

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N  
3N-67W-33 BABCOCK 6-4HZ Pad  
BABCOCK 32N-33HZ**

**Plan A**

**Plan: Permit Rev-3**

## **Standard Planning Report**

**10 May, 2016**



Azimuths to True North  
Magnetic North: 8.27°

Magnetic Field  
Strength: 52492.1snT  
Dip Angle: 66.68°  
Date: 3/28/2016  
Model: IGRF2010

SITE: 3N-67W-33 BABCOCK 6-4HZ Pad

Well: BABCOCK 32N-33HZ  
Wellbore: Plan A  
Design: Permit Rev-3

#### FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
975.00	976.23	Fox Hills
4576.00	4831.84	Sussex
7061.00	7434.95	Sharon Springs
7147.00	7563.80	Niobrara
7199.00	7662.85	Nio B
7255.00	7828.83	Nio C

#### WELL DETAILS: BABCOCK 32N-33HZ

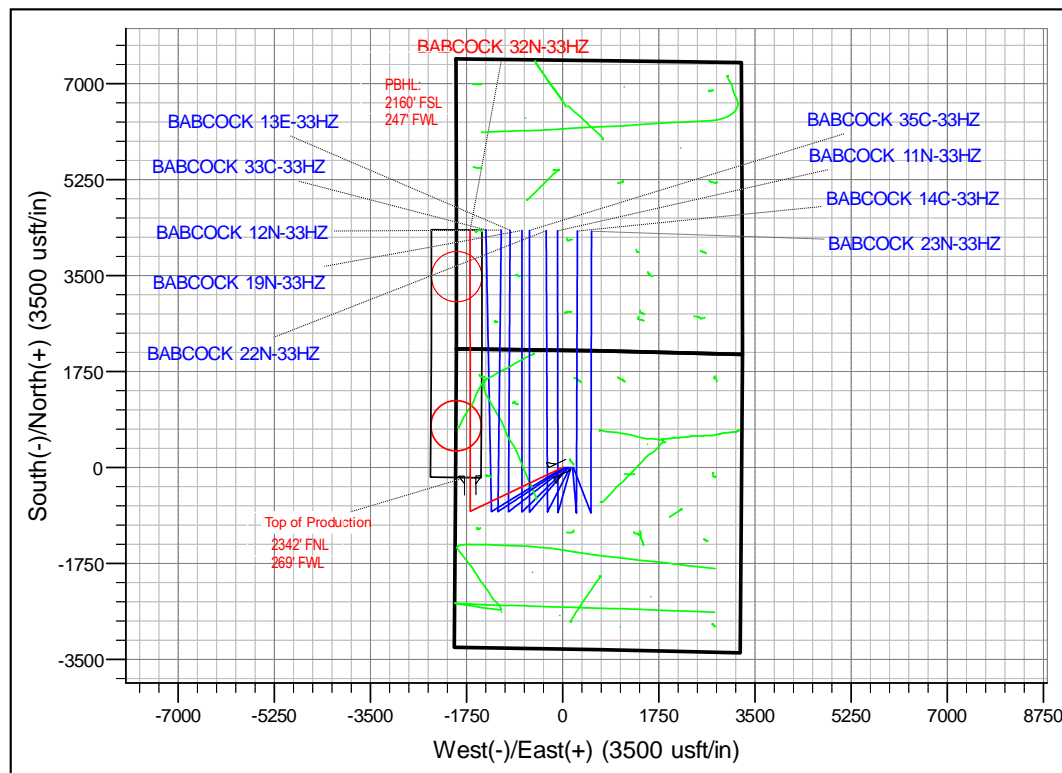
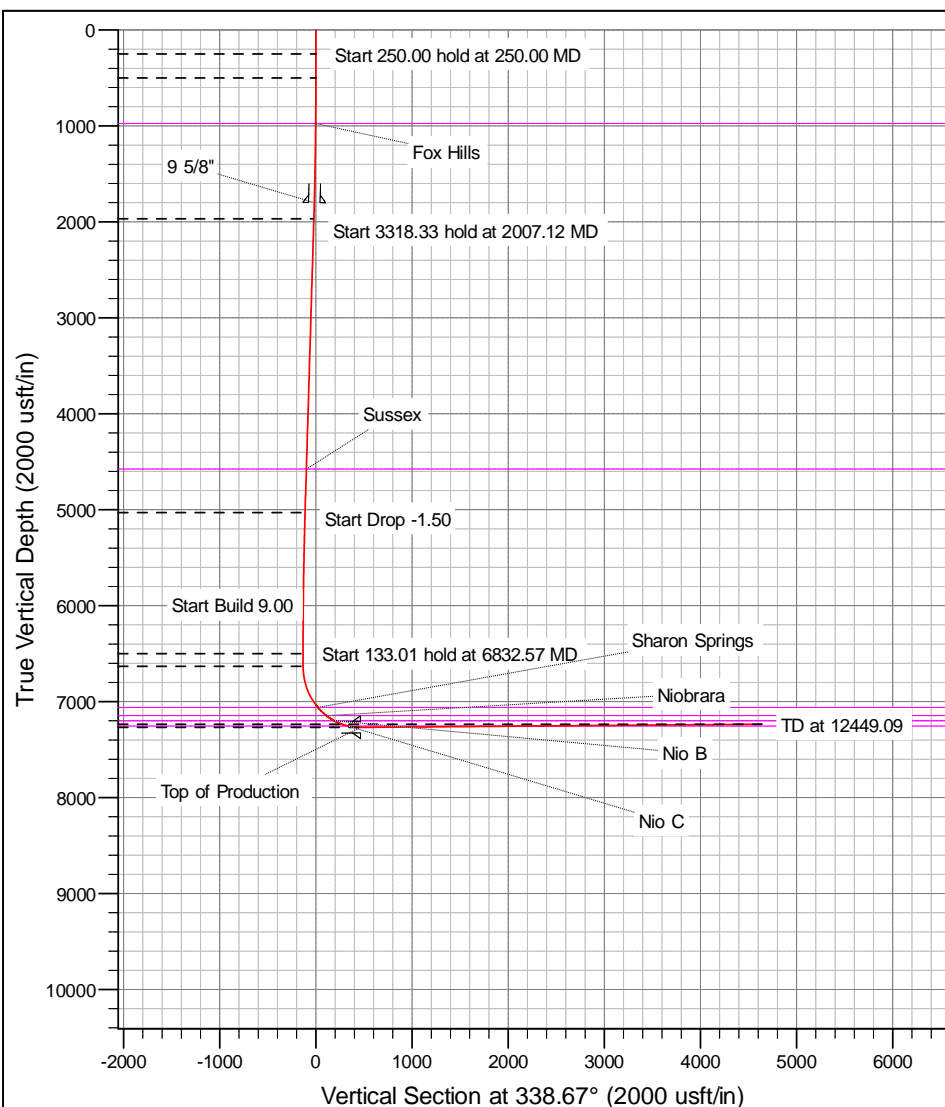
+N/-S	+E/-W	GL: 4887.00 Northing	RKB @ 4904.00usft (Original Well Elev) Easting	Latitude 40.169184	Longitude -104.897427	Slot
0.00	0.00	14588357.65	1669071.32			

#### 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
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00
2007.12	22.61	244.56	1968.32	-126.06	-265.04	1.50	-21.02
5325.45	22.61	244.56	5031.65	-673.94	-1416.96	0.00	-112.36
6832.57	0.00	0.00	6500.00	-800.00	-1682.00	1.50	-133.37
6965.58	0.00	0.00	6633.01	-800.00	-1682.00	0.00	-133.37
7970.36	90.43	359.94	7269.61	-158.60	-1682.62	9.00	464.31
12449.09	90.43	359.94	7236.00	4320.00	-1686.95	0.00	4637.69

#### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape Point
BABCOCK 32N-33HZ_PBHL	7236.00	4320.00	-1686.95	14592675.70	1667379.38	40.181047	-104.903467	



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## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well BABCOCK 32N-33HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4904.00usft (Original Well Elev)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4904.00usft (Original Well Elev)
<b>Site:</b>	3N-67W-33 BABCOCK 6-4HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	BABCOCK 32N-33HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-3		

<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						3N-67W-33 BABCOCK 6-4HZ Pad											
Site Position:						Northing:			14,588,357.65 usft			Latitude:			40.169184		
From:			Lat/Long			Easting:			1,669,071.31 usft			Longitude:			-104.897427		
Position Uncertainty:			0.00 usft			Slot Radius:			13-3/16 "			Grid Convergence:			0.07		

Well	BABCOCK 32N-33HZ					
Well Position	+N/-S	0.00 usft	Northing:	14,588,357.65 usft	Latitude:	40.169184
	+E/-W	0.00 usft	Easting:	1,669,071.31 usft	Longitude:	-104.897427
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,887.00 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	3/28/2016	8.27	66.68	52,492

<b>Design</b>	Permit Rev-3				
<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	338.67	

<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	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,007.12	22.61	244.56	1,968.32	-126.06	-265.04	1.50	1.50	0.00	244.56	
5,325.45	22.61	244.56	5,031.68	-673.94	-1,416.96	0.00	0.00	0.00	0.00	
6,832.57	0.00	0.00	6,500.00	-800.00	-1,682.00	1.50	-1.50	0.00	180.00	
6,965.58	0.00	0.00	6,633.01	-800.00	-1,682.00	0.00	0.00	0.00	0.00	
7,970.36	90.43	359.94	7,269.61	-158.60	-1,682.62	9.00	9.00	0.00	359.94	
12,449.09	90.43	359.94	7,236.00	4,320.00	-1,686.95	0.00	0.00	0.00	0.00	BABCOCK 32N-33H

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## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well BABCOCK 32N-33HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4904.00usft (Original Well Elev)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4904.00usft (Original Well Elev)
<b>Site:</b>	3N-67W-33 BABCOCK 6-4HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	BABCOCK 32N-33HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-3		

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	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	1.50	244.56	599.99	-0.56	-1.18	-0.09	1.50	1.50	0.00
700.00	3.00	244.56	699.91	-2.25	-4.73	-0.37	1.50	1.50	0.00
800.00	4.50	244.56	799.69	-5.06	-10.63	-0.84	1.50	1.50	0.00
900.00	6.00	244.56	899.27	-8.99	-18.90	-1.50	1.50	1.50	0.00
976.23	7.14	244.56	975.00	-12.73	-26.78	-2.12	1.50	1.50	0.00
<b>Fox Hills</b>									
1,000.00	7.50	244.56	998.57	-14.04	-29.51	-2.34	1.50	1.50	0.00
1,100.00	9.00	244.56	1,097.54	-20.20	-42.47	-3.37	1.50	1.50	0.00
1,200.00	10.50	244.56	1,196.09	-27.47	-57.76	-4.58	1.50	1.50	0.00
1,300.00	12.00	244.56	1,294.16	-35.85	-75.38	-5.98	1.50	1.50	0.00
1,400.00	13.50	244.56	1,391.70	-45.33	-95.31	-7.56	1.50	1.50	0.00
1,500.00	15.00	244.56	1,488.62	-55.90	-117.54	-9.32	1.50	1.50	0.00
1,600.00	16.50	244.56	1,584.86	-67.56	-142.05	-11.26	1.50	1.50	0.00
1,700.00	18.00	244.56	1,680.36	-80.30	-168.83	-13.39	1.50	1.50	0.00
1,800.00	19.50	244.56	1,775.05	-94.10	-197.85	-15.69	1.50	1.50	0.00
1,826.50	19.90	244.56	1,800.00	-97.94	-205.92	-16.33	1.50	1.50	0.00
<b>9 5/8"</b>									
1,900.00	21.00	244.56	1,868.86	-108.97	-229.11	-18.17	1.50	1.50	0.00
2,000.00	22.50	244.56	1,961.74	-124.89	-262.57	-20.82	1.50	1.50	0.00
2,007.12	22.61	244.56	1,968.32	-126.06	-265.04	-21.02	1.50	1.50	0.00
2,100.00	22.61	244.56	2,054.06	-141.39	-297.28	-23.57	0.00	0.00	0.00
2,200.00	22.61	244.56	2,146.38	-157.90	-331.99	-26.33	0.00	0.00	0.00
2,300.00	22.61	244.56	2,238.70	-174.42	-366.71	-29.08	0.00	0.00	0.00
2,400.00	22.61	244.56	2,331.01	-190.93	-401.42	-31.83	0.00	0.00	0.00
2,500.00	22.61	244.56	2,423.33	-207.44	-436.14	-34.58	0.00	0.00	0.00
2,600.00	22.61	244.56	2,515.64	-223.95	-470.85	-37.34	0.00	0.00	0.00
2,700.00	22.61	244.56	2,607.96	-240.46	-505.56	-40.09	0.00	0.00	0.00
2,800.00	22.61	244.56	2,700.28	-256.97	-540.28	-42.84	0.00	0.00	0.00
2,900.00	22.61	244.56	2,792.59	-273.48	-574.99	-45.59	0.00	0.00	0.00
3,000.00	22.61	244.56	2,884.91	-289.99	-609.71	-48.35	0.00	0.00	0.00
3,100.00	22.61	244.56	2,977.23	-306.50	-644.42	-51.10	0.00	0.00	0.00
3,200.00	22.61	244.56	3,069.54	-323.01	-679.13	-53.85	0.00	0.00	0.00
3,300.00	22.61	244.56	3,161.86	-339.52	-713.85	-56.60	0.00	0.00	0.00
3,400.00	22.61	244.56	3,254.18	-356.03	-748.56	-59.36	0.00	0.00	0.00
3,500.00	22.61	244.56	3,346.49	-372.55	-783.28	-62.11	0.00	0.00	0.00
3,600.00	22.61	244.56	3,438.81	-389.06	-817.99	-64.86	0.00	0.00	0.00
3,700.00	22.61	244.56	3,531.13	-405.57	-852.70	-67.62	0.00	0.00	0.00
3,800.00	22.61	244.56	3,623.44	-422.08	-887.42	-70.37	0.00	0.00	0.00
3,900.00	22.61	244.56	3,715.76	-438.59	-922.13	-73.12	0.00	0.00	0.00
4,000.00	22.61	244.56	3,808.08	-455.10	-956.85	-75.87	0.00	0.00	0.00
4,100.00	22.61	244.56	3,900.39	-471.61	-991.56	-78.63	0.00	0.00	0.00
4,200.00	22.61	244.56	3,992.71	-488.12	-1,026.27	-81.38	0.00	0.00	0.00
4,300.00	22.61	244.56	4,085.02	-504.63	-1,060.99	-84.13	0.00	0.00	0.00
4,400.00	22.61	244.56	4,177.34	-521.14	-1,095.70	-86.88	0.00	0.00	0.00
4,500.00	22.61	244.56	4,269.66	-537.65	-1,130.42	-89.64	0.00	0.00	0.00
4,600.00	22.61	244.56	4,361.97	-554.16	-1,165.13	-92.39	0.00	0.00	0.00
4,700.00	22.61	244.56	4,454.29	-570.67	-1,199.84	-95.14	0.00	0.00	0.00

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## Planning Report

**Database:** PLANNING  
**Company:** US ROCKIES WATTENBERG PLANNING  
**Project:** WELD-NAD83-UTMFT13N  
**Site:** 3N-67W-33 BABCOCK 6-4HZ Pad  
**Well:** BABCOCK 32N-33HZ  
**Wellbore:** Plan A  
**Design:** Permit Rev-3

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

Well BABCOCK 32N-33HZ  
 RKB @ 4904.00usft (Original Well Elev)  
 RKB @ 4904.00usft (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)
4,800.00	22.61	244.56	4,546.61	-587.19	-1,234.56	-97.89	0.00	0.00	0.00
4,831.84	22.61	244.56	4,576.00	-592.44	-1,245.61	-98.77	0.00	0.00	0.00
<b>Sussex</b>									
4,900.00	22.61	244.56	4,638.92	-603.70	-1,269.27	-100.65	0.00	0.00	0.00
5,000.00	22.61	244.56	4,731.24	-620.21	-1,303.99	-103.40	0.00	0.00	0.00
5,100.00	22.61	244.56	4,823.56	-636.72	-1,338.70	-106.15	0.00	0.00	0.00
5,200.00	22.61	244.56	4,915.87	-653.23	-1,373.41	-108.91	0.00	0.00	0.00
5,300.00	22.61	244.56	5,008.19	-669.74	-1,408.13	-111.66	0.00	0.00	0.00
5,325.45	22.61	244.56	5,031.68	-673.94	-1,416.96	-112.36	0.00	0.00	0.00
5,400.00	21.49	244.56	5,100.78	-685.96	-1,442.23	-114.36	1.50	-1.50	0.00
5,500.00	19.99	244.56	5,194.30	-701.17	-1,474.21	-116.90	1.50	-1.50	0.00
5,600.00	18.49	244.56	5,288.71	-715.32	-1,503.97	-119.26	1.50	-1.50	0.00
5,700.00	16.99	244.56	5,383.96	-728.41	-1,531.48	-121.44	1.50	-1.50	0.00
5,800.00	15.49	244.56	5,479.96	-740.42	-1,556.73	-123.44	1.50	-1.50	0.00
5,900.00	13.99	244.56	5,576.67	-751.35	-1,579.70	-125.26	1.50	-1.50	0.00
6,000.00	12.49	244.56	5,674.01	-761.18	-1,600.38	-126.90	1.50	-1.50	0.00
6,100.00	10.99	244.56	5,771.92	-769.92	-1,618.76	-128.36	1.50	-1.50	0.00
6,200.00	9.49	244.56	5,870.32	-777.55	-1,634.81	-129.63	1.50	-1.50	0.00
6,300.00	7.99	244.56	5,969.16	-784.08	-1,648.53	-130.72	1.50	-1.50	0.00
6,400.00	6.49	244.56	6,068.36	-789.49	-1,659.90	-131.62	1.50	-1.50	0.00
6,500.00	4.99	244.56	6,167.85	-793.79	-1,668.93	-132.34	1.50	-1.50	0.00
6,600.00	3.49	244.56	6,267.58	-796.96	-1,675.61	-132.87	1.50	-1.50	0.00
6,700.00	1.99	244.56	6,367.46	-799.01	-1,679.92	-133.21	1.50	-1.50	0.00
6,800.00	0.49	244.56	6,467.43	-799.94	-1,681.87	-133.36	1.50	-1.50	0.00
6,832.57	0.00	0.00	6,500.00	-800.00	-1,682.00	-133.37	1.50	-1.50	0.00
6,900.00	0.00	0.00	6,567.43	-800.00	-1,682.00	-133.37	0.00	0.00	0.00
6,965.58	0.00	0.00	6,633.01	-800.00	-1,682.00	-133.37	0.00	0.00	0.00
7,000.00	3.10	359.94	6,667.42	-799.07	-1,682.00	-132.51	9.00	9.00	0.00
7,100.00	12.10	359.94	6,766.44	-785.86	-1,682.01	-120.20	9.00	9.00	0.00
7,200.00	21.10	359.94	6,862.17	-757.32	-1,682.04	-93.61	9.00	9.00	0.00
7,300.00	30.10	359.94	6,952.26	-714.16	-1,682.08	-53.39	9.00	9.00	0.00
7,400.00	39.10	359.94	7,034.49	-657.44	-1,682.14	-0.53	9.00	9.00	0.00
7,434.95	42.24	359.94	7,061.00	-634.67	-1,682.16	20.69	9.00	9.00	0.00
<b>Sharon Springs</b>									
7,500.00	48.10	359.94	7,106.84	-588.55	-1,682.20	63.66	9.00	9.00	0.00
7,563.80	53.84	359.94	7,147.00	-539.01	-1,682.25	109.83	9.00	9.00	0.00
<b>Niobrara</b>									
7,600.00	57.10	359.94	7,167.52	-509.19	-1,682.28	137.61	9.00	9.00	0.00
7,662.85	62.75	359.94	7,199.00	-454.83	-1,682.33	188.28	9.00	9.00	0.00
<b>Nio B</b>									
7,700.00	66.10	359.94	7,215.03	-421.32	-1,682.37	219.50	9.00	9.00	0.00
7,800.00	75.10	359.94	7,248.22	-327.10	-1,682.46	307.30	9.00	9.00	0.00
7,828.83	77.69	359.94	7,255.00	-299.08	-1,682.48	333.41	9.00	9.00	0.00
<b>Nio C</b>									
7,900.00	84.10	359.94	7,266.26	-228.84	-1,682.55	398.86	9.00	9.00	0.00
7,970.36	90.43	359.94	7,269.61	-158.60	-1,682.62	464.32	9.00	9.00	0.00
<b>Top of Production - Babcock 32N-33HZ_PHL</b>									
8,000.00	90.43	359.94	7,269.39	-128.96	-1,682.65	491.93	0.00	0.00	0.00
8,100.00	90.43	359.94	7,268.64	-28.96	-1,682.75	585.12	0.00	0.00	0.00
8,200.00	90.43	359.94	7,267.89	71.04	-1,682.84	678.30	0.00	0.00	0.00
8,300.00	90.43	359.94	7,267.14	171.03	-1,682.94	771.48	0.00	0.00	0.00
8,400.00	90.43	359.94	7,266.39	271.03	-1,683.04	864.66	0.00	0.00	0.00
8,500.00	90.43	359.94	7,265.64	371.03	-1,683.13	957.85	0.00	0.00	0.00

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well BABCOCK 32N-33HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4904.00usft (Original Well Elev)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4904.00usft (Original Well Elev)
<b>Site:</b>	3N-67W-33 BABCOCK 6-4HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	BABCOCK 32N-33HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-3		

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	90.43	359.94	7,264.89	471.02	-1,683.23	1,051.03	0.00	0.00	0.00
8,700.00	90.43	359.94	7,264.14	571.02	-1,683.33	1,144.21	0.00	0.00	0.00
8,800.00	90.43	359.94	7,263.39	671.02	-1,683.42	1,237.39	0.00	0.00	0.00
8,900.00	90.43	359.94	7,262.64	771.02	-1,683.52	1,330.57	0.00	0.00	0.00
9,000.00	90.43	359.94	7,261.89	871.01	-1,683.62	1,423.76	0.00	0.00	0.00
9,100.00	90.43	359.94	7,261.13	971.01	-1,683.71	1,516.94	0.00	0.00	0.00
9,200.00	90.43	359.94	7,260.38	1,071.01	-1,683.81	1,610.12	0.00	0.00	0.00
9,300.00	90.43	359.94	7,259.63	1,171.00	-1,683.91	1,703.30	0.00	0.00	0.00
9,400.00	90.43	359.94	7,258.88	1,271.00	-1,684.00	1,796.49	0.00	0.00	0.00
9,500.00	90.43	359.94	7,258.13	1,371.00	-1,684.10	1,889.67	0.00	0.00	0.00
9,600.00	90.43	359.94	7,257.38	1,471.00	-1,684.20	1,982.85	0.00	0.00	0.00
9,700.00	90.43	359.94	7,256.63	1,570.99	-1,684.29	2,076.03	0.00	0.00	0.00
9,800.00	90.43	359.94	7,255.88	1,670.99	-1,684.39	2,169.22	0.00	0.00	0.00
9,900.00	90.43	359.94	7,255.13	1,770.99	-1,684.49	2,262.40	0.00	0.00	0.00
10,000.00	90.43	359.94	7,254.38	1,870.98	-1,684.58	2,355.58	0.00	0.00	0.00
10,100.00	90.43	359.94	7,253.63	1,970.98	-1,684.68	2,448.76	0.00	0.00	0.00
10,200.00	90.43	359.94	7,252.88	2,070.98	-1,684.78	2,541.94	0.00	0.00	0.00
10,300.00	90.43	359.94	7,252.13	2,170.98	-1,684.87	2,635.13	0.00	0.00	0.00
10,400.00	90.43	359.94	7,251.38	2,270.97	-1,684.97	2,728.31	0.00	0.00	0.00
10,500.00	90.43	359.94	7,250.63	2,370.97	-1,685.07	2,821.49	0.00	0.00	0.00
10,600.00	90.43	359.94	7,249.88	2,470.97	-1,685.16	2,914.67	0.00	0.00	0.00
10,700.00	90.43	359.94	7,249.13	2,570.96	-1,685.26	3,007.86	0.00	0.00	0.00
10,800.00	90.43	359.94	7,248.38	2,670.96	-1,685.36	3,101.04	0.00	0.00	0.00
10,900.00	90.43	359.94	7,247.63	2,770.96	-1,685.45	3,194.22	0.00	0.00	0.00
11,000.00	90.43	359.94	7,246.88	2,870.96	-1,685.55	3,287.40	0.00	0.00	0.00
11,100.00	90.43	359.94	7,246.12	2,970.95	-1,685.65	3,380.58	0.00	0.00	0.00
11,200.00	90.43	359.94	7,245.37	3,070.95	-1,685.74	3,473.77	0.00	0.00	0.00
11,300.00	90.43	359.94	7,244.62	3,170.95	-1,685.84	3,566.95	0.00	0.00	0.00
11,400.00	90.43	359.94	7,243.87	3,270.94	-1,685.94	3,660.13	0.00	0.00	0.00
11,500.00	90.43	359.94	7,243.12	3,370.94	-1,686.03	3,753.31	0.00	0.00	0.00
11,600.00	90.43	359.94	7,242.37	3,470.94	-1,686.13	3,846.50	0.00	0.00	0.00
11,700.00	90.43	359.94	7,241.62	3,570.94	-1,686.23	3,939.68	0.00	0.00	0.00
11,800.00	90.43	359.94	7,240.87	3,670.93	-1,686.32	4,032.86	0.00	0.00	0.00
11,900.00	90.43	359.94	7,240.12	3,770.93	-1,686.42	4,126.04	0.00	0.00	0.00
12,000.00	90.43	359.94	7,239.37	3,870.93	-1,686.52	4,219.22	0.00	0.00	0.00
12,100.00	90.43	359.94	7,238.62	3,970.92	-1,686.61	4,312.41	0.00	0.00	0.00
12,200.00	90.43	359.94	7,237.87	4,070.92	-1,686.71	4,405.59	0.00	0.00	0.00
12,300.00	90.43	359.94	7,237.12	4,170.92	-1,686.81	4,498.77	0.00	0.00	0.00
12,400.00	90.43	359.94	7,236.37	4,270.92	-1,686.90	4,591.95	0.00	0.00	0.00
12,449.09	90.43	359.94	7,236.00	4,320.00	-1,686.95	4,637.69	0.00	0.00	0.00
BABCOCK 32N-33HZ_PBHL									

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well BABCOCK 32N-33HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4904.00usft (Original Well Elev)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4904.00usft (Original Well Elev)
<b>Site:</b>	3N-67W-33 BABCOCK 6-4HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	BABCOCK 32N-33HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-3		

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)		
BABCOCK 32N-33HZ	0.00	0.00	7,236.00	4,320.00	-1,686.95	14,592,675.70	1,667,379.38	40.181047	-104.903467
- plan hits target center									
- Point									
Babcock 32N-33HZ_P	0.00	0.00	7,269.61	-158.60	-1,682.62	14,588,197.11	1,667,388.88	40.168748	-104.903450
- plan hits target center									
- Point									

Casing Points					
	Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
	(usft)	(usft)	Name	(")	(")
	1,826.50	1,800.00	9 5/8"	9-5/8	13-1/2
	7,970.36	7,269.61	Top of Production	5-1/2	7-7/8

Formations						
	Measured Depth	Vertical Depth			Dip	Dip Direction
	(usft)	(usft)	Name	Lithology	(°)	(°)
	976.23	975.00	Fox Hills		0.00	
	4,831.84	4,576.00	Sussex		0.00	
	7,434.95	7,061.00	Sharon Springs		0.00	
	7,563.80	7,147.00	Niobrara		0.00	
	7,662.85	7,199.00	Nio B		0.00	
	7,828.83	7,255.00	Nio C		0.00	