

US ROCKIES WATTENBERG PLANNING

**WELD-NAD83-UTMFT13N
5N-67W-22 BLUE CHIP 6-22HZ PAD
BLUE CHIP 22-10HZ**

Plan A

Plan: Permit Rev-1

Standard Planning Report

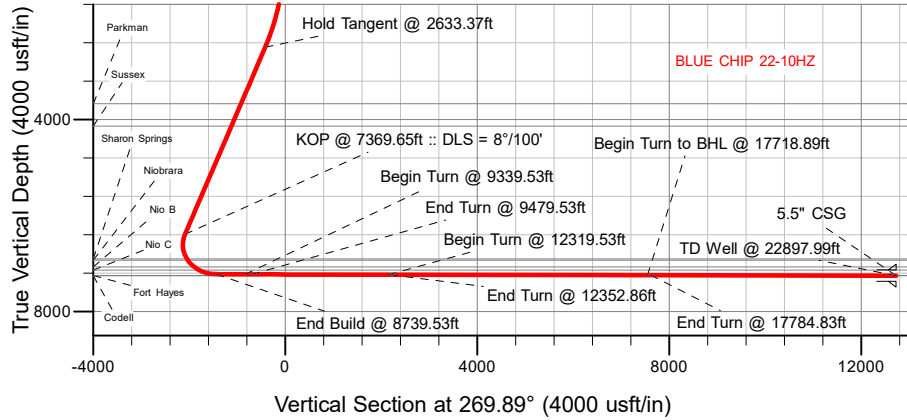
08 September, 2022

Project: WELD-NAD83-UTMFT13N
 Site: 5N-67W-22 BLUE CHIP 6-22HZ PAD
 Well: BLUE CHIP 22-10HZ
 Wellbore: Plan A
 Design: Permit Rev-1

US ROCKIES WATTENBERG PLANNING

CASING DETAILS

TVD	MD	Name	Size
1500.00	1519.73	9 5/8"	9-5/8
7255.00	22897.99	5.5" CSG	5-1/2



SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
215.00	0.00	0.00	215.00	0.00	0.00	0.00	0.00	0.00	
348.33	2.00	157.00	348.31	-2.14	0.91	1.50	157.00	-0.91	
448.33	2.00	157.00	448.24	-5.35	2.27	0.00	0.00	-2.26	
2633.37	34.70	141.60	2494.41	-542.60	414.80	1.50	-16.22	-413.76	
7369.65	34.70	141.60	6388.31	-2655.65	2089.59	0.00	0.00	-2084.48	
8739.53	89.88	267.90	7225.00	-3145.72	1434.12	8.00	121.19	-1428.07	
9339.53	89.88	267.90	7226.25	-3167.71	834.52	0.00	0.00	-828.44	
9479.53	89.88	270.00	7226.55	-3170.27	694.55	1.50	90.00	-688.46	
12319.53	89.88	270.00	7232.50	-3170.27	-2145.44	0.00	0.00	-2151.52	
12352.86	89.88	269.50	7232.57	-3170.42	-2178.77	1.50	-90.00	-2184.86	
17718.89	89.88	269.50	7243.80	-3217.24	-7544.58	0.00	0.00	-7550.75	
17784.83	89.88	270.49	7243.94	-3217.25	-7610.53	1.50	90.23	-7616.69	
22897.99	89.88	270.49	7255.00	-3173.60	-12723.48	0.00	0.00	-12729.55	BLUE CHIP 22-10HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	Northing	Easting	Latitude	Longitude
BLUE CHIP 22-10HZ_SHL	0.00	14668044.82	1673746.17	40.387993	-104.880308
BLUE CHIP 22-10HZ_LP	7225.00	14664901.04	1675184.55	40.379355	-104.875158
BLUE CHIP 22-10HZ_BHL	7255.00	14664854.00	1661027.00	40.379270	-104.925994

WELL DETAILS: BLUE CHIP 22-10HZ

GL = 5036'
 RKB = 17' @ 5053.00usft (RIG)

Plan: Permit Rev-1 (BLUE CHIP 22-10HZ/Plan A)

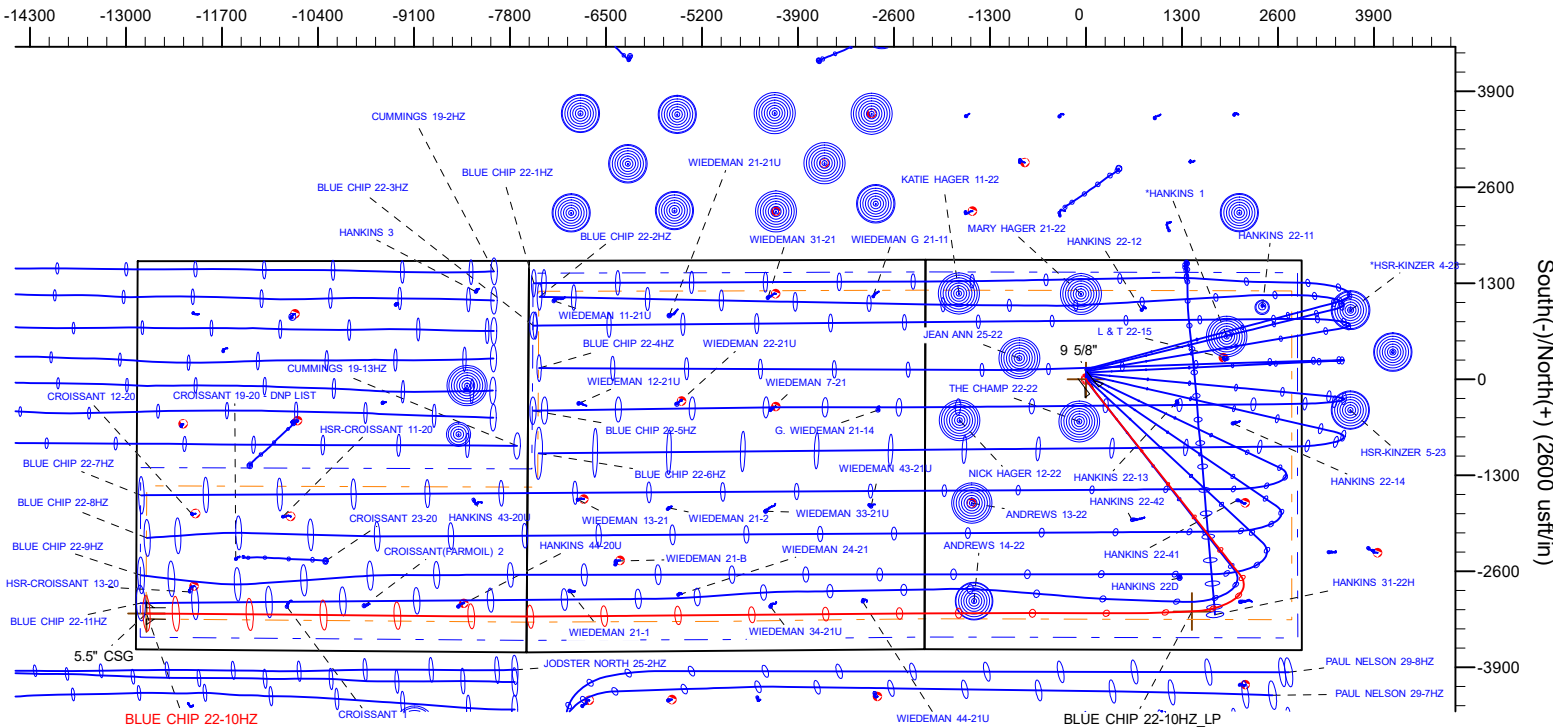
Date: 9/8/2022

SHL
1613' FNL
2179' FWL

LP
517' FSL
1486' FEL

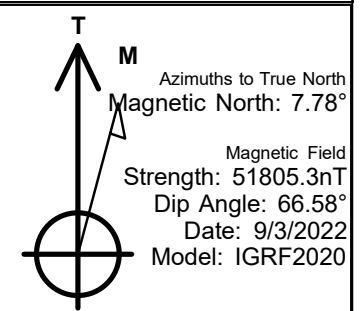
BHL
485' FSL
140' FWL

West(-)/East(+) (2600 usft/in)



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
919.00	921.57	Fox Hills
3670.00	4063.28	Parkman
4137.00	4631.31	Sussex
6907.00	7984.35	Sharon Springs
6930.00	8014.97	Niobrara
7071.00	8227.77	Nio B
7138.00	8359.00	Nio C
7249.00	20123.09	Fort Hayes
7255.00	22897.99	Codell



Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BLUE CHIP 22-10HZ
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 22-10HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
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 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 22-10HZ			
Well Position	+N/-S	0.00 usft	Northing: 14,668,044.82 usft
	+E/-W	0.00 usft	Easting: 1,673,746.17 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	51,805.29845009

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	269.89

Plan Survey Tool Program		Date	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	1,500.00	22,897.99 Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWD+I	Fixed:v2:Rockies, crustal dec +	

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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 22-10HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
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	
215.00	0.00	0.00	215.00	0.00	0.00	0.00	0.00	0.00	0.00	
348.33	2.00	157.00	348.31	-2.14	0.91	1.50	1.50	0.00	157.00	
448.33	2.00	157.00	448.24	-5.35	2.27	0.00	0.00	0.00	0.00	
2,633.37	34.70	141.60	2,494.41	-542.60	414.80	1.50	1.50	-0.70	-16.22	
7,369.65	34.70	141.60	6,388.31	-2,655.65	2,089.59	0.00	0.00	0.00	0.00	
8,739.53	89.88	267.90	7,225.00	-3,145.72	1,434.12	8.00	4.03	9.22	121.19	
9,339.53	89.88	267.90	7,226.25	-3,167.71	834.52	0.00	0.00	0.00	0.00	
9,479.53	89.88	270.00	7,226.55	-3,170.27	694.55	1.50	0.00	1.50	90.00	
12,319.53	89.88	270.00	7,232.50	-3,170.27	-2,145.44	0.00	0.00	0.00	0.00	
12,352.86	89.88	269.50	7,232.57	-3,170.42	-2,178.77	1.50	0.00	-1.50	-90.00	
17,718.89	89.88	269.50	7,243.80	-3,217.25	-7,544.58	0.00	0.00	0.00	0.00	
17,784.84	89.88	270.49	7,243.94	-3,217.25	-7,610.53	1.50	-0.01	1.50	90.23	
22,897.99	89.88	270.49	7,255.00	-3,173.60	-12,723.48	0.00	0.00	0.00	0.00	BLUE CHIP 22-10HZ

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BLUE CHIP 22-10HZ
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 22-10HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
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	0.00
100.00	0.00	0.00	100.00	0.00	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	0.00
215.00	0.00	0.00	215.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 215.00ft										
300.00	1.28	157.00	299.99	-0.87	0.37	-0.37	1.50	1.50	0.00	0.00
348.33	2.00	157.00	348.31	-2.14	0.91	-0.91	1.50	1.50	0.00	0.00
End Nudge @ 348.33ft										
400.00	2.00	157.00	399.94	-3.80	1.61	-1.61	0.00	0.00	0.00	0.00
448.33	2.00	157.00	448.24	-5.35	2.27	-2.26	0.00	0.00	0.00	0.00
Change Tangent Direction @ 448.33ft										
500.00	2.75	152.49	499.87	-7.28	3.20	-3.18	1.50	1.46	-8.73	
600.00	4.23	148.36	599.68	-12.56	6.24	-6.22	1.50	1.48	-4.13	
700.00	5.72	146.37	699.30	-19.85	10.94	-10.90	1.50	1.49	-1.99	
800.00	7.22	145.21	798.66	-29.16	17.29	-17.23	1.50	1.49	-1.17	
900.00	8.71	144.44	897.69	-40.48	25.28	-25.20	1.50	1.50	-0.77	
921.57	9.04	144.31	919.00	-43.19	27.21	-27.13	1.50	1.50	-0.61	
Fox Hills										
1,000.00	10.21	143.90	996.33	-53.81	34.90	-34.80	1.50	1.50	-0.53	
1,100.00	11.71	143.49	1,094.50	-69.12	46.16	-46.03	1.50	1.50	-0.41	
1,200.00	13.21	143.17	1,192.14	-86.42	59.05	-58.88	1.50	1.50	-0.32	
1,300.00	14.71	142.92	1,289.19	-105.70	73.55	-73.35	1.50	1.50	-0.25	
1,400.00	16.20	142.72	1,385.57	-126.92	89.66	-89.41	1.50	1.50	-0.21	
1,500.00	17.70	142.54	1,481.22	-150.10	107.36	-107.07	1.50	1.50	-0.17	
1,519.73	18.00	142.51	1,500.00	-154.90	111.04	-110.74	1.50	1.50	-0.16	
9 5/8"										
1,600.00	19.20	142.40	1,576.08	-175.20	126.64	-126.30	1.50	1.50	-0.14	
1,700.00	20.70	142.27	1,670.07	-202.21	147.49	-147.11	1.50	1.50	-0.13	
1,800.00	22.20	142.16	1,763.14	-231.11	169.90	-169.46	1.50	1.50	-0.11	
1,900.00	23.70	142.07	1,855.22	-261.89	193.85	-193.35	1.50	1.50	-0.10	
2,000.00	25.20	141.98	1,946.25	-294.52	219.32	-218.75	1.50	1.50	-0.09	
2,100.00	26.70	141.90	2,036.16	-328.97	246.30	-245.66	1.50	1.50	-0.08	
2,200.00	28.20	141.83	2,124.90	-365.23	274.76	-274.06	1.50	1.50	-0.07	
2,300.00	29.70	141.77	2,212.40	-403.27	304.69	-303.92	1.50	1.50	-0.06	
2,400.00	31.20	141.72	2,298.61	-443.06	336.07	-335.22	1.50	1.50	-0.06	
2,500.00	32.70	141.66	2,383.46	-484.59	368.87	-367.94	1.50	1.50	-0.05	
2,600.00	34.20	141.62	2,466.89	-527.81	403.08	-402.07	1.50	1.50	-0.05	
2,633.37	34.70	141.60	2,494.41	-542.60	414.80	-413.76	1.50	1.50	-0.05	
Hold Tangent @ 2633.37ft										
2,700.00	34.70	141.60	2,549.19	-572.33	438.37	-437.27	0.00	0.00	0.00	
2,800.00	34.70	141.60	2,631.40	-616.94	473.73	-472.54	0.00	0.00	0.00	
2,900.00	34.70	141.60	2,713.62	-661.55	509.09	-507.82	0.00	0.00	0.00	
3,000.00	34.70	141.60	2,795.83	-706.17	544.45	-543.09	0.00	0.00	0.00	
3,100.00	34.70	141.60	2,878.05	-750.78	579.81	-578.37	0.00	0.00	0.00	
3,200.00	34.70	141.60	2,960.26	-795.40	615.17	-613.64	0.00	0.00	0.00	
3,300.00	34.70	141.60	3,042.48	-840.01	650.53	-648.92	0.00	0.00	0.00	
3,400.00	34.70	141.60	3,124.69	-884.63	685.89	-684.19	0.00	0.00	0.00	
3,500.00	34.70	141.60	3,206.90	-929.24	721.25	-719.47	0.00	0.00	0.00	
3,600.00	34.70	141.60	3,289.12	-973.85	756.61	-754.74	0.00	0.00	0.00	
3,700.00	34.70	141.60	3,371.33	-1,018.47	791.97	-790.02	0.00	0.00	0.00	
3,800.00	34.70	141.60	3,453.55	-1,063.08	827.33	-825.29	0.00	0.00	0.00	
3,900.00	34.70	141.60	3,535.76	-1,107.70	862.69	-860.57	0.00	0.00	0.00	
4,000.00	34.70	141.60	3,617.98	-1,152.31	898.05	-895.84	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BLUE CHIP 22-10HZ
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 22-10HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
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)	
4,063.28	34.70	141.60	3,670.00	-1,180.54	920.43	-918.16	0.00	0.00	0.00	
Parkman										
4,100.00	34.70	141.60	3,700.19	-1,196.92	933.41	-931.12	0.00	0.00	0.00	
4,200.00	34.70	141.60	3,782.40	-1,241.54	968.78	-966.39	0.00	0.00	0.00	
4,300.00	34.70	141.60	3,864.62	-1,286.15	1,004.14	-1,001.67	0.00	0.00	0.00	
4,400.00	34.70	141.60	3,946.83	-1,330.77	1,039.50	-1,036.94	0.00	0.00	0.00	
4,500.00	34.70	141.60	4,029.05	-1,375.38	1,074.86	-1,072.22	0.00	0.00	0.00	
4,600.00	34.70	141.60	4,111.26	-1,419.99	1,110.22	-1,107.49	0.00	0.00	0.00	
4,631.31	34.70	141.60	4,137.00	-1,433.96	1,121.29	-1,118.53	0.00	0.00	0.00	
Sussex										
4,700.00	34.70	141.60	4,193.48	-1,464.61	1,145.58	-1,142.76	0.00	0.00	0.00	
4,800.00	34.70	141.60	4,275.69	-1,509.22	1,180.94	-1,178.04	0.00	0.00	0.00	
4,900.00	34.70	141.60	4,357.91	-1,553.84	1,216.30	-1,213.31	0.00	0.00	0.00	
5,000.00	34.70	141.60	4,440.12	-1,598.45	1,251.66	-1,248.59	0.00	0.00	0.00	
5,100.00	34.70	141.60	4,522.33	-1,643.06	1,287.02	-1,283.86	0.00	0.00	0.00	
5,200.00	34.70	141.60	4,604.55	-1,687.68	1,322.38	-1,319.14	0.00	0.00	0.00	
5,300.00	34.70	141.60	4,686.76	-1,732.29	1,357.74	-1,354.41	0.00	0.00	0.00	
5,400.00	34.70	141.60	4,768.98	-1,776.91	1,393.10	-1,389.69	0.00	0.00	0.00	
5,500.00	34.70	141.60	4,851.19	-1,821.52	1,428.46	-1,424.96	0.00	0.00	0.00	
5,600.00	34.70	141.60	4,933.41	-1,866.13	1,463.82	-1,460.24	0.00	0.00	0.00	
5,700.00	34.70	141.60	5,015.62	-1,910.75	1,499.19	-1,495.51	0.00	0.00	0.00	
5,800.00	34.70	141.60	5,097.84	-1,955.36	1,534.55	-1,530.79	0.00	0.00	0.00	
5,900.00	34.70	141.60	5,180.05	-1,999.98	1,569.91	-1,566.06	0.00	0.00	0.00	
6,000.00	34.70	141.60	5,262.26	-2,044.59	1,605.27	-1,601.34	0.00	0.00	0.00	
6,100.00	34.70	141.60	5,344.48	-2,089.20	1,640.63	-1,636.61	0.00	0.00	0.00	
6,200.00	34.70	141.60	5,426.69	-2,133.82	1,675.99	-1,671.89	0.00	0.00	0.00	
6,300.00	34.70	141.60	5,508.91	-2,178.43	1,711.35	-1,707.16	0.00	0.00	0.00	
6,400.00	34.70	141.60	5,591.12	-2,223.05	1,746.71	-1,742.44	0.00	0.00	0.00	
6,500.00	34.70	141.60	5,673.34	-2,267.66	1,782.07	-1,777.71	0.00	0.00	0.00	
6,600.00	34.70	141.60	5,755.55	-2,312.28	1,817.43	-1,812.99	0.00	0.00	0.00	
6,700.00	34.70	141.60	5,837.77	-2,356.89	1,852.79	-1,848.26	0.00	0.00	0.00	
6,800.00	34.70	141.60	5,919.98	-2,401.50	1,888.15	-1,883.54	0.00	0.00	0.00	
6,900.00	34.70	141.60	6,002.19	-2,446.12	1,923.51	-1,918.81	0.00	0.00	0.00	
7,000.00	34.70	141.60	6,084.41	-2,490.73	1,958.87	-1,954.09	0.00	0.00	0.00	
7,100.00	34.70	141.60	6,166.62	-2,535.35	1,994.24	-1,989.36	0.00	0.00	0.00	
7,200.00	34.70	141.60	6,248.84	-2,579.96	2,029.60	-2,024.64	0.00	0.00	0.00	
7,300.00	34.70	141.60	6,331.05	-2,624.57	2,064.96	-2,059.91	0.00	0.00	0.00	
7,369.65	34.70	141.60	6,388.31	-2,655.65	2,089.59	-2,084.48	0.00	0.00	0.00	
KOP @ 7369.65ft :: DLS = 8°/100'										
7,400.00	33.50	145.36	6,413.45	-2,669.31	2,099.71	-2,094.58	8.00	-3.96	12.40	
7,450.00	31.79	152.07	6,455.56	-2,692.31	2,113.73	-2,108.56	8.00	-3.42	13.42	
7,500.00	30.47	159.38	6,498.38	-2,715.82	2,124.36	-2,119.15	8.00	-2.65	14.61	
7,550.00	29.58	167.18	6,541.68	-2,739.73	2,131.57	-2,126.31	8.00	-1.77	15.60	
7,600.00	29.17	175.30	6,585.27	-2,763.91	2,135.31	-2,130.00	8.00	-0.82	16.23	
7,650.00	29.26	183.50	6,628.93	-2,788.26	2,135.56	-2,130.20	8.00	0.17	16.40	
7,700.00	29.84	191.53	6,672.45	-2,812.65	2,132.33	-2,126.92	8.00	1.16	16.06	
7,750.00	30.88	199.17	6,715.61	-2,836.97	2,125.63	-2,120.17	8.00	2.09	15.29	
7,800.00	32.35	206.28	6,758.20	-2,861.10	2,115.48	-2,109.99	8.00	2.93	14.21	
7,850.00	34.18	212.77	6,800.02	-2,884.91	2,101.96	-2,096.41	8.00	3.66	12.98	
7,900.00	36.32	218.63	6,840.86	-2,908.29	2,085.10	-2,079.52	8.00	4.28	11.72	
7,950.00	38.71	223.89	6,880.53	-2,931.14	2,065.01	-2,059.38	8.00	4.79	10.52	
7,984.35	40.49	227.19	6,907.00	-2,946.46	2,049.38	-2,043.72	8.00	5.16	9.60	
Sharon Springs										

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BLUE CHIP 22-10HZ
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 22-10HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
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)	
8,000.00	41.32	228.61	6,918.83	-2,953.33	2,041.78	-2,036.11	8.00	5.35	9.09	
8,014.97	42.14	229.93	6,930.00	-2,959.83	2,034.23	-2,028.54	8.00	5.45	8.79	
Niobrara										
8,050.00	44.10	232.85	6,955.57	-2,974.76	2,015.52	-2,009.80	8.00	5.61	8.34	
8,100.00	47.03	236.67	6,990.58	-2,995.33	1,986.35	-1,980.60	8.00	5.85	7.65	
8,150.00	50.07	240.14	7,023.68	-3,014.93	1,954.43	-1,948.64	8.00	6.08	6.94	
8,200.00	53.20	243.32	7,054.71	-3,033.47	1,919.90	-1,914.08	8.00	6.27	6.34	
8,227.77	54.98	244.97	7,071.00	-3,043.28	1,899.66	-1,893.82	8.00	6.39	5.94	
Nio B										
8,250.00	56.41	246.23	7,083.53	-3,050.86	1,882.94	-1,877.08	8.00	6.46	5.71	
8,300.00	59.69	248.94	7,109.99	-3,067.01	1,843.72	-1,837.83	8.00	6.55	5.41	
8,350.00	63.02	251.47	7,133.96	-3,081.85	1,802.44	-1,796.52	8.00	6.65	5.06	
8,359.00	63.62	251.91	7,138.00	-3,084.38	1,794.81	-1,788.88	8.00	6.71	4.88	
Nio C										
8,400.00	66.38	253.86	7,155.33	-3,095.31	1,759.30	-1,753.35	8.00	6.75	4.74	
8,450.00	69.79	256.12	7,173.98	-3,107.31	1,714.50	-1,708.53	8.00	6.81	4.53	
8,500.00	73.22	258.29	7,189.84	-3,117.80	1,668.27	-1,662.28	8.00	6.86	4.33	
8,550.00	76.68	260.38	7,202.83	-3,126.72	1,620.83	-1,614.82	8.00	6.91	4.18	
8,600.00	80.15	262.41	7,212.87	-3,134.05	1,572.41	-1,566.39	8.00	6.94	4.06	
8,650.00	83.63	264.40	7,219.93	-3,139.73	1,523.25	-1,517.22	8.00	6.96	3.98	
8,700.00	87.12	266.36	7,223.96	-3,143.74	1,473.58	-1,467.54	8.00	6.98	3.92	
8,739.53	89.88	267.90	7,225.00	-3,145.72	1,434.12	-1,428.07	8.00	6.99	3.90	
End Build @ 8739.53ft										
8,800.00	89.88	267.90	7,225.12	-3,147.94	1,373.69	-1,367.64	0.00	0.00	0.00	
8,900.00	89.88	267.90	7,225.33	-3,151.60	1,273.76	-1,267.70	0.00	0.00	0.00	
9,000.00	89.88	267.90	7,225.54	-3,155.27	1,173.82	-1,167.77	0.00	0.00	0.00	
9,100.00	89.88	267.90	7,225.75	-3,158.93	1,073.89	-1,067.83	0.00	0.00	0.00	
9,200.00	89.88	267.90	7,225.96	-3,162.59	973.96	-967.89	0.00	0.00	0.00	
9,300.00	89.88	267.90	7,226.17	-3,166.26	874.03	-867.95	0.00	0.00	0.00	
9,339.53	89.88	267.90	7,226.25	-3,167.71	834.52	-828.44	0.00	0.00	0.00	
Begin Turn @ 9339.53ft										
9,400.00	89.88	268.81	7,226.38	-3,169.44	774.08	-767.99	1.50	0.00	1.50	
9,479.53	89.88	270.00	7,226.55	-3,170.27	694.55	-688.46	1.50	0.00	1.50	
End Turn @ 9479.53ft										
9,500.00	89.88	270.00	7,226.59	-3,170.27	674.09	-668.00	0.00	0.00	0.00	
9,600.00	89.88	270.00	7,226.80	-3,170.27	574.09	-568.00	0.00	0.00	0.00	
9,700.00	89.88	270.00	7,227.01	-3,170.27	474.09	-468.00	0.00	0.00	0.00	
9,800.00	89.88	270.00	7,227.22	-3,170.27	374.09	-368.00	0.00	0.00	0.00	
9,900.00	89.88	270.00	7,227.43	-3,170.27	274.09	-268.00	0.00	0.00	0.00	
10,000.00	89.88	270.00	7,227.64	-3,170.27	174.09	-168.00	0.00	0.00	0.00	
10,100.00	89.88	270.00	7,227.85	-3,170.27	74.09	-68.00	0.00	0.00	0.00	
10,200.00	89.88	270.00	7,228.06	-3,170.27	-25.91	32.00	0.00	0.00	0.00	
10,300.00	89.88	270.00	7,228.27	-3,170.27	-125.91	132.00	0.00	0.00	0.00	
10,400.00	89.88	270.00	7,228.48	-3,170.27	-225.91	232.00	0.00	0.00	0.00	
10,500.00	89.88	270.00	7,228.68	-3,170.27	-325.91	332.00	0.00	0.00	0.00	
10,600.00	89.88	270.00	7,228.89	-3,170.27	-425.91	432.00	0.00	0.00	0.00	
10,700.00	89.88	270.00	7,229.10	-3,170.27	-525.91	532.00	0.00	0.00	0.00	
10,800.00	89.88	270.00	7,229.31	-3,170.27	-625.91	632.00	0.00	0.00	0.00	
10,900.00	89.88	270.00	7,229.52	-3,170.27	-725.91	732.00	0.00	0.00	0.00	
11,000.00	89.88	270.00	7,229.73	-3,170.27	-825.91	832.00	0.00	0.00	0.00	
11,100.00	89.88	270.00	7,229.94	-3,170.27	-925.91	932.00	0.00	0.00	0.00	
11,200.00	89.88	270.00	7,230.15	-3,170.27	-1,025.91	1,032.00	0.00	0.00	0.00	
11,300.00	89.88	270.00	7,230.36	-3,170.27	-1,125.91	1,132.00	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BLUE CHIP 22-10HZ
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 22-10HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
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)	
11,400.00	89.88	270.00	7,230.57	-3,170.27	-1,225.91	1,231.99	0.00	0.00	0.00	
11,500.00	89.88	270.00	7,230.78	-3,170.27	-1,325.91	1,331.99	0.00	0.00	0.00	
11,600.00	89.88	270.00	7,230.99	-3,170.27	-1,425.91	1,431.99	0.00	0.00	0.00	
11,700.00	89.88	270.00	7,231.20	-3,170.27	-1,525.91	1,531.99	0.00	0.00	0.00	
11,800.00	89.88	270.00	7,231.41	-3,170.27	-1,625.91	1,631.99	0.00	0.00	0.00	
11,900.00	89.88	270.00	7,231.62	-3,170.27	-1,725.91	1,731.99	0.00	0.00	0.00	
12,000.00	89.88	270.00	7,231.83	-3,170.27	-1,825.91	1,831.99	0.00	0.00	0.00	
12,100.00	89.88	270.00	7,232.04	-3,170.27	-1,925.91	1,931.99	0.00	0.00	0.00	
12,200.00	89.88	270.00	7,232.25	-3,170.27	-2,025.91	2,031.99	0.00	0.00	0.00	
12,300.00	89.88	270.00	7,232.45	-3,170.27	-2,125.91	2,131.99	0.00	0.00	0.00	
12,319.53	89.88	270.00	7,232.50	-3,170.27	-2,145.44	2,151.52	0.00	0.00	0.00	
Begin Turn @ 12319.53ft										
12,352.86	89.88	269.50	7,232.57	-3,170.42	-2,178.77	2,184.86	1.50	0.00	-1.50	
End Turn @ 12352.86ft										
12,400.00	89.88	269.50	7,232.66	-3,170.83	-2,225.91	2,231.99	0.00	0.00	0.00	
12,500.00	89.88	269.50	7,232.87	-3,171.70	-2,325.90	2,331.99	0.00	0.00	0.00	
12,600.00	89.88	269.50	7,233.08	-3,172.57	-2,425.90	2,431.98	0.00	0.00	0.00	
12,700.00	89.88	269.50	7,233.29	-3,173.45	-2,525.89	2,531.98	0.00	0.00	0.00	
12,800.00	89.88	269.50	7,233.50	-3,174.32	-2,625.89	2,631.98	0.00	0.00	0.00	
12,900.00	89.88	269.50	7,233.71	-3,175.19	-2,725.89	2,731.98	0.00	0.00	0.00	
13,000.00	89.88	269.50	7,233.92	-3,176.07	-2,825.88	2,831.97	0.00	0.00	0.00	
13,100.00	89.88	269.50	7,234.13	-3,176.94	-2,925.88	2,931.97	0.00	0.00	0.00	
13,200.00	89.88	269.50	7,234.34	-3,177.81	-3,025.87	3,031.97	0.00	0.00	0.00	
13,300.00	89.88	269.50	7,234.55	-3,178.68	-3,125.87	3,131.97	0.00	0.00	0.00	
13,400.00	89.88	269.50	7,234.76	-3,179.56	-3,225.87	3,231.96	0.00	0.00	0.00	
13,500.00	89.88	269.50	7,234.97	-3,180.43	-3,325.86	3,331.96	0.00	0.00	0.00	
13,600.00	89.88	269.50	7,235.18	-3,181.30	-3,425.86	3,431.96	0.00	0.00	0.00	
13,700.00	89.88	269.50	7,235.39	-3,182.17	-3,525.85	3,531.96	0.00	0.00	0.00	
13,800.00	89.88	269.50	7,235.60	-3,183.05	-3,625.85	3,631.95	0.00	0.00	0.00	
13,900.00	89.88	269.50	7,235.81	-3,183.92	-3,725.85	3,731.95	0.00	0.00	0.00	
14,000.00	89.88	269.50	7,236.02	-3,184.79	-3,825.84	3,831.95	0.00	0.00	0.00	
14,100.00	89.88	269.50	7,236.22	-3,185.66	-3,925.84	3,931.95	0.00	0.00	0.00	
14,200.00	89.88	269.50	7,236.43	-3,186.54	-4,025.83	4,031.94	0.00	0.00	0.00	
14,300.00	89.88	269.50	7,236.64	-3,187.41	-4,125.83	4,131.94	0.00	0.00	0.00	
14,400.00	89.88	269.50	7,236.85	-3,188.28	-4,225.83	4,231.94	0.00	0.00	0.00	
14,500.00	89.88	269.50	7,237.06	-3,189.16	-4,325.82	4,331.94	0.00	0.00	0.00	
14,600.00	89.88	269.50	7,237.27	-3,190.03	-4,425.82	4,431.93	0.00	0.00	0.00	
14,700.00	89.88	269.50	7,237.48	-3,190.90	-4,525.81	4,531.93	0.00	0.00	0.00	
14,800.00	89.88	269.50	7,237.69	-3,191.77	-4,625.81	4,631.93	0.00	0.00	0.00	
14,900.00	89.88	269.50	7,237.90	-3,192.65	-4,725.81	4,731.93	0.00	0.00	0.00	
15,000.00	89.88	269.50	7,238.11	-3,193.52	-4,825.80	4,831.92	0.00	0.00	0.00	
15,100.00	89.88	269.50	7,238.32	-3,194.39	-4,925.80	4,931.92	0.00	0.00	0.00	
15,200.00	89.88	269.50	7,238.53	-3,195.26	-5,025.79	5,031.92	0.00	0.00	0.00	
15,300.00	89.88	269.50	7,238.74	-3,196.14	-5,125.79	5,131.92	0.00	0.00	0.00	
15,400.00	89.88	269.50	7,238.95	-3,197.01	-5,225.79	5,231.91	0.00	0.00	0.00	
15,500.00	89.88	269.50	7,239.16	-3,197.88	-5,325.78	5,331.91	0.00	0.00	0.00	
15,600.00	89.88	269.50	7,239.37	-3,198.75	-5,425.78	5,431.91	0.00	0.00	0.00	
15,700.00	89.88	269.50	7,239.58	-3,199.63	-5,525.77	5,531.91	0.00	0.00	0.00	
15,800.00	89.88	269.50	7,239.79	-3,200.50	-5,625.77	5,631.90	0.00	0.00	0.00	
15,900.00	89.88	269.50	7,239.99	-3,201.37	-5,725.77	5,731.90	0.00	0.00	0.00	
16,000.00	89.88	269.50	7,240.20	-3,202.25	-5,825.76	5,831.90	0.00	0.00	0.00	
16,100.00	89.88	269.50	7,240.41	-3,203.12	-5,925.76	5,931.90	0.00	0.00	0.00	
16,200.00	89.88	269.50	7,240.62	-3,203.99	-6,025.75	6,031.89	0.00	0.00	0.00	
16,300.00	89.88	269.50	7,240.83	-3,204.86	-6,125.75	6,131.89	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BLUE CHIP 22-10HZ
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 22-10HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
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)
16,400.00	89.88	269.50	7,241.04	-3,205.74	-6,225.75	6,231.89	0.00	0.00	0.00
16,500.00	89.88	269.50	7,241.25	-3,206.61	-6,325.74	6,331.89	0.00	0.00	0.00
16,600.00	89.88	269.50	7,241.46	-3,207.48	-6,425.74	6,431.88	0.00	0.00	0.00
16,700.00	89.88	269.50	7,241.67	-3,208.35	-6,525.73	6,531.88	0.00	0.00	0.00
16,800.00	89.88	269.50	7,241.88	-3,209.23	-6,625.73	6,631.88	0.00	0.00	0.00
16,900.00	89.88	269.50	7,242.09	-3,210.10	-6,725.73	6,731.88	0.00	0.00	0.00
17,000.00	89.88	269.50	7,242.30	-3,210.97	-6,825.72	6,831.87	0.00	0.00	0.00
17,100.00	89.88	269.50	7,242.51	-3,211.84	-6,925.72	6,931.87	0.00	0.00	0.00
17,200.00	89.88	269.50	7,242.72	-3,212.72	-7,025.71	7,031.87	0.00	0.00	0.00
17,300.00	89.88	269.50	7,242.93	-3,213.59	-7,125.71	7,131.87	0.00	0.00	0.00
17,400.00	89.88	269.50	7,243.14	-3,214.46	-7,225.70	7,231.86	0.00	0.00	0.00
17,500.00	89.88	269.50	7,243.35	-3,215.33	-7,325.70	7,331.86	0.00	0.00	0.00
17,600.00	89.88	269.50	7,243.55	-3,216.21	-7,425.70	7,431.86	0.00	0.00	0.00
17,700.00	89.88	269.50	7,243.76	-3,217.08	-7,525.69	7,531.86	0.00	0.00	0.00
17,718.89	89.88	269.50	7,243.80	-3,217.25	-7,544.58	7,550.75	0.00	0.00	0.00
Begin Turn to BHL @ 17718.89ft									
17,784.84	89.88	270.49	7,243.94	-3,217.25	-7,610.53	7,616.69	1.50	-0.01	1.50
End Turn @ 17784.83ft									
17,800.00	89.88	270.49	7,243.98	-3,217.12	-7,625.69	7,631.85	0.00	0.00	0.00
17,900.00	89.88	270.49	7,244.19	-3,216.27	-7,725.69	7,731.85	0.00	0.00	0.00
18,000.00	89.88	270.49	7,244.41	-3,215.41	-7,825.68	7,831.84	0.00	0.00	0.00
18,100.00	89.88	270.49	7,244.63	-3,214.56	-7,925.68	7,931.84	0.00	0.00	0.00
18,200.00	89.88	270.49	7,244.84	-3,213.71	-8,025.68	8,031.83	0.00	0.00	0.00
18,300.00	89.88	270.49	7,245.06	-3,212.85	-8,125.67	8,131.82	0.00	0.00	0.00
18,400.00	89.88	270.49	7,245.27	-3,212.00	-8,225.67	8,231.82	0.00	0.00	0.00
18,500.00	89.88	270.49	7,245.49	-3,211.15	-8,325.66	8,331.81	0.00	0.00	0.00
18,600.00	89.88	270.49	7,245.71	-3,210.29	-8,425.66	8,431.81	0.00	0.00	0.00
18,700.00	89.88	270.49	7,245.92	-3,209.44	-8,525.66	8,531.80	0.00	0.00	0.00
18,800.00	89.88	270.49	7,246.14	-3,208.58	-8,625.65	8,631.80	0.00	0.00	0.00
18,900.00	89.88	270.49	7,246.36	-3,207.73	-8,725.65	8,731.79	0.00	0.00	0.00
19,000.00	89.88	270.49	7,246.57	-3,206.88	-8,825.64	8,831.78	0.00	0.00	0.00
19,100.00	89.88	270.49	7,246.79	-3,206.02	-8,925.64	8,931.78	0.00	0.00	0.00
19,200.00	89.88	270.49	7,247.00	-3,205.17	-9,025.64	9,031.77	0.00	0.00	0.00
19,300.00	89.88	270.49	7,247.22	-3,204.32	-9,125.63	9,131.77	0.00	0.00	0.00
19,400.00	89.88	270.49	7,247.44	-3,203.46	-9,225.63	9,231.76	0.00	0.00	0.00
19,500.00	89.88	270.49	7,247.65	-3,202.61	-9,325.62	9,331.76	0.00	0.00	0.00
19,600.00	89.88	270.49	7,247.87	-3,201.75	-9,425.62	9,431.75	0.00	0.00	0.00
19,700.00	89.88	270.49	7,248.09	-3,200.90	-9,525.62	9,531.74	0.00	0.00	0.00
19,800.00	89.88	270.49	7,248.30	-3,200.05	-9,625.61	9,631.74	0.00	0.00	0.00
19,900.00	89.88	270.49	7,248.52	-3,199.19	-9,725.61	9,731.73	0.00	0.00	0.00
20,000.00	89.88	270.49	7,248.73	-3,198.34	-9,825.61	9,831.73	0.00	0.00	0.00
20,100.00	89.88	270.49	7,248.95	-3,197.49	-9,925.60	9,931.72	0.00	0.00	0.00
20,123.09	89.88	270.49	7,249.00	-3,197.29	-9,948.69	9,954.81	0.00	0.00	0.00
Fort Hayes									
20,200.00	89.88	270.49	7,249.17	-3,196.63	-10,025.60	10,031.72	0.00	0.00	0.00
20,300.00	89.88	270.49	7,249.38	-3,195.78	-10,125.59	10,131.71	0.00	0.00	0.00
20,400.00	89.88	270.49	7,249.60	-3,194.93	-10,225.59	10,231.70	0.00	0.00	0.00
20,500.00	89.88	270.49	7,249.82	-3,194.07	-10,325.59	10,331.70	0.00	0.00	0.00
20,600.00	89.88	270.49	7,250.03	-3,193.22	-10,425.58	10,431.69	0.00	0.00	0.00
20,700.00	89.88	270.49	7,250.25	-3,192.36	-10,525.58	10,531.69	0.00	0.00	0.00
20,800.00	89.88	270.49	7,250.46	-3,191.51	-10,625.57	10,631.68	0.00	0.00	0.00
20,900.00	89.88	270.49	7,250.68	-3,190.66	-10,725.57	10,731.68	0.00	0.00	0.00
21,000.00	89.88	270.49	7,250.90	-3,189.80	-10,825.57	10,831.67	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BLUE CHIP 22-10HZ
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 22-10HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
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)	
21,100.00	89.88	270.49	7,251.11	-3,188.95	-10,925.56	10,931.66	0.00	0.00	0.00	
21,200.00	89.88	270.49	7,251.33	-3,188.10	-11,025.56	11,031.66	0.00	0.00	0.00	
21,300.00	89.88	270.49	7,251.54	-3,187.24	-11,125.55	11,131.65	0.00	0.00	0.00	
21,400.00	89.88	270.49	7,251.76	-3,186.39	-11,225.55	11,231.65	0.00	0.00	0.00	
21,500.00	89.88	270.49	7,251.98	-3,185.53	-11,325.55	11,331.64	0.00	0.00	0.00	
21,600.00	89.88	270.49	7,252.19	-3,184.68	-11,425.54	11,431.64	0.00	0.00	0.00	
21,700.00	89.88	270.49	7,252.41	-3,183.83	-11,525.54	11,531.63	0.00	0.00	0.00	
21,800.00	89.88	270.49	7,252.63	-3,182.97	-11,625.54	11,631.62	0.00	0.00	0.00	
21,900.00	89.88	270.49	7,252.84	-3,182.12	-11,725.53	11,731.62	0.00	0.00	0.00	
22,000.00	89.88	270.49	7,253.06	-3,181.27	-11,825.53	11,831.61	0.00	0.00	0.00	
22,100.00	89.88	270.49	7,253.27	-3,180.41	-11,925.52	11,931.61	0.00	0.00	0.00	
22,200.00	89.88	270.49	7,253.49	-3,179.56	-12,025.52	12,031.60	0.00	0.00	0.00	
22,300.00	89.88	270.49	7,253.71	-3,178.70	-12,125.52	12,131.60	0.00	0.00	0.00	
22,400.00	89.88	270.49	7,253.92	-3,177.85	-12,225.51	12,231.59	0.00	0.00	0.00	
22,500.00	89.88	270.49	7,254.14	-3,177.00	-12,325.51	12,331.59	0.00	0.00	0.00	
22,600.00	89.88	270.49	7,254.36	-3,176.14	-12,425.50	12,431.58	0.00	0.00	0.00	
22,700.00	89.88	270.49	7,254.57	-3,175.29	-12,525.50	12,531.57	0.00	0.00	0.00	
22,800.00	89.88	270.49	7,254.79	-3,174.44	-12,625.50	12,631.57	0.00	0.00	0.00	
22,897.99	89.88	270.49	7,255.00	-3,173.60	-12,723.48	12,729.55	0.00	0.00	0.00	
TD Well @ 22897.99ft - Codell										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,519.73	1,500.00	9 5/8"	9-5/8	13-1/2	
22,897.99	7,255.00	5.5" CSG	5-1/2	7-7/8	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
921.57	919.00	Fox Hills			
4,063.28	3,670.00	Parkman			
4,631.31	4,137.00	Sussex			
7,984.35	6,907.00	Sharon Springs			
8,014.97	6,930.00	Niobrara			
8,227.77	7,071.00	Nio B			
8,359.00	7,138.00	Nio C			
20,123.09	7,249.00	Fort Hayes			
22,897.99	7,255.00	Codell		0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BLUE CHIP 22-10HZ
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 22-10HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
215.00	215.00	0.00	0.00	Begin Nudge @ 215.00ft
348.33	348.31	-2.14	0.91	End Nudge @ 348.33ft
448.33	448.24	-5.35	2.27	Change Tangent Direction @ 448.33ft
2,633.37	2,494.41	-542.60	414.80	Hold Tangent @ 2633.37ft
7,369.65	6,388.31	-2,655.65	2,089.59	KOP @ 7369.65ft :: DLS = 8°/100'
8,739.53	7,225.00	-3,145.72	1,434.12	End Build @ 8739.53ft
9,339.53	7,226.25	-3,167.71	834.52	Begin Turn @ 9339.53ft
9,479.53	7,226.55	-3,170.27	694.55	End Turn @ 9479.53ft
12,319.53	7,232.50	-3,170.27	-2,145.44	Begin Turn @ 12319.53ft
12,352.86	7,232.57	-3,170.42	-2,178.77	End Turn @ 12352.86ft
17,718.89	7,243.80	-3,217.25	-7,544.58	Begin Turn to BHL @ 17718.89ft
17,784.84	7,243.94	-3,217.25	-7,610.53	End Turn @ 17784.83ft
22,897.99	7,255.00	-3,173.60	-12,723.48	TD Well @ 22897.99ft