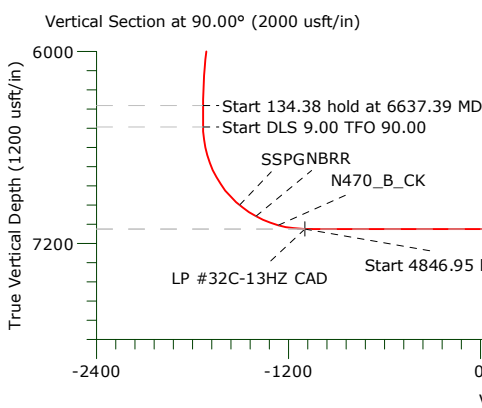
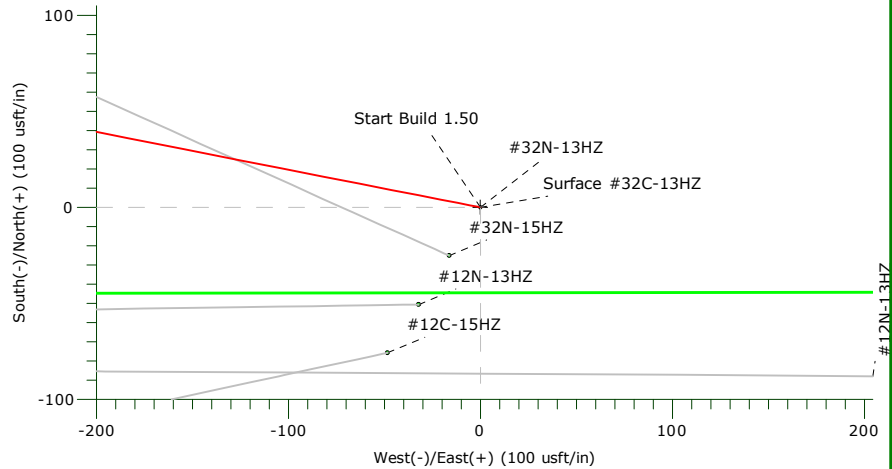
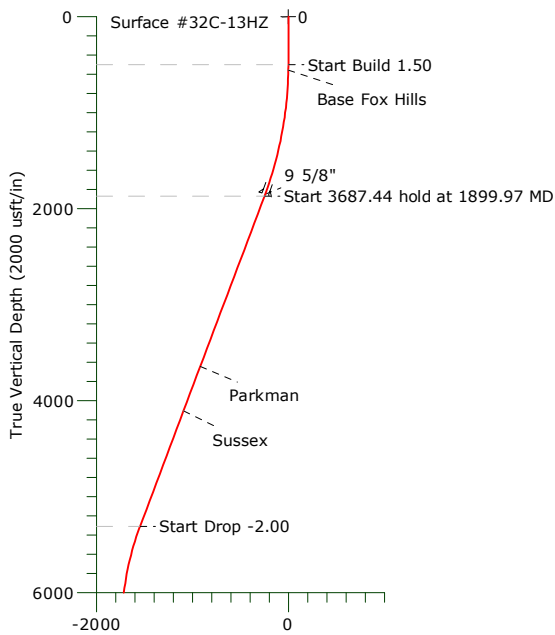
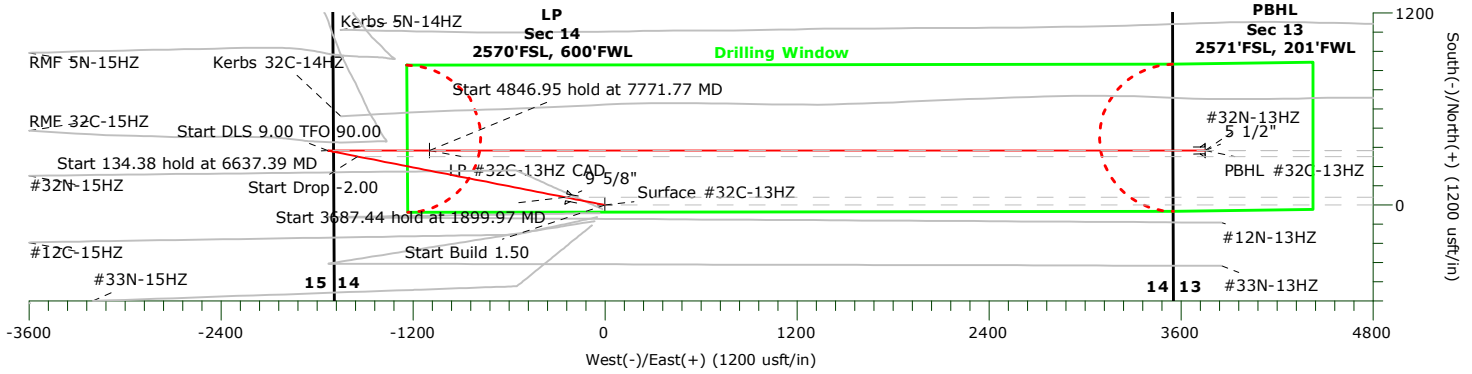




# US ROCKIES WATTENBERG PLANNING

Project: WELD-NAD83-UTMFT13N  
 Site: 3N-68W-15 Docheff 11-14HZ  
 Well: #32N-13HZ  
 Wellbore: Original Hole  
 Design: DP #1



CASING DETAILS			
TVD	MD	Name	Size
1850.00	1879.81	9 5/8"	9.62
7109.00	12618.72	5 1/2"	5.50

FORMATION TOP DETAILS			
TVDPath	MDPath	Formation	Base
554.00	554.00	Base Fox Hills	
3643.00	3800.35	Parkman	
4106.00	4296.29	Sussex	
6960.00	7327.24	SSPG	
7030.00	7451.24	NBRR	
7087.00	7603.92	N470_B_CK	

### WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Surface #32C-13HZ	0.00	0.00	0.00	14608685.97	1647788.20	40.225050°N	104.973591°W	Point
LP #32C-13HZ CAD	7109.00	339.83	-1095.76	14609025.47	1646692.33	40.225983°N	104.977517°W	Point
PBHL #32C-13HZ	7109.00	339.86	3751.18	14609026.94	1651539.28	40.225982°N	104.960152°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	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	
3	1899.97	21.00	281.10	1868.84	48.83	-248.95	1.50	281.10	-248.95	
4	5587.41	21.00	281.10	5311.37	303.20	-1545.67	0.00	0.00	-1545.67	
5	6637.39	0.00	0.00	6338.00	339.82	-1732.38	2.00	180.00	-1732.38	
6	6771.77	0.00	0.00	6472.38	339.82	-1732.38	0.00	0.00	-1732.38	
7	7771.77	90.00	90.00	7109.00	339.83	-1095.77	9.00	90.00	-1095.77	
8	12618.72	90.00	90.00	7109.00	339.86	3751.18	0.00	0.00		PBHL #32C-13HZ

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N  
3N-68W-15 Docheff 11-14HZ  
#32N-13HZ**

**Original Hole**

**Plan: DP #1**

## **Standard Planning Report**

**24 February, 2016**

# Precision Drilling Corporation

## Planning Report

<b>Database:</b>	Compass_US	<b>Local Co-ordinate Reference:</b>	Well #32N-13HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	4934'GL+20'KB @ 4954.00usft (PD461)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	4934'GL+20'KB @ 4954.00usft (PD461)
<b>Site:</b>	3N-68W-15 Docheff 11-14HZ	<b>North Reference:</b>	True
<b>Well:</b>	#32N-13HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	DP #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)		

<b>Site</b>	3N-68W-15 Docheff 11-14HZ				
<b>Site Position:</b>		<b>Northing:</b>	14,608,685.96 usft	<b>Latitude:</b>	40.225050°N
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,647,788.19 usft	<b>Longitude:</b>	104.973591°W
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.20 in	<b>Grid Convergence:</b>	0.02 °

<b>Well</b>	#32N-13HZ					
<b>Well Position</b>	<b>+N-S</b>	0.00 usft	<b>Northing:</b>	14,608,685.96 usft	<b>Latitude:</b>	40.225050°N
	<b>+E-W</b>	0.00 usft	<b>Easting:</b>	1,647,788.19 usft	<b>Longitude:</b>	104.973591°W
<b>Position Uncertainty</b>		3.28 usft	<b>Wellhead Elevation:</b>	0.00 usft	<b>Ground Level:</b>	4,934.00 usft

<b>Wellbore</b>	Original Hole				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	03/01/16	8.44	66.71	52,425

<b>Design</b>	DP #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	90.00

<b>Plan Sections</b>										
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	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,899.97	21.00	281.10	1,868.84	48.83	-248.95	1.50	1.50	0.00	281.10	
5,587.41	21.00	281.10	5,311.37	303.20	-1,545.67	0.00	0.00	0.00	0.00	
6,637.39	0.00	0.00	6,338.00	339.82	-1,732.39	2.00	-2.00	0.00	180.00	
6,771.77	0.00	0.00	6,472.38	339.82	-1,732.39	0.00	0.00	0.00	0.00	
7,771.77	90.00	90.00	7,109.00	339.83	-1,095.77	9.00	9.00	9.00	90.00	
12,618.72	90.00	90.00	7,109.00	339.86	3,751.18	0.00	0.00	0.00	0.00	PBHL #32C-13HZ

# Precision Drilling Corporation

## Planning Report

<b>Database:</b>	Compass_US	<b>Local Co-ordinate Reference:</b>	Well #32N-13HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	4934'GL+20'KB @ 4954.00usft (PD461)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	4934'GL+20'KB @ 4954.00usft (PD461)
<b>Site:</b>	3N-68W-15 Docheff 11-14HZ	<b>North Reference:</b>	True
<b>Well:</b>	#32N-13HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	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	0.00
<b>Surface #32C-13HZ</b>										
100.00	0.00	0.00	100.00	0.00	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	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
554.00	0.81	281.10	554.00	0.07	-0.37	-0.37	1.50	1.50	0.00	0.00
<b>Base Fox Hills</b>										
600.00	1.50	281.10	599.99	0.25	-1.28	-1.28	1.50	1.50	0.00	0.00
700.00	3.00	281.10	699.91	1.01	-5.14	-5.14	1.50	1.50	0.00	0.00
800.00	4.50	281.10	799.69	2.27	-11.55	-11.55	1.50	1.50	0.00	0.00
900.00	6.00	281.10	899.27	4.03	-20.53	-20.53	1.50	1.50	0.00	0.00
1,000.00	7.50	281.10	998.57	6.29	-32.07	-32.07	1.50	1.50	0.00	0.00
1,100.00	9.00	281.10	1,097.54	9.05	-46.15	-46.15	1.50	1.50	0.00	0.00
1,200.00	10.50	281.10	1,196.09	12.31	-62.77	-62.77	1.50	1.50	0.00	0.00
1,300.00	12.00	281.10	1,294.16	16.07	-81.91	-81.91	1.50	1.50	0.00	0.00
1,400.00	13.50	281.10	1,391.70	20.32	-103.57	-103.57	1.50	1.50	0.00	0.00
1,500.00	15.00	281.10	1,488.62	25.05	-127.72	-127.72	1.50	1.50	0.00	0.00
1,600.00	16.50	281.10	1,584.86	30.28	-154.36	-154.36	1.50	1.50	0.00	0.00
1,700.00	18.00	281.10	1,680.36	35.99	-183.45	-183.45	1.50	1.50	0.00	0.00
1,800.00	19.50	281.10	1,775.05	42.17	-215.00	-215.00	1.50	1.50	0.00	0.00
1,879.81	20.70	281.10	1,850.00	47.45	-241.91	-241.91	1.50	1.50	0.00	0.00
<b>9 5/8"</b>										
1,899.97	21.00	281.10	1,868.84	48.83	-248.95	-248.95	1.50	1.50	0.00	0.00
2,000.00	21.00	281.10	1,962.22	55.73	-284.13	-284.13	0.00	0.00	0.00	0.00
2,100.00	21.00	281.10	2,055.58	62.63	-319.29	-319.29	0.00	0.00	0.00	0.00
2,200.00	21.00	281.10	2,148.94	69.53	-354.46	-354.46	0.00	0.00	0.00	0.00
2,300.00	21.00	281.10	2,242.30	76.43	-389.62	-389.62	0.00	0.00	0.00	0.00
2,400.00	21.00	281.10	2,335.66	83.33	-424.79	-424.79	0.00	0.00	0.00	0.00
2,500.00	21.00	281.10	2,429.01	90.22	-459.96	-459.96	0.00	0.00	0.00	0.00
2,600.00	21.00	281.10	2,522.37	97.12	-495.12	-495.12	0.00	0.00	0.00	0.00
2,700.00	21.00	281.10	2,615.73	104.02	-530.29	-530.29	0.00	0.00	0.00	0.00
2,800.00	21.00	281.10	2,709.09	110.92	-565.45	-565.45	0.00	0.00	0.00	0.00
2,900.00	21.00	281.10	2,802.45	117.82	-600.62	-600.62	0.00	0.00	0.00	0.00
3,000.00	21.00	281.10	2,895.81	124.72	-635.78	-635.78	0.00	0.00	0.00	0.00
3,100.00	21.00	281.10	2,989.16	131.61	-670.95	-670.95	0.00	0.00	0.00	0.00
3,200.00	21.00	281.10	3,082.52	138.51	-706.12	-706.12	0.00	0.00	0.00	0.00
3,300.00	21.00	281.10	3,175.88	145.41	-741.28	-741.28	0.00	0.00	0.00	0.00
3,400.00	21.00	281.10	3,269.24	152.31	-776.45	-776.45	0.00	0.00	0.00	0.00
3,500.00	21.00	281.10	3,362.60	159.21	-811.61	-811.61	0.00	0.00	0.00	0.00
3,600.00	21.00	281.10	3,455.96	166.10	-846.78	-846.78	0.00	0.00	0.00	0.00
3,700.00	21.00	281.10	3,549.31	173.00	-881.95	-881.95	0.00	0.00	0.00	0.00
3,800.00	21.00	281.10	3,642.67	179.90	-917.11	-917.11	0.00	0.00	0.00	0.00
3,800.35	21.00	281.10	3,643.00	179.92	-917.24	-917.24	0.00	0.00	0.00	0.00
<b>Parkman</b>										
3,900.00	21.00	281.10	3,736.03	186.80	-952.28	-952.28	0.00	0.00	0.00	0.00
4,000.00	21.00	281.10	3,829.39	193.70	-987.44	-987.44	0.00	0.00	0.00	0.00
4,100.00	21.00	281.10	3,922.75	200.59	-1,022.61	-1,022.61	0.00	0.00	0.00	0.00
4,200.00	21.00	281.10	4,016.11	207.49	-1,057.78	-1,057.78	0.00	0.00	0.00	0.00
4,296.29	21.00	281.10	4,106.00	214.14	-1,091.64	-1,091.64	0.00	0.00	0.00	0.00
<b>Sussex</b>										
4,300.00	21.00	281.10	4,109.46	214.39	-1,092.94	-1,092.94	0.00	0.00	0.00	0.00
4,400.00	21.00	281.10	4,202.82	221.29	-1,128.11	-1,128.11	0.00	0.00	0.00	0.00

# Precision Drilling Corporation

## Planning Report

<b>Database:</b>	Compass_US	<b>Local Co-ordinate Reference:</b>	Well #32N-13HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	4934'GL+20'KB @ 4954.00usft (PD461)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	4934'GL+20'KB @ 4954.00usft (PD461)
<b>Site:</b>	3N-68W-15 Docheff 11-14HZ	<b>North Reference:</b>	True
<b>Well:</b>	#32N-13HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	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)
4,500.00	21.00	281.10	4,296.18	228.19	-1,163.27	-1,163.27	0.00	0.00	0.00
4,600.00	21.00	281.10	4,389.54	235.09	-1,198.44	-1,198.44	0.00	0.00	0.00
4,700.00	21.00	281.10	4,482.90	241.98	-1,233.61	-1,233.61	0.00	0.00	0.00
4,800.00	21.00	281.10	4,576.26	248.88	-1,268.77	-1,268.77	0.00	0.00	0.00
4,900.00	21.00	281.10	4,669.61	255.78	-1,303.94	-1,303.94	0.00	0.00	0.00
5,000.00	21.00	281.10	4,762.97	262.68	-1,339.10	-1,339.10	0.00	0.00	0.00
5,100.00	21.00	281.10	4,856.33	269.58	-1,374.27	-1,374.27	0.00	0.00	0.00
5,200.00	21.00	281.10	4,949.69	276.47	-1,409.44	-1,409.44	0.00	0.00	0.00
5,300.00	21.00	281.10	5,043.05	283.37	-1,444.60	-1,444.60	0.00	0.00	0.00
5,400.00	21.00	281.10	5,136.41	290.27	-1,479.77	-1,479.77	0.00	0.00	0.00
5,500.00	21.00	281.10	5,229.76	297.17	-1,514.93	-1,514.93	0.00	0.00	0.00
5,587.41	21.00	281.10	5,311.37	303.20	-1,545.67	-1,545.67	0.00	0.00	0.00
5,600.00	20.75	281.10	5,323.13	304.06	-1,550.07	-1,550.07	2.00	-2.00	0.00
5,700.00	18.75	281.10	5,417.25	310.57	-1,583.23	-1,583.23	2.00	-2.00	0.00
5,800.00	16.75	281.10	5,512.48	316.43	-1,613.14	-1,613.14	2.00	-2.00	0.00
5,900.00	14.75	281.10	5,608.72	321.66	-1,639.77	-1,639.77	2.00	-2.00	0.00
6,000.00	12.75	281.10	5,705.85	326.23	-1,663.09	-1,663.09	2.00	-2.00	0.00
6,100.00	10.75	281.10	5,803.75	330.15	-1,683.07	-1,683.07	2.00	-2.00	0.00
6,200.00	8.75	281.10	5,902.31	333.41	-1,699.68	-1,699.68	2.00	-2.00	0.00
6,300.00	6.75	281.10	6,001.39	336.00	-1,712.91	-1,712.91	2.00	-2.00	0.00
6,400.00	4.75	281.10	6,100.88	337.93	-1,722.74	-1,722.74	2.00	-2.00	0.00
6,500.00	2.75	281.10	6,200.66	339.19	-1,729.15	-1,729.15	2.00	-2.00	0.00
6,600.00	0.75	281.10	6,300.61	339.78	-1,732.15	-1,732.15	2.00	-2.00	0.00
6,637.39	0.00	0.00	6,338.00	339.82	-1,732.39	-1,732.39	2.00	-2.00	0.00
6,700.00	0.00	0.00	6,400.61	339.82	-1,732.39	-1,732.39	0.00	0.00	0.00
6,771.77	0.00	0.00	6,472.38	339.82	-1,732.39	-1,732.39	0.00	0.00	0.00
6,800.00	2.54	90.00	6,500.60	339.82	-1,731.76	-1,731.76	9.00	9.00	0.00
6,850.00	7.04	90.00	6,550.41	339.82	-1,727.58	-1,727.58	9.00	9.00	0.00
6,900.00	11.54	90.00	6,599.74	339.82	-1,719.51	-1,719.51	9.00	9.00	0.00
6,950.00	16.04	90.00	6,648.29	339.82	-1,707.60	-1,707.60	9.00	9.00	0.00
7,000.00	20.54	90.00	6,695.75	339.82	-1,691.91	-1,691.91	9.00	9.00	0.00
7,050.00	25.04	90.00	6,741.84	339.82	-1,672.55	-1,672.55	9.00	9.00	0.00
7,100.00	29.54	90.00	6,786.26	339.82	-1,649.63	-1,649.63	9.00	9.00	0.00
7,150.00	34.04	90.00	6,828.75	339.82	-1,623.30	-1,623.30	9.00	9.00	0.00
7,200.00	38.54	90.00	6,869.04	339.82	-1,593.71	-1,593.71	9.00	9.00	0.00
7,250.00	43.04	90.00	6,906.88	339.82	-1,561.05	-1,561.05	9.00	9.00	0.00
7,300.00	47.54	90.00	6,942.05	339.83	-1,525.53	-1,525.53	9.00	9.00	0.00
7,327.24	49.99	90.00	6,960.00	339.83	-1,505.05	-1,505.05	9.00	9.00	0.00
<b>SSPG</b>									
7,350.00	52.04	90.00	6,974.32	339.83	-1,487.35	-1,487.35	9.00	9.00	0.00
7,400.00	56.54	90.00	7,003.50	339.83	-1,446.76	-1,446.76	9.00	9.00	0.00
7,450.00	61.04	90.00	7,029.40	339.83	-1,404.01	-1,404.01	9.00	9.00	0.00
7,451.25	61.15	90.00	7,030.00	339.83	-1,402.92	-1,402.92	9.00	9.00	0.00
<b>NBRR</b>									
7,500.00	65.54	90.00	7,051.87	339.83	-1,359.36	-1,359.36	9.00	9.00	0.00
7,550.00	70.04	90.00	7,070.76	339.83	-1,313.08	-1,313.08	9.00	9.00	0.00
7,600.00	74.54	90.00	7,085.97	339.83	-1,265.46	-1,265.46	9.00	9.00	0.00
7,603.92	74.89	90.00	7,087.00	339.83	-1,261.68	-1,261.68	9.00	9.00	0.00
<b>N470_B_CK</b>									
7,650.00	79.04	90.00	7,097.39	339.83	-1,216.80	-1,216.80	9.00	9.00	0.00
7,700.00	83.54	90.00	7,104.96	339.83	-1,167.39	-1,167.39	9.00	9.00	0.00
7,750.00	88.04	90.00	7,108.63	339.83	-1,117.53	-1,117.53	9.00	9.00	0.00
7,771.77	90.00	90.00	7,109.00	339.83	-1,095.77	-1,095.77	9.00	9.00	0.00

# Precision Drilling Corporation

## Planning Report

<b>Database:</b>	Compass_US	<b>Local Co-ordinate Reference:</b>	Well #32N-13HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	4934'GL+20'KB @ 4954.00usft (PD461)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	4934'GL+20'KB @ 4954.00usft (PD461)
<b>Site:</b>	3N-68W-15 Docheff 11-14HZ	<b>North Reference:</b>	True
<b>Well:</b>	#32N-13HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	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)	
<b>LP #32C-13HZ CAD</b>										
7,800.00	90.00	90.00	7,109.00	339.83	-1,067.54	-1,067.54	0.00	0.00	0.00	
7,900.00	90.00	90.00	7,109.00	339.83	-967.54	-967.54	0.00	0.00	0.00	
8,000.00	90.00	90.00	7,109.00	339.83	-867.54	-867.54	0.00	0.00	0.00	
8,100.00	90.00	90.00	7,109.00	339.83	-767.54	-767.54	0.00	0.00	0.00	
8,200.00	90.00	90.00	7,109.00	339.83	-667.54	-667.54	0.00	0.00	0.00	
8,300.00	90.00	90.00	7,109.00	339.83	-567.54	-567.54	0.00	0.00	0.00	
8,400.00	90.00	90.00	7,109.00	339.83	-467.54	-467.54	0.00	0.00	0.00	
8,500.00	90.00	90.00	7,109.00	339.83	-367.54	-367.54	0.00	0.00	0.00	
8,600.00	90.00	90.00	7,109.00	339.83	-267.54	-267.54	0.00	0.00	0.00	
8,700.00	90.00	90.00	7,109.00	339.83	-167.54	-167.54	0.00	0.00	0.00	
8,800.00	90.00	90.00	7,109.00	339.83	-67.54	-67.54	0.00	0.00	0.00	
8,900.00	90.00	90.00	7,109.00	339.83	32.46	32.46	0.00	0.00	0.00	
9,000.00	90.00	90.00	7,109.00	339.83	132.46	132.46	0.00	0.00	0.00	
9,100.00	90.00	90.00	7,109.00	339.84	232.46	232.46	0.00	0.00	0.00	
9,200.00	90.00	90.00	7,109.00	339.84	332.46	332.46	0.00	0.00	0.00	
9,300.00	90.00	90.00	7,109.00	339.84	432.46	432.46	0.00	0.00	0.00	
9,400.00	90.00	90.00	7,109.00	339.84	532.46	532.46	0.00	0.00	0.00	
9,500.00	90.00	90.00	7,109.00	339.84	632.46	632.46	0.00	0.00	0.00	
9,600.00	90.00	90.00	7,109.00	339.84	732.46	732.46	0.00	0.00	0.00	
9,700.00	90.00	90.00	7,109.00	339.84	832.46	832.46	0.00	0.00	0.00	
9,800.00	90.00	90.00	7,109.00	339.84	932.46	932.46	0.00	0.00	0.00	
9,900.00	90.00	90.00	7,109.00	339.84	1,032.46	1,032.46	0.00	0.00	0.00	
10,000.00	90.00	90.00	7,109.00	339.84	1,132.46	1,132.46	0.00	0.00	0.00	
10,100.00	90.00	90.00	7,109.00	339.84	1,232.46	1,232.46	0.00	0.00	0.00	
10,200.00	90.00	90.00	7,109.00	339.84	1,332.46	1,332.46	0.00	0.00	0.00	
10,300.00	90.00	90.00	7,109.00	339.84	1,432.46	1,432.46	0.00	0.00	0.00	
10,400.00	90.00	90.00	7,109.00	339.84	1,532.46	1,532.46	0.00	0.00	0.00	
10,500.00	90.00	90.00	7,109.00	339.84	1,632.46	1,632.46	0.00	0.00	0.00	
10,600.00	90.00	90.00	7,109.00	339.84	1,732.46	1,732.46	0.00	0.00	0.00	
10,700.00	90.00	90.00	7,109.00	339.84	1,832.46	1,832.46	0.00	0.00	0.00	
10,800.00	90.00	90.00	7,109.00	339.85	1,932.46	1,932.46	0.00	0.00	0.00	
10,900.00	90.00	90.00	7,109.00	339.85	2,032.46	2,032.46	0.00	0.00	0.00	
11,000.00	90.00	90.00	7,109.00	339.85	2,132.46	2,132.46	0.00	0.00	0.00	
11,100.00	90.00	90.00	7,109.00	339.85	2,232.46	2,232.46	0.00	0.00	0.00	
11,200.00	90.00	90.00	7,109.00	339.85	2,332.46	2,332.46	0.00	0.00	0.00	
11,300.00	90.00	90.00	7,109.00	339.85	2,432.46	2,432.46	0.00	0.00	0.00	
11,400.00	90.00	90.00	7,109.00	339.85	2,532.46	2,532.46	0.00	0.00	0.00	
11,500.00	90.00	90.00	7,109.00	339.85	2,632.46	2,632.46	0.00	0.00	0.00	
11,600.00	90.00	90.00	7,109.00	339.85	2,732.46	2,732.46	0.00	0.00	0.00	
11,700.00	90.00	90.00	7,109.00	339.85	2,832.46	2,832.46	0.00	0.00	0.00	
11,800.00	90.00	90.00	7,109.00	339.85	2,932.46	2,932.46	0.00	0.00	0.00	
11,900.00	90.00	90.00	7,109.00	339.85	3,032.46	3,032.46	0.00	0.00	0.00	
12,000.00	90.00	90.00	7,109.00	339.85	3,132.46	3,132.46	0.00	0.00	0.00	
12,100.00	90.00	90.00	7,109.00	339.85	3,232.46	3,232.46	0.00	0.00	0.00	
12,200.00	90.00	90.00	7,109.00	339.85	3,332.46	3,332.46	0.00	0.00	0.00	
12,300.00	90.00	90.00	7,109.00	339.85	3,432.46	3,432.46	0.00	0.00	0.00	
12,400.00	90.00	90.00	7,109.00	339.85	3,532.46	3,532.46	0.00	0.00	0.00	
12,500.00	90.00	90.00	7,109.00	339.85	3,632.46	3,632.46	0.00	0.00	0.00	
12,600.00	90.00	90.00	7,109.00	339.86	3,732.46	3,732.46	0.00	0.00	0.00	
12,618.72	90.00	90.00	7,109.00	339.86	3,751.18	3,751.18	0.00	0.00	0.00	
<b>5 1/2" - PBHL #32C-13HZ</b>										

# Precision Drilling Corporation

## Planning Report

<b>Database:</b>	Compass_US	<b>Local Co-ordinate Reference:</b>	Well #32N-13HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	4934'GL+20'KB @ 4954.00usft (PD461)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	4934'GL+20'KB @ 4954.00usft (PD461)
<b>Site:</b>	3N-68W-15 Docheff 11-14HZ	<b>North Reference:</b>	True
<b>Well:</b>	#32N-13HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	DP #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									
Surface #32C-13HZ - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	14,608,685.96	1,647,788.19	40.225050°N	104.973591°W
LP #32C-13HZ CAD - plan hits target center - Point	0.00	0.00	7,109.00	339.83	-1,095.77	14,609,025.47	1,646,692.33	40.225983°N	104.977517°W
PBHL #32C-13HZ - plan hits target center - Point	0.00	0.00	7,109.00	339.86	3,751.18	14,609,026.94	1,651,539.27	40.225983°N	104.960152°W

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)		
1,879.81	1,850.00	9 5/8"	9.63	13.50		
12,618.72	7,109.00	5 1/2"	5.50	7.88		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
554.00	554.00	Base Fox Hills				
3,800.35	3,643.00	Parkman				
4,296.29	4,106.00	Sussex				
7,327.24	6,960.00	SSPG				
7,451.25	7,030.00	NBRR				
7,603.92	7,087.00	N470_B_CK				