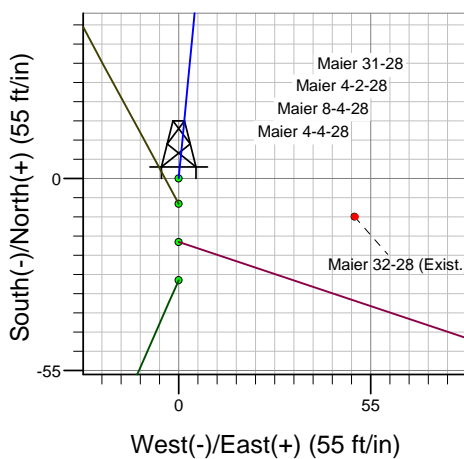
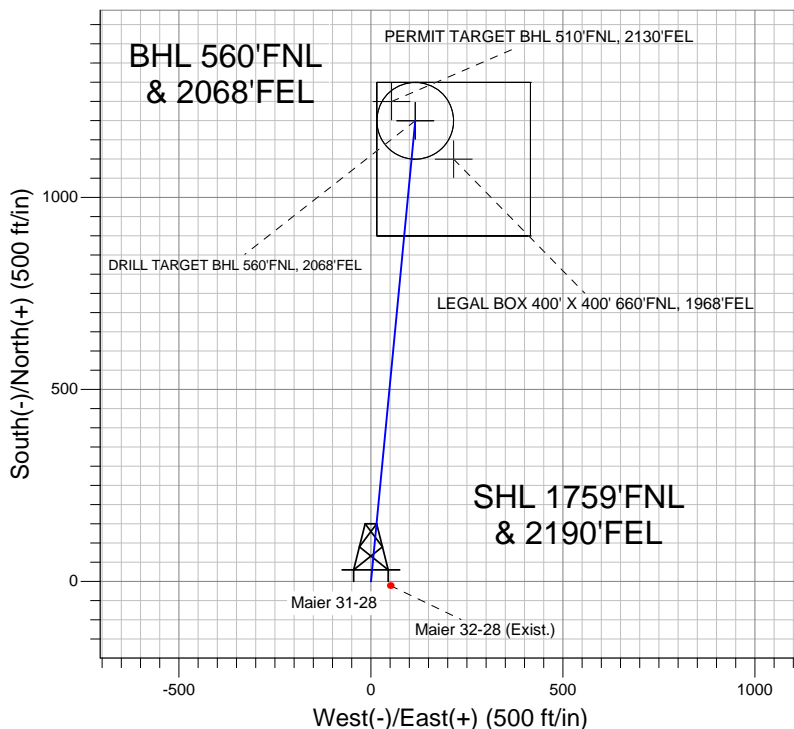
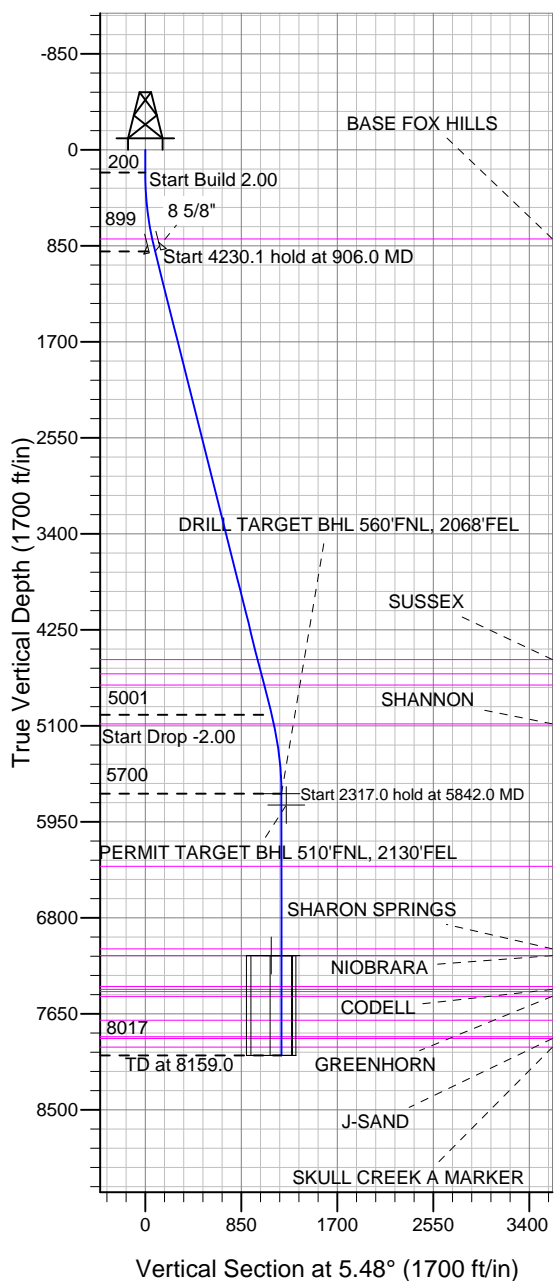


Well Name: Maier 31-28

Surface Location: Maier 31-28 Pad Sec.28-T2N-R66W
North American Datum 1983, US State Plane 1983 Colorado Northern Zone
Ground Elevation: 4931.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1284297.93	3201199.44	40.111550	-104.780640	
		Original Well Elev	WELL @ 4943.0ft (Original Well Elev)			

EnCana Oil & Gas Weld County CO



Maier 31-28 Pad Sec.28-T2N-R66W
Maier 31-28
Plan #1 (4-02-12)
12:23, April 04 2012



Azimuths to True North
Magnetic North: 8.74°
Magnetic Field
Strength: 52892.8snT
Dip Angle: 66.79°
Date: 4/2/2012
Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
DRILL TARGET BHL 560'FNL, 2068'FEL	5700.0	1199.5	115.1	40.114843	-104.780228	Point
PERMIT TARGET BHL 510'FNL, 2130'FEL	5800.0	1249.5	53.1	40.114980	-104.780450	Point
LEGAL BOX 400' X 400' 660'FNL, 1968'FEL	7133.0	1099.5	215.1	40.114568	-104.779871	Rectangle (Sides: L400.0 W400.0)
TARGET CIRCLE 560'FNL & 2068'FEL	7133.0	1199.5	115.1	40.114843	-104.780228	Circle (Radius: 100.0)

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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	906.0	14.12	5.48	898.9	86.2	8.3	2.00	5.48	86.5	
4	5136.1	14.12	5.48	5001.1	1113.3	106.8	0.00	0.00	1118.5	
5	5842.0	0.00	0.00	5700.0	1199.5	115.1	2.00	180.00	1205.0	DRILL TARGET BHL 560'FNL, 2068'FEL
6	8159.0	0.00	0.00	8017.0	1199.5	115.1	0.00	0.00	1205.0	



EnCana Oil & Gas Weld County CO

SEC.28-T2N-R66W

Maier 31-28 Pad Sec.28-T2N-R66W

Maier 31-28

Wellbore #1

Plan: Plan #1 (4-02-12)

Standard Planning Report

04 April, 2012

Database:	Landmark	Local Co-ordinate Reference:	Well Maier 31-28
Company:	EnCana Oil & Gas Weld County CO	TVD Reference:	WELL @ 4943.0ft (Original Well Elev)
Project:	SEC.28-T2N-R66W	MD Reference:	WELL @ 4943.0ft (Original Well Elev)
Site:	Maier 31-28 Pad Sec.28-T2N-R66W	North Reference:	True
Well:	Maier 31-28	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (4-02-12)		

Project	SEC.28-T2N-R66W		
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		Maier 31-28 Pad Sec.28-T2N-R66W			
Site Position:		Northing:	1,284,297.93ft	Latitude:	40.111550
From:	Lat/Long	Easting:	3,201,199.44 ft	Longitude:	-104.780640
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.46 °

Well	Maier 31-28					
Well Position	+N-S	0.0 ft	Northing:	1,284,297.93 ft	Latitude:	40.111550
	+E-W	0.0 ft	Easting:	3,201,199.44 ft	Longitude:	-104.780640
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,931.0 ft

Wellbore #1					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/2/2012	8.74	66.79	52,893

Design	Plan #1 (4-02-12)			
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	5.48

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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
906.0	14.12	5.48	898.9	86.2	8.3	2.00	2.00	0.00	5.48	
5,136.1	14.12	5.48	5,001.1	1,113.3	106.8	0.00	0.00	0.00	0.00	
5,842.0	0.00	0.00	5,700.0	1,199.5	115.1	2.00	-2.00	0.00	180.00	DRILL TARGET B-
8,159.0	0.00	0.00	8,017.0	1,199.5	115.1	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Maier 31-28
Company:	EnCana Oil & Gas Weld County CO	TVD Reference:	WELL @ 4943.0ft (Original Well Elev)
Project:	SEC.28-T2N-R66W	MD Reference:	WELL @ 4943.0ft (Original Well Elev)
Site:	Maier 31-28 Pad Sec.28-T2N-R66W	North Reference:	True
Well:	Maier 31-28	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (4-02-12)		

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	0.80	5.48	240.0	0.3	0.0	0.3	2.00	2.00	0.00
280.0	1.60	5.48	280.0	1.1	0.1	1.1	2.00	2.00	0.00
320.0	2.40	5.48	320.0	2.5	0.2	2.5	2.00	2.00	0.00
360.0	3.20	5.48	359.9	4.4	0.4	4.5	2.00	2.00	0.00
400.0	4.00	5.48	399.8	6.9	0.7	7.0	2.00	2.00	0.00
440.0	4.80	5.48	439.7	10.0	1.0	10.0	2.00	2.00	0.00
480.0	5.60	5.48	479.6	13.6	1.3	13.7	2.00	2.00	0.00
520.0	6.40	5.48	519.3	17.8	1.7	17.9	2.00	2.00	0.00
560.0	7.20	5.48	559.1	22.5	2.2	22.6	2.00	2.00	0.00
600.0	8.00	5.48	598.7	27.8	2.7	27.9	2.00	2.00	0.00
640.0	8.80	5.48	638.3	33.6	3.2	33.7	2.00	2.00	0.00
680.0	9.60	5.48	677.8	39.9	3.8	40.1	2.00	2.00	0.00
720.0	10.40	5.48	717.1	46.8	4.5	47.1	2.00	2.00	0.00
760.0	11.20	5.48	756.4	54.3	5.2	54.6	2.00	2.00	0.00
793.2	11.86	5.48	789.0	60.9	5.8	61.2	2.00	2.00	0.00
BASE FOX HILLS									
800.0	12.00	5.48	795.6	62.3	6.0	62.6	2.00	2.00	0.00
840.0	12.80	5.48	834.7	70.9	6.8	71.2	2.00	2.00	0.00
880.0	13.60	5.48	873.6	80.0	7.7	80.3	2.00	2.00	0.00
906.0	14.12	5.48	898.9	86.2	8.3	86.5	2.00	2.00	0.00
907.2	14.12	5.48	900.0	86.4	8.3	86.8	0.00	0.00	0.00
8 5/8"									
920.0	14.12	5.48	912.5	89.6	8.6	90.0	0.00	0.00	0.00
960.0	14.12	5.48	951.2	99.3	9.5	99.7	0.00	0.00	0.00
1,000.0	14.12	5.48	990.0	109.0	10.5	109.5	0.00	0.00	0.00
1,040.0	14.12	5.48	1,028.8	118.7	11.4	119.2	0.00	0.00	0.00
1,080.0	14.12	5.48	1,067.6	128.4	12.3	129.0	0.00	0.00	0.00
1,120.0	14.12	5.48	1,106.4	138.1	13.3	138.8	0.00	0.00	0.00
1,160.0	14.12	5.48	1,145.2	147.8	14.2	148.5	0.00	0.00	0.00
1,200.0	14.12	5.48	1,184.0	157.6	15.1	158.3	0.00	0.00	0.00
1,240.0	14.12	5.48	1,222.8	167.3	16.1	168.0	0.00	0.00	0.00
1,280.0	14.12	5.48	1,261.6	177.0	17.0	177.8	0.00	0.00	0.00
1,320.0	14.12	5.48	1,300.4	186.7	17.9	187.5	0.00	0.00	0.00
1,360.0	14.12	5.48	1,339.2	196.4	18.8	197.3	0.00	0.00	0.00
1,400.0	14.12	5.48	1,378.0	206.1	19.8	207.1	0.00	0.00	0.00
1,440.0	14.12	5.48	1,416.7	215.8	20.7	216.8	0.00	0.00	0.00
1,480.0	14.12	5.48	1,455.5	225.5	21.6	226.6	0.00	0.00	0.00
1,520.0	14.12	5.48	1,494.3	235.3	22.6	236.3	0.00	0.00	0.00
1,560.0	14.12	5.48	1,533.1	245.0	23.5	246.1	0.00	0.00	0.00
1,600.0	14.12	5.48	1,571.9	254.7	24.4	255.9	0.00	0.00	0.00
1,640.0	14.12	5.48	1,610.7	264.4	25.4	265.6	0.00	0.00	0.00
1,680.0	14.12	5.48	1,649.5	274.1	26.3	275.4	0.00	0.00	0.00
1,720.0	14.12	5.48	1,688.3	283.8	27.2	285.1	0.00	0.00	0.00
1,760.0	14.12	5.48	1,727.1	293.5	28.2	294.9	0.00	0.00	0.00
1,800.0	14.12	5.48	1,765.9	303.2	29.1	304.6	0.00	0.00	0.00
1,840.0	14.12	5.48	1,804.7	313.0	30.0	314.4	0.00	0.00	0.00
1,880.0	14.12	5.48	1,843.4	322.7	31.0	324.2	0.00	0.00	0.00
1,920.0	14.12	5.48	1,882.2	332.4	31.9	333.9	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Maier 31-28
Company:	EnCana Oil & Gas Weld County CO	TVD Reference:	WELL @ 4943.0ft (Original Well Elev)
Project:	SEC.28-T2N-R66W	MD Reference:	WELL @ 4943.0ft (Original Well Elev)
Site:	Maier 31-28 Pad Sec.28-T2N-R66W	North Reference:	True
Well:	Maier 31-28	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (4-02-12)		

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)
1,960.0	14.12	5.48	1,921.0	342.1	32.8	343.7	0.00	0.00	0.00
2,000.0	14.12	5.48	1,959.8	351.8	33.8	353.4	0.00	0.00	0.00
2,040.0	14.12	5.48	1,998.6	361.5	34.7	363.2	0.00	0.00	0.00
2,080.0	14.12	5.48	2,037.4	371.2	35.6	372.9	0.00	0.00	0.00
2,120.0	14.12	5.48	2,076.2	381.0	36.6	382.7	0.00	0.00	0.00
2,160.0	14.12	5.48	2,115.0	390.7	37.5	392.5	0.00	0.00	0.00
2,200.0	14.12	5.48	2,153.8	400.4	38.4	402.2	0.00	0.00	0.00
2,240.0	14.12	5.48	2,192.6	410.1	39.4	412.0	0.00	0.00	0.00
2,280.0	14.12	5.48	2,231.4	419.8	40.3	421.7	0.00	0.00	0.00
2,320.0	14.12	5.48	2,270.2	429.5	41.2	431.5	0.00	0.00	0.00
2,360.0	14.12	5.48	2,308.9	439.2	42.1	441.3	0.00	0.00	0.00
2,400.0	14.12	5.48	2,347.7	448.9	43.1	451.0	0.00	0.00	0.00
2,440.0	14.12	5.48	2,386.5	458.7	44.0	460.8	0.00	0.00	0.00
2,480.0	14.12	5.48	2,425.3	468.4	44.9	470.5	0.00	0.00	0.00
2,520.0	14.12	5.48	2,464.1	478.1	45.9	480.3	0.00	0.00	0.00
2,560.0	14.12	5.48	2,502.9	487.8	46.8	490.0	0.00	0.00	0.00
2,600.0	14.12	5.48	2,541.7	497.5	47.7	499.8	0.00	0.00	0.00
2,640.0	14.12	5.48	2,580.5	507.2	48.7	509.6	0.00	0.00	0.00
2,680.0	14.12	5.48	2,619.3	516.9	49.6	519.3	0.00	0.00	0.00
2,720.0	14.12	5.48	2,658.1	526.7	50.5	529.1	0.00	0.00	0.00
2,760.0	14.12	5.48	2,696.9	536.4	51.5	538.8	0.00	0.00	0.00
2,800.0	14.12	5.48	2,735.7	546.1	52.4	548.6	0.00	0.00	0.00
2,840.0	14.12	5.48	2,774.4	555.8	53.3	558.3	0.00	0.00	0.00
2,880.0	14.12	5.48	2,813.2	565.5	54.3	568.1	0.00	0.00	0.00
2,920.0	14.12	5.48	2,852.0	575.2	55.2	577.9	0.00	0.00	0.00
2,960.0	14.12	5.48	2,890.8	584.9	56.1	587.6	0.00	0.00	0.00
3,000.0	14.12	5.48	2,929.6	594.6	57.1	597.4	0.00	0.00	0.00
3,040.0	14.12	5.48	2,968.4	604.4	58.0	607.1	0.00	0.00	0.00
3,080.0	14.12	5.48	3,007.2	614.1	58.9	616.9	0.00	0.00	0.00
3,120.0	14.12	5.48	3,046.0	623.8	59.9	626.7	0.00	0.00	0.00
3,160.0	14.12	5.48	3,084.8	633.5	60.8	636.4	0.00	0.00	0.00
3,200.0	14.12	5.48	3,123.6	643.2	61.7	646.2	0.00	0.00	0.00
3,240.0	14.12	5.48	3,162.4	652.9	62.7	655.9	0.00	0.00	0.00
3,280.0	14.12	5.48	3,201.2	662.6	63.6	665.7	0.00	0.00	0.00
3,320.0	14.12	5.48	3,239.9	672.4	64.5	675.4	0.00	0.00	0.00
3,360.0	14.12	5.48	3,278.7	682.1	65.4	685.2	0.00	0.00	0.00
3,400.0	14.12	5.48	3,317.5	691.8	66.4	695.0	0.00	0.00	0.00
3,440.0	14.12	5.48	3,356.3	701.5	67.3	704.7	0.00	0.00	0.00
3,480.0	14.12	5.48	3,395.1	711.2	68.2	714.5	0.00	0.00	0.00
3,520.0	14.12	5.48	3,433.9	720.9	69.2	724.2	0.00	0.00	0.00
3,560.0	14.12	5.48	3,472.7	730.6	70.1	734.0	0.00	0.00	0.00
3,600.0	14.12	5.48	3,511.5	740.3	71.0	743.7	0.00	0.00	0.00
3,640.0	14.12	5.48	3,550.3	750.1	72.0	753.5	0.00	0.00	0.00
3,680.0	14.12	5.48	3,589.1	759.8	72.9	763.3	0.00	0.00	0.00
3,720.0	14.12	5.48	3,627.9	769.5	73.8	773.0	0.00	0.00	0.00
3,760.0	14.12	5.48	3,666.7	779.2	74.8	782.8	0.00	0.00	0.00
3,800.0	14.12	5.48	3,705.4	788.9	75.7	792.5	0.00	0.00	0.00
3,840.0	14.12	5.48	3,744.2	798.6	76.6	802.3	0.00	0.00	0.00
3,880.0	14.12	5.48	3,783.0	808.3	77.6	812.0	0.00	0.00	0.00
3,920.0	14.12	5.48	3,821.8	818.0	78.5	821.8	0.00	0.00	0.00
3,960.0	14.12	5.48	3,860.6	827.8	79.4	831.6	0.00	0.00	0.00
4,000.0	14.12	5.48	3,899.4	837.5	80.4	841.3	0.00	0.00	0.00
4,040.0	14.12	5.48	3,938.2	847.2	81.3	851.1	0.00	0.00	0.00
4,080.0	14.12	5.48	3,977.0	856.9	82.2	860.8	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Maier 31-28
Company:	EnCana Oil & Gas Weld County CO	TVD Reference:	WELL @ 4943.0ft (Original Well Elev)
Project:	SEC.28-T2N-R66W	MD Reference:	WELL @ 4943.0ft (Original Well Elev)
Site:	Maier 31-28 Pad Sec.28-T2N-R66W	North Reference:	True
Well:	Maier 31-28	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (4-02-12)		

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)
4,120.0	14.12	5.48	4,015.8	866.6	83.2	870.6	0.00	0.00	0.00
4,160.0	14.12	5.48	4,054.6	876.3	84.1	880.4	0.00	0.00	0.00
4,200.0	14.12	5.48	4,093.4	886.0	85.0	890.1	0.00	0.00	0.00
4,240.0	14.12	5.48	4,132.2	895.8	86.0	899.9	0.00	0.00	0.00
4,280.0	14.12	5.48	4,170.9	905.5	86.9	909.6	0.00	0.00	0.00
4,320.0	14.12	5.48	4,209.7	915.2	87.8	919.4	0.00	0.00	0.00
4,360.0	14.12	5.48	4,248.5	924.9	88.7	929.1	0.00	0.00	0.00
4,400.0	14.12	5.48	4,287.3	934.6	89.7	938.9	0.00	0.00	0.00
4,440.0	14.12	5.48	4,326.1	944.3	90.6	948.7	0.00	0.00	0.00
4,480.0	14.12	5.48	4,364.9	954.0	91.5	958.4	0.00	0.00	0.00
4,520.0	14.12	5.48	4,403.7	963.7	92.5	968.2	0.00	0.00	0.00
4,560.0	14.12	5.48	4,442.5	973.5	93.4	977.9	0.00	0.00	0.00
4,600.0	14.12	5.48	4,481.3	983.2	94.3	987.7	0.00	0.00	0.00
4,632.7	14.12	5.48	4,513.0	991.1	95.1	995.7	0.00	0.00	0.00
SUSSEX									
4,640.0	14.12	5.48	4,520.1	992.9	95.3	997.4	0.00	0.00	0.00
4,680.0	14.12	5.48	4,558.9	1,002.6	96.2	1,007.2	0.00	0.00	0.00
4,720.0	14.12	5.48	4,597.7	1,012.3	97.1	1,017.0	0.00	0.00	0.00
4,760.0	14.12	5.48	4,636.4	1,022.0	98.1	1,026.7	0.00	0.00	0.00
4,763.7	14.12	5.48	4,640.0	1,022.9	98.2	1,027.6	0.00	0.00	0.00
SUSSEX PAY TOP									
4,800.0	14.12	5.48	4,675.2	1,031.7	99.0	1,036.5	0.00	0.00	0.00
4,840.0	14.12	5.48	4,714.0	1,041.5	99.9	1,046.2	0.00	0.00	0.00
4,864.7	14.12	5.48	4,738.0	1,047.5	100.5	1,052.3	0.00	0.00	0.00
SUSSEX MARKER									
4,880.0	14.12	5.48	4,752.8	1,051.2	100.9	1,056.0	0.00	0.00	0.00
4,920.0	14.12	5.48	4,791.6	1,060.9	101.8	1,065.8	0.00	0.00	0.00
4,960.0	14.12	5.48	4,830.4	1,070.6	102.7	1,075.5	0.00	0.00	0.00
5,000.0	14.12	5.48	4,869.2	1,080.3	103.7	1,085.3	0.00	0.00	0.00
5,040.0	14.12	5.48	4,908.0	1,090.0	104.6	1,095.0	0.00	0.00	0.00
5,080.0	14.12	5.48	4,946.8	1,099.7	105.5	1,104.8	0.00	0.00	0.00
5,120.0	14.12	5.48	4,985.6	1,109.4	106.5	1,114.5	0.00	0.00	0.00
5,136.1	14.12	5.48	5,001.1	1,113.3	106.8	1,118.5	0.00	0.00	0.00
5,160.0	13.64	5.48	5,024.4	1,119.1	107.4	1,124.2	2.00	-2.00	0.00
5,200.0	12.84	5.48	5,063.3	1,128.2	108.3	1,133.4	2.00	-2.00	0.00
5,220.2	12.44	5.48	5,083.0	1,132.6	108.7	1,137.8	2.00	-2.00	0.00
SHANNON									
5,240.0	12.04	5.48	5,102.4	1,136.8	109.1	1,142.0	2.00	-2.00	0.00
5,280.0	11.24	5.48	5,141.6	1,144.8	109.9	1,150.1	2.00	-2.00	0.00
5,320.0	10.44	5.48	5,180.8	1,152.3	110.6	1,157.6	2.00	-2.00	0.00
5,360.0	9.64	5.48	5,220.2	1,159.2	111.2	1,164.5	2.00	-2.00	0.00
5,400.0	8.84	5.48	5,259.7	1,165.6	111.8	1,171.0	2.00	-2.00	0.00
5,440.0	8.04	5.48	5,299.3	1,171.5	112.4	1,176.8	2.00	-2.00	0.00
5,480.0	7.24	5.48	5,338.9	1,176.8	112.9	1,182.2	2.00	-2.00	0.00
5,520.0	6.44	5.48	5,378.6	1,181.5	113.4	1,186.9	2.00	-2.00	0.00
5,560.0	5.64	5.48	5,418.4	1,185.7	113.8	1,191.1	2.00	-2.00	0.00
5,600.0	4.84	5.48	5,458.2	1,189.3	114.1	1,194.8	2.00	-2.00	0.00
5,640.0	4.04	5.48	5,498.1	1,192.4	114.4	1,197.9	2.00	-2.00	0.00
5,680.0	3.24	5.48	5,538.0	1,194.9	114.7	1,200.4	2.00	-2.00	0.00
5,720.0	2.44	5.48	5,578.0	1,196.9	114.9	1,202.4	2.00	-2.00	0.00
5,760.0	1.64	5.48	5,618.0	1,198.3	115.0	1,203.8	2.00	-2.00	0.00
5,800.0	0.84	5.48	5,658.0	1,199.2	115.1	1,204.7	2.00	-2.00	0.00
5,840.0	0.04	5.48	5,698.0	1,199.5	115.1	1,205.0	2.00	-2.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Maier 31-28
Company:	EnCana Oil & Gas Weld County CO	TVD Reference:	WELL @ 4943.0ft (Original Well Elev)
Project:	SEC.28-T2N-R66W	MD Reference:	WELL @ 4943.0ft (Original Well Elev)
Site:	Maier 31-28 Pad Sec.28-T2N-R66W	North Reference:	True
Well:	Maier 31-28	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (4-02-12)		

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)
5,842.0	0.00	0.00	5,700.0	1,199.5	115.1	1,205.0	2.00	-2.00	-268.21
DRILL TARGET BHL 560'FNL, 2068'FEL									
5,880.0	0.00	0.00	5,738.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
5,920.0	0.00	0.00	5,778.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
5,942.0	0.00	0.00	5,800.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
PERMIT TARGET BHL 510'FNL, 2130'FEL									
5,960.0	0.00	0.00	5,818.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,000.0	0.00	0.00	5,858.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,040.0	0.00	0.00	5,898.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,080.0	0.00	0.00	5,938.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,120.0	0.00	0.00	5,978.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,160.0	0.00	0.00	6,018.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,058.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,240.0	0.00	0.00	6,098.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,280.0	0.00	0.00	6,138.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,320.0	0.00	0.00	6,178.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,360.0	0.00	0.00	6,218.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,258.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,440.0	0.00	0.00	6,298.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,480.0	0.00	0.00	6,338.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,485.0	0.00	0.00	6,343.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
TEEPEE BUTTES									
6,520.0	0.00	0.00	6,378.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,560.0	0.00	0.00	6,418.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,458.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,640.0	0.00	0.00	6,498.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,680.0	0.00	0.00	6,538.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,720.0	0.00	0.00	6,578.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,760.0	0.00	0.00	6,618.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,658.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,840.0	0.00	0.00	6,698.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,880.0	0.00	0.00	6,738.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,920.0	0.00	0.00	6,778.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
6,960.0	0.00	0.00	6,818.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
7,000.0	0.00	0.00	6,858.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
7,040.0	0.00	0.00	6,898.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
7,080.0	0.00	0.00	6,938.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
7,120.0	0.00	0.00	6,978.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
7,160.0	0.00	0.00	7,018.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,058.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
7,215.0	0.00	0.00	7,073.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
SHARON SPRINGS									
7,240.0	0.00	0.00	7,098.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
7,275.0	0.00	0.00	7,133.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
NIORARA - LEGAL BOX 400' X 400' 660'FNL, 1968'FEL - TARGET CIRCLE 560'FNL & 2068'FEL									
7,280.0	0.00	0.00	7,138.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
7,320.0	0.00	0.00	7,178.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
7,360.0	0.00	0.00	7,218.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,258.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
7,440.0	0.00	0.00	7,298.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
7,480.0	0.00	0.00	7,338.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
7,520.0	0.00	0.00	7,378.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00
7,549.0	0.00	0.00	7,407.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Maier 31-28
Company:	EnCana Oil & Gas Weld County CO	TVD Reference:	WELL @ 4943.0ft (Original Well Elev)
Project:	SEC.28-T2N-R66W	MD Reference:	WELL @ 4943.0ft (Original Well Elev)
Site:	Maier 31-28 Pad Sec.28-T2N-R66W	North Reference:	True
Well:	Maier 31-28	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (4-02-12)		

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)	
FT. HAYES										
7,560.0	0.00	0.00	7,418.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
7,575.0	0.00	0.00	7,433.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
CODELL										
7,595.0	0.00	0.00	7,453.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
FAIRPORT										
7,600.0	0.00	0.00	7,458.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
7,637.0	0.00	0.00	7,495.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
GREENHORN										
7,640.0	0.00	0.00	7,498.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
7,680.0	0.00	0.00	7,538.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
7,720.0	0.00	0.00	7,578.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
7,760.0	0.00	0.00	7,618.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
7,800.0	0.00	0.00	7,658.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
7,840.0	0.00	0.00	7,698.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
7,848.0	0.00	0.00	7,706.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
GRANEROS										
7,880.0	0.00	0.00	7,738.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
7,920.0	0.00	0.00	7,778.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
7,960.0	0.00	0.00	7,818.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
7,995.0	0.00	0.00	7,853.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
MOWRY										
8,000.0	0.00	0.00	7,858.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
8,009.0	0.00	0.00	7,867.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
J-SAND										
8,040.0	0.00	0.00	7,898.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
8,080.0	0.00	0.00	7,938.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
8,086.0	0.00	0.00	7,944.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
SKULL CREEK A MARKER										
8,120.0	0.00	0.00	7,978.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	
8,159.0	0.00	0.00	8,017.0	1,199.5	115.1	1,205.0	0.00	0.00	0.00	

Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
PERMIT TARGET BH	0.00	0.00	5,800.0	1,249.5	53.1	1,285,547.80	3,201,242.44	40.114980	-104.780450	
- plan misses target center by 79.6ft at 5942.0ft MD (5800.0 TVD, 1199.5 N, 115.1 E)										
- Point										
LEGAL BOX 400' X 400'	0.00	0.00	7,133.0	1,099.5	215.1	1,285,399.09	3,201,405.60	40.114568	-104.779871	
- plan misses target center by 141.4ft at 7275.0ft MD (7133.0 TVD, 1199.5 N, 115.1 E)										
- Rectangle (sides W400.0 H400.0 D884.0)										
TARGET CIRCLE 56'	0.00	0.00	7,133.0	1,199.5	115.1	1,285,498.27	3,201,304.80	40.114843	-104.780228	
- plan hits target center										
- Circle (radius 100.0)										
DRILL TARGET BHL	0.00	0.00	5,700.0	1,199.5	115.1	1,285,498.27	3,201,304.80	40.114843	-104.780228	
- plan hits target center										
- Point										

Database:	Landmark	Local Co-ordinate Reference:	Well Maier 31-28
Company:	EnCana Oil & Gas Weld County CO	TVD Reference:	WELL @ 4943.0ft (Original Well Elev)
Project:	SEC.28-T2N-R66W	MD Reference:	WELL @ 4943.0ft (Original Well Elev)
Site:	Maier 31-28 Pad Sec.28-T2N-R66W	North Reference:	True
Well:	Maier 31-28	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (4-02-12)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
907.2	900.0	8 5/8"	8-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
793.2	789.0	BASE FOX HILLS		0.00		
4,632.7	4,513.0	SUSSEX		0.00		
4,763.7	4,640.0	SUSSEX PAY TOP		0.00		
4,864.7	4,738.0	SUSSEX MARKER		0.00		
5,220.2	5,083.0	SHANNON		0.00		
6,485.0	6,343.0	TEEPEE BUTTES		0.00		
7,215.0	7,073.0	SHARON SPRINGS		0.00		
7,275.0	7,133.0	NIOBRARA		0.00		
7,549.0	7,407.0	FT. HAYES		0.00		
7,575.0	7,433.0	CODELL		0.00		
7,595.0	7,453.0	FAIRPORT		0.00		
7,637.0	7,495.0	GREENHORN		0.00		
7,848.0	7,706.0	GRANEROS		0.00		
7,995.0	7,853.0	MOWRY		0.00		
8,009.0	7,867.0	J-SAND		0.00		
8,086.0	7,944.0	SKULL CREEK A MARKER		0.00		



EnCana Oil & Gas Weld County CO

SEC.28-T2N-R66W

Maier 31-28 Pad Sec.28-T2N-R66W

Maier 31-28

Wellbore #1

Plan #1 (4-02-12)

Anticollision Report

04 April, 2012

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Maier 31-28
Project:	SEC.28-T2N-R66W	TVD Reference:	WELL @ 4943.0ft (Original Well Elev)
Reference Site:	Maier 31-28 Pad Sec.28-T2N-R66W	MD Reference:	WELL @ 4943.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maier 31-28	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 #1 (4-02-12)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (4-02-12)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 4/4/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	8,159.0	Plan #1 (4-02-12) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Maier 31-28 Pad Sec.28-T2N-R66W						
Maier 32-28 (Exist.) - Wellbore #1 - Design #1	200.0	200.0	51.5	50.8	76.406	CC
Maier 32-28 (Exist.) - Wellbore #1 - Design #1	300.0	300.0	51.8	50.6	46.061	ES
Maier 32-28 (Exist.) - Wellbore #1 - Design #1	700.0	697.5	71.3	68.2	23.408	SF
Maier 4-2-28 - Wellbore #1 - Plan #1 (4-02-12)	200.0	200.0	7.3	6.6	10.811	CC, ES
Maier 4-2-28 - Wellbore #1 - Plan #1 (4-02-12)	300.0	300.0	9.0	7.9	7.978	SF
Maier 8-4-28 - Wellbore #1 - Plan #1 (4-02-12)	200.0	200.0	18.2	17.5	27.019	CC, ES
Maier 8-4-28 - Wellbore #1 - Plan #1 (4-02-12)	400.0	399.0	28.0	26.4	17.695	SF

Offset Design Maier 31-28 Pad Sec.28-T2N-R66W - Maier 32-28 (Exist.) - Wellbore #1 - Design #1													Offset Site Error:	0.0ft
Survey Program: 0-MWD													Offset Well Error:	0.0ft
Reference Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	102.25	-10.9	50.3	51.5					
100.0	100.0	100.0	100.0	0.1	0.1	102.25	-10.9	50.3	51.5	51.3	0.22	229.219		
200.0	200.0	200.0	200.0	0.3	0.3	102.25	-10.9	50.3	51.5	50.8	0.67	76.406	CC	
300.0	300.0	300.0	300.0	0.6	0.6	98.68	-10.9	50.3	51.8	50.6	1.12	46.061	ES	
400.0	399.8	399.8	399.8	0.8	0.8	104.28	-10.9	50.3	52.8	51.2	1.58	33.426		
500.0	499.5	499.5	499.5	1.0	1.0	112.93	-10.9	50.3	55.6	53.5	2.05	27.084		
600.0	598.7	598.7	598.7	1.3	1.2	123.31	-10.9	50.3	61.4	58.9	2.54	24.130		
700.0	697.5	697.5	697.5	1.6	1.5	133.67	-10.9	50.3	71.3	68.2	3.04	23.408	SF	
800.0	795.6	795.6	795.6	2.0	1.7	142.71	-10.9	50.3	85.6	82.1	3.54	24.202		
900.0	893.1	893.1	893.1	2.4	1.9	149.96	-10.9	50.3	104.5	100.5	4.02	25.978		
1,000.0	990.0	990.0	990.0	2.9	2.1	155.46	-10.9	50.3	126.4	121.9	4.50	28.089		
1,100.0	1,087.0	1,087.0	1,087.0	3.4	2.3	159.35	-10.9	50.3	149.0	144.0	4.97	29.967		
1,200.0	1,184.0	1,184.0	1,184.0	3.9	2.5	162.20	-10.9	50.3	172.1	166.7	5.45	31.602		
1,300.0	1,281.0	1,281.0	1,281.0	4.3	2.8	164.38	-10.9	50.3	195.6	189.6	5.92	33.019		
1,400.0	1,378.0	1,378.0	1,378.0	4.8	3.0	166.10	-10.9	50.3	219.2	212.8	6.40	34.247		
1,500.0	1,474.9	1,474.9	1,474.9	5.3	3.2	167.48	-10.9	50.3	243.0	236.1	6.88	35.316		
1,600.0	1,571.9	1,571.9	1,571.9	5.8	3.4	168.61	-10.9	50.3	266.9	259.5	7.36	36.252		
1,700.0	1,668.9	1,668.9	1,668.9	6.3	3.6	169.56	-10.9	50.3	290.9	283.0	7.84	37.076		
1,800.0	1,765.9	1,765.9	1,765.9	6.8	3.9	170.36	-10.9	50.3	314.9	306.6	8.33	37.806		
1,900.0	1,862.8	1,862.8	1,862.8	7.3	4.1	171.05	-10.9	50.3	339.0	330.2	8.81	38.456		
2,000.0	1,959.8	1,959.8	1,959.8	7.8	4.3	171.65	-10.9	50.3	363.1	353.8	9.30	39.039		

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

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Maier 31-28
Project:	SEC.28-T2N-R66W	TVD Reference:	WELL @ 4943.0ft (Original Well Elev)
Reference Site:	Maier 31-28 Pad Sec.28-T2N-R66W	MD Reference:	WELL @ 4943.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maier 31-28	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 #1 (4-02-12)	Offset TVD Reference:	Offset Datum

Offset Design													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		
2,100.0	2,056.8	2,056.8	2,056.8	8.3	4.5	172.18	-10.9	50.3	387.3	377.5	9.79	39.563		
2,200.0	2,153.8	2,153.8	2,153.8	8.8	4.7	172.64	-10.9	50.3	411.5	401.2	10.28	40.037		
2,300.0	2,250.8	2,250.8	2,250.8	9.3	4.9	173.05	-10.9	50.3	435.7	424.9	10.77	40.468		
2,400.0	2,347.7	2,347.7	2,347.7	9.8	5.2	173.42	-10.9	50.3	459.9	448.7	11.26	40.860		
2,500.0	2,444.7	2,444.7	2,444.7	10.3	5.4	173.75	-10.9	50.3	484.2	472.4	11.75	41.219		
2,600.0	2,541.7	2,541.7	2,541.7	10.8	5.6	174.05	-10.9	50.3	508.5	496.2	12.24	41.549		
2,700.0	2,638.7	2,638.7	2,638.7	11.3	5.8	174.32	-10.9	50.3	532.7	520.0	12.73	41.853		
2,800.0	2,735.7	2,735.7	2,735.7	11.8	6.0	174.57	-10.9	50.3	557.0	543.8	13.22	42.134		
2,900.0	2,832.6	2,832.6	2,832.6	12.3	6.3	174.79	-10.9	50.3	581.3	567.6	13.71	42.394		
3,000.0	2,929.6	2,929.6	2,929.6	12.8	6.5	175.00	-10.9	50.3	605.6	591.4	14.20	42.636		
3,100.0	3,026.6	3,026.6	3,026.6	13.3	6.7	175.20	-10.9	50.3	629.9	615.2	14.70	42.861		
3,200.0	3,123.6	3,123.6	3,123.6	13.8	6.9	175.38	-10.9	50.3	654.2	639.1	15.19	43.071		
3,300.0	3,220.5	3,220.5	3,220.5	14.3	7.1	175.54	-10.9	50.3	678.6	662.9	15.68	43.268		
3,400.0	3,317.5	3,317.5	3,317.5	14.8	7.3	175.70	-10.9	50.3	702.9	686.7	16.18	43.452		
3,500.0	3,414.5	3,414.5	3,414.5	15.3	7.6	175.84	-10.9	50.3	727.2	710.6	16.67	43.625		
3,600.0	3,511.5	3,511.5	3,511.5	15.8	7.8	175.98	-10.9	50.3	751.6	734.4	17.16	43.788		
3,700.0	3,608.5	3,608.5	3,608.5	16.3	8.0	176.10	-10.9	50.3	775.9	758.2	17.66	43.941		
3,800.0	3,705.4	3,705.4	3,705.4	16.8	8.2	176.22	-10.9	50.3	800.2	782.1	18.15	44.086		
3,900.0	3,802.4	3,802.4	3,802.4	17.3	8.4	176.33	-10.9	50.3	824.6	805.9	18.65	44.223		
4,000.0	3,899.4	3,899.4	3,899.4	17.8	8.7	176.44	-10.9	50.3	848.9	829.8	19.14	44.353		
4,100.0	3,996.4	3,996.4	3,996.4	18.3	8.9	176.54	-10.9	50.3	873.3	853.7	19.64	44.475		
4,200.0	4,093.4	4,093.4	4,093.4	18.8	9.1	176.63	-10.9	50.3	897.6	877.5	20.13	44.592		
4,300.0	4,190.3	4,190.3	4,190.3	19.3	9.3	176.72	-10.9	50.3	922.0	901.4	20.63	44.702		
4,400.0	4,287.3	4,287.3	4,287.3	19.8	9.5	176.80	-10.9	50.3	946.4	925.2	21.12	44.808		
4,500.0	4,384.3	4,384.3	4,384.3	20.3	9.7	176.88	-10.9	50.3	970.7	949.1	21.62	44.908		
4,600.0	4,481.3	4,481.3	4,481.3	20.8	10.0	176.96	-10.9	50.3	995.1	973.0	22.11	45.003		
4,700.0	4,578.3	4,578.3	4,578.3	21.3	10.2	177.03	-10.9	50.3	1,019.4	996.8	22.61	45.095		
4,800.0	4,675.2	4,675.2	4,675.2	21.8	10.4	177.10	-10.9	50.3	1,043.8	1,020.7	23.10	45.182		
4,900.0	4,772.2	4,772.2	4,772.2	22.3	10.6	177.17	-10.9	50.3	1,068.2	1,044.6	23.60	45.265		
5,000.0	4,869.2	4,869.2	4,869.2	22.8	10.8	177.23	-10.9	50.3	1,092.5	1,068.4	24.09	45.344		
5,100.0	4,966.2	4,966.2	4,966.2	23.4	11.0	177.29	-10.9	50.3	1,116.9	1,092.3	24.59	45.421		
5,200.0	5,063.3	5,063.3	5,063.3	23.8	11.3	177.36	-10.9	50.3	1,140.6	1,115.5	25.12	45.407		
5,300.0	5,161.2	5,161.2	5,161.2	24.2	11.5	177.43	-10.9	50.3	1,161.1	1,135.5	25.61	45.329		
5,400.0	5,259.7	5,259.7	5,259.7	24.5	11.7	177.48	-10.9	50.3	1,178.2	1,152.1	26.07	45.185		
5,500.0	5,358.8	5,358.8	5,358.8	24.7	11.9	177.52	-10.9	50.3	1,191.8	1,165.3	26.50	44.979		
5,600.0	5,458.2	5,458.2	5,458.2	24.9	12.2	177.55	-10.9	50.3	1,202.0	1,175.1	26.88	44.716		
5,700.0	5,558.0	5,558.0	5,558.0	25.1	12.4	177.57	-10.9	50.3	1,208.6	1,181.4	27.22	44.396		
5,800.0	5,658.0	5,658.0	5,658.0	25.3	12.6	177.58	-10.9	50.3	1,211.9	1,184.3	27.53	44.023		
5,900.0	5,758.0	5,758.0	5,758.0	25.4	12.8	-176.94	-10.9	50.3	1,212.2	1,184.3	27.87	43.497		
6,000.0	5,858.0	5,858.0	5,858.0	25.5	13.1	-176.94	-10.9	50.3	1,212.2	1,183.9	28.27	42.872		
6,100.0	5,958.0	5,958.0	5,958.0	25.6	13.3	-176.94	-10.9	50.3	1,212.2	1,183.5	28.68	42.263		
6,200.0	6,058.0	6,058.0	6,058.0	25.7	13.5	-176.94	-10.9	50.3	1,212.2	1,183.1	29.09	41.670		
6,300.0	6,158.0	6,158.0	6,158.0	25.8	13.7	-176.94	-10.9	50.3	1,212.2	1,182.7	29.50	41.091		
6,400.0	6,258.0	6,258.0	6,258.0	25.9	14.0	-176.94	-10.9	50.3	1,212.2	1,182.3	29.91	40.527		
6,500.0	6,358.0	6,358.0	6,358.0	26.0	14.2	-176.94	-10.9	50.3	1,212.2	1,181.8	30.32	39.977		
6,600.0	6,458.0	6,458.0	6,458.0	26.1	14.4	-176.94	-10.9	50.3	1,212.2	1,181.4	30.73	39.440		
6,700.0	6,558.0	6,558.0	6,558.0	26.2	14.6	-176.94	-10.9	50.3	1,212.2	1,181.0	31.15	38.917		
6,800.0	6,658.0	6,658.0	6,658.0	26.3	14.9	-176.94	-10.9	50.3	1,212.2	1,180.6	31.56	38.406		
6,900.0	6,758.0	6,758.0	6,758.0	26.5	15.1	-176.94	-10.9	50.3	1,212.2	1,180.2	31.98	37.907		
7,000.0	6,858.0	6,858.0	6,858.0	26.6	15.3	-176.94	-10.9	50.3	1,212.2	1,179.8	32.39	37.420		
7,100.0	6,958.0	6,958.0	6,958.0	26.7	15.5	-176.94	-10.9	50.3	1,212.2	1,179.4	32.81	36.945		
7,200.0	7,058.0	7,058.0	7,058.0	26.8	15.8	-176.94	-10.9	50.3	1,212.2	1,178.9	33.23	36.480		

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

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Maier 31-28
Project:	SEC.28-T2N-R66W	TVD Reference:	WELL @ 4943.0ft (Original Well Elev)
Reference Site:	Maier 31-28 Pad Sec.28-T2N-R66W	MD Reference:	WELL @ 4943.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maier 31-28	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 #1 (4-02-12)	Offset TVD Reference:	Offset Datum

Offset Design Maier 31-28 Pad Sec.28-T2N-R66W - Maier 32-28 (Exist.) - Wellbore #1 - Design #1												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
7,300.0	7,158.0	7,158.0	7,158.0	27.0	16.0	-176.94	-10.9	50.3	1,212.2	1,178.5	33.65	36.027	
7,400.0	7,258.0	7,258.0	7,258.0	27.1	16.2	-176.94	-10.9	50.3	1,212.2	1,178.1	34.07	35.583	
7,500.0	7,358.0	7,358.0	7,358.0	27.2	16.4	-176.94	-10.9	50.3	1,212.2	1,177.7	34.49	35.150	
7,600.0	7,458.0	7,458.0	7,458.0	27.3	16.7	-176.94	-10.9	50.3	1,212.2	1,177.3	34.91	34.727	
7,700.0	7,558.0	7,558.0	7,558.0	27.5	16.9	-176.94	-10.9	50.3	1,212.2	1,176.8	35.33	34.313	
7,800.0	7,658.0	7,658.0	7,658.0	27.6	17.1	-176.94	-10.9	50.3	1,212.2	1,176.4	35.75	33.908	
7,900.0	7,758.0	7,758.0	7,758.0	27.7	17.3	-176.94	-10.9	50.3	1,212.2	1,176.0	36.17	33.512	
8,000.0	7,858.0	7,858.0	7,858.0	27.8	17.5	-176.94	-10.9	50.3	1,212.2	1,175.6	36.59	33.124	
8,100.0	7,958.0	7,958.0	7,958.0	28.0	17.8	-176.94	-10.9	50.3	1,212.2	1,175.1	37.02	32.745	
8,131.4	7,989.4	7,989.4	7,989.4	28.0	17.8	-176.94	-10.9	50.3	1,212.2	1,175.0	37.15	32.628	
8,159.0	8,017.0	8,000.0	8,000.0	28.1	17.9	-176.94	-10.9	50.3	1,212.3	1,175.1	37.23	32.562	

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Maier 31-28
Project:	SEC.28-T2N-R66W	TVD Reference:	WELL @ 4943.0ft (Original Well Elev)
Reference Site:	Maier 31-28 Pad Sec.28-T2N-R66W	MD Reference:	WELL @ 4943.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maier 31-28	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 #1 (4-02-12)	Offset TVD Reference:	Offset Datum

Offset Design													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	180.00	-7.3	0.0	7.3	7.3	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-7.3	0.0	7.3	7.1	0.22	32.434		
178.9	178.9	178.9	178.9	0.3	0.3	180.00	-7.3	0.0	7.3	6.7	0.58	12.584		
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-7.3	0.0	7.3	6.6	0.67	10.811 CC, ES		
300.0	300.0	300.0	300.0	0.6	0.6	175.57	-7.3	0.0	9.0	7.9	1.13	7.978 SF		
400.0	399.8	399.8	399.8	0.8	0.8	177.19	-7.3	0.0	14.3	12.7	1.59	8.944		
500.0	499.5	499.5	499.5	1.0	1.0	178.25	-7.3	0.0	23.0	20.9	2.05	11.174		
600.0	598.7	598.7	598.7	1.3	1.2	178.85	-7.3	0.0	35.1	32.6	2.52	13.965		
700.0	697.5	697.5	697.5	1.6	1.5	179.20	-7.3	0.0	50.8	47.8	2.98	17.048		
800.0	795.6	795.6	795.6	2.0	1.7	179.42	-7.3	0.0	69.9	66.4	3.44	20.294		
900.0	893.1	893.1	893.1	2.4	1.9	179.55	-7.3	0.0	92.4	88.4	3.91	23.630		
1,000.0	990.0	990.0	990.0	2.9	2.1	179.65	-7.3	0.0	116.7	112.4	4.38	26.670		
1,100.0	1,087.0	1,087.0	1,087.0	3.4	2.3	179.71	-7.3	0.0	141.1	136.3	4.85	29.089		
1,200.0	1,184.0	1,188.2	1,188.2	3.9	2.6	-179.98	-6.1	-0.6	164.5	159.1	5.33	30.833		
1,300.0	1,281.0	1,291.3	1,291.1	4.3	2.8	-179.10	-1.7	-3.0	184.9	179.1	5.82	31.779		
1,400.0	1,378.0	1,395.3	1,394.8	4.8	3.0	-177.77	6.1	-7.2	202.5	196.2	6.32	32.054		
1,500.0	1,474.9	1,500.2	1,498.9	5.3	3.3	-176.04	17.3	-13.3	217.4	210.5	6.84	31.782		
1,600.0	1,571.9	1,605.6	1,603.0	5.8	3.6	-173.93	31.9	-21.2	229.6	222.2	7.39	31.062		
1,700.0	1,668.9	1,704.9	1,700.7	6.3	3.9	-171.84	47.3	-29.5	240.5	232.5	7.96	30.210		
1,800.0	1,765.9	1,804.0	1,798.2	6.8	4.2	-169.93	62.8	-37.9	251.7	243.2	8.56	29.422		
1,900.0	1,862.8	1,903.0	1,895.7	7.3	4.5	-168.19	78.2	-46.2	263.2	254.0	9.17	28.699		
2,000.0	1,959.8	2,002.0	1,993.1	7.8	4.8	-166.60	93.6	-54.6	274.9	265.1	9.81	28.032		
2,100.0	2,056.8	2,101.1	2,090.6	8.3	5.2	-165.13	109.1	-62.9	286.8	276.3	10.46	27.419		
2,200.0	2,153.8	2,200.1	2,188.1	8.8	5.5	-163.78	124.5	-71.3	298.9	287.7	11.13	26.856		
2,300.0	2,250.8	2,299.1	2,285.5	9.3	5.9	-162.54	139.9	-79.6	311.1	299.3	11.81	26.340		
2,400.0	2,347.7	2,398.2	2,383.0	9.8	6.2	-161.39	155.4	-88.0	323.4	310.9	12.50	25.865		
2,500.0	2,444.7	2,497.2	2,480.5	10.3	6.6	-160.33	170.8	-96.3	335.9	322.7	13.21	25.429		
2,600.0	2,541.7	2,596.2	2,577.9	10.8	7.0	-159.34	186.2	-104.7	348.5	334.6	13.92	25.028		
2,700.0	2,638.7	2,695.3	2,675.4	11.3	7.3	-158.42	201.7	-113.0	361.2	346.5	14.65	24.659		
2,800.0	2,735.7	2,794.3	2,772.9	11.8	7.7	-157.56	217.1	-121.4	373.9	358.5	15.38	24.319		
2,900.0	2,832.6	2,893.3	2,870.3	12.3	8.1	-156.76	232.5	-129.7	386.7	370.6	16.11	24.004		
3,000.0	2,929.6	2,992.4	2,967.8	12.8	8.5	-156.01	248.0	-138.1	399.6	382.8	16.85	23.713		
3,100.0	3,026.6	3,091.4	3,065.3	13.3	8.9	-155.31	263.4	-146.4	412.6	395.0	17.60	23.444		
3,200.0	3,123.6	3,190.4	3,162.7	13.8	9.2	-154.65	278.8	-154.7	425.6	407.3	18.35	23.194		
3,300.0	3,220.5	3,289.5	3,260.2	14.3	9.6	-154.03	294.3	-163.1	438.7	419.6	19.11	22.962		
3,400.0	3,317.5	3,388.5	3,357.7	14.8	10.0	-153.45	309.7	-171.4	451.8	432.0	19.87	22.745		
3,500.0	3,414.5	3,487.5	3,455.1	15.3	10.4	-152.89	325.1	-179.8	465.0	444.4	20.63	22.543		
3,600.0	3,511.5	3,586.6	3,552.6	15.8	10.8	-152.37	340.6	-188.1	478.2	456.8	21.39	22.355		
3,700.0	3,608.5	3,685.6	3,650.1	16.3	11.1	-151.88	356.0	-196.5	491.5	469.3	22.16	22.178		
3,800.0	3,705.4	3,784.6	3,747.5	16.8	11.5	-151.41	371.4	-204.8	504.7	481.8	22.93	22.013		
3,900.0	3,802.4	3,883.7	3,845.0	17.3	11.9	-150.97	386.9	-213.2	518.0	494.3	23.70	21.858		
4,000.0	3,899.4	3,982.7	3,942.5	17.8	12.3	-150.55	402.3	-221.5	531.4	506.9	24.47	21.712		
4,100.0	3,996.4	4,081.7	4,039.9	18.3	12.7	-150.15	417.7	-229.9	544.8	519.5	25.25	21.574		
4,200.0	4,093.4	4,180.7	4,137.4	18.8	13.1	-149.77	433.2	-238.2	558.1	532.1	26.03	21.445		
4,300.0	4,190.3	4,279.8	4,234.9	19.3	13.5	-149.40	448.6	-246.6	571.6	544.8	26.81	21.322		
4,400.0	4,287.3	4,378.8	4,332.3	19.8	13.9	-149.06	464.0	-254.9	585.0	557.4	27.59	21.206		
4,500.0	4,384.3	4,477.8	4,429.8	20.3	14.3	-148.73	479.5	-263.3	598.5	570.1	28.37	21.097		
4,600.0	4,481.3	4,576.9	4,527.3	20.8	14.6	-148.41	494.9	-271.6	611.9	582.8	29.15	20.993		
4,700.0	4,578.3	4,675.9	4,624.7	21.3	15.0	-148.11	510.3	-279.9	625.4	595.5	29.93	20.895		
4,800.0	4,675.2	4,774.9	4,722.2	21.8	15.4	-147.82	525.8	-288.3	638.9	608.2	30.72	20.801		
4,900.0	4,772.2	4,874.0	4,819.7	22.3	15.8	-147.54	541.2	-296.6	652.5	620.9	31.50	20.712		
5,000.0	4,869.2	4,973.0	4,917.1	22.8	16.2	-147.27	556.6	-305.0	666.0	633.7	32.29	20.627		

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

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Maier 31-28
Project:	SEC.28-T2N-R66W	TVD Reference:	WELL @ 4943.0ft (Original Well Elev)
Reference Site:	Maier 31-28 Pad Sec.28-T2N-R66W	MD Reference:	WELL @ 4943.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maier 31-28	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 #1 (4-02-12)	Offset TVD Reference:	Offset Datum

Offset Design													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	4,966.2	5,070.1	5,012.7	23.4	16.6	-147.03	571.7	-313.1	679.6	646.5	33.05	20.560			
5,200.0	5,063.3	5,160.4	5,101.9	23.8	16.8	-147.03	584.0	-319.8	693.5	659.8	33.68	20.589			
5,300.0	5,161.2	5,250.8	5,191.6	24.2	17.1	-147.15	593.8	-325.1	705.9	671.7	34.18	20.650			
5,400.0	5,259.7	5,341.2	5,281.6	24.5	17.3	-147.33	601.1	-329.0	716.6	682.0	34.60	20.710			
5,500.0	5,358.8	5,431.6	5,371.9	24.7	17.4	-147.56	605.9	-331.6	725.7	690.8	34.94	20.770			
5,600.0	5,458.2	5,522.0	5,462.2	24.9	17.6	-147.84	608.2	-332.9	733.2	698.0	35.20	20.831			
5,700.0	5,558.0	5,617.8	5,558.0	25.1	17.7	-148.14	608.4	-333.0	738.7	703.4	35.40	20.871			
5,800.0	5,658.0	5,717.8	5,658.0	25.3	17.9	-148.30	608.4	-333.0	741.5	705.9	35.60	20.827			
5,900.0	5,758.0	5,817.8	5,758.0	25.4	18.0	-142.83	608.4	-333.0	741.7	705.9	35.86	20.685			
6,000.0	5,858.0	5,917.8	5,858.0	25.5	18.2	-142.83	608.4	-333.0	741.7	705.6	36.17	20.510			
6,100.0	5,958.0	6,017.8	5,958.0	25.6	18.3	-142.83	608.4	-333.0	741.7	705.3	36.48	20.335			
6,200.0	6,058.0	6,117.8	6,058.0	25.7	18.5	-142.83	608.4	-333.0	741.7	705.0	36.79	20.162			
6,300.0	6,158.0	6,217.8	6,158.0	25.8	18.6	-142.83	608.4	-333.0	741.7	704.6	37.10	19.991			
6,400.0	6,258.0	6,317.8	6,258.0	25.9	18.8	-142.83	608.4	-333.0	741.7	704.3	37.42	19.820			
6,500.0	6,358.0	6,417.8	6,358.0	26.0	19.0	-142.83	608.4	-333.0	741.7	704.0	37.74	19.652			
6,600.0	6,458.0	6,517.8	6,458.0	26.1	19.1	-142.83	608.4	-333.0	741.7	703.7	38.07	19.484			
6,700.0	6,558.0	6,617.8	6,558.0	26.2	19.3	-142.83	608.4	-333.0	741.7	703.3	38.39	19.319			
6,800.0	6,658.0	6,717.8	6,658.0	26.3	19.4	-142.83	608.4	-333.0	741.7	703.0	38.72	19.155			
6,900.0	6,758.0	6,817.8	6,758.0	26.5	19.6	-142.83	608.4	-333.0	741.7	702.7	39.06	18.992			
7,000.0	6,858.0	6,917.8	6,858.0	26.6	19.8	-142.83	608.4	-333.0	741.7	702.4	39.39	18.831			
7,100.0	6,958.0	7,017.8	6,958.0	26.7	19.9	-142.83	608.4	-333.0	741.7	702.0	39.72	18.672			
7,200.0	7,058.0	7,117.8	7,058.0	26.8	20.1	-142.83	608.4	-333.0	741.7	701.7	40.06	18.515			
7,300.0	7,158.0	7,217.8	7,158.0	27.0	20.3	-142.83	608.4	-333.0	741.7	701.3	40.40	18.359			
7,400.0	7,258.0	7,317.8	7,258.0	27.1	20.5	-142.83	608.4	-333.0	741.7	701.0	40.75	18.204			
7,500.0	7,358.0	7,417.8	7,358.0	27.2	20.6	-142.83	608.4	-333.0	741.7	700.7	41.09	18.052			
7,600.0	7,458.0	7,517.8	7,458.0	27.3	20.8	-142.83	608.4	-333.0	741.7	700.3	41.44	17.901			
7,700.0	7,558.0	7,617.8	7,558.0	27.5	21.0	-142.83	608.4	-333.0	741.7	700.0	41.78	17.752			
7,800.0	7,658.0	7,717.8	7,658.0	27.6	21.2	-142.83	608.4	-333.0	741.7	699.6	42.13	17.604			
7,900.0	7,758.0	7,817.8	7,758.0	27.7	21.3	-142.83	608.4	-333.0	741.7	699.3	42.49	17.458			
8,000.0	7,858.0	7,917.8	7,858.0	27.8	21.5	-142.83	608.4	-333.0	741.7	698.9	42.84	17.314			
8,100.0	7,958.0	8,017.8	7,958.0	28.0	21.7	-142.83	608.4	-333.0	741.7	698.5	43.20	17.171			
8,159.0	8,017.0	8,076.8	8,017.0	28.1	21.8	-142.83	608.4	-333.0	741.7	698.3	43.41	17.088			

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Maier 31-28
Project:	SEC.28-T2N-R66W	TVD Reference:	WELL @ 4943.0ft (Original Well Elev)
Reference Site:	Maier 31-28 Pad Sec.28-T2N-R66W	MD Reference:	WELL @ 4943.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maier 31-28	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 #1 (4-02-12)	Offset TVD Reference:	Offset Datum

Offset Design Maier 31-28 Pad Sec.28-T2N-R66W - Maier 8-4-28 - Wellbore #1 - Plan #1 (4-02-12)													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		
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-18.2	0.0	18.2	18.2	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-18.2	0.0	18.2	18.0	0.22	81.057		
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-18.2	0.0	18.2	17.5	0.67	27.019 CC, ES		
300.0	300.0	299.7	299.7	0.6	0.5	170.38	-18.8	1.6	20.6	19.4	1.12	18.364		
400.0	399.8	399.0	398.8	0.8	0.8	162.29	-20.4	6.6	28.0	26.4	1.58	17.695 SF		
500.0	499.5	497.4	496.9	1.0	1.0	155.51	-23.1	14.6	41.0	38.9	2.07	19.792		
600.0	598.7	594.5	593.3	1.3	1.3	151.01	-26.8	25.7	59.5	56.9	2.58	23.025		
700.0	697.5	689.9	687.6	1.6	1.6	148.11	-31.4	39.6	83.4	80.2	3.13	26.660		
800.0	795.6	783.3	779.3	2.0	2.0	146.15	-37.0	56.1	112.4	108.7	3.70	30.344		
900.0	893.1	874.4	868.1	2.4	2.4	144.74	-43.2	74.9	146.5	142.1	4.32	33.894		
1,000.0	990.0	963.2	954.2	2.9	2.8	143.82	-50.2	95.9	184.2	179.2	4.97	37.059		
1,100.0	1,087.0	1,050.2	1,037.8	3.4	3.3	142.73	-57.9	118.8	224.0	218.4	5.65	39.662		
1,200.0	1,184.0	1,135.3	1,118.8	3.9	3.8	141.58	-66.1	143.5	266.0	259.7	6.35	41.885		
1,300.0	1,281.0	1,218.4	1,197.1	4.3	4.4	140.42	-74.9	169.9	310.2	303.1	7.07	43.849		
1,400.0	1,378.0	1,300.0	1,273.2	4.8	5.0	139.29	-84.3	197.9	356.4	348.6	7.81	45.608		
1,500.0	1,474.9	1,378.4	1,345.5	5.3	5.6	138.21	-93.9	226.7	404.7	396.1	8.57	47.221		
1,600.0	1,571.9	1,455.3	1,415.5	5.8	6.2	137.18	-103.9	256.7	455.0	445.6	9.33	48.757		
1,700.0	1,668.9	1,536.6	1,488.8	6.3	7.0	136.15	-115.0	290.0	506.9	496.8	10.13	50.055		
1,800.0	1,765.9	1,621.6	1,565.5	6.8	7.7	135.27	-126.7	325.0	559.1	548.1	10.93	51.126		
1,900.0	1,862.8	1,706.6	1,642.1	7.3	8.5	134.53	-138.3	359.9	611.3	599.5	11.75	52.044		
2,000.0	1,959.8	1,791.7	1,718.7	7.8	9.3	133.91	-150.0	394.9	663.6	651.0	12.56	52.836		
2,100.0	2,056.8	1,876.7	1,795.4	8.3	10.1	133.38	-161.7	429.8	715.9	702.6	13.38	53.528		
2,200.0	2,153.8	1,961.7	1,872.0	8.8	10.9	132.92	-173.3	464.8	768.3	754.1	14.19	54.138		
2,300.0	2,250.8	2,046.8	1,948.6	9.3	11.7	132.52	-185.0	499.7	820.8	805.7	15.01	54.679		
2,400.0	2,347.7	2,131.8	2,025.2	9.8	12.5	132.17	-196.7	534.7	873.2	857.4	15.83	55.163		
2,500.0	2,444.7	2,216.8	2,101.9	10.3	13.3	131.85	-208.3	569.6	925.7	909.0	16.65	55.597		
2,600.0	2,541.7	2,301.8	2,178.5	10.8	14.1	131.57	-220.0	604.6	978.2	960.7	17.47	55.989		
2,700.0	2,638.7	2,386.9	2,255.1	11.3	14.9	131.32	-231.7	639.5	1,030.7	1,012.4	18.29	56.343		
2,800.0	2,735.7	2,471.9	2,331.8	11.8	15.7	131.10	-243.3	674.5	1,083.2	1,064.1	19.12	56.666		
2,900.0	2,832.6	2,556.9	2,408.4	12.3	16.5	130.89	-255.0	709.4	1,135.7	1,115.8	19.94	56.961		
3,000.0	2,929.6	2,641.9	2,485.0	12.8	17.3	130.70	-266.6	744.4	1,188.2	1,167.5	20.76	57.232		
3,100.0	3,026.6	2,727.0	2,561.6	13.3	18.1	130.53	-278.3	779.3	1,240.8	1,219.2	21.59	57.481		
3,200.0	3,123.6	2,812.0	2,638.3	13.8	18.9	130.37	-290.0	814.3	1,293.3	1,270.9	22.41	57.711		
3,300.0	3,220.5	2,897.0	2,714.9	14.3	19.7	130.23	-301.6	849.2	1,345.9	1,322.7	23.24	57.925		
3,400.0	3,317.5	2,982.0	2,791.5	14.8	20.5	130.09	-313.3	884.2	1,398.5	1,374.4	24.06	58.122		
3,500.0	3,414.5	3,067.1	2,868.2	15.3	21.3	129.97	-325.0	919.1	1,451.0	1,426.1	24.89	58.307		
3,600.0	3,511.5	3,152.1	2,944.8	15.8	22.1	129.85	-336.6	954.1	1,503.6	1,477.9	25.71	58.478		
3,700.0	3,608.5	3,237.1	3,021.4	16.3	22.9	129.74	-348.3	989.0	1,556.2	1,529.6	26.54	58.639		
3,800.0	3,705.4	3,322.2	3,098.0	16.8	23.7	129.64	-360.0	1,024.0	1,608.8	1,581.4	27.36	58.789		
3,900.0	3,802.4	3,407.2	3,174.7	17.3	24.5	129.55	-371.6	1,058.9	1,661.3	1,633.2	28.19	58.931		
4,000.0	3,899.4	3,492.2	3,251.3	17.8	25.3	129.46	-383.3	1,093.9	1,713.9	1,684.9	29.02	59.064		
4,100.0	3,996.4	3,577.2	3,327.9	18.3	26.1	129.38	-395.0	1,128.9	1,766.5	1,736.7	29.85	59.189		
4,200.0	4,093.4	3,662.3	3,404.5	18.8	26.9	129.30	-406.6	1,163.8	1,819.1	1,788.4	30.67	59.307		
4,300.0	4,190.3	3,747.3	3,481.2	19.3	27.8	129.22	-418.3	1,198.8	1,871.7	1,840.2	31.50	59.418		
4,400.0	4,287.3	3,832.3	3,557.8	19.8	28.6	129.15	-429.9	1,233.7	1,924.3	1,892.0	32.33	59.523		
4,500.0	4,384.3	3,917.3	3,634.4	20.3	29.4	129.09	-441.6	1,268.7	1,976.9	1,943.8	33.16	59.623		
4,600.0	4,481.3	4,002.4	3,711.1	20.8	30.2	129.02	-453.3	1,303.6	2,029.5	1,995.5	33.98	59.718		
4,700.0	4,578.3	4,087.4	3,787.7	21.3	31.0	128.96	-464.9	1,338.6	2,082.1	2,047.3	34.81	59.808		
4,800.0	4,675.2	4,172.4	3,864.3	21.8	31.8	128.91	-476.6	1,373.5	2,134.7	2,099.1	35.64	59.894		
4,900.0	4,772.2	4,257.4	3,940.9	22.3	32.6	128.85	-488.3	1,408.5	2,187.3	2,150.9	36.47	59.975		
5,000.0	4,869.2	4,342.5	4,017.6	22.8	33.4	128.80	-499.9	1,443.4	2,239.9	2,202.6	37.30	60.053		
5,100.0	4,966.2	4,427.5	4,094.2	23.4	34.2	128.75	-511.6	1,478.4	2,292.5	2,254.4	38.13	60.126		

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

Company:	EnCana Oil & Gas Weld County CO	Local Co-ordinate Reference:	Well Maier 31-28
Project:	SEC.28-T2N-R66W	TVD Reference:	WELL @ 4943.0ft (Original Well Elev)
Reference Site:	Maier 31-28 Pad Sec.28-T2N-R66W	MD Reference:	WELL @ 4943.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maier 31-28	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 #1 (4-02-12)	Offset TVD Reference:	Offset Datum

Offset Design													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		
5,200.0	5,063.3	4,512.7	4,171.0	23.8	35.0	129.29	-523.3	1,513.4	2,344.8	2,305.6	39.17	59.859		
5,300.0	5,161.2	4,599.0	4,248.7	24.2	35.8	130.06	-535.1	1,548.8	2,395.2	2,355.0	40.25	59.507		
5,400.0	5,259.7	4,686.1	4,327.2	24.5	36.7	130.71	-547.1	1,584.7	2,443.8	2,402.5	41.28	59.203		
5,500.0	5,358.8	4,774.0	4,406.5	24.7	37.5	131.25	-559.1	1,620.8	2,490.3	2,448.1	42.25	58.949		
5,600.0	5,458.2	4,862.7	4,486.4	24.9	38.3	131.68	-571.3	1,657.3	2,534.9	2,491.7	43.15	58.748		
5,700.0	5,558.0	4,952.0	4,566.9	25.1	39.2	132.02	-583.5	1,693.9	2,577.4	2,533.4	43.98	58.602		
5,800.0	5,658.0	5,041.7	4,647.7	25.3	40.0	132.26	-595.9	1,730.8	2,617.9	2,573.2	44.74	58.511		
5,900.0	5,758.0	5,131.8	4,728.9	25.4	40.9	132.56	-608.2	1,767.9	2,656.8	2,611.4	45.32	58.617		
6,000.0	5,858.0	5,221.9	4,810.2	25.5	41.7	132.81	-620.6	1,804.9	2,695.6	2,649.7	45.82	58.827		
6,100.0	5,958.0	5,313.5	4,895.7	25.6	42.5	133.02	-633.0	1,843.0	2,735.0	2,686.1	46.29	58.889		
6,200.0	6,058.0	5,406.5	4,981.2	25.7	43.3	133.19	-645.3	1,881.1	2,774.1	2,725.5	46.74	58.689		
6,300.0	6,158.0	5,499.0	5,066.7	25.8	44.1	133.26	-657.5	1,919.2	2,812.2	2,766.6	47.17	58.095		
6,400.0	6,258.0	5,591.7	5,152.2	25.9	44.9	133.26	-669.7	1,957.3	2,850.3	2,807.7	47.58	55.838		
6,500.0	6,358.0	5,684.4	5,237.7	26.0	45.7	133.19	-681.9	1,995.4	2,888.4	2,848.8	47.97	55.581		
6,600.0	6,458.0	5,777.1	5,323.2	26.1	46.5	133.02	-694.1	2,033.5	2,926.5	2,886.9	48.35	55.323		
6,700.0	6,558.0	5,869.8	5,408.7	26.2	47.3	132.77	-706.3	2,071.6	2,964.6	2,925.0	48.72	55.063		
6,800.0	6,658.0	5,962.5	5,494.2	26.3	48.1	132.47	-718.5	2,109.7	2,999.7	2,960.1	49.08	54.803		
6,900.0	6,758.0	6,055.2	5,579.7	26.5	48.9	132.07	-730.7	2,147.8	3,037.8	2,998.2	49.43	54.543		
7,000.0	6,858.0	6,147.9	5,665.2	26.6	49.7	131.57	-742.9	2,185.9	3,075.9	3,036.3	49.77	54.282		
7,100.0	6,958.0	6,240.6	5,750.7	26.7	50.5	130.97	-755.1	2,224.0	3,114.0	3,074.4	50.10	54.020		
7,200.0	7,058.0	6,333.3	5,836.2	26.8	51.3	130.27	-767.3	2,262.1	3,152.1	3,112.5	50.42	53.758		
7,300.0	7,158.0	6,426.0	5,921.7	27.0	52.1	129.47	-779.5	2,300.2	3,189.2	3,150.6	50.74	53.496		
7,400.0	7,258.0	6,518.7	6,007.2	27.1	52.9	128.57	-791.7	2,338.3	3,227.3	3,188.7	51.05	53.234		
7,500.0	7,358.0	6,611.4	6,092.7	27.2	53.7	127.57	-803.9	2,376.4	3,265.4	3,226.8	51.35	52.971		
7,600.0	7,458.0	6,704.1	6,178.2	27.3	54.5	126.47	-816.1	2,414.5	3,303.5	3,264.9	51.64	52.709		
7,700.0	7,558.0	6,796.8	6,263.7	27.5	55.3	125.27	-828.3	2,452.6	3,341.6	3,303.0	51.92	52.446		
7,800.0	7,658.0	6,889.5	6,349.2	27.6	56.1	123.97	-840.5	2,490.7	3,379.7	3,341.1	52.19	52.184		
7,900.0	7,758.0	6,982.2	6,434.7	27.7	56.9	122.57	-852.7	2,528.8	3,417.8	3,379.2	52.45	51.922		
8,000.0	7,858.0	7,074.9	6,520.2	27.8	57.7	121.07	-864.9	2,566.9	3,455.9	3,417.3	52.70	51.660		
8,100.0	7,958.0	7,167.6	6,605.7	28.0	58.5	119.47	-877.1	2,605.0	3,494.0	3,455.4	52.94	51.398		
8,136.3	7,994.2	7,204.1	6,642.2	28.0	58.6	119.47	-877.1	2,605.0	3,494.0	3,455.4	52.94	51.303		
8,159.0	8,017.0	7,240.6	6,678.7	28.1	58.6	119.47	-877.1	2,605.0	3,494.0	3,455.4	52.94	51.254		

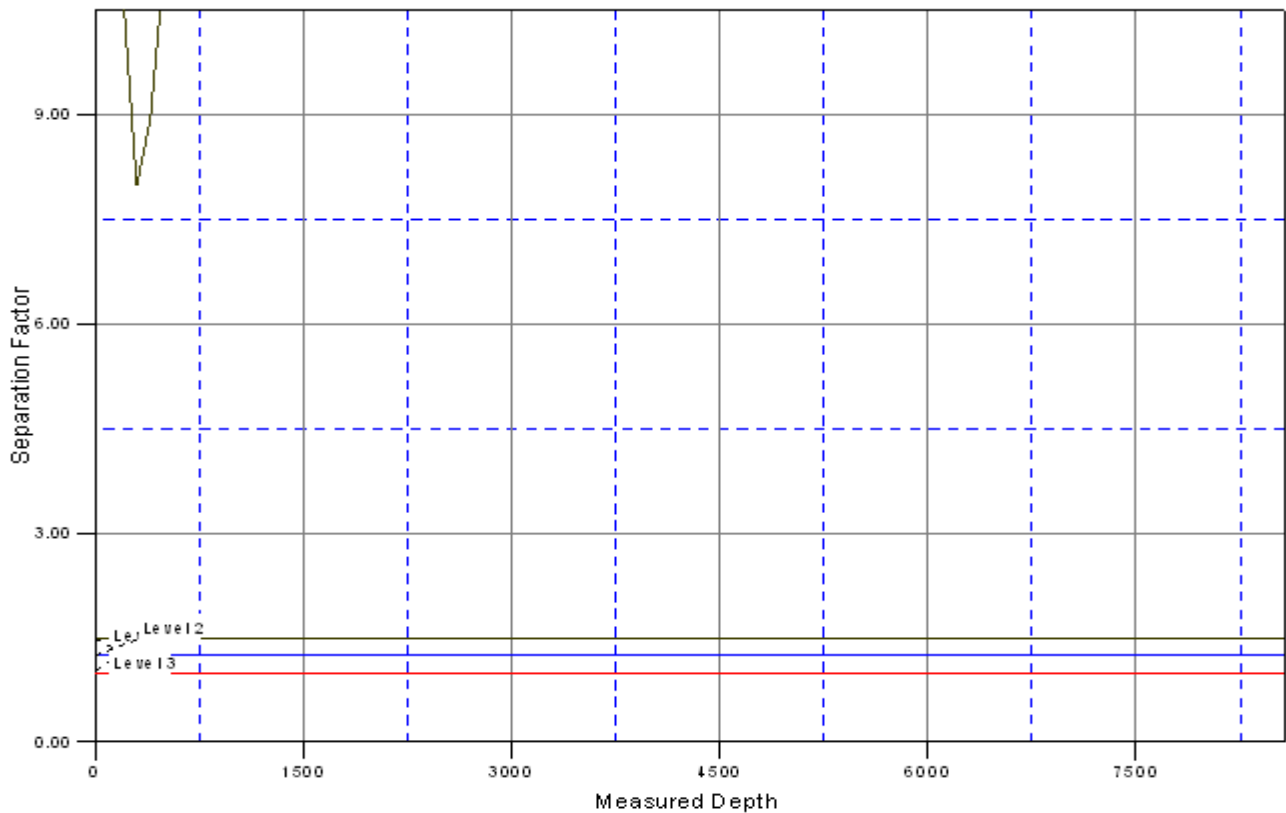
Reference Depths are relative to WELL @ 4943.0ft (Original Well Elev) Coordinates are relative to: Maier 31-28
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.46°



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Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.46°

Separation Factor Plot



LEGEND

Maier 4-2-28, Wellbore #1, Plan #1 (4-02-12) Maier 8-4-28, Wellbore #1, Plan #1 (4-02-12) Maier 32-28 (Exist.), Wellbore #1, Design #1 \