

US ROCKIES WATTENBERG PLANNING

**WELD-NAD83-UTMFT13N
3N-67W-35 CHICA 4-35HZ PAD
CHICA 4N2-23HZ**

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 4N2-23HZ
Wellbore: Plan B
Design: Permit Rev-1

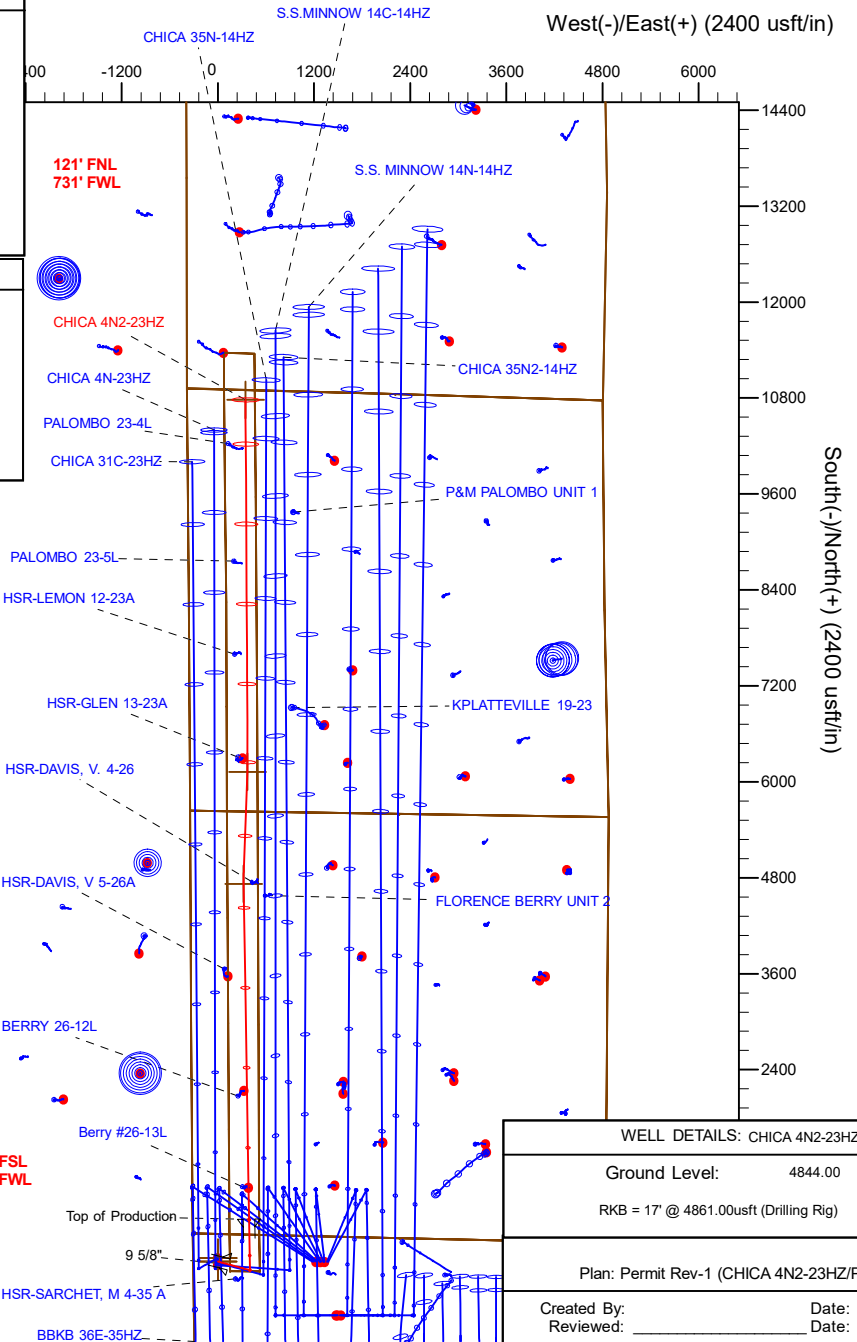
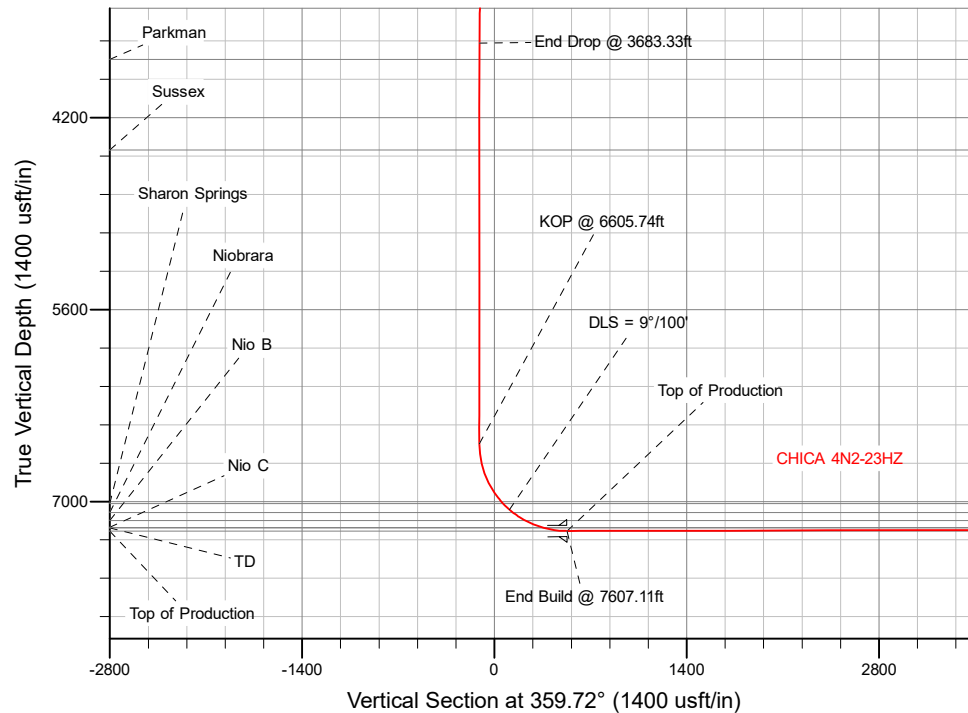
US ROCKIES WATTENBERG PLANNING

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	105.00	781.60	-9.62	35.91	1.50	105.00	-9.80	
4	3283.33	8.00	105.00	3257.27	-99.67	371.98	0.00	0.00	-101.49	
5	3683.33	0.00	0.00	3655.97	-106.89	398.91	2.00	180.00	-108.84	
6	6605.74	0.00	0.00	6578.38	-106.89	398.91	0.00	0.00	-108.84	
7	7607.11	90.12	359.08	7215.00	531.01	388.62	9.00	359.08	529.11	
8	11800.57	90.12	359.08	7206.00	4723.92	320.98	0.00	0.00	4722.29	CHICA 4N2-23HZ_tgt1
9	11951.16	90.12	2.09	7205.68	4874.48	322.51	2.00	89.99	4872.85	CHICA 4N2-23HZ_tgt2
10	13201.41	90.12	2.09	7202.99	6123.90	368.05	0.00	0.00	6122.03	
11	13321.53	90.12	359.69	7202.73	6243.99	369.91	2.00	-90.00	6242.11	
12	17854.23	90.12	359.69	7193.00	10776.62	345.00	0.00	0.00	10774.81	CHICA 4N2-23HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
CHICA 4N2-23HZ_SHL	0.00	0.00	0.00	40.188222	-104.866148	Point
CHICA 4N2-23HZ_BHL	7193.00	10776.62	345.00	40.217816	-104.864912	Point



Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CHICA 4N2-23HZ
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 4N2-23HZ	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 4N2-23HZ					
Well Position	+N/-S	-45.15 usft	Northing:	14,595,302.00 usft	Latitude:	40.188222
	+E/-W	-0.28 usft	Easting:	1,677,798.92 usft	Longitude:	-104.866148
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	359.72

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	105.00	781.60	-9.62	35.91	1.50	1.50	0.00	105.00	
3,283.33	8.00	105.00	3,257.27	-99.67	371.98	0.00	0.00	0.00	0.00	
3,683.33	0.00	0.00	3,655.97	-106.89	398.91	2.00	-2.00	0.00	180.00	
6,605.74	0.00	0.00	6,578.38	-106.89	398.91	0.00	0.00	0.00	0.00	
7,607.11	90.12	359.08	7,215.00	531.01	388.62	9.00	9.00	-0.09	359.08	
11,800.57	90.12	359.08	7,206.00	4,723.92	320.98	0.00	0.00	0.00	0.00	CHICA 4N2-23HZ_tgt
11,951.16	90.12	2.09	7,205.68	4,874.48	322.51	2.00	0.00	2.00	89.99	
13,201.41	90.12	2.09	7,202.99	6,123.90	368.05	0.00	0.00	0.00	0.00	CHICA 4N2-23HZ_tgt
13,321.53	90.12	359.69	7,202.73	6,243.99	369.91	2.00	0.00	-2.00	-90.00	
17,854.23	90.12	359.69	7,193.00	10,776.62	345.00	0.00	0.00	0.00	0.00	CHICA 4N2-23HZ_BH

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CHICA 4N2-23HZ
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 4N2-23HZ	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	105.00	300.00	-0.08	0.32	-0.09	1.50	1.50	0.00
400.00	2.25	105.00	399.96	-0.76	2.84	-0.78	1.50	1.50	0.00
500.00	3.75	105.00	499.82	-2.12	7.90	-2.16	1.50	1.50	0.00
600.00	5.25	105.00	599.51	-4.15	15.48	-4.22	1.50	1.50	0.00
700.00	6.75	105.00	698.96	-6.85	25.57	-6.98	1.50	1.50	0.00
783.33	8.00	105.00	781.60	-9.62	35.91	-9.80	1.50	1.50	0.00
End Nudge @ 783.33ft									
800.00	8.00	105.00	798.11	-10.22	38.15	-10.41	0.00	0.00	0.00
900.00	8.00	105.00	897.13	-13.82	51.59	-14.08	0.00	0.00	0.00
1,000.00	8.00	105.00	996.16	-17.43	65.03	-17.74	0.00	0.00	0.00
1,100.00	8.00	105.00	1,095.19	-21.03	78.48	-21.41	0.00	0.00	0.00
1,200.00	8.00	105.00	1,194.21	-24.63	91.92	-25.08	0.00	0.00	0.00
1,300.00	8.00	105.00	1,293.24	-28.23	105.36	-28.75	0.00	0.00	0.00
1,400.00	8.00	105.00	1,392.27	-31.83	118.81	-32.41	0.00	0.00	0.00
1,500.00	8.00	105.00	1,491.29	-35.44	132.25	-36.08	0.00	0.00	0.00
1,508.79	8.00	105.00	1,500.00	-35.75	133.43	-36.40	0.00	0.00	0.00
9 5/8"									
1,600.00	8.00	105.00	1,590.32	-39.04	145.69	-39.75	0.00	0.00	0.00
1,700.00	8.00	105.00	1,689.35	-42.64	159.13	-43.42	0.00	0.00	0.00
1,800.00	8.00	105.00	1,788.37	-46.24	172.58	-47.08	0.00	0.00	0.00
1,900.00	8.00	105.00	1,887.40	-49.84	186.02	-50.75	0.00	0.00	0.00
2,000.00	8.00	105.00	1,986.43	-53.45	199.46	-54.42	0.00	0.00	0.00
2,100.00	8.00	105.00	2,085.46	-57.05	212.91	-58.09	0.00	0.00	0.00
2,200.00	8.00	105.00	2,184.48	-60.65	226.35	-61.76	0.00	0.00	0.00
2,300.00	8.00	105.00	2,283.51	-64.25	239.79	-65.42	0.00	0.00	0.00
2,400.00	8.00	105.00	2,382.54	-67.85	253.24	-69.09	0.00	0.00	0.00
2,500.00	8.00	105.00	2,481.56	-71.46	266.68	-72.76	0.00	0.00	0.00
2,600.00	8.00	105.00	2,580.59	-75.06	280.12	-76.43	0.00	0.00	0.00
2,700.00	8.00	105.00	2,679.62	-78.66	293.57	-80.09	0.00	0.00	0.00
2,800.00	8.00	105.00	2,778.64	-82.26	307.01	-83.76	0.00	0.00	0.00
2,900.00	8.00	105.00	2,877.67	-85.86	320.45	-87.43	0.00	0.00	0.00
3,000.00	8.00	105.00	2,976.70	-89.47	333.90	-91.10	0.00	0.00	0.00
3,100.00	8.00	105.00	3,075.72	-93.07	347.34	-94.77	0.00	0.00	0.00
3,200.00	8.00	105.00	3,174.75	-96.67	360.78	-98.43	0.00	0.00	0.00
3,283.33	8.00	105.00	3,257.27	-99.67	371.98	-101.49	0.00	0.00	0.00
Begin Drop @ 3283.33ft									
3,300.00	7.67	105.00	3,273.78	-100.26	374.18	-102.09	2.00	-2.00	0.00
3,400.00	5.67	105.00	3,373.10	-103.27	385.39	-105.15	2.00	-2.00	0.00
3,500.00	3.67	105.00	3,472.77	-105.37	393.25	-107.29	2.00	-2.00	0.00
3,600.00	1.67	105.00	3,572.65	-106.57	397.74	-108.52	2.00	-2.00	0.00
3,683.33	0.00	0.00	3,655.97	-106.89	398.91	-108.84	2.00	-2.00	0.00
End Drop @ 3683.33ft									
3,700.00	0.00	0.00	3,672.64	-106.89	398.91	-108.84	0.00	0.00	0.00
3,800.00	0.00	0.00	3,772.64	-106.89	398.91	-108.84	0.00	0.00	0.00
3,900.00	0.00	0.00	3,872.64	-106.89	398.91	-108.84	0.00	0.00	0.00
4,000.00	0.00	0.00	3,972.64	-106.89	398.91	-108.84	0.00	0.00	0.00
4,100.00	0.00	0.00	4,072.64	-106.89	398.91	-108.84	0.00	0.00	0.00
4,200.00	0.00	0.00	4,172.64	-106.89	398.91	-108.84	0.00	0.00	0.00
4,300.00	0.00	0.00	4,272.64	-106.89	398.91	-108.84	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CHICA 4N2-23HZ
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 4N2-23HZ	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	4,372.64	-106.89	398.91	-108.84	0.00	0.00	0.00
4,500.00	0.00	0.00	4,472.64	-106.89	398.91	-108.84	0.00	0.00	0.00
4,600.00	0.00	0.00	4,572.64	-106.89	398.91	-108.84	0.00	0.00	0.00
4,700.00	0.00	0.00	4,672.64	-106.89	398.91	-108.84	0.00	0.00	0.00
4,800.00	0.00	0.00	4,772.64	-106.89	398.91	-108.84	0.00	0.00	0.00
4,900.00	0.00	0.00	4,872.64	-106.89	398.91	-108.84	0.00	0.00	0.00
5,000.00	0.00	0.00	4,972.64	-106.89	398.91	-108.84	0.00	0.00	0.00
5,100.00	0.00	0.00	5,072.64	-106.89	398.91	-108.84	0.00	0.00	0.00
5,200.00	0.00	0.00	5,172.64	-106.89	398.91	-108.84	0.00	0.00	0.00
5,300.00	0.00	0.00	5,272.64	-106.89	398.91	-108.84	0.00	0.00	0.00
5,400.00	0.00	0.00	5,372.64	-106.89	398.91	-108.84	0.00	0.00	0.00
5,500.00	0.00	0.00	5,472.64	-106.89	398.91	-108.84	0.00	0.00	0.00
5,600.00	0.00	0.00	5,572.64	-106.89	398.91	-108.84	0.00	0.00	0.00
5,700.00	0.00	0.00	5,672.64	-106.89	398.91	-108.84	0.00	0.00	0.00
5,800.00	0.00	0.00	5,772.64	-106.89	398.91	-108.84	0.00	0.00	0.00
5,900.00	0.00	0.00	5,872.64	-106.89	398.91	-108.84	0.00	0.00	0.00
6,000.00	0.00	0.00	5,972.64	-106.89	398.91	-108.84	0.00	0.00	0.00
6,100.00	0.00	0.00	6,072.64	-106.89	398.91	-108.84	0.00	0.00	0.00
6,200.00	0.00	0.00	6,172.64	-106.89	398.91	-108.84	0.00	0.00	0.00
6,300.00	0.00	0.00	6,272.64	-106.89	398.91	-108.84	0.00	0.00	0.00
6,400.00	0.00	0.00	6,372.64	-106.89	398.91	-108.84	0.00	0.00	0.00
6,500.00	0.00	0.00	6,472.64	-106.89	398.91	-108.84	0.00	0.00	0.00
6,600.00	0.00	0.00	6,572.64	-106.89	398.91	-108.84	0.00	0.00	0.00
6,605.74	0.00	0.00	6,578.38	-106.89	398.91	-108.84	0.00	0.00	0.00
KOP @ 6605.74ft									
6,700.00	8.48	359.08	6,672.30	-99.92	398.80	-101.87	9.00	9.00	0.00
6,800.00	17.48	359.08	6,769.64	-77.48	398.44	-79.43	9.00	9.00	0.00
6,900.00	26.48	359.08	6,862.27	-40.09	397.84	-42.04	9.00	9.00	0.00
7,000.00	35.48	359.08	6,947.92	11.32	397.01	9.38	9.00	9.00	0.00
7,100.00	44.48	359.08	7,024.46	75.51	395.97	73.57	9.00	9.00	0.00
7,150.00	48.98	359.08	7,058.72	111.90	395.38	109.97	9.00	9.00	0.00
DLS = 9°/100'									
7,200.00	53.48	359.08	7,090.02	150.87	394.76	148.94	9.00	9.00	0.00
7,300.00	62.48	359.08	7,142.99	235.56	393.39	233.64	9.00	9.00	0.00
7,400.00	71.48	359.08	7,182.05	327.49	391.91	325.58	9.00	9.00	0.00
7,500.00	80.48	359.08	7,206.24	424.40	390.34	422.49	9.00	9.00	0.00
7,600.00	89.48	359.08	7,214.98	523.91	388.74	522.00	9.00	9.00	0.00
7,607.11	90.12	359.08	7,215.00	531.01	388.62	529.11	9.00	9.00	0.00
End Build @ 7607.11ft - Top of Production									
7,700.00	90.12	359.08	7,214.80	623.89	387.12	621.99	0.00	0.00	0.00
7,800.00	90.12	359.08	7,214.59	723.88	385.51	721.99	0.00	0.00	0.00
7,900.00	90.12	359.08	7,214.37	823.87	383.90	821.98	0.00	0.00	0.00
8,000.00	90.12	359.08	7,214.16	923.85	382.29	921.97	0.00	0.00	0.00
8,100.00	90.12	359.08	7,213.94	1,023.84	380.67	1,021.97	0.00	0.00	0.00
8,200.00	90.12	359.08	7,213.73	1,123.83	379.06	1,121.96	0.00	0.00	0.00
8,300.00	90.12	359.08	7,213.51	1,223.81	377.45	1,221.95	0.00	0.00	0.00
8,400.00	90.12	359.08	7,213.30	1,323.80	375.83	1,321.95	0.00	0.00	0.00
8,500.00	90.12	359.08	7,213.09	1,423.79	374.22	1,421.94	0.00	0.00	0.00
8,600.00	90.12	359.08	7,212.87	1,523.77	372.61	1,521.93	0.00	0.00	0.00
8,700.00	90.12	359.08	7,212.66	1,623.76	370.99	1,621.93	0.00	0.00	0.00
8,800.00	90.12	359.08	7,212.44	1,723.75	369.38	1,721.92	0.00	0.00	0.00
8,900.00	90.12	359.08	7,212.23	1,823.73	367.77	1,821.91	0.00	0.00	0.00
9,000.00	90.12	359.08	7,212.01	1,923.72	366.15	1,921.91	0.00	0.00	0.00

Corporate
Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CHICA 4N2-23HZ
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 4N2-23HZ	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)
9,100.00	90.12	359.08	7,211.80	2,023.71	364.54	2,021.90	0.00	0.00	0.00
9,200.00	90.12	359.08	7,211.58	2,123.69	362.93	2,121.89	0.00	0.00	0.00
9,300.00	90.12	359.08	7,211.37	2,223.68	361.32	2,221.89	0.00	0.00	0.00
9,400.00	90.12	359.08	7,211.15	2,323.67	359.70	2,321.88	0.00	0.00	0.00
9,500.00	90.12	359.08	7,210.94	2,423.65	358.09	2,421.88	0.00	0.00	0.00
9,600.00	90.12	359.08	7,210.72	2,523.64	356.48	2,521.87	0.00	0.00	0.00
9,700.00	90.12	359.08	7,210.51	2,623.63	354.86	2,621.86	0.00	0.00	0.00
9,800.00	90.12	359.08	7,210.29	2,723.61	353.25	2,721.86	0.00	0.00	0.00
9,900.00	90.12	359.08	7,210.08	2,823.60	351.64	2,821.85	0.00	0.00	0.00
10,000.00	90.12	359.08	7,209.87	2,923.59	350.02	2,921.84	0.00	0.00	0.00
10,100.00	90.12	359.08	7,209.65	3,023.57	348.41	3,021.84	0.00	0.00	0.00
10,200.00	90.12	359.08	7,209.44	3,123.56	346.80	3,121.83	0.00	0.00	0.00
10,300.00	90.12	359.08	7,209.22	3,223.55	345.18	3,221.82	0.00	0.00	0.00
10,400.00	90.12	359.08	7,209.01	3,323.54	343.57	3,321.82	0.00	0.00	0.00
10,500.00	90.12	359.08	7,208.79	3,423.52	341.96	3,421.81	0.00	0.00	0.00
10,600.00	90.12	359.08	7,208.58	3,523.51	340.35	3,521.80	0.00	0.00	0.00
10,700.00	90.12	359.08	7,208.36	3,623.50	338.73	3,621.80	0.00	0.00	0.00
10,800.00	90.12	359.08	7,208.15	3,723.48	337.12	3,721.79	0.00	0.00	0.00
10,900.00	90.12	359.08	7,207.93	3,823.47	335.51	3,821.78	0.00	0.00	0.00
11,000.00	90.12	359.08	7,207.72	3,923.46	333.89	3,921.78	0.00	0.00	0.00
11,100.00	90.12	359.08	7,207.50	4,023.44	332.28	4,021.77	0.00	0.00	0.00
11,200.00	90.12	359.08	7,207.29	4,123.43	330.67	4,121.76	0.00	0.00	0.00
11,300.00	90.12	359.08	7,207.07	4,223.42	329.05	4,221.76	0.00	0.00	0.00
11,400.00	90.12	359.08	7,206.86	4,323.40	327.44	4,321.75	0.00	0.00	0.00
11,500.00	90.12	359.08	7,206.65	4,423.39	325.83	4,421.74	0.00	0.00	0.00
11,600.00	90.12	359.08	7,206.43	4,523.38	324.22	4,521.74	0.00	0.00	0.00
11,700.00	90.12	359.08	7,206.22	4,623.36	322.60	4,621.73	0.00	0.00	0.00
11,800.00	90.12	359.08	7,206.00	4,723.35	320.99	4,721.72	0.00	0.00	0.00
11,800.57	90.12	359.08	7,206.00	4,723.92	320.98	4,722.29	0.00	0.00	0.00
Begin Turn @ 11800.57ft									
11,900.00	90.12	1.06	7,205.79	4,823.34	321.10	4,821.72	2.00	0.00	2.00
11,951.16	90.12	2.09	7,205.68	4,874.48	322.51	4,872.85	2.00	0.00	2.00
End Turn @ 11951.16ft									
12,000.00	90.12	2.09	7,205.57	4,923.29	324.29	4,921.65	0.00	0.00	0.00
12,100.00	90.12	2.09	7,205.36	5,023.23	327.93	5,021.56	0.00	0.00	0.00
12,200.00	90.12	2.09	7,205.14	5,123.16	331.57	5,121.48	0.00	0.00	0.00
12,300.00	90.12	2.09	7,204.93	5,223.09	335.22	5,221.39	0.00	0.00	0.00
12,400.00	90.12	2.09	7,204.71	5,323.03	338.86	5,321.31	0.00	0.00	0.00
12,500.00	90.12	2.09	7,204.50	5,422.96	342.50	5,421.22	0.00	0.00	0.00
12,600.00	90.12	2.09	7,204.28	5,522.89	346.14	5,521.13	0.00	0.00	0.00
12,700.00	90.12	2.09	7,204.07	5,622.83	349.79	5,621.05	0.00	0.00	0.00
12,800.00	90.12	2.09	7,203.85	5,722.76	353.43	5,720.96	0.00	0.00	0.00
12,900.00	90.12	2.09	7,203.64	5,822.69	357.07	5,820.88	0.00	0.00	0.00
13,000.00	90.12	2.09	7,203.42	5,922.63	360.71	5,920.79	0.00	0.00	0.00
13,100.00	90.12	2.09	7,203.21	6,022.56	364.36	6,020.71	0.00	0.00	0.00
13,200.00	90.12	2.09	7,202.99	6,122.49	368.00	6,120.62	0.00	0.00	0.00
13,201.41	90.12	2.09	7,202.99	6,123.90	368.05	6,122.03	0.00	0.00	0.00
Begin Turn to BHL @ 13201.41ft									
13,300.00	90.12	0.12	7,202.78	6,222.47	369.95	6,220.59	2.00	0.00	-2.00
13,321.53	90.12	359.69	7,202.73	6,244.00	369.91	6,242.12	2.00	0.00	-2.00
End Turn @ 13321.53ft									
13,400.00	90.12	359.69	7,202.56	6,322.47	369.48	6,320.59	0.00	0.00	0.00
13,500.00	90.12	359.69	7,202.35	6,422.47	368.93	6,420.59	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CHICA 4N2-23HZ
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 4N2-23HZ	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)
13,600.00	90.12	359.69	7,202.13	6,522.46	368.38	6,520.59	0.00	0.00	0.00
13,700.00	90.12	359.69	7,201.92	6,622.46	367.83	6,620.58	0.00	0.00	0.00
13,800.00	90.12	359.69	7,201.70	6,722.46	367.28	6,720.58	0.00	0.00	0.00
13,900.00	90.12	359.69	7,201.49	6,822.46	366.73	6,820.58	0.00	0.00	0.00
14,000.00	90.12	359.69	7,201.28	6,922.46	366.18	6,920.58	0.00	0.00	0.00
14,100.00	90.12	359.69	7,201.06	7,022.45	365.63	7,020.58	0.00	0.00	0.00
14,200.00	90.12	359.69	7,200.85	7,122.45	365.08	7,120.58	0.00	0.00	0.00
14,300.00	90.12	359.69	7,200.63	7,222.45	364.53	7,220.58	0.00	0.00	0.00
14,400.00	90.12	359.69	7,200.42	7,322.45	363.98	7,320.58	0.00	0.00	0.00
14,500.00	90.12	359.69	7,200.20	7,422.45	363.43	7,420.58	0.00	0.00	0.00
14,600.00	90.12	359.69	7,199.99	7,522.45	362.88	7,520.58	0.00	0.00	0.00
14,700.00	90.12	359.69	7,199.77	7,622.44	362.33	7,620.58	0.00	0.00	0.00
14,800.00	90.12	359.69	7,199.56	7,722.44	361.78	7,720.58	0.00	0.00	0.00
14,900.00	90.12	359.69	7,199.34	7,822.44	361.23	7,820.58	0.00	0.00	0.00
15,000.00	90.12	359.69	7,199.13	7,922.44	360.68	7,920.58	0.00	0.00	0.00
15,100.00	90.12	359.69	7,198.91	8,022.44	360.13	8,020.58	0.00	0.00	0.00
15,200.00	90.12	359.69	7,198.70	8,122.44	359.59	8,120.58	0.00	0.00	0.00
15,300.00	90.12	359.69	7,198.48	8,222.43	359.04	8,220.58	0.00	0.00	0.00
15,400.00	90.12	359.69	7,198.27	8,322.43	358.49	8,320.58	0.00	0.00	0.00
15,500.00	90.12	359.69	7,198.05	8,422.43	357.94	8,420.58	0.00	0.00	0.00
15,600.00	90.12	359.69	7,197.84	8,522.43	357.39	8,520.58	0.00	0.00	0.00
15,700.00	90.12	359.69	7,197.63	8,622.43	356.84	8,620.58	0.00	0.00	0.00
15,800.00	90.12	359.69	7,197.41	8,722.43	356.29	8,720.58	0.00	0.00	0.00
15,900.00	90.12	359.69	7,197.20	8,822.42	355.74	8,820.58	0.00	0.00	0.00
16,000.00	90.12	359.69	7,196.98	8,922.42	355.19	8,920.58	0.00	0.00	0.00
16,100.00	90.12	359.69	7,196.77	9,022.42	354.64	9,020.58	0.00	0.00	0.00
16,200.00	90.12	359.69	7,196.55	9,122.42	354.09	9,120.58	0.00	0.00	0.00
16,300.00	90.12	359.69	7,196.34	9,222.42	353.54	9,220.58	0.00	0.00	0.00
16,400.00	90.12	359.69	7,196.12	9,322.41	352.99	9,320.58	0.00	0.00	0.00
16,500.00	90.12	359.69	7,195.91	9,422.41	352.44	9,420.58	0.00	0.00	0.00
16,600.00	90.12	359.69	7,195.69	9,522.41	351.89	9,520.58	0.00	0.00	0.00
16,700.00	90.12	359.69	7,195.48	9,622.41	351.34	9,620.58	0.00	0.00	0.00
16,800.00	90.12	359.69	7,195.26	9,722.41	350.79	9,720.58	0.00	0.00	0.00
16,900.00	90.12	359.69	7,195.05	9,822.41	350.24	9,820.58	0.00	0.00	0.00
17,000.00	90.12	359.69	7,194.83	9,922.40	349.69	9,920.58	0.00	0.00	0.00
17,100.00	90.12	359.69	7,194.62	10,022.40	349.14	10,020.58	0.00	0.00	0.00
17,200.00	90.12	359.69	7,194.40	10,122.40	348.60	10,120.58	0.00	0.00	0.00
17,300.00	90.12	359.69	7,194.19	10,222.40	348.05	10,220.58	0.00	0.00	0.00
17,400.00	90.12	359.69	7,193.98	10,322.40	347.50	10,320.58	0.00	0.00	0.00
17,500.00	90.12	359.69	7,193.76	10,422.40	346.95	10,420.58	0.00	0.00	0.00
17,600.00	90.12	359.69	7,193.55	10,522.39	346.40	10,520.58	0.00	0.00	0.00
17,700.00	90.12	359.69	7,193.33	10,622.39	345.85	10,620.58	0.00	0.00	0.00
17,800.00	90.12	359.69	7,193.12	10,722.39	345.30	10,720.57	0.00	0.00	0.00
17,854.23	90.12	359.69	7,193.00	10,776.62	345.00	10,774.80	0.00	0.00	0.00
TD Well @ 17854.23ft									

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CHICA 4N2-23HZ
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 4N2-23HZ	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	45.15	0.28	14,595,347.16	1,677,799.14	40.188346	-104.866147
- plan misses target center by 45.16usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- 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 4N2-23HZ_Hardl	0.00	0.00	0.00	0.00	0.00	14,595,302.00	1,677,798.92	40.188222	-104.866148
- plan hits target center									
- Polygon									
Point 1			0.00	6,942.34	108.74	14,602,244.50	1,677,897.20		
Point 2			0.00	8,250.95	102.71	14,603,553.10	1,677,889.19		
Point 3			0.00	9,576.97	87.41	14,604,879.09	1,677,871.90		
Point 4			0.00	10,902.89	75.41	14,606,204.99	1,677,857.90		
Point 5			0.00	11,363.10	74.60	14,606,665.20	1,677,856.39		
Point 6			0.00	11,353.02	456.79	14,606,655.70	1,678,238.60		
Point 7			0.00	10,892.92	457.40	14,606,195.60	1,678,239.90		
Point 8			0.00	9,567.80	469.20	14,604,870.50	1,678,253.70		
Point 9			0.00	8,242.58	481.10	14,603,545.30	1,678,267.60		
Point 10			0.00	6,935.27	488.13	14,602,238.00	1,678,276.60		
Point 11			0.00	5,625.55	497.56	14,600,928.30	1,678,288.00		
Point 12			0.00	4,301.44	501.66	14,599,604.19	1,678,294.10		
Point 13			0.00	2,967.74	505.85	14,598,270.50	1,678,300.30		
Point 14			0.00	1,655.63	510.57	14,596,958.40	1,678,307.00		
Point 15			0.00	333.92	515.38	14,595,636.70	1,678,313.80		
Point 16			0.00	-126.39	522.48	14,595,176.40	1,678,321.59		
Point 17			0.00	-117.63	150.60	14,595,184.60	1,677,949.70		
Point 18			0.00	342.68	143.49	14,595,644.90	1,677,941.90		
Point 19			0.00	1,663.39	134.68	14,596,965.59	1,677,931.10		
Point 20			0.00	2,984.11	125.97	14,598,286.30	1,677,920.40		
Point 21			0.00	4,307.72	118.77	14,599,609.90	1,677,911.20		
Point 22			0.00	5,631.43	111.46	14,600,933.59	1,677,901.89		
Point 23			0.00	6,942.34	108.74	14,602,244.50	1,677,897.20		
CHICA 4N2-23HZ_SHL	0.00	0.00	0.00	0.00	0.00	14,595,302.00	1,677,798.92	40.188222	-104.866148
- plan hits target center									
- Point									
3N-R67W-Sec. 23_Secti	0.00	0.00	0.00	45.15	0.28	14,595,347.16	1,677,799.14	40.188346	-104.866147
- plan misses target center by 45.16usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- 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	1,679,995.51		
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		
3N-R67W-Sec. 35_Secti	0.00	0.00	0.00	45.15	0.28	14,595,347.16	1,677,799.14	40.188346	-104.866147
- plan misses target center by 45.16usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- 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		

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CHICA 4N2-23HZ
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 4N2-23HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
Design:	Permit Rev-1		

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	14,905.40	-5,341.11	14,610,199.33	1,672,435.34
- plan misses target center by 10019.33usft at 17854.23usft MD (7193.00 TVD, 10776.62 N, 345.00 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 4N2-23HZ_BHL	0.00	0.00	7,193.00	10,776.62	345.00	14,606,079.13	1,678,127.68
- plan hits target center							
- Point							
CHICA 4N2-23HZ_tgt2	0.00	0.00	7,202.99	6,123.90	368.05	14,601,426.45	1,678,157.74
- plan hits target center							
- Point							
CHICA 4N2-23HZ_tgt1	0.00	0.00	7,206.00	4,723.92	320.98	14,600,026.40	1,678,112.78
- plan hits target center							
- 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	
7,607.11	7,215.00	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				
3,802.36	3,775.00	Parkman				
4,463.36	4,436.00	Sussex				
7,088.24	7,016.00	Sharon Springs				
7,185.07	7,081.00	Niobrara				
7,289.38	7,138.00	Nio B				
7,426.73	7,190.00	Nio C				
17,854.23	7,193.00	TD		0.00		
7,607.11	7,215.00	Top of Production		0.00		

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CHICA 4N2-23HZ
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 4N2-23HZ	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	-9.62	35.91	End Nudge @ 783.33ft
3,283.33	3,257.27	-99.67	371.98	Begin Drop @ 3283.33ft
3,683.33	3,655.97	-106.89	398.91	End Drop @ 3683.33ft
6,605.74	6,578.38	-106.89	398.91	KOP @ 6605.74ft
7,150.00	7,058.72	111.90	395.38	DLS = 9°/100'
7,607.11	7,215.00	531.01	388.62	End Build @ 7607.11ft
11,800.57	7,206.00	4,723.92	320.98	Begin Turn @ 11800.57ft
11,951.16	7,205.68	4,874.48	322.51	End Turn @ 11951.16ft
13,201.41	7,202.99	6,123.90	368.05	Begin Turn to BHL @ 13201.41ft
13,321.53	7,202.73	6,244.00	369.91	End Turn @ 13321.53ft
17,854.23	7,193.00	10,776.62	345.00	TD Well @ 17854.23ft