

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N**

**1N-68W-21 WINDSOCK 15-21HZ PAD**

**WINDSOCK 21-8HZ**

## **Plan A**

### **Plan: Permit Rev-1**

SHL Lat/Long: 40.030177/-105.007347

Survey Program: MWD+IFR

## **Standard Planning Report**

**26 November, 2018**

Project: WELD-NAD83-UTMFT13N  
Site: 1N-68W-21 WINDSOCK 15-21HZ PAD  
Well: WINDSOCK 21-8HZ  
Wellbore: Plan A  
Design: Permit Rev-1

# US ROCKIES WATTENBERG PLANNING

## CASING DETAILS

TVD	MD	Name	Size
1500.00	1524.43	9 5/8" Csg	9-5/8
7907.00	8836.11	Top of Production	5-1/2

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	400.00	3.00	80.00	399.91	0.91	5.16	1.50	80.00	0.91	
4	2216.86	29.63	115.94	2129.47	-190.93	464.55	1.50	39.32	-190.93	
5	4996.14	29.63	115.94	4545.32	-791.99	1700.18	0.00	0.00	-791.99	
6	6477.64	0.00	0.00	5961.66	-955.85	2037.05	2.00	180.00	-955.85	
7	7706.80	0.00	0.00	7190.82	-955.85	2037.05	0.00	0.00	-955.85	
8	8836.11	90.35	360.00	7907.00	-235.34	2036.99	8.00	360.00	-235.34	
9	13983.46	90.35	360.00	7876.00	4911.91	2036.55	0.00	0.00	4911.91	WINDSOCK 21-8HZ_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
WINDSOCK 21-8HZ_SHL	0.00	0.00	0.00	40.030177	-105.007347
WINDSOCK 21-8HZ_BHL	7876.00	4911.91	2036.55	40.043666	-105.000070

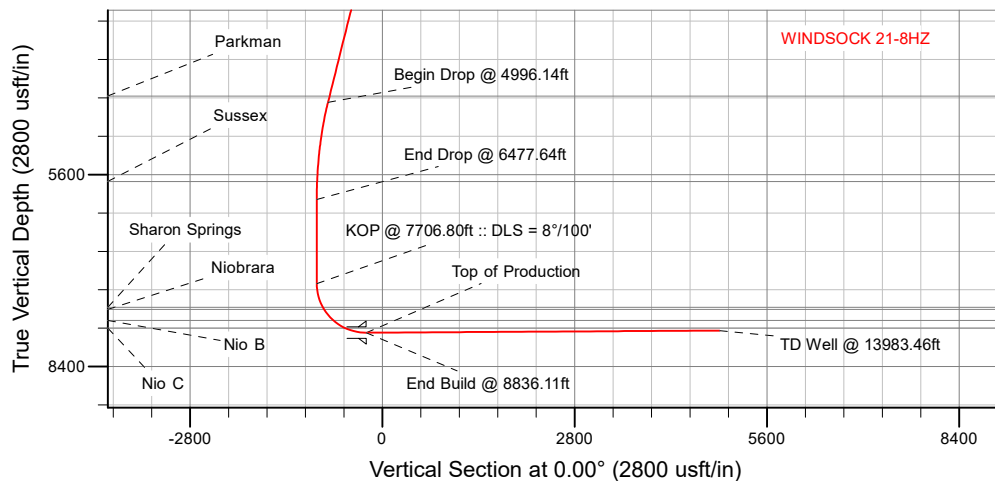
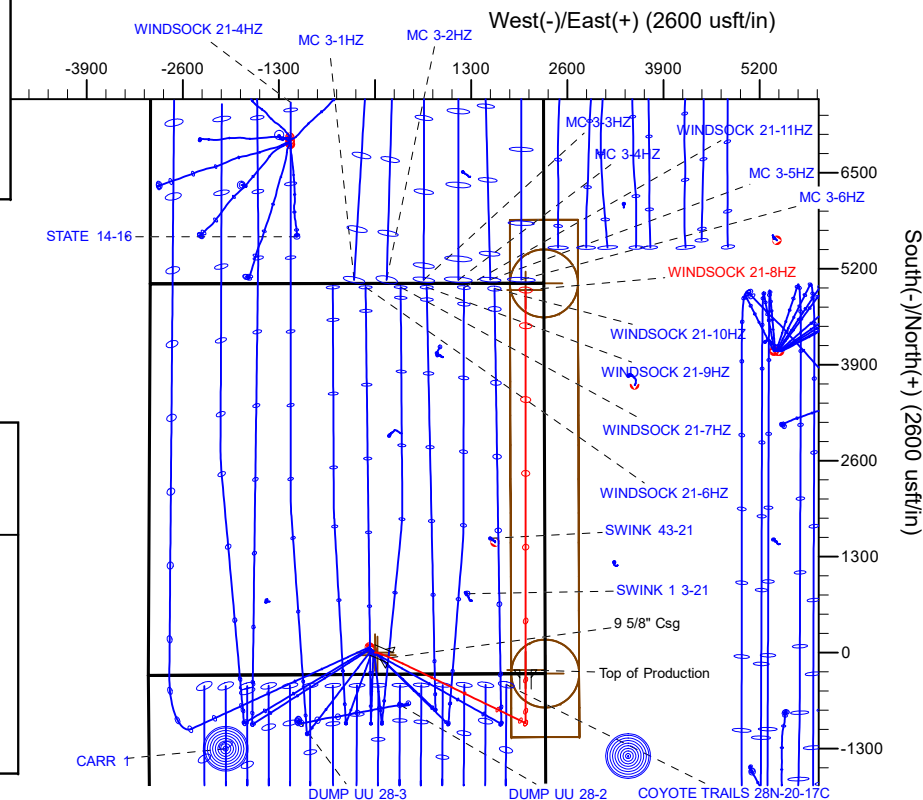
**SHL**  
**295' FSL**  
**2301' FEL**

**HEEL**  
**50' FSL**  
**264' FEL**

**BHL**  
**90' FNL**  
**248' FEL**

## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1309.00	1323.83	Fox Hills
4456.00	4893.39	Parkman
5701.00	6216.62	Sussex
7535.00	8065.83	Sharon Springs
7567.00	8102.86	Niobrara
7729.00	8315.74	Nio B
7840.00	8519.50	Nio C



## WELL DETAILS: WINDSOCK 21-8HZ

GL = 5222'

RKB = 17' @ 5239.00usft (Drilling Rig)

Plan: Permit Rev-1 (WINDSOCK 21-8HZ/Plan A)

Date: 11/27/2018

## Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-8HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 5239.00usft (Drilling Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 5239.00usft (Drilling Rig)
<b>Site:</b>	1N-68W-21 WINDSOCK 15-21HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	WINDSOCK 21-8HZ	<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)		

Site		1N-68W-21 WINDSOCK 15-21HZ PAD			
Site Position:		Northing:	14,537,796.91 usft	Latitude:	40.030382
From:	Lat/Long	Easting:	1,638,286.42 usft	Longitude:	-105.007610
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.00 °

Well	WINDSOCK 21-8HZ					
Well Position	+N/-S	-74.65 usft	Northing:	14,537,722.26 usft	Latitude:	40.030177
	+E/-W	73.62 usft	Easting:	1,638,360.03 usft	Longitude:	-105.007347
Position Uncertainty		3.28 usft	Wellhead Elevation:		Ground Level:	5,222.00 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>
	IGRF2015	11/19/2018	8.16	66.49	52,008.58201559

<b>Design</b>	Permit Rev-1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<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	0.00

<b>Plan Survey Tool Program</b>	<b>Date</b>	11/24/2018		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	1,500.00	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWD+I Fixed:v2:crustal field declinatio
2	1,500.00	13,983.46	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWD+I Fixed:v2:crustal field declinatio

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-8HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 5239.00usft (Drilling Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 5239.00usft (Drilling Rig)
<b>Site:</b>	1N-68W-21 WINDSOCK 15-21HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	WINDSOCK 21-8HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	3.00	80.00	399.91	0.91	5.16	1.50	1.50	0.00	80.00	
2,216.86	29.63	115.94	2,129.47	-190.93	464.55	1.50	1.47	1.98	39.32	
4,996.14	29.63	115.94	4,545.32	-791.99	1,700.18	0.00	0.00	0.00	0.00	
6,477.64	0.00	0.00	5,961.66	-955.85	2,037.05	2.00	-2.00	0.00	180.00	
7,706.80	0.00	0.00	7,190.82	-955.85	2,037.05	0.00	0.00	0.00	0.00	
8,836.11	90.35	360.00	7,907.00	-235.34	2,036.99	8.00	8.00	0.00	360.00	
13,983.46	90.35	360.00	7,876.00	4,911.91	2,036.55	0.00	0.00	0.00	0.00	WINDSOCK 21-8HZ_

**Corporate**  
Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-8HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 5239.00usft (Drilling Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 5239.00usft (Drilling Rig)
<b>Site:</b>	1N-68W-21 WINDSOCK 15-21HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	WINDSOCK 21-8HZ	<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)
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
Begin Nudge @ 200.00ft									
300.00	1.50	80.00	299.99	0.23	1.29	0.23	1.50	1.50	0.00
400.00	3.00	80.00	399.91	0.91	5.16	0.91	1.50	1.50	0.00
Change Nudge Direction @ 400.00ft									
500.00	4.27	92.88	499.71	1.18	11.45	1.18	1.50	1.27	12.88
600.00	5.65	99.69	599.33	0.16	20.02	0.16	1.50	1.38	6.81
700.00	7.08	103.79	698.71	-2.14	30.86	-2.14	1.50	1.43	4.10
800.00	8.53	106.51	797.78	-5.71	43.96	-5.71	1.50	1.45	2.72
900.00	10.00	108.44	896.48	-10.57	59.31	-10.57	1.50	1.47	1.93
1,000.00	11.48	109.88	994.72	-16.70	76.91	-16.70	1.50	1.48	1.44
1,100.00	12.96	110.99	1,092.45	-24.10	96.73	-24.10	1.50	1.48	1.11
1,200.00	14.44	111.88	1,189.61	-32.77	118.78	-32.77	1.50	1.49	0.89
1,300.00	15.93	112.61	1,286.11	-42.69	143.02	-42.69	1.50	1.49	0.73
1,323.83	16.29	112.76	1,309.00	-45.24	149.12	-45.24	1.50	1.49	0.65
Fox Hills									
1,400.00	17.42	113.21	1,381.90	-53.87	169.45	-53.87	1.50	1.49	0.59
1,500.00	18.91	113.73	1,476.91	-66.29	198.05	-66.29	1.50	1.49	0.51
1,524.43	19.28	113.84	1,500.00	-69.52	205.36	-69.52	1.50	1.49	0.46
9 5/8" Csg									
1,600.00	20.41	114.17	1,571.08	-79.95	228.79	-79.95	1.50	1.49	0.43
1,700.00	21.90	114.55	1,664.34	-94.84	261.66	-94.84	1.50	1.49	0.38
1,800.00	23.39	114.89	1,756.63	-110.95	296.64	-110.95	1.50	1.49	0.34
1,900.00	24.89	115.18	1,847.88	-128.25	333.70	-128.25	1.50	1.50	0.30
2,000.00	26.39	115.45	1,938.03	-146.76	372.81	-146.76	1.50	1.50	0.27
2,100.00	27.88	115.69	2,027.02	-166.44	413.94	-166.44	1.50	1.50	0.24
2,200.00	29.38	115.91	2,114.79	-187.30	457.08	-187.30	1.50	1.50	0.22
2,216.86	29.63	115.94	2,129.47	-190.93	464.55	-190.93	1.50	1.50	0.21
Hold Tangent @ 2216.86ft									
2,300.00	29.63	115.94	2,201.73	-208.91	501.51	-208.91	0.00	0.00	0.00
2,400.00	29.63	115.94	2,288.66	-230.53	545.97	-230.53	0.00	0.00	0.00
2,500.00	29.63	115.94	2,375.58	-252.16	590.43	-252.16	0.00	0.00	0.00
2,600.00	29.63	115.94	2,462.51	-273.79	634.89	-273.79	0.00	0.00	0.00
2,700.00	29.63	115.94	2,549.43	-295.41	679.35	-295.41	0.00	0.00	0.00
2,800.00	29.63	115.94	2,636.35	-317.04	723.80	-317.04	0.00	0.00	0.00
2,900.00	29.63	115.94	2,723.28	-338.66	768.26	-338.66	0.00	0.00	0.00
3,000.00	29.63	115.94	2,810.20	-360.29	812.72	-360.29	0.00	0.00	0.00
3,100.00	29.63	115.94	2,897.12	-381.92	857.18	-381.92	0.00	0.00	0.00
3,200.00	29.63	115.94	2,984.05	-403.54	901.64	-403.54	0.00	0.00	0.00
3,300.00	29.63	115.94	3,070.97	-425.17	946.10	-425.17	0.00	0.00	0.00
3,400.00	29.63	115.94	3,157.89	-446.80	990.56	-446.80	0.00	0.00	0.00
3,500.00	29.63	115.94	3,244.82	-468.42	1,035.02	-468.42	0.00	0.00	0.00
3,600.00	29.63	115.94	3,331.74	-490.05	1,079.47	-490.05	0.00	0.00	0.00
3,700.00	29.63	115.94	3,418.67	-511.68	1,123.93	-511.68	0.00	0.00	0.00
3,800.00	29.63	115.94	3,505.59	-533.30	1,168.39	-533.30	0.00	0.00	0.00
3,900.00	29.63	115.94	3,592.51	-554.93	1,212.85	-554.93	0.00	0.00	0.00
4,000.00	29.63	115.94	3,679.44	-576.56	1,257.31	-576.56	0.00	0.00	0.00
4,100.00	29.63	115.94	3,766.36	-598.18	1,301.77	-598.18	0.00	0.00	0.00
4,200.00	29.63	115.94	3,853.28	-619.81	1,346.23	-619.81	0.00	0.00	0.00
4,300.00	29.63	115.94	3,940.21	-641.43	1,390.69	-641.43	0.00	0.00	0.00
4,400.00	29.63	115.94	4,027.13	-663.06	1,435.15	-663.06	0.00	0.00	0.00
4,500.00	29.63	115.94	4,114.05	-684.69	1,479.60	-684.69	0.00	0.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-8HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 5239.00usft (Drilling Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 5239.00usft (Drilling Rig)
<b>Site:</b>	1N-68W-21 WINDSOCK 15-21HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	WINDSOCK 21-8HZ	<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)
4,600.00	29.63	115.94	4,200.98	-706.31	1,524.06	-706.31	0.00	0.00	0.00
4,700.00	29.63	115.94	4,287.90	-727.94	1,568.52	-727.94	0.00	0.00	0.00
4,800.00	29.63	115.94	4,374.83	-749.57	1,612.98	-749.57	0.00	0.00	0.00
4,893.39	29.63	115.94	4,456.00	-769.76	1,654.50	-769.76	0.00	0.00	0.00
<b>Parkman</b>									
4,900.00	29.63	115.94	4,461.75	-771.19	1,657.44	-771.19	0.00	0.00	0.00
4,996.14	29.63	115.94	4,545.32	-791.99	1,700.18	-791.99	0.00	0.00	0.00
<b>Begin Drop @ 4996.14ft</b>									
5,000.00	29.55	115.94	4,548.67	-792.82	1,701.90	-792.82	2.00	-2.00	0.00
5,100.00	27.55	115.94	4,636.51	-813.72	1,744.88	-813.72	2.00	-2.00	0.00
5,200.00	25.55	115.94	4,725.95	-833.28	1,785.07	-833.28	2.00	-2.00	0.00
5,300.00	23.55	115.94	4,816.91	-851.45	1,822.44	-851.45	2.00	-2.00	0.00
5,400.00	21.55	115.94	4,909.26	-868.23	1,856.92	-868.23	2.00	-2.00	0.00
5,500.00	19.55	115.94	5,002.89	-883.59	1,888.49	-883.59	2.00	-2.00	0.00
5,600.00	17.55	115.94	5,097.68	-897.50	1,917.10	-897.50	2.00	-2.00	0.00
5,700.00	15.55	115.94	5,193.53	-909.97	1,942.72	-909.97	2.00	-2.00	0.00
5,800.00	13.55	115.94	5,290.32	-920.96	1,965.32	-920.96	2.00	-2.00	0.00
5,900.00	11.55	115.94	5,387.93	-930.46	1,984.86	-930.46	2.00	-2.00	0.00
6,000.00	9.55	115.94	5,486.23	-938.47	2,001.33	-938.47	2.00	-2.00	0.00
6,100.00	7.55	115.94	5,585.11	-944.98	2,014.70	-944.98	2.00	-2.00	0.00
6,200.00	5.55	115.94	5,684.45	-949.97	2,024.96	-949.97	2.00	-2.00	0.00
6,216.62	5.22	115.94	5,701.00	-950.65	2,026.37	-950.65	2.00	-2.00	0.00
<b>Sussex</b>									
6,300.00	3.55	115.94	5,784.13	-953.44	2,032.10	-953.44	2.00	-2.00	0.00
6,400.00	1.55	115.94	5,884.03	-955.39	2,036.11	-955.39	2.00	-2.00	0.00
6,477.64	0.00	0.00	5,961.66	-955.85	2,037.05	-955.85	2.00	-2.00	0.00
<b>End Drop @ 6477.64ft</b>									
6,500.00	0.00	0.00	5,984.02	-955.85	2,037.05	-955.85	0.00	0.00	0.00
6,600.00	0.00	0.00	6,084.02	-955.85	2,037.05	-955.85	0.00	0.00	0.00
6,700.00	0.00	0.00	6,184.02	-955.85	2,037.05	-955.85	0.00	0.00	0.00
6,800.00	0.00	0.00	6,284.02	-955.85	2,037.05	-955.85	0.00	0.00	0.00
6,900.00	0.00	0.00	6,384.02	-955.85	2,037.05	-955.85	0.00	0.00	0.00
7,000.00	0.00	0.00	6,484.02	-955.85	2,037.05	-955.85	0.00	0.00	0.00
7,100.00	0.00	0.00	6,584.02	-955.85	2,037.05	-955.85	0.00	0.00	0.00
7,200.00	0.00	0.00	6,684.02	-955.85	2,037.05	-955.85	0.00	0.00	0.00
7,300.00	0.00	0.00	6,784.02	-955.85	2,037.05	-955.85	0.00	0.00	0.00
7,400.00	0.00	0.00	6,884.02	-955.85	2,037.05	-955.85	0.00	0.00	0.00
7,500.00	0.00	0.00	6,984.02	-955.85	2,037.05	-955.85	0.00	0.00	0.00
7,600.00	0.00	0.00	7,084.02	-955.85	2,037.05	-955.85	0.00	0.00	0.00
7,700.00	0.00	0.00	7,184.02	-955.85	2,037.05	-955.85	0.00	0.00	0.00
7,706.80	0.00	0.00	7,190.82	-955.85	2,037.05	-955.85	0.00	0.00	0.00
<b>KOP @ 7706.80ft :: DLS = 8°/100'</b>									
7,800.00	7.46	360.00	7,283.76	-949.80	2,037.05	-949.80	8.00	8.00	0.00
7,900.00	15.46	360.00	7,381.69	-929.95	2,037.05	-929.95	8.00	8.00	0.00
8,000.00	23.46	360.00	7,475.90	-896.67	2,037.05	-896.67	8.00	8.00	0.00
8,065.83	28.72	360.00	7,535.00	-867.73	2,037.05	-867.73	8.00	8.00	0.00
<b>Sharon Springs</b>									
8,100.00	31.46	360.00	7,564.56	-850.60	2,037.04	-850.60	8.00	8.00	0.00
8,102.86	31.68	360.00	7,567.00	-849.10	2,037.04	-849.10	8.00	8.00	0.00
<b>Niobrara</b>									
8,200.00	39.46	360.00	7,645.95	-792.64	2,037.04	-792.64	8.00	8.00	0.00
8,300.00	47.46	360.00	7,718.48	-723.91	2,037.03	-723.91	8.00	8.00	0.00
8,315.74	48.72	360.00	7,729.00	-712.20	2,037.03	-712.20	8.00	8.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-8HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 5239.00usft (Drilling Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 5239.00usft (Drilling Rig)
<b>Site:</b>	1N-68W-21 WINDSOCK 15-21HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	WINDSOCK 21-8HZ	<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)
<b>Nio B</b>									
8,400.00	55.46	360.00	7,780.75	-645.77	2,037.03	-645.77	8.00	8.00	0.00
8,500.00	63.46	360.00	7,831.52	-559.71	2,037.02	-559.71	8.00	8.00	0.00
8,519.50	65.02	360.00	7,840.00	-542.15	2,037.02	-542.15	8.00	8.00	0.00
<b>Nio C</b>									
8,600.00	71.46	360.00	7,869.83	-467.43	2,037.01	-467.43	8.00	8.00	0.00
8,700.00	79.46	360.00	7,894.92	-370.71	2,037.00	-370.71	8.00	8.00	0.00
8,800.00	87.46	360.00	7,906.31	-271.44	2,036.99	-271.44	8.00	8.00	0.00
8,836.11	90.34	360.00	7,907.00	-235.34	2,036.99	-235.34	8.00	8.00	0.00
<b>End Build @ 8836.11ft - Top of Production</b>									
8,900.00	90.35	360.00	7,906.62	-171.45	2,036.99	-171.45	0.00	0.00	0.00
9,000.00	90.35	360.00	7,906.02	-71.46	2,036.98	-71.46	0.00	0.00	0.00
9,100.00	90.35	360.00	7,905.41	28.54	2,036.97	28.54	0.00	0.00	0.00
9,200.00	90.35	360.00	7,904.81	128.54	2,036.96	128.54	0.00	0.00	0.00
9,300.00	90.35	360.00	7,904.21	228.54	2,036.95	228.54	0.00	0.00	0.00
9,400.00	90.35	360.00	7,903.61	328.54	2,036.94	328.54	0.00	0.00	0.00
9,500.00	90.35	360.00	7,903.01	428.53	2,036.93	428.53	0.00	0.00	0.00
9,600.00	90.35	360.00	7,902.40	528.53	2,036.93	528.53	0.00	0.00	0.00
9,700.00	90.35	360.00	7,901.80	628.53	2,036.92	628.53	0.00	0.00	0.00
9,800.00	90.35	360.00	7,901.20	728.53	2,036.91	728.53	0.00	0.00	0.00
9,900.00	90.35	360.00	7,900.60	828.53	2,036.90	828.53	0.00	0.00	0.00
10,000.00	90.35	360.00	7,899.99	928.53	2,036.89	928.53	0.00	0.00	0.00
10,100.00	90.35	360.00	7,899.39	1,028.52	2,036.88	1,028.52	0.00	0.00	0.00
10,200.00	90.35	360.00	7,898.79	1,128.52	2,036.88	1,128.52	0.00	0.00	0.00
10,300.00	90.35	360.00	7,898.19	1,228.52	2,036.87	1,228.52	0.00	0.00	0.00
10,400.00	90.35	360.00	7,897.58	1,328.52	2,036.86	1,328.52	0.00	0.00	0.00
10,500.00	90.35	360.00	7,896.98	1,428.52	2,036.85	1,428.52	0.00	0.00	0.00
10,600.00	90.35	360.00	7,896.38	1,528.51	2,036.84	1,528.51	0.00	0.00	0.00
10,700.00	90.35	360.00	7,895.78	1,628.51	2,036.83	1,628.51	0.00	0.00	0.00
10,800.00	90.35	360.00	7,895.18	1,728.51	2,036.82	1,728.51	0.00	0.00	0.00
10,900.00	90.35	360.00	7,894.57	1,828.51	2,036.82	1,828.51	0.00	0.00	0.00
11,000.00	90.35	360.00	7,893.97	1,928.51	2,036.81	1,928.51	0.00	0.00	0.00
11,100.00	90.35	360.00	7,893.37	2,028.51	2,036.80	2,028.51	0.00	0.00	0.00
11,200.00	90.35	360.00	7,892.77	2,128.50	2,036.79	2,128.50	0.00	0.00	0.00
11,300.00	90.35	360.00	7,892.16	2,228.50	2,036.78	2,228.50	0.00	0.00	0.00
11,400.00	90.35	360.00	7,891.56	2,328.50	2,036.77	2,328.50	0.00	0.00	0.00
11,500.00	90.35	360.00	7,890.96	2,428.50	2,036.76	2,428.50	0.00	0.00	0.00
11,600.00	90.35	360.00	7,890.36	2,528.50	2,036.76	2,528.50	0.00	0.00	0.00
11,700.00	90.35	360.00	7,889.75	2,628.49	2,036.75	2,628.49	0.00	0.00	0.00
11,800.00	90.35	360.00	7,889.15	2,728.49	2,036.74	2,728.49	0.00	0.00	0.00
11,900.00	90.35	360.00	7,888.55	2,828.49	2,036.73	2,828.49	0.00	0.00	0.00
12,000.00	90.35	360.00	7,887.95	2,928.49	2,036.72	2,928.49	0.00	0.00	0.00
12,100.00	90.35	360.00	7,887.34	3,028.49	2,036.71	3,028.49	0.00	0.00	0.00
12,200.00	90.35	360.00	7,886.74	3,128.49	2,036.71	3,128.49	0.00	0.00	0.00
12,300.00	90.35	360.00	7,886.14	3,228.48	2,036.70	3,228.48	0.00	0.00	0.00
12,400.00	90.35	360.00	7,885.54	3,328.48	2,036.69	3,328.48	0.00	0.00	0.00
12,500.00	90.35	360.00	7,884.94	3,428.48	2,036.68	3,428.48	0.00	0.00	0.00
12,600.00	90.35	360.00	7,884.33	3,528.48	2,036.67	3,528.48	0.00	0.00	0.00
12,700.00	90.35	360.00	7,883.73	3,628.48	2,036.66	3,628.48	0.00	0.00	0.00
12,800.00	90.35	360.00	7,883.13	3,728.47	2,036.65	3,728.47	0.00	0.00	0.00
12,900.00	90.35	360.00	7,882.53	3,828.47	2,036.65	3,828.47	0.00	0.00	0.00
13,000.00	90.35	360.00	7,881.92	3,928.47	2,036.64	3,928.47	0.00	0.00	0.00
13,100.00	90.35	360.00	7,881.32	4,028.47	2,036.63	4,028.47	0.00	0.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-8HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 5239.00usft (Drilling Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 5239.00usft (Drilling Rig)
<b>Site:</b>	1N-68W-21 WINDSOCK 15-21HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	WINDSOCK 21-8HZ	<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)	
13,200.00	90.35	360.00	7,880.72	4,128.47	2,036.62	4,128.47	0.00	0.00	0.00	
13,300.00	90.35	360.00	7,880.12	4,228.47	2,036.61	4,228.47	0.00	0.00	0.00	
13,400.00	90.35	360.00	7,879.51	4,328.46	2,036.60	4,328.46	0.00	0.00	0.00	
13,500.00	90.35	360.00	7,878.91	4,428.46	2,036.59	4,428.46	0.00	0.00	0.00	
13,600.00	90.35	360.00	7,878.31	4,528.46	2,036.59	4,528.46	0.00	0.00	0.00	
13,700.00	90.35	360.00	7,877.71	4,628.46	2,036.58	4,628.46	0.00	0.00	0.00	
13,800.00	90.35	360.00	7,877.11	4,728.46	2,036.57	4,728.46	0.00	0.00	0.00	
13,900.00	90.35	360.00	7,876.50	4,828.45	2,036.56	4,828.45	0.00	0.00	0.00	
13,983.46	90.35	360.00	7,876.00	4,911.91	2,036.55	4,911.91	0.00	0.00	0.00	
TD Well @ 13983.46ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,524.43	1,500.00	9 5/8" Csg	9-5/8	13-1/2	
8,836.11	7,907.00	Top of Production	5-1/2	7-7/8	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,323.83	1,309.00	Fox Hills				
4,893.39	4,456.00	Parkman				
6,216.62	5,701.00	Sussex				
8,065.83	7,535.00	Sharon Springs				
8,102.86	7,567.00	Niobrara				
8,315.74	7,729.00	Nio B				
8,519.50	7,840.00	Nio C				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
200.00	200.00	0.00	0.00	Begin Nudge @ 200.00ft	
400.00	399.91	0.91	5.16	Change Nudge Direction @ 400.00ft	
2,216.86	2,129.47	-190.93	464.55	Hold Tangent @ 2216.86ft	
4,996.14	4,545.32	-791.99	1,700.18	Begin Drop @ 4996.14ft	
6,477.64	5,961.66	-955.85	2,037.05	End Drop @ 6477.64ft	
7,706.80	7,190.82	-955.85	2,037.05	KOP @ 7706.80ft :: DLS = 8°/100'	
8,836.11	7,907.00	-235.34	2,036.99	End Build @ 8836.11ft	
13,983.46	7,876.00	4,911.91	2,036.55	TD Well @ 13983.46ft	