

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N**

**4N-67W-33 CAMENISCH 10-33HZ PAD**

**CAMENISCH 33-3HZ**

**Plan B**

**Plan: Permit Rev-1**

## **Standard Planning Report**

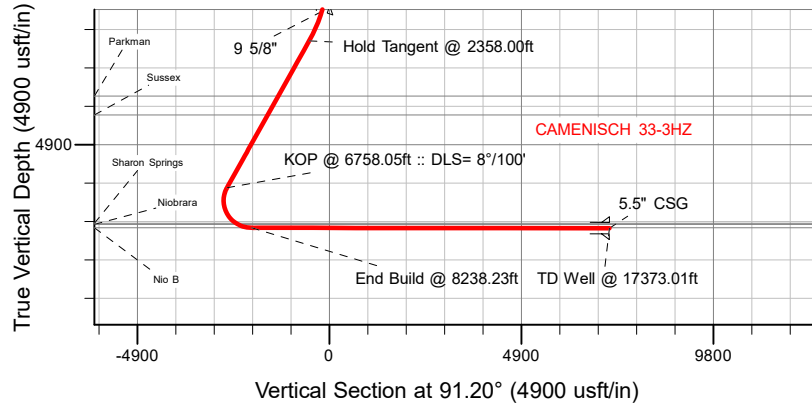
**22 June, 2023**

Project: WELD-NAD83-UTMFT13N  
Site: 4N-67W-33 CAMENISCH 10-33HZ PAD  
Well: CAMENISCH 33-3HZ  
Wellbore: Plan B  
Design: Permit Rev-1

# US ROCKIES WATTENBERG PLANNING

## CASING DETAILS

TVD	MD	Name	Size
1500.00	1523.46	9 5/8"	9-5/8
7033.00	17373.01	5.5" CSG	5-1/2



## SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
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	
2358.00	31.62	246.60	2252.61	-225.21	-520.42	1.50	246.60	-515.59	
6758.05	31.62	246.60	5999.45	-1141.38	-2637.56	0.00	0.00	-2613.08	
8238.23	89.94	91.20	7024.00	-1416.86	-2014.31	8.00	-151.75	-1984.19	
17373.01	89.94	91.20	7033.00	-1608.80	7118.45	0.00	0.00	7150.59	CAMENISCH 33-3HZ_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

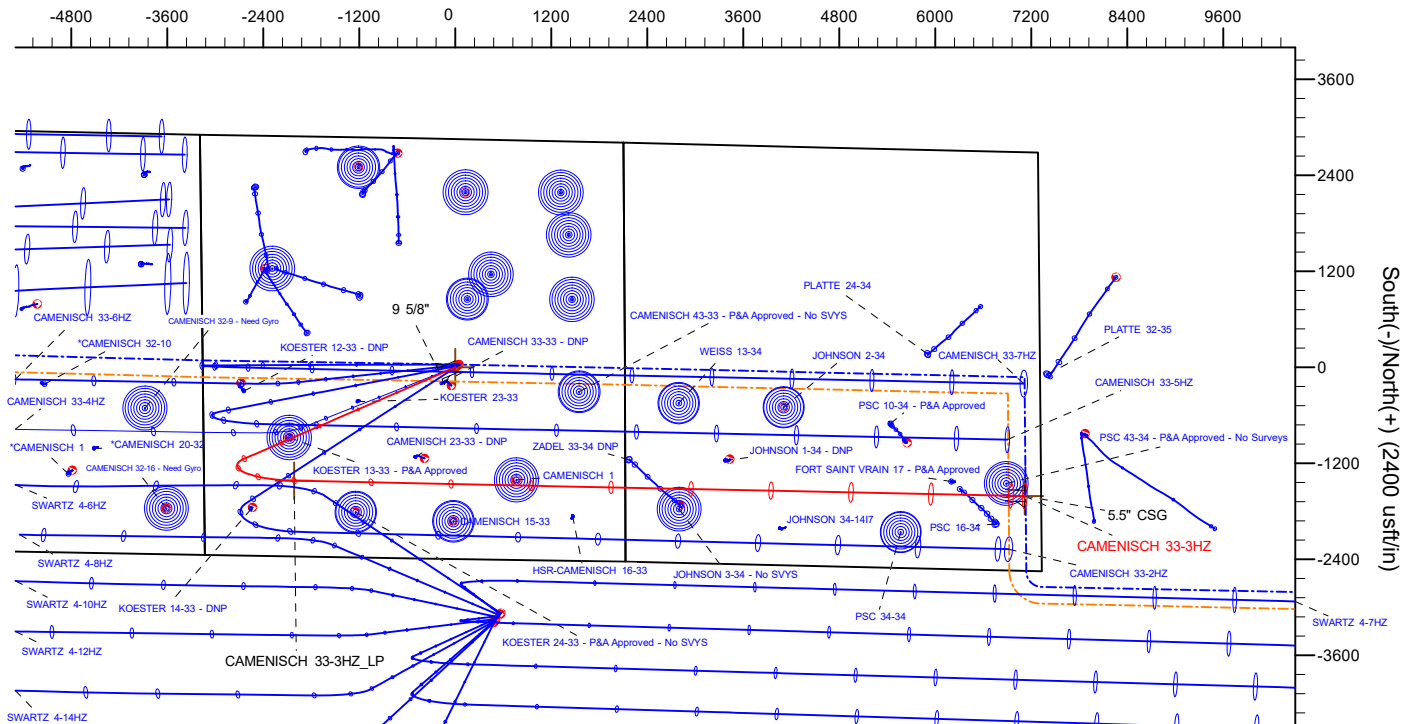
Name	TVD	Northing	Easting	Latitude	Longitude
CAMENISCH 33-3HZ_SHL	0.00	14624615.26	1670083.62	40.268747	-104.893648
CAMENISCH 33-3HZ_LP	7024.00	14623195.98	1668071.01	40.264856	-104.900869
CAMENISCH 33-3HZ_BHL	7033.00	14623015.00	1677204.00	40.264326	-104.868131

SHL  
2397' FSL  
2110' FEL

LP  
947' FSL  
1127' FWL

BHL  
936' FSL  
205' FEL

West(-)/East(+) (2400 usft/in)



## WELL DETAILS: CAMENISCH 33-3HZ

GL = 4870'

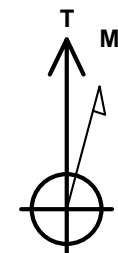
RKB = 17" @ 4887.00usft (RIG)

Plan: Permit Rev-1 (CAMENISCH 33-3HZ/Plan B)

Date: 6/22/2023

## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
772.00	773.64	Fox Hills
3663.00	4014.27	Parkman
4145.00	4580.30	Sussex
6906.00	7815.10	Sharon Springs
6936.00	7874.32	Niobrara
7024.00	8238.23	Nio B



Azimuths to True North  
Magnetic North: 7.71°

Magnetic Field  
Strength: 51672.4nT  
Dip Angle: 66.45°  
Date: 5/5/2023  
Model: IGRF2020

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CAMENISCH 33-3HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4887.00usft (RIG)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4887.00usft (RIG)
<b>Site:</b>	4N-67W-33 CAMENISCH 10-33HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	CAMENISCH 33-3HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan B		
<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		4N-67W-33 CAMENISCH 10-33HZ PAD				
Site Position:		Northing:	14,624,597.34	usft	Latitude:	40.268698
From:	Map	Easting:	1,670,059.57	usft	Longitude:	-104.893734
Position Uncertainty:		0.00	usft	Slot Radius:	13-3/16	"

Well		CAMENISCH 33-3HZ				
Well Position	+N/-S	0.00 usft	Northing:	14,624,615.26 usft	Latitude:	40.268747
	+E/-W	0.00 usft	Easting:	1,670,083.62 usft	Longitude:	-104.893648
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	4,870.00 usft
Grid Convergence:		0.07 °				

<b>Wellbore</b>	Plan B				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF202013	5/5/2023	7.71	66.45	51,672.40405335

<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	91.20	

<b>Plan Survey Tool Program</b>		<b>Date</b>	6/22/2023		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	2,000.00	Permit Rev-1 (Plan B)	APC_ISCWSA REV 2 MWD	Fixed:v2:standard declination
2	2,000.00	17,373.01	Permit Rev-1 (Plan B)	APC_ISCWSA REV 2 MWD+I	Fixed:v2:Rockies, crustal dec +

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well CAMENISCH 33-3HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4887.00usft (RIG)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4887.00usft (RIG)
Site:	4N-67W-33 CAMENISCH 10-33HZ PAD	North Reference:	True
Well:	CAMENISCH 33-3HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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	
2,358.00	31.62	246.60	2,252.61	-225.21	-520.42	1.50	1.50	0.00	246.60	
6,758.05	31.62	246.60	5,999.45	-1,141.38	-2,637.56	0.00	0.00	0.00	0.00	
8,238.23	89.94	91.20	7,024.00	-1,416.86	-2,014.31	8.00	3.94	-10.50	-151.75	
17,373.01	89.94	91.20	7,033.00	-1,608.80	7,118.45	0.00	0.00	0.00	0.00	CAMENISCH 33-3HZ

# Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CAMENISCH 33-3HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4887.00usft (RIG)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4887.00usft (RIG)
<b>Site:</b>	4N-67W-33 CAMENISCH 10-33HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	CAMENISCH 33-3HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan B		
<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	246.60	300.00	-0.13	-0.30	-0.30	1.50	1.50	0.00
400.00	2.25	246.60	399.96	-1.17	-2.70	-2.68	1.50	1.50	0.00
500.00	3.75	246.60	499.82	-3.25	-7.51	-7.44	1.50	1.50	0.00
600.00	5.25	246.60	599.51	-6.36	-14.71	-14.57	1.50	1.50	0.00
700.00	6.75	246.60	698.96	-10.52	-24.30	-24.07	1.50	1.50	0.00
773.64	7.85	246.60	772.00	-14.23	-32.89	-32.58	1.50	1.50	0.00
Fox Hills									
800.00	8.25	246.60	798.10	-15.70	-36.28	-35.94	1.50	1.50	0.00
900.00	9.75	246.60	896.87	-21.91	-50.63	-50.16	1.50	1.50	0.00
1,000.00	11.25	246.60	995.19	-29.15	-67.36	-66.73	1.50	1.50	0.00
1,100.00	12.75	246.60	1,093.00	-37.41	-86.44	-85.64	1.50	1.50	0.00
1,200.00	14.25	246.60	1,190.24	-46.68	-107.86	-106.86	1.50	1.50	0.00
1,300.00	15.75	246.60	1,286.83	-56.96	-131.62	-130.39	1.50	1.50	0.00
1,400.00	17.25	246.60	1,382.71	-68.23	-157.68	-156.22	1.50	1.50	0.00
1,500.00	18.75	246.60	1,477.81	-80.51	-186.04	-184.31	1.50	1.50	0.00
1,523.46	19.10	246.60	1,500.00	-83.53	-193.02	-191.23	1.50	1.50	0.00
9 5/8"									
1,600.00	20.25	246.60	1,572.07	-93.76	-216.67	-214.66	1.50	1.50	0.00
1,700.00	21.75	246.60	1,665.43	-108.00	-249.56	-247.25	1.50	1.50	0.00
1,800.00	23.25	246.60	1,757.81	-123.19	-284.68	-282.04	1.50	1.50	0.00
1,900.00	24.75	246.60	1,849.16	-139.35	-322.01	-319.02	1.50	1.50	0.00
2,000.00	26.25	246.60	1,939.42	-156.44	-361.52	-358.16	1.50	1.50	0.00
2,100.00	27.75	246.60	2,028.52	-174.47	-403.18	-399.44	1.50	1.50	0.00
2,200.00	29.25	246.60	2,116.40	-193.42	-446.97	-442.82	1.50	1.50	0.00
2,300.00	30.75	246.60	2,203.00	-213.28	-492.86	-488.29	1.50	1.50	0.00
2,358.00	31.62	246.60	2,252.61	-225.21	-520.42	-515.59	1.50	1.50	0.00
Hold Tangent @ 2358.00ft									
2,400.00	31.62	246.60	2,288.38	-233.95	-540.63	-535.61	0.00	0.00	0.00
2,500.00	31.62	246.60	2,373.53	-254.77	-588.75	-583.28	0.00	0.00	0.00
2,600.00	31.62	246.60	2,458.69	-275.60	-636.86	-630.95	0.00	0.00	0.00
2,700.00	31.62	246.60	2,543.84	-296.42	-684.98	-678.62	0.00	0.00	0.00
2,800.00	31.62	246.60	2,629.00	-317.24	-733.10	-726.29	0.00	0.00	0.00
2,900.00	31.62	246.60	2,714.15	-338.06	-781.21	-773.96	0.00	0.00	0.00
3,000.00	31.62	246.60	2,799.31	-358.88	-829.33	-821.63	0.00	0.00	0.00
3,100.00	31.62	246.60	2,884.46	-379.70	-877.45	-869.30	0.00	0.00	0.00
3,200.00	31.62	246.60	2,969.61	-400.53	-925.56	-916.97	0.00	0.00	0.00
3,300.00	31.62	246.60	3,054.77	-421.35	-973.68	-964.64	0.00	0.00	0.00
3,400.00	31.62	246.60	3,139.92	-442.17	-1,021.79	-1,012.31	0.00	0.00	0.00
3,500.00	31.62	246.60	3,225.08	-462.99	-1,069.91	-1,059.98	0.00	0.00	0.00
3,600.00	31.62	246.60	3,310.23	-483.81	-1,118.03	-1,107.65	0.00	0.00	0.00
3,700.00	31.62	246.60	3,395.39	-504.64	-1,166.14	-1,155.32	0.00	0.00	0.00
3,800.00	31.62	246.60	3,480.54	-525.46	-1,214.26	-1,202.99	0.00	0.00	0.00
3,900.00	31.62	246.60	3,565.70	-546.28	-1,262.38	-1,250.66	0.00	0.00	0.00
4,000.00	31.62	246.60	3,650.85	-567.10	-1,310.49	-1,298.33	0.00	0.00	0.00
4,014.27	31.62	246.60	3,663.00	-570.07	-1,317.36	-1,305.13	0.00	0.00	0.00
Parkman									
4,100.00	31.62	246.60	3,736.00	-587.92	-1,358.61	-1,346.00	0.00	0.00	0.00
4,200.00	31.62	246.60	3,821.16	-608.74	-1,406.73	-1,393.67	0.00	0.00	0.00
4,300.00	31.62	246.60	3,906.31	-629.57	-1,454.84	-1,441.34	0.00	0.00	0.00

# Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CAMENISCH 33-3HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4887.00usft (RIG)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4887.00usft (RIG)
<b>Site:</b>	4N-67W-33 CAMENISCH 10-33HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	CAMENISCH 33-3HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan B		
<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)
4,400.00	31.62	246.60	3,991.47	-650.39	-1,502.96	-1,489.01	0.00	0.00	0.00
4,500.00	31.62	246.60	4,076.62	-671.21	-1,551.07	-1,536.68	0.00	0.00	0.00
4,580.30	31.62	246.60	4,145.00	-687.93	-1,589.71	-1,574.96	0.00	0.00	0.00
Sussex									
4,600.00	31.62	246.60	4,161.78	-692.03	-1,599.19	-1,584.35	0.00	0.00	0.00
4,700.00	31.62	246.60	4,246.93	-712.85	-1,647.31	-1,632.02	0.00	0.00	0.00
4,800.00	31.62	246.60	4,332.08	-733.68	-1,695.42	-1,679.69	0.00	0.00	0.00
4,900.00	31.62	246.60	4,417.24	-754.50	-1,743.54	-1,727.36	0.00	0.00	0.00
5,000.00	31.62	246.60	4,502.39	-775.32	-1,791.66	-1,775.03	0.00	0.00	0.00
5,100.00	31.62	246.60	4,587.55	-796.14	-1,839.77	-1,822.70	0.00	0.00	0.00
5,200.00	31.62	246.60	4,672.70	-816.96	-1,887.89	-1,870.37	0.00	0.00	0.00
5,300.00	31.62	246.60	4,757.86	-837.78	-1,936.00	-1,918.03	0.00	0.00	0.00
5,400.00	31.62	246.60	4,843.01	-858.61	-1,984.12	-1,965.70	0.00	0.00	0.00
5,500.00	31.62	246.60	4,928.17	-879.43	-2,032.24	-2,013.37	0.00	0.00	0.00
5,600.00	31.62	246.60	5,013.32	-900.25	-2,080.35	-2,061.04	0.00	0.00	0.00
5,700.00	31.62	246.60	5,098.47	-921.07	-2,128.47	-2,108.71	0.00	0.00	0.00
5,800.00	31.62	246.60	5,183.63	-941.89	-2,176.59	-2,156.38	0.00	0.00	0.00
5,900.00	31.62	246.60	5,268.78	-962.71	-2,224.70	-2,204.05	0.00	0.00	0.00
6,000.00	31.62	246.60	5,353.94	-983.54	-2,272.82	-2,251.72	0.00	0.00	0.00
6,100.00	31.62	246.60	5,439.09	-1,004.36	-2,320.94	-2,299.39	0.00	0.00	0.00
6,200.00	31.62	246.60	5,524.25	-1,025.18	-2,369.05	-2,347.06	0.00	0.00	0.00
6,300.00	31.62	246.60	5,609.40	-1,046.00	-2,417.17	-2,394.73	0.00	0.00	0.00
6,400.00	31.62	246.60	5,694.56	-1,066.82	-2,465.28	-2,442.40	0.00	0.00	0.00
6,500.00	31.62	246.60	5,779.71	-1,087.65	-2,513.40	-2,490.07	0.00	0.00	0.00
6,600.00	31.62	246.60	5,864.86	-1,108.47	-2,561.52	-2,537.74	0.00	0.00	0.00
6,700.00	31.62	246.60	5,950.02	-1,129.29	-2,609.63	-2,585.41	0.00	0.00	0.00
6,758.05	31.62	246.60	5,999.45	-1,141.38	-2,637.56	-2,613.08	0.00	0.00	0.00
KOP @ 6758.05ft :: DLS = 8°/100'									
6,800.00	28.70	243.29	6,035.72	-1,150.27	-2,656.66	-2,631.99	8.00	-6.95	-7.88
6,850.00	25.36	238.46	6,080.26	-1,161.27	-2,676.52	-2,651.61	8.00	-6.69	-9.66
6,900.00	22.21	232.32	6,126.01	-1,172.65	-2,693.13	-2,667.98	8.00	-6.29	-12.28
6,950.00	19.36	224.38	6,172.76	-1,184.36	-2,706.41	-2,681.02	8.00	-5.69	-15.88
7,000.00	16.97	214.08	6,220.28	-1,196.33	-2,716.30	-2,690.65	8.00	-4.79	-20.62
7,050.00	15.24	201.03	6,268.33	-1,208.51	-2,722.75	-2,696.84	8.00	-3.46	-26.10
7,100.00	14.41	185.68	6,316.69	-1,220.84	-2,725.72	-2,699.56	8.00	-1.65	-30.70
7,150.00	14.65	169.72	6,365.11	-1,233.26	-2,725.21	-2,698.79	8.00	0.48	-31.93
7,200.00	15.90	155.25	6,413.36	-1,245.70	-2,721.21	-2,694.53	8.00	2.50	-28.93
7,250.00	17.96	143.42	6,461.20	-1,258.12	-2,713.75	-2,686.81	8.00	4.11	-23.65
7,300.00	20.57	134.23	6,508.41	-1,270.44	-2,702.86	-2,675.66	8.00	5.24	-18.39
7,350.00	23.57	127.15	6,554.75	-1,282.61	-2,688.59	-2,661.14	8.00	5.99	-14.15
7,400.00	26.81	121.64	6,599.99	-1,294.57	-2,671.01	-2,643.32	8.00	6.49	-11.02
7,450.00	30.23	117.27	6,643.92	-1,306.26	-2,650.22	-2,622.28	8.00	6.83	-8.74
7,500.00	33.76	113.73	6,686.32	-1,317.62	-2,626.30	-2,598.13	8.00	7.06	-7.10
7,550.00	37.38	110.78	6,726.99	-1,328.60	-2,599.38	-2,570.99	8.00	7.23	-5.88
7,600.00	41.06	108.30	6,765.72	-1,339.15	-2,569.59	-2,540.98	8.00	7.36	-4.98
7,650.00	44.78	106.15	6,802.34	-1,349.20	-2,537.07	-2,508.26	8.00	7.45	-4.29
7,700.00	48.54	104.27	6,836.65	-1,358.72	-2,501.99	-2,472.98	8.00	7.52	-3.76
7,750.00	52.33	102.60	6,868.49	-1,367.66	-2,464.50	-2,435.32	8.00	7.57	-3.34
7,800.00	56.13	101.09	6,897.72	-1,375.98	-2,424.80	-2,395.46	8.00	7.62	-3.02
7,815.10	57.29	100.66	6,906.00	-1,378.36	-2,412.41	-2,383.02	8.00	7.64	-2.84
Sharon Springs									
7,850.00	59.96	99.71	6,924.17	-1,383.62	-2,383.09	-2,353.59	8.00	7.65	-2.72
7,874.32	61.82	99.08	6,936.00	-1,387.09	-2,362.13	-2,332.56	8.00	7.67	-2.60

# Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CAMENISCH 33-3HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4887.00usft (RIG)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4887.00usft (RIG)
<b>Site:</b>	4N-67W-33 CAMENISCH 10-33HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	CAMENISCH 33-3HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan B		
<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>Niobrara</b>									
7,900.00	63.80	98.43	6,947.74	-1,390.56	-2,339.55	-2,309.91	8.00	7.68	-2.51
7,950.00	67.65	97.24	6,968.29	-1,396.77	-2,294.40	-2,264.65	8.00	7.70	-2.39
8,000.00	71.50	96.11	6,985.74	-1,402.20	-2,247.87	-2,218.01	8.00	7.71	-2.26
8,050.00	75.37	95.02	6,999.99	-1,406.85	-2,200.18	-2,170.24	8.00	7.73	-2.16
8,100.00	79.24	93.98	7,010.98	-1,410.67	-2,151.57	-2,121.55	8.00	7.74	-2.09
8,150.00	83.11	92.96	7,018.65	-1,413.66	-2,102.26	-2,072.19	8.00	7.74	-2.03
8,200.00	86.98	91.96	7,022.97	-1,415.80	-2,052.50	-2,022.40	8.00	7.75	-2.00
8,238.23	89.94	91.20	7,024.00	-1,416.86	-2,014.31	-1,984.19	8.00	7.75	-1.99
<b>End Build @ 8238.23ft - Nio B</b>									
8,300.00	89.94	91.20	7,024.06	-1,418.16	-1,952.55	-1,922.42	0.00	0.00	0.00
8,400.00	89.94	91.20	7,024.16	-1,420.26	-1,852.57	-1,822.42	0.00	0.00	0.00
8,500.00	89.94	91.20	7,024.25	-1,422.36	-1,752.59	-1,722.42	0.00	0.00	0.00
8,600.00	89.94	91.20	7,024.35	-1,424.46	-1,652.62	-1,622.42	0.00	0.00	0.00
8,700.00	89.94	91.20	7,024.45	-1,426.56	-1,552.64	-1,522.42	0.00	0.00	0.00
8,800.00	89.94	91.20	7,024.55	-1,428.66	-1,452.66	-1,422.42	0.00	0.00	0.00
8,900.00	89.94	91.20	7,024.65	-1,430.76	-1,352.68	-1,322.42	0.00	0.00	0.00
9,000.00	89.94	91.20	7,024.75	-1,432.87	-1,252.70	-1,222.42	0.00	0.00	0.00
9,100.00	89.94	91.20	7,024.85	-1,434.97	-1,152.73	-1,122.42	0.00	0.00	0.00
9,200.00	89.94	91.20	7,024.94	-1,437.07	-1,052.75	-1,022.42	0.00	0.00	0.00
9,300.00	89.94	91.20	7,025.04	-1,439.17	-952.77	-922.42	0.00	0.00	0.00
9,400.00	89.94	91.20	7,025.14	-1,441.27	-852.79	-822.42	0.00	0.00	0.00
9,500.00	89.94	91.20	7,025.24	-1,443.37	-752.81	-722.42	0.00	0.00	0.00
9,600.00	89.94	91.20	7,025.34	-1,445.47	-652.84	-622.42	0.00	0.00	0.00
9,700.00	89.94	91.20	7,025.44	-1,447.57	-552.86	-522.42	0.00	0.00	0.00
9,800.00	89.94	91.20	7,025.54	-1,449.68	-452.88	-422.42	0.00	0.00	0.00
9,900.00	89.94	91.20	7,025.63	-1,451.78	-352.90	-322.42	0.00	0.00	0.00
10,000.00	89.94	91.20	7,025.73	-1,453.88	-252.93	-222.42	0.00	0.00	0.00
10,100.00	89.94	91.20	7,025.83	-1,455.98	-152.95	-122.42	0.00	0.00	0.00
10,200.00	89.94	91.20	7,025.93	-1,458.08	-52.97	-22.42	0.00	0.00	0.00
10,300.00	89.94	91.20	7,026.03	-1,460.18	47.01	77.58	0.00	0.00	0.00
10,400.00	89.94	91.20	7,026.13	-1,462.28	146.99	177.58	0.00	0.00	0.00
10,500.00	89.94	91.20	7,026.23	-1,464.38	246.96	277.58	0.00	0.00	0.00
10,600.00	89.94	91.20	7,026.32	-1,466.49	346.94	377.58	0.00	0.00	0.00
10,700.00	89.94	91.20	7,026.42	-1,468.59	446.92	477.58	0.00	0.00	0.00
10,800.00	89.94	91.20	7,026.52	-1,470.69	546.90	577.58	0.00	0.00	0.00
10,900.00	89.94	91.20	7,026.62	-1,472.79	646.88	677.58	0.00	0.00	0.00
11,000.00	89.94	91.20	7,026.72	-1,474.89	746.85	777.58	0.00	0.00	0.00
11,100.00	89.94	91.20	7,026.82	-1,476.99	846.83	877.58	0.00	0.00	0.00
11,200.00	89.94	91.20	7,026.92	-1,479.09	946.81	977.58	0.00	0.00	0.00
11,300.00	89.94	91.20	7,027.01	-1,481.19	1,046.79	1,077.58	0.00	0.00	0.00
11,400.00	89.94	91.20	7,027.11	-1,483.30	1,146.76	1,177.58	0.00	0.00	0.00
11,500.00	89.94	91.20	7,027.21	-1,485.40	1,246.74	1,277.58	0.00	0.00	0.00
11,600.00	89.94	91.20	7,027.31	-1,487.50	1,346.72	1,377.58	0.00	0.00	0.00
11,700.00	89.94	91.20	7,027.41	-1,489.60	1,446.70	1,477.58	0.00	0.00	0.00
11,800.00	89.94	91.20	7,027.51	-1,491.70	1,546.68	1,577.58	0.00	0.00	0.00
11,900.00	89.94	91.20	7,027.61	-1,493.80	1,646.65	1,677.58	0.00	0.00	0.00
12,000.00	89.94	91.20	7,027.70	-1,495.90	1,746.63	1,777.58	0.00	0.00	0.00
12,100.00	89.94	91.20	7,027.80	-1,498.00	1,846.61	1,877.58	0.00	0.00	0.00
12,200.00	89.94	91.20	7,027.90	-1,500.10	1,946.59	1,977.58	0.00	0.00	0.00
12,300.00	89.94	91.20	7,028.00	-1,502.21	2,046.57	2,077.58	0.00	0.00	0.00
12,400.00	89.94	91.20	7,028.10	-1,504.31	2,146.54	2,177.58	0.00	0.00	0.00
12,500.00	89.94	91.20	7,028.20	-1,506.41	2,246.52	2,277.58	0.00	0.00	0.00

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CAMENISCH 33-3HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4887.00usft (RIG)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4887.00usft (RIG)
<b>Site:</b>	4N-67W-33 CAMENISCH 10-33HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	CAMENISCH 33-3HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan B		
<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)	
12,600.00	89.94	91.20	7,028.30	-1,508.51	2,346.50	2,377.58	0.00	0.00	0.00	
12,700.00	89.94	91.20	7,028.39	-1,510.61	2,446.48	2,477.58	0.00	0.00	0.00	
12,800.00	89.94	91.20	7,028.49	-1,512.71	2,546.46	2,577.58	0.00	0.00	0.00	
12,900.00	89.94	91.20	7,028.59	-1,514.81	2,646.43	2,677.58	0.00	0.00	0.00	
13,000.00	89.94	91.20	7,028.69	-1,516.91	2,746.41	2,777.58	0.00	0.00	0.00	
13,100.00	89.94	91.20	7,028.79	-1,519.02	2,846.39	2,877.58	0.00	0.00	0.00	
13,200.00	89.94	91.20	7,028.89	-1,521.12	2,946.37	2,977.58	0.00	0.00	0.00	
13,300.00	89.94	91.20	7,028.99	-1,523.22	3,046.34	3,077.58	0.00	0.00	0.00	
13,400.00	89.94	91.20	7,029.08	-1,525.32	3,146.32	3,177.58	0.00	0.00	0.00	
13,500.00	89.94	91.20	7,029.18	-1,527.42	3,246.30	3,277.58	0.00	0.00	0.00	
13,600.00	89.94	91.20	7,029.28	-1,529.52	3,346.28	3,377.58	0.00	0.00	0.00	
13,700.00	89.94	91.20	7,029.38	-1,531.62	3,446.26	3,477.58	0.00	0.00	0.00	
13,800.00	89.94	91.20	7,029.48	-1,533.72	3,546.23	3,577.58	0.00	0.00	0.00	
13,900.00	89.94	91.20	7,029.58	-1,535.83	3,646.21	3,677.58	0.00	0.00	0.00	
14,000.00	89.94	91.20	7,029.68	-1,537.93	3,746.19	3,777.58	0.00	0.00	0.00	
14,100.00	89.94	91.20	7,029.77	-1,540.03	3,846.17	3,877.58	0.00	0.00	0.00	
14,200.00	89.94	91.20	7,029.87	-1,542.13	3,946.15	3,977.58	0.00	0.00	0.00	
14,300.00	89.94	91.20	7,029.97	-1,544.23	4,046.12	4,077.58	0.00	0.00	0.00	
14,400.00	89.94	91.20	7,030.07	-1,546.33	4,146.10	4,177.58	0.00	0.00	0.00	
14,500.00	89.94	91.20	7,030.17	-1,548.43	4,246.08	4,277.58	0.00	0.00	0.00	
14,600.00	89.94	91.20	7,030.27	-1,550.53	4,346.06	4,377.58	0.00	0.00	0.00	
14,700.00	89.94	91.20	7,030.37	-1,552.64	4,446.03	4,477.58	0.00	0.00	0.00	
14,800.00	89.94	91.20	7,030.46	-1,554.74	4,546.01	4,577.58	0.00	0.00	0.00	
14,900.00	89.94	91.20	7,030.56	-1,556.84	4,645.99	4,677.58	0.00	0.00	0.00	
15,000.00	89.94	91.20	7,030.66	-1,558.94	4,745.97	4,777.58	0.00	0.00	0.00	
15,100.00	89.94	91.20	7,030.76	-1,561.04	4,845.95	4,877.58	0.00	0.00	0.00	
15,200.00	89.94	91.20	7,030.86	-1,563.14	4,945.92	4,977.58	0.00	0.00	0.00	
15,300.00	89.94	91.20	7,030.96	-1,565.24	5,045.90	5,077.58	0.00	0.00	0.00	
15,400.00	89.94	91.20	7,031.06	-1,567.34	5,145.88	5,177.58	0.00	0.00	0.00	
15,500.00	89.94	91.20	7,031.15	-1,569.45	5,245.86	5,277.58	0.00	0.00	0.00	
15,600.00	89.94	91.20	7,031.25	-1,571.55	5,345.84	5,377.58	0.00	0.00	0.00	
15,700.00	89.94	91.20	7,031.35	-1,573.65	5,445.81	5,477.58	0.00	0.00	0.00	
15,800.00	89.94	91.20	7,031.45	-1,575.75	5,545.79	5,577.58	0.00	0.00	0.00	
15,900.00	89.94	91.20	7,031.55	-1,577.85	5,645.77	5,677.58	0.00	0.00	0.00	
16,000.00	89.94	91.20	7,031.65	-1,579.95	5,745.75	5,777.57	0.00	0.00	0.00	
16,100.00	89.94	91.20	7,031.75	-1,582.05	5,845.72	5,877.57	0.00	0.00	0.00	
16,200.00	89.94	91.20	7,031.84	-1,584.15	5,945.70	5,977.57	0.00	0.00	0.00	
16,300.00	89.94	91.20	7,031.94	-1,586.26	6,045.68	6,077.57	0.00	0.00	0.00	
16,400.00	89.94	91.20	7,032.04	-1,588.36	6,145.66	6,177.57	0.00	0.00	0.00	
16,500.00	89.94	91.20	7,032.14	-1,590.46	6,245.64	6,277.57	0.00	0.00	0.00	
16,600.00	89.94	91.20	7,032.24	-1,592.56	6,345.61	6,377.57	0.00	0.00	0.00	
16,700.00	89.94	91.20	7,032.34	-1,594.66	6,445.59	6,477.57	0.00	0.00	0.00	
16,800.00	89.94	91.20	7,032.44	-1,596.76	6,545.57	6,577.57	0.00	0.00	0.00	
16,900.00	89.94	91.20	7,032.53	-1,598.86	6,645.55	6,677.57	0.00	0.00	0.00	
17,000.00	89.94	91.20	7,032.63	-1,600.96	6,745.53	6,777.57	0.00	0.00	0.00	
17,100.00	89.94	91.20	7,032.73	-1,603.07	6,845.50	6,877.57	0.00	0.00	0.00	
17,200.00	89.94	91.20	7,032.83	-1,605.17	6,945.48	6,977.57	0.00	0.00	0.00	
17,300.00	89.94	91.20	7,032.93	-1,607.27	7,045.46	7,077.57	0.00	0.00	0.00	
17,373.01	89.94	91.20	7,033.00	-1,608.80	7,118.45	7,150.58	0.00	0.00	0.00	
TD Well @ 17373.01ft - 5.5" CSG										



## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CAMENISCH 33-3HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4887.00usft (RIG)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4887.00usft (RIG)
<b>Site:</b>	4N-67W-33 CAMENISCH 10-33HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	CAMENISCH 33-3HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan B		
<b>Design:</b>	Permit Rev-1		

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,523.46	1,500.00	9 5/8"	9-5/8	13-1/2	
17,373.01	7,033.00	5.5" CSG	5-1/2	7-7/8	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
773.64	772.00	Fox Hills				
4,014.27	3,663.00	Parkman				
4,580.30	4,145.00	Sussex				
7,815.10	6,906.00	Sharon Springs				
7,874.32	6,936.00	Niobrara				
8,238.23	7,024.00	Nio B		0.00		

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	
2,358.00	2,252.61	-225.21	-520.42	Hold Tangent @ 2358.00ft	
6,758.05	5,999.45	-1,141.38	-2,637.56	KOP @ 6758.05ft :: DLS= 8°/100'	
8,238.23	7,024.00	-1,416.86	-2,014.31	End Build @ 8238.23ft	
17,373.01	7,033.00	-1,608.80	7,118.45	TD Well @ 17373.01ft	