

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N**

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

**WINDSOCK 21-5HZ**

## **Plan A**

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

SHL Lat/Long: 40.030265/-105.007460

Survey Program: MWD+IFR

## **Standard Planning Report**

**26 November, 2018**

Project: WELD-NAD83-UTMFT13N  
Site: 1N-68W-21 WINDSOCK 15-21HZ PAD  
Well: WINDSOCK 21-5HZ  
Wellbore: Plan A  
Design: Permit Rev-1

## US ROCKIES WATTENBERG PLANNING

### CASING DETAILS

TVD	MD	Name	Size
1500.00	1519.99	9 5/8" Csg	9-5/8
7992.00	8538.86	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	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
3	1390.00	16.35	200.00	1375.27	-145.15	-52.83	1.50	200.00	-143.51	
4	4190.00	16.35	200.00	4062.03	-885.83	-322.42	0.00	0.00	-875.81	
5	5007.50	0.00	0.00	4868.48	-994.70	-362.04	2.00	180.00	-983.45	
6	7414.82	0.00	0.00	7275.80	-994.70	-362.04	0.00	0.00	-983.45	
7	8538.86	89.92	356.75	7992.00	-280.61	-402.57	8.00	356.75	-268.47	
8	10610.80	89.92	356.75	7994.78	1788.00	-520.00	0.00	0.00	1802.72	WINDSOCK 21-5HZ_target
9	10810.81	89.92	359.75	7995.05	1987.90	-526.10	1.50	90.01	2002.71	
10	13740.60	89.92	359.75	7999.00	4917.65	-538.82	0.00	0.00	4931.54	WINDSOCK 21-5HZ_BHL

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
WINDSOCK 21-5HZ_SHL	0.00	0.00	0.00	40.030265	-105.007460
WINDSOCK 21-5HZ_BHL	7999.00	4917.65	-538.82	40.043770	-105.009385

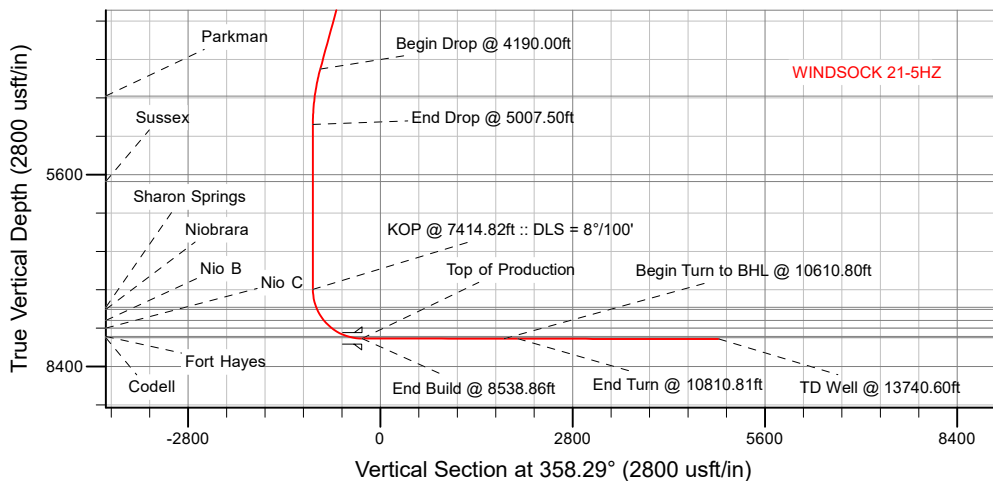
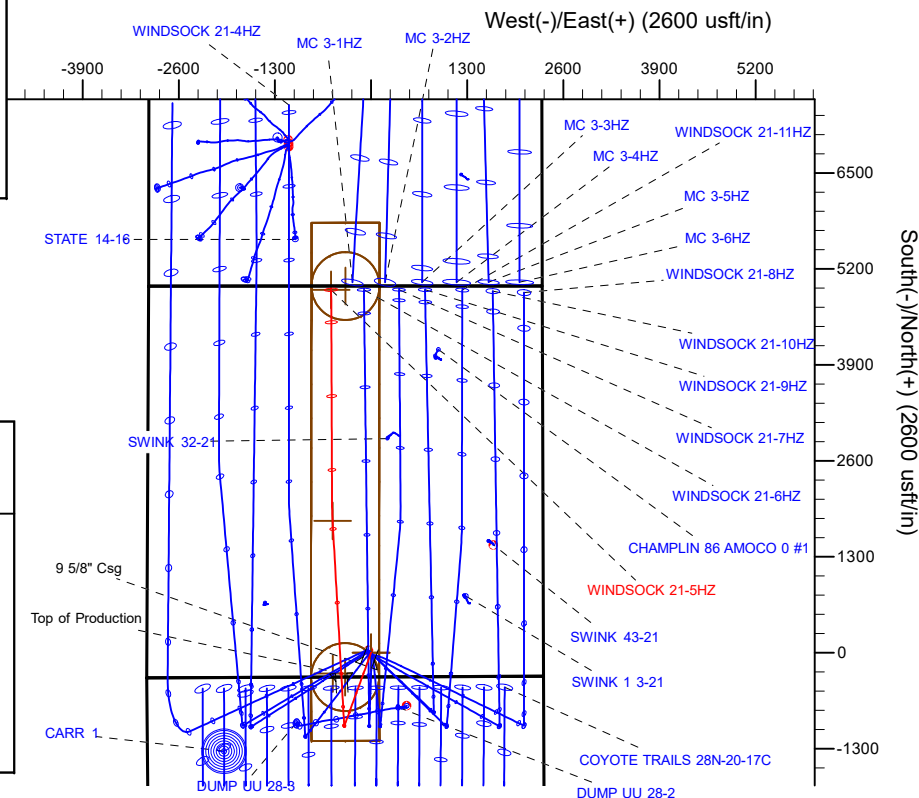
**SHL**  
327' FSL  
2332' FEL

**HEEL**  
50' FSL  
2631' FWL

**BHL**  
50' FNL  
2470' FWL

### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1309.00	1321.12	Fox Hills
4456.00	4593.58	Parkman
5701.00	5840.02	Sussex
7535.00	7680.04	Sharon Springs
7567.00	7714.70	Niobrara
7729.00	7905.51	Nio B
7840.00	8064.53	Nio C
7961.00	8328.32	Fort Hayes
7982.00	8419.98	Codell



### WELL DETAILS: WINDSOCK 21-5HZ

GL = 5222'

RKB = 17' @ 5239.00usft (Drilling Rig)

Plan: Permit Rev-1 (WINDSOCK 21-5HZ/Plan A)

Date: 11/27/2018

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-5HZ
<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 21-5HZ	<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-21 WINDSOCK 15-21HZ PAD			
<b>Site Position:</b>		<b>Northing:</b>	14,537,796.91 usft	<b>Latitude:</b> 40.030382
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,638,286.42 usft	<b>Longitude:</b> -105.007610
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b> 0.00 °

Well	WINDSOCK 21-5HZ				
Well Position	+N/-S	-42.60 usft	Northing:	14,537,754.31 usft	Latitude: 40.030265
	+E/-W	41.99 usft	Easting:	1,638,328.41 usft	Longitude: -105.007460
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	52,008.61594116

<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	358.29

<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	13,740.60	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 21-5HZ
<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 21-5HZ	<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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,390.00	16.35	200.00	1,375.27	-145.15	-52.83	1.50	1.50	0.00	200.00	
4,190.00	16.35	200.00	4,062.03	-885.83	-322.42	0.00	0.00	0.00	0.00	
5,007.50	0.00	0.00	4,868.49	-994.70	-362.04	2.00	-2.00	0.00	180.00	
7,414.82	0.00	0.00	7,275.81	-994.70	-362.04	0.00	0.00	0.00	0.00	
8,538.86	89.92	356.75	7,992.00	-280.61	-402.58	8.00	8.00	-0.29	356.75	
10,610.80	89.92	356.75	7,994.78	1,788.00	-520.00	0.00	0.00	0.00	0.00	WINDSOCK 21-5HZ_
10,810.81	89.92	359.75	7,995.05	1,987.90	-526.10	1.50	0.00	1.50	90.01	
13,740.60	89.92	359.75	7,999.00	4,917.65	-538.82	0.00	0.00	0.00	0.00	WINDSOCK 21-5HZ_

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<b>Site:</b>	1N-68W-21 WINDSOCK 15-21HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	WINDSOCK 21-5HZ	<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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 300.00ft									
400.00	1.50	200.00	399.99	-1.23	-0.45	-1.22	1.50	1.50	0.00
500.00	3.00	200.00	499.91	-4.92	-1.79	-4.86	1.50	1.50	0.00
600.00	4.50	200.00	599.69	-11.06	-4.03	-10.94	1.50	1.50	0.00
700.00	6.00	200.00	699.27	-19.66	-7.16	-19.44	1.50	1.50	0.00
800.00	7.50	200.00	798.57	-30.71	-11.18	-30.36	1.50	1.50	0.00
900.00	9.00	200.00	897.54	-44.19	-16.08	-43.69	1.50	1.50	0.00
1,000.00	10.50	200.00	996.09	-60.10	-21.88	-59.42	1.50	1.50	0.00
1,100.00	12.00	200.00	1,094.16	-78.44	-28.55	-77.55	1.50	1.50	0.00
1,200.00	13.50	200.00	1,191.70	-99.17	-36.10	-98.05	1.50	1.50	0.00
1,300.00	15.00	200.00	1,288.62	-122.30	-44.52	-120.92	1.50	1.50	0.00
1,321.12	15.32	200.00	1,309.00	-127.49	-46.40	-126.05	1.50	1.50	0.00
Fox Hills									
1,390.00	16.35	200.00	1,375.27	-145.15	-52.83	-143.51	1.50	1.50	0.00
Hold Tangent @ 1390.00ft									
1,400.00	16.35	200.00	1,384.86	-147.80	-53.79	-146.13	0.00	0.00	0.00
1,500.00	16.35	200.00	1,480.82	-174.25	-63.42	-172.28	0.00	0.00	0.00
1,519.99	16.35	200.00	1,500.00	-179.54	-65.35	-177.51	0.00	0.00	0.00
9 5/8" Csg									
1,600.00	16.35	200.00	1,576.77	-200.70	-73.05	-198.44	0.00	0.00	0.00
1,700.00	16.35	200.00	1,672.73	-227.16	-82.68	-224.59	0.00	0.00	0.00
1,800.00	16.35	200.00	1,768.69	-253.61	-92.31	-250.74	0.00	0.00	0.00
1,900.00	16.35	200.00	1,864.64	-280.06	-101.93	-276.90	0.00	0.00	0.00
2,000.00	16.35	200.00	1,960.60	-306.52	-111.56	-303.05	0.00	0.00	0.00
2,100.00	16.35	200.00	2,056.55	-332.97	-121.19	-329.20	0.00	0.00	0.00
2,200.00	16.35	200.00	2,152.51	-359.42	-130.82	-355.36	0.00	0.00	0.00
2,300.00	16.35	200.00	2,248.47	-385.87	-140.45	-381.51	0.00	0.00	0.00
2,400.00	16.35	200.00	2,344.42	-412.33	-150.07	-407.66	0.00	0.00	0.00
2,500.00	16.35	200.00	2,440.38	-438.78	-159.70	-433.82	0.00	0.00	0.00
2,600.00	16.35	200.00	2,536.33	-465.23	-169.33	-459.97	0.00	0.00	0.00
2,700.00	16.35	200.00	2,632.29	-491.68	-178.96	-486.13	0.00	0.00	0.00
2,800.00	16.35	200.00	2,728.25	-518.14	-188.59	-512.28	0.00	0.00	0.00
2,900.00	16.35	200.00	2,824.20	-544.59	-198.21	-538.43	0.00	0.00	0.00
3,000.00	16.35	200.00	2,920.16	-571.04	-207.84	-564.59	0.00	0.00	0.00
3,100.00	16.35	200.00	3,016.11	-597.50	-217.47	-590.74	0.00	0.00	0.00
3,200.00	16.35	200.00	3,112.07	-623.95	-227.10	-616.89	0.00	0.00	0.00
3,300.00	16.35	200.00	3,208.03	-650.40	-236.73	-643.05	0.00	0.00	0.00
3,400.00	16.35	200.00	3,303.98	-676.85	-246.35	-669.20	0.00	0.00	0.00
3,500.00	16.35	200.00	3,399.94	-703.31	-255.98	-695.35	0.00	0.00	0.00
3,600.00	16.35	200.00	3,495.89	-729.76	-265.61	-721.51	0.00	0.00	0.00
3,700.00	16.35	200.00	3,591.85	-756.21	-275.24	-747.66	0.00	0.00	0.00
3,800.00	16.35	200.00	3,687.81	-782.66	-284.87	-773.82	0.00	0.00	0.00
3,900.00	16.35	200.00	3,783.76	-809.12	-294.49	-799.97	0.00	0.00	0.00
4,000.00	16.35	200.00	3,879.72	-835.57	-304.12	-826.12	0.00	0.00	0.00
4,100.00	16.35	200.00	3,975.67	-862.02	-313.75	-852.28	0.00	0.00	0.00
4,190.00	16.35	200.00	4,062.03	-885.83	-322.42	-875.81	0.00	0.00	0.00
Begin Drop @ 4190.00ft									
4,200.00	16.15	200.00	4,071.64	-888.46	-323.37	-878.41	2.00	-2.00	0.00
4,300.00	14.15	200.00	4,168.15	-913.02	-332.31	-902.69	2.00	-2.00	0.00
4,400.00	12.15	200.00	4,265.53	-934.39	-340.09	-923.83	2.00	-2.00	0.00

# Corporate Planning Report

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<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 21-5HZ	<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	10.15	200.00	4,363.64	-952.57	-346.71	-941.79	2.00	-2.00	0.00
4,593.58	8.28	200.00	4,456.00	-966.64	-351.83	-955.72	2.00	-2.00	0.00
Parkman									
4,600.00	8.15	200.00	4,462.36	-967.51	-352.14	-956.57	2.00	-2.00	0.00
4,700.00	6.15	200.00	4,561.58	-979.20	-356.40	-968.13	2.00	-2.00	0.00
4,800.00	4.15	200.00	4,661.17	-987.64	-359.47	-976.47	2.00	-2.00	0.00
4,900.00	2.15	200.00	4,761.01	-992.80	-361.35	-981.58	2.00	-2.00	0.00
5,000.00	0.15	200.00	4,860.99	-994.69	-362.04	-983.44	2.00	-2.00	0.00
5,007.50	0.00	0.00	4,868.49	-994.70	-362.04	-983.45	2.00	-2.00	0.00
End Drop @ 5007.50ft									
5,100.00	0.00	0.00	4,960.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
5,200.00	0.00	0.00	5,060.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
5,300.00	0.00	0.00	5,160.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
5,400.00	0.00	0.00	5,260.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
5,500.00	0.00	0.00	5,360.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
5,600.00	0.00	0.00	5,460.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
5,700.00	0.00	0.00	5,560.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
5,800.00	0.00	0.00	5,660.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
5,840.02	0.00	0.00	5,701.00	-994.70	-362.04	-983.45	0.00	0.00	0.00
Sussex									
5,900.00	0.00	0.00	5,760.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
6,000.00	0.00	0.00	5,860.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
6,100.00	0.00	0.00	5,960.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
6,200.00	0.00	0.00	6,060.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
6,300.00	0.00	0.00	6,160.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
6,400.00	0.00	0.00	6,260.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
6,500.00	0.00	0.00	6,360.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
6,600.00	0.00	0.00	6,460.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
6,700.00	0.00	0.00	6,560.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
6,800.00	0.00	0.00	6,660.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
6,900.00	0.00	0.00	6,760.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
7,000.00	0.00	0.00	6,860.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
7,100.00	0.00	0.00	6,960.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
7,200.00	0.00	0.00	7,060.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
7,300.00	0.00	0.00	7,160.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
7,400.00	0.00	0.00	7,260.99	-994.70	-362.04	-983.45	0.00	0.00	0.00
7,414.82	0.00	0.00	7,275.81	-994.70	-362.04	-983.45	0.00	0.00	0.00
KOP @ 7414.82ft :: DLS = 8°/100'									
7,500.00	6.81	356.75	7,360.78	-989.64	-362.33	-978.39	8.00	8.00	0.00
7,600.00	14.81	356.75	7,458.93	-970.93	-363.39	-959.65	8.00	8.00	0.00
7,680.04	21.22	356.75	7,535.00	-946.23	-364.79	-934.92	8.00	8.00	0.00
Sharon Springs									
7,700.00	22.81	356.75	7,553.51	-938.75	-365.22	-927.44	8.00	8.00	0.00
7,714.70	23.99	356.75	7,567.00	-932.93	-365.55	-921.60	8.00	8.00	0.00
Niobrara									
7,800.00	30.81	356.75	7,642.68	-893.75	-367.77	-882.38	8.00	8.00	0.00
7,900.00	38.81	356.75	7,724.72	-836.80	-371.00	-825.36	8.00	8.00	0.00
7,905.51	39.26	356.75	7,729.00	-833.33	-371.20	-821.88	8.00	8.00	0.00
Nio B									
8,000.00	46.81	356.75	7,798.01	-769.00	-374.85	-757.47	8.00	8.00	0.00
8,064.53	51.98	356.75	7,840.00	-720.10	-377.63	-708.51	8.00	8.00	0.00
Nio C									
8,100.00	54.81	356.75	7,861.15	-691.68	-379.24	-680.05	8.00	8.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-5HZ
<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 21-5HZ	<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)	
8,200.00	62.81	356.75	7,912.88	-606.34	-384.09	-594.60	8.00	8.00	0.00	
8,300.00	70.81	356.75	7,952.22	-514.63	-389.29	-502.79	8.00	8.00	0.00	
8,328.32	73.08	356.75	7,961.00	-487.75	-390.82	-475.87	8.00	8.00	0.00	
Fort Hayes										
8,400.00	78.81	356.75	7,978.40	-418.36	-394.76	-406.39	8.00	8.00	0.00	
8,419.98	80.41	356.75	7,982.00	-398.73	-395.87	-386.74	8.00	8.00	0.00	
Codell										
8,500.00	86.81	356.75	7,990.90	-319.39	-400.37	-307.30	8.00	8.00	0.00	
8,538.86	89.92	356.75	7,992.00	-280.61	-402.58	-268.47	8.00	8.00	0.00	
End Build @ 8538.86ft - Top of Production										
8,600.00	89.92	356.75	7,992.08	-219.57	-406.04	-207.35	0.00	0.00	0.00	
8,700.00	89.92	356.75	7,992.22	-119.73	-411.71	-107.39	0.00	0.00	0.00	
8,800.00	89.92	356.75	7,992.35	-19.89	-417.37	-7.42	0.00	0.00	0.00	
8,900.00	89.92	356.75	7,992.49	79.95	-423.04	92.54	0.00	0.00	0.00	
9,000.00	89.92	356.75	7,992.62	179.79	-428.71	192.50	0.00	0.00	0.00	
9,100.00	89.92	356.75	7,992.75	279.63	-434.38	292.47	0.00	0.00	0.00	
9,200.00	89.92	356.75	7,992.89	379.47	-440.04	392.43	0.00	0.00	0.00	
9,300.00	89.92	356.75	7,993.02	479.31	-445.71	492.39	0.00	0.00	0.00	
9,400.00	89.92	356.75	7,993.16	579.15	-451.38	592.36	0.00	0.00	0.00	
9,500.00	89.92	356.75	7,993.29	678.99	-457.05	692.32	0.00	0.00	0.00	
9,600.00	89.92	356.75	7,993.42	778.83	-462.71	792.29	0.00	0.00	0.00	
9,700.00	89.92	356.75	7,993.56	878.66	-468.38	892.25	0.00	0.00	0.00	
9,800.00	89.92	356.75	7,993.69	978.50	-474.05	992.21	0.00	0.00	0.00	
9,900.00	89.92	356.75	7,993.83	1,078.34	-479.72	1,092.18	0.00	0.00	0.00	
10,000.00	89.92	356.75	7,993.96	1,178.18	-485.38	1,192.14	0.00	0.00	0.00	
10,100.00	89.92	356.75	7,994.10	1,278.02	-491.05	1,292.11	0.00	0.00	0.00	
10,200.00	89.92	356.75	7,994.23	1,377.86	-496.72	1,392.07	0.00	0.00	0.00	
10,300.00	89.92	356.75	7,994.36	1,477.70	-502.39	1,492.03	0.00	0.00	0.00	
10,400.00	89.92	356.75	7,994.50	1,577.54	-508.05	1,592.00	0.00	0.00	0.00	
10,500.00	89.92	356.75	7,994.63	1,677.38	-513.72	1,691.96	0.00	0.00	0.00	
10,600.00	89.92	356.75	7,994.77	1,777.22	-519.39	1,791.92	0.00	0.00	0.00	
10,610.80	89.92	356.75	7,994.78	1,788.00	-520.00	1,802.72	0.00	0.00	0.00	
Begin Turn to BHL @ 10610.80ft										
10,700.00	89.92	358.09	7,994.90	1,877.11	-524.02	1,891.91	1.50	0.00	1.50	
10,800.00	89.92	359.59	7,995.03	1,977.08	-526.04	1,991.90	1.50	0.00	1.50	
10,810.81	89.92	359.75	7,995.05	1,987.90	-526.10	2,002.71	1.50	0.00	1.50	
End Turn @ 10810.81ft										
10,900.00	89.92	359.75	7,995.17	2,077.08	-526.49	2,091.87	0.00	0.00	0.00	
11,000.00	89.92	359.75	7,995.30	2,177.08	-526.92	2,191.84	0.00	0.00	0.00	
11,100.00	89.92	359.75	7,995.44	2,277.08	-527.36	2,291.80	0.00	0.00	0.00	
11,200.00	89.92	359.75	7,995.57	2,377.08	-527.79	2,391.77	0.00	0.00	0.00	
11,300.00	89.92	359.75	7,995.71	2,477.08	-528.23	2,491.74	0.00	0.00	0.00	
11,400.00	89.92	359.75	7,995.84	2,577.08	-528.66	2,591.71	0.00	0.00	0.00	
11,500.00	89.92	359.75	7,995.98	2,677.08	-529.09	2,691.67	0.00	0.00	0.00	
11,600.00	89.92	359.75	7,996.11	2,777.08	-529.53	2,791.64	0.00	0.00	0.00	
11,700.00	89.92	359.75	7,996.25	2,877.07	-529.96	2,891.61	0.00	0.00	0.00	
11,800.00	89.92	359.75	7,996.38	2,977.07	-530.40	2,991.58	0.00	0.00	0.00	
11,900.00	89.92	359.75	7,996.52	3,077.07	-530.83	3,091.54	0.00	0.00	0.00	
12,000.00	89.92	359.75	7,996.65	3,177.07	-531.27	3,191.51	0.00	0.00	0.00	
12,100.00	89.92	359.75	7,996.79	3,277.07	-531.70	3,291.48	0.00	0.00	0.00	
12,200.00	89.92	359.75	7,996.92	3,377.07	-532.13	3,391.44	0.00	0.00	0.00	
12,300.00	89.92	359.75	7,997.06	3,477.07	-532.57	3,491.41	0.00	0.00	0.00	
12,400.00	89.92	359.75	7,997.19	3,577.07	-533.00	3,591.38	0.00	0.00	0.00	

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-5HZ
<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 21-5HZ	<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)	
12,500.00	89.92	359.75	7,997.33	3,677.07	-533.44	3,691.35	0.00	0.00	0.00	
12,600.00	89.92	359.75	7,997.46	3,777.07	-533.87	3,791.31	0.00	0.00	0.00	
12,700.00	89.92	359.75	7,997.60	3,877.06	-534.30	3,891.28	0.00	0.00	0.00	
12,800.00	89.92	359.75	7,997.73	3,977.06	-534.74	3,991.25	0.00	0.00	0.00	
12,900.00	89.92	359.75	7,997.87	4,077.06	-535.17	4,091.22	0.00	0.00	0.00	
13,000.00	89.92	359.75	7,998.00	4,177.06	-535.61	4,191.18	0.00	0.00	0.00	
13,100.00	89.92	359.75	7,998.14	4,277.06	-536.04	4,291.15	0.00	0.00	0.00	
13,200.00	89.92	359.75	7,998.27	4,377.06	-536.47	4,391.12	0.00	0.00	0.00	
13,300.00	89.92	359.75	7,998.41	4,477.06	-536.91	4,491.09	0.00	0.00	0.00	
13,400.00	89.92	359.75	7,998.54	4,577.06	-537.34	4,591.05	0.00	0.00	0.00	
13,500.00	89.92	359.75	7,998.68	4,677.06	-537.78	4,691.02	0.00	0.00	0.00	
13,600.00	89.92	359.75	7,998.81	4,777.05	-538.21	4,790.99	0.00	0.00	0.00	
13,700.00	89.92	359.75	7,998.95	4,877.05	-538.64	4,890.96	0.00	0.00	0.00	
13,740.60	89.92	359.75	7,999.00	4,917.65	-538.82	4,931.54	0.00	0.00	0.00	
TD Well @ 13740.60ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,519.99	1,500.00	9 5/8" Csg	9-5/8	13-1/2	
8,538.86	7,992.00	Top of Production	5-1/2	7-7/8	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,321.12	1,309.00	Fox Hills				
4,593.58	4,456.00	Parkman				
5,840.02	5,701.00	Sussex				
7,680.04	7,535.00	Sharon Springs				
7,714.70	7,567.00	Niobrara				
7,905.51	7,729.00	Nio B				
8,064.53	7,840.00	Nio C				
8,328.32	7,961.00	Fort Hayes				
8,419.98	7,982.00	Codell				



# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-5HZ
<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 21-5HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
300.00	300.00	0.00	0.00	Begin Nudge @ 300.00ft
1,390.00	1,375.27	-145.15	-52.83	Hold Tangent @ 1390.00ft
4,190.00	4,062.03	-885.83	-322.42	Begin Drop @ 4190.00ft
5,007.50	4,868.49	-994.70	-362.04	End Drop @ 5007.50ft
7,414.82	7,275.81	-994.70	-362.04	KOP @ 7414.82ft :: DLS = 8"/100'
8,538.86	7,992.00	-280.61	-402.58	End Build @ 8538.86ft
10,610.80	7,994.78	1,788.00	-520.00	Begin Turn to BHL @ 10610.80ft
10,810.81	7,995.05	1,987.90	-526.10	End Turn @ 10810.81ft
13,740.60	7,999.00	4,917.65	-538.82	TD Well @ 13740.60ft