

US ROCKIES WATTENBERG PLANNING

**WELD-NAD83-UTMFT13N
5N-67W-22 BLUE CHIP 6-22HZ PAD
BLUE CHIP 22-1HZ**

Plan A

Plan: Permit Rev-2

Standard Planning Report

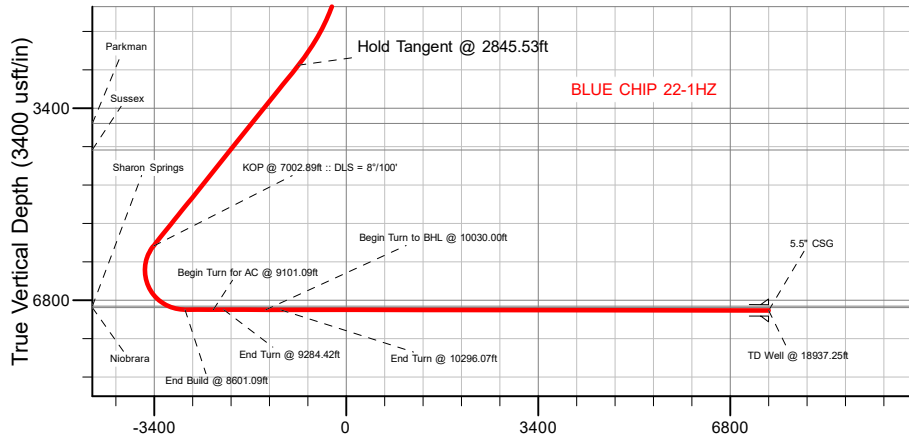
09 September, 2022

Project: WELD-NAD83-UTMFT13N
 Site: 5N-67W-22 BLUE CHIP 6-22HZ PAD
 Well: BLUE CHIP 22-1HZ
 Wellbore: Plan A
 Design: Permit Rev-2

US ROCKIES WATTENBERG PLANNING

CASING DETAILS

TVD	MD	Name	Size
1500.00	1526.49	9 5/8"	9-5/8
6980.00	18937.25	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	
200.20	0.00	0.00	200.20	0.00	0.00	0.00	0.00	0.00	
2845.53	39.68	75.03	2639.09	227.31	850.11	1.50	75.03	-850.31	
7002.89	39.68	75.03	5838.68	912.99	3414.49	0.00	0.00	-3415.29	
8601.09	89.93	270.75	6967.00	1173.57	2853.75	8.00	-159.93	-2854.78	
9101.09	89.93	270.75	6967.61	1180.12	2353.79	0.00	0.00	-2354.82	
9284.42	89.93	273.50	6967.84	1186.92	2170.61	1.50	90.00	-2171.64	
10030.00	89.93	273.50	6968.75	1232.43	1426.42	0.00	0.00	-1427.49	
10296.07	89.93	269.51	6969.08	1239.42	1160.50	1.50	-90.04	-1161.58	
18937.25	89.93	269.51	6980.00	1165.36	-7480.36	0.00	0.00	7479.34	BLUE CHIP 22-1HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	Northing	Easting	Latitude	Longitude
BLUE CHIP 22-1HZ_SHL	0.00	14668179.77	1673746.93	40.388364	-104.880304
BLUE CHIP 22-1HZ_LP	6967.00	14669357.20	1676599.09	40.391586	-104.870055
BLUE CHIP 22-1HZ_BHL	6980.00	14669335.00	1666265.00	40.391561	-104.907169

Vertical Section at 269.95° (3400 usft/in)

SHL
1478' FNL
2180' FWL

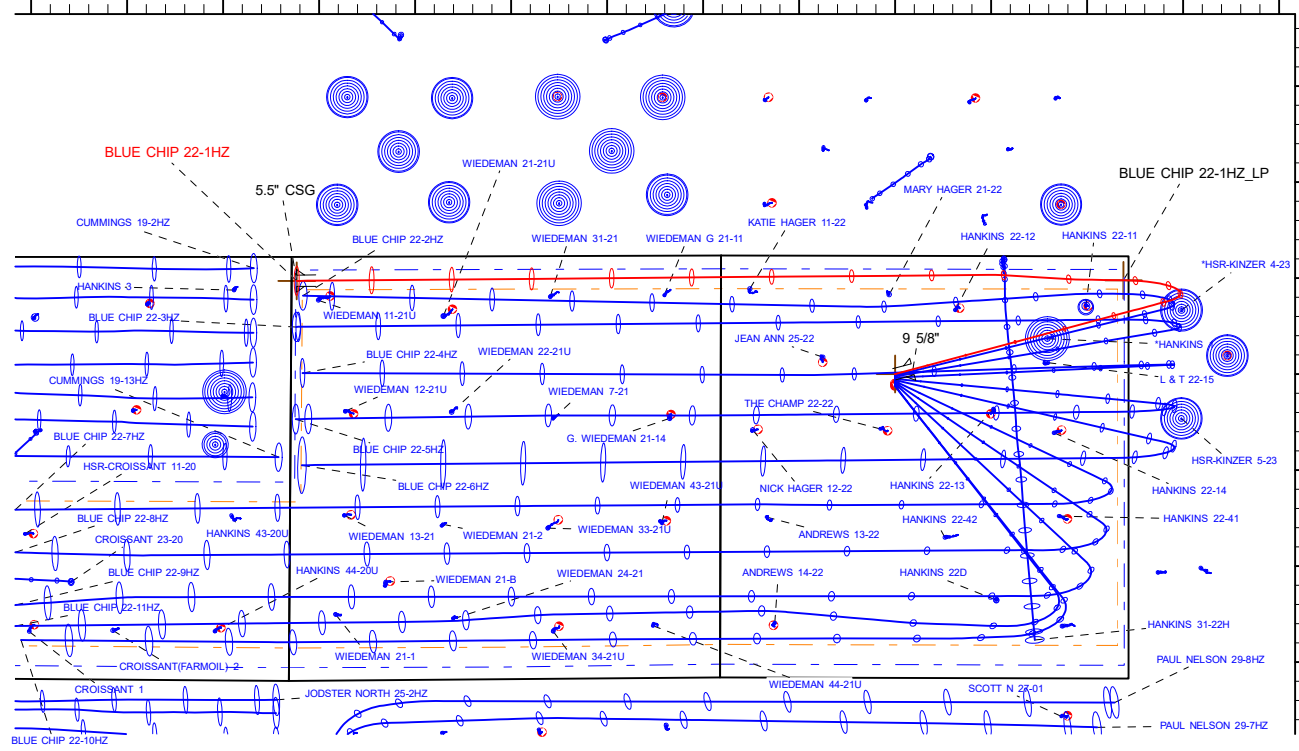
LP
300' FNL
65' FEL

BHL
300' FNL
65' FWL

WELL DETAILS: BLUE CHIP 22-1HZ

GL = 5036'
RKB = 17' @ 5053.00usft (RIG)
Plan: Permit Rev-2 (BLUE CHIP 22-1HZ/Plan A)
Date: 9/8/2022

West(-)/East(+) (2400 usft/in)



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
919.00	923.31	Fox Hills
3670.00	4185.04	Parkman
4137.00	4791.83	Sussex
6907.00	8303.02	Sharon Springs
6930.00	8367.87	Niobrara

T ↑ **M** ↘

↑ Azimuths to True North
 Magnetic North: 7.78°

Magnetic Field
 Strength: 51805.5nT
 Dip Angle: 66.58°
 Date: 9/3/2022
 Model: IGRF2020

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BLUE CHIP 22-1HZ
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 22-1HZ	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 22-1HZ			
Well Position	+N/-S	0.00 usft	Northing: 14,668,179.77 usft
	+E/-W	0.00 usft	Easting: 1,673,746.93 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	51,805.49232992

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	0.00	0.00	269.95

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	18,937.25 Permit Rev-2 (Plan A)	APC_ISCWSA REV 2 MWD+I	Fixed:v2:Rockies, crustal dec +	

Planning Report

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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 22-1HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

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	
200.20	0.00	0.00	200.20	0.00	0.00	0.00	0.00	0.00	0.00	
2,845.53	39.68	75.03	2,639.09	227.31	850.11	1.50	1.50	0.00	75.03	
7,002.89	39.68	75.03	5,838.68	912.99	3,414.49	0.00	0.00	0.00	0.00	
8,601.09	89.93	270.75	6,967.00	1,173.57	2,853.75	8.00	3.14	-10.28	-159.93	
9,101.09	89.93	270.75	6,967.61	1,180.12	2,353.79	0.00	0.00	0.00	0.00	
9,284.42	89.93	273.50	6,967.84	1,186.92	2,170.61	1.50	0.00	1.50	90.00	
10,030.00	89.93	273.50	6,968.75	1,232.43	1,426.42	0.00	0.00	0.00	0.00	
10,296.07	89.93	269.51	6,969.08	1,239.42	1,160.50	1.50	0.00	-1.50	-90.04	
18,937.25	89.93	269.51	6,980.00	1,165.36	-7,480.36	0.00	0.00	0.00	0.00	BLUE CHIP 22-1HZ_I

Planning Report

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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 22-1HZ	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	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
200.20	0.00	0.00	200.20	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 200.20ft									
300.00	1.50	75.03	299.99	0.34	1.26	-1.26	1.50	1.50	0.00
400.00	3.00	75.03	399.91	1.35	5.05	-5.05	1.50	1.50	0.00
500.00	4.50	75.03	499.69	3.04	11.36	-11.36	1.50	1.50	0.00
600.00	6.00	75.03	599.27	5.40	20.19	-20.20	1.50	1.50	0.00
700.00	7.50	75.03	698.58	8.43	31.54	-31.55	1.50	1.50	0.00
800.00	9.00	75.03	797.54	12.14	45.40	-45.41	1.50	1.50	0.00
900.00	10.50	75.03	896.09	16.51	61.76	-61.77	1.50	1.50	0.00
923.31	10.85	75.03	919.00	17.63	65.93	-65.94	1.50	1.50	0.00
Fox Hills									
1,000.00	12.00	75.03	994.17	21.55	80.60	-80.62	1.50	1.50	0.00
1,100.00	13.50	75.03	1,091.70	27.25	101.91	-101.94	1.50	1.50	0.00
1,200.00	15.00	75.03	1,188.62	33.61	125.69	-125.72	1.50	1.50	0.00
1,300.00	16.50	75.03	1,284.87	40.62	151.90	-151.94	1.50	1.50	0.00
1,400.00	18.00	75.03	1,380.37	48.28	180.55	-180.59	1.50	1.50	0.00
1,500.00	19.50	75.03	1,475.06	56.58	211.59	-211.64	1.50	1.50	0.00
1,526.49	19.89	75.03	1,500.00	58.88	220.22	-220.27	1.50	1.50	0.00
9 5/8"									
1,600.00	21.00	75.03	1,568.88	65.52	245.02	-245.08	1.50	1.50	0.00
1,700.00	22.50	75.03	1,661.76	75.09	280.82	-280.88	1.50	1.50	0.00
1,800.00	24.00	75.03	1,753.64	85.28	318.95	-319.02	1.50	1.50	0.00
1,900.00	25.50	75.03	1,844.45	96.10	359.39	-359.47	1.50	1.50	0.00
2,000.00	27.00	75.03	1,934.14	107.52	402.11	-402.20	1.50	1.50	0.00
2,100.00	28.50	75.03	2,022.64	119.54	447.08	-447.19	1.50	1.50	0.00
2,200.00	30.00	75.03	2,109.89	132.16	494.28	-494.40	1.50	1.50	0.00
2,300.00	31.50	75.03	2,195.83	145.37	543.67	-543.80	1.50	1.50	0.00
2,400.00	33.00	75.03	2,280.40	159.15	595.21	-595.35	1.50	1.50	0.00
2,500.00	34.50	75.03	2,363.55	173.50	648.88	-649.03	1.50	1.50	0.00
2,600.00	36.00	75.03	2,445.21	188.41	704.63	-704.79	1.50	1.50	0.00
2,700.00	37.50	75.03	2,525.34	203.86	762.43	-762.60	1.50	1.50	0.00
2,800.00	39.00	75.03	2,603.87	219.85	822.23	-822.42	1.50	1.50	0.00
2,845.53	39.68	75.03	2,639.09	227.31	850.11	-850.31	1.50	1.50	0.00
Hold Tangent @ 2845.53ft									
2,900.00	39.68	75.03	2,681.01	236.29	883.71	-883.91	0.00	0.00	0.00
3,000.00	39.68	75.03	2,757.97	252.79	945.39	-945.61	0.00	0.00	0.00
3,100.00	39.68	75.03	2,834.93	269.28	1,007.07	-1,007.31	0.00	0.00	0.00
3,200.00	39.68	75.03	2,911.89	285.77	1,068.76	-1,069.01	0.00	0.00	0.00
3,300.00	39.68	75.03	2,988.86	302.27	1,130.44	-1,130.70	0.00	0.00	0.00
3,400.00	39.68	75.03	3,065.82	318.76	1,192.12	-1,192.40	0.00	0.00	0.00
3,500.00	39.68	75.03	3,142.78	335.25	1,253.81	-1,254.10	0.00	0.00	0.00
3,600.00	39.68	75.03	3,219.74	351.75	1,315.49	-1,315.80	0.00	0.00	0.00
3,700.00	39.68	75.03	3,296.70	368.24	1,377.17	-1,377.49	0.00	0.00	0.00
3,800.00	39.68	75.03	3,373.67	384.73	1,438.86	-1,439.19	0.00	0.00	0.00
3,900.00	39.68	75.03	3,450.63	401.23	1,500.54	-1,500.89	0.00	0.00	0.00
4,000.00	39.68	75.03	3,527.59	417.72	1,562.22	-1,562.58	0.00	0.00	0.00
4,100.00	39.68	75.03	3,604.55	434.21	1,623.90	-1,624.28	0.00	0.00	0.00
4,185.04	39.68	75.03	3,670.00	448.24	1,676.36	-1,676.75	0.00	0.00	0.00
Parkman									
4,200.00	39.68	75.03	3,681.52	450.71	1,685.59	-1,685.98	0.00	0.00	0.00
4,300.00	39.68	75.03	3,758.48	467.20	1,747.27	-1,747.68	0.00	0.00	0.00
4,400.00	39.68	75.03	3,835.44	483.69	1,808.95	-1,809.37	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BLUE CHIP 22-1HZ
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 22-1HZ	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	39.68	75.03	3,912.40	500.19	1,870.64	-1,871.07	0.00	0.00	0.00
4,600.00	39.68	75.03	3,989.36	516.68	1,932.32	-1,932.77	0.00	0.00	0.00
4,700.00	39.68	75.03	4,066.33	533.17	1,994.00	-1,994.47	0.00	0.00	0.00
4,791.83	39.68	75.03	4,137.00	548.32	2,050.64	-2,051.12	0.00	0.00	0.00
Sussex									
4,800.00	39.68	75.03	4,143.29	549.67	2,055.68	-2,056.16	0.00	0.00	0.00
4,900.00	39.68	75.03	4,220.25	566.16	2,117.37	-2,117.86	0.00	0.00	0.00
5,000.00	39.68	75.03	4,297.21	582.65	2,179.05	-2,179.56	0.00	0.00	0.00
5,100.00	39.68	75.03	4,374.18	599.15	2,240.73	-2,241.26	0.00	0.00	0.00
5,200.00	39.68	75.03	4,451.14	615.64	2,302.42	-2,302.95	0.00	0.00	0.00
5,300.00	39.68	75.03	4,528.10	632.13	2,364.10	-2,364.65	0.00	0.00	0.00
5,400.00	39.68	75.03	4,605.06	648.63	2,425.78	-2,426.35	0.00	0.00	0.00
5,500.00	39.68	75.03	4,682.02	665.12	2,487.46	-2,488.04	0.00	0.00	0.00
5,600.00	39.68	75.03	4,758.99	681.61	2,549.15	-2,549.74	0.00	0.00	0.00
5,700.00	39.68	75.03	4,835.95	698.11	2,610.83	-2,611.44	0.00	0.00	0.00
5,800.00	39.68	75.03	4,912.91	714.60	2,672.51	-2,673.14	0.00	0.00	0.00
5,900.00	39.68	75.03	4,989.87	731.09	2,734.20	-2,734.83	0.00	0.00	0.00
6,000.00	39.68	75.03	5,066.84	747.58	2,795.88	-2,796.53	0.00	0.00	0.00
6,100.00	39.68	75.03	5,143.80	764.08	2,857.56	-2,858.23	0.00	0.00	0.00
6,200.00	39.68	75.03	5,220.76	780.57	2,919.25	-2,919.93	0.00	0.00	0.00
6,300.00	39.68	75.03	5,297.72	797.06	2,980.93	-2,981.62	0.00	0.00	0.00
6,400.00	39.68	75.03	5,374.68	813.56	3,042.61	-3,043.32	0.00	0.00	0.00
6,500.00	39.68	75.03	5,451.65	830.05	3,104.29	-3,105.02	0.00	0.00	0.00
6,600.00	39.68	75.03	5,528.61	846.54	3,165.98	-3,166.71	0.00	0.00	0.00
6,700.00	39.68	75.03	5,605.57	863.04	3,227.66	-3,228.41	0.00	0.00	0.00
6,800.00	39.68	75.03	5,682.53	879.53	3,289.34	-3,290.11	0.00	0.00	0.00
6,900.00	39.68	75.03	5,759.50	896.02	3,351.03	-3,351.81	0.00	0.00	0.00
7,002.89	39.68	75.03	5,838.68	912.99	3,414.49	-3,415.29	0.00	0.00	0.00
KOP @ 7002.89ft :: DLS = 8°/100'									
7,050.00	36.16	72.84	5,875.84	920.98	3,442.31	-3,443.11	8.00	-7.47	-4.65
7,100.00	32.47	70.07	5,917.13	929.91	3,469.04	-3,469.85	8.00	-7.37	-5.53
7,150.00	28.86	66.69	5,960.14	939.27	3,492.75	-3,493.57	8.00	-7.22	-6.76
7,200.00	25.36	62.45	6,004.64	949.00	3,513.33	-3,514.16	8.00	-7.01	-8.48
7,250.00	22.01	56.99	6,050.43	959.06	3,530.69	-3,531.53	8.00	-6.70	-10.93
7,300.00	18.90	49.76	6,097.28	969.40	3,544.74	-3,545.58	8.00	-6.21	-14.46
7,350.00	16.18	40.01	6,144.96	979.97	3,555.40	-3,556.26	8.00	-5.45	-19.50
7,400.00	14.05	26.95	6,193.24	990.72	3,562.64	-3,563.50	8.00	-4.25	-26.11
7,450.00	12.84	10.50	6,241.88	1,001.60	3,566.40	-3,567.27	8.00	-2.43	-32.92
7,500.00	12.79	352.39	6,290.66	1,012.55	3,566.68	-3,567.56	8.00	-0.10	-36.22
7,550.00	13.92	335.71	6,339.33	1,023.52	3,563.47	-3,564.36	8.00	2.26	-33.36
7,600.00	15.98	322.36	6,387.64	1,034.45	3,556.79	-3,557.69	8.00	4.13	-26.68
7,650.00	18.67	312.38	6,435.38	1,045.30	3,546.67	-3,547.58	8.00	5.38	-19.97
7,700.00	21.75	304.98	6,482.30	1,056.02	3,533.16	-3,534.08	8.00	6.17	-14.80
7,750.00	25.09	299.40	6,528.18	1,066.53	3,516.33	-3,517.26	8.00	6.66	-11.16
7,800.00	28.58	295.08	6,572.80	1,076.81	3,496.25	-3,497.19	8.00	6.99	-8.64
7,850.00	32.19	291.64	6,615.93	1,086.79	3,473.03	-3,473.98	8.00	7.21	-6.88
7,900.00	35.86	288.83	6,657.36	1,096.44	3,446.78	-3,447.73	8.00	7.36	-5.61
7,950.00	39.60	286.49	6,696.90	1,105.69	3,417.62	-3,418.59	8.00	7.47	-4.69
8,000.00	43.37	284.48	6,734.35	1,114.51	3,385.71	-3,386.68	8.00	7.55	-4.00
8,050.00	47.18	282.75	6,769.53	1,122.85	3,351.19	-3,352.16	8.00	7.61	-3.48
8,100.00	51.01	281.21	6,802.27	1,130.68	3,314.23	-3,315.21	8.00	7.66	-3.07
8,150.00	54.85	279.83	6,832.40	1,137.95	3,275.01	-3,276.00	8.00	7.69	-2.76
8,200.00	58.71	278.58	6,859.79	1,144.63	3,233.73	-3,234.72	8.00	7.72	-2.51

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BLUE CHIP 22-1HZ
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 22-1HZ	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)	
8,250.00	62.58	277.42	6,884.30	1,150.68	3,190.58	-3,191.58	8.00	7.74	-2.31	
8,300.00	66.46	276.35	6,905.80	1,156.09	3,145.77	-3,146.78	8.00	7.76	-2.15	
8,303.02	66.70	276.28	6,907.00	1,156.39	3,143.02	-3,144.02	8.00	7.77	-2.08	
Sharon Springs										
8,350.00	70.35	275.33	6,924.20	1,160.81	3,099.53	-3,100.54	8.00	7.77	-2.03	
8,367.87	71.74	274.98	6,930.00	1,162.33	3,082.70	-3,083.71	8.00	7.78	-1.96	
Niobrara										
8,400.00	74.24	274.37	6,939.40	1,164.83	3,052.08	-3,053.09	8.00	7.79	-1.92	
8,450.00	78.14	273.44	6,951.33	1,168.13	3,003.65	-3,004.66	8.00	7.79	-1.86	
8,500.00	82.04	272.53	6,959.93	1,170.69	2,954.47	-2,955.49	8.00	7.80	-1.81	
8,550.00	85.94	271.65	6,965.16	1,172.51	2,904.79	-2,905.81	8.00	7.80	-1.77	
8,601.09	89.93	270.75	6,967.00	1,173.57	2,853.75	-2,854.78	8.00	7.81	-1.76	
End Build @ 8601.09ft										
8,700.00	89.93	270.75	6,967.12	1,174.87	2,754.85	-2,755.87	0.00	0.00	0.00	
8,800.00	89.93	270.75	6,967.25	1,176.18	2,654.86	-2,655.88	0.00	0.00	0.00	
8,900.00	89.93	270.75	6,967.37	1,177.49	2,554.87	-2,555.89	0.00	0.00	0.00	
9,000.00	89.93	270.75	6,967.49	1,178.80	2,454.88	-2,455.90	0.00	0.00	0.00	
9,101.09	89.93	270.75	6,967.61	1,180.12	2,353.79	-2,354.82	0.00	0.00	0.00	
Begin Turn for AC @ 9101.09ft										
9,200.00	89.93	272.23	6,967.73	1,182.69	2,254.92	-2,255.95	1.50	0.00	1.50	
9,284.42	89.93	273.50	6,967.84	1,186.92	2,170.61	-2,171.64	1.50	0.00	1.50	
End Turn @ 9284.42ft										
9,300.00	89.93	273.50	6,967.86	1,187.87	2,155.06	-2,156.09	0.00	0.00	0.00	
9,400.00	89.93	273.50	6,967.98	1,193.97	2,055.24	-2,056.29	0.00	0.00	0.00	
9,500.00	89.93	273.50	6,968.10	1,200.08	1,955.43	-1,956.48	0.00	0.00	0.00	
9,600.00	89.93	273.50	6,968.22	1,206.18	1,855.62	-1,856.67	0.00	0.00	0.00	
9,700.00	89.93	273.50	6,968.34	1,212.29	1,755.80	-1,756.86	0.00	0.00	0.00	
9,800.00	89.93	273.50	6,968.47	1,218.39	1,655.99	-1,657.05	0.00	0.00	0.00	
9,900.00	89.93	273.50	6,968.59	1,224.50	1,556.18	-1,557.25	0.00	0.00	0.00	
10,000.00	89.93	273.50	6,968.71	1,230.60	1,456.36	-1,457.44	0.00	0.00	0.00	
10,030.00	89.93	273.50	6,968.75	1,232.43	1,426.42	-1,427.49	0.00	0.00	0.00	
Begin Turn to BHL @ 10030.00ft										
10,100.00	89.93	272.45	6,968.83	1,236.07	1,356.52	-1,357.59	1.50	0.00	-1.50	
10,200.00	89.93	270.95	6,968.96	1,239.03	1,256.56	-1,257.64	1.50	0.00	-1.50	
10,296.07	89.93	269.51	6,969.08	1,239.42	1,160.50	-1,161.58	1.50	0.00	-1.50	
End Turn @ 10296.07ft										
10,300.00	89.93	269.51	6,969.08	1,239.38	1,156.57	-1,157.65	0.00	0.00	0.00	
10,400.00	89.93	269.51	6,969.21	1,238.53	1,056.57	-1,057.65	0.00	0.00	0.00	
10,500.00	89.93	269.51	6,969.34	1,237.67	956.57	-957.65	0.00	0.00	0.00	
10,600.00	89.93	269.51	6,969.46	1,236.81	856.58	-857.66	0.00	0.00	0.00	
10,700.00	89.93	269.51	6,969.59	1,235.95	756.58	-757.66	0.00	0.00	0.00	
10,800.00	89.93	269.51	6,969.72	1,235.10	656.58	-657.66	0.00	0.00	0.00	
10,900.00	89.93	269.51	6,969.84	1,234.24	556.59	-557.67	0.00	0.00	0.00	
11,000.00	89.93	269.51	6,969.97	1,233.38	456.59	-457.67	0.00	0.00	0.00	
11,100.00	89.93	269.51	6,970.09	1,232.53	356.60	-357.67	0.00	0.00	0.00	
11,200.00	89.93	269.51	6,970.22	1,231.67	256.60	-257.67	0.00	0.00	0.00	
11,300.00	89.93	269.51	6,970.35	1,230.81	156.60	-157.68	0.00	0.00	0.00	
11,400.00	89.93	269.51	6,970.47	1,229.96	56.61	-57.68	0.00	0.00	0.00	
11,500.00	89.93	269.51	6,970.60	1,229.10	-43.39	42.32	0.00	0.00	0.00	
11,600.00	89.93	269.51	6,970.73	1,228.24	-143.39	142.31	0.00	0.00	0.00	
11,700.00	89.93	269.51	6,970.85	1,227.38	-243.38	242.31	0.00	0.00	0.00	
11,800.00	89.93	269.51	6,970.98	1,226.53	-343.38	342.31	0.00	0.00	0.00	
11,900.00	89.93	269.51	6,971.11	1,225.67	-443.37	442.30	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BLUE CHIP 22-1HZ
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 22-1HZ	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)	
12,000.00	89.93	269.51	6,971.23	1,224.81	-543.37	542.30	0.00	0.00	0.00	
12,100.00	89.93	269.51	6,971.36	1,223.96	-643.37	642.30	0.00	0.00	0.00	
12,200.00	89.93	269.51	6,971.49	1,223.10	-743.36	742.30	0.00	0.00	0.00	
12,300.00	89.93	269.51	6,971.61	1,222.24	-843.36	842.29	0.00	0.00	0.00	
12,400.00	89.93	269.51	6,971.74	1,221.38	-943.36	942.29	0.00	0.00	0.00	
12,500.00	89.93	269.51	6,971.86	1,220.53	-1,043.35	1,042.29	0.00	0.00	0.00	
12,600.00	89.93	269.51	6,971.99	1,219.67	-1,143.35	1,142.28	0.00	0.00	0.00	
12,700.00	89.93	269.51	6,972.12	1,218.81	-1,243.34	1,242.28	0.00	0.00	0.00	
12,800.00	89.93	269.51	6,972.24	1,217.96	-1,343.34	1,342.28	0.00	0.00	0.00	
12,900.00	89.93	269.51	6,972.37	1,217.10	-1,443.34	1,442.27	0.00	0.00	0.00	
13,000.00	89.93	269.51	6,972.50	1,216.24	-1,543.33	1,542.27	0.00	0.00	0.00	
13,100.00	89.93	269.51	6,972.62	1,215.39	-1,643.33	1,642.27	0.00	0.00	0.00	
13,200.00	89.93	269.51	6,972.75	1,214.53	-1,743.33	1,742.27	0.00	0.00	0.00	
13,300.00	89.93	269.51	6,972.88	1,213.67	-1,843.32	1,842.26	0.00	0.00	0.00	
13,400.00	89.93	269.51	6,973.00	1,212.81	-1,943.32	1,942.26	0.00	0.00	0.00	
13,500.00	89.93	269.51	6,973.13	1,211.96	-2,043.31	2,042.26	0.00	0.00	0.00	
13,600.00	89.93	269.51	6,973.25	1,211.10	-2,143.31	2,142.25	0.00	0.00	0.00	
13,700.00	89.93	269.51	6,973.38	1,210.24	-2,243.31	2,242.25	0.00	0.00	0.00	
13,800.00	89.93	269.51	6,973.51	1,209.39	-2,343.30	2,342.25	0.00	0.00	0.00	
13,900.00	89.93	269.51	6,973.63	1,208.53	-2,443.30	2,442.24	0.00	0.00	0.00	
14,000.00	89.93	269.51	6,973.76	1,207.67	-2,543.30	2,542.24	0.00	0.00	0.00	
14,100.00	89.93	269.51	6,973.89	1,206.82	-2,643.29	2,642.24	0.00	0.00	0.00	
14,200.00	89.93	269.51	6,974.01	1,205.96	-2,743.29	2,742.23	0.00	0.00	0.00	
14,300.00	89.93	269.51	6,974.14	1,205.10	-2,843.28	2,842.23	0.00	0.00	0.00	
14,400.00	89.93	269.51	6,974.27	1,204.24	-2,943.28	2,942.23	0.00	0.00	0.00	
14,500.00	89.93	269.51	6,974.39	1,203.39	-3,043.28	3,042.23	0.00	0.00	0.00	
14,600.00	89.93	269.51	6,974.52	1,202.53	-3,143.27	3,142.22	0.00	0.00	0.00	
14,700.00	89.93	269.51	6,974.64	1,201.67	-3,243.27	3,242.22	0.00	0.00	0.00	
14,800.00	89.93	269.51	6,974.77	1,200.82	-3,343.27	3,342.22	0.00	0.00	0.00	
14,900.00	89.93	269.51	6,974.90	1,199.96	-3,443.26	3,442.21	0.00	0.00	0.00	
15,000.00	89.93	269.51	6,975.02	1,199.10	-3,543.26	3,542.21	0.00	0.00	0.00	
15,100.00	89.93	269.51	6,975.15	1,198.24	-3,643.25	3,642.21	0.00	0.00	0.00	
15,200.00	89.93	269.51	6,975.28	1,197.39	-3,743.25	3,742.20	0.00	0.00	0.00	
15,300.00	89.93	269.51	6,975.40	1,196.53	-3,843.25	3,842.20	0.00	0.00	0.00	
15,400.00	89.93	269.51	6,975.53	1,195.67	-3,943.24	3,942.20	0.00	0.00	0.00	
15,500.00	89.93	269.51	6,975.66	1,194.82	-4,043.24	4,042.20	0.00	0.00	0.00	
15,600.00	89.93	269.51	6,975.78	1,193.96	-4,143.24	4,142.19	0.00	0.00	0.00	
15,700.00	89.93	269.51	6,975.91	1,193.10	-4,243.23	4,242.19	0.00	0.00	0.00	
15,800.00	89.93	269.51	6,976.04	1,192.25	-4,343.23	4,342.19	0.00	0.00	0.00	
15,900.00	89.93	269.51	6,976.16	1,191.39	-4,443.22	4,442.18	0.00	0.00	0.00	
16,000.00	89.93	269.51	6,976.29	1,190.53	-4,543.22	4,542.18	0.00	0.00	0.00	
16,100.00	89.93	269.51	6,976.41	1,189.67	-4,643.22	4,642.18	0.00	0.00	0.00	
16,200.00	89.93	269.51	6,976.54	1,188.82	-4,743.21	4,742.17	0.00	0.00	0.00	
16,300.00	89.93	269.51	6,976.67	1,187.96	-4,843.21	4,842.17	0.00	0.00	0.00	
16,400.00	89.93	269.51	6,976.79	1,187.10	-4,943.21	4,942.17	0.00	0.00	0.00	
16,500.00	89.93	269.51	6,976.92	1,186.25	-5,043.20	5,042.16	0.00	0.00	0.00	
16,600.00	89.93	269.51	6,977.05	1,185.39	-5,143.20	5,142.16	0.00	0.00	0.00	
16,700.00	89.93	269.51	6,977.17	1,184.53	-5,243.19	5,242.16	0.00	0.00	0.00	
16,800.00	89.93	269.51	6,977.30	1,183.67	-5,343.19	5,342.16	0.00	0.00	0.00	
16,900.00	89.93	269.51	6,977.43	1,182.82	-5,443.19	5,442.15	0.00	0.00	0.00	
17,000.00	89.93	269.51	6,977.55	1,181.96	-5,543.18	5,542.15	0.00	0.00	0.00	
17,100.00	89.93	269.51	6,977.68	1,181.10	-5,643.18	5,642.15	0.00	0.00	0.00	
17,200.00	89.93	269.51	6,977.80	1,180.25	-5,743.18	5,742.14	0.00	0.00	0.00	
17,300.00	89.93	269.51	6,977.93	1,179.39	-5,843.17	5,842.14	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well BLUE CHIP 22-1HZ
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 22-1HZ	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)
17,400.00	89.93	269.51	6,978.06	1,178.53	-5,943.17	5,942.14	0.00	0.00	0.00
17,500.00	89.93	269.51	6,978.18	1,177.68	-6,043.16	6,042.13	0.00	0.00	0.00
17,600.00	89.93	269.51	6,978.31	1,176.82	-6,143.16	6,142.13	0.00	0.00	0.00
17,700.00	89.93	269.51	6,978.44	1,175.96	-6,243.16	6,242.13	0.00	0.00	0.00
17,800.00	89.93	269.51	6,978.56	1,175.10	-6,343.15	6,342.13	0.00	0.00	0.00
17,900.00	89.93	269.51	6,978.69	1,174.25	-6,443.15	6,442.12	0.00	0.00	0.00
18,000.00	89.93	269.51	6,978.82	1,173.39	-6,543.15	6,542.12	0.00	0.00	0.00
18,100.00	89.93	269.51	6,978.94	1,172.53	-6,643.14	6,642.12	0.00	0.00	0.00
18,200.00	89.93	269.51	6,979.07	1,171.68	-6,743.14	6,742.11	0.00	0.00	0.00
18,300.00	89.93	269.51	6,979.19	1,170.82	-6,843.13	6,842.11	0.00	0.00	0.00
18,400.00	89.93	269.51	6,979.32	1,169.96	-6,943.13	6,942.11	0.00	0.00	0.00
18,500.00	89.93	269.51	6,979.45	1,169.10	-7,043.13	7,042.10	0.00	0.00	0.00
18,600.00	89.93	269.51	6,979.57	1,168.25	-7,143.12	7,142.10	0.00	0.00	0.00
18,700.00	89.93	269.51	6,979.70	1,167.39	-7,243.12	7,242.10	0.00	0.00	0.00
18,800.00	89.93	269.51	6,979.83	1,166.53	-7,343.12	7,342.09	0.00	0.00	0.00
18,900.00	89.93	269.51	6,979.95	1,165.68	-7,443.11	7,442.09	0.00	0.00	0.00
18,937.25	89.93	269.51	6,980.00	1,165.36	-7,480.36	7,479.34	0.00	0.00	0.00
TD Well @ 18937.25ft									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,526.49	1,500.00	9 5/8"	9-5/8	13-1/2
18,937.25	6,980.00	5.5" CSG	5-1/2	7-7/8

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
923.31	919.00	Fox Hills			
4,185.04	3,670.00	Parkman			
4,791.83	4,137.00	Sussex			
8,303.02	6,907.00	Sharon Springs			
8,367.87	6,930.00	Niobrara			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
200.20	200.20	0.00	0.00	Begin Nudge @ 200.20ft
2,845.53	2,639.09	227.31	850.11	Hold Tangent @ 2845.53ft
7,002.89	5,838.68	912.99	3,414.49	KOP @ 7002.89ft :: DLS = 8°/100'
8,601.09	6,967.00	1,173.57	2,853.75	End Build @ 8601.09ft
9,101.09	6,967.61	1,180.12	2,353.79	Begin Turn for AC @ 9101.09ft
9,284.42	6,967.84	1,186.92	2,170.61	End Turn @ 9284.42ft
10,030.00	6,968.75	1,232.43	1,426.42	Begin Turn to BHL @ 10030.00ft
10,296.07	6,969.08	1,239.42	1,160.50	End Turn @ 10296.07ft
18,937.25	6,980.00	1,165.36	-7,480.36	TD Well @ 18937.25ft