

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N**

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

**YELLOWHAMMER 30N2-8HZ**

**Plan A**

**Plan: Permit Rev-1**

## **Standard Planning Report**

**16 August, 2016**



Azimuths to True North  
Magnetic North: 8.28°

Magnetic Field  
Strength: 52380.2snT  
Dip Angle: 66.56°  
Date: 8/15/2016  
Model: IGRF2010

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

Well: YELLOWHAMMER 30N2-8HZ  
Wellbore: Plan A  
Design: Permit Rev-1

#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1016.00	1023.27	Fox Hills
4185.00	4476.30	Parkman
4613.00	4948.95	Sussex
7409.00	7867.80	Sharon Springs
7451.00	7927.48	Niobrara
7590.00	8215.91	Nio B

#### WELL DETAILS: YELLOWHAMMER 30N2-8HZ

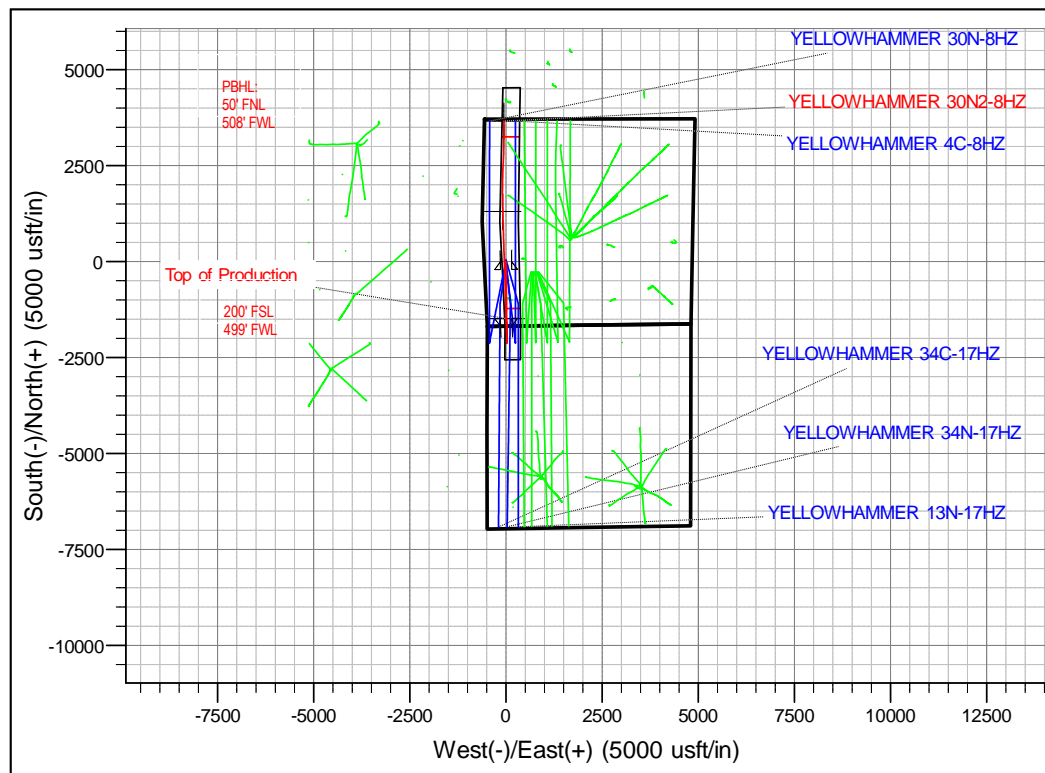
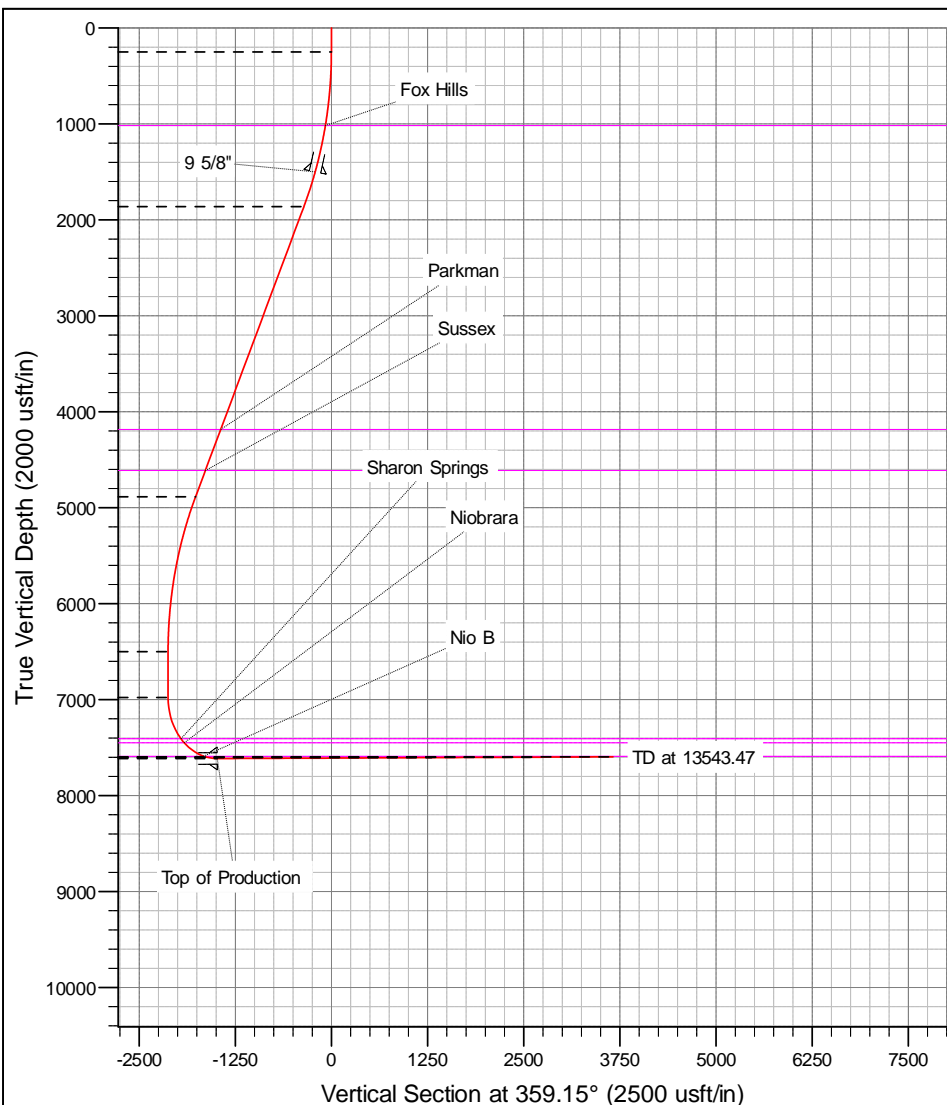
+N/-S	+E/-W	GL: 5063.00 Northing	RKB @ 5080.00usft (Original Well Elev) Easting	Latitude	Longitude	Slot
0.00	0.00	14549608.32	1630522.86	40.062813	-105.035361	

#### 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
1915.08	24.98	179.33	1862.85	-357.18	4.21	1.50	-357.21
5251.39	24.98	179.33	4887.15	-1765.82	20.79	0.00	-1765.93
6916.47	0.00	0.00	6500.00	-2123.00	25.00	1.50	-2123.14
7394.83	0.00	0.00	6978.36	-2123.00	25.00	0.00	-2123.14
8397.05	90.20	358.16	7614.97	-1484.49	4.49	9.00	-1484.39
11185.26	90.20	358.16	7605.24	1302.27	-85.00	0.00	1303.39
12472.14	90.20	2.93	7600.74	2588.71	-72.74	0.37	2589.50
12483.02	90.20	2.93	7600.71	2599.58	-72.19	0.00	2600.36
13543.47	90.20	359.00	7597.00	3659.66	-54.32	0.37	3660.07

#### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
YELLOWHAMMER 30N2-8HZ_PBHL	7597.00	3659.66	-54.32	14553268.00	1630470.00	40.072863	-105.035555



# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well YELLOWHAMMER 30N2-8HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 5080.00usft (Original Well Elev)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 5080.00usft (Original Well Elev)
<b>Site:</b>	1N-68W-08 YELLOWHAMMER 12-8HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	YELLOWHAMMER 30N2-8HZ	<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>	1N-68W-08 YELLOWHAMMER 12-8HZ Pad			
<b>Site Position:</b>		<b>Northing:</b>	14,549,653.10 usft	<b>Latitude:</b> 40.062936
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,630,523.16 usft	<b>Longitude:</b> -105.035360
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b> -0.02 °

Well	YELLOWHAMMER 30N2-8HZ					
Well Position	+N/-S	-44.79 usft	Northing:	14,549,608.31 usft	Latitude:	40.062813
	+E/-W	-0.28 usft	Easting:	1,630,522.86 usft	Longitude:	-105.035361
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	5,063.00 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	8/15/2016	8.28	66.56	52,380

<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	359.15

<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	
1,915.08	24.98	179.33	1,862.85	-357.18	4.21	1.50	1.50	0.00	179.33	
5,251.39	24.98	179.33	4,887.15	-1,765.82	20.79	0.00	0.00	0.00	0.00	
6,916.47	0.00	0.00	6,500.00	-2,123.00	25.00	1.50	-1.50	0.00	180.00	
7,394.83	0.00	0.00	6,978.36	-2,123.00	25.00	0.00	0.00	0.00	0.00	
8,397.05	90.20	358.16	7,614.97	-1,484.49	4.49	9.00	9.00	0.00	358.16	
11,185.26	90.20	358.16	7,605.24	1,302.27	-85.00	0.00	0.00	0.00	0.00	YELLOWHAMMER
12,472.14	90.20	2.93	7,600.74	2,588.71	-72.74	0.37	0.00	0.37	89.99	
12,483.02	90.20	2.93	7,600.71	2,599.58	-72.19	0.00	0.00	0.00	0.00	
13,543.47	90.20	359.00	7,597.00	3,659.66	-54.32	0.37	0.00	-0.37	-90.00	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 30N2-8HZ  
**Wellbore:** Plan A  
**Design:** Permit Rev-1

**Local Co-ordinate Reference:** Well YELLOWHAMMER 30N2-8HZ  
**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	179.33	300.00	-0.33	0.00	-0.33	1.50	1.50	0.00
400.00	2.25	179.33	399.96	-2.94	0.03	-2.94	1.50	1.50	0.00
500.00	3.75	179.33	499.82	-8.18	0.10	-8.18	1.50	1.50	0.00
600.00	5.25	179.33	599.51	-16.02	0.19	-16.02	1.50	1.50	0.00
700.00	6.75	179.33	698.96	-26.47	0.31	-26.48	1.50	1.50	0.00
800.00	8.25	179.33	798.10	-39.53	0.47	-39.53	1.50	1.50	0.00
900.00	9.75	179.33	896.87	-55.17	0.65	-55.17	1.50	1.50	0.00
1,000.00	11.25	179.33	995.19	-73.39	0.86	-73.39	1.50	1.50	0.00
1,023.27	11.60	179.33	1,018.00	-78.00	0.92	-78.00	1.50	1.50	0.00
Fox Hills									
1,100.00	12.75	179.33	1,093.00	-94.18	1.11	-94.18	1.50	1.50	0.00
1,200.00	14.25	179.33	1,190.24	-117.52	1.38	-117.53	1.50	1.50	0.00
1,300.00	15.75	179.33	1,286.83	-143.40	1.69	-143.41	1.50	1.50	0.00
1,400.00	17.25	179.33	1,382.71	-171.80	2.02	-171.81	1.50	1.50	0.00
1,500.00	18.75	179.33	1,477.81	-202.70	2.39	-202.71	1.50	1.50	0.00
1,523.46	19.10	179.33	1,500.00	-210.31	2.48	-210.32	1.50	1.50	0.00
9 5/8"									
1,600.00	20.25	179.33	1,572.07	-236.08	2.78	-236.09	1.50	1.50	0.00
1,700.00	21.75	179.33	1,665.43	-271.91	3.20	-271.93	1.50	1.50	0.00
1,800.00	23.25	179.33	1,757.81	-310.17	3.65	-310.19	1.50	1.50	0.00
1,900.00	24.75	179.33	1,849.16	-350.84	4.13	-350.87	1.50	1.50	0.00
1,915.08	24.98	179.33	1,862.85	-357.18	4.21	-357.21	1.50	1.50	0.00
2,000.00	24.98	179.33	1,939.82	-393.04	4.63	-393.06	0.00	0.00	0.00
2,100.00	24.98	179.33	2,030.47	-435.26	5.13	-435.29	0.00	0.00	0.00
2,200.00	24.98	179.33	2,121.12	-477.48	5.62	-477.51	0.00	0.00	0.00
2,300.00	24.98	179.33	2,211.77	-519.70	6.12	-519.73	0.00	0.00	0.00
2,400.00	24.98	179.33	2,302.42	-561.92	6.62	-561.96	0.00	0.00	0.00
2,500.00	24.98	179.33	2,393.06	-604.14	7.11	-604.18	0.00	0.00	0.00
2,600.00	24.98	179.33	2,483.71	-646.36	7.61	-646.41	0.00	0.00	0.00
2,700.00	24.98	179.33	2,574.36	-688.59	8.11	-688.63	0.00	0.00	0.00
2,800.00	24.98	179.33	2,665.01	-730.81	8.61	-730.85	0.00	0.00	0.00
2,900.00	24.98	179.33	2,755.66	-773.03	9.10	-773.08	0.00	0.00	0.00
3,000.00	24.98	179.33	2,846.31	-815.25	9.60	-815.30	0.00	0.00	0.00
3,100.00	24.98	179.33	2,936.95	-857.47	10.10	-857.53	0.00	0.00	0.00
3,200.00	24.98	179.33	3,027.60	-899.69	10.59	-899.75	0.00	0.00	0.00
3,300.00	24.98	179.33	3,118.25	-941.91	11.09	-941.97	0.00	0.00	0.00
3,400.00	24.98	179.33	3,208.90	-984.14	11.59	-984.20	0.00	0.00	0.00
3,500.00	24.98	179.33	3,299.55	-1,026.36	12.09	-1,026.42	0.00	0.00	0.00
3,600.00	24.98	179.33	3,390.20	-1,068.58	12.58	-1,068.65	0.00	0.00	0.00
3,700.00	24.98	179.33	3,480.84	-1,110.80	13.08	-1,110.87	0.00	0.00	0.00
3,800.00	24.98	179.33	3,571.49	-1,153.02	13.58	-1,153.10	0.00	0.00	0.00
3,900.00	24.98	179.33	3,662.14	-1,195.24	14.07	-1,195.32	0.00	0.00	0.00
4,000.00	24.98	179.33	3,752.79	-1,237.46	14.57	-1,237.54	0.00	0.00	0.00
4,100.00	24.98	179.33	3,843.44	-1,279.68	15.07	-1,279.77	0.00	0.00	0.00
4,200.00	24.98	179.33	3,934.09	-1,321.91	15.57	-1,321.99	0.00	0.00	0.00
4,300.00	24.98	179.33	4,024.73	-1,364.13	16.06	-1,364.22	0.00	0.00	0.00
4,400.00	24.98	179.33	4,115.38	-1,406.35	16.56	-1,406.44	0.00	0.00	0.00
4,476.80	24.98	179.33	4,185.00	-1,438.77	16.94	-1,438.87	0.00	0.00	0.00
Parkman									

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well YELLOWHAMMER 30N2-8HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 5080.00usft (Original Well Elev)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 5080.00usft (Original Well Elev)
<b>Site:</b>	1N-68W-08 YELLOWHAMMER 12-8HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	YELLOWHAMMER 30N2-8HZ	<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	24.98	179.33	4,206.03	-1,448.57	17.06	-1,448.66	0.00	0.00	0.00
4,600.00	24.98	179.33	4,296.68	-1,490.79	17.56	-1,490.89	0.00	0.00	0.00
4,700.00	24.98	179.33	4,387.33	-1,533.01	18.05	-1,533.11	0.00	0.00	0.00
4,800.00	24.98	179.33	4,477.98	-1,575.23	18.55	-1,575.34	0.00	0.00	0.00
4,900.00	24.98	179.33	4,568.62	-1,617.45	19.05	-1,617.56	0.00	0.00	0.00
4,948.95	24.98	179.33	4,613.00	-1,638.12	19.29	-1,638.23	0.00	0.00	0.00
<b>Sussex</b>									
5,000.00	24.98	179.33	4,659.27	-1,659.68	19.54	-1,659.78	0.00	0.00	0.00
5,100.00	24.98	179.33	4,749.92	-1,701.90	20.04	-1,702.01	0.00	0.00	0.00
5,200.00	24.98	179.33	4,840.57	-1,744.12	20.54	-1,744.23	0.00	0.00	0.00
5,251.39	24.98	179.33	4,887.15	-1,765.82	20.79	-1,765.93	0.00	0.00	0.00
5,300.00	24.25	179.33	4,931.35	-1,786.06	21.03	-1,786.17	1.50	-1.50	0.00
5,400.00	22.75	179.33	5,023.05	-1,825.93	21.50	-1,826.04	1.50	-1.50	0.00
5,500.00	21.25	179.33	5,115.77	-1,863.38	21.94	-1,863.50	1.50	-1.50	0.00
5,600.00	19.75	179.33	5,209.44	-1,898.39	22.36	-1,898.51	1.50	-1.50	0.00
5,700.00	18.25	179.33	5,303.99	-1,930.94	22.74	-1,931.06	1.50	-1.50	0.00
5,800.00	16.75	179.33	5,399.36	-1,961.00	23.09	-1,961.13	1.50	-1.50	0.00
5,900.00	15.25	179.33	5,495.48	-1,988.56	23.42	-1,988.69	1.50	-1.50	0.00
6,000.00	13.75	179.33	5,592.30	-2,013.59	23.71	-2,013.72	1.50	-1.50	0.00
6,100.00	12.25	179.33	5,689.73	-2,036.08	23.98	-2,036.21	1.50	-1.50	0.00
6,200.00	10.75	179.33	5,787.72	-2,056.01	24.21	-2,056.14	1.50	-1.50	0.00
6,300.00	9.25	179.33	5,886.20	-2,073.36	24.42	-2,073.50	1.50	-1.50	0.00
6,400.00	7.75	179.33	5,985.10	-2,088.14	24.59	-2,088.27	1.50	-1.50	0.00
6,500.00	6.25	179.33	6,084.35	-2,100.32	24.73	-2,100.46	1.50	-1.50	0.00
6,600.00	4.75	179.33	6,183.89	-2,109.90	24.85	-2,110.03	1.50	-1.50	0.00
6,700.00	3.25	179.33	6,283.64	-2,116.87	24.93	-2,117.00	1.50	-1.50	0.00
6,800.00	1.75	179.33	6,383.55	-2,121.22	24.98	-2,121.36	1.50	-1.50	0.00
6,900.00	0.25	179.33	6,483.53	-2,122.96	25.00	-2,123.10	1.50	-1.50	0.00
6,916.47	0.00	0.00	6,500.00	-2,123.00	25.00	-2,123.14	1.50	-1.50	0.00
7,000.00	0.00	0.00	6,583.53	-2,123.00	25.00	-2,123.14	0.00	0.00	0.00
7,100.00	0.00	0.00	6,683.53	-2,123.00	25.00	-2,123.14	0.00	0.00	0.00
7,200.00	0.00	0.00	6,783.53	-2,123.00	25.00	-2,123.14	0.00	0.00	0.00
7,300.00	0.00	0.00	6,883.53	-2,123.00	25.00	-2,123.14	0.00	0.00	0.00
7,394.83	0.00	0.00	6,978.36	-2,123.00	25.00	-2,123.14	0.00	0.00	0.00
7,400.00	0.47	358.16	6,983.53	-2,122.98	25.00	-2,123.12	9.00	9.00	0.00
7,500.00	9.47	358.16	7,083.05	-2,114.34	24.72	-2,114.47	9.00	9.00	0.00
7,600.00	18.47	358.16	7,179.99	-2,090.24	23.95	-2,090.37	9.00	9.00	0.00
7,700.00	27.47	358.16	7,271.97	-2,051.28	22.70	-2,051.39	9.00	9.00	0.00
7,800.00	36.47	358.16	7,356.72	-1,998.42	21.00	-1,998.52	9.00	9.00	0.00
7,867.80	42.57	358.16	7,409.00	-1,955.33	19.62	-1,955.40	9.00	9.00	0.00
<b>Sharon Springs</b>									
7,900.00	45.47	358.16	7,432.16	-1,932.97	18.90	-1,933.03	9.00	9.00	0.00
7,927.48	47.94	358.16	7,451.00	-1,912.98	18.26	-1,913.04	9.00	9.00	0.00
<b>Niobrara</b>									
8,000.00	54.47	358.16	7,496.42	-1,856.52	16.44	-1,856.56	9.00	9.00	0.00
8,100.00	63.47	358.16	7,547.92	-1,770.96	13.69	-1,770.97	9.00	9.00	0.00
8,200.00	72.47	358.16	7,585.40	-1,678.41	10.72	-1,678.39	9.00	9.00	0.00
8,215.91	73.90	358.16	7,590.00	-1,663.19	10.23	-1,663.16	9.00	9.00	0.00
<b>Nio B</b>									
8,300.00	81.47	358.16	7,607.93	-1,581.14	7.60	-1,581.08	9.00	9.00	0.00
8,397.05	90.20	358.16	7,614.97	-1,484.49	4.49	-1,484.39	9.00	9.00	0.00
<b>Top of Production - YELLOWHAMMER 30N2-8HZ_PHL</b>									
8,400.00	90.20	358.16	7,614.96	-1,481.54	4.40	-1,481.44	0.00	0.00	0.00
8,500.00	90.20	358.16	7,614.61	-1,381.59	1.19	-1,381.46	0.00	0.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well YELLOWHAMMER 30N2-8HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 5080.00usft (Original Well Elev)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 5080.00usft (Original Well Elev)
<b>Site:</b>	1N-68W-08 YELLOWHAMMER 12-8HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	YELLOWHAMMER 30N2-8HZ	<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	90.20	358.16	7,614.26	-1,281.64	-2.02	-1,281.47	0.00	0.00	0.00
8,700.00	90.20	358.16	7,613.92	-1,181.70	-5.23	-1,181.49	0.00	0.00	0.00
8,800.00	90.20	358.16	7,613.57	-1,081.75	-8.44	-1,081.50	0.00	0.00	0.00
8,900.00	90.20	358.16	7,613.22	-981.80	-11.65	-981.52	0.00	0.00	0.00
9,000.00	90.20	358.16	7,612.87	-881.85	-14.86	-881.54	0.00	0.00	0.00
9,100.00	90.20	358.16	7,612.52	-781.91	-18.07	-781.55	0.00	0.00	0.00
9,200.00	90.20	358.16	7,612.17	-681.96	-21.28	-681.57	0.00	0.00	0.00
9,300.00	90.20	358.16	7,611.82	-582.01	-24.49	-581.58	0.00	0.00	0.00
9,400.00	90.20	358.16	7,611.47	-482.06	-27.70	-481.60	0.00	0.00	0.00
9,500.00	90.20	358.16	7,611.12	-382.11	-30.91	-381.61	0.00	0.00	0.00
9,600.00	90.20	358.16	7,610.77	-282.17	-34.12	-281.63	0.00	0.00	0.00
9,700.00	90.20	358.16	7,610.42	-182.22	-37.33	-181.64	0.00	0.00	0.00
9,800.00	90.20	358.16	7,610.08	-82.27	-40.54	-81.66	0.00	0.00	0.00
9,900.00	90.20	358.16	7,609.73	17.68	-43.75	18.33	0.00	0.00	0.00
10,000.00	90.20	358.16	7,609.38	117.63	-46.96	118.31	0.00	0.00	0.00
10,100.00	90.20	358.16	7,609.03	217.57	-50.17	218.29	0.00	0.00	0.00
10,200.00	90.20	358.16	7,608.68	317.52	-53.38	318.28	0.00	0.00	0.00
10,300.00	90.20	358.16	7,608.33	417.47	-56.59	418.26	0.00	0.00	0.00
10,400.00	90.20	358.16	7,607.98	517.42	-59.80	518.25	0.00	0.00	0.00
10,500.00	90.20	358.16	7,607.63	617.37	-63.00	618.23	0.00	0.00	0.00
10,600.00	90.20	358.16	7,607.28	717.31	-66.21	718.22	0.00	0.00	0.00
10,700.00	90.20	358.16	7,606.93	817.26	-69.42	818.20	0.00	0.00	0.00
10,800.00	90.20	358.16	7,606.58	917.21	-72.63	918.19	0.00	0.00	0.00
10,900.00	90.20	358.16	7,606.24	1,017.16	-75.84	1,018.17	0.00	0.00	0.00
11,000.00	90.20	358.16	7,605.89	1,117.10	-79.05	1,118.15	0.00	0.00	0.00
11,100.00	90.20	358.16	7,605.54	1,217.05	-82.26	1,218.14	0.00	0.00	0.00
11,185.26	90.20	358.16	7,605.24	1,302.27	-85.00	1,303.39	0.00	0.00	0.00
<b>YELLOWHAMMER 30N2-8HZ_PITL1</b>									
11,200.00	90.20	358.22	7,605.19	1,317.00	-85.47	1,318.12	0.37	0.00	0.37
11,300.00	90.20	358.59	7,604.84	1,416.96	-88.26	1,418.11	0.37	0.00	0.37
11,400.00	90.20	358.96	7,604.49	1,516.94	-90.40	1,518.11	0.37	0.00	0.37
11,500.00	90.20	359.33	7,604.14	1,616.92	-91.90	1,618.11	0.37	0.00	0.37
11,600.00	90.20	359.70	7,603.79	1,716.92	-92.75	1,718.11	0.37	0.00	0.37
11,700.00	90.20	0.07	7,603.44	1,816.92	-92.95	1,818.10	0.37	0.00	0.37
11,800.00	90.20	0.44	7,603.09	1,916.92	-92.51	1,918.08	0.37	0.00	0.37
11,900.00	90.20	0.81	7,602.74	2,016.91	-91.42	2,018.05	0.37	0.00	0.37
12,000.00	90.20	1.18	7,602.39	2,116.90	-89.68	2,117.99	0.37	0.00	0.37
12,100.00	90.20	1.55	7,602.04	2,216.87	-87.30	2,217.92	0.37	0.00	0.37
12,200.00	90.20	1.92	7,601.69	2,316.82	-84.27	2,317.81	0.37	0.00	0.37
12,300.00	90.20	2.29	7,601.34	2,416.75	-80.59	2,417.68	0.37	0.00	0.37
12,400.00	90.20	2.66	7,601.00	2,516.66	-76.26	2,517.51	0.37	0.00	0.37
12,472.14	90.20	2.93	7,600.74	2,588.71	-72.74	2,589.50	0.37	0.00	0.37
12,483.02	90.20	2.93	7,600.71	2,599.58	-72.19	2,600.36	0.00	0.00	0.00
12,500.00	90.20	2.87	7,600.65	2,616.53	-71.33	2,617.30	0.37	0.00	-0.37
12,600.00	90.20	2.50	7,600.30	2,716.42	-66.65	2,717.11	0.37	0.00	-0.37
12,700.00	90.20	2.13	7,599.95	2,816.34	-62.61	2,816.96	0.37	0.00	-0.37
12,800.00	90.20	1.76	7,599.60	2,916.28	-59.22	2,916.84	0.37	0.00	-0.37
12,900.00	90.20	1.39	7,599.25	3,016.24	-56.48	3,016.75	0.37	0.00	-0.37
13,000.00	90.20	1.01	7,598.90	3,116.22	-54.39	3,116.69	0.37	0.00	-0.37
13,100.00	90.20	0.64	7,598.55	3,216.21	-52.94	3,216.64	0.37	0.00	-0.37
13,200.00	90.20	0.27	7,598.20	3,316.21	-52.14	3,316.62	0.37	0.00	-0.37
13,300.00	90.20	359.90	7,597.85	3,416.21	-51.99	3,416.60	0.37	0.00	-0.37
13,400.00	90.20	359.53	7,597.50	3,516.20	-52.48	3,516.60	0.37	0.00	-0.37

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well YELLOWHAMMER 30N2-8HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 5080.00usft (Original Well Elev)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 5080.00usft (Original Well Elev)
<b>Site:</b>	1N-68W-08 YELLOWHAMMER 12-8HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	YELLOWHAMMER 30N2-8HZ	<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)
13,500.00	90.20	359.16	7,597.15	3,616.20	-53.62	3,616.59	0.37	0.00	-0.37
13,543.47	90.20	359.00	7,597.00	3,659.66	-54.32	3,660.07	0.37	0.00	-0.37
YELLOWHAMMER 30N2-8HZ_PBHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
YELLOWHAMMER 30N2-8HZ_PBHL	0.00	0.00	7,597.00	3,659.66	-54.32	14,553,268.00	1,630,470.00	40.072863	-105.035555
- plan hits target center									
- Point									
YELLOWHAMMER 30N2-8HZ_PBHL	0.00	0.00	7,605.24	1,302.27	-85.00	14,550,910.61	1,630,438.38	40.066389	-105.035665
- plan hits target center									
- Point									
YELLOWHAMMER 30N2-8HZ_PBHL	0.00	0.00	7,614.97	-1,484.49	4.49	14,548,123.82	1,630,526.77	40.058736	-105.035345
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,523.46	1,500.00	9 5/8"	9-5/8	13-1/2	
8,397.05	7,614.97	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			
4,476.80	4,185.00	Parkman			
4,948.95	4,613.00	Sussex			
7,867.80	7,409.00	Sharon Springs			
7,927.48	7,451.00	Niobrara			
8,215.91	7,590.00	Nio B			