

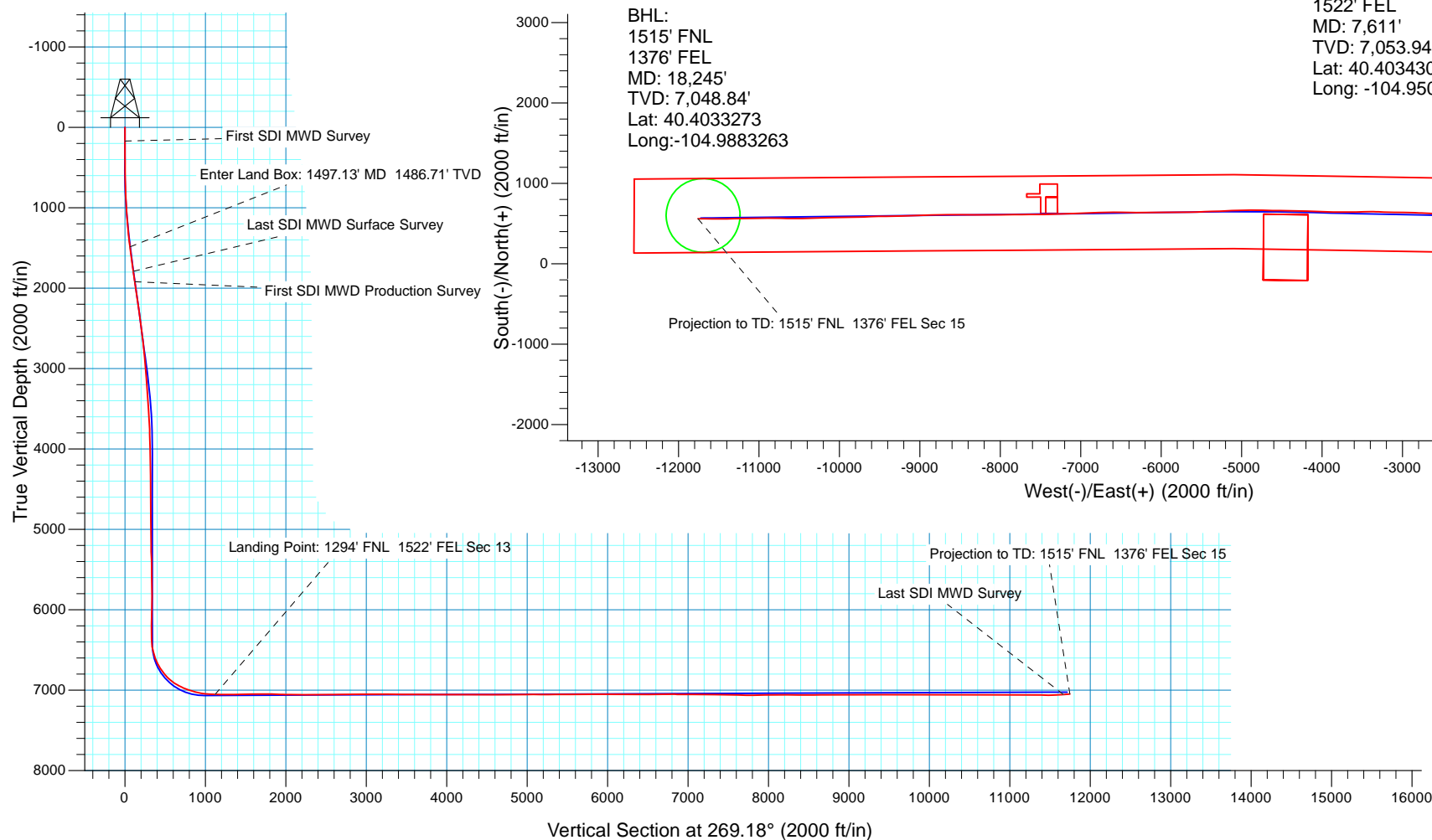
WELL DETAILS: Folley North 1			
GL 4923' & KB 20' @ 4943.00ft (Precision 461)	4923.00		
Northing	Easting	Latitude	Longitude
14673052.94	1655425.35	40.4017950	-104.9460900

Design: OH (Folley North 1/OH)

Created By: Seth Burstad Date: 8-21-2016

ANNOTATIONS						
TVD	MD	Inc	Azi	+N/-S	+E/-W	Annotation
170.99	171.00	0.81	200.31	-1.13	-0.42	First SDI MWD Survey
1486.71	1497.13	12.28	324.26	113.53	-64.51	Enter Land Box: 1497.13' MD 1486.71' TVD
1790.56	1810.00	14.79	327.83	174.72	-106.92	Last SDI MWD Surface Survey
1921.42	1946.00	16.78	328.23	206.10	-126.50	First SDI MWD Production Survey
7053.94	7611.00	89.06	270.68	595.47	-1128.72	Landing Point: 1294' FNL 1522' FEL Sec 13
7055.39	18164.00	94.64	270.51	560.10	-11677.73	Last SDI MWD Survey
7048.84	18245.00	94.64	270.51	560.82	-11758.46	Projection to TD: 1515' FNL 1376' FEL Sec 15

PROJECT DETAILS: US Rockies Wattenberg Planning	
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



Landing Point:
 1294' FNL
 1522' FEL
 MD: 7,611'
 TVD: 7,053.94'
 Lat: 40.4034301
 Long: -104.9501443

Landing Point: 1294' FNL 1522' FEL Sec

Enter Land Box: 1497.13' MD 1486.71'

Surface Hole:
 1889' FNL 393' FEL
 Sec 13 T5N R68W



US ROCKIES REGION PLANNING

US Rockies Wattenberg Planning

Folley, 5N-68W-13

Folley North 1

OH

Design: OH

Standard Survey Report

21 August, 2016



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Folley North 1
Project:	US Rockies Wattenberg Planning	TVD Reference:	GL 4923' & KB 20' @ 4943.00ft (Precision 461)
Site:	Folley, 5N-68W-13	MD Reference:	GL 4923' & KB 20' @ 4943.00ft (Precision 461)
Well:	Folley North 1	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

Project	US Rockies Wattenberg Planning		
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	Folley, 5N-68W-13, Site Center: Folley South 1		
Site Position:		Northing:	14,670,156.60 usft
From:	Lat/Long	Easting:	1,655,221.07 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in
		Latitude:	40.3938420
		Longitude:	-104.9468300
		Grid Convergence:	0.03 °

Well	Folley North 1, 1889' FNL 393' FEL Sec 13 T5N R68W		
Well Position	+N/-S	0.00 ft	Northing: 14,673,052.94 usft
	+E/-W	0.00 ft	Easting: 1,655,425.35 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	0.00 ft
		Latitude:	40.4017950
		Longitude:	-104.9460900
		Ground Level:	4,923.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	7/27/2016	8.55	66.87	52,466
	User Defined	8/12/2016	8.44	66.75	52,612

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		269.18

Survey Program	Date	8/21/2016			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
171.00	1,810.00	Survey #1 - Surface (OH)	APC_ISCWSA REV 2 MWD+	Fixed:v2:crustal field declination	
1,946.00	18,245.00	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 (°/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	
171.00	0.81	200.31	170.99	-1.13	-0.42	0.44	0.47	0.47	0.00	
First SDI MWD Survey										
265.00	0.72	210.44	264.99	-2.27	-0.95	0.98	0.17	-0.10	10.78	
354.00	0.78	233.91	353.98	-3.10	-1.72	1.77	0.35	0.07	26.37	
447.00	0.48	303.63	446.97	-3.26	-2.56	2.60	0.82	-0.32	74.97	
541.00	1.34	334.82	540.96	-2.05	-3.35	3.38	1.02	0.91	33.18	
634.00	3.17	339.25	633.89	1.34	-4.73	4.71	1.98	1.97	4.76	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Folley North 1
Project:	US Rockies Wattenberg Planning	TVD Reference:	GL 4923' & KB 20' @ 4943.00ft (Precision 461)
Site:	Folley, 5N-68W-13	MD Reference:	GL 4923' & KB 20' @ 4943.00ft (Precision 461)
Well:	Folley North 1	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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
729.00	4.83	339.28	728.65	7.54	-7.07	6.96	1.75	1.75	0.03
824.00	6.09	338.32	823.22	15.96	-10.35	10.12	1.33	1.33	-1.01
919.00	7.50	338.85	917.55	26.43	-14.45	14.07	1.49	1.48	0.56
1,014.00	9.03	337.49	1,011.56	39.10	-19.54	18.98	1.62	1.61	-1.43
1,109.00	10.02	333.71	1,105.25	53.39	-26.06	25.29	1.23	1.04	-3.98
1,202.00	9.64	329.72	1,196.88	67.37	-33.57	32.60	0.84	-0.41	-4.29
1,294.00	10.42	326.85	1,287.48	80.99	-42.00	40.84	1.01	0.85	-3.12
1,387.00	11.02	325.45	1,378.86	95.35	-51.64	50.27	0.70	0.65	-1.51
1,481.00	12.13	324.17	1,470.94	110.76	-62.52	60.92	1.21	1.18	-1.36
1,497.13	12.28	324.26	1,486.71	113.53	-64.51	62.88	0.96	0.96	0.57
Enter Land Box: 1497.13' MD 1486.71' TVD									
1,575.00	13.03	324.68	1,562.68	127.41	-74.42	72.59	0.96	0.96	0.54
1,671.00	14.13	324.74	1,656.00	145.81	-87.45	85.35	1.15	1.15	0.06
1,766.00	14.71	326.29	1,748.01	165.32	-100.83	98.46	0.73	0.61	1.63
1,810.00	14.79	327.83	1,790.56	174.72	-106.92	104.41	0.91	0.18	3.50
Last SDI MWD Surface Survey									
1,946.00	16.78	328.23	1,921.42	206.10	-126.50	123.54	1.47	1.46	0.29
First SDI MWD Production Survey									
2,041.00	15.95	328.92	2,012.57	228.94	-140.46	137.17	0.90	-0.87	0.73
2,135.00	16.57	329.04	2,102.81	251.50	-154.03	150.41	0.66	0.66	0.13
2,230.00	15.63	329.83	2,194.08	274.18	-167.43	163.49	1.02	-0.99	0.83
2,325.00	16.55	331.88	2,285.36	297.18	-180.24	175.97	1.14	0.97	2.16
2,417.00	17.95	335.10	2,373.22	321.59	-192.38	187.76	1.84	1.52	3.50
2,511.00	18.63	333.94	2,462.48	348.22	-205.08	200.07	0.82	0.72	-1.23
2,605.00	15.94	334.13	2,552.22	373.33	-217.31	211.94	2.86	-2.86	0.20
2,700.00	13.92	333.71	2,644.01	395.31	-228.06	222.38	2.13	-2.13	-0.44
2,795.00	14.69	335.27	2,736.06	416.50	-238.16	232.18	0.91	0.81	1.64
2,890.00	14.42	336.39	2,828.02	438.28	-247.94	241.64	0.41	-0.28	1.18
2,984.00	12.88	335.18	2,919.36	458.51	-257.02	250.44	1.67	-1.64	-1.29
3,078.00	12.08	335.33	3,011.14	476.96	-265.53	258.67	0.85	-0.85	0.16
3,172.00	10.53	335.96	3,103.31	493.74	-273.13	266.04	1.65	-1.65	0.67
3,266.00	8.63	337.55	3,195.99	508.11	-279.33	272.03	2.04	-2.02	1.69
3,360.00	7.93	327.01	3,289.02	520.06	-285.55	278.08	1.77	-0.74	-11.21
3,454.00	6.76	320.48	3,382.25	529.77	-292.60	284.99	1.53	-1.24	-6.95
3,548.00	5.93	318.33	3,475.67	537.67	-299.35	291.63	0.92	-0.88	-2.29
3,641.00	6.18	316.14	3,568.15	544.86	-306.01	298.18	0.37	0.27	-2.35
3,735.00	5.62	324.94	3,661.66	552.28	-312.16	304.23	1.13	-0.60	9.36
3,829.00	3.89	336.80	3,755.33	558.98	-316.06	308.03	2.11	-1.84	12.62
3,922.00	1.85	326.41	3,848.21	563.13	-318.14	310.05	2.25	-2.19	-11.17
4,016.00	2.15	304.87	3,942.15	565.40	-320.42	312.30	0.85	0.32	-22.91
4,109.00	2.20	307.57	4,035.09	567.49	-323.27	315.11	0.12	0.05	2.90
4,201.00	1.03	315.90	4,127.05	569.16	-325.24	317.07	1.29	-1.27	9.05
4,295.00	0.66	307.70	4,221.04	570.10	-326.26	318.07	0.41	-0.39	-8.72
4,387.00	0.56	267.87	4,313.03	570.40	-327.13	318.93	0.46	-0.11	-43.29

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Folley North 1
Project:	US Rockies Wattenberg Planning	TVD Reference:	GL 4923' & KB 20' @ 4943.00ft (Precision 461)
Site:	Folley, 5N-68W-13	MD Reference:	GL 4923' & KB 20' @ 4943.00ft (Precision 461)
Well:	Folley North 1	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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,480.00	0.81	212.00	4,406.03	569.83	-327.93	319.74	0.73	0.27	-60.08
4,573.00	1.15	189.88	4,499.02	568.35	-328.44	320.27	0.54	0.37	-23.78
4,668.00	1.21	195.60	4,594.00	566.45	-328.87	320.73	0.14	0.06	6.02
4,763.00	1.08	200.01	4,688.98	564.64	-329.45	321.34	0.17	-0.14	4.64
4,857.00	1.04	213.75	4,782.96	563.10	-330.23	322.13	0.27	-0.04	14.62
4,976.00	0.93	209.76	4,901.94	561.36	-331.31	323.24	0.11	-0.09	-3.35
5,070.00	0.91	226.34	4,995.93	560.18	-332.22	324.17	0.28	-0.02	17.64
5,166.00	0.83	227.15	5,091.92	559.18	-333.29	325.25	0.08	-0.08	0.84
5,260.00	0.85	235.40	5,185.91	558.33	-334.36	326.33	0.13	0.02	8.78
5,354.00	1.23	273.50	5,279.90	557.99	-335.94	327.92	0.82	0.40	40.53
5,448.00	1.39	282.47	5,373.87	558.30	-338.06	330.04	0.28	0.17	9.54
5,543.00	1.12	274.69	5,468.85	558.62	-340.11	332.08	0.34	-0.28	-8.19
5,636.00	1.20	261.28	5,561.83	558.55	-341.98	333.95	0.30	0.09	-14.42
5,729.00	1.82	344.19	5,654.81	559.82	-343.34	335.30	2.21	0.67	89.15
5,824.00	1.41	341.49	5,749.77	562.38	-344.13	336.04	0.44	-0.43	-2.84
5,916.00	1.08	339.15	5,841.75	564.27	-344.79	336.68	0.36	-0.36	-2.54
6,010.00	1.37	69.09	5,935.73	565.50	-344.06	335.93	1.85	0.31	95.68
6,103.00	0.92	64.82	6,028.71	566.21	-342.35	334.21	0.49	-0.48	-4.59
6,196.00	0.75	58.72	6,121.70	566.84	-341.15	333.00	0.21	-0.18	-6.56
6,290.00	0.67	52.62	6,215.70	567.50	-340.19	332.03	0.12	-0.09	-6.49
6,383.00	0.69	67.21	6,308.69	568.04	-339.24	331.07	0.19	0.02	15.69
6,477.00	2.95	265.02	6,402.65	568.05	-341.13	332.96	3.84	2.40	-172.54
6,571.00	13.46	273.94	6,495.56	568.60	-354.49	346.32	11.23	11.18	9.49
6,666.00	18.53	271.64	6,586.86	569.79	-380.63	372.43	5.38	5.34	-2.42
6,760.00	27.62	268.74	6,673.25	569.74	-417.42	409.22	9.74	9.67	-3.09
6,855.00	34.90	269.42	6,754.40	568.98	-466.68	458.49	7.67	7.66	0.72
6,950.00	42.32	272.07	6,828.59	569.86	-525.90	517.69	8.00	7.81	2.79
7,045.00	52.79	269.31	6,892.62	570.56	-595.89	587.66	11.23	11.02	-2.91
7,140.00	62.35	273.60	6,943.52	572.75	-675.92	667.65	10.76	10.06	4.52
7,234.00	68.93	273.59	6,982.28	578.12	-761.34	752.98	7.00	7.00	-0.01
7,329.00	72.77	273.31	7,013.43	583.52	-850.90	842.46	4.05	4.04	-0.29
7,423.00	79.36	273.28	7,036.06	588.76	-941.93	933.41	7.01	7.01	-0.03
7,517.00	84.86	272.15	7,048.96	593.16	-1,034.90	1,026.31	5.97	5.85	-1.20
7,611.00	89.06	270.68	7,053.94	595.47	-1,128.72	1,120.08	4.73	4.47	-1.56
Landing Point: 1294' FNL 1522' FEL Sec 13									
7,706.00	91.85	270.23	7,053.19	596.23	-1,223.70	1,215.04	2.97	2.94	-0.47
7,801.00	88.49	269.07	7,052.91	595.65	-1,318.68	1,310.02	3.74	-3.54	-1.22
7,895.00	91.31	271.28	7,053.07	595.94	-1,412.67	1,403.99	3.81	3.00	2.35
7,990.00	91.11	271.34	7,051.06	598.11	-1,507.62	1,498.91	0.22	-0.21	0.06
8,084.00	90.34	272.01	7,049.87	600.85	-1,601.57	1,592.81	1.09	-0.82	0.71
8,177.00	89.76	272.67	7,049.79	604.65	-1,694.49	1,685.67	0.94	-0.62	0.71
8,271.00	89.23	272.30	7,050.62	608.73	-1,788.40	1,779.51	0.69	-0.56	-0.39
8,366.00	89.33	270.15	7,051.81	610.76	-1,883.37	1,874.43	2.27	0.11	-2.26

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Site:	Folley, 5N-68W-13	MD Reference:	GL 4923' & KB 20' @ 4943.00ft (Precision 461)
Well:	Folley North 1	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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,460.00	88.19	268.14	7,053.85	609.36	-1,977.33	1,968.40	2.46	-1.21	-2.14
8,554.00	89.63	270.23	7,055.64	608.02	-2,071.29	2,062.38	2.70	1.53	2.22
8,648.00	90.50	270.93	7,055.53	608.97	-2,165.29	2,156.35	1.19	0.93	0.74
8,742.00	89.80	271.09	7,055.28	610.63	-2,259.27	2,250.30	0.76	-0.74	0.17
8,836.00	89.83	272.05	7,055.59	613.20	-2,353.23	2,344.22	1.02	0.03	1.02
8,931.00	89.53	272.85	7,056.12	617.26	-2,448.15	2,439.06	0.90	-0.32	0.84
9,025.00	90.47	273.34	7,056.12	622.34	-2,542.01	2,532.84	1.13	1.00	0.52
9,120.00	90.34	272.05	7,055.45	626.81	-2,636.90	2,627.66	1.36	-0.14	-1.36
9,216.00	89.46	271.85	7,055.61	630.07	-2,732.84	2,723.54	0.94	-0.92	-0.21
9,310.00	91.78	273.03	7,054.60	634.07	-2,826.74	2,817.38	2.77	2.47	1.26
9,405.00	91.38	270.31	7,051.98	636.84	-2,921.66	2,912.24	2.89	-0.42	-2.86
9,500.00	91.11	270.63	7,049.91	637.62	-3,016.63	3,007.20	0.44	-0.28	0.34
9,594.00	89.63	271.24	7,049.31	639.15	-3,110.61	3,101.15	1.70	-1.57	0.65
9,689.00	89.46	271.99	7,050.06	641.83	-3,205.57	3,196.06	0.81	-0.18	0.79
9,782.00	89.43	272.35	7,050.96	645.35	-3,298.50	3,288.93	0.39	-0.03	0.39
9,875.00	88.52	270.22	7,052.63	647.44	-3,391.46	3,381.84	2.49	-0.98	-2.29
9,969.00	90.24	268.85	7,053.64	646.67	-3,485.44	3,475.83	2.34	1.83	-1.46
10,063.00	90.77	268.89	7,052.81	644.82	-3,579.42	3,569.82	0.57	0.56	0.04
10,158.00	89.97	269.63	7,052.20	643.59	-3,674.41	3,664.82	1.15	-0.84	0.78
10,253.00	89.60	270.55	7,052.56	643.74	-3,769.41	3,759.81	1.04	-0.39	0.97
10,346.00	88.69	271.02	7,053.95	645.02	-3,862.39	3,852.76	1.10	-0.98	0.51
10,440.00	89.23	271.15	7,055.65	646.80	-3,956.35	3,946.69	0.59	0.57	0.14
10,535.00	89.09	271.80	7,057.04	649.24	-4,051.31	4,041.60	0.70	-0.15	0.68
10,629.00	90.84	272.23	7,057.10	652.55	-4,145.25	4,135.49	1.92	1.86	0.46
10,723.00	90.30	271.82	7,056.17	655.87	-4,239.18	4,229.36	0.72	-0.57	-0.44
10,816.00	89.29	271.06	7,056.50	658.21	-4,332.15	4,322.29	1.36	-1.09	-0.82
10,910.00	89.43	271.05	7,057.55	659.94	-4,426.13	4,416.23	0.15	0.15	-0.01
11,004.00	91.04	270.81	7,057.16	661.46	-4,520.11	4,510.19	1.73	1.71	-0.26
11,099.00	90.00	270.70	7,056.30	662.71	-4,615.10	4,605.14	1.10	-1.09	-0.12
11,193.00	90.37	271.88	7,056.00	664.83	-4,709.08	4,699.08	1.32	0.39	1.26
11,288.00	90.00	270.61	7,055.69	666.89	-4,804.05	4,794.01	1.39	-0.39	-1.34
11,383.00	90.74	269.20	7,055.08	666.74	-4,899.05	4,889.00	1.68	0.78	-1.48
11,478.00	90.34	268.89	7,054.18	665.15	-4,994.03	4,984.00	0.53	-0.42	-0.33
11,573.00	90.10	268.09	7,053.82	662.65	-5,088.99	5,078.99	0.88	-0.25	-0.84
11,666.00	89.29	267.14	7,054.31	658.78	-5,181.91	5,171.95	1.34	-0.87	-1.02
11,759.00	90.37	267.87	7,054.59	654.73	-5,274.82	5,264.91	1.40	1.16	0.78
11,852.00	90.97	267.81	7,053.50	651.23	-5,367.75	5,357.88	0.65	0.65	-0.06
11,945.00	90.13	267.89	7,052.61	647.74	-5,460.68	5,450.85	0.91	-0.90	0.09
12,039.00	90.24	268.45	7,052.30	644.74	-5,554.63	5,544.83	0.61	0.12	0.60
12,132.00	90.34	269.06	7,051.83	642.71	-5,647.60	5,637.83	0.66	0.11	0.66
12,227.00	89.83	268.74	7,051.69	640.89	-5,742.58	5,732.82	0.63	-0.54	-0.34
12,321.00	89.93	269.62	7,051.89	639.55	-5,836.57	5,826.82	0.94	0.11	0.94
12,416.00	89.13	270.06	7,052.67	639.28	-5,931.57	5,921.81	0.96	-0.84	0.46
12,511.00	90.64	270.01	7,052.86	639.34	-6,026.57	6,016.80	1.59	1.59	-0.05

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Folley North 1
Project:	US Rockies Wattenberg Planning	TVD Reference:	GL 4923' & KB 20' @ 4943.00ft (Precision 461)
Site:	Folley, 5N-68W-13	MD Reference:	GL 4923' & KB 20' @ 4943.00ft (Precision 461)
Well:	Folley North 1	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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,606.00	90.03	269.21	7,052.30	638.69	-6,121.56	6,111.79	1.06	-0.64	-0.84
12,699.00	89.83	268.67	7,052.42	636.97	-6,214.54	6,204.79	0.62	-0.22	-0.58
12,794.00	90.34	270.78	7,052.28	636.52	-6,309.54	6,299.78	2.29	0.54	2.22
12,888.00	89.93	271.37	7,052.06	638.28	-6,403.52	6,393.73	0.76	-0.44	0.63
12,983.00	89.50	271.03	7,052.53	640.27	-6,498.50	6,488.67	0.58	-0.45	-0.36
13,078.00	90.91	270.15	7,052.19	641.25	-6,593.49	6,583.64	1.75	1.48	-0.93
13,172.00	90.91	268.05	7,050.70	639.77	-6,687.46	6,677.62	2.23	0.00	-2.23
13,267.00	88.73	267.41	7,050.99	636.01	-6,782.38	6,772.58	2.39	-2.29	-0.67
13,360.00	89.93	269.02	7,052.08	633.11	-6,875.32	6,865.56	2.16	1.29	1.73
13,455.00	89.80	267.98	7,052.31	630.63	-6,970.29	6,960.55	1.10	-0.14	-1.09
13,550.00	89.97	267.76	7,052.50	627.09	-7,065.22	7,055.52	0.29	0.18	-0.23
13,645.00	89.13	268.03	7,053.24	623.60	-7,160.16	7,150.50	0.93	-0.88	0.28
13,740.00	88.79	267.60	7,054.97	619.98	-7,255.07	7,245.45	0.58	-0.36	-0.45
13,835.00	89.66	268.31	7,056.25	616.59	-7,350.00	7,340.42	1.18	0.92	0.75
13,930.00	88.99	269.22	7,057.37	614.55	-7,444.97	7,435.41	1.19	-0.71	0.96
14,025.00	88.99	270.01	7,059.04	613.91	-7,539.95	7,530.39	0.83	0.00	0.83
14,120.00	88.72	269.45	7,060.94	613.46	-7,634.93	7,625.37	0.65	-0.28	-0.59
14,215.00	88.86	269.31	7,062.95	612.43	-7,729.90	7,720.35	0.21	0.15	-0.15
14,309.00	91.14	269.27	7,062.95	611.27	-7,823.89	7,814.34	2.43	2.43	-0.04
14,404.00	90.94	269.38	7,061.23	610.15	-7,918.87	7,909.33	0.24	-0.21	0.12
14,498.00	90.20	269.66	7,060.29	609.36	-8,012.86	8,003.32	0.84	-0.79	0.30
14,591.00	90.20	269.83	7,059.97	608.95	-8,105.86	8,096.31	0.18	0.00	0.18
14,684.00	90.07	270.09	7,059.75	608.88	-8,198.86	8,189.30	0.31	-0.14	0.28
14,778.00	90.03	270.14	7,059.66	609.07	-8,292.86	8,283.29	0.07	-0.04	0.05
14,872.00	89.43	270.56	7,060.11	609.65	-8,386.85	8,377.27	0.78	-0.64	0.45
14,966.00	89.97	269.99	7,060.60	610.10	-8,480.85	8,471.25	0.84	0.57	-0.61
15,058.00	90.57	270.12	7,060.17	610.19	-8,572.85	8,563.24	0.67	0.65	0.14
15,154.00	90.10	269.37	7,059.60	609.76	-8,668.85	8,659.23	0.92	-0.49	-0.78
15,248.00	90.34	269.05	7,059.24	608.46	-8,762.84	8,753.23	0.43	0.26	-0.34
15,342.00	90.10	268.24	7,058.88	606.24	-8,856.81	8,847.23	0.90	-0.26	-0.86
15,436.00	89.60	267.99	7,059.13	603.15	-8,950.76	8,941.21	0.59	-0.53	-0.27
15,530.00	89.83	268.82	7,059.60	600.53	-9,044.72	9,035.20	0.92	0.24	0.88
15,624.00	90.03	268.05	7,059.71	597.96	-9,138.68	9,129.19	0.85	0.21	-0.82
15,717.00	89.87	268.20	7,059.79	594.92	-9,231.63	9,222.17	0.24	-0.17	0.16
15,811.00	90.70	268.98	7,059.32	592.61	-9,325.60	9,316.17	1.21	0.88	0.83
15,905.00	91.14	269.06	7,057.82	591.00	-9,419.58	9,410.15	0.48	0.47	0.09
15,999.00	91.48	268.82	7,055.67	589.26	-9,513.53	9,504.13	0.44	0.36	-0.26
16,094.00	89.53	267.44	7,054.83	586.16	-9,608.47	9,599.10	2.51	-2.05	-1.45
16,189.00	88.35	268.51	7,056.59	582.81	-9,703.39	9,694.06	1.68	-1.24	1.13
16,284.00	89.76	269.06	7,058.15	580.79	-9,798.36	9,789.04	1.59	1.48	0.58
16,379.00	89.56	268.13	7,058.72	578.46	-9,893.33	9,884.03	1.00	-0.21	-0.98
16,475.00	90.44	268.61	7,058.72	575.73	-9,989.29	9,980.02	1.04	0.92	0.50
16,570.00	90.87	268.55	7,057.63	573.38	-10,084.25	10,075.01	0.46	0.45	-0.06

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Folley North 1
Project:	US Rockies Wattenberg Planning	TVD Reference:	GL 4923' & KB 20' @ 4943.00ft (Precision 461)
Site:	Folley, 5N-68W-13	MD Reference:	GL 4923' & KB 20' @ 4943.00ft (Precision 461)
Well:	Folley North 1	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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
16,665.00	90.03	268.98	7,056.89	571.33	-10,179.22	10,170.01	0.99	-0.88	0.45
16,760.00	90.17	269.38	7,056.72	569.97	-10,274.21	10,265.01	0.45	0.15	0.42
16,855.00	88.66	268.01	7,057.69	567.81	-10,369.18	10,359.99	2.15	-1.59	-1.44
16,947.00	90.07	268.45	7,058.71	564.97	-10,461.13	10,451.97	1.61	1.53	0.48
17,040.00	89.53	269.85	7,059.03	563.59	-10,554.11	10,544.97	1.61	-0.58	1.51
17,134.00	89.77	270.70	7,059.61	564.04	-10,648.11	10,638.95	0.94	0.26	0.90
17,227.00	90.13	271.37	7,059.69	565.72	-10,741.09	10,731.90	0.82	0.39	0.72
17,321.00	88.42	269.59	7,060.88	566.51	-10,835.08	10,825.86	2.63	-1.82	-1.89
17,414.00	91.11	269.87	7,061.26	566.07	-10,928.07	10,918.85	2.91	2.89	0.30
17,507.00	90.30	269.54	7,060.12	565.59	-11,021.06	11,011.83	0.94	-0.87	-0.35
17,601.00	90.17	269.51	7,059.73	564.81	-11,115.05	11,105.83	0.14	-0.14	-0.03
17,695.00	90.17	269.19	7,059.45	563.74	-11,209.05	11,199.83	0.34	0.00	-0.34
17,788.00	88.93	268.14	7,060.18	561.58	-11,302.02	11,292.82	1.75	-1.33	-1.13
17,883.00	88.96	268.57	7,061.93	558.85	-11,396.96	11,387.79	0.45	0.03	0.45
17,976.00	89.90	270.22	7,062.86	557.87	-11,489.95	11,480.79	2.04	1.01	1.77
18,070.00	92.28	271.00	7,061.07	558.87	-11,583.92	11,574.73	2.66	2.53	0.83
18,164.00	94.64	270.51	7,055.39	560.10	-11,677.73	11,668.52	2.56	2.51	-0.52
Last SDI MWD Survey									
18,245.00	94.64	270.51	7,048.84	560.82	-11,758.46	11,749.23	0.00	0.00	0.00
Projection to TD: 1515' FNL 1376' FEL Sec 15									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
171.00	170.99	-1.13	-0.42	First SDI MWD Survey
1,497.13	1,486.71	113.53	-64.51	Enter Land Box: 1497.13' MD 1486.71' TVD
1,810.00	1,790.56	174.72	-106.92	Last SDI MWD Surface Survey
1,946.00	1,921.42	206.10	-126.50	First SDI MWD Production Survey
7,611.00	7,053.94	595.47	-1,128.72	Landing Point: 1294' FNL 1522' FEL Sec 13
18,164.00	7,055.39	560.10	-11,677.73	Last SDI MWD Survey
18,245.00	7,048.84	560.82	-11,758.46	Projection to TD: 1515' FNL 1376' FEL Sec 15

Checked By: _____	Approved By: _____	Date: _____
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