

US ROCKIES WATTENBERG PLANNING

**WELD-NAD83-UTMFT13N
1N-66W-13 AZUL 14-13HZ PAD
AZUL 13-24HZ**

Plan A

Plan: Permit Rev-1

Standard Planning Report

07 June, 2017



Azimuths to True North
Magnetic North: 8.01°

Magnetic Field
Strength: 52319.4snT
Dip Angle: 66.56°
Date: 6/5/2017
Model: IGRF2010

SITE: 1N-66W-13 AZUL 14-13HZ PAD

Well: AZUL 13-24HZ
Wellbore: Plan A
Design: Permit Rev-1

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1599.00	1654.60	Fox Hills
4240.00	4727.99	Parkman
4604.00	5151.85	Sussex
7098.00	7837.43	Sharon Springs
7124.00	7874.93	Niobrara
7261.00	8153.94	Nio B

WELL DETAILS: AZUL 13-24HZ

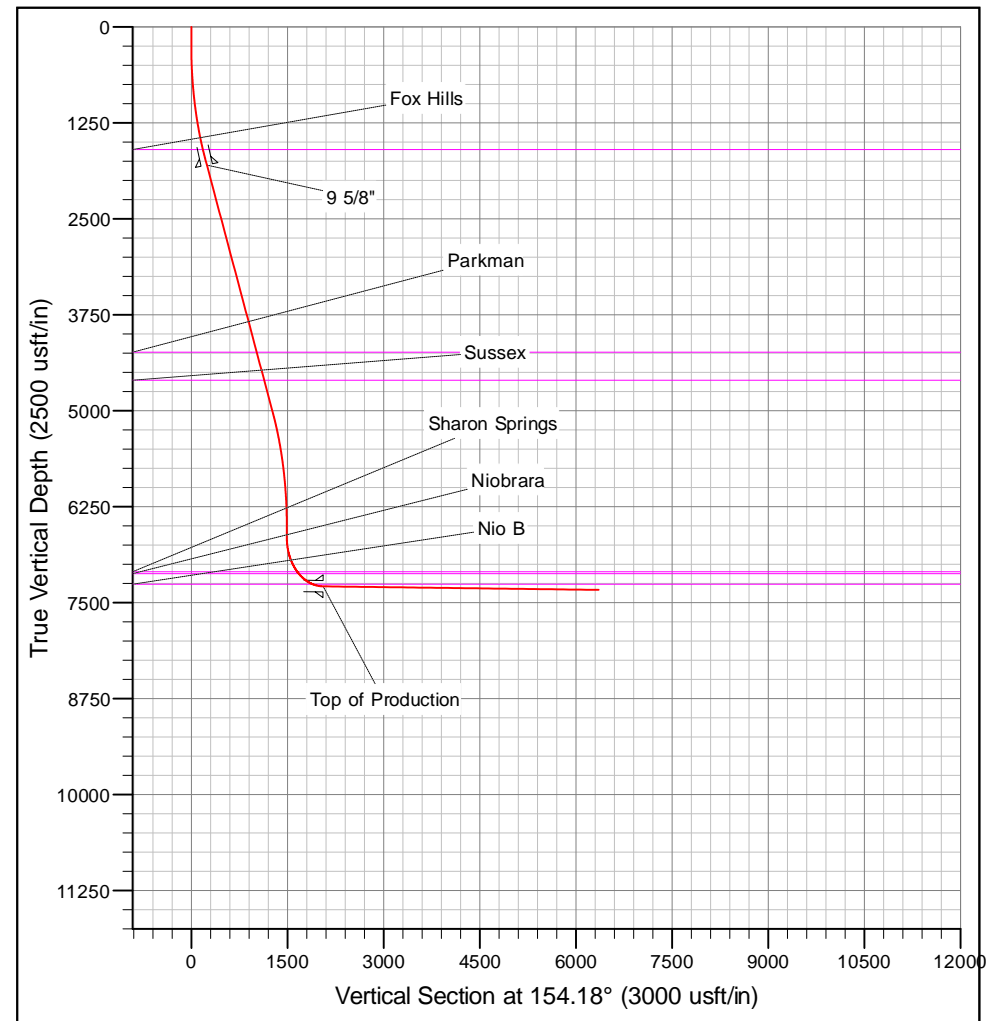
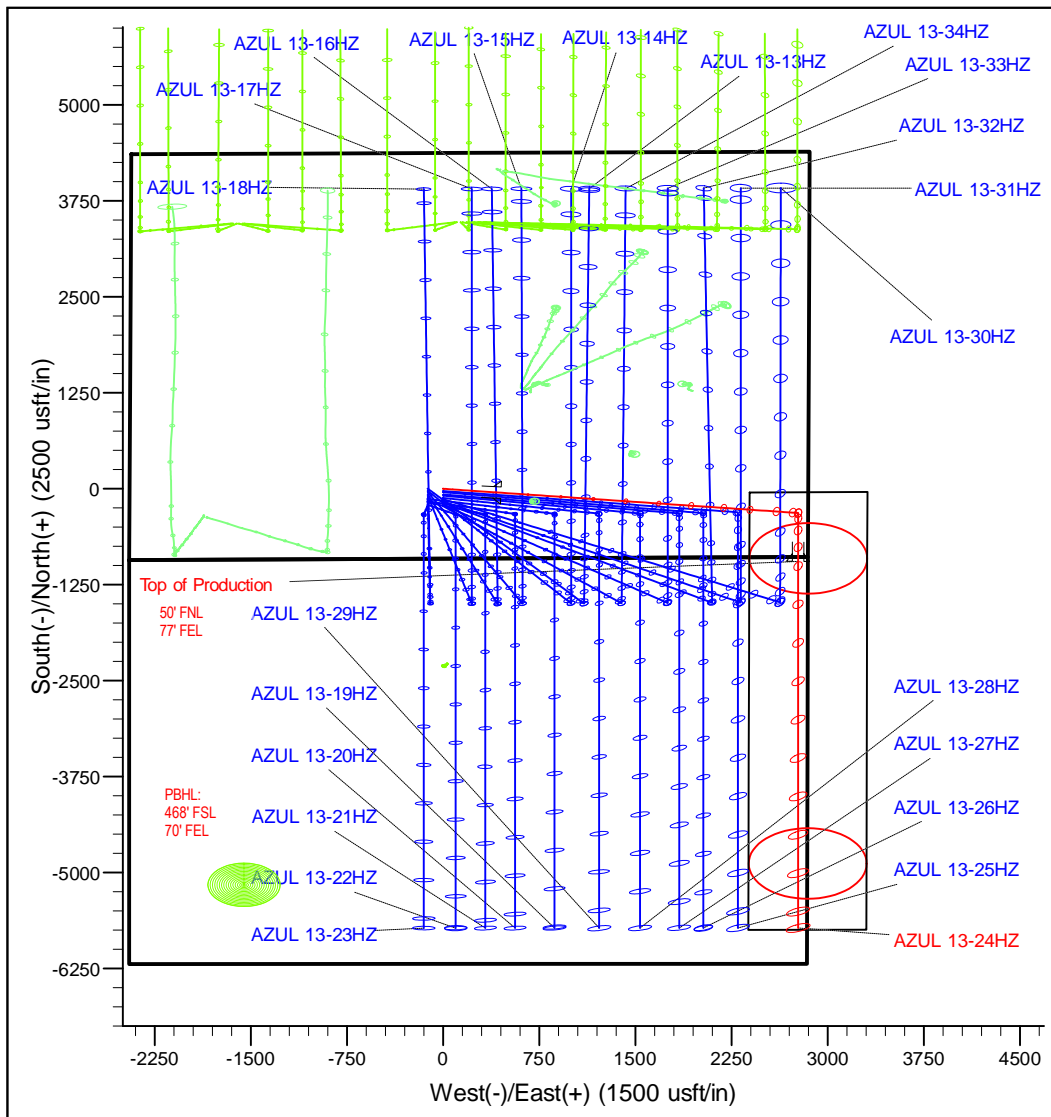
+N/-S	+E/-W	GL: 5051.00	RKB @ 5068.00usft (D Rig)	Latitude	Longitude	Slot
0.00	0.00	14543796.97	1717039.79	40.046536	-104.726210	

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
AZUL 13-24HZ_PBHL	7335.00	-5721.51	2768.63	14538084.00	1719826.00	40.030823	-104.716319

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	V Sct
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
1790.98	30.82	96.49	1717.73	-45.73	401.96	2.00	216.25
5650.54	30.82	96.49	5032.27	-269.27	2366.67	0.00	273.26
7191.51	0.00	0.00	6500.00	-315.00	2768.63	2.00	489.51
7344.08	0.00	0.00	6652.56	-315.00	2768.63	0.00	489.51
8337.96	89.45	180.00	7289.15	-945.51	2768.63	9.00	57.06
13114.19	89.45	180.00	7335.00	-5721.51	2768.63	0.00	356.18



Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well AZUL 13-24HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 5068.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 5068.00usft (D Rig)
Site:	1N-66W-13 AZUL 14-13HZ PAD	North Reference:	True
Well:	AZUL 13-24HZ	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						1N-66W-13 AZUL 14-13HZ PAD											
Site Position:						Northing:			14,543,797.69 usft			Latitude:			40.046539		
From:			Lat/Long			Easting:			1,716,920.01 usft			Longitude:			-104.726638		
Position Uncertainty:			0.00 usft			Slot Radius:			13-3/16 "			Grid Convergence:			0.18		

Well	AZUL 13-24HZ					
Well Position	+N/-S	-1.09 usft	Northing:	14,543,796.97 usft	Latitude:	40.046536
	+E/-W	119.78 usft	Easting:	1,717,039.79 usft	Longitude:	-104.726210
Position Uncertainty		3.28 usft	Wellhead Elevation:		Ground Level:	5,051.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/5/2017	8.01	66.56	52,319.39542093

Design	Permit Rev-1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	154.18

Plan Survey Tool Program	Date	6/7/2017		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	13,114.19	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWI Fixed:v2:crustal field declinat

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	
1,790.98	30.82	96.49	1,717.73	-45.73	401.96	2.00	2.00	0.00	96.49	
5,650.54	30.82	96.49	5,032.27	-269.27	2,366.67	0.00	0.00	0.00	0.00	
7,191.51	0.00	0.00	6,500.00	-315.00	2,768.63	2.00	-2.00	0.00	180.00	
7,344.08	0.00	0.00	6,652.56	-315.00	2,768.63	0.00	0.00	0.00	0.00	
8,337.96	89.45	180.00	7,289.15	-945.51	2,768.63	9.00	9.00	0.00	180.00	
13,114.19	89.45	180.00	7,335.00	-5,721.51	2,768.63	0.00	0.00	0.00	0.00	AZUL 13-24HZ_PBI

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well AZUL 13-24HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 5068.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 5068.00usft (D Rig)
Site:	1N-66W-13 AZUL 14-13HZ PAD	North Reference:	True
Well:	AZUL 13-24HZ	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
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
300.00	1.00	96.49	300.00	-0.05	0.43	0.23	2.00	2.00	0.00
400.00	3.00	96.49	399.93	-0.44	3.90	2.10	2.00	2.00	0.00
500.00	5.00	96.49	499.68	-1.23	10.83	5.83	2.00	2.00	0.00
600.00	7.00	96.49	599.13	-2.41	21.22	11.41	2.00	2.00	0.00
700.00	9.00	96.49	698.15	-3.99	35.04	18.85	2.00	2.00	0.00
800.00	11.00	96.49	796.63	-5.95	52.30	28.14	2.00	2.00	0.00
900.00	13.00	96.49	894.44	-8.30	72.95	39.25	2.00	2.00	0.00
1,000.00	15.00	96.49	991.46	-11.03	96.99	52.18	2.00	2.00	0.00
1,100.00	17.00	96.49	1,087.58	-14.15	124.38	66.91	2.00	2.00	0.00
1,200.00	19.00	96.49	1,182.68	-17.64	155.08	83.43	2.00	2.00	0.00
1,300.00	21.00	96.49	1,276.65	-21.51	189.06	101.71	2.00	2.00	0.00
1,400.00	23.00	96.49	1,369.36	-25.74	226.28	121.74	2.00	2.00	0.00
1,500.00	25.00	96.49	1,460.71	-30.34	266.69	143.48	2.00	2.00	0.00
1,600.00	27.00	96.49	1,550.59	-35.30	310.24	166.91	2.00	2.00	0.00
1,654.60	28.09	96.49	1,599.00	-38.15	335.33	180.41	2.00	2.00	0.00
Fox Hills									
1,700.00	29.00	96.49	1,638.88	-40.60	356.89	192.00	2.00	2.00	0.00
1,790.98	30.82	96.49	1,717.73	-45.73	401.96	216.25	2.00	2.00	0.00
1,800.00	30.82	96.49	1,725.48	-46.26	406.55	218.72	0.00	0.00	0.00
1,886.77	30.82	96.49	1,800.00	-51.28	450.72	242.49	0.00	0.00	0.00
9 5/8"									
1,900.00	30.82	96.49	1,811.36	-52.05	457.46	246.11	0.00	0.00	0.00
2,000.00	30.82	96.49	1,897.24	-57.84	508.36	273.50	0.00	0.00	0.00
2,100.00	30.82	96.49	1,983.12	-63.63	559.27	300.88	0.00	0.00	0.00
2,200.00	30.82	96.49	2,069.00	-69.42	610.17	328.27	0.00	0.00	0.00
2,300.00	30.82	96.49	2,154.88	-75.21	661.08	355.66	0.00	0.00	0.00
2,400.00	30.82	96.49	2,240.75	-81.01	711.98	383.04	0.00	0.00	0.00
2,500.00	30.82	96.49	2,326.63	-86.80	762.89	410.43	0.00	0.00	0.00
2,600.00	30.82	96.49	2,412.51	-92.59	813.79	437.82	0.00	0.00	0.00
2,700.00	30.82	96.49	2,498.39	-98.38	864.70	465.20	0.00	0.00	0.00
2,800.00	30.82	96.49	2,584.27	-104.17	915.60	492.59	0.00	0.00	0.00
2,900.00	30.82	96.49	2,670.15	-109.96	966.51	519.98	0.00	0.00	0.00
3,000.00	30.82	96.49	2,756.02	-115.76	1,017.41	547.36	0.00	0.00	0.00
3,100.00	30.82	96.49	2,841.90	-121.55	1,068.32	574.75	0.00	0.00	0.00
3,200.00	30.82	96.49	2,927.78	-127.34	1,119.22	602.14	0.00	0.00	0.00
3,300.00	30.82	96.49	3,013.66	-133.13	1,170.13	629.52	0.00	0.00	0.00
3,400.00	30.82	96.49	3,099.54	-138.92	1,221.03	656.91	0.00	0.00	0.00
3,500.00	30.82	96.49	3,185.42	-144.71	1,271.94	684.30	0.00	0.00	0.00
3,600.00	30.82	96.49	3,271.30	-150.51	1,322.84	711.68	0.00	0.00	0.00
3,700.00	30.82	96.49	3,357.17	-156.30	1,373.75	739.07	0.00	0.00	0.00
3,800.00	30.82	96.49	3,443.05	-162.09	1,424.65	766.46	0.00	0.00	0.00
3,900.00	30.82	96.49	3,528.93	-167.88	1,475.56	793.84	0.00	0.00	0.00
4,000.00	30.82	96.49	3,614.81	-173.67	1,526.46	821.23	0.00	0.00	0.00
4,100.00	30.82	96.49	3,700.69	-179.46	1,577.37	848.62	0.00	0.00	0.00
4,200.00	30.82	96.49	3,786.57	-185.26	1,628.27	876.00	0.00	0.00	0.00
4,300.00	30.82	96.49	3,872.45	-191.05	1,679.18	903.39	0.00	0.00	0.00
4,400.00	30.82	96.49	3,958.32	-196.84	1,730.09	930.78	0.00	0.00	0.00
4,500.00	30.82	96.49	4,044.20	-202.63	1,780.99	958.16	0.00	0.00	0.00
4,600.00	30.82	96.49	4,130.08	-208.42	1,831.90	985.55	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well AZUL 13-24HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 5068.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 5068.00usft (D Rig)
Site:	1N-66W-13 AZUL 14-13HZ PAD	North Reference:	True
Well:	AZUL 13-24HZ	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)
4,700.00	30.82	96.49	4,215.96	-214.22	1,882.80	1,012.94	0.00	0.00	0.00
4,727.99	30.82	96.49	4,240.00	-215.84	1,897.05	1,020.60	0.00	0.00	0.00
Parkman									
4,800.00	30.82	96.49	4,301.84	-220.01	1,933.71	1,040.32	0.00	0.00	0.00
4,900.00	30.82	96.49	4,387.72	-225.80	1,984.61	1,067.71	0.00	0.00	0.00
5,000.00	30.82	96.49	4,473.60	-231.59	2,035.52	1,095.10	0.00	0.00	0.00
5,100.00	30.82	96.49	4,559.47	-237.38	2,086.42	1,122.48	0.00	0.00	0.00
5,151.85	30.82	96.49	4,604.00	-240.38	2,112.81	1,136.68	0.00	0.00	0.00
Sussex									
5,200.00	30.82	96.49	4,645.35	-243.17	2,137.33	1,149.87	0.00	0.00	0.00
5,300.00	30.82	96.49	4,731.23	-248.97	2,188.23	1,177.26	0.00	0.00	0.00
5,400.00	30.82	96.49	4,817.11	-254.76	2,239.14	1,204.64	0.00	0.00	0.00
5,500.00	30.82	96.49	4,902.99	-260.55	2,290.04	1,232.03	0.00	0.00	0.00
5,600.00	30.82	96.49	4,988.87	-266.34	2,340.95	1,259.42	0.00	0.00	0.00
5,650.54	30.82	96.49	5,032.27	-269.27	2,366.67	1,273.26	0.00	0.00	0.00
5,700.00	29.83	96.49	5,074.96	-272.09	2,391.49	1,286.61	2.00	-2.00	0.00
5,800.00	27.83	96.49	5,162.56	-277.54	2,439.40	1,312.38	2.00	-2.00	0.00
5,900.00	25.83	96.49	5,251.79	-282.64	2,484.24	1,336.51	2.00	-2.00	0.00
6,000.00	23.83	96.49	5,342.54	-287.39	2,525.96	1,358.96	2.00	-2.00	0.00
6,100.00	21.83	96.49	5,434.70	-291.78	2,564.51	1,379.69	2.00	-2.00	0.00
6,200.00	19.83	96.49	5,528.16	-295.80	2,599.84	1,398.70	2.00	-2.00	0.00
6,300.00	17.83	96.49	5,622.81	-299.44	2,631.91	1,415.95	2.00	-2.00	0.00
6,400.00	15.83	96.49	5,718.52	-302.72	2,660.68	1,431.43	2.00	-2.00	0.00
6,500.00	13.83	96.49	5,815.18	-305.61	2,686.11	1,445.11	2.00	-2.00	0.00
6,600.00	11.83	96.49	5,912.68	-308.12	2,708.17	1,456.98	2.00	-2.00	0.00
6,700.00	9.83	96.49	6,010.89	-310.25	2,726.84	1,467.03	2.00	-2.00	0.00
6,800.00	7.83	96.49	6,109.70	-311.98	2,742.09	1,475.23	2.00	-2.00	0.00
6,900.00	5.83	96.49	6,208.99	-313.32	2,753.91	1,481.59	2.00	-2.00	0.00
7,000.00	3.83	96.49	6,308.63	-314.28	2,762.27	1,486.09	2.00	-2.00	0.00
7,100.00	1.83	96.49	6,408.50	-314.83	2,767.18	1,488.73	2.00	-2.00	0.00
7,191.51	0.00	0.00	6,500.00	-315.00	2,768.63	1,489.51	2.00	-2.00	0.00
7,200.00	0.00	0.00	6,508.49	-315.00	2,768.63	1,489.51	0.00	0.00	0.00
7,300.00	0.00	0.00	6,608.49	-315.00	2,768.63	1,489.51	0.00	0.00	0.00
7,344.08	0.00	0.00	6,652.56	-315.00	2,768.63	1,489.51	0.00	0.00	0.00
7,400.00	5.03	180.00	6,708.41	-317.45	2,768.63	1,491.72	9.00	9.00	0.00
7,500.00	14.03	180.00	6,806.93	-334.00	2,768.63	1,506.61	9.00	9.00	0.00
7,600.00	23.03	180.00	6,901.65	-365.75	2,768.63	1,535.19	9.00	9.00	0.00
7,700.00	32.03	180.00	6,990.23	-411.93	2,768.63	1,576.76	9.00	9.00	0.00
7,800.00	41.03	180.00	7,070.50	-471.40	2,768.63	1,630.29	9.00	9.00	0.00
7,837.43	44.40	180.00	7,098.00	-496.79	2,768.63	1,653.15	9.00	9.00	0.00
Sharon Springs									
7,874.93	47.78	180.00	7,124.00	-523.80	2,768.63	1,677.46	9.00	9.00	0.00
Niobrara									
7,900.00	50.03	180.00	7,140.48	-542.69	2,768.63	1,694.47	9.00	9.00	0.00
8,000.00	59.03	180.00	7,198.44	-624.05	2,768.63	1,767.70	9.00	9.00	0.00
8,100.00	68.03	180.00	7,242.96	-713.48	2,768.63	1,848.20	9.00	9.00	0.00
8,153.94	72.89	180.00	7,261.00	-764.30	2,768.63	1,893.95	9.00	9.00	0.00
Nio B									
8,200.00	77.03	180.00	7,272.95	-808.77	2,768.63	1,933.98	9.00	9.00	0.00
8,300.00	86.03	180.00	7,287.66	-907.58	2,768.63	2,022.92	9.00	9.00	0.00
8,337.96	89.45	180.00	7,289.15	-945.50	2,768.63	2,057.06	9.00	9.00	0.00
Top of Production - AZUL 13-24HZ_PHL									
8,400.00	89.45	180.00	7,289.75	-1,007.54	2,768.63	2,112.90	0.00	0.00	0.00

Corporate Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 5068.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 5068.00usft (D Rig)
Site:	1N-66W-13 AZUL 14-13HZ PAD	North Reference:	True
Well:	AZUL 13-24HZ	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)
8,500.00	89.45	180.00	7,290.71	-1,107.54	2,768.63	2,202.91	0.00	0.00	0.00
8,600.00	89.45	180.00	7,291.67	-1,207.53	2,768.63	2,292.92	0.00	0.00	0.00
8,700.00	89.45	180.00	7,292.63	-1,307.53	2,768.63	2,382.93	0.00	0.00	0.00
8,800.00	89.45	180.00	7,293.59	-1,407.52	2,768.63	2,472.94	0.00	0.00	0.00
8,900.00	89.45	180.00	7,294.55	-1,507.52	2,768.63	2,562.95	0.00	0.00	0.00
9,000.00	89.45	180.00	7,295.51	-1,607.51	2,768.63	2,652.97	0.00	0.00	0.00
9,100.00	89.45	180.00	7,296.47	-1,707.51	2,768.63	2,742.98	0.00	0.00	0.00
9,200.00	89.45	180.00	7,297.43	-1,807.51	2,768.63	2,832.99	0.00	0.00	0.00
9,300.00	89.45	180.00	7,298.39	-1,907.50	2,768.63	2,923.00	0.00	0.00	0.00
9,400.00	89.45	180.00	7,299.35	-2,007.50	2,768.63	3,013.01	0.00	0.00	0.00
9,500.00	89.45	180.00	7,300.31	-2,107.49	2,768.63	3,103.02	0.00	0.00	0.00
9,600.00	89.45	180.00	7,301.27	-2,207.49	2,768.63	3,193.03	0.00	0.00	0.00
9,700.00	89.45	180.00	7,302.23	-2,307.48	2,768.63	3,283.04	0.00	0.00	0.00
9,800.00	89.45	180.00	7,303.19	-2,407.48	2,768.63	3,373.05	0.00	0.00	0.00
9,900.00	89.45	180.00	7,304.15	-2,507.47	2,768.63	3,463.06	0.00	0.00	0.00
10,000.00	89.45	180.00	7,305.11	-2,607.47	2,768.63	3,553.07	0.00	0.00	0.00
10,100.00	89.45	180.00	7,306.07	-2,707.46	2,768.63	3,643.08	0.00	0.00	0.00
10,200.00	89.45	180.00	7,307.03	-2,807.46	2,768.63	3,733.10	0.00	0.00	0.00
10,300.00	89.45	180.00	7,307.99	-2,907.45	2,768.63	3,823.11	0.00	0.00	0.00
10,400.00	89.45	180.00	7,308.95	-3,007.45	2,768.63	3,913.12	0.00	0.00	0.00
10,500.00	89.45	180.00	7,309.91	-3,107.45	2,768.63	4,003.13	0.00	0.00	0.00
10,600.00	89.45	180.00	7,310.87	-3,207.44	2,768.63	4,093.14	0.00	0.00	0.00
10,700.00	89.45	180.00	7,311.83	-3,307.44	2,768.63	4,183.15	0.00	0.00	0.00
10,800.00	89.45	180.00	7,312.79	-3,407.43	2,768.63	4,273.16	0.00	0.00	0.00
10,900.00	89.45	180.00	7,313.75	-3,507.43	2,768.63	4,363.17	0.00	0.00	0.00
11,000.00	89.45	180.00	7,314.71	-3,607.42	2,768.63	4,453.18	0.00	0.00	0.00
11,100.00	89.45	180.00	7,315.67	-3,707.42	2,768.63	4,543.19	0.00	0.00	0.00
11,200.00	89.45	180.00	7,316.63	-3,807.41	2,768.63	4,633.20	0.00	0.00	0.00
11,300.00	89.45	180.00	7,317.59	-3,907.41	2,768.63	4,723.21	0.00	0.00	0.00
11,400.00	89.45	180.00	7,318.55	-4,007.40	2,768.63	4,813.23	0.00	0.00	0.00
11,500.00	89.45	180.00	7,319.51	-4,107.40	2,768.63	4,903.24	0.00	0.00	0.00
11,600.00	89.45	180.00	7,320.47	-4,207.39	2,768.63	4,993.25	0.00	0.00	0.00
11,700.00	89.45	180.00	7,321.43	-4,307.39	2,768.63	5,083.26	0.00	0.00	0.00
11,800.00	89.45	180.00	7,322.39	-4,407.39	2,768.63	5,173.27	0.00	0.00	0.00
11,900.00	89.45	180.00	7,323.34	-4,507.38	2,768.63	5,263.28	0.00	0.00	0.00
12,000.00	89.45	180.00	7,324.30	-4,607.38	2,768.63	5,353.29	0.00	0.00	0.00
12,100.00	89.45	180.00	7,325.26	-4,707.37	2,768.63	5,443.30	0.00	0.00	0.00
12,200.00	89.45	180.00	7,326.22	-4,807.37	2,768.63	5,533.31	0.00	0.00	0.00
12,300.00	89.45	180.00	7,327.18	-4,907.36	2,768.63	5,623.32	0.00	0.00	0.00
12,400.00	89.45	180.00	7,328.14	-5,007.36	2,768.63	5,713.33	0.00	0.00	0.00
12,500.00	89.45	180.00	7,329.10	-5,107.35	2,768.63	5,803.34	0.00	0.00	0.00
12,600.00	89.45	180.00	7,330.06	-5,207.35	2,768.63	5,893.35	0.00	0.00	0.00
12,700.00	89.45	180.00	7,331.02	-5,307.34	2,768.63	5,983.37	0.00	0.00	0.00
12,800.00	89.45	180.00	7,331.98	-5,407.34	2,768.63	6,073.38	0.00	0.00	0.00
12,900.00	89.45	180.00	7,332.94	-5,507.33	2,768.63	6,163.39	0.00	0.00	0.00
13,000.00	89.45	180.00	7,333.90	-5,607.33	2,768.63	6,253.40	0.00	0.00	0.00
13,100.00	89.45	180.00	7,334.86	-5,707.33	2,768.63	6,343.41	0.00	0.00	0.00
13,114.19	89.45	180.00	7,335.00	-5,721.51	2,768.63	6,356.18	0.00	0.00	0.00
AZUL 13-24HZ_PBHL									

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well AZUL 13-24HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 5068.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 5068.00usft (D Rig)
Site:	1N-66W-13 AZUL 14-13HZ PAD	North Reference:	True
Well:	AZUL 13-24HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
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)		
AZUL 13-24HZ_PHL	0.00	0.00	7,289.15	-945.50	2,768.63	14,542,859.98	1,719,811.31	40.043939	-104.716318
- plan hits target center									
- Point									
AZUL 13-24HZ_PBHL	0.00	0.00	7,335.00	-5,721.51	2,768.63	14,538,084.00	1,719,826.00	40.030824	-104.716320
- plan hits target center									
- Point									

Casing Points					
	Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
	(usft)	(usft)	Name	(")	(")
	1,886.77	1,800.00	9 5/8"	9-5/8	13-1/2
	8,337.96	7,289.15	Top of Production	5-1/2	7-7/8

Formations						
	Measured Depth	Vertical Depth			Dip	Dip Direction
	(usft)	(usft)	Name	Lithology	(°)	(°)
	1,654.60	1,599.00	Fox Hills			
	4,727.99	4,240.00	Parkman			
	5,151.85	4,604.00	Sussex			
	7,837.43	7,098.00	Sharon Springs			
	7,874.93	7,124.00	Niobrara			
	8,153.94	7,261.00	Nio B			