.00
5,448.46	13.22	302.42	5,326.17	583.70	-919.17	721.94	0.00	0.00	0.00
5,500.00	12.45	302.42	5,376.43	589.84	-928.84	729.54	1.50	-1.50	0.00
5,600.00	10.95	302.42	5,474.35	600.71	-945.96	742.98	1.50	-1.50	0.00
5,700.00	9.45	302.42	5,572.76	610.20	-960.91	754.73	1.50	-1.50	0.00
5,800.00	7.95	302.42	5,671.61	618.31	-973.68	764.76	1.50	-1.50	0.00
5,900.00	6.45	302.42	5,770.82	625.03	-984.26	773.07	1.50	-1.50	0.00
6,000.00	4.95	302.42	5,870.32	630.36	-992.65	779.66	1.50	-1.50	0.00
6,100.00	3.45	302.42	5,970.05	634.29	-998.83	784.51	1.50	-1.50	0.00
6,200.00	1.95	302.42	6,069.93	636.81	-1,002.81	787.64	1.50	-1.50	0.00
6,300.00	0.45	302.42	6,169.91	637.94	-1,004.58	789.03	1.50	-1.50	0.00
6,330.09	0.00	0.00	6,200.00	638.00	-1,004.68	789.11	1.50	-1.50	0.00
6,400.00	0.00	0.00	6,269.91	638.00	-1,004.68	789.11	0.00	0.00	0.00
6,500.00	0.00	0.00	6,369.91	638.00	-1,004.68	789.11	0.00	0.00	0.00
6,600.00	0.00	0.00	6,469.91	638.00	-1,004.68	789.11	0.00	0.00	0.00
6,700.00	0.00	0.00	6,569.91	638.00	-1,004.68	789.11	0.00	0.00	0.00
6,800.00	0.00	0.00	6,669.91	638.00	-1,004.68	789.11	0.00	0.00	0.00
6,831.75	0.00	0.00	6,701.65	638.00	-1,004.68	789.11	0.00	0.00	0.00
6,900.00	6.14	360.00	6,769.78	641.66	-1,004.68	792.72	9.00	9.00	0.00
7,000.00	15.14	360.00	6,867.96	660.10	-1,004.68	810.93	9.00	9.00	0.00
7,100.00	24.14	360.00	6,962.04	693.69	-1,004.68	844.09	9.00	9.00	0.00
7,200.00	33.14	360.00	7,049.71	741.57	-1,004.68	891.37	9.00	9.00	0.00
7,300.00	42.14	360.00	7,128.81	802.58	-1,004.68	951.61	9.00	9.00	0.00
7,312.50	43.27	360.00	7,138.00	811.06	-1,004.68	959.98	9.00	9.00	0.00
<b>Sharon Springs</b>									
7,377.54	49.12	360.00	7,183.00	857.98	-1,004.68	1,006.30	9.00	9.00	0.00
<b>Niobrara</b>									
7,400.00	51.14	360.00	7,197.40	875.22	-1,004.68	1,023.33	9.00	9.00	0.00
7,500.00	60.14	360.00	7,253.78	957.69	-1,004.68	1,104.75	9.00	9.00	0.00
7,566.96	66.17	360.00	7,284.00	1,017.41	-1,004.68	1,163.72	9.00	9.00	0.00
<b>Nio B</b>									
7,600.00	69.14	360.00	7,296.56	1,047.96	-1,004.68	1,193.89	9.00	9.00	0.00
7,700.00	78.14	360.00	7,324.69	1,143.81	-1,004.68	1,288.53	9.00	9.00	0.00
7,749.74	82.62	360.00	7,333.00	1,192.84	-1,004.68	1,336.94	9.00	9.00	0.00
<b>Nio C</b>									
7,800.00	87.14	360.00	7,337.48	1,242.89	-1,004.68	1,386.35	9.00	9.00	0.00
7,834.08	90.21	360.00	7,338.27	1,276.95	-1,004.68	1,419.99	9.00	9.00	0.00
<b>Top of Production - GABEL 28N-5HZ_PHL</b>									
7,900.00	90.21	360.00	7,338.03	1,342.87	-1,004.68	1,485.08	0.00	0.00	0.00
8,000.00	90.21	360.00	7,337.66	1,442.87	-1,004.68	1,583.81	0.00	0.00	0.00
8,100.00	90.21	360.00	7,337.30	1,542.87	-1,004.68	1,682.55	0.00	0.00	0.00
8,200.00	90.21	360.00	7,336.93	1,642.87	-1,004.68	1,781.29	0.00	0.00	0.00

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## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well Gabel 28N-5HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4958.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4958.00usft (D Rig)
<b>Site:</b>	1N-66W-08 Gabel 37-8HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	Gabel 28N-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)	
8,300.00	90.21	360.00	7,336.56	1,742.87	-1,004.68	1,880.02	0.00	0.00	0.00	
8,400.00	90.21	360.00	7,336.20	1,842.87	-1,004.68	1,978.76	0.00	0.00	0.00	
8,500.00	90.21	360.00	7,335.83	1,942.87	-1,004.68	2,077.50	0.00	0.00	0.00	
8,600.00	90.21	360.00	7,335.46	2,042.87	-1,004.68	2,176.23	0.00	0.00	0.00	
8,700.00	90.21	360.00	7,335.10	2,142.87	-1,004.68	2,274.97	0.00	0.00	0.00	
8,800.00	90.21	360.00	7,334.73	2,242.87	-1,004.68	2,373.71	0.00	0.00	0.00	
8,900.00	90.21	360.00	7,334.36	2,342.87	-1,004.68	2,472.44	0.00	0.00	0.00	
9,000.00	90.21	360.00	7,334.00	2,442.87	-1,004.68	2,571.18	0.00	0.00	0.00	
9,100.00	90.21	360.00	7,333.63	2,542.87	-1,004.68	2,669.92	0.00	0.00	0.00	
9,200.00	90.21	360.00	7,333.26	2,642.86	-1,004.68	2,768.65	0.00	0.00	0.00	
9,300.00	90.21	360.00	7,332.90	2,742.86	-1,004.68	2,867.39	0.00	0.00	0.00	
9,400.00	90.21	360.00	7,332.53	2,842.86	-1,004.68	2,966.13	0.00	0.00	0.00	
9,500.00	90.21	360.00	7,332.16	2,942.86	-1,004.68	3,064.86	0.00	0.00	0.00	
9,600.00	90.21	360.00	7,331.80	3,042.86	-1,004.68	3,163.60	0.00	0.00	0.00	
9,700.00	90.21	360.00	7,331.43	3,142.86	-1,004.68	3,262.33	0.00	0.00	0.00	
9,800.00	90.21	360.00	7,331.06	3,242.86	-1,004.68	3,361.07	0.00	0.00	0.00	
9,900.00	90.21	360.00	7,330.70	3,342.86	-1,004.68	3,459.81	0.00	0.00	0.00	
10,000.00	90.21	360.00	7,330.33	3,442.86	-1,004.68	3,558.54	0.00	0.00	0.00	
10,100.00	90.21	360.00	7,329.97	3,542.86	-1,004.68	3,657.28	0.00	0.00	0.00	
10,200.00	90.21	360.00	7,329.60	3,642.86	-1,004.68	3,756.02	0.00	0.00	0.00	
10,300.00	90.21	360.00	7,329.23	3,742.86	-1,004.68	3,854.75	0.00	0.00	0.00	
10,400.00	90.21	360.00	7,328.87	3,842.86	-1,004.68	3,953.49	0.00	0.00	0.00	
10,500.00	90.21	360.00	7,328.50	3,942.86	-1,004.68	4,052.23	0.00	0.00	0.00	
10,600.00	90.21	360.00	7,328.13	4,042.85	-1,004.68	4,150.96	0.00	0.00	0.00	
10,700.00	90.21	360.00	7,327.77	4,142.85	-1,004.68	4,249.70	0.00	0.00	0.00	
10,800.00	90.21	360.00	7,327.40	4,242.85	-1,004.68	4,348.44	0.00	0.00	0.00	
10,900.00	90.21	360.00	7,327.03	4,342.85	-1,004.68	4,447.17	0.00	0.00	0.00	
11,000.00	90.21	360.00	7,326.67	4,442.85	-1,004.68	4,545.91	0.00	0.00	0.00	
11,100.00	90.21	360.00	7,326.30	4,542.85	-1,004.68	4,644.65	0.00	0.00	0.00	
11,200.00	90.21	360.00	7,325.93	4,642.85	-1,004.68	4,743.38	0.00	0.00	0.00	
11,300.00	90.21	360.00	7,325.57	4,742.85	-1,004.68	4,842.12	0.00	0.00	0.00	
11,400.00	90.21	360.00	7,325.20	4,842.85	-1,004.68	4,940.86	0.00	0.00	0.00	
11,500.00	90.21	360.00	7,324.83	4,942.85	-1,004.68	5,039.59	0.00	0.00	0.00	
11,600.00	90.21	360.00	7,324.47	5,042.85	-1,004.68	5,138.33	0.00	0.00	0.00	
11,700.00	90.21	360.00	7,324.10	5,142.85	-1,004.68	5,237.06	0.00	0.00	0.00	
11,800.00	90.21	360.00	7,323.73	5,242.85	-1,004.68	5,335.80	0.00	0.00	0.00	
11,900.00	90.21	360.00	7,323.37	5,342.85	-1,004.68	5,434.54	0.00	0.00	0.00	
12,000.00	90.21	360.00	7,323.00	5,442.85	-1,004.68	5,533.27	0.00	0.00	0.00	
12,100.00	90.21	360.00	7,322.64	5,542.84	-1,004.68	5,632.01	0.00	0.00	0.00	
12,200.00	90.21	360.00	7,322.27	5,642.84	-1,004.68	5,730.75	0.00	0.00	0.00	
12,300.00	90.21	360.00	7,321.90	5,742.84	-1,004.68	5,829.48	0.00	0.00	0.00	
12,400.00	90.21	360.00	7,321.54	5,842.84	-1,004.68	5,928.22	0.00	0.00	0.00	
12,500.00	90.21	360.00	7,321.17	5,942.84	-1,004.68	6,026.96	0.00	0.00	0.00	
12,600.00	90.21	360.00	7,320.80	6,042.84	-1,004.68	6,125.69	0.00	0.00	0.00	
12,700.00	90.21	360.00	7,320.44	6,142.84	-1,004.68	6,224.43	0.00	0.00	0.00	
12,800.00	90.21	360.00	7,320.07	6,242.84	-1,004.68	6,323.17	0.00	0.00	0.00	
12,818.90	90.21	360.00	7,320.00	6,261.74	-1,004.68	6,341.83	0.00	0.00	0.00	
GABEL 28N-5HZ_PBHL										

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well Gabel 28N-5HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4958.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4958.00usft (D Rig)
<b>Site:</b>	1N-66W-08 Gabel 37-8HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	Gabel 28N-5HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
GABEL 28N-5HZ_PBI	0.00	0.00	7,320.00	6,261.74	-1,004.68	14,558,536.00	1,696,190.00	40.087164	-104.800592
- plan hits target center									
- Point									
GABEL 28N-5HZ_PHI	0.00	0.00	7,338.27	1,276.95	-1,004.68	14,553,551.22	1,696,201.37	40.073475	-104.800592
- plan hits target center									
- Point									

Casing Points					
	Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
	(usft)	(usft)	Name	(")	(")
	1,826.23	1,800.00	9 5/8"	9-5/8	12-1/4
	7,834.08	7,338.27	Top of Production	5-1/2	8-1/2

Formations						
	Measured Depth	Vertical Depth			Dip	Dip Direction
	(usft)	(usft)	Name	Lithology	(°)	(°)
	1,415.33	1,400.00	Fox Hills			
	4,297.77	4,206.00	Parkman			
	4,735.37	4,632.00	Sussex			
	7,312.50	7,138.00	Sharon Springs			
	7,377.54	7,183.00	Niobrara			
	7,566.96	7,284.00	Nio B			
	7,749.74	7,333.00	Nio C			