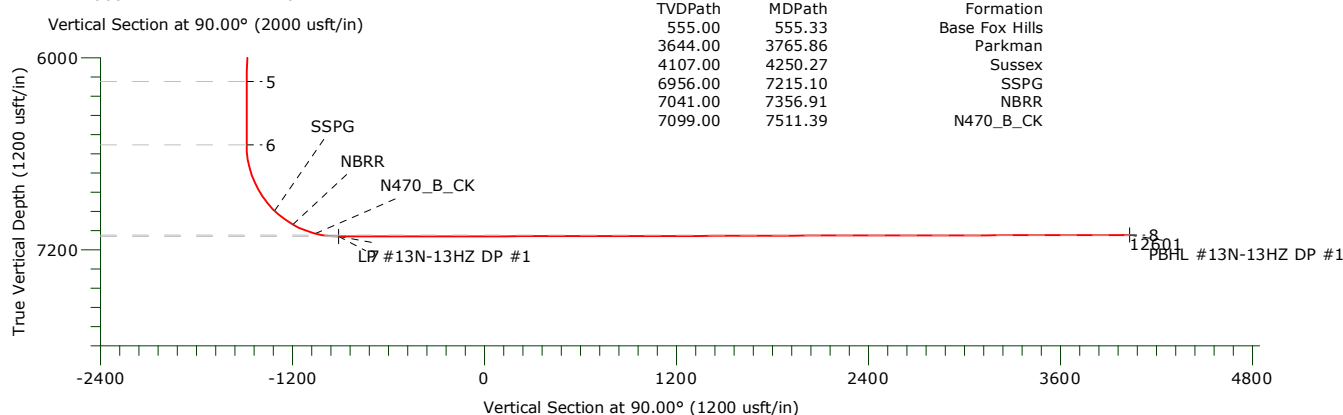
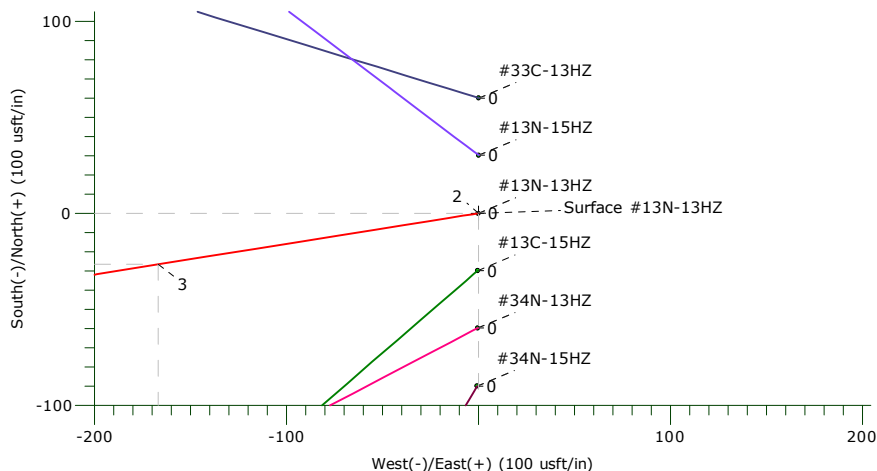
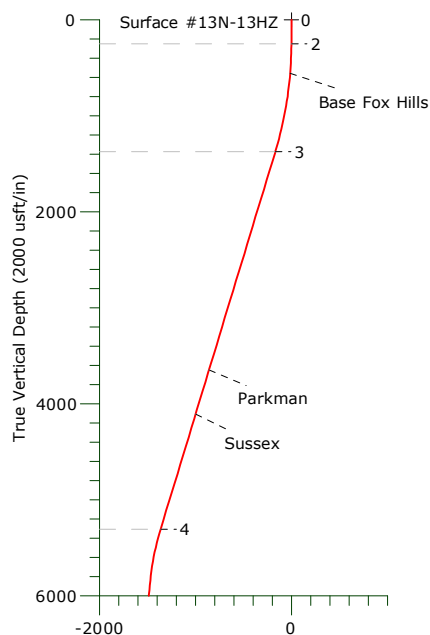
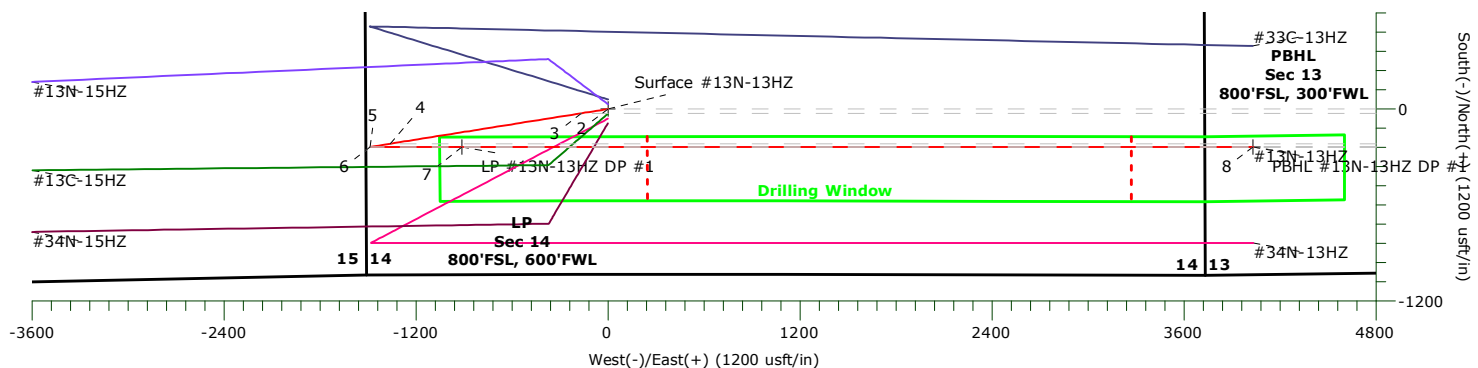




US ROCKIES WATTENBERG PLANNING

Project: WELD-NAD83-UTMFT13N
Site: 3N-68W-14 Docheff 19-14HZ
Well: #13N-13HZ
Wellbore: Original Hole
Design: DP #1



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
555.00	555.33	Base Fox Hills
3644.00	3765.86	Parkman
4107.00	4250.27	Sussex
6956.00	7215.10	SSPG
7041.00	7356.91	NBRR
7099.00	7511.39	N470_B_CK

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Surface #13N-13HZ	0.00	0.00	0.00	14607492.58	1647614.37	40.221773°N	104.974215°W	Point
PBHL #13N-13HZ DP #1	7107.00	-236.49	4031.64	14607257.26	1651646.07	40.221123°N	104.959772°W	Point
LP #13N-13HZ DP #1	7117.00	-236.73	-912.33	14607255.59	1646702.10	40.221123°N	104.977483°W	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	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	1389.91	17.10	260.95	1373.06	-26.56	-166.73	1.50	260.95	-166.73	
4	5504.41	17.10	260.95	5305.70	-216.84	-1361.40	0.00	0.00	-1361.40	
5	6359.34	0.00	0.00	6148.00	-236.76	-1486.45	2.00	180.00	-1486.45	
6	6755.38	0.00	0.00	6544.04	-236.76	-1486.45	0.00	0.00	-1486.45	
7	7656.54	90.12	90.00	7117.00	-236.73	-912.33	10.00	90.00	-912.33	
8	12600.52	90.12	90.00	7107.00	-236.49	4031.64	0.00	0.00	4031.64	

US ROCKIES WATTENBERG PLANNING

**WELD-NAD83-UTMFT13N
3N-68W-14 Docheff 19-14HZ
#13N-13HZ**

Original Hole

Plan: DP #1

Standard Planning Report

30 March, 2016

Precision Drilling Corporation

Planning Report

Database:	Compass_Rockies	Local Co-ordinate Reference:	Well #13N-13HZ
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:	#13N-13HZ	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	Latitude:	40.221938°N
From:	Lat/Long	Easting:	1,647,614.62 usft	Longitude:	104.974214°W
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	0.02 °

Well	#13N-13HZ					
Well Position	+N-S	-60.09 usft	Northing:	14,607,492.58 usft	Latitude:	40.221773°N
	+E-W	-0.28 usft	Easting:	1,647,614.36 usft	Longitude:	104.974215°W
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	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	90.00	

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	
1,389.91	17.10	260.95	1,373.06	-26.56	-166.73	1.50	1.50	0.00	260.95	
5,504.41	17.10	260.95	5,305.70	-216.84	-1,361.40	0.00	0.00	0.00	0.00	
6,359.34	0.00	0.00	6,148.00	-236.76	-1,486.45	2.00	-2.00	0.00	180.00	
6,755.38	0.00	0.00	6,544.04	-236.76	-1,486.45	0.00	0.00	0.00	0.00	
7,656.54	90.12	90.00	7,117.00	-236.73	-912.33	10.00	10.00	9.99	90.00	
12,600.52	90.12	90.00	7,107.00	-236.49	4,031.64	0.00	0.00	0.00	0.00	

Precision Drilling Corporation

Planning Report

Database:	Compass_Rockies	Local Co-ordinate Reference:	Well #13N-13HZ
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:	#13N-13HZ	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	260.95	300.00	-0.05	-0.32	-0.32	1.50	1.50	0.00	
400.00	2.25	260.95	399.96	-0.46	-2.91	-2.91	1.50	1.50	0.00	
500.00	3.75	260.95	499.82	-1.29	-8.08	-8.08	1.50	1.50	0.00	
555.33	4.58	260.95	555.00	-1.92	-12.04	-12.04	1.50	1.50	0.00	
Base Fox Hills										
600.00	5.25	260.95	599.51	-2.52	-15.82	-15.82	1.50	1.50	0.00	
700.00	6.75	260.95	698.96	-4.16	-26.15	-26.15	1.50	1.50	0.00	
800.00	8.25	260.95	798.10	-6.22	-39.04	-39.04	1.50	1.50	0.00	
900.00	9.75	260.95	896.87	-8.68	-54.48	-54.48	1.50	1.50	0.00	
1,000.00	11.25	260.95	995.19	-11.54	-72.48	-72.48	1.50	1.50	0.00	
1,100.00	12.75	260.95	1,093.00	-14.81	-93.01	-93.01	1.50	1.50	0.00	
1,200.00	14.25	260.95	1,190.24	-18.49	-116.07	-116.07	1.50	1.50	0.00	
1,300.00	15.75	260.95	1,286.83	-22.56	-141.63	-141.63	1.50	1.50	0.00	
1,389.91	17.10	260.95	1,373.07	-26.56	-166.73	-166.73	1.50	1.50	0.00	
3										
1,400.00	17.10	260.95	1,382.71	-27.02	-169.66	-169.66	0.00	0.00	0.00	
1,500.00	17.10	260.95	1,478.29	-31.65	-198.70	-198.70	0.00	0.00	0.00	
1,600.00	17.10	260.95	1,573.87	-36.27	-227.73	-227.73	0.00	0.00	0.00	
1,700.00	17.10	260.95	1,669.45	-40.90	-256.77	-256.77	0.00	0.00	0.00	
1,800.00	17.10	260.95	1,765.03	-45.52	-285.80	-285.80	0.00	0.00	0.00	
1,900.00	17.10	260.95	1,860.61	-50.15	-314.84	-314.84	0.00	0.00	0.00	
2,000.00	17.10	260.95	1,956.19	-54.77	-343.87	-343.87	0.00	0.00	0.00	
2,100.00	17.10	260.95	2,051.77	-59.40	-372.91	-372.91	0.00	0.00	0.00	
2,200.00	17.10	260.95	2,147.35	-64.02	-401.95	-401.95	0.00	0.00	0.00	
2,300.00	17.10	260.95	2,242.93	-68.65	-430.98	-430.98	0.00	0.00	0.00	
2,400.00	17.10	260.95	2,338.51	-73.27	-460.02	-460.02	0.00	0.00	0.00	
2,500.00	17.10	260.95	2,434.09	-77.90	-489.05	-489.05	0.00	0.00	0.00	
2,600.00	17.10	260.95	2,529.67	-82.52	-518.09	-518.09	0.00	0.00	0.00	
2,700.00	17.10	260.95	2,625.25	-87.15	-547.12	-547.12	0.00	0.00	0.00	
2,800.00	17.10	260.95	2,720.83	-91.77	-576.16	-576.16	0.00	0.00	0.00	
2,900.00	17.10	260.95	2,816.41	-96.39	-605.20	-605.20	0.00	0.00	0.00	
3,000.00	17.10	260.95	2,911.99	-101.02	-634.23	-634.23	0.00	0.00	0.00	
3,100.00	17.10	260.95	3,007.57	-105.64	-663.27	-663.27	0.00	0.00	0.00	
3,200.00	17.10	260.95	3,103.15	-110.27	-692.30	-692.30	0.00	0.00	0.00	
3,300.00	17.10	260.95	3,198.73	-114.89	-721.34	-721.34	0.00	0.00	0.00	
3,400.00	17.10	260.95	3,294.31	-119.52	-750.37	-750.37	0.00	0.00	0.00	
3,500.00	17.10	260.95	3,389.89	-124.14	-779.41	-779.41	0.00	0.00	0.00	
3,600.00	17.10	260.95	3,485.47	-128.77	-808.45	-808.45	0.00	0.00	0.00	
3,700.00	17.10	260.95	3,581.05	-133.39	-837.48	-837.48	0.00	0.00	0.00	
3,765.86	17.10	260.95	3,644.00	-136.44	-856.60	-856.60	0.00	0.00	0.00	
Parkman										
3,800.00	17.10	260.95	3,676.63	-138.02	-866.52	-866.52	0.00	0.00	0.00	
3,900.00	17.10	260.95	3,772.21	-142.64	-895.55	-895.55	0.00	0.00	0.00	
4,000.00	17.10	260.95	3,867.79	-147.27	-924.59	-924.59	0.00	0.00	0.00	
4,100.00	17.10	260.95	3,963.37	-151.89	-953.62	-953.62	0.00	0.00	0.00	
4,200.00	17.10	260.95	4,058.95	-156.52	-982.66	-982.66	0.00	0.00	0.00	
4,250.27	17.10	260.95	4,107.00	-158.84	-997.26	-997.26	0.00	0.00	0.00	

Precision Drilling Corporation

Planning Report

Database:	Compass_Rockies	Local Co-ordinate Reference:	Well #13N-13HZ
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:	#13N-13HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Orignal 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)
Sussex									
4,300.00	17.10	260.95	4,154.53	-161.14	-1,011.69	-1,011.69	0.00	0.00	0.00
4,400.00	17.10	260.95	4,250.11	-165.77	-1,040.73	-1,040.73	0.00	0.00	0.00
4,500.00	17.10	260.95	4,345.69	-170.39	-1,069.77	-1,069.77	0.00	0.00	0.00
4,600.00	17.10	260.95	4,441.27	-175.02	-1,098.80	-1,098.80	0.00	0.00	0.00
4,700.00	17.10	260.95	4,536.85	-179.64	-1,127.84	-1,127.84	0.00	0.00	0.00
4,800.00	17.10	260.95	4,632.43	-184.27	-1,156.87	-1,156.87	0.00	0.00	0.00
4,900.00	17.10	260.95	4,728.01	-188.89	-1,185.91	-1,185.91	0.00	0.00	0.00
5,000.00	17.10	260.95	4,823.59	-193.51	-1,214.94	-1,214.94	0.00	0.00	0.00
5,100.00	17.10	260.95	4,919.17	-198.14	-1,243.98	-1,243.98	0.00	0.00	0.00
5,200.00	17.10	260.95	5,014.75	-202.76	-1,273.02	-1,273.02	0.00	0.00	0.00
5,300.00	17.10	260.95	5,110.33	-207.39	-1,302.05	-1,302.05	0.00	0.00	0.00
5,400.00	17.10	260.95	5,205.91	-212.01	-1,331.09	-1,331.09	0.00	0.00	0.00
5,504.41	17.10	260.95	5,305.71	-216.84	-1,361.40	-1,361.40	0.00	0.00	0.00
4									
5,600.00	15.19	260.95	5,397.52	-221.02	-1,387.65	-1,387.65	2.00	-2.00	0.00
5,700.00	13.19	260.95	5,494.47	-224.88	-1,411.85	-1,411.85	2.00	-2.00	0.00
5,800.00	11.19	260.95	5,592.21	-228.20	-1,432.70	-1,432.70	2.00	-2.00	0.00
5,900.00	9.19	260.95	5,690.63	-230.98	-1,450.16	-1,450.16	2.00	-2.00	0.00
6,000.00	7.19	260.95	5,789.60	-233.22	-1,464.22	-1,464.22	2.00	-2.00	0.00
6,100.00	5.19	260.95	5,889.02	-234.91	-1,474.87	-1,474.87	2.00	-2.00	0.00
6,200.00	3.19	260.95	5,988.74	-236.06	-1,482.08	-1,482.08	2.00	-2.00	0.00
6,300.00	1.19	260.95	6,088.67	-236.66	-1,485.84	-1,485.84	2.00	-2.00	0.00
6,359.34	0.00	0.00	6,148.00	-236.76	-1,486.45	-1,486.45	2.00	-2.00	0.00
5									
6,400.00	0.00	0.00	6,188.66	-236.76	-1,486.45	-1,486.45	0.00	0.00	0.00
6,500.00	0.00	0.00	6,288.66	-236.76	-1,486.45	-1,486.45	0.00	0.00	0.00
6,600.00	0.00	0.00	6,388.66	-236.76	-1,486.45	-1,486.45	0.00	0.00	0.00
6,700.00	0.00	0.00	6,488.66	-236.76	-1,486.45	-1,486.45	0.00	0.00	0.00
6,755.38	0.00	0.00	6,544.04	-236.76	-1,486.45	-1,486.45	0.00	0.00	0.00
6									
6,800.00	4.46	90.00	6,588.62	-236.76	-1,484.71	-1,484.71	10.00	10.00	0.00
6,850.00	9.46	90.00	6,638.23	-236.76	-1,478.65	-1,478.65	10.00	10.00	0.00
6,900.00	14.46	90.00	6,687.13	-236.76	-1,468.29	-1,468.29	10.00	10.00	0.00
6,950.00	19.46	90.00	6,734.94	-236.76	-1,453.71	-1,453.71	10.00	10.00	0.00
7,000.00	24.46	90.00	6,781.30	-236.76	-1,435.02	-1,435.02	10.00	10.00	0.00
7,050.00	29.46	90.00	6,825.85	-236.76	-1,412.36	-1,412.36	10.00	10.00	0.00
7,100.00	34.46	90.00	6,868.26	-236.76	-1,385.90	-1,385.90	10.00	10.00	0.00
7,150.00	39.46	90.00	6,908.19	-236.75	-1,355.84	-1,355.84	10.00	10.00	0.00
7,200.00	44.46	90.00	6,945.36	-236.75	-1,322.42	-1,322.42	10.00	10.00	0.00
7,215.10	45.97	90.00	6,956.00	-236.75	-1,311.70	-1,311.70	10.00	10.00	0.00
SSPG									
7,250.00	49.46	90.00	6,979.47	-236.75	-1,285.89	-1,285.89	10.00	10.00	0.00
7,300.00	54.46	90.00	7,010.27	-236.75	-1,246.52	-1,246.52	10.00	10.00	0.00
7,350.00	59.46	90.00	7,037.53	-236.75	-1,204.62	-1,204.62	10.00	10.00	0.00
7,356.91	60.15	90.00	7,041.00	-236.75	-1,198.64	-1,198.64	10.00	10.00	0.00
NBRR									
7,400.00	64.46	90.00	7,061.02	-236.74	-1,160.50	-1,160.50	10.00	10.00	0.00
7,450.00	69.46	90.00	7,080.58	-236.74	-1,114.50	-1,114.50	10.00	10.00	0.00
7,500.00	74.46	90.00	7,096.06	-236.74	-1,066.97	-1,066.97	10.00	10.00	0.00
7,511.39	75.60	90.00	7,099.00	-236.74	-1,055.97	-1,055.97	10.00	10.00	0.00
N470_B_CK									
7,550.00	79.46	90.00	7,107.33	-236.74	-1,018.28	-1,018.28	10.00	10.00	0.00

Precision Drilling Corporation

Planning Report

Database:	Compass_Rockies	Local Co-ordinate Reference:	Well #13N-13HZ
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:	#13N-13HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Orignal 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)
7,600.00	84.46	90.00	7,114.32	-236.73	-968.78	-968.78	10.00	10.00	0.00
7,650.00	89.46	90.00	7,116.97	-236.73	-918.87	-918.87	10.00	10.00	0.00
7,656.54	90.12	90.00	7,117.00	-236.73	-912.33	-912.33	10.00	10.00	0.00
7									
7,700.00	90.12	90.00	7,116.91	-236.73	-868.87	-868.87	0.00	0.00	0.00
7,800.00	90.12	90.00	7,116.71	-236.72	-768.87	-768.87	0.00	0.00	0.00
7,900.00	90.12	90.00	7,116.50	-236.72	-668.87	-668.87	0.00	0.00	0.00
8,000.00	90.12	90.00	7,116.30	-236.72	-568.87	-568.87	0.00	0.00	0.00
8,100.00	90.12	90.00	7,116.10	-236.71	-468.87	-468.87	0.00	0.00	0.00
8,200.00	90.12	90.00	7,115.90	-236.71	-368.87	-368.87	0.00	0.00	0.00
8,300.00	90.12	90.00	7,115.70	-236.70	-268.87	-268.87	0.00	0.00	0.00
8,400.00	90.12	90.00	7,115.49	-236.70	-168.87	-168.87	0.00	0.00	0.00
8,500.00	90.12	90.00	7,115.29	-236.69	-68.87	-68.87	0.00	0.00	0.00
8,600.00	90.12	90.00	7,115.09	-236.69	31.13	31.13	0.00	0.00	0.00
8,700.00	90.12	90.00	7,114.89	-236.68	131.13	131.13	0.00	0.00	0.00
8,800.00	90.12	90.00	7,114.68	-236.68	231.13	231.13	0.00	0.00	0.00
8,900.00	90.12	90.00	7,114.48	-236.67	331.13	331.13	0.00	0.00	0.00
9,000.00	90.12	90.00	7,114.28	-236.67	431.13	431.13	0.00	0.00	0.00
9,100.00	90.12	90.00	7,114.08	-236.66	531.13	531.13	0.00	0.00	0.00
9,200.00	90.12	90.00	7,113.88	-236.66	631.13	631.13	0.00	0.00	0.00
9,300.00	90.12	90.00	7,113.67	-236.65	731.13	731.13	0.00	0.00	0.00
9,400.00	90.12	90.00	7,113.47	-236.65	831.13	831.13	0.00	0.00	0.00
9,500.00	90.12	90.00	7,113.27	-236.64	931.13	931.13	0.00	0.00	0.00
9,600.00	90.12	90.00	7,113.07	-236.64	1,031.13	1,031.13	0.00	0.00	0.00
9,700.00	90.12	90.00	7,112.86	-236.63	1,131.13	1,131.13	0.00	0.00	0.00
9,800.00	90.12	90.00	7,112.66	-236.63	1,231.13	1,231.13	0.00	0.00	0.00
9,900.00	90.12	90.00	7,112.46	-236.62	1,331.12	1,331.12	0.00	0.00	0.00
10,000.00	90.12	90.00	7,112.26	-236.62	1,431.12	1,431.12	0.00	0.00	0.00
10,100.00	90.12	90.00	7,112.06	-236.61	1,531.12	1,531.12	0.00	0.00	0.00
10,200.00	90.12	90.00	7,111.85	-236.61	1,631.12	1,631.12	0.00	0.00	0.00
10,300.00	90.12	90.00	7,111.65	-236.60	1,731.12	1,731.12	0.00	0.00	0.00
10,400.00	90.12	90.00	7,111.45	-236.60	1,831.12	1,831.12	0.00	0.00	0.00
10,500.00	90.12	90.00	7,111.25	-236.59	1,931.12	1,931.12	0.00	0.00	0.00
10,600.00	90.12	90.00	7,111.05	-236.59	2,031.12	2,031.12	0.00	0.00	0.00
10,700.00	90.12	90.00	7,110.84	-236.58	2,131.12	2,131.12	0.00	0.00	0.00
10,800.00	90.12	90.00	7,110.64	-236.58	2,231.12	2,231.12	0.00	0.00	0.00
10,900.00	90.12	90.00	7,110.44	-236.57	2,331.12	2,331.12	0.00	0.00	0.00
11,000.00	90.12	90.00	7,110.24	-236.57	2,431.12	2,431.12	0.00	0.00	0.00
11,100.00	90.12	90.00	7,110.03	-236.56	2,531.12	2,531.12	0.00	0.00	0.00
11,200.00	90.12	90.00	7,109.83	-236.56	2,631.12	2,631.12	0.00	0.00	0.00
11,300.00	90.12	90.00	7,109.63	-236.55	2,731.12	2,731.12	0.00	0.00	0.00
11,400.00	90.12	90.00	7,109.43	-236.55	2,831.12	2,831.12	0.00	0.00	0.00
11,500.00	90.12	90.00	7,109.23	-236.54	2,931.12	2,931.12	0.00	0.00	0.00
11,600.00	90.12	90.00	7,109.02	-236.54	3,031.12	3,031.12	0.00	0.00	0.00
11,700.00	90.12	90.00	7,108.82	-236.53	3,131.12	3,131.12	0.00	0.00	0.00
11,800.00	90.12	90.00	7,108.62	-236.53	3,231.12	3,231.12	0.00	0.00	0.00
11,900.00	90.12	90.00	7,108.42	-236.52	3,331.12	3,331.12	0.00	0.00	0.00
12,000.00	90.12	90.00	7,108.21	-236.52	3,431.12	3,431.12	0.00	0.00	0.00
12,100.00	90.12	90.00	7,108.01	-236.51	3,531.12	3,531.12	0.00	0.00	0.00
12,200.00	90.12	90.00	7,107.81	-236.51	3,631.12	3,631.12	0.00	0.00	0.00
12,300.00	90.12	90.00	7,107.61	-236.50	3,731.12	3,731.12	0.00	0.00	0.00
12,400.00	90.12	90.00	7,107.41	-236.50	3,831.12	3,831.12	0.00	0.00	0.00
12,500.00	90.12	90.00	7,107.20	-236.49	3,931.12	3,931.12	0.00	0.00	0.00

Precision Drilling Corporation

Planning Report

Database:	Compass_Rockies	Local Co-ordinate Reference:	Well #13N-13HZ
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:	#13N-13HZ	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)
12,600.52	90.12	90.00	7,107.00	-236.49	4,031.64	4,031.64	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 #13N-13HZ - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	14,607,492.58	1,647,614.36	40.221773°N	104.974215°W
PBHL #13N-13HZ DP - plan hits target center - Point	0.00	0.00	7,107.00	-236.49	4,031.64	14,607,257.26	1,651,646.07	40.221123°N	104.959772°W
LP #13N-13HZ DP #1 - plan hits target center - Point	0.00	0.00	7,117.00	-236.73	-912.33	14,607,255.58	1,646,702.10	40.221123°N	104.977484°W

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (in)	Hole Diameter (in)
1,836.59	1,800.00	9 5/8"		9.63	13.50
12,534.95	7,107.13	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				
3,765.86	3,644.00	Parkman				
4,250.27	4,107.00	Sussex				
7,215.10	6,956.00	SSPG				
7,356.91	7,041.00	NBRR				
7,511.39	7,099.00	N470_B_CK				

Precision Drilling Corporation

Planning Report

Database:	Compass_Rockies	Local Co-ordinate Reference:	Well #13N-13HZ
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:	#13N-13HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Orignal 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
1,389.91	1,373.07	-26.56	-166.73	3
5,504.41	5,305.71	-216.84	-1,361.40	4
6,359.34	6,148.00	-236.76	-1,486.45	5
6,755.38	6,544.04	-236.76	-1,486.45	6
7,656.54	7,117.00	-236.73	-912.33	7
12,600.52	7,107.00	-236.49	4,031.64	8