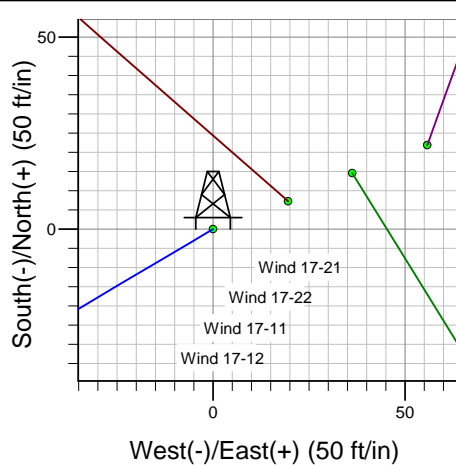
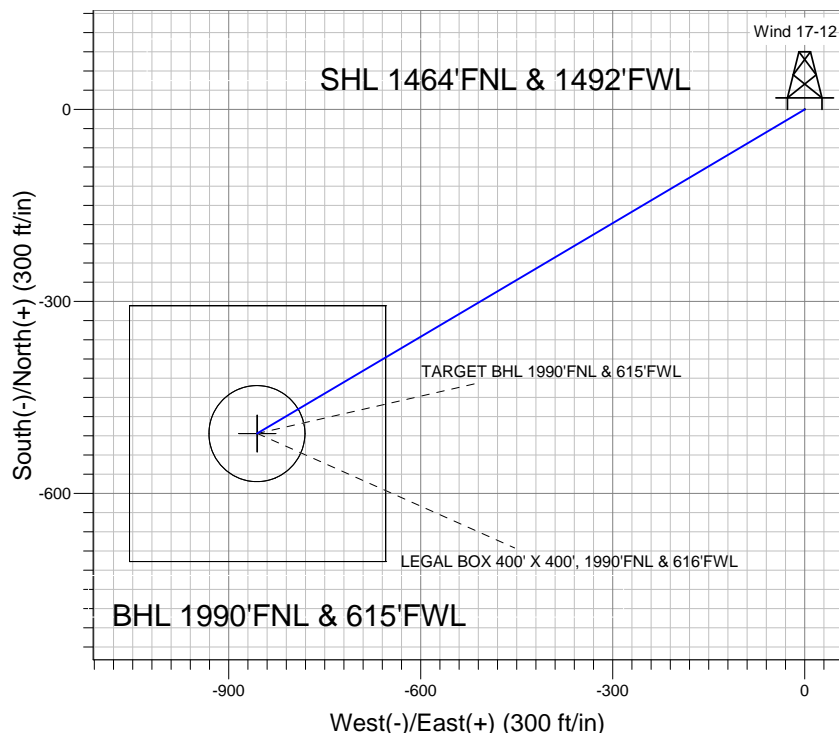
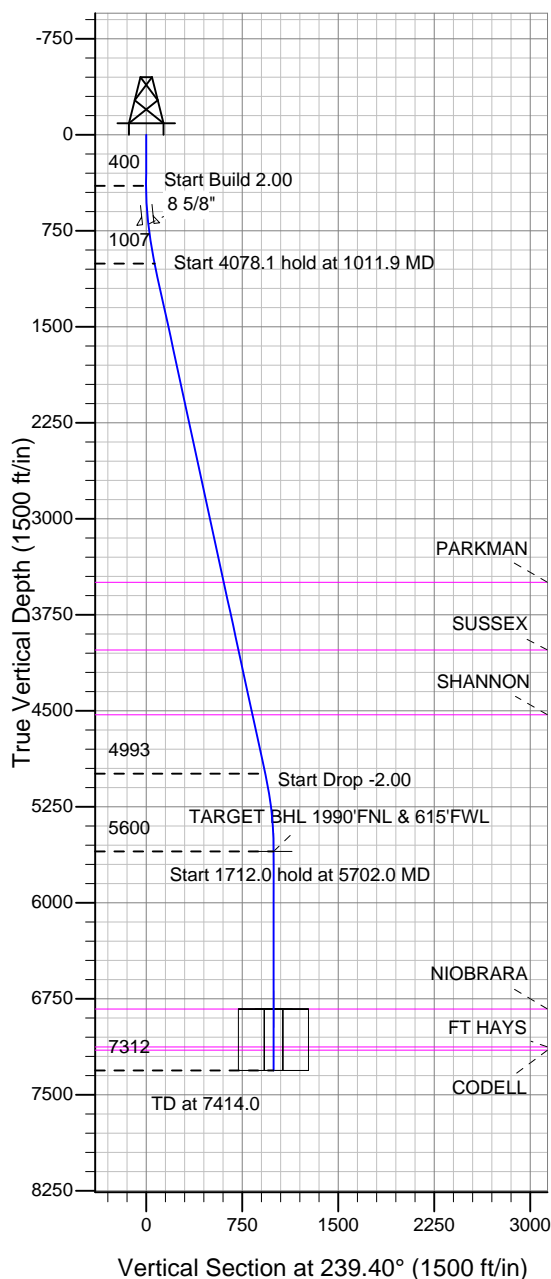


## Trilogy Resources, LLC. Weld County, CO



Wind 17-12  
Plan #1 (11-28-12)  
13:39, November 28 2012



Azimuths to True North  
Magnetic North: 8.74°

Magnetic Field  
Strength: 52917.9snT  
Dip Angle: 66.91°  
Date: 11/28/2012  
Model: IGRF2010

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1990'FNL & 615'FWL	5600.0	-506.4	-856.1	40.314930	-104.921310	Point
LEGAL BOX 400' X 400', 1990'FNL & 616'FWL	6832.0	-506.4	-855.1	40.314930	-104.921306	Rectangle (Sides: L400.0 W400.0)
TARGET CIRCLE 1990'FNL & 615'FWL	6832.0	-506.4	-856.1	40.314930	-104.921310	Circle (Radius: 75.0)

### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	1011.9	12.24	239.40	1007.3	-33.1	-56.0	2.00	239.40	65.1	
4	5090.1	12.24	239.40	4992.7	-473.2	-800.1	0.00	0.00	929.6	
5	5702.0	0.00	0.00	5600.0	-506.4	-856.1	2.00	180.00	994.7	TARGET BHL 1990'FNL & 615'FWL
6	7414.0	0.00	0.00	7312.0	-506.4	-856.1	0.00	0.00	994.7	



# **Trilogy Resources, LLC. Weld County, CO**

**SEC.17-T4N-R67W**

**Wind 17-22 Pad Sec.17-T4N-R67W**

**Wind 17-12**

**Wellbore #1**

**Plan: Plan #1 (11-28-12)**

## **Standard Planning Report**

**28 November, 2012**

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wind 17-12
<b>Company:</b>	Trilogy Resources, LLC. Weld County, CO	<b>TVD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Project:</b>	SEC.17-T4N-R67W	<b>MD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Site:</b>	Wind 17-22 Pad Sec.17-T4N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Wind 17-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (11-28-12)		

<b>Project</b>	SEC.17-T4N-R67W, Weld County, CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site	Wind 17-22 Pad Sec.17-T4N-R67W				
Site Position:		Northing:	1,358,623.25 ft	Latitude:	40.316360
From:	Lat/Long	Easting:	3,162,261.17 ft	Longitude:	-104.918110
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.38 °

Well	Wind 17-12					
Well Position	+N-S	-14.6 ft	Northing:	1,358,608.43 ft	Latitude:	40.316320
	+E-W	-36.3 ft	Easting:	3,162,225.02 ft	Longitude:	-104.918240
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,794.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	11/28/2012	8.74	66.91	52,918

<b>Design</b>	Plan #1 (11-28-12)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	239.40

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,011.9	12.24	239.40	1,007.3	-33.1	-56.0	2.00	2.00	0.00	239.40	
5,090.1	12.24	239.40	4,992.7	-473.2	-800.1	0.00	0.00	0.00	0.00	
5,702.0	0.00	0.00	5,600.0	-506.4	-856.1	2.00	-2.00	0.00	180.00	TARGET BHL 199C
7,414.0	0.00	0.00	7,312.0	-506.4	-856.1	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wind 17-12
<b>Company:</b>	Trilogy Resources, LLC. Weld County, CO	<b>TVD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Project:</b>	SEC.17-T4N-R67W	<b>MD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Site:</b>	Wind 17-22 Pad Sec.17-T4N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Wind 17-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (11-28-12)		

Planned 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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
440.0	0.80	239.40	440.0	-0.1	-0.2	0.3	2.00	2.00	0.00
480.0	1.60	239.40	480.0	-0.6	-1.0	1.1	2.00	2.00	0.00
520.0	2.40	239.40	520.0	-1.3	-2.2	2.5	2.00	2.00	0.00
560.0	3.20	239.40	559.9	-2.3	-3.8	4.5	2.00	2.00	0.00
600.0	4.00	239.40	599.8	-3.6	-6.0	7.0	2.00	2.00	0.00
640.0	4.80	239.40	639.7	-5.1	-8.6	10.0	2.00	2.00	0.00
680.0	5.60	239.40	679.6	-7.0	-11.8	13.7	2.00	2.00	0.00
700.6	6.01	239.40	700.0	-8.0	-13.6	15.8	2.00	2.00	0.00
8 5/8"									
720.0	6.40	239.40	719.3	-9.1	-15.4	17.9	2.00	2.00	0.00
760.0	7.20	239.40	759.1	-11.5	-19.4	22.6	2.00	2.00	0.00
800.0	8.00	239.40	798.7	-14.2	-24.0	27.9	2.00	2.00	0.00
840.0	8.80	239.40	838.3	-17.2	-29.0	33.7	2.00	2.00	0.00
880.0	9.60	239.40	877.8	-20.4	-34.5	40.1	2.00	2.00	0.00
920.0	10.40	239.40	917.1	-24.0	-40.5	47.1	2.00	2.00	0.00
960.0	11.20	239.40	956.4	-27.8	-47.0	54.6	2.00	2.00	0.00
1,000.0	12.00	239.40	995.6	-31.9	-53.9	62.6	2.00	2.00	0.00
1,011.9	12.24	239.40	1,007.3	-33.1	-56.0	65.1	2.00	2.00	0.00
1,040.0	12.24	239.40	1,034.7	-36.2	-61.2	71.1	0.00	0.00	0.00
1,080.0	12.24	239.40	1,073.8	-40.5	-68.5	79.5	0.00	0.00	0.00
1,120.0	12.24	239.40	1,112.9	-44.8	-75.8	88.0	0.00	0.00	0.00
1,160.0	12.24	239.40	1,152.0	-49.1	-83.1	96.5	0.00	0.00	0.00
1,200.0	12.24	239.40	1,191.1	-53.4	-90.4	105.0	0.00	0.00	0.00
1,240.0	12.24	239.40	1,230.2	-57.8	-97.7	113.5	0.00	0.00	0.00
1,280.0	12.24	239.40	1,269.3	-62.1	-104.9	121.9	0.00	0.00	0.00
1,320.0	12.24	239.40	1,308.4	-66.4	-112.2	130.4	0.00	0.00	0.00
1,360.0	12.24	239.40	1,347.4	-70.7	-119.5	138.9	0.00	0.00	0.00
1,400.0	12.24	239.40	1,386.5	-75.0	-126.8	147.4	0.00	0.00	0.00
1,440.0	12.24	239.40	1,425.6	-79.3	-134.1	155.8	0.00	0.00	0.00
1,480.0	12.24	239.40	1,464.7	-83.7	-141.4	164.3	0.00	0.00	0.00
1,520.0	12.24	239.40	1,503.8	-88.0	-148.7	172.8	0.00	0.00	0.00
1,560.0	12.24	239.40	1,542.9	-92.3	-156.0	181.3	0.00	0.00	0.00
1,600.0	12.24	239.40	1,582.0	-96.6	-163.3	189.8	0.00	0.00	0.00
1,640.0	12.24	239.40	1,621.1	-100.9	-170.6	198.2	0.00	0.00	0.00
1,680.0	12.24	239.40	1,660.2	-105.2	-177.9	206.7	0.00	0.00	0.00
1,720.0	12.24	239.40	1,699.3	-109.6	-185.2	215.2	0.00	0.00	0.00
1,760.0	12.24	239.40	1,738.4	-113.9	-192.5	223.7	0.00	0.00	0.00
1,800.0	12.24	239.40	1,777.4	-118.2	-199.8	232.2	0.00	0.00	0.00
1,840.0	12.24	239.40	1,816.5	-122.5	-207.1	240.6	0.00	0.00	0.00
1,880.0	12.24	239.40	1,855.6	-126.8	-214.4	249.1	0.00	0.00	0.00
1,920.0	12.24	239.40	1,894.7	-131.1	-221.7	257.6	0.00	0.00	0.00
1,960.0	12.24	239.40	1,933.8	-135.5	-229.0	266.1	0.00	0.00	0.00
2,000.0	12.24	239.40	1,972.9	-139.8	-236.3	274.6	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wind 17-12
<b>Company:</b>	Trilogy Resources, LLC. Weld County, CO	<b>TVD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Project:</b>	SEC.17-T4N-R67W	<b>MD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Site:</b>	Wind 17-22 Pad Sec.17-T4N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Wind 17-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (11-28-12)		

Planned 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)
2,040.0	12.24	239.40	2,012.0	-144.1	-243.6	283.0	0.00	0.00	0.00
2,080.0	12.24	239.40	2,051.1	-148.4	-250.9	291.5	0.00	0.00	0.00
2,120.0	12.24	239.40	2,090.2	-152.7	-258.2	300.0	0.00	0.00	0.00
2,160.0	12.24	239.40	2,129.3	-157.0	-265.5	308.5	0.00	0.00	0.00
2,200.0	12.24	239.40	2,168.4	-161.3	-272.8	316.9	0.00	0.00	0.00
2,240.0	12.24	239.40	2,207.4	-165.7	-280.1	325.4	0.00	0.00	0.00
2,280.0	12.24	239.40	2,246.5	-170.0	-287.4	333.9	0.00	0.00	0.00
2,320.0	12.24	239.40	2,285.6	-174.3	-294.7	342.4	0.00	0.00	0.00
2,360.0	12.24	239.40	2,324.7	-178.6	-302.0	350.9	0.00	0.00	0.00
2,400.0	12.24	239.40	2,363.8	-182.9	-309.3	359.3	0.00	0.00	0.00
2,440.0	12.24	239.40	2,402.9	-187.2	-316.6	367.8	0.00	0.00	0.00
2,480.0	12.24	239.40	2,442.0	-191.6	-323.9	376.3	0.00	0.00	0.00
2,520.0	12.24	239.40	2,481.1	-195.9	-331.2	384.8	0.00	0.00	0.00
2,560.0	12.24	239.40	2,520.2	-200.2	-338.5	393.3	0.00	0.00	0.00
2,600.0	12.24	239.40	2,559.3	-204.5	-345.8	401.7	0.00	0.00	0.00
2,640.0	12.24	239.40	2,598.4	-208.8	-353.1	410.2	0.00	0.00	0.00
2,680.0	12.24	239.40	2,637.5	-213.1	-360.4	418.7	0.00	0.00	0.00
2,720.0	12.24	239.40	2,676.5	-217.5	-367.7	427.2	0.00	0.00	0.00
2,760.0	12.24	239.40	2,715.6	-221.8	-375.0	435.7	0.00	0.00	0.00
2,800.0	12.24	239.40	2,754.7	-226.1	-382.3	444.1	0.00	0.00	0.00
2,840.0	12.24	239.40	2,793.8	-230.4	-389.6	452.6	0.00	0.00	0.00
2,880.0	12.24	239.40	2,832.9	-234.7	-396.9	461.1	0.00	0.00	0.00
2,920.0	12.24	239.40	2,872.0	-239.0	-404.2	469.6	0.00	0.00	0.00
2,960.0	12.24	239.40	2,911.1	-243.4	-411.5	478.1	0.00	0.00	0.00
3,000.0	12.24	239.40	2,950.2	-247.7	-418.8	486.5	0.00	0.00	0.00
3,040.0	12.24	239.40	2,989.3	-252.0	-426.1	495.0	0.00	0.00	0.00
3,080.0	12.24	239.40	3,028.4	-256.3	-433.4	503.5	0.00	0.00	0.00
3,120.0	12.24	239.40	3,067.5	-260.6	-440.7	512.0	0.00	0.00	0.00
3,160.0	12.24	239.40	3,106.5	-264.9	-448.0	520.4	0.00	0.00	0.00
3,200.0	12.24	239.40	3,145.6	-269.3	-455.3	528.9	0.00	0.00	0.00
3,240.0	12.24	239.40	3,184.7	-273.6	-462.6	537.4	0.00	0.00	0.00
3,280.0	12.24	239.40	3,223.8	-277.9	-469.9	545.9	0.00	0.00	0.00
3,320.0	12.24	239.40	3,262.9	-282.2	-477.2	554.4	0.00	0.00	0.00
3,360.0	12.24	239.40	3,302.0	-286.5	-484.5	562.8	0.00	0.00	0.00
3,400.0	12.24	239.40	3,341.1	-290.8	-491.7	571.3	0.00	0.00	0.00
3,440.0	12.24	239.40	3,380.2	-295.2	-499.0	579.8	0.00	0.00	0.00
3,480.0	12.24	239.40	3,419.3	-299.5	-506.3	588.3	0.00	0.00	0.00
3,520.0	12.24	239.40	3,458.4	-303.8	-513.6	596.8	0.00	0.00	0.00
3,559.5	12.24	239.40	3,497.0	-308.1	-520.9	605.1	0.00	0.00	0.00
<b>PARKMAN</b>									
3,560.0	12.24	239.40	3,497.5	-308.1	-520.9	605.2	0.00	0.00	0.00
3,600.0	12.24	239.40	3,536.5	-312.4	-528.2	613.7	0.00	0.00	0.00
3,640.0	12.24	239.40	3,575.6	-316.7	-535.5	622.2	0.00	0.00	0.00
3,680.0	12.24	239.40	3,614.7	-321.1	-542.8	630.7	0.00	0.00	0.00
3,720.0	12.24	239.40	3,653.8	-325.4	-550.1	639.2	0.00	0.00	0.00
3,760.0	12.24	239.40	3,692.9	-329.7	-557.4	647.6	0.00	0.00	0.00
3,800.0	12.24	239.40	3,732.0	-334.0	-564.7	656.1	0.00	0.00	0.00
3,840.0	12.24	239.40	3,771.1	-338.3	-572.0	664.6	0.00	0.00	0.00
3,880.0	12.24	239.40	3,810.2	-342.6	-579.3	673.1	0.00	0.00	0.00
3,920.0	12.24	239.40	3,849.3	-347.0	-586.6	681.5	0.00	0.00	0.00
3,960.0	12.24	239.40	3,888.4	-351.3	-593.9	690.0	0.00	0.00	0.00
4,000.0	12.24	239.40	3,927.5	-355.6	-601.2	698.5	0.00	0.00	0.00
4,040.0	12.24	239.40	3,966.5	-359.9	-608.5	707.0	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wind 17-12
<b>Company:</b>	Trilogy Resources, LLC. Weld County, CO	<b>TVD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Project:</b>	SEC.17-T4N-R67W	<b>MD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Site:</b>	Wind 17-22 Pad Sec.17-T4N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Wind 17-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (11-28-12)		

Planned 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)
4,080.0	12.24	239.40	4,005.6	-364.2	-615.8	715.5	0.00	0.00	0.00
4,101.9	12.24	239.40	4,027.0	-366.6	-619.8	720.1	0.00	0.00	0.00
<b>SUSSEX</b>									
4,120.0	12.24	239.40	4,044.7	-368.5	-623.1	723.9	0.00	0.00	0.00
4,160.0	12.24	239.40	4,083.8	-372.9	-630.4	732.4	0.00	0.00	0.00
4,200.0	12.24	239.40	4,122.9	-377.2	-637.7	740.9	0.00	0.00	0.00
4,240.0	12.24	239.40	4,162.0	-381.5	-645.0	749.4	0.00	0.00	0.00
4,280.0	12.24	239.40	4,201.1	-385.8	-652.3	757.9	0.00	0.00	0.00
4,320.0	12.24	239.40	4,240.2	-390.1	-659.6	766.3	0.00	0.00	0.00
4,360.0	12.24	239.40	4,279.3	-394.4	-666.9	774.8	0.00	0.00	0.00
4,400.0	12.24	239.40	4,318.4	-398.8	-674.2	783.3	0.00	0.00	0.00
4,440.0	12.24	239.40	4,357.5	-403.1	-681.5	791.8	0.00	0.00	0.00
4,480.0	12.24	239.40	4,396.5	-407.4	-688.8	800.3	0.00	0.00	0.00
4,520.0	12.24	239.40	4,435.6	-411.7	-696.1	808.7	0.00	0.00	0.00
4,560.0	12.24	239.40	4,474.7	-416.0	-703.4	817.2	0.00	0.00	0.00
4,600.0	12.24	239.40	4,513.8	-420.3	-710.7	825.7	0.00	0.00	0.00
4,618.6	12.24	239.40	4,532.0	-422.3	-714.1	829.6	0.00	0.00	0.00
<b>SHANNON</b>									
4,640.0	12.24	239.40	4,552.9	-424.7	-718.0	834.2	0.00	0.00	0.00
4,680.0	12.24	239.40	4,592.0	-429.0	-725.3	842.6	0.00	0.00	0.00
4,720.0	12.24	239.40	4,631.1	-433.3	-732.6	851.1	0.00	0.00	0.00
4,760.0	12.24	239.40	4,670.2	-437.6	-739.9	859.6	0.00	0.00	0.00
4,800.0	12.24	239.40	4,709.3	-441.9	-747.2	868.1	0.00	0.00	0.00
4,840.0	12.24	239.40	4,748.4	-446.2	-754.5	876.6	0.00	0.00	0.00
4,880.0	12.24	239.40	4,787.5	-450.6	-761.8	885.0	0.00	0.00	0.00
4,920.0	12.24	239.40	4,826.5	-454.9	-769.1	893.5	0.00	0.00	0.00
4,960.0	12.24	239.40	4,865.6	-459.2	-776.4	902.0	0.00	0.00	0.00
5,000.0	12.24	239.40	4,904.7	-463.5	-783.7	910.5	0.00	0.00	0.00
5,040.0	12.24	239.40	4,943.8	-467.8	-791.0	919.0	0.00	0.00	0.00
5,080.0	12.24	239.40	4,982.9	-472.1	-798.3	927.4	0.00	0.00	0.00
5,090.1	12.24	239.40	4,992.7	-473.2	-800.1	929.6	0.00	0.00	0.00
5,120.0	11.64	239.40	5,022.0	-476.4	-805.4	935.8	2.00	-2.00	0.00
5,160.0	10.84	239.40	5,061.3	-480.3	-812.1	943.6	2.00	-2.00	0.00
5,200.0	10.04	239.40	5,100.6	-484.0	-818.4	950.8	2.00	-2.00	0.00
5,240.0	9.24	239.40	5,140.0	-487.4	-824.1	957.5	2.00	-2.00	0.00
5,280.0	8.44	239.40	5,179.6	-490.6	-829.4	963.7	2.00	-2.00	0.00
5,320.0	7.64	239.40	5,219.2	-493.4	-834.3	969.2	2.00	-2.00	0.00
5,360.0	6.84	239.40	5,258.9	-496.0	-838.6	974.3	2.00	-2.00	0.00
5,400.0	6.04	239.40	5,298.6	-498.3	-842.5	978.8	2.00	-2.00	0.00
5,440.0	5.24	239.40	5,338.4	-500.3	-845.8	982.7	2.00	-2.00	0.00
5,480.0	4.44	239.40	5,378.3	-502.0	-848.7	986.1	2.00	-2.00	0.00
5,520.0	3.64	239.40	5,418.2	-503.4	-851.2	988.9	2.00	-2.00	0.00
5,560.0	2.84	239.40	5,458.1	-504.6	-853.1	991.2	2.00	-2.00	0.00
5,600.0	2.04	239.40	5,498.1	-505.4	-854.6	992.9	2.00	-2.00	0.00
5,640.0	1.24	239.40	5,538.0	-506.0	-855.6	994.0	2.00	-2.00	0.00
5,680.0	0.44	239.40	5,578.0	-506.3	-856.1	994.6	2.00	-2.00	0.00
5,702.0	0.00	0.00	5,600.0	-506.4	-856.1	994.7	2.00	-2.00	0.00
<b>TARGET BHL 1990'FNL &amp; 615'FWL</b>									
5,720.0	0.00	0.00	5,618.0	-506.4	-856.1	994.7	0.00	0.00	0.00
5,760.0	0.00	0.00	5,658.0	-506.4	-856.1	994.7	0.00	0.00	0.00
5,800.0	0.00	0.00	5,698.0	-506.4	-856.1	994.7	0.00	0.00	0.00
5,840.0	0.00	0.00	5,738.0	-506.4	-856.1	994.7	0.00	0.00	0.00
5,880.0	0.00	0.00	5,778.0	-506.4	-856.1	994.7	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wind 17-12
<b>Company:</b>	Trilogy Resources, LLC. Weld County, CO	<b>TVD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Project:</b>	SEC.17-T4N-R67W	<b>MD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Site:</b>	Wind 17-22 Pad Sec.17-T4N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Wind 17-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (11-28-12)		

Planned 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)
5,920.0	0.00	0.00	5,818.0	-506.4	-856.1	994.7	0.00	0.00	0.00
5,960.0	0.00	0.00	5,858.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,000.0	0.00	0.00	5,898.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,040.0	0.00	0.00	5,938.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,080.0	0.00	0.00	5,978.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,120.0	0.00	0.00	6,018.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,160.0	0.00	0.00	6,058.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,200.0	0.00	0.00	6,098.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,240.0	0.00	0.00	6,138.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,280.0	0.00	0.00	6,178.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,320.0	0.00	0.00	6,218.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,360.0	0.00	0.00	6,258.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,400.0	0.00	0.00	6,298.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,440.0	0.00	0.00	6,338.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,480.0	0.00	0.00	6,378.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,520.0	0.00	0.00	6,418.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,560.0	0.00	0.00	6,458.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,600.0	0.00	0.00	6,498.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,640.0	0.00	0.00	6,538.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,680.0	0.00	0.00	6,578.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,720.0	0.00	0.00	6,618.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,760.0	0.00	0.00	6,658.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,800.0	0.00	0.00	6,698.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,840.0	0.00	0.00	6,738.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,880.0	0.00	0.00	6,778.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,920.0	0.00	0.00	6,818.0	-506.4	-856.1	994.7	0.00	0.00	0.00
6,934.0	0.00	0.00	6,832.0	-506.4	-856.1	994.7	0.00	0.00	0.00
<b>NIOBARRA - TARGET CIRCLE 1990'FNL &amp; 615'FWL - LEGAL BOX 400' X 400', 1990'FNL &amp; 616'FWL</b>									
6,960.0	0.00	0.00	6,858.0	-506.4	-856.1	994.7	0.00	0.00	0.00
7,000.0	0.00	0.00	6,898.0	-506.4	-856.1	994.7	0.00	0.00	0.00
7,040.0	0.00	0.00	6,938.0	-506.4	-856.1	994.7	0.00	0.00	0.00
7,080.0	0.00	0.00	6,978.0	-506.4	-856.1	994.7	0.00	0.00	0.00
7,120.0	0.00	0.00	7,018.0	-506.4	-856.1	994.7	0.00	0.00	0.00
7,160.0	0.00	0.00	7,058.0	-506.4	-856.1	994.7	0.00	0.00	0.00
7,200.0	0.00	0.00	7,098.0	-506.4	-856.1	994.7	0.00	0.00	0.00
7,229.0	0.00	0.00	7,127.0	-506.4	-856.1	994.7	0.00	0.00	0.00
<b>FT HAYS</b>									
7,240.0	0.00	0.00	7,138.0	-506.4	-856.1	994.7	0.00	0.00	0.00
7,254.0	0.00	0.00	7,152.0	-506.4	-856.1	994.7	0.00	0.00	0.00
<b>CODELL</b>									
7,280.0	0.00	0.00	7,178.0	-506.4	-856.1	994.7	0.00	0.00	0.00
7,320.0	0.00	0.00	7,218.0	-506.4	-856.1	994.7	0.00	0.00	0.00
7,360.0	0.00	0.00	7,258.0	-506.4	-856.1	994.7	0.00	0.00	0.00
7,400.0	0.00	0.00	7,298.0	-506.4	-856.1	994.7	0.00	0.00	0.00
7,414.0	0.00	0.00	7,312.0	-506.4	-856.1	994.7	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wind 17-12
<b>Company:</b>	Trilogy Resources, LLC. Weld County, CO	<b>TVD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Project:</b>	SEC.17-T4N-R67W	<b>MD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Site:</b>	Wind 17-22 Pad Sec.17-T4N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Wind 17-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (11-28-12)		

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
TARGET CIRCLE 19¢ - hit/miss target - Circle (radius 75.0)	0.00	0.00	6,832.0	-506.4	-856.1	1,358,096.49	3,161,372.26	40.314930	-104.921310
TARGET BHL 1990'F - plan hits target center - Point	0.00	0.00	5,600.0	-506.4	-856.1	1,358,096.49	3,161,372.26	40.314930	-104.921310
LEGAL BOX 400' X 400' - plan misses target center by 1.0ft at 6934.0ft MD (6832.0 TVD, -506.4 N, -856.1 E) - Rectangle (sides W400.0 H400.0 D480.0)	0.00	0.00	6,832.0	-506.4	-855.1	1,358,096.46	3,161,373.29	40.314930	-104.921306

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
700.6	700.0	8 5/8"	8-5/8	12-1/4

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,559.5	3,497.0	PARKMAN		0.00	
4,101.9	4,027.0	SUSSEX		0.00	
4,618.6	4,532.0	SHANNON		0.00	
6,934.0	6,832.0	NIOBRARA		0.00	
7,229.0	7,127.0	FT HAYS		0.00	
7,254.0	7,152.0	CODELL		0.00	





# **Trilogy Resources, LLC. Weld County, CO**

**SEC.17-T4N-R67W**

**Wind 17-22 Pad Sec.17-T4N-R67W**

**Wind 17-12**

**Wellbore #1**

**Plan #1 (11-28-12)**

## **Anticollision Report**

**28 November, 2012**



<b>Company:</b>	Trilogy Resources, LLC. Weld County, CO	<b>Local Co-ordinate Reference:</b>	Well Wind 17-12
<b>Project:</b>	SEC.17-T4N-R67W	<b>TVD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Reference Site:</b>	Wind 17-22 Pad Sec.17-T4N-R67W	<b>MD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wind 17-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (11-28-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Wind 17-22 Pad Sec.17-T4N-R67W - Wind 17-11 - Wellbore #1 - Plan #1 (11-28-12)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
2,200.0	2,168.4	2,157.3	2,127.2	7.8	6.6	137.22	167.9	-164.1	349.2	336.4	12.76	27.358		
2,300.0	2,266.1	2,252.7	2,218.4	8.3	7.2	135.32	186.3	-185.1	376.8	363.1	13.67	27.558		
2,400.0	2,363.8	2,348.1	2,309.7	8.7	7.7	133.67	204.6	-206.0	404.7	390.1	14.58	27.759		
2,500.0	2,461.5	2,443.5	2,401.0	9.2	8.2	132.23	222.9	-226.9	432.9	417.4	15.48	27.959		
2,600.0	2,559.3	2,539.0	2,492.2	9.7	8.8	130.97	241.3	-247.9	461.3	444.9	16.38	28.153		
2,700.0	2,657.0	2,634.4	2,583.5	10.1	9.4	129.85	259.6	-268.8	489.9	472.6	17.28	28.341		
2,800.0	2,754.7	2,729.8	2,674.7	10.6	9.9	128.86	277.9	-289.8	518.6	500.4	18.18	28.522		
2,900.0	2,852.5	2,825.2	2,766.0	11.1	10.5	127.97	296.2	-310.7	547.5	528.4	19.08	28.695		
3,000.0	2,950.2	2,920.6	2,857.3	11.5	11.0	127.17	314.6	-331.7	576.5	556.5	19.97	28.860		
3,100.0	3,047.9	3,016.0	2,948.5	12.0	11.6	126.44	332.9	-352.6	605.6	584.7	20.87	29.018		
3,200.0	3,145.6	3,111.4	3,039.8	12.5	12.2	125.78	351.2	-373.6	634.7	612.9	21.76	29.167		
3,300.0	3,243.4	3,206.8	3,131.0	12.9	12.8	125.18	369.5	-394.5	663.9	641.3	22.65	29.310		
3,400.0	3,341.1	3,302.2	3,222.3	13.4	13.3	124.63	387.9	-415.5	693.2	669.7	23.54	29.445		
3,500.0	3,438.8	3,397.6	3,313.6	13.9	13.9	124.12	406.2	-436.4	722.6	698.1	24.43	29.573		
3,600.0	3,536.5	3,493.1	3,404.8	14.4	14.5	123.66	424.5	-457.4	752.0	726.6	25.32	29.696		
3,700.0	3,634.3	3,588.5	3,496.1	14.8	15.0	123.23	442.8	-478.3	781.4	755.2	26.21	29.812		
3,800.0	3,732.0	3,683.9	3,587.3	15.3	15.6	122.83	461.2	-499.3	810.9	783.8	27.10	29.923		
3,900.0	3,829.7	3,779.3	3,678.6	15.8	16.2	122.45	479.5	-520.2	840.4	812.4	27.99	30.028		
4,000.0	3,927.5	3,874.7	3,769.9	16.2	16.8	122.11	497.8	-541.1	869.9	841.0	28.87	30.129		
4,100.0	4,025.2	3,970.1	3,861.1	16.7	17.3	121.78	516.1	-562.1	899.5	869.7	29.76	30.225		
4,200.0	4,122.9	4,065.5	3,952.4	17.2	17.9	121.48	534.5	-583.0	929.1	898.4	30.65	30.316		
4,300.0	4,220.6	4,160.9	4,043.7	17.7	18.5	121.19	552.8	-604.0	958.7	927.1	31.53	30.404		
4,400.0	4,318.4	4,256.3	4,134.9	18.1	19.1	120.92	571.1	-624.9	988.3	955.9	32.42	30.487		
4,500.0	4,416.1	4,351.7	4,226.2	18.6	19.7	120.67	589.4	-645.9	1,017.9	984.6	33.30	30.567		
4,600.0	4,513.8	4,447.2	4,317.4	19.1	20.2	120.43	607.8	-666.8	1,047.6	1,013.4	34.19	30.644		
4,700.0	4,611.5	4,542.6	4,408.7	19.5	20.8	120.21	626.1	-687.8	1,077.3	1,042.2	35.07	30.717		
4,800.0	4,709.3	4,638.0	4,500.0	20.0	21.4	120.00	644.4	-708.7	1,107.0	1,071.0	35.96	30.787		
4,900.0	4,807.0	4,733.4	4,591.2	20.5	22.0	119.79	662.8	-729.7	1,136.7	1,099.9	36.84	30.855		
5,000.0	4,904.7	4,828.8	4,682.5	21.0	22.6	119.60	681.1	-750.6	1,166.4	1,128.7	37.72	30.919		
5,090.1	4,992.7	4,914.7	4,764.7	21.4	23.1	119.44	697.6	-769.5	1,193.2	1,154.7	38.52	30.975		
5,100.0	5,002.5	4,924.2	4,773.7	21.4	23.1	119.47	699.4	-771.6	1,196.1	1,157.5	38.61	30.977		
5,200.0	5,100.6	5,019.8	4,865.2	21.7	23.7	119.73	717.8	-792.6	1,224.9	1,185.4	39.47	31.031		
5,300.0	5,199.4	5,115.7	4,956.9	22.0	24.3	119.83	736.2	-813.6	1,252.0	1,211.8	40.28	31.081		
5,400.0	5,298.6	5,249.3	5,085.5	22.3	24.9	119.64	760.1	-840.9	1,276.3	1,235.2	41.09	31.063		
5,500.0	5,398.2	5,389.2	5,221.7	22.5	25.5	119.40	780.9	-864.7	1,295.8	1,254.0	41.75	31.036		
5,600.0	5,498.1	5,531.6	5,361.9	22.6	25.9	119.12	797.5	-883.7	1,310.4	1,268.1	42.30	30.978		
5,702.0	5,600.0	5,678.9	5,508.0	22.7	26.3	-1.81	809.9	-897.8	1,320.1	1,277.4	42.75	30.880		
5,800.0	5,698.0	5,821.9	5,650.5	22.8	26.6	-2.16	817.1	-906.1	1,325.3	1,282.2	43.08	30.763		
5,900.0	5,798.0	5,968.6	5,797.1	22.9	26.8	-2.29	819.7	-909.1	1,327.1	1,283.8	43.37	30.598		
6,000.0	5,898.0	6,069.5	5,898.0	23.0	26.9	-2.29	819.7	-909.1	1,327.1	1,283.5	43.61	30.429		
6,100.0	5,998.0	6,169.5	5,998.0	23.2	27.0	-2.29	819.7	-909.1	1,327.1	1,283.3	43.86	30.257		
6,200.0	6,098.0	6,269.5	6,098.0	23.3	27.1	-2.29	819.7	-909.1	1,327.1	1,283.0	44.11	30.085		
6,300.0	6,198.0	6,369.5	6,198.0	23.4	27.2	-2.29	819.7	-909.1	1,327.1	1,282.8	44.37	29.913		
6,400.0	6,298.0	6,469.5	6,298.0	23.5	27.3	-2.29	819.7	-909.1	1,327.1	1,282.5	44.62	29.740		
6,500.0	6,398.0	6,569.5	6,398.0	23.6	27.4	-2.29	819.7	-909.1	1,327.1	1,282.2	44.88	29.568		
6,600.0	6,498.0	6,669.5	6,498.0	23.7	27.5	-2.29	819.7	-909.1	1,327.1	1,282.0	45.15	29.395		
6,700.0	6,598.0	6,769.5	6,598.0	23.9	27.6	-2.29	819.7	-909.1	1,327.1	1,281.7	45.41	29.223		
6,800.0	6,698.0	6,869.5	6,698.0	24.0	27.7	-2.29	819.7	-909.1	1,327.1	1,281.4	45.68	29.051		
6,900.0	6,798.0	6,969.5	6,798.0	24.1	27.9	-2.29	819.7	-909.1	1,327.1	1,281.2	45.95	28.879		
7,000.0	6,898.0	7,069.5	6,898.0	24.2	28.0	-2.29	819.7	-909.1	1,327.1	1,280.9	46.23	28.708		
7,100.0	6,998.0	7,169.5	6,998.0	24.3	28.1	-2.29	819.7	-909.1	1,327.1	1,280.6	46.51	28.537		
7,200.0	7,098.0	7,269.5	7,098.0	24.5	28.2	-2.29	819.7	-909.1	1,327.1	1,280.3	46.79	28.366		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	Trilogy Resources, LLC. Weld County, CO	<b>Local Co-ordinate Reference:</b>	Well Wind 17-12
<b>Project:</b>	SEC.17-T4N-R67W	<b>TVD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Reference Site:</b>	Wind 17-22 Pad Sec.17-T4N-R67W	<b>MD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wind 17-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (11-28-12)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Wind 17-22 Pad Sec.17-T4N-R67W - Wind 17-11 - Wellbore #1 - Plan #1 (11-28-12)												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.0 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
7,300.0	7,198.0	7,369.5	7,198.0	24.6	28.3	-2.29	819.7	-909.1	1,327.1	1,280.1	47.07	28.195	
7,400.0	7,298.0	7,469.5	7,298.0	24.7	28.5	-2.29	819.7	-909.1	1,327.1	1,279.8	47.35	28.026	
7,414.0	7,312.0	7,483.5	7,312.0	24.7	28.5	-2.29	819.7	-909.1	1,327.1	1,279.7	47.39	28.002	

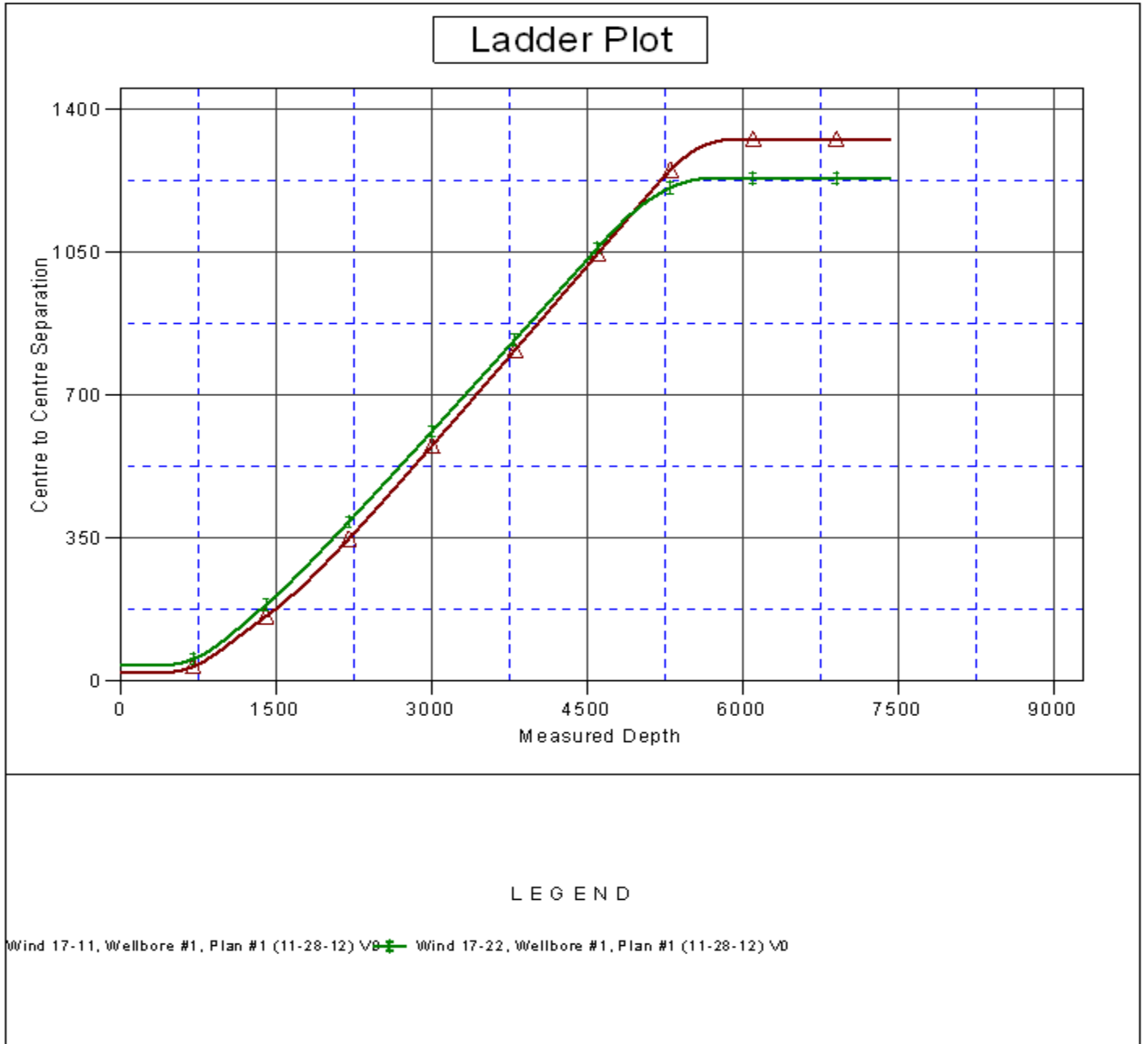
Wind 17-22 Pad Sec.17-T4N-R67W - Wind 17-22 - Wellbore #1 - Plan #1 (11-28-12)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth Depth (ft)	Vertical Depth (ft)	Measured Depth Depth (ft)	Vertical Depth (ft)	Reference  (ft)	Offset  (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	68.10	14.6	36.3	39.1					
100.0	100.0	100.0	100.0	0.1	0.1	68.10	14.6	36.3	39.1	38.8	0.22	173.833		
200.0	200.0	200.0	200.0	0.3	0.3	68.10	14.6	36.3	39.1	38.4	0.67	57.944		
300.0	300.0	300.0	300.0	0.6	0.6	68.10	14.6	36.3	39.1	37.9	1.12	34.767		
400.0	400.0	400.0	400.0	0.8	0.8	68.10	14.6	36.3	39.1	37.5	1.57	24.833 CC, ES		
500.0	500.0	500.0	500.0	1.0	1.0	-171.66	14.6	36.3	40.8	38.8	2.01	20.335		
600.0	599.8	599.8	599.8	1.2	1.2	-172.59	14.6	36.3	46.0	43.5	2.43	18.906 SF		
700.0	699.5	699.5	699.5	1.4	1.5	-173.75	14.6	36.3	54.6	51.8	2.87	19.059		
800.0	798.7	798.7	798.7	1.7	1.7	-174.87	14.6	36.3	66.8	63.5	3.31	20.193		
900.0	897.5	897.5	897.5	2.0	1.9	-175.82	14.6	36.3	82.4	78.6	3.75	21.967		
1,000.0	995.6	995.6	995.6	2.4	2.1	-176.58	14.6	36.3	101.4	97.2	4.19	24.174		
1,011.9	1,007.3	1,007.3	1,007.3	2.4	2.2	-176.66	14.6	36.3	103.9	99.6	4.25	24.459		
1,100.0	1,093.4	1,093.4	1,093.4	2.8	2.3	-177.17	14.6	36.3	122.5	117.9	4.65	26.362		
1,200.0	1,191.1	1,190.8	1,190.8	3.2	2.5	-177.00	13.3	37.0	143.8	138.7	5.09	28.273		
1,300.0	1,288.8	1,287.9	1,287.8	3.7	2.7	-175.71	9.3	39.5	165.4	159.8	5.52	29.982		
1,400.0	1,386.5	1,384.6	1,384.2	4.1	2.9	-173.70	2.6	43.7	187.4	181.4	5.96	31.417		
1,500.0	1,484.3	1,480.7	1,479.6	4.6	3.1	-171.23	-6.9	49.5	210.1	203.6	6.44	32.599		
1,600.0	1,582.0	1,575.8	1,573.6	5.0	3.3	-168.47	-19.0	57.0	233.8	226.8	6.97	33.559		
1,700.0	1,679.7	1,670.5	1,666.7	5.5	3.6	-165.55	-33.5	66.0	258.7	251.1	7.53	34.332		
1,800.0	1,777.4	1,766.3	1,760.9	5.9	3.9	-162.94	-48.9	75.5	284.4	276.3	8.15	34.919		
1,900.0	1,875.2	1,862.2	1,855.0	6.4	4.2	-160.76	-64.4	85.1	310.6	301.8	8.78	35.392		
2,000.0	1,972.9	1,958.1	1,949.1	6.9	4.6	-158.92	-79.8	94.6	337.2	327.7	9.43	35.768		
2,100.0	2,070.6	2,054.0	2,043.3	7.3	4.9	-157.34	-95.3	104.2	364.0	353.9	10.09	36.087		
2,200.0	2,168.4	2,149.9	2,137.4	7.8	5.3	-155.98	-110.7	113.7	391.1	380.3	10.76	36.350		
2,300.0	2,266.1	2,245.7	2,231.6	8.3	5.6	-154.79	-126.2	123.3	418.3	406.9	11.44	36.573		
2,400.0	2,363.8	2,341.6	2,325.7	8.7	6.0	-153.75	-141.6	132.9	445.7	433.6	12.12	36.764		
2,500.0	2,461.5	2,437.5	2,419.9	9.2	6.4	-152.83	-157.1	142.4	473.2	460.4	12.81	36.931		
2,600.0	2,559.3	2,533.4	2,514.0	9.7	6.7	-152.01	-172.5	152.0	500.8	487.3	13.51	37.077		
2,700.0	2,657.0	2,629.2	2,608.1	10.1	7.1	-151.28	-188.0	161.5	528.5	514.3	14.21	37.206		
2,800.0	2,754.7	2,725.1	2,702.3	10.6	7.5	-150.62	-203.4	171.1	556.3	541.4	14.91	37.322		
2,900.0	2,852.5	2,821.0	2,796.4	11.1	7.9	-150.02	-218.9	180.6	584.1	568.5	15.61	37.425		
3,000.0	2,950.2	2,916.9	2,890.6	11.5	8.3	-149.48	-234.3	190.2	612.0	595.7	16.31	37.519		
3,100.0	3,047.9	3,012.8	2,984.7	12.0	8.7	-148.98	-249.8	199.7	639.9	622.9	17.02	37.605		
3,200.0	3,145.6	3,108.6	3,078.9	12.5	9.1	-148.52	-265.2	209.3	667.9	650.2	17.72	37.682		
3,300.0	3,243.4	3,204.5	3,173.0	12.9	9.5	-148.10	-280.7	218.8	695.9	677.5	18.43	37.754		
3,400.0	3,341.1	3,300.4	3,267.1	13.4	9.9	-147.72	-296.1	228.4	724.0	704.8	19.14	37.820		
3,500.0	3,438.8	3,396.3	3,361.3	13.9	10.3	-147.36	-311.6	238.0	752.0	732.2	19.85	37.880		
3,600.0	3,536.5	3,492.2	3,455.4	14.4	10.7	-147.03	-327.0	247.5	780.1	759.6	20.56	37.936		
3,700.0	3,634.3	3,588.0	3,549.6	14.8	11.1	-146.72	-342.4	257.1	808.2	787.0	21.28	37.989		
3,800.0	3,732.0	3,683.9	3,643.7	15.3	11.5	-146.43	-357.9	266.6	836.4	814.4	21.99	38.038		
3,900.0	3,829.7	3,779.8	3,737.8	15.8	11.9	-146.16	-373.3	276.2	864.5	841.8	22.70	38.083		
4,000.0	3,927.5	3,875.7	3,832.0	16.2	12.3	-145.91	-388.8	285.7	892.7	869.3	23.41	38.126		
4,100.0	4,025.2	3,971.5	3,926.1	16.7	12.7	-145.67	-404.2	295.3	920.9	896.7	24.13	38.166		
4,200.0	4,122.9	4,067.4	4,020.3	17.2	13.1	-145.45	-419.7	304.8	949.1	924.2	24.84	38.203		
4,300.0	4,220.6	4,163.3	4,114.4	17.7	13.5	-145.24	-435.1	314.4	977.3	951.7	25.56	38.239		
4,400.0	4,318.4	4,259.2	4,208.6	18.1	13.9	-145.04	-450.6	323.9	1,005.5	979.2	26.27	38.272		
4,500.0	4,416.1	4,355.1	4,302.7	18.6	14.3	-144.85	-466.0	333.5	1,033.7	1,006.8	26.99	38.304		
4,600.0	4,513.8	4,450.9	4,396.8	19.1	14.8	-144.67	-481.5	343.1	1,062.0	1,034.3	27.70	38.334		
4,700.0	4,611.5	4,556.6	4,500.7	19.5	15.2	-144.50	-498.2	353.4	1,090.1	1,061.6	28.43	38.342		
4,800.0	4,709.3	4,681.1	4,623.7	20.0	15.5	-144.50	-514.4	363.4	1,116.3	1,087.1	29.11	38.342		
4,900.0	4,807.0	4,807.1	4,748.9	20.5	15.8	-144.72	-526.1	370.7	1,140.0	1,110.2	29.72	38.351		
5,000.0	4,904.7	4,934.1	4,875.7	21.0	16.1	-145.16	-533.2	375.1	1,161.2	1,130.9	30.27	38.355		

Offset Design													Wind 17-22 Pad Sec.17-T4N-R67W - Wind 17-22 - Wellbore #1 - Plan #1 (11-28-12)		Offset Site Error:		0.0 ft
Survey Program: 0-MWD													Offset Well Error:		0.0 ft		
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
5,090.1	4,992.7	5,049.0	4,990.5	21.4	16.3	-145.74	-535.5	376.5	1,178.2	1,147.5	30.73	38.345					
5,100.0	5,002.5	5,061.0	5,002.5	21.4	16.3	-145.83	-535.5	376.5	1,180.0	1,149.2	30.78	38.338					
5,200.0	5,100.6	5,159.1	5,100.6	21.7	16.4	-146.52	-535.5	376.5	1,196.0	1,164.8	31.20	38.332					
5,300.0	5,199.4	5,257.9	5,199.4	22.0	16.5	-147.08	-535.5	376.5	1,209.2	1,177.6	31.59	38.280					
5,400.0	5,298.6	5,357.1	5,298.6	22.3	16.7	-147.50	-535.5	376.5	1,219.5	1,187.6	31.94	38.178					
5,500.0	5,398.2	5,456.7	5,398.2	22.5	16.8	-147.80	-535.5	376.5	1,226.9	1,194.7	32.26	38.027					
5,600.0	5,498.1	5,556.6	5,498.1	22.6	16.9	-147.98	-535.5	376.5	1,231.4	1,198.9	32.55	37.827					
5,702.0	5,600.0	5,658.5	5,600.0	22.7	17.1	91.36	-535.5	376.5	1,233.0	1,200.1	32.83	37.557					
5,800.0	5,698.0	5,756.5	5,698.0	22.8	17.2	91.36	-535.5	376.5	1,233.0	1,199.8	33.11	37.235					
5,900.0	5,798.0	5,856.5	5,798.0	22.9	17.3	91.36	-535.5	376.5	1,233.0	1,199.6	33.40	36.919					
6,000.0	5,898.0	5,956.5	5,898.0	23.0	17.5	91.36	-535.5	376.5	1,233.0	1,199.3	33.68	36.604					
6,100.0	5,998.0	6,056.5	5,998.0	23.2	17.6	91.36	-535.5	376.5	1,233.0	1,199.0	33.97	36.291					
6,200.0	6,098.0	6,156.5	6,098.0	23.3	17.8	91.36	-535.5	376.5	1,233.0	1,198.7	34.27	35.980					
6,300.0	6,198.0	6,256.5	6,198.0	23.4	17.9	91.36	-535.5	376.5	1,233.0	1,198.4	34.57	35.671					
6,400.0	6,298.0	6,356.5	6,298.0	23.5	18.1	91.36	-535.5	376.5	1,233.0	1,198.1	34.87	35.363					
6,500.0	6,398.0	6,456.5	6,398.0	23.6	18.2	91.36	-535.5	376.5	1,233.0	1,197.8	35.17	35.058					
6,600.0	6,498.0	6,556.5	6,498.0	23.7	18.4	91.36	-535.5	376.5	1,233.0	1,197.5	35.48	34.754					
6,700.0	6,598.0	6,656.5	6,598.0	23.9	18.5	91.36	-535.5	376.5	1,233.0	1,197.2	35.79	34.453					
6,800.0	6,698.0	6,756.5	6,698.0	24.0	18.7	91.36	-535.5	376.5	1,233.0	1,196.9	36.10	34.155					
6,900.0	6,798.0	6,856.5	6,798.0	24.1	18.8	91.36	-535.5	376.5	1,233.0	1,196.5	36.41	33.859					
7,000.0	6,898.0	6,956.5	6,898.0	24.2	19.0	91.36	-535.5	376.5	1,233.0	1,196.2	36.73	33.565					
7,100.0	6,998.0	7,056.5	6,998.0	24.3	19.2	91.36	-535.5	376.5	1,233.0	1,195.9	37.05	33.275					
7,200.0	7,098.0	7,156.5	7,098.0	24.5	19.3	91.36	-535.5	376.5	1,233.0	1,195.6	37.38	32.986					
7,300.0	7,198.0	7,256.5	7,198.0	24.6	19.5	91.36	-535.5	376.5	1,233.0	1,195.3	37.70	32.701					
7,400.0	7,298.0	7,356.5	7,298.0	24.7	19.6	91.36	-535.5	376.5	1,233.0	1,194.9	38.03	32.418					
7,414.0	7,312.0	7,370.5	7,312.0	24.7	19.7	91.36	-535.5	376.5	1,233.0	1,194.9	38.08	32.379					

<b>Company:</b>	Trilogy Resources, LLC. Weld County, CO	<b>Local Co-ordinate Reference:</b>	Well Wind 17-12
<b>Project:</b>	SEC.17-T4N-R67W	<b>TVD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Reference Site:</b>	Wind 17-22 Pad Sec.17-T4N-R67W	<b>MD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wind 17-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (11-28-12)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4807.0ft (RKB - 13')  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °

Coordinates are relative to: Wind 17-12  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.38°



<b>Company:</b>	Trilogy Resources, LLC. Weld County, CO	<b>Local Co-ordinate Reference:</b>	Well Wind 17-12
<b>Project:</b>	SEC.17-T4N-R67W	<b>TVD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Reference Site:</b>	Wind 17-22 Pad Sec.17-T4N-R67W	<b>MD Reference:</b>	WELL @ 4807.0ft (RKB - 13')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wind 17-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (11-28-12)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4807.0ft (RKB - 13')  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °

Coordinates are relative to: Wind 17-12  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.38°

