

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

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

Gabel 36N-8HZ

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 36N-8HZ
Wellbore: Plan A
Design: Permit Rev-1

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1400.00	1418.12	Fox Hills
4206.00	4390.23	Parkman
4743.00	4959.14	Sussex
7110.00	7428.54	Sharon Springs
7155.00	7495.43	Niobrara
7283.00	7789.23	Nio B

WELL DETAILS: Gabel 36N-8HZ

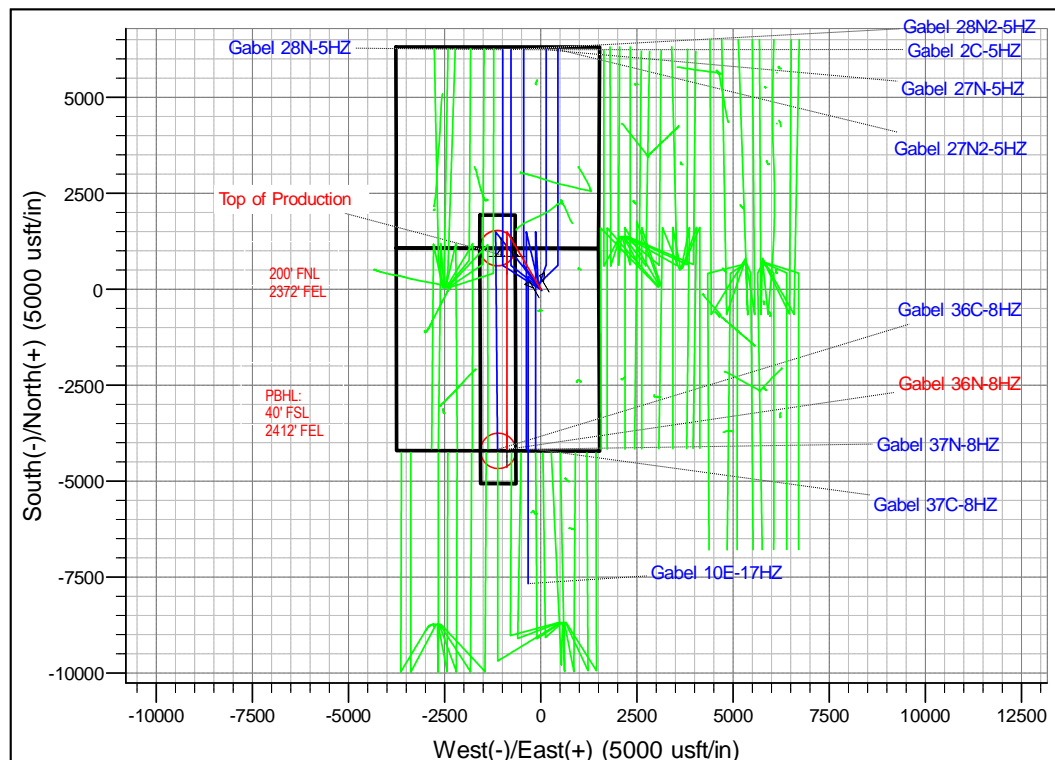
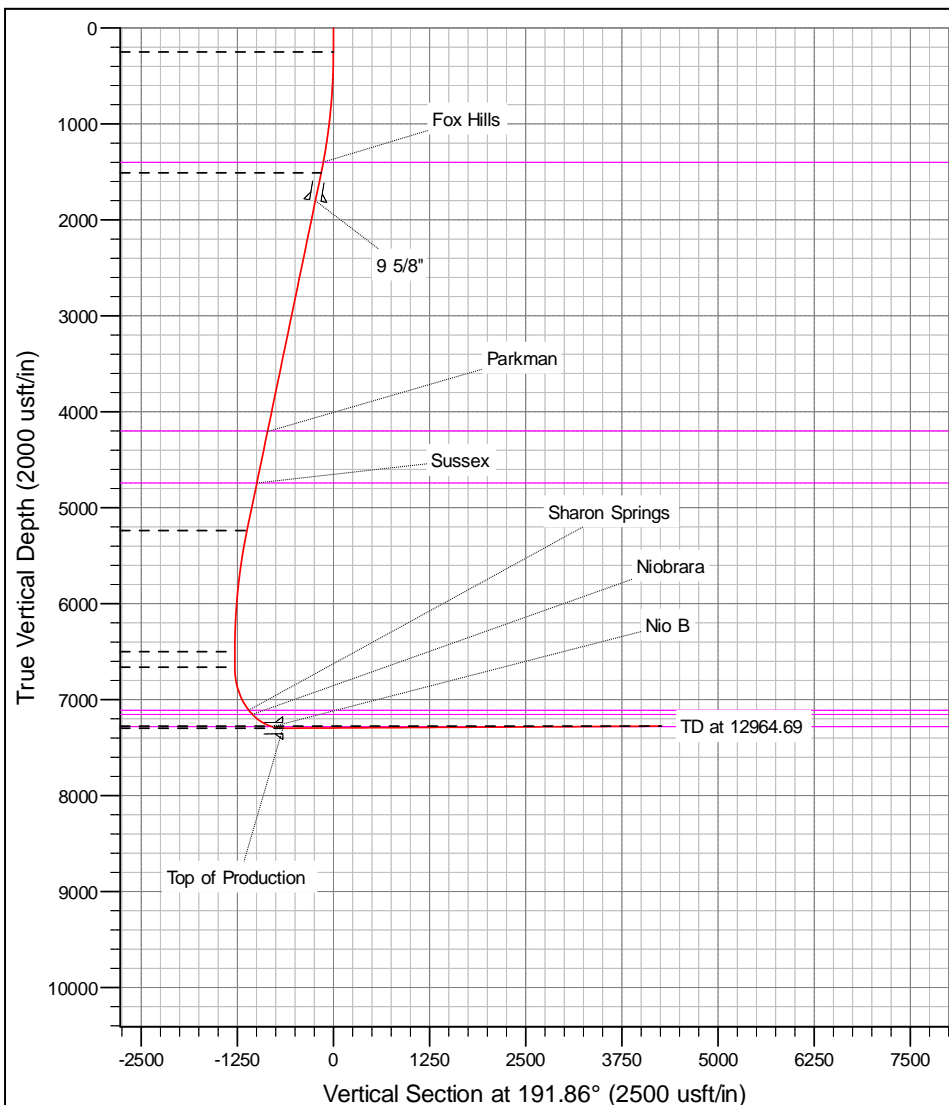
+N/-S	+E/-W	GL: 4941.00	RKB @ 4958.00usft (D Rig)	Longitude	Slot
0.00	0.00	Northing 14552300.20	Easting 1697190.44	Latitude 40.070033	Longitude -104.797066

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
1535.34	19.28	329.59	1511.22	184.75	-108.45	1.50	-158.51
5484.38	19.28	329.59	5238.78	1309.25	-768.52	0.00	1123.32
6769.72	0.00	0.00	6500.00	1494.00	-876.97	1.50	1281.83
6932.05	0.00	0.00	6662.33	1494.00	-876.97	0.00	1281.83
7934.83	90.25	180.00	7298.95	854.60	-876.97	9.00	-656.09
12964.69	90.25	180.00	7277.00	-4175.21	-876.97	0.00	4266.31

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
GABEL 36N-8HZ_PBHL	7277.00	-4175.21	-876.97	14548123.00	1696323.00	40.058567	-104.800200



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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well Gabel 36N-8HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4958.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4958.00usft (D Rig)
Site:	1N-66W-08 Gabel 37-8HZ Pad	North Reference:	True
Well:	Gabel 36N-8HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Project	WELD-NAD83-UTMFT13N		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	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 36N-8HZ					
Well Position	+N/-S	23.67 usft	Northing:	14,552,300.19 usft	Latitude:	40.070033
	+E/-W	-18.46 usft	Easting:	1,697,190.44 usft	Longitude:	-104.797066
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,941.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/5/2016	8.17	66.60	52,422

Design	Permit Rev-1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	191.86

Plan Sections										
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	
1,535.34	19.28	329.59	1,511.22	184.75	-108.45	1.50	1.50	0.00	329.59	
5,484.38	19.28	329.59	5,238.78	1,309.25	-768.52	0.00	0.00	0.00	0.00	
6,769.72	0.00	0.00	6,500.00	1,494.00	-876.97	1.50	-1.50	0.00	180.00	
6,932.05	0.00	0.00	6,662.33	1,494.00	-876.97	0.00	0.00	0.00	0.00	
7,934.83	90.25	180.00	7,298.95	854.60	-876.97	9.00	9.00	0.00	180.00	
12,964.69	90.25	180.00	7,277.00	-4,175.21	-876.97	0.00	0.00	0.00	0.00	GABEL 36N-8HZ_P

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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well Gabel 36N-8HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4958.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4958.00usft (D Rig)
Site:	1N-66W-08 Gabel 37-8HZ Pad	North Reference:	True
Well:	Gabel 36N-8HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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	329.59	300.00	0.28	-0.17	-0.24	1.50	1.50	0.00
400.00	2.25	329.59	399.96	2.54	-1.49	-2.18	1.50	1.50	0.00
500.00	3.75	329.59	499.82	7.05	-4.14	-6.05	1.50	1.50	0.00
600.00	5.25	329.59	599.51	13.82	-8.11	-11.86	1.50	1.50	0.00
700.00	6.75	329.59	698.96	22.83	-13.40	-19.59	1.50	1.50	0.00
800.00	8.25	329.59	798.10	34.09	-20.01	-29.25	1.50	1.50	0.00
900.00	9.75	329.59	896.87	47.58	-27.93	-40.82	1.50	1.50	0.00
1,000.00	11.25	329.59	995.19	63.30	-37.15	-54.31	1.50	1.50	0.00
1,100.00	12.75	329.59	1,093.00	81.23	-47.68	-69.69	1.50	1.50	0.00
1,200.00	14.25	329.59	1,190.24	101.36	-59.50	-86.96	1.50	1.50	0.00
1,300.00	15.75	329.59	1,286.83	123.68	-72.60	-106.11	1.50	1.50	0.00
1,400.00	17.25	329.59	1,382.71	148.17	-86.98	-127.13	1.50	1.50	0.00
1,418.12	17.52	329.59	1,400.00	152.84	-89.72	-131.13	1.50	1.50	0.00
Fox Hills									
1,500.00	18.75	329.59	1,477.81	174.82	-102.62	-149.99	1.50	1.50	0.00
1,535.34	19.28	329.59	1,511.22	184.75	-108.45	-158.51	1.50	1.50	0.00
1,600.00	19.28	329.59	1,572.25	203.16	-119.25	-174.31	0.00	0.00	0.00
1,700.00	19.28	329.59	1,666.65	231.64	-135.97	-198.74	0.00	0.00	0.00
1,800.00	19.28	329.59	1,761.04	260.11	-152.68	-223.17	0.00	0.00	0.00
1,841.28	19.28	329.59	1,800.00	271.87	-159.58	-233.26	0.00	0.00	0.00
9 5/8"									
1,900.00	19.28	329.59	1,855.43	288.59	-169.40	-247.60	0.00	0.00	0.00
2,000.00	19.28	329.59	1,949.82	317.06	-186.11	-272.03	0.00	0.00	0.00
2,100.00	19.28	329.59	2,044.21	345.54	-202.83	-296.47	0.00	0.00	0.00
2,200.00	19.28	329.59	2,138.60	374.01	-219.54	-320.90	0.00	0.00	0.00
2,300.00	19.28	329.59	2,232.99	402.49	-236.26	-345.33	0.00	0.00	0.00
2,400.00	19.28	329.59	2,327.39	430.96	-252.97	-369.76	0.00	0.00	0.00
2,500.00	19.28	329.59	2,421.78	459.44	-269.69	-394.19	0.00	0.00	0.00
2,600.00	19.28	329.59	2,516.17	487.91	-286.40	-418.62	0.00	0.00	0.00
2,700.00	19.28	329.59	2,610.56	516.39	-303.12	-443.05	0.00	0.00	0.00
2,800.00	19.28	329.59	2,704.95	544.87	-319.83	-467.49	0.00	0.00	0.00
2,900.00	19.28	329.59	2,799.34	573.34	-336.55	-491.92	0.00	0.00	0.00
3,000.00	19.28	329.59	2,893.74	601.82	-353.26	-516.35	0.00	0.00	0.00
3,100.00	19.28	329.59	2,988.13	630.29	-369.98	-540.78	0.00	0.00	0.00
3,200.00	19.28	329.59	3,082.52	658.77	-386.69	-565.21	0.00	0.00	0.00
3,300.00	19.28	329.59	3,176.91	687.24	-403.41	-589.64	0.00	0.00	0.00
3,400.00	19.28	329.59	3,271.30	715.72	-420.12	-614.07	0.00	0.00	0.00
3,500.00	19.28	329.59	3,365.69	744.19	-436.84	-638.51	0.00	0.00	0.00
3,600.00	19.28	329.59	3,460.08	772.67	-453.55	-662.94	0.00	0.00	0.00
3,700.00	19.28	329.59	3,554.48	801.14	-470.27	-687.37	0.00	0.00	0.00
3,800.00	19.28	329.59	3,648.87	829.62	-486.98	-711.80	0.00	0.00	0.00
3,900.00	19.28	329.59	3,743.26	858.09	-503.70	-736.23	0.00	0.00	0.00
4,000.00	19.28	329.59	3,837.65	886.57	-520.41	-760.66	0.00	0.00	0.00
4,100.00	19.28	329.59	3,932.04	915.04	-537.13	-785.09	0.00	0.00	0.00
4,200.00	19.28	329.59	4,026.43	943.52	-553.84	-809.53	0.00	0.00	0.00
4,300.00	19.28	329.59	4,120.83	972.00	-570.56	-833.96	0.00	0.00	0.00
4,390.23	19.28	329.59	4,206.00	997.69	-585.64	-856.00	0.00	0.00	0.00
Parkman									
4,400.00	19.28	329.59	4,215.22	1,000.47	-587.27	-858.39	0.00	0.00	0.00

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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well Gabel 36N-8HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4958.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4958.00usft (D Rig)
Site:	1N-66W-08 Gabel 37-8HZ Pad	North Reference:	True
Well:	Gabel 36N-8HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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	19.28	329.59	4,309.61	1,028.95	-603.99	-882.82	0.00	0.00	0.00
4,600.00	19.28	329.59	4,404.00	1,057.42	-620.70	-907.25	0.00	0.00	0.00
4,700.00	19.28	329.59	4,498.39	1,085.90	-637.42	-931.68	0.00	0.00	0.00
4,800.00	19.28	329.59	4,592.78	1,114.37	-654.13	-956.11	0.00	0.00	0.00
4,900.00	19.28	329.59	4,687.18	1,142.85	-670.85	-980.55	0.00	0.00	0.00
4,959.14	19.28	329.59	4,743.00	1,159.69	-680.73	-994.99	0.00	0.00	0.00
Sussex									
5,000.00	19.28	329.59	4,781.57	1,171.32	-687.56	-1,004.98	0.00	0.00	0.00
5,100.00	19.28	329.59	4,875.96	1,199.80	-704.27	-1,029.41	0.00	0.00	0.00
5,200.00	19.28	329.59	4,970.35	1,228.27	-720.99	-1,053.84	0.00	0.00	0.00
5,300.00	19.28	329.59	5,064.74	1,256.75	-737.70	-1,078.27	0.00	0.00	0.00
5,400.00	19.28	329.59	5,159.13	1,285.22	-754.42	-1,102.70	0.00	0.00	0.00
5,484.38	19.28	329.59	5,238.78	1,309.25	-768.52	-1,123.32	0.00	0.00	0.00
5,500.00	19.05	329.59	5,253.54	1,313.67	-771.12	-1,127.11	1.50	-1.50	0.00
5,600.00	17.55	329.59	5,348.48	1,340.74	-787.01	-1,150.34	1.50	-1.50	0.00
5,700.00	16.05	329.59	5,444.21	1,365.66	-801.64	-1,171.72	1.50	-1.50	0.00
5,800.00	14.55	329.59	5,540.66	1,388.41	-814.99	-1,191.24	1.50	-1.50	0.00
5,900.00	13.05	329.59	5,637.78	1,408.98	-827.06	-1,208.88	1.50	-1.50	0.00
6,000.00	11.55	329.59	5,735.48	1,427.34	-837.84	-1,224.64	1.50	-1.50	0.00
6,100.00	10.05	329.59	5,833.71	1,443.50	-847.32	-1,238.50	1.50	-1.50	0.00
6,200.00	8.55	329.59	5,932.39	1,457.43	-855.50	-1,250.45	1.50	-1.50	0.00
6,300.00	7.05	329.59	6,031.46	1,469.12	-862.37	-1,260.49	1.50	-1.50	0.00
6,400.00	5.55	329.59	6,130.86	1,478.58	-867.92	-1,268.60	1.50	-1.50	0.00
6,500.00	4.05	329.59	6,230.50	1,485.79	-872.15	-1,274.79	1.50	-1.50	0.00
6,600.00	2.55	329.59	6,330.34	1,490.75	-875.06	-1,279.04	1.50	-1.50	0.00
6,700.00	1.05	329.59	6,430.28	1,493.45	-876.65	-1,281.36	1.50	-1.50	0.00
6,769.72	0.00	0.00	6,500.00	1,494.00	-876.97	-1,281.83	1.50	-1.50	0.00
6,800.00	0.00	0.00	6,530.28	1,494.00	-876.97	-1,281.83	0.00	0.00	0.00
6,900.00	0.00	0.00	6,630.28	1,494.00	-876.97	-1,281.83	0.00	0.00	0.00
6,932.05	0.00	0.00	6,662.33	1,494.00	-876.97	-1,281.83	0.00	0.00	0.00
7,000.00	6.12	180.00	6,730.15	1,490.38	-876.97	-1,278.28	9.00	9.00	0.00
7,100.00	15.12	180.00	6,828.34	1,471.97	-876.97	-1,260.27	9.00	9.00	0.00
7,200.00	24.12	180.00	6,922.44	1,438.44	-876.97	-1,227.46	9.00	9.00	0.00
7,300.00	33.12	180.00	7,010.13	1,390.60	-876.97	-1,180.63	9.00	9.00	0.00
7,400.00	42.12	180.00	7,089.27	1,329.62	-876.97	-1,120.96	9.00	9.00	0.00
7,428.54	44.68	180.00	7,110.00	1,310.02	-876.97	-1,101.77	9.00	9.00	0.00
Sharon Springs									
7,495.43	50.70	180.00	7,155.00	1,260.57	-876.97	-1,053.39	9.00	9.00	0.00
Niobrara									
7,500.00	51.12	180.00	7,157.88	1,257.02	-876.97	-1,049.91	9.00	9.00	0.00
7,600.00	60.12	180.00	7,214.30	1,174.58	-876.97	-969.23	9.00	9.00	0.00
7,700.00	69.12	180.00	7,257.13	1,084.33	-876.97	-880.91	9.00	9.00	0.00
7,789.23	77.15	180.00	7,283.00	999.00	-876.97	-797.40	9.00	9.00	0.00
Nio B									
7,800.00	78.12	180.00	7,285.31	988.49	-876.97	-787.11	9.00	9.00	0.00
7,900.00	87.12	180.00	7,298.15	889.42	-876.97	-690.16	9.00	9.00	0.00
7,934.83	90.25	180.00	7,298.95	854.60	-876.97	-656.09	9.00	9.00	0.00
Top of Production - GABEL 36N-8HZ_PHL									
8,000.00	90.25	180.00	7,298.66	789.43	-876.97	-592.31	0.00	0.00	0.00
8,100.00	90.25	180.00	7,298.23	689.43	-876.97	-494.45	0.00	0.00	0.00
8,200.00	90.25	180.00	7,297.79	589.44	-876.97	-396.58	0.00	0.00	0.00
8,300.00	90.25	180.00	7,297.35	489.44	-876.97	-298.72	0.00	0.00	0.00
8,400.00	90.25	180.00	7,296.92	389.44	-876.97	-200.85	0.00	0.00	0.00
8,500.00	90.25	180.00	7,296.48	289.44	-876.97	-102.99	0.00	0.00	0.00

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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well Gabel 36N-8HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4958.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4958.00usft (D Rig)
Site:	1N-66W-08 Gabel 37-8HZ Pad	North Reference:	True
Well:	Gabel 36N-8HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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	90.25	180.00	7,296.04	189.44	-876.97	-5.13	0.00	0.00	0.00
8,700.00	90.25	180.00	7,295.61	89.44	-876.97	92.74	0.00	0.00	0.00
8,800.00	90.25	180.00	7,295.17	-10.56	-876.97	190.60	0.00	0.00	0.00
8,900.00	90.25	180.00	7,294.74	-110.56	-876.97	288.46	0.00	0.00	0.00
9,000.00	90.25	180.00	7,294.30	-210.56	-876.97	386.33	0.00	0.00	0.00
9,100.00	90.25	180.00	7,293.86	-310.56	-876.97	484.19	0.00	0.00	0.00
9,200.00	90.25	180.00	7,293.43	-410.56	-876.97	582.05	0.00	0.00	0.00
9,300.00	90.25	180.00	7,292.99	-510.55	-876.97	679.92	0.00	0.00	0.00
9,400.00	90.25	180.00	7,292.55	-610.55	-876.97	777.78	0.00	0.00	0.00
9,500.00	90.25	180.00	7,292.12	-710.55	-876.97	875.64	0.00	0.00	0.00
9,600.00	90.25	180.00	7,291.68	-810.55	-876.97	973.51	0.00	0.00	0.00
9,700.00	90.25	180.00	7,291.25	-910.55	-876.97	1,071.37	0.00	0.00	0.00
9,800.00	90.25	180.00	7,290.81	-1,010.55	-876.97	1,169.24	0.00	0.00	0.00
9,900.00	90.25	180.00	7,290.37	-1,110.55	-876.97	1,267.10	0.00	0.00	0.00
10,000.00	90.25	180.00	7,289.94	-1,210.55	-876.97	1,364.96	0.00	0.00	0.00
10,100.00	90.25	180.00	7,289.50	-1,310.55	-876.97	1,462.83	0.00	0.00	0.00
10,200.00	90.25	180.00	7,289.06	-1,410.55	-876.97	1,560.69	0.00	0.00	0.00
10,300.00	90.25	180.00	7,288.63	-1,510.54	-876.97	1,658.55	0.00	0.00	0.00
10,400.00	90.25	180.00	7,288.19	-1,610.54	-876.97	1,756.42	0.00	0.00	0.00
10,500.00	90.25	180.00	7,287.75	-1,710.54	-876.97	1,854.28	0.00	0.00	0.00
10,600.00	90.25	180.00	7,287.32	-1,810.54	-876.97	1,952.14	0.00	0.00	0.00
10,700.00	90.25	180.00	7,286.88	-1,910.54	-876.97	2,050.01	0.00	0.00	0.00
10,800.00	90.25	180.00	7,286.45	-2,010.54	-876.97	2,147.87	0.00	0.00	0.00
10,900.00	90.25	180.00	7,286.01	-2,110.54	-876.97	2,245.74	0.00	0.00	0.00
11,000.00	90.25	180.00	7,285.57	-2,210.54	-876.97	2,343.60	0.00	0.00	0.00
11,100.00	90.25	180.00	7,285.14	-2,310.54	-876.97	2,441.46	0.00	0.00	0.00
11,200.00	90.25	180.00	7,284.70	-2,410.54	-876.97	2,539.33	0.00	0.00	0.00
11,300.00	90.25	180.00	7,284.26	-2,510.54	-876.97	2,637.19	0.00	0.00	0.00
11,400.00	90.25	180.00	7,283.83	-2,610.53	-876.97	2,735.05	0.00	0.00	0.00
11,500.00	90.25	180.00	7,283.39	-2,710.53	-876.97	2,832.92	0.00	0.00	0.00
11,600.00	90.25	180.00	7,282.95	-2,810.53	-876.97	2,930.78	0.00	0.00	0.00
11,700.00	90.25	180.00	7,282.52	-2,910.53	-876.97	3,028.64	0.00	0.00	0.00
11,800.00	90.25	180.00	7,282.08	-3,010.53	-876.97	3,126.51	0.00	0.00	0.00
11,900.00	90.25	180.00	7,281.65	-3,110.53	-876.97	3,224.37	0.00	0.00	0.00
12,000.00	90.25	180.00	7,281.21	-3,210.53	-876.97	3,322.23	0.00	0.00	0.00
12,100.00	90.25	180.00	7,280.77	-3,310.53	-876.97	3,420.10	0.00	0.00	0.00
12,200.00	90.25	180.00	7,280.34	-3,410.53	-876.97	3,517.96	0.00	0.00	0.00
12,300.00	90.25	180.00	7,279.90	-3,510.53	-876.97	3,615.83	0.00	0.00	0.00
12,400.00	90.25	180.00	7,279.46	-3,610.52	-876.97	3,713.69	0.00	0.00	0.00
12,500.00	90.25	180.00	7,279.03	-3,710.52	-876.97	3,811.55	0.00	0.00	0.00
12,600.00	90.25	180.00	7,278.59	-3,810.52	-876.97	3,909.42	0.00	0.00	0.00
12,700.00	90.25	180.00	7,278.16	-3,910.52	-876.97	4,007.28	0.00	0.00	0.00
12,800.00	90.25	180.00	7,277.72	-4,010.52	-876.97	4,105.14	0.00	0.00	0.00
12,900.00	90.25	180.00	7,277.28	-4,110.52	-876.97	4,203.01	0.00	0.00	0.00
12,964.69	90.25	180.00	7,277.00	-4,175.21	-876.97	4,266.31	0.00	0.00	0.00
GABEL 36N-8HZ_PBHL									

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well Gabel 36N-8HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4958.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4958.00usft (D Rig)
Site:	1N-66W-08 Gabel 37-8HZ Pad	North Reference:	True
Well:	Gabel 36N-8HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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 36N-8HZ_PBI - plan hits target center - Point	0.00	0.00	7,277.00	-4,175.21	-876.97	14,548,123.00	1,696,323.00	40.058567	-104.800200
GABEL 36N-8HZ_PHI - plan hits target center - Point	0.00	0.00	7,298.95	854.60	-876.97	14,553,152.79	1,696,311.53	40.072380	-104.800201

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,841.28	1,800.00	9 5/8"	9-5/8	13-1/2	
7,934.83	7,298.95	Top of Production	5-1/2	8-1/2	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,418.12	1,400.00	Fox Hills		0.00		
4,390.23	4,206.00	Parkman		0.00		
4,959.14	4,743.00	Sussex		0.00		
7,428.54	7,110.00	Sharon Springs		0.00		
7,495.43	7,155.00	Niobrara		0.00		
7,789.23	7,283.00	Nio B		0.00		