

# **US ROCKIES WATTENBERG PLANNING**

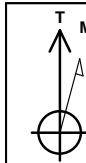
**WELD-NAD83-UTMFT13N  
1N-66W-13 AZUL 14-13HZ PAD  
AZUL 13-28HZ**

**Plan A**

**Plan: Permit Rev-1**

## **Standard Planning Report**

**07 June, 2017**



Azimuths to True North  
Magnetic North: 8.01°

Magnetic Field  
Strength: 52319.3snT  
Dip Angle: 66.56°  
Date: 6/5/2017  
Model: IGRF2010

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

Well: AZUL 13-28HZ  
Wellbore: Plan A  
Design: Permit Rev-1

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1599.00	1628.30	Fox Hills
4240.00	4425.22	Parkman
4604.00	4810.71	Sussex
7106.00	7350.18	Sharon Springs
7132.00	7378.33	Niobrara
7267.00	7536.06	Nio B
7324.00	7612.11	Nio C
7478.00	7905.76	Fort Hayes
7500.00	7991.55	Codell

## WELL DETAILS: AZUL 13-28HZ

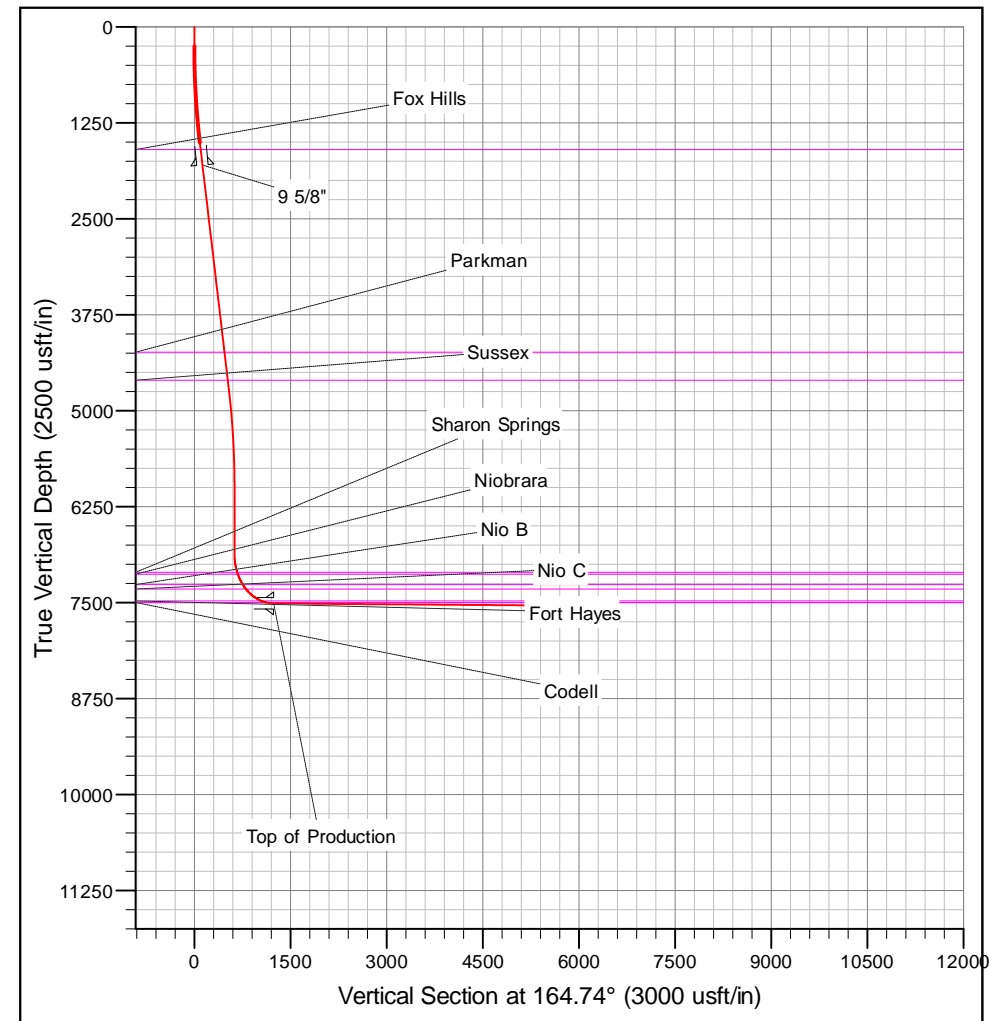
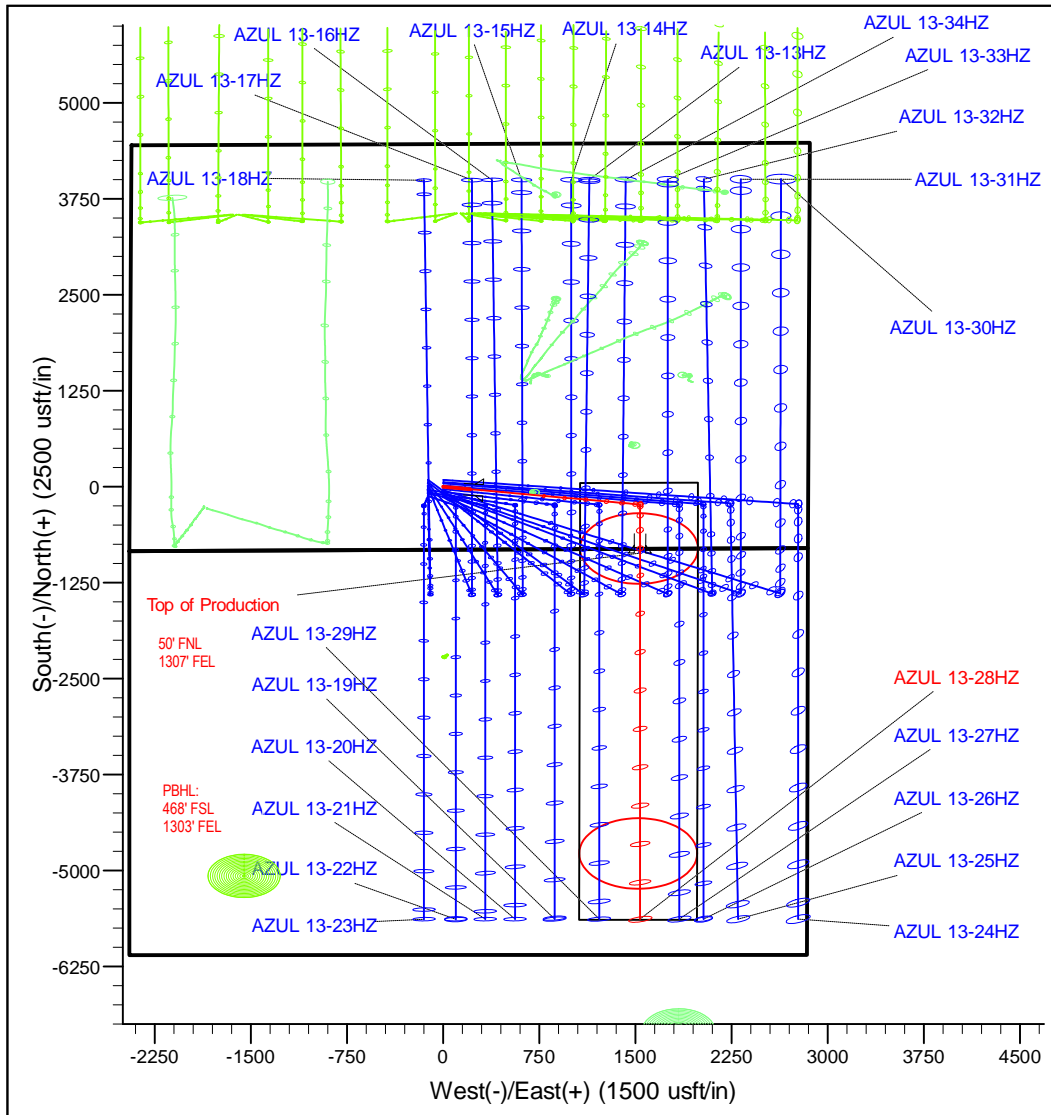
+N/-S	+E/-W	GL: 5051.00 Northing	RKB @ 5068.00usft (D Rig) Easting	Latitude	Longitude	Slot
0.00	0.00	14543707.03	1717039.23	40.046289	-104.726213	

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
AZUL 13-28HZ_PBHL	7540.00	-5631.78	1536.46	14538080.00	1718593.00	40.030823	-104.720724

## 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
1531.43	19.22	98.55	1507.53	-31.66	210.57	1.50	85.96
4957.36	19.22	98.55	4742.47	-199.34	1325.92	0.00	541.30
6238.79	0.00	0.00	6000.00	-231.00	1536.49	1.50	627.26
7113.88	0.00	0.00	6875.10	-231.00	1536.49	0.00	627.26
8110.11	89.66	180.00	7511.71	-863.84	1536.49	9.00	237.79
12878.13	89.66	180.00	7540.00	-5631.78	1536.46	0.00	837.61



# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well AZUL 13-28HZ
<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 13-28HZ	<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 13-28HZ					
Well Position	+N/-S	-91.04 usft	Northing:	14,543,707.02 usft	Latitude:	40.046289
	+E/-W	118.94 usft	Easting:	1,717,039.23 usft	Longitude:	-104.726213
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	52,319.26519246

<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	164.74

<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	12,878.13	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	
1,531.43	19.22	98.55	1,507.53	-31.66	210.57	1.50	1.50	0.00	98.55	
4,957.36	19.22	98.55	4,742.47	-199.34	1,325.92	0.00	0.00	0.00	0.00	
6,238.79	0.00	0.00	6,000.00	-231.00	1,536.49	1.50	-1.50	0.00	180.00	
7,113.89	0.00	0.00	6,875.10	-231.00	1,536.49	0.00	0.00	0.00	0.00	
8,110.11	89.66	180.00	7,511.71	-863.84	1,536.49	9.00	9.00	0.00	180.00	
12,878.13	89.66	180.00	7,540.00	-5,631.78	1,536.46	0.00	0.00	0.00	0.00	AZUL 13-28HZ_PBI

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well AZUL 13-28HZ
<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 13-28HZ	<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	0.75	98.55	300.00	-0.05	0.32	0.13	1.50	1.50	0.00
400.00	2.25	98.55	399.96	-0.44	2.91	1.19	1.50	1.50	0.00
500.00	3.75	98.55	499.82	-1.22	8.09	3.30	1.50	1.50	0.00
600.00	5.25	98.55	599.51	-2.38	15.85	6.47	1.50	1.50	0.00
700.00	6.75	98.55	698.96	-3.94	26.18	10.69	1.50	1.50	0.00
800.00	8.25	98.55	798.10	-5.88	39.09	15.96	1.50	1.50	0.00
900.00	9.75	98.55	896.87	-8.20	54.56	22.27	1.50	1.50	0.00
1,000.00	11.25	98.55	995.19	-10.91	72.58	29.63	1.50	1.50	0.00
1,100.00	12.75	98.55	1,093.00	-14.00	93.14	38.02	1.50	1.50	0.00
1,200.00	14.25	98.55	1,190.24	-17.47	116.22	47.45	1.50	1.50	0.00
1,300.00	15.75	98.55	1,286.83	-21.32	141.82	57.90	1.50	1.50	0.00
1,400.00	17.25	98.55	1,382.71	-25.54	169.90	69.36	1.50	1.50	0.00
1,500.00	18.75	98.55	1,477.81	-30.14	200.46	81.84	1.50	1.50	0.00
1,531.43	19.22	98.55	1,507.53	-31.66	210.57	85.96	1.50	1.50	0.00
1,600.00	19.22	98.55	1,572.28	-35.01	232.89	95.08	0.00	0.00	0.00
1,628.30	19.22	98.55	1,599.00	-36.40	242.11	98.84	0.00	0.00	0.00
Fox Hills									
1,700.00	19.22	98.55	1,666.70	-39.91	265.45	108.37	0.00	0.00	0.00
1,800.00	19.22	98.55	1,761.13	-44.80	298.01	121.66	0.00	0.00	0.00
1,841.17	19.22	98.55	1,800.00	-46.82	311.41	127.13	0.00	0.00	0.00
9 5/8"									
1,900.00	19.22	98.55	1,855.55	-49.70	330.56	134.95	0.00	0.00	0.00
2,000.00	19.22	98.55	1,949.98	-54.59	363.12	148.24	0.00	0.00	0.00
2,100.00	19.22	98.55	2,044.40	-59.49	395.67	161.53	0.00	0.00	0.00
2,200.00	19.22	98.55	2,138.83	-64.38	428.23	174.82	0.00	0.00	0.00
2,300.00	19.22	98.55	2,233.25	-69.28	460.79	188.11	0.00	0.00	0.00
2,400.00	19.22	98.55	2,327.68	-74.17	493.34	201.40	0.00	0.00	0.00
2,500.00	19.22	98.55	2,422.10	-79.07	525.90	214.69	0.00	0.00	0.00
2,600.00	19.22	98.55	2,516.53	-83.96	558.46	227.99	0.00	0.00	0.00
2,700.00	19.22	98.55	2,610.95	-88.85	591.01	241.28	0.00	0.00	0.00
2,800.00	19.22	98.55	2,705.38	-93.75	623.57	254.57	0.00	0.00	0.00
2,900.00	19.22	98.55	2,799.81	-98.64	656.12	267.86	0.00	0.00	0.00
3,000.00	19.22	98.55	2,894.23	-103.54	688.68	281.15	0.00	0.00	0.00
3,100.00	19.22	98.55	2,988.66	-108.43	721.24	294.44	0.00	0.00	0.00
3,200.00	19.22	98.55	3,083.08	-113.33	753.79	307.73	0.00	0.00	0.00
3,300.00	19.22	98.55	3,177.51	-118.22	786.35	321.02	0.00	0.00	0.00
3,400.00	19.22	98.55	3,271.93	-123.12	818.90	334.31	0.00	0.00	0.00
3,500.00	19.22	98.55	3,366.36	-128.01	851.46	347.60	0.00	0.00	0.00
3,600.00	19.22	98.55	3,460.78	-132.91	884.02	360.89	0.00	0.00	0.00
3,700.00	19.22	98.55	3,555.21	-137.80	916.57	374.18	0.00	0.00	0.00
3,800.00	19.22	98.55	3,649.63	-142.69	949.13	387.47	0.00	0.00	0.00
3,900.00	19.22	98.55	3,744.06	-147.59	981.68	400.77	0.00	0.00	0.00
4,000.00	19.22	98.55	3,838.48	-152.48	1,014.24	414.06	0.00	0.00	0.00
4,100.00	19.22	98.55	3,932.91	-157.38	1,046.80	427.35	0.00	0.00	0.00
4,200.00	19.22	98.55	4,027.33	-162.27	1,079.35	440.64	0.00	0.00	0.00
4,300.00	19.22	98.55	4,121.76	-167.17	1,111.91	453.93	0.00	0.00	0.00
4,400.00	19.22	98.55	4,216.19	-172.06	1,144.47	467.22	0.00	0.00	0.00
4,425.22	19.22	98.55	4,240.00	-173.30	1,152.68	470.57	0.00	0.00	0.00
Parkman									

# 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 13-28HZ	<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	19.22	98.55	4,310.61	-176.96	1,177.02	480.51	0.00	0.00	0.00
4,600.00	19.22	98.55	4,405.04	-181.85	1,209.58	493.80	0.00	0.00	0.00
4,700.00	19.22	98.55	4,499.46	-186.75	1,242.13	507.09	0.00	0.00	0.00
4,800.00	19.22	98.55	4,593.89	-191.64	1,274.69	520.38	0.00	0.00	0.00
4,810.71	19.22	98.55	4,604.00	-192.16	1,278.18	521.81	0.00	0.00	0.00
<b>Sussex</b>									
4,900.00	19.22	98.55	4,688.31	-196.53	1,307.25	533.67	0.00	0.00	0.00
4,957.36	19.22	98.55	4,742.47	-199.34	1,325.92	541.30	0.00	0.00	0.00
5,000.00	18.58	98.55	4,782.81	-201.40	1,339.58	546.87	1.50	-1.50	0.00
5,100.00	17.08	98.55	4,878.01	-205.95	1,369.86	559.24	1.50	-1.50	0.00
5,200.00	15.58	98.55	4,973.97	-210.13	1,397.67	570.59	1.50	-1.50	0.00
5,300.00	14.08	98.55	5,070.64	-213.93	1,422.98	580.92	1.50	-1.50	0.00
5,400.00	12.58	98.55	5,167.94	-217.36	1,445.78	590.23	1.50	-1.50	0.00
5,500.00	11.08	98.55	5,265.81	-220.41	1,466.06	598.51	1.50	-1.50	0.00
5,600.00	9.58	98.55	5,364.19	-223.08	1,483.79	605.75	1.50	-1.50	0.00
5,700.00	8.08	98.55	5,463.00	-225.36	1,498.98	611.95	1.50	-1.50	0.00
5,800.00	6.58	98.55	5,562.18	-227.26	1,511.59	617.10	1.50	-1.50	0.00
5,900.00	5.08	98.55	5,661.66	-228.77	1,521.64	621.20	1.50	-1.50	0.00
6,000.00	3.58	98.55	5,761.37	-229.89	1,529.11	624.25	1.50	-1.50	0.00
6,100.00	2.08	98.55	5,861.24	-230.63	1,534.00	626.24	1.50	-1.50	0.00
6,200.00	0.58	98.55	5,961.21	-230.97	1,536.30	627.18	1.50	-1.50	0.00
6,238.79	0.00	0.00	6,000.00	-231.00	1,536.49	627.26	1.50	-1.50	0.00
6,300.00	0.00	0.00	6,061.21	-231.00	1,536.49	627.26	0.00	0.00	0.00
6,400.00	0.00	0.00	6,161.21	-231.00	1,536.49	627.26	0.00	0.00	0.00
6,500.00	0.00	0.00	6,261.21	-231.00	1,536.49	627.26	0.00	0.00	0.00
6,600.00	0.00	0.00	6,361.21	-231.00	1,536.49	627.26	0.00	0.00	0.00
6,700.00	0.00	0.00	6,461.21	-231.00	1,536.49	627.26	0.00	0.00	0.00
6,800.00	0.00	0.00	6,561.21	-231.00	1,536.49	627.26	0.00	0.00	0.00
6,900.00	0.00	0.00	6,661.21	-231.00	1,536.49	627.26	0.00	0.00	0.00
7,000.00	0.00	0.00	6,761.21	-231.00	1,536.49	627.26	0.00	0.00	0.00
7,100.00	0.00	0.00	6,861.21	-231.00	1,536.49	627.26	0.00	0.00	0.00
7,113.89	0.00	0.00	6,875.10	-231.00	1,536.49	627.26	0.00	0.00	0.00
7,200.00	7.75	180.00	6,960.95	-236.82	1,536.49	632.87	9.00	9.00	0.00
7,300.00	16.75	180.00	7,058.57	-258.01	1,536.49	653.32	9.00	9.00	0.00
7,350.18	21.25	180.00	7,106.00	-274.35	1,536.49	669.08	8.97	8.97	0.00
<b>Sharon Springs</b>									
7,378.33	23.80	180.00	7,132.00	-285.14	1,536.49	679.49	9.06	9.06	0.00
<b>Niobrara</b>									
7,400.00	25.75	180.00	7,151.68	-294.22	1,536.49	688.25	9.00	9.00	0.00
7,500.00	34.75	180.00	7,237.97	-344.55	1,536.49	736.80	9.00	9.00	0.00
7,536.06	38.00	180.00	7,267.00	-365.93	1,536.49	757.43	9.00	9.00	0.00
<b>Nio B</b>									
7,600.00	43.75	180.00	7,315.33	-407.75	1,536.49	797.78	9.00	9.00	0.00
7,612.11	44.84	180.00	7,324.00	-416.21	1,536.49	805.94	9.00	9.00	0.00
<b>Nio C</b>									
7,700.00	52.75	180.00	7,381.85	-482.28	1,536.49	869.68	9.00	9.00	0.00
7,800.00	61.75	180.00	7,435.89	-566.30	1,536.49	950.74	9.00	9.00	0.00
7,900.00	70.75	180.00	7,476.12	-657.74	1,536.49	1,038.95	9.00	9.00	0.00
7,905.76	71.27	180.00	7,478.00	-663.19	1,536.49	1,044.21	9.00	9.00	0.00
<b>Fort Hayes</b>									
7,991.55	78.99	180.00	7,500.00	-746.04	1,536.49	1,124.14	9.00	9.00	0.00
<b>Codell</b>									
8,000.00	79.75	180.00	7,501.56	-754.34	1,536.49	1,132.15	9.00	9.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well AZUL 13-28HZ
<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 13-28HZ	<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)
8,100.00	88.75	180.00	7,511.57	-853.74	1,536.49	1,228.04	9.00	9.00	0.00
8,110.11	89.66	180.00	7,511.71	-863.84	1,536.49	1,237.79	9.00	9.00	0.00
Top of Production - AZUL 13-28HZ_PHL									
8,200.00	89.66	180.00	7,512.24	-953.73	1,536.49	1,324.51	0.00	0.00	0.00
8,300.00	89.66	180.00	7,512.83	-1,053.73	1,536.49	1,420.98	0.00	0.00	0.00
8,400.00	89.66	180.00	7,513.43	-1,153.73	1,536.49	1,517.45	0.00	0.00	0.00
8,500.00	89.66	180.00	7,514.02	-1,253.73	1,536.48	1,613.93	0.00	0.00	0.00
8,600.00	89.66	180.00	7,514.61	-1,353.73	1,536.48	1,710.40	0.00	0.00	0.00
8,700.00	89.66	180.00	7,515.21	-1,453.72	1,536.48	1,806.87	0.00	0.00	0.00
8,800.00	89.66	180.00	7,515.80	-1,553.72	1,536.48	1,903.34	0.00	0.00	0.00
8,900.00	89.66	180.00	7,516.39	-1,653.72	1,536.48	1,999.82	0.00	0.00	0.00
9,000.00	89.66	180.00	7,516.99	-1,753.72	1,536.48	2,096.29	0.00	0.00	0.00
9,100.00	89.66	180.00	7,517.58	-1,853.72	1,536.48	2,192.76	0.00	0.00	0.00
9,200.00	89.66	180.00	7,518.17	-1,953.72	1,536.48	2,289.23	0.00	0.00	0.00
9,300.00	89.66	180.00	7,518.77	-2,053.71	1,536.48	2,385.71	0.00	0.00	0.00
9,400.00	89.66	180.00	7,519.36	-2,153.71	1,536.48	2,482.18	0.00	0.00	0.00
9,500.00	89.66	180.00	7,519.95	-2,253.71	1,536.48	2,578.65	0.00	0.00	0.00
9,600.00	89.66	180.00	7,520.55	-2,353.71	1,536.48	2,675.12	0.00	0.00	0.00
9,700.00	89.66	180.00	7,521.14	-2,453.71	1,536.48	2,771.59	0.00	0.00	0.00
9,800.00	89.66	180.00	7,521.73	-2,553.71	1,536.48	2,868.07	0.00	0.00	0.00
9,900.00	89.66	180.00	7,522.33	-2,653.70	1,536.48	2,964.54	0.00	0.00	0.00
10,000.00	89.66	180.00	7,522.92	-2,753.70	1,536.48	3,061.01	0.00	0.00	0.00
10,100.00	89.66	180.00	7,523.51	-2,853.70	1,536.48	3,157.48	0.00	0.00	0.00
10,200.00	89.66	180.00	7,524.11	-2,953.70	1,536.48	3,253.96	0.00	0.00	0.00
10,300.00	89.66	180.00	7,524.70	-3,053.70	1,536.48	3,350.43	0.00	0.00	0.00
10,400.00	89.66	180.00	7,525.29	-3,153.69	1,536.48	3,446.90	0.00	0.00	0.00
10,500.00	89.66	180.00	7,525.89	-3,253.69	1,536.48	3,543.37	0.00	0.00	0.00
10,600.00	89.66	180.00	7,526.48	-3,353.69	1,536.47	3,639.85	0.00	0.00	0.00
10,700.00	89.66	180.00	7,527.07	-3,453.69	1,536.47	3,736.32	0.00	0.00	0.00
10,800.00	89.66	180.00	7,527.67	-3,553.69	1,536.47	3,832.79	0.00	0.00	0.00
10,900.00	89.66	180.00	7,528.26	-3,653.69	1,536.47	3,929.26	0.00	0.00	0.00
11,000.00	89.66	180.00	7,528.86	-3,753.68	1,536.47	4,025.73	0.00	0.00	0.00
11,100.00	89.66	180.00	7,529.45	-3,853.68	1,536.47	4,122.21	0.00	0.00	0.00
11,200.00	89.66	180.00	7,530.04	-3,953.68	1,536.47	4,218.68	0.00	0.00	0.00
11,300.00	89.66	180.00	7,530.64	-4,053.68	1,536.47	4,315.15	0.00	0.00	0.00
11,400.00	89.66	180.00	7,531.23	-4,153.68	1,536.47	4,411.62	0.00	0.00	0.00
11,500.00	89.66	180.00	7,531.82	-4,253.68	1,536.47	4,508.10	0.00	0.00	0.00
11,600.00	89.66	180.00	7,532.42	-4,353.67	1,536.47	4,604.57	0.00	0.00	0.00
11,700.00	89.66	180.00	7,533.01	-4,453.67	1,536.47	4,701.04	0.00	0.00	0.00
11,800.00	89.66	180.00	7,533.60	-4,553.67	1,536.47	4,797.51	0.00	0.00	0.00
11,900.00	89.66	180.00	7,534.20	-4,653.67	1,536.47	4,893.98	0.00	0.00	0.00
12,000.00	89.66	180.00	7,534.79	-4,753.67	1,536.47	4,990.46	0.00	0.00	0.00
12,100.00	89.66	180.00	7,535.38	-4,853.66	1,536.47	5,086.93	0.00	0.00	0.00
12,200.00	89.66	180.00	7,535.98	-4,953.66	1,536.47	5,183.40	0.00	0.00	0.00
12,300.00	89.66	180.00	7,536.57	-5,053.66	1,536.47	5,279.87	0.00	0.00	0.00
12,400.00	89.66	180.00	7,537.16	-5,153.66	1,536.47	5,376.35	0.00	0.00	0.00
12,500.00	89.66	180.00	7,537.76	-5,253.66	1,536.47	5,472.82	0.00	0.00	0.00
12,600.00	89.66	180.00	7,538.35	-5,353.66	1,536.46	5,569.29	0.00	0.00	0.00
12,700.00	89.66	180.00	7,538.94	-5,453.65	1,536.46	5,665.76	0.00	0.00	0.00
12,800.00	89.66	180.00	7,539.54	-5,553.65	1,536.46	5,762.24	0.00	0.00	0.00
12,878.13	89.66	180.00	7,540.00	-5,631.78	1,536.46	5,837.61	0.00	0.00	0.00
AZUL 13-28HZ_PBHL									

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well AZUL 13-28HZ
<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 13-28HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
AZUL 13-28HZ_PHL	0.00	0.00	7,511.71	-863.84	1,536.49	14,542,847.90	1,718,578.36	40.043917	-104.720723
- plan hits target center									
- Point									
AZUL 13-28HZ_PBHL	0.00	0.00	7,540.00	-5,631.78	1,536.46	14,538,080.00	1,718,593.00	40.030823	-104.720724
- plan hits target center									
- Point									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(usft)	(usft)			(")	(")
1,841.17	1,800.00	9 5/8"		9-5/8	13-1/2
8,110.11	7,511.71	Top of Production		5-1/2	7-7/8

Formations						
Measured Depth	Vertical Depth	Name		Lithology	Dip	Dip Direction
(usft)	(usft)				(°)	(°)
1,628.30	1,599.00	Fox Hills				
4,425.22	4,240.00	Parkman				
4,810.71	4,604.00	Sussex				
7,350.18	7,106.00	Sharon Springs				
7,378.33	7,132.00	Niobrara				
7,536.06	7,267.00	Nio B				
7,612.11	7,324.00	Nio C				
7,905.76	7,478.00	Fort Hayes				
7,991.55	7,500.00	Codell				