

US ROCKIES WATTENBERG PLANNING

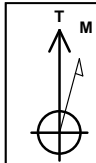
**WELD-NAD83-UTMFT13N
3N-67W-33 BABCOCK 6-4HZ Pad
BABCOCK 22N-33HZ**

Plan A

Plan: Permit Rev-2

Standard Planning Report

15 April, 2016



Azimuths to True North
Magnetic North: 8.27°

Magnetic Field
Strength: 52490.2snT
Dip Angle: 66.68°
Date: 4/4/2016
Model: IGRF2010

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

Well: BABCOCK 22N-33HZ
Wellbore: Plan A
Design: Permit Rev-2

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
975.00	979.43	Fox Hills
4576.00	4683.95	Sussex
7068.00	7241.76	Sharon Springs
7154.00	7397.97	Niobrara
7200.00	7529.16	Nio B

WELL DETAILS: BABCOCK 22N-33HZ

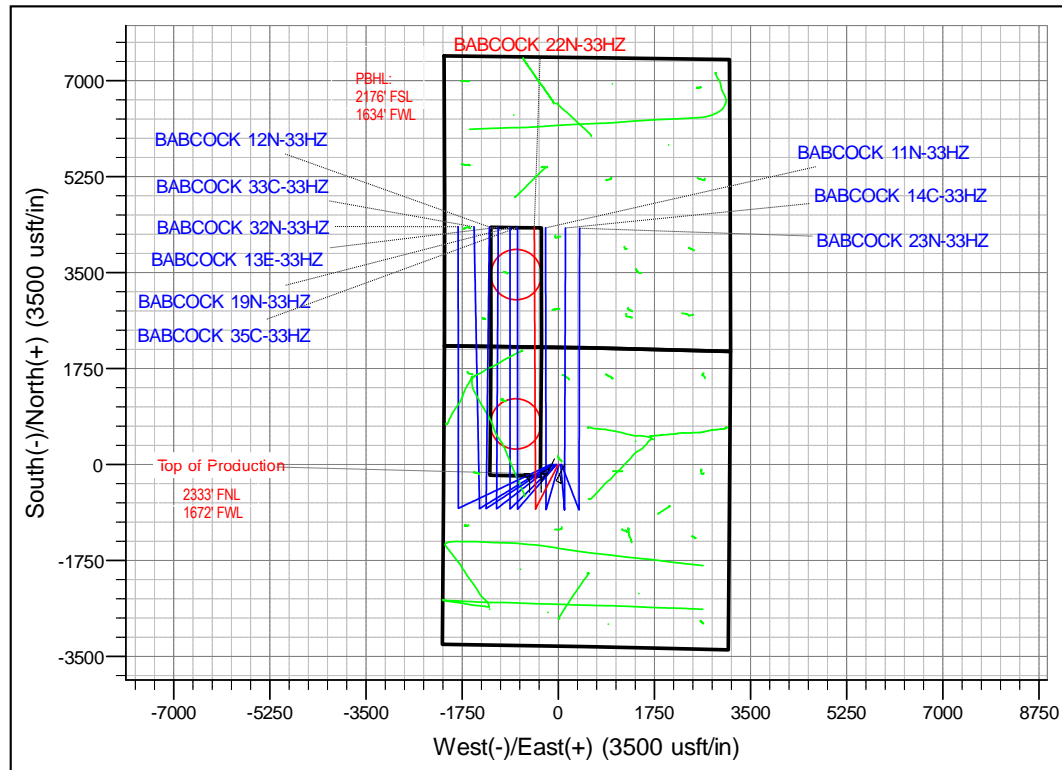
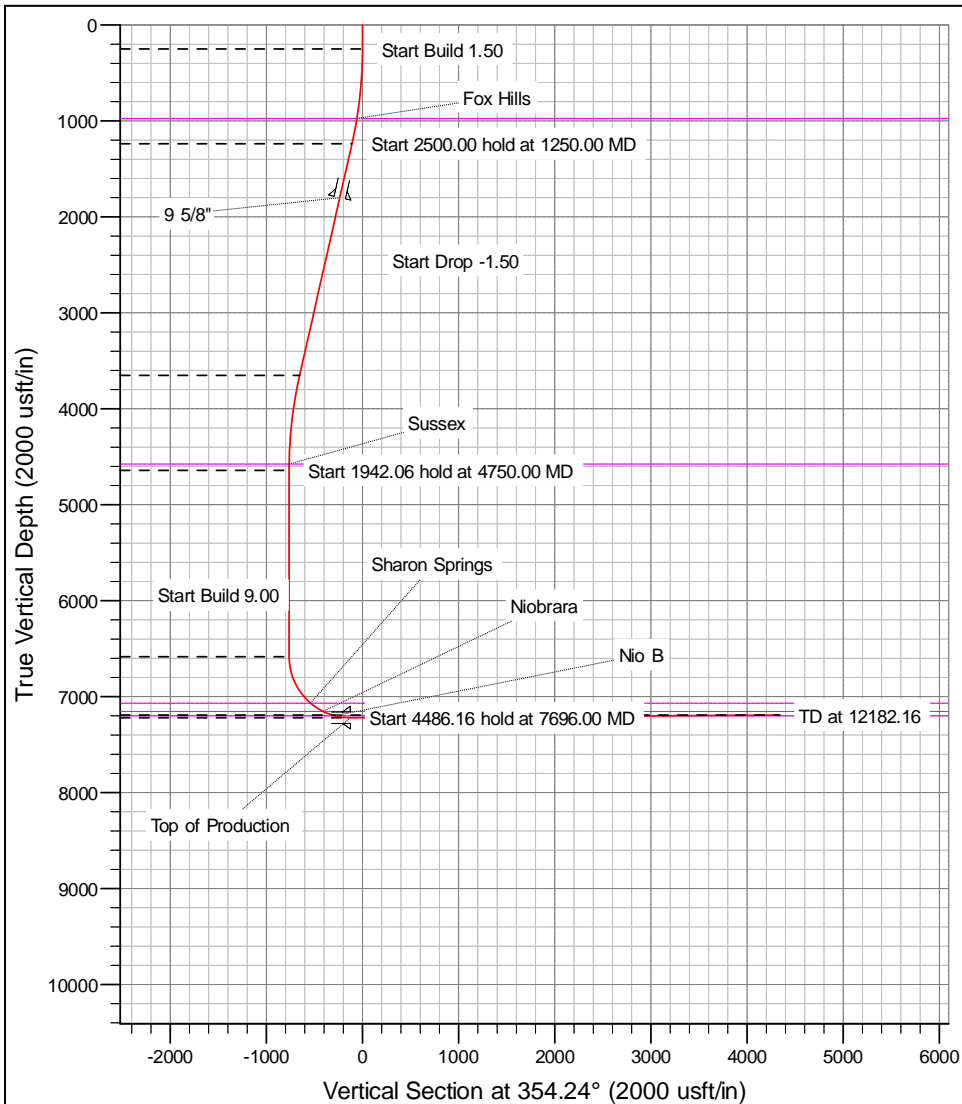
+N/-S	+E/-W	GL: 4887.00	RKB @ 4904.00usft (D Rig)	North	East	Latitude	Longitude	Slot
0.00	0.00	14588357.08	1669206.25	40.169182	-104.896944			

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
1250.00	15.00	207.00	1238.62	-115.97	-59.09	1.50	-109.45
3750.00	15.00	207.00	3653.43	-692.49	-352.84	0.00	-653.60
4750.00	0.00	0.00	4642.05	-808.46	-411.93	1.50	-763.05
6692.06	0.00	0.00	6584.11	-808.46	-411.93	0.00	-763.05
7696.00	90.35	359.74	7220.72	-167.91	-414.87	9.00	-125.44
12182.16	90.35	359.74	7193.00	4318.12	-435.44	0.00	4340.02

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	North	East	Latitude	Longitude	Shape
BABCOCK 22N-33HZ_PBHL	7193.00	4318.12	-435.44	14592674.69	1668765.79	40.181040	-104.898503	Point
BABCOCK 22N-33HZ_PHL	7220.72	-167.91	-414.87	14588188.69	1668791.57	40.168721	-104.898429	Point



Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BABCOCK 22N-33HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4904.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4904.00usft (D Rig)
Site:	3N-67W-33 BABCOCK 6-4HZ Pad	North Reference:	True
Well:	BABCOCK 22N-33HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

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	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 22N-33HZ					
Well Position	+N/-S	-0.73 usft	Northing:	14,588,357.08 usft	Latitude:	40.169182
	+E/-W	134.93 usft	Easting:	1,669,206.24 usft	Longitude:	-104.896944
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,887.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/4/2016	8.27	66.68	52,490

Design	Permit Rev-2			
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	354.24

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	
1,250.00	15.00	207.00	1,238.62	-115.97	-59.09	1.50	1.50	0.00	207.00	
3,750.00	15.00	207.00	3,653.43	-692.49	-352.84	0.00	0.00	0.00	0.00	
4,750.00	0.00	0.00	4,642.05	-808.46	-411.93	1.50	-1.50	0.00	180.00	
6,692.06	0.00	0.00	6,584.11	-808.46	-411.93	0.00	0.00	0.00	0.00	
7,696.00	90.35	359.74	7,220.72	-167.91	-414.87	9.00	9.00	0.00	359.74	
12,182.16	90.35	359.74	7,193.00	4,318.12	-435.44	0.00	0.00	0.00	0.00	BABCOCK 22N-33H

Anadarko Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BABCOCK 22N-33HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4904.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4904.00usft (D Rig)
Site:	3N-67W-33 BABCOCK 6-4HZ Pad	North Reference:	True
Well:	BABCOCK 22N-33HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

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	207.00	300.00	-0.29	-0.15	-0.28	1.50	1.50	0.00
400.00	2.25	207.00	399.96	-2.62	-1.34	-2.48	1.50	1.50	0.00
500.00	3.75	207.00	499.82	-7.29	-3.71	-6.88	1.50	1.50	0.00
600.00	5.25	207.00	599.51	-14.28	-7.27	-13.48	1.50	1.50	0.00
700.00	6.75	207.00	698.96	-23.59	-12.02	-22.27	1.50	1.50	0.00
800.00	8.25	207.00	798.10	-35.22	-17.95	-33.24	1.50	1.50	0.00
900.00	9.75	207.00	896.87	-49.16	-25.05	-46.40	1.50	1.50	0.00
979.43	10.94	207.00	975.00	-61.87	-31.52	-58.39	1.50	1.50	0.00
Fox Hills									
1,000.00	11.25	207.00	995.19	-65.40	-33.32	-61.72	1.50	1.50	0.00
1,100.00	12.75	207.00	1,093.00	-83.92	-42.76	-79.21	1.50	1.50	0.00
1,200.00	14.25	207.00	1,190.24	-104.72	-53.36	-98.84	1.50	1.50	0.00
1,250.00	15.00	207.00	1,238.62	-115.97	-59.09	-109.45	1.50	1.50	0.00
1,300.00	15.00	207.00	1,286.91	-127.50	-64.96	-120.34	0.00	0.00	0.00
1,400.00	15.00	207.00	1,383.50	-150.56	-76.71	-142.10	0.00	0.00	0.00
1,500.00	15.00	207.00	1,480.10	-173.62	-88.46	-163.87	0.00	0.00	0.00
1,600.00	15.00	207.00	1,576.69	-196.68	-100.21	-185.63	0.00	0.00	0.00
1,700.00	15.00	207.00	1,673.28	-219.74	-111.96	-207.40	0.00	0.00	0.00
1,800.00	15.00	207.00	1,769.88	-242.80	-123.71	-229.17	0.00	0.00	0.00
1,831.19	15.00	207.00	1,800.00	-250.00	-127.38	-235.95	0.00	0.00	0.00
9 5/8"									
1,900.00	15.00	207.00	1,866.47	-265.86	-135.46	-250.93	0.00	0.00	0.00
2,000.00	15.00	207.00	1,963.06	-288.92	-147.21	-272.70	0.00	0.00	0.00
2,100.00	15.00	207.00	2,059.65	-311.99	-158.96	-294.46	0.00	0.00	0.00
2,200.00	15.00	207.00	2,156.25	-335.05	-170.71	-316.23	0.00	0.00	0.00
2,300.00	15.00	207.00	2,252.84	-358.11	-182.47	-337.99	0.00	0.00	0.00
2,400.00	15.00	207.00	2,349.43	-381.17	-194.22	-359.76	0.00	0.00	0.00
2,500.00	15.00	207.00	2,446.02	-404.23	-205.97	-381.52	0.00	0.00	0.00
2,600.00	15.00	207.00	2,542.62	-427.29	-217.72	-403.29	0.00	0.00	0.00
2,700.00	15.00	207.00	2,639.21	-450.35	-229.47	-425.06	0.00	0.00	0.00
2,800.00	15.00	207.00	2,735.80	-473.41	-241.22	-446.82	0.00	0.00	0.00
2,900.00	15.00	207.00	2,832.39	-496.47	-252.97	-468.59	0.00	0.00	0.00
3,000.00	15.00	207.00	2,928.99	-519.53	-264.72	-490.35	0.00	0.00	0.00
3,100.00	15.00	207.00	3,025.58	-542.60	-276.47	-512.12	0.00	0.00	0.00
3,200.00	15.00	207.00	3,122.17	-565.66	-288.22	-533.88	0.00	0.00	0.00
3,300.00	15.00	207.00	3,218.76	-588.72	-299.97	-555.65	0.00	0.00	0.00
3,400.00	15.00	207.00	3,315.36	-611.78	-311.72	-577.42	0.00	0.00	0.00
3,500.00	15.00	207.00	3,411.95	-634.84	-323.47	-599.18	0.00	0.00	0.00
3,600.00	15.00	207.00	3,508.54	-657.90	-335.22	-620.95	0.00	0.00	0.00
3,700.00	15.00	207.00	3,605.13	-680.96	-346.97	-642.71	0.00	0.00	0.00
3,750.00	15.00	207.00	3,653.43	-692.49	-352.84	-653.60	0.00	0.00	0.00
3,800.00	14.25	207.00	3,701.81	-703.74	-358.57	-664.21	1.50	-1.50	0.00
3,900.00	12.75	207.00	3,799.04	-724.54	-369.17	-683.84	1.50	-1.50	0.00
4,000.00	11.25	207.00	3,896.86	-743.06	-378.61	-701.33	1.50	-1.50	0.00
4,100.00	9.75	207.00	3,995.18	-759.30	-386.88	-716.65	1.50	-1.50	0.00
4,200.00	8.25	207.00	4,093.95	-773.24	-393.98	-729.81	1.50	-1.50	0.00
4,300.00	6.75	207.00	4,193.09	-784.87	-399.91	-740.78	1.50	-1.50	0.00
4,400.00	5.25	207.00	4,292.54	-794.18	-404.66	-749.57	1.50	-1.50	0.00
4,500.00	3.75	207.00	4,392.22	-801.17	-408.22	-756.17	1.50	-1.50	0.00
4,600.00	2.25	207.00	4,492.09	-805.84	-410.59	-760.57	1.50	-1.50	0.00

Anadarko Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BABCOCK 22N-33HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4904.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4904.00usft (D Rig)
Site:	3N-67W-33 BABCOCK 6-4HZ Pad	North Reference:	True
Well:	BABCOCK 22N-33HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

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)	
4,683.95	0.99	207.00	4,576.00	-807.95	-411.67	-762.57	1.50	-1.50	0.00	
Sussex										
4,700.00	0.75	207.00	4,592.05	-808.17	-411.78	-762.77	1.50	-1.50	0.00	
4,750.00	0.00	0.00	4,642.05	-808.46	-411.93	-763.05	1.50	-1.50	0.00	
4,800.00	0.00	0.00	4,692.05	-808.46	-411.93	-763.05	0.00	0.00	0.00	
4,900.00	0.00	0.00	4,792.05	-808.46	-411.93	-763.05	0.00	0.00	0.00	
5,000.00	0.00	0.00	4,892.05	-808.46	-411.93	-763.05	0.00	0.00	0.00	
5,100.00	0.00	0.00	4,992.05	-808.46	-411.93	-763.05	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,092.05	-808.46	-411.93	-763.05	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,192.05	-808.46	-411.93	-763.05	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,292.05	-808.46	-411.93	-763.05	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,392.05	-808.46	-411.93	-763.05	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,492.05	-808.46	-411.93	-763.05	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,592.05	-808.46	-411.93	-763.05	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,692.05	-808.46	-411.93	-763.05	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,792.05	-808.46	-411.93	-763.05	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,892.05	-808.46	-411.93	-763.05	0.00	0.00	0.00	
6,100.00	0.00	0.00	5,992.05	-808.46	-411.93	-763.05	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,092.05	-808.46	-411.93	-763.05	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,192.05	-808.46	-411.93	-763.05	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,292.05	-808.46	-411.93	-763.05	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,392.05	-808.46	-411.93	-763.05	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,492.05	-808.46	-411.93	-763.05	0.00	0.00	0.00	
6,692.06	0.00	0.00	6,584.11	-808.46	-411.93	-763.05	0.00	0.00	0.00	
6,700.00	0.71	359.74	6,592.05	-808.41	-411.93	-763.00	9.00	9.00	0.00	
6,800.00	9.71	359.74	6,691.53	-799.33	-411.97	-753.96	9.00	9.00	0.00	
6,900.00	18.71	359.74	6,788.37	-774.80	-412.08	-729.55	9.00	9.00	0.00	
7,000.00	27.71	359.74	6,880.18	-735.43	-412.27	-690.35	9.00	9.00	0.00	
7,100.00	36.71	359.74	6,964.70	-682.17	-412.51	-637.34	9.00	9.00	0.00	
7,200.00	45.71	359.74	7,039.85	-616.35	-412.81	-571.82	9.00	9.00	0.00	
7,241.76	49.47	359.74	7,068.00	-585.53	-412.95	-541.14	9.00	9.00	0.00	
Sharon Springs										
7,300.00	54.71	359.74	7,103.77	-539.59	-413.16	-495.41	9.00	9.00	0.00	
7,397.97	63.53	359.74	7,154.00	-455.59	-413.55	-411.79	9.00	9.00	0.00	
Niobrara										
7,400.00	63.71	359.74	7,154.90	-453.77	-413.56	-409.99	9.00	9.00	0.00	
7,500.00	72.71	359.74	7,191.98	-361.01	-413.98	-317.65	9.00	9.00	0.00	
7,529.16	75.34	359.74	7,200.00	-332.98	-414.11	-289.75	9.00	9.00	0.00	
Nio B										
7,600.00	81.71	359.74	7,214.08	-263.59	-414.43	-220.68	9.00	9.00	0.00	
7,696.00	90.35	359.74	7,220.72	-167.91	-414.87	-125.44	9.00	9.00	0.00	
Top of Production - BABCOCK 22N-33HZ_PHL										
7,700.00	90.35	359.74	7,220.69	-163.91	-414.89	-121.46	0.00	0.00	0.00	
7,800.00	90.35	359.74	7,220.08	-63.91	-415.35	-21.92	0.00	0.00	0.00	
7,900.00	90.35	359.74	7,219.46	36.08	-415.80	77.62	0.00	0.00	0.00	
8,000.00	90.35	359.74	7,218.84	136.08	-416.26	177.16	0.00	0.00	0.00	
8,100.00	90.35	359.74	7,218.22	236.08	-416.72	276.70	0.00	0.00	0.00	
8,200.00	90.35	359.74	7,217.60	336.08	-417.18	376.24	0.00	0.00	0.00	
8,300.00	90.35	359.74	7,216.99	436.07	-417.64	475.77	0.00	0.00	0.00	
8,400.00	90.35	359.74	7,216.37	536.07	-418.10	575.31	0.00	0.00	0.00	
8,500.00	90.35	359.74	7,215.75	636.07	-418.56	674.85	0.00	0.00	0.00	
8,600.00	90.35	359.74	7,215.13	736.06	-419.01	774.39	0.00	0.00	0.00	
8,700.00	90.35	359.74	7,214.51	836.06	-419.47	873.93	0.00	0.00	0.00	

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BABCOCK 22N-33HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4904.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4904.00usft (D Rig)
Site:	3N-67W-33 BABCOCK 6-4HZ Pad	North Reference:	True
Well:	BABCOCK 22N-33HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

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)
8,800.00	90.35	359.74	7,213.90	936.06	-419.93	973.47	0.00	0.00	0.00
8,900.00	90.35	359.74	7,213.28	1,036.05	-420.39	1,073.01	0.00	0.00	0.00
9,000.00	90.35	359.74	7,212.66	1,136.05	-420.85	1,172.54	0.00	0.00	0.00
9,100.00	90.35	359.74	7,212.04	1,236.05	-421.31	1,272.08	0.00	0.00	0.00
9,200.00	90.35	359.74	7,211.43	1,336.05	-421.77	1,371.62	0.00	0.00	0.00
9,300.00	90.35	359.74	7,210.81	1,436.04	-422.23	1,471.16	0.00	0.00	0.00
9,400.00	90.35	359.74	7,210.19	1,536.04	-422.68	1,570.70	0.00	0.00	0.00
9,500.00	90.35	359.74	7,209.57	1,636.04	-423.14	1,670.24	0.00	0.00	0.00
9,600.00	90.35	359.74	7,208.95	1,736.03	-423.60	1,769.77	0.00	0.00	0.00
9,700.00	90.35	359.74	7,208.34	1,836.03	-424.06	1,869.31	0.00	0.00	0.00
9,800.00	90.35	359.74	7,207.72	1,936.03	-424.52	1,968.85	0.00	0.00	0.00
9,900.00	90.35	359.74	7,207.10	2,036.03	-424.98	2,068.39	0.00	0.00	0.00
10,000.00	90.35	359.74	7,206.48	2,136.02	-425.44	2,167.93	0.00	0.00	0.00
10,100.00	90.35	359.74	7,205.86	2,236.02	-425.89	2,267.47	0.00	0.00	0.00
10,200.00	90.35	359.74	7,205.25	2,336.02	-426.35	2,367.01	0.00	0.00	0.00
10,300.00	90.35	359.74	7,204.63	2,436.01	-426.81	2,466.54	0.00	0.00	0.00
10,400.00	90.35	359.74	7,204.01	2,536.01	-427.27	2,566.08	0.00	0.00	0.00
10,500.00	90.35	359.74	7,203.39	2,636.01	-427.73	2,665.62	0.00	0.00	0.00
10,600.00	90.35	359.74	7,202.78	2,736.00	-428.19	2,765.16	0.00	0.00	0.00
10,700.00	90.35	359.74	7,202.16	2,836.00	-428.65	2,864.70	0.00	0.00	0.00
10,800.00	90.35	359.74	7,201.54	2,936.00	-429.11	2,964.24	0.00	0.00	0.00
10,900.00	90.35	359.74	7,200.92	3,036.00	-429.56	3,063.78	0.00	0.00	0.00
11,000.00	90.35	359.74	7,200.30	3,135.99	-430.02	3,163.31	0.00	0.00	0.00
11,100.00	90.35	359.74	7,199.69	3,235.99	-430.48	3,262.85	0.00	0.00	0.00
11,200.00	90.35	359.74	7,199.07	3,335.99	-430.94	3,362.39	0.00	0.00	0.00
11,300.00	90.35	359.74	7,198.45	3,435.98	-431.40	3,461.93	0.00	0.00	0.00
11,400.00	90.35	359.74	7,197.83	3,535.98	-431.86	3,561.47	0.00	0.00	0.00
11,500.00	90.35	359.74	7,197.21	3,635.98	-432.32	3,661.01	0.00	0.00	0.00
11,600.00	90.35	359.74	7,196.60	3,735.97	-432.77	3,760.54	0.00	0.00	0.00
11,700.00	90.35	359.74	7,195.98	3,835.97	-433.23	3,860.08	0.00	0.00	0.00
11,800.00	90.35	359.74	7,195.36	3,935.97	-433.69	3,959.62	0.00	0.00	0.00
11,900.00	90.35	359.74	7,194.74	4,035.97	-434.15	4,059.16	0.00	0.00	0.00
12,000.00	90.35	359.74	7,194.13	4,135.96	-434.61	4,158.70	0.00	0.00	0.00
12,100.00	90.35	359.74	7,193.51	4,235.96	-435.07	4,258.24	0.00	0.00	0.00
12,182.16	90.35	359.74	7,193.00	4,318.12	-435.44	4,340.02	0.00	0.00	0.00
BABCOCK 22N-33HZ_PBHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BABCOCK 22N-33HZ - hit/miss target - Shape - Point	0.00	0.00	7,193.00	4,318.12	-435.44	14,592,674.68	1,668,765.79	40.181040	-104.898503
BABCOCK 22N-33HZ - plan hits target center - Point	0.00	0.00	7,220.72	-167.91	-414.87	14,588,188.69	1,668,791.57	40.168721	-104.898429

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BABCOCK 22N-33HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4904.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4904.00usft (D Rig)
Site:	3N-67W-33 BABCOCK 6-4HZ Pad	North Reference:	True
Well:	BABCOCK 22N-33HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

Casing Points						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
	1,831.19	1,800.00	9 5/8"	9-5/8	13-1/2	
	7,696.00	7,220.72	Top of Production	5-1/2	7-7/8	

Formations						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
	979.43	975.00	Fox Hills			
	4,683.95	4,576.00	Sussex			
	7,241.76	7,068.00	Sharon Springs			
	7,397.97	7,154.00	Niobrara			
	7,529.16	7,200.00	Nio B			