

US ROCKIES WATTENBERG PLANNING

**WELD-NAD83-UTMFT13N
1N-68W-21 WINDSOCK 15-21HZ PAD
WINDSOCK 21-3HZ**

Plan A

Plan: Permit Rev-1

SHL Lat/Long: 40.030323/-105.007535
Survey Program: MWD+IFR+MSA

Standard Planning Report

26 November, 2018

Project: WELD-NAD83-UTMFT13N
 Site: 1N-68W-21 WINDSOCK 15-21HZ PAD
 Well: WINDSOCK 21-3HZ
 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
7897.00	8695.93	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	1986.67	26.05	237.40	1927.45	-209.07	-326.91	1.50	237.40	-210.09	
4	4786.67	26.05	237.40	4443.00	-871.56	-1362.81	0.00	0.00	-875.83	
5	6089.17	0.00	0.00	5701.09	-1028.36	-1607.99	2.00	180.00	-1033.40	
6	7568.88	0.00	0.00	7180.80	-1028.36	-1607.99	0.00	0.00	-1033.40	
7	8695.93	90.16	0.74	7897.00	-310.17	-1598.72	8.00	0.74	-315.19	
8	14408.13	90.16	0.74	7880.64	5401.53	-1525.00	0.00	0.00	5396.71	WINDSOCK 21-3HZ_Target
9	14490.46	90.16	359.50	7880.40	5483.86	-1524.82	1.50	-89.99	5479.05	
10	19168.23	90.16	359.50	7867.00	10161.44	-1565.28	0.00	0.00	10156.47	WINDSOCK 21-3HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
WINDSOCK 21-3HZ_SHL	0.00	0.00	0.00	40.030323	-105.007535
WINDSOCK 21-3HZ_BHL	7867.00	10161.44	-1565.28	40.058228	-105.013129

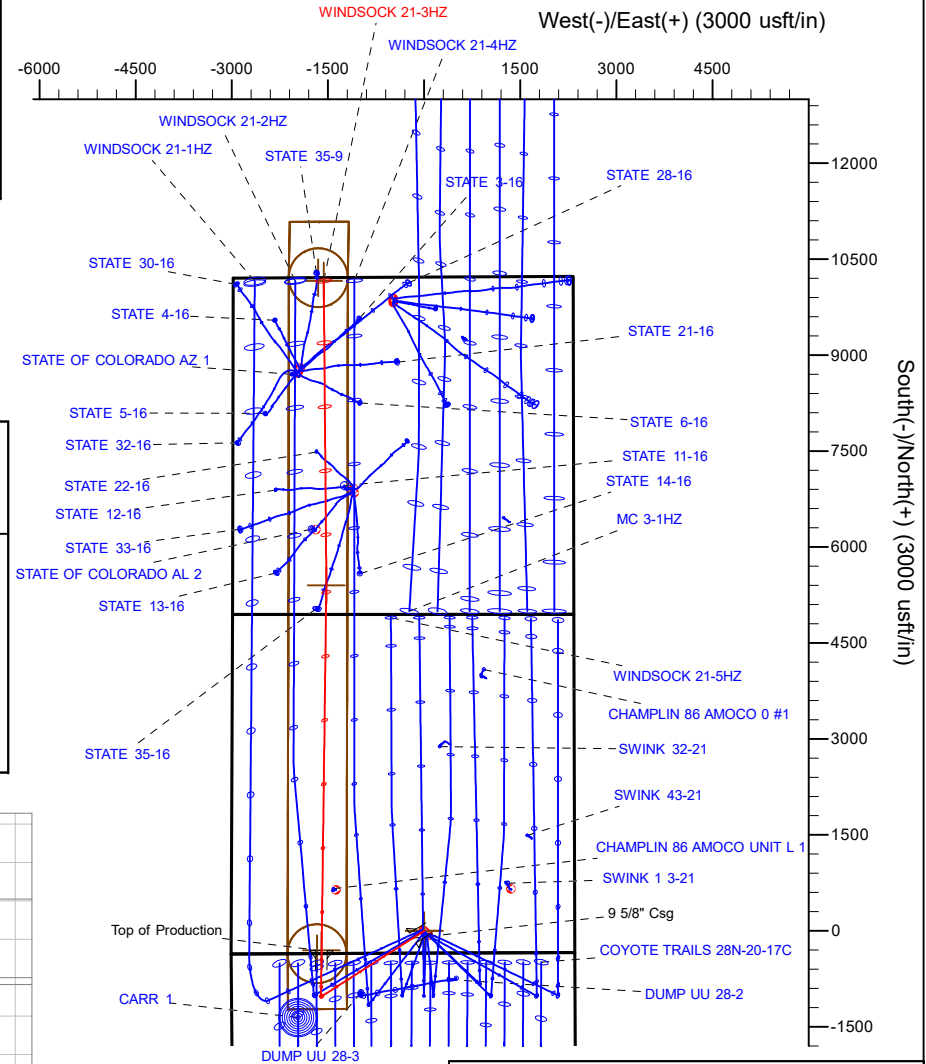
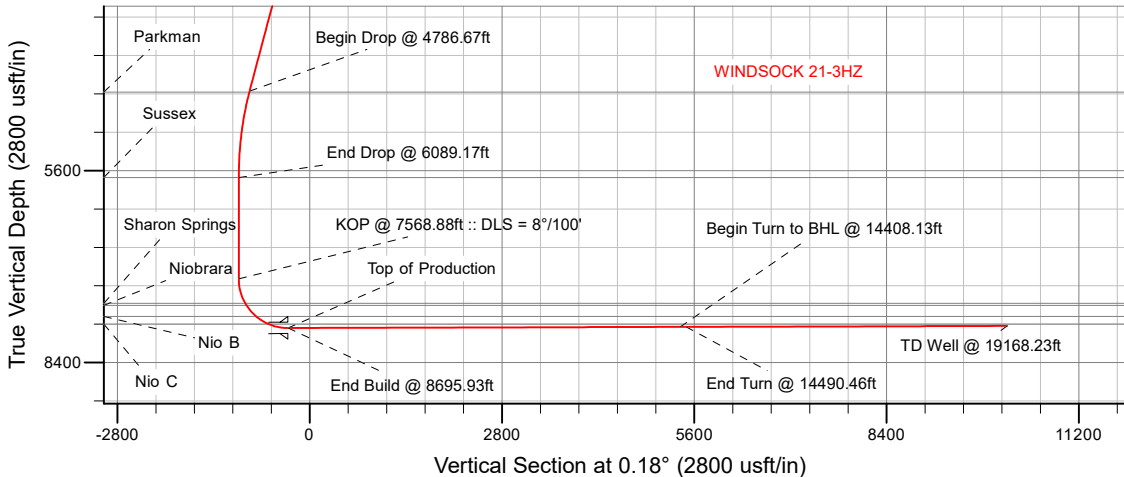
SHL
349' FSL
2353' FEL

HEEL
50' FSL
1410' FWL

BHL
50' FNL
1413' FWL

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1309.00	1323.06	Fox Hills
4456.00	4801.12	Parkman
5701.00	6089.08	Sussex
7535.00	7939.38	Sharon Springs
7567.00	7976.77	Niobrara
7729.00	8193.19	Nio B
7840.00	8406.21	Nio C



WELL DETAILS: WINDSOCK 21-3HZ

GL = 5222'

RKB = 17' @ 5239.00usft (Drilling Rig)

Plan: Permit Rev-1 (WINDSOCK 21-3HZ/Plan A)

Date: 11/27/2018

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well WINDSOCK 21-3HZ
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 21-3HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

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	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 21-3HZ					
Well Position	+N-S	-21.48 usft	Northing:	14,537,775.43 usft	Latitude:	40.030323
	+E-W	20.99 usft	Easting:	1,638,307.41 usft	Longitude:	-105.007535
Position Uncertainty		3.28 usft	Wellhead Elevation:		Ground Level:	5,222.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/19/2018	8.16	66.49	52,008.63824523

Design	Permit Rev-1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	0.18

Plan Survey Tool Program	Date	11/24/2018			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
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	19,168.23	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWD+I Fixed:v2:Rockies, crustal dec +	

Corporate Planning Report

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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 21-3HZ	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	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,986.67	26.05	237.40	1,927.45	-209.07	-326.91	1.50	1.50	0.00	237.40	
4,786.67	26.05	237.40	4,443.00	-871.56	-1,362.81	0.00	0.00	0.00	0.00	
6,089.17	0.00	0.00	5,701.09	-1,028.36	-1,607.99	2.00	-2.00	9.41	180.00	
7,568.88	0.00	0.00	7,180.80	-1,028.36	-1,607.99	0.00	0.00	0.00	0.00	
8,695.93	90.16	0.74	7,897.00	-310.17	-1,598.72	8.00	8.00	0.07	0.74	
14,408.13	90.16	0.74	7,880.64	5,401.53	-1,525.00	0.00	0.00	0.00	0.00	WINDSOCK 21-3HZ_
14,490.46	90.16	359.50	7,880.40	5,483.86	-1,524.82	1.50	0.00	-1.50	-89.99	
19,168.23	90.16	359.50	7,867.00	10,161.44	-1,565.28	0.00	0.00	0.00	0.00	WINDSOCK 21-3HZ_

Corporate Planning Report

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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 21-3HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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	0.00
100.00	0.00	0.00	100.00	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	0.00
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 250.00ft										
300.00	0.75	237.40	300.00	-0.18	-0.28	-0.18	1.50	1.50	0.00	
400.00	2.25	237.40	399.96	-1.59	-2.48	-1.59	1.50	1.50	0.00	
500.00	3.75	237.40	499.82	-4.41	-6.89	-4.43	1.50	1.50	0.00	
600.00	5.25	237.40	599.51	-8.63	-13.50	-8.68	1.50	1.50	0.00	
700.00	6.75	237.40	698.96	-14.26	-22.31	-14.33	1.50	1.50	0.00	
800.00	8.25	237.40	798.10	-21.30	-33.30	-21.40	1.50	1.50	0.00	
900.00	9.75	237.40	896.87	-29.72	-46.48	-29.87	1.50	1.50	0.00	
1,000.00	11.25	237.40	995.19	-39.54	-61.83	-39.74	1.50	1.50	0.00	
1,100.00	12.75	237.40	1,093.00	-50.74	-79.35	-50.99	1.50	1.50	0.00	
1,200.00	14.25	237.40	1,190.24	-63.32	-99.01	-63.63	1.50	1.50	0.00	
1,300.00	15.75	237.40	1,286.83	-77.27	-120.82	-77.64	1.50	1.50	0.00	
1,323.06	16.10	237.40	1,309.00	-80.67	-126.15	-81.07	1.50	1.50	0.00	
Fox Hills										
1,400.00	17.25	237.40	1,382.71	-92.57	-144.74	-93.02	1.50	1.50	0.00	
1,500.00	18.75	237.40	1,477.81	-109.22	-170.78	-109.75	1.50	1.50	0.00	
1,523.46	19.10	237.40	1,500.00	-113.31	-177.19	-113.87	1.50	1.50	0.00	
9 5/8" Csg										
1,600.00	20.25	237.40	1,572.07	-127.20	-198.90	-127.82	1.50	1.50	0.00	
1,700.00	21.75	237.40	1,665.43	-146.51	-229.09	-147.23	1.50	1.50	0.00	
1,800.00	23.25	237.40	1,757.81	-167.12	-261.32	-167.94	1.50	1.50	0.00	
1,900.00	24.75	237.40	1,849.16	-189.04	-295.59	-189.96	1.50	1.50	0.00	
1,986.67	26.05	237.40	1,927.45	-209.07	-326.91	-210.09	1.50	1.50	0.00	
Hold Tangent @ 1986.67ft										
2,000.00	26.05	237.40	1,939.43	-212.22	-331.84	-213.26	0.00	0.00	0.00	
2,100.00	26.05	237.40	2,029.27	-235.88	-368.84	-237.04	0.00	0.00	0.00	
2,200.00	26.05	237.40	2,119.11	-259.54	-405.83	-260.81	0.00	0.00	0.00	
2,300.00	26.05	237.40	2,208.95	-283.20	-442.83	-284.59	0.00	0.00	0.00	
2,400.00	26.05	237.40	2,298.79	-306.86	-479.83	-308.37	0.00	0.00	0.00	
2,500.00	26.05	237.40	2,388.63	-330.52	-516.82	-332.14	0.00	0.00	0.00	
2,600.00	26.05	237.40	2,478.48	-354.18	-553.82	-355.92	0.00	0.00	0.00	
2,700.00	26.05	237.40	2,568.32	-377.84	-590.82	-379.70	0.00	0.00	0.00	
2,800.00	26.05	237.40	2,658.16	-401.50	-627.81	-403.47	0.00	0.00	0.00	
2,900.00	26.05	237.40	2,748.00	-425.16	-664.81	-427.25	0.00	0.00	0.00	
3,000.00	26.05	237.40	2,837.84	-448.82	-701.81	-451.03	0.00	0.00	0.00	
3,100.00	26.05	237.40	2,927.68	-472.48	-738.80	-474.80	0.00	0.00	0.00	
3,200.00	26.05	237.40	3,017.52	-496.14	-775.80	-498.58	0.00	0.00	0.00	
3,300.00	26.05	237.40	3,107.36	-519.81	-812.80	-522.36	0.00	0.00	0.00	
3,400.00	26.05	237.40	3,197.20	-543.47	-849.79	-546.13	0.00	0.00	0.00	
3,500.00	26.05	237.40	3,287.05	-567.13	-886.79	-569.91	0.00	0.00	0.00	
3,600.00	26.05	237.40	3,376.89	-590.79	-923.79	-593.69	0.00	0.00	0.00	
3,700.00	26.05	237.40	3,466.73	-614.45	-960.78	-617.46	0.00	0.00	0.00	
3,800.00	26.05	237.40	3,556.57	-638.11	-997.78	-641.24	0.00	0.00	0.00	
3,900.00	26.05	237.40	3,646.41	-661.77	-1,034.78	-665.02	0.00	0.00	0.00	
4,000.00	26.05	237.40	3,736.25	-685.43	-1,071.77	-688.79	0.00	0.00	0.00	
4,100.00	26.05	237.40	3,826.09	-709.09	-1,108.77	-712.57	0.00	0.00	0.00	
4,200.00	26.05	237.40	3,915.93	-732.75	-1,145.77	-736.34	0.00	0.00	0.00	
4,300.00	26.05	237.40	4,005.77	-756.41	-1,182.76	-760.12	0.00	0.00	0.00	
4,400.00	26.05	237.40	4,095.62	-780.07	-1,219.76	-783.90	0.00	0.00	0.00	
4,500.00	26.05	237.40	4,185.46	-803.73	-1,256.76	-807.67	0.00	0.00	0.00	

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well WINDSOCK 21-3HZ
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 21-3HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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	26.05	237.40	4,275.30	-827.39	-1,293.75	-831.45	0.00	0.00	0.00
4,700.00	26.05	237.40	4,365.14	-851.05	-1,330.75	-855.23	0.00	0.00	0.00
4,786.67	26.05	237.40	4,443.00	-871.56	-1,362.81	-875.83	0.00	0.00	0.00
Begin Drop @ 4786.67ft									
4,800.00	25.78	237.40	4,454.99	-874.70	-1,367.72	-878.99	2.00	-2.00	0.00
4,801.12	25.76	237.40	4,456.00	-874.96	-1,368.13	-879.25	2.00	-2.00	0.00
Parkman									
4,900.00	23.78	237.40	4,545.78	-897.28	-1,403.04	-901.68	2.00	-2.00	0.00
5,000.00	21.78	237.40	4,637.97	-918.14	-1,435.66	-922.65	2.00	-2.00	0.00
5,100.00	19.78	237.40	4,731.46	-937.26	-1,465.55	-941.86	2.00	-2.00	0.00
5,200.00	17.78	237.40	4,826.13	-954.61	-1,492.68	-959.29	2.00	-2.00	0.00
5,300.00	15.78	237.40	4,921.86	-970.16	-1,517.00	-974.92	2.00	-2.00	0.00
5,400.00	13.78	237.40	5,018.55	-983.91	-1,538.50	-988.74	2.00	-2.00	0.00
5,500.00	11.78	237.40	5,116.07	-995.83	-1,557.14	-1,000.72	2.00	-2.00	0.00
5,600.00	9.78	237.40	5,214.30	-1,005.91	-1,572.90	-1,010.85	2.00	-2.00	0.00
5,700.00	7.78	237.40	5,313.12	-1,014.14	-1,585.76	-1,019.11	2.00	-2.00	0.00
5,800.00	5.78	237.40	5,412.41	-1,020.50	-1,595.71	-1,025.51	2.00	-2.00	0.00
5,900.00	3.78	237.40	5,512.06	-1,024.99	-1,602.73	-1,030.02	2.00	-2.00	0.00
6,000.00	1.78	237.40	5,611.94	-1,027.61	-1,606.83	-1,032.65	2.00	-2.00	0.00
6,089.08	0.00	237.43	5,701.00	-1,028.36	-1,607.99	-1,033.40	2.00	-2.00	0.04
Sussex									
6,089.17	0.00	0.00	5,701.09	-1,028.36	-1,607.99	-1,033.40	2.00	-2.00	138,687.19
End Drop @ 6089.17ft									
6,100.00	0.00	0.00	5,711.92	-1,028.36	-1,607.99	-1,033.40	0.00	0.00	0.00
6,200.00	0.00	0.00	5,811.92	-1,028.36	-1,607.99	-1,033.40	0.00	0.00	0.00
6,300.00	0.00	0.00	5,911.92	-1,028.36	-1,607.99	-1,033.40	0.00	0.00	0.00
6,400.00	0.00	0.00	6,011.92	-1,028.36	-1,607.99	-1,033.40	0.00	0.00	0.00
6,500.00	0.00	0.00	6,111.92	-1,028.36	-1,607.99	-1,033.40	0.00	0.00	0.00
6,600.00	0.00	0.00	6,211.92	-1,028.36	-1,607.99	-1,033.40	0.00	0.00	0.00
6,700.00	0.00	0.00	6,311.92	-1,028.36	-1,607.99	-1,033.40	0.00	0.00	0.00
6,800.00	0.00	0.00	6,411.92	-1,028.36	-1,607.99	-1,033.40	0.00	0.00	0.00
6,900.00	0.00	0.00	6,511.92	-1,028.36	-1,607.99	-1,033.40	0.00	0.00	0.00
7,000.00	0.00	0.00	6,611.92	-1,028.36	-1,607.99	-1,033.40	0.00	0.00	0.00
7,100.00	0.00	0.00	6,711.92	-1,028.36	-1,607.99	-1,033.40	0.00	0.00	0.00
7,200.00	0.00	0.00	6,811.92	-1,028.36	-1,607.99	-1,033.40	0.00	0.00	0.00
7,300.00	0.00	0.00	6,911.92	-1,028.36	-1,607.99	-1,033.40	0.00	0.00	0.00
7,400.00	0.00	0.00	7,011.92	-1,028.36	-1,607.99	-1,033.40	0.00	0.00	0.00
7,500.00	0.00	0.00	7,111.92	-1,028.36	-1,607.99	-1,033.40	0.00	0.00	0.00
7,568.88	0.00	0.00	7,180.80	-1,028.36	-1,607.99	-1,033.40	0.00	0.00	0.00
KOP @ 7568.88ft :: DLS = 8°/100'									
7,600.00	2.49	0.74	7,211.91	-1,027.68	-1,607.99	-1,032.73	8.00	8.00	2.38
7,700.00	10.49	0.74	7,311.19	-1,016.39	-1,607.84	-1,021.43	8.00	8.00	0.00
7,800.00	18.49	0.74	7,407.93	-991.39	-1,607.52	-996.43	8.00	8.00	0.00
7,900.00	26.49	0.74	7,500.25	-953.17	-1,607.02	-958.22	8.00	8.00	0.00
7,939.38	29.64	0.74	7,535.00	-934.65	-1,606.78	-939.69	8.00	8.00	0.00
Sharon Springs									
7,976.77	32.63	0.74	7,567.00	-915.32	-1,606.54	-920.36	8.00	8.00	0.00
Niobrara									
8,000.00	34.49	0.74	7,586.35	-902.48	-1,606.37	-907.52	8.00	8.00	0.00
8,100.00	42.49	0.74	7,664.56	-840.30	-1,605.57	-845.34	8.00	8.00	0.00
8,193.20	49.95	0.74	7,729.00	-773.07	-1,604.70	-778.10	8.00	8.00	0.00
Nio B									
8,200.00	50.49	0.74	7,733.35	-767.84	-1,604.63	-772.87	8.00	8.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well WINDSOCK 21-3HZ
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 21-3HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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)
8,300.00	58.49	0.74	7,791.39	-686.51	-1,603.58	-691.54	8.00	8.00	0.00
8,400.00	66.49	0.74	7,837.55	-597.90	-1,602.44	-602.93	8.00	8.00	0.00
8,406.21	66.99	0.74	7,840.00	-592.19	-1,602.36	-597.22	8.00	8.00	0.00
Nio C									
8,500.00	74.49	0.74	7,870.92	-503.72	-1,601.22	-508.75	8.00	8.00	0.00
8,600.00	82.49	0.74	7,890.85	-405.82	-1,599.96	-410.85	8.00	8.00	0.00
8,695.93	90.16	0.74	7,897.00	-310.17	-1,598.72	-315.19	8.00	8.00	0.00
End Build @ 8695.93ft - Top of Production									
8,700.00	90.16	0.74	7,896.98	-306.10	-1,598.67	-311.12	0.00	0.00	0.00
8,800.00	90.16	0.74	7,896.70	-206.11	-1,597.38	-211.12	0.00	0.00	0.00
8,900.00	90.16	0.74	7,896.41	-106.12	-1,596.09	-111.13	0.00	0.00	0.00
9,000.00	90.16	0.74	7,896.13	-6.12	-1,594.80	-11.13	0.00	0.00	0.00
9,100.00	90.16	0.74	7,895.84	93.87	-1,593.51	88.86	0.00	0.00	0.00
9,200.00	90.16	0.74	7,895.55	193.86	-1,592.22	188.86	0.00	0.00	0.00
9,300.00	90.16	0.74	7,895.27	293.85	-1,590.93	288.85	0.00	0.00	0.00
9,400.00	90.16	0.74	7,894.98	393.84	-1,589.64	388.84	0.00	0.00	0.00
9,500.00	90.16	0.74	7,894.69	493.83	-1,588.35	488.84	0.00	0.00	0.00
9,600.00	90.16	0.74	7,894.41	593.82	-1,587.06	588.83	0.00	0.00	0.00
9,700.00	90.16	0.74	7,894.12	693.81	-1,585.77	688.83	0.00	0.00	0.00
9,800.00	90.16	0.74	7,893.83	793.81	-1,584.47	788.82	0.00	0.00	0.00
9,900.00	90.16	0.74	7,893.55	893.80	-1,583.18	888.82	0.00	0.00	0.00
10,000.00	90.16	0.74	7,893.26	993.79	-1,581.89	988.81	0.00	0.00	0.00
10,100.00	90.16	0.74	7,892.98	1,093.78	-1,580.60	1,088.81	0.00	0.00	0.00
10,200.00	90.16	0.74	7,892.69	1,193.77	-1,579.31	1,188.80	0.00	0.00	0.00
10,300.00	90.16	0.74	7,892.40	1,293.76	-1,578.02	1,288.80	0.00	0.00	0.00
10,400.00	90.16	0.74	7,892.12	1,393.75	-1,576.73	1,388.79	0.00	0.00	0.00
10,500.00	90.16	0.74	7,891.83	1,493.74	-1,575.44	1,488.79	0.00	0.00	0.00
10,600.00	90.16	0.74	7,891.54	1,593.74	-1,574.15	1,588.78	0.00	0.00	0.00
10,700.00	90.16	0.74	7,891.26	1,693.73	-1,572.86	1,688.78	0.00	0.00	0.00
10,800.00	90.16	0.74	7,890.97	1,793.72	-1,571.57	1,788.77	0.00	0.00	0.00
10,900.00	90.16	0.74	7,890.69	1,893.71	-1,570.28	1,888.77	0.00	0.00	0.00
11,000.00	90.16	0.74	7,890.40	1,993.70	-1,568.99	1,988.76	0.00	0.00	0.00
11,100.00	90.16	0.74	7,890.11	2,093.69	-1,567.70	2,088.76	0.00	0.00	0.00
11,200.00	90.16	0.74	7,889.83	2,193.68	-1,566.41	2,188.75	0.00	0.00	0.00
11,300.00	90.16	0.74	7,889.54	2,293.67	-1,565.11	2,288.75	0.00	0.00	0.00
11,400.00	90.16	0.74	7,889.25	2,393.67	-1,563.82	2,388.74	0.00	0.00	0.00
11,500.00	90.16	0.74	7,888.97	2,493.66	-1,562.53	2,488.74	0.00	0.00	0.00
11,600.00	90.16	0.74	7,888.68	2,593.65	-1,561.24	2,588.73	0.00	0.00	0.00
11,700.00	90.16	0.74	7,888.39	2,693.64	-1,559.95	2,688.73	0.00	0.00	0.00
11,800.00	90.16	0.74	7,888.11	2,793.63	-1,558.66	2,788.72	0.00	0.00	0.00
11,900.00	90.16	0.74	7,887.82	2,893.62	-1,557.37	2,888.72	0.00	0.00	0.00
12,000.00	90.16	0.74	7,887.54	2,993.61	-1,556.08	2,988.71	0.00	0.00	0.00
12,100.00	90.16	0.74	7,887.25	3,093.60	-1,554.79	3,088.71	0.00	0.00	0.00
12,200.00	90.16	0.74	7,886.96	3,193.60	-1,553.50	3,188.70	0.00	0.00	0.00
12,300.00	90.16	0.74	7,886.68	3,293.59	-1,552.21	3,288.69	0.00	0.00	0.00
12,400.00	90.16	0.74	7,886.39	3,393.58	-1,550.92	3,388.69	0.00	0.00	0.00
12,500.00	90.16	0.74	7,886.10	3,493.57	-1,549.63	3,488.68	0.00	0.00	0.00
12,600.00	90.16	0.74	7,885.82	3,593.56	-1,548.34	3,588.68	0.00	0.00	0.00
12,700.00	90.16	0.74	7,885.53	3,693.55	-1,547.05	3,688.67	0.00	0.00	0.00
12,800.00	90.16	0.74	7,885.24	3,793.54	-1,545.76	3,788.67	0.00	0.00	0.00
12,900.00	90.16	0.74	7,884.96	3,893.53	-1,544.46	3,888.66	0.00	0.00	0.00
13,000.00	90.16	0.74	7,884.67	3,993.53	-1,543.17	3,988.66	0.00	0.00	0.00
13,100.00	90.16	0.74	7,884.39	4,093.52	-1,541.88	4,088.65	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well WINDSOCK 21-3HZ
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 21-3HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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	90.16	0.74	7,884.10	4,193.51	-1,540.59	4,188.65	0.00	0.00	0.00	
13,300.00	90.16	0.74	7,883.81	4,293.50	-1,539.30	4,288.64	0.00	0.00	0.00	
13,400.00	90.16	0.74	7,883.53	4,393.49	-1,538.01	4,388.64	0.00	0.00	0.00	
13,500.00	90.16	0.74	7,883.24	4,493.48	-1,536.72	4,488.63	0.00	0.00	0.00	
13,600.00	90.16	0.74	7,882.95	4,593.47	-1,535.43	4,588.63	0.00	0.00	0.00	
13,700.00	90.16	0.74	7,882.67	4,693.47	-1,534.14	4,688.62	0.00	0.00	0.00	
13,800.00	90.16	0.74	7,882.38	4,793.46	-1,532.85	4,788.62	0.00	0.00	0.00	
13,900.00	90.16	0.74	7,882.10	4,893.45	-1,531.56	4,888.61	0.00	0.00	0.00	
14,000.00	90.16	0.74	7,881.81	4,993.44	-1,530.27	4,988.61	0.00	0.00	0.00	
14,100.00	90.16	0.74	7,881.52	5,093.43	-1,528.98	5,088.60	0.00	0.00	0.00	
14,200.00	90.16	0.74	7,881.24	5,193.42	-1,527.69	5,188.60	0.00	0.00	0.00	
14,300.00	90.16	0.74	7,880.95	5,293.41	-1,526.40	5,288.59	0.00	0.00	0.00	
14,400.00	90.16	0.74	7,880.66	5,393.40	-1,525.10	5,388.59	0.00	0.00	0.00	
14,408.13	90.16	0.74	7,880.64	5,401.53	-1,525.00	5,396.71	0.00	0.00	0.00	
Begin Turn to BHL @ 14408.13ft										
14,490.46	90.16	359.50	7,880.40	5,483.86	-1,524.82	5,479.05	1.50	0.00	-1.50	
End Turn @ 14490.46ft										
14,500.00	90.16	359.50	7,880.38	5,493.40	-1,524.91	5,488.58	0.00	0.00	0.00	
14,600.00	90.16	359.50	7,880.09	5,593.40	-1,525.77	5,588.58	0.00	0.00	0.00	
14,700.00	90.16	359.50	7,879.80	5,693.39	-1,526.64	5,688.57	0.00	0.00	0.00	
14,800.00	90.16	359.50	7,879.52	5,793.39	-1,527.50	5,788.56	0.00	0.00	0.00	
14,900.00	90.16	359.50	7,879.23	5,893.38	-1,528.37	5,888.55	0.00	0.00	0.00	
15,000.00	90.16	359.50	7,878.94	5,993.38	-1,529.23	5,988.55	0.00	0.00	0.00	
15,100.00	90.16	359.50	7,878.66	6,093.38	-1,530.10	6,088.54	0.00	0.00	0.00	
15,200.00	90.16	359.50	7,878.37	6,193.37	-1,530.96	6,188.53	0.00	0.00	0.00	
15,300.00	90.16	359.50	7,878.08	6,293.37	-1,531.83	6,288.52	0.00	0.00	0.00	
15,400.00	90.16	359.50	7,877.80	6,393.36	-1,532.69	6,388.52	0.00	0.00	0.00	
15,500.00	90.16	359.50	7,877.51	6,493.36	-1,533.56	6,488.51	0.00	0.00	0.00	
15,600.00	90.16	359.50	7,877.22	6,593.36	-1,534.42	6,588.50	0.00	0.00	0.00	
15,700.00	90.16	359.50	7,876.94	6,693.35	-1,535.29	6,688.49	0.00	0.00	0.00	
15,800.00	90.16	359.50	7,876.65	6,793.35	-1,536.15	6,788.49	0.00	0.00	0.00	
15,900.00	90.16	359.50	7,876.37	6,893.34	-1,537.01	6,888.48	0.00	0.00	0.00	
16,000.00	90.16	359.50	7,876.08	6,993.34	-1,537.88	6,988.47	0.00	0.00	0.00	
16,100.00	90.16	359.50	7,875.79	7,093.33	-1,538.74	7,088.47	0.00	0.00	0.00	
16,200.00	90.16	359.50	7,875.51	7,193.33	-1,539.61	7,188.46	0.00	0.00	0.00	
16,300.00	90.16	359.50	7,875.22	7,293.33	-1,540.47	7,288.45	0.00	0.00	0.00	
16,400.00	90.16	359.50	7,874.93	7,393.32	-1,541.34	7,388.44	0.00	0.00	0.00	
16,500.00	90.16	359.50	7,874.65	7,493.32	-1,542.20	7,488.44	0.00	0.00	0.00	
16,600.00	90.16	359.50	7,874.36	7,593.31	-1,543.07	7,588.43	0.00	0.00	0.00	
16,700.00	90.16	359.50	7,874.07	7,693.31	-1,543.93	7,688.42	0.00	0.00	0.00	
16,800.00	90.16	359.50	7,873.79	7,793.31	-1,544.80	7,788.41	0.00	0.00	0.00	
16,900.00	90.16	359.50	7,873.50	7,893.30	-1,545.66	7,888.41	0.00	0.00	0.00	
17,000.00	90.16	359.50	7,873.21	7,993.30	-1,546.53	7,988.40	0.00	0.00	0.00	
17,100.00	90.16	359.50	7,872.93	8,093.29	-1,547.39	8,088.39	0.00	0.00	0.00	
17,200.00	90.16	359.50	7,872.64	8,193.29	-1,548.26	8,188.38	0.00	0.00	0.00	
17,300.00	90.16	359.50	7,872.35	8,293.28	-1,549.12	8,288.38	0.00	0.00	0.00	
17,400.00	90.16	359.50	7,872.07	8,393.28	-1,549.99	8,388.37	0.00	0.00	0.00	
17,500.00	90.16	359.50	7,871.78	8,493.28	-1,550.85	8,488.36	0.00	0.00	0.00	
17,600.00	90.16	359.50	7,871.49	8,593.27	-1,551.72	8,588.35	0.00	0.00	0.00	
17,700.00	90.16	359.50	7,871.21	8,693.27	-1,552.58	8,688.35	0.00	0.00	0.00	
17,800.00	90.16	359.50	7,870.92	8,793.26	-1,553.45	8,788.34	0.00	0.00	0.00	
17,900.00	90.16	359.50	7,870.63	8,893.26	-1,554.31	8,888.33	0.00	0.00	0.00	
18,000.00	90.16	359.50	7,870.35	8,993.26	-1,555.18	8,988.33	0.00	0.00	0.00	
18,100.00	90.16	359.50	7,870.06	9,093.25	-1,556.04	9,088.32	0.00	0.00	0.00	

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well WINDSOCK 21-3HZ
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 21-3HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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)	
18,200.00	90.16	359.50	7,869.77	9,193.25	-1,556.91	9,188.31	0.00	0.00	0.00	
18,300.00	90.16	359.50	7,869.49	9,293.24	-1,557.77	9,288.30	0.00	0.00	0.00	
18,400.00	90.16	359.50	7,869.20	9,393.24	-1,558.64	9,388.30	0.00	0.00	0.00	
18,500.00	90.16	359.50	7,868.91	9,493.23	-1,559.50	9,488.29	0.00	0.00	0.00	
18,600.00	90.16	359.50	7,868.63	9,593.23	-1,560.37	9,588.28	0.00	0.00	0.00	
18,700.00	90.16	359.50	7,868.34	9,693.23	-1,561.23	9,688.27	0.00	0.00	0.00	
18,800.00	90.16	359.50	7,868.06	9,793.22	-1,562.10	9,788.27	0.00	0.00	0.00	
18,900.00	90.16	359.50	7,867.77	9,893.22	-1,562.96	9,888.26	0.00	0.00	0.00	
19,000.00	90.16	359.50	7,867.48	9,993.21	-1,563.83	9,988.25	0.00	0.00	0.00	
19,100.00	90.16	359.50	7,867.20	10,093.21	-1,564.69	10,088.24	0.00	0.00	0.00	
19,168.23	90.16	359.50	7,867.00	10,161.44	-1,565.28	10,156.47	0.00	0.00	0.00	
TD Well @ 19168.23ft										

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	
8,695.93	7,897.00	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				
4,801.12	4,456.00	Parkman				
6,089.08	5,701.00	Sussex				
7,939.38	7,535.00	Sharon Springs				
7,976.77	7,567.00	Niobrara				
8,193.20	7,729.00	Nio B				
8,406.21	7,840.00	Nio C				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
250.00	250.00	0.00	0.00	Begin Nudge @ 250.00ft	
1,986.67	1,927.45	-209.07	-326.91	Hold Tangent @ 1986.67ft	
4,786.67	4,443.00	-871.56	-1,362.81	Begin Drop @ 4786.67ft	
6,089.17	5,701.09	-1,028.36	-1,607.99	End Drop @ 6089.17ft	
7,568.88	7,180.80	-1,028.36	-1,607.99	KOP @ 7568.88ft :: DLS = 8°/100'	
8,695.93	7,897.00	-310.17	-1,598.72	End Build @ 8695.93ft	
14,408.13	7,880.64	5,401.53	-1,525.00	Begin Turn to BHL @ 14408.13ft	
14,490.46	7,880.40	5,483.86	-1,524.82	End Turn @ 14490.46ft	
19,168.23	7,867.00	10,161.44	-1,565.28	TD Well @ 19168.23ft	