

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

1N-68W-08 YELLOWHAMMER 12-8HZ Pad

YELLOWHAMMER 13N-17HZ

Plan A

Plan: Permit Rev-1

Standard Planning Report

16 August, 2016



Azimuths to True North
Magnetic North: 8.28°

Magnetic Field
Strength: 52380.3snT
Dip Angle: 66.56°
Date: 8/15/2016
Model: IGRF2010

SITE: 1N-68W-08 YELLOWHAMMER 12-8HZ Pad

Well: YELLOWHAMMER 13N-17HZ
Wellbore: Plan A
Design: Permit Rev-1

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1016.00	1023.27	Fox Hills
4185.00	4265.57	Parkman
4613.00	4703.75	Sussex
7413.00	7579.78	Sharon Springs
7454.00	7638.67	Niobrara
7588.00	7917.85	Nio B

WELL DETAILS: YELLOWHAMMER 13N-17HZ

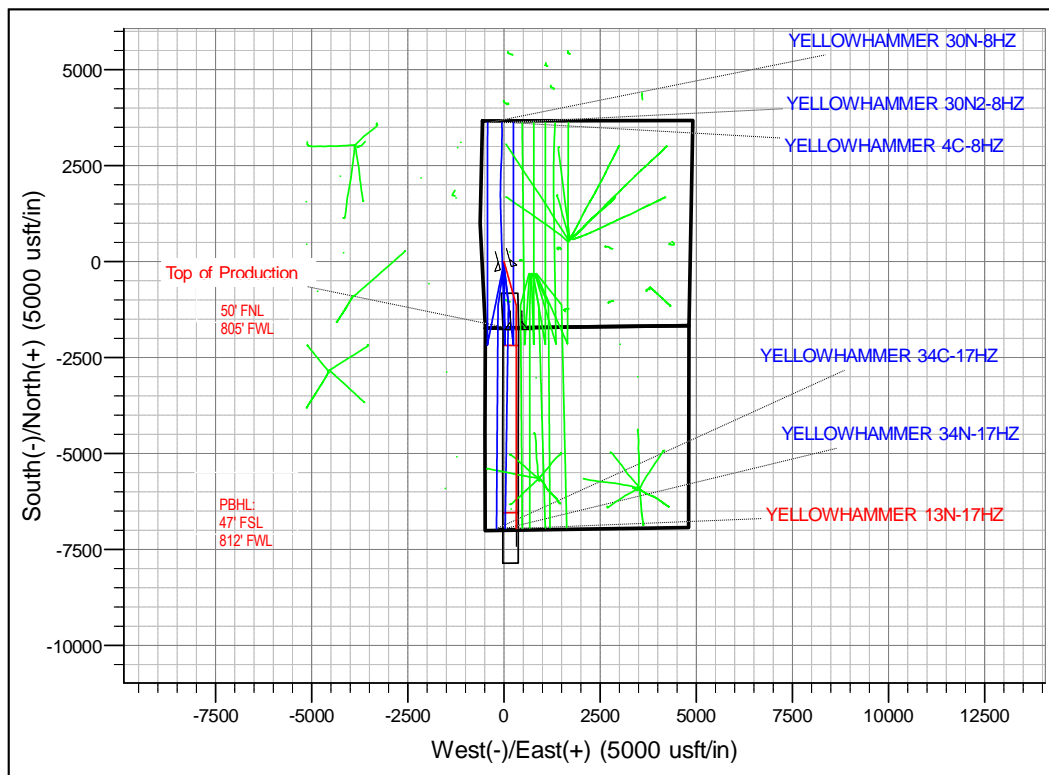
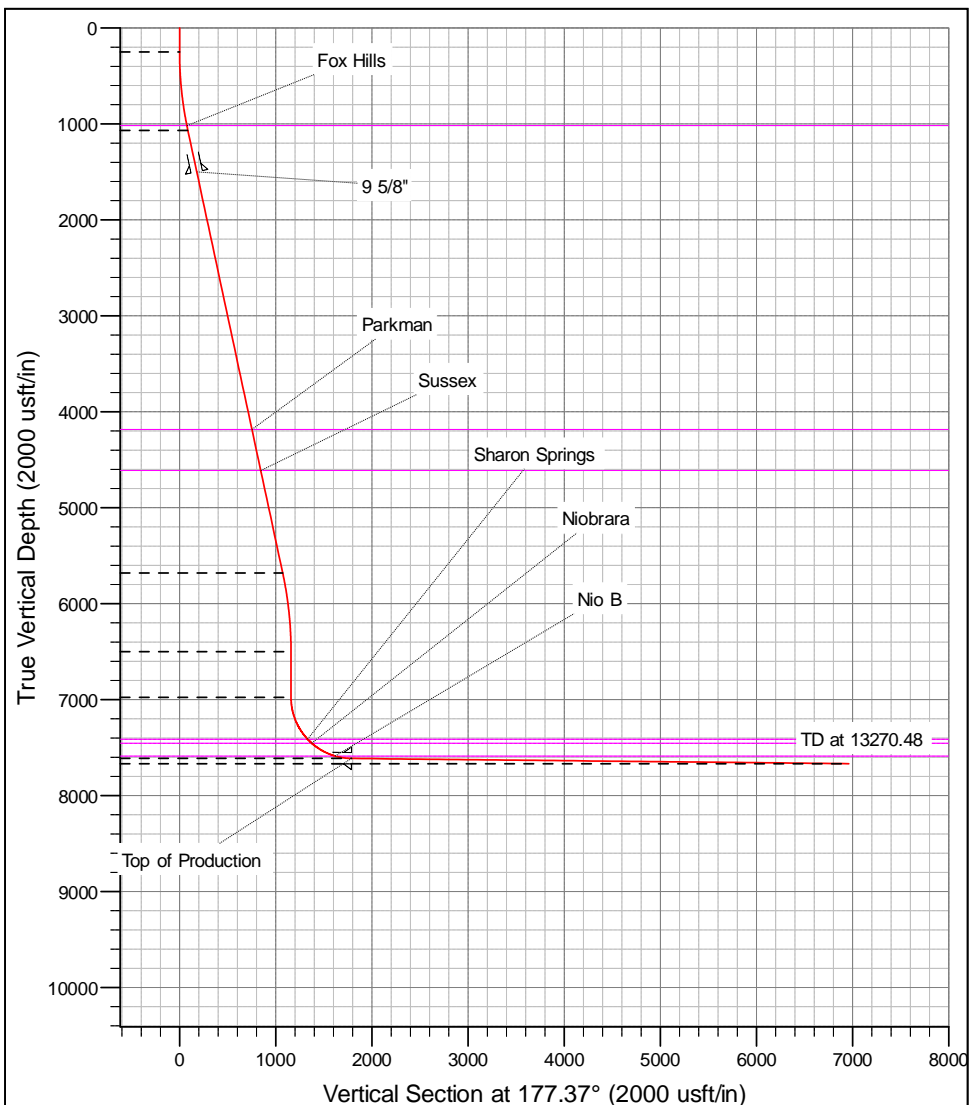
+N/-S	+E/-W	GL: 5063.00 Northing	RKB @ 5080.00usft (Original Well Elev) Easting	Latitude	Longitude	Slot
0.00	0.00	14549653.11	1630523.16	40.062936	-105.035360	

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
1075.21	12.38	164.40	1068.80	-85.52	23.88	1.50	86.53
5797.37	12.38	164.40	5681.20	-1060.48	296.12	0.00	1072.97
6622.58	0.00	0.00	6500.00	-1146.00	320.00	1.50	1159.50
7099.78	0.00	0.00	6977.20	-1146.00	320.00	0.00	1159.50
8093.11	89.40	180.00	7613.78	-1775.95	320.00	9.00	1788.79
13270.48	89.40	180.00	7668.00	-6953.04	320.00	0.00	6960.40

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
YELLOWHAMMER 13N-17HZ_PBHL	7668.00	-6953.04	320.00	14542699.94	1630840.40	40.043842	-105.034217



Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well YELLOWHAMMER 13N-17HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 5080.00usft (Original Well Elev)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 5080.00usft (Original Well Elev)
Site:	1N-68W-08 YELLOWHAMMER 12-8HZ Pad	North Reference:	True
Well:	YELLOWHAMMER 13N-17HZ	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-68W-08 YELLOWHAMMER 12-8HZ Pad			
Site Position:		Northing:	14,549,653.10 usft	Latitude:	40.062936
From:	Lat/Long	Easting:	1,630,523.16 usft	Longitude:	-105.035360
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.02 °

Well	YELLOWHAMMER 13N-17HZ					
Well Position	+N-S	0.00 usft	Northing:	14,549,653.10 usft	Latitude:	40.062936
	+E-W	0.00 usft	Easting:	1,630,523.16 usft	Longitude:	-105.035360
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	5,063.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/15/2016	8.28	66.56	52,380

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	177.37

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	
1,075.21	12.38	164.40	1,068.80	-85.52	23.88	1.50	1.50	0.00	164.40	
5,797.37	12.38	164.40	5,681.20	-1,060.48	296.12	0.00	0.00	0.00	0.00	
6,622.58	0.00	0.00	6,500.00	-1,146.00	320.00	1.50	-1.50	0.00	180.00	
7,099.78	0.00	0.00	6,977.20	-1,146.00	320.00	0.00	0.00	0.00	0.00	
8,093.11	89.40	180.00	7,613.78	-1,775.95	320.00	9.00	9.00	0.00	180.00	
13,270.48	89.40	180.00	7,668.00	-6,953.04	320.00	0.00	0.00	0.00	0.00	YELLOWHAMMER

Corporate Planning Report

Database: PLANNING
Company: US ROCKIES WATTENBERG PLANNING
Project: WELD-NAD83-UTMFT13N
Site: 1N-68W-08 YELLOWHAMMER 12-8HZ Pad
Well: YELLOWHAMMER 13N-17HZ
Wellbore: Plan A
Design: Permit Rev-1

Local Co-ordinate Reference: Well YELLOWHAMMER 13N-17HZ
TVD Reference: RKB @ 5080.00usft (Original Well Elev)
MD Reference: RKB @ 5080.00usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

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	164.40	300.00	-0.32	0.09	0.32	1.50	1.50	0.00
400.00	2.25	164.40	399.96	-2.84	0.79	2.87	1.50	1.50	0.00
500.00	3.75	164.40	499.82	-7.88	2.20	7.97	1.50	1.50	0.00
600.00	5.25	164.40	599.51	-15.43	4.31	15.62	1.50	1.50	0.00
700.00	6.75	164.40	698.96	-25.50	7.12	25.80	1.50	1.50	0.00
800.00	8.25	164.40	798.10	-38.07	10.63	38.52	1.50	1.50	0.00
900.00	9.75	164.40	896.87	-53.14	14.84	53.76	1.50	1.50	0.00
1,000.00	11.25	164.40	995.19	-70.69	19.74	71.52	1.50	1.50	0.00
1,023.27	11.60	164.40	1,018.00	-75.13	20.98	76.02	1.50	1.50	0.00
Fox Hills									
1,075.21	12.38	164.40	1,068.80	-85.52	23.88	86.53	1.50	1.50	0.00
1,100.00	12.38	164.40	1,093.02	-90.64	25.31	91.71	0.00	0.00	0.00
1,200.00	12.38	164.40	1,190.69	-111.29	31.07	112.60	0.00	0.00	0.00
1,300.00	12.38	164.40	1,288.37	-131.93	36.84	133.49	0.00	0.00	0.00
1,400.00	12.38	164.40	1,386.05	-152.58	42.60	154.38	0.00	0.00	0.00
1,500.00	12.38	164.40	1,483.72	-173.23	48.37	175.27	0.00	0.00	0.00
1,516.67	12.38	164.40	1,500.00	-176.67	49.33	178.75	0.00	0.00	0.00
9 5/8"									
1,600.00	12.38	164.40	1,581.40	-193.87	54.14	196.16	0.00	0.00	0.00
1,700.00	12.38	164.40	1,679.07	-214.52	59.90	217.04	0.00	0.00	0.00
1,800.00	12.38	164.40	1,776.75	-235.16	65.67	237.93	0.00	0.00	0.00
1,900.00	12.38	164.40	1,874.42	-255.81	71.43	258.82	0.00	0.00	0.00
2,000.00	12.38	164.40	1,972.10	-276.46	77.20	279.71	0.00	0.00	0.00
2,100.00	12.38	164.40	2,069.77	-297.10	82.96	300.60	0.00	0.00	0.00
2,200.00	12.38	164.40	2,167.45	-317.75	88.73	321.49	0.00	0.00	0.00
2,300.00	12.38	164.40	2,265.12	-338.40	94.49	342.38	0.00	0.00	0.00
2,400.00	12.38	164.40	2,362.80	-359.04	100.26	363.27	0.00	0.00	0.00
2,500.00	12.38	164.40	2,460.48	-379.69	106.02	384.16	0.00	0.00	0.00
2,600.00	12.38	164.40	2,558.15	-400.34	111.79	405.05	0.00	0.00	0.00
2,700.00	12.38	164.40	2,655.83	-420.98	117.55	425.94	0.00	0.00	0.00
2,800.00	12.38	164.40	2,753.50	-441.63	123.32	446.83	0.00	0.00	0.00
2,900.00	12.38	164.40	2,851.18	-462.28	129.08	467.72	0.00	0.00	0.00
3,000.00	12.38	164.40	2,948.85	-482.92	134.85	488.61	0.00	0.00	0.00
3,100.00	12.38	164.40	3,046.53	-503.57	140.61	509.50	0.00	0.00	0.00
3,200.00	12.38	164.40	3,144.20	-524.21	146.38	530.39	0.00	0.00	0.00
3,300.00	12.38	164.40	3,241.88	-544.86	152.14	551.28	0.00	0.00	0.00
3,400.00	12.38	164.40	3,339.55	-565.51	157.91	572.17	0.00	0.00	0.00
3,500.00	12.38	164.40	3,437.23	-586.15	163.67	593.06	0.00	0.00	0.00
3,600.00	12.38	164.40	3,534.91	-606.80	169.44	613.95	0.00	0.00	0.00
3,700.00	12.38	164.40	3,632.58	-627.45	175.20	634.84	0.00	0.00	0.00
3,800.00	12.38	164.40	3,730.26	-648.09	180.97	655.73	0.00	0.00	0.00
3,900.00	12.38	164.40	3,827.93	-668.74	186.73	676.62	0.00	0.00	0.00
4,000.00	12.38	164.40	3,925.61	-689.39	192.50	697.51	0.00	0.00	0.00
4,100.00	12.38	164.40	4,023.28	-710.03	198.26	718.40	0.00	0.00	0.00
4,200.00	12.38	164.40	4,120.96	-730.68	204.03	739.29	0.00	0.00	0.00
4,265.57	12.38	164.40	4,185.00	-744.22	207.81	752.98	0.00	0.00	0.00
Parkman									
4,300.00	12.38	164.40	4,218.63	-751.33	209.79	760.18	0.00	0.00	0.00
4,400.00	12.38	164.40	4,316.31	-771.97	215.56	781.06	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well YELLOWHAMMER 13N-17HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 5080.00usft (Original Well Elev)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 5080.00usft (Original Well Elev)
Site:	1N-68W-08 YELLOWHAMMER 12-8HZ Pad	North Reference:	True
Well:	YELLOWHAMMER 13N-17HZ	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	12.38	164.40	4,413.98	-792.62	221.32	801.95	0.00	0.00	0.00
4,600.00	12.38	164.40	4,511.66	-813.26	227.09	822.84	0.00	0.00	0.00
4,700.00	12.38	164.40	4,609.33	-833.91	232.85	843.73	0.00	0.00	0.00
4,703.75	12.38	164.40	4,613.00	-834.69	233.07	844.52	0.00	0.00	0.00
Sussex									
4,800.00	12.38	164.40	4,707.01	-854.56	238.62	864.62	0.00	0.00	0.00
4,900.00	12.38	164.40	4,804.69	-875.20	244.39	885.51	0.00	0.00	0.00
5,000.00	12.38	164.40	4,902.36	-895.85	250.15	906.40	0.00	0.00	0.00
5,100.00	12.38	164.40	5,000.04	-916.50	255.92	927.29	0.00	0.00	0.00
5,200.00	12.38	164.40	5,097.71	-937.14	261.68	948.18	0.00	0.00	0.00
5,300.00	12.38	164.40	5,195.39	-957.79	267.45	969.07	0.00	0.00	0.00
5,400.00	12.38	164.40	5,293.06	-978.44	273.21	989.96	0.00	0.00	0.00
5,500.00	12.38	164.40	5,390.74	-999.08	278.98	1,010.85	0.00	0.00	0.00
5,600.00	12.38	164.40	5,488.41	-1,019.73	284.74	1,031.74	0.00	0.00	0.00
5,700.00	12.38	164.40	5,586.09	-1,040.38	290.51	1,052.63	0.00	0.00	0.00
5,797.37	12.38	164.40	5,681.20	-1,060.48	296.12	1,072.97	0.00	0.00	0.00
5,800.00	12.34	164.40	5,683.76	-1,061.02	296.27	1,073.52	1.50	-1.50	0.00
5,900.00	10.84	164.40	5,781.72	-1,080.37	301.67	1,093.09	1.50	-1.50	0.00
6,000.00	9.34	164.40	5,880.17	-1,097.24	306.38	1,110.16	1.50	-1.50	0.00
6,100.00	7.84	164.40	5,979.05	-1,111.62	310.40	1,124.72	1.50	-1.50	0.00
6,200.00	6.34	164.40	6,078.28	-1,123.51	313.72	1,136.74	1.50	-1.50	0.00
6,300.00	4.84	164.40	6,177.80	-1,132.89	316.34	1,146.23	1.50	-1.50	0.00
6,400.00	3.34	164.40	6,277.55	-1,139.76	318.26	1,153.18	1.50	-1.50	0.00
6,500.00	1.84	164.40	6,377.44	-1,144.11	319.47	1,157.58	1.50	-1.50	0.00
6,600.00	0.34	164.40	6,477.42	-1,145.94	319.98	1,159.43	1.50	-1.50	0.00
6,622.58	0.00	0.00	6,500.00	-1,146.00	320.00	1,159.50	1.50	-1.50	0.00
6,700.00	0.00	0.00	6,577.42	-1,146.00	320.00	1,159.50	0.00	0.00	0.00
6,800.00	0.00	0.00	6,677.42	-1,146.00	320.00	1,159.50	0.00	0.00	0.00
6,900.00	0.00	0.00	6,777.42	-1,146.00	320.00	1,159.50	0.00	0.00	0.00
7,000.00	0.00	0.00	6,877.42	-1,146.00	320.00	1,159.50	0.00	0.00	0.00
7,099.78	0.00	0.00	6,977.20	-1,146.00	320.00	1,159.50	0.00	0.00	0.00
7,100.00	0.00	180.00	6,977.42	-1,146.00	320.00	1,159.50	0.00	0.00	0.00
7,200.00	9.02	180.00	7,077.01	-1,153.87	320.00	1,167.36	9.02	9.02	0.00
7,300.00	18.02	180.00	7,174.14	-1,177.23	320.00	1,190.69	9.00	9.00	0.00
7,400.00	27.02	180.00	7,266.42	-1,215.49	320.00	1,228.91	9.00	9.00	0.00
7,500.00	36.02	180.00	7,351.57	-1,267.71	320.00	1,281.08	9.00	9.00	0.00
7,579.78	43.20	180.00	7,413.00	-1,318.55	320.00	1,331.86	9.00	9.00	0.00
Sharon Springs									
7,600.00	45.02	180.00	7,427.51	-1,332.62	320.00	1,345.92	9.00	9.00	0.00
7,638.67	48.50	180.00	7,454.00	-1,360.78	320.00	1,374.06	9.00	9.00	0.00
Niobrara									
7,700.00	54.02	180.00	7,492.37	-1,408.60	320.00	1,421.82	9.00	9.00	0.00
7,800.00	63.02	180.00	7,544.53	-1,493.80	320.00	1,506.93	9.00	9.00	0.00
7,900.00	72.02	180.00	7,582.73	-1,586.11	320.00	1,599.14	9.00	9.00	0.00
7,917.85	73.63	180.00	7,588.00	-1,603.16	320.00	1,616.17	9.00	9.00	0.00
Nio B									
8,000.00	81.02	180.00	7,606.02	-1,683.25	320.00	1,696.18	9.00	9.00	0.00
8,093.11	89.40	180.00	7,613.78	-1,775.95	320.00	1,788.78	9.00	9.00	0.00
Top of Production - YELLOWHAMMER 13N-17HZ_PHL									
8,100.00	89.40	180.00	7,613.86	-1,782.84	320.00	1,795.67	0.00	0.00	0.00
8,200.00	89.40	180.00	7,614.90	-1,882.84	320.00	1,895.56	0.00	0.00	0.00
8,300.00	89.40	180.00	7,615.95	-1,982.83	320.00	1,995.44	0.00	0.00	0.00
8,400.00	89.40	180.00	7,617.00	-2,082.83	320.00	2,095.33	0.00	0.00	0.00
8,500.00	89.40	180.00	7,618.04	-2,182.82	320.00	2,195.22	0.00	0.00	0.00

Corporate Planning Report

Database: PLANNING
Company: US ROCKIES WATTENBERG PLANNING
Project: WELD-NAD83-UTMFT13N
Site: 1N-68W-08 YELLOWHAMMER 12-8HZ Pad
Well: YELLOWHAMMER 13N-17HZ
Wellbore: Plan A
Design: Permit Rev-1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well YELLOWHAMMER 13N-17HZ
RKB @ 5080.00usft (Original Well Elev)
RKB @ 5080.00usft (Original Well Elev)
True
Minimum Curvature

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	89.40	180.00	7,619.09	-2,282.81	320.00	2,295.11	0.00	0.00	0.00
8,700.00	89.40	180.00	7,620.14	-2,382.81	320.00	2,395.00	0.00	0.00	0.00
8,800.00	89.40	180.00	7,621.19	-2,482.80	320.00	2,494.89	0.00	0.00	0.00
8,900.00	89.40	180.00	7,622.23	-2,582.80	320.00	2,594.78	0.00	0.00	0.00
9,000.00	89.40	180.00	7,623.28	-2,682.79	320.00	2,694.67	0.00	0.00	0.00
9,100.00	89.40	180.00	7,624.33	-2,782.79	320.00	2,794.56	0.00	0.00	0.00
9,200.00	89.40	180.00	7,625.37	-2,882.78	320.00	2,894.44	0.00	0.00	0.00
9,300.00	89.40	180.00	7,626.42	-2,982.78	320.00	2,994.33	0.00	0.00	0.00
9,400.00	89.40	180.00	7,627.47	-3,082.77	320.00	3,094.22	0.00	0.00	0.00
9,500.00	89.40	180.00	7,628.52	-3,182.77	320.00	3,194.11	0.00	0.00	0.00
9,600.00	89.40	180.00	7,629.56	-3,282.76	320.00	3,294.00	0.00	0.00	0.00
9,700.00	89.40	180.00	7,630.61	-3,382.75	320.00	3,393.89	0.00	0.00	0.00
9,800.00	89.40	180.00	7,631.66	-3,482.75	320.00	3,493.78	0.00	0.00	0.00
9,900.00	89.40	180.00	7,632.71	-3,582.74	320.00	3,593.67	0.00	0.00	0.00
10,000.00	89.40	180.00	7,633.75	-3,682.74	320.00	3,693.55	0.00	0.00	0.00
10,100.00	89.40	180.00	7,634.80	-3,782.73	320.00	3,793.44	0.00	0.00	0.00
10,200.00	89.40	180.00	7,635.85	-3,882.73	320.00	3,893.33	0.00	0.00	0.00
10,300.00	89.40	180.00	7,636.89	-3,982.72	320.00	3,993.22	0.00	0.00	0.00
10,400.00	89.40	180.00	7,637.94	-4,082.72	320.00	4,093.11	0.00	0.00	0.00
10,500.00	89.40	180.00	7,638.99	-4,182.71	320.00	4,193.00	0.00	0.00	0.00
10,600.00	89.40	180.00	7,640.04	-4,282.70	320.00	4,292.89	0.00	0.00	0.00
10,700.00	89.40	180.00	7,641.08	-4,382.70	320.00	4,392.78	0.00	0.00	0.00
10,800.00	89.40	180.00	7,642.13	-4,482.69	320.00	4,492.67	0.00	0.00	0.00
10,900.00	89.40	180.00	7,643.18	-4,582.69	320.00	4,592.55	0.00	0.00	0.00
11,000.00	89.40	180.00	7,644.22	-4,682.68	320.00	4,692.44	0.00	0.00	0.00
11,100.00	89.40	180.00	7,645.27	-4,782.68	320.00	4,792.33	0.00	0.00	0.00
11,200.00	89.40	180.00	7,646.32	-4,882.67	320.00	4,892.22	0.00	0.00	0.00
11,300.00	89.40	180.00	7,647.37	-4,982.67	320.00	4,992.11	0.00	0.00	0.00
11,400.00	89.40	180.00	7,648.41	-5,082.66	320.00	5,092.00	0.00	0.00	0.00
11,500.00	89.40	180.00	7,649.46	-5,182.66	320.00	5,191.89	0.00	0.00	0.00
11,600.00	89.40	180.00	7,650.51	-5,282.65	320.00	5,291.78	0.00	0.00	0.00
11,700.00	89.40	180.00	7,651.55	-5,382.64	320.00	5,391.66	0.00	0.00	0.00
11,800.00	89.40	180.00	7,652.60	-5,482.64	320.00	5,491.55	0.00	0.00	0.00
11,900.00	89.40	180.00	7,653.65	-5,582.63	320.00	5,591.44	0.00	0.00	0.00
12,000.00	89.40	180.00	7,654.70	-5,682.63	320.00	5,691.33	0.00	0.00	0.00
12,100.00	89.40	180.00	7,655.74	-5,782.62	320.00	5,791.22	0.00	0.00	0.00
12,200.00	89.40	180.00	7,656.79	-5,882.62	320.00	5,891.11	0.00	0.00	0.00
12,300.00	89.40	180.00	7,657.84	-5,982.61	320.00	5,991.00	0.00	0.00	0.00
12,400.00	89.40	180.00	7,658.88	-6,082.61	320.00	6,090.89	0.00	0.00	0.00
12,500.00	89.40	180.00	7,659.93	-6,182.60	320.00	6,190.78	0.00	0.00	0.00
12,600.00	89.40	180.00	7,660.98	-6,282.60	320.00	6,290.66	0.00	0.00	0.00
12,700.00	89.40	180.00	7,662.03	-6,382.59	320.00	6,390.55	0.00	0.00	0.00
12,800.00	89.40	180.00	7,663.07	-6,482.58	320.00	6,490.44	0.00	0.00	0.00
12,900.00	89.40	180.00	7,664.12	-6,582.58	320.00	6,590.33	0.00	0.00	0.00
13,000.00	89.40	180.00	7,665.17	-6,682.57	320.00	6,690.22	0.00	0.00	0.00
13,100.00	89.40	180.00	7,666.21	-6,782.57	320.00	6,790.11	0.00	0.00	0.00
13,200.00	89.40	180.00	7,667.26	-6,882.56	320.00	6,890.00	0.00	0.00	0.00
13,270.48	89.40	180.00	7,668.00	-6,953.04	320.00	6,960.40	0.00	0.00	0.00
YELLOWHAMMER 13N-17HZ_PBHL									

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well YELLOWHAMMER 13N-17HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 5080.00usft (Original Well Elev)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 5080.00usft (Original Well Elev)
Site:	1N-68W-08 YELLOWHAMMER 12-8HZ Pad	North Reference:	True
Well:	YELLOWHAMMER 13N-17HZ	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)		
YELLOWHAMMER 13N-17HZ	0.00	0.00	7,613.78	-1,775.95	320.00	14,547,877.02	1,630,842.45	40.058059	-105.034217
- plan hits target center									
- Point									
YELLOWHAMMER 13N-17HZ	0.00	0.00	7,668.00	-6,953.04	320.00	14,542,699.94	1,630,840.40	40.043842	-105.034217
- plan hits target center									
- Point									

Casing Points					
	Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
	1,516.67	1,500.00	9 5/8"	9-5/8	13-1/2
	8,093.11	7,613.78	Top of Production	5-1/2	8-1/2

Formations						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
	1,023.27	1,018.00	Fox Hills			
	4,265.57	4,185.00	Parkman			
	4,703.75	4,613.00	Sussex			
	7,579.78	7,413.00	Sharon Springs			
	7,638.67	7,454.00	Niobrara			
	7,917.85	7,588.00	Nio B			