

WELL DETAILS: FL Greens Federal 35N-8HZ

Northing: 14552327.82
 Easting: 1694717.81
 Latitude: 40.0701240
 Longitude: -104.8059040
 GL 4925' & KB 20' @ 4945.00ft (Precision 461) 4925.00

Design: OH (FL Greens Federal 35N-8HZ/OH)

Created By: Seth Burstad Date: 7-10-2017

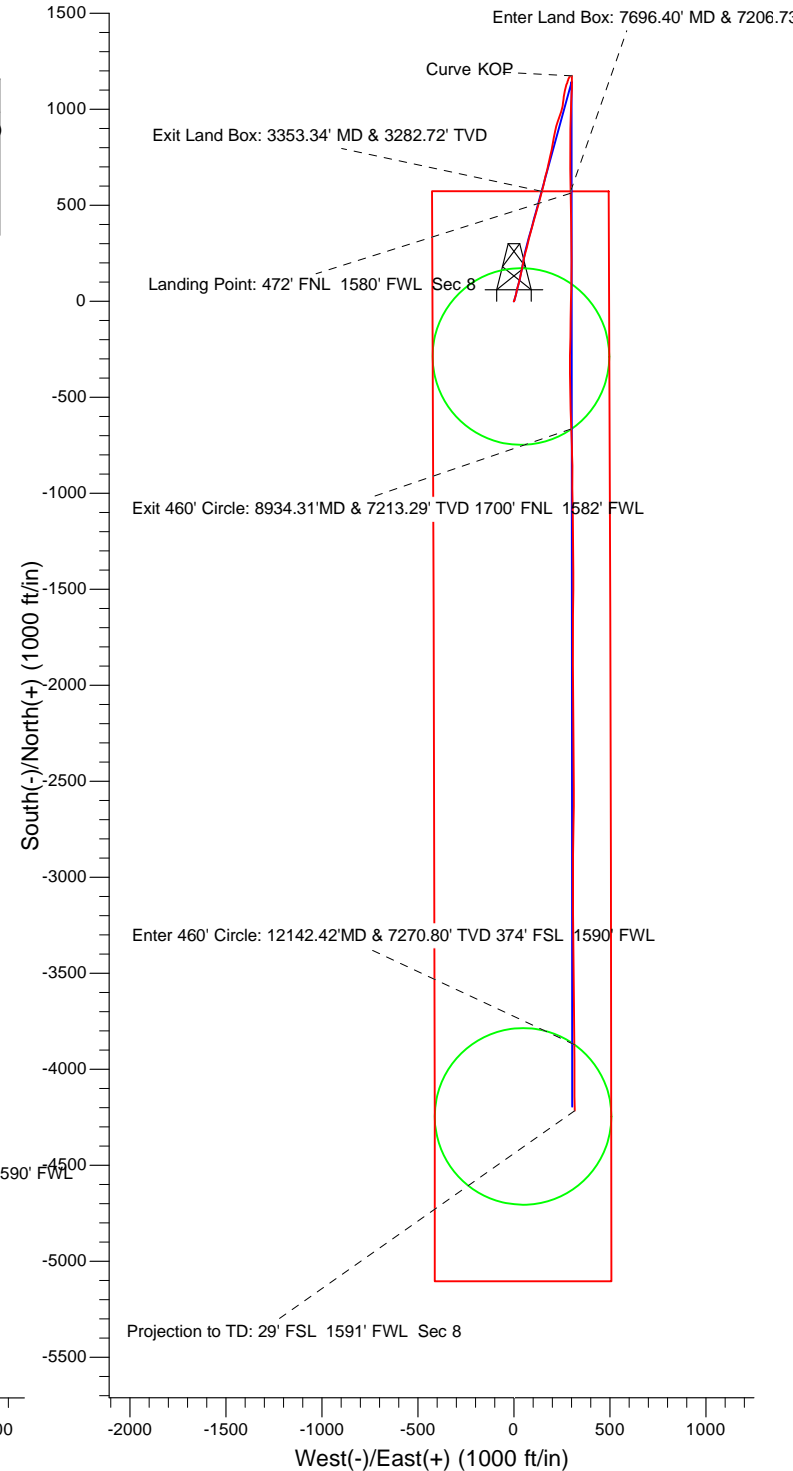
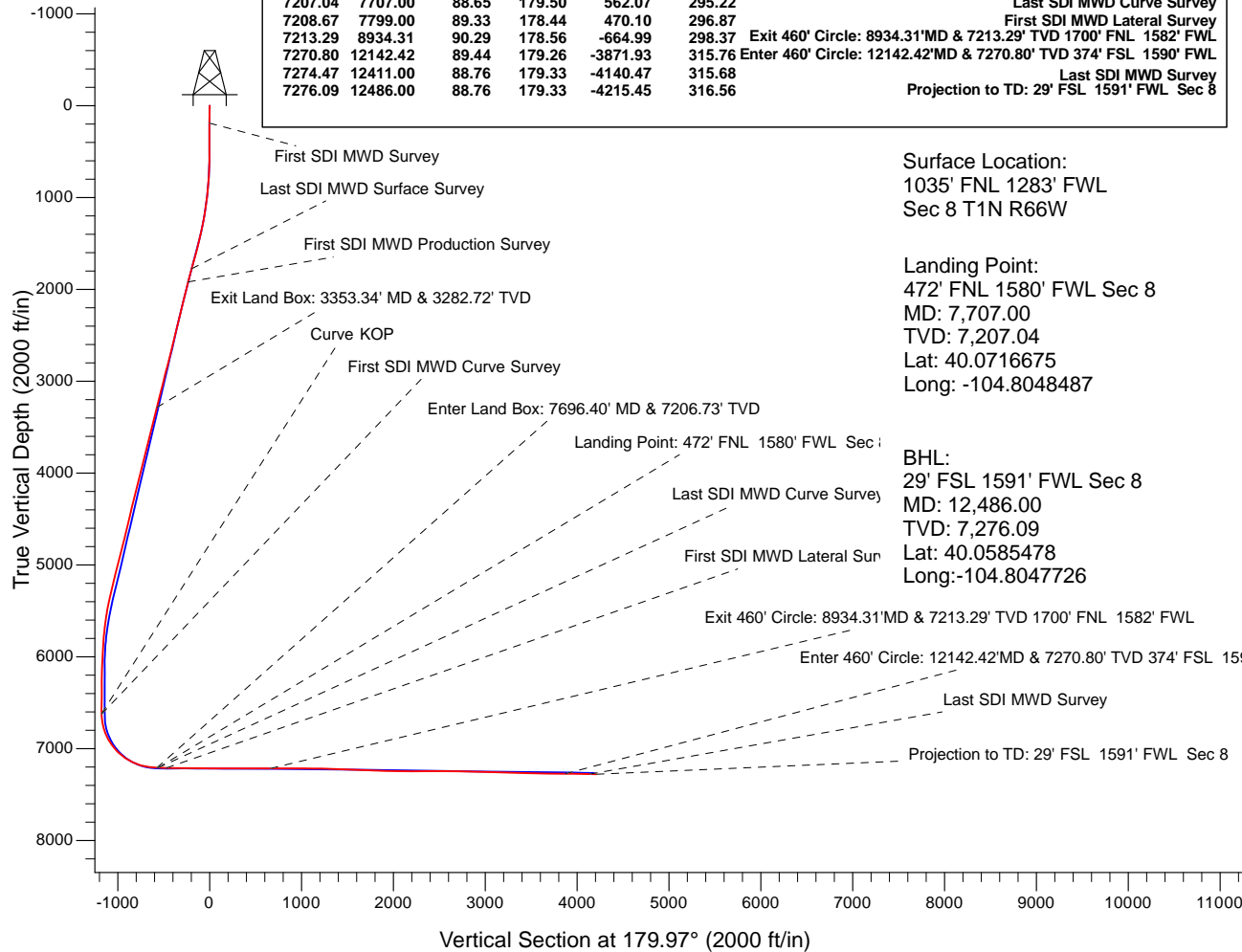
PROJECT DETAILS: US Rockies Wattenberg Planning UTM83

Geodetic System: Universal Transverse Mercator (US Survey Feet)
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: Zone 13N (108 W to 102 W)

System Datum: Mean Sea Level
 Local North: True

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Annotation
190.00	190.00	0.11	357.30	0.18	-0.01	First SDI MWD Survey
1772.29	1793.00	15.21	9.82	194.57	46.39	Last SDI MWD Surface Survey
1917.13	1943.00	14.96	15.55	232.61	54.94	First SDI MWD Production Survey
3282.72	3353.34	15.61	14.45	572.87	145.98	Exit Land Box: 3353.34' MD & 3282.72' TVD
6616.60	6760.00	0.21	67.46	1174.90	302.55	Curve KOP
6620.60	6764.00	0.18	72.18	1174.90	302.57	First SDI MWD Curve Survey
7206.73	7696.40	87.97	179.53	572.66	295.13	Enter Land Box: 7696.40' MD & 7206.73' TVD
7207.04	7707.00	88.65	179.50	562.07	295.22	Landing Point: 472' FNL 1580' FWL Sec 8
7207.04	7707.00	88.65	179.50	562.07	295.22	Last SDI MWD Curve Survey
7208.67	7799.00	89.33	178.44	470.10	296.87	First SDI MWD Lateral Survey
7213.29	8934.31	90.29	178.56	-664.99	298.37	Exit 460' Circle: 8934.31' MD & 7213.29' TVD 1700' FNL 1582' FWL
7270.80	12142.42	89.44	179.26	-3871.93	315.76	Enter 460' Circle: 12142.42' MD & 7270.80' TVD 374' FSL 1590' FWL
7274.47	12411.00	88.76	179.33	-4140.47	315.68	Last SDI MWD Survey
7276.09	12486.00	88.76	179.33	-4215.45	316.56	Projection to TD: 29' FSL 1591' FWL Sec 8





US ROCKIES REGION PLANNING

US Rockies Wattenberg Planning UTM83

FL Greens 18-8HZ Pad

FL Greens Federal 35N-8HZ

OH

Design: OH

Standard Survey Report

10 July, 2017



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well FL Greens Federal 35N-8HZ
Project:	US Rockies Wattenberg Planning UTM83	TVD Reference:	GL 4925' & KB 20' @ 4945.00ft (Precision 461)
Site:	FL Greens 18-8HZ Pad	MD Reference:	GL 4925' & KB 20' @ 4945.00ft (Precision 461)
Well:	FL Greens Federal 35N-8HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

Project	US Rockies Wattenberg Planning UTM83		
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						FL Greens 18-8HZ Pad, Site Center : FL Greens 3N-5HZ											
Site Position:			Northing:			14,552,327.94 usft			Latitude:			40.0701240					
From:			Lat/Long			Easting:			1,694,777.68 usft			Longitude:			-104.8056900		
Position Uncertainty:			0.00 ft			Slot Radius:			13.200 in			Grid Convergence:			0.13 °		

Well	FL Greens Federal 35N-8HZ, 1035' FNL 1283' FWL Sec 8 T1N R66W					
Well Position	+N/-S	0.00 ft	Northing:	14,552,327.81 usft	Latitude:	40.0701240
	+E/-W	0.00 ft	Easting:	1,694,717.81 usft	Longitude:	-104.8059040
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,925.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	5/24/2017	8.39	66.62	52,222

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	179.97	

Survey Program	Date	7/10/2017			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
190.00	1,793.00	Survey #1 - Surface (OH)	APC_ISCWSA REV 2 MWD+	Fixed:v2:crustal field declination	
1,793.00	12,486.00	Survey #2 - Production (OH)	APC_ISCWSA REV 2 MWD+	Fixed:v2:crustal field declination	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
190.00	0.11	357.30	190.00	0.18	-0.01	-0.18	0.06	0.06	0.00	
First SDI MWD Survey										
279.00	0.11	292.83	279.00	0.30	-0.09	-0.30	0.13	0.00	-72.44	
366.00	0.08	79.41	366.00	0.34	-0.11	-0.34	0.21	-0.03	168.48	
497.00	0.03	40.10	497.00	0.39	0.00	-0.39	0.05	-0.04	-30.01	
586.00	0.99	23.04	586.00	1.11	0.32	-1.11	1.08	1.08	-19.17	
672.00	2.26	31.31	671.96	3.25	1.49	-3.24	1.50	1.48	9.62	
761.00	3.50	9.51	760.85	7.42	2.85	-7.42	1.84	1.39	-24.49	
850.00	4.94	18.00	849.60	13.75	4.49	-13.75	1.76	1.62	9.54	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well FL Greens Federal 35N-8HZ
Project:	US Rockies Wattenberg Planning UTM83	TVD Reference:	GL 4925' & KB 20' @ 4945.00ft (Precision 461)
Site:	FL Greens 18-8HZ Pad	MD Reference:	GL 4925' & KB 20' @ 4945.00ft (Precision 461)
Well:	FL Greens Federal 35N-8HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
938.00	6.00	14.97	937.20	21.80	6.84	-21.79	1.25	1.20	-3.44
1,027.00	7.35	14.43	1,025.60	31.80	9.46	-31.80	1.52	1.52	-0.61
1,115.00	8.66	13.62	1,112.74	43.69	12.43	-43.69	1.49	1.49	-0.92
1,204.00	10.07	13.74	1,200.55	57.76	15.85	-57.76	1.58	1.58	0.13
1,293.00	11.55	14.13	1,287.97	73.96	19.88	-73.95	1.66	1.66	0.44
1,380.00	12.42	12.84	1,373.07	91.53	24.08	-91.52	1.05	1.00	-1.48
1,468.00	13.39	14.80	1,458.85	110.61	28.79	-110.60	1.21	1.10	2.23
1,555.00	15.06	12.27	1,543.18	131.40	33.76	-131.38	2.05	1.92	-2.91
1,644.00	15.96	11.58	1,628.94	154.68	38.68	-154.66	1.03	1.01	-0.78
1,729.00	16.01	11.04	1,710.65	177.63	43.27	-177.61	0.18	0.06	-0.64
1,793.00	15.21	9.82	1,772.29	194.57	46.39	-194.55	1.35	-1.25	-1.91
Last SDI MWD Surface Survey									
1,943.00	14.96	15.55	1,917.13	232.61	54.94	-232.58	1.01	-0.17	3.82
First SDI MWD Production Survey									
2,037.00	14.50	13.39	2,008.04	255.75	60.91	-255.72	0.76	-0.49	-2.30
2,131.00	13.78	12.53	2,099.19	278.13	66.07	-278.09	0.80	-0.77	-0.91
2,224.00	14.63	13.43	2,189.35	300.36	71.20	-300.33	0.94	0.91	0.97
2,318.00	13.65	12.61	2,280.50	322.73	76.38	-322.69	1.06	-1.04	-0.87
2,412.00	14.55	16.56	2,371.67	344.88	82.17	-344.83	1.40	0.96	4.20
2,506.00	14.07	15.87	2,462.75	367.19	88.66	-367.14	0.54	-0.51	-0.73
2,600.00	14.66	16.96	2,553.81	389.55	95.25	-389.50	0.69	0.63	1.16
2,692.00	14.07	16.27	2,642.93	411.42	101.78	-411.37	0.67	-0.64	-0.75
2,785.00	14.34	15.83	2,733.09	433.36	108.09	-433.30	0.31	0.29	-0.47
2,880.00	15.21	14.70	2,824.95	456.73	114.46	-456.67	0.96	0.92	-1.19
2,974.00	14.65	14.36	2,915.77	480.17	120.54	-480.11	0.60	-0.60	-0.36
3,069.00	15.42	16.40	3,007.52	503.93	127.08	-503.86	0.98	0.81	2.15
3,162.00	13.85	14.84	3,097.50	526.55	133.42	-526.48	1.74	-1.69	-1.68
3,257.00	14.30	15.72	3,189.65	548.83	139.52	-548.76	0.52	0.47	0.93
3,352.00	15.63	14.46	3,281.43	572.52	145.89	-572.45	1.44	1.40	-1.33
3,353.34	15.61	14.45	3,282.72	572.87	145.98	-572.79	1.48	-1.46	-0.80
Exit Land Box: 3353.34' MD & 3282.72' TVD									
3,445.00	14.27	13.65	3,371.28	595.79	151.72	-595.71	1.48	-1.46	-0.87
3,539.00	14.65	12.61	3,462.30	618.65	157.05	-618.57	0.49	0.40	-1.11
3,634.00	13.62	11.68	3,554.42	641.33	161.94	-641.24	1.11	-1.08	-0.98
3,727.00	14.21	15.49	3,644.69	663.05	167.21	-662.96	1.17	0.63	4.10
3,820.00	14.86	13.40	3,734.72	685.65	173.02	-685.56	0.90	0.70	-2.25
3,915.00	14.66	13.75	3,826.58	709.18	178.70	-709.09	0.23	-0.21	0.37
4,009.00	13.97	11.92	3,917.66	731.84	183.87	-731.74	0.88	-0.73	-1.95
4,103.00	14.39	12.57	4,008.80	754.34	188.75	-754.24	0.48	0.45	0.69
4,197.00	14.43	12.98	4,099.84	777.15	193.93	-777.05	0.12	0.04	0.44
4,291.00	14.57	11.10	4,190.85	800.17	198.83	-800.06	0.52	0.15	-2.00
4,384.00	14.65	9.78	4,280.84	823.24	203.08	-823.13	0.37	0.09	-1.42
4,479.00	13.67	7.51	4,372.95	846.21	206.59	-846.10	1.19	-1.03	-2.39
4,572.00	13.25	14.29	4,463.41	867.43	210.66	-867.32	1.75	-0.45	7.29

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well FL Greens Federal 35N-8HZ
Project:	US Rockies Wattenberg Planning UTM83	TVD Reference:	GL 4925' & KB 20' @ 4945.00ft (Precision 461)
Site:	FL Greens 18-8HZ Pad	MD Reference:	GL 4925' & KB 20' @ 4945.00ft (Precision 461)
Well:	FL Greens Federal 35N-8HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,666.00	13.78	11.27	4,554.80	888.85	215.51	-888.74	0.94	0.56	-3.21
4,760.00	14.61	15.55	4,645.94	911.25	220.87	-911.13	1.42	0.88	4.55
4,854.00	14.42	17.85	4,736.94	933.81	227.64	-933.69	0.65	-0.20	2.45
4,949.00	15.82	20.31	4,828.65	957.22	235.76	-957.09	1.62	1.47	2.59
5,043.00	14.06	17.73	4,919.47	980.11	243.68	-979.98	2.00	-1.87	-2.74
5,137.00	14.98	14.29	5,010.46	1,002.76	250.16	-1,002.63	1.34	0.98	-3.66
5,254.00	13.72	7.17	5,123.82	1,031.18	255.63	-1,031.05	1.85	-1.08	-6.09
5,349.00	13.88	6.56	5,216.08	1,053.68	258.33	-1,053.55	0.23	0.17	-0.64
5,444.00	13.70	11.17	5,308.34	1,076.04	261.81	-1,075.90	1.17	-0.19	4.85
5,539.00	11.79	9.26	5,401.00	1,096.66	265.56	-1,096.52	2.06	-2.01	-2.01
5,633.00	10.76	13.76	5,493.18	1,114.66	269.19	-1,114.52	1.44	-1.10	4.79
5,727.00	8.12	22.21	5,585.91	1,129.33	273.79	-1,129.19	3.16	-2.81	8.99
5,822.00	6.94	18.53	5,680.09	1,140.99	278.15	-1,140.84	1.34	-1.24	-3.87
5,917.00	5.17	15.34	5,774.55	1,150.56	281.10	-1,150.41	1.90	-1.86	-3.36
6,012.00	4.28	20.76	5,869.23	1,158.00	283.49	-1,157.85	1.05	-0.94	5.71
6,107.00	3.55	27.71	5,964.01	1,163.92	286.12	-1,163.77	0.92	-0.77	7.32
6,201.00	2.95	37.62	6,057.86	1,168.41	288.95	-1,168.26	0.87	-0.64	10.54
6,295.00	2.48	60.59	6,151.75	1,171.32	292.19	-1,171.17	1.25	-0.50	24.44
6,388.00	2.00	80.02	6,244.68	1,172.59	295.55	-1,172.44	0.96	-0.52	20.89
6,480.00	1.35	78.41	6,336.64	1,173.09	298.19	-1,172.93	0.71	-0.71	-1.75
6,575.00	1.28	76.42	6,431.62	1,173.56	300.32	-1,173.41	0.09	-0.07	-2.09
6,670.00	0.91	45.97	6,526.60	1,174.34	301.89	-1,174.18	0.71	-0.39	-32.05
6,760.00	0.21	67.46	6,616.60	1,174.90	302.55	-1,174.74	0.80	-0.78	23.88
Curve KOP									
6,764.00	0.18	72.18	6,620.60	1,174.90	302.57	-1,174.74	0.80	-0.69	118.03
First SDI MWD Curve Survey									
6,858.00	10.40	185.62	6,714.09	1,166.48	301.87	-1,166.32	11.14	10.87	120.68
6,952.00	19.18	179.39	6,804.89	1,142.55	301.21	-1,142.39	9.48	9.34	-6.63
7,047.00	27.66	180.77	6,891.98	1,104.82	301.08	-1,104.67	8.94	8.93	1.45
7,141.00	38.04	181.31	6,970.84	1,053.91	300.12	-1,053.76	11.05	11.04	0.57
7,236.00	45.86	183.51	7,041.45	990.53	297.36	-990.37	8.37	8.23	2.32
7,330.00	55.58	182.08	7,100.89	917.94	293.88	-917.78	10.41	10.34	-1.52
7,424.00	64.60	180.28	7,147.72	836.56	292.26	-836.41	9.74	9.60	-1.91
7,519.00	74.22	178.49	7,181.09	747.75	293.26	-747.59	10.28	10.13	-1.88
7,613.00	82.65	179.78	7,199.92	655.75	294.63	-655.60	9.07	8.97	1.37
7,696.40	87.97	179.53	7,206.73	572.66	295.13	-572.51	6.39	6.38	-0.30
Enter Land Box: 7696.40' MD & 7206.73' TVD									
7,707.00	88.65	179.50	7,207.04	562.07	295.22	-561.91	6.39	6.38	-0.30
Landing Point: 472' FNL 1580' FWL Sec 8 - Last SDI MWD Curve Survey									
7,799.00	89.33	178.44	7,208.67	470.10	296.87	-469.94	1.37	0.74	-1.15
First SDI MWD Lateral Survey									
7,894.00	89.43	178.52	7,209.69	375.14	299.39	-374.98	0.13	0.11	0.08
7,989.00	89.46	180.57	7,210.61	280.15	300.15	-279.99	2.16	0.03	2.16
8,083.00	89.63	180.79	7,211.36	186.16	299.03	-186.00	0.30	0.18	0.23

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Well:	FL Greens Federal 35N-8HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,177.00	89.76	180.81	7,211.86	92.17	297.72	-92.01	0.14	0.14	0.02
8,270.00	89.76	180.60	7,212.25	-0.82	296.57	0.98	0.23	0.00	-0.23
8,364.00	89.63	180.71	7,212.75	-94.82	295.50	94.97	0.18	-0.14	0.12
8,457.00	89.83	180.95	7,213.19	-187.81	294.15	187.96	0.34	0.22	0.26
8,552.00	90.37	181.65	7,213.02	-282.78	292.00	282.93	0.93	0.57	0.74
8,644.00	89.80	178.96	7,212.89	-374.77	291.51	374.92	2.99	-0.62	-2.92
8,738.00	90.17	179.02	7,212.91	-468.75	293.16	468.91	0.40	0.39	0.06
8,832.00	89.53	178.13	7,213.16	-562.72	295.50	562.88	1.17	-0.68	-0.95
8,927.00	90.27	178.63	7,213.32	-657.69	298.19	657.84	0.94	0.78	0.53
8,934.31	90.29	178.56	7,213.29	-664.99	298.37	665.15	1.01	0.21	-0.99
Exit 460' Circle: 8934.31'MD & 7213.29' TVD 1700' FNL 1582' FWL									
9,021.00	90.47	177.70	7,212.72	-751.63	301.20	751.79	1.01	0.21	-0.99
9,115.00	90.34	178.79	7,212.05	-845.59	304.08	845.75	1.17	-0.14	1.16
9,209.00	89.46	180.35	7,212.22	-939.58	304.78	939.74	1.91	-0.94	1.66
9,302.00	89.23	179.21	7,213.28	-1,032.57	305.14	1,032.73	1.25	-0.25	-1.23
9,397.00	89.33	179.32	7,214.47	-1,127.56	306.36	1,127.72	0.16	0.11	0.12
9,491.00	89.80	179.11	7,215.19	-1,221.54	307.65	1,221.70	0.55	0.50	-0.22
9,586.00	87.95	179.98	7,217.05	-1,316.52	308.40	1,316.68	2.15	-1.95	0.92
9,679.00	87.48	179.02	7,220.76	-1,409.44	309.21	1,409.60	1.15	-0.51	-1.03
9,773.00	86.94	180.81	7,225.34	-1,503.32	309.35	1,503.48	1.99	-0.57	1.90
9,865.00	87.24	180.72	7,230.01	-1,595.20	308.12	1,595.36	0.34	0.33	-0.10
9,961.00	88.39	180.67	7,233.67	-1,691.12	306.96	1,691.28	1.20	1.20	-0.05
10,055.00	88.05	179.34	7,236.59	-1,785.07	306.95	1,785.23	1.46	-0.36	-1.41
10,150.00	88.02	180.17	7,239.84	-1,880.01	307.36	1,880.17	0.87	-0.03	0.87
10,245.00	89.02	179.87	7,242.30	-1,974.98	307.32	1,975.14	1.10	1.05	-0.32
10,340.00	90.24	179.58	7,242.91	-2,069.97	307.78	2,070.14	1.32	1.28	-0.31
10,434.00	89.93	178.48	7,242.77	-2,163.96	309.37	2,164.12	1.22	-0.33	-1.17
10,528.00	90.17	180.57	7,242.69	-2,257.95	310.15	2,258.11	2.24	0.26	2.22
10,622.00	90.30	179.60	7,242.30	-2,351.95	310.01	2,352.11	1.04	0.14	-1.03
10,714.00	89.66	179.82	7,242.34	-2,443.95	310.48	2,444.11	0.74	-0.70	0.24
10,809.00	90.13	179.35	7,242.51	-2,538.94	311.17	2,539.11	0.70	0.49	-0.49
10,902.00	88.79	180.18	7,243.39	-2,631.94	311.55	2,632.10	1.69	-1.44	0.89
10,997.00	89.46	180.71	7,244.84	-2,726.92	310.81	2,727.08	0.90	0.71	0.56
11,091.00	88.32	180.57	7,246.66	-2,820.90	309.76	2,821.06	1.22	-1.21	-0.15
11,185.00	88.02	180.35	7,249.66	-2,914.84	309.01	2,915.01	0.40	-0.32	-0.23
11,280.00	88.12	180.34	7,252.86	-3,009.79	308.43	3,009.95	0.11	0.11	-0.01
11,375.00	88.28	180.33	7,255.84	-3,104.74	307.88	3,104.90	0.17	0.17	-0.01
11,470.00	88.22	179.92	7,258.75	-3,199.70	307.67	3,199.86	0.44	-0.06	-0.43
11,565.00	88.12	179.69	7,261.78	-3,294.65	307.99	3,294.81	0.26	-0.11	-0.24
11,658.00	89.23	179.53	7,263.93	-3,387.62	308.63	3,387.78	1.21	1.19	-0.17
11,752.00	88.55	178.92	7,265.75	-3,481.59	309.90	3,481.75	0.97	-0.72	-0.65
11,846.00	89.36	179.17	7,267.46	-3,575.56	311.46	3,575.72	0.90	0.86	0.27
11,940.00	89.23	178.68	7,268.62	-3,669.54	313.23	3,669.70	0.54	-0.14	-0.52

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well FL Greens Federal 35N-8HZ
Project:	US Rockies Wattenberg Planning UTM83	TVD Reference:	GL 4925' & KB 20' @ 4945.00ft (Precision 461)
Site:	FL Greens 18-8HZ Pad	MD Reference:	GL 4925' & KB 20' @ 4945.00ft (Precision 461)
Well:	FL Greens Federal 35N-8HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
12,036.00	89.43	179.73	7,269.74	-3,765.52	314.56	3,765.68	1.11	0.21	1.09
12,130.00	89.43	179.03	7,270.68	-3,859.51	315.58	3,859.67	0.74	0.00	-0.74
12,142.42	89.44	179.26	7,270.80	-3,871.93	315.76	3,872.09	1.87	0.08	1.87
Enter 460' Circle: 12142.42'MD & 7270.80' TVD 374' FSL 1590' FWL									
12,222.00	89.50	180.75	7,271.54	-3,951.50	315.75	3,951.67	1.87	0.08	1.87
12,317.00	89.09	180.00	7,272.71	-4,046.49	315.13	4,046.66	0.90	-0.43	-0.79
12,411.00	88.76	179.33	7,274.47	-4,140.47	315.68	4,140.64	0.79	-0.35	-0.71
Last SDI MWD Survey									
12,486.00	88.76	179.33	7,276.09	-4,215.45	316.56	4,215.62	0.00	0.00	0.00
Projection to TD: 29' FSL 1591' FWL Sec 8									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
190.00	190.00	0.18	-0.01	First SDI MWD Survey
1,793.00	1,772.29	194.57	46.39	Last SDI MWD Surface Survey
1,943.00	1,917.13	232.61	54.94	First SDI MWD Production Survey
3,353.34	3,282.72	572.87	145.98	Exit Land Box: 3353.34' MD & 3282.72' TVD
6,760.00	6,616.60	1,174.90	302.55	Curve KOP
6,764.00	6,620.60	1,174.90	302.57	First SDI MWD Curve Survey
7,696.40	7,206.73	572.66	295.13	Enter Land Box: 7696.40' MD & 7206.73' TVD
7,707.00	7,207.04	562.07	295.22	Landing Point: 472' FNL 1580' FWL Sec 8
7,707.00	7,207.04	562.07	295.22	Last SDI MWD Curve Survey
7,799.00	7,208.67	470.10	296.87	First SDI MWD Lateral Survey
8,934.31	7,213.29	-664.99	298.37	Exit 460' Circle: 8934.31'MD & 7213.29' TVD 1700' FNL 1582' FWL
12,142.42	7,270.80	-3,871.93	315.76	Enter 460' Circle: 12142.42'MD & 7270.80' TVD 374' FSL 1590' FWL
12,411.00	7,274.47	-4,140.47	315.68	Last SDI MWD Survey
12,486.00	7,276.09	-4,215.45	316.56	Projection to TD: 29' FSL 1591' FWL Sec 8

Checked By: _____	Approved By: _____	Date: _____
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