

WELL DETAILS: Hilgers 41N-26HZ

GL 5001' & KB 17' @ 5018.00ft (Xtreme 24)	5001.00
Northing 14601968.55	Longitude -104.9821530
Easting 1645399.64	Latitude 40.2066050

Design: OH (Hilgers 41N-26HZ/OH)
Created By: Seth Burstad Date: 6-29-2017

PROJECT DETAILS: US Rockies Wattenberg Planning UTM83

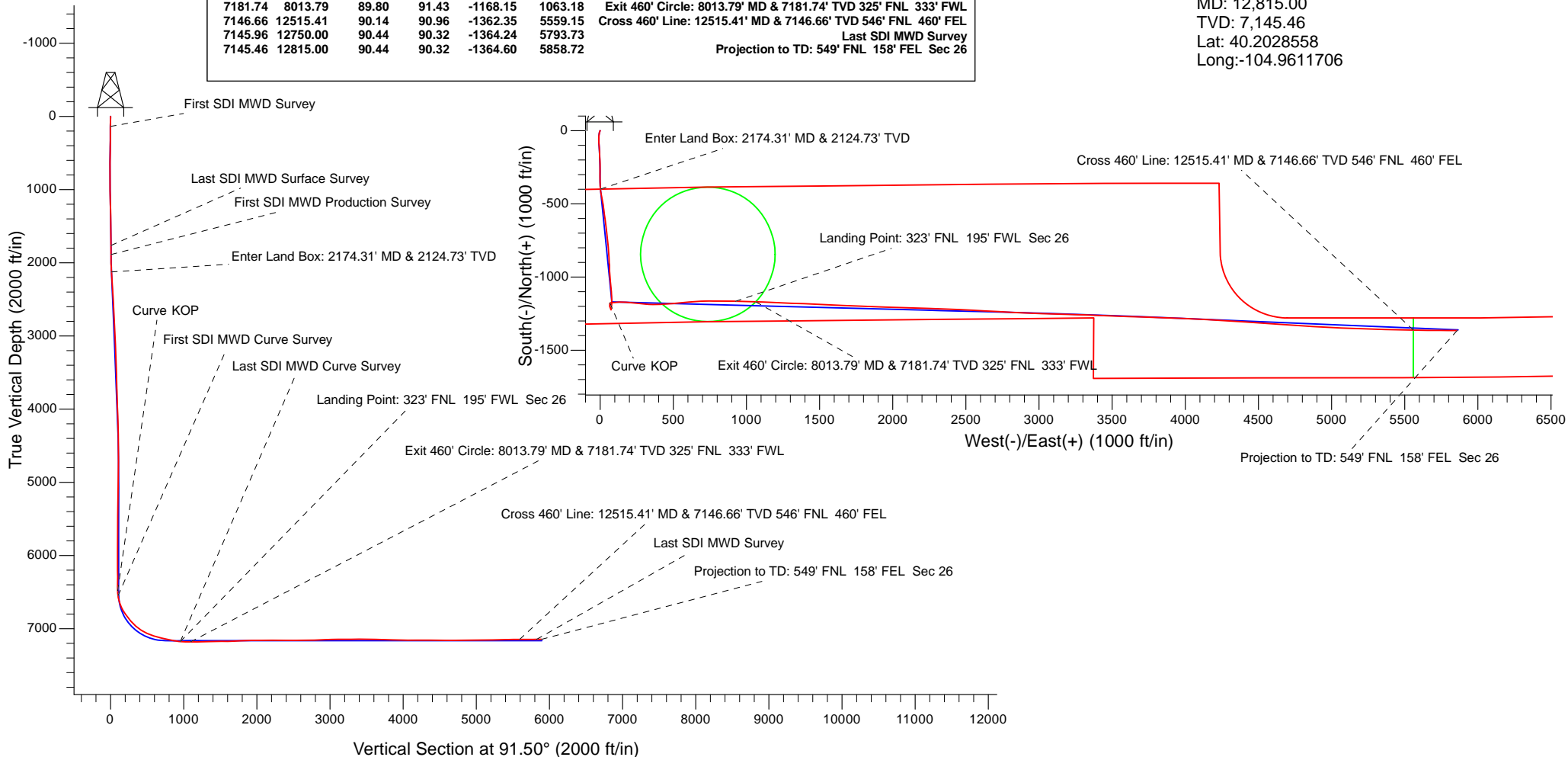
Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Zone 13N (108 W to 102 W)
System Datum: Mean Sea Level
Local North: True

Surface Hole:
 857' FSL 730' FEL
 Sec 22 T3N R68W

Landing Point:
 323' FNL 195' FWL Sec 26
 MD: 7,876.00
 TVD: 7,175.56
 Lat: 40.2034051
 Long: -104.9788380

BHL:
 549' FNL 158' FEL Sec 26
 MD: 12,815.00
 TVD: 7,145.46
 Lat: 40.2028558
 Long: -104.9611706

TVD	MD	Inc	Azi	+N/-S	+E/-W	Annotation
138.00	138.00	0.35	351.23	0.42	-0.06	First SDI MWD Survey
1762.12	1797.00	15.88	180.25	-294.90	-0.83	Last SDI MWD Surface Survey
1887.57	1927.00	14.51	177.50	-328.95	-0.20	First SDI MWD Production Survey
2124.73	2174.31	18.80	173.53	-398.75	2.28	Enter Land Box: 2174.31' MD & 2124.73' TVD
6483.17	6662.00	1.13	34.15	-1176.97	67.35	Curve KOP
6551.91	6731.00	8.21	84.54	-1175.93	72.64	First SDI MWD Curve Survey
7175.56	7876.00	84.59	91.25	-1165.24	925.61	Last SDI MWD Curve Survey
7175.56	7876.00	84.59	91.25	-1165.24	925.61	Landing Point: 323' FNL 195' FWL Sec 26
7181.74	8013.79	89.80	91.43	-1168.15	1063.18	Exit 460' Circle: 8013.79' MD & 7181.74' TVD 325' FNL 333' FWL
7146.66	12515.41	90.14	90.96	-1362.35	5559.15	Cross 460' Line: 12515.41' MD & 7146.66' TVD 546' FNL 460' FEL
7145.96	12750.00	90.44	90.32	-1364.24	5793.73	Last SDI MWD Survey
7145.46	12815.00	90.44	90.32	-1364.60	5858.72	Projection to TD: 549' FNL 158' FEL Sec 26





US ROCKIES REGION PLANNING

US Rockies Wattenberg Planning UTM83

Hilgers 16-22 Pad

Hilgers 41N-26HZ

OH

Design: OH

Standard Survey Report

29 June, 2017



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Hilgers 41N-26HZ
Project:	US Rockies Wattenberg Planning UTM83	TVD Reference:	GL 5001' & KB 17' @ 5018.00ft (Xtreme 24)
Site:	Hilgers 16-22 Pad	MD Reference:	GL 5001' & KB 17' @ 5018.00ft (Xtreme 24)
Well:	Hilgers 41N-26HZ	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	Hilgers 16-22 Pad, Site Center : Hilgers 7N-34HZ				
Site Position:		Northing:	14,601,968.89 usft	Latitude:	40.2066060
From:	Lat/Long	Easting:	1,645,309.73 usft	Longitude:	-104.9824750
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.01 °

Well	Hilgers 41N-26HZ, 857' FSL 730' FEL Sec 22 T3N R68W					
Well Position	+N/-S	0.00 ft	Northing:	14,601,968.55 usft	Latitude:	40.2066050
	+E/-W	0.00 ft	Easting:	1,645,399.64 usft	Longitude:	-104.9821530
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	5,001.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	5/4/2017	8.49	66.69	52,274

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	91.50	

Survey Program	Date	6/29/2017			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
138.00	1,797.00	Survey #1 - Surface (OH)	APC_ISCWSA REV 2 MWD+	Fixed:v2:crustal field declination	
1,797.00	12,815.00	Survey #2 - Production (OH)	APC_ISCWSA REV 2 MWD+	Fixed:v2:Rockies, crustal dec + 3-axis correction	

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	
138.00	0.35	351.23	138.00	0.42	-0.06	-0.08	0.25	0.25	0.00	
First SDI MWD Survey										
243.00	1.21	205.05	242.99	-0.27	-0.58	-0.58	1.44	0.82	-139.22	
330.00	2.15	202.11	329.95	-2.62	-1.59	-1.52	1.08	1.08	-3.38	
416.00	3.09	199.78	415.86	-6.29	-2.98	-2.81	1.10	1.09	-2.71	
505.00	4.50	194.89	504.67	-11.92	-4.69	-4.37	1.62	1.58	-5.49	
594.00	5.57	188.38	593.32	-19.57	-6.21	-5.70	1.36	1.20	-7.31	
683.00	7.15	186.91	681.77	-29.34	-7.51	-6.74	1.78	1.78	-1.65	
771.00	8.80	183.34	768.92	-41.50	-8.56	-7.47	1.96	1.88	-4.06	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Hilgers 41N-26HZ
Project:	US Rockies Wattenberg Planning UTM83	TVD Reference:	GL 5001' & KB 17' @ 5018.00ft (Xtreme 24)
Site:	Hilgers 16-22 Pad	MD Reference:	GL 5001' & KB 17' @ 5018.00ft (Xtreme 24)
Well:	Hilgers 41N-26HZ	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)
860.00	9.74	179.00	856.76	-55.82	-8.83	-7.36	1.32	1.06	-4.88
949.00	11.52	177.07	944.23	-72.23	-8.24	-6.35	2.04	2.00	-2.17
1,035.00	12.85	176.46	1,028.29	-90.35	-7.21	-4.84	1.55	1.55	-0.71
1,120.00	14.09	177.41	1,110.95	-110.12	-6.16	-3.27	1.48	1.46	1.12
1,209.00	14.95	177.36	1,197.10	-132.41	-5.14	-1.67	0.97	0.97	-0.06
1,297.00	15.66	176.27	1,281.98	-155.60	-3.85	0.23	0.87	0.81	-1.24
1,386.00	14.95	176.97	1,367.82	-179.05	-2.46	2.23	0.82	-0.80	0.79
1,475.00	15.76	177.35	1,453.65	-202.59	-1.29	4.01	0.92	0.91	0.43
1,564.00	16.51	179.21	1,539.14	-227.31	-0.56	5.39	1.02	0.84	2.09
1,648.00	17.31	180.95	1,619.51	-251.74	-0.60	5.99	1.13	0.95	2.07
1,735.00	16.96	179.94	1,702.65	-277.37	-0.80	6.46	0.53	-0.40	-1.16
1,797.00	15.88	180.25	1,762.12	-294.90	-0.83	6.89	1.75	-1.74	0.50
Last SDI MWD Surface Survey									
1,927.00	14.51	177.50	1,887.57	-328.95	-0.20	8.41	1.19	-1.05	-2.12
First SDI MWD Production Survey									
2,015.00	15.51	181.41	1,972.57	-351.73	-0.01	9.20	1.62	1.14	4.44
2,104.00	17.46	176.88	2,057.91	-376.96	0.43	10.30	2.62	2.19	-5.09
2,174.31	18.80	173.53	2,124.73	-398.75	2.28	12.72	2.41	1.90	-4.76
Enter Land Box: 2174.31' MD & 2124.73' TVD									
2,193.00	19.16	172.72	2,142.41	-404.79	3.01	13.60	2.41	1.95	-4.35
2,282.00	19.13	170.40	2,226.48	-433.65	7.29	18.64	0.86	-0.03	-2.61
2,370.00	18.60	168.69	2,309.76	-461.63	12.45	24.53	0.87	-0.60	-1.94
2,459.00	18.15	168.01	2,394.22	-489.11	18.11	30.91	0.56	-0.51	-0.76
2,548.00	19.62	173.36	2,478.43	-517.51	22.72	36.26	2.55	1.65	6.01
2,637.00	19.13	173.08	2,562.39	-546.83	26.20	40.51	0.56	-0.55	-0.31
2,726.00	18.46	172.61	2,646.65	-575.28	29.77	44.82	0.77	-0.75	-0.53
2,815.00	18.01	171.82	2,731.18	-602.88	33.54	49.31	0.58	-0.51	-0.89
2,903.00	17.35	171.48	2,815.02	-629.32	37.42	53.88	0.76	-0.75	-0.39
2,993.00	17.02	174.05	2,901.00	-655.69	40.78	57.93	0.92	-0.37	2.86
3,081.00	17.00	174.46	2,985.15	-681.31	43.35	61.17	0.14	-0.02	0.47
3,170.00	19.17	173.25	3,069.75	-708.77	46.33	64.86	2.47	2.44	-1.36
3,259.00	17.70	172.44	3,154.18	-736.69	49.82	69.09	1.68	-1.65	-0.91
3,348.00	16.75	172.71	3,239.19	-762.83	53.23	73.18	1.07	-1.07	0.30
3,437.00	16.43	175.30	3,324.49	-788.09	55.89	76.50	0.91	-0.36	2.91
3,526.00	18.18	178.79	3,409.46	-814.52	57.21	78.52	2.29	1.97	3.92
3,614.00	18.27	176.23	3,493.04	-842.01	58.41	80.43	0.92	0.10	-2.91
3,703.00	16.53	175.79	3,577.97	-868.56	60.26	82.97	1.96	-1.96	-0.49
3,792.00	17.16	175.18	3,663.15	-894.27	62.29	85.68	0.74	0.71	-0.69
3,881.00	19.05	177.54	3,747.74	-921.87	64.02	88.13	2.28	2.12	2.65
3,994.00	19.88	177.03	3,854.28	-959.48	65.80	90.90	0.75	0.73	-0.45
4,083.00	18.93	176.91	3,938.22	-989.01	67.37	93.23	1.07	-1.07	-0.13
4,171.00	17.03	177.18	4,021.92	-1,016.13	68.77	95.35	2.16	-2.16	0.31
4,260.00	16.95	172.56	4,107.04	-1,042.02	71.09	98.34	1.52	-0.09	-5.19
4,349.00	18.03	174.04	4,191.93	-1,068.58	74.20	102.15	1.31	1.21	1.66

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Site:	Hilgers 16-22 Pad	MD Reference:	GL 5001' & KB 17' @ 5018.00ft (Xtreme 24)
Well:	Hilgers 41N-26HZ	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)	
4,437.00	20.32	176.13	4,275.04	-1,097.38	76.65	105.35	2.72	2.60	2.38	
4,526.00	19.68	176.46	4,358.67	-1,127.75	78.62	108.11	0.73	-0.72	0.37	
4,615.00	16.90	179.95	4,443.17	-1,155.65	79.55	109.78	3.36	-3.12	3.92	
4,704.00	12.87	184.06	4,529.17	-1,178.48	78.86	109.68	4.68	-4.53	4.62	
4,792.00	9.41	183.31	4,615.50	-1,195.45	77.75	109.02	3.94	-3.93	-0.85	
4,881.00	6.86	181.78	4,703.59	-1,208.03	77.17	108.76	2.88	-2.87	-1.72	
4,969.00	4.18	182.25	4,791.18	-1,216.48	76.88	108.70	3.05	-3.05	0.53	
5,058.00	2.27	198.82	4,880.03	-1,221.39	76.18	108.13	2.37	-2.15	18.62	
5,147.00	1.08	273.06	4,969.00	-1,223.02	74.78	106.77	2.51	-1.34	83.42	
5,236.00	2.35	346.00	5,057.97	-1,221.20	73.50	105.44	2.56	1.43	81.96	
5,324.00	2.04	342.55	5,145.90	-1,217.96	72.59	104.45	0.38	-0.35	-3.92	
5,413.00	1.76	336.35	5,234.86	-1,215.20	71.57	103.35	0.39	-0.31	-6.97	
5,502.00	2.62	343.12	5,323.79	-1,212.00	70.43	102.13	1.01	0.97	7.61	
5,591.00	2.28	335.45	5,412.71	-1,208.44	69.10	100.71	0.53	-0.38	-8.62	
5,679.00	2.60	338.80	5,500.63	-1,204.99	67.65	99.17	0.40	0.36	3.81	
5,768.00	2.40	344.23	5,589.54	-1,201.31	66.42	97.84	0.35	-0.22	6.10	
5,857.00	2.16	355.72	5,678.47	-1,197.85	65.78	97.12	0.58	-0.27	12.91	
5,946.00	2.29	9.34	5,767.41	-1,194.42	65.95	97.19	0.61	0.15	15.30	
6,035.00	1.96	1.96	5,856.35	-1,191.14	66.29	97.45	0.48	-0.37	-8.29	
6,123.00	1.51	348.82	5,944.31	-1,188.50	66.12	97.20	0.68	-0.51	-14.93	
6,212.00	0.98	351.83	6,033.29	-1,186.60	65.78	96.82	0.60	-0.60	3.38	
6,301.00	1.59	11.62	6,122.26	-1,184.63	65.92	96.91	0.84	0.69	22.24	
6,390.00	1.46	18.45	6,211.23	-1,182.35	66.53	97.46	0.25	-0.15	7.67	
6,478.00	1.25	14.58	6,299.21	-1,180.36	67.12	98.00	0.26	-0.24	-4.40	
6,567.00	1.04	358.67	6,388.19	-1,178.61	67.35	98.18	0.43	-0.24	-17.88	
6,656.00	0.95	358.79	6,477.18	-1,177.07	67.32	98.10	0.10	-0.10	0.13	
6,662.00	1.13	34.15	6,483.17	-1,176.97	67.35	98.13	10.92	3.03	589.25	
Curve KOP										
6,731.00	8.21	84.54	6,551.91	-1,175.93	72.64	103.40	10.92	10.26	73.04	
First SDI MWD Curve Survey										
6,745.00	9.73	85.59	6,565.74	-1,175.75	74.82	105.57	10.92	10.86	7.50	
6,834.00	19.38	82.07	6,651.79	-1,173.12	96.99	127.67	10.88	10.84	-3.96	
6,922.00	27.35	89.64	6,732.52	-1,170.98	131.73	162.34	9.66	9.06	8.60	
7,011.00	34.89	93.02	6,808.66	-1,172.19	177.66	208.29	8.69	8.47	3.80	
7,100.00	42.04	95.52	6,878.31	-1,176.41	232.82	263.53	8.22	8.03	2.81	
7,189.00	44.77	96.57	6,942.96	-1,182.86	293.63	324.49	3.17	3.07	1.18	
7,278.00	53.41	91.32	7,001.22	-1,187.28	360.64	391.59	10.68	9.71	-5.90	
7,367.00	61.97	85.92	7,048.77	-1,185.30	435.72	466.59	10.89	9.62	-6.07	
7,455.00	70.77	83.98	7,084.01	-1,178.17	515.94	546.60	10.20	10.00	-2.20	
7,544.00	74.90	85.89	7,110.27	-1,170.68	600.62	631.06	5.07	4.64	2.15	
7,633.00	77.32	87.72	7,131.64	-1,165.87	686.87	717.16	3.37	2.72	2.06	
7,722.00	77.43	89.16	7,151.09	-1,163.51	773.69	803.88	1.58	0.12	1.62	
7,811.00	81.25	91.25	7,167.55	-1,163.83	861.13	891.30	4.87	4.29	2.35	

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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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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)	
7,876.00	84.59	91.25	7,175.56	-1,165.24	925.61	955.79	5.14	5.14	0.00	
Last SDI MWD Curve Survey - Landing Point: 323' FNL 195' FWL Sec 26										
7,899.00	85.77	91.25	7,177.50	-1,165.74	948.52	978.71	5.14	5.14	0.00	
7,988.00	89.09	91.12	7,181.49	-1,167.57	1,037.40	1,067.61	3.73	3.73	-0.15	
8,013.79	89.80	91.43	7,181.74	-1,168.15	1,063.18	1,093.40	3.00	2.75	1.19	
Exit 460' Circle: 8013.79' MD & 7181.74' TVD 325' FNL 333' FWL										
8,077.00	91.54	92.18	7,181.00	-1,170.14	1,126.35	1,156.60	3.00	2.75	1.19	
8,166.00	91.78	92.88	7,178.42	-1,174.06	1,215.23	1,245.54	0.83	0.27	0.79	
8,255.00	91.38	92.35	7,175.96	-1,178.12	1,304.10	1,334.49	0.75	-0.45	-0.60	
8,344.00	90.94	92.25	7,174.16	-1,181.69	1,393.01	1,423.47	0.51	-0.49	-0.11	
8,433.00	90.44	92.49	7,173.09	-1,185.37	1,481.93	1,512.45	0.62	-0.56	0.27	
8,522.00	90.23	92.47	7,172.57	-1,189.23	1,570.84	1,601.43	0.24	-0.24	-0.02	
8,611.00	92.75	92.87	7,170.26	-1,193.37	1,659.71	1,690.38	2.87	2.83	0.45	
8,699.00	93.12	92.39	7,165.75	-1,197.40	1,747.50	1,778.25	0.69	0.42	-0.55	
8,788.00	93.52	92.15	7,160.60	-1,200.92	1,836.28	1,867.09	0.52	0.45	-0.27	
8,877.00	90.54	91.91	7,157.44	-1,204.07	1,925.16	1,956.02	3.36	-3.35	-0.27	
8,966.00	89.26	91.69	7,157.60	-1,206.87	2,014.11	2,045.02	1.46	-1.44	-0.25	
9,055.00	89.20	91.89	7,158.80	-1,209.65	2,103.06	2,134.01	0.23	-0.07	0.22	
9,143.00	89.16	91.67	7,160.06	-1,212.38	2,191.01	2,222.00	0.25	-0.05	-0.25	
9,232.00	88.89	91.68	7,161.57	-1,214.98	2,279.96	2,310.98	0.30	-0.30	0.01	
9,321.00	90.77	92.49	7,161.83	-1,218.22	2,368.90	2,399.97	2.30	2.11	0.91	
9,410.00	91.21	92.65	7,160.30	-1,222.21	2,457.79	2,488.94	0.53	0.49	0.18	
9,499.00	91.11	92.89	7,158.49	-1,226.51	2,546.67	2,577.90	0.29	-0.11	0.27	
9,588.00	91.24	93.04	7,156.67	-1,231.11	2,635.53	2,666.86	0.22	0.15	0.17	
9,677.00	91.14	93.11	7,154.82	-1,235.88	2,724.38	2,755.80	0.14	-0.11	0.08	
9,766.00	91.41	92.99	7,152.84	-1,240.62	2,813.24	2,844.75	0.33	0.30	-0.13	
9,855.00	91.68	92.36	7,150.44	-1,244.77	2,902.11	2,933.70	0.77	0.30	-0.71	
9,944.00	92.21	92.26	7,147.42	-1,248.36	2,990.98	3,022.64	0.61	0.60	-0.11	
10,033.00	91.17	91.72	7,144.80	-1,251.45	3,079.89	3,111.59	1.32	-1.17	-0.61	
10,122.00	89.46	91.66	7,144.31	-1,254.07	3,168.85	3,200.59	1.92	-1.92	-0.07	
10,211.00	90.34	91.79	7,144.46	-1,256.75	3,257.80	3,289.59	1.00	0.99	0.15	
10,300.00	91.01	91.90	7,143.41	-1,259.61	3,346.75	3,378.58	0.76	0.75	0.12	
10,388.00	89.63	92.15	7,142.92	-1,262.72	3,434.69	3,466.57	1.59	-1.57	0.28	
10,477.00	88.22	92.26	7,144.59	-1,266.15	3,523.61	3,555.55	1.59	-1.58	0.12	
10,566.00	88.42	92.12	7,147.20	-1,269.55	3,612.51	3,644.50	0.27	0.22	-0.16	
10,655.00	88.42	92.03	7,149.65	-1,272.77	3,701.41	3,733.46	0.10	0.00	-0.10	
10,744.00	88.46	91.96	7,152.08	-1,275.87	3,790.33	3,822.43	0.09	0.04	-0.08	
10,834.00	88.86	92.03	7,154.18	-1,279.00	3,880.25	3,912.40	0.45	0.44	0.08	
10,922.00	88.93	92.37	7,155.88	-1,282.37	3,968.17	4,000.37	0.39	0.08	0.39	
11,011.00	89.16	92.23	7,157.36	-1,285.95	4,057.08	4,089.35	0.30	0.26	-0.16	
11,101.00	90.17	93.33	7,157.89	-1,290.31	4,146.97	4,179.33	1.66	1.12	1.22	
11,190.00	90.07	93.49	7,157.70	-1,295.60	4,235.81	4,268.28	0.21	-0.11	0.18	
11,278.00	89.73	93.71	7,157.86	-1,301.13	4,323.64	4,356.22	0.46	-0.39	0.25	
11,367.00	89.53	93.59	7,158.43	-1,306.80	4,412.46	4,445.15	0.26	-0.22	-0.13	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Hilgers 41N-26HZ
Project:	US Rockies Wattenberg Planning UTM83	TVD Reference:	GL 5001' & KB 17' @ 5018.00ft (Xtreme 24)
Site:	Hilgers 16-22 Pad	MD Reference:	GL 5001' & KB 17' @ 5018.00ft (Xtreme 24)
Well:	Hilgers 41N-26HZ	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)	
11,456.00	89.60	93.83	7,159.11	-1,312.55	4,501.27	4,534.08	0.28	0.08	0.27	
11,545.00	89.46	94.15	7,159.84	-1,318.75	4,590.05	4,623.00	0.39	-0.16	0.36	
11,634.00	90.34	93.44	7,159.99	-1,324.64	4,678.85	4,711.92	1.27	0.99	-0.80	
11,723.00	90.64	93.76	7,159.23	-1,330.23	4,767.67	4,800.86	0.49	0.34	0.36	
11,812.00	90.50	93.98	7,158.35	-1,336.23	4,856.47	4,889.78	0.29	-0.16	0.25	
11,901.00	90.03	93.06	7,157.93	-1,341.70	4,945.30	4,978.72	1.16	-0.53	-1.03	
11,989.00	90.27	92.90	7,157.70	-1,346.27	5,033.18	5,066.69	0.33	0.27	-0.18	
12,079.00	91.44	91.85	7,156.36	-1,350.00	5,123.09	5,156.67	1.75	1.30	-1.17	
12,167.00	92.95	91.81	7,152.99	-1,352.81	5,210.97	5,244.60	1.72	1.72	-0.05	
12,256.00	91.71	92.13	7,149.37	-1,355.87	5,299.85	5,333.52	1.44	-1.39	0.36	
12,345.00	90.57	91.52	7,147.60	-1,358.70	5,388.78	5,422.50	1.45	-1.28	-0.69	
12,434.00	90.27	91.20	7,146.95	-1,360.81	5,477.75	5,511.50	0.49	-0.34	-0.36	
12,515.41	90.14	90.96	7,146.66	-1,362.35	5,559.15	5,592.91	0.33	-0.16	-0.29	
Cross 460' Line: 12515.41' MD & 7146.66' TVD 546' FNL 460' FEL										
12,523.00	90.13	90.94	7,146.64	-1,362.47	5,566.74	5,600.50	0.33	-0.16	-0.29	
12,612.00	89.83	90.29	7,146.67	-1,363.43	5,655.73	5,689.49	0.80	-0.34	-0.73	
12,701.00	90.54	90.37	7,146.38	-1,363.94	5,744.73	5,778.47	0.80	0.80	0.09	
12,750.00	90.44	90.32	7,145.96	-1,364.24	5,793.73	5,827.45	0.23	-0.20	-0.10	
Last SDI MWD Survey										
12,815.00	90.44	90.32	7,145.46	-1,364.60	5,858.72	5,892.44	0.00	0.00	0.00	
Projection to TD: 549' FNL 158' FEL Sec 26										

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
138.00	138.00	0.42	-0.06	First SDI MWD Survey	
1,797.00	1,762.12	-294.90	-0.83	Last SDI MWD Surface Survey	
1,927.00	1,887.57	-328.95	-0.20	First SDI MWD Production Survey	
2,174.31	2,124.73	-398.75	2.28	Enter Land Box: 2174.31' MD & 2124.73' TVD	
6,662.00	6,483.17	-1,176.97	67.35	Curve KOP	
6,731.00	6,551.91	-1,175.93	72.64	First SDI MWD Curve Survey	
7,876.00	7,175.56	-1,165.24	925.61	Last SDI MWD Curve Survey	
7,876.00	7,175.56	-1,165.24	925.61	Landing Point: 323' FNL 195' FWL Sec 26	
8,013.79	7,181.74	-1,168.15	1,063.18	Exit 460' Circle: 8013.79' MD & 7181.74' TVD 325' FNL 333' FWL	
12,515.41	7,146.66	-1,362.35	5,559.15	Cross 460' Line: 12515.41' MD & 7146.66' TVD 546' FNL 460' FEL	
12,750.00	7,145.96	-1,364.24	5,793.73	Last SDI MWD Survey	
12,815.00	7,145.46	-1,364.60	5,858.72	Projection to TD: 549' FNL 158' FEL Sec 26	

Checked By: _____ Approved By: _____ Date: _____