

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N**

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

**WINDSOCK 21-9HZ**

## **Plan A**

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

SHL Lat/Long: 40.030148/-105.007309

Survey Program: MWD+IFR

## **Standard Planning Report**

**26 November, 2018**

Project: WELD-NAD83-UTMFT13N  
Site: 1N-68W-21 WINDSOCK 15-21HZ PAD  
Well: WINDSOCK 21-9HZ  
Wellbore: Plan A  
Design: Permit Rev-1

## US ROCKIES WATTENBERG PLANNING

### CASING DETAILS

TVD	MD	Name	Size
1500.00	1508.54	9 5/8" Csg	9-5/8
7992.00	8554.80	Top of Production	5-1/2

### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	
3	1736.67	17.05	133.60	1719.96	-115.77	121.57	1.50	133.60	-118.27	
4	4536.67	17.05	133.60	4396.90	-681.93	716.10	0.00	0.00	-696.66	
5	5389.17	0.00	0.00	5236.88	-768.76	807.28	2.00	180.00	-785.36	
6	7428.09	0.00	0.00	7275.80	-768.76	807.28	0.00	0.00	-785.36	
7	8554.80	90.14	358.81	7992.00	-51.01	792.33	8.00	358.81	-67.45	
8	13568.28	90.14	358.81	7980.00	4961.37	687.91	0.00	0.00	4946.01	WINDSOCK 21-9HZ_BHL

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
WINDSOCK 21-9HZ_SHL	0.00	0.00	0.00	40.030148	-105.007309
WINDSOCK 21-9HZ_BHL	7980.00	4961.37	687.91	40.043773	-105.004851

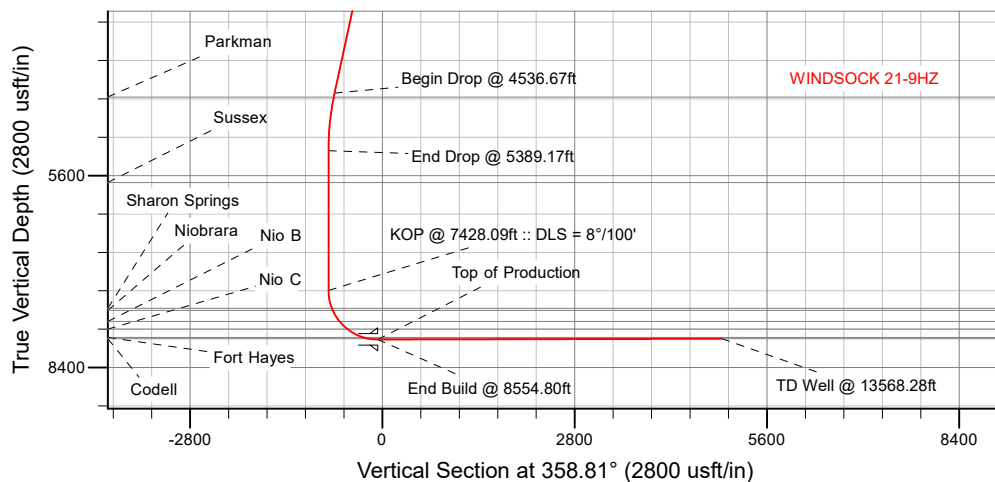
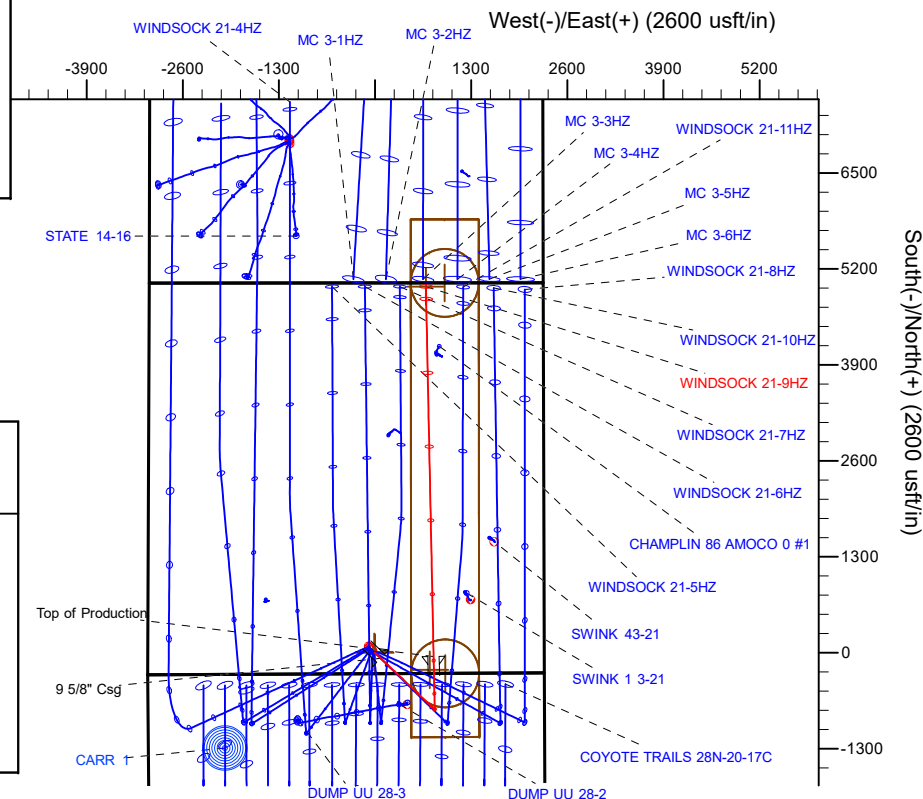
### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1309.00	1313.14	Fox Hills
4456.00	4598.28	Parkman
5701.00	5853.29	Sussex
7535.00	7693.31	Sharon Springs
7567.00	7727.98	Niobrara
7729.00	7918.79	Nio B
7840.00	8077.81	Nio C
7961.00	8341.61	Fort Hayes
7982.00	8433.29	Codell

**SHL**  
**284' FSL**  
**2290' FEL**

**HEEL**  
**231' FSL**  
**1499' FEL**

**BHL**  
**50' FNL**  
**1586' FEL**



### WELL DETAILS: WINDSOCK 21-9HZ

GL = 5222'

RKB = 17' @ 5239.00usft (Drilling Rig)

Plan: Permit Rev-1 (WINDSOCK 21-9HZ/Plan A)

Date: 11/27/2018

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-9HZ
<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 21-9HZ	<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 21-9HZ					
Well Position	+N/-S	-85.21 usft	Northing:	14,537,711.70 usft	Latitude:	40.030148
	+E/-W	84.26 usft	Easting:	1,638,370.67 usft	Longitude:	-105.007309
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	52,008.57091694

<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	358.81	

<b>Plan Survey Tool Program</b>	<b>Date</b>	11/26/2018			
<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	13,568.28	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWD+I Fixed:v2:crustal field declinatio	

Corporate  
Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well WINDSOCK 21-9HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5239.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5239.00usft (Drilling Rig)
Site:	1N-68W-21 WINDSOCK 15-21HZ PAD	North Reference:	True
Well:	WINDSOCK 21-9HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,736.67	17.05	133.60	1,719.96	-115.77	121.57	1.50	1.50	0.00	133.60	
4,536.67	17.05	133.60	4,396.90	-681.93	716.10	0.00	0.00	0.00	0.00	
5,389.17	0.00	0.00	5,236.88	-768.76	807.28	2.00	-2.00	0.00	180.00	
7,428.09	0.00	0.00	7,275.80	-768.76	807.28	0.00	0.00	0.00	0.00	
8,554.80	90.14	358.81	7,992.00	-51.01	792.33	8.00	8.00	-0.11	358.81	
13,568.28	90.14	358.81	7,980.00	4,961.37	687.91	0.00	0.00	0.00	0.00	WINDSOCK 21-9HZ_

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-9HZ
<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 21-9HZ	<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
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	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 600.00ft									
700.00	1.50	133.60	699.99	-0.90	0.95	-0.92	1.50	1.50	0.00
800.00	3.00	133.60	799.91	-3.61	3.79	-3.69	1.50	1.50	0.00
900.00	4.50	133.60	899.69	-8.12	8.53	-8.30	1.50	1.50	0.00
1,000.00	6.00	133.60	999.27	-14.43	15.15	-14.74	1.50	1.50	0.00
1,100.00	7.50	133.60	1,098.57	-22.54	23.66	-23.02	1.50	1.50	0.00
1,200.00	9.00	133.60	1,197.54	-32.43	34.06	-33.13	1.50	1.50	0.00
1,300.00	10.50	133.60	1,296.09	-44.11	46.32	-45.06	1.50	1.50	0.00
1,313.14	10.70	133.60	1,309.00	-45.78	48.07	-46.76	1.50	1.50	0.00
Fox Hills									
1,400.00	12.00	133.60	1,394.16	-57.56	60.45	-58.81	1.50	1.50	0.00
1,500.00	13.50	133.60	1,491.70	-72.78	76.43	-74.35	1.50	1.50	0.00
1,508.54	13.63	133.60	1,500.00	-74.16	77.88	-75.76	1.50	1.50	0.00
9 5/8" Csg									
1,600.00	15.00	133.60	1,588.62	-89.76	94.25	-91.69	1.50	1.50	0.00
1,700.00	16.50	133.60	1,684.86	-108.48	113.91	-110.82	1.50	1.50	0.00
1,736.67	17.05	133.60	1,719.96	-115.77	121.57	-118.27	1.50	1.50	0.00
Hold Tangent @ 1736.67ft									
1,800.00	17.05	133.60	1,780.51	-128.58	135.02	-131.36	0.00	0.00	0.00
1,900.00	17.05	133.60	1,876.12	-148.80	156.25	-152.01	0.00	0.00	0.00
2,000.00	17.05	133.60	1,971.72	-169.02	177.49	-172.67	0.00	0.00	0.00
2,100.00	17.05	133.60	2,067.33	-189.24	198.72	-193.33	0.00	0.00	0.00
2,200.00	17.05	133.60	2,162.93	-209.46	219.95	-213.98	0.00	0.00	0.00
2,300.00	17.05	133.60	2,258.54	-229.68	241.19	-234.64	0.00	0.00	0.00
2,400.00	17.05	133.60	2,354.14	-249.90	262.42	-255.30	0.00	0.00	0.00
2,500.00	17.05	133.60	2,449.75	-270.12	283.65	-275.95	0.00	0.00	0.00
2,600.00	17.05	133.60	2,545.35	-290.34	304.89	-296.61	0.00	0.00	0.00
2,700.00	17.05	133.60	2,640.96	-310.56	326.12	-317.27	0.00	0.00	0.00
2,800.00	17.05	133.60	2,736.56	-330.78	347.35	-337.92	0.00	0.00	0.00
2,900.00	17.05	133.60	2,832.17	-351.00	368.59	-358.58	0.00	0.00	0.00
3,000.00	17.05	133.60	2,927.77	-371.22	389.82	-379.24	0.00	0.00	0.00
3,100.00	17.05	133.60	3,023.38	-391.44	411.05	-399.89	0.00	0.00	0.00
3,200.00	17.05	133.60	3,118.98	-411.66	432.29	-420.55	0.00	0.00	0.00
3,300.00	17.05	133.60	3,214.59	-431.88	453.52	-441.21	0.00	0.00	0.00
3,400.00	17.05	133.60	3,310.19	-452.10	474.75	-461.86	0.00	0.00	0.00
3,500.00	17.05	133.60	3,405.80	-472.32	495.99	-482.52	0.00	0.00	0.00
3,600.00	17.05	133.60	3,501.40	-492.54	517.22	-503.18	0.00	0.00	0.00
3,700.00	17.05	133.60	3,597.01	-512.76	538.45	-523.83	0.00	0.00	0.00
3,800.00	17.05	133.60	3,692.61	-532.98	559.68	-544.49	0.00	0.00	0.00
3,900.00	17.05	133.60	3,788.22	-553.20	580.92	-565.15	0.00	0.00	0.00
4,000.00	17.05	133.60	3,883.82	-573.42	602.15	-585.80	0.00	0.00	0.00
4,100.00	17.05	133.60	3,979.43	-593.64	623.38	-606.46	0.00	0.00	0.00
4,200.00	17.05	133.60	4,075.03	-613.86	644.62	-627.12	0.00	0.00	0.00
4,300.00	17.05	133.60	4,170.64	-634.08	665.85	-647.77	0.00	0.00	0.00
4,400.00	17.05	133.60	4,266.24	-654.30	687.08	-668.43	0.00	0.00	0.00
4,500.00	17.05	133.60	4,361.85	-674.52	708.32	-689.09	0.00	0.00	0.00
4,536.67	17.05	133.60	4,396.90	-681.93	716.10	-696.66	0.00	0.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-9HZ
<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 21-9HZ	<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>Begin Drop @ 4536.67ft</b>									
4,598.28	15.82	133.60	4,456.00	-693.96	728.73	-708.94	2.00	-2.00	0.00
<b>Parkman</b>									
4,600.00	15.78	133.60	4,457.65	-694.28	729.06	-709.27	2.00	-2.00	0.00
4,700.00	13.78	133.60	4,554.34	-711.87	747.54	-727.25	2.00	-2.00	0.00
4,800.00	11.78	133.60	4,651.85	-727.13	763.56	-742.83	2.00	-2.00	0.00
4,900.00	9.78	133.60	4,750.08	-740.03	777.11	-756.01	2.00	-2.00	0.00
5,000.00	7.78	133.60	4,848.91	-750.56	788.17	-766.77	2.00	-2.00	0.00
5,100.00	5.78	133.60	4,948.20	-758.71	796.72	-775.09	2.00	-2.00	0.00
5,200.00	3.78	133.60	5,047.85	-764.46	802.76	-780.97	2.00	-2.00	0.00
5,300.00	1.78	133.60	5,147.72	-767.81	806.28	-784.39	2.00	-2.00	0.00
5,389.17	0.00	0.00	5,236.88	-768.76	807.28	-785.36	2.00	-2.00	0.00
<b>End Drop @ 5389.17ft</b>									
5,400.00	0.00	0.00	5,247.71	-768.76	807.28	-785.36	0.00	0.00	0.00
5,500.00	0.00	0.00	5,347.71	-768.76	807.28	-785.36	0.00	0.00	0.00
5,600.00	0.00	0.00	5,447.71	-768.76	807.28	-785.36	0.00	0.00	0.00
5,700.00	0.00	0.00	5,547.71	-768.76	807.28	-785.36	0.00	0.00	0.00
5,800.00	0.00	0.00	5,647.71	-768.76	807.28	-785.36	0.00	0.00	0.00
5,853.29	0.00	0.00	5,701.00	-768.76	807.28	-785.36	0.00	0.00	0.00
<b>Sussex</b>									
5,900.00	0.00	0.00	5,747.71	-768.76	807.28	-785.36	0.00	0.00	0.00
6,000.00	0.00	0.00	5,847.71	-768.76	807.28	-785.36	0.00	0.00	0.00
6,100.00	0.00	0.00	5,947.71	-768.76	807.28	-785.36	0.00	0.00	0.00
6,200.00	0.00	0.00	6,047.71	-768.76	807.28	-785.36	0.00	0.00	0.00
6,300.00	0.00	0.00	6,147.71	-768.76	807.28	-785.36	0.00	0.00	0.00
6,400.00	0.00	0.00	6,247.71	-768.76	807.28	-785.36	0.00	0.00	0.00
6,500.00	0.00	0.00	6,347.71	-768.76	807.28	-785.36	0.00	0.00	0.00
6,600.00	0.00	0.00	6,447.71	-768.76	807.28	-785.36	0.00	0.00	0.00
6,700.00	0.00	0.00	6,547.71	-768.76	807.28	-785.36	0.00	0.00	0.00
6,800.00	0.00	0.00	6,647.71	-768.76	807.28	-785.36	0.00	0.00	0.00
6,900.00	0.00	0.00	6,747.71	-768.76	807.28	-785.36	0.00	0.00	0.00
7,000.00	0.00	0.00	6,847.71	-768.76	807.28	-785.36	0.00	0.00	0.00
7,100.00	0.00	0.00	6,947.71	-768.76	807.28	-785.36	0.00	0.00	0.00
7,200.00	0.00	0.00	7,047.71	-768.76	807.28	-785.36	0.00	0.00	0.00
7,300.00	0.00	0.00	7,147.71	-768.76	807.28	-785.36	0.00	0.00	0.00
7,400.00	0.00	0.00	7,247.71	-768.76	807.28	-785.36	0.00	0.00	0.00
7,428.09	0.00	0.00	7,275.80	-768.76	807.28	-785.36	0.00	0.00	0.00
<b>KOP @ 7428.09ft :: DLS = 8°/100'</b>									
7,500.00	5.75	358.81	7,347.59	-765.16	807.21	-781.76	8.00	8.00	0.00
7,600.00	13.75	358.81	7,446.06	-748.24	806.85	-764.83	8.00	8.00	0.00
7,693.31	21.22	358.81	7,535.00	-720.23	806.27	-736.82	8.00	8.00	0.00
<b>Sharon Springs</b>									
7,700.00	21.75	358.81	7,541.22	-717.78	806.22	-734.37	8.00	8.00	0.00
7,727.98	23.99	358.81	7,567.00	-706.91	805.99	-723.49	8.00	8.00	0.00
<b>Niobrara</b>									
7,800.00	29.75	358.81	7,631.22	-674.37	805.32	-690.95	8.00	8.00	0.00
7,900.00	37.75	358.81	7,714.30	-618.87	804.16	-635.44	8.00	8.00	0.00
7,918.79	39.26	358.81	7,729.00	-607.17	803.92	-623.74	8.00	8.00	0.00
<b>Nio B</b>									
8,000.00	45.75	358.81	7,788.84	-552.34	802.77	-568.90	8.00	8.00	0.00
8,077.81	51.98	358.81	7,840.00	-493.78	801.55	-510.32	8.00	8.00	0.00
<b>Nio C</b>									
8,100.00	53.75	358.81	7,853.39	-476.10	801.19	-492.63	8.00	8.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-9HZ
<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 21-9HZ	<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	61.75	358.81	7,906.71	-391.61	799.43	-408.13	8.00	8.00	0.00
8,300.00	69.75	358.81	7,947.74	-300.52	797.53	-317.02	8.00	8.00	0.00
8,341.61	73.08	358.81	7,961.00	-261.10	796.71	-277.59	8.00	8.00	0.00
Fort Hayes									
8,400.00	77.75	358.81	7,975.70	-204.62	795.53	-221.09	8.00	8.00	0.00
8,433.29	80.42	358.81	7,982.00	-171.94	794.85	-188.41	8.00	8.00	0.00
Codell									
8,500.00	85.75	358.81	7,990.03	-105.75	793.47	-122.21	8.00	8.00	0.00
8,554.80	90.14	358.81	7,992.00	-51.01	792.33	-67.46	8.00	8.00	0.00
End Build @ 8554.80ft - Top of Production									
8,600.00	90.14	358.81	7,991.89	-5.82	791.39	-22.26	0.00	0.00	0.00
8,700.00	90.14	358.81	7,991.65	94.16	789.31	77.74	0.00	0.00	0.00
8,800.00	90.14	358.81	7,991.41	194.13	787.22	177.74	0.00	0.00	0.00
8,900.00	90.14	358.81	7,991.17	294.11	785.14	277.74	0.00	0.00	0.00
9,000.00	90.14	358.81	7,990.93	394.09	783.06	377.74	0.00	0.00	0.00
9,100.00	90.14	358.81	7,990.69	494.07	780.98	477.74	0.00	0.00	0.00
9,200.00	90.14	358.81	7,990.45	594.05	778.89	577.74	0.00	0.00	0.00
9,300.00	90.14	358.81	7,990.21	694.02	776.81	677.74	0.00	0.00	0.00
9,400.00	90.14	358.81	7,989.97	794.00	774.73	777.74	0.00	0.00	0.00
9,500.00	90.14	358.81	7,989.73	893.98	772.64	877.74	0.00	0.00	0.00
9,600.00	90.14	358.81	7,989.49	993.96	770.56	977.74	0.00	0.00	0.00
9,700.00	90.14	358.81	7,989.26	1,093.94	768.48	1,077.74	0.00	0.00	0.00
9,800.00	90.14	358.81	7,989.02	1,193.91	766.40	1,177.74	0.00	0.00	0.00
9,900.00	90.14	358.81	7,988.78	1,293.89	764.31	1,277.74	0.00	0.00	0.00
10,000.00	90.14	358.81	7,988.54	1,393.87	762.23	1,377.74	0.00	0.00	0.00
10,100.00	90.14	358.81	7,988.30	1,493.85	760.15	1,477.74	0.00	0.00	0.00
10,200.00	90.14	358.81	7,988.06	1,593.83	758.07	1,577.74	0.00	0.00	0.00
10,300.00	90.14	358.81	7,987.82	1,693.80	755.98	1,677.74	0.00	0.00	0.00
10,400.00	90.14	358.81	7,987.58	1,793.78	753.90	1,777.74	0.00	0.00	0.00
10,500.00	90.14	358.81	7,987.34	1,893.76	751.82	1,877.74	0.00	0.00	0.00
10,600.00	90.14	358.81	7,987.10	1,993.74	749.74	1,977.74	0.00	0.00	0.00
10,700.00	90.14	358.81	7,986.86	2,093.72	747.65	2,077.74	0.00	0.00	0.00
10,800.00	90.14	358.81	7,986.62	2,193.69	745.57	2,177.74	0.00	0.00	0.00
10,900.00	90.14	358.81	7,986.38	2,293.67	743.49	2,277.74	0.00	0.00	0.00
11,000.00	90.14	358.81	7,986.14	2,393.65	741.40	2,377.74	0.00	0.00	0.00
11,100.00	90.14	358.81	7,985.91	2,493.63	739.32	2,477.74	0.00	0.00	0.00
11,200.00	90.14	358.81	7,985.67	2,593.61	737.24	2,577.74	0.00	0.00	0.00
11,300.00	90.14	358.81	7,985.43	2,693.58	735.16	2,677.74	0.00	0.00	0.00
11,400.00	90.14	358.81	7,985.19	2,793.56	733.07	2,777.73	0.00	0.00	0.00
11,500.00	90.14	358.81	7,984.95	2,893.54	730.99	2,877.73	0.00	0.00	0.00
11,600.00	90.14	358.81	7,984.71	2,993.52	728.91	2,977.73	0.00	0.00	0.00
11,700.00	90.14	358.81	7,984.47	3,093.50	726.83	3,077.73	0.00	0.00	0.00
11,800.00	90.14	358.81	7,984.23	3,193.47	724.74	3,177.73	0.00	0.00	0.00
11,900.00	90.14	358.81	7,983.99	3,293.45	722.66	3,277.73	0.00	0.00	0.00
12,000.00	90.14	358.81	7,983.75	3,393.43	720.58	3,377.73	0.00	0.00	0.00
12,100.00	90.14	358.81	7,983.51	3,493.41	718.49	3,477.73	0.00	0.00	0.00
12,200.00	90.14	358.81	7,983.27	3,593.39	716.41	3,577.73	0.00	0.00	0.00
12,300.00	90.14	358.81	7,983.03	3,693.36	714.33	3,677.73	0.00	0.00	0.00
12,400.00	90.14	358.81	7,982.80	3,793.34	712.25	3,777.73	0.00	0.00	0.00
12,500.00	90.14	358.81	7,982.56	3,893.32	710.16	3,877.73	0.00	0.00	0.00
12,600.00	90.14	358.81	7,982.32	3,993.30	708.08	3,977.73	0.00	0.00	0.00
12,700.00	90.14	358.81	7,982.08	4,093.28	706.00	4,077.73	0.00	0.00	0.00
12,800.00	90.14	358.81	7,981.84	4,193.25	703.92	4,177.73	0.00	0.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WINDSOCK 21-9HZ
<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 21-9HZ	<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)	
12,900.00	90.14	358.81	7,981.60	4,293.23	701.83	4,277.73	0.00	0.00	0.00	
13,000.00	90.14	358.81	7,981.36	4,393.21	699.75	4,377.73	0.00	0.00	0.00	
13,100.00	90.14	358.81	7,981.12	4,493.19	697.67	4,477.73	0.00	0.00	0.00	
13,200.00	90.14	358.81	7,980.88	4,593.17	695.59	4,577.73	0.00	0.00	0.00	
13,300.00	90.14	358.81	7,980.64	4,693.14	693.50	4,677.73	0.00	0.00	0.00	
13,400.00	90.14	358.81	7,980.40	4,793.12	691.42	4,777.73	0.00	0.00	0.00	
13,500.00	90.14	358.81	7,980.16	4,893.10	689.34	4,877.73	0.00	0.00	0.00	
13,568.28	90.14	358.81	7,980.00	4,961.37	687.91	4,946.01	0.00	0.00	0.00	
TD Well @ 13568.28ft										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,508.54	1,500.00	9 5/8" Csg	9-5/8	13-1/2	
8,554.80	7,992.00	Top of Production	5-1/2	7-7/8	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,313.14	1,309.00	Fox Hills				
4,598.28	4,456.00	Parkman				
5,853.29	5,701.00	Sussex				
7,693.31	7,535.00	Sharon Springs				
7,727.98	7,567.00	Niobrara				
7,918.79	7,729.00	Nio B				
8,077.81	7,840.00	Nio C				
8,341.61	7,961.00	Fort Hayes				
8,433.29	7,982.00	Codell				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
600.00	600.00	0.00	0.00	Begin Nudge @ 600.00ft	
1,736.67	1,719.96	-115.77	121.57	Hold Tangent @ 1736.67ft	
4,536.67	4,396.90	-681.93	716.10	Begin Drop @ 4536.67ft	
5,389.17	5,236.88	-768.76	807.28	End Drop @ 5389.17ft	
7,428.09	7,275.80	-768.76	807.28	KOP @ 7428.09ft :: DLS = 8°/100'	
8,554.80	7,992.00	-51.01	792.33	End Build @ 8554.80ft	
13,568.28	7,980.00	4,961.37	687.91	TD Well @ 13568.28ft	