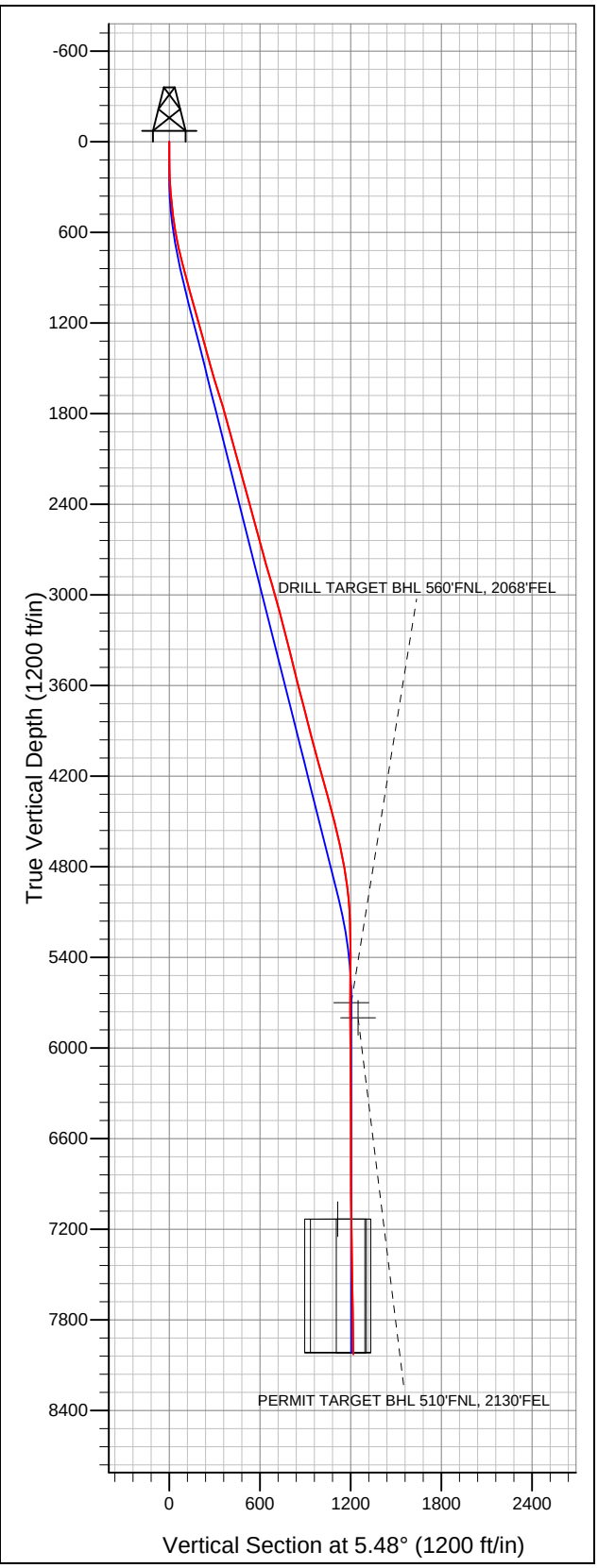
ENSIGN Directional

Well Name: Maier 31-28

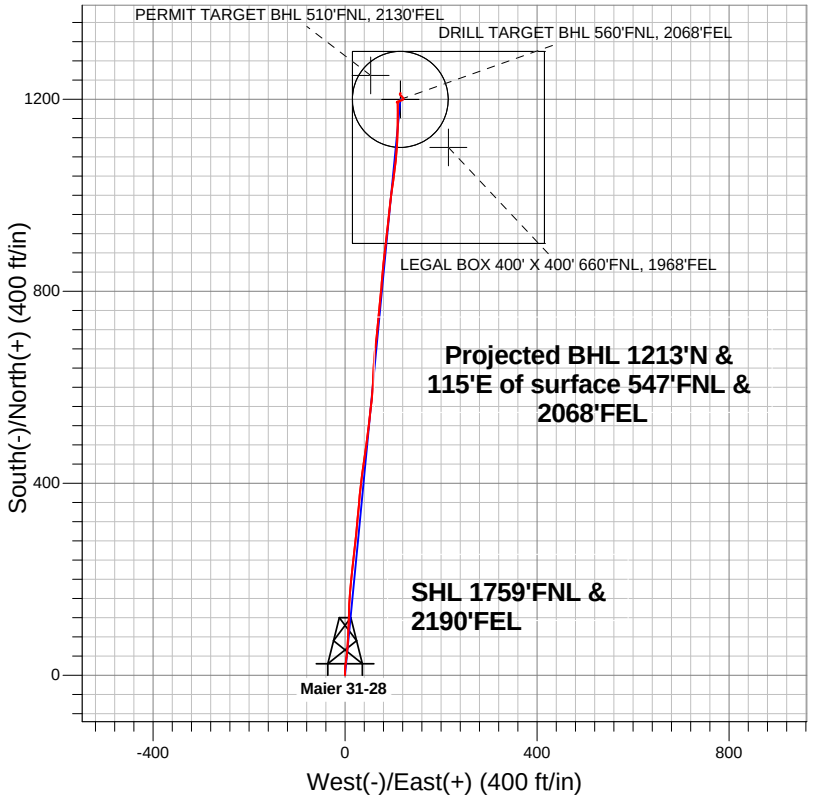
Surface Location: Maier 31-28 Pad Sec.28-T2N-R66W
North American Datum 1983 US State Plane 1983Colorado Northern Zone
Ground Elevation: 4931.0

+N/-S	+E/-W	Northing	Easting	Latittude	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



LEGEND

- Wellbore #1
- Maier 31-28, Wellbore #1, Plan #2 (7-03-12) R V0
- Survey #1

Final Survey Plot

Projected Final Survey -
8180'MD & 8028'TVD @ 1218'VS
1.10 deg Inc 44.10 deg AZ

Project: SEC.28-T2N-R66W
Site: Maier 31-28 Pad Sec.28-T2N-R66W
Well: Maier 31-28
Plan: Wellbore #1

EnCana Oil & Gas Weld County CO

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

Wellbore #1

Survey: Survey #1

Standard Survey Report

13 July, 2012

Ensign Directional
Survey Report

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)
Site:	Maier 31-28 Pad Sec.28-T2N-R66W	**MD Reference:**	WELL @ 4943.0ft (Original Well Elev)
Well:	Maier 31-28	**North Reference:**	True
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	Landmark

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:**	1,284,297.93 ft	**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 Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/3/2012	8.71	66.78	52,866

Design Wellbore #1

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**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

Survey Program **Date** 7/12/2012

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
93.0	8,180.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard

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
93.0	0.40	23.70	93.0	0.3	0.1	0.3	0.43	0.43	0.00
185.0	1.30	355.00	185.0	1.6	0.2	1.6	1.05	0.98	-31.20
277.0	3.80	356.80	276.9	5.7	-0.1	5.7	2.72	2.72	1.96
368.0	5.10	4.50	367.6	12.8	0.1	12.7	1.57	1.43	8.46
460.0	6.50	6.60	459.1	22.0	1.0	22.0	1.54	1.52	2.28
551.0	8.70	7.80	549.3	33.9	2.5	34.0	2.42	2.42	1.32
643.0	10.60	5.70	640.0	49.3	4.3	49.4	2.10	2.07	-2.28
736.0	13.10	2.70	731.0	68.3	5.6	68.5	2.77	2.69	-3.23
830.0	14.90	2.70	822.2	91.0	6.7	91.2	1.91	1.91	0.00
881.0	15.50	2.70	871.5	104.4	7.3	104.6	1.18	1.18	0.00
953.0	15.20	1.50	940.9	123.4	8.0	123.6	0.61	-0.42	-1.67
1,047.0	15.00	2.60	1,031.6	147.9	8.9	148.1	0.37	-0.21	1.17

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)
Site:	Maier 31-28 Pad Sec.28-T2N-R66W	**MD Reference:**	WELL @ 4943.0ft (Original Well Elev)
Well:	Maier 31-28	**North Reference:**	True
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	Landmark

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)
1,141.0	15.70	5.20	1,122.3	172.7	10.6	172.9	1.04	0.74	2.77
1,234.0	15.70	4.50	1,211.8	197.8	12.7	198.1	0.20	0.00	-0.75
1,328.0	14.90	7.10	1,302.5	222.5	15.2	222.9	1.12	-0.85	2.77
1,422.0	15.70	6.60	1,393.2	247.1	18.2	247.7	0.86	0.85	-0.53
1,515.0	15.80	6.40	1,482.7	272.2	21.0	272.9	0.12	0.11	-0.22
1,609.0	16.60	5.20	1,572.9	298.3	23.7	299.2	0.92	0.85	-1.28
1,703.0	17.50	5.00	1,662.8	325.7	26.1	326.7	0.96	0.96	-0.21
1,796.0	16.20	6.30	1,751.8	352.5	28.8	353.7	1.46	-1.40	1.40
1,890.0	15.70	4.50	1,842.2	378.2	31.2	379.5	0.75	-0.53	-1.91
1,984.0	15.00	6.30	1,932.8	403.0	33.6	404.4	0.90	-0.74	1.91
2,077.0	15.50	8.20	2,022.6	427.3	36.6	428.8	0.76	0.54	2.04
2,171.0	14.90	7.80	2,113.3	451.7	40.1	453.4	0.65	-0.64	-0.43
2,265.0	15.40	8.40	2,204.0	476.0	43.5	478.0	0.56	0.53	0.64
2,358.0	15.50	8.00	2,293.6	500.5	47.1	502.7	0.16	0.11	-0.43
2,452.0	15.40	6.40	2,384.3	525.4	50.2	527.8	0.47	-0.11	-1.70
2,546.0	15.70	6.30	2,474.8	550.4	53.0	553.0	0.32	0.32	-0.11
2,639.0	15.10	5.90	2,564.5	575.0	55.6	577.7	0.66	-0.65	-0.43
2,733.0	15.10	3.40	2,655.2	599.4	57.6	602.1	0.69	0.00	-2.66
2,827.0	15.10	2.60	2,746.0	623.8	58.9	626.6	0.22	0.00	-0.85
2,920.0	16.30	2.90	2,835.5	649.0	60.1	651.7	1.29	1.29	0.32
3,014.0	16.30	6.30	2,925.7	675.2	62.2	678.1	1.02	0.00	3.62
3,108.0	15.00	7.30	3,016.2	700.4	65.2	703.5	1.41	-1.38	1.06
3,201.0	15.70	4.70	3,105.9	724.9	67.8	728.1	1.06	0.75	-2.80
3,295.0	14.40	6.00	3,196.7	749.2	70.0	752.5	1.43	-1.38	1.38
3,389.0	14.00	5.20	3,287.8	772.2	72.3	775.5	0.47	-0.43	-0.85
3,482.0	14.70	5.90	3,377.9	795.1	74.5	798.6	0.78	0.75	0.75
3,576.0	13.60	3.80	3,469.1	818.0	76.5	821.5	1.29	-1.17	-2.23
3,670.0	14.10	4.90	3,560.3	840.4	78.2	844.0	0.60	0.53	1.17
3,763.0	14.50	7.10	3,650.5	863.3	80.6	867.0	0.73	0.43	2.37
3,857.0	14.20	7.00	3,741.5	886.4	83.5	890.3	0.32	-0.32	-0.11
3,951.0	14.30	5.60	3,832.6	909.4	86.0	913.4	0.38	0.11	-1.49
4,044.0	14.20	6.40	3,922.8	932.1	88.4	936.3	0.24	-0.11	0.86
4,138.0	15.60	5.90	4,013.6	956.2	91.0	960.5	1.50	1.49	-0.53
4,232.0	14.80	7.30	4,104.3	980.7	93.8	985.1	0.94	-0.85	1.49
4,325.0	15.90	7.50	4,194.0	1,005.1	97.0	1,009.7	1.18	1.18	0.22
4,419.0	15.60	7.30	4,284.5	1,030.4	100.3	1,035.2	0.32	-0.32	-0.21
4,513.0	14.60	6.60	4,375.2	1,054.7	103.2	1,059.7	1.08	-1.06	-0.74
4,606.0	14.10	6.80	4,465.3	1,077.6	105.9	1,082.8	0.54	-0.54	0.22
4,700.0	13.80	4.10	4,556.6	1,100.1	108.1	1,105.4	0.76	-0.32	-2.87
4,794.0	12.30	1.50	4,648.1	1,121.3	109.1	1,126.6	1.71	-1.60	-2.77
4,887.0	12.00	359.10	4,739.0	1,140.9	109.2	1,146.1	0.63	-0.32	-2.58
4,981.0	9.60	2.00	4,831.4	1,158.5	109.4	1,163.6	2.62	-2.55	3.09
5,075.0	6.70	4.90	4,924.4	1,171.8	110.1	1,177.0	3.11	-3.09	3.09
5,168.0	4.70	358.90	5,017.0	1,181.0	110.5	1,186.2	2.24	-2.15	-6.45
5,262.0	3.50	352.90	5,110.7	1,187.7	110.1	1,192.8	1.35	-1.28	-6.38
5,355.0	1.90	356.40	5,203.6	1,192.1	109.6	1,197.1	1.73	-1.72	3.76
5,449.0	1.00	353.10	5,297.6	1,194.4	109.4	1,199.4	0.96	-0.96	-3.51
5,543.0	0.20	158.10	5,391.6	1,195.1	109.4	1,200.1	1.27	-0.85	175.53
5,636.0	0.90	244.10	5,484.6	1,194.6	108.8	1,199.6	0.98	0.75	92.47
5,730.0	0.40	206.80	5,578.6	1,194.0	108.0	1,198.9	0.67	-0.53	-39.68
5,824.0	0.20	176.20	5,672.6	1,193.6	107.8	1,198.4	0.27	-0.21	-32.55
5,851.4	0.16	168.14	5,700.0	1,193.5	107.8	1,198.3	0.17	-0.14	-29.36
DRILL TARGET BHL 560'FNL, 2068'FEL									
5,917.0	0.10	126.10	5,765.6	1,193.3	107.9	1,198.2	0.17	-0.09	-64.13

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

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)
5,951.3	0.18	75.98	5,799.9	1,193.3	108.0	1,198.2	0.40	0.23	-146.01
PERMIT TARGET BHL 510'FNL, 2130'FEL									
6,011.0	0.40	56.50	5,859.6	1,193.5	108.2	1,198.4	0.40	0.37	-32.65
6,105.0	0.80	87.60	5,953.5	1,193.7	109.2	1,198.7	0.53	0.43	33.09
6,198.0	0.90	77.30	6,046.5	1,193.9	110.5	1,199.0	0.20	0.11	-11.08
6,292.0	0.90	50.60	6,140.5	1,194.5	111.8	1,199.7	0.44	0.00	-28.40
6,386.0	0.60	14.00	6,234.5	1,195.4	112.5	1,200.7	0.59	-0.32	-38.94
6,480.0	0.40	41.70	6,328.5	1,196.2	112.9	1,201.5	0.33	-0.21	29.47
6,574.0	0.30	69.20	6,422.5	1,196.5	113.3	1,201.9	0.20	-0.11	29.26
6,668.0	0.50	86.20	6,516.5	1,196.6	113.9	1,202.0	0.25	0.21	18.09
6,763.0	0.60	95.70	6,611.5	1,196.6	114.9	1,202.1	0.14	0.11	10.00
6,857.0	0.60	43.70	6,705.5	1,196.9	115.7	1,202.5	0.56	0.00	-55.32
6,951.0	0.80	60.00	6,799.5	1,197.6	116.6	1,203.2	0.30	0.21	17.34
7,046.0	1.00	87.80	6,894.5	1,198.0	118.0	1,203.7	0.50	0.21	29.26
7,140.0	0.40	60.90	6,988.5	1,198.1	119.1	1,204.0	0.71	-0.64	-28.62
7,234.0	0.50	58.50	7,082.5	1,198.5	119.7	1,204.5	0.11	0.11	-2.55
7,284.5	0.61	52.93	7,133.0	1,198.8	120.1	1,204.8	0.23	0.21	-11.04
TARGET CIRCLE 560'FNL & 2068'FEL									
7,284.7	0.61	52.91	7,133.2	1,198.8	120.1	1,204.8	0.23	0.21	-9.09
LEGAL BOX 400' X 400' 660'FNL, 1968'FEL									
7,328.0	0.70	49.50	7,176.5	1,199.1	120.5	1,205.1	0.23	0.22	-7.87
7,423.0	0.90	29.10	7,271.5	1,200.1	121.3	1,206.2	0.36	0.21	-21.47
7,517.0	1.40	330.20	7,365.4	1,201.8	121.1	1,207.8	1.29	0.53	-62.66
7,611.0	1.80	320.90	7,459.4	1,203.9	119.6	1,209.8	0.51	0.43	-9.89
7,706.0	1.70	319.70	7,554.4	1,206.1	117.8	1,211.9	0.11	-0.11	-1.26
7,800.0	1.30	312.10	7,648.3	1,207.9	116.1	1,213.5	0.47	-0.43	-8.09
7,894.0	1.00	319.70	7,742.3	1,209.3	114.7	1,214.7	0.36	-0.32	8.09
7,988.0	0.40	339.00	7,836.3	1,210.2	114.1	1,215.6	0.68	-0.64	20.53
8,083.0	1.00	25.40	7,931.3	1,211.3	114.3	1,216.6	0.82	0.63	48.84
8,135.0	1.10	44.10	7,983.3	1,212.0	114.9	1,217.5	0.68	0.19	35.96
8,180.0	1.10	44.10	8,028.3	1,212.6	115.5	1,218.1	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____