

US ROCKIES WATTENBERG PLANNING

**WELD-NAD83-UTMFT13N
3N-67W-35 CHICA 4-35HZ PAD
CHICA 31C-23HZ**

Plan B

Plan: Permit Rev-1

Standard Planning Report

13 October, 2016

Project: WELD-NAD83-UTMFT13N
Site: 3N-67W-35 CHICA 4-35HZ PAD
Well: CHICA 31C-23HZ
Wellbore: Plan B
Design: Permit Rev-1

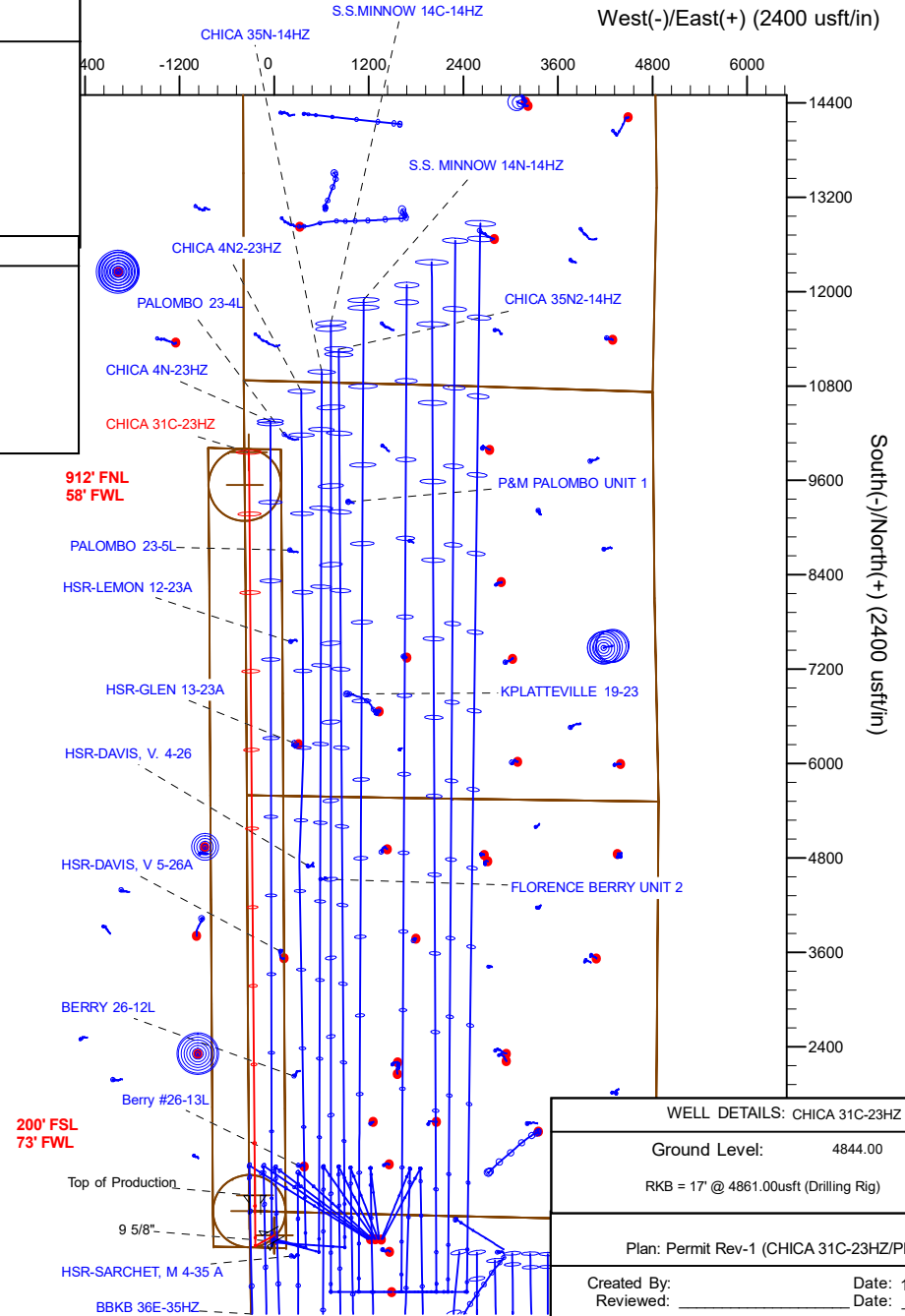
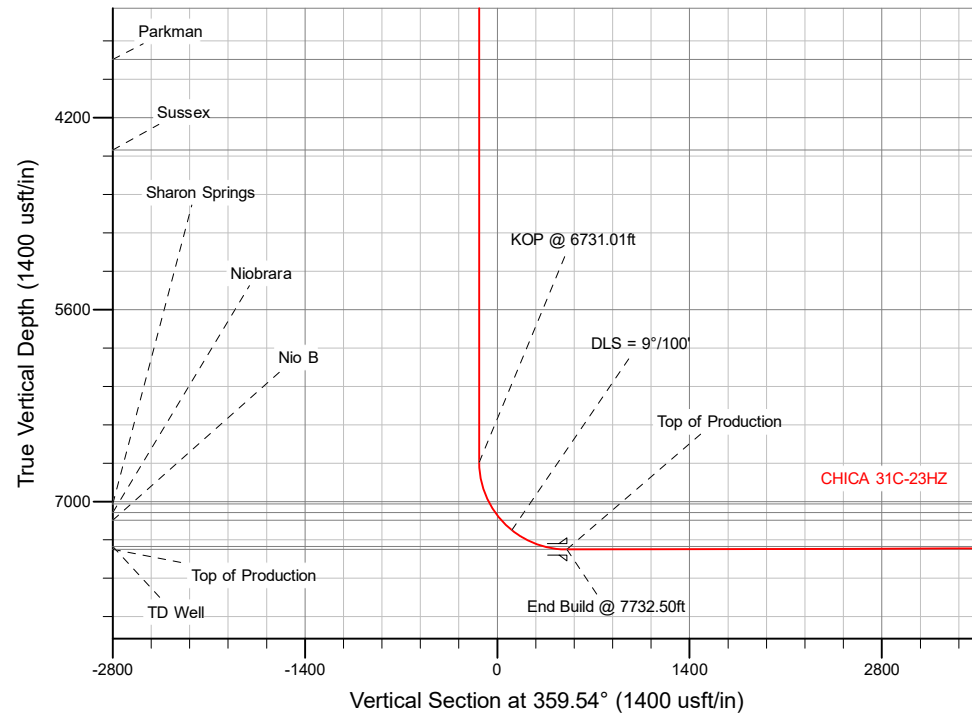
US ROCKIES WATTENBERG PLANNING

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	783.33	8.00	241.00	781.60	-18.02	-32.51	1.50	241.00	-17.76	
4	2283.33	8.00	241.00	2267.00	-119.23	-215.10	0.00	0.00	-117.50	
5	2683.33	0.00	0.00	2665.71	-132.75	-239.48	2.00	180.00	-130.82	
6	6731.01	0.00	0.00	6713.39	-132.75	-239.48	0.00	0.00	-130.82	
7	7732.50	90.13	359.54	7350.00	505.33	-244.64	9.00	359.54	507.28	
8	17185.83	90.13	359.54	7328.00	9958.34	-321.12	0.00	0.00	9960.59	CHICA 31C-23HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
CHICA 31C-23HZ_SHL	0.00	0.00	0.00	40.188346	-104.866147	Point
CHICA 31C-23HZ_BHL	7328.00	9958.34	-321.12	40.215693	-104.867297	Point



WELL DETAILS: CHICA 31C-23HZ

Ground Level: 4844.00

RKB = 17' @ 4861.00usft (Drilling Rig)

Plan: Permit Rev-1 (CHICA 31C-23HZ/Plan B)

Created By: _____ Date: 10/13/2016
Reviewed: _____ Date: _____

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CHICA 31C-23HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4861.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4861.00usft (Drilling Rig)
Site:	3N-67W-35 CHICA 4-35HZ PAD	North Reference:	True
Well:	CHICA 31C-23HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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		3N-67W-35 CHICA 4-35HZ PAD			
Site Position:		Northing:	14,595,347.16 usft	Latitude:	40.188346
From:	Lat/Long	Easting:	1,677,799.14 usft	Longitude:	-104.866147
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.09 °

Well	CHICA 31C-23HZ					
Well Position	+N/-S	0.00 usft	Northing:	14,595,347.16 usft	Latitude:	40.188346
	+E/-W	0.00 usft	Easting:	1,677,799.14 usft	Longitude:	-104.866147
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,844.00 usft

Wellbore	Plan B				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/8/2016	8.18	66.68	52,450

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	359.54

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	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
783.33	8.00	241.00	781.60	-18.02	-32.51	1.50	1.50	0.00	241.00	
2,283.33	8.00	241.00	2,267.00	-119.23	-215.10	0.00	0.00	0.00	0.00	
2,683.33	0.00	0.00	2,665.71	-132.75	-239.48	2.00	-2.00	0.00	180.00	
6,731.01	0.00	0.00	6,713.39	-132.75	-239.48	0.00	0.00	0.00	0.00	
7,732.50	90.13	359.54	7,350.00	505.33	-244.64	9.00	9.00	-0.05	359.54	
17,185.83	90.13	359.54	7,328.00	9,958.34	-321.12	0.00	0.00	0.00	0.00	CHICA 31C-23HZ_BH

Corporate
Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CHICA 31C-23HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4861.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4861.00usft (Drilling Rig)
Site:	3N-67W-35 CHICA 4-35HZ PAD	North Reference:	True
Well:	CHICA 31C-23HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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
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
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 250.00ft									
300.00	0.75	241.00	300.00	-0.16	-0.29	-0.16	1.50	1.50	0.00
400.00	2.25	241.00	399.96	-1.43	-2.58	-1.41	1.50	1.50	0.00
500.00	3.75	241.00	499.82	-3.96	-7.15	-3.91	1.50	1.50	0.00
600.00	5.25	241.00	599.51	-7.77	-14.01	-7.66	1.50	1.50	0.00
700.00	6.75	241.00	698.96	-12.84	-23.16	-12.65	1.50	1.50	0.00
783.33	8.00	241.00	781.60	-18.02	-32.51	-17.76	1.50	1.50	0.00
End Nudge @ 783.33ft									
800.00	8.00	241.00	798.11	-19.15	-34.54	-18.87	0.00	0.00	0.00
900.00	8.00	241.00	897.13	-25.89	-46.71	-25.52	0.00	0.00	0.00
1,000.00	8.00	241.00	996.16	-32.64	-58.89	-32.17	0.00	0.00	0.00
1,100.00	8.00	241.00	1,095.19	-39.39	-71.06	-38.82	0.00	0.00	0.00
1,200.00	8.00	241.00	1,194.21	-46.14	-83.23	-45.47	0.00	0.00	0.00
1,300.00	8.00	241.00	1,293.24	-52.88	-95.40	-52.12	0.00	0.00	0.00
1,400.00	8.00	241.00	1,392.27	-59.63	-107.58	-58.76	0.00	0.00	0.00
1,500.00	8.00	241.00	1,491.29	-66.38	-119.75	-65.41	0.00	0.00	0.00
1,508.79	8.00	241.00	1,500.00	-66.97	-120.82	-66.00	0.00	0.00	0.00
9 5/8"									
1,600.00	8.00	241.00	1,590.32	-73.12	-131.92	-72.06	0.00	0.00	0.00
1,700.00	8.00	241.00	1,689.35	-79.87	-144.09	-78.71	0.00	0.00	0.00
1,800.00	8.00	241.00	1,788.37	-86.62	-156.26	-85.36	0.00	0.00	0.00
1,900.00	8.00	241.00	1,887.40	-93.37	-168.44	-92.01	0.00	0.00	0.00
2,000.00	8.00	241.00	1,986.43	-100.11	-180.61	-98.66	0.00	0.00	0.00
2,100.00	8.00	241.00	2,085.46	-106.86	-192.78	-105.31	0.00	0.00	0.00
2,200.00	8.00	241.00	2,184.48	-113.61	-204.95	-111.96	0.00	0.00	0.00
2,283.33	8.00	241.00	2,267.00	-119.23	-215.10	-117.50	0.00	0.00	0.00
Begin Drop @ 2283.33ft									
2,300.00	7.67	241.00	2,283.52	-120.33	-217.08	-118.59	2.00	-2.00	0.00
2,400.00	5.67	241.00	2,382.83	-125.96	-227.24	-124.13	2.00	-2.00	0.00
2,500.00	3.67	241.00	2,482.50	-129.90	-234.35	-128.02	2.00	-2.00	0.00
2,600.00	1.67	241.00	2,582.38	-132.16	-238.42	-130.24	2.00	-2.00	0.00
2,683.33	0.00	0.00	2,665.71	-132.75	-239.48	-130.82	2.00	-2.00	0.00
End Drop @ 2683.33ft									
2,700.00	0.00	0.00	2,682.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
2,800.00	0.00	0.00	2,782.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
2,900.00	0.00	0.00	2,882.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
3,000.00	0.00	0.00	2,982.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
3,100.00	0.00	0.00	3,082.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
3,200.00	0.00	0.00	3,182.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
3,300.00	0.00	0.00	3,282.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
3,400.00	0.00	0.00	3,382.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
3,500.00	0.00	0.00	3,482.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
3,600.00	0.00	0.00	3,582.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
3,700.00	0.00	0.00	3,682.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
3,800.00	0.00	0.00	3,782.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
3,900.00	0.00	0.00	3,882.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
4,000.00	0.00	0.00	3,982.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
4,100.00	0.00	0.00	4,082.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
4,200.00	0.00	0.00	4,182.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
4,300.00	0.00	0.00	4,282.37	-132.75	-239.48	-130.82	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CHICA 31C-23HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4861.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4861.00usft (Drilling Rig)
Site:	3N-67W-35 CHICA 4-35HZ PAD	North Reference:	True
Well:	CHICA 31C-23HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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)
4,400.00	0.00	0.00	4,382.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
4,500.00	0.00	0.00	4,482.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
4,600.00	0.00	0.00	4,582.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
4,700.00	0.00	0.00	4,682.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
4,800.00	0.00	0.00	4,782.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
4,900.00	0.00	0.00	4,882.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
5,000.00	0.00	0.00	4,982.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
5,100.00	0.00	0.00	5,082.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
5,200.00	0.00	0.00	5,182.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
5,300.00	0.00	0.00	5,282.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
5,400.00	0.00	0.00	5,382.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
5,500.00	0.00	0.00	5,482.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
5,600.00	0.00	0.00	5,582.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
5,700.00	0.00	0.00	5,682.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
5,800.00	0.00	0.00	5,782.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
5,900.00	0.00	0.00	5,882.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
6,000.00	0.00	0.00	5,982.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
6,100.00	0.00	0.00	6,082.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
6,200.00	0.00	0.00	6,182.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
6,300.00	0.00	0.00	6,282.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
6,400.00	0.00	0.00	6,382.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
6,500.00	0.00	0.00	6,482.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
6,600.00	0.00	0.00	6,582.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
6,700.00	0.00	0.00	6,682.37	-132.75	-239.48	-130.82	0.00	0.00	0.00
6,731.01	0.00	0.00	6,713.38	-132.75	-239.48	-130.82	0.00	0.00	0.00
KOP @ 6731.01ft									
6,800.00	6.21	359.54	6,782.24	-129.01	-239.51	-127.09	9.00	9.00	0.00
6,900.00	15.21	359.54	6,880.40	-110.45	-239.66	-108.52	9.00	9.00	0.00
7,000.00	24.21	359.54	6,974.44	-76.76	-239.94	-74.83	9.00	9.00	0.00
7,100.00	33.21	359.54	7,062.06	-28.78	-240.32	-26.85	9.00	9.00	0.00
7,200.00	42.21	359.54	7,141.09	32.32	-240.82	34.25	9.00	9.00	0.00
7,300.00	51.21	359.54	7,209.59	105.03	-241.41	106.97	9.00	9.00	0.00
DLS = 9°/100'									
7,400.00	60.21	359.54	7,265.87	187.56	-242.07	189.50	9.00	9.00	0.00
7,500.00	69.21	359.54	7,308.55	277.88	-242.80	279.82	9.00	9.00	0.00
7,600.00	78.21	359.54	7,336.57	373.77	-243.58	375.71	9.00	9.00	0.00
7,700.00	87.21	359.54	7,349.25	472.85	-244.38	474.80	9.00	9.00	0.00
7,732.50	90.13	359.54	7,350.00	505.34	-244.64	507.29	9.00	9.00	0.00
End Build @ 7732.50ft - Top of Production									
7,800.00	90.13	359.54	7,349.85	572.84	-245.19	574.79	0.00	0.00	0.00
7,900.00	90.13	359.54	7,349.61	672.83	-246.00	674.79	0.00	0.00	0.00
8,000.00	90.13	359.54	7,349.38	772.83	-246.81	774.79	0.00	0.00	0.00
8,100.00	90.13	359.54	7,349.15	872.83	-247.62	874.79	0.00	0.00	0.00
8,200.00	90.13	359.54	7,348.92	972.82	-248.43	974.79	0.00	0.00	0.00
8,300.00	90.13	359.54	7,348.68	1,072.82	-249.24	1,074.78	0.00	0.00	0.00
8,400.00	90.13	359.54	7,348.45	1,172.81	-250.04	1,174.78	0.00	0.00	0.00
8,500.00	90.13	359.54	7,348.22	1,272.81	-250.85	1,274.78	0.00	0.00	0.00
8,600.00	90.13	359.54	7,347.98	1,372.81	-251.66	1,374.78	0.00	0.00	0.00
8,700.00	90.13	359.54	7,347.75	1,472.80	-252.47	1,474.78	0.00	0.00	0.00
8,800.00	90.13	359.54	7,347.52	1,572.80	-253.28	1,574.78	0.00	0.00	0.00
8,900.00	90.13	359.54	7,347.29	1,672.80	-254.09	1,674.78	0.00	0.00	0.00
9,000.00	90.13	359.54	7,347.05	1,772.79	-254.90	1,774.78	0.00	0.00	0.00
9,100.00	90.13	359.54	7,346.82	1,872.79	-255.71	1,874.78	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CHICA 31C-23HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4861.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4861.00usft (Drilling Rig)
Site:	3N-67W-35 CHICA 4-35HZ PAD	North Reference:	True
Well:	CHICA 31C-23HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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)
9,200.00	90.13	359.54	7,346.59	1,972.79	-256.52	1,974.78	0.00	0.00	0.00
9,300.00	90.13	359.54	7,346.36	2,072.78	-257.33	2,074.78	0.00	0.00	0.00
9,400.00	90.13	359.54	7,346.12	2,172.78	-258.14	2,174.78	0.00	0.00	0.00
9,500.00	90.13	359.54	7,345.89	2,272.78	-258.94	2,274.78	0.00	0.00	0.00
9,600.00	90.13	359.54	7,345.66	2,372.77	-259.75	2,374.78	0.00	0.00	0.00
9,700.00	90.13	359.54	7,345.42	2,472.77	-260.56	2,474.78	0.00	0.00	0.00
9,800.00	90.13	359.54	7,345.19	2,572.77	-261.37	2,574.78	0.00	0.00	0.00
9,900.00	90.13	359.54	7,344.96	2,672.76	-262.18	2,674.78	0.00	0.00	0.00
10,000.00	90.13	359.54	7,344.73	2,772.76	-262.99	2,774.78	0.00	0.00	0.00
10,100.00	90.13	359.54	7,344.49	2,872.75	-263.80	2,874.78	0.00	0.00	0.00
10,200.00	90.13	359.54	7,344.26	2,972.75	-264.61	2,974.78	0.00	0.00	0.00
10,300.00	90.13	359.54	7,344.03	3,072.75	-265.42	3,074.78	0.00	0.00	0.00
10,400.00	90.13	359.54	7,343.80	3,172.74	-266.23	3,174.78	0.00	0.00	0.00
10,500.00	90.13	359.54	7,343.56	3,272.74	-267.03	3,274.78	0.00	0.00	0.00
10,600.00	90.13	359.54	7,343.33	3,372.74	-267.84	3,374.78	0.00	0.00	0.00
10,700.00	90.13	359.54	7,343.10	3,472.73	-268.65	3,474.78	0.00	0.00	0.00
10,800.00	90.13	359.54	7,342.86	3,572.73	-269.46	3,574.78	0.00	0.00	0.00
10,900.00	90.13	359.54	7,342.63	3,672.73	-270.27	3,674.78	0.00	0.00	0.00
11,000.00	90.13	359.54	7,342.40	3,772.72	-271.08	3,774.78	0.00	0.00	0.00
11,100.00	90.13	359.54	7,342.17	3,872.72	-271.89	3,874.78	0.00	0.00	0.00
11,200.00	90.13	359.54	7,341.93	3,972.72	-272.70	3,974.78	0.00	0.00	0.00
11,300.00	90.13	359.54	7,341.70	4,072.71	-273.51	4,074.78	0.00	0.00	0.00
11,400.00	90.13	359.54	7,341.47	4,172.71	-274.32	4,174.78	0.00	0.00	0.00
11,500.00	90.13	359.54	7,341.23	4,272.71	-275.12	4,274.78	0.00	0.00	0.00
11,600.00	90.13	359.54	7,341.00	4,372.70	-275.93	4,374.78	0.00	0.00	0.00
11,700.00	90.13	359.54	7,340.77	4,472.70	-276.74	4,474.78	0.00	0.00	0.00
11,800.00	90.13	359.54	7,340.54	4,572.69	-277.55	4,574.78	0.00	0.00	0.00
11,900.00	90.13	359.54	7,340.30	4,672.69	-278.36	4,674.78	0.00	0.00	0.00
12,000.00	90.13	359.54	7,340.07	4,772.69	-279.17	4,774.77	0.00	0.00	0.00
12,100.00	90.13	359.54	7,339.84	4,872.68	-279.98	4,874.77	0.00	0.00	0.00
12,200.00	90.13	359.54	7,339.61	4,972.68	-280.79	4,974.77	0.00	0.00	0.00
12,300.00	90.13	359.54	7,339.37	5,072.68	-281.60	5,074.77	0.00	0.00	0.00
12,400.00	90.13	359.54	7,339.14	5,172.67	-282.41	5,174.77	0.00	0.00	0.00
12,500.00	90.13	359.54	7,338.91	5,272.67	-283.21	5,274.77	0.00	0.00	0.00
12,600.00	90.13	359.54	7,338.67	5,372.67	-284.02	5,374.77	0.00	0.00	0.00
12,700.00	90.13	359.54	7,338.44	5,472.66	-284.83	5,474.77	0.00	0.00	0.00
12,800.00	90.13	359.54	7,338.21	5,572.66	-285.64	5,574.77	0.00	0.00	0.00
12,900.00	90.13	359.54	7,337.98	5,672.66	-286.45	5,674.77	0.00	0.00	0.00
13,000.00	90.13	359.54	7,337.74	5,772.65	-287.26	5,774.77	0.00	0.00	0.00
13,100.00	90.13	359.54	7,337.51	5,872.65	-288.07	5,874.77	0.00	0.00	0.00
13,200.00	90.13	359.54	7,337.28	5,972.64	-288.88	5,974.77	0.00	0.00	0.00
13,300.00	90.13	359.54	7,337.04	6,072.64	-289.69	6,074.77	0.00	0.00	0.00
13,400.00	90.13	359.54	7,336.81	6,172.64	-290.50	6,174.77	0.00	0.00	0.00
13,500.00	90.13	359.54	7,336.58	6,272.63	-291.31	6,274.77	0.00	0.00	0.00
13,600.00	90.13	359.54	7,336.35	6,372.63	-292.11	6,374.77	0.00	0.00	0.00
13,700.00	90.13	359.54	7,336.11	6,472.63	-292.92	6,474.77	0.00	0.00	0.00
13,800.00	90.13	359.54	7,335.88	6,572.62	-293.73	6,574.77	0.00	0.00	0.00
13,900.00	90.13	359.54	7,335.65	6,672.62	-294.54	6,674.77	0.00	0.00	0.00
14,000.00	90.13	359.54	7,335.42	6,772.62	-295.35	6,774.77	0.00	0.00	0.00
14,100.00	90.13	359.54	7,335.18	6,872.61	-296.16	6,874.77	0.00	0.00	0.00
14,200.00	90.13	359.54	7,334.95	6,972.61	-296.97	6,974.77	0.00	0.00	0.00
14,300.00	90.13	359.54	7,334.72	7,072.61	-297.78	7,074.77	0.00	0.00	0.00
14,400.00	90.13	359.54	7,334.48	7,172.60	-298.59	7,174.77	0.00	0.00	0.00
14,500.00	90.13	359.54	7,334.25	7,272.60	-299.40	7,274.77	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CHICA 31C-23HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4861.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4861.00usft (Drilling Rig)
Site:	3N-67W-35 CHICA 4-35HZ PAD	North Reference:	True
Well:	CHICA 31C-23HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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)
14,600.00	90.13	359.54	7,334.02	7,372.60	-300.20	7,374.77	0.00	0.00	0.00
14,700.00	90.13	359.54	7,333.79	7,472.59	-301.01	7,474.77	0.00	0.00	0.00
14,800.00	90.13	359.54	7,333.55	7,572.59	-301.82	7,574.77	0.00	0.00	0.00
14,900.00	90.13	359.54	7,333.32	7,672.58	-302.63	7,674.77	0.00	0.00	0.00
15,000.00	90.13	359.54	7,333.09	7,772.58	-303.44	7,774.77	0.00	0.00	0.00
15,100.00	90.13	359.54	7,332.86	7,872.58	-304.25	7,874.77	0.00	0.00	0.00
15,200.00	90.13	359.54	7,332.62	7,972.57	-305.06	7,974.77	0.00	0.00	0.00
15,300.00	90.13	359.54	7,332.39	8,072.57	-305.87	8,074.77	0.00	0.00	0.00
15,400.00	90.13	359.54	7,332.16	8,172.57	-306.68	8,174.77	0.00	0.00	0.00
15,500.00	90.13	359.54	7,331.92	8,272.56	-307.49	8,274.77	0.00	0.00	0.00
15,600.00	90.13	359.54	7,331.69	8,372.56	-308.29	8,374.77	0.00	0.00	0.00
15,700.00	90.13	359.54	7,331.46	8,472.56	-309.10	8,474.76	0.00	0.00	0.00
15,800.00	90.13	359.54	7,331.23	8,572.55	-309.91	8,574.76	0.00	0.00	0.00
15,900.00	90.13	359.54	7,330.99	8,672.55	-310.72	8,674.76	0.00	0.00	0.00
16,000.00	90.13	359.54	7,330.76	8,772.55	-311.53	8,774.76	0.00	0.00	0.00
16,100.00	90.13	359.54	7,330.53	8,872.54	-312.34	8,874.76	0.00	0.00	0.00
16,200.00	90.13	359.54	7,330.29	8,972.54	-313.15	8,974.76	0.00	0.00	0.00
16,300.00	90.13	359.54	7,330.06	9,072.54	-313.96	9,074.76	0.00	0.00	0.00
16,400.00	90.13	359.54	7,329.83	9,172.53	-314.77	9,174.76	0.00	0.00	0.00
16,500.00	90.13	359.54	7,329.60	9,272.53	-315.58	9,274.76	0.00	0.00	0.00
16,600.00	90.13	359.54	7,329.36	9,372.52	-316.39	9,374.76	0.00	0.00	0.00
16,700.00	90.13	359.54	7,329.13	9,472.52	-317.19	9,474.76	0.00	0.00	0.00
16,800.00	90.13	359.54	7,328.90	9,572.52	-318.00	9,574.76	0.00	0.00	0.00
16,900.00	90.13	359.54	7,328.67	9,672.51	-318.81	9,674.76	0.00	0.00	0.00
17,000.00	90.13	359.54	7,328.43	9,772.51	-319.62	9,774.76	0.00	0.00	0.00
17,100.00	90.13	359.54	7,328.20	9,872.51	-320.43	9,874.76	0.00	0.00	0.00
17,185.83	90.13	359.54	7,328.00	9,958.33	-321.12	9,960.59	0.00	0.00	0.00
TD Well @ 17185.83ft									

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CHICA 31C-23HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4861.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4861.00usft (Drilling Rig)
Site:	3N-67W-35 CHICA 4-35HZ PAD	North Reference:	True
Well:	CHICA 31C-23HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
Design:	Permit Rev-1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
3N-R67W-Sec. 26_Secti	0.00	0.00	0.00	0.00	0.00	14,595,347.16	1,677,799.14	40.188346	-104.866147
- plan hits target center									
- Polygon									
Point 1			0.00	5,593.40	-348.84	14,600,940.02	1,677,441.86		
Point 2			0.00	5,553.49	2,263.61	14,600,904.05	1,680,054.37		
Point 3			0.00	5,514.70	4,876.21	14,600,869.20	1,682,667.03		
Point 4			0.00	2,852.43	4,856.17	14,598,206.90	1,682,651.00		
Point 5			0.00	189.60	4,835.61	14,595,544.05	1,682,634.45		
Point 6			0.00	247.25	2,267.09	14,595,597.82	1,680,065.85		
Point 7			0.00	308.38	-317.06	14,595,655.06	1,677,481.61		
Point 8			0.00	2,949.42	-337.09	14,598,296.07	1,677,457.60		
CHICA 31C-23HZ_460' (0.00	0.00	0.00	308.42	-316.97	14,595,655.10	1,677,481.70	40.189193	-104.867282
- plan misses target center by 442.26usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Circle (radius 460.00)									
CHICA 31C-23HZ_Hardl	0.00	0.00	0.00	0.00	0.00	14,595,347.16	1,677,799.14	40.188346	-104.866147
- plan hits target center									
- Polygon									
Point 1			0.00	6,914.88	-817.81	14,602,260.80	1,676,970.90		
Point 2			0.00	8,226.59	-822.04	14,603,572.50	1,676,964.69		
Point 3			0.00	9,553.11	-835.74	14,604,899.00	1,676,948.99		
Point 4			0.00	10,013.31	-837.24	14,605,359.19	1,676,946.80		
Point 5			0.00	9,998.52	-377.06	14,605,345.10	1,677,407.00		
Point 6			0.00	9,992.13	83.03	14,605,339.40	1,677,867.10		
Point 7			0.00	9,531.82	86.23	14,604,879.10	1,677,870.99		
Point 8			0.00	8,205.90	100.03	14,603,553.20	1,677,886.79		
Point 9			0.00	6,897.29	107.56	14,602,244.60	1,677,896.30		
Point 10			0.00	5,595.88	111.10	14,600,943.20	1,677,901.80		
Point 11			0.00	4,262.57	118.49	14,599,609.90	1,677,911.20		
Point 12			0.00	2,938.95	125.69	14,598,286.29	1,677,920.39		
Point 13			0.00	1,618.24	134.40	14,596,965.60	1,677,931.10		
Point 14			0.00	297.52	143.21	14,595,644.89	1,677,941.90		
Point 15			0.00	-162.79	150.32	14,595,184.59	1,677,949.70		
Point 16			0.00	-152.69	-309.87	14,595,194.00	1,677,489.50		
Point 17			0.00	-140.90	-770.15	14,595,205.10	1,677,029.20		
Point 18			0.00	319.41	-777.06	14,595,665.39	1,677,021.59		
Point 19			0.00	1,636.93	-785.77	14,596,982.90	1,677,010.90		
Point 20			0.00	2,944.04	-794.30	14,598,290.00	1,677,000.40		
Point 21			0.00	4,278.05	-801.69	14,599,623.99	1,676,991.00		
Point 22			0.00	5,601.47	-808.89	14,600,947.40	1,676,981.80		
Point 23			0.00	6,914.88	-817.81	14,602,260.80	1,676,970.90		
3N-R67W-Sec. 23_Secti	0.00	0.00	0.00	0.00	0.00	14,595,347.16	1,677,799.14	40.188346	-104.866147
- plan hits target center									
- Polygon									
Point 1			0.00	10,872.19	-387.66	14,606,218.75	1,677,395.08		
Point 2			0.00	10,803.66	2,212.66	14,606,154.14	1,679,995.50		
Point 3			0.00	10,722.59	4,802.58	14,606,076.98	1,682,585.54		
Point 4			0.00	8,106.26	4,826.78	14,603,460.68	1,682,613.69		
Point 5			0.00	5,514.70	4,876.21	14,600,869.20	1,682,667.03		
Point 6			0.00	5,553.49	2,263.61	14,600,904.05	1,680,054.37		
Point 7			0.00	5,593.40	-348.84	14,600,940.02	1,677,441.86		
Point 8			0.00	8,218.33	-363.85	14,603,564.93	1,677,422.90		
CHICA 31C-23HZ_460' (0.00	0.00	0.00	9,543.01	-372.95	14,604,889.60	1,677,411.80	40.214552	-104.867483
- plan misses target center by 7329.15usft at 16788.00usft MD (7328.93 TVD, 9560.52 N, -317.91 E)									
- Circle (radius 460.00)									
CHICA 31C-23HZ_SHL	0.00	0.00	0.00	0.00	0.00	14,595,347.16	1,677,799.14	40.188346	-104.866147

Corporate
Planning Report

Database:	PLANNING				Local Co-ordinate Reference:			Well CHICA 31C-23HZ	
Company:	US ROCKIES WATTENBERG PLANNING				TVD Reference:			RKB = 17' @ 4861.00usft (Drilling Rig)	
Project:	WELD-NAD83-UTMFT13N				MD Reference:			RKB = 17' @ 4861.00usft (Drilling Rig)	
Site:	3N-67W-35 CHICA 4-35HZ PAD				North Reference:			True	
Well:	CHICA 31C-23HZ				Survey Calculation Method:			Minimum Curvature	
Wellbore:	Plan B								
Design:	Permit Rev-1								
- plan hits target center									
- Point									
3N-R67W-Sec. 35_Secti	0.00	0.00	0.00	0.00	0.00	14,595,347.16	1,677,799.14	40.188346	-104.866147
- plan hits target center									
- Polygon									
Point 1			0.00	308.38	-317.06	14,595,655.06	1,677,481.61		
Point 2			0.00	247.25	2,267.09	14,595,597.82	1,680,065.85		
Point 3			0.00	189.60	4,835.61	14,595,544.05	1,682,634.45		
Point 4			0.00	-2,474.69	4,906.83	14,592,879.87	1,682,709.69		
Point 5			0.00	-5,142.10	4,998.35	14,590,212.60	1,682,805.23		
Point 6			0.00	-5,082.34	2,341.25	14,590,268.35	1,680,148.04		
Point 7			0.00	-5,031.79	-225.14	14,590,315.03	1,677,581.58		
Point 8			0.00	-2,377.13	-275.93	14,592,969.61	1,677,526.79		
3N-R67W-Sec. 14_Secti	0.00	0.00	51.00	14,860.24	-5,341.39	14,610,199.33	1,672,435.34	40.229152	-104.885284
- plan misses target center by 10108.74usft at 17185.83usft MD (7328.00 TVD, 9958.33 N, -321.12 E)									
- Polygon									
Point 1			51.00	1,289.82	4,945.22	14,611,496.61	1,677,378.61		
Point 2			51.00	1,227.63	7,548.72	14,611,438.34	1,679,982.21		
Point 3			51.00	1,165.86	10,153.16	14,611,380.50	1,682,586.74		
Point 4			51.00	-1,533.48	10,197.29	14,608,681.23	1,682,634.94		
Point 5			51.00	-4,135.40	10,144.38	14,606,079.23	1,682,585.95		
Point 6			51.00	-4,054.81	7,554.83	14,606,155.92	1,679,996.28		
Point 7			51.00	-3,986.95	4,954.50	14,606,219.86	1,677,395.85		
Point 8			51.00	-1,348.61	4,949.74	14,608,858.19	1,677,387.11		
CHICA 31C-23HZ_BHL	0.00	0.00	7,328.00	9,958.34	-321.12	14,605,305.00	1,677,463.00	40.215693	-104.867298
- plan hits target center									
- Point									
CHICA 31C-23HZ_Heel	0.00	0.00	7,350.00	507.21	-245.37	14,595,854.00	1,677,553.00	40.189739	-104.867026
- plan misses target center by 0.71usft at 7734.38usft MD (7350.00 TVD, 507.22 N, -244.66 E)									
- Point									

Casing Points					
	Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
	1,508.79	1,500.00	9 5/8"	9-5/8	13-1/2
	7,732.50	7,350.00	Top of Production	5-1/2	7-7/8

Formations						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
	945.31	942.00	Fox Hills			
	3,792.63	3,775.00	Parkman			
	4,453.63	4,436.00	Sussex			
	7,047.50	7,017.00	Sharon Springs			
	7,122.92	7,081.00	Niobrara			
	7,193.16	7,136.00	Nio B			
	17,185.83	7,328.00	TD Well		0.00	
	7,732.50	7,350.00	Top of Production		0.00	

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CHICA 31C-23HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4861.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4861.00usft (Drilling Rig)
Site:	3N-67W-35 CHICA 4-35HZ PAD	North Reference:	True
Well:	CHICA 31C-23HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
Design:	Permit Rev-1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
250.00	250.00	0.00	0.00	Begin Nudge @ 250.00ft
783.33	781.60	-18.02	-32.51	End Nudge @ 783.33ft
2,283.33	2,267.00	-119.23	-215.10	Begin Drop @ 2283.33ft
2,683.33	2,665.71	-132.75	-239.48	End Drop @ 2683.33ft
6,731.01	6,713.38	-132.75	-239.48	KOP @ 6731.01ft
7,300.00	7,209.59	105.03	-241.41	DLS = 9°/100'
7,732.50	7,350.00	505.34	-244.64	End Build @ 7732.50ft
17,185.83	7,328.00	9,958.33	-321.12	TD Well @ 17185.83ft