

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

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

CAMENISCH 33-6HZ

Plan B

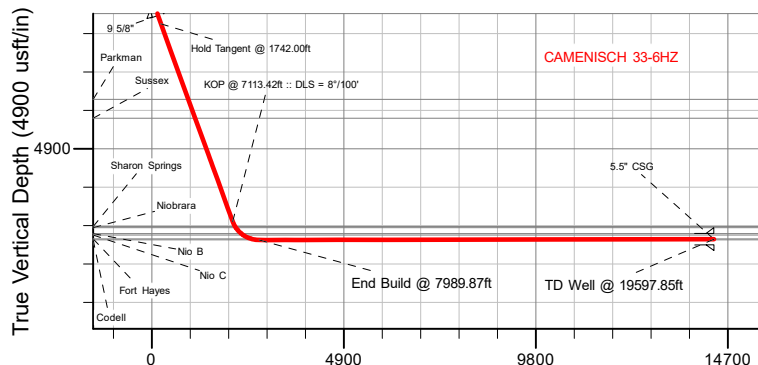
Plan: Permit Rev-1

Standard Planning Report

06 February, 2024

US ROCKIES WATTENBERG PLANNING

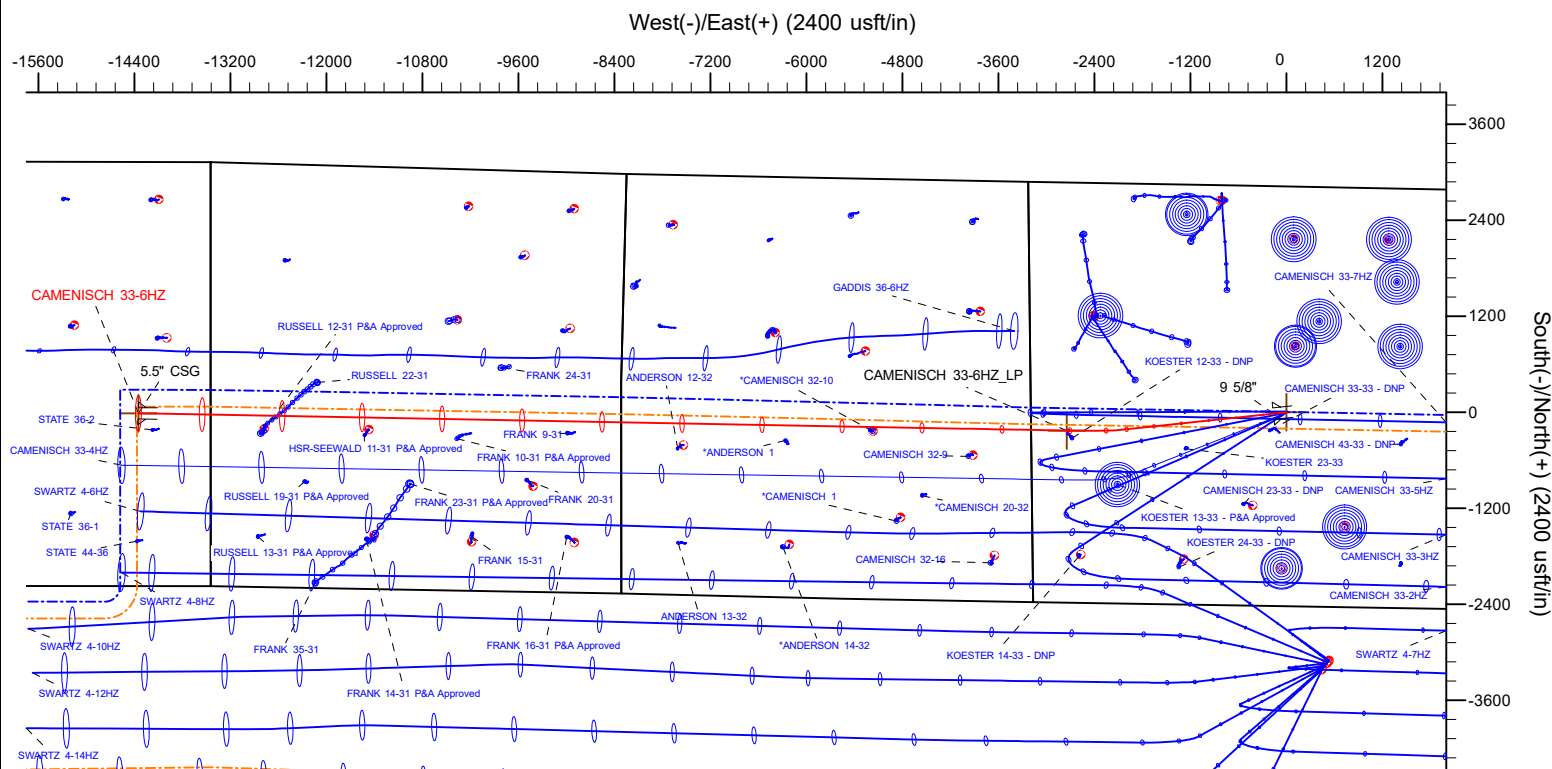
CASING DETAILS			
TVD	MD	Name	Size
1500.00	1515.80	9 5/8"	9-5/8
7212.00	19597.85	5.5" CSG	5-1/2



Vertical Section at 271.07° (4900 usft/in)

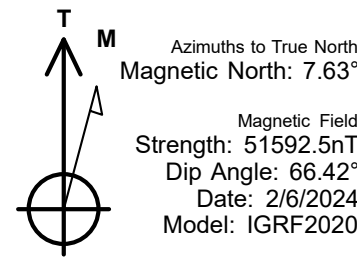
SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
1742.00	20.13	263.94	1714.56	-24.63	-232.03	1.50	263.94	231.53	
7113.42	20.13	263.94	6757.86	-219.79	-2070.28	0.00	0.00	2065.81	
7989.87	90.08	271.07	7229.00	-228.70	-2744.75	8.00	7.58	2740.00	
19597.85	90.08	271.07	7212.00	-12.90	-14350.72	0.00	0.00	14347.97	CAMENISCH 33-6HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	Northing	Easting	Latitude	Longitude
CAMENISCH 33-6HZ_SHL	0.00	14624642.14	1670119.69	40.268821	-104.893518
CAMENISCH 33-6HZ_LP	7229.00	14624410.14	1667375.22	40.268192	-104.903358
CAMENISCH 33-6HZ_BHL	7212.00	14624612.00	1655769.00	40.268774	-104.944964



WELL DETAILS: CAMENISCH 33-6HZ
GL = 4870'
RKB = 17' @ 4887.00usft (RIG)
Plan: Permit Rev-1 (CAMENISCH 33-6HZ/Plan B)
Date: 2/6/2024

FORMATION TOP DETAILS		
TVDPPath	MDPath	Formation
752.00	752.50	Fox Hills
3643.00	3795.90	Parkman
4125.00	4309.26	Sussex
6886.00	7255.97	Sharon Springs
6916.00	7291.70	Niobrara
7068.00	7498.85	Nio B
7100.00	7552.01	Nio C
7202.00	7791.45	Fort Hayes
7223.00	7896.03	Codell



Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well CAMENISCH 33-6HZ
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 33-6HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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		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 33-6HZ					
Well Position	+N/-S	0.00 usft	Northing:	14,624,642.14 usft	Latitude:	40.268821
	+E/-W	0.00 usft	Easting:	1,670,119.69 usft	Longitude:	-104.893519
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	4,870.00 usft
Grid Convergence:		0.07 °				

Wellbore	Plan B				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF202013	2/6/2024	7.63	66.42	51,592.52867740

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	271.07

Plan Survey Tool Program		Date	2/6/2024		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	2,000.00	Permit Rev-1 (Plan B)	APC_ISCWSA REV 2 MWD+I	Fixed:v2:crustal field declinatio
2	2,000.00	19,597.85	Permit Rev-1 (Plan B)	APC_ISCWSA REV 2 MWD+I	Fixed:v2:Rockies, crustal dec +

Planning Report

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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 33-6HZ	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	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,742.00	20.13	263.94	1,714.56	-24.63	-232.03	1.50	1.50	0.00	263.94	
7,113.42	20.13	263.94	6,757.86	-219.79	-2,070.28	0.00	0.00	0.00	0.00	
7,989.87	90.08	271.07	7,229.00	-228.70	-2,744.75	8.00	7.98	0.81	7.58	
19,597.85	90.08	271.07	7,212.00	-12.90	-14,350.72	0.00	0.00	0.00	0.00	CAMENISCH 33-6HZ

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well CAMENISCH 33-6HZ
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 33-6HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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
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
Begin Nudge @ 400.00ft									
500.00	1.50	263.94	499.99	-0.14	-1.30	1.30	1.50	1.50	0.00
600.00	3.00	263.94	599.91	-0.55	-5.21	5.19	1.50	1.50	0.00
700.00	4.50	263.94	699.69	-1.24	-11.71	11.68	1.50	1.50	0.00
752.50	5.29	263.94	752.00	-1.72	-16.16	16.13	1.50	1.50	0.00
Fox Hills									
800.00	6.00	263.94	799.27	-2.21	-20.81	20.76	1.50	1.50	0.00
900.00	7.50	263.94	898.57	-3.45	-32.50	32.43	1.50	1.50	0.00
1,000.00	9.00	263.94	997.54	-4.96	-46.76	46.66	1.50	1.50	0.00
1,100.00	10.50	263.94	1,096.09	-6.75	-63.60	63.47	1.50	1.50	0.00
1,200.00	12.00	263.94	1,194.16	-8.81	-83.00	82.82	1.50	1.50	0.00
1,300.00	13.50	263.94	1,291.70	-11.14	-104.95	104.72	1.50	1.50	0.00
1,400.00	15.00	263.94	1,388.62	-13.74	-129.43	129.15	1.50	1.50	0.00
1,500.00	16.50	263.94	1,484.86	-16.61	-156.42	156.08	1.50	1.50	0.00
1,515.80	16.74	263.94	1,500.00	-17.08	-160.91	160.56	1.50	1.50	0.00
9 5/8"									
1,600.00	18.00	263.94	1,580.36	-19.74	-185.91	185.50	1.50	1.50	0.00
1,700.00	19.50	263.94	1,675.05	-23.13	-217.87	217.40	1.50	1.50	0.00
1,742.00	20.13	263.94	1,714.56	-24.63	-232.03	231.53	1.50	1.50	0.00
Hold Tangent @ 1742.00ft									
1,800.00	20.13	263.94	1,769.02	-26.74	-251.88	251.33	0.00	0.00	0.00
1,900.00	20.13	263.94	1,862.91	-30.37	-286.10	285.48	0.00	0.00	0.00
2,000.00	20.13	263.94	1,956.80	-34.01	-320.32	319.63	0.00	0.00	0.00
2,100.00	20.13	263.94	2,050.69	-37.64	-354.54	353.78	0.00	0.00	0.00
2,200.00	20.13	263.94	2,144.58	-41.27	-388.77	387.93	0.00	0.00	0.00
2,300.00	20.13	263.94	2,238.48	-44.91	-422.99	422.08	0.00	0.00	0.00
2,400.00	20.13	263.94	2,332.37	-48.54	-457.21	456.23	0.00	0.00	0.00
2,500.00	20.13	263.94	2,426.26	-52.17	-491.44	490.38	0.00	0.00	0.00
2,600.00	20.13	263.94	2,520.15	-55.81	-525.66	524.52	0.00	0.00	0.00
2,700.00	20.13	263.94	2,614.04	-59.44	-559.88	558.67	0.00	0.00	0.00
2,800.00	20.13	263.94	2,707.93	-63.07	-594.10	592.82	0.00	0.00	0.00
2,900.00	20.13	263.94	2,801.82	-66.71	-628.33	626.97	0.00	0.00	0.00
3,000.00	20.13	263.94	2,895.72	-70.34	-662.55	661.12	0.00	0.00	0.00
3,100.00	20.13	263.94	2,989.61	-73.97	-696.77	695.27	0.00	0.00	0.00
3,200.00	20.13	263.94	3,083.50	-77.60	-731.00	729.42	0.00	0.00	0.00
3,300.00	20.13	263.94	3,177.39	-81.24	-765.22	763.57	0.00	0.00	0.00
3,400.00	20.13	263.94	3,271.28	-84.87	-799.44	797.72	0.00	0.00	0.00
3,500.00	20.13	263.94	3,365.17	-88.50	-833.66	831.87	0.00	0.00	0.00
3,600.00	20.13	263.94	3,459.06	-92.14	-867.89	866.01	0.00	0.00	0.00
3,700.00	20.13	263.94	3,552.96	-95.77	-902.11	900.16	0.00	0.00	0.00
3,795.90	20.13	263.94	3,643.00	-99.26	-934.93	932.91	0.00	0.00	0.00
Parkman									
3,800.00	20.13	263.94	3,646.85	-99.40	-936.33	934.31	0.00	0.00	0.00
3,900.00	20.13	263.94	3,740.74	-103.04	-970.56	968.46	0.00	0.00	0.00
4,000.00	20.13	263.94	3,834.63	-106.67	-1,004.78	1,002.61	0.00	0.00	0.00
4,100.00	20.13	263.94	3,928.52	-110.30	-1,039.00	1,036.76	0.00	0.00	0.00
4,200.00	20.13	263.94	4,022.41	-113.94	-1,073.22	1,070.91	0.00	0.00	0.00
4,300.00	20.13	263.94	4,116.30	-117.57	-1,107.45	1,105.06	0.00	0.00	0.00
4,309.26	20.13	263.94	4,125.00	-117.91	-1,110.62	1,108.22	0.00	0.00	0.00

Planning Report

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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 33-6HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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)
Sussex									
4,400.00	20.13	263.94	4,210.20	-121.20	-1,141.67	1,139.21	0.00	0.00	0.00
4,500.00	20.13	263.94	4,304.09	-124.84	-1,175.89	1,173.36	0.00	0.00	0.00
4,600.00	20.13	263.94	4,397.98	-128.47	-1,210.11	1,207.50	0.00	0.00	0.00
4,700.00	20.13	263.94	4,491.87	-132.10	-1,244.34	1,241.65	0.00	0.00	0.00
4,800.00	20.13	263.94	4,585.76	-135.74	-1,278.56	1,275.80	0.00	0.00	0.00
4,900.00	20.13	263.94	4,679.65	-139.37	-1,312.78	1,309.95	0.00	0.00	0.00
5,000.00	20.13	263.94	4,773.54	-143.00	-1,347.01	1,344.10	0.00	0.00	0.00
5,100.00	20.13	263.94	4,867.44	-146.64	-1,381.23	1,378.25	0.00	0.00	0.00
5,200.00	20.13	263.94	4,961.33	-150.27	-1,415.45	1,412.40	0.00	0.00	0.00
5,300.00	20.13	263.94	5,055.22	-153.90	-1,449.67	1,446.55	0.00	0.00	0.00
5,400.00	20.13	263.94	5,149.11	-157.54	-1,483.90	1,480.70	0.00	0.00	0.00
5,500.00	20.13	263.94	5,243.00	-161.17	-1,518.12	1,514.85	0.00	0.00	0.00
5,600.00	20.13	263.94	5,336.89	-164.80	-1,552.34	1,549.00	0.00	0.00	0.00
5,700.00	20.13	263.94	5,430.78	-168.43	-1,586.57	1,583.14	0.00	0.00	0.00
5,800.00	20.13	263.94	5,524.68	-172.07	-1,620.79	1,617.29	0.00	0.00	0.00
5,900.00	20.13	263.94	5,618.57	-175.70	-1,655.01	1,651.44	0.00	0.00	0.00
6,000.00	20.13	263.94	5,712.46	-179.33	-1,689.23	1,685.59	0.00	0.00	0.00
6,100.00	20.13	263.94	5,806.35	-182.97	-1,723.46	1,719.74	0.00	0.00	0.00
6,200.00	20.13	263.94	5,900.24	-186.60	-1,757.68	1,753.89	0.00	0.00	0.00
6,300.00	20.13	263.94	5,994.13	-190.23	-1,791.90	1,788.04	0.00	0.00	0.00
6,400.00	20.13	263.94	6,088.02	-193.87	-1,826.13	1,822.19	0.00	0.00	0.00
6,500.00	20.13	263.94	6,181.92	-197.50	-1,860.35	1,856.34	0.00	0.00	0.00
6,600.00	20.13	263.94	6,275.81	-201.13	-1,894.57	1,890.49	0.00	0.00	0.00
6,700.00	20.13	263.94	6,369.70	-204.77	-1,928.79	1,924.63	0.00	0.00	0.00
6,800.00	20.13	263.94	6,463.59	-208.40	-1,963.02	1,958.78	0.00	0.00	0.00
6,900.00	20.13	263.94	6,557.48	-212.03	-1,997.24	1,992.93	0.00	0.00	0.00
7,000.00	20.13	263.94	6,651.37	-215.67	-2,031.46	2,027.08	0.00	0.00	0.00
7,100.00	20.13	263.94	6,745.26	-219.30	-2,065.69	2,061.23	0.00	0.00	0.00
7,113.42	20.13	263.94	6,757.86	-219.79	-2,070.28	2,065.81	0.00	0.00	0.00
KOP @ 7113.42ft :: DLS = 8°/100'									
7,150.00	23.03	264.93	6,791.88	-221.08	-2,083.67	2,079.18	8.00	7.94	2.70
7,200.00	27.01	265.95	6,837.17	-222.75	-2,104.75	2,100.22	8.00	7.95	2.04
7,250.00	30.99	266.72	6,880.90	-224.29	-2,128.93	2,124.37	8.00	7.96	1.55
7,255.97	31.47	266.80	6,886.00	-224.47	-2,132.02	2,127.46	8.00	7.97	1.35
Sharon Springs									
7,291.70	34.32	267.24	6,916.00	-225.47	-2,151.40	2,146.82	8.00	7.97	1.23
Niobrara									
7,300.00	34.98	267.34	6,922.83	-225.69	-2,156.11	2,151.52	8.00	7.97	1.12
7,350.00	38.97	267.84	6,962.77	-226.95	-2,186.15	2,181.53	8.00	7.98	1.01
7,400.00	42.96	268.26	7,000.51	-228.06	-2,218.91	2,214.26	8.00	7.98	0.85
7,450.00	46.95	268.63	7,035.89	-229.02	-2,254.21	2,249.54	8.00	7.98	0.73
7,498.85	50.85	268.94	7,068.00	-229.79	-2,291.01	2,286.32	8.00	7.99	0.64
Nio B									
7,500.00	50.94	268.95	7,068.72	-229.81	-2,291.90	2,287.21	8.00	7.99	0.60
7,550.00	54.94	269.23	7,098.85	-230.44	-2,331.79	2,327.08	8.00	7.99	0.57
7,552.01	55.10	269.24	7,100.00	-230.46	-2,333.43	2,328.72	8.00	7.99	0.54
Nio C									
7,600.00	58.93	269.49	7,126.13	-230.90	-2,373.68	2,368.95	8.00	7.99	0.52
7,650.00	62.92	269.73	7,150.42	-231.20	-2,417.37	2,412.63	8.00	7.99	0.48
7,700.00	66.92	269.95	7,171.60	-231.32	-2,462.65	2,457.90	8.00	7.99	0.44
7,750.00	70.91	270.16	7,189.59	-231.27	-2,509.29	2,504.53	8.00	7.99	0.42
7,791.45	74.23	270.33	7,202.00	-231.11	-2,548.83	2,544.07	8.00	7.99	0.40

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well CAMENISCH 33-6HZ
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 33-6HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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)
Fort Hayes									
7,800.00	74.91	270.36	7,204.28	-231.06	-2,557.07	2,552.31	8.00	7.99	0.39
7,850.00	78.91	270.55	7,215.60	-230.67	-2,605.76	2,601.00	8.00	7.99	0.38
7,896.03	82.58	270.72	7,223.00	-230.16	-2,651.18	2,646.42	8.00	7.99	0.37
Codell									
7,900.00	82.90	270.74	7,223.50	-230.11	-2,655.12	2,650.36	8.00	7.99	0.37
7,950.00	86.90	270.92	7,227.95	-229.39	-2,704.91	2,700.15	8.00	7.99	0.37
7,989.87	90.08	271.07	7,229.00	-228.70	-2,744.75	2,740.00	8.00	7.99	0.36
End Build @ 7989.87ft									
8,000.00	90.08	271.07	7,228.98	-228.51	-2,754.88	2,750.13	0.00	0.00	0.00
8,100.00	90.08	271.07	7,228.83	-226.66	-2,854.86	2,850.13	0.00	0.00	0.00
8,200.00	90.08	271.07	7,228.69	-224.80	-2,954.85	2,950.13	0.00	0.00	0.00
8,300.00	90.08	271.07	7,228.54	-222.94	-3,054.83	3,050.13	0.00	0.00	0.00
8,400.00	90.08	271.07	7,228.39	-221.08	-3,154.81	3,150.13	0.00	0.00	0.00
8,500.00	90.08	271.07	7,228.25	-219.22	-3,254.79	3,250.13	0.00	0.00	0.00
8,600.00	90.08	271.07	7,228.10	-217.36	-3,354.78	3,350.13	0.00	0.00	0.00
8,700.00	90.08	271.07	7,227.96	-215.50	-3,454.76	3,450.13	0.00	0.00	0.00
8,800.00	90.08	271.07	7,227.81	-213.64	-3,554.74	3,550.13	0.00	0.00	0.00
8,900.00	90.08	271.07	7,227.66	-211.78	-3,654.72	3,650.13	0.00	0.00	0.00
9,000.00	90.08	271.07	7,227.52	-209.92	-3,754.71	3,750.13	0.00	0.00	0.00
9,100.00	90.08	271.07	7,227.37	-208.06	-3,854.69	3,850.13	0.00	0.00	0.00
9,200.00	90.08	271.07	7,227.22	-206.21	-3,954.67	3,950.13	0.00	0.00	0.00
9,300.00	90.08	271.07	7,227.08	-204.35	-4,054.65	4,050.13	0.00	0.00	0.00
9,400.00	90.08	271.07	7,226.93	-202.49	-4,154.64	4,150.13	0.00	0.00	0.00
9,500.00	90.08	271.07	7,226.78	-200.63	-4,254.62	4,250.13	0.00	0.00	0.00
9,600.00	90.08	271.07	7,226.64	-198.77	-4,354.60	4,350.13	0.00	0.00	0.00
9,700.00	90.08	271.07	7,226.49	-196.91	-4,454.58	4,450.13	0.00	0.00	0.00
9,800.00	90.08	271.07	7,226.35	-195.05	-4,554.57	4,550.13	0.00	0.00	0.00
9,900.00	90.08	271.07	7,226.20	-193.19	-4,654.55	4,650.13	0.00	0.00	0.00
10,000.00	90.08	271.07	7,226.05	-191.33	-4,754.53	4,750.13	0.00	0.00	0.00
10,100.00	90.08	271.07	7,225.91	-189.47	-4,854.51	4,850.13	0.00	0.00	0.00
10,200.00	90.08	271.07	7,225.76	-187.61	-4,954.50	4,950.13	0.00	0.00	0.00
10,300.00	90.08	271.07	7,225.61	-185.76	-5,054.48	5,050.13	0.00	0.00	0.00
10,400.00	90.08	271.07	7,225.47	-183.90	-5,154.46	5,150.13	0.00	0.00	0.00
10,500.00	90.08	271.07	7,225.32	-182.04	-5,254.45	5,250.13	0.00	0.00	0.00
10,600.00	90.08	271.07	7,225.17	-180.18	-5,354.43	5,350.13	0.00	0.00	0.00
10,700.00	90.08	271.07	7,225.03	-178.32	-5,454.41	5,450.13	0.00	0.00	0.00
10,800.00	90.08	271.07	7,224.88	-176.46	-5,554.39	5,550.13	0.00	0.00	0.00
10,900.00	90.08	271.07	7,224.73	-174.60	-5,654.38	5,650.13	0.00	0.00	0.00
11,000.00	90.08	271.07	7,224.59	-172.74	-5,754.36	5,750.13	0.00	0.00	0.00
11,100.00	90.08	271.07	7,224.44	-170.88	-5,854.34	5,850.13	0.00	0.00	0.00
11,200.00	90.08	271.07	7,224.30	-169.02	-5,954.32	5,950.13	0.00	0.00	0.00
11,300.00	90.08	271.07	7,224.15	-167.16	-6,054.31	6,050.13	0.00	0.00	0.00
11,400.00	90.08	271.07	7,224.00	-165.31	-6,154.29	6,150.13	0.00	0.00	0.00
11,500.00	90.08	271.07	7,223.86	-163.45	-6,254.27	6,250.13	0.00	0.00	0.00
11,600.00	90.08	271.07	7,223.71	-161.59	-6,354.25	6,350.13	0.00	0.00	0.00
11,700.00	90.08	271.07	7,223.56	-159.73	-6,454.24	6,450.13	0.00	0.00	0.00
11,800.00	90.08	271.07	7,223.42	-157.87	-6,554.22	6,550.13	0.00	0.00	0.00
11,900.00	90.08	271.07	7,223.27	-156.01	-6,654.20	6,650.13	0.00	0.00	0.00
12,000.00	90.08	271.07	7,223.12	-154.15	-6,754.18	6,750.13	0.00	0.00	0.00
12,100.00	90.08	271.07	7,222.98	-152.29	-6,854.17	6,850.13	0.00	0.00	0.00
12,200.00	90.08	271.07	7,222.83	-150.43	-6,954.15	6,950.13	0.00	0.00	0.00
12,300.00	90.08	271.07	7,222.68	-148.57	-7,054.13	7,050.13	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well CAMENISCH 33-6HZ
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 33-6HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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)
12,400.00	90.08	271.07	7,222.54	-146.71	-7,154.11	7,150.13	0.00	0.00	0.00
12,500.00	90.08	271.07	7,222.39	-144.86	-7,254.10	7,250.13	0.00	0.00	0.00
12,600.00	90.08	271.07	7,222.25	-143.00	-7,354.08	7,350.13	0.00	0.00	0.00
12,700.00	90.08	271.07	7,222.10	-141.14	-7,454.06	7,450.13	0.00	0.00	0.00
12,800.00	90.08	271.07	7,221.95	-139.28	-7,554.05	7,550.13	0.00	0.00	0.00
12,900.00	90.08	271.07	7,221.81	-137.42	-7,654.03	7,650.13	0.00	0.00	0.00
13,000.00	90.08	271.07	7,221.66	-135.56	-7,754.01	7,750.13	0.00	0.00	0.00
13,100.00	90.08	271.07	7,221.51	-133.70	-7,853.99	7,850.13	0.00	0.00	0.00
13,200.00	90.08	271.07	7,221.37	-131.84	-7,953.98	7,950.13	0.00	0.00	0.00
13,300.00	90.08	271.07	7,221.22	-129.98	-8,053.96	8,050.13	0.00	0.00	0.00
13,400.00	90.08	271.07	7,221.07	-128.12	-8,153.94	8,150.13	0.00	0.00	0.00
13,500.00	90.08	271.07	7,220.93	-126.26	-8,253.92	8,250.13	0.00	0.00	0.00
13,600.00	90.08	271.07	7,220.78	-124.41	-8,353.91	8,350.13	0.00	0.00	0.00
13,700.00	90.08	271.07	7,220.64	-122.55	-8,453.89	8,450.13	0.00	0.00	0.00
13,800.00	90.08	271.07	7,220.49	-120.69	-8,553.87	8,550.13	0.00	0.00	0.00
13,900.00	90.08	271.07	7,220.34	-118.83	-8,653.85	8,650.13	0.00	0.00	0.00
14,000.00	90.08	271.07	7,220.20	-116.97	-8,753.84	8,750.13	0.00	0.00	0.00
14,100.00	90.08	271.07	7,220.05	-115.11	-8,853.82	8,850.13	0.00	0.00	0.00
14,200.00	90.08	271.07	7,219.90	-113.25	-8,953.80	8,950.13	0.00	0.00	0.00
14,300.00	90.08	271.07	7,219.76	-111.39	-9,053.78	9,050.13	0.00	0.00	0.00
14,400.00	90.08	271.07	7,219.61	-109.53	-9,153.77	9,150.13	0.00	0.00	0.00
14,500.00	90.08	271.07	7,219.46	-107.67	-9,253.75	9,250.13	0.00	0.00	0.00
14,600.00	90.08	271.07	7,219.32	-105.81	-9,353.73	9,350.13	0.00	0.00	0.00
14,700.00	90.08	271.07	7,219.17	-103.96	-9,453.71	9,450.13	0.00	0.00	0.00
14,800.00	90.08	271.07	7,219.02	-102.10	-9,553.70	9,550.13	0.00	0.00	0.00
14,900.00	90.08	271.07	7,218.88	-100.24	-9,653.68	9,650.12	0.00	0.00	0.00
15,000.00	90.08	271.07	7,218.73	-98.38	-9,753.66	9,750.12	0.00	0.00	0.00
15,100.00	90.08	271.07	7,218.59	-96.52	-9,853.65	9,850.12	0.00	0.00	0.00
15,200.00	90.08	271.07	7,218.44	-94.66	-9,953.63	9,950.12	0.00	0.00	0.00
15,300.00	90.08	271.07	7,218.29	-92.80	-10,053.61	10,050.12	0.00	0.00	0.00
15,400.00	90.08	271.07	7,218.15	-90.94	-10,153.59	10,150.12	0.00	0.00	0.00
15,500.00	90.08	271.07	7,218.00	-89.08	-10,253.58	10,250.12	0.00	0.00	0.00
15,600.00	90.08	271.07	7,217.85	-87.22	-10,353.56	10,350.12	0.00	0.00	0.00
15,700.00	90.08	271.07	7,217.71	-85.36	-10,453.54	10,450.12	0.00	0.00	0.00
15,800.00	90.08	271.07	7,217.56	-83.51	-10,553.52	10,550.12	0.00	0.00	0.00
15,900.00	90.08	271.07	7,217.41	-81.65	-10,653.51	10,650.12	0.00	0.00	0.00
16,000.00	90.08	271.07	7,217.27	-79.79	-10,753.49	10,750.12	0.00	0.00	0.00
16,100.00	90.08	271.07	7,217.12	-77.93	-10,853.47	10,850.12	0.00	0.00	0.00
16,200.00	90.08	271.07	7,216.97	-76.07	-10,953.45	10,950.12	0.00	0.00	0.00
16,300.00	90.08	271.07	7,216.83	-74.21	-11,053.44	11,050.12	0.00	0.00	0.00
16,400.00	90.08	271.07	7,216.68	-72.35	-11,153.42	11,150.12	0.00	0.00	0.00
16,500.00	90.08	271.07	7,216.54	-70.49	-11,253.40	11,250.12	0.00	0.00	0.00
16,600.00	90.08	271.07	7,216.39	-68.63	-11,353.38	11,350.12	0.00	0.00	0.00
16,700.00	90.08	271.07	7,216.24	-66.77	-11,453.37	11,450.12	0.00	0.00	0.00
16,800.00	90.08	271.07	7,216.10	-64.91	-11,553.35	11,550.12	0.00	0.00	0.00
16,900.00	90.08	271.07	7,215.95	-63.06	-11,653.33	11,650.12	0.00	0.00	0.00
17,000.00	90.08	271.07	7,215.80	-61.20	-11,753.32	11,750.12	0.00	0.00	0.00
17,100.00	90.08	271.07	7,215.66	-59.34	-11,853.30	11,850.12	0.00	0.00	0.00
17,200.00	90.08	271.07	7,215.51	-57.48	-11,953.28	11,950.12	0.00	0.00	0.00
17,300.00	90.08	271.07	7,215.36	-55.62	-12,053.26	12,050.12	0.00	0.00	0.00
17,400.00	90.08	271.07	7,215.22	-53.76	-12,153.25	12,150.12	0.00	0.00	0.00
17,500.00	90.08	271.07	7,215.07	-51.90	-12,253.23	12,250.12	0.00	0.00	0.00
17,600.00	90.08	271.07	7,214.93	-50.04	-12,353.21	12,350.12	0.00	0.00	0.00
17,700.00	90.08	271.07	7,214.78	-48.18	-12,453.19	12,450.12	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well CAMENISCH 33-6HZ
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 33-6HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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)	
17,800.00	90.08	271.07	7,214.63	-46.32	-12,553.18	12,550.12	0.00	0.00	0.00	
17,900.00	90.08	271.07	7,214.49	-44.46	-12,653.16	12,650.12	0.00	0.00	0.00	
18,000.00	90.08	271.07	7,214.34	-42.61	-12,753.14	12,750.12	0.00	0.00	0.00	
18,100.00	90.08	271.07	7,214.19	-40.75	-12,853.12	12,850.12	0.00	0.00	0.00	
18,200.00	90.08	271.07	7,214.05	-38.89	-12,953.11	12,950.12	0.00	0.00	0.00	
18,300.00	90.08	271.07	7,213.90	-37.03	-13,053.09	13,050.12	0.00	0.00	0.00	
18,400.00	90.08	271.07	7,213.75	-35.17	-13,153.07	13,150.12	0.00	0.00	0.00	
18,500.00	90.08	271.07	7,213.61	-33.31	-13,253.05	13,250.12	0.00	0.00	0.00	
18,600.00	90.08	271.07	7,213.46	-31.45	-13,353.04	13,350.12	0.00	0.00	0.00	
18,700.00	90.08	271.07	7,213.31	-29.59	-13,453.02	13,450.12	0.00	0.00	0.00	
18,800.00	90.08	271.07	7,213.17	-27.73	-13,553.00	13,550.12	0.00	0.00	0.00	
18,900.00	90.08	271.07	7,213.02	-25.87	-13,652.98	13,650.12	0.00	0.00	0.00	
19,000.00	90.08	271.07	7,212.88	-24.01	-13,752.97	13,750.12	0.00	0.00	0.00	
19,100.00	90.08	271.07	7,212.73	-22.16	-13,852.95	13,850.12	0.00	0.00	0.00	
19,200.00	90.08	271.07	7,212.58	-20.30	-13,952.93	13,950.12	0.00	0.00	0.00	
19,300.00	90.08	271.07	7,212.44	-18.44	-14,052.92	14,050.12	0.00	0.00	0.00	
19,400.00	90.08	271.07	7,212.29	-16.58	-14,152.90	14,150.12	0.00	0.00	0.00	
19,500.00	90.08	271.07	7,212.14	-14.72	-14,252.88	14,250.12	0.00	0.00	0.00	
19,597.85	90.08	271.07	7,212.00	-12.90	-14,350.71	14,347.97	0.00	0.00	0.00	
TD Well @ 19597.85ft - 5.5" CSG										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,515.80	1,500.00	9 5/8"	9-5/8	13-1/2	
19,597.85	7,212.00	5.5" CSG	5-1/2	7-7/8	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
752.50	752.00	Fox Hills				
3,795.90	3,643.00	Parkman				
4,309.26	4,125.00	Sussex				
7,255.97	6,886.00	Sharon Springs				
7,291.70	6,916.00	Niobrara				
7,498.85	7,068.00	Nio B				
7,552.01	7,100.00	Nio C				
7,791.45	7,202.00	Fort Hayes				
7,896.03	7,223.00	Codell				

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well CAMENISCH 33-6HZ
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 33-6HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
Design:	Permit Rev-1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
400.00	400.00	0.00	0.00	Begin Nudge @ 400.00ft
1,742.00	1,714.56	-24.63	-232.03	Hold Tangent @ 1742.00ft
7,113.42	6,757.86	-219.79	-2,070.28	KOP @ 7113.42ft :: DLS = 8°/100'
7,989.87	7,229.00	-228.70	-2,744.75	End Build @ 7989.87ft
19,597.85	7,212.00	-12.90	-14,350.72	TD Well @ 19597.85ft