

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	900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.0	
3	1748.0	16.96	311.18	1735.7	82.0	-93.8	2.00	311.18	124.6	
4	5123.5	16.96	311.18	4964.3	730.4	-834.8	0.00	0.00	1109.2	
5	5971.5	0.00	0.00	5800.0	812.4	-928.6	2.00	180.00	1233.8	TARGET BHL 664'FNL & 618'FWL
6	7483.5	0.00	0.00	7312.0	812.4	-928.6	0.00	0.00	1233.8	



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

**SEC.17-T4N-R67W**

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

**Wind 17-11**

**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 17-11
<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 17-11	<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 17-11					
Well Position	+N/-S	-7.3 ft	Northing:	1,358,615.85 ft	Latitude:	40.316340
	+E/-W	-16.7 ft	Easting:	3,162,244.49 ft	Longitude:	-104.918170
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	311.18

<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	
900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,748.0	16.96	311.18	1,735.7	82.0	-93.8	2.00	2.00	0.00	311.18	
5,123.5	16.96	311.18	4,964.3	730.4	-834.8	0.00	0.00	0.00	0.00	
5,971.5	0.00	0.00	5,800.0	812.4	-928.6	2.00	-2.00	0.00	180.00	TARGET BHL 664'I
7,483.5	0.00	0.00	7,312.0	812.4	-928.6	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wind 17-11
<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 17-11	<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	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
560.0	0.00	0.00	560.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00
680.0	0.00	0.00	680.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.00	0.00	760.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
840.0	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
920.0	0.40	311.18	920.0	0.0	-0.1	0.1	2.00	2.00	0.00
960.0	1.20	311.18	960.0	0.4	-0.5	0.6	2.00	2.00	0.00
1,000.0	2.00	311.18	1,000.0	1.1	-1.3	1.7	2.00	2.00	0.00
1,040.0	2.80	311.18	1,039.9	2.3	-2.6	3.4	2.00	2.00	0.00
1,080.0	3.60	311.18	1,079.9	3.7	-4.3	5.7	2.00	2.00	0.00
1,120.0	4.40	311.18	1,119.8	5.6	-6.4	8.4	2.00	2.00	0.00
1,160.0	5.20	311.18	1,159.6	7.8	-8.9	11.8	2.00	2.00	0.00
1,200.0	6.00	311.18	1,199.5	10.3	-11.8	15.7	2.00	2.00	0.00
1,240.0	6.80	311.18	1,239.2	13.3	-15.2	20.2	2.00	2.00	0.00
1,280.0	7.60	311.18	1,278.9	16.6	-18.9	25.2	2.00	2.00	0.00
1,320.0	8.40	311.18	1,318.5	20.2	-23.1	30.7	2.00	2.00	0.00
1,360.0	9.20	311.18	1,358.0	24.3	-27.7	36.9	2.00	2.00	0.00
1,400.0	10.00	311.18	1,397.5	28.7	-32.8	43.5	2.00	2.00	0.00
1,440.0	10.80	311.18	1,436.8	33.4	-38.2	50.7	2.00	2.00	0.00
1,480.0	11.60	311.18	1,476.0	38.5	-44.0	58.5	2.00	2.00	0.00
1,520.0	12.40	311.18	1,515.2	44.0	-50.3	66.8	2.00	2.00	0.00
1,560.0	13.20	311.18	1,554.2	49.8	-57.0	75.7	2.00	2.00	0.00
1,600.0	14.00	311.18	1,593.1	56.0	-64.0	85.1	2.00	2.00	0.00
1,640.0	14.80	311.18	1,631.8	62.6	-71.5	95.0	2.00	2.00	0.00
1,680.0	15.60	311.18	1,670.4	69.5	-79.4	105.5	2.00	2.00	0.00
1,720.0	16.40	311.18	1,708.8	76.7	-87.7	116.6	2.00	2.00	0.00
1,748.0	16.96	311.18	1,735.7	82.0	-93.8	124.6	2.00	2.00	0.00
1,760.0	16.96	311.18	1,747.1	84.3	-96.4	128.1	0.00	0.00	0.00
1,800.0	16.96	311.18	1,785.4	92.0	-105.2	139.8	0.00	0.00	0.00
1,840.0	16.96	311.18	1,823.7	99.7	-114.0	151.4	0.00	0.00	0.00
1,880.0	16.96	311.18	1,861.9	107.4	-122.7	163.1	0.00	0.00	0.00
1,920.0	16.96	311.18	1,900.2	115.1	-131.5	174.8	0.00	0.00	0.00
1,960.0	16.96	311.18	1,938.5	122.8	-140.3	186.4	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wind 17-11
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<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 17-11	<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)
2,000.0	16.96	311.18	1,976.7	130.4	-149.1	198.1	0.00	0.00	0.00
2,040.0	16.96	311.18	2,015.0	138.1	-157.9	209.8	0.00	0.00	0.00
2,080.0	16.96	311.18	2,053.2	145.8	-166.7	221.4	0.00	0.00	0.00
2,120.0	16.96	311.18	2,091.5	153.5	-175.4	233.1	0.00	0.00	0.00
2,160.0	16.96	311.18	2,129.8	161.2	-184.2	244.8	0.00	0.00	0.00
2,200.0	16.96	311.18	2,168.0	168.9	-193.0	256.4	0.00	0.00	0.00
2,240.0	16.96	311.18	2,206.3	176.5	-201.8	268.1	0.00	0.00	0.00
2,280.0	16.96	311.18	2,244.5	184.2	-210.6	279.8	0.00	0.00	0.00
2,320.0	16.96	311.18	2,282.8	191.9	-219.3	291.4	0.00	0.00	0.00
2,360.0	16.96	311.18	2,321.1	199.6	-228.1	303.1	0.00	0.00	0.00
2,400.0	16.96	311.18	2,359.3	207.3	-236.9	314.8	0.00	0.00	0.00
2,440.0	16.96	311.18	2,397.6	215.0	-245.7	326.5	0.00	0.00	0.00
2,480.0	16.96	311.18	2,435.8	222.6	-254.5	338.1	0.00	0.00	0.00
2,520.0	16.96	311.18	2,474.1	230.3	-263.3	349.8	0.00	0.00	0.00
2,560.0	16.96	311.18	2,512.4	238.0	-272.0	361.5	0.00	0.00	0.00
2,600.0	16.96	311.18	2,550.6	245.7	-280.8	373.1	0.00	0.00	0.00
2,640.0	16.96	311.18	2,588.9	253.4	-289.6	384.8	0.00	0.00	0.00
2,680.0	16.96	311.18	2,627.1	261.1	-298.4	396.5	0.00	0.00	0.00
2,720.0	16.96	311.18	2,665.4	268.7	-307.2	408.1	0.00	0.00	0.00
2,760.0	16.96	311.18	2,703.7	276.4	-315.9	419.8	0.00	0.00	0.00
2,800.0	16.96	311.18	2,741.9	284.1	-324.7	431.5	0.00	0.00	0.00
2,840.0	16.96	311.18	2,780.2	291.8	-333.5	443.1	0.00	0.00	0.00
2,880.0	16.96	311.18	2,818.4	299.5	-342.3	454.8	0.00	0.00	0.00
2,920.0	16.96	311.18	2,856.7	307.2	-351.1	466.5	0.00	0.00	0.00
2,960.0	16.96	311.18	2,895.0	314.8	-359.9	478.1	0.00	0.00	0.00
3,000.0	16.96	311.18	2,933.2	322.5	-368.6	489.8	0.00	0.00	0.00
3,040.0	16.96	311.18	2,971.5	330.2	-377.4	501.5	0.00	0.00	0.00
3,080.0	16.96	311.18	3,009.7	337.9	-386.2	513.1	0.00	0.00	0.00
3,120.0	16.96	311.18	3,048.0	345.6	-395.0	524.8	0.00	0.00	0.00
3,160.0	16.96	311.18	3,086.3	353.3	-403.8	536.5	0.00	0.00	0.00
3,200.0	16.96	311.18	3,124.5	360.9	-412.5	548.2	0.00	0.00	0.00
3,240.0	16.96	311.18	3,162.8	368.6	-421.3	559.8	0.00	0.00	0.00
3,280.0	16.96	311.18	3,201.0	376.3	-430.1	571.5	0.00	0.00	0.00
3,320.0	16.96	311.18	3,239.3	384.0	-438.9	583.2	0.00	0.00	0.00
3,360.0	16.96	311.18	3,277.6	391.7	-447.7	594.8	0.00	0.00	0.00
3,400.0	16.96	311.18	3,315.8	399.4	-456.5	606.5	0.00	0.00	0.00
3,440.0	16.96	311.18	3,354.1	407.0	-465.2	618.2	0.00	0.00	0.00
3,480.0	16.96	311.18	3,392.3	414.7	-474.0	629.8	0.00	0.00	0.00
3,520.0	16.96	311.18	3,430.6	422.4	-482.8	641.5	0.00	0.00	0.00
3,560.0	16.96	311.18	3,468.9	430.1	-491.6	653.2	0.00	0.00	0.00
3,589.4	16.96	311.18	3,497.0	435.7	-498.0	661.7	0.00	0.00	0.00
<b>PARKMAN</b>									
3,600.0	16.96	311.18	3,507.1	437.8	-500.4	664.8	0.00	0.00	0.00
3,640.0	16.96	311.18	3,545.4	445.5	-509.1	676.5	0.00	0.00	0.00
3,680.0	16.96	311.18	3,583.6	453.1	-517.9	688.2	0.00	0.00	0.00
3,720.0	16.96	311.18	3,621.9	460.8	-526.7	699.8	0.00	0.00	0.00
3,760.0	16.96	311.18	3,660.2	468.5	-535.5	711.5	0.00	0.00	0.00
3,800.0	16.96	311.18	3,698.4	476.2	-544.3	723.2	0.00	0.00	0.00
3,840.0	16.96	311.18	3,736.7	483.9	-553.1	734.8	0.00	0.00	0.00
3,880.0	16.96	311.18	3,774.9	491.6	-561.8	746.5	0.00	0.00	0.00
3,920.0	16.96	311.18	3,813.2	499.2	-570.6	758.2	0.00	0.00	0.00
3,960.0	16.96	311.18	3,851.5	506.9	-579.4	769.8	0.00	0.00	0.00
4,000.0	16.96	311.18	3,889.7	514.6	-588.2	781.5	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wind 17-11
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<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 17-11	<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)
4,040.0	16.96	311.18	3,928.0	522.3	-597.0	793.2	0.00	0.00	0.00
4,080.0	16.96	311.18	3,966.2	530.0	-605.7	804.9	0.00	0.00	0.00
4,120.0	16.96	311.18	4,004.5	537.7	-614.5	816.5	0.00	0.00	0.00
4,143.5	16.96	311.18	4,027.0	542.2	-619.7	823.4	0.00	0.00	0.00
<b>SUSSEX</b>									
4,160.0	16.96	311.18	4,042.8	545.3	-623.3	828.2	0.00	0.00	0.00
4,200.0	16.96	311.18	4,081.0	553.0	-632.1	839.9	0.00	0.00	0.00
4,240.0	16.96	311.18	4,119.3	560.7	-640.9	851.5	0.00	0.00	0.00
4,280.0	16.96	311.18	4,157.5	568.4	-649.6	863.2	0.00	0.00	0.00
4,320.0	16.96	311.18	4,195.8	576.1	-658.4	874.9	0.00	0.00	0.00
4,360.0	16.96	311.18	4,234.1	583.7	-667.2	886.5	0.00	0.00	0.00
4,400.0	16.96	311.18	4,272.3	591.4	-676.0	898.2	0.00	0.00	0.00
4,440.0	16.96	311.18	4,310.6	599.1	-684.8	909.9	0.00	0.00	0.00
4,480.0	16.96	311.18	4,348.9	606.8	-693.6	921.5	0.00	0.00	0.00
4,520.0	16.96	311.18	4,387.1	614.5	-702.3	933.2	0.00	0.00	0.00
4,560.0	16.96	311.18	4,425.4	622.2	-711.1	944.9	0.00	0.00	0.00
4,600.0	16.96	311.18	4,463.6	629.8	-719.9	956.5	0.00	0.00	0.00
4,640.0	16.96	311.18	4,501.9	637.5	-728.7	968.2	0.00	0.00	0.00
4,671.5	16.96	311.18	4,532.0	643.6	-735.6	977.4	0.00	0.00	0.00
<b>SHANNON</b>									
4,680.0	16.96	311.18	4,540.2	645.2	-737.5	979.9	0.00	0.00	0.00
4,720.0	16.96	311.18	4,578.4	652.9	-746.2	991.5	0.00	0.00	0.00
4,760.0	16.96	311.18	4,616.7	660.6	-755.0	1,003.2	0.00	0.00	0.00
4,800.0	16.96	311.18	4,654.9	668.3	-763.8	1,014.9	0.00	0.00	0.00
4,840.0	16.96	311.18	4,693.2	675.9	-772.6	1,026.5	0.00	0.00	0.00
4,880.0	16.96	311.18	4,731.5	683.6	-781.4	1,038.2	0.00	0.00	0.00
4,920.0	16.96	311.18	4,769.7	691.3	-790.2	1,049.9	0.00	0.00	0.00
4,960.0	16.96	311.18	4,808.0	699.0	-798.9	1,061.6	0.00	0.00	0.00
5,000.0	16.96	311.18	4,846.2	706.7	-807.7	1,073.2	0.00	0.00	0.00
5,040.0	16.96	311.18	4,884.5	714.4	-816.5	1,084.9	0.00	0.00	0.00
5,080.0	16.96	311.18	4,922.8	722.0	-825.3	1,096.6	0.00	0.00	0.00
5,120.0	16.96	311.18	4,961.0	729.7	-834.1	1,108.2	0.00	0.00	0.00
5,123.5	16.96	311.18	4,964.3	730.4	-834.8	1,109.2	0.00	0.00	0.00
5,160.0	16.23	311.18	4,999.3	737.3	-842.7	1,119.7	2.00	-2.00	0.00
5,200.0	15.43	311.18	5,037.8	744.4	-850.9	1,130.6	2.00	-2.00	0.00
5,240.0	14.63	311.18	5,076.5	751.3	-858.7	1,141.0	2.00	-2.00	0.00
5,280.0	13.83	311.18	5,115.2	757.8	-866.1	1,150.8	2.00	-2.00	0.00
5,320.0	13.03	311.18	5,154.1	763.9	-873.1	1,160.1	2.00	-2.00	0.00
5,360.0	12.23	311.18	5,193.2	769.6	-879.7	1,168.8	2.00	-2.00	0.00
5,400.0	11.43	311.18	5,232.3	775.0	-885.8	1,177.0	2.00	-2.00	0.00
5,440.0	10.63	311.18	5,271.6	780.1	-891.6	1,184.7	2.00	-2.00	0.00
5,480.0	9.83	311.18	5,310.9	784.7	-896.9	1,191.8	2.00	-2.00	0.00
5,520.0	9.03	311.18	5,350.4	789.1	-901.9	1,198.3	2.00	-2.00	0.00
5,560.0	8.23	311.18	5,389.9	793.0	-906.4	1,204.3	2.00	-2.00	0.00
5,600.0	7.43	311.18	5,429.6	796.6	-910.5	1,209.8	2.00	-2.00	0.00
5,640.0	6.63	311.18	5,469.3	799.8	-914.2	1,214.7	2.00	-2.00	0.00
5,680.0	5.83	311.18	5,509.0	802.7	-917.4	1,219.0	2.00	-2.00	0.00
5,720.0	5.03	311.18	5,548.9	805.2	-920.3	1,222.8	2.00	-2.00	0.00
5,760.0	4.23	311.18	5,588.7	807.3	-922.7	1,226.0	2.00	-2.00	0.00
5,800.0	3.43	311.18	5,628.6	809.1	-924.7	1,228.7	2.00	-2.00	0.00
5,840.0	2.63	311.18	5,668.6	810.4	-926.3	1,230.8	2.00	-2.00	0.00
5,880.0	1.83	311.18	5,708.6	811.5	-927.5	1,232.4	2.00	-2.00	0.00
5,920.0	1.03	311.18	5,748.5	812.1	-928.2	1,233.4	2.00	-2.00	0.00
5,960.0	0.23	311.18	5,788.5	812.4	-928.6	1,233.8	2.00	-2.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wind 17-11
<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 17-11	<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)
5,971.5	0.00	0.00	5,800.0	812.4	-928.6	1,233.8	2.00	-2.00	425.80
<b>TARGET BHL 664'FNL &amp; 618'FWL</b>									
6,000.0	0.00	0.00	5,828.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,040.0	0.00	0.00	5,868.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,080.0	0.00	0.00	5,908.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,120.0	0.00	0.00	5,948.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,160.0	0.00	0.00	5,988.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,200.0	0.00	0.00	6,028.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,240.0	0.00	0.00	6,068.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,280.0	0.00	0.00	6,108.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,320.0	0.00	0.00	6,148.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,360.0	0.00	0.00	6,188.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,400.0	0.00	0.00	6,228.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,440.0	0.00	0.00	6,268.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,480.0	0.00	0.00	6,308.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,520.0	0.00	0.00	6,348.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,560.0	0.00	0.00	6,388.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,600.0	0.00	0.00	6,428.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,640.0	0.00	0.00	6,468.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,680.0	0.00	0.00	6,508.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,720.0	0.00	0.00	6,548.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,760.0	0.00	0.00	6,588.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,800.0	0.00	0.00	6,628.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,840.0	0.00	0.00	6,668.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,880.0	0.00	0.00	6,708.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,920.0	0.00	0.00	6,748.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
6,960.0	0.00	0.00	6,788.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
7,000.0	0.00	0.00	6,828.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
7,003.5	0.00	0.00	6,832.0	812.4	-928.6	1,233.8	0.00	0.00	0.00
<b>NIOBRARA - TARGET CIRCLE 664'FNL &amp; 618'FWL - LEGAL BOX 400' X 400', 663'FNL &amp; 620'FWL</b>									
7,040.0	0.00	0.00	6,868.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
7,080.0	0.00	0.00	6,908.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
7,120.0	0.00	0.00	6,948.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
7,160.0	0.00	0.00	6,988.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
7,200.0	0.00	0.00	7,028.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
7,240.0	0.00	0.00	7,068.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
7,280.0	0.00	0.00	7,108.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
7,298.5	0.00	0.00	7,127.0	812.4	-928.6	1,233.8	0.00	0.00	0.00
<b>FT HAYS</b>									
7,320.0	0.00	0.00	7,148.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
7,323.5	0.00	0.00	7,152.0	812.4	-928.6	1,233.8	0.00	0.00	0.00
<b>CODELL</b>									
7,360.0	0.00	0.00	7,188.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
7,400.0	0.00	0.00	7,228.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
7,440.0	0.00	0.00	7,268.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
7,480.0	0.00	0.00	7,308.5	812.4	-928.6	1,233.8	0.00	0.00	0.00
7,483.5	0.00	0.00	7,312.0	812.4	-928.6	1,233.8	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wind 17-11
<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 17-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (11-28-12)		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
TARGET BHL 664'FN	0.00	0.00	5,800.0	812.4	-928.6	1,359,422.13	3,161,310.62	40.318570	-104.921500
- plan hits target center									
- Point									
TARGET CIRCLE 664	0.00	0.00	6,832.0	812.4	-928.6	1,359,422.13	3,161,310.62	40.318570	-104.921500
- plan hits target center									
- Circle (radius 75.0)									
LEGAL BOX 400' X 40'	0.00	0.00	6,832.0	813.4	-926.6	1,359,423.12	3,161,312.61	40.318573	-104.921493
- plan misses target center by 2.2ft at 7003.5ft MD (6832.0 TVD, 812.4 N, -928.6 E)									
- Rectangle (sides W400.0 H400.0 D480.0)									

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

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,589.4	3,497.0	PARKMAN		0.00		
4,143.5	4,027.0	SUSSEX		0.00		
4,671.5	4,532.0	SHANNON		0.00		
7,003.5	6,832.0	NIOBRARA		0.00		
7,298.5	7,127.0	FT HAYS		0.00		
7,323.5	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 17-11**

**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 17-11
<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 17-11	<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 17-12 - 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	2,168.0	2,145.1	2,114.7	6.9	7.5	-112.70	-162.7	-282.3	347.5	334.8	12.71	27.333	
2,300.0	2,263.7	2,240.5	2,208.0	7.4	8.0	-114.63	-173.0	-299.7	375.1	361.4	13.62	27.539	
2,400.0	2,359.3	2,335.9	2,301.2	8.0	8.4	-116.29	-183.3	-317.1	402.9	388.4	14.52	27.746	
2,500.0	2,455.0	2,431.4	2,394.5	8.6	8.9	-117.74	-193.6	-334.5	431.1	415.7	15.43	27.948	
2,600.0	2,550.6	2,526.8	2,487.7	9.2	9.3	-119.01	-203.9	-351.9	459.5	443.2	16.33	28.145	
2,700.0	2,646.3	2,622.2	2,580.9	9.7	9.8	-120.13	-214.2	-369.4	488.1	470.9	17.23	28.334	
2,800.0	2,741.9	2,717.6	2,674.2	10.3	10.2	-121.14	-224.5	-386.8	516.8	498.7	18.12	28.515	
2,900.0	2,837.6	2,813.0	2,767.4	10.9	10.7	-122.03	-234.8	-404.2	545.7	526.7	19.02	28.688	
3,000.0	2,933.2	2,908.4	2,860.7	11.5	11.1	-122.84	-245.1	-421.6	574.7	554.7	19.92	28.853	
3,100.0	3,028.9	3,003.8	2,953.9	12.1	11.6	-123.57	-255.4	-439.0	603.7	582.9	20.81	29.009	
3,200.0	3,124.5	3,099.2	3,047.1	12.7	12.0	-124.23	-265.7	-456.4	632.9	611.2	21.71	29.158	
3,300.0	3,220.2	3,194.6	3,140.4	13.3	12.5	-124.84	-276.0	-473.8	662.1	639.5	22.60	29.299	
3,400.0	3,315.8	3,290.0	3,233.6	13.9	12.9	-125.39	-286.3	-491.2	691.4	667.9	23.49	29.433	
3,500.0	3,411.5	3,385.5	3,326.9	14.5	13.3	-125.90	-296.6	-508.6	720.7	696.4	24.38	29.561	
3,600.0	3,507.1	3,480.9	3,420.1	15.1	13.8	-126.37	-306.9	-526.0	750.1	724.9	25.27	29.682	
3,700.0	3,602.8	3,576.3	3,513.4	15.7	14.2	-126.80	-317.2	-543.4	779.6	753.4	26.16	29.797	
3,800.0	3,698.4	3,671.7	3,606.6	16.3	14.7	-127.20	-327.4	-560.8	809.0	782.0	27.05	29.906	
3,900.0	3,794.1	3,767.1	3,699.8	16.9	15.1	-127.58	-337.7	-578.2	838.5	810.6	27.94	30.010	
4,000.0	3,889.7	3,862.5	3,793.1	17.5	15.6	-127.93	-348.0	-595.7	868.1	839.2	28.83	30.110	
4,100.0	3,985.4	3,957.9	3,886.3	18.1	16.0	-128.25	-358.3	-613.1	897.6	867.9	29.72	30.204	
4,200.0	4,081.0	4,053.3	3,979.6	18.7	16.5	-128.56	-368.6	-630.5	927.2	896.6	30.61	30.294	
4,300.0	4,176.7	4,148.7	4,072.8	19.3	16.9	-128.84	-378.9	-647.9	956.8	925.3	31.49	30.381	
4,400.0	4,272.3	4,244.1	4,166.0	19.9	17.4	-129.11	-389.2	-665.3	986.5	954.1	32.38	30.463	
4,500.0	4,368.0	4,339.6	4,259.3	20.6	17.8	-129.37	-399.5	-682.7	1,016.1	982.8	33.27	30.541	
4,600.0	4,463.6	4,435.0	4,352.5	21.2	18.3	-129.61	-409.8	-700.1	1,045.8	1,011.6	34.16	30.617	
4,700.0	4,559.3	4,530.4	4,445.8	21.8	18.7	-129.83	-420.1	-717.5	1,075.4	1,040.4	35.04	30.689	
4,800.0	4,654.9	4,625.8	4,539.0	22.4	19.2	-130.05	-430.4	-734.9	1,105.1	1,069.2	35.93	30.758	
4,900.0	4,750.6	4,721.2	4,632.3	23.0	19.6	-130.25	-440.7	-752.3	1,134.9	1,098.0	36.82	30.824	
5,000.0	4,846.2	4,816.6	4,725.5	23.6	20.1	-130.44	-451.0	-769.7	1,164.6	1,126.9	37.70	30.887	
5,100.0	4,941.9	4,912.0	4,818.7	24.2	20.5	-130.62	-461.3	-787.1	1,194.3	1,155.7	38.59	30.948	
5,123.5	4,964.3	4,934.4	4,840.6	24.3	20.7	-130.66	-463.7	-791.2	1,201.3	1,162.5	38.80	30.962	
5,200.0	5,037.8	5,007.6	4,912.2	24.7	21.0	-131.11	-471.6	-804.6	1,223.4	1,183.9	39.50	30.974	
5,300.0	5,134.7	5,107.6	5,009.9	25.2	21.5	-131.54	-482.4	-822.8	1,250.4	1,210.0	40.33	31.005	
5,400.0	5,232.3	5,231.2	5,131.4	25.5	21.8	-131.89	-494.0	-842.4	1,273.8	1,232.7	41.06	31.021	
5,500.0	5,330.7	5,356.6	5,255.4	25.9	22.2	-132.24	-503.1	-857.8	1,292.9	1,251.2	41.70	31.004	
5,600.0	5,429.6	5,483.2	5,381.5	26.1	22.4	-132.58	-509.4	-868.5	1,307.6	1,265.3	42.24	30.959	
5,700.0	5,528.9	5,610.8	5,508.8	26.4	22.6	-132.93	-512.9	-874.4	1,317.8	1,275.1	42.66	30.889	
5,800.0	5,628.6	5,730.6	5,628.6	26.5	22.8	-133.26	-513.6	-875.7	1,323.6	1,280.6	42.98	30.794	
5,900.0	5,728.5	5,830.5	5,728.5	26.7	22.9	-133.43	-513.6	-875.7	1,326.5	1,283.3	43.23	30.687	
5,971.5	5,800.0	5,902.0	5,800.0	26.8	22.9	177.71	-513.6	-875.7	1,327.1	1,283.8	43.38	30.595	
6,000.0	5,828.5	5,930.5	5,828.5	26.8	23.0	177.71	-513.6	-875.7	1,327.1	1,283.7	43.44	30.548	
6,100.0	5,928.5	6,030.5	5,928.5	26.9	23.1	177.71	-513.6	-875.7	1,327.1	1,283.4	43.69	30.377	
6,200.0	6,028.5	6,130.5	6,028.5	27.0	23.2	177.71	-513.6	-875.7	1,327.1	1,283.2	43.94	30.205	
6,300.0	6,128.5	6,230.5	6,128.5	27.1	23.3	177.71	-513.6	-875.7	1,327.1	1,282.9	44.19	30.032	
6,400.0	6,228.5	6,330.5	6,228.5	27.2	23.4	177.71	-513.6	-875.7	1,327.1	1,282.7	44.45	29.860	
6,500.0	6,328.5	6,430.5	6,328.5	27.3	23.5	177.71	-513.6	-875.7	1,327.1	1,282.4	44.70	29.688	
6,600.0	6,428.5	6,530.5	6,428.5	27.4	23.7	177.71	-513.6	-875.7	1,327.1	1,282.2	44.96	29.515	
6,700.0	6,528.5	6,630.5	6,528.5	27.5	23.8	177.71	-513.6	-875.7	1,327.1	1,281.9	45.23	29.343	
6,800.0	6,628.5	6,730.5	6,628.5	27.7	23.9	177.71	-513.6	-875.7	1,327.1	1,281.6	45.50	29.171	
6,900.0	6,728.5	6,830.5	6,728.5	27.8	24.0	177.71	-513.6	-875.7	1,327.1	1,281.4	45.77	28.999	
7,000.0	6,828.5	6,930.5	6,828.5	27.9	24.1	177.71	-513.6	-875.7	1,327.1	1,281.1	46.04	28.827	
7,100.0	6,928.5	7,030.5	6,928.5	28.0	24.3	177.71	-513.6	-875.7	1,327.1	1,280.8	46.31	28.656	

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 17-11
<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 17-11	<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 17-12 - 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)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
7,200.0	7,028.5	7,130.5	7,028.5	28.1	24.4	177.71	-513.6	-875.7	1,327.1	1,280.5	46.59	28.484	
7,300.0	7,128.5	7,230.5	7,128.5	28.3	24.5	177.71	-513.6	-875.7	1,327.1	1,280.3	46.87	28.314	
7,400.0	7,228.5	7,330.5	7,228.5	28.4	24.6	177.71	-513.6	-875.7	1,327.1	1,280.0	47.16	28.144	
7,483.5	7,312.0	7,414.0	7,312.0	28.5	24.7	177.71	-513.6	-875.7	1,327.1	1,279.7	47.39	28.002	

<b>Company:</b>	Trilogy Resources, LLC. Weld County, CO	<b>Local Co-ordinate Reference:</b>	Well Wind 17-11
<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 17-11	<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 17-22 - 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 (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	66.47	7.3	16.7	18.2	18.2	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	66.47	7.3	16.7	18.2	18.0	0.22	81.194		
200.0	200.0	200.0	200.0	0.3	0.3	66.47	7.3	16.7	18.2	17.6	0.67	27.065		
300.0	300.0	300.0	300.0	0.6	0.6	66.47	7.3	16.7	18.2	17.1	1.12	16.239		
400.0	400.0	400.0	400.0	0.8	0.8	66.47	7.3	16.7	18.2	16.7	1.57	11.599		
500.0	500.0	500.0	500.0	1.0	1.0	66.47	7.3	16.7	18.2	16.2	2.02	9.022		
600.0	600.0	600.0	600.0	1.2	1.2	66.47	7.3	16.7	18.2	15.8	2.47	7.381		
700.0	700.0	700.0	700.0	1.5	1.5	66.47	7.3	16.7	18.2	15.3	2.92	6.246		
800.0	800.0	800.0	800.0	1.7	1.7	66.47	7.3	16.7	18.2	14.9	3.37	5.413		
900.0	900.0	900.0	900.0	1.9	1.9	66.47	7.3	16.7	18.2	14.4	3.82	4.776 CC, ES		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	120.02	7.3	16.7	19.1	14.8	4.27	4.468 SF		
1,100.0	1,099.8	1,099.8	1,099.8	2.4	2.4	131.77	7.3	16.7	22.1	17.4	4.71	4.707		
1,200.0	1,199.5	1,198.8	1,198.8	2.6	2.6	147.29	5.8	17.6	29.8	24.7	5.12	5.822		
1,300.0	1,298.7	1,296.4	1,296.2	2.8	2.7	160.65	1.6	20.3	44.6	39.1	5.51	8.099		
1,400.0	1,397.5	1,391.9	1,391.4	3.1	2.9	169.18	-5.4	24.5	66.9	61.0	5.90	11.332		
1,500.0	1,495.6	1,484.9	1,483.7	3.4	3.1	174.37	-14.7	30.3	96.2	89.9	6.30	15.268		
1,600.0	1,593.1	1,574.6	1,572.5	3.8	3.3	177.65	-26.1	37.4	132.1	125.4	6.70	19.716		
1,700.0	1,689.6	1,661.7	1,658.1	4.2	3.6	179.86	-39.4	45.6	174.1	167.0	7.10	24.521		
1,748.0	1,735.7	1,704.4	1,700.1	4.4	3.7	-179.35	-46.2	49.8	195.8	188.5	7.29	26.874		
1,800.0	1,785.4	1,750.5	1,745.3	4.7	3.9	-178.66	-53.7	54.4	219.8	212.3	7.51	29.263		
1,900.0	1,881.1	1,839.1	1,832.3	5.2	4.1	-177.70	-67.9	63.3	266.0	258.0	7.95	33.460		
2,000.0	1,976.7	1,927.8	1,919.4	5.7	4.4	-177.02	-82.2	72.1	312.2	303.8	8.39	37.187		
2,100.0	2,072.4	2,016.4	2,006.4	6.3	4.8	-176.51	-96.5	80.9	358.4	349.5	8.86	40.473		
2,200.0	2,168.0	2,105.0	2,093.4	6.9	5.1	-176.12	-110.8	89.8	404.6	395.3	9.32	43.423		
2,300.0	2,263.7	2,193.7	2,180.5	7.4	5.4	-175.81	-125.1	98.6	450.9	441.1	9.79	46.058		
2,400.0	2,359.3	2,282.3	2,267.5	8.0	5.8	-175.56	-139.4	107.4	497.1	486.9	10.27	48.424		
2,500.0	2,455.0	2,370.9	2,354.5	8.6	6.1	-175.35	-153.6	116.3	543.4	532.7	10.75	50.558		
2,600.0	2,550.6	2,459.6	2,441.5	9.2	6.5	-175.17	-167.9	125.1	589.7	578.5	11.23	52.491		
2,700.0	2,646.3	2,548.2	2,528.6	9.7	6.8	-175.02	-182.2	133.9	636.0	624.2	11.72	54.246		
2,800.0	2,741.9	2,636.9	2,615.6	10.3	7.2	-174.89	-196.5	142.8	682.2	670.0	12.22	55.845		
2,900.0	2,837.6	2,725.5	2,702.6	10.9	7.5	-174.78	-210.8	151.6	728.5	715.8	12.71	57.308		
3,000.0	2,933.2	2,814.1	2,789.7	11.5	7.9	-174.68	-225.0	160.4	774.8	761.6	13.21	58.648		
3,100.0	3,028.9	2,902.8	2,876.7	12.1	8.2	-174.59	-239.3	169.3	821.1	807.4	13.71	59.881		
3,200.0	3,124.5	2,991.4	2,963.7	12.7	8.6	-174.51	-253.6	178.1	867.4	853.2	14.22	61.017		
3,300.0	3,220.2	3,080.0	3,050.8	13.3	9.0	-174.44	-267.9	186.9	913.7	899.0	14.72	62.067		
3,400.0	3,315.8	3,168.7	3,137.8	13.9	9.3	-174.37	-282.2	195.8	960.0	944.7	15.23	63.041		
3,500.0	3,411.5	3,257.3	3,224.8	14.5	9.7	-174.31	-296.4	204.6	1,006.3	990.5	15.74	63.945		
3,600.0	3,507.1	3,345.9	3,311.9	15.1	10.1	-174.26	-310.7	213.4	1,052.5	1,036.3	16.25	64.786		
3,700.0	3,602.8	3,434.6	3,398.9	15.7	10.5	-174.21	-325.0	222.3	1,098.8	1,082.1	16.76	65.572		
3,800.0	3,698.4	3,523.2	3,485.9	16.3	10.8	-174.16	-339.3	231.1	1,145.1	1,127.9	17.27	66.306		
3,900.0	3,794.1	3,611.9	3,573.0	16.9	11.2	-174.12	-353.6	239.9	1,191.4	1,173.6	17.78	66.993		
4,000.0	3,889.7	3,700.5	3,660.0	17.5	11.6	-174.09	-367.9	248.8	1,237.7	1,219.4	18.30	67.637		
4,100.0	3,985.4	3,789.1	3,747.0	18.1	11.9	-174.05	-382.1	257.6	1,284.0	1,265.2	18.82	68.243		
4,200.0	4,081.0	3,877.8	3,834.0	18.7	12.3	-174.02	-396.4	266.4	1,330.3	1,311.0	19.33	68.812		
4,300.0	4,176.7	3,966.4	3,921.1	19.3	12.7	-173.99	-410.7	275.2	1,376.6	1,356.8	19.85	69.349		
4,400.0	4,272.3	4,055.0	4,008.1	19.9	13.1	-173.96	-425.0	284.1	1,422.9	1,402.5	20.37	69.856		
4,500.0	4,368.0	4,143.7	4,095.1	20.6	13.4	-173.93	-439.3	292.9	1,469.2	1,448.3	20.89	70.335		
4,600.0	4,463.6	4,232.3	4,182.2	21.2	13.8	-173.90	-453.5	301.7	1,515.5	1,494.1	21.41	70.788		
4,700.0	4,559.3	4,320.9	4,269.2	21.8	14.2	-173.88	-467.8	310.6	1,561.8	1,539.9	21.93	71.218		
4,800.0	4,654.9	4,409.6	4,356.2	22.4	14.6	-173.86	-482.1	319.4	1,608.1	1,585.6	22.45	71.625		
4,900.0	4,750.6	4,498.2	4,443.3	23.0	15.0	-173.84	-496.4	328.2	1,654.4	1,631.4	22.97	72.012		
5,000.0	4,846.2	4,690.2	4,632.7	23.6	15.6	-173.83	-522.7	344.5	1,698.4	1,674.7	23.68	71.712		

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 17-11
<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 17-11	<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 17-22 - 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 (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	
5,100.0	4,941.9	4,915.3	4,856.9	24.2	16.0	-173.94	-539.8	355.1	1,735.7	1,711.3	24.41	71.119	
5,123.5	4,964.3	4,970.1	4,911.6	24.3	16.1	-173.99	-541.6	356.2	1,743.4	1,718.8	24.57	70.950	
5,200.0	5,037.8	5,096.3	5,037.8	24.7	16.3	-174.15	-542.8	357.0	1,765.2	1,740.1	25.12	70.261	
5,300.0	5,134.7	5,193.2	5,134.7	25.2	16.4	-174.28	-542.8	357.0	1,790.0	1,764.3	25.67	69.739	
5,400.0	5,232.3	5,290.8	5,232.3	25.5	16.6	-174.39	-542.8	357.0	1,811.4	1,785.2	26.18	69.203	
5,500.0	5,330.7	5,389.2	5,330.7	25.9	16.7	-174.48	-542.8	357.0	1,829.4	1,802.8	26.65	68.653	
5,600.0	5,429.6	5,488.1	5,429.6	26.1	16.8	-174.56	-542.8	357.0	1,844.0	1,816.9	27.08	68.090	
5,700.0	5,528.9	5,587.5	5,528.9	26.4	17.0	-174.61	-542.8	357.0	1,855.2	1,827.7	27.48	67.514	
5,800.0	5,628.6	5,687.1	5,628.6	26.5	17.1	-174.65	-542.8	357.0	1,862.9	1,835.0	27.84	66.924	
5,900.0	5,728.5	5,787.1	5,728.5	26.7	17.2	-174.67	-542.8	357.0	1,867.1	1,838.9	28.15	66.321	
5,971.5	5,800.0	5,858.5	5,800.0	26.8	17.3	136.51	-542.8	357.0	1,868.0	1,839.6	28.36	65.877	
6,000.0	5,828.5	5,887.0	5,828.5	26.8	17.4	136.51	-542.8	357.0	1,868.0	1,839.5	28.45	65.648	
6,100.0	5,928.5	5,987.0	5,928.5	26.9	17.5	136.51	-542.8	357.0	1,868.0	1,839.2	28.82	64.823	
6,200.0	6,028.5	6,087.0	6,028.5	27.0	17.7	136.51	-542.8	357.0	1,868.0	1,838.8	29.18	64.012	
6,300.0	6,128.5	6,187.0	6,128.5	27.1	17.8	136.51	-542.8	357.0	1,868.0	1,838.4	29.55	63.216	
6,400.0	6,228.5	6,287.0	6,228.5	27.2	18.0	136.51	-542.8	357.0	1,868.0	1,838.1	29.92	62.436	
6,500.0	6,328.5	6,387.0	6,328.5	27.3	18.1	136.51	-542.8	357.0	1,868.0	1,837.7	30.29	61.670	
6,600.0	6,428.5	6,487.0	6,428.5	27.4	18.3	136.51	-542.8	357.0	1,868.0	1,837.3	30.66	60.918	
6,700.0	6,528.5	6,587.0	6,528.5	27.5	18.4	136.51	-542.8	357.0	1,868.0	1,836.9	31.04	60.181	
6,800.0	6,628.5	6,687.0	6,628.5	27.7	18.6	136.51	-542.8	357.0	1,868.0	1,836.6	31.42	59.458	
6,900.0	6,728.5	6,787.0	6,728.5	27.8	18.7	136.51	-542.8	357.0	1,868.0	1,836.2	31.80	58.748	
7,000.0	6,828.5	6,887.0	6,828.5	27.9	18.9	136.51	-542.8	357.0	1,868.0	1,835.8	32.18	58.052	
7,100.0	6,928.5	6,987.0	6,928.5	28.0	19.0	136.51	-542.8	357.0	1,868.0	1,835.4	32.56	57.369	
7,200.0	7,028.5	7,087.0	7,028.5	28.1	19.2	136.51	-542.8	357.0	1,868.0	1,835.0	32.95	56.699	
7,300.0	7,128.5	7,187.0	7,128.5	28.3	19.4	136.51	-542.8	357.0	1,868.0	1,834.6	33.33	56.042	
7,400.0	7,228.5	7,287.0	7,228.5	28.4	19.5	136.51	-542.8	357.0	1,868.0	1,834.2	33.72	55.398	
7,483.5	7,312.0	7,370.5	7,312.0	28.5	19.7	136.51	-542.8	357.0	1,868.0	1,833.9	34.04	54.869	

<b>Company:</b>	Trilogy Resources, LLC. Weld County, CO	<b>Local Co-ordinate Reference:</b>	Well Wind 17-11
<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 17-11	<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 17-11  
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 17-11
<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 17-11	<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
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