

# **US ROCKIES WATTENBERG PLANNING**

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

**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 13-13HZ  
Wellbore: Plan A  
Design: Permit Rev-1

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1599.00	1644.66	Fox Hills
4240.00	4468.56	Parkman
4604.00	4857.77	Sussex
7110.00	7470.69	Sharon Springs
7136.00	7504.41	Niobrara
7272.00	7720.47	Nio B
7329.00	7867.25	Nio C

## WELL DETAILS: AZUL 13-13HZ

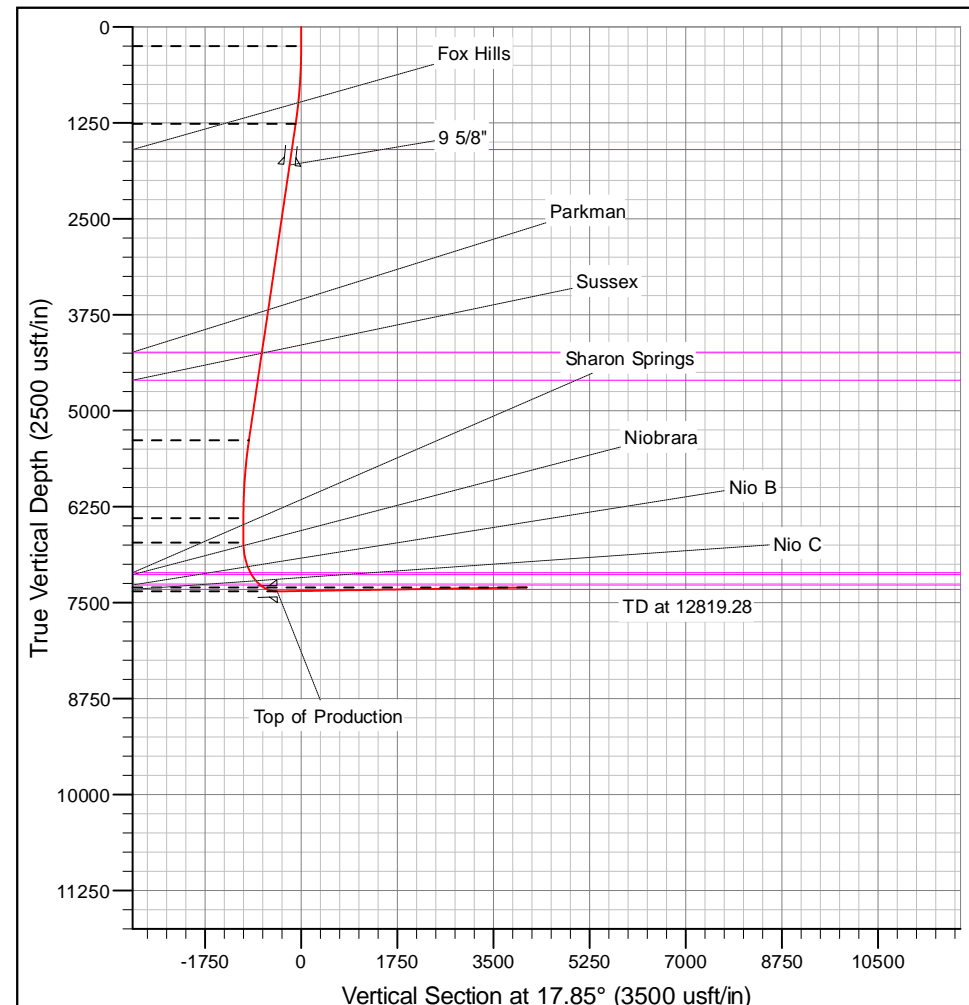
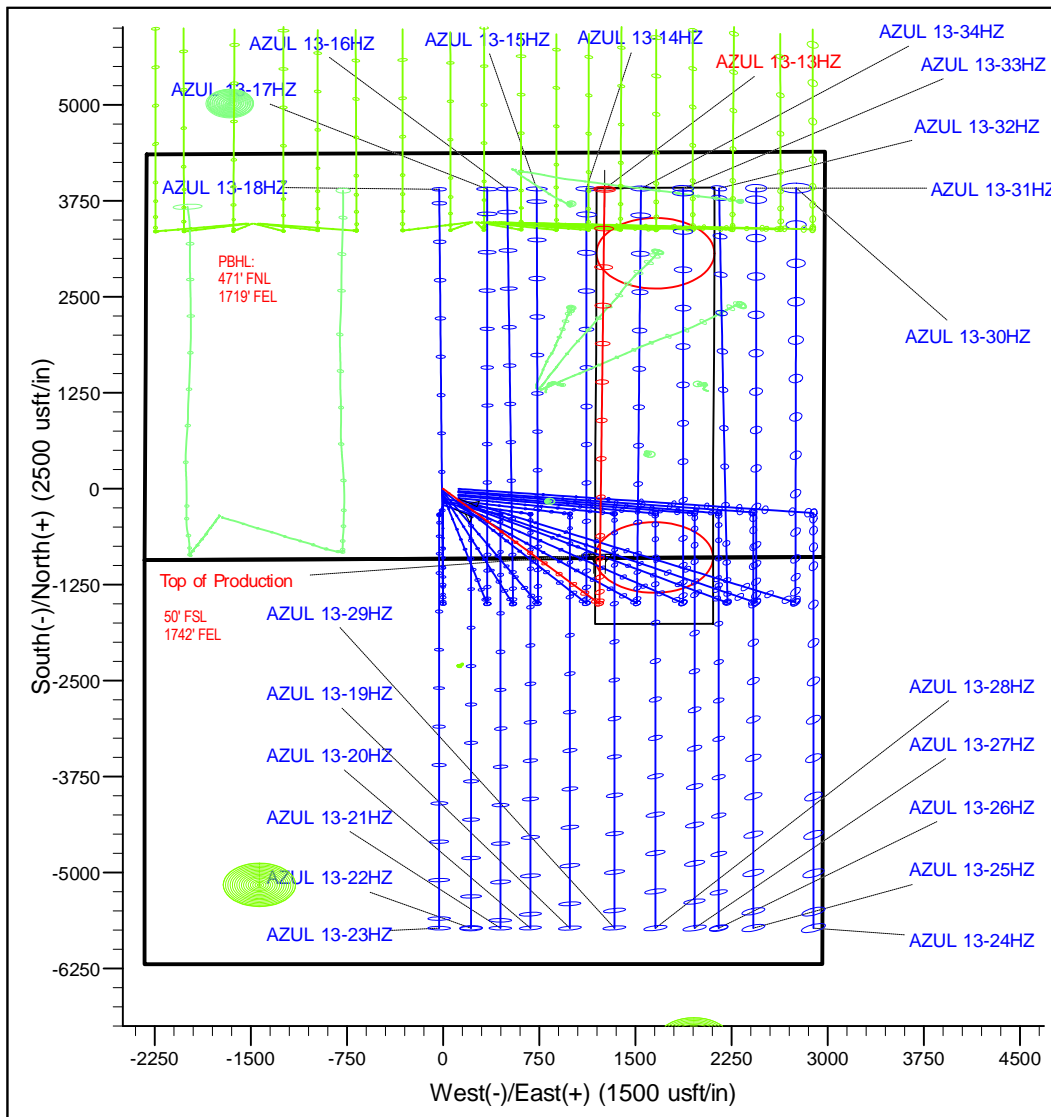
+N/-S	+E/-W	GL: 5051.00	RKB @ 5068.00usft (D Rig)	Latitude	Longitude	Slot
0.00	0.00	Northing 14543797.70	Easting 1716920.01	40.046539	-104.726638	

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
AZUL 13-13HZ_PBHL	7303.00	3909.12	1259.00	14547710.66	1718167.00	40.057274	-104.722139

## 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
1286.72	20.73	140.86	1264.24	-143.92	117.11	2.00	-101.09
5693.67	20.73	140.86	5385.76	-1354.08	1101.89	0.00	-951.09
6730.39	0.00	0.00	6400.00	-1498.00	1219.00	2.00	052.18
7048.36	0.00	0.00	6717.97	-1498.00	1219.00	0.00	052.18
8055.25	90.62	0.42	7354.55	-854.51	1223.76	9.00	-438.21
12819.28	90.62	0.42	7303.00	3909.12	1259.00	0.00	106.86



# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well AZUL 13-13HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 5068.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 5068.00usft (D Rig)
<b>Site:</b>	1N-66W-13 AZUL 14-13HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	AZUL 13-13HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

<b>Project</b>	WELD-NAD83-UTMFT13N		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	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 13-13HZ					
Well Position	+N/-S	0.00 usft	Northing:	14,543,797.69 usft	Latitude:	40.046539
	+E/-W	0.00 usft	Easting:	1,716,920.01 usft	Longitude:	-104.726638
Position Uncertainty		3.28 usft	Wellhead Elevation:		Ground Level:	5,051.00 usft

<b>Wellbore</b>	Plan A				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	6/5/2017	8.01	66.56	52,319.35342341

<b>Design</b>	Permit Rev-1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	17.85

<b>Plan Survey Tool Program</b>	<b>Date</b>	6/7/2017		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	12,819.28	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWI Fixed:v2:crustal field declinat

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
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	
1,286.72	20.73	140.86	1,264.24	-143.92	117.11	2.00	2.00	0.00	140.86	
5,693.67	20.73	140.86	5,385.76	-1,354.08	1,101.89	0.00	0.00	0.00	0.00	
6,730.39	0.00	0.00	6,400.00	-1,498.00	1,219.00	2.00	-2.00	0.00	180.00	
7,048.36	0.00	0.00	6,717.97	-1,498.00	1,219.00	0.00	0.00	0.00	0.00	
8,055.25	90.62	0.42	7,354.55	-854.51	1,223.76	9.00	9.00	0.00	0.42	
12,819.28	90.62	0.42	7,303.00	3,909.12	1,259.00	0.00	0.00	0.00	0.00	AZUL 13-13HZ_PBI

# Corporate Planning Report

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<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 5068.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 5068.00usft (D Rig)
<b>Site:</b>	1N-66W-13 AZUL 14-13HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	AZUL 13-13HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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	140.86	300.00	-0.34	0.28	-0.24	2.00	2.00	0.00
400.00	3.00	140.86	399.93	-3.05	2.48	-2.14	2.00	2.00	0.00
500.00	5.00	140.86	499.68	-8.46	6.88	-5.94	2.00	2.00	0.00
600.00	7.00	140.86	599.13	-16.56	13.48	-11.63	2.00	2.00	0.00
700.00	9.00	140.86	698.15	-27.36	22.26	-19.22	2.00	2.00	0.00
800.00	11.00	140.86	796.63	-40.83	33.22	-28.68	2.00	2.00	0.00
900.00	13.00	140.86	894.44	-56.95	46.34	-40.00	2.00	2.00	0.00
1,000.00	15.00	140.86	991.46	-75.71	61.61	-53.18	2.00	2.00	0.00
1,100.00	17.00	140.86	1,087.58	-97.09	79.01	-68.20	2.00	2.00	0.00
1,200.00	19.00	140.86	1,182.68	-121.06	98.51	-85.03	2.00	2.00	0.00
1,286.72	20.73	140.86	1,264.24	-143.92	117.11	-101.09	2.00	2.00	0.00
1,300.00	20.73	140.86	1,276.66	-147.56	120.08	-103.65	0.00	0.00	0.00
1,400.00	20.73	140.86	1,370.18	-175.03	142.43	-122.94	0.00	0.00	0.00
1,500.00	20.73	140.86	1,463.71	-202.49	164.77	-142.22	0.00	0.00	0.00
1,600.00	20.73	140.86	1,557.23	-229.95	187.12	-161.51	0.00	0.00	0.00
1,644.66	20.73	140.86	1,599.00	-242.21	197.10	-170.13	0.00	0.00	0.00
Fox Hills									
1,700.00	20.73	140.86	1,650.75	-257.41	209.46	-180.80	0.00	0.00	0.00
1,800.00	20.73	140.86	1,744.28	-284.87	231.81	-200.09	0.00	0.00	0.00
1,859.58	20.73	140.86	1,800.00	-301.23	245.13	-211.58	0.00	0.00	0.00
9 5/8"									
1,900.00	20.73	140.86	1,837.80	-312.33	254.16	-219.37	0.00	0.00	0.00
2,000.00	20.73	140.86	1,931.32	-339.79	276.50	-238.66	0.00	0.00	0.00
2,100.00	20.73	140.86	2,024.85	-367.25	298.85	-257.95	0.00	0.00	0.00
2,200.00	20.73	140.86	2,118.37	-394.71	321.19	-277.24	0.00	0.00	0.00
2,300.00	20.73	140.86	2,211.89	-422.17	343.54	-296.53	0.00	0.00	0.00
2,400.00	20.73	140.86	2,305.41	-449.63	365.89	-315.81	0.00	0.00	0.00
2,500.00	20.73	140.86	2,398.94	-477.09	388.23	-335.10	0.00	0.00	0.00
2,600.00	20.73	140.86	2,492.46	-504.55	410.58	-354.39	0.00	0.00	0.00
2,700.00	20.73	140.86	2,585.98	-532.01	432.92	-373.68	0.00	0.00	0.00
2,800.00	20.73	140.86	2,679.51	-559.47	455.27	-392.96	0.00	0.00	0.00
2,900.00	20.73	140.86	2,773.03	-586.93	477.62	-412.25	0.00	0.00	0.00
3,000.00	20.73	140.86	2,866.55	-614.39	499.96	-431.54	0.00	0.00	0.00
3,100.00	20.73	140.86	2,960.08	-641.85	522.31	-450.83	0.00	0.00	0.00
3,200.00	20.73	140.86	3,053.60	-669.31	544.65	-470.12	0.00	0.00	0.00
3,300.00	20.73	140.86	3,147.12	-696.77	567.00	-489.40	0.00	0.00	0.00
3,400.00	20.73	140.86	3,240.65	-724.23	589.35	-508.69	0.00	0.00	0.00
3,500.00	20.73	140.86	3,334.17	-751.69	611.69	-527.98	0.00	0.00	0.00
3,600.00	20.73	140.86	3,427.69	-779.15	634.04	-547.27	0.00	0.00	0.00
3,700.00	20.73	140.86	3,521.22	-806.61	656.38	-566.55	0.00	0.00	0.00
3,800.00	20.73	140.86	3,614.74	-834.07	678.73	-585.84	0.00	0.00	0.00
3,900.00	20.73	140.86	3,708.26	-861.53	701.07	-605.13	0.00	0.00	0.00
4,000.00	20.73	140.86	3,801.79	-888.99	723.42	-624.42	0.00	0.00	0.00
4,100.00	20.73	140.86	3,895.31	-916.45	745.77	-643.71	0.00	0.00	0.00
4,200.00	20.73	140.86	3,988.83	-943.91	768.11	-662.99	0.00	0.00	0.00
4,300.00	20.73	140.86	4,082.36	-971.38	790.46	-682.28	0.00	0.00	0.00
4,400.00	20.73	140.86	4,175.88	-998.84	812.80	-701.57	0.00	0.00	0.00
4,468.56	20.73	140.86	4,240.00	-1,017.66	828.12	-714.79	0.00	0.00	0.00
Parkman									

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<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 5068.00usft (D Rig)
<b>Site:</b>	1N-66W-13 AZUL 14-13HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	AZUL 13-13HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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)
4,500.00	20.73	140.86	4,269.40	-1,026.30	835.15	-720.86	0.00	0.00	0.00
4,600.00	20.73	140.86	4,362.93	-1,053.76	857.50	-740.15	0.00	0.00	0.00
4,700.00	20.73	140.86	4,456.45	-1,081.22	879.84	-759.43	0.00	0.00	0.00
4,800.00	20.73	140.86	4,549.97	-1,108.68	902.19	-778.72	0.00	0.00	0.00
4,857.77	20.73	140.86	4,604.00	-1,124.54	915.10	-789.86	0.00	0.00	0.00
<b>Sussex</b>									
4,900.00	20.73	140.86	4,643.49	-1,136.14	924.53	-798.01	0.00	0.00	0.00
5,000.00	20.73	140.86	4,737.02	-1,163.60	946.88	-817.30	0.00	0.00	0.00
5,100.00	20.73	140.86	4,830.54	-1,191.06	969.23	-836.58	0.00	0.00	0.00
5,200.00	20.73	140.86	4,924.06	-1,218.52	991.57	-855.87	0.00	0.00	0.00
5,300.00	20.73	140.86	5,017.59	-1,245.98	1,013.92	-875.16	0.00	0.00	0.00
5,400.00	20.73	140.86	5,111.11	-1,273.44	1,036.26	-894.45	0.00	0.00	0.00
5,500.00	20.73	140.86	5,204.63	-1,300.90	1,058.61	-913.74	0.00	0.00	0.00
5,600.00	20.73	140.86	5,298.16	-1,328.36	1,080.96	-933.02	0.00	0.00	0.00
5,693.67	20.73	140.86	5,385.76	-1,354.08	1,101.89	-951.09	0.00	0.00	0.00
5,700.00	20.61	140.86	5,391.68	-1,355.82	1,103.30	-952.31	2.00	-2.00	0.00
5,800.00	18.61	140.86	5,485.88	-1,381.84	1,124.48	-970.59	2.00	-2.00	0.00
5,900.00	16.61	140.86	5,581.19	-1,405.30	1,143.57	-987.07	2.00	-2.00	0.00
6,000.00	14.61	140.86	5,677.50	-1,426.17	1,160.55	-1,001.73	2.00	-2.00	0.00
6,100.00	12.61	140.86	5,774.69	-1,444.42	1,175.40	-1,014.54	2.00	-2.00	0.00
6,200.00	10.61	140.86	5,872.63	-1,460.03	1,188.10	-1,025.50	2.00	-2.00	0.00
6,300.00	8.61	140.86	5,971.23	-1,472.97	1,198.63	-1,034.60	2.00	-2.00	0.00
6,400.00	6.61	140.86	6,070.34	-1,483.24	1,206.99	-1,041.81	2.00	-2.00	0.00
6,500.00	4.61	140.86	6,169.86	-1,490.82	1,213.16	-1,047.13	2.00	-2.00	0.00
6,600.00	2.61	140.86	6,269.66	-1,495.70	1,217.13	-1,050.56	2.00	-2.00	0.00
6,700.00	0.61	140.86	6,369.61	-1,497.88	1,218.90	-1,052.09	2.00	-2.00	0.00
6,730.39	0.00	0.00	6,400.00	-1,498.00	1,219.00	-1,052.18	2.00	-2.00	0.00
6,800.00	0.00	0.00	6,469.61	-1,498.00	1,219.00	-1,052.18	0.00	0.00	0.00
6,900.00	0.00	0.00	6,569.61	-1,498.00	1,219.00	-1,052.18	0.00	0.00	0.00
7,000.00	0.00	0.00	6,669.61	-1,498.00	1,219.00	-1,052.18	0.00	0.00	0.00
7,048.36	0.00	0.00	6,717.97	-1,498.00	1,219.00	-1,052.18	0.00	0.00	0.00
7,100.00	4.65	0.42	6,769.55	-1,495.91	1,219.02	-1,050.18	9.00	9.00	0.00
7,200.00	13.65	0.42	6,868.18	-1,480.03	1,219.13	-1,035.03	9.00	9.00	0.00
7,300.00	22.65	0.42	6,963.11	-1,448.91	1,219.36	-1,005.34	9.00	9.00	0.00
7,400.00	31.65	0.42	7,052.00	-1,403.33	1,219.70	-961.85	9.00	9.00	0.00
7,470.69	38.01	0.42	7,110.00	-1,362.98	1,220.00	-923.35	9.00	9.00	0.00
<b>Sharon Springs</b>									
7,500.00	40.65	0.42	7,132.67	-1,344.41	1,220.14	-905.63	9.00	9.00	0.00
7,504.41	41.04	0.42	7,136.00	-1,341.52	1,220.16	-902.88	9.00	9.00	0.00
<b>Niobrara</b>									
7,600.00	49.65	0.42	7,203.12	-1,273.59	1,220.66	-838.06	9.00	9.00	0.00
7,700.00	58.65	0.42	7,261.63	-1,192.62	1,221.26	-760.81	9.00	9.00	0.00
7,720.47	60.49	0.42	7,272.00	-1,174.97	1,221.39	-743.97	9.00	9.00	0.00
<b>Nio B</b>									
7,800.00	67.65	0.42	7,306.75	-1,103.50	1,221.92	-675.77	9.00	9.00	0.00
7,867.25	73.70	0.42	7,329.00	-1,040.07	1,222.39	-615.25	9.00	9.00	0.00
<b>Nio C</b>									
7,900.00	76.65	0.42	7,337.38	-1,008.41	1,222.62	-585.05	9.00	9.00	0.00
8,000.00	85.65	0.42	7,352.75	-909.71	1,223.35	-490.88	9.00	9.00	0.00
8,055.25	90.62	0.42	7,354.55	-854.51	1,223.76	-438.21	9.00	9.00	0.00
<b>Top of Production - AZUL 13-13HZ_PHL</b>									
8,100.00	90.62	0.42	7,354.07	-809.76	1,224.09	-395.51	0.00	0.00	0.00
8,200.00	90.62	0.42	7,352.98	-709.77	1,224.83	-300.11	0.00	0.00	0.00

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<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 5068.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 5068.00usft (D Rig)
<b>Site:</b>	1N-66W-13 AZUL 14-13HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	AZUL 13-13HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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)	
8,300.00	90.62	0.42	7,351.90	-609.78	1,225.57	-204.71	0.00	0.00	0.00	
8,400.00	90.62	0.42	7,350.82	-509.79	1,226.31	-109.30	0.00	0.00	0.00	
8,500.00	90.62	0.42	7,349.74	-409.79	1,227.05	-13.90	0.00	0.00	0.00	
8,600.00	90.62	0.42	7,348.66	-309.80	1,227.79	81.51	0.00	0.00	0.00	
8,700.00	90.62	0.42	7,347.57	-209.81	1,228.53	176.91	0.00	0.00	0.00	
8,800.00	90.62	0.42	7,346.49	-109.82	1,229.27	272.31	0.00	0.00	0.00	
8,900.00	90.62	0.42	7,345.41	-9.83	1,230.01	367.72	0.00	0.00	0.00	
9,000.00	90.62	0.42	7,344.33	90.16	1,230.75	463.12	0.00	0.00	0.00	
9,100.00	90.62	0.42	7,343.25	190.15	1,231.49	558.52	0.00	0.00	0.00	
9,200.00	90.62	0.42	7,342.16	290.15	1,232.23	653.93	0.00	0.00	0.00	
9,300.00	90.62	0.42	7,341.08	390.14	1,232.97	749.33	0.00	0.00	0.00	
9,400.00	90.62	0.42	7,340.00	490.13	1,233.71	844.73	0.00	0.00	0.00	
9,500.00	90.62	0.42	7,338.92	590.12	1,234.45	940.14	0.00	0.00	0.00	
9,600.00	90.62	0.42	7,337.84	690.11	1,235.19	1,035.54	0.00	0.00	0.00	
9,700.00	90.62	0.42	7,336.75	790.10	1,235.93	1,130.95	0.00	0.00	0.00	
9,800.00	90.62	0.42	7,335.67	890.09	1,236.67	1,226.35	0.00	0.00	0.00	
9,900.00	90.62	0.42	7,334.59	990.09	1,237.41	1,321.75	0.00	0.00	0.00	
10,000.00	90.62	0.42	7,333.51	1,090.08	1,238.15	1,417.16	0.00	0.00	0.00	
10,100.00	90.62	0.42	7,332.43	1,190.07	1,238.89	1,512.56	0.00	0.00	0.00	
10,200.00	90.62	0.42	7,331.34	1,290.06	1,239.63	1,607.96	0.00	0.00	0.00	
10,300.00	90.62	0.42	7,330.26	1,390.05	1,240.36	1,703.37	0.00	0.00	0.00	
10,400.00	90.62	0.42	7,329.18	1,490.04	1,241.10	1,798.77	0.00	0.00	0.00	
10,500.00	90.62	0.42	7,328.10	1,590.03	1,241.84	1,894.18	0.00	0.00	0.00	
10,600.00	90.62	0.42	7,327.01	1,690.03	1,242.58	1,989.58	0.00	0.00	0.00	
10,700.00	90.62	0.42	7,325.93	1,790.02	1,243.32	2,084.98	0.00	0.00	0.00	
10,800.00	90.62	0.42	7,324.85	1,890.01	1,244.06	2,180.39	0.00	0.00	0.00	
10,900.00	90.62	0.42	7,323.77	1,990.00	1,244.80	2,275.79	0.00	0.00	0.00	
11,000.00	90.62	0.42	7,322.69	2,089.99	1,245.54	2,371.19	0.00	0.00	0.00	
11,100.00	90.62	0.42	7,321.60	2,189.98	1,246.28	2,466.60	0.00	0.00	0.00	
11,200.00	90.62	0.42	7,320.52	2,289.97	1,247.02	2,562.00	0.00	0.00	0.00	
11,300.00	90.62	0.42	7,319.44	2,389.96	1,247.76	2,657.41	0.00	0.00	0.00	
11,400.00	90.62	0.42	7,318.36	2,489.96	1,248.50	2,752.81	0.00	0.00	0.00	
11,500.00	90.62	0.42	7,317.28	2,589.95	1,249.24	2,848.21	0.00	0.00	0.00	
11,600.00	90.62	0.42	7,316.19	2,689.94	1,249.98	2,943.62	0.00	0.00	0.00	
11,700.00	90.62	0.42	7,315.11	2,789.93	1,250.72	3,039.02	0.00	0.00	0.00	
11,800.00	90.62	0.42	7,314.03	2,889.92	1,251.46	3,134.42	0.00	0.00	0.00	
11,900.00	90.62	0.42	7,312.95	2,989.91	1,252.20	3,229.83	0.00	0.00	0.00	
12,000.00	90.62	0.42	7,311.87	3,089.90	1,252.94	3,325.23	0.00	0.00	0.00	
12,100.00	90.62	0.42	7,310.78	3,189.90	1,253.68	3,420.64	0.00	0.00	0.00	
12,200.00	90.62	0.42	7,309.70	3,289.89	1,254.42	3,516.04	0.00	0.00	0.00	
12,300.00	90.62	0.42	7,308.62	3,389.88	1,255.16	3,611.44	0.00	0.00	0.00	
12,400.00	90.62	0.42	7,307.54	3,489.87	1,255.90	3,706.85	0.00	0.00	0.00	
12,500.00	90.62	0.42	7,306.46	3,589.86	1,256.64	3,802.25	0.00	0.00	0.00	
12,600.00	90.62	0.42	7,305.37	3,689.85	1,257.38	3,897.65	0.00	0.00	0.00	
12,700.00	90.62	0.42	7,304.29	3,789.84	1,258.12	3,993.06	0.00	0.00	0.00	
12,800.00	90.62	0.42	7,303.21	3,889.84	1,258.86	4,088.46	0.00	0.00	0.00	
12,819.28	90.62	0.42	7,303.00	3,909.12	1,259.00	4,106.86	0.00	0.00	0.00	
AZUL 13-13HZ_PBHL										

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well AZUL 13-13HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 5068.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 5068.00usft (D Rig)
<b>Site:</b>	1N-66W-13 AZUL 14-13HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	AZUL 13-13HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	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 13-13HZ_PBHL	0.00	0.00	7,303.00	3,909.12	1,259.00	14,547,710.66	1,718,167.00	40.057274	-104.722139
- plan hits target center									
- Point									
AZUL 13-13HZ_PHL	0.00	0.00	7,354.55	-854.51	1,223.76	14,542,946.95	1,718,146.38	40.044192	-104.722266
- plan hits target center									
- Point									

Casing Points					
	Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
	1,859.58	1,800.00	9 5/8"	9-5/8	13-1/2
	8,055.25	7,354.55	Top of Production	5-1/2	7-7/8

Formations						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
	1,644.66	1,599.00	Fox Hills			
	4,468.56	4,240.00	Parkman			
	4,857.77	4,604.00	Sussex			
	7,470.69	7,110.00	Sharon Springs			
	7,504.41	7,136.00	Niobrara			
	7,720.47	7,272.00	Nio B			
	7,867.25	7,329.00	Nio C			