

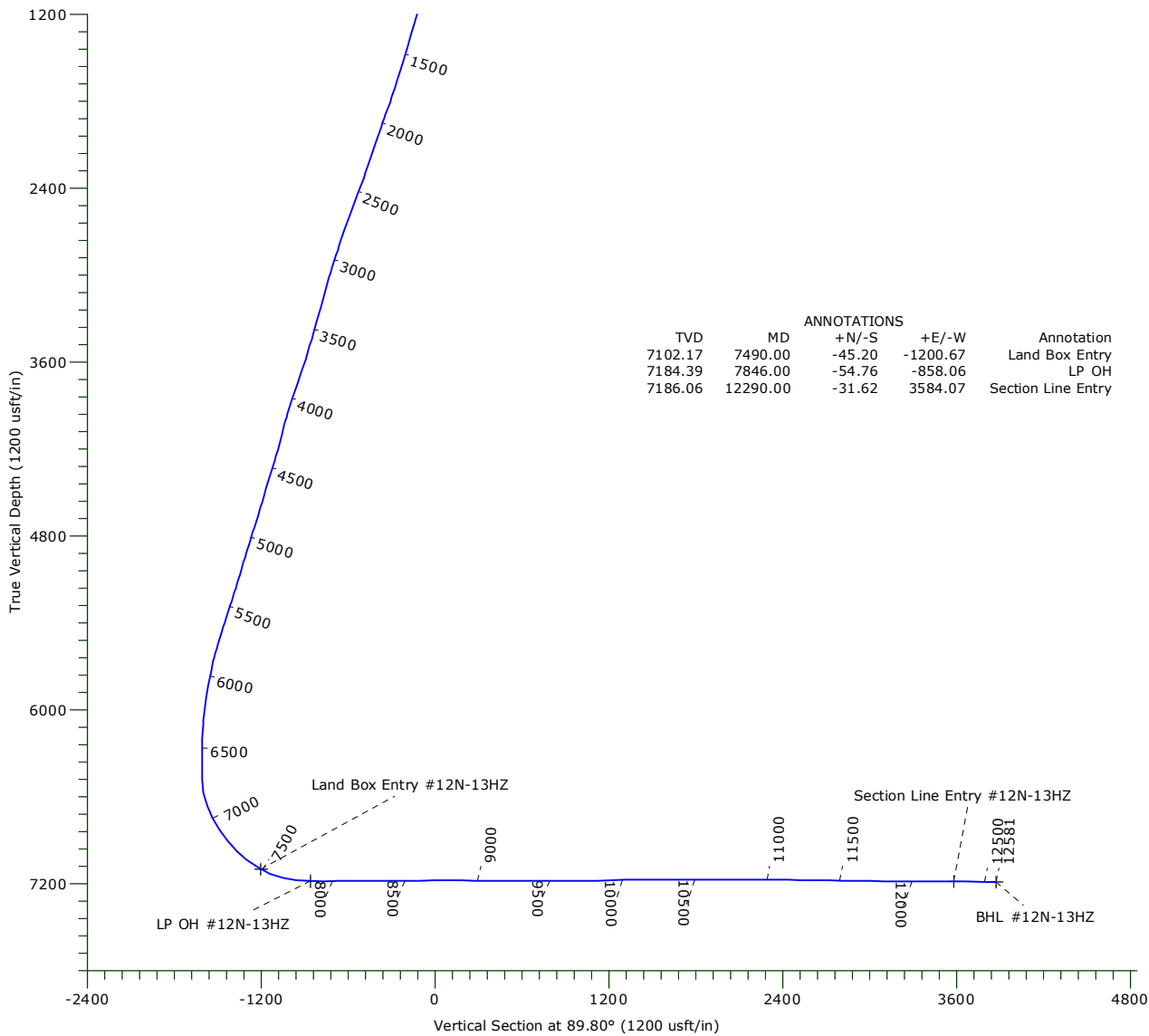
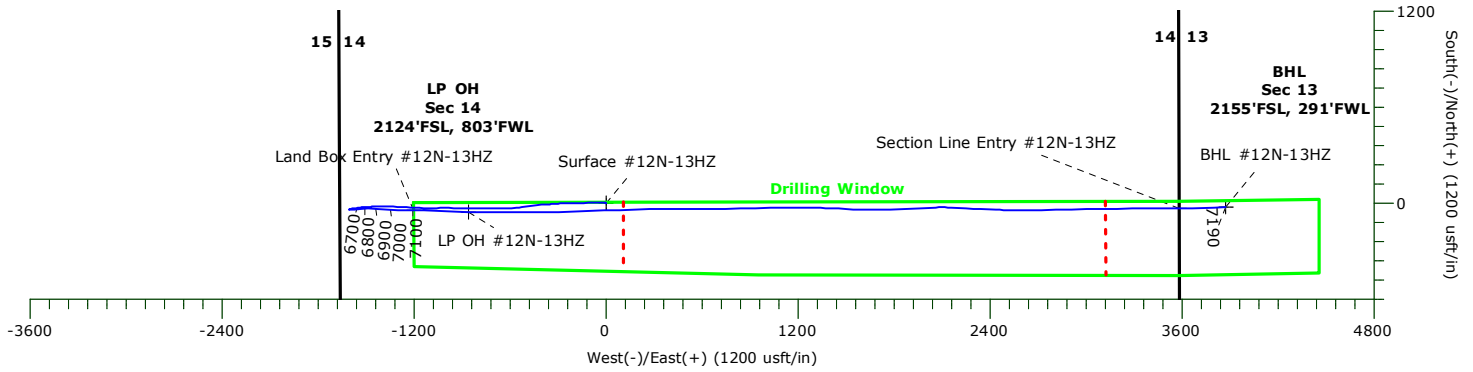


# US ROCKIES WATTENBERG PLANNING

Project: WELD-NAD83-UTMFT13N  
 Site: 3N-68W-15 Docheff 11-14HZ  
 Well: #12N-13HZ  
 Wellbore: Original Hole  
 Design: Original Hole



**Precision**  
 Directional Services



### WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Surface #12N-13HZ	0.00	0.00	0.00	14608635.34	1647756.11	40.224911°N	104.973706°W	Point
Land Box Entry #12N-13HZ	7102.17	-45.19	-1200.67	14608589.79	1646555.45	40.224787°N	104.978007°W	Point
LP OH #12N-13HZ	7184.39	-54.76	-858.06	14608580.32	1646898.07	40.224761°N	104.976780°W	Point
Section Line Entry #12N-13HZ	7186.06	-31.62	3584.07	14608604.79	1651340.19	40.224823°N	104.960866°W	Point
BHL #12N-13HZ	7189.86	-24.21	3874.93	14608612.28	1651631.05	40.224844°N	104.959824°W	Point

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N  
3N-68W-15 Docheff 11-14HZ  
#12N-13HZ**

**Original Hole**

**Design: Original Hole**

## **Standard Survey Report**

**06 April, 2016**

# Precision Drilling Corporation

## Survey Report

<b>Company:</b> US ROCKIES WATTENBERG PLANNING	<b>Local Co-ordinate Reference:</b> Well #12N-13HZ
<b>Project:</b> WELD-NAD83-UTMFT13N	<b>TVD Reference:</b> 4935'GL+20'KB @ 4955.00usft (PD461)
<b>Site:</b> 3N-68W-15 Docheff 11-14HZ	<b>MD Reference:</b> 4935'GL+20'KB @ 4955.00usft (PD461)
<b>Well:</b> #12N-13HZ	<b>North Reference:</b> True
<b>Wellbore:</b> Original Hole	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> Original Hole	<b>Database:</b> Compass_Rockies

<b>Project</b> WELD-NAD83-UTMFT13N	
<b>Map System:</b> Universal Transverse Mercator (US Survey Fee	<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> #12N-13HZ		
<b>Well Position</b> +N/-S 0.00 usft	<b>Northing:</b> 14,608,635.34 usft	<b>Latitude:</b> 40.224911°N
+E/-W 0.00 usft	<b>Easting:</b> 1,647,756.11 usft	<b>Longitude:</b> 104.973706°W
<b>Position Uncertainty</b> 3.28 usft	<b>Wellhead Elevation:</b> 0.00 usft	<b>Ground Level:</b> 4,935.00 usft

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

<b>Design</b> Original Hole
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<b>Audit Notes:</b>			
<b>Version:</b> 1.0	<b>Phase:</b> ACTUAL	<b>Tie On Depth:</b>	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	89.80

Survey Program		Date			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
121.00	12,510.00	Survey #1 (Original Hole)	APC_ISCWSA REV 2 MV	Fixed:v2:crustal field declination	
12,581.00	12,581.00	Survey #2 (Original Hole)	APC_BLIND	OWSG BLIND	

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
<b>Surface #12N-13HZ</b>									
121.00	0.53	342.32	121.00	0.53	-0.17	-0.17	0.44	0.44	0.00
216.00	0.70	337.57	215.99	1.49	-0.52	-0.52	0.19	0.18	-5.00
311.00	1.06	277.63	310.98	2.14	-1.62	-1.61	0.98	0.38	-63.09
414.00	2.55	273.41	413.93	2.40	-4.85	-4.84	1.45	1.45	-4.10
509.00	5.28	277.63	508.70	3.11	-11.29	-11.28	2.89	2.87	4.44
605.00	6.60	267.79	604.18	3.48	-21.18	-21.17	1.73	1.38	-10.25
700.00	5.36	273.24	698.67	3.52	-31.07	-31.06	1.43	-1.31	5.74
794.00	6.51	268.84	792.16	3.66	-40.78	-40.77	1.31	1.22	-4.68

# Precision Drilling Corporation

## Survey Report

<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>Local Co-ordinate Reference:</b>	Well #12N-13HZ
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>TVD Reference:</b>	4935'GL+20'KB @ 4955.00usft (PD461)
<b>Site:</b>	3N-68W-15 Docheff 11-14HZ	<b>MD Reference:</b>	4935'GL+20'KB @ 4955.00usft (PD461)
<b>Well:</b>	#12N-13HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	Original Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Original Hole	<b>Database:</b>	Compass_Rockies

### 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)
889.00	9.58	271.65	886.21	3.78	-54.07	-54.06	3.26	3.23	2.96
984.00	10.82	273.59	979.71	4.57	-70.87	-70.86	1.35	1.31	2.04
1,078.00	12.05	266.73	1,071.85	4.56	-89.48	-89.46	1.95	1.31	-7.30
1,173.00	14.25	262.34	1,164.35	2.44	-110.97	-110.96	2.54	2.32	-4.62
1,267.00	16.88	264.80	1,254.90	-0.34	-136.03	-136.03	2.88	2.80	2.62
1,361.00	17.15	268.14	1,344.79	-2.03	-163.47	-163.48	1.08	0.29	3.55
1,455.00	16.53	272.18	1,434.76	-1.97	-190.69	-190.69	1.41	-0.66	4.30
1,550.00	17.50	272.36	1,525.60	-0.87	-218.47	-218.47	1.02	1.02	0.19
1,644.00	16.53	268.84	1,615.49	-0.56	-245.96	-245.96	1.50	-1.03	-3.74
1,739.00	17.67	267.26	1,706.29	-1.52	-273.87	-273.88	1.30	1.20	-1.66
1,842.00	20.05	266.03	1,803.75	-3.49	-307.10	-307.11	2.34	2.31	-1.19
1,937.00	20.31	265.84	1,892.92	-5.81	-339.79	-339.81	0.28	0.27	-0.20
2,030.00	18.20	264.44	1,980.71	-8.39	-370.35	-370.38	2.32	-2.27	-1.51
2,124.00	19.26	266.72	2,069.73	-10.70	-400.44	-400.48	1.37	1.13	2.43
2,312.00	18.82	261.80	2,247.46	-16.80	-461.41	-461.47	0.88	-0.23	-2.62
2,405.00	20.05	261.27	2,335.16	-21.36	-492.02	-492.09	1.34	1.32	-0.57
2,498.00	20.84	262.86	2,422.30	-25.84	-524.19	-524.28	1.04	0.85	1.71
2,593.00	20.31	266.55	2,511.24	-28.93	-557.42	-557.52	1.47	-0.56	3.88
2,685.00	20.22	268.66	2,597.55	-30.26	-589.25	-589.35	0.80	-0.10	2.29
2,871.00	18.91	269.89	2,772.81	-31.07	-651.53	-651.63	0.74	-0.70	0.66
2,965.00	17.15	264.96	2,862.19	-32.32	-680.57	-680.68	2.48	-1.87	-5.24
3,059.00	17.67	272.17	2,951.90	-32.99	-708.64	-708.75	2.36	0.55	7.67
3,154.00	15.83	268.30	3,042.87	-32.83	-736.00	-736.11	2.26	-1.94	-4.07
3,248.00	15.65	272.35	3,133.34	-32.69	-761.48	-761.59	1.18	-0.19	4.31
3,340.00	15.56	274.81	3,221.95	-31.15	-786.18	-786.28	0.73	-0.10	2.67
3,434.00	16.00	270.41	3,312.41	-30.00	-811.70	-811.79	1.36	0.47	-4.68
3,529.00	16.09	269.18	3,403.71	-30.09	-837.95	-838.05	0.37	0.09	-1.29
3,621.00	17.32	270.59	3,491.83	-30.14	-864.39	-864.49	1.41	1.34	1.53
3,715.00	17.59	268.83	3,581.50	-30.28	-892.59	-892.69	0.63	0.29	-1.87
3,808.00	17.94	269.54	3,670.07	-30.68	-920.96	-921.06	0.44	0.38	0.76
3,901.00	18.82	272.52	3,758.32	-30.14	-950.27	-950.37	1.38	0.95	3.20
3,994.00	18.20	271.82	3,846.51	-29.02	-979.77	-979.87	0.71	-0.67	-0.75
4,088.00	18.11	270.59	3,935.83	-28.40	-1,009.05	-1,009.14	0.42	-0.10	-1.31
4,182.00	14.68	265.84	4,026.00	-29.12	-1,035.55	-1,035.64	3.91	-3.65	-5.05
4,275.00	14.95	266.90	4,115.91	-30.62	-1,059.28	-1,059.38	0.41	0.29	1.14
4,369.00	14.77	265.49	4,206.77	-32.22	-1,083.33	-1,083.44	0.43	-0.19	-1.50
4,462.00	17.67	273.58	4,296.07	-32.27	-1,109.25	-1,109.35	3.95	3.12	8.70
4,557.00	17.06	271.82	4,386.74	-30.93	-1,137.56	-1,137.67	0.85	-0.64	-1.85
4,650.00	17.15	273.40	4,475.62	-29.68	-1,164.89	-1,164.98	0.51	0.10	1.70
4,746.00	15.48	271.82	4,567.75	-28.43	-1,191.82	-1,191.92	1.80	-1.74	-1.65
4,840.00	18.29	275.16	4,657.70	-26.71	-1,219.06	-1,219.14	3.16	2.99	3.55
4,932.00	17.94	273.05	4,745.14	-24.65	-1,247.58	-1,247.66	0.81	-0.38	-2.29
5,024.00	15.74	269.36	4,833.19	-24.04	-1,274.22	-1,274.29	2.66	-2.39	-4.01

# Precision Drilling Corporation

## Survey Report

<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>Local Co-ordinate Reference:</b>	Well #12N-13HZ
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>TVD Reference:</b>	4935'GL+20'KB @ 4955.00usft (PD461)
<b>Site:</b>	3N-68W-15 Docheff 11-14HZ	<b>MD Reference:</b>	4935'GL+20'KB @ 4955.00usft (PD461)
<b>Well:</b>	#12N-13HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	Original Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Original Hole	<b>Database:</b>	Compass_Rockies

### 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)
5,118.00	17.94	272.88	4,923.15	-23.46	-1,301.43	-1,301.50	2.58	2.34	3.74
5,212.00	15.83	271.29	5,013.10	-22.44	-1,328.71	-1,328.78	2.30	-2.24	-1.69
5,308.00	17.94	274.11	5,104.96	-21.08	-1,356.55	-1,356.61	2.36	2.20	2.94
5,402.00	16.00	272.17	5,194.86	-19.56	-1,383.94	-1,384.00	2.15	-2.06	-2.06
5,496.00	18.38	268.30	5,284.66	-19.51	-1,411.70	-1,411.76	2.81	2.53	-4.12
5,590.00	18.82	266.20	5,373.75	-20.95	-1,441.64	-1,441.71	0.85	0.47	-2.23
5,682.00	16.62	264.61	5,461.38	-23.17	-1,469.55	-1,469.62	2.45	-2.39	-1.73
5,774.00	17.41	269.89	5,549.36	-24.43	-1,496.42	-1,496.49	1.89	0.86	5.74
5,867.00	14.51	264.79	5,638.77	-25.52	-1,521.94	-1,522.02	3.46	-3.12	-5.48
5,960.00	11.34	260.22	5,729.40	-28.13	-1,542.56	-1,542.65	3.58	-3.41	-4.91
6,053.00	11.70	265.14	5,820.53	-30.48	-1,560.96	-1,561.06	1.12	0.39	5.29
6,148.00	8.79	260.39	5,914.01	-32.51	-1,577.72	-1,577.83	3.19	-3.06	-5.00
6,244.00	6.24	255.12	6,009.17	-35.07	-1,590.00	-1,590.11	2.75	-2.66	-5.49
6,339.00	4.31	248.97	6,103.77	-37.68	-1,598.32	-1,598.44	2.11	-2.03	-6.47
6,434.00	2.73	248.97	6,198.59	-39.77	-1,603.77	-1,603.89	1.66	-1.66	0.00
6,528.00	0.62	244.93	6,292.54	-40.79	-1,606.32	-1,606.45	2.25	-2.24	-4.30
6,623.00	0.35	180.77	6,387.54	-41.30	-1,606.78	-1,606.92	0.59	-0.28	-67.54
6,717.00	0.26	137.88	6,481.54	-41.75	-1,606.65	-1,606.78	0.25	-0.10	-45.63
6,810.00	12.05	89.89	6,573.84	-41.88	-1,596.76	-1,596.90	12.77	12.68	-51.60
6,904.00	20.14	83.38	6,664.09	-40.00	-1,570.83	-1,570.96	8.80	8.61	-6.93
6,999.00	27.00	84.44	6,751.11	-36.02	-1,533.07	-1,533.19	7.23	7.22	1.12
7,092.00	33.15	89.54	6,831.57	-33.77	-1,486.58	-1,486.69	7.16	6.61	5.48
7,186.00	38.95	93.23	6,907.54	-35.22	-1,431.33	-1,431.45	6.59	6.17	3.93
7,281.00	45.29	94.46	6,977.97	-39.54	-1,367.80	-1,367.93	6.73	6.67	1.29
7,375.00	52.76	92.00	7,039.57	-43.45	-1,297.00	-1,297.14	8.19	7.95	-2.62
7,469.00	59.62	90.41	7,091.85	-45.04	-1,218.96	-1,219.11	7.43	7.30	-1.69
7,489.98	61.48	90.54	7,102.17	-45.20	-1,200.69	-1,200.84	8.90	8.88	0.60
<b>Land Box Entry #12N-13HZ</b>									
7,562.00	67.88	90.94	7,132.95	-46.04	-1,135.63	-1,135.78	8.90	8.88	0.56
7,657.00	76.50	92.00	7,161.98	-48.38	-1,045.30	-1,045.46	9.14	9.07	1.12
7,751.00	84.24	92.35	7,177.69	-51.90	-952.76	-952.94	8.24	8.23	0.37
7,846.00	87.67	91.12	7,184.39	-54.76	-858.06	-858.24	3.83	3.61	-1.29
<b>LP OH #12N-13HZ</b>									
7,940.00	90.57	91.29	7,185.83	-56.74	-764.10	-764.29	3.09	3.09	0.18
8,035.00	90.75	89.71	7,184.74	-57.57	-669.11	-669.31	1.67	0.19	-1.66
8,130.00	90.40	89.71	7,183.79	-57.09	-574.12	-574.31	0.37	-0.37	0.00
8,224.00	89.96	89.89	7,183.49	-56.76	-480.12	-480.31	0.51	-0.47	0.19
8,318.00	90.66	88.83	7,182.98	-55.71	-386.13	-386.32	1.35	0.74	-1.13
8,412.00	90.66	89.18	7,181.90	-54.08	-292.15	-292.34	0.37	0.00	0.37
8,506.00	90.48	88.66	7,180.96	-52.30	-198.17	-198.35	0.59	-0.19	-0.55
8,602.00	90.40	88.13	7,180.23	-49.62	-102.21	-102.38	0.56	-0.08	-0.55
8,697.00	91.36	88.13	7,178.77	-46.52	-7.27	-7.44	1.01	1.01	0.00
8,791.00	89.87	89.18	7,177.76	-44.31	86.69	86.54	1.94	-1.59	1.12
8,886.00	89.52	86.55	7,178.27	-40.77	181.61	181.47	2.79	-0.37	-2.77

# Precision Drilling Corporation

## Survey Report

<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>Local Co-ordinate Reference:</b>	Well #12N-13HZ
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>TVD Reference:</b>	4935'GL+20'KB @ 4955.00usft (PD461)
<b>Site:</b>	3N-68W-15 Docheff 11-14HZ	<b>MD Reference:</b>	4935'GL+20'KB @ 4955.00usft (PD461)
<b>Well:</b>	#12N-13HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	Original Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Original Hole	<b>Database:</b>	Compass_Rockies

### 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)
8,980.00	88.64	88.13	7,179.77	-36.41	275.50	275.37	1.92	-0.94	1.68
9,074.00	90.57	90.06	7,180.42	-34.93	369.47	369.35	2.90	2.05	2.05
9,168.00	89.60	90.59	7,180.28	-35.46	463.47	463.34	1.18	-1.03	0.56
9,263.00	89.08	90.94	7,181.38	-36.73	558.46	558.32	0.66	-0.55	0.37
9,357.00	90.04	89.71	7,182.10	-37.26	652.45	652.31	1.66	1.02	-1.31
9,452.00	91.36	89.18	7,180.94	-36.34	747.43	747.30	1.50	1.39	-0.56
9,545.00	90.22	88.83	7,179.66	-34.72	840.41	840.28	1.28	-1.23	-0.38
9,640.00	89.78	88.66	7,179.66	-32.64	935.39	935.27	0.50	-0.46	-0.18
9,735.00	89.34	87.95	7,180.39	-29.83	1,030.34	1,030.23	0.88	-0.46	-0.75
9,829.00	91.01	90.41	7,180.10	-28.49	1,124.32	1,124.22	3.16	1.78	2.62
9,923.00	91.28	90.24	7,178.22	-29.02	1,218.30	1,218.19	0.34	0.29	-0.18
10,016.00	91.63	90.24	7,175.86	-29.41	1,311.27	1,311.16	0.38	0.38	0.00
10,111.00	89.69	92.35	7,174.76	-31.56	1,406.23	1,406.11	3.02	-2.04	2.22
10,204.00	90.04	93.40	7,174.98	-36.22	1,499.11	1,498.98	1.19	0.38	1.13
10,298.00	90.92	92.17	7,174.20	-40.79	1,592.99	1,592.84	1.61	0.94	-1.31
10,392.00	89.60	88.48	7,173.77	-41.32	1,686.97	1,686.82	4.17	-1.40	-3.93
10,485.00	90.22	88.30	7,173.92	-38.71	1,779.94	1,779.79	0.69	0.67	-0.19
10,580.00	90.31	87.95	7,173.48	-35.60	1,874.88	1,874.75	0.38	0.09	-0.37
10,674.00	89.69	86.37	7,173.48	-30.94	1,968.76	1,968.64	1.81	-0.66	-1.68
10,769.00	89.87	88.30	7,173.84	-26.53	2,063.66	2,063.55	2.04	0.19	2.03
10,863.00	89.25	92.88	7,174.56	-27.50	2,157.62	2,157.51	4.92	-0.66	4.87
10,956.00	89.87	93.58	7,175.28	-32.74	2,250.47	2,250.34	1.01	0.67	0.75
11,049.00	89.87	92.00	7,175.49	-37.26	2,343.36	2,343.21	1.70	0.00	-1.70
11,144.00	89.78	92.52	7,175.78	-41.01	2,438.28	2,438.13	0.56	-0.09	0.55
11,238.00	89.08	89.54	7,176.71	-42.70	2,532.25	2,532.09	3.26	-0.74	-3.17
11,333.00	89.60	90.24	7,177.81	-42.52	2,627.25	2,627.08	0.92	0.55	0.74
11,427.00	89.16	89.54	7,178.83	-42.33	2,721.24	2,721.07	0.88	-0.47	-0.74
11,522.00	89.25	89.36	7,180.14	-41.42	2,816.23	2,816.06	0.21	0.09	-0.19
11,617.00	88.99	88.66	7,181.60	-39.78	2,911.20	2,911.04	0.79	-0.27	-0.74
11,712.00	88.81	89.18	7,183.43	-37.99	3,006.16	3,006.01	0.58	-0.19	0.55
11,806.00	88.20	88.83	7,185.88	-36.36	3,100.12	3,099.97	0.75	-0.65	-0.37
11,901.00	90.48	89.36	7,186.97	-34.86	3,195.09	3,194.95	2.46	2.40	0.56
11,996.00	90.13	89.01	7,186.47	-33.51	3,290.08	3,289.95	0.52	-0.37	-0.37
12,090.00	89.96	89.36	7,186.39	-32.17	3,384.07	3,383.94	0.41	-0.18	0.37
12,185.00	90.04	90.06	7,186.39	-31.69	3,479.07	3,478.94	0.74	0.08	0.74
12,279.00	90.31	89.89	7,186.11	-31.65	3,573.07	3,572.94	0.34	0.29	-0.18
12,290.00	90.20	89.77	7,186.06	-31.62	3,584.07	3,583.94	1.53	-1.03	-1.13
<b>Section Line Entry #12N-13HZ</b>									
12,373.00	89.34	88.83	7,186.39	-30.60	3,667.06	3,666.93	1.53	-1.03	-1.13
12,510.00	88.90	87.95	7,188.50	-26.75	3,803.99	3,803.87	0.72	-0.32	-0.64
12,581.00	88.90	87.95	7,189.86	-24.21	3,874.93	3,874.82	0.00	0.00	0.00
<b>BHL #12N-13HZ</b>									

# Precision Drilling Corporation

## Survey Report

<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>Local Co-ordinate Reference:</b>	Well #12N-13HZ
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>TVD Reference:</b>	4935'GL+20'KB @ 4955.00usft (PD461)
<b>Site:</b>	3N-68W-15 Docheff 11-14HZ	<b>MD Reference:</b>	4935'GL+20'KB @ 4955.00usft (PD461)
<b>Well:</b>	#12N-13HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	Original Hole	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Original Hole	<b>Database:</b>	Compass_Rockies

### 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 #12N-13HZ - actual wellpath hits target center - Point	0.00	0.00	0.00	0.00	0.00	14,608,635.34	1,647,756.11	40.224911°N	104.973706°W
Land Box Entry #12N - actual wellpath hits target center - Point	0.00	0.00	7,102.17	-45.20	-1,200.67	14,608,589.79	1,646,555.45	40.224787°N	104.978008°W
LP OH #12N-13HZ - actual wellpath hits target center - Point	0.00	0.00	7,184.39	-54.76	-858.06	14,608,580.32	1,646,898.07	40.224761°N	104.976780°W
Section Line Entry #1: - actual wellpath hits target center - Point	0.00	0.00	7,186.06	-31.62	3,584.07	14,608,604.78	1,651,340.19	40.224824°N	104.960866°W
BHL #12N-13HZ - actual wellpath hits target center - Point	0.00	0.00	7,189.86	-24.21	3,874.93	14,608,612.27	1,651,631.05	40.224844°N	104.959824°W

### Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,490.00	7,102.17	-45.20	-1,200.67	Land Box Entry
7,846.00	7,184.39	-54.76	-858.06	LP OH
12,290.00	7,186.06	-31.62	3,584.07	Section Line Entry