

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N**

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

**WINDSOCK 21-2HZ**

## **Plan A**

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

SHL Lat/Long: 40.030353/-105.007573

Survey Program: MWD+IFR

## **Standard Planning Report**

**26 November, 2018**

Project: WELD-NAD83-UTMFT13N  
Site: 1N-68W-21 WINDSOCK 15-21HZ PAD  
Well: WINDSOCK 21-2HZ  
Wellbore: Plan A  
Design: Permit Rev-1

# US ROCKIES WATTENBERG PLANNING

## CASING DETAILS

TVD	MD	Name	Size
1500.00	1523.46	9 5/8" Csg	9-5/8
7788.00	8615.58	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	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	2043.33	26.90	239.10	1978.17	-212.25	-354.64	1.50	239.10	-202.95	
4	4843.33	26.90	239.10	4475.21	-862.81	-1441.65	0.00	0.00	-825.03	
5	6188.33	0.00	0.00	5771.34	-1022.00	-1707.63	2.00	180.00	-977.25	
6	7488.80	0.00	0.00	7071.80	-1022.00	-1707.63	0.00	0.00	-977.25	
7	8615.58	90.14	354.88	7788.00	-306.88	-1771.67	8.00	354.88	-260.71	
8	11287.53	90.14	354.88	7781.36	2354.41	-2010.00	0.00	0.00	2405.88	WINDSOCK 21-2HZ_target
9	11642.32	90.14	0.20	7780.48	2708.75	-2025.20	1.50	89.99	2760.49	
10	19082.13	90.14	0.20	7762.00	10148.48	-1998.64	0.00	0.00	10197.02	WINDSOCK 21-2HZ_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
WINDSOCK 21-2HZ_SHL	0.00	0.00	0.00	40.030353	-105.007573
WINDSOCK 21-2HZ_BHL	7762.00	10148.48	-1998.64	40.058222	-105.014716

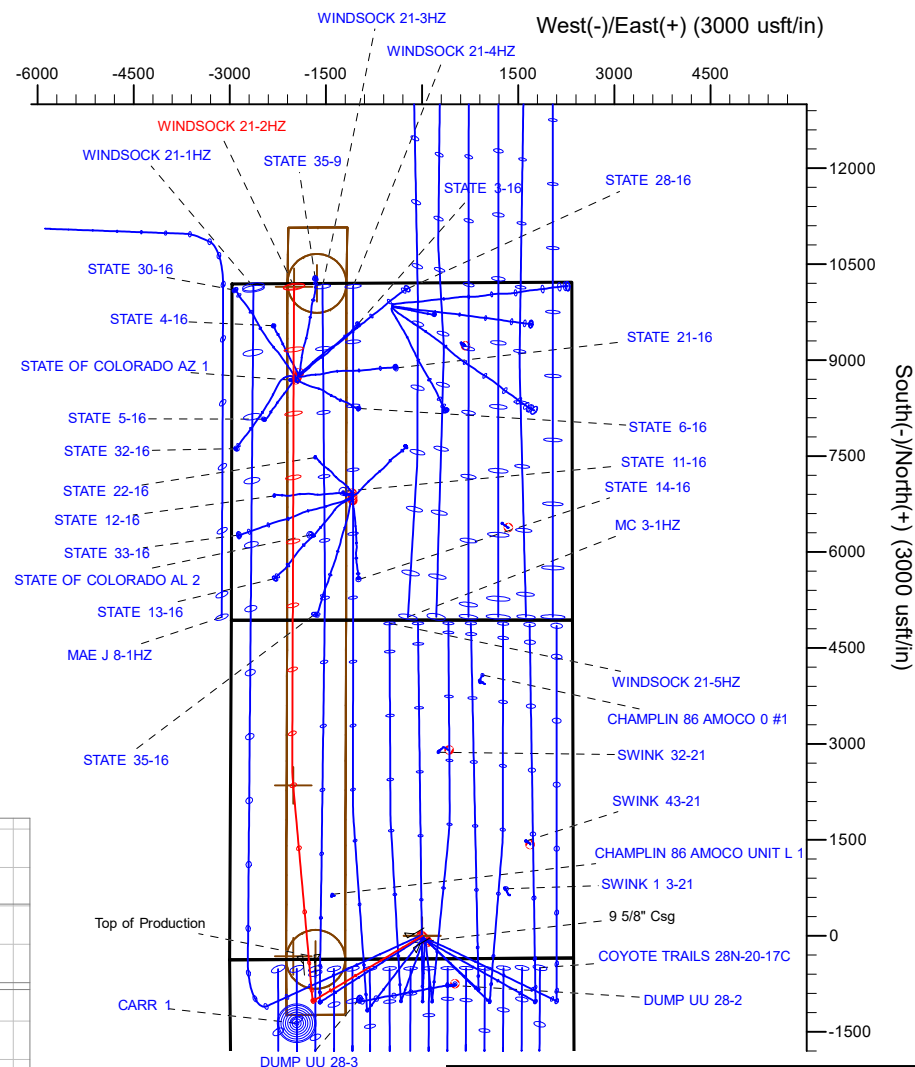
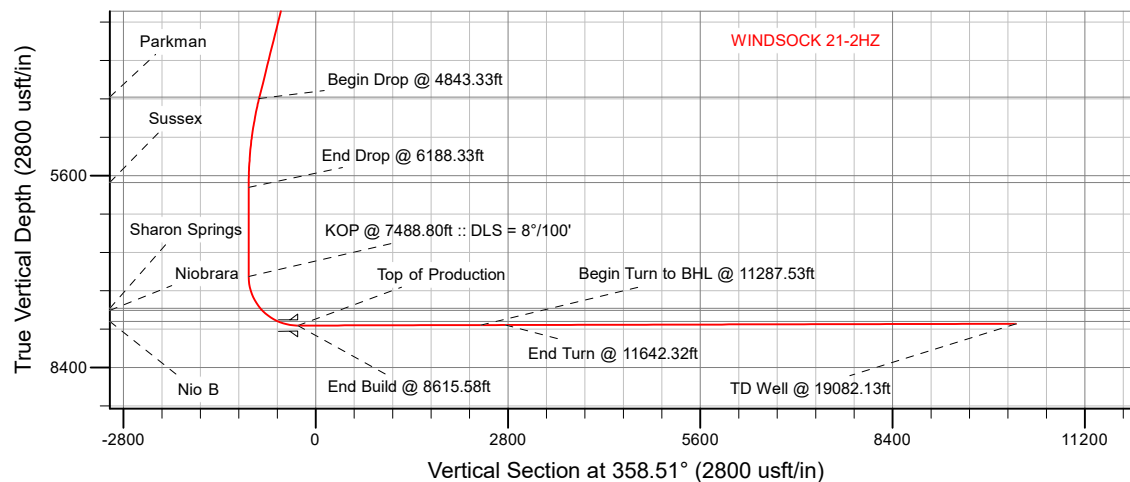
**SHL**  
**359' FSL**  
**2364' FEL**

**HEEL**  
**50' FSL**  
**1228' FWL**

**BHL**  
**50' FNL**  
**969' FWL**

## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1309.00	1323.06	Fox Hills
4456.00	4821.80	Parkman
5701.00	6117.99	Sussex
7535.00	7992.51	Sharon Springs
7567.00	8035.59	Niobrara
7729.00	8321.06	Nio B



## WELL DETAILS: WINDSOCK 21-2HZ

GL = 5222'

RKB = 17' @ 5239.00usft (Drilling Rig)

Plan: Permit Rev-1 (WINDSOCK 21-2HZ/Plan A)

Date: 11/27/2018

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-2HZ
<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 21-2HZ	<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 21-2HZ					
Well Position	+N/-S	-10.56 usft	Northing:	14,537,786.35 usft	Latitude:	40.030353
	+E/-W	10.36 usft	Easting:	1,638,296.78 usft	Longitude:	-105.007573
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	52,008.64986659

<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	358.51	

<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	19,082.13	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 21-2HZ
<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 21-2HZ	<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	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,043.33	26.90	239.10	1,978.17	-212.25	-354.64	1.50	1.50	0.00	239.10	
4,843.33	26.90	239.10	4,475.21	-862.81	-1,441.65	0.00	0.00	0.00	0.00	
6,188.33	0.00	0.00	5,771.34	-1,022.00	-1,707.63	2.00	-2.00	8.99	180.00	
7,488.80	0.00	0.00	7,071.80	-1,022.00	-1,707.63	0.00	0.00	0.00	0.00	
8,615.58	90.14	354.88	7,788.00	-306.88	-1,771.67	8.00	8.00	-0.45	354.88	
11,287.53	90.14	354.88	7,781.36	2,354.41	-2,010.00	0.00	0.00	0.00	0.00	WINDSOCK 21-2HZ_
11,642.32	90.14	0.20	7,780.48	2,708.75	-2,025.20	1.50	0.00	1.50	89.99	
19,082.13	90.14	0.20	7,762.00	10,148.48	-1,998.64	0.00	0.00	0.00	0.00	WINDSOCK 21-2HZ_

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-2HZ
<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 21-2HZ	<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
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 250.00ft									
300.00	0.75	239.10	300.00	-0.17	-0.28	-0.16	1.50	1.50	0.00
400.00	2.25	239.10	399.96	-1.51	-2.53	-1.45	1.50	1.50	0.00
500.00	3.75	239.10	499.82	-4.20	-7.02	-4.02	1.50	1.50	0.00
600.00	5.25	239.10	599.51	-8.23	-13.75	-7.87	1.50	1.50	0.00
700.00	6.75	239.10	698.96	-13.60	-22.72	-13.00	1.50	1.50	0.00
800.00	8.25	239.10	798.10	-20.30	-33.92	-19.41	1.50	1.50	0.00
900.00	9.75	239.10	896.87	-28.33	-47.34	-27.09	1.50	1.50	0.00
1,000.00	11.25	239.10	995.19	-37.69	-62.98	-36.04	1.50	1.50	0.00
1,100.00	12.75	239.10	1,093.00	-48.37	-80.82	-46.25	1.50	1.50	0.00
1,200.00	14.25	239.10	1,190.24	-60.36	-100.85	-57.71	1.50	1.50	0.00
1,300.00	15.75	239.10	1,286.83	-73.65	-123.06	-70.42	1.50	1.50	0.00
1,323.06	16.10	239.10	1,309.00	-76.90	-128.48	-73.53	1.50	1.50	0.00
Fox Hills									
1,400.00	17.25	239.10	1,382.71	-88.23	-147.43	-84.37	1.50	1.50	0.00
1,500.00	18.75	239.10	1,477.81	-104.10	-173.94	-99.54	1.50	1.50	0.00
1,523.46	19.10	239.10	1,500.00	-108.01	-180.47	-103.28	1.50	1.50	0.00
9 5/8" Csg									
1,600.00	20.25	239.10	1,572.07	-121.24	-202.58	-115.93	1.50	1.50	0.00
1,700.00	21.75	239.10	1,665.43	-139.65	-233.33	-133.53	1.50	1.50	0.00
1,800.00	23.25	239.10	1,757.81	-159.30	-266.17	-152.32	1.50	1.50	0.00
1,900.00	24.75	239.10	1,849.16	-180.18	-301.07	-172.30	1.50	1.50	0.00
2,000.00	26.25	239.10	1,939.42	-202.29	-338.01	-193.44	1.50	1.50	0.00
2,043.33	26.90	239.10	1,978.17	-212.25	-354.64	-202.95	1.50	1.50	0.00
Hold Tangent @ 2043.33ft									
2,100.00	26.90	239.10	2,028.71	-225.41	-376.64	-215.54	0.00	0.00	0.00
2,200.00	26.90	239.10	2,117.89	-248.65	-415.46	-237.76	0.00	0.00	0.00
2,300.00	26.90	239.10	2,207.07	-271.88	-454.28	-259.98	0.00	0.00	0.00
2,400.00	26.90	239.10	2,296.25	-295.12	-493.11	-282.20	0.00	0.00	0.00
2,500.00	26.90	239.10	2,385.43	-318.35	-531.93	-304.41	0.00	0.00	0.00
2,600.00	26.90	239.10	2,474.61	-341.59	-570.75	-326.63	0.00	0.00	0.00
2,700.00	26.90	239.10	2,563.79	-364.82	-609.57	-348.85	0.00	0.00	0.00
2,800.00	26.90	239.10	2,652.97	-388.06	-648.39	-371.06	0.00	0.00	0.00
2,900.00	26.90	239.10	2,742.15	-411.29	-687.21	-393.28	0.00	0.00	0.00
3,000.00	26.90	239.10	2,831.33	-434.52	-726.04	-415.50	0.00	0.00	0.00
3,100.00	26.90	239.10	2,920.51	-457.76	-764.86	-437.72	0.00	0.00	0.00
3,200.00	26.90	239.10	3,009.69	-480.99	-803.68	-459.93	0.00	0.00	0.00
3,300.00	26.90	239.10	3,098.87	-504.23	-842.50	-482.15	0.00	0.00	0.00
3,400.00	26.90	239.10	3,188.05	-527.46	-881.32	-504.37	0.00	0.00	0.00
3,500.00	26.90	239.10	3,277.23	-550.70	-920.15	-526.58	0.00	0.00	0.00
3,600.00	26.90	239.10	3,366.40	-573.93	-958.97	-548.80	0.00	0.00	0.00
3,700.00	26.90	239.10	3,455.58	-597.16	-997.79	-571.02	0.00	0.00	0.00
3,800.00	26.90	239.10	3,544.76	-620.40	-1,036.61	-593.23	0.00	0.00	0.00
3,900.00	26.90	239.10	3,633.94	-643.63	-1,075.43	-615.45	0.00	0.00	0.00
4,000.00	26.90	239.10	3,723.12	-666.87	-1,114.25	-637.67	0.00	0.00	0.00
4,100.00	26.90	239.10	3,812.30	-690.10	-1,153.08	-659.89	0.00	0.00	0.00
4,200.00	26.90	239.10	3,901.48	-713.34	-1,191.90	-682.10	0.00	0.00	0.00
4,300.00	26.90	239.10	3,990.66	-736.57	-1,230.72	-704.32	0.00	0.00	0.00
4,400.00	26.90	239.10	4,079.84	-759.81	-1,269.54	-726.54	0.00	0.00	0.00
4,500.00	26.90	239.10	4,169.02	-783.04	-1,308.36	-748.75	0.00	0.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-2HZ
<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 21-2HZ	<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	26.90	239.10	4,258.20	-806.27	-1,347.19	-770.97	0.00	0.00	0.00
4,700.00	26.90	239.10	4,347.38	-829.51	-1,386.01	-793.19	0.00	0.00	0.00
4,800.00	26.90	239.10	4,436.56	-852.74	-1,424.83	-815.41	0.00	0.00	0.00
4,821.80	26.90	239.10	4,456.00	-857.81	-1,433.29	-820.25	0.00	0.00	0.00
<b>Parkman</b>									
4,843.33	26.90	239.10	4,475.21	-862.81	-1,441.65	-825.03	0.00	0.00	0.00
<b>Begin Drop @ 4843.33ft</b>									
4,900.00	25.77	239.10	4,525.99	-875.72	-1,463.22	-837.38	2.00	-2.00	0.00
5,000.00	23.77	239.10	4,616.79	-897.23	-1,499.17	-857.95	2.00	-2.00	0.00
5,100.00	21.77	239.10	4,708.99	-917.10	-1,532.37	-876.95	2.00	-2.00	0.00
5,200.00	19.77	239.10	4,802.49	-935.31	-1,562.79	-894.36	2.00	-2.00	0.00
5,300.00	17.77	239.10	4,897.17	-951.83	-1,590.40	-910.16	2.00	-2.00	0.00
5,400.00	15.77	239.10	4,992.91	-966.65	-1,615.15	-924.32	2.00	-2.00	0.00
5,500.00	13.77	239.10	5,089.61	-979.73	-1,637.02	-936.84	2.00	-2.00	0.00
5,600.00	11.77	239.10	5,187.13	-991.08	-1,655.98	-947.69	2.00	-2.00	0.00
5,700.00	9.77	239.10	5,285.36	-1,000.67	-1,672.01	-956.86	2.00	-2.00	0.00
5,800.00	7.77	239.10	5,384.19	-1,008.50	-1,685.08	-964.34	2.00	-2.00	0.00
5,900.00	5.77	239.10	5,483.49	-1,014.55	-1,695.19	-970.13	2.00	-2.00	0.00
6,000.00	3.77	239.10	5,583.14	-1,018.82	-1,702.32	-974.21	2.00	-2.00	0.00
6,100.00	1.77	239.10	5,683.02	-1,021.30	-1,706.46	-976.58	2.00	-2.00	0.00
6,117.99	1.41	239.10	5,701.00	-1,021.55	-1,706.89	-976.82	2.00	-2.00	0.00
<b>Sussex</b>									
6,188.33	0.00	0.00	5,771.34	-1,022.00	-1,707.63	-977.25	2.00	-2.00	171.87
<b>End Drop @ 6188.33ft</b>									
6,200.00	0.00	0.00	5,783.00	-1,022.00	-1,707.63	-977.25	0.00	0.00	0.00
6,300.00	0.00	0.00	5,883.00	-1,022.00	-1,707.63	-977.25	0.00	0.00	0.00
6,400.00	0.00	0.00	5,983.00	-1,022.00	-1,707.63	-977.25	0.00	0.00	0.00
6,500.00	0.00	0.00	6,083.00	-1,022.00	-1,707.63	-977.25	0.00	0.00	0.00
6,600.00	0.00	0.00	6,183.00	-1,022.00	-1,707.63	-977.25	0.00	0.00	0.00
6,700.00	0.00	0.00	6,283.00	-1,022.00	-1,707.63	-977.25	0.00	0.00	0.00
6,800.00	0.00	0.00	6,383.00	-1,022.00	-1,707.63	-977.25	0.00	0.00	0.00
6,900.00	0.00	0.00	6,483.00	-1,022.00	-1,707.63	-977.25	0.00	0.00	0.00
7,000.00	0.00	0.00	6,583.00	-1,022.00	-1,707.63	-977.25	0.00	0.00	0.00
7,100.00	0.00	0.00	6,683.00	-1,022.00	-1,707.63	-977.25	0.00	0.00	0.00
7,200.00	0.00	0.00	6,783.00	-1,022.00	-1,707.63	-977.25	0.00	0.00	0.00
7,300.00	0.00	0.00	6,883.00	-1,022.00	-1,707.63	-977.25	0.00	0.00	0.00
7,400.00	0.00	0.00	6,983.00	-1,022.00	-1,707.63	-977.25	0.00	0.00	0.00
7,488.80	0.00	0.00	7,071.80	-1,022.00	-1,707.63	-977.25	0.00	0.00	0.00
<b>KOP @ 7488.80ft :: DLS = 8°/100'</b>									
7,500.00	0.90	354.88	7,083.00	-1,021.91	-1,707.64	-977.16	8.00	8.00	-45.69
7,600.00	8.90	354.88	7,182.56	-1,013.42	-1,708.40	-968.65	8.00	8.00	0.00
7,700.00	16.90	354.88	7,279.96	-991.20	-1,710.39	-946.40	8.00	8.00	0.00
7,800.00	24.90	354.88	7,373.30	-955.71	-1,713.57	-910.83	8.00	8.00	0.00
7,900.00	32.90	354.88	7,460.78	-907.62	-1,717.88	-862.64	8.00	8.00	0.00
7,992.51	40.30	354.88	7,535.00	-852.73	-1,722.79	-807.64	8.00	8.00	0.00
<b>Sharon Springs</b>									
8,000.00	40.90	354.88	7,540.69	-847.87	-1,723.23	-802.77	8.00	8.00	0.00
8,035.59	43.74	354.88	7,567.00	-824.01	-1,725.36	-778.86	8.00	8.00	0.00
<b>Niobrara</b>									
8,100.00	48.90	354.88	7,611.47	-777.63	-1,729.52	-732.39	8.00	8.00	0.00
8,200.00	56.90	354.88	7,671.75	-698.25	-1,736.62	-652.86	8.00	8.00	0.00
8,300.00	64.90	354.88	7,720.35	-611.30	-1,744.41	-565.73	8.00	8.00	0.00
8,321.06	66.58	354.88	7,729.00	-592.18	-1,746.12	-546.57	8.00	8.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-2HZ
<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 21-2HZ	<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	72.90	354.88	7,756.32	-518.45	-1,752.73	-472.70	8.00	8.00	0.00
8,500.00	80.90	354.88	7,778.98	-421.52	-1,761.41	-375.58	8.00	8.00	0.00
8,600.00	88.90	354.88	7,787.87	-322.40	-1,770.28	-276.26	8.00	8.00	0.00
8,615.58	90.14	354.88	7,788.00	-306.88	-1,771.67	-260.71	8.00	8.00	0.00
<b>End Build @ 8615.58ft - Top of Production</b>									
8,700.00	90.14	354.88	7,787.79	-222.80	-1,779.20	-176.46	0.00	0.00	0.00
8,800.00	90.14	354.88	7,787.54	-123.20	-1,788.12	-76.66	0.00	0.00	0.00
8,900.00	90.14	354.88	7,787.29	-23.60	-1,797.04	23.14	0.00	0.00	0.00
9,000.00	90.14	354.88	7,787.04	76.00	-1,805.96	122.94	0.00	0.00	0.00
9,100.00	90.14	354.88	7,786.79	175.61	-1,814.88	222.74	0.00	0.00	0.00
9,200.00	90.14	354.88	7,786.55	275.21	-1,823.80	322.54	0.00	0.00	0.00
9,300.00	90.14	354.88	7,786.30	374.81	-1,832.72	422.34	0.00	0.00	0.00
9,400.00	90.14	354.88	7,786.05	474.41	-1,841.64	522.14	0.00	0.00	0.00
9,500.00	90.14	354.88	7,785.80	574.01	-1,850.56	621.94	0.00	0.00	0.00
9,600.00	90.14	354.88	7,785.55	673.61	-1,859.48	721.73	0.00	0.00	0.00
9,700.00	90.14	354.88	7,785.30	773.21	-1,868.40	821.53	0.00	0.00	0.00
9,800.00	90.14	354.88	7,785.06	872.81	-1,877.32	921.33	0.00	0.00	0.00
9,900.00	90.14	354.88	7,784.81	972.41	-1,886.24	1,021.13	0.00	0.00	0.00
10,000.00	90.14	354.88	7,784.56	1,072.02	-1,895.16	1,120.93	0.00	0.00	0.00
10,100.00	90.14	354.88	7,784.31	1,171.62	-1,904.08	1,220.73	0.00	0.00	0.00
10,200.00	90.14	354.88	7,784.06	1,271.22	-1,913.00	1,320.53	0.00	0.00	0.00
10,300.00	90.14	354.88	7,783.81	1,370.82	-1,921.92	1,420.33	0.00	0.00	0.00
10,400.00	90.14	354.88	7,783.57	1,470.42	-1,930.84	1,520.13	0.00	0.00	0.00
10,500.00	90.14	354.88	7,783.32	1,570.02	-1,939.76	1,619.93	0.00	0.00	0.00
10,600.00	90.14	354.88	7,783.07	1,669.62	-1,948.68	1,719.73	0.00	0.00	0.00
10,700.00	90.14	354.88	7,782.82	1,769.22	-1,957.59	1,819.53	0.00	0.00	0.00
10,800.00	90.14	354.88	7,782.57	1,868.82	-1,966.51	1,919.33	0.00	0.00	0.00
10,900.00	90.14	354.88	7,782.32	1,968.43	-1,975.43	2,019.13	0.00	0.00	0.00
11,000.00	90.14	354.88	7,782.07	2,068.03	-1,984.35	2,118.93	0.00	0.00	0.00
11,100.00	90.14	354.88	7,781.83	2,167.63	-1,993.27	2,218.73	0.00	0.00	0.00
11,200.00	90.14	354.88	7,781.58	2,267.23	-2,002.19	2,318.52	0.00	0.00	0.00
11,287.53	90.14	354.88	7,781.36	2,354.41	-2,010.00	2,405.88	0.00	0.00	0.00
<b>Begin Turn to BHL @ 11287.53ft</b>									
11,300.00	90.14	355.07	7,781.33	2,366.83	-2,011.09	2,418.33	1.50	0.00	1.50
11,400.00	90.14	356.57	7,781.08	2,466.56	-2,018.38	2,518.21	1.50	0.00	1.50
11,500.00	90.14	358.07	7,780.83	2,566.45	-2,023.06	2,618.19	1.50	0.00	1.50
11,600.00	90.14	359.57	7,780.58	2,666.43	-2,025.12	2,718.18	1.50	0.00	1.50
11,642.32	90.14	0.20	7,780.48	2,708.75	-2,025.20	2,760.49	1.50	0.00	1.50
<b>End Turn @ 11642.32ft</b>									
11,700.00	90.14	0.20	7,780.33	2,766.43	-2,024.99	2,818.14	0.00	0.00	0.00
11,800.00	90.14	0.20	7,780.09	2,866.42	-2,024.64	2,918.10	0.00	0.00	0.00
11,900.00	90.14	0.20	7,779.84	2,966.42	-2,024.28	3,018.06	0.00	0.00	0.00
12,000.00	90.14	0.20	7,779.59	3,066.42	-2,023.92	3,118.01	0.00	0.00	0.00
12,100.00	90.14	0.20	7,779.34	3,166.42	-2,023.57	3,217.97	0.00	0.00	0.00
12,200.00	90.14	0.20	7,779.09	3,266.42	-2,023.21	3,317.92	0.00	0.00	0.00
12,300.00	90.14	0.20	7,778.84	3,366.42	-2,022.85	3,417.88	0.00	0.00	0.00
12,400.00	90.14	0.20	7,778.60	3,466.42	-2,022.50	3,517.84	0.00	0.00	0.00
12,500.00	90.14	0.20	7,778.35	3,566.42	-2,022.14	3,617.79	0.00	0.00	0.00
12,600.00	90.14	0.20	7,778.10	3,666.42	-2,021.78	3,717.75	0.00	0.00	0.00
12,700.00	90.14	0.20	7,777.85	3,766.42	-2,021.43	3,817.70	0.00	0.00	0.00
12,800.00	90.14	0.20	7,777.60	3,866.41	-2,021.07	3,917.66	0.00	0.00	0.00
12,900.00	90.14	0.20	7,777.35	3,966.41	-2,020.71	4,017.62	0.00	0.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-2HZ
<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 21-2HZ	<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)
13,000.00	90.14	0.20	7,777.11	4,066.41	-2,020.35	4,117.57	0.00	0.00	0.00
13,100.00	90.14	0.20	7,776.86	4,166.41	-2,020.00	4,217.53	0.00	0.00	0.00
13,200.00	90.14	0.20	7,776.61	4,266.41	-2,019.64	4,317.48	0.00	0.00	0.00
13,300.00	90.14	0.20	7,776.36	4,366.41	-2,019.28	4,417.44	0.00	0.00	0.00
13,400.00	90.14	0.20	7,776.11	4,466.41	-2,018.93	4,517.40	0.00	0.00	0.00
13,500.00	90.14	0.20	7,775.86	4,566.41	-2,018.57	4,617.35	0.00	0.00	0.00
13,600.00	90.14	0.20	7,775.62	4,666.41	-2,018.21	4,717.31	0.00	0.00	0.00
13,700.00	90.14	0.20	7,775.37	4,766.41	-2,017.86	4,817.26	0.00	0.00	0.00
13,800.00	90.14	0.20	7,775.12	4,866.41	-2,017.50	4,917.22	0.00	0.00	0.00
13,900.00	90.14	0.20	7,774.87	4,966.40	-2,017.14	5,017.18	0.00	0.00	0.00
14,000.00	90.14	0.20	7,774.62	5,066.40	-2,016.78	5,117.13	0.00	0.00	0.00
14,100.00	90.14	0.20	7,774.37	5,166.40	-2,016.43	5,217.09	0.00	0.00	0.00
14,200.00	90.14	0.20	7,774.13	5,266.40	-2,016.07	5,317.04	0.00	0.00	0.00
14,300.00	90.14	0.20	7,773.88	5,366.40	-2,015.71	5,417.00	0.00	0.00	0.00
14,400.00	90.14	0.20	7,773.63	5,466.40	-2,015.36	5,516.96	0.00	0.00	0.00
14,500.00	90.14	0.20	7,773.38	5,566.40	-2,015.00	5,616.91	0.00	0.00	0.00
14,600.00	90.14	0.20	7,773.13	5,666.40	-2,014.64	5,716.87	0.00	0.00	0.00
14,700.00	90.14	0.20	7,772.88	5,766.40	-2,014.29	5,816.82	0.00	0.00	0.00
14,800.00	90.14	0.20	7,772.64	5,866.40	-2,013.93	5,916.78	0.00	0.00	0.00
14,900.00	90.14	0.20	7,772.39	5,966.39	-2,013.57	6,016.74	0.00	0.00	0.00
15,000.00	90.14	0.20	7,772.14	6,066.39	-2,013.21	6,116.69	0.00	0.00	0.00
15,100.00	90.14	0.20	7,771.89	6,166.39	-2,012.86	6,216.65	0.00	0.00	0.00
15,200.00	90.14	0.20	7,771.64	6,266.39	-2,012.50	6,316.60	0.00	0.00	0.00
15,300.00	90.14	0.20	7,771.39	6,366.39	-2,012.14	6,416.56	0.00	0.00	0.00
15,400.00	90.14	0.20	7,771.15	6,466.39	-2,011.79	6,516.52	0.00	0.00	0.00
15,500.00	90.14	0.20	7,770.90	6,566.39	-2,011.43	6,616.47	0.00	0.00	0.00
15,600.00	90.14	0.20	7,770.65	6,666.39	-2,011.07	6,716.43	0.00	0.00	0.00
15,700.00	90.14	0.20	7,770.40	6,766.39	-2,010.72	6,816.38	0.00	0.00	0.00
15,800.00	90.14	0.20	7,770.15	6,866.39	-2,010.36	6,916.34	0.00	0.00	0.00
15,900.00	90.14	0.20	7,769.90	6,966.39	-2,010.00	7,016.29	0.00	0.00	0.00
16,000.00	90.14	0.20	7,769.66	7,066.38	-2,009.65	7,116.25	0.00	0.00	0.00
16,100.00	90.14	0.20	7,769.41	7,166.38	-2,009.29	7,216.21	0.00	0.00	0.00
16,200.00	90.14	0.20	7,769.16	7,266.38	-2,008.93	7,316.16	0.00	0.00	0.00
16,300.00	90.14	0.20	7,768.91	7,366.38	-2,008.57	7,416.12	0.00	0.00	0.00
16,400.00	90.14	0.20	7,768.66	7,466.38	-2,008.22	7,516.07	0.00	0.00	0.00
16,500.00	90.14	0.20	7,768.41	7,566.38	-2,007.86	7,616.03	0.00	0.00	0.00
16,600.00	90.14	0.20	7,768.16	7,666.38	-2,007.50	7,715.99	0.00	0.00	0.00
16,700.00	90.14	0.20	7,767.92	7,766.38	-2,007.15	7,815.94	0.00	0.00	0.00
16,800.00	90.14	0.20	7,767.67	7,866.38	-2,006.79	7,915.90	0.00	0.00	0.00
16,900.00	90.14	0.20	7,767.42	7,966.38	-2,006.43	8,015.85	0.00	0.00	0.00
17,000.00	90.14	0.20	7,767.17	8,066.38	-2,006.08	8,115.81	0.00	0.00	0.00
17,100.00	90.14	0.20	7,766.92	8,166.37	-2,005.72	8,215.77	0.00	0.00	0.00
17,200.00	90.14	0.20	7,766.67	8,266.37	-2,005.36	8,315.72	0.00	0.00	0.00
17,300.00	90.14	0.20	7,766.43	8,366.37	-2,005.00	8,415.68	0.00	0.00	0.00
17,400.00	90.14	0.20	7,766.18	8,466.37	-2,004.65	8,515.63	0.00	0.00	0.00
17,500.00	90.14	0.20	7,765.93	8,566.37	-2,004.29	8,615.59	0.00	0.00	0.00
17,600.00	90.14	0.20	7,765.68	8,666.37	-2,003.93	8,715.55	0.00	0.00	0.00
17,700.00	90.14	0.20	7,765.43	8,766.37	-2,003.58	8,815.50	0.00	0.00	0.00
17,800.00	90.14	0.20	7,765.18	8,866.37	-2,003.22	8,915.46	0.00	0.00	0.00
17,900.00	90.14	0.20	7,764.94	8,966.37	-2,002.86	9,015.41	0.00	0.00	0.00
18,000.00	90.14	0.20	7,764.69	9,066.37	-2,002.51	9,115.37	0.00	0.00	0.00
18,100.00	90.14	0.20	7,764.44	9,166.36	-2,002.15	9,215.33	0.00	0.00	0.00
18,200.00	90.14	0.20	7,764.19	9,266.36	-2,001.79	9,315.28	0.00	0.00	0.00
18,300.00	90.14	0.20	7,763.94	9,366.36	-2,001.43	9,415.24	0.00	0.00	0.00



# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-2HZ
<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 21-2HZ	<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)	
18,400.00	90.14	0.20	7,763.69	9,466.36	-2,001.08	9,515.19	0.00	0.00	0.00	
18,500.00	90.14	0.20	7,763.45	9,566.36	-2,000.72	9,615.15	0.00	0.00	0.00	
18,600.00	90.14	0.20	7,763.20	9,666.36	-2,000.36	9,715.11	0.00	0.00	0.00	
18,700.00	90.14	0.20	7,762.95	9,766.36	-2,000.01	9,815.06	0.00	0.00	0.00	
18,800.00	90.14	0.20	7,762.70	9,866.36	-1,999.65	9,915.02	0.00	0.00	0.00	
18,900.00	90.14	0.20	7,762.45	9,966.36	-1,999.29	10,014.97	0.00	0.00	0.00	
19,000.00	90.14	0.20	7,762.20	10,066.36	-1,998.94	10,114.93	0.00	0.00	0.00	
19,082.13	90.14	0.20	7,762.00	10,148.48	-1,998.64	10,197.02	0.00	0.00	0.00	
TD Well @ 19082.13ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,523.46	1,500.00	9 5/8" Csg	9-5/8	13-1/2	
8,615.58	7,788.00	Top of Production	5-1/2	7-7/8	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,323.06	1,309.00	Fox Hills				
4,821.80	4,456.00	Parkman				
6,117.99	5,701.00	Sussex				
7,992.51	7,535.00	Sharon Springs				
8,035.59	7,567.00	Niobrara				
8,321.06	7,729.00	Nio B				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
250.00	250.00	0.00	0.00	Begin Nudge @ 250.00ft	
2,043.33	1,978.17	-212.25	-354.64	Hold Tangent @ 2043.33ft	
4,843.33	4,475.21	-862.81	-1,441.65	Begin Drop @ 4843.33ft	
6,188.33	5,771.34	-1,022.00	-1,707.63	End Drop @ 6188.33ft	
7,488.80	7,071.80	-1,022.00	-1,707.63	KOP @ 7488.80ft :: DLS = 8°/100'	
8,615.58	7,788.00	-306.88	-1,771.67	End Build @ 8615.58ft	
11,287.53	7,781.36	2,354.41	-2,010.00	Begin Turn to BHL @ 11287.53ft	
11,642.32	7,780.48	2,708.75	-2,025.20	End Turn @ 11642.32ft	
19,082.13	7,762.00	10,148.48	-1,998.64	TD Well @ 19082.13ft	