

US ROCKIES WATTENBERG PLANNING

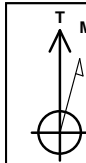
**WELD-NAD83-UTMFT13N
1N-66W-13 AZUL 14-13HZ PAD
AZUL 13-29HZ**

Plan A

Plan: Permit Rev-1

Standard Planning Report

07 June, 2017



Azimuths to True North
Magnetic North: 8.01°

Magnetic Field
Strength: 52319.2snT
Dip Angle: 66.56°
Date: 6/5/2017
Model: IGRF2010

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

Well: AZUL 13-29HZ
Wellbore: Plan A
Design: Permit Rev-1

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1599.00	1622.85	Fox Hills
4240.00	4355.22	Parkman
4604.00	4731.81	Sussex
7105.00	7283.76	Sharon Springs
7131.00	7317.18	Niobrara
7270.00	7535.68	Nio B
7328.00	7682.68	Nio C

WELL DETAILS: AZUL 13-29HZ

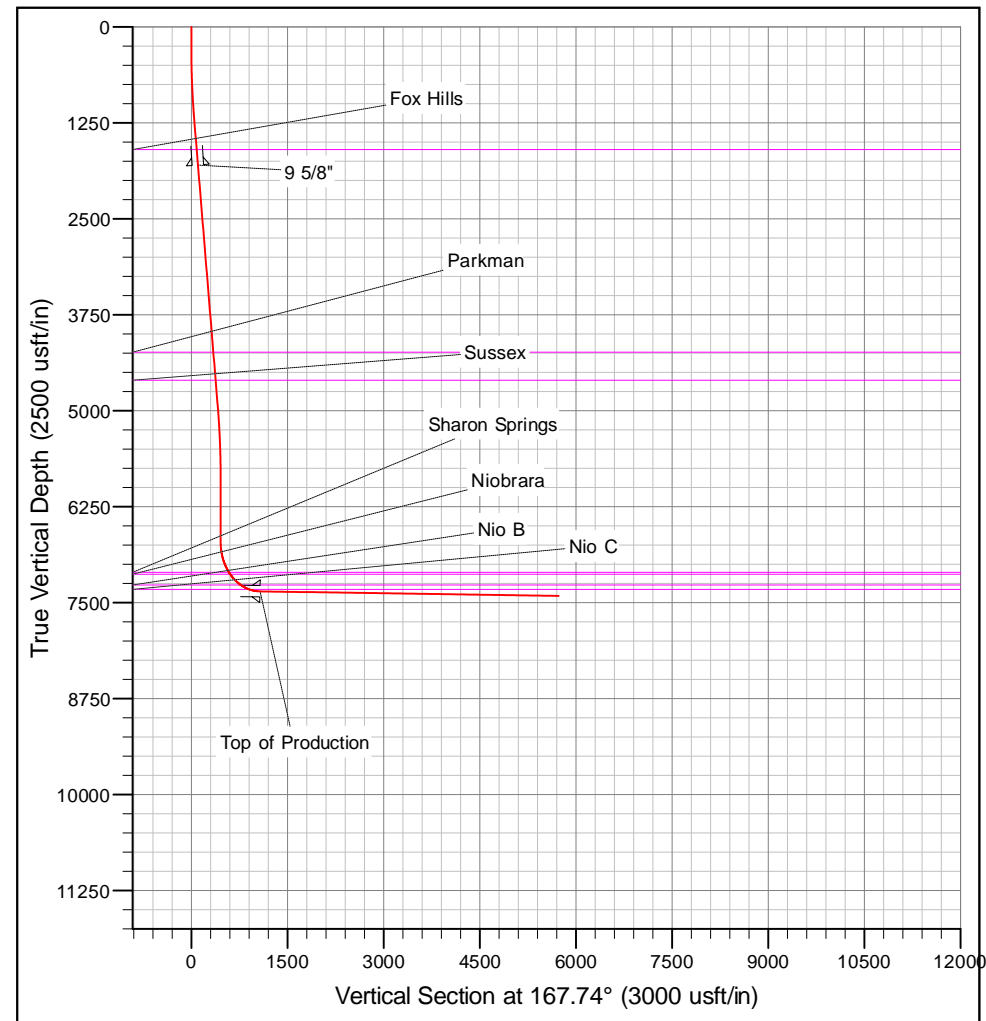
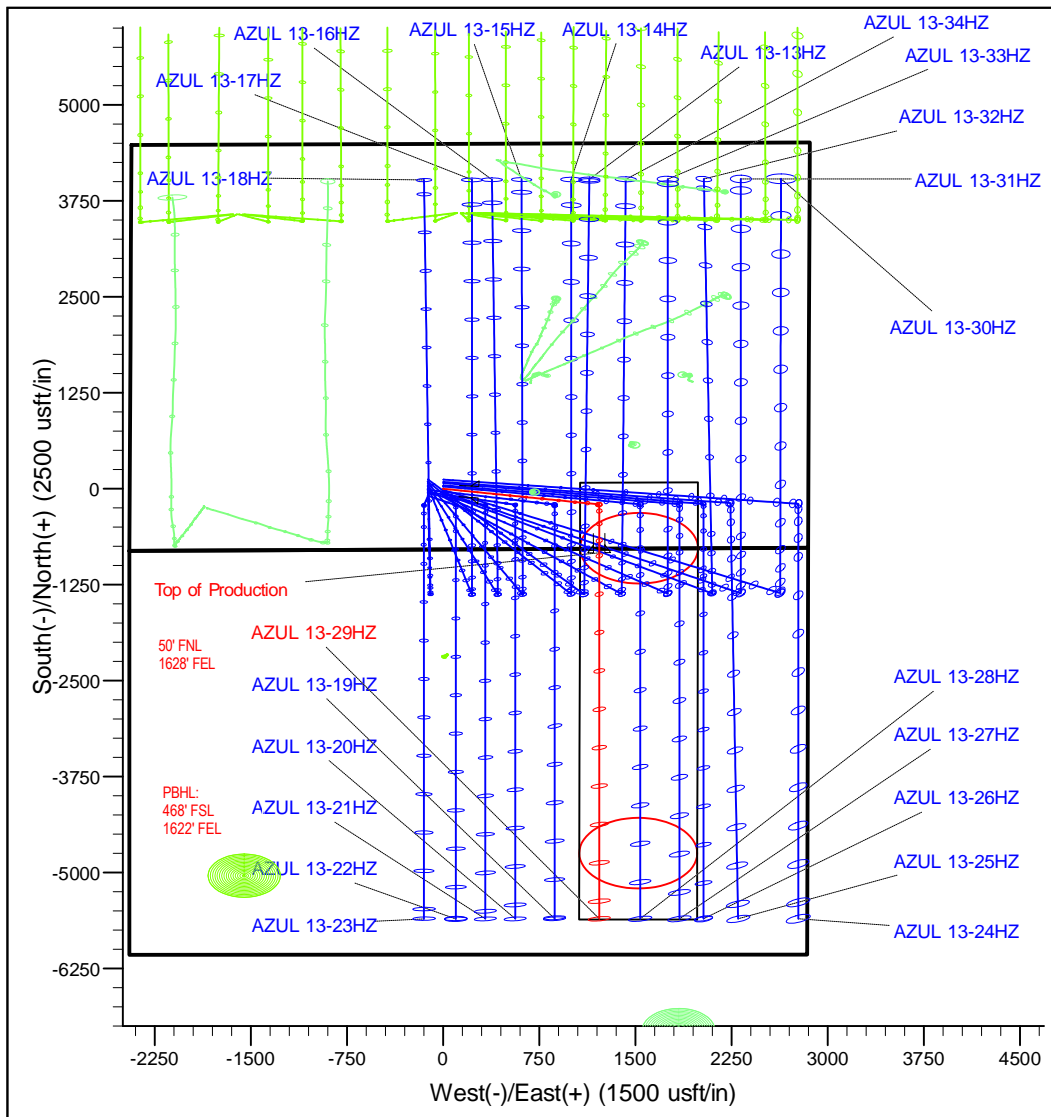
+N/-S	+E/-W	GL: 5051.00 Northing	RKB @ 5068.00usft (D Rig) Easting	Latitude	Longitude	Slot
0.00	0.00	14543677.17	1717039.04	40.046207	-104.726214	

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
AZUL 13-29HZ_PBHL	7413.00	-5601.94	1217.74	14538079.00	1718274.00	40.030823	-104.721864

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
1240.59	14.86	99.51	1229.53	-21.10	125.97	1.50	47.38
5059.24	14.86	99.51	4920.47	-182.90	1081.77	0.00	410.83
6049.83	0.00	0.00	5900.00	-204.00	1217.74	1.50	458.01
6867.99	0.00	0.00	6718.16	-204.00	1217.74	0.00	458.01
7860.21	89.30	180.00	7354.73	-832.84	1217.74	9.00	072.51
12629.66	89.30	180.00	7413.00	-5601.94	1217.74	0.00	732.76



Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well AZUL 13-29HZ
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 13-29HZ	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 13-29HZ					
Well Position	+N/-S	-120.90 usft	Northing:	14,543,677.16 usft	Latitude:	40.046207
	+E/-W	118.66 usft	Easting:	1,717,039.04 usft	Longitude:	-104.726214
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	52,319.22195813

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	167.74

Plan Survey Tool Program	Date	6/7/2017		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	12,629.66	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	
1,240.59	14.86	99.51	1,229.53	-21.10	125.97	1.50	1.50	0.00	99.51	
5,059.24	14.86	99.51	4,920.48	-182.90	1,091.77	0.00	0.00	0.00	0.00	
6,049.83	0.00	0.00	5,900.00	-204.00	1,217.74	1.50	-1.50	0.00	180.00	
6,867.99	0.00	0.00	6,718.16	-204.00	1,217.74	0.00	0.00	0.00	0.00	
7,860.21	89.30	180.00	7,354.73	-832.84	1,217.74	9.00	9.00	0.00	180.00	
12,629.66	89.30	180.00	7,413.00	-5,601.94	1,217.74	0.00	0.00	0.00	0.00	AZUL 13-29HZ_PBI

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well AZUL 13-29HZ
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 13-29HZ	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	0.75	99.51	300.00	-0.05	0.32	0.12	1.50	1.50	0.00
400.00	2.25	99.51	399.96	-0.49	2.90	1.09	1.50	1.50	0.00
500.00	3.75	99.51	499.82	-1.35	8.07	3.03	1.50	1.50	0.00
600.00	5.25	99.51	599.51	-2.65	15.80	5.94	1.50	1.50	0.00
700.00	6.75	99.51	698.96	-4.37	26.11	9.82	1.50	1.50	0.00
800.00	8.25	99.51	798.10	-6.53	38.99	14.66	1.50	1.50	0.00
900.00	9.75	99.51	896.87	-9.12	54.41	20.47	1.50	1.50	0.00
1,000.00	11.25	99.51	995.19	-12.13	72.39	27.23	1.50	1.50	0.00
1,100.00	12.75	99.51	1,093.00	-15.56	92.89	34.94	1.50	1.50	0.00
1,200.00	14.25	99.51	1,190.24	-19.42	115.91	43.60	1.50	1.50	0.00
1,240.59	14.86	99.51	1,229.53	-21.10	125.97	47.38	1.50	1.50	0.00
1,300.00	14.86	99.51	1,286.95	-23.62	141.00	53.03	0.00	0.00	0.00
1,400.00	14.86	99.51	1,383.60	-27.86	166.29	62.55	0.00	0.00	0.00
1,500.00	14.86	99.51	1,480.26	-32.09	191.58	72.06	0.00	0.00	0.00
1,600.00	14.86	99.51	1,576.92	-36.33	216.87	81.57	0.00	0.00	0.00
1,622.85	14.86	99.51	1,599.00	-37.30	222.65	83.74	0.00	0.00	0.00
Fox Hills									
1,700.00	14.86	99.51	1,673.57	-40.57	242.17	91.08	0.00	0.00	0.00
1,800.00	14.86	99.51	1,770.23	-44.81	267.46	100.60	0.00	0.00	0.00
1,830.80	14.86	99.51	1,800.00	-46.11	275.25	103.53	0.00	0.00	0.00
9 5/8"									
1,900.00	14.86	99.51	1,866.88	-49.04	292.75	110.11	0.00	0.00	0.00
2,000.00	14.86	99.51	1,963.54	-53.28	318.04	119.62	0.00	0.00	0.00
2,100.00	14.86	99.51	2,060.20	-57.52	343.33	129.13	0.00	0.00	0.00
2,200.00	14.86	99.51	2,156.85	-61.75	368.62	138.65	0.00	0.00	0.00
2,300.00	14.86	99.51	2,253.51	-65.99	393.91	148.16	0.00	0.00	0.00
2,400.00	14.86	99.51	2,350.16	-70.23	419.21	157.67	0.00	0.00	0.00
2,500.00	14.86	99.51	2,446.82	-74.46	444.50	167.18	0.00	0.00	0.00
2,600.00	14.86	99.51	2,543.48	-78.70	469.79	176.70	0.00	0.00	0.00
2,700.00	14.86	99.51	2,640.13	-82.94	495.08	186.21	0.00	0.00	0.00
2,800.00	14.86	99.51	2,736.79	-87.17	520.37	195.72	0.00	0.00	0.00
2,900.00	14.86	99.51	2,833.44	-91.41	545.66	205.23	0.00	0.00	0.00
3,000.00	14.86	99.51	2,930.10	-95.65	570.95	214.75	0.00	0.00	0.00
3,100.00	14.86	99.51	3,026.76	-99.89	596.25	224.26	0.00	0.00	0.00
3,200.00	14.86	99.51	3,123.41	-104.12	621.54	233.77	0.00	0.00	0.00
3,300.00	14.86	99.51	3,220.07	-108.36	646.83	243.28	0.00	0.00	0.00
3,400.00	14.86	99.51	3,316.72	-112.60	672.12	252.80	0.00	0.00	0.00
3,500.00	14.86	99.51	3,413.38	-116.83	697.41	262.31	0.00	0.00	0.00
3,600.00	14.86	99.51	3,510.04	-121.07	722.70	271.82	0.00	0.00	0.00
3,700.00	14.86	99.51	3,606.69	-125.31	747.99	281.33	0.00	0.00	0.00
3,800.00	14.86	99.51	3,703.35	-129.54	773.29	290.85	0.00	0.00	0.00
3,900.00	14.86	99.51	3,800.00	-133.78	798.58	300.36	0.00	0.00	0.00
4,000.00	14.86	99.51	3,896.66	-138.02	823.87	309.87	0.00	0.00	0.00
4,100.00	14.86	99.51	3,993.32	-142.25	849.16	319.38	0.00	0.00	0.00
4,200.00	14.86	99.51	4,089.97	-146.49	874.45	328.90	0.00	0.00	0.00
4,300.00	14.86	99.51	4,186.63	-150.73	899.74	338.41	0.00	0.00	0.00
4,355.22	14.86	99.51	4,240.00	-153.07	913.71	343.66	0.00	0.00	0.00
Parkman									
4,400.00	14.86	99.51	4,283.28	-154.97	925.04	347.92	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well AZUL 13-29HZ
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 13-29HZ	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)
4,500.00	14.86	99.51	4,379.94	-159.20	950.33	357.44	0.00	0.00	0.00
4,600.00	14.86	99.51	4,476.60	-163.44	975.62	366.95	0.00	0.00	0.00
4,700.00	14.86	99.51	4,573.25	-167.68	1,000.91	376.46	0.00	0.00	0.00
4,731.81	14.86	99.51	4,604.00	-169.02	1,008.96	379.49	0.00	0.00	0.00
Sussex									
4,800.00	14.86	99.51	4,669.91	-171.91	1,026.20	385.97	0.00	0.00	0.00
4,900.00	14.86	99.51	4,766.56	-176.15	1,051.49	395.49	0.00	0.00	0.00
5,000.00	14.86	99.51	4,863.22	-180.39	1,076.78	405.00	0.00	0.00	0.00
5,059.24	14.86	99.51	4,920.48	-182.90	1,091.77	410.63	0.00	0.00	0.00
5,100.00	14.25	99.51	4,959.93	-184.59	1,101.87	414.43	1.50	-1.50	0.00
5,200.00	12.75	99.51	5,057.17	-188.44	1,124.89	423.09	1.50	-1.50	0.00
5,300.00	11.25	99.51	5,154.98	-191.88	1,145.39	430.80	1.50	-1.50	0.00
5,400.00	9.75	99.51	5,253.30	-194.89	1,163.36	437.56	1.50	-1.50	0.00
5,500.00	8.25	99.51	5,352.07	-197.47	1,178.78	443.36	1.50	-1.50	0.00
5,600.00	6.75	99.51	5,451.21	-199.63	1,191.65	448.20	1.50	-1.50	0.00
5,700.00	5.25	99.51	5,550.66	-201.36	1,201.95	452.08	1.50	-1.50	0.00
5,800.00	3.75	99.51	5,650.35	-202.65	1,209.69	454.98	1.50	-1.50	0.00
5,900.00	2.25	99.51	5,750.21	-203.51	1,214.84	456.92	1.50	-1.50	0.00
6,000.00	0.75	99.51	5,850.17	-203.95	1,217.42	457.89	1.50	-1.50	0.00
6,049.83	0.00	0.00	5,900.00	-204.00	1,217.74	458.01	1.50	-1.50	0.00
6,100.00	0.00	0.00	5,950.17	-204.00	1,217.74	458.01	0.00	0.00	0.00
6,200.00	0.00	0.00	6,050.17	-204.00	1,217.74	458.01	0.00	0.00	0.00
6,300.00	0.00	0.00	6,150.17	-204.00	1,217.74	458.01	0.00	0.00	0.00
6,400.00	0.00	0.00	6,250.17	-204.00	1,217.74	458.01	0.00	0.00	0.00
6,500.00	0.00	0.00	6,350.17	-204.00	1,217.74	458.01	0.00	0.00	0.00
6,600.00	0.00	0.00	6,450.17	-204.00	1,217.74	458.01	0.00	0.00	0.00
6,700.00	0.00	0.00	6,550.17	-204.00	1,217.74	458.01	0.00	0.00	0.00
6,800.00	0.00	0.00	6,650.17	-204.00	1,217.74	458.01	0.00	0.00	0.00
6,867.99	0.00	0.00	6,718.16	-204.00	1,217.74	458.01	0.00	0.00	0.00
6,900.00	2.88	180.00	6,750.16	-204.80	1,217.74	458.80	9.00	9.00	0.00
7,000.00	11.88	180.00	6,849.23	-217.64	1,217.74	471.34	9.00	9.00	0.00
7,100.00	20.88	180.00	6,945.07	-245.81	1,217.74	498.87	9.00	9.00	0.00
7,200.00	29.88	180.00	7,035.33	-288.63	1,217.74	540.72	9.00	9.00	0.00
7,283.76	37.42	180.00	7,105.00	-335.01	1,217.74	586.04	9.00	9.00	0.00
Sharon Springs									
7,300.00	38.88	180.00	7,117.77	-345.04	1,217.74	595.84	9.00	9.00	0.00
7,317.18	40.43	180.00	7,131.00	-356.01	1,217.74	606.55	9.00	9.00	0.00
Niobrara									
7,400.00	47.88	180.00	7,190.38	-413.66	1,217.74	662.89	9.00	9.00	0.00
7,500.00	56.88	180.00	7,251.35	-492.79	1,217.74	740.21	9.00	9.00	0.00
7,535.68	60.09	180.00	7,270.00	-523.20	1,217.74	769.93	9.00	9.00	0.00
Nio B									
7,600.00	65.88	180.00	7,299.20	-580.48	1,217.74	825.90	9.00	9.00	0.00
7,682.68	73.32	180.00	7,328.00	-657.92	1,217.74	901.58	9.00	9.00	0.00
Nio C									
7,700.00	74.88	180.00	7,332.74	-674.58	1,217.74	917.85	9.00	9.00	0.00
7,800.00	83.88	180.00	7,351.15	-772.76	1,217.74	1,013.80	9.00	9.00	0.00
7,860.21	89.30	180.00	7,354.73	-832.84	1,217.74	1,072.51	9.00	9.00	0.00
Top of Production - AZUL 13-29HZ_PHL									
7,900.00	89.30	180.00	7,355.22	-872.63	1,217.74	1,111.39	0.00	0.00	0.00
8,000.00	89.30	180.00	7,356.44	-972.62	1,217.74	1,209.10	0.00	0.00	0.00
8,100.00	89.30	180.00	7,357.66	-1,072.62	1,217.74	1,306.81	0.00	0.00	0.00
8,200.00	89.30	180.00	7,358.88	-1,172.61	1,217.74	1,404.52	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well AZUL 13-29HZ
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 13-29HZ	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)	
8,300.00	89.30	180.00	7,360.10	-1,272.60	1,217.74	1,502.23	0.00	0.00	0.00	
8,400.00	89.30	180.00	7,361.33	-1,372.59	1,217.74	1,599.94	0.00	0.00	0.00	
8,500.00	89.30	180.00	7,362.55	-1,472.59	1,217.74	1,697.65	0.00	0.00	0.00	
8,600.00	89.30	180.00	7,363.77	-1,572.58	1,217.74	1,795.36	0.00	0.00	0.00	
8,700.00	89.30	180.00	7,364.99	-1,672.57	1,217.74	1,893.07	0.00	0.00	0.00	
8,800.00	89.30	180.00	7,366.21	-1,772.56	1,217.74	1,990.78	0.00	0.00	0.00	
8,900.00	89.30	180.00	7,367.43	-1,872.56	1,217.74	2,088.49	0.00	0.00	0.00	
9,000.00	89.30	180.00	7,368.66	-1,972.55	1,217.74	2,186.20	0.00	0.00	0.00	
9,100.00	89.30	180.00	7,369.88	-2,072.54	1,217.74	2,283.91	0.00	0.00	0.00	
9,200.00	89.30	180.00	7,371.10	-2,172.53	1,217.74	2,381.62	0.00	0.00	0.00	
9,300.00	89.30	180.00	7,372.32	-2,272.53	1,217.74	2,479.33	0.00	0.00	0.00	
9,400.00	89.30	180.00	7,373.54	-2,372.52	1,217.74	2,577.05	0.00	0.00	0.00	
9,500.00	89.30	180.00	7,374.77	-2,472.51	1,217.74	2,674.76	0.00	0.00	0.00	
9,600.00	89.30	180.00	7,375.99	-2,572.50	1,217.74	2,772.47	0.00	0.00	0.00	
9,700.00	89.30	180.00	7,377.21	-2,672.50	1,217.74	2,870.18	0.00	0.00	0.00	
9,800.00	89.30	180.00	7,378.43	-2,772.49	1,217.74	2,967.89	0.00	0.00	0.00	
9,900.00	89.30	180.00	7,379.65	-2,872.48	1,217.74	3,065.60	0.00	0.00	0.00	
10,000.00	89.30	180.00	7,380.87	-2,972.47	1,217.74	3,163.31	0.00	0.00	0.00	
10,100.00	89.30	180.00	7,382.10	-3,072.47	1,217.74	3,261.02	0.00	0.00	0.00	
10,200.00	89.30	180.00	7,383.32	-3,172.46	1,217.74	3,358.73	0.00	0.00	0.00	
10,300.00	89.30	180.00	7,384.54	-3,272.45	1,217.74	3,456.44	0.00	0.00	0.00	
10,400.00	89.30	180.00	7,385.76	-3,372.44	1,217.74	3,554.15	0.00	0.00	0.00	
10,500.00	89.30	180.00	7,386.98	-3,472.44	1,217.74	3,651.86	0.00	0.00	0.00	
10,600.00	89.30	180.00	7,388.20	-3,572.43	1,217.74	3,749.57	0.00	0.00	0.00	
10,700.00	89.30	180.00	7,389.43	-3,672.42	1,217.74	3,847.28	0.00	0.00	0.00	
10,800.00	89.30	180.00	7,390.65	-3,772.41	1,217.74	3,944.99	0.00	0.00	0.00	
10,900.00	89.30	180.00	7,391.87	-3,872.41	1,217.74	4,042.70	0.00	0.00	0.00	
11,000.00	89.30	180.00	7,393.09	-3,972.40	1,217.74	4,140.42	0.00	0.00	0.00	
11,100.00	89.30	180.00	7,394.31	-4,072.39	1,217.74	4,238.13	0.00	0.00	0.00	
11,200.00	89.30	180.00	7,395.53	-4,172.38	1,217.74	4,335.84	0.00	0.00	0.00	
11,300.00	89.30	180.00	7,396.76	-4,272.38	1,217.74	4,433.55	0.00	0.00	0.00	
11,400.00	89.30	180.00	7,397.98	-4,372.37	1,217.74	4,531.26	0.00	0.00	0.00	
11,500.00	89.30	180.00	7,399.20	-4,472.36	1,217.74	4,628.97	0.00	0.00	0.00	
11,600.00	89.30	180.00	7,400.42	-4,572.35	1,217.74	4,726.68	0.00	0.00	0.00	
11,700.00	89.30	180.00	7,401.64	-4,672.35	1,217.74	4,824.39	0.00	0.00	0.00	
11,800.00	89.30	180.00	7,402.86	-4,772.34	1,217.74	4,922.10	0.00	0.00	0.00	
11,900.00	89.30	180.00	7,404.09	-4,872.33	1,217.74	5,019.81	0.00	0.00	0.00	
12,000.00	89.30	180.00	7,405.31	-4,972.32	1,217.74	5,117.52	0.00	0.00	0.00	
12,100.00	89.30	180.00	7,406.53	-5,072.32	1,217.74	5,215.23	0.00	0.00	0.00	
12,200.00	89.30	180.00	7,407.75	-5,172.31	1,217.74	5,312.94	0.00	0.00	0.00	
12,300.00	89.30	180.00	7,408.97	-5,272.30	1,217.74	5,410.65	0.00	0.00	0.00	
12,400.00	89.30	180.00	7,410.19	-5,372.30	1,217.74	5,508.36	0.00	0.00	0.00	
12,500.00	89.30	180.00	7,411.42	-5,472.29	1,217.74	5,606.07	0.00	0.00	0.00	
12,600.00	89.30	180.00	7,412.64	-5,572.28	1,217.74	5,703.78	0.00	0.00	0.00	
12,629.66	89.30	180.00	7,413.00	-5,601.94	1,217.74	5,732.76	0.00	0.00	0.00	
AZUL 13-29HZ_PBHL										

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well AZUL 13-29HZ
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 13-29HZ	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 13-29HZ_PHL	0.00	0.00	7,354.73	-832.84	1,217.74	14,542,848.07	1,718,259.33	40.043920	-104.721863
- plan hits target center									
- Point									
AZUL 13-29HZ_PBHL	0.00	0.00	7,413.00	-5,601.94	1,217.74	14,538,079.00	1,718,274.00	40.030823	-104.721864
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,830.80	1,800.00	9 5/8"	9-5/8	13-1/2	
7,860.21	7,354.73	Top of Production	5-1/2	7-7/8	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,622.85	1,599.00	Fox Hills				
4,355.22	4,240.00	Parkman				
4,731.81	4,604.00	Sussex				
7,283.76	7,105.00	Sharon Springs				
7,317.18	7,131.00	Niobrara				
7,535.68	7,270.00	Nio B				
7,682.68	7,328.00	Nio C				