

US ROCKIES WATTENBERG PLANNING

**WELD-NAD83-UTMFT13N
5N-67W-22 BLUE CHIP 6-22HZ PAD
BLUE CHIP 22-11HZ**

Plan A

Plan: Permit Rev-2

Standard Planning Report

09 September, 2022

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BLUE CHIP 22-11HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5053.00usft (RIG)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5053.00usft (RIG)
Site:	5N-67W-22 BLUE CHIP 6-22HZ PAD	North Reference:	True
Well:	BLUE CHIP 22-11HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

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

Well BLUE CHIP 22-11HZ			
Well Position	+N/-S	0.00 usft	Northing: 14,668,029.83 usft
	+E/-W	0.00 usft	Easting: 1,673,746.09 usft
Position Uncertainty		3.28 usft	Wellhead Elevation: usft
Grid Convergence:		0.08 °	Ground Level: 5,036.00 usft

Wellbore Plan A					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF202013	9/3/2022	7.78	66.58	51,805.27691580

Design Permit Rev-2				
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	-3,000.58	1,323.81	269.93

Plan Survey Tool Program		Date	9/8/2022		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	1,500.00	Permit Rev-2 (Plan A)	APC_ISCWSA REV 2 MWD+I	Fixed:v2:crustal field declinatio
2	1,500.00	22,537.14	Permit Rev-2 (Plan A)	APC_ISCWSA REV 2 MWD+I	Fixed:v2:Rockies, crustal dec +

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Wellbore:	Plan A		
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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	
200.80	0.00	0.00	200.80	0.00	0.00	0.00	0.00	0.00	0.00	
2,530.13	34.94	141.97	2,388.42	-542.32	424.16	1.50	1.50	0.00	141.97	
7,008.35	34.94	141.97	6,059.45	-2,562.55	2,004.24	0.00	0.00	0.00	0.00	
8,402.43	89.90	272.00	6,924.00	-3,000.58	1,323.81	8.00	3.94	9.33	124.60	
9,402.43	89.90	272.00	6,925.74	-2,965.69	324.42	0.00	0.00	0.00	0.00	
9,602.43	89.90	275.00	6,926.09	-2,953.48	124.82	1.50	0.00	1.50	90.00	
11,077.43	89.90	275.00	6,928.67	-2,824.92	-1,344.56	0.00	0.00	0.00	0.00	
11,477.43	89.90	269.00	6,929.37	-2,810.97	-1,744.14	1.50	0.00	-1.50	-90.01	
14,010.76	89.90	269.00	6,933.79	-2,855.18	-4,277.08	0.00	0.00	0.00	0.00	
14,210.76	89.90	266.00	6,934.14	-2,863.90	-4,476.87	1.50	0.00	-1.50	-90.00	
15,210.76	89.90	266.00	6,935.88	-2,933.66	-5,474.43	0.00	0.00	0.00	0.00	
15,437.21	89.91	269.40	6,936.27	-2,942.75	-5,700.66	1.50	0.00	1.50	89.91	
22,537.14	89.91	269.40	6,948.00	-3,017.51	-12,800.19	0.00	0.00	0.00	0.00	BLUE CHIP 22-11HZ_

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5053.00usft (RIG)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5053.00usft (RIG)
Site:	5N-67W-22 BLUE CHIP 6-22HZ PAD	North Reference:	True
Well:	BLUE CHIP 22-11HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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	1,320.21	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	1,320.21	0.00	0.00	0.00	
200.80	0.00	0.00	200.80	0.00	0.00	1,320.21	0.00	0.00	0.00	
Begin Nudge @ 200.80ft										
300.00	1.49	141.97	299.99	-1.01	0.79	1,319.42	1.50	1.50	0.00	
400.00	2.99	141.97	399.91	-4.09	3.20	1,317.02	1.50	1.50	0.00	
500.00	4.49	141.97	499.69	-9.23	7.22	1,313.01	1.50	1.50	0.00	
600.00	5.99	141.97	599.27	-16.42	12.84	1,307.39	1.50	1.50	0.00	
700.00	7.49	141.97	698.58	-25.66	20.07	1,300.18	1.50	1.50	0.00	
800.00	8.99	141.97	797.55	-36.94	28.90	1,291.36	1.50	1.50	0.00	
900.00	10.49	141.97	896.10	-50.27	39.32	1,280.96	1.50	1.50	0.00	
923.30	10.84	141.97	919.00	-53.66	41.97	1,278.31	1.50	1.50	0.00	
Fox Hills										
1,000.00	11.99	141.97	994.18	-65.62	51.32	1,268.97	1.50	1.50	0.00	
1,100.00	13.49	141.97	1,091.72	-82.98	64.90	1,255.41	1.50	1.50	0.00	
1,200.00	14.99	141.97	1,188.64	-102.36	80.06	1,240.28	1.50	1.50	0.00	
1,300.00	16.49	141.97	1,284.89	-123.72	96.77	1,223.60	1.50	1.50	0.00	
1,400.00	17.99	141.97	1,380.40	-147.06	115.02	1,205.37	1.50	1.50	0.00	
1,500.00	19.49	141.97	1,475.09	-172.37	134.81	1,185.61	1.50	1.50	0.00	
1,526.45	19.88	141.97	1,500.00	-179.39	140.30	1,180.13	1.50	1.50	0.00	
9 5/8"										
1,600.00	20.99	141.97	1,568.92	-199.61	156.12	1,164.33	1.50	1.50	0.00	
1,700.00	22.49	141.97	1,661.80	-228.79	178.94	1,141.55	1.50	1.50	0.00	
1,800.00	23.99	141.97	1,753.69	-259.86	203.25	1,117.28	1.50	1.50	0.00	
1,900.00	25.49	141.97	1,844.51	-292.83	229.03	1,091.54	1.50	1.50	0.00	
2,000.00	26.99	141.97	1,934.20	-327.65	256.26	1,064.34	1.50	1.50	0.00	
2,100.00	28.49	141.97	2,022.71	-364.31	284.94	1,035.71	1.50	1.50	0.00	
2,200.00	29.99	141.97	2,109.97	-402.78	315.03	1,005.67	1.50	1.50	0.00	
2,300.00	31.49	141.97	2,195.92	-443.04	346.51	974.23	1.50	1.50	0.00	
2,400.00	32.99	141.97	2,280.50	-485.06	379.38	941.42	1.50	1.50	0.00	
2,500.00	34.49	141.97	2,363.65	-528.80	413.59	907.26	1.50	1.50	0.00	
2,530.13	34.94	141.97	2,388.42	-542.32	424.16	896.70	1.50	1.50	0.00	
Hold Tangent @ 2530.13ft										
2,600.00	34.94	141.97	2,445.70	-573.84	448.82	872.09	0.00	0.00	0.00	
2,700.00	34.94	141.97	2,527.67	-618.95	484.10	836.86	0.00	0.00	0.00	
2,800.00	34.94	141.97	2,609.65	-664.06	519.38	801.63	0.00	0.00	0.00	
2,900.00	34.94	141.97	2,691.62	-709.18	554.67	766.40	0.00	0.00	0.00	
3,000.00	34.94	141.97	2,773.60	-754.29	589.95	731.17	0.00	0.00	0.00	
3,100.00	34.94	141.97	2,855.57	-799.40	625.23	695.94	0.00	0.00	0.00	
3,200.00	34.94	141.97	2,937.55	-844.51	660.52	660.71	0.00	0.00	0.00	
3,300.00	34.94	141.97	3,019.52	-889.62	695.80	625.48	0.00	0.00	0.00	
3,400.00	34.94	141.97	3,101.50	-934.74	731.09	590.25	0.00	0.00	0.00	
3,500.00	34.94	141.97	3,183.47	-979.85	766.37	555.02	0.00	0.00	0.00	
3,600.00	34.94	141.97	3,265.45	-1,024.96	801.65	519.79	0.00	0.00	0.00	
3,700.00	34.94	141.97	3,347.42	-1,070.07	836.94	484.56	0.00	0.00	0.00	
3,800.00	34.94	141.97	3,429.40	-1,115.19	872.22	449.33	0.00	0.00	0.00	
3,900.00	34.94	141.97	3,511.37	-1,160.30	907.50	414.10	0.00	0.00	0.00	
4,000.00	34.94	141.97	3,593.35	-1,205.41	942.79	378.87	0.00	0.00	0.00	
4,093.50	34.94	141.97	3,670.00	-1,247.59	975.78	345.93	0.00	0.00	0.00	
Parkman										
4,100.00	34.94	141.97	3,675.32	-1,250.52	978.07	343.64	0.00	0.00	0.00	
4,200.00	34.94	141.97	3,757.30	-1,295.64	1,013.35	308.41	0.00	0.00	0.00	
4,300.00	34.94	141.97	3,839.28	-1,340.75	1,048.64	273.18	0.00	0.00	0.00	
4,400.00	34.94	141.97	3,921.25	-1,385.86	1,083.92	237.95	0.00	0.00	0.00	

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Well:	BLUE CHIP 22-11HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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)
4,500.00	34.94	141.97	4,003.23	-1,430.97	1,119.21	202.72	0.00	0.00	0.00
4,600.00	34.94	141.97	4,085.20	-1,476.09	1,154.49	167.49	0.00	0.00	0.00
4,663.19	34.94	141.97	4,137.00	-1,504.59	1,176.79	145.23	0.00	0.00	0.00
Sussex									
4,700.00	34.94	141.97	4,167.18	-1,521.20	1,189.77	132.26	0.00	0.00	0.00
4,800.00	34.94	141.97	4,249.15	-1,566.31	1,225.06	97.03	0.00	0.00	0.00
4,900.00	34.94	141.97	4,331.13	-1,611.42	1,260.34	61.80	0.00	0.00	0.00
5,000.00	34.94	141.97	4,413.10	-1,656.53	1,295.62	26.58	0.00	0.00	0.00
5,100.00	34.94	141.97	4,495.08	-1,701.65	1,330.91	-8.65	0.00	0.00	0.00
5,200.00	34.94	141.97	4,577.05	-1,746.76	1,366.19	-43.88	0.00	0.00	0.00
5,300.00	34.94	141.97	4,659.03	-1,791.87	1,401.48	-79.11	0.00	0.00	0.00
5,400.00	34.94	141.97	4,741.00	-1,836.98	1,436.76	-114.34	0.00	0.00	0.00
5,500.00	34.94	141.97	4,822.98	-1,882.10	1,472.04	-149.57	0.00	0.00	0.00
5,600.00	34.94	141.97	4,904.95	-1,927.21	1,507.33	-184.80	0.00	0.00	0.00
5,700.00	34.94	141.97	4,986.93	-1,972.32	1,542.61	-220.03	0.00	0.00	0.00
5,800.00	34.94	141.97	5,068.90	-2,017.43	1,577.89	-255.26	0.00	0.00	0.00
5,900.00	34.94	141.97	5,150.88	-2,062.55	1,613.18	-290.49	0.00	0.00	0.00
6,000.00	34.94	141.97	5,232.85	-2,107.66	1,648.46	-325.72	0.00	0.00	0.00
6,100.00	34.94	141.97	5,314.83	-2,152.77	1,683.74	-360.95	0.00	0.00	0.00
6,200.00	34.94	141.97	5,396.80	-2,197.88	1,719.03	-396.18	0.00	0.00	0.00
6,300.00	34.94	141.97	5,478.78	-2,243.00	1,754.31	-431.41	0.00	0.00	0.00
6,400.00	34.94	141.97	5,560.75	-2,288.11	1,789.60	-466.64	0.00	0.00	0.00
6,500.00	34.94	141.97	5,642.73	-2,333.22	1,824.88	-501.87	0.00	0.00	0.00
6,600.00	34.94	141.97	5,724.71	-2,378.33	1,860.16	-537.10	0.00	0.00	0.00
6,700.00	34.94	141.97	5,806.68	-2,423.44	1,895.45	-572.33	0.00	0.00	0.00
6,800.00	34.94	141.97	5,888.66	-2,468.56	1,930.73	-607.56	0.00	0.00	0.00
6,900.00	34.94	141.97	5,970.63	-2,513.67	1,966.01	-642.79	0.00	0.00	0.00
7,008.35	34.94	141.97	6,059.45	-2,562.55	2,004.24	-680.96	0.00	0.00	0.00
KOP @ 7008.35ft :: DLS = 8°/100'									
7,050.00	33.15	146.99	6,093.97	-2,581.50	2,017.80	-694.49	8.00	-4.30	12.05
7,100.00	31.29	153.64	6,136.28	-2,604.60	2,031.02	-707.68	8.00	-3.72	13.30
7,150.00	29.81	160.96	6,179.35	-2,628.00	2,040.84	-717.48	8.00	-2.96	14.63
7,200.00	28.77	168.86	6,222.98	-2,651.56	2,047.22	-723.83	8.00	-2.08	15.80
7,250.00	28.21	177.17	6,266.94	-2,675.18	2,050.14	-726.71	8.00	-1.11	16.62
7,300.00	28.17	185.64	6,311.03	-2,698.74	2,049.56	-726.11	8.00	-0.08	16.94
7,350.00	28.65	193.99	6,355.02	-2,722.12	2,045.50	-722.02	8.00	0.95	16.71
7,400.00	29.62	201.97	6,398.71	-2,745.22	2,037.98	-714.47	8.00	1.94	15.95
7,450.00	31.04	209.38	6,441.88	-2,767.92	2,027.03	-703.49	8.00	2.83	14.83
7,500.00	32.84	216.14	6,484.33	-2,790.11	2,012.70	-689.14	8.00	3.61	13.51
7,550.00	34.97	222.21	6,525.83	-2,811.68	1,995.07	-671.49	8.00	4.26	12.15
7,600.00	37.37	227.64	6,566.21	-2,832.53	1,974.23	-650.62	8.00	4.80	10.85
7,650.00	39.99	232.47	6,605.24	-2,852.55	1,950.26	-626.63	8.00	5.25	9.67
7,700.00	42.80	236.79	6,642.76	-2,871.65	1,923.30	-599.64	8.00	5.60	8.64
7,750.00	45.74	240.67	6,678.56	-2,889.73	1,893.46	-569.79	8.00	5.90	7.75
7,800.00	48.81	244.16	6,712.48	-2,906.71	1,860.91	-537.21	8.00	6.13	7.00
7,850.00	51.97	247.34	6,744.36	-2,922.50	1,825.79	-502.07	8.00	6.33	6.36
7,900.00	55.21	250.26	6,774.04	-2,937.03	1,788.27	-464.54	8.00	6.48	5.83
7,950.00	58.52	252.95	6,801.37	-2,950.22	1,748.55	-424.80	8.00	6.61	5.38
8,000.00	61.88	255.45	6,826.22	-2,962.01	1,706.81	-383.04	8.00	6.72	5.01
8,050.00	65.28	257.81	6,848.46	-2,972.35	1,663.25	-339.48	8.00	6.80	4.71
8,100.00	68.71	260.03	6,868.00	-2,981.19	1,618.09	-294.31	8.00	6.87	4.45
8,150.00	72.18	262.16	6,884.74	-2,988.47	1,571.56	-247.76	8.00	6.93	4.25
8,200.00	75.66	264.20	6,898.59	-2,994.16	1,523.86	-200.06	8.00	6.97	4.09

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Site:	5N-67W-22 BLUE CHIP 6-22HZ PAD	North Reference:	True
Well:	BLUE CHIP 22-11HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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)	
8,237.31	78.27	265.68	6,907.00	-2,997.37	1,487.65	-163.85	8.00	7.00	3.97	
Sharon Springs										
8,250.00	79.16	266.18	6,909.48	-2,998.25	1,475.24	-151.44	8.00	7.02	3.92	
8,300.00	82.68	268.12	6,917.37	-3,000.70	1,425.94	-102.13	8.00	7.03	3.87	
8,350.00	86.20	270.02	6,922.21	-3,001.51	1,376.19	-52.38	8.00	7.05	3.81	
8,402.43	89.90	272.00	6,924.00	-3,000.58	1,323.81	0.00	8.00	7.05	3.78	
End Build @ 8402.43ft										
8,500.00	89.90	272.00	6,924.17	-2,997.18	1,226.30	97.50	0.00	0.00	0.00	
8,600.00	89.90	272.00	6,924.34	-2,993.69	1,126.36	197.44	0.00	0.00	0.00	
8,700.00	89.90	272.00	6,924.52	-2,990.20	1,026.43	297.37	0.00	0.00	0.00	
8,800.00	89.90	272.00	6,924.69	-2,986.71	926.49	397.31	0.00	0.00	0.00	
8,900.00	89.90	272.00	6,924.87	-2,983.22	826.55	497.24	0.00	0.00	0.00	
9,000.00	89.90	272.00	6,925.04	-2,979.73	726.61	597.18	0.00	0.00	0.00	
9,100.00	89.90	272.00	6,925.22	-2,976.24	626.67	697.11	0.00	0.00	0.00	
9,200.00	89.90	272.00	6,925.39	-2,972.75	526.73	797.05	0.00	0.00	0.00	
9,300.00	89.90	272.00	6,925.56	-2,969.26	426.79	896.98	0.00	0.00	0.00	
9,402.43	89.90	272.00	6,925.74	-2,965.69	324.42	999.34	0.00	0.00	0.00	
Begin Turn for AC @ 9402.43ft										
9,500.00	89.90	273.46	6,925.91	-2,961.04	226.97	1,096.79	1.50	0.00	1.50	
9,602.43	89.90	275.00	6,926.09	-2,953.48	124.82	1,198.93	1.50	0.00	1.50	
End Turn @ 9602.43ft										
9,700.00	89.90	275.00	6,926.26	-2,944.97	27.62	1,296.12	0.00	0.00	0.00	
9,800.00	89.90	275.00	6,926.44	-2,936.26	-72.00	1,395.73	0.00	0.00	0.00	
9,900.00	89.90	275.00	6,926.61	-2,927.54	-171.62	1,495.34	0.00	0.00	0.00	
10,000.00	89.90	275.00	6,926.79	-2,918.83	-271.24	1,594.95	0.00	0.00	0.00	
10,100.00	89.90	275.00	6,926.96	-2,910.11	-370.86	1,694.56	0.00	0.00	0.00	
10,200.00	89.90	275.00	6,927.14	-2,901.40	-470.47	1,794.16	0.00	0.00	0.00	
10,300.00	89.90	275.00	6,927.31	-2,892.68	-570.09	1,893.77	0.00	0.00	0.00	
10,400.00	89.90	275.00	6,927.48	-2,883.96	-669.71	1,993.38	0.00	0.00	0.00	
10,500.00	89.90	275.00	6,927.66	-2,875.25	-769.33	2,092.99	0.00	0.00	0.00	
10,600.00	89.90	275.00	6,927.83	-2,866.53	-868.95	2,192.60	0.00	0.00	0.00	
10,700.00	89.90	275.00	6,928.01	-2,857.82	-968.57	2,292.21	0.00	0.00	0.00	
10,800.00	89.90	275.00	6,928.18	-2,849.10	-1,068.19	2,391.82	0.00	0.00	0.00	
10,900.00	89.90	275.00	6,928.36	-2,840.39	-1,167.81	2,491.43	0.00	0.00	0.00	
11,000.00	89.90	275.00	6,928.53	-2,831.67	-1,267.43	2,591.03	0.00	0.00	0.00	
11,077.43	89.90	275.00	6,928.67	-2,824.92	-1,344.56	2,668.16	0.00	0.00	0.00	
Begin Turn for 3-D Spacing @ 11077.43ft										
11,100.00	89.90	274.66	6,928.71	-2,823.02	-1,367.05	2,690.65	1.50	0.00	-1.50	
11,200.00	89.90	273.16	6,928.88	-2,816.20	-1,466.82	2,790.41	1.50	0.00	-1.50	
11,300.00	89.90	271.66	6,929.06	-2,811.99	-1,566.73	2,890.31	1.50	0.00	-1.50	
11,400.00	89.90	270.16	6,929.23	-2,810.40	-1,666.71	2,990.29	1.50	0.00	-1.50	
11,477.43	89.90	269.00	6,929.37	-2,810.97	-1,744.14	3,067.72	1.50	0.00	-1.50	
End Turn @ 11477.43ft										
11,500.00	89.90	269.00	6,929.40	-2,811.36	-1,766.70	3,090.28	0.00	0.00	0.00	
11,600.00	89.90	269.00	6,929.58	-2,813.11	-1,866.69	3,190.27	0.00	0.00	0.00	
11,700.00	89.90	269.00	6,929.75	-2,814.85	-1,966.67	3,290.26	0.00	0.00	0.00	
11,800.00	89.90	269.00	6,929.93	-2,816.60	-2,066.66	3,390.24	0.00	0.00	0.00	
11,841.05	89.90	269.00	6,930.00	-2,817.32	-2,107.70	3,431.29	0.00	0.00	0.00	
Niobrara										
11,900.00	89.90	269.00	6,930.10	-2,818.34	-2,166.64	3,490.23	0.00	0.00	0.00	
12,000.00	89.90	269.00	6,930.28	-2,820.09	-2,266.63	3,590.22	0.00	0.00	0.00	
12,100.00	89.90	269.00	6,930.45	-2,821.83	-2,366.61	3,690.20	0.00	0.00	0.00	
12,200.00	89.90	269.00	6,930.63	-2,823.58	-2,466.60	3,790.19	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BLUE CHIP 22-11HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5053.00usft (RIG)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5053.00usft (RIG)
Site:	5N-67W-22 BLUE CHIP 6-22HZ PAD	North Reference:	True
Well:	BLUE CHIP 22-11HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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)	
12,300.00	89.90	269.00	6,930.80	-2,825.32	-2,566.58	3,890.18	0.00	0.00	0.00	
12,400.00	89.90	269.00	6,930.98	-2,827.07	-2,666.57	3,990.16	0.00	0.00	0.00	
12,500.00	89.90	269.00	6,931.15	-2,828.82	-2,766.55	4,090.15	0.00	0.00	0.00	
12,600.00	89.90	269.00	6,931.32	-2,830.56	-2,866.53	4,190.14	0.00	0.00	0.00	
12,700.00	89.90	269.00	6,931.50	-2,832.31	-2,966.52	4,290.12	0.00	0.00	0.00	
12,800.00	89.90	269.00	6,931.67	-2,834.05	-3,066.50	4,390.11	0.00	0.00	0.00	
12,900.00	89.90	269.00	6,931.85	-2,835.80	-3,166.49	4,490.10	0.00	0.00	0.00	
13,000.00	89.90	269.00	6,932.02	-2,837.54	-3,266.47	4,590.08	0.00	0.00	0.00	
13,100.00	89.90	269.00	6,932.20	-2,839.29	-3,366.46	4,690.07	0.00	0.00	0.00	
13,200.00	89.90	269.00	6,932.37	-2,841.03	-3,466.44	4,790.06	0.00	0.00	0.00	
13,300.00	89.90	269.00	6,932.55	-2,842.78	-3,566.43	4,890.04	0.00	0.00	0.00	
13,400.00	89.90	269.00	6,932.72	-2,844.52	-3,666.41	4,990.03	0.00	0.00	0.00	
13,500.00	89.90	269.00	6,932.90	-2,846.27	-3,766.40	5,090.02	0.00	0.00	0.00	
13,600.00	89.90	269.00	6,933.07	-2,848.01	-3,866.38	5,190.00	0.00	0.00	0.00	
13,700.00	89.90	269.00	6,933.24	-2,849.76	-3,966.37	5,289.99	0.00	0.00	0.00	
13,800.00	89.90	269.00	6,933.42	-2,851.50	-4,066.35	5,389.98	0.00	0.00	0.00	
13,900.00	89.90	269.00	6,933.59	-2,853.25	-4,166.33	5,489.96	0.00	0.00	0.00	
14,000.00	89.90	269.00	6,933.77	-2,854.99	-4,266.32	5,589.95	0.00	0.00	0.00	
14,010.76	89.90	269.00	6,933.79	-2,855.18	-4,277.08	5,600.71	0.00	0.00	0.00	
Begin Turn for 3-D Spacing @ 14010.76ft										
14,100.00	89.90	267.66	6,933.94	-2,857.78	-4,366.28	5,689.91	1.50	0.00	-1.50	
14,200.00	89.90	266.16	6,934.12	-2,863.17	-4,466.13	5,789.77	1.50	0.00	-1.50	
14,210.76	89.90	266.00	6,934.14	-2,863.90	-4,476.87	5,800.51	1.50	0.00	-1.50	
End Turn @ 14210.76ft										
14,300.00	89.90	266.00	6,934.29	-2,870.13	-4,565.89	5,889.54	0.00	0.00	0.00	
14,400.00	89.90	266.00	6,934.47	-2,877.11	-4,665.64	5,989.30	0.00	0.00	0.00	
14,500.00	89.90	266.00	6,934.64	-2,884.08	-4,765.40	6,089.07	0.00	0.00	0.00	
14,600.00	89.90	266.00	6,934.82	-2,891.06	-4,865.16	6,188.83	0.00	0.00	0.00	
14,700.00	89.90	266.00	6,934.99	-2,898.03	-4,964.91	6,288.59	0.00	0.00	0.00	
14,800.00	89.90	266.00	6,935.16	-2,905.01	-5,064.67	6,388.36	0.00	0.00	0.00	
14,900.00	89.90	266.00	6,935.34	-2,911.98	-5,164.42	6,488.12	0.00	0.00	0.00	
15,000.00	89.90	266.00	6,935.51	-2,918.96	-5,264.18	6,587.89	0.00	0.00	0.00	
15,100.00	89.90	266.00	6,935.69	-2,925.93	-5,363.94	6,687.65	0.00	0.00	0.00	
15,200.00	89.90	266.00	6,935.86	-2,932.91	-5,463.69	6,787.42	0.00	0.00	0.00	
15,210.76	89.90	266.00	6,935.88	-2,933.66	-5,474.43	6,798.16	0.00	0.00	0.00	
Begin Turn to BHL @ 15210.76ft										
15,300.00	89.90	267.34	6,936.04	-2,938.85	-5,563.51	6,887.25	1.50	0.00	1.50	
15,400.00	89.90	268.84	6,936.20	-2,942.18	-5,663.46	6,987.19	1.50	0.00	1.50	
15,437.21	89.91	269.40	6,936.27	-2,942.75	-5,700.66	7,024.40	1.50	0.00	1.50	
End Turn @ 15437.21ft										
15,500.00	89.91	269.40	6,936.37	-2,943.41	-5,763.45	7,087.18	0.00	0.00	0.00	
15,600.00	89.91	269.40	6,936.54	-2,944.47	-5,863.44	7,187.18	0.00	0.00	0.00	
15,700.00	89.91	269.40	6,936.70	-2,945.52	-5,963.44	7,287.17	0.00	0.00	0.00	
15,800.00	89.91	269.40	6,936.87	-2,946.57	-6,063.43	7,387.17	0.00	0.00	0.00	
15,900.00	89.91	269.40	6,937.03	-2,947.63	-6,163.42	7,487.17	0.00	0.00	0.00	
16,000.00	89.91	269.40	6,937.20	-2,948.68	-6,263.42	7,587.16	0.00	0.00	0.00	
16,100.00	89.91	269.40	6,937.36	-2,949.73	-6,363.41	7,687.16	0.00	0.00	0.00	
16,200.00	89.91	269.40	6,937.53	-2,950.78	-6,463.41	7,787.15	0.00	0.00	0.00	
16,300.00	89.91	269.40	6,937.69	-2,951.84	-6,563.40	7,887.15	0.00	0.00	0.00	
16,400.00	89.91	269.40	6,937.86	-2,952.89	-6,663.40	7,987.14	0.00	0.00	0.00	
16,500.00	89.91	269.40	6,938.02	-2,953.94	-6,763.39	8,087.14	0.00	0.00	0.00	
16,600.00	89.91	269.40	6,938.19	-2,955.00	-6,863.38	8,187.13	0.00	0.00	0.00	
16,700.00	89.91	269.40	6,938.35	-2,956.05	-6,963.38	8,287.13	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BLUE CHIP 22-11HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5053.00usft (RIG)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5053.00usft (RIG)
Site:	5N-67W-22 BLUE CHIP 6-22HZ PAD	North Reference:	True
Well:	BLUE CHIP 22-11HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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)	
16,800.00	89.91	269.40	6,938.52	-2,957.10	-7,063.37	8,387.13	0.00	0.00	0.00	
16,900.00	89.91	269.40	6,938.68	-2,958.15	-7,163.37	8,487.12	0.00	0.00	0.00	
17,000.00	89.91	269.40	6,938.85	-2,959.21	-7,263.36	8,587.12	0.00	0.00	0.00	
17,100.00	89.91	269.40	6,939.01	-2,960.26	-7,363.36	8,687.11	0.00	0.00	0.00	
17,200.00	89.91	269.40	6,939.18	-2,961.31	-7,463.35	8,787.11	0.00	0.00	0.00	
17,300.00	89.91	269.40	6,939.34	-2,962.37	-7,563.34	8,887.10	0.00	0.00	0.00	
17,400.00	89.91	269.40	6,939.51	-2,963.42	-7,663.34	8,987.10	0.00	0.00	0.00	
17,500.00	89.91	269.40	6,939.68	-2,964.47	-7,763.33	9,087.09	0.00	0.00	0.00	
17,600.00	89.91	269.40	6,939.84	-2,965.52	-7,863.33	9,187.09	0.00	0.00	0.00	
17,700.00	89.91	269.40	6,940.01	-2,966.58	-7,963.32	9,287.08	0.00	0.00	0.00	
17,800.00	89.91	269.40	6,940.17	-2,967.63	-8,063.32	9,387.08	0.00	0.00	0.00	
17,900.00	89.91	269.40	6,940.34	-2,968.68	-8,163.31	9,487.08	0.00	0.00	0.00	
18,000.00	89.91	269.40	6,940.50	-2,969.74	-8,263.31	9,587.07	0.00	0.00	0.00	
18,100.00	89.91	269.40	6,940.67	-2,970.79	-8,363.30	9,687.07	0.00	0.00	0.00	
18,200.00	89.91	269.40	6,940.83	-2,971.84	-8,463.29	9,787.06	0.00	0.00	0.00	
18,300.00	89.91	269.40	6,941.00	-2,972.89	-8,563.29	9,887.06	0.00	0.00	0.00	
18,400.00	89.91	269.40	6,941.16	-2,973.95	-8,663.28	9,987.05	0.00	0.00	0.00	
18,500.00	89.91	269.40	6,941.33	-2,975.00	-8,763.28	10,087.05	0.00	0.00	0.00	
18,600.00	89.91	269.40	6,941.49	-2,976.05	-8,863.27	10,187.04	0.00	0.00	0.00	
18,700.00	89.91	269.40	6,941.66	-2,977.11	-8,963.27	10,287.04	0.00	0.00	0.00	
18,800.00	89.91	269.40	6,941.82	-2,978.16	-9,063.26	10,387.04	0.00	0.00	0.00	
18,900.00	89.91	269.40	6,941.99	-2,979.21	-9,163.25	10,487.03	0.00	0.00	0.00	
19,000.00	89.91	269.40	6,942.15	-2,980.26	-9,263.25	10,587.03	0.00	0.00	0.00	
19,100.00	89.91	269.40	6,942.32	-2,981.32	-9,363.24	10,687.02	0.00	0.00	0.00	
19,200.00	89.91	269.40	6,942.48	-2,982.37	-9,463.24	10,787.02	0.00	0.00	0.00	
19,300.00	89.91	269.40	6,942.65	-2,983.42	-9,563.23	10,887.01	0.00	0.00	0.00	
19,400.00	89.91	269.40	6,942.82	-2,984.48	-9,663.23	10,987.01	0.00	0.00	0.00	
19,500.00	89.91	269.40	6,942.98	-2,985.53	-9,763.22	11,087.00	0.00	0.00	0.00	
19,600.00	89.91	269.40	6,943.15	-2,986.58	-9,863.21	11,187.00	0.00	0.00	0.00	
19,700.00	89.91	269.40	6,943.31	-2,987.63	-9,963.21	11,287.00	0.00	0.00	0.00	
19,800.00	89.91	269.40	6,943.48	-2,988.69	-10,063.20	11,386.99	0.00	0.00	0.00	
19,900.00	89.91	269.40	6,943.64	-2,989.74	-10,163.20	11,486.99	0.00	0.00	0.00	
20,000.00	89.91	269.40	6,943.81	-2,990.79	-10,263.19	11,586.98	0.00	0.00	0.00	
20,100.00	89.91	269.40	6,943.97	-2,991.85	-10,363.19	11,686.98	0.00	0.00	0.00	
20,200.00	89.91	269.40	6,944.14	-2,992.90	-10,463.18	11,786.97	0.00	0.00	0.00	
20,300.00	89.91	269.40	6,944.30	-2,993.95	-10,563.17	11,886.97	0.00	0.00	0.00	
20,400.00	89.91	269.40	6,944.47	-2,995.00	-10,663.17	11,986.96	0.00	0.00	0.00	
20,500.00	89.91	269.40	6,944.63	-2,996.06	-10,763.16	12,086.96	0.00	0.00	0.00	
20,600.00	89.91	269.40	6,944.80	-2,997.11	-10,863.16	12,186.95	0.00	0.00	0.00	
20,700.00	89.91	269.40	6,944.96	-2,998.16	-10,963.15	12,286.95	0.00	0.00	0.00	
20,800.00	89.91	269.40	6,945.13	-2,999.22	-11,063.15	12,386.95	0.00	0.00	0.00	
20,900.00	89.91	269.40	6,945.29	-3,000.27	-11,163.14	12,486.94	0.00	0.00	0.00	
21,000.00	89.91	269.40	6,945.46	-3,001.32	-11,263.13	12,586.94	0.00	0.00	0.00	
21,100.00	89.91	269.40	6,945.63	-3,002.37	-11,363.13	12,686.93	0.00	0.00	0.00	
21,200.00	89.91	269.40	6,945.79	-3,003.43	-11,463.12	12,786.93	0.00	0.00	0.00	
21,300.00	89.91	269.40	6,945.96	-3,004.48	-11,563.12	12,886.92	0.00	0.00	0.00	
21,400.00	89.91	269.40	6,946.12	-3,005.53	-11,663.11	12,986.92	0.00	0.00	0.00	
21,500.00	89.91	269.40	6,946.29	-3,006.59	-11,763.11	13,086.91	0.00	0.00	0.00	
21,600.00	89.91	269.40	6,946.45	-3,007.64	-11,863.10	13,186.91	0.00	0.00	0.00	
21,700.00	89.91	269.40	6,946.62	-3,008.69	-11,963.10	13,286.91	0.00	0.00	0.00	
21,800.00	89.91	269.40	6,946.78	-3,009.74	-12,063.09	13,386.90	0.00	0.00	0.00	
21,900.00	89.91	269.40	6,946.95	-3,010.80	-12,163.08	13,486.90	0.00	0.00	0.00	
22,000.00	89.91	269.40	6,947.11	-3,011.85	-12,263.08	13,586.89	0.00	0.00	0.00	
22,100.00	89.91	269.40	6,947.28	-3,012.90	-12,363.07	13,686.89	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BLUE CHIP 22-11HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5053.00usft (RIG)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5053.00usft (RIG)
Site:	5N-67W-22 BLUE CHIP 6-22HZ PAD	North Reference:	True
Well:	BLUE CHIP 22-11HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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)
22,200.00	89.91	269.40	6,947.44	-3,013.96	-12,463.07	13,786.88	0.00	0.00	0.00
22,300.00	89.91	269.40	6,947.61	-3,015.01	-12,563.06	13,886.88	0.00	0.00	0.00
22,400.00	89.91	269.40	6,947.77	-3,016.06	-12,663.06	13,986.87	0.00	0.00	0.00
22,500.00	89.91	269.40	6,947.94	-3,017.11	-12,763.05	14,086.87	0.00	0.00	0.00
22,537.14	89.91	269.40	6,948.00	-3,017.51	-12,800.19	14,124.01	0.00	0.00	0.00
TD Well @ 22537.14ft									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,526.45	1,500.00	9 5/8"	9-5/8	13-1/2	
22,537.14	6,948.00	5.5" CSG	5-1/2	7-7/8	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
923.30	919.00	Fox Hills			
4,093.50	3,670.00	Parkman			
4,663.19	4,137.00	Sussex			
8,237.31	6,907.00	Sharon Springs			
11,841.05	6,930.00	Niobrara			

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
200.80	200.80	0.00	0.00	Begin Nudge @ 200.80ft	
2,530.13	2,388.42	-542.32	424.16	Hold Tangent @ 2530.13ft	
7,008.35	6,059.45	-2,562.55	2,004.24	KOP @ 7008.35ft :: DLS = 8°/100'	
8,402.43	6,924.00	-3,000.58	1,323.81	End Build @ 8402.43ft	
9,402.43	6,925.74	-2,965.69	324.42	Begin Turn for AC @ 9402.43ft	
9,602.43	6,926.09	-2,953.48	124.82	End Turn @ 9602.43ft	
11,077.43	6,928.67	-2,824.92	-1,344.56	Begin Turn for 3-D Spacing @ 11077.43ft	
11,477.43	6,929.37	-2,810.97	-1,744.14	End Turn @ 11477.43ft	
14,010.76	6,933.79	-2,855.18	-4,277.08	Begin Turn for 3-D Spacing @ 14010.76ft	
14,210.76	6,934.14	-2,863.90	-4,476.87	End Turn @ 14210.76ft	
15,210.76	6,935.88	-2,933.66	-5,474.43	Begin Turn to BHL @ 15210.76ft	
15,437.21	6,936.27	-2,942.75	-5,700.66	End Turn @ 15437.21ft	
22,537.14	6,948.00	-3,017.51	-12,800.19	TD Well @ 22537.14ft	