

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

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

Gabel 2C-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 2C-5HZ
Wellbore: Plan A
Design: Permit Rev-1

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1400.00	1415.95	Fox Hills
4206.00	4283.82	Parkman
4632.00	4709.82	Sussex
7074.00	7159.72	Sharon Springs
7118.00	7208.85	Niobrara
7231.00	7346.74	Nio B
7297.00	7440.53	Nio C
7414.00	7676.28	Fort Hayes
7436.00	7757.80	Codell

WELL DETAILS: Gabel 2C-5HZ

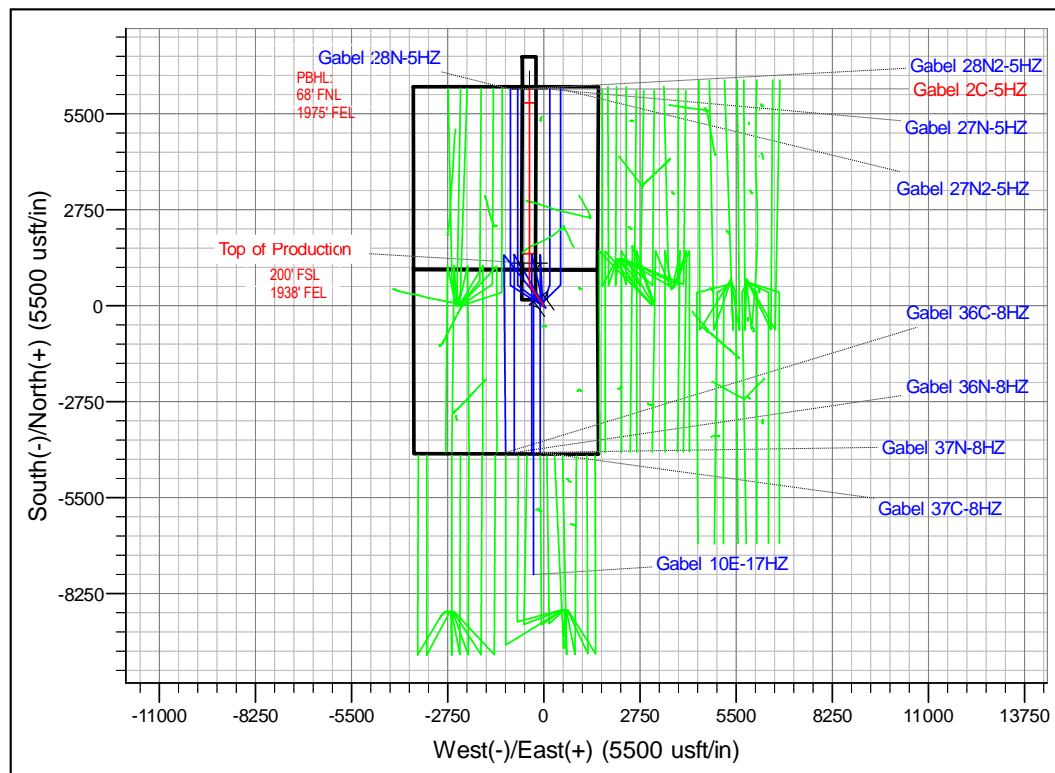
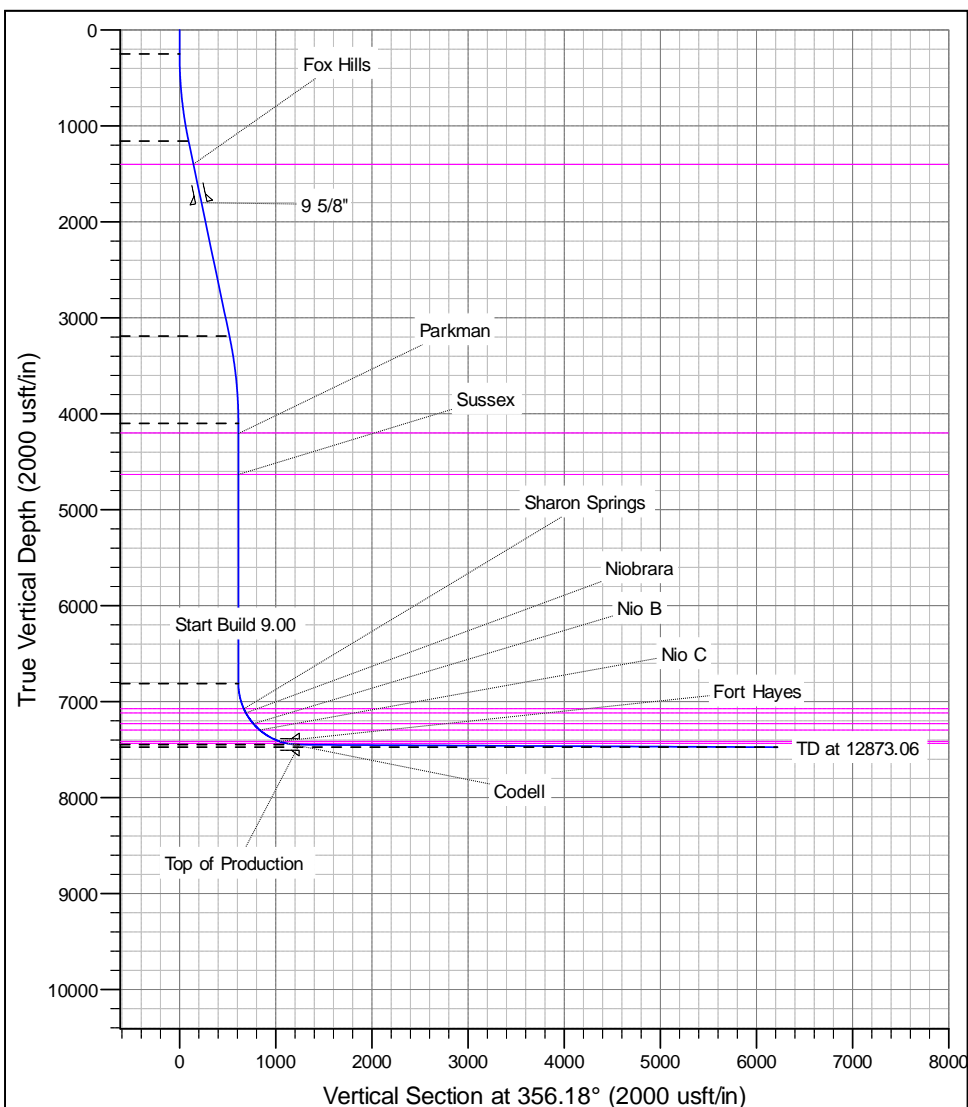
+N/-S	+E/-W	GL: 4941.00	RKB @ 4958.00usft (D Rig)	Longitude	Slot
0.00	0.00	Northing 14552335.46	Easting 1697162.67	Latitude 40.070130	-104.797165

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
1168.61	13.78	324.72	1159.78	89.74	-63.48	1.50	93.78
3259.21	13.78	324.72	3190.22	496.26	-351.05	0.00	518.55
4177.82	0.00	0.00	4100.00	586.00	-414.53	1.50	612.33
6891.11	0.00	0.00	6813.29	586.00	-414.53	0.00	612.33
7887.78	89.70	0.00	7449.90	1219.29	-414.53	9.001244	21
12873.06	89.70	0.00	7476.00	6204.51	-414.53	0.006218	34

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
GABEL 2C-5HZ_PBHL	7476.00	6204.51	-414.53	14558539.00	1696734.00	40.087168	-104.798647



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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well Gabel 2C-5HZ
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 2C-5HZ	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 2C-5HZ					
Well Position	+N/-S	58.99 usft	Northing:	14,552,335.45 usft	Latitude:	40.070130
	+E/-W	-46.16 usft	Easting:	1,697,162.66 usft	Longitude:	-104.797165
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	356.18	

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	
1,168.61	13.78	324.72	1,159.78	89.74	-63.48	1.50	1.50	0.00	324.72	
3,259.21	13.78	324.72	3,190.22	496.26	-351.05	0.00	0.00	0.00	0.00	
4,177.82	0.00	0.00	4,100.00	586.00	-414.53	1.50	-1.50	0.00	180.00	
6,891.11	0.00	0.00	6,813.29	586.00	-414.53	0.00	0.00	0.00	0.00	
7,887.78	89.70	0.00	7,449.90	1,219.29	-414.53	9.00	9.00	0.00	0.00	
12,873.06	89.70	0.00	7,476.00	6,204.51	-414.53	0.00	0.00	0.00	0.00	GABEL 2C-5HZ_PE

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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well Gabel 2C-5HZ
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 2C-5HZ	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	324.72	300.00	0.27	-0.19	0.28	1.50	1.50	0.00
400.00	2.25	324.72	399.96	2.40	-1.70	2.51	1.50	1.50	0.00
500.00	3.75	324.72	499.82	6.68	-4.72	6.98	1.50	1.50	0.00
600.00	5.25	324.72	599.51	13.08	-9.25	13.67	1.50	1.50	0.00
700.00	6.75	324.72	698.96	21.62	-15.29	22.59	1.50	1.50	0.00
800.00	8.25	324.72	798.10	32.27	-22.83	33.72	1.50	1.50	0.00
900.00	9.75	324.72	896.87	45.04	-31.86	47.07	1.50	1.50	0.00
1,000.00	11.25	324.72	995.19	59.92	-42.39	62.61	1.50	1.50	0.00
1,100.00	12.75	324.72	1,093.00	76.89	-54.39	80.35	1.50	1.50	0.00
1,168.61	13.78	324.72	1,159.78	89.74	-63.48	93.78	1.50	1.50	0.00
1,200.00	13.78	324.72	1,190.27	95.85	-67.80	100.15	0.00	0.00	0.00
1,300.00	13.78	324.72	1,287.39	115.29	-81.56	120.47	0.00	0.00	0.00
1,400.00	13.78	324.72	1,384.51	134.74	-95.31	140.79	0.00	0.00	0.00
1,415.95	13.78	324.72	1,400.00	137.84	-97.50	144.03	0.00	0.00	0.00
Fox Hills									
1,500.00	13.78	324.72	1,481.63	154.18	-109.07	161.11	0.00	0.00	0.00
1,600.00	13.78	324.72	1,578.76	173.63	-122.82	181.43	0.00	0.00	0.00
1,700.00	13.78	324.72	1,675.88	193.07	-136.58	201.75	0.00	0.00	0.00
1,800.00	13.78	324.72	1,773.00	212.52	-150.33	222.06	0.00	0.00	0.00
1,827.80	13.78	324.72	1,800.00	217.92	-154.16	227.71	0.00	0.00	0.00
9 5/8"									
1,900.00	13.78	324.72	1,870.12	231.96	-164.09	242.38	0.00	0.00	0.00
2,000.00	13.78	324.72	1,967.24	251.41	-177.84	262.70	0.00	0.00	0.00
2,100.00	13.78	324.72	2,064.37	270.85	-191.60	283.02	0.00	0.00	0.00
2,200.00	13.78	324.72	2,161.49	290.29	-205.35	303.34	0.00	0.00	0.00
2,300.00	13.78	324.72	2,258.61	309.74	-219.11	323.66	0.00	0.00	0.00
2,400.00	13.78	324.72	2,355.73	329.18	-232.86	343.98	0.00	0.00	0.00
2,500.00	13.78	324.72	2,452.85	348.63	-246.62	364.29	0.00	0.00	0.00
2,600.00	13.78	324.72	2,549.98	368.07	-260.37	384.61	0.00	0.00	0.00
2,700.00	13.78	324.72	2,647.10	387.52	-274.13	404.93	0.00	0.00	0.00
2,800.00	13.78	324.72	2,744.22	406.96	-287.88	425.25	0.00	0.00	0.00
2,900.00	13.78	324.72	2,841.34	426.41	-301.64	445.57	0.00	0.00	0.00
3,000.00	13.78	324.72	2,938.47	445.85	-315.39	465.89	0.00	0.00	0.00
3,100.00	13.78	324.72	3,035.59	465.30	-329.15	486.20	0.00	0.00	0.00
3,200.00	13.78	324.72	3,132.71	484.74	-342.90	506.52	0.00	0.00	0.00
3,259.21	13.78	324.72	3,190.22	496.26	-351.05	518.55	0.00	0.00	0.00
3,300.00	13.17	324.72	3,229.88	504.01	-356.53	526.66	1.50	-1.50	0.00
3,400.00	11.67	324.72	3,327.54	521.57	-368.95	545.00	1.50	-1.50	0.00
3,500.00	10.17	324.72	3,425.73	537.03	-379.89	561.16	1.50	-1.50	0.00
3,600.00	8.67	324.72	3,524.38	550.39	-389.34	575.12	1.50	-1.50	0.00
3,700.00	7.17	324.72	3,623.42	561.63	-397.29	586.87	1.50	-1.50	0.00
3,800.00	5.67	324.72	3,722.79	570.76	-403.75	596.40	1.50	-1.50	0.00
3,900.00	4.17	324.72	3,822.42	577.76	-408.70	603.71	1.50	-1.50	0.00
4,000.00	2.67	324.72	3,922.24	582.62	-412.14	608.80	1.50	-1.50	0.00
4,100.00	1.17	324.72	4,022.18	585.35	-414.07	611.65	1.50	-1.50	0.00
4,177.82	0.00	0.00	4,100.00	586.00	-414.53	612.33	1.50	-1.50	0.00
4,200.00	0.00	0.00	4,122.18	586.00	-414.53	612.33	0.00	0.00	0.00
4,283.82	0.00	0.00	4,206.00	586.00	-414.53	612.33	0.00	0.00	0.00
Parkman									

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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well Gabel 2C-5HZ
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 2C-5HZ	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)
4,300.00	0.00	0.00	4,222.18	586.00	-414.53	612.33	0.00	0.00	0.00
4,400.00	0.00	0.00	4,322.18	586.00	-414.53	612.33	0.00	0.00	0.00
4,500.00	0.00	0.00	4,422.18	586.00	-414.53	612.33	0.00	0.00	0.00
4,600.00	0.00	0.00	4,522.18	586.00	-414.53	612.33	0.00	0.00	0.00
4,700.00	0.00	0.00	4,622.18	586.00	-414.53	612.33	0.00	0.00	0.00
4,709.82	0.00	0.00	4,632.00	586.00	-414.53	612.33	0.00	0.00	0.00
Sussex									
4,800.00	0.00	0.00	4,722.18	586.00	-414.53	612.33	0.00	0.00	0.00
4,900.00	0.00	0.00	4,822.18	586.00	-414.53	612.33	0.00	0.00	0.00
5,000.00	0.00	0.00	4,922.18	586.00	-414.53	612.33	0.00	0.00	0.00
5,100.00	0.00	0.00	5,022.18	586.00	-414.53	612.33	0.00	0.00	0.00
5,200.00	0.00	0.00	5,122.18	586.00	-414.53	612.33	0.00	0.00	0.00
5,300.00	0.00	0.00	5,222.18	586.00	-414.53	612.33	0.00	0.00	0.00
5,400.00	0.00	0.00	5,322.18	586.00	-414.53	612.33	0.00	0.00	0.00
5,500.00	0.00	0.00	5,422.18	586.00	-414.53	612.33	0.00	0.00	0.00
5,600.00	0.00	0.00	5,522.18	586.00	-414.53	612.33	0.00	0.00	0.00
5,700.00	0.00	0.00	5,622.18	586.00	-414.53	612.33	0.00	0.00	0.00
5,800.00	0.00	0.00	5,722.18	586.00	-414.53	612.33	0.00	0.00	0.00
5,900.00	0.00	0.00	5,822.18	586.00	-414.53	612.33	0.00	0.00	0.00
6,000.00	0.00	0.00	5,922.18	586.00	-414.53	612.33	0.00	0.00	0.00
6,100.00	0.00	0.00	6,022.18	586.00	-414.53	612.33	0.00	0.00	0.00
6,200.00	0.00	0.00	6,122.18	586.00	-414.53	612.33	0.00	0.00	0.00
6,300.00	0.00	0.00	6,222.18	586.00	-414.53	612.33	0.00	0.00	0.00
6,400.00	0.00	0.00	6,322.18	586.00	-414.53	612.33	0.00	0.00	0.00
6,500.00	0.00	0.00	6,422.18	586.00	-414.53	612.33	0.00	0.00	0.00
6,600.00	0.00	0.00	6,522.18	586.00	-414.53	612.33	0.00	0.00	0.00
6,700.00	0.00	0.00	6,622.18	586.00	-414.53	612.33	0.00	0.00	0.00
6,800.00	0.00	0.00	6,722.18	586.00	-414.53	612.33	0.00	0.00	0.00
6,891.11	0.00	0.00	6,813.29	586.00	-414.53	612.33	0.00	0.00	0.00
6,900.00	0.80	0.00	6,822.18	586.06	-414.53	612.39	9.00	9.00	0.00
7,000.00	9.80	0.00	6,921.65	595.29	-414.53	621.60	9.00	9.00	0.00
7,100.00	18.80	0.00	7,018.45	619.96	-414.53	646.22	9.00	9.00	0.00
7,159.72	24.18	0.00	7,074.00	641.83	-414.53	668.04	9.00	9.00	0.00
Sharon Springs									
7,200.00	27.80	0.00	7,110.20	659.48	-414.53	685.64	9.00	9.00	0.00
7,208.85	28.60	0.00	7,118.00	663.66	-414.53	689.82	9.00	9.00	0.00
Niobrara									
7,300.00	36.80	0.00	7,194.64	712.86	-414.53	738.91	9.00	9.00	0.00
7,346.74	41.01	0.00	7,231.00	742.20	-414.53	768.19	9.00	9.00	0.00
Nio B									
7,400.00	45.80	0.00	7,269.69	778.79	-414.53	804.69	9.00	9.00	0.00
7,440.53	49.45	0.00	7,297.00	808.73	-414.53	834.56	9.00	9.00	0.00
Nio C									
7,500.00	54.80	0.00	7,333.50	855.65	-414.53	881.38	9.00	9.00	0.00
7,600.00	63.80	0.00	7,384.50	941.55	-414.53	967.09	9.00	9.00	0.00
7,676.28	70.67	0.00	7,414.00	1,011.84	-414.53	1,037.22	9.00	9.00	0.00
Fort Hayes									
7,700.00	72.80	0.00	7,421.44	1,034.37	-414.53	1,059.70	9.00	9.00	0.00
7,757.80	78.00	0.00	7,436.00	1,090.29	-414.53	1,115.49	9.00	9.00	0.00
Codell									
7,800.00	81.80	0.00	7,443.40	1,131.82	-414.53	1,156.94	9.00	9.00	0.00
7,887.78	89.70	0.00	7,449.90	1,219.29	-414.53	1,244.21	9.00	9.00	0.00
Top of Production - GABEL 2C-5HZ_PHL									

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well Gabel 2C-5HZ
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 2C-5HZ	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)
7,900.00	89.70	0.00	7,449.96	1,231.51	-414.53	1,256.40	0.00	0.00	0.00
8,000.00	89.70	0.00	7,450.48	1,331.51	-414.53	1,356.18	0.00	0.00	0.00
8,100.00	89.70	0.00	7,451.01	1,431.51	-414.53	1,455.96	0.00	0.00	0.00
8,200.00	89.70	0.00	7,451.53	1,531.51	-414.53	1,555.73	0.00	0.00	0.00
8,300.00	89.70	0.00	7,452.06	1,631.50	-414.53	1,655.51	0.00	0.00	0.00
8,400.00	89.70	0.00	7,452.58	1,731.50	-414.53	1,755.28	0.00	0.00	0.00
8,500.00	89.70	0.00	7,453.10	1,831.50	-414.53	1,855.06	0.00	0.00	0.00
8,600.00	89.70	0.00	7,453.63	1,931.50	-414.53	1,954.84	0.00	0.00	0.00
8,700.00	89.70	0.00	7,454.15	2,031.50	-414.53	2,054.61	0.00	0.00	0.00
8,800.00	89.70	0.00	7,454.67	2,131.50	-414.53	2,154.39	0.00	0.00	0.00
8,900.00	89.70	0.00	7,455.20	2,231.50	-414.53	2,254.17	0.00	0.00	0.00
9,000.00	89.70	0.00	7,455.72	2,331.49	-414.53	2,353.94	0.00	0.00	0.00
9,100.00	89.70	0.00	7,456.24	2,431.49	-414.53	2,453.72	0.00	0.00	0.00
9,200.00	89.70	0.00	7,456.77	2,531.49	-414.53	2,553.49	0.00	0.00	0.00
9,300.00	89.70	0.00	7,457.29	2,631.49	-414.53	2,653.27	0.00	0.00	0.00
9,400.00	89.70	0.00	7,457.82	2,731.49	-414.53	2,753.05	0.00	0.00	0.00
9,500.00	89.70	0.00	7,458.34	2,831.49	-414.53	2,852.82	0.00	0.00	0.00
9,600.00	89.70	0.00	7,458.86	2,931.49	-414.53	2,952.60	0.00	0.00	0.00
9,700.00	89.70	0.00	7,459.39	3,031.48	-414.53	3,052.37	0.00	0.00	0.00
9,800.00	89.70	0.00	7,459.91	3,131.48	-414.53	3,152.15	0.00	0.00	0.00
9,900.00	89.70	0.00	7,460.43	3,231.48	-414.53	3,251.93	0.00	0.00	0.00
10,000.00	89.70	0.00	7,460.96	3,331.48	-414.53	3,351.70	0.00	0.00	0.00
10,100.00	89.70	0.00	7,461.48	3,431.48	-414.53	3,451.48	0.00	0.00	0.00
10,200.00	89.70	0.00	7,462.00	3,531.48	-414.53	3,551.26	0.00	0.00	0.00
10,300.00	89.70	0.00	7,462.53	3,631.48	-414.53	3,651.03	0.00	0.00	0.00
10,400.00	89.70	0.00	7,463.05	3,731.48	-414.53	3,750.81	0.00	0.00	0.00
10,500.00	89.70	0.00	7,463.57	3,831.47	-414.53	3,850.58	0.00	0.00	0.00
10,600.00	89.70	0.00	7,464.10	3,931.47	-414.53	3,950.36	0.00	0.00	0.00
10,700.00	89.70	0.00	7,464.62	4,031.47	-414.53	4,050.14	0.00	0.00	0.00
10,800.00	89.70	0.00	7,465.15	4,131.47	-414.53	4,149.91	0.00	0.00	0.00
10,900.00	89.70	0.00	7,465.67	4,231.47	-414.53	4,249.69	0.00	0.00	0.00
11,000.00	89.70	0.00	7,466.19	4,331.47	-414.53	4,349.47	0.00	0.00	0.00
11,100.00	89.70	0.00	7,466.72	4,431.47	-414.53	4,449.24	0.00	0.00	0.00
11,200.00	89.70	0.00	7,467.24	4,531.46	-414.53	4,549.02	0.00	0.00	0.00
11,300.00	89.70	0.00	7,467.76	4,631.46	-414.53	4,648.79	0.00	0.00	0.00
11,400.00	89.70	0.00	7,468.29	4,731.46	-414.53	4,748.57	0.00	0.00	0.00
11,500.00	89.70	0.00	7,468.81	4,831.46	-414.53	4,848.35	0.00	0.00	0.00
11,600.00	89.70	0.00	7,469.33	4,931.46	-414.53	4,948.12	0.00	0.00	0.00
11,700.00	89.70	0.00	7,469.86	5,031.46	-414.53	5,047.90	0.00	0.00	0.00
11,800.00	89.70	0.00	7,470.38	5,131.46	-414.53	5,147.67	0.00	0.00	0.00
11,900.00	89.70	0.00	7,470.91	5,231.45	-414.53	5,247.45	0.00	0.00	0.00
12,000.00	89.70	0.00	7,471.43	5,331.45	-414.53	5,347.23	0.00	0.00	0.00
12,100.00	89.70	0.00	7,471.95	5,431.45	-414.53	5,447.00	0.00	0.00	0.00
12,200.00	89.70	0.00	7,472.48	5,531.45	-414.53	5,546.78	0.00	0.00	0.00
12,300.00	89.70	0.00	7,473.00	5,631.45	-414.53	5,646.56	0.00	0.00	0.00
12,400.00	89.70	0.00	7,473.52	5,731.45	-414.53	5,746.33	0.00	0.00	0.00
12,500.00	89.70	0.00	7,474.05	5,831.45	-414.53	5,846.11	0.00	0.00	0.00
12,600.00	89.70	0.00	7,474.57	5,931.45	-414.53	5,945.88	0.00	0.00	0.00
12,700.00	89.70	0.00	7,475.09	6,031.44	-414.53	6,045.66	0.00	0.00	0.00
12,800.00	89.70	0.00	7,475.62	6,131.44	-414.53	6,145.44	0.00	0.00	0.00
12,873.06	89.70	0.00	7,476.00	6,204.51	-414.53	6,218.34	0.00	0.00	0.00
GABEL 2C-5HZ_PBHL									

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well Gabel 2C-5HZ
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 2C-5HZ	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 2C-5HZ_PHL	0.00	0.00	7,449.90	1,219.29	-414.53	14,553,553.79	1,696,745.36	40.073478	-104.798647
- plan hits target center									
- Point									
GABEL 2C-5HZ_PBH	0.00	0.00	7,476.00	6,204.51	-414.53	14,558,539.00	1,696,734.00	40.087169	-104.798647
- plan hits target center									
- Point									

Casing Points					
	Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
	(usft)	(usft)	Name	(")	(")
	1,827.80	1,800.00	9 5/8"	9-5/8	13-1/2
	7,887.78	7,449.90	Top of Production	5-1/2	8-1/2

Formations						
	Measured Depth	Vertical Depth			Dip	Dip Direction
	(usft)	(usft)	Name	Lithology	(°)	(°)
	1,415.95	1,400.00	Fox Hills			
	4,283.82	4,206.00	Parkman			
	4,709.82	4,632.00	Sussex			
	7,159.72	7,074.00	Sharon Springs			
	7,208.85	7,118.00	Niobrara			
	7,346.74	7,231.00	Nio B			
	7,440.53	7,297.00	Nio C			
	7,676.28	7,414.00	Fort Hayes			
	7,757.80	7,436.00	Codell			