

US ROCKIES WATTENBERG PLANNING

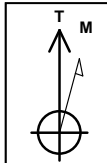
**WELD-NAD83-UTMFT13N
3N-65W-29 RW 35-29HZ Pad
RW 29N-5HZ**

Plan A

Plan: Permit Rev-1

Standard Planning Report

11 January, 2017



Azimuths to True North
Magnetic North: 8.06°

Magnetic Field
Strength: 52443.7snT
Dip Angle: 66.70°
Date: 1/4/2017
Model: IGRF2010

SITE: 3N-65W-29 RW 35-29HZ Pad

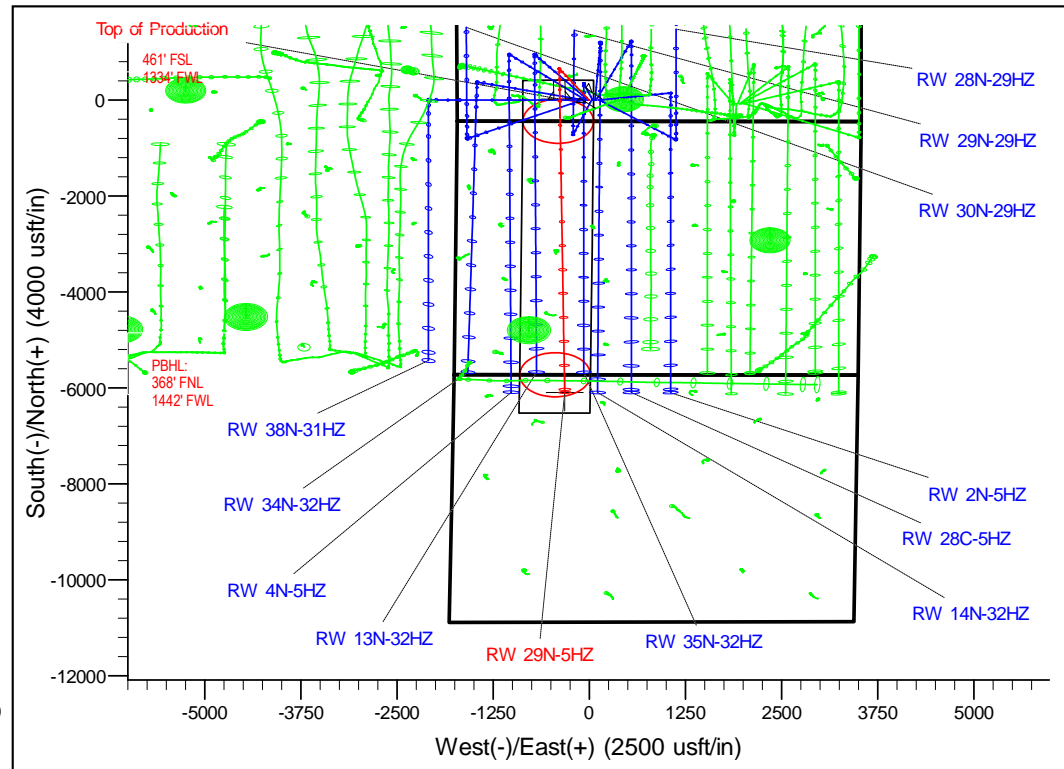
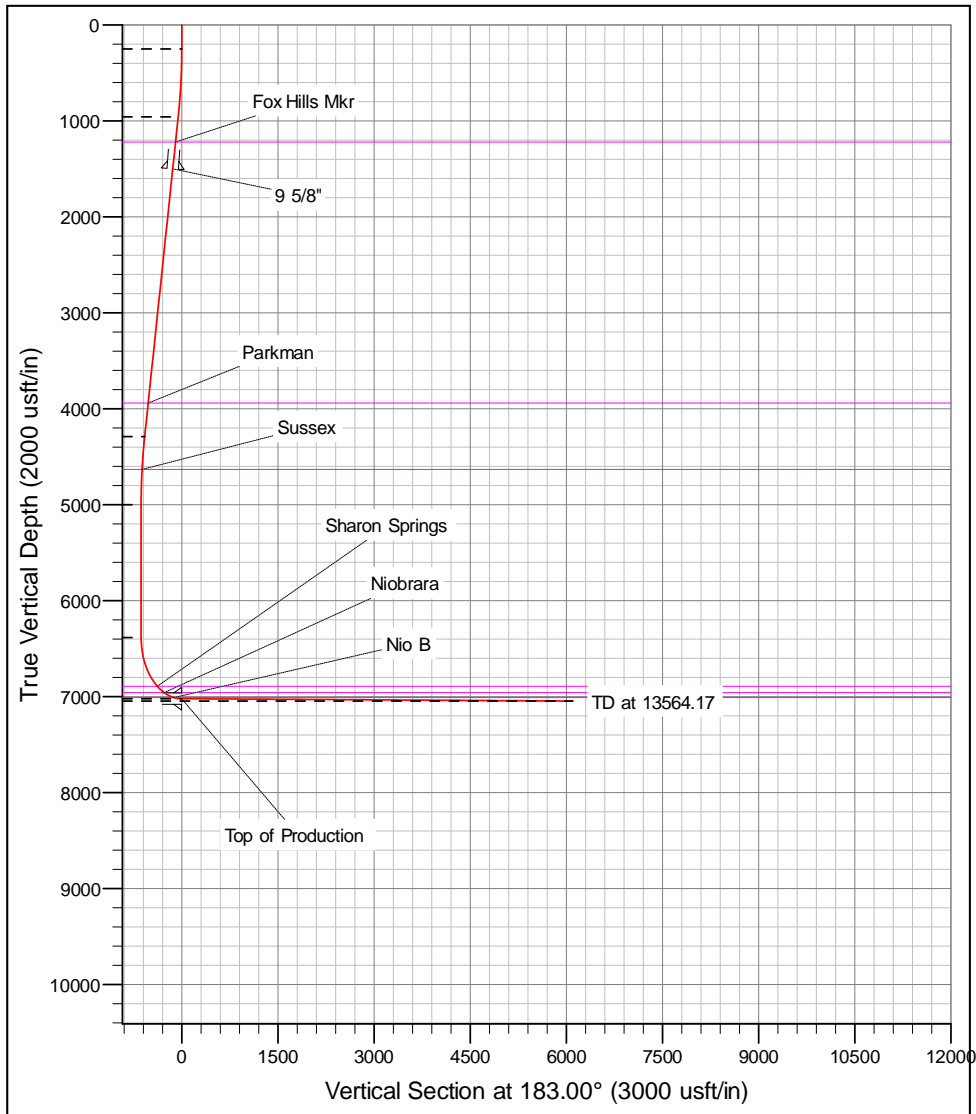
Well: RW 29N-5HZ
Wellbore: Plan A
Design: Permit Rev-1

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1220.00	1228.75	Fox Hills Mkr
3940.00	3996.83	Parkman
4633.00	4699.60	Sussex
6892.00	7038.15	Sharon Springs
6959.00	7165.34	Niobrara
7010.00	7326.84	Nio B

WELL DETAILS: RW 29N-5HZ						
+N/-S	+E/-W	GL: 4885.00	RKB @ 4902.00usft (D Rig)			Slot
0.00	0.00	Northing	Easting	Latitude	Longitude	
		14596213.89	1726831.19	40.190390	-104.690572	

SECTION DETAILS							
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	Vsect
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
962.98	10.69	329.27	958.85	57.03	-33.91	1.50	-55.18
4354.19	10.69	329.27	4291.15	597.97	-355.52	0.00	-578.53
5067.17	0.00	0.00	5000.00	655.00	-389.43	1.50	-633.71
6453.01	0.00	0.00	6385.84	655.00	-389.43	0.00	-633.71
7450.46	89.77	179.41	7022.46	20.97	-382.85	9.00	-0.90
13564.17	89.77	179.41	7047.00	-6092.36	-319.43	0.00	6100.73

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
RW 29N-5HZ_PBHL	7047.00	-6092.36	-319.43	14590120.45	1726533.00	40.173660	-104.691715



Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well RW 29N-5HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4902.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4902.00usft (D Rig)
Site:	3N-65W-29 RW 35-29HZ Pad	North Reference:	True
Well:	RW 29N-5HZ	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	3N-65W-29 RW 35-29HZ Pad		
Site Position:		Northing:	14,596,214.62 usft
From:	Lat/Long	Easting:	1,726,726.18 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	40.190393
		Longitude:	-104.690948
		Grid Convergence:	0.20 °

Well	RW 29N-5HZ		
Well Position	+N-S	-1.09 usft	Northing: 14,596,213.89 usft
	+E-W	105.01 usft	Easting: 1,726,831.19 usft
Position Uncertainty		3.28 usft	Wellhead Elevation:
			Latitude: 40.190390
			Longitude: -104.690572
			Ground Level: 4,885.00 usft

Wellbore	Plan A		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2010	1/4/2017	8.06
			Dip Angle (°)
			66.70
			Field Strength (nT)
			52,443.65129976

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)
	0.00	0.00	0.00
			Direction (°)
			183.00

Plan Survey Tool Program	Date	1/11/2017		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	13,564.17	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWI
				Fixed:v2:Rockies, crustal dex

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	0.00
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
962.98	10.69	329.27	958.85	57.03	-33.91	1.50	1.50	0.00	329.27	
4,354.19	10.69	329.27	4,291.15	597.97	-355.52	0.00	0.00	0.00	0.00	
5,067.17	0.00	0.00	5,000.00	655.00	-389.43	1.50	-1.50	0.00	180.00	
6,453.01	0.00	0.00	6,385.84	655.00	-389.43	0.00	0.00	0.00	0.00	
7,450.46	89.77	179.41	7,022.46	20.97	-382.85	9.00	9.00	0.00	179.41	
13,564.17	89.77	179.41	7,047.00	-6,092.36	-319.43	0.00	0.00	0.00	0.00	RW 29N-5HZ_PBH

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well RW 29N-5HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4902.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4902.00usft (D Rig)
Site:	3N-65W-29 RW 35-29HZ Pad	North Reference:	True
Well:	RW 29N-5HZ	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	329.27	300.00	0.28	-0.17	-0.27	1.50	1.50	0.00
400.00	2.25	329.27	399.96	2.53	-1.50	-2.45	1.50	1.50	0.00
500.00	3.75	329.27	499.82	7.03	-4.18	-6.80	1.50	1.50	0.00
600.00	5.25	329.27	599.51	13.77	-8.19	-13.33	1.50	1.50	0.00
700.00	6.75	329.27	698.96	22.76	-13.53	-22.02	1.50	1.50	0.00
800.00	8.25	329.27	798.10	33.98	-20.20	-32.87	1.50	1.50	0.00
900.00	9.75	329.27	896.87	47.42	-28.20	-45.88	1.50	1.50	0.00
962.98	10.69	329.27	958.85	57.03	-33.91	-55.18	1.50	1.50	0.00
1,000.00	10.69	329.27	995.22	62.94	-37.42	-60.89	0.00	0.00	0.00
1,100.00	10.69	329.27	1,093.49	78.89	-46.90	-76.32	0.00	0.00	0.00
1,200.00	10.69	329.27	1,191.75	94.84	-56.39	-91.76	0.00	0.00	0.00
1,228.75	10.69	329.27	1,220.00	99.42	-59.11	-96.19	0.00	0.00	0.00
Fox Hills Mkr									
1,300.00	10.69	329.27	1,290.01	110.79	-65.87	-107.19	0.00	0.00	0.00
1,400.00	10.69	329.27	1,388.28	126.74	-75.35	-122.62	0.00	0.00	0.00
1,500.00	10.69	329.27	1,486.54	142.69	-84.84	-138.05	0.00	0.00	0.00
1,513.70	10.69	329.27	1,500.00	144.88	-86.14	-140.17	0.00	0.00	0.00
9 5/8"									
1,600.00	10.69	329.27	1,584.80	158.64	-94.32	-153.49	0.00	0.00	0.00
1,700.00	10.69	329.27	1,683.07	174.59	-103.80	-168.92	0.00	0.00	0.00
1,800.00	10.69	329.27	1,781.33	190.55	-113.29	-184.35	0.00	0.00	0.00
1,900.00	10.69	329.27	1,879.59	206.50	-122.77	-199.78	0.00	0.00	0.00
2,000.00	10.69	329.27	1,977.85	222.45	-132.26	-215.22	0.00	0.00	0.00
2,100.00	10.69	329.27	2,076.12	238.40	-141.74	-230.65	0.00	0.00	0.00
2,200.00	10.69	329.27	2,174.38	254.35	-151.22	-246.08	0.00	0.00	0.00
2,300.00	10.69	329.27	2,272.64	270.30	-160.71	-261.52	0.00	0.00	0.00
2,400.00	10.69	329.27	2,370.91	286.25	-170.19	-276.95	0.00	0.00	0.00
2,500.00	10.69	329.27	2,469.17	302.20	-179.68	-292.38	0.00	0.00	0.00
2,600.00	10.69	329.27	2,567.43	318.15	-189.16	-307.81	0.00	0.00	0.00
2,700.00	10.69	329.27	2,665.69	334.11	-198.64	-323.25	0.00	0.00	0.00
2,800.00	10.69	329.27	2,763.96	350.06	-208.13	-338.68	0.00	0.00	0.00
2,900.00	10.69	329.27	2,862.22	366.01	-217.61	-354.11	0.00	0.00	0.00
3,000.00	10.69	329.27	2,960.48	381.96	-227.09	-369.55	0.00	0.00	0.00
3,100.00	10.69	329.27	3,058.75	397.91	-236.58	-384.98	0.00	0.00	0.00
3,200.00	10.69	329.27	3,157.01	413.86	-246.06	-400.41	0.00	0.00	0.00
3,300.00	10.69	329.27	3,255.27	429.81	-255.55	-415.84	0.00	0.00	0.00
3,400.00	10.69	329.27	3,353.54	445.76	-265.03	-431.28	0.00	0.00	0.00
3,500.00	10.69	329.27	3,451.80	461.72	-274.51	-446.71	0.00	0.00	0.00
3,600.00	10.69	329.27	3,550.06	477.67	-284.00	-462.14	0.00	0.00	0.00
3,700.00	10.69	329.27	3,648.32	493.62	-293.48	-477.57	0.00	0.00	0.00
3,800.00	10.69	329.27	3,746.59	509.57	-302.96	-493.01	0.00	0.00	0.00
3,900.00	10.69	329.27	3,844.85	525.52	-312.45	-508.44	0.00	0.00	0.00
3,996.83	10.69	329.27	3,940.00	540.97	-321.63	-523.38	0.00	0.00	0.00
Parkman									
4,000.00	10.69	329.27	3,943.11	541.47	-321.93	-523.87	0.00	0.00	0.00
4,100.00	10.69	329.27	4,041.38	557.42	-331.42	-539.31	0.00	0.00	0.00
4,200.00	10.69	329.27	4,139.64	573.37	-340.90	-554.74	0.00	0.00	0.00
4,300.00	10.69	329.27	4,237.90	589.33	-350.38	-570.17	0.00	0.00	0.00
4,354.19	10.69	329.27	4,291.15	597.97	-355.52	-578.53	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well RW 29N-5HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4902.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4902.00usft (D Rig)
Site:	3N-65W-29 RW 35-29HZ Pad	North Reference:	True
Well:	RW 29N-5HZ	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)	
4,400.00	10.01	329.27	4,336.22	605.04	-359.73	-585.38	1.50	-1.50	0.00	
4,500.00	8.51	329.27	4,434.91	618.87	-367.95	-598.76	1.50	-1.50	0.00	
4,600.00	7.01	329.27	4,533.99	630.47	-374.85	-609.98	1.50	-1.50	0.00	
4,699.60	5.51	329.27	4,633.00	639.81	-380.40	-619.02	1.50	-1.50	0.00	
Sussex										
4,700.00	5.51	329.27	4,633.39	639.84	-380.42	-619.05	1.50	-1.50	0.00	
4,800.00	4.01	329.27	4,733.05	646.97	-384.66	-625.94	1.50	-1.50	0.00	
4,900.00	2.51	329.27	4,832.88	651.86	-387.56	-630.67	1.50	-1.50	0.00	
5,000.00	1.01	329.27	4,932.83	654.49	-389.13	-633.22	1.50	-1.50	0.00	
5,067.17	0.00	0.00	5,000.00	655.00	-389.43	-633.71	1.50	-1.50	0.00	
5,100.00	0.00	0.00	5,032.83	655.00	-389.43	-633.71	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,132.83	655.00	-389.43	-633.71	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,232.83	655.00	-389.43	-633.71	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,332.83	655.00	-389.43	-633.71	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,432.83	655.00	-389.43	-633.71	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,532.83	655.00	-389.43	-633.71	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,632.83	655.00	-389.43	-633.71	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,732.83	655.00	-389.43	-633.71	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,832.83	655.00	-389.43	-633.71	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,932.83	655.00	-389.43	-633.71	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,032.83	655.00	-389.43	-633.71	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,132.83	655.00	-389.43	-633.71	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,232.83	655.00	-389.43	-633.71	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,332.83	655.00	-389.43	-633.71	0.00	0.00	0.00	
6,453.01	0.00	0.00	6,385.84	655.00	-389.43	-633.71	0.00	0.00	0.00	
6,500.00	4.23	179.41	6,432.79	653.27	-389.41	-631.98	9.00	9.00	0.00	
6,600.00	13.23	179.41	6,531.53	638.11	-389.25	-616.85	9.00	9.00	0.00	
6,700.00	22.23	179.41	6,626.68	607.69	-388.94	-586.49	9.00	9.00	0.00	
6,800.00	31.23	179.41	6,715.90	562.76	-388.47	-541.65	9.00	9.00	0.00	
6,900.00	40.23	179.41	6,797.00	504.43	-387.87	-483.43	9.00	9.00	0.00	
7,000.00	49.23	179.41	6,867.97	434.13	-387.14	-413.27	9.00	9.00	0.00	
7,038.15	52.66	179.41	6,892.00	404.52	-386.83	-383.71	9.00	9.00	0.00	
Sharon Springs										
7,100.00	58.23	179.41	6,927.07	353.60	-386.30	-332.88	9.00	9.00	0.00	
7,166.34	64.20	179.41	6,959.00	295.48	-385.70	-274.88	9.00	9.00	0.00	
Niobrara										
7,200.00	67.23	179.41	6,972.84	264.81	-385.38	-244.27	9.00	9.00	0.00	
7,300.00	76.23	179.41	7,004.16	169.95	-384.40	-149.59	9.00	9.00	0.00	
7,326.84	78.64	179.41	7,010.00	143.76	-384.13	-123.45	9.00	9.00	0.00	
Nio B										
7,400.00	85.23	179.41	7,020.26	71.37	-383.38	-51.19	9.00	9.00	0.00	
7,450.46	89.77	179.41	7,022.46	20.97	-382.85	-0.89	9.00	9.00	0.00	
Top of Production - RW 29N-5HZ_PHL										
7,500.00	89.77	179.41	7,022.66	-28.57	-382.34	48.55	0.00	0.00	0.00	
7,600.00	89.77	179.41	7,023.06	-128.56	-381.30	148.35	0.00	0.00	0.00	
7,700.00	89.77	179.41	7,023.46	-228.56	-380.26	248.15	0.00	0.00	0.00	
7,800.00	89.77	179.41	7,023.86	-328.55	-379.23	347.95	0.00	0.00	0.00	
7,900.00	89.77	179.41	7,024.26	-428.54	-378.19	447.76	0.00	0.00	0.00	
8,000.00	89.77	179.41	7,024.66	-528.54	-377.15	547.56	0.00	0.00	0.00	
8,100.00	89.77	179.41	7,025.07	-628.53	-376.11	647.36	0.00	0.00	0.00	
8,200.00	89.77	179.41	7,025.47	-728.52	-375.08	747.16	0.00	0.00	0.00	
8,300.00	89.77	179.41	7,025.87	-828.52	-374.04	846.97	0.00	0.00	0.00	
8,400.00	89.77	179.41	7,026.27	-928.51	-373.00	946.77	0.00	0.00	0.00	
8,500.00	89.77	179.41	7,026.67	-1,028.51	-371.96	1,046.57	0.00	0.00	0.00	

Corporate Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4902.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4902.00usft (D Rig)
Site:	3N-65W-29 RW 35-29HZ Pad	North Reference:	True
Well:	RW 29N-5HZ	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)
8,600.00	89.77	179.41	7,027.07	-1,128.50	-370.93	1,146.37	0.00	0.00	0.00
8,700.00	89.77	179.41	7,027.47	-1,228.49	-369.89	1,246.18	0.00	0.00	0.00
8,800.00	89.77	179.41	7,027.88	-1,328.49	-368.85	1,345.98	0.00	0.00	0.00
8,900.00	89.77	179.41	7,028.28	-1,428.48	-367.82	1,445.78	0.00	0.00	0.00
9,000.00	89.77	179.41	7,028.68	-1,528.47	-366.78	1,545.58	0.00	0.00	0.00
9,100.00	89.77	179.41	7,029.08	-1,628.47	-365.74	1,645.38	0.00	0.00	0.00
9,200.00	89.77	179.41	7,029.48	-1,728.46	-364.70	1,745.19	0.00	0.00	0.00
9,300.00	89.77	179.41	7,029.88	-1,828.46	-363.67	1,844.99	0.00	0.00	0.00
9,400.00	89.77	179.41	7,030.28	-1,928.45	-362.63	1,944.79	0.00	0.00	0.00
9,500.00	89.77	179.41	7,030.69	-2,028.44	-361.59	2,044.59	0.00	0.00	0.00
9,600.00	89.77	179.41	7,031.09	-2,128.44	-360.55	2,144.40	0.00	0.00	0.00
9,700.00	89.77	179.41	7,031.49	-2,228.43	-359.52	2,244.20	0.00	0.00	0.00
9,800.00	89.77	179.41	7,031.89	-2,328.43	-358.48	2,344.00	0.00	0.00	0.00
9,900.00	89.77	179.41	7,032.29	-2,428.42	-357.44	2,443.80	0.00	0.00	0.00
10,000.00	89.77	179.41	7,032.69	-2,528.41	-356.40	2,543.61	0.00	0.00	0.00
10,100.00	89.77	179.41	7,033.09	-2,628.41	-355.37	2,643.41	0.00	0.00	0.00
10,200.00	89.77	179.41	7,033.50	-2,728.40	-354.33	2,743.21	0.00	0.00	0.00
10,300.00	89.77	179.41	7,033.90	-2,828.39	-353.29	2,843.01	0.00	0.00	0.00
10,400.00	89.77	179.41	7,034.30	-2,928.39	-352.25	2,942.82	0.00	0.00	0.00
10,500.00	89.77	179.41	7,034.70	-3,028.38	-351.22	3,042.62	0.00	0.00	0.00
10,600.00	89.77	179.41	7,035.10	-3,128.38	-350.18	3,142.42	0.00	0.00	0.00
10,700.00	89.77	179.41	7,035.50	-3,228.37	-349.14	3,242.22	0.00	0.00	0.00
10,800.00	89.77	179.41	7,035.90	-3,328.36	-348.10	3,342.02	0.00	0.00	0.00
10,900.00	89.77	179.41	7,036.31	-3,428.36	-347.07	3,441.83	0.00	0.00	0.00
11,000.00	89.77	179.41	7,036.71	-3,528.35	-346.03	3,541.63	0.00	0.00	0.00
11,100.00	89.77	179.41	7,037.11	-3,628.35	-344.99	3,641.43	0.00	0.00	0.00
11,200.00	89.77	179.41	7,037.51	-3,728.34	-343.96	3,741.23	0.00	0.00	0.00
11,300.00	89.77	179.41	7,037.91	-3,828.33	-342.92	3,841.04	0.00	0.00	0.00
11,400.00	89.77	179.41	7,038.31	-3,928.33	-341.88	3,940.84	0.00	0.00	0.00
11,500.00	89.77	179.41	7,038.71	-4,028.32	-340.84	4,040.64	0.00	0.00	0.00
11,600.00	89.77	179.41	7,039.12	-4,128.31	-339.81	4,140.44	0.00	0.00	0.00
11,700.00	89.77	179.41	7,039.52	-4,228.31	-338.77	4,240.25	0.00	0.00	0.00
11,800.00	89.77	179.41	7,039.92	-4,328.30	-337.73	4,340.05	0.00	0.00	0.00
11,900.00	89.77	179.41	7,040.32	-4,428.30	-336.69	4,439.85	0.00	0.00	0.00
12,000.00	89.77	179.41	7,040.72	-4,528.29	-335.66	4,539.65	0.00	0.00	0.00
12,100.00	89.77	179.41	7,041.12	-4,628.28	-334.62	4,639.46	0.00	0.00	0.00
12,200.00	89.77	179.41	7,041.52	-4,728.28	-333.58	4,739.26	0.00	0.00	0.00
12,300.00	89.77	179.41	7,041.93	-4,828.27	-332.54	4,839.06	0.00	0.00	0.00
12,400.00	89.77	179.41	7,042.33	-4,928.26	-331.51	4,938.86	0.00	0.00	0.00
12,500.00	89.77	179.41	7,042.73	-5,028.26	-330.47	5,038.66	0.00	0.00	0.00
12,600.00	89.77	179.41	7,043.13	-5,128.25	-329.43	5,138.47	0.00	0.00	0.00
12,700.00	89.77	179.41	7,043.53	-5,228.25	-328.39	5,238.27	0.00	0.00	0.00
12,800.00	89.77	179.41	7,043.93	-5,328.24	-327.36	5,338.07	0.00	0.00	0.00
12,900.00	89.77	179.41	7,044.33	-5,428.23	-326.32	5,437.87	0.00	0.00	0.00
13,000.00	89.77	179.41	7,044.74	-5,528.23	-325.28	5,537.68	0.00	0.00	0.00
13,100.00	89.77	179.41	7,045.14	-5,628.22	-324.25	5,637.48	0.00	0.00	0.00
13,200.00	89.77	179.41	7,045.54	-5,728.22	-323.21	5,737.28	0.00	0.00	0.00
13,300.00	89.77	179.41	7,045.94	-5,828.21	-322.17	5,837.08	0.00	0.00	0.00
13,400.00	89.77	179.41	7,046.34	-5,928.20	-321.13	5,936.89	0.00	0.00	0.00
13,500.00	89.77	179.41	7,046.74	-6,028.20	-320.10	6,036.69	0.00	0.00	0.00
13,564.17	89.77	179.41	7,047.00	-6,092.36	-319.43	6,100.73	0.00	0.00	0.00
RW 29N-5HZ_PBHL									

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well RW 29N-5HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4902.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4902.00usft (D Rig)
Site:	3N-65W-29 RW 35-29HZ Pad	North Reference:	True
Well:	RW 29N-5HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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										
RW 29N-5HZ_PHL - plan hits target center - Point	0.00	0.00	7,022.46	20.97	-382.85	14,596,233.52	1,726,448.27	40.190448	-104.691943	
RW 29N-5HZ_PBHL - plan hits target center - Point	0.00	0.00	7,047.00	-6,092.36	-319.43	14,590,120.45	1,726,533.00	40.173660	-104.691716	

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")		
1,513.70	1,500.00	9 5/8"	9-5/8	13-1/2		
7,450.46	7,022.46	Top of Production	5-1/2	8-1/2		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,228.75	1,220.00	Fox Hills Mkr				
3,996.83	3,940.00	Parkman				
4,699.60	4,633.00	Sussex				
7,038.15	6,892.00	Sharon Springs				
7,166.34	6,959.00	Niobrara				
7,326.84	7,010.00	Nio B				