

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N  
2N-68W-15 Camenisch 7-15 Pad  
CAMENISCH STATE 23N2-34HZ**

**Plan A**

**Plan: Permit Rev-2**

## **Standard Planning Report**

**05 October, 2016**



Azimuths to True North  
Magnetic North: 8.39°

Magnetic Field  
Strength: 52521.3snT  
Dip Angle: 66.66°  
Date: 9/22/2015  
Model: IGRF2010

SITE: 2N-68W-15 Camenisch 7-15 Pad

Well: CAMENISCH STATE 23N2-34HZ  
Wellbore: Plan A  
Design: Permit Rev-2

#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
749.00	749.00	Fox Hills Mkr
3786.00	3781.20	Parkman
4523.00	4528.31	Sussex
7075.00	7107.08	Sharon Springs
7167.00	7231.13	Niobrara
7232.00	7337.83	Nio B
7307.00	7518.11	Nio C

#### WELL DETAILS: CAMENISCH STATE 23N2-34HZ

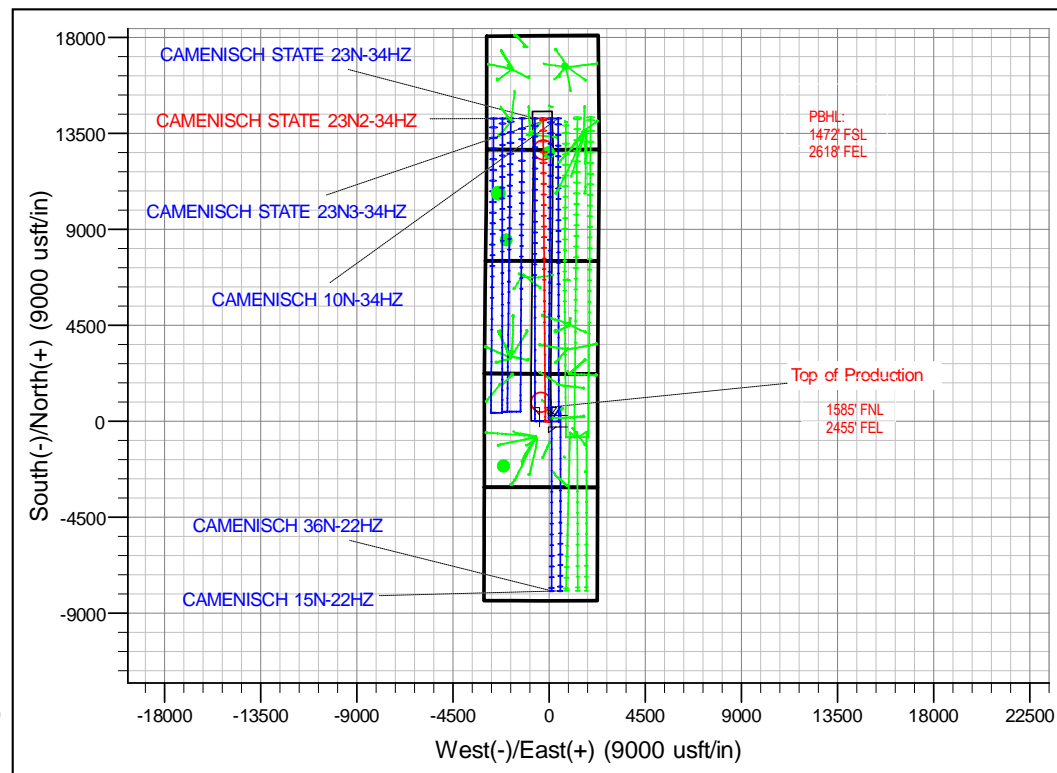
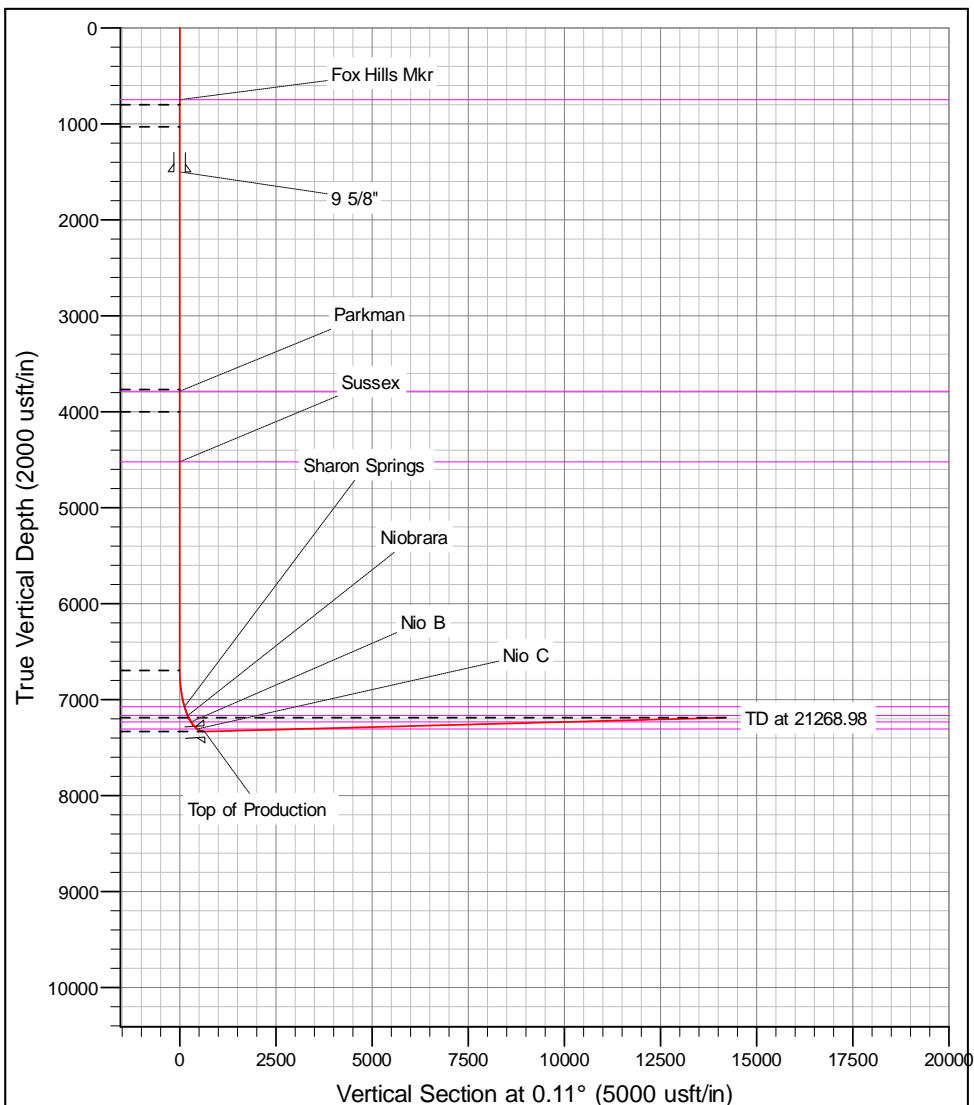
+N/-S	+E/-W	GL: 4876.00	RKB = 17' @ 4893.00usft (D Rig)		
0.00	0.00	Northing	Easting	Latitude	Longitude
		14577706.70	1643805.62	40.139980	-104.987874
					Slot

#### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	Vsect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00
1031.32	3.47	270.00	1031.18	0.00	-7.00	1.50	-0.01
3773.99	3.47	270.00	3768.82	0.00	-173.00	0.00	-0.33
4005.31	0.00	0.00	4000.00	0.00	-180.00	1.50	-0.35
6702.09	0.00	0.00	6696.78	0.00	-180.00	0.00	-0.35
7708.87	90.61	359.58	7333.37	643.38	-184.76	9.00	643.02
21268.98	90.61	359.58	7189.00	14202.35	-285.00	0.00	4201.78

#### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
CAMENISCH STATE 23N2-34HZ_PBHL	7189.00	14202.35	-285.00	14591909.01	1643518.68	40.178981	-104.988894



# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well CAMENISCH STATE 23N2-34HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4893.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4893.00usft (D Rig)
<b>Site:</b>	2N-68W-15 Camenisch 7-15 Pad	<b>North Reference:</b>	True
<b>Well:</b>	CAMENISCH STATE 23N2-34HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-2		

<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						2N-68W-15 Camenisch 7-15 Pad											
Site Position:						Northing:			14,577,706.69 usft			Latitude:			40.139980		
From:			Lat/Long			Easting:			1,643,790.52 usft			Longitude:			-104.987928		
Position Uncertainty:			0.00 usft			Slot Radius:			13-3/16 "			Grid Convergence:			0.01		

Well	CAMENISCH STATE 23N2-34HZ					
Well Position	+N/-S	0.00 usft	Northing:	14,577,706.69 usft	Latitude:	40.139980
	+E/-W	15.09 usft	Easting:	1,643,805.62 usft	Longitude:	-104.987874
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,876.00 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>
	IGRF2010	9/22/2015	8.39	66.66	52,521

<b>Design</b>	Permit Rev-2			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<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	0.11

<b>Plan Sections</b>										
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	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,031.32	3.47	270.00	1,031.18	0.00	-7.00	1.50	1.50	0.00	270.00	
3,773.99	3.47	270.00	3,768.82	0.00	-173.00	0.00	0.00	0.00	0.00	
4,005.31	0.00	0.00	4,000.00	0.00	-180.00	1.50	-1.50	0.00	180.00	
6,702.09	0.00	0.00	6,696.78	0.00	-180.00	0.00	0.00	0.00	0.00	
7,708.87	90.61	359.58	7,333.37	643.38	-184.76	9.00	9.00	0.00	359.58	
21,268.98	90.61	359.58	7,189.00	14,202.35	-285.00	0.00	0.00	0.00	0.00	CAMENISCH STAT

# Corporate Planning Report

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<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4893.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4893.00usft (D Rig)
<b>Site:</b>	2N-68W-15 Camenisch 7-15 Pad	<b>North Reference:</b>	True
<b>Well:</b>	CAMENISCH STATE 23N2-34HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-2		

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
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
749.00	0.00	0.00	749.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fox Hills Mkr</b>									
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	1.50	270.00	899.99	0.00	-1.31	0.00	1.50	1.50	0.00
1,000.00	3.00	270.00	999.91	0.00	-5.23	-0.01	1.50	1.50	0.00
1,031.32	3.47	270.00	1,031.18	0.00	-7.00	-0.01	1.50	1.50	0.00
1,100.00	3.47	270.00	1,099.73	0.00	-11.16	-0.02	0.00	0.00	0.00
1,200.00	3.47	270.00	1,199.55	0.00	-17.21	-0.03	0.00	0.00	0.00
1,300.00	3.47	270.00	1,299.37	0.00	-23.26	-0.04	0.00	0.00	0.00
1,400.00	3.47	270.00	1,399.18	0.00	-29.32	-0.06	0.00	0.00	0.00
1,500.00	3.47	270.00	1,499.00	0.00	-35.37	-0.07	0.00	0.00	0.00
1,501.00	3.47	270.00	1,500.00	0.00	-35.43	-0.07	0.00	0.00	0.00
<b>9 5/8"</b>									
1,600.00	3.47	270.00	1,598.82	0.00	-41.42	-0.08	0.00	0.00	0.00
1,700.00	3.47	270.00	1,698.63	0.00	-47.47	-0.09	0.00	0.00	0.00
1,800.00	3.47	270.00	1,798.45	0.00	-53.53	-0.10	0.00	0.00	0.00
1,900.00	3.47	270.00	1,898.27	0.00	-59.58	-0.11	0.00	0.00	0.00
2,000.00	3.47	270.00	1,998.08	0.00	-65.63	-0.13	0.00	0.00	0.00
2,100.00	3.47	270.00	2,097.90	0.00	-71.68	-0.14	0.00	0.00	0.00
2,200.00	3.47	270.00	2,197.72	0.00	-77.73	-0.15	0.00	0.00	0.00
2,300.00	3.47	270.00	2,297.53	0.00	-83.79	-0.16	0.00	0.00	0.00
2,400.00	3.47	270.00	2,397.35	0.00	-89.84	-0.17	0.00	0.00	0.00
2,500.00	3.47	270.00	2,497.17	0.00	-95.89	-0.18	0.00	0.00	0.00
2,600.00	3.47	270.00	2,596.98	0.00	-101.94	-0.20	0.00	0.00	0.00
2,700.00	3.47	270.00	2,696.80	0.00	-108.00	-0.21	0.00	0.00	0.00
2,800.00	3.47	270.00	2,796.62	0.00	-114.05	-0.22	0.00	0.00	0.00
2,900.00	3.47	270.00	2,896.43	0.00	-120.10	-0.23	0.00	0.00	0.00
3,000.00	3.47	270.00	2,996.25	0.00	-126.15	-0.24	0.00	0.00	0.00
3,100.00	3.47	270.00	3,096.07	0.00	-132.21	-0.25	0.00	0.00	0.00
3,200.00	3.47	270.00	3,195.88	0.00	-138.26	-0.27	0.00	0.00	0.00
3,300.00	3.47	270.00	3,295.70	0.00	-144.31	-0.28	0.00	0.00	0.00
3,400.00	3.47	270.00	3,395.52	0.00	-150.36	-0.29	0.00	0.00	0.00
3,500.00	3.47	270.00	3,495.33	0.00	-156.41	-0.30	0.00	0.00	0.00
3,600.00	3.47	270.00	3,595.15	0.00	-162.47	-0.31	0.00	0.00	0.00
3,700.00	3.47	270.00	3,694.97	0.00	-168.52	-0.32	0.00	0.00	0.00
3,773.99	3.47	270.00	3,768.82	0.00	-173.00	-0.33	0.00	0.00	0.00
3,791.20	3.21	270.00	3,786.00	0.00	-174.00	-0.33	1.50	-1.50	0.00
<b>Parkman</b>									
3,800.00	3.08	270.00	3,794.79	0.00	-174.48	-0.33	1.50	-1.50	0.00
3,900.00	1.58	270.00	3,894.70	0.00	-178.55	-0.34	1.50	-1.50	0.00
4,000.00	0.08	270.00	3,994.69	0.00	-180.00	-0.35	1.50	-1.50	0.00
4,005.31	0.00	0.00	4,000.00	0.00	-180.00	-0.35	1.50	-1.50	0.00
4,100.00	0.00	0.00	4,094.69	0.00	-180.00	-0.35	0.00	0.00	0.00
4,200.00	0.00	0.00	4,194.69	0.00	-180.00	-0.35	0.00	0.00	0.00
4,300.00	0.00	0.00	4,294.69	0.00	-180.00	-0.35	0.00	0.00	0.00

# Corporate Planning Report

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<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4893.00usft (D Rig)
<b>Site:</b>	2N-68W-15 Camenisch 7-15 Pad	<b>North Reference:</b>	True
<b>Well:</b>	CAMENISCH STATE 23N2-34HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-2		

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	0.00	0.00	4,394.69	0.00	-180.00	-0.35	0.00	0.00	0.00
4,500.00	0.00	0.00	4,494.69	0.00	-180.00	-0.35	0.00	0.00	0.00
4,528.31	0.00	0.00	4,523.00	0.00	-180.00	-0.35	0.00	0.00	0.00
<b>Sussex</b>									
4,600.00	0.00	0.00	4,594.69	0.00	-180.00	-0.35	0.00	0.00	0.00
4,700.00	0.00	0.00	4,694.69	0.00	-180.00	-0.35	0.00	0.00	0.00
4,800.00	0.00	0.00	4,794.69	0.00	-180.00	-0.35	0.00	0.00	0.00
4,900.00	0.00	0.00	4,894.69	0.00	-180.00	-0.35	0.00	0.00	0.00
5,000.00	0.00	0.00	4,994.69	0.00	-180.00	-0.35	0.00	0.00	0.00
5,100.00	0.00	0.00	5,094.69	0.00	-180.00	-0.35	0.00	0.00	0.00
5,200.00	0.00	0.00	5,194.69	0.00	-180.00	-0.35	0.00	0.00	0.00
5,300.00	0.00	0.00	5,294.69	0.00	-180.00	-0.35	0.00	0.00	0.00
5,400.00	0.00	0.00	5,394.69	0.00	-180.00	-0.35	0.00	0.00	0.00
5,500.00	0.00	0.00	5,494.69	0.00	-180.00	-0.35	0.00	0.00	0.00
5,600.00	0.00	0.00	5,594.69	0.00	-180.00	-0.35	0.00	0.00	0.00
5,700.00	0.00	0.00	5,694.69	0.00	-180.00	-0.35	0.00	0.00	0.00
5,800.00	0.00	0.00	5,794.69	0.00	-180.00	-0.35	0.00	0.00	0.00
5,900.00	0.00	0.00	5,894.69	0.00	-180.00	-0.35	0.00	0.00	0.00
6,000.00	0.00	0.00	5,994.69	0.00	-180.00	-0.35	0.00	0.00	0.00
6,100.00	0.00	0.00	6,094.69	0.00	-180.00	-0.35	0.00	0.00	0.00
6,200.00	0.00	0.00	6,194.69	0.00	-180.00	-0.35	0.00	0.00	0.00
6,300.00	0.00	0.00	6,294.69	0.00	-180.00	-0.35	0.00	0.00	0.00
6,400.00	0.00	0.00	6,394.69	0.00	-180.00	-0.35	0.00	0.00	0.00
6,500.00	0.00	0.00	6,494.69	0.00	-180.00	-0.35	0.00	0.00	0.00
6,600.00	0.00	0.00	6,594.69	0.00	-180.00	-0.35	0.00	0.00	0.00
6,700.00	0.00	0.00	6,694.69	0.00	-180.00	-0.35	0.00	0.00	0.00
6,702.09	0.00	0.00	6,696.78	0.00	-180.00	-0.35	0.00	0.00	0.00
6,800.00	8.81	359.58	6,794.30	7.51	-180.06	7.17	9.00	9.00	0.00
6,900.00	17.81	359.58	6,891.52	30.51	-180.23	30.17	9.00	9.00	0.00
7,000.00	26.81	359.58	6,983.94	68.44	-180.51	68.09	9.00	9.00	0.00
7,100.00	35.81	359.58	7,069.28	120.35	-180.89	120.01	9.00	9.00	0.00
7,107.08	36.45	359.58	7,075.00	124.53	-180.92	124.18	9.00	9.00	0.00
<b>Sharon Springs</b>									
7,200.00	44.81	359.58	7,145.46	184.98	-181.37	184.63	9.00	9.00	0.00
7,231.13	47.61	359.58	7,167.00	207.45	-181.53	207.10	9.00	9.00	0.00
<b>Niobrara</b>									
7,300.00	53.81	359.58	7,210.59	260.73	-181.93	260.38	9.00	9.00	0.00
7,337.83	57.22	359.58	7,232.00	291.90	-182.16	291.55	9.00	9.00	0.00
<b>Nio B</b>									
7,400.00	62.81	359.58	7,263.06	345.73	-182.56	345.38	9.00	9.00	0.00
7,500.00	71.81	359.58	7,301.59	437.89	-183.24	437.54	9.00	9.00	0.00
7,518.11	73.44	359.58	7,307.00	455.17	-183.37	454.82	9.00	9.00	0.00
<b>Nio C</b>									
7,600.00	80.81	359.58	7,325.23	534.95	-183.95	534.60	9.00	9.00	0.00
7,700.00	89.81	359.58	7,333.40	634.51	-184.69	634.15	9.00	9.00	0.00
7,708.87	90.61	359.58	7,333.37	643.38	-184.76	643.02	9.00	9.00	0.00
<b>Top of Production - CAMENISCH STATE 23N2-34HZ_PHL</b>									
7,800.00	90.61	359.58	7,332.40	734.50	-185.43	734.14	0.00	0.00	0.00
7,900.00	90.61	359.58	7,331.33	834.49	-186.17	834.13	0.00	0.00	0.00
8,000.00	90.61	359.58	7,330.27	934.49	-186.91	934.12	0.00	0.00	0.00
8,100.00	90.61	359.58	7,329.20	1,034.48	-187.65	1,034.11	0.00	0.00	0.00
8,200.00	90.61	359.58	7,328.14	1,134.47	-188.39	1,134.10	0.00	0.00	0.00
8,300.00	90.61	359.58	7,327.07	1,234.46	-189.13	1,234.09	0.00	0.00	0.00

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<b>Site:</b>	2N-68W-15 Camenisch 7-15 Pad	<b>North Reference:</b>	True
<b>Well:</b>	CAMENISCH STATE 23N2-34HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-2		

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)
8,400.00	90.61	359.58	7,326.01	1,334.45	-189.87	1,334.08	0.00	0.00	0.00
8,500.00	90.61	359.58	7,324.94	1,434.44	-190.61	1,434.07	0.00	0.00	0.00
8,600.00	90.61	359.58	7,323.88	1,534.44	-191.34	1,534.06	0.00	0.00	0.00
8,700.00	90.61	359.58	7,322.81	1,634.43	-192.08	1,634.05	0.00	0.00	0.00
8,800.00	90.61	359.58	7,321.75	1,734.42	-192.82	1,734.04	0.00	0.00	0.00
8,900.00	90.61	359.58	7,320.68	1,834.41	-193.56	1,834.03	0.00	0.00	0.00
9,000.00	90.61	359.58	7,319.62	1,934.40	-194.30	1,934.02	0.00	0.00	0.00
9,100.00	90.61	359.58	7,318.55	2,034.39	-195.04	2,034.01	0.00	0.00	0.00
9,200.00	90.61	359.58	7,317.49	2,134.38	-195.78	2,134.00	0.00	0.00	0.00
9,300.00	90.61	359.58	7,316.43	2,234.38	-196.52	2,233.99	0.00	0.00	0.00
9,400.00	90.61	359.58	7,315.36	2,334.37	-197.26	2,333.98	0.00	0.00	0.00
9,500.00	90.61	359.58	7,314.30	2,434.36	-198.00	2,433.97	0.00	0.00	0.00
9,600.00	90.61	359.58	7,313.23	2,534.35	-198.74	2,533.96	0.00	0.00	0.00
9,700.00	90.61	359.58	7,312.17	2,634.34	-199.48	2,633.95	0.00	0.00	0.00
9,800.00	90.61	359.58	7,311.10	2,734.33	-200.22	2,733.94	0.00	0.00	0.00
9,900.00	90.61	359.58	7,310.04	2,834.33	-200.95	2,833.93	0.00	0.00	0.00
10,000.00	90.61	359.58	7,308.97	2,934.32	-201.69	2,933.92	0.00	0.00	0.00
10,100.00	90.61	359.58	7,307.91	3,034.31	-202.43	3,033.91	0.00	0.00	0.00
10,200.00	90.61	359.58	7,306.84	3,134.30	-203.17	3,133.90	0.00	0.00	0.00
10,300.00	90.61	359.58	7,305.78	3,234.29	-203.91	3,233.89	0.00	0.00	0.00
10,400.00	90.61	359.58	7,304.71	3,334.28	-204.65	3,333.88	0.00	0.00	0.00
10,500.00	90.61	359.58	7,303.65	3,434.28	-205.39	3,433.87	0.00	0.00	0.00
10,600.00	90.61	359.58	7,302.59	3,534.27	-206.13	3,533.86	0.00	0.00	0.00
10,700.00	90.61	359.58	7,301.52	3,634.26	-206.87	3,633.85	0.00	0.00	0.00
10,800.00	90.61	359.58	7,300.46	3,734.25	-207.61	3,733.84	0.00	0.00	0.00
10,900.00	90.61	359.58	7,299.39	3,834.24	-208.35	3,833.83	0.00	0.00	0.00
11,000.00	90.61	359.58	7,298.33	3,934.23	-209.09	3,933.82	0.00	0.00	0.00
11,100.00	90.61	359.58	7,297.26	4,034.23	-209.83	4,033.81	0.00	0.00	0.00
11,200.00	90.61	359.58	7,296.20	4,134.22	-210.56	4,133.80	0.00	0.00	0.00
11,300.00	90.61	359.58	7,295.13	4,234.21	-211.30	4,233.79	0.00	0.00	0.00
11,400.00	90.61	359.58	7,294.07	4,334.20	-212.04	4,333.78	0.00	0.00	0.00
11,500.00	90.61	359.58	7,293.00	4,434.19	-212.78	4,433.77	0.00	0.00	0.00
11,600.00	90.61	359.58	7,291.94	4,534.18	-213.52	4,533.76	0.00	0.00	0.00
11,700.00	90.61	359.58	7,290.87	4,634.17	-214.26	4,633.75	0.00	0.00	0.00
11,800.00	90.61	359.58	7,289.81	4,734.17	-215.00	4,733.74	0.00	0.00	0.00
11,900.00	90.61	359.58	7,288.75	4,834.16	-215.74	4,833.73	0.00	0.00	0.00
12,000.00	90.61	359.58	7,287.68	4,934.15	-216.48	4,933.72	0.00	0.00	0.00
12,100.00	90.61	359.58	7,286.62	5,034.14	-217.22	5,033.71	0.00	0.00	0.00
12,200.00	90.61	359.58	7,285.55	5,134.13	-217.96	5,133.70	0.00	0.00	0.00
12,300.00	90.61	359.58	7,284.49	5,234.12	-218.70	5,233.69	0.00	0.00	0.00
12,400.00	90.61	359.58	7,283.42	5,334.12	-219.44	5,333.68	0.00	0.00	0.00
12,500.00	90.61	359.58	7,282.36	5,434.11	-220.18	5,433.67	0.00	0.00	0.00
12,600.00	90.61	359.58	7,281.29	5,534.10	-220.91	5,533.66	0.00	0.00	0.00
12,700.00	90.61	359.58	7,280.23	5,634.09	-221.65	5,633.65	0.00	0.00	0.00
12,800.00	90.61	359.58	7,279.16	5,734.08	-222.39	5,733.64	0.00	0.00	0.00
12,900.00	90.61	359.58	7,278.10	5,834.07	-223.13	5,833.63	0.00	0.00	0.00
13,000.00	90.61	359.58	7,277.03	5,934.07	-223.87	5,933.62	0.00	0.00	0.00
13,100.00	90.61	359.58	7,275.97	6,034.06	-224.61	6,033.61	0.00	0.00	0.00
13,200.00	90.61	359.58	7,274.91	6,134.05	-225.35	6,133.60	0.00	0.00	0.00
13,300.00	90.61	359.58	7,273.84	6,234.04	-226.09	6,233.59	0.00	0.00	0.00
13,400.00	90.61	359.58	7,272.78	6,334.03	-226.83	6,333.58	0.00	0.00	0.00
13,500.00	90.61	359.58	7,271.71	6,434.02	-227.57	6,433.57	0.00	0.00	0.00
13,600.00	90.61	359.58	7,270.65	6,534.02	-228.31	6,533.56	0.00	0.00	0.00
13,700.00	90.61	359.58	7,269.58	6,634.01	-229.05	6,633.55	0.00	0.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well CAMENISCH STATE 23N2-34HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4893.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4893.00usft (D Rig)
<b>Site:</b>	2N-68W-15 Camenisch 7-15 Pad	<b>North Reference:</b>	True
<b>Well:</b>	CAMENISCH STATE 23N2-34HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-2		

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)
13,800.00	90.61	359.58	7,268.52	6,734.00	-229.79	6,733.54	0.00	0.00	0.00
13,900.00	90.61	359.58	7,267.45	6,833.99	-230.52	6,833.53	0.00	0.00	0.00
14,000.00	90.61	359.58	7,266.39	6,933.98	-231.26	6,933.52	0.00	0.00	0.00
14,100.00	90.61	359.58	7,265.32	7,033.97	-232.00	7,033.51	0.00	0.00	0.00
14,200.00	90.61	359.58	7,264.26	7,133.96	-232.74	7,133.50	0.00	0.00	0.00
14,300.00	90.61	359.58	7,263.19	7,233.96	-233.48	7,233.49	0.00	0.00	0.00
14,400.00	90.61	359.58	7,262.13	7,333.95	-234.22	7,333.48	0.00	0.00	0.00
14,500.00	90.61	359.58	7,261.06	7,433.94	-234.96	7,433.47	0.00	0.00	0.00
14,600.00	90.61	359.58	7,260.00	7,533.93	-235.70	7,533.46	0.00	0.00	0.00
14,700.00	90.61	359.58	7,258.94	7,633.92	-236.44	7,633.45	0.00	0.00	0.00
14,800.00	90.61	359.58	7,257.87	7,733.91	-237.18	7,733.44	0.00	0.00	0.00
14,900.00	90.61	359.58	7,256.81	7,833.91	-237.92	7,833.43	0.00	0.00	0.00
15,000.00	90.61	359.58	7,255.74	7,933.90	-238.66	7,933.42	0.00	0.00	0.00
15,100.00	90.61	359.58	7,254.68	8,033.89	-239.40	8,033.41	0.00	0.00	0.00
15,200.00	90.61	359.58	7,253.61	8,133.88	-240.13	8,133.40	0.00	0.00	0.00
15,300.00	90.61	359.58	7,252.55	8,233.87	-240.87	8,233.39	0.00	0.00	0.00
15,400.00	90.61	359.58	7,251.48	8,333.86	-241.61	8,333.38	0.00	0.00	0.00
15,500.00	90.61	359.58	7,250.42	8,433.86	-242.35	8,433.37	0.00	0.00	0.00
15,600.00	90.61	359.58	7,249.35	8,533.85	-243.09	8,533.36	0.00	0.00	0.00
15,700.00	90.61	359.58	7,248.29	8,633.84	-243.83	8,633.35	0.00	0.00	0.00
15,800.00	90.61	359.58	7,247.22	8,733.83	-244.57	8,733.34	0.00	0.00	0.00
15,900.00	90.61	359.58	7,246.16	8,833.82	-245.31	8,833.33	0.00	0.00	0.00
16,000.00	90.61	359.58	7,245.10	8,933.81	-246.05	8,933.32	0.00	0.00	0.00
16,100.00	90.61	359.58	7,244.03	9,033.81	-246.79	9,033.31	0.00	0.00	0.00
16,200.00	90.61	359.58	7,242.97	9,133.80	-247.53	9,133.30	0.00	0.00	0.00
16,300.00	90.61	359.58	7,241.90	9,233.79	-248.27	9,233.29	0.00	0.00	0.00
16,400.00	90.61	359.58	7,240.84	9,333.78	-249.01	9,333.28	0.00	0.00	0.00
16,500.00	90.61	359.58	7,239.77	9,433.77	-249.75	9,433.27	0.00	0.00	0.00
16,600.00	90.61	359.58	7,238.71	9,533.76	-250.48	9,533.26	0.00	0.00	0.00
16,700.00	90.61	359.58	7,237.64	9,633.75	-251.22	9,633.25	0.00	0.00	0.00
16,800.00	90.61	359.58	7,236.58	9,733.75	-251.96	9,733.24	0.00	0.00	0.00
16,900.00	90.61	359.58	7,235.51	9,833.74	-252.70	9,833.23	0.00	0.00	0.00
17,000.00	90.61	359.58	7,234.45	9,933.73	-253.44	9,933.22	0.00	0.00	0.00
17,100.00	90.61	359.58	7,233.38	10,033.72	-254.18	10,033.21	0.00	0.00	0.00
17,200.00	90.61	359.58	7,232.32	10,133.71	-254.92	10,133.20	0.00	0.00	0.00
17,300.00	90.61	359.58	7,231.26	10,233.70	-255.66	10,233.19	0.00	0.00	0.00
17,400.00	90.61	359.58	7,230.19	10,333.70	-256.40	10,333.18	0.00	0.00	0.00
17,500.00	90.61	359.58	7,229.13	10,433.69	-257.14	10,433.17	0.00	0.00	0.00
17,600.00	90.61	359.58	7,228.06	10,533.68	-257.88	10,533.16	0.00	0.00	0.00
17,700.00	90.61	359.58	7,227.00	10,633.67	-258.62	10,633.15	0.00	0.00	0.00
17,800.00	90.61	359.58	7,225.93	10,733.66	-259.36	10,733.14	0.00	0.00	0.00
17,900.00	90.61	359.58	7,224.87	10,833.65	-260.09	10,833.13	0.00	0.00	0.00
18,000.00	90.61	359.58	7,223.80	10,933.65	-260.83	10,933.12	0.00	0.00	0.00
18,100.00	90.61	359.58	7,222.74	11,033.64	-261.57	11,033.11	0.00	0.00	0.00
18,200.00	90.61	359.58	7,221.67	11,133.63	-262.31	11,133.10	0.00	0.00	0.00
18,300.00	90.61	359.58	7,220.61	11,233.62	-263.05	11,233.09	0.00	0.00	0.00
18,400.00	90.61	359.58	7,219.54	11,333.61	-263.79	11,333.08	0.00	0.00	0.00
18,500.00	90.61	359.58	7,218.48	11,433.60	-264.53	11,433.07	0.00	0.00	0.00
18,600.00	90.61	359.58	7,217.41	11,533.60	-265.27	11,533.06	0.00	0.00	0.00
18,700.00	90.61	359.58	7,216.35	11,633.59	-266.01	11,633.05	0.00	0.00	0.00
18,800.00	90.61	359.58	7,215.29	11,733.58	-266.75	11,733.04	0.00	0.00	0.00
18,900.00	90.61	359.58	7,214.22	11,833.57	-267.49	11,833.03	0.00	0.00	0.00
19,000.00	90.61	359.58	7,213.16	11,933.56	-268.23	11,933.02	0.00	0.00	0.00
19,100.00	90.61	359.58	7,212.09	12,033.55	-268.97	12,033.01	0.00	0.00	0.00

# Corporate Planning Report

**Database:** PLANNING  
**Company:** US ROCKIES WATTENBERG PLANNING  
**Project:** WELD-NAD83-UTMFT13N  
**Site:** 2N-68W-15 Camenisch 7-15 Pad  
**Well:** CAMENISCH STATE 23N2-34HZ  
**Wellbore:** Plan A  
**Design:** Permit Rev-2

**Local Co-ordinate Reference:** Well CAMENISCH STATE 23N2-34HZ  
**TVD Reference:** RKB = 17' @ 4893.00usft (D Rig)  
**MD Reference:** RKB = 17' @ 4893.00usft (D Rig)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

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)
19,200.00	90.61	359.58	7,211.03	12,133.54	-269.71	12,133.00	0.00	0.00	0.00
19,300.00	90.61	359.58	7,209.96	12,233.54	-270.44	12,232.99	0.00	0.00	0.00
19,400.00	90.61	359.58	7,208.90	12,333.53	-271.18	12,332.98	0.00	0.00	0.00
19,500.00	90.61	359.58	7,207.83	12,433.52	-271.92	12,432.97	0.00	0.00	0.00
19,600.00	90.61	359.58	7,206.77	12,533.51	-272.66	12,532.96	0.00	0.00	0.00
19,700.00	90.61	359.58	7,205.70	12,633.50	-273.40	12,632.95	0.00	0.00	0.00
19,800.00	90.61	359.58	7,204.64	12,733.49	-274.14	12,732.94	0.00	0.00	0.00
19,900.00	90.61	359.58	7,203.57	12,833.49	-274.88	12,832.93	0.00	0.00	0.00
20,000.00	90.61	359.58	7,202.51	12,933.48	-275.62	12,932.92	0.00	0.00	0.00
20,100.00	90.61	359.58	7,201.45	13,033.47	-276.36	13,032.91	0.00	0.00	0.00
20,200.00	90.61	359.58	7,200.38	13,133.46	-277.10	13,132.90	0.00	0.00	0.00
20,300.00	90.61	359.58	7,199.32	13,233.45	-277.84	13,232.89	0.00	0.00	0.00
20,400.00	90.61	359.58	7,198.25	13,333.44	-278.58	13,332.88	0.00	0.00	0.00
20,500.00	90.61	359.58	7,197.19	13,433.44	-279.32	13,432.87	0.00	0.00	0.00
20,600.00	90.61	359.58	7,196.12	13,533.43	-280.05	13,532.86	0.00	0.00	0.00
20,700.00	90.61	359.58	7,195.06	13,633.42	-280.79	13,632.85	0.00	0.00	0.00
20,800.00	90.61	359.58	7,193.99	13,733.41	-281.53	13,732.84	0.00	0.00	0.00
20,900.00	90.61	359.58	7,192.93	13,833.40	-282.27	13,832.83	0.00	0.00	0.00
21,000.00	90.61	359.58	7,191.86	13,933.39	-283.01	13,932.82	0.00	0.00	0.00
21,100.00	90.61	359.58	7,190.80	14,033.39	-283.75	14,032.81	0.00	0.00	0.00
21,200.00	90.61	359.58	7,189.73	14,133.38	-284.49	14,132.80	0.00	0.00	0.00
21,268.98	90.61	359.58	7,189.00	14,202.35	-285.00	14,201.78	0.00	0.00	0.00
CAMENISCH STATE 23N2-34HZ_PBHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
CAMENISCH STATE	0.00	0.00	7,189.00	14,202.35	-285.00	14,591,909.01	1,643,518.68	40.178981	-104.988895
- plan hits target center									
- Point									
CAMENISCH STATE	0.00	0.00	7,333.37	643.38	-184.76	14,578,350.05	1,643,620.77	40.141747	-104.988535
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,501.00	1,500.00	9 5/8"	9-5/8	13-1/2	
7,708.87	7,333.37	Top of Production	5-1/2	8-1/2	



# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well CAMENISCH STATE 23N2-34HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4893.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4893.00usft (D Rig)
<b>Site:</b>	2N-68W-15 Camenisch 7-15 Pad	<b>North Reference:</b>	True
<b>Well:</b>	CAMENISCH STATE 23N2-34HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-2		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
749.00	749.00	Fox Hills Mkr				
3,791.20	3,786.00	Parkman				
4,528.31	4,523.00	Sussex				
7,107.08	7,075.00	Sharon Springs				
7,231.13	7,167.00	Niobrara				
7,337.83	7,232.00	Nio B				
7,518.11	7,307.00	Nio C				