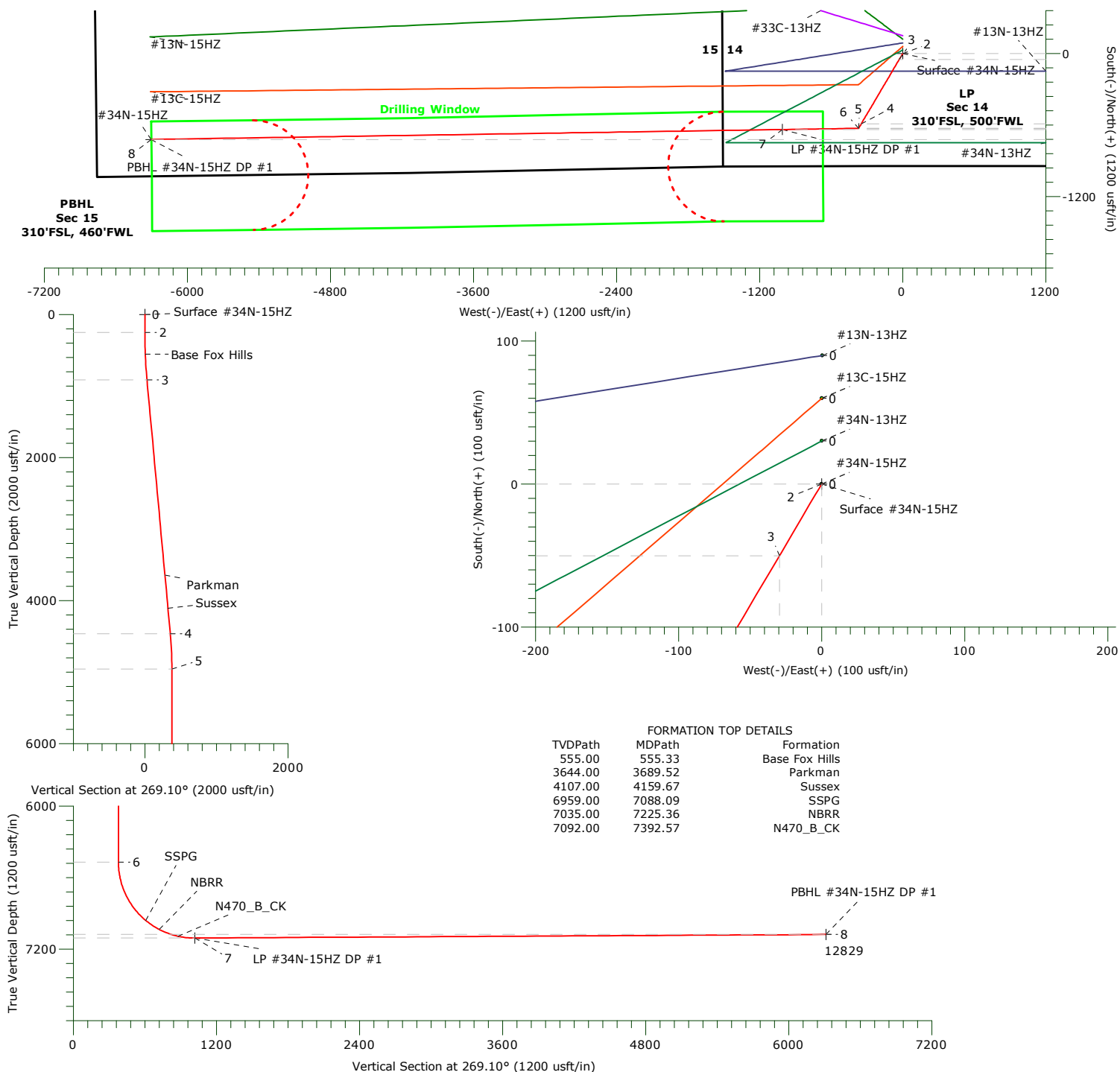


US ROCKIES WATTENBERG PLANNING

Project: WELD-NAD83-UTMFT13N
Site: 3N-68W-14 Docheff 19-14HZ
Well: #34N-15HZ
Wellbore: Original Hole
Design: DP #1



WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Surface #34N-15HZ	0.00	0.00	0.00	14607402.64	1647613.83	40.221526°N	104.974217°W	Point
PBHL #34N-15HZ DP #1	7077.00	-720.19	-6303.29	14606680.61	1641310.75	40.219546°N	104.996797°W	Point
LP #34N-15HZ DP #1	7107.00	-636.97	-1009.30	14606765.37	1646604.72	40.219777°N	104.977833°W	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	916.81	10.00	210.49	913.43	-50.03	-29.46	1.50	210.49	30.24	
4	4520.58	10.00	210.49	4462.43	-589.39	-347.06	0.00	0.00	356.27	
5	5020.69	0.00	0.00	4960.00	-626.91	-369.15	2.00	180.00	378.95	
6	6531.08	0.00	0.00	6470.39	-626.91	-369.15	0.00	0.00	378.95	
7	7534.69	90.32	269.10	7107.00	-636.97	-1009.30	9.00	269.10	1019.18	
8	12829.42	90.32	269.10	7077.00	-720.19	-6303.29	0.00	0.00	6313.82	

US ROCKIES WATTENBERG PLANNING

**WELD-NAD83-UTMFT13N
3N-68W-14 Docheff 19-14HZ
#34N-15HZ**

Original Hole

Plan: DP #1

Standard Planning Report

30 March, 2016

Precision Drilling Corporation

Planning Report

Database:	Compass_Rockies	Local Co-ordinate Reference:	Well #34N-15HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	4935'GL+20'KB @ 4955.00usft (PD461)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	4935'GL+20'KB @ 4955.00usft (PD461)
Site:	3N-68W-14 Docheff 19-14HZ	North Reference:	True
Well:	#34N-15HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	DP #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-68W-14 Docheff 19-14HZ		
Site Position:		Northing:	14,607,552.66 usft
From:	Lat/Long	Easting:	1,647,614.62 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in
		Latitude:	40.221938°N
		Longitude:	104.974214°W
		Grid Convergence:	0.02 °

Well	#34N-15HZ		
Well Position	+N-S	-150.03 usft	Northing: 14,607,402.63 usft
	+E-W	-0.84 usft	Easting: 1,647,613.83 usft
Position Uncertainty		3.28 usft	Wellhead Elevation: 0.00 usft
			Latitude: 40.221526°N
			Longitude: 104.974217°W
			Ground Level: 4,935.00 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	03/17/16	8.44	66.71	52,419

Design	DP #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	269.10	

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	
916.81	10.00	210.49	913.43	-50.03	-29.46	1.50	1.50	0.00	210.49	
4,520.58	10.00	210.49	4,462.43	-589.39	-347.06	0.00	0.00	0.00	0.00	
5,020.69	0.00	0.00	4,960.00	-626.91	-369.15	2.00	-2.00	0.00	180.00	
6,531.08	0.00	0.00	6,470.39	-626.91	-369.15	0.00	0.00	0.00	0.00	
7,534.69	90.32	269.10	7,107.00	-636.97	-1,009.30	9.00	9.00	-9.06	269.10	
12,829.42	90.32	269.10	7,077.00	-720.19	-6,303.29	0.00	0.00	0.00	0.00	

Precision Drilling Corporation

Planning Report

Database:	Compass_Rockies	Local Co-ordinate Reference:	Well #34N-15HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	4935'GL+20'KB @ 4955.00usft (PD461)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	4935'GL+20'KB @ 4955.00usft (PD461)
Site:	3N-68W-14 Docheff 19-14HZ	North Reference:	True
Well:	#34N-15HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	DP #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	
1										
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	
2										
300.00	0.75	210.49	300.00	-0.28	-0.17	0.17	1.50	1.50	0.00	
400.00	2.25	210.49	399.96	-2.54	-1.49	1.53	1.50	1.50	0.00	
500.00	3.75	210.49	499.82	-7.05	-4.15	4.26	1.50	1.50	0.00	
555.33	4.58	210.49	555.00	-10.51	-6.19	6.35	1.50	1.50	0.00	
Base Fox Hills										
600.00	5.25	210.49	599.51	-13.81	-8.13	8.35	1.50	1.50	0.00	
700.00	6.75	210.49	698.96	-22.82	-13.43	13.79	1.50	1.50	0.00	
800.00	8.25	210.49	798.10	-34.06	-20.06	20.59	1.50	1.50	0.00	
900.00	9.75	210.49	896.87	-47.54	-27.99	28.74	1.50	1.50	0.00	
916.81	10.00	210.49	913.43	-50.03	-29.46	30.24	1.50	1.50	0.00	
3										
1,000.00	10.00	210.49	995.35	-62.48	-36.79	37.77	0.00	0.00	0.00	
1,100.00	10.00	210.49	1,093.83	-77.44	-45.60	46.81	0.00	0.00	0.00	
1,200.00	10.00	210.49	1,192.31	-92.41	-54.41	55.86	0.00	0.00	0.00	
1,300.00	10.00	210.49	1,290.79	-107.38	-63.23	64.91	0.00	0.00	0.00	
1,400.00	10.00	210.49	1,389.27	-122.34	-72.04	73.95	0.00	0.00	0.00	
1,500.00	10.00	210.49	1,487.75	-137.31	-80.85	83.00	0.00	0.00	0.00	
1,600.00	10.00	210.49	1,586.23	-152.28	-89.67	92.05	0.00	0.00	0.00	
1,700.00	10.00	210.49	1,684.71	-167.24	-98.48	101.09	0.00	0.00	0.00	
1,800.00	10.00	210.49	1,783.19	-182.21	-107.29	110.14	0.00	0.00	0.00	
1,900.00	10.00	210.49	1,881.67	-197.18	-116.11	119.19	0.00	0.00	0.00	
2,000.00	10.00	210.49	1,980.16	-212.14	-124.92	128.24	0.00	0.00	0.00	
2,100.00	10.00	210.49	2,078.64	-227.11	-133.73	137.28	0.00	0.00	0.00	
2,200.00	10.00	210.49	2,177.12	-242.08	-142.54	146.33	0.00	0.00	0.00	
2,300.00	10.00	210.49	2,275.60	-257.04	-151.36	155.38	0.00	0.00	0.00	
2,400.00	10.00	210.49	2,374.08	-272.01	-160.17	164.42	0.00	0.00	0.00	
2,500.00	10.00	210.49	2,472.56	-286.98	-168.98	173.47	0.00	0.00	0.00	
2,600.00	10.00	210.49	2,571.04	-301.94	-177.80	182.52	0.00	0.00	0.00	
2,700.00	10.00	210.49	2,669.52	-316.91	-186.61	191.56	0.00	0.00	0.00	
2,800.00	10.00	210.49	2,768.00	-331.88	-195.42	200.61	0.00	0.00	0.00	
2,900.00	10.00	210.49	2,866.48	-346.84	-204.24	209.66	0.00	0.00	0.00	
3,000.00	10.00	210.49	2,964.96	-361.81	-213.05	218.71	0.00	0.00	0.00	
3,100.00	10.00	210.49	3,063.44	-376.78	-221.86	227.75	0.00	0.00	0.00	
3,200.00	10.00	210.49	3,161.92	-391.74	-230.67	236.80	0.00	0.00	0.00	
3,300.00	10.00	210.49	3,260.40	-406.71	-239.49	245.85	0.00	0.00	0.00	
3,400.00	10.00	210.49	3,358.88	-421.68	-248.30	254.89	0.00	0.00	0.00	
3,500.00	10.00	210.49	3,457.36	-436.64	-257.11	263.94	0.00	0.00	0.00	
3,600.00	10.00	210.49	3,555.84	-451.61	-265.93	272.99	0.00	0.00	0.00	
3,689.52	10.00	210.49	3,644.00	-465.01	-273.82	281.09	0.00	0.00	0.00	
Parkman										
3,700.00	10.00	210.49	3,654.32	-466.58	-274.74	282.03	0.00	0.00	0.00	
3,800.00	10.00	210.49	3,752.80	-481.54	-283.55	291.08	0.00	0.00	0.00	
3,900.00	10.00	210.49	3,851.28	-496.51	-292.37	300.13	0.00	0.00	0.00	
4,000.00	10.00	210.49	3,949.76	-511.48	-301.18	309.17	0.00	0.00	0.00	
4,100.00	10.00	210.49	4,048.24	-526.44	-309.99	318.22	0.00	0.00	0.00	
4,159.67	10.00	210.49	4,107.00	-535.37	-315.25	323.62	0.00	0.00	0.00	
Sussex										

Precision Drilling Corporation

Planning Report

Database:	Compass_Rockies	Local Co-ordinate Reference:	Well #34N-15HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	4935'GL+20'KB @ 4955.00usft (PD461)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	4935'GL+20'KB @ 4955.00usft (PD461)
Site:	3N-68W-14 Docheff 19-14HZ	North Reference:	True
Well:	#34N-15HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	DP #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)
4,200.00	10.00	210.49	4,146.72	-541.41	-318.80	327.27	0.00	0.00	0.00
4,300.00	10.00	210.49	4,245.20	-556.38	-327.62	336.32	0.00	0.00	0.00
4,400.00	10.00	210.49	4,343.68	-571.34	-336.43	345.36	0.00	0.00	0.00
4,500.00	10.00	210.49	4,442.16	-586.31	-345.24	354.41	0.00	0.00	0.00
4,520.58	10.00	210.49	4,462.42	-589.39	-347.06	356.27	0.00	0.00	0.00
4									
4,600.00	8.41	210.49	4,540.82	-600.34	-353.50	362.89	2.00	-2.00	0.00
4,700.00	6.41	210.49	4,639.98	-611.46	-360.05	369.61	2.00	-2.00	0.00
4,800.00	4.41	210.49	4,739.53	-619.59	-364.84	374.53	2.00	-2.00	0.00
4,900.00	2.41	210.49	4,839.34	-624.72	-367.86	377.63	2.00	-2.00	0.00
5,000.00	0.41	210.49	4,939.31	-626.85	-369.11	378.91	2.00	-2.00	0.00
5,020.69	0.00	0.00	4,960.00	-626.91	-369.15	378.95	2.00	-2.00	722.61
5									
5,100.00	0.00	0.00	5,039.31	-626.91	-369.15	378.95	0.00	0.00	0.00
5,200.00	0.00	0.00	5,139.31	-626.91	-369.15	378.95	0.00	0.00	0.00
5,300.00	0.00	0.00	5,239.31	-626.91	-369.15	378.95	0.00	0.00	0.00
5,400.00	0.00	0.00	5,339.31	-626.91	-369.15	378.95	0.00	0.00	0.00
5,500.00	0.00	0.00	5,439.31	-626.91	-369.15	378.95	0.00	0.00	0.00
5,600.00	0.00	0.00	5,539.31	-626.91	-369.15	378.95	0.00	0.00	0.00
5,700.00	0.00	0.00	5,639.31	-626.91	-369.15	378.95	0.00	0.00	0.00
5,800.00	0.00	0.00	5,739.31	-626.91	-369.15	378.95	0.00	0.00	0.00
5,900.00	0.00	0.00	5,839.31	-626.91	-369.15	378.95	0.00	0.00	0.00
6,000.00	0.00	0.00	5,939.31	-626.91	-369.15	378.95	0.00	0.00	0.00
6,100.00	0.00	0.00	6,039.31	-626.91	-369.15	378.95	0.00	0.00	0.00
6,200.00	0.00	0.00	6,139.31	-626.91	-369.15	378.95	0.00	0.00	0.00
6,300.00	0.00	0.00	6,239.31	-626.91	-369.15	378.95	0.00	0.00	0.00
6,400.00	0.00	0.00	6,339.31	-626.91	-369.15	378.95	0.00	0.00	0.00
6,500.00	0.00	0.00	6,439.31	-626.91	-369.15	378.95	0.00	0.00	0.00
6,531.08	0.00	0.00	6,470.39	-626.91	-369.15	378.95	0.00	0.00	0.00
6									
6,550.00	1.70	269.10	6,489.31	-626.91	-369.43	379.23	9.00	9.00	0.00
6,600.00	6.20	269.10	6,539.17	-626.97	-372.88	382.68	9.00	9.00	0.00
6,650.00	10.70	269.10	6,588.62	-627.08	-380.22	390.03	9.00	9.00	0.00
6,700.00	15.20	269.10	6,637.33	-627.26	-391.43	401.23	9.00	9.00	0.00
6,750.00	19.70	269.10	6,685.02	-627.50	-406.42	416.22	9.00	9.00	0.00
6,800.00	24.20	269.10	6,731.38	-627.79	-425.10	434.91	9.00	9.00	0.00
6,850.00	28.70	269.10	6,776.14	-628.14	-447.37	457.18	9.00	9.00	0.00
6,900.00	33.20	269.10	6,819.00	-628.54	-473.07	482.89	9.00	9.00	0.00
6,950.00	37.70	269.10	6,859.72	-629.00	-502.06	511.88	9.00	9.00	0.00
7,000.00	42.20	269.10	6,898.04	-629.50	-534.16	543.98	9.00	9.00	0.00
7,050.00	46.70	269.10	6,933.72	-630.05	-569.16	578.99	9.00	9.00	0.00
7,088.09	50.13	269.10	6,959.00	-630.50	-597.64	607.47	9.00	9.00	0.00
SSPG									
7,100.00	51.20	269.10	6,966.55	-630.65	-606.86	616.69	9.00	9.00	0.00
7,150.00	55.70	269.10	6,996.32	-631.28	-647.01	656.84	9.00	9.00	0.00
7,200.00	60.20	269.10	7,022.84	-631.94	-689.37	699.21	9.00	9.00	0.00
7,225.36	62.48	269.10	7,035.00	-632.29	-711.62	721.46	9.00	9.00	0.00
NBRR									
7,250.00	64.70	269.10	7,045.96	-632.64	-733.69	743.53	9.00	9.00	0.00
7,300.00	69.20	269.10	7,065.53	-633.36	-779.68	789.53	9.00	9.00	0.00
7,350.00	73.70	269.10	7,081.43	-634.11	-827.06	836.92	9.00	9.00	0.00
7,392.57	77.53	269.10	7,092.00	-634.76	-868.28	878.15	9.00	9.00	0.00
N470_B_CK									

Precision Drilling Corporation

Planning Report

Database:	Compass_Rockies	Local Co-ordinate Reference:	Well #34N-15HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	4935'GL+20'KB @ 4955.00usft (PD461)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	4935'GL+20'KB @ 4955.00usft (PD461)
Site:	3N-68W-14 Docheff 19-14HZ	North Reference:	True
Well:	#34N-15HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	DP #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)
7,400.00	78.20	269.10	7,093.56	-634.87	-875.55	885.41	9.00	9.00	0.00
7,450.00	82.70	269.10	7,101.85	-635.65	-924.84	934.71	9.00	9.00	0.00
7,500.00	87.20	269.10	7,106.25	-636.43	-974.63	984.50	9.00	9.00	0.00
7,534.69	90.32	269.10	7,107.00	-636.97	-1,009.30	1,019.18	9.00	9.00	0.00
7									
7,600.00	90.32	269.10	7,106.63	-638.00	-1,074.60	1,084.49	0.00	0.00	0.00
7,700.00	90.32	269.10	7,106.06	-639.57	-1,174.59	1,184.49	0.00	0.00	0.00
7,800.00	90.32	269.10	7,105.50	-641.14	-1,274.57	1,284.49	0.00	0.00	0.00
7,900.00	90.32	269.10	7,104.93	-642.71	-1,374.56	1,384.48	0.00	0.00	0.00
8,000.00	90.32	269.10	7,104.36	-644.29	-1,474.54	1,484.48	0.00	0.00	0.00
8,100.00	90.32	269.10	7,103.80	-645.86	-1,574.53	1,584.48	0.00	0.00	0.00
8,200.00	90.32	269.10	7,103.23	-647.43	-1,674.52	1,684.48	0.00	0.00	0.00
8,300.00	90.32	269.10	7,102.66	-649.00	-1,774.50	1,784.48	0.00	0.00	0.00
8,400.00	90.32	269.10	7,102.10	-650.57	-1,874.49	1,884.48	0.00	0.00	0.00
8,500.00	90.32	269.10	7,101.53	-652.14	-1,974.47	1,984.47	0.00	0.00	0.00
8,600.00	90.32	269.10	7,100.96	-653.72	-2,074.46	2,084.47	0.00	0.00	0.00
8,700.00	90.32	269.10	7,100.40	-655.29	-2,174.45	2,184.47	0.00	0.00	0.00
8,800.00	90.32	269.10	7,099.83	-656.86	-2,274.43	2,284.47	0.00	0.00	0.00
8,900.00	90.32	269.10	7,099.26	-658.43	-2,374.42	2,384.47	0.00	0.00	0.00
9,000.00	90.32	269.10	7,098.70	-660.00	-2,474.40	2,484.47	0.00	0.00	0.00
9,100.00	90.32	269.10	7,098.13	-661.57	-2,574.39	2,584.46	0.00	0.00	0.00
9,200.00	90.32	269.10	7,097.56	-663.15	-2,674.38	2,684.46	0.00	0.00	0.00
9,300.00	90.32	269.10	7,097.00	-664.72	-2,774.36	2,784.46	0.00	0.00	0.00
9,400.00	90.32	269.10	7,096.43	-666.29	-2,874.35	2,884.46	0.00	0.00	0.00
9,500.00	90.32	269.10	7,095.86	-667.86	-2,974.33	2,984.46	0.00	0.00	0.00
9,600.00	90.32	269.10	7,095.30	-669.43	-3,074.32	3,084.46	0.00	0.00	0.00
9,700.00	90.32	269.10	7,094.73	-671.00	-3,174.31	3,184.46	0.00	0.00	0.00
9,800.00	90.32	269.10	7,094.16	-672.58	-3,274.29	3,284.45	0.00	0.00	0.00
9,900.00	90.32	269.10	7,093.60	-674.15	-3,374.28	3,384.45	0.00	0.00	0.00
10,000.00	90.32	269.10	7,093.03	-675.72	-3,474.27	3,484.45	0.00	0.00	0.00
10,100.00	90.32	269.10	7,092.46	-677.29	-3,574.25	3,584.45	0.00	0.00	0.00
10,200.00	90.32	269.10	7,091.90	-678.86	-3,674.24	3,684.45	0.00	0.00	0.00
10,300.00	90.32	269.10	7,091.33	-680.44	-3,774.22	3,784.45	0.00	0.00	0.00
10,400.00	90.32	269.10	7,090.77	-682.01	-3,874.21	3,884.44	0.00	0.00	0.00
10,500.00	90.32	269.10	7,090.20	-683.58	-3,974.20	3,984.44	0.00	0.00	0.00
10,600.00	90.32	269.10	7,089.63	-685.15	-4,074.18	4,084.44	0.00	0.00	0.00
10,700.00	90.32	269.10	7,089.07	-686.72	-4,174.17	4,184.44	0.00	0.00	0.00
10,800.00	90.32	269.10	7,088.50	-688.29	-4,274.15	4,284.44	0.00	0.00	0.00
10,900.00	90.32	269.10	7,087.93	-689.87	-4,374.14	4,384.44	0.00	0.00	0.00
11,000.00	90.32	269.10	7,087.37	-691.44	-4,474.13	4,484.43	0.00	0.00	0.00
11,100.00	90.32	269.10	7,086.80	-693.01	-4,574.11	4,584.43	0.00	0.00	0.00
11,200.00	90.32	269.10	7,086.23	-694.58	-4,674.10	4,684.43	0.00	0.00	0.00
11,300.00	90.32	269.10	7,085.67	-696.15	-4,774.08	4,784.43	0.00	0.00	0.00
11,400.00	90.32	269.10	7,085.10	-697.72	-4,874.07	4,884.43	0.00	0.00	0.00
11,500.00	90.32	269.10	7,084.53	-699.30	-4,974.06	4,984.43	0.00	0.00	0.00
11,600.00	90.32	269.10	7,083.97	-700.87	-5,074.04	5,084.42	0.00	0.00	0.00
11,700.00	90.32	269.10	7,083.40	-702.44	-5,174.03	5,184.42	0.00	0.00	0.00
11,800.00	90.32	269.10	7,082.83	-704.01	-5,274.01	5,284.42	0.00	0.00	0.00
11,900.00	90.32	269.10	7,082.27	-705.58	-5,374.00	5,384.42	0.00	0.00	0.00
12,000.00	90.32	269.10	7,081.70	-707.15	-5,473.99	5,484.42	0.00	0.00	0.00
12,100.00	90.32	269.10	7,081.13	-708.73	-5,573.97	5,584.42	0.00	0.00	0.00
12,200.00	90.32	269.10	7,080.57	-710.30	-5,673.96	5,684.42	0.00	0.00	0.00
12,300.00	90.32	269.10	7,080.00	-711.87	-5,773.94	5,784.41	0.00	0.00	0.00

Precision Drilling Corporation

Planning Report

Database:	Compass_Rockies	Local Co-ordinate Reference:	Well #34N-15HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	4935'GL+20'KB @ 4955.00usft (PD461)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	4935'GL+20'KB @ 4955.00usft (PD461)
Site:	3N-68W-14 Docheff 19-14HZ	North Reference:	True
Well:	#34N-15HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	DP #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)
12,400.00	90.32	269.10	7,079.43	-713.44	-5,873.93	5,884.41	0.00	0.00	0.00
12,500.00	90.32	269.10	7,078.87	-715.01	-5,973.92	5,984.41	0.00	0.00	0.00
12,600.00	90.32	269.10	7,078.30	-716.58	-6,073.90	6,084.41	0.00	0.00	0.00
12,700.00	90.32	269.10	7,077.73	-718.16	-6,173.89	6,184.41	0.00	0.00	0.00
12,800.00	90.32	269.10	7,077.17	-719.73	-6,273.87	6,284.41	0.00	0.00	0.00
12,829.42	90.32	269.10	7,077.00	-720.19	-6,303.29	6,313.82	0.00	0.00	0.00
8									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Surface #34N-15HZ - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	14,607,402.63	1,647,613.83	40.221526°N	104.974217°W
PBHL #34N-15HZ DP - plan hits target center - Point	0.00	0.00	7,077.00	-720.19	-6,303.29	14,606,680.61	1,641,310.75	40.219546°N	104.996797°W
LP #34N-15HZ DP #1 - plan hits target center - Point	0.00	0.00	7,107.00	-636.97	-1,009.30	14,606,765.37	1,646,604.72	40.219777°N	104.977833°W

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (in)	Hole Diameter (in)
1,817.06	1,800.00	9 5/8"		9.63	13.50
12,888.77		5 1/2"		5.50	7.88

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
555.33	555.00	Base Fox Hills				
3,689.52	3,644.00	Parkman				
4,159.67	4,107.00	Sussex				
7,088.09	6,959.00	SSPG				
7,225.36	7,035.00	NBRR				
7,392.57	7,092.00	N470_B_CK				

Precision Drilling Corporation

Planning Report

Database:	Compass_Rockies	Local Co-ordinate Reference:	Well #34N-15HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	4935'GL+20'KB @ 4955.00usft (PD461)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	4935'GL+20'KB @ 4955.00usft (PD461)
Site:	3N-68W-14 Docheff 19-14HZ	North Reference:	True
Well:	#34N-15HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	DP #1		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
0.00	0.00	0.00	0.00	1	
250.00	250.00	0.00	0.00	2	
916.81	913.43	-50.03	-29.46	3	
4,520.58	4,462.42	-589.39	-347.06	4	
5,020.69	4,960.00	-626.91	-369.15	5	
6,531.08	6,470.39	-626.91	-369.15	6	
7,534.69	7,107.00	-636.97	-1,009.30	7	
12,829.42	7,077.00	-720.19	-6,303.29	8	