

ENSIGN

Directional

Well Name: Keto 7-44

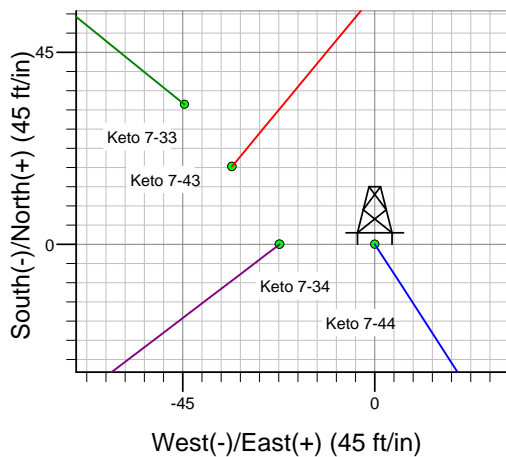
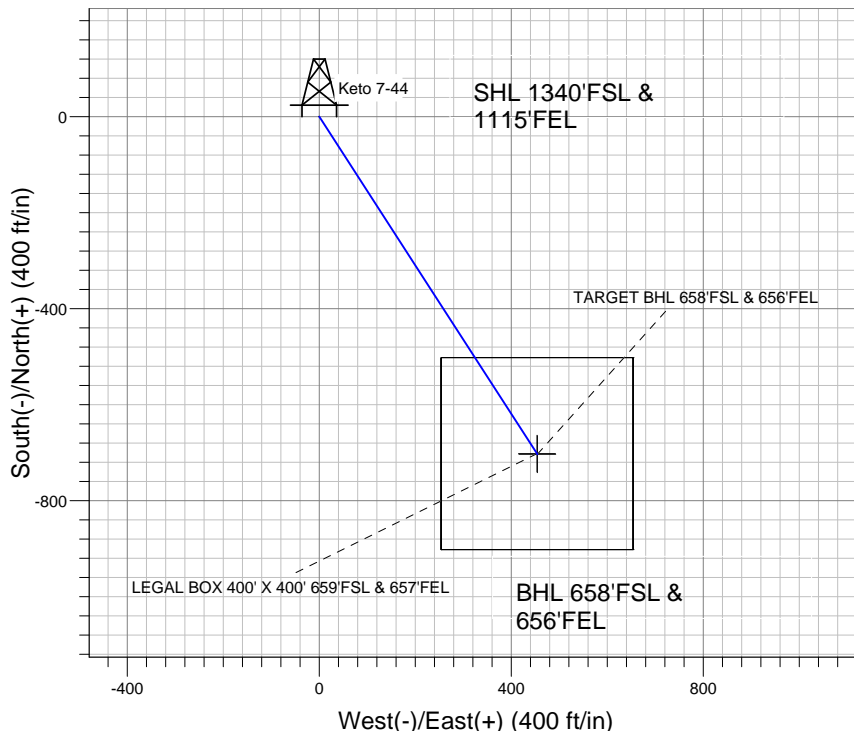
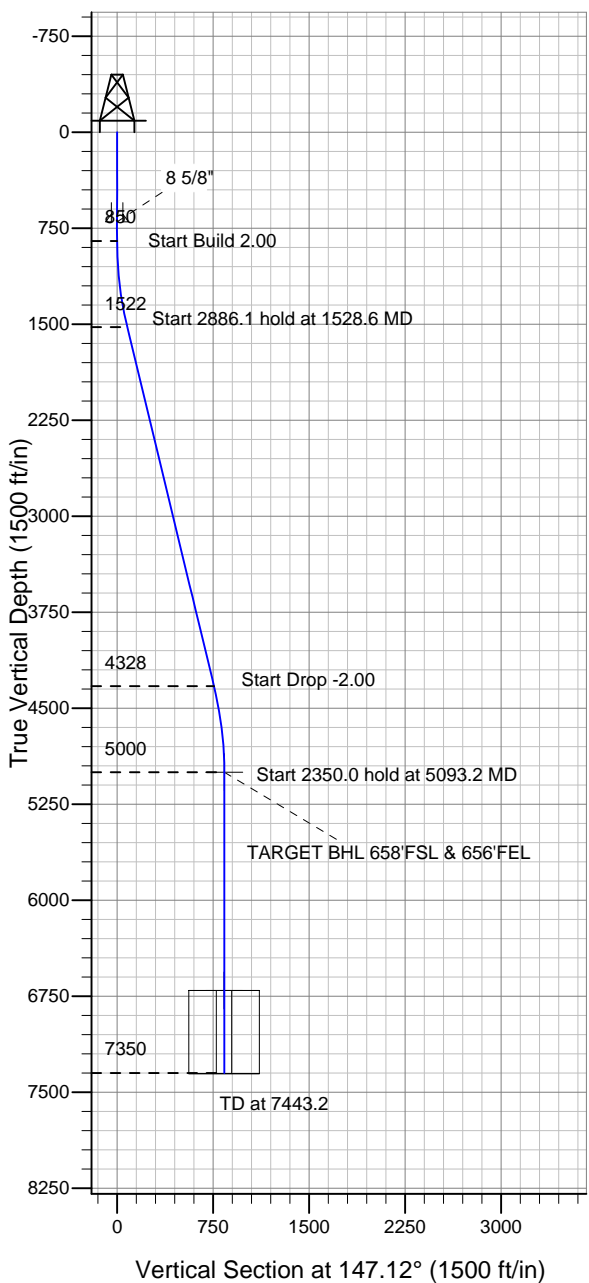
Surface Location: Keto 7-33 Pad Sec.7-T4N-R67W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4838.0

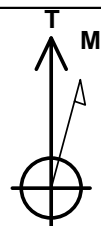
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1361483.51	3159543.35	40.324260	-104.927790	

Original Well Elev WELL @ 4851.0ft (Original Well Elev)

TRILLOGY RESOURCES, LLC. Weld County, CO



Keto 7-33 Pad Sec.7-T4N-R67W
Keto 7-44
Plan #2 (11-5-11)
17:27, November 07 2011



Azimuths to True North
Magnetic North: 8.89°

Magnetic Field
Strength: 53032.0nT
Dip Angle: 66.95°
Date: 11/7/2011
Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 658'FSL & 656'FEL	5000.0	-703.1	454.5	40.322330	-104.926160	Point
LEGAL BOX 400' X 400' 659'FSL & 657'FEL	6705.0	-702.1	453.5	40.322333	-104.926164	Rectangle (Sides: L400.0 W400.0)

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	850.0	0.00	0.00	850.0	0.0	0.0	0.00	0.00	0.0	
3	1528.6	13.57	147.12	1522.2	-67.2	43.4	2.00	147.12	80.0	
4	4414.7	13.57	147.12	4327.8	-635.9	411.1	0.00	0.00	757.2	
5	5093.2	0.00	0.00	5000.0	-703.1	454.5	2.00	180.00	837.2	TARGET BHL 658'FSL & 656'FEL
6	7443.2	0.00	0.00	7350.0	-703.1	454.5	0.00	0.00	837.2	



TRILLOGY RESOURCES, LLC. Weld County, CO

SEC.7-T4N-R67W

Keto 7-33 Pad Sec.7-T4N-R67W

Keto 7-44

Wellbore #1

Plan: Plan #2 (11-5-11)

Standard Planning Report

07 November, 2011

Database:	Landmark	Local Co-ordinate Reference:	Well Keto 7-44
Company:	TRILLOGY RESOURCES, LLC. Weld County, CO	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Project:	SEC.7-T4N-R67W	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site:	Keto 7-33 Pad Sec.7-T4N-R67W	North Reference:	True
Well:	Keto 7-44	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (11-5-11)		

Project	SEC.7-T4N-R67W, Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site Keto 7-33 Pad Sec.7-T4N-R67W					
Site Position:		Northing:	1,361,516.02 ft	Latitude:	40.324350
From:	Lat/Long	Easting:	3,159,498.53 ft	Longitude:	-104.927950
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.37 °

Well	Keto 7-44					
Well Position	+N/-S	-32.8 ft	Northing:	1,361,483.51 ft	Latitude:	40.324260
	+E/-W	44.6 ft	Easting:	3,159,543.35 ft	Longitude:	-104.927790
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,838.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/7/2011	8.89	66.95	53,032

Design	Plan #2 (11-5-11)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	147.12

Plan Sections										
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	
850.0	0.00	0.00	850.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,528.6	13.57	147.12	1,522.2	-67.2	43.4	2.00	2.00	0.00	147.12	
4,414.7	13.57	147.12	4,327.8	-635.9	411.1	0.00	0.00	0.00	0.00	
5,093.2	0.00	0.00	5,000.0	-703.1	454.5	2.00	-2.00	0.00	180.00	TARGET BHL 658'I
7,443.2	0.00	0.00	7,350.0	-703.1	454.5	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Keto 7-44
Company:	TRILLOGY RESOURCES, LLC. Weld County, CO	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Project:	SEC.7-T4N-R67W	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site:	Keto 7-33 Pad Sec.7-T4N-R67W	North Reference:	True
Well:	Keto 7-44	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (11-5-11)		

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
850.0	0.00	0.00	850.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.60	147.12	880.0	-0.1	0.1	0.2	2.00	2.00	0.00
920.0	1.40	147.12	920.0	-0.7	0.5	0.9	2.00	2.00	0.00
960.0	2.20	147.12	960.0	-1.8	1.1	2.1	2.00	2.00	0.00
1,000.0	3.00	147.12	999.9	-3.3	2.1	3.9	2.00	2.00	0.00
1,040.0	3.80	147.12	1,039.9	-5.3	3.4	6.3	2.00	2.00	0.00
1,080.0	4.60	147.12	1,079.8	-7.7	5.0	9.2	2.00	2.00	0.00
1,120.0	5.40	147.12	1,119.6	-10.7	6.9	12.7	2.00	2.00	0.00
1,160.0	6.20	147.12	1,159.4	-14.1	9.1	16.8	2.00	2.00	0.00
1,200.0	7.00	147.12	1,199.1	-17.9	11.6	21.4	2.00	2.00	0.00
1,240.0	7.80	147.12	1,238.8	-22.3	14.4	26.5	2.00	2.00	0.00
1,280.0	8.60	147.12	1,278.4	-27.1	17.5	32.2	2.00	2.00	0.00
1,320.0	9.40	147.12	1,317.9	-32.3	20.9	38.5	2.00	2.00	0.00
1,360.0	10.20	147.12	1,357.3	-38.0	24.6	45.3	2.00	2.00	0.00
1,400.0	11.00	147.12	1,396.6	-44.2	28.6	52.6	2.00	2.00	0.00
1,440.0	11.80	147.12	1,435.8	-50.8	32.9	60.5	2.00	2.00	0.00
1,480.0	12.60	147.12	1,474.9	-57.9	37.5	69.0	2.00	2.00	0.00
1,520.0	13.40	147.12	1,513.9	-65.5	42.3	78.0	2.00	2.00	0.00
1,528.6	13.57	147.12	1,522.2	-67.2	43.4	80.0	2.00	2.00	0.00
1,560.0	13.57	147.12	1,552.8	-73.4	47.4	87.4	0.00	0.00	0.00
1,600.0	13.57	147.12	1,591.7	-81.3	52.5	96.8	0.00	0.00	0.00
1,640.0	13.57	147.12	1,630.6	-89.1	57.6	106.1	0.00	0.00	0.00
1,680.0	13.57	147.12	1,669.4	-97.0	62.7	115.5	0.00	0.00	0.00
1,720.0	13.57	147.12	1,708.3	-104.9	67.8	124.9	0.00	0.00	0.00
1,760.0	13.57	147.12	1,747.2	-112.8	72.9	134.3	0.00	0.00	0.00
1,800.0	13.57	147.12	1,786.1	-120.7	78.0	143.7	0.00	0.00	0.00
1,840.0	13.57	147.12	1,825.0	-128.5	83.1	153.1	0.00	0.00	0.00
1,880.0	13.57	147.12	1,863.9	-136.4	88.2	162.5	0.00	0.00	0.00
1,920.0	13.57	147.12	1,902.7	-144.3	93.3	171.8	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Keto 7-44
Company:	TRILLOGY RESOURCES, LLC. Weld County, CO	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Project:	SEC.7-T4N-R67W	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site:	Keto 7-33 Pad Sec.7-T4N-R67W	North Reference:	True
Well:	Keto 7-44	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (11-5-11)		

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)
1,960.0	13.57	147.12	1,941.6	-152.2	98.4	181.2	0.00	0.00	0.00
2,000.0	13.57	147.12	1,980.5	-160.1	103.5	190.6	0.00	0.00	0.00
2,040.0	13.57	147.12	2,019.4	-168.0	108.6	200.0	0.00	0.00	0.00
2,080.0	13.57	147.12	2,058.3	-175.8	113.7	209.4	0.00	0.00	0.00
2,120.0	13.57	147.12	2,097.2	-183.7	118.8	218.8	0.00	0.00	0.00
2,160.0	13.57	147.12	2,136.0	-191.6	123.9	228.2	0.00	0.00	0.00
2,200.0	13.57	147.12	2,174.9	-199.5	129.0	237.5	0.00	0.00	0.00
2,240.0	13.57	147.12	2,213.8	-207.4	134.1	246.9	0.00	0.00	0.00
2,280.0	13.57	147.12	2,252.7	-215.3	139.2	256.3	0.00	0.00	0.00
2,320.0	13.57	147.12	2,291.6	-223.1	144.2	265.7	0.00	0.00	0.00
2,360.0	13.57	147.12	2,330.5	-231.0	149.3	275.1	0.00	0.00	0.00
2,400.0	13.57	147.12	2,369.3	-238.9	154.4	284.5	0.00	0.00	0.00
2,440.0	13.57	147.12	2,408.2	-246.8	159.5	293.9	0.00	0.00	0.00
2,480.0	13.57	147.12	2,447.1	-254.7	164.6	303.2	0.00	0.00	0.00
2,520.0	13.57	147.12	2,486.0	-262.6	169.7	312.6	0.00	0.00	0.00
2,560.0	13.57	147.12	2,524.9	-270.4	174.8	322.0	0.00	0.00	0.00
2,600.0	13.57	147.12	2,563.8	-278.3	179.9	331.4	0.00	0.00	0.00
2,640.0	13.57	147.12	2,602.6	-286.2	185.0	340.8	0.00	0.00	0.00
2,680.0	13.57	147.12	2,641.5	-294.1	190.1	350.2	0.00	0.00	0.00
2,720.0	13.57	147.12	2,680.4	-302.0	195.2	359.6	0.00	0.00	0.00
2,760.0	13.57	147.12	2,719.3	-309.8	200.3	368.9	0.00	0.00	0.00
2,800.0	13.57	147.12	2,758.2	-317.7	205.4	378.3	0.00	0.00	0.00
2,840.0	13.57	147.12	2,797.1	-325.6	210.5	387.7	0.00	0.00	0.00
2,880.0	13.57	147.12	2,835.9	-333.5	215.6	397.1	0.00	0.00	0.00
2,920.0	13.57	147.12	2,874.8	-341.4	220.7	406.5	0.00	0.00	0.00
2,960.0	13.57	147.12	2,913.7	-349.3	225.8	415.9	0.00	0.00	0.00
3,000.0	13.57	147.12	2,952.6	-357.1	230.9	425.3	0.00	0.00	0.00
3,040.0	13.57	147.12	2,991.5	-365.0	236.0	434.7	0.00	0.00	0.00
3,080.0	13.57	147.12	3,030.4	-372.9	241.1	444.0	0.00	0.00	0.00
3,120.0	13.57	147.12	3,069.2	-380.8	246.2	453.4	0.00	0.00	0.00
3,160.0	13.57	147.12	3,108.1	-388.7	251.3	462.8	0.00	0.00	0.00
3,200.0	13.57	147.12	3,147.0	-396.6	256.3	472.2	0.00	0.00	0.00
3,240.0	13.57	147.12	3,185.9	-404.4	261.4	481.6	0.00	0.00	0.00
3,280.0	13.57	147.12	3,224.8	-412.3	266.5	491.0	0.00	0.00	0.00
3,320.0	13.57	147.12	3,263.7	-420.2	271.6	500.4	0.00	0.00	0.00
3,360.0	13.57	147.12	3,302.5	-428.1	276.7	509.7	0.00	0.00	0.00
3,400.0	13.57	147.12	3,341.4	-436.0	281.8	519.1	0.00	0.00	0.00
3,440.0	13.57	147.12	3,380.3	-443.8	286.9	528.5	0.00	0.00	0.00
3,480.0	13.57	147.12	3,419.2	-451.7	292.0	537.9	0.00	0.00	0.00
3,520.0	13.57	147.12	3,458.1	-459.6	297.1	547.3	0.00	0.00	0.00
3,560.0	13.57	147.12	3,497.0	-467.5	302.2	556.7	0.00	0.00	0.00
3,600.0	13.57	147.12	3,535.8	-475.4	307.3	566.1	0.00	0.00	0.00
3,640.0	13.57	147.12	3,574.7	-483.3	312.4	575.4	0.00	0.00	0.00
3,680.0	13.57	147.12	3,613.6	-491.1	317.5	584.8	0.00	0.00	0.00
3,720.0	13.57	147.12	3,652.5	-499.0	322.6	594.2	0.00	0.00	0.00
3,760.0	13.57	147.12	3,691.4	-506.9	327.7	603.6	0.00	0.00	0.00
3,800.0	13.57	147.12	3,730.3	-514.8	332.8	613.0	0.00	0.00	0.00
3,840.0	13.57	147.12	3,769.1	-522.7	337.9	622.4	0.00	0.00	0.00
3,880.0	13.57	147.12	3,808.0	-530.6	343.0	631.8	0.00	0.00	0.00
3,920.0	13.57	147.12	3,846.9	-538.4	348.1	641.1	0.00	0.00	0.00
3,960.0	13.57	147.12	3,885.8	-546.3	353.2	650.5	0.00	0.00	0.00
4,000.0	13.57	147.12	3,924.7	-554.2	358.3	659.9	0.00	0.00	0.00
4,040.0	13.57	147.12	3,963.6	-562.1	363.4	669.3	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Keto 7-44
Company:	TRILLOGY RESOURCES, LLC. Weld County, CO	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Project:	SEC.7-T4N-R67W	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site:	Keto 7-33 Pad Sec.7-T4N-R67W	North Reference:	True
Well:	Keto 7-44	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (11-5-11)		

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	13.57	147.12	4,002.4	-570.0	368.5	678.7	0.00	0.00	0.00
4,120.0	13.57	147.12	4,041.3	-577.9	373.5	688.1	0.00	0.00	0.00
4,160.0	13.57	147.12	4,080.2	-585.7	378.6	697.5	0.00	0.00	0.00
4,200.0	13.57	147.12	4,119.1	-593.6	383.7	706.9	0.00	0.00	0.00
4,240.0	13.57	147.12	4,158.0	-601.5	388.8	716.2	0.00	0.00	0.00
4,280.0	13.57	147.12	4,196.8	-609.4	393.9	725.6	0.00	0.00	0.00
4,320.0	13.57	147.12	4,235.7	-617.3	399.0	735.0	0.00	0.00	0.00
4,360.0	13.57	147.12	4,274.6	-625.1	404.1	744.4	0.00	0.00	0.00
4,400.0	13.57	147.12	4,313.5	-633.0	409.2	753.8	0.00	0.00	0.00
4,414.7	13.57	147.12	4,327.8	-635.9	411.1	757.2	0.00	0.00	0.00
4,440.0	13.06	147.12	4,352.4	-640.8	414.3	763.1	2.00	-2.00	0.00
4,480.0	12.26	147.12	4,391.4	-648.2	419.0	771.8	2.00	-2.00	0.00
4,520.0	11.46	147.12	4,430.6	-655.1	423.5	780.1	2.00	-2.00	0.00
4,560.0	10.66	147.12	4,469.8	-661.5	427.6	787.7	2.00	-2.00	0.00
4,600.0	9.86	147.12	4,509.2	-667.5	431.5	794.9	2.00	-2.00	0.00
4,640.0	9.06	147.12	4,548.7	-673.0	435.1	801.4	2.00	-2.00	0.00
4,680.0	8.26	147.12	4,588.2	-678.1	438.4	807.5	2.00	-2.00	0.00
4,720.0	7.46	147.12	4,627.8	-682.7	441.3	812.9	2.00	-2.00	0.00
4,760.0	6.66	147.12	4,667.5	-686.8	444.0	817.9	2.00	-2.00	0.00
4,800.0	5.86	147.12	4,707.3	-690.5	446.4	822.2	2.00	-2.00	0.00
4,840.0	5.06	147.12	4,747.1	-693.7	448.4	826.0	2.00	-2.00	0.00
4,880.0	4.26	147.12	4,787.0	-696.4	450.2	829.3	2.00	-2.00	0.00
4,920.0	3.46	147.12	4,826.9	-698.7	451.7	832.0	2.00	-2.00	0.00
4,960.0	2.66	147.12	4,866.8	-700.5	452.8	834.1	2.00	-2.00	0.00
5,000.0	1.86	147.12	4,906.8	-701.8	453.7	835.7	2.00	-2.00	0.00
5,040.0	1.06	147.12	4,946.8	-702.7	454.2	836.7	2.00	-2.00	0.00
5,080.0	0.26	147.12	4,986.8	-703.1	454.5	837.2	2.00	-2.00	0.00
5,093.2	0.00	0.00	5,000.0	-703.1	454.5	837.2	2.00	-2.00	0.00
TARGET BHL 658'FSL & 656'FEL									
5,120.0	0.00	0.00	5,026.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,160.0	0.00	0.00	5,066.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,200.0	0.00	0.00	5,106.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,240.0	0.00	0.00	5,146.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,280.0	0.00	0.00	5,186.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,320.0	0.00	0.00	5,226.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,360.0	0.00	0.00	5,266.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,400.0	0.00	0.00	5,306.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,440.0	0.00	0.00	5,346.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,480.0	0.00	0.00	5,386.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,520.0	0.00	0.00	5,426.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,560.0	0.00	0.00	5,466.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,600.0	0.00	0.00	5,506.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,640.0	0.00	0.00	5,546.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,680.0	0.00	0.00	5,586.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,720.0	0.00	0.00	5,626.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,760.0	0.00	0.00	5,666.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,800.0	0.00	0.00	5,706.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,840.0	0.00	0.00	5,746.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,880.0	0.00	0.00	5,786.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,920.0	0.00	0.00	5,826.8	-703.1	454.5	837.2	0.00	0.00	0.00
5,960.0	0.00	0.00	5,866.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,000.0	0.00	0.00	5,906.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,040.0	0.00	0.00	5,946.8	-703.1	454.5	837.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Keto 7-44
Company:	TRILLOGY RESOURCES, LLC. Weld County, CO	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Project:	SEC.7-T4N-R67W	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site:	Keto 7-33 Pad Sec.7-T4N-R67W	North Reference:	True
Well:	Keto 7-44	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (11-5-11)		

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)
6,080.0	0.00	0.00	5,986.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,120.0	0.00	0.00	6,026.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,160.0	0.00	0.00	6,066.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,200.0	0.00	0.00	6,106.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,240.0	0.00	0.00	6,146.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,280.0	0.00	0.00	6,186.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,320.0	0.00	0.00	6,226.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,360.0	0.00	0.00	6,266.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,400.0	0.00	0.00	6,306.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,440.0	0.00	0.00	6,346.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,480.0	0.00	0.00	6,386.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,520.0	0.00	0.00	6,426.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,560.0	0.00	0.00	6,466.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,600.0	0.00	0.00	6,506.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,640.0	0.00	0.00	6,546.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,680.0	0.00	0.00	6,586.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,720.0	0.00	0.00	6,626.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,760.0	0.00	0.00	6,666.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,793.2	0.00	0.00	6,700.0	-703.1	454.5	837.2	0.00	0.00	0.00
NIOBRARA									
6,798.2	0.00	0.00	6,705.0	-703.1	454.5	837.2	0.00	0.00	0.00
LEGAL BOX 400' X 400' 659'FSL & 657'FEL									
6,800.0	0.00	0.00	6,706.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,840.0	0.00	0.00	6,746.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,880.0	0.00	0.00	6,786.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,920.0	0.00	0.00	6,826.8	-703.1	454.5	837.2	0.00	0.00	0.00
6,960.0	0.00	0.00	6,866.8	-703.1	454.5	837.2	0.00	0.00	0.00
7,000.0	0.00	0.00	6,906.8	-703.1	454.5	837.2	0.00	0.00	0.00
7,040.0	0.00	0.00	6,946.8	-703.1	454.5	837.2	0.00	0.00	0.00
7,080.0	0.00	0.00	6,986.8	-703.1	454.5	837.2	0.00	0.00	0.00
7,120.0	0.00	0.00	7,026.8	-703.1	454.5	837.2	0.00	0.00	0.00
7,138.2	0.00	0.00	7,045.0	-703.1	454.5	837.2	0.00	0.00	0.00
CODELL									
7,160.0	0.00	0.00	7,066.8	-703.1	454.5	837.2	0.00	0.00	0.00
7,200.0	0.00	0.00	7,106.8	-703.1	454.5	837.2	0.00	0.00	0.00
7,240.0	0.00	0.00	7,146.8	-703.1	454.5	837.2	0.00	0.00	0.00
7,280.0	0.00	0.00	7,186.8	-703.1	454.5	837.2	0.00	0.00	0.00
7,320.0	0.00	0.00	7,226.8	-703.1	454.5	837.2	0.00	0.00	0.00
7,360.0	0.00	0.00	7,266.8	-703.1	454.5	837.2	0.00	0.00	0.00
7,400.0	0.00	0.00	7,306.8	-703.1	454.5	837.2	0.00	0.00	0.00
7,440.0	0.00	0.00	7,346.8	-703.1	454.5	837.2	0.00	0.00	0.00
7,443.2	0.00	0.00	7,350.0	-703.1	454.5	837.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Keto 7-44
Company:	TRILLOGY RESOURCES, LLC. Weld County, CO	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Project:	SEC.7-T4N-R67W	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site:	Keto 7-33 Pad Sec.7-T4N-R67W	North Reference:	True
Well:	Keto 7-44	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (11-5-11)		

Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
TARGET BHL 658'FS	0.00	0.00	5,000.0	-703.1	454.5	1,360,783.40	3,160,002.37	40.322330	-104.926160
- plan hits target center									
- Point									
LEGAL BOX 400' X 400'	0.00	0.00	6,705.0	-702.1	453.5	1,360,784.37	3,160,001.32	40.322333	-104.926164
- plan misses target center by 1.4ft at 6798.2ft MD (6705.0 TVD, -703.1 N, 454.5 E)									
- Rectangle (sides W400.0 H400.0 D650.0)									

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 (°)
6,793.2	6,700.0	NIOBRARA		0.00	
7,138.2	7,045.0	CODELL		0.00	



Directional

TRILLOGY RESOURCES, LLC. Weld County, CO

SEC.7-T4N-R67W

Keto 7-33 Pad Sec.7-T4N-R67W

Keto 7-44

Wellbore #1

Plan #2 (11-5-11)

Anticollision Report

07 November, 2011

Company:	TRILLOGY RESOURCES, LLC. Weld County, CO	Local Co-ordinate Reference:	Well Keto 7-44
Project:	SEC.7-T4N-R67W	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	Keto 7-33 Pad Sec.7-T4N-R67W	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Keto 7-44	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (11-5-11)	Offset TVD Reference:	Offset Datum

Reference	Plan #2 (11-5-11)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date	11/7/2011		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	7,443.2	Plan #2 (11-5-11) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Separation Factor	Warning	
Offset Well - Wellbore - Design						
Keto 7-33 Pad Sec.7-T4N-R67W						
Keto 7-34 - Wellbore #1 - Plan #2 (11-5-11)	850.0	850.0	22.3	18.7	6.203	CC, ES
Keto 7-34 - Wellbore #1 - Plan #2 (11-5-11)	1,000.0	999.9	24.7	20.5	5.858	SF
Keto 7-43 - Wellbore #1 - Plan #1 (11-5-11)	850.0	850.0	38.1	34.5	10.594	CC, ES
Keto 7-43 - Wellbore #1 - Plan #1 (11-5-11)	1,000.0	999.9	41.6	37.4	9.880	SF

Offset Design		Keto 7-33 Pad Sec.7-T4N-R67W - Keto 7-34 - Wellbore #1 - Plan #2 (11-5-11)											Offset Site Error:		0.0 ft
Survey Program:		0-MWD											Offset Well Error:		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		
0.0	0.0	0.0	0.0	0.0	0.0	-89.99	0.0	-22.3	22.3						
100.0	100.0	100.0	100.0	0.1	0.1	-89.99	0.0	-22.3	22.3	22.1	0.22	99.244			
200.0	200.0	200.0	200.0	0.3	0.3	-89.99	0.0	-22.3	22.3	21.6	0.67	33.081			
300.0	300.0	300.0	300.0	0.6	0.6	-89.99	0.0	-22.3	22.3	21.2	1.12	19.849			
400.0	400.0	400.0	400.0	0.8	0.8	-89.99	0.0	-22.3	22.3	20.7	1.57	14.178			
500.0	500.0	500.0	500.0	1.0	1.0	-89.99	0.0	-22.3	22.3	20.3	2.02	11.027			
600.0	600.0	600.0	600.0	1.2	1.2	-89.99	0.0	-22.3	22.3	19.8	2.47	9.022			
700.0	700.0	700.0	700.0	1.5	1.5	-89.99	0.0	-22.3	22.3	19.4	2.92	7.634			
800.0	800.0	800.0	800.0	1.7	1.7	-89.99	0.0	-22.3	22.3	18.9	3.37	6.616			
850.0	850.0	850.0	850.0	1.8	1.8	-89.99	0.0	-22.3	22.3	18.7	3.60	6.203	CC, ES		
900.0	900.0	900.0	900.0	1.9	1.9	123.82	0.0	-22.3	22.5	18.7	3.81	5.921			
1,000.0	999.9	999.9	999.9	2.1	2.1	130.53	0.0	-22.3	24.7	20.5	4.21	5.858	SF		
1,100.0	1,099.7	1,099.4	1,099.4	2.3	2.3	140.05	-0.3	-22.6	29.9	25.3	4.61	6.492			
1,200.0	1,199.1	1,198.2	1,198.1	2.5	2.5	145.49	-2.3	-25.4	40.1	35.1	4.99	8.046			
1,300.0	1,298.2	1,296.2	1,295.9	2.7	2.7	147.33	-6.4	-30.7	55.0	49.7	5.39	10.221			
1,400.0	1,396.6	1,393.3	1,392.5	3.0	2.9	147.35	-12.5	-38.6	74.5	68.6	5.81	12.807			
1,500.0	1,494.4	1,489.1	1,487.4	3.4	3.2	146.61	-20.4	-49.0	98.3	92.0	6.28	15.646			
1,528.6	1,522.2	1,516.2	1,514.1	3.5	3.2	146.34	-22.9	-52.4	105.9	99.4	6.42	16.482			
1,600.0	1,591.7	1,583.5	1,580.4	3.8	3.4	145.60	-30.0	-61.7	125.7	118.9	6.81	18.467			
1,700.0	1,688.9	1,676.8	1,671.8	4.2	3.7	144.00	-41.4	-76.6	154.8	147.4	7.39	20.951			
1,800.0	1,786.1	1,768.9	1,761.4	4.6	4.1	142.09	-54.4	-93.7	185.7	177.7	8.03	23.135			
1,900.0	1,883.3	1,861.9	1,851.2	5.1	4.4	140.12	-69.0	-112.8	218.1	209.4	8.71	25.042			

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

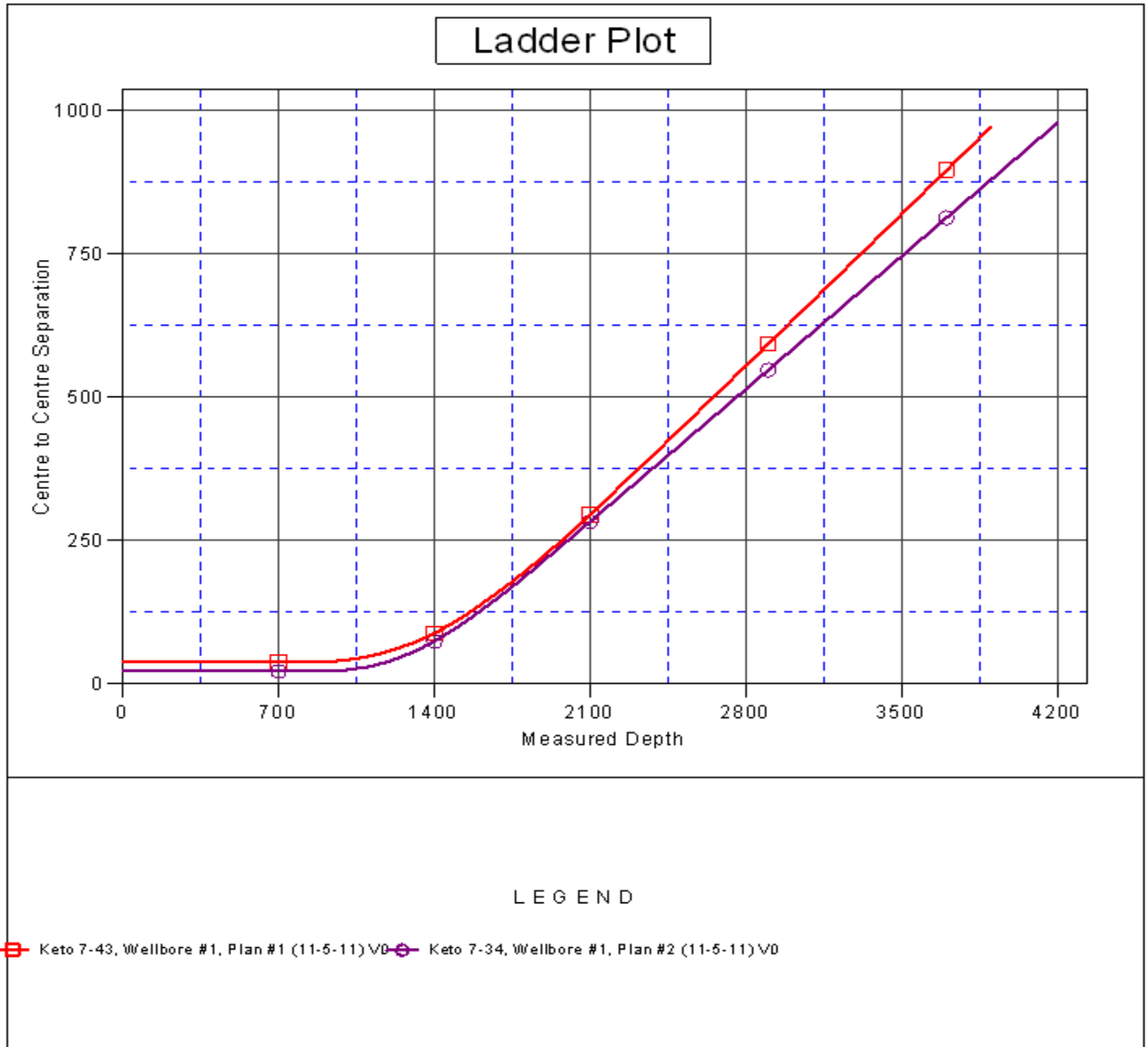
Company:	TRILLOGY RESOURCES, LLC. Weld County, CO	Local Co-ordinate Reference:	Well Keto 7-44
Project:	SEC.7-T4N-R67W	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	Keto 7-33 Pad Sec.7-T4N-R67W	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Keto 7-44	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (11-5-11)	Offset TVD Reference:	Offset Datum

Offset Design Keto 7-33 Pad Sec.7-T4N-R67W - Keto 7-34 - Wellbore #1 - Plan #2 (11-5-11)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	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	
2,000.0	1,980.5	1,956.2	1,942.3	5.5	4.9	138.59	-83.9	-132.4	250.8	241.4	9.42	26.615		
2,100.0	2,077.7	2,050.5	2,033.3	6.0	5.3	137.41	-98.8	-152.0	283.6	273.5	10.15	27.932		
2,200.0	2,174.9	2,144.8	2,124.3	6.5	5.8	136.48	-113.7	-171.5	316.6	305.7	10.90	29.037		
2,300.0	2,272.1	2,239.1	2,215.4	7.0	6.2	135.72	-128.7	-191.1	349.6	337.9	11.66	29.974		
2,400.0	2,369.3	2,333.5	2,306.4	7.4	6.7	135.10	-143.6	-210.7	382.6	370.2	12.43	30.773		
2,500.0	2,466.5	2,427.8	2,397.5	7.9	7.2	134.57	-158.5	-230.3	415.7	402.5	13.21	31.461		
2,600.0	2,563.8	2,522.1	2,488.5	8.4	7.7	134.12	-173.4	-249.9	448.8	434.8	14.00	32.058		
2,700.0	2,661.0	2,616.4	2,579.5	8.9	8.2	133.73	-188.4	-269.5	481.9	467.1	14.79	32.580		
2,800.0	2,758.2	2,710.7	2,670.6	9.4	8.7	133.39	-203.3	-289.0	515.0	499.4	15.59	33.039		
2,900.0	2,855.4	2,805.0	2,761.6	9.9	9.2	133.09	-218.2	-308.6	548.2	531.8	16.39	33.445		
3,000.0	2,952.6	2,899.3	2,852.7	10.4	9.7	132.83	-233.1	-328.2	581.3	564.1	17.20	33.806		
3,100.0	3,049.8	2,993.6	2,943.7	10.9	10.2	132.60	-248.0	-347.8	614.5	596.5	18.00	34.130		
3,200.0	3,147.0	3,087.9	3,034.7	11.4	10.7	132.38	-263.0	-367.4	647.7	628.9	18.82	34.420		
3,300.0	3,244.2	3,182.2	3,125.8	11.9	11.2	132.19	-277.9	-387.0	680.9	661.2	19.63	34.683		
3,400.0	3,341.4	3,276.6	3,216.8	12.4	11.7	132.02	-292.8	-406.5	714.1	693.6	20.45	34.921		
3,500.0	3,438.6	3,370.9	3,307.9	12.9	12.2	131.86	-307.7	-426.1	747.2	726.0	21.27	35.138		
3,600.0	3,535.8	3,465.2	3,398.9	13.4	12.8	131.72	-322.7	-445.7	780.5	758.4	22.09	35.336		
3,700.0	3,633.0	3,559.5	3,489.9	13.9	13.3	131.59	-337.6	-465.3	813.7	790.7	22.91	35.518		
3,800.0	3,730.3	3,653.8	3,581.0	14.4	13.8	131.47	-352.5	-484.9	846.9	823.1	23.73	35.685		
3,900.0	3,827.5	3,748.1	3,672.0	14.9	14.3	131.35	-367.4	-504.5	880.1	855.5	24.56	35.839		
4,000.0	3,924.7	3,842.4	3,763.0	15.5	14.8	131.25	-382.4	-524.0	913.3	887.9	25.38	35.982		
4,100.0	4,021.9	3,936.7	3,854.1	16.0	15.4	131.15	-397.3	-543.6	946.5	920.3	26.21	36.115		
4,200.0	4,119.1	4,031.0	3,945.1	16.5	15.9	131.06	-412.2	-563.2	979.7	952.7	27.04	36.238		

Keto 7-33 Pad Sec.7-T4N-R67W - Keto 7-43 - Wellbore #1 - Plan #1 (11-5-11)													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		
0.0	0.0	0.0	0.0	0.0	0.0	-61.43	18.2	-33.5	38.1					
100.0	100.0	100.0	100.0	0.1	0.1	-61.43	18.2	-33.5	38.1	37.9	0.22	169.505		
200.0	200.0	200.0	200.0	0.3	0.3	-61.43	18.2	-33.5	38.1	37.4	0.67	56.502		
300.0	300.0	300.0	300.0	0.6	0.6	-61.43	18.2	-33.5	38.1	37.0	1.12	33.901		
400.0	400.0	400.0	400.0	0.8	0.8	-61.43	18.2	-33.5	38.1	36.5	1.57	24.215		
500.0	500.0	500.0	500.0	1.0	1.0	-61.43	18.2	-33.5	38.1	36.1	2.02	18.834		
600.0	600.0	600.0	600.0	1.2	1.2	-61.43	18.2	-33.5	38.1	35.6	2.47	15.410		
700.0	700.0	700.0	700.0	1.5	1.5	-61.43	18.2	-33.5	38.1	35.2	2.92	13.039		
800.0	800.0	800.0	800.0	1.7	1.7	-61.43	18.2	-33.5	38.1	34.7	3.37	11.300		
850.0	850.0	850.0	850.0	1.8	1.8	-61.43	18.2	-33.5	38.1	34.5	3.60	10.594 CC, ES		
900.0	900.0	900.0	900.0	1.9	1.9	151.76	18.2	-33.5	38.5	34.7	3.81	10.107		
1,000.0	999.9	999.9	999.9	2.1	2.1	154.00	18.2	-33.5	41.6	37.4	4.21	9.880 SF		
1,100.0	1,099.7	1,099.7	1,099.7	2.3	2.4	157.61	18.2	-33.5	48.0	43.3	4.62	10.386		
1,200.0	1,199.1	1,199.1	1,199.1	2.5	2.6	161.50	18.2	-33.5	57.8	52.7	5.03	11.485		
1,300.0	1,298.2	1,298.1	1,298.1	2.7	2.8	165.31	18.5	-33.2	71.1	65.7	5.44	13.073		
1,400.0	1,396.6	1,396.1	1,396.0	3.0	3.0	170.27	21.1	-31.1	88.4	82.6	5.85	15.129		
1,500.0	1,494.4	1,492.6	1,492.3	3.4	3.2	175.49	26.1	-26.9	110.3	104.1	6.25	17.643		
1,528.6	1,522.2	1,519.8	1,519.4	3.5	3.3	176.92	28.0	-25.4	117.5	111.1	6.37	18.439		
1,600.0	1,591.7	1,587.5	1,586.7	3.8	3.5	-179.68	33.5	-20.8	136.3	129.6	6.69	20.369		
1,700.0	1,688.9	1,681.2	1,679.6	4.2	3.7	-175.38	43.2	-12.8	164.2	157.0	7.16	22.926		
1,800.0	1,786.1	1,773.5	1,770.6	4.6	3.9	-171.50	55.0	-3.1	194.1	186.4	7.66	25.329		
1,900.0	1,883.3	1,864.3	1,859.6	5.1	4.2	-168.00	68.8	8.3	226.1	217.9	8.20	27.584		
2,000.0	1,980.5	1,953.4	1,946.4	5.5	4.5	-164.83	84.5	21.3	260.2	251.5	8.76	29.708		
2,100.0	2,077.7	2,045.2	2,035.3	6.0	4.9	-161.99	102.0	35.7	296.1	286.7	9.36	31.629		
2,200.0	2,174.9	2,137.6	2,124.8	6.5	5.2	-159.73	119.6	50.3	332.5	322.5	9.99	33.296		
2,300.0	2,272.1	2,230.0	2,214.3	7.0	5.6	-157.91	137.3	64.9	369.2	358.6	10.62	34.775		
2,400.0	2,369.3	2,322.4	2,303.9	7.4	6.0	-156.42	155.0	79.5	406.2	395.0	11.26	36.075		
2,500.0	2,466.5	2,414.8	2,393.4	7.9	6.4	-155.18	172.6	94.1	443.5	431.6	11.91	37.226		
2,600.0	2,563.8	2,507.2	2,482.9	8.4	6.8	-154.13	190.3	108.7	480.8	468.3	12.57	38.248		
2,700.0	2,661.0	2,599.7	2,572.5	8.9	7.3	-153.23	208.0	123.3	518.3	505.1	13.24	39.160		
2,800.0	2,758.2	2,692.1	2,662.0	9.4	7.7	-152.45	225.6	137.9	555.9	542.0	13.91	39.977		
2,900.0	2,855.4	2,784.5	2,751.5	9.9	8.1	-151.77	243.3	152.4	593.6	579.0	14.58	40.713		
3,000.0	2,952.6	2,876.9	2,841.1	10.4	8.6	-151.16	260.9	167.0	631.3	616.0	15.26	41.378		
3,100.0	3,049.8	2,969.3	2,930.6	10.9	9.0	-150.63	278.6	181.6	669.1	653.1	15.94	41.982		
3,200.0	3,147.0	3,061.8	3,020.1	11.4	9.5	-150.16	296.3	196.2	706.9	690.3	16.62	42.532		
3,300.0	3,244.2	3,154.2	3,109.7	11.9	9.9	-149.73	313.9	210.8	744.8	727.5	17.31	43.036		
3,400.0	3,341.4	3,246.6	3,199.2	12.4	10.4	-149.34	331.6	225.4	782.7	764.7	17.99	43.497		
3,500.0	3,438.6	3,339.0	3,288.7	12.9	10.8	-148.99	349.3	240.0	820.6	801.9	18.68	43.922		
3,600.0	3,535.8	3,431.4	3,378.3	13.4	11.3	-148.67	366.9	254.6	858.5	839.2	19.37	44.314		
3,700.0	3,633.0	3,523.8	3,467.8	13.9	11.7	-148.38	384.6	269.2	896.5	876.4	20.07	44.676		
3,800.0	3,730.3	3,616.3	3,557.3	14.4	12.2	-148.11	402.2	283.8	934.5	913.7	20.76	45.012		
3,900.0	3,827.5	3,708.7	3,646.9	14.9	12.7	-147.86	419.9	298.3	972.5	951.0	21.46	45.325		

Company:	TRILLOGY RESOURCES, LLC. Weld County, CO	Local Co-ordinate Reference:	Well Keto 7-44
Project:	SEC.7-T4N-R67W	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	Keto 7-33 Pad Sec.7-T4N-R67W	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Keto 7-44	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (11-5-11)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4851.0ft (Original Well Elev) Coordinates are relative to: Keto 7-44
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.37°



Company:	TRILLOGY RESOURCES, LLC. Weld County, CO	Local Co-ordinate Reference:	Well Keto 7-44
Project:	SEC.7-T4N-R67W	TVD Reference:	WELL @ 4851.0ft (Original Well Elev)
Reference Site:	Keto 7-33 Pad Sec.7-T4N-R67W	MD Reference:	WELL @ 4851.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Keto 7-44	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (11-5-11)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4851.0ft (Original Well Elev) Coordinates are relative to: Keto 7-44
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.37°

