

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N  
5N-67W-22 BLUE CHIP 6-22HZ PAD  
BLUE CHIP 22-5HZ**

**Plan A**

**Plan: Permit Rev-1**

## **Standard Planning Report**

**08 September, 2022**



## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BLUE CHIP 22-5HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 5053.00usft (RIG)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 5053.00usft (RIG)
<b>Site:</b>	5N-67W-22 BLUE CHIP 6-22HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BLUE CHIP 22-5HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

<b>Project</b> WELD-NAD83-UTMFT13N			
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Zone 13N (108 W to 102 W)		

<b>Site</b> 5N-67W-22 BLUE CHIP 6-22HZ PAD			
<b>Site Position:</b>		<b>Northing:</b>	14,668,179.77 usft
<b>From:</b>	Map	<b>Easting:</b>	1,673,746.93 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	40.388364
		<b>Longitude:</b>	-104.880304

<b>Well</b> BLUE CHIP 22-5HZ			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b> 14,668,119.79 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b> 1,673,746.59 usft
<b>Position Uncertainty</b>		3.28 usft	<b>Wellhead Elevation:</b> usft
<b>Grid Convergence:</b>		0.08 °	<b>Ground Level:</b> 5,036.00 usft

<b>Wellbore</b> Plan A					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF202013	9/3/2022	7.78	66.58	51,805.40615731

<b>Design</b> Permit Rev-1				
<b>Audit Notes:</b>				
<b>Version:</b>		<b>Phase:</b>	PLAN	<b>Tie On Depth:</b> 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	269.49

<b>Plan Survey Tool Program</b>		<b>Date</b>	9/5/2022		
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	8,522.00	18,757.05 Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWD+I	Fixed:v2:Rockies, crustal dec +	

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<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 5053.00usft (RIG)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 5053.00usft (RIG)
<b>Site:</b>	5N-67W-22 BLUE CHIP 6-22HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BLUE CHIP 22-5HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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	
320.70	0.00	0.00	320.70	0.00	0.00	0.00	0.00	0.00	0.00	
2,932.70	39.18	95.32	2,733.84	-79.63	855.11	1.50	1.50	0.00	95.32	
6,874.83	39.18	95.32	5,789.64	-310.54	3,334.85	0.00	0.00	0.00	0.00	
8,485.45	89.91	269.49	6,952.00	-411.52	2,779.78	8.00	3.15	10.81	172.51	
13,485.44	89.91	269.49	6,959.86	-456.02	-2,220.01	0.00	0.00	0.00	0.00	
13,519.44	89.91	270.00	6,959.91	-456.17	-2,254.01	1.50	0.00	1.50	90.00	
15,519.44	89.91	270.00	6,963.05	-456.17	-4,254.01	0.00	0.00	0.00	0.00	
15,574.76	89.89	269.17	6,963.15	-456.57	-4,309.32	1.50	-0.03	-1.50	-91.07	
18,757.05	89.89	269.17	6,969.00	-502.65	-7,491.28	0.00	0.00	0.00	0.00	BLUE CHIP 22-5HZ_I

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<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 5053.00usft (RIG)
<b>Site:</b>	5N-67W-22 BLUE CHIP 6-22HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BLUE CHIP 22-5HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
320.70	0.00	0.00	320.70	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Begin Nudge @ 320.70ft</b>										
400.00	1.19	95.32	399.99	-0.08	0.82	-0.82	1.50	1.50	0.00	
500.00	2.69	95.32	499.93	-0.39	4.19	-4.19	1.50	1.50	0.00	
600.00	4.19	95.32	599.75	-0.95	10.16	-10.15	1.50	1.50	0.00	
700.00	5.69	95.32	699.38	-1.74	18.74	-18.72	1.50	1.50	0.00	
800.00	7.19	95.32	798.74	-2.78	29.90	-29.88	1.50	1.50	0.00	
900.00	8.69	95.32	897.78	-4.07	43.66	-43.62	1.50	1.50	0.00	
921.47	9.01	95.32	919.00	-4.37	46.95	-46.90	1.50	1.50	0.00	
<b>Fox Hills</b>										
1,000.00	10.19	95.32	996.42	-5.59	59.98	-59.93	1.50	1.50	0.00	
1,100.00	11.69	95.32	1,094.60	-7.35	78.88	-78.81	1.50	1.50	0.00	
1,200.00	13.19	95.32	1,192.25	-9.34	100.33	-100.24	1.50	1.50	0.00	
1,300.00	14.69	95.32	1,289.31	-11.58	124.31	-124.20	1.50	1.50	0.00	
1,400.00	16.19	95.32	1,385.70	-14.04	150.82	-150.69	1.50	1.50	0.00	
1,500.00	17.69	95.32	1,481.35	-16.75	179.83	-179.67	1.50	1.50	0.00	
1,519.59	17.98	95.32	1,500.00	-17.30	185.80	-185.64	1.50	1.50	0.00	
<b>9 5/8"</b>										
1,600.00	19.19	95.32	1,576.22	-19.68	211.32	-211.14	1.50	1.50	0.00	
1,700.00	20.69	95.32	1,670.22	-22.84	245.28	-245.06	1.50	1.50	0.00	
1,800.00	22.19	95.32	1,763.30	-26.23	281.67	-281.43	1.50	1.50	0.00	
1,900.00	23.69	95.32	1,855.39	-29.84	320.48	-320.20	1.50	1.50	0.00	
2,000.00	25.19	95.32	1,946.42	-33.68	361.67	-361.36	1.50	1.50	0.00	
2,100.00	26.69	95.32	2,036.35	-37.73	405.22	-404.87	1.50	1.50	0.00	
2,200.00	28.19	95.32	2,125.09	-42.01	451.11	-450.71	1.50	1.50	0.00	
2,300.00	29.69	95.32	2,212.60	-46.49	499.28	-498.85	1.50	1.50	0.00	
2,400.00	31.19	95.32	2,298.82	-51.19	549.73	-549.25	1.50	1.50	0.00	
2,500.00	32.69	95.32	2,383.68	-56.10	602.40	-601.88	1.50	1.50	0.00	
2,600.00	34.19	95.32	2,467.12	-61.20	657.27	-656.70	1.50	1.50	0.00	
2,700.00	35.69	95.32	2,549.09	-66.51	714.29	-713.67	1.50	1.50	0.00	
2,800.00	37.19	95.32	2,629.54	-72.02	773.43	-772.76	1.50	1.50	0.00	
2,900.00	38.69	95.32	2,708.40	-77.72	834.65	-833.92	1.50	1.50	0.00	
2,932.70	39.18	95.32	2,733.84	-79.63	855.11	-854.36	1.50	1.50	0.00	
<b>Hold Tangent @ 2932.70ft</b>										
3,000.00	39.18	95.32	2,786.01	-83.57	897.44	-896.66	0.00	0.00	0.00	
3,100.00	39.18	95.32	2,863.53	-89.43	960.34	-959.51	0.00	0.00	0.00	
3,200.00	39.18	95.32	2,941.04	-95.28	1,023.25	-1,022.36	0.00	0.00	0.00	
3,300.00	39.18	95.32	3,018.56	-101.14	1,086.15	-1,085.21	0.00	0.00	0.00	
3,400.00	39.18	95.32	3,096.08	-107.00	1,149.06	-1,148.06	0.00	0.00	0.00	
3,500.00	39.18	95.32	3,173.59	-112.86	1,211.96	-1,210.91	0.00	0.00	0.00	
3,600.00	39.18	95.32	3,251.11	-118.71	1,274.86	-1,273.76	0.00	0.00	0.00	
3,700.00	39.18	95.32	3,328.62	-124.57	1,337.77	-1,336.61	0.00	0.00	0.00	
3,800.00	39.18	95.32	3,406.14	-130.43	1,400.67	-1,399.45	0.00	0.00	0.00	
3,900.00	39.18	95.32	3,483.66	-136.29	1,463.57	-1,462.30	0.00	0.00	0.00	
4,000.00	39.18	95.32	3,561.17	-142.14	1,526.48	-1,525.15	0.00	0.00	0.00	
4,100.00	39.18	95.32	3,638.69	-148.00	1,589.38	-1,588.00	0.00	0.00	0.00	
4,140.39	39.18	95.32	3,670.00	-150.37	1,614.79	-1,613.39	0.00	0.00	0.00	
<b>Parkman</b>										
4,200.00	39.18	95.32	3,716.21	-153.86	1,652.29	-1,650.85	0.00	0.00	0.00	
4,300.00	39.18	95.32	3,793.72	-159.72	1,715.19	-1,713.70	0.00	0.00	0.00	

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<b>Well:</b>	BLUE CHIP 22-5HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,400.00	39.18	95.32	3,871.24	-165.57	1,778.09	-1,776.55	0.00	0.00	0.00
4,500.00	39.18	95.32	3,948.76	-171.43	1,841.00	-1,839.40	0.00	0.00	0.00
4,600.00	39.18	95.32	4,026.27	-177.29	1,903.90	-1,902.25	0.00	0.00	0.00
4,700.00	39.18	95.32	4,103.79	-183.15	1,966.80	-1,965.10	0.00	0.00	0.00
4,742.84	39.18	95.32	4,137.00	-185.66	1,993.75	-1,992.02	0.00	0.00	0.00
<b>Sussex</b>									
4,800.00	39.18	95.32	4,181.31	-189.00	2,029.71	-2,027.95	0.00	0.00	0.00
4,900.00	39.18	95.32	4,258.82	-194.86	2,092.61	-2,090.79	0.00	0.00	0.00
5,000.00	39.18	95.32	4,336.34	-200.72	2,155.52	-2,153.64	0.00	0.00	0.00
5,100.00	39.18	95.32	4,413.86	-206.58	2,218.42	-2,216.49	0.00	0.00	0.00
5,200.00	39.18	95.32	4,491.37	-212.44	2,281.32	-2,279.34	0.00	0.00	0.00
5,300.00	39.18	95.32	4,568.89	-218.29	2,344.23	-2,342.19	0.00	0.00	0.00
5,400.00	39.18	95.32	4,646.41	-224.15	2,407.13	-2,405.04	0.00	0.00	0.00
5,500.00	39.18	95.32	4,723.92	-230.01	2,470.03	-2,467.89	0.00	0.00	0.00
5,600.00	39.18	95.32	4,801.44	-235.87	2,532.94	-2,530.74	0.00	0.00	0.00
5,700.00	39.18	95.32	4,878.96	-241.72	2,595.84	-2,593.59	0.00	0.00	0.00
5,800.00	39.18	95.32	4,956.47	-247.58	2,658.75	-2,656.44	0.00	0.00	0.00
5,900.00	39.18	95.32	5,033.99	-253.44	2,721.65	-2,719.29	0.00	0.00	0.00
6,000.00	39.18	95.32	5,111.50	-259.30	2,784.55	-2,782.13	0.00	0.00	0.00
6,100.00	39.18	95.32	5,189.02	-265.15	2,847.46	-2,844.98	0.00	0.00	0.00
6,200.00	39.18	95.32	5,266.54	-271.01	2,910.36	-2,907.83	0.00	0.00	0.00
6,300.00	39.18	95.32	5,344.05	-276.87	2,973.26	-2,970.68	0.00	0.00	0.00
6,400.00	39.18	95.32	5,421.57	-282.73	3,036.17	-3,033.53	0.00	0.00	0.00
6,500.00	39.18	95.32	5,499.09	-288.58	3,099.07	-3,096.38	0.00	0.00	0.00
6,600.00	39.18	95.32	5,576.60	-294.44	3,161.98	-3,159.23	0.00	0.00	0.00
6,700.00	39.18	95.32	5,654.12	-300.30	3,224.88	-3,222.08	0.00	0.00	0.00
6,800.00	39.18	95.32	5,731.64	-306.16	3,287.78	-3,284.93	0.00	0.00	0.00
6,874.83	39.18	95.32	5,789.64	-310.54	3,334.85	-3,331.96	0.00	0.00	0.00
<b>KOP @ 6874.83ft :: DLS = 8°/100'</b>									
6,900.00	37.18	95.75	5,809.43	-312.04	3,350.34	-3,347.43	8.00	-7.93	1.73
6,950.00	33.23	96.75	5,850.27	-315.17	3,378.99	-3,376.05	8.00	-7.92	1.99
7,000.00	29.28	97.98	5,893.01	-318.47	3,404.71	-3,401.74	8.00	-7.90	2.46
7,050.00	25.34	99.55	5,937.43	-321.95	3,427.38	-3,424.38	8.00	-7.87	3.15
7,100.00	21.43	101.66	5,983.31	-325.57	3,446.88	-3,443.85	8.00	-7.82	4.21
7,150.00	17.55	104.65	6,030.44	-329.32	3,463.13	-3,460.06	8.00	-7.75	5.98
7,200.00	13.75	109.25	6,078.58	-333.19	3,476.04	-3,472.94	8.00	-7.61	9.20
7,250.00	10.09	117.18	6,127.50	-337.15	3,485.55	-3,482.41	8.00	-7.32	15.87
7,300.00	6.82	133.21	6,176.95	-341.19	3,491.62	-3,488.44	8.00	-6.54	32.06
7,350.00	4.82	168.40	6,226.71	-345.28	3,494.20	-3,490.99	8.00	-4.01	70.38
7,400.00	5.64	212.59	6,276.52	-349.41	3,493.30	-3,490.05	8.00	1.64	88.38
7,450.00	8.50	235.91	6,326.14	-353.55	3,488.92	-3,485.63	8.00	5.73	46.64
7,500.00	12.03	246.67	6,375.34	-357.68	3,481.07	-3,477.75	8.00	7.06	21.51
7,550.00	15.78	252.49	6,423.87	-361.80	3,469.80	-3,466.44	8.00	7.50	11.64
7,600.00	19.63	256.09	6,471.49	-365.86	3,455.15	-3,451.76	8.00	7.70	7.21
7,650.00	23.53	258.55	6,517.98	-369.86	3,437.21	-3,433.79	8.00	7.79	4.91
7,700.00	27.45	260.34	6,563.10	-373.78	3,416.06	-3,412.60	8.00	7.85	3.58
7,750.00	31.40	261.71	6,606.65	-377.59	3,391.80	-3,388.31	8.00	7.89	2.74
7,800.00	35.35	262.80	6,648.39	-381.28	3,364.55	-3,361.03	8.00	7.91	2.19
7,850.00	39.31	263.70	6,688.14	-384.83	3,334.45	-3,330.89	8.00	7.93	1.80
7,900.00	43.28	264.46	6,725.70	-388.23	3,301.63	-3,298.04	8.00	7.94	1.52
7,950.00	47.26	265.11	6,760.88	-391.45	3,266.26	-3,262.65	8.00	7.95	1.31
8,000.00	51.23	265.69	6,793.52	-394.48	3,228.52	-3,224.88	8.00	7.95	1.15
8,050.00	55.21	266.20	6,823.45	-397.30	3,188.58	-3,184.92	8.00	7.96	1.03

## Planning Report

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<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 5053.00usft (RIG)
<b>Site:</b>	5N-67W-22 BLUE CHIP 6-22HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BLUE CHIP 22-5HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,100.00	59.19	266.67	6,850.53	-399.91	3,146.64	-3,142.96	8.00	7.96	0.93	
8,150.00	63.17	267.10	6,874.63	-402.28	3,102.91	-3,099.20	8.00	7.96	0.86	
8,200.00	67.16	267.50	6,895.62	-404.42	3,057.59	-3,053.87	8.00	7.97	0.80	
8,230.89	69.62	267.74	6,907.00	-405.61	3,028.90	-3,025.17	8.00	7.97	0.76	
<b>Sharon Springs</b>										
8,250.00	71.14	267.88	6,913.42	-406.30	3,010.91	-3,007.18	8.00	7.97	0.74	
8,300.00	75.13	268.24	6,927.92	-407.92	2,963.10	-2,959.35	8.00	7.97	0.72	
8,308.28	75.79	268.30	6,930.00	-408.16	2,955.09	-2,951.34	8.00	7.97	0.70	
<b>Niobrara</b>										
8,350.00	79.11	268.59	6,939.06	-409.27	2,914.39	-2,910.63	8.00	7.97	0.69	
8,400.00	83.10	268.92	6,946.79	-410.34	2,865.01	-2,861.24	8.00	7.97	0.68	
8,450.00	87.08	269.26	6,951.07	-411.13	2,815.21	-2,811.44	8.00	7.97	0.66	
8,485.45	89.91	269.49	6,952.00	-411.52	2,779.78	-2,776.01	8.00	7.97	0.66	
<b>End Build @ 8485.44ft</b>										
8,500.00	89.91	269.49	6,952.02	-411.65	2,765.23	-2,761.45	0.00	0.00	0.00	
8,600.00	89.91	269.49	6,952.18	-412.54	2,665.23	-2,661.45	0.00	0.00	0.00	
8,700.00	89.91	269.49	6,952.34	-413.43	2,565.24	-2,561.45	0.00	0.00	0.00	
8,800.00	89.91	269.49	6,952.50	-414.32	2,465.24	-2,461.45	0.00	0.00	0.00	
8,900.00	89.91	269.49	6,952.65	-415.21	2,365.24	-2,361.45	0.00	0.00	0.00	
9,000.00	89.91	269.49	6,952.81	-416.10	2,265.25	-2,261.45	0.00	0.00	0.00	
9,100.00	89.91	269.49	6,952.97	-416.99	2,165.25	-2,161.45	0.00	0.00	0.00	
9,200.00	89.91	269.49	6,953.12	-417.88	2,065.26	-2,061.45	0.00	0.00	0.00	
9,300.00	89.91	269.49	6,953.28	-418.77	1,965.26	-1,961.45	0.00	0.00	0.00	
9,400.00	89.91	269.49	6,953.44	-419.66	1,865.26	-1,861.45	0.00	0.00	0.00	
9,500.00	89.91	269.49	6,953.60	-420.55	1,765.27	-1,761.45	0.00	0.00	0.00	
9,600.00	89.91	269.49	6,953.75	-421.44	1,665.27	-1,661.46	0.00	0.00	0.00	
9,700.00	89.91	269.49	6,953.91	-422.33	1,565.28	-1,561.46	0.00	0.00	0.00	
9,800.00	89.91	269.49	6,954.07	-423.22	1,465.28	-1,461.46	0.00	0.00	0.00	
9,900.00	89.91	269.49	6,954.22	-424.11	1,365.28	-1,361.46	0.00	0.00	0.00	
10,000.00	89.91	269.49	6,954.38	-425.00	1,265.29	-1,261.46	0.00	0.00	0.00	
10,100.00	89.91	269.49	6,954.54	-425.89	1,165.29	-1,161.46	0.00	0.00	0.00	
10,200.00	89.91	269.49	6,954.70	-426.78	1,065.30	-1,061.46	0.00	0.00	0.00	
10,300.00	89.91	269.49	6,954.85	-427.67	965.30	-961.46	0.00	0.00	0.00	
10,400.00	89.91	269.49	6,955.01	-428.56	865.30	-861.46	0.00	0.00	0.00	
10,500.00	89.91	269.49	6,955.17	-429.45	765.31	-761.46	0.00	0.00	0.00	
10,600.00	89.91	269.49	6,955.32	-430.34	665.31	-661.46	0.00	0.00	0.00	
10,700.00	89.91	269.49	6,955.48	-431.23	565.32	-561.46	0.00	0.00	0.00	
10,800.00	89.91	269.49	6,955.64	-432.12	465.32	-461.46	0.00	0.00	0.00	
10,900.00	89.91	269.49	6,955.79	-433.01	365.33	-361.46	0.00	0.00	0.00	
11,000.00	89.91	269.49	6,955.95	-433.90	265.33	-261.46	0.00	0.00	0.00	
11,100.00	89.91	269.49	6,956.11	-434.79	165.33	-161.46	0.00	0.00	0.00	
11,200.00	89.91	269.49	6,956.27	-435.68	65.34	-61.46	0.00	0.00	0.00	
11,300.00	89.91	269.49	6,956.42	-436.57	-34.66	38.54	0.00	0.00	0.00	
11,400.00	89.91	269.49	6,956.58	-437.46	-134.65	138.54	0.00	0.00	0.00	
11,500.00	89.91	269.49	6,956.74	-438.35	-234.65	238.54	0.00	0.00	0.00	
11,600.00	89.91	269.49	6,956.89	-439.24	-334.65	338.54	0.00	0.00	0.00	
11,700.00	89.91	269.49	6,957.05	-440.13	-434.64	438.54	0.00	0.00	0.00	
11,800.00	89.91	269.49	6,957.21	-441.02	-534.64	538.54	0.00	0.00	0.00	
11,900.00	89.91	269.49	6,957.37	-441.91	-634.63	638.54	0.00	0.00	0.00	
12,000.00	89.91	269.49	6,957.52	-442.80	-734.63	738.54	0.00	0.00	0.00	
12,100.00	89.91	269.49	6,957.68	-443.69	-834.63	838.54	0.00	0.00	0.00	
12,200.00	89.91	269.49	6,957.84	-444.58	-934.62	938.54	0.00	0.00	0.00	
12,300.00	89.91	269.49	6,957.99	-445.47	-1,034.62	1,038.54	0.00	0.00	0.00	

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BLUE CHIP 22-5HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 5053.00usft (RIG)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 5053.00usft (RIG)
<b>Site:</b>	5N-67W-22 BLUE CHIP 6-22HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BLUE CHIP 22-5HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
12,400.00	89.91	269.49	6,958.15	-446.36	-1,134.61	1,138.54	0.00	0.00	0.00	
12,500.00	89.91	269.49	6,958.31	-447.25	-1,234.61	1,238.54	0.00	0.00	0.00	
12,600.00	89.91	269.49	6,958.47	-448.14	-1,334.61	1,338.54	0.00	0.00	0.00	
12,700.00	89.91	269.49	6,958.62	-449.03	-1,434.60	1,438.54	0.00	0.00	0.00	
12,800.00	89.91	269.49	6,958.78	-449.92	-1,534.60	1,538.54	0.00	0.00	0.00	
12,900.00	89.91	269.49	6,958.94	-450.81	-1,634.59	1,638.54	0.00	0.00	0.00	
13,000.00	89.91	269.49	6,959.09	-451.70	-1,734.59	1,738.54	0.00	0.00	0.00	
13,100.00	89.91	269.49	6,959.25	-452.59	-1,834.58	1,838.54	0.00	0.00	0.00	
13,200.00	89.91	269.49	6,959.41	-453.48	-1,934.58	1,938.54	0.00	0.00	0.00	
13,300.00	89.91	269.49	6,959.56	-454.37	-2,034.58	2,038.54	0.00	0.00	0.00	
13,400.00	89.91	269.49	6,959.72	-455.26	-2,134.57	2,138.54	0.00	0.00	0.00	
13,485.44	89.91	269.49	6,959.86	-456.02	-2,220.01	2,223.98	0.00	0.00	0.00	
<b>Begin Turn @ 13485.44ft</b>										
13,500.00	89.91	269.71	6,959.88	-456.12	-2,234.57	2,238.54	1.50	0.00	1.50	
13,519.44	89.91	270.00	6,959.91	-456.17	-2,254.01	2,257.98	1.50	0.00	1.50	
<b>End Turn @ 13519.44ft</b>										
13,600.00	89.91	270.00	6,960.04	-456.17	-2,334.57	2,338.54	0.00	0.00	0.00	
13,700.00	89.91	270.00	6,960.19	-456.17	-2,434.57	2,438.53	0.00	0.00	0.00	
13,800.00	89.91	270.00	6,960.35	-456.17	-2,534.57	2,538.53	0.00	0.00	0.00	
13,900.00	89.91	270.00	6,960.51	-456.17	-2,634.57	2,638.52	0.00	0.00	0.00	
14,000.00	89.91	270.00	6,960.66	-456.17	-2,734.57	2,738.52	0.00	0.00	0.00	
14,100.00	89.91	270.00	6,960.82	-456.17	-2,834.57	2,838.52	0.00	0.00	0.00	
14,200.00	89.91	270.00	6,960.98	-456.17	-2,934.57	2,938.51	0.00	0.00	0.00	
14,300.00	89.91	270.00	6,961.14	-456.17	-3,034.57	3,038.51	0.00	0.00	0.00	
14,400.00	89.91	270.00	6,961.29	-456.17	-3,134.57	3,138.50	0.00	0.00	0.00	
14,500.00	89.91	270.00	6,961.45	-456.17	-3,234.57	3,238.50	0.00	0.00	0.00	
14,600.00	89.91	270.00	6,961.61	-456.17	-3,334.57	3,338.50	0.00	0.00	0.00	
14,700.00	89.91	270.00	6,961.76	-456.17	-3,434.57	3,438.49	0.00	0.00	0.00	
14,800.00	89.91	270.00	6,961.92	-456.17	-3,534.57	3,538.49	0.00	0.00	0.00	
14,900.00	89.91	270.00	6,962.08	-456.17	-3,634.57	3,638.48	0.00	0.00	0.00	
15,000.00	89.91	270.00	6,962.24	-456.17	-3,734.57	3,738.48	0.00	0.00	0.00	
15,100.00	89.91	270.00	6,962.39	-456.17	-3,834.57	3,838.48	0.00	0.00	0.00	
15,200.00	89.91	270.00	6,962.55	-456.17	-3,934.57	3,938.47	0.00	0.00	0.00	
15,300.00	89.91	270.00	6,962.71	-456.17	-4,034.57	4,038.47	0.00	0.00	0.00	
15,400.00	89.91	270.00	6,962.86	-456.17	-4,134.57	4,138.46	0.00	0.00	0.00	
15,500.00	89.91	270.00	6,963.02	-456.17	-4,234.57	4,238.46	0.00	0.00	0.00	
15,519.44	89.91	270.00	6,963.05	-456.17	-4,254.01	4,257.90	0.00	0.00	0.00	
<b>Begin Turn to BHL @ 15519.44ft</b>										
15,574.76	89.89	269.17	6,963.15	-456.57	-4,309.32	4,313.22	1.50	-0.03	-1.50	
<b>End Turn @ 15574.76ft</b>										
15,600.00	89.89	269.17	6,963.19	-456.94	-4,334.56	4,338.46	0.00	0.00	0.00	
15,700.00	89.89	269.17	6,963.38	-458.39	-4,434.55	4,438.46	0.00	0.00	0.00	
15,800.00	89.89	269.17	6,963.56	-459.83	-4,534.54	4,538.45	0.00	0.00	0.00	
15,900.00	89.89	269.17	6,963.74	-461.28	-4,634.53	4,638.45	0.00	0.00	0.00	
16,000.00	89.89	269.17	6,963.93	-462.73	-4,734.52	4,738.45	0.00	0.00	0.00	
16,100.00	89.89	269.17	6,964.11	-464.18	-4,834.51	4,838.45	0.00	0.00	0.00	
16,200.00	89.89	269.17	6,964.30	-465.63	-4,934.50	4,938.45	0.00	0.00	0.00	
16,300.00	89.89	269.17	6,964.48	-467.07	-5,034.49	5,038.44	0.00	0.00	0.00	
16,400.00	89.89	269.17	6,964.66	-468.52	-5,134.48	5,138.44	0.00	0.00	0.00	
16,500.00	89.89	269.17	6,964.85	-469.97	-5,234.47	5,238.44	0.00	0.00	0.00	
16,600.00	89.89	269.17	6,965.03	-471.42	-5,334.46	5,338.44	0.00	0.00	0.00	
16,700.00	89.89	269.17	6,965.22	-472.87	-5,434.44	5,438.44	0.00	0.00	0.00	
16,800.00	89.89	269.17	6,965.40	-474.31	-5,534.43	5,538.44	0.00	0.00	0.00	
16,900.00	89.89	269.17	6,965.58	-475.76	-5,634.42	5,638.43	0.00	0.00	0.00	

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BLUE CHIP 22-5HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 5053.00usft (RIG)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 5053.00usft (RIG)
<b>Site:</b>	5N-67W-22 BLUE CHIP 6-22HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BLUE CHIP 22-5HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,000.00	89.89	269.17	6,965.77	-477.21	-5,734.41	5,738.43	0.00	0.00	0.00
17,100.00	89.89	269.17	6,965.95	-478.66	-5,834.40	5,838.43	0.00	0.00	0.00
17,200.00	89.89	269.17	6,966.14	-480.10	-5,934.39	5,938.43	0.00	0.00	0.00
17,300.00	89.89	269.17	6,966.32	-481.55	-6,034.38	6,038.43	0.00	0.00	0.00
17,400.00	89.89	269.17	6,966.50	-483.00	-6,134.37	6,138.43	0.00	0.00	0.00
17,500.00	89.89	269.17	6,966.69	-484.45	-6,234.36	6,238.42	0.00	0.00	0.00
17,600.00	89.89	269.17	6,966.87	-485.90	-6,334.35	6,338.42	0.00	0.00	0.00
17,700.00	89.89	269.17	6,967.06	-487.34	-6,434.34	6,438.42	0.00	0.00	0.00
17,800.00	89.89	269.17	6,967.24	-488.79	-6,534.33	6,538.42	0.00	0.00	0.00
17,900.00	89.89	269.17	6,967.42	-490.24	-6,634.32	6,638.42	0.00	0.00	0.00
18,000.00	89.89	269.17	6,967.61	-491.69	-6,734.31	6,738.42	0.00	0.00	0.00
18,100.00	89.89	269.17	6,967.79	-493.14	-6,834.30	6,838.41	0.00	0.00	0.00
18,200.00	89.89	269.17	6,967.98	-494.58	-6,934.28	6,938.41	0.00	0.00	0.00
18,300.00	89.89	269.17	6,968.16	-496.03	-7,034.27	7,038.41	0.00	0.00	0.00
18,400.00	89.89	269.17	6,968.34	-497.48	-7,134.26	7,138.41	0.00	0.00	0.00
18,500.00	89.89	269.17	6,968.53	-498.93	-7,234.25	7,238.41	0.00	0.00	0.00
18,600.00	89.89	269.17	6,968.71	-500.38	-7,334.24	7,338.41	0.00	0.00	0.00
18,700.00	89.89	269.17	6,968.90	-501.82	-7,434.23	7,438.40	0.00	0.00	0.00
18,757.05	89.89	269.17	6,969.00	-502.65	-7,491.28	7,495.45	0.00	0.00	0.00
<b>TD Well @ 18757.05ft - 5.5" CSG</b>									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,519.59	1,500.00	9 5/8"	9-5/8	13-1/2	
18,757.05	6,969.00	5.5" CSG	5-1/2	7-7/8	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
921.47	919.00	Fox Hills			
4,140.39	3,670.00	Parkman			
4,742.84	4,137.00	Sussex			
8,230.89	6,907.00	Sharon Springs			
8,308.28	6,930.00	Niobrara			

## Planning Report

<b>Database:</b>	EDM 5000.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BLUE CHIP 22-5HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 5053.00usft (RIG)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 5053.00usft (RIG)
<b>Site:</b>	5N-67W-22 BLUE CHIP 6-22HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BLUE CHIP 22-5HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
320.70	320.70	0.00	0.00	Begin Nudge @ 320.70ft
2,932.70	2,733.84	-79.63	855.11	Hold Tangent @ 2932.70ft
6,874.83	5,789.64	-310.54	3,334.85	KOP @ 6874.83ft :: DLS = 8°/100'
8,485.45	6,952.00	-411.52	2,779.78	End Build @ 8485.44ft
13,485.44	6,959.86	-456.02	-2,220.01	Begin Turn @ 13485.44ft
13,519.44	6,959.91	-456.17	-2,254.01	End Turn @ 13519.44ft
15,519.44	6,963.05	-456.17	-4,254.01	Begin Turn to BHL @ 15519.44ft
15,574.76	6,963.15	-456.57	-4,309.32	End Turn @ 15574.76ft
18,757.05	6,969.00	-502.65	-7,491.28	TD Well @ 18757.05ft